Kuwait Energy Gateway
Phase One Feasibility Study

Submitted to

Kuwait Institute for Scientific Research

by

United Nations Development Programme – Kuwait

May 2012

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Foreword

As a results-oriented, knowledge-based development organization, UNDP Kuwait is pleased to partner with the Kuwait Institute for Scientific Research (KISR) to carry out Phase One of the Feasibility Study for the establishment of the Kuwait Energy Gateway. Supporting national entities to bring about transformational change in development is at the very core of UNDP's work. UNDP, neutral and independent, is well situated to complete the feasibility phase of establishing the Kuwait Energy Gateway.

UNDP Kuwait is committed to supporting the Government of Kuwait in achieving the vision and objectives of the Mid-Range National Development Plan, prepared and monitored by the General Secretariat of the Supreme Council for Planning and Development, UNDP Kuwait's main Government counterpart. The Development Plan seeks to encourage private sector growth, stimulate public and private sector partnerships, promote investment opportunities in Kuwait, attend to high added value and advanced technology industries, and increase employment opportunities in the private sector. These development objectives would be well served by the establishment of Kuwait Energy Gateway.

To ensure that UNDP Kuwait's engagement with KISR incorporated international best practices and was completed at an exceptionally high level of expertise, UNDP engaged four distinguished international experts to complete this study: Dr. Thomas Stephens (Team Leader); Dr. Flynn Bucy (Marketing and Strategic Planning Specialist); Mr. Charles Krakoff (Special Economic Zone Specialist and Financial Analyst); and Mr. David Rowe (Technology Park Specialist). The international consultant team has produced an analysis with promising conclusions and recommendations for addressing specific development challenges in Kuwait and the region.

Therefore, if successfully implemented, the Kuwait Energy Gateway can contribute tremendously towards addressing the unique development challenges facing the Kuwaiti Government and people. It will create private sector employment opportunities; accelerate growth in oil output; reduce the cost to extract oil through better techniques; ensure more efficient water usage; and introduce the employment of solar power technologies. In addition, the Kuwait Energy Gateway can be an exciting opportunity to enhance the national business environment and increase the private sector's role in the Kuwaiti economy. The Gateway is expected to contribute substantially to sustainable human and economic development in Kuwait and the Region.

The conclusions and recommendations contained in this report will certainly enable KISR and the Government of Kuwait to move forward with the second phase of the Feasibility Study to establish the Kuwait Energy Gateway. UNDP Kuwait stands ready to support the Institute's efforts to address some of the most pressing development challenges facing the State of Kuwait. We will endeavor to work closely with KISR as a trusted source of policy and technical advice in the advancement of KISR's mandate and research agenda.

Dr. Adam Abdelmoula
UN Resident Coordinator and
UNDP Resident Representative

Acknowledgements

The consultant team responsible for this report would like to gratefully acknowledge the significant support and wise counsel that they received from numerous sources during the preparation of this study.

First and foremost, the team would like to thank the staff of the Kuwait Institute for Scientific Research, notably Dr. Naji Al-Mutairi, the Director General of KISR, and members of the Steering Committee: Dr. Mohammad Salman, Dr. Nader Al-Awadhi, Dr. Abdul-Hameed Al-Hashem, and Dr. Wajih Sawaya—all of whom were instrumental in providing strategic direction for the feasibility study. In addition, the consultant team was pleased to have the opportunity to work with Dr. Meena Marafi, Manager of the Petroleum Refining Department and Dr. Mamun Absi-Halabi, Principal Research Scientist. Together, they served as the KSR lead managers for the study and gave extensively of their time, knowledge and considerable expertise. The consultant team also benefited from the significant contributions from other members of the KISR project team: Dr. Faten Al Jabsheh, Dr. Hamad Al Hassawi, Ms. Noura AbdelMalek, Ms. Sheikha Al Fulaij, and Ms. Weam Behbehani.

In addition, the consultant team felt privileged to work with the staff of UNDP Kuwait. Dr. Adam Abdelmoula, the UNDP Resident Representative and UN Resident Coordinator, took an active interest in the study and provided useful advice. The consultant team was likewise fortunate to be in the hands of Mr. Mubarak Al-Adwani, the UNDP Assistant Resident Representative, whose practical insights, knowledge of Kuwaiti institutions, and infectious hospitality made the assignment so enjoyable for the team. Similarly, the team benefitted from the logistical and administrative support of Ms. Darah Aljoudar who assisted the team in such an incredibly courteous and efficient manner. Other UNDP staff members were equally courteous in supporting the efforts of the team.

As found in Annex 2 of this report, the consultant team had the opportunity to meet with a number of high ranking and senior officials in the Kuwait public and private sectors. The team was especially impressed with the candor, strategic insights and broad understanding they demonstrated in discussing the issues faced by the Kuwaiti private sector and the requirements for promoting diversified economic growth through increased foreign investment, technology advances and new business opportunities for Kuwaiti and international companies.

Finally, and on a more personal note, the team has enjoyed the opportunity of working in Kuwait and being exposed to Kuwait's fascinating history, vibrant traditions and culture, and the extraordinary warmth and graciousness that was extended to us.

Abbreviations and Acronyms

b/d	barrels (of oil) per day
BOOT	Build, Operate, Own, Transfer
BOT	Build, Operate and Transfer
CSR	Corporate Social Responsibility
DBRP	Dubai Biotechnology and Research Park
DTV	Dhahran Techno Valley
ESH	Environment, Safety and Health
EU	European Union
EZ	Economic Zone
FDI	Foreign Direct Investment
FIB	Foreign Investment Bureau
FTZ	Free Trade Zone
FZ	Free Zone
GCC	Gulf Cooperation Council
HEI	Higher Education Institute
IASP	International Association of Science Parks
IEA	International Energy Agency
IFC	International Finance Corporation (World Bank Group)
IASP	International Association of Science Parks
IOC	International Oil Company
IRR	Internal Rate of Return
JV	Joint Venture
K-Company	A Kuwaiti entity, such as Kuwait oil sector companies, Ministry of Electricity and Water, KISR, NTEC, Kuwait Offset Company, and others
KD	Kuwaiti dinar
KEG	Kuwait Energy Gateway
KFAS	Kuwait Foundation for the Advancement of Science
KFIB	Kuwait Foreign Investment Board
KFTZA	Kuwait Free Trade Zone Authority
KISR	Kuwait Institute for Scientific Research
KC	Kuwait Oil Company
KOM	Knowledge Oasis Muscat
KPC	Kuwait Petroleum Corporation
KPPTSC	Kuwait Petroleum and Petrochemicals Technology and Services City
KU	Kuwait University
LNG	Liquid (or liquefied) Natural Gas
MENA	Middle East and North Africa
mb/d	million barrels (of oil)/day
NTEC	National Technology Enterprise Company
NOC	National Oil Company
NPV	Net Present Value
NTEC	National Technology Enterprises Company
OECD	Organization for Economic Co-operation and Development
PAI	Public Authority for Industry
P&L	profit and loss
PPP	Public-Private Partnership
R&D	Research and Development

QSTP	Qatar Science and Technology Park
RTO	Research and Technology Organization
SCPD	Supreme Council for Planning and Development
SEZ	Special Economic Zone
SME(s)	Small and Medium Size Enterprise(s)
SP	Specialized Park
SPV	Special Purpose Vehicle
STP	Science and Technology Park
SWOT	Strengths, Weaknesses, Opportunities, Threats
TOR	Terms of Reference
TP	Technology Park
UNDP	United Nations Development Programme
USDOE	United States Department of Energy
US$	United States dollar
WPC	World Petroleum Congress

Executive Summary

This phase one feasibility study has been prepared by a UNDP consultant team for the Kuwait Institute for Scientific Research (KISR) in order to provide analysis and recommendations for the creation of a new entity called the Kuwait Energy Gateway (KEG). The report has been written to provide KISR and Kuwaiti Government officials with sufficient background information, options and recommendations to decide whether or not to proceed to the next phase of the feasibility study for the establishment of the Kuwait Energy Gateway. The major activities covered in this report, as specified in the Terms of Reference, are noted in the left column of the table below. The second phase of the work will encompass the more detailed activities needed to complete the full feasibility study, as shown in the right column of the table.

Kuwait Energy Gateway Feasibility Study

Phase One: Strategic Analysis 3 Months	**Phase Two: Technical Design** 6 - 9 Months
• Linkages with Kuwaiti national development objectives • Global and regional energy market analysis • Review of Kuwait business environment • Comparative models of technology parks and economic zones • Regional competitive analysis and domestic benchmarking • Demand assessment for proposed Gateway services • Proposed facilities, services and legal framework • Proposed business model and governance structure for the KEG • Preliminary investment and costing analysis • Recommended phase two requirements	• Site Selection • Site evaluation • Master plan and development strategy • Project cost analysis • Detailed financial analysis and projections • Legal, regulatory and institutional framework • Structuring of public-private partnership • Detailed demand analysis and projections • Benchmarking and competition assessment • Marketing and promotion strategy plan • Environmental and social analysis • Organizational design, policies and staffing plan • Preparation of tender documents

The main findings and recommendations from the phase one analysis are given below.

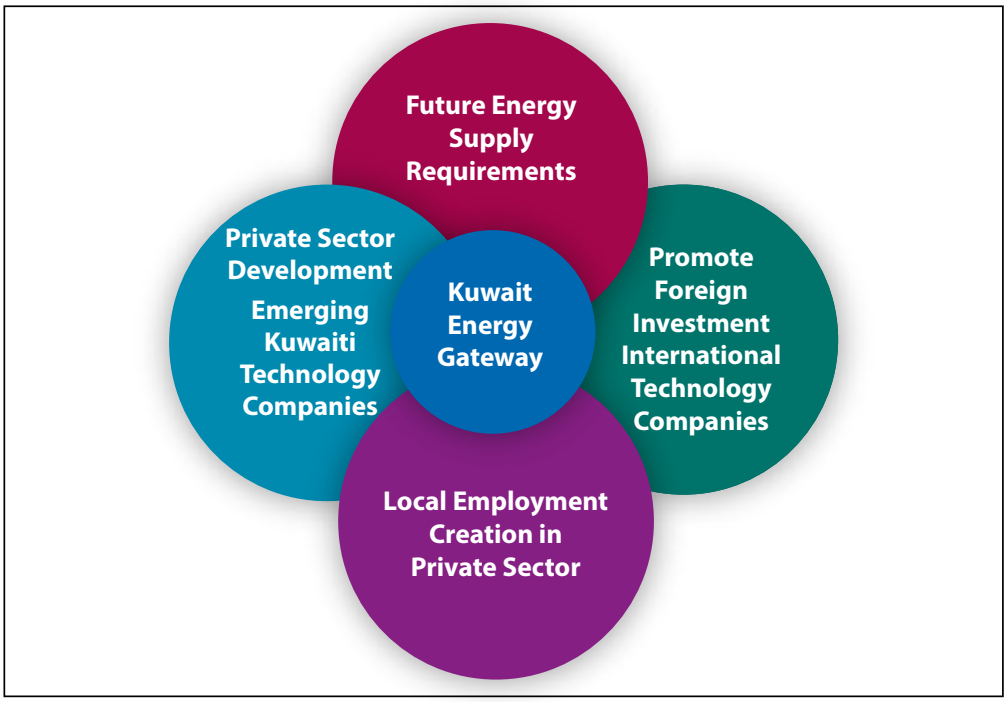
Market Need and Opportunity

Based on extensive interviews with Kuwaiti public officials and with private-sector energy company executives both in and outside Kuwait, the consulting team has identified a compelling need for a new entity to meet the expected growth and evolving technology requirements of the energy sector in Kuwait and the Gulf Region. An opportunity exists for Kuwait to become a regional leader in commercializing new technology-based solutions and services that address the priority needs of the energy sector. More specifically, these requirements include:

- Regional hydrocarbon production increases will generate a growing need for new technologies, professional services and direct investment in order to achieve 2035 supply projections.
- Changing demands of upstream petroleum production that require new technologies and innovative approaches to meet Kuwait's target of 4 million b/d by 2020.

- Value-added downstream processing and utilization of heavy oil that require new technologies and innovative approaches.
- Growing demand for more efficient power and the use of renewable energy, which represent important opportunities and reflect national development priorities.
- New approaches to power generation, alternative energy and water treatment, which require new technology-based products and services.
- The need that many of the aging fields in the Gulf Region have for similar types of innovative approaches, which creates an opportunity for Kuwait to serve as the high-tech hub for the region.
- Current procurement procedures and practices that make it difficult to introduce the required new technologies into the regional petroleum, petrochemical and power markets.
- The need for thousands of job opportunities for Kuwaiti graduates in technical and managerial disciplines, which can be created by attracting technology-based companies serving the regional energy sector.
- Creation of a more business-friendly environment, which will stimulate development of the Kuwaiti private sector, which in turn will create additional, high-quality job opportunities and contribute to economic diversification.
- The inability of the "business-as-usual" status quo to meet the development goals and objectives established by the Kuwaiti Governmen

Helping to Meet Kuwaiti National Development Objectives



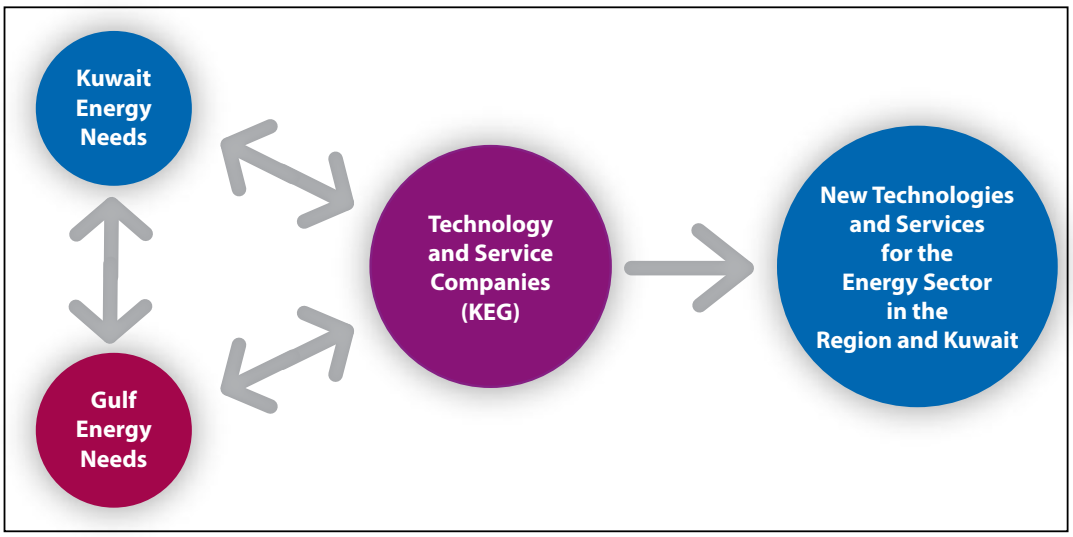
Summary Conclusion

There is a need for a new entity to facilitate the more effective engagement of private-sector equipment and service companies in technology commercialization and service provision in the energy sector. Creating a successful and cost effective entity to meet the needs described above is possible and the next phase of the feasibility study should be undertaken.

This new entity can fill an important niche in Kuwait's energy sector and help achieve key national development goals. It can increase the role of the private sector in the economy, and it can be a cost-effective investment for both public and private sector stakeholders—**IF** it is designed and implemented according to the following critical guidelines:

- Sharp focus on technology commercialization and support services relevant to high-priority needs in the energy sector for both Kuwait and the Gulf Region.
- Key Kuwaiti institutions cooperate to assure complementarity instead of overlap and competition among similar initiatives.
- Facilities, services, legal and institutional framework of the Gateway are designed and implemented in a way that effectively promotes and encourages collaboration among private-sector equipment and service companies, Kuwaiti stakeholder institutions and the regional market.
- Establishment of the Gateway as a special economic zone (SEZ) to provide the business environment and investment incentives needed to make it competitive with other economic zones in the Gulf Region.
- The initiative should not be allowed to become a vehicle for real estate development and speculation. Although infrastructure and the built environment are important, the business development and matchmaking services offered by the Gateway's management constitute its principal value.
- The project requires political and financial support from both public and private sector stakeholders.

Kuwait Energy Gateway: Role and Ecosystem



Main Recommendation and Rationale

The Kuwait Energy Gateway should be established as a public/private partnership dedicated to building a specialized technology business park within the legal framework of a special economic zone. It should be dedicated to attracting and supporting private-sector technology products and services companies engaged in commercialization of new technologies that meet priority needs of the energy sector in Kuwait and the Gulf Region.

The rationale for this recommendation includes the following key elements:

- Critical need to employ new technologies and engineering services to meet upstream production targets and downstream value-added processing;
- Demonstrated success of existing models of combined technology park/special economic zones for attracting international companies;
- The Gateway will directly create an estimated 2,500 high-quality technical and managerial jobs for Kuwaiti graduates, and will indirectly create a substantially greater number of jobs;
- Kuwait can become a high-tech leader in the Region by becoming the gateway for new technological and engineering solutions to meet the priority needs of the petroleum, petrochemical and power generation sectors;
- The recommended target activities of the Gateway are complementary to those of other similar initiatives in Kuwait, and highly competitive with those of other facilities in the Region.

Competitive Analysis

The Kuwait Energy Gateway has the potential to fill a vital market niche—both in Kuwait and the Region—that is currently not being met by any existing technology park or economic zone.

There is an important market niche for facilities, services and a legal framework that effectively promotes opportunities to introduce, demonstrate and pilot new technologies and innovative approaches.

Other countries in the Gulf States, particularly UAE, Qatar and Saudi Arabia, have successfully used a variety of specialized parks and economic zones to attract companies. These developments represent a significant competitive challenge for the Kuwait Energy Gateway attempting to become a regional hub for the companies that will expand in the Region to meet the overall growing energy sector. At the same time, by focusing on a distinctive set of technological challenges and market needs, Kuwait can become a high-tech leader in the Gulf Region for the energy sector. Examples of these technologies include production and downstream processing of heavy oil, enhanced recovery techniques, off-grid solar power, and oilfield water treatment and conservation.

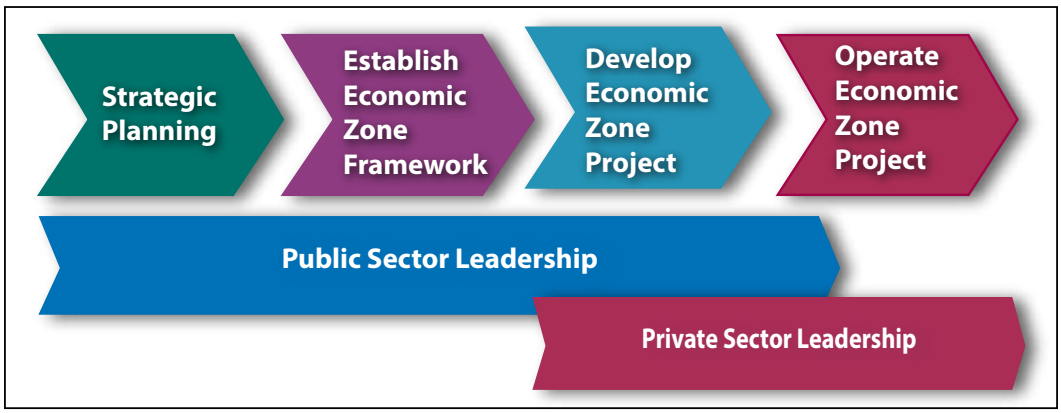
There is currently an oversupply of quality office space in Kuwait City and around the Region. In addition, Kuwait's Public Authority for Industry (PAI) is developing a new industrial park. There is no need for the government to sponsor commercial business facilities. The KEG needs to offer a value proposition that both attracts the target companies and serves the country's development agenda.

In Kuwait and in the Region, there are numerous institutions dedicated to R&D in the energy sector, and most of these organizations support technology commercialization. The key niche for the Gateway is to house and support the private sector companies that need to effectively engage those R&D institutions to bring new technologies to market. Cooperation among key Kuwaiti stakeholder institutions is essential to avoid excessive functional overlap and unproductive competition. Many of the target types of companies for the Gateway currently have sales agents in Kuwait but do not have significant technical capacity or presence in the country. These existing business development approaches are poorly suited to commercialization of new technological solutions addressing the priority needs of the energy sector in Kuwait and the Region.

The biggest competitive threat to the Gateway initiative is a continuation of the current "business-as-usual" approach that impedes both international and Kuwaiti companies from expanding their business presence in Kuwait and the Region.

The demand and competitive analysis for the Gateway are discussed in greater detail in Chapters 6 and 7, respectively.

Steps in the Economic Zone Development Process



Proposed Gateway Offering

The Gateway will offer facilities, services and special legal/regulatory framework that provide a compelling value proposition to target companies. The overall product offering will be designed to attract, support and facilitate technology-based equipment and service companies addressing priority needs of the energy sector in Kuwait and the Region.

The Gateway should be marketed and sold to its clients not as a destination simply for the sake of having a base in Kuwait, but literally as a "gateway to business opportunity." The Gateway will offer target companies the following facilities and services:

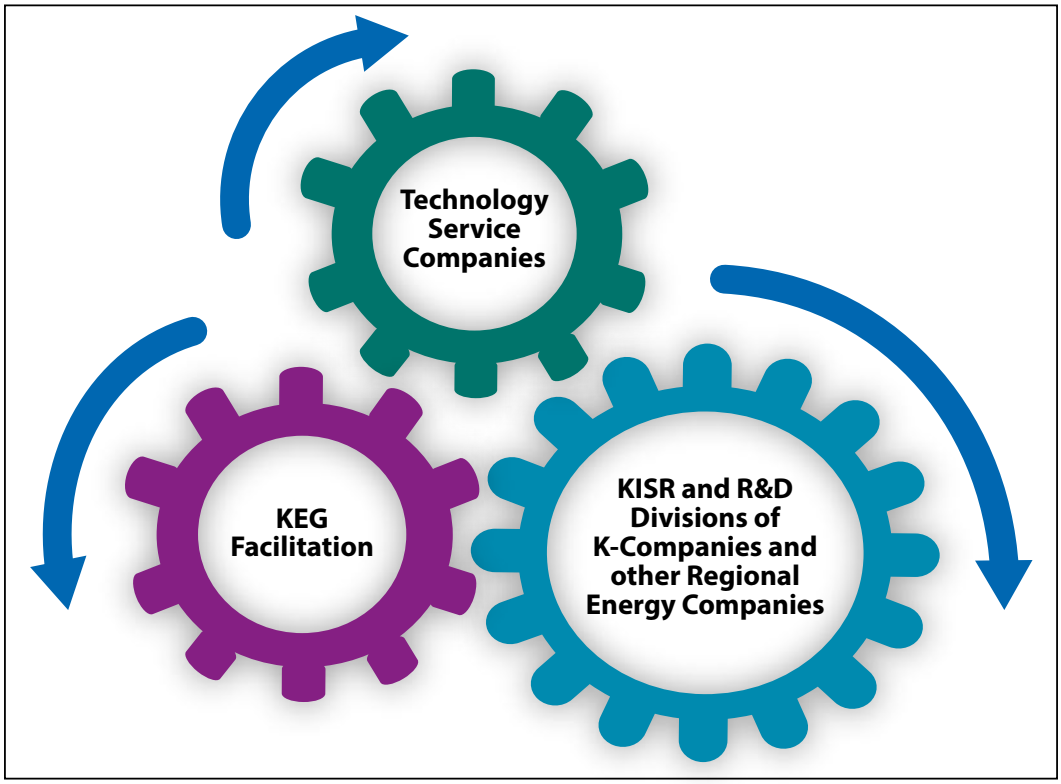
- high-quality office space and infrastructure;
- a streamlined business and regulatory environment for international companies to provide a "soft landing" for companies new to Kuwait;
- business and support services to facilitate the tenant companies' access to new business opportunities in Kuwait and the Region;
- benefits from operating within a special economic zone.

The Gateway will:

- facilitate entry of private sector companies into Kuwait and the Region;
- facilitate partnerships and joint ventures with Kuwaiti companies;
- facilitate business relationships between private energy service companies and state-owned energy companies in Kuwait and the Region;
- serve as a platform for adapting and showcasing new technologies appropriate for Kuwait and the Region;
- help the Kuwait energy sector more rapidly employ new technologies that create operating efficiencies and improved financial performance.

Discussion of the Gateway's offering is found in Chapter 9.

KEG Facilitation Role as Technology Business Park/Special Economic Zone



Business Model Recommendation

The proposed Kuwait Energy Gateway is a special economic zone that incorporates many elements of a technology and business park. In order to promote entrepreneurship and private investment, it should be established as a Kuwaiti joint stock company with public oversight, public-private ownership and operate as an independent entity.

The Gateway is effectively a technology business park because of its primary focus is on technology commercialization. Even though the KEG will serve a wide range of equipment and service businesses, it should be focused on facilitating opportunities to introduce, demonstrate and commercialize priority technologies for the energy sector. The Gateway should be constituted as a special economic zone

to make it easier and more attractive for companies with valuable energy-related technologies and services to locate their technical and managerial staff in Kuwait. In short, the provision of infrastructure, facilities and services associated with a specialized technology business park is combined with a legal and regulatory framework designed to incentivize companies, both domestic and international, to attract particular types of activities within the Gateway. It is proposed that the entity be organized as an autonomous corporate entity with a mixed public-private Board of Directors and a management team drawn from the private sector, which possesses experience in technology commercialization, property management, and international marketing, among other skill sets.

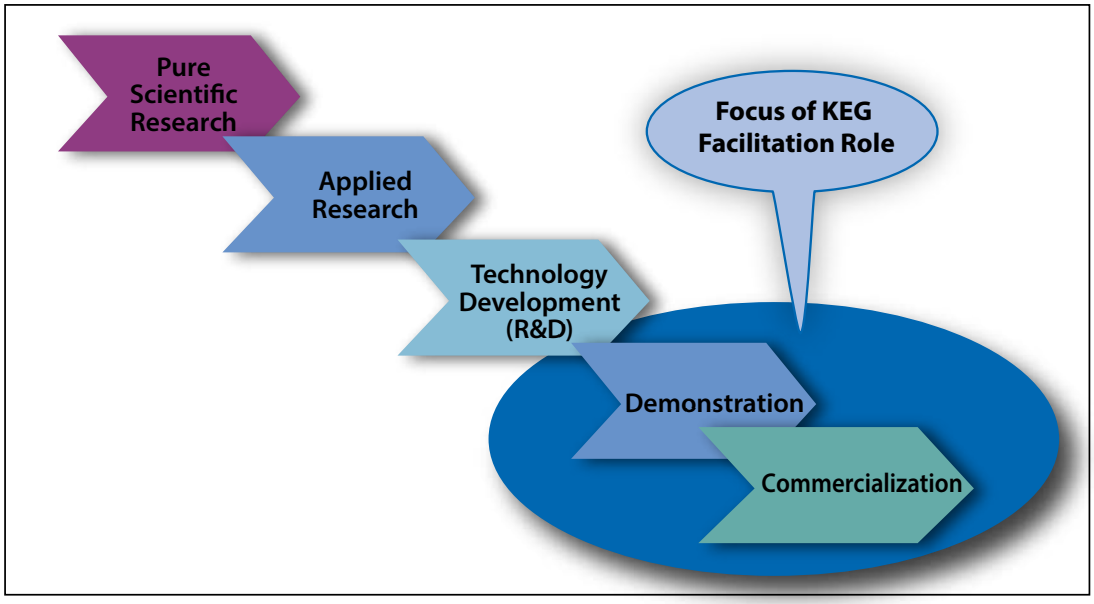
The facilities, services and legal framework for the Gateway's initial offering are recommended to include:

- A suitable location for the Gateway has not yet been identified. It is estimated that the Gateway will need a total land area of approximately 12 hectares initially, increasing to approximately 40 hectares when fully developed. The gross internal developed space will increase from approximately 30,000 square meters initially to as much as some 100,000 square meters when fully developed.
- Gateway Hub facilities will consist of modern office infrastructure dedicated to serving the needs of energy-related equipment and services companies establishing a significant technical capacity in Kuwait. The Hub should include a business center, a training center, and specialized facilities to create an appropriate environment for collaboration and innovation. The Hub would also house the management and staff supporting the business facilitation function.
- Core services for the Gateway should include: outreach and single-point soft-landing facilities and guidance (which permit companies to start operating immediately), networking and match-making, proactive facilitation for selected activities and technologies, and support for recruitment of employees.
- A legal and regulatory framework that creates conditions for attracting target companies and activities based upon existing legislation and global best practices.

This core set of initial offerings would be followed up in later years, depending upon the uptake by business tenants, with more office space and other amenities, either built by the companies themselves or local/international commercial real estate developers.

Discussion of the business model for the Gateway is found in Chapter 10.

Kuwait Energy Gateway and the Technology Life Cycle



Public Sector Funding Requirements

Preliminary analysis suggests that KD 50-60 million in public funding is necessary to launch the Gateway, but it is possible to structure the approach to attract private investment for expansion and financial self-sustainability.

The total cost of this investment, spread over 8 years, including on-site infrastructure, car parking, roads, hard landscaping, etc., is estimated at KD 50–60 million. Starting from year 4, once the Gateway has proven its ability to attract tenants on financially sustainable terms, private investment in additional buildings may occur, initially in single-occupier, pre-let premises, but later in larger multi-occupancy units built on a private risk-return basis.

The investment and economic analysis for the Gateway are discussed in Chapter 11 and Annexes 8 and 9.

SWOT Analysis of the Kuwait Energy Gateway

The following table provides a summary SWOT analysis of the strategic objectives for the Kuwait Energy Gateway and the challenges and opportunities provided by the Gateway.

A SWOT Analysis of the Strategic Context for the Proposed Gateway

Strengths	Weaknesses	Opportunities	Threats
• Alignment with current Kuwaiti national development objectives • Presence of strong R&D capabilities already in Kuwait • Highly educated Kuwait workforce • Extensive business and financial experience in Kuwait private sector • Kuwait's strategic location in the Gulf • Political stability and vibrant democratic institutions • Government support in using public-private partnership models • Long-term global demand for Kuwaiti and Regional oil and gas supplies	• Kuwait's late start in using economic zones and specialized parks compared to other Gulf countries • Difficult Kuwaiti business environment dampens private sector attraction • Risk that current inertia for private sector reform will result in little change • Procurement practices in K-companies discourage adoption of new technologies • Decision-making process in Government can be slow and cumbersome	• Clear market niche facilitating the private-sector role in energy technology commercialization • Understanding by energy service companies of new business opportunities in Kuwait and Region • Existing models for economic zones and technology parks can be uniquely adapted for rapid deployment in Kuwait • Strong potential for knowledge-based employment for young Kuwaitis • Current Government priority for establishing Kuwait as business-friendly location for international companies	• Presence of other technology parks and business parks in the Region • Risk that other parks in the Region could fill the proposed Gateway market niche • Parallel initiatives to the Gateway in Kuwait could result in competition, not cooperation • Gateway's designated management is not sufficiently experienced to fully implement the business model • Insufficient Government funding is not made available to launch the Gateway • If the initiative is pursued on a purely commercial real estate basis, the pressure to generate immediate financial returns will deflect necessary investment in value-added services

1 Introduction

This phase one feasibility study has been undertaken to explore options and issues for the establishment of a specialized technology business park and economic zone, now called the Kuwait Energy Gateway (KEG). This report has been prepared under a Consultancy Services Agreement signed between the Kuwait Institute for Scientific Research (KISR) and the United Nations Development Programme (UNDP), in which UNDP has been contracted to provide support for the first phase of a feasibility phase for the proposed project.

To carry out this first phase of analysis, UNDP contracted four international consultants who had been recommended by UNDP and approved by KISR. The international consultant team visited Kuwait from 30 November 2011 until 20 December 2011 where they conducted numerous interviews with senior Kuwait officials and executives and held three planning meetings with key KISR staff. In addition, the international team visited Doha, Qatar to attend the World Petroleum Congress (WPC) in early December, where they met with over 125 international companies to gauge private-sector perceptions and interest in working in Kuwait and potentially establishing a presence in the proposed Kuwait Energy Gateway. While at the WPC, some 100 companies agreed to complete an on-line survey (See Annex 3), the results from which form an integral part of the market research found later in this report. Additional background research and analysis were undertaken by the consultant team though December 2011 and early January 2012.

As part of the assignment, the team also undertook a comparative analysis of specialized technology and business parks, both in the Region and globally, in order to ascertain the most appropriate thematic focus, key features of the offering, and business model for the KEG, given Kuwait's business environment, its late-comer status in seeking to create a specialized park, and its comparative advantages in the energy sector.

As noted in the revised Terms of Reference (TOR), KISR envisions that the proposed Gateway could help achieve a number of important development objectives as elaborated in the Government's Development Plan 2009–2014 and the longer-term Vision 2035. The envisioned role for the new entity is to:

> *"…support the growth of business activities and attract regional and international companies that are active in providing high tech services to the oil, gas, petrochemical, and energy industries. [The Gateway] will provide a forum for interaction among industrialists, consulting companies, engineering companies, service providers, business promoters, and investors, that are active in the oil, gas, and power related industries. It will also foster collaboration between these businesses and the local and regional scientific and technical institutions…"*

In the original TOR, KISR explained that the examination of creating the proposed "City" would be broken into five stages. These were:

1. To prepare a pre-feasibility study to assess the potentials for success of the proposed city;
2. To prepare a detailed techno-economic feasibility study for establishing Kuwait Petroleum and Petrochemicals Technology and Services City;
3. To prepare a master physical plan for the city and determine potential sites;
4. To develop the business model, medium and long term business plans, and the required policies and procedures for managing the city;
5. To secure the required approvals from the government authorities.

At a meeting on 19 October 2011, KISR senior management decided to combine the prefeasibility and feasibility work into a single stage, consisting of two phases, and to broaden the scope of businesses targeted for the Gateway, to include energy related businesses such as power and renewable energy. This report has been written to reflect this expanded scope and the division of the feasibility study into two phases.

The diagram on the facing page lays out the steps to be followed in the phased approach for moving forward (or not) with development of the Kuwait Energy Gateway.

In addition, the original and revised TOR for the feasibility phase lays out a number of expected deliverables for the feasibility phase research and analysis. The key deliverables consist of:

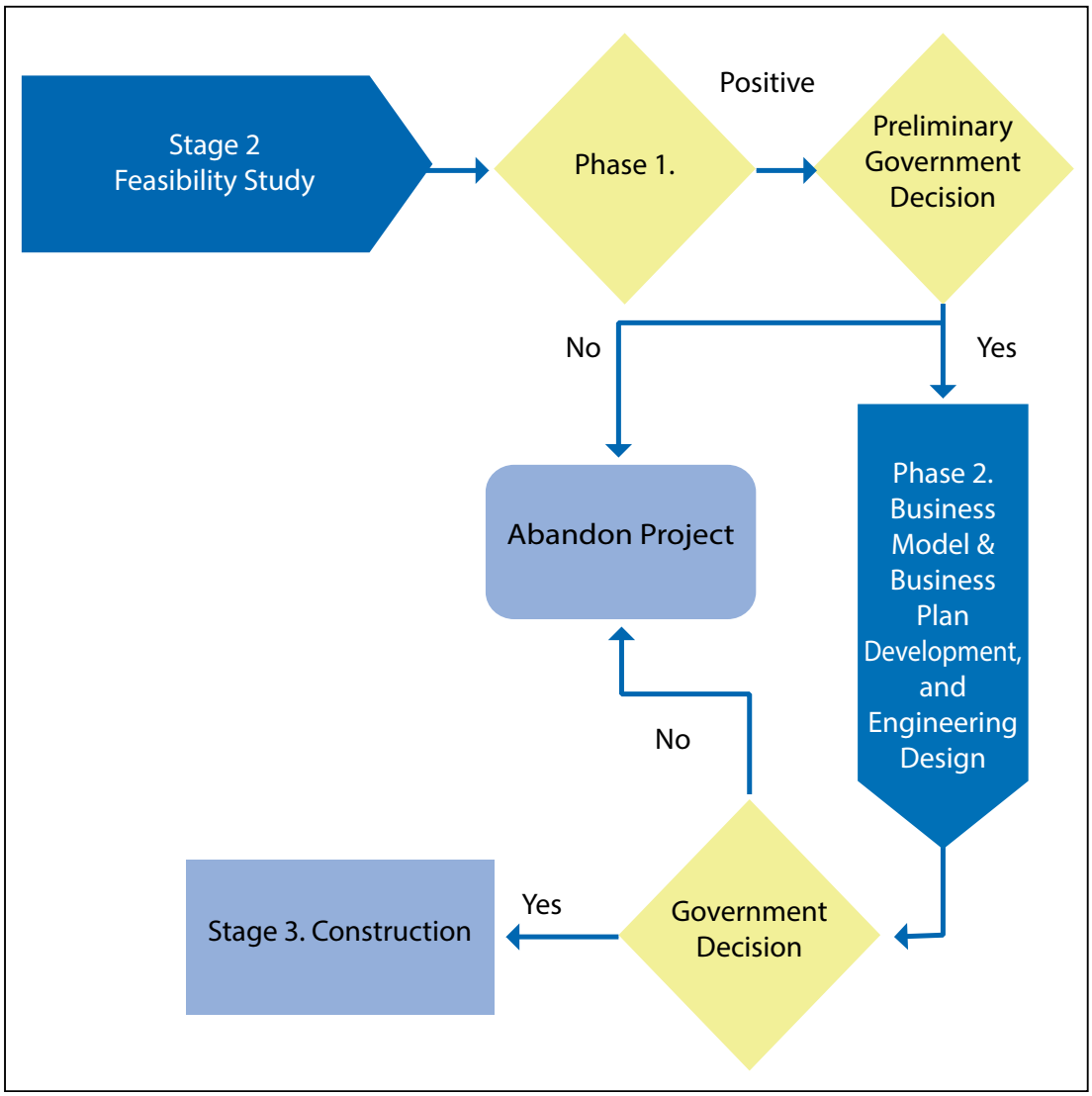
- A detailed document elaborating on the conceptual idea and specifying the required resources for the proposed City;
- Main services to be provided by the City to attract and support the activities of the tenants;
- Preliminary survey of potential tenants;
- Preliminary survey of business models that can be adopted to manage the City;
- Identification of other projects in the Region that may have similar objectives, summarizing their strength and weaknesses;
- Identification of other successful technology parks or cities, and defining the lessons that can be learnt from their success;
- Assessment of the potential growth and market demand of the energy sector in the Region, in particular oil and gas;
- Assessment of weaknesses and strengths of Kuwait business environment, and means to improve on the weaknesses;
- Assessment of the socio-economic benefits of the project on a national level.

The analysis and recommendations for establishing the Gateway which follows are organized into four sections:

Section One, consisting of four chapters, examines the macro context for establishing the Kuwait Energy Gateway. Chapter 2 briefly reviews the broad economic and social objectives toward which the Gateway can contribute as a part of the Government's broad development objectives. Chapter 3 then examines the global and regional market context for future energy supply and demand. Chapter 4 turns to the Kuwait business environment and the issues and challenges confronting international companies wishing to do business in Kuwait or expand their operations. The final chapter of this section then reviews different models and characteristics of special economic zones (SEZs) and specialized parks

(SPs) that have been used around the world to attract foreign investment and spur new technologies and growth in the private sector.

Figure 1.1 Feasibility Stage—Phase One and Two



Based on the context established in Section One, **Section Two** provides an analysis of the market within Kuwait and the Gulf Region for such an initiative. This section consists of three chapters. Chapter 6 undertakes a demand analysis of the types of facilities and services possible for the Gateway, based on the numerous direct interviews with potential target companies and an on-line survey conducted as part of the feasibility study. Chapter 7 provides a competitive analysis by benchmarking against alternative regional locations and offerings as well as highlighting some Kuwaiti initiatives with similar or parallel mandates. Chapter 8 then explores a range of potential target markets and provides specific recommendations for the types of companies that should be targeted as clients and tenants for the Gateway.

Section Three covers the principal recommendations of the phase one feasibility study by exploring key issues in designing the Kuwait Energy Gateway. Chapter 9 lays out a rationale and proposed framework and design approach for the Gateway. Chapter 10 then explores business model options and provides recommendations for the management and funding approach for the Gateway. Chapter 11 provides

a preliminary economic and financial analysis for the Gateway which includes some preliminary estimates of the public funding required to launch the Gateway and the pace at which it can become financially self-sustaining.

Section Four concludes the report with the suggested next steps for completing the second phase of this feasibility study as well as some summary conclusions and observations. These next steps and conclusions are put forward on the assumption that the Government will decide to proceed to the second phase of the feasibility study.

Finally, several Annexes are found at the end of the report, which give further background and complementary information to that found in the four earlier Sections.

Before turning to Section One, it is important to emphasize two points about the preparation of the first phase of the feasibility study.

First, it is necessary to define the specific type of entity under consideration in this feasibility study. The team found within Kuwait multiple terms and varying concepts being used by different stakeholders for the proposed entity. This is not surprising given the many variations commonly employed around the world for such entities. Common terms include science and technology park, technology park, science park , research park, industrial park, business park, and innovation hub, to name but a few. In addition, when there is substantial residential and urban development surrounding the particular type of park, these types of initiatives are sometimes called "cities."

Adding to the confusion is another set of terms commonly associated with such specialized parks or cities which involves the legal, regulatory, trade and business frameworks. These types of special zones are also called by various names, including: special economic zone, economic zone, free trade zone, duty-free zone, export processing area, etc. In short, the provision of infrastructure and services within defined geographical boundaries is often combined with a legal and regulatory system that is designed to attract international companies. The different models of economic zones and specialized parks are discussed extensively in Chapter 5, with the goal of helping to bring clarity to these definitional issues.

The second point is that the consultant team has made a concerted effort to ensure that the analysis and recommendations for establishing the Kuwait Energy Gateway are formulated by taking into account the specific Kuwait context and challenges that such an energy services and technology gateway represents in the current competitive market. The underlying approach has been to understand the niche opportunities upon which Kuwait can capitalize. The consultant team is aware of numerous technology parks developed by governments around the world that have never attracted international companies as originally envisioned, nor spurred the growth of domestic companies and contributed to overall economic development. Stated another way, the consultant team has sought to determine what would uniquely work best for Kuwait, given the agreed mandate that the Gateway should focus on the energy sector broadly defined.

SECTION ONE: THE MACRO CONTEXT

This section of the report examines the broad policy, economic, energy, and business trends which form the backdrop for exploring options for development of the Gateway. The analysis points out some of the constraints and challenges facing Kuwait, as well as significant advantages and opportunities. Chapter 2 provides an overview of economic and social objectives for the Gateway based on national development policies. Chapter 4 examines the current Kuwait business environment and its implications for the gateway. Chapter 5 gives considerable attention to comparative models of economic zones and specialized parks in order to determine what is the appropriate "fit" for Kuwait in light of the proposed mandate of the Gateway.

2 Economic and Social Objectives for Kuwait Energy Gateway

Chapter 2 Summary Findings and Conclusions

The proposed approach and objectives of the Kuwait Energy Gateway are closely aligned with Kuwait's medium-term and long-term national development goals and priorities. More specifically, the Gateway's objectives are to:

- Create productive work opportunities for young Kuwaitis and other GCC nationals;
- Provide an environment for effective technology transfer for oil and energy related industries;
- Place Kuwait as a regional center for advanced technical support and R&D services for the oil, gas, petrochemicals and power industries;
- Promote socio-economic development through encouraging start-ups of SMEs;
- Help to diversify the economy by attracting international knowledge-based companies and promoting the growth of similar Kuwaiti firms;
- Promote the commercialization of new energy technologies that help to diversify the Kuwaiti economy and promote Kuwait's comparative advantages, both regionally and globally.

The rationale for establishing the Gateway is closely aligned to the Government of Kuwait's national development plans and objectives and goes back four years to 2008 when KISR proposed the idea for a Technology City, now Gateway, as a contribution to support the oil and gas industry. A first proposal was forwarded to the Ministry of Oil to seek preliminary feedback. Following deliberations with concerned parties with the Kuwait oil sector, the Ministry requested KISR to further develop the proposal and conduct a full feasibility study. The idea was proposed to the Supreme Council for Planning and Development in 2009. It was approved as part of Kuwait Mid-Range Development Plan 2010/2011–2013/2014, with the expectation that a feasibility study would be conducted in 2011–2012.[1]

1 State of Kuwait (2009), Mid-range Development *Plan of the State of Kuwait 2010/2011–2013/2014 : A Draft General Framework*, The General Secretariat of the Supreme Council for Planning and Development, June 2009. *General Framework,* The General Secretariat of the Supreme Council for Planning and Development, June 2009.

Mid-Range Development Plan

The Mid-Range Plan highlights several problem areas for the Kuwait economy that are of direct relevance to the goals and objectives of the Gateway. These include:

- The decline in the private sector's contribution to economic activities from 37 percent of GDP in 2002 to 32 percent in 2007;
- The small proportion of the Kuwait labor force in private sector technical and scientific occupations;
- The lack of legislation and incentives to encourage the Kuwait labor force to work in the private sector;
- The relative increase in the oil sector contribution to GDP to 48 percent during the period 2002–2007.

In response to these problem areas in the economy, the Plan lays out several policy objectives that are of direct relevance to the creation of KEG:

1. Economic Policies:

1.(3)3. Motivating and encouraging the growth of the private sector to exercise a greater role in economic and social development

1.(3)9. Supporting small and medium-sized business and achieving diversity in their activities

1.(4–2)6. Opening all areas of business activities for job seekers, …activating partnerships between public and private sectors, and promoting investments opportunities in the State of Kuwait, locally and globally

1.(4–4)5. Attention to industries with high added value and advanced technology

1.(5–1)6. Use of the latest technologies to generate electricity and water production

2. Human and Social Development Policies

2.(2)5. Increasing employment opportunities for the national labor force in the private sector

2.(2)12. Supporting small and medium-sized projects and businesses… through integration with major projects

Based on the Plan's stated policies, it lays out some ambitious quantitative targets to be achieved by 2013/2014:

Table 2.1 Quantitative Targets of the Mid-Range Plan in the Oil and Non-Oil Sectors

Target	2013/2014
Oil Sector Share in GDP	39%
Non-Oil Sector Share in GDP	61%
Private Sector Share in Non-Oil GDP	70%
Private sector Share in Total Non-Oil Investment	65%
Average Rate of Investment to GDP	23%
Average Rate of Private Sector Investment to GDP	12.5%
Average Rate of Public Sector Investment to GDP	10.4%
Share of Oil Revenues tin Total Government Revenue	9.8%

State of Kuwait (2009), *Mid-range Development Plan of the State of Kuwait 2010/2011–2013/2014*

Kuwait Vision 2035

In February 2010, Kuwait's Parliament approved a KD31 billion (US$108 billion) development plan. This four-year plan is the first of six consecutive development plans that will guide the Government in achieving Kuwait's vision of becoming the Region's financial and trade center by 2035.[2]

The Kuwait Vision 2035 gives the following broad goals as the foundational underpinning for the country's social and economic development:

> *"In 2035, Kuwait shall become a financial and trade center that is attractive to investors; where the private sector leads economic activity, creating competition, and promoting production efficiency under the umbrella of enabling government institutions, which accentuates values, safeguards social identity, achieves human resource development, provides adequate infrastructure, with advanced legislation and an inspired business environment."*

The Kuwait Vision 2035 proposes reform covering five areas: economy, people, political systems, cultural environment, and Kuwait's international positioning. Some of these key reform areas are of direct relevance to the establishment of the KEG and the approach laid out in later chapters of this report:

1. ***Reducing red tape***—Reduce requirements for starting and operating a business, improve convenience and efficiency, increase access to land and capital for start-up and small businesses, and open up international trade.
2. ***Improving access to land***— Auction government land, engage the private sector in the development of public land and infrastructure, and establish a central land authority.
3. ***Creating fair and equal opportunities in the market***—Fight corruption and unequal treatment, develop an anti-trust law and competition commission, level the playing field for large and small business, reduce government intervention in the market, lift restriction on foreign investors, and promote foreign direct investment (FDI).
4. ***Promoting a sound and sustainable fiscal position***—Stop rapid increase in public sector employment and salaries, reduce expenditures through privatization, reduce government spending on infrastructure and development projects – through public private partnerships (PPP) – and diversify government income.
5. ***Expanding and empowering the energy sector***—Insulate industry from politics, become more open to international expertise, transform the electricity sector, optimize exploitation of available resources, explore the petrochemical option, and build a regional energy hub.
6. ***Creating a regional transport center***—Upgrade the capacity of existing infrastructure, introduce alternative management arrangements for existing infrastructure, build a first-class multimodal logistics hub that can become a gateway to the north, improve the regulatory environment for trade, and develop the trade and logistics center.
7. ***Developing a niche financial center***—Build a world-class financial sector, and develop a niche financial center focused on wealth management and capital markets.

2 State of Kuwait (2010), *Kuwait Vision 2035,* Parliament of Kuwait, February 2010.

8. ***Changing the dynamics of the labor market***—Professionalize and tighten working conditions in the public sector, prepare Kuwaitis for the private sector through training and matching skills to needs, and improve working conditions in the private sector.

9. ***Upgrading the education system***—Strengthen the teaching profession, increase the performance of students and schools, improve and adapt vocational and university education, and broaden educational choices.

10. ***Building a stronger healthcare system***—Promote healthy lifestyles and behavior, enhance the health infrastructure, join international prestige networks, and increase profile in international health.

11. ***Protecting the environment and fostering green development***—Use natural resources more efficiently, enhance regulation and enforcement, and invest in green energy.

12. ***Building a cultural haven and a leisure, sport and media sanctuary***—Develop an art center, build up the creative arts, and create facilities than strengthen the national image.

The Vision further calls for the issuances or revision of 21 economic/commercial laws and regulations and establishment of seven specialized authorities, such as a stock market, high council for privatization, transport, and telecom.

Several of these key Vision 2035 reform areas have direct relevance to the goals and objectives for the Kuwait Energy Gateway, in term of promoting private sector development and reducing red tape, promoting equal opportunities in the market, supporting the energy sector, fostering green development, and creating a regional trade and transport center.

Education and Labor Force Issues

Kuwait's 2009/10 to 2012/13 mid-range development plan[3] highlights a number of concerns and objectives with respect to the national labor market. The Government seeks to reverse current demographic trends, which have seen the proportion of non-Kuwaitis increase relative to total population, with the goal of increasing the Kuwaiti citizen population from 31 percent to 36 percent of the total by 2014. To achieve this goal would require a reduction of 10 percent in the expatriate population. This in turn would entail an increase in labor force participation by Kuwaiti citizens from 15.5 percent of total employment to 21 percent.

At the same time, the Kuwaiti Government seeks to reduce its role as the employer of last resort by stabilizing employment numbers in the private sector and adopting policies to encourage private companies to employ at least 65 percent of the 14,000 people who enter the labor force each year. This implies reducing the growth rate of public sector employment from 3 percent to 1 percent a year, while private sector employment increases its annual growth rate from 3 percent to 8 percent.

The Government also seeks to raise the quality of employment in the private sector, increasing labor productivity and shifting from labor-intensive to capital- and technology-intensive activities. To achieve this, the mid-range development plan places substantial emphasis on improving scientific education in primary and secondary schools and on increasing the proportion of tertiary admissions and graduates in scientific disciplines.

3 State of Kuwait (2009).

It serves little purpose to increase the number of qualified science graduates if there are no appropriate private sector jobs for them. The mid-range development plan thus calls for ***"strengthening the relationship between scientific research institutions and production and services sectors in the State, and the private sector"*** through various mechanisms, including the establishment of joint ventures between the Kuwait Institute for Scientific Research and the Kuwaiti private sector, and the development of partnerships with other private sector projects… including [in] the field of petroleum and chemicals, techniques and management of water resources, and the area of renewable energy… "***[t]he establishment of specialized units in the Kuwait Institute for Scientific Research, to support the cooperation with the private sector*** and the production and services sectors… [and] ***marketing of scientific research output in the production and services sectors in the State,*** through joint channels and programs for marketing output and applications of scientific research."[4]

The Kuwait Energy Gateway explicitly serves these objectives by serving as a vehicle for establishment of joint ventures between state research entities (including KISR and K-company R&D facilities) and private enterprises and for the marketing of scientific research output in the production and services sectors. By increasing domestic demand for graduates in technical and scientific disciplines, and through collaboration with educational and scientific institutions, the Gateway will improve the quality of education and the productivity of Kuwaiti employees.

4 *ibid.*, p. 61.

3 Global and Regional Energy Trends

Chapter 3 Summary Findings and Conclusions

This chapter underscores the continuing and primary importance of oil and gas in the world economy for the next three decades. While demand for oil and gas will shift toward non-OECD countries (notably the high growth economies such as India and China), increased output by the oil and gas exporting economies will be the principal source for meeting future demand.

To achieve this level of supply, many of the established oil exporters in the Gulf Region will need significant investment in new technologies to maximize exploitation of existing fields and initiate exploitation of new heavy oil reserves consisting of higher-density, hard-to-extract hydrocarbons.

In the different scenarios presented by the International Energy Agency and the US Department of Energy, there are a number of implications for Kuwait and the Gulf Region:

- Price volatility will continue to plague oil and gas markets despite the gradually increasing high price trends.
- Oil price increases could be slower than expected if non-OECD countries significantly increase their policy support to renewable energy technologies and lower the overall demand for hydrocarbons.
- New sources of hydrocarbons, such as in Brazil, Russia, sub-Saharan Africa, and North America could lower the dependence of global markets on the Gulf States, especially if there is political instability in the greater MENA Region.
- Continued subsidies in Kuwait for domestic gasoline consumption as well as subsidies and inefficiencies in power generation will lower foreign exchange earnings for the Government over the medium to longer term—unless steps are taken to slowly reduce the levels of subsidies for transport, energy, and power.

This chapter explores the context and trends for energy-related commodities and products which are—and will be for decades to come—the cornerstones for the world economy. More specifically, the chapter examines both the global and regional nature of energy markets and provides some general thoughts on how these trends might impact the Kuwaiti economy and the development of the Kuwait Energy Gateway. As the readers of this report are aware, the Kuwait economy is largely driven by the country's dependence on abundant hydrocarbon resources. At the same time, however, Kuwaiti government policy has prioritized the need to diversify the country's economic base and promote more knowledge-based sectors and industries. This confluence of energy trends and national development goals is an important ingredient to understand in developing a successful approach for the establishment of the Gateway.

Global Energy Trends

There are numerous organizations that analyze trends, make projections, and develop future scenarios about the energy sector. These organizations include both public organizations (government ministries and international organizations) as well as private companies. Many of the major oil companies have their own specialized research units that conduct such analyses.

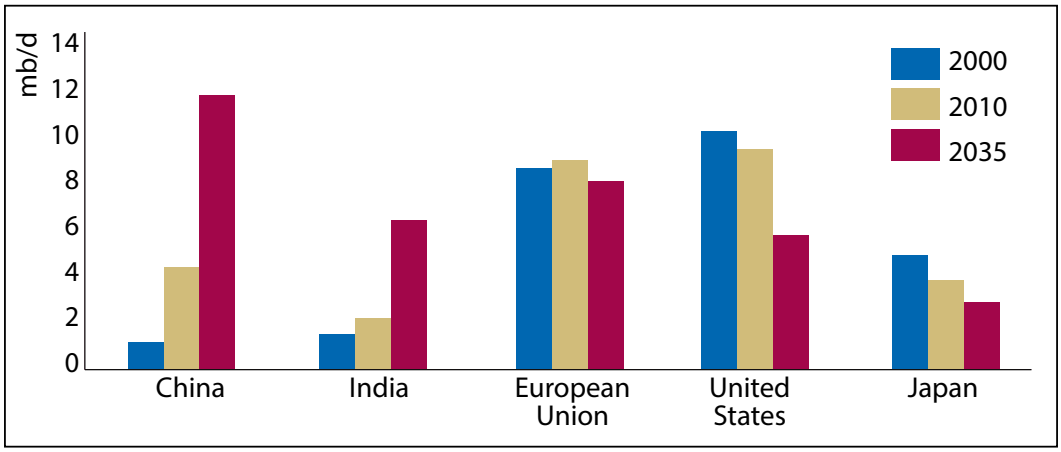
Two of the most widely quoted and well respected analyses of energy trends are prepared annually by the International Energy Agency (IEA) in Paris and the U.S. Department of Energy (USDOE) in Washington. Their most recent annual reports are IEA's *2011 World Energy Outlook* and the U.S Department of Energy's *International Energy Outlook 2011.* Published respectively in November and September 2011, these two publications provide the most comprehensive and up-to-date overview of energy trends through 2035.[5] In addition, OPEC produces its own *World Oil Outlook,* which agrees with the general trends projected by the two other organizations.

Both reports of IEA and USDOE present very similar findings, of which some of the key projections are summarized below.

Overall, there is common agreement that despite uncertainty about the prospects for short-term global economic growth, demand for energy is expected to grow strongly, increasing by approximately one-third from 2010 to 2035. If the average annual growth rate for the global economy reaches 3.5 percent, energy demand would be even higher. A lower rate of global GDP growth rate in the short-term does not appreciably decrease energy demand over the long term.

At the same time, demand for all fuels rises, but the share of hydrocarbon fuels in global primary energy consumption falls slightly from 81 percent in 2010 to 75 percent in 2035. Natural gas is the only fossil fuel to increase its share in the global mix over the period to 2035. In the power sector, renewable energy technologies, led by hydropower and wind, account for half of the new capacity installed to meet growing demand.

Figure 3.1 Net Imports of Oil



Source: IEA, *2011 World Energy Outlook*

In the USDOE projections, fossil fuels are expected to continue supplying much of the energy used worldwide. Although liquid fuels—mostly petroleum based—remain the largest source of energy, the

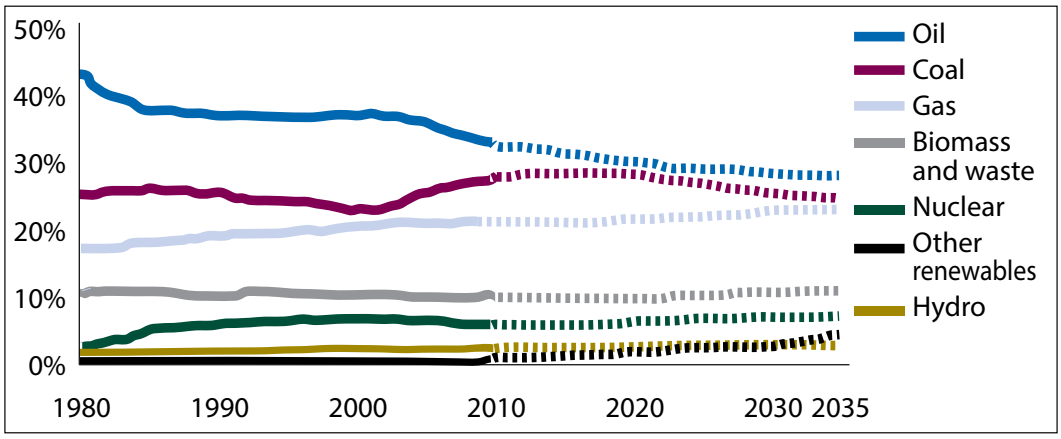
5 These two documents are, respectively, International Energy Agency (2011), *2011 World Energy Outlook,* Paris; November; and U.S. Department of Energy (2011), *International Energy Outlook 2011,* U.S. Energy Information Administration, Washington, September.

liquid fuels' share of world marketed energy consumption falls from 34 percent in 2008 to 29 percent in 2035, as projected high world oil prices lead many energy users to switch away from liquid fuels when feasible. Renewable energy is the world's fastest growing form of energy, and the renewable share of total energy use increases from 10 percent in 2008 to 14 percent in 2035.

In the immediate future, pressures on oil markets may be eased by slower economic growth and by the expected return of Libyan oil to the market, but trends on both the oil demand and supply sides maintain medium- and long-term pressure on prices. The IEA assumptions on import prices see a rise in prices to US$120/barrel (in year-2010 dollars) in 2035. At the same time, continued price volatility is likely to remain a common occurrence.

Virtually all scenarios suggest that the dynamics of energy markets will be determined by non-OECD countries. The IEA projection is for non-OECD countries to account for 90 percent of population growth, 70 percent of economic output, and 90 percent of energy demand growth through 2035. China will be the major energy consumer. By 2035, China will consume 70 percent more energy than the United States, even though per-capita energy consumption in China will still be less than half the level in the United States. The rates of growth in energy consumption in India, Indonesia, Brazil and the Middle East are even faster than in China.

Figure 3.2 Proportion of Primary Energy Sources in World Energy Demand, 1980–2035



Source: *World Energy Outlook 2011*

With respect to petroleum, all of the net increase comes from the transport sector in emerging economies, as economic growth pushes up demand for personal mobility and freight. Oil demand (excluding biofuels) rises from 87 million barrels per day (mb/d) in 2010 to 99 mb/d in 2035. The total number of passenger cars doubles to almost 1.7 billion in 2035. Sales in non-OECD markets exceed those in the OECD by 2020, with the center of gravity of car manufacturing shifting to non-OECD countries before 2015. The rise in petroleum use comes despite significant gains in fuel economy in many regions, notably for passenger vehicles in Europe and for heavy freight in the United States. Alternative vehicle technologies will emerge that use oil much more efficiently or not at all, such as electric vehicles. Yet major market penetration for these automotive technologies, based on commercial viability, is still 10–20 years away.

During the 2010–2035 period, oil imports to the United States, currently the world's biggest importer, drop as efficiency gains reduce demand and new supplies are developed. Even though American energy efficiency improves, increasing reliance on oil imports in emerging market countries heightens concerns about the cost of imports and supply security. By 2035, four-fifths of oil consumed in non-OECD Asia comes from imports, compared with just over half in 2010. Globally, reliance grows on a relatively

small number of producers, mainly in the MENA Region. In aggregate, the increase in production from the MENA Region is over 90 percent of the required growth in world oil output, pushing their share of OPEC in global production above 50 percent in 2035.

With respect to natural gas, projections are for major increases on both the supply and demand side. One scenario sees gas reaching the same level of demand as coal by 2035, with 80 percent of the additional demand coming from non-OECD countries. Policies promoting fuel diversification support a major expansion of gas use in China—met through higher domestic production and through an increasing share of LNG trade and Eurasian pipeline imports. Global trade in gas and LNG doubles and more than one-third of the increase goes to China. Russia remains the largest gas producer in 2035 and makes the largest contribution to global supply growth, followed by China, Qatar, the United States and Australia.

Finally, both the IEA and USDOE projections highlight the impact of Japan's disaster at the Fukushima Daiichi Nuclear power plant and the questions it raises about the future role of nuclear power. While nuclear power policies and plans are not likely to change in countries such as China, India, Russia and Korea, it is possible that there could be a substantial shift away from nuclear power, based on assumptions that no new OECD reactors are built, that non-OECD countries build only half of the additions previously projected, and that the operating lifespan of existing nuclear plants is shortened. While creating opportunities for renewables, such a low-nuclear future would also boost demand for fossil fuels, put additional upward pressure on energy prices, and make it harder and more expensive to combat climate change. The consequences would be particularly severe for those countries with limited domestic energy resources which have been planning to rely relatively heavily on nuclear power, as well as making it considerably more challenging for emerging economies to satisfy their rapidly growing demand for electricity.

Table 3.1 World Industrial Energy Use by Energy Source 2008–2035 (quadrillion BTUs)

Region	2008	2015	2020	2025	2030	2035	Average annual percent change, 2008–2035
OECD							
Petroleum and other liquids	28.1	26.2	27.0	27.4	27.6	28.0	0.0
Natural gas	19.1	20.2	21.2	21.9	22.9	24.0	0.9
Coal	9.2	8.6	8.6	8.8	9.0	9.2	0.0
Electricity	11.4	11.5	12.3	13.0	13.7	14.4	0.9
Renewables	5.3	5.4	6.1	7.0	7.6	8.0	1.5
Total OECD	**73.0**	**72.0**	**75.2**	**78.1**	**80.7**	**83.6**	**0.5**
Non-OECD							
Petroleum and other liquids	27.2	31.2	32.2	34.4	37.5	40.6	1.5
Natural gas	25.0	29.4	33.1	36.9	41.1	45.6	2.2
Coal	40.7	52.7	56.0	59.9	63.3	66.2	1.8
Electricity	16.5	20.9	24.0	28.1	32.5	37.0	3.0
Renewables	8.9	10.0	11.2	12.4	13.8	15.2	2.0
Total non-OECD	**118.3**	**144.2**	**156.3**	**171.8**	**188.1**	**204.5**	**2.0**
World							
Petroleum and other liquids	55.3	57.5	59.2	61.9	65.1	68.6	0.8
Natural gas	44.0	49.7	54.3	58.8	63.9	69.5	1.7
Coal	49.8	61.2	64.5	68.7	72.3	75.5	1.5
Electricity	27.9	32.4	36.3	41.1	46.1	51.4	2.3
Renewables	14.2	15.4	17.2	19.4	21.4	23.2	1.8
Total world	**191.3**	**216.2**	**231.5**	**249.9**	**268.8**	**288.2**	**1.5**

Note: Totals may not equal sum of components due to independent rounding.
Source: US Department of Energy, *International Energy Outlook 2011*

Power Generation and Renewable Energy Trends

The worldwide mix of primary fuels used to generate electricity has changed considerably over the past four decades. Coal continues to be the fuel most widely used for electricity generation, although generation from nuclear power increased rapidly from the 1970s through the 1980s. Use of natural-gas-fired generation grew rapidly in the 1980s and 1990s. The use of oil for electricity generation has been declining since the mid-1970s, when oil prices rose sharply. The high fossil fuel prices recorded between 2003 and 2008, combined with concerns about the environmental consequences of greenhouse gas emissions, have renewed interest in the development of alternatives to fossil fuels—specifically, nuclear power and renewable energy sources.

According to the U.S. Department of Energy, long-term prospects continue to improve for generation from both nuclear and renewable energy sources (even after the Japan nuclear accident in 2011)—primarily supported by government incentives. Renewable energy sources are the fastest-growing sources of electricity generation, with annual increases averaging 3.1 percent per year from 2008 to 2035. Natural gas is the second fastest-growing generation source, increasing by 2.6 percent per year, followed by nuclear power at 2.4 percent per year.

Although coal-fired generation increases by an annual average of only 1.9 percent over the projection period, it remains the largest source of generation through 2035. However, the outlook for coal, in particular, could be altered substantially by any future national policies or international agreements aimed at reducing or limiting the growth of greenhouse gas emissions.

Table 3.2 OECD and Non-OECD Net Electricity Generation by Energy Source, 2008–2035
(trillion kilowatt hours)

Region	2008	2015	2020	2025	2030	2035	Average annual percent change, 2008–2035
OECD							
Liquids	0.4	0.3	0.3	0.3	0.3	0.3	–0.8
Natural gas	2.3	2.5	2.7	2.9	3.4	3.8	1.8
Coal	3.6	3.3	3.4	3.5	3.6	3.8	0.2
Nuclear	2.2	2.4	2.6	2.7	2.8	2.9	1.0
Renewables	1.8	2.3	2.7	2.9	3.1	3.2	2.2
Total OECD	**10.2**	**10.9**	**11.6**	**12.4**	**13.2**	**13.9**	**1.2**
Non-OECD							
Liquids	0.7	0.6	0.6	0.6	0.5	0.5	–1.0
Natural gas	1.8	2.4	3.0	3.5	4.1	4.6	3.4
Coal	4.1	5.2	5.6	6.7	7.9	9.1	3.0
Nuclear	0.4	0.7	1.2	1.5	1.7	2.0	6.0
Renewables	1.9	2.8	3.6	4.0	4.5	5.0	3.7
Total non-OECD	**8.9**	**11.8**	**13.9**	**16.3**	**18.8**	**21.2**	**3.3**
World							
Liquids	1.0	0.9	0.9	0.9	0.8	0.8	–0.9
Natural gas	4.2	4.9	5.6	6.5	7.5	8.4	2.6
Coal	7.7	8.5	8.9	10.2	11.5	12.9	1.9
Nuclear	2.6	3.2	3.7	4.2	4.5	4.9	2.4
Renewables	3.7	5.1	6.3	7.0	7.6	8.2	3.1
Total World	**19.1**	**22.7**	**25.5**	**28.7**	**31.9**	**35.2**	**2.3**

Note: Totals may not equal sum of components due to independent rounding.
Source: US Department of Energy, *International Energy Outlook 2011*

Investment Issues in Global Energy Supply

To meet the balance of projected global supply and demand for energy to 2035, the IEA estimates that a total of US$38 trillion (in 2010 dollars) is required in global investment for energy supply infrastructure. Almost two-thirds of the total investment is in countries outside of the OECD. Oil and gas collectively account for almost US$20 trillion, as both the need for upstream investment and the associated cost rise in the medium and long term. The power sector claims most of the remainder, with over 40 percent of this being for transmission and distribution networks.

A critical issue in investment requirements is the rising cost of bringing oil to market as oil companies are forced to turn to more difficult and costly sources to replace lost capacity and meet rising demand. Production of conventional crude oil—the largest single component of oil supply—remains at current levels before declining slightly to around 68 mb/d by 2035. To compensate for declining crude oil production at existing fields, an additional 47 mb/d of gross capacity are required, twice the current total oil production of all OPEC countries in the Middle East. A growing share of output comes from natural gas liquids (over 18 mb/d in 2035) and unconventional sources (10 mb/d). The largest increase in oil production comes from Iraq, followed by Saudi Arabia, Brazil, Kazakhstan and Canada.

IEA's *World Energy Outlook 2011* also raises concerns about a shortfall in upstream investment in the MENA Region. This could have far-reaching consequences for global energy markets. Such a shortfall could result from a variety of factors, including higher perceived investment risks, deliberate government policies to develop production capacity more slowly, or constraints on upstream domestic capital flows because priority is given to spending on other public programs. If, between 2011 and 2015, investment in the MENA Region runs one-third **lower** than the US$100 billion per year required, consumers could face a substantial near-term rise in the oil price to US$150/barrel (in year-2010 dollars).

Energy Projections for Kuwait and Gulf Region

The revised TOR for the feasibility study prepared by KISR (December 2011) provides an excellent summary of the Kuwaiti and Regional aspects of energy demand and supply, and the Region's relationship with world trends. Table 3.2 and Figure 3.3 show the growth of oil and gas production, as well as power generation in Kuwait and the Middle East Region compared with world trends up to 2030 (OPEC, 2011; BP, 2011; EIA, 2011).[6] The growth of oil production is nearly 28 percent in Kuwait and 40 percent for the Region, versus only 14 percent for the rest of the world. The growth in gas production is almost double that of the rest of the world. Kuwait is expected to see a significant growth in gas production due to recent discoveries of some large reserves. Power generation for Kuwait will double, and the growth is over double that of the Region and the world.

Apart from oil, gas and power, the petroleum refining and petrochemical industries in the Middle East are expected also to expand significantly during the same period. As suggested above, extensive investment in existing production facilities is also required, which will involve replacing old facilities, as well as revamping and upgrading other facilities with new technologies to comply with the requirements of the market and with international environmental standards.

6 Organization of Petroleum Exporting Countries, OPEC (2011), 2011 *World Oil Outlook 2011,* OPEC Secretariat, Vienna, British Petroleum (2011), *Energy Outlook 2030,* London; and IEA (2011), ibid.

Table 3.3 Forecasted Production Levels and Percentage Growth of the Oil, Gas, and Electric Power Production to 2030

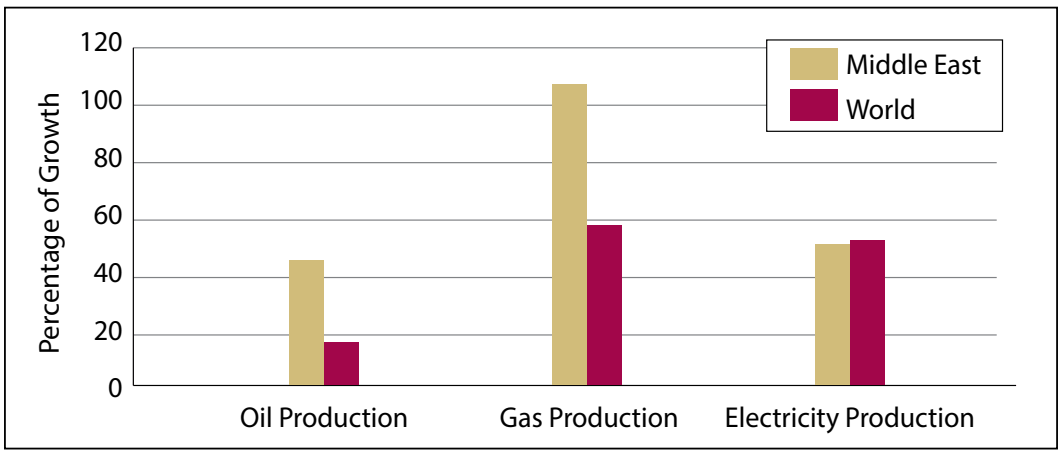
	Unit	Production Level		Growth (%)
		2010	2030	
Kuwait Oil Production	million b/d	2.9	3.7	28
ME Oil Production	million b/d	25.2	35.2	40
World Oil Production	million b/d	83.1	94.6	14
ME Gas Production	trillion Cubic Feet	426	837	96
World Gas Production	trillion Cubic Feet	2859	4331	51
Kuwait Electricity Production	gigawatts	11	22–28	100–160
ME Electricity Production	gigawatts	165	240	45
World Electricity Production	gigawatts	4623	6769	46

Source: OPEC (2011); BP (2011); EIA (2011)

As noted in the KISR TOR, the implications of these trends have a major impact on the potential services and technology priorities supported by the Kuwait Energy Gateway, including:

- Exploration of deeper oil and gas resources;
- The need for secondary and tertiary oil recovery techniques to enhance production in aging conventional oil fields;
- Changes in crude oil properties towards higher densities and sulfur levels;
- The increasing complexity of petroleum refining due to crude oil quality and the need to produce cleaner fuels;
- Solar and wind energy will start to play an increasing role in power generation in the Region;
- Complexity of environmental problems;
- The need to optimize and streamline production activities to reduce cost and increase revenues.

Figure 3.3 Forecasted Growth of Oil and Gas Production and Electricity Generation in the Middle East and the World



Source: OPEC (2011); BP (2011); EIA (2011)

4 Kuwait Business Environment

Chapter 4 Summary Findings and Conclusions

Kuwait's business environment is less open and business-friendly than in other GCC countries. Kuwait also ranks below most other GCC countries on economic competitiveness.

In spite of legal reforms that have opened many sectors of the economy to foreign participation, administrative requirements make it difficult in practice for foreign investors to operate.

Many countries in the GCC have overcome similar administrative barriers to investment by establishing economic zones, which offer less intrusive business regulation. For Kuwait to compete successfully to attract foreign investment, it should also establish one or more economic zones.

The difficulty of rapid and comprehensive liberalization is one of the reasons for the proliferation of economic zones of various kinds, since they can serve as laboratories for reform—controlled environments in which new practices can be tested before being introduced in the wider national economic and political context.

Economic zones and specialized parks are not a panacea, but by attracting foreign investment and the resulting spillover effects on management know-how, technology, and innovation, they can increase competitiveness.

A country's business environment can be assessed on several dimensions, including business regulation, commercial and investment legislation, the quality and cost of physical and social infrastructure, and the quality and cost of human resources (these latter three can be grouped together under the rubric of "competitiveness"). This chapter seeks to address each of these dimensions. This chapter also reviews Kuwaiti legislation related to foreign investment, establishment of special economic zones and free trade zones, taxation, and other areas that can affect location decisions by the private sector.

Business Regulation

The World Bank's annual *Doing Business* report is one of the most closely-watched indicators of the relative competitiveness of a country's business environment. The report ranks 183 countries on 10 different dimensions as well as on an aggregate basis.

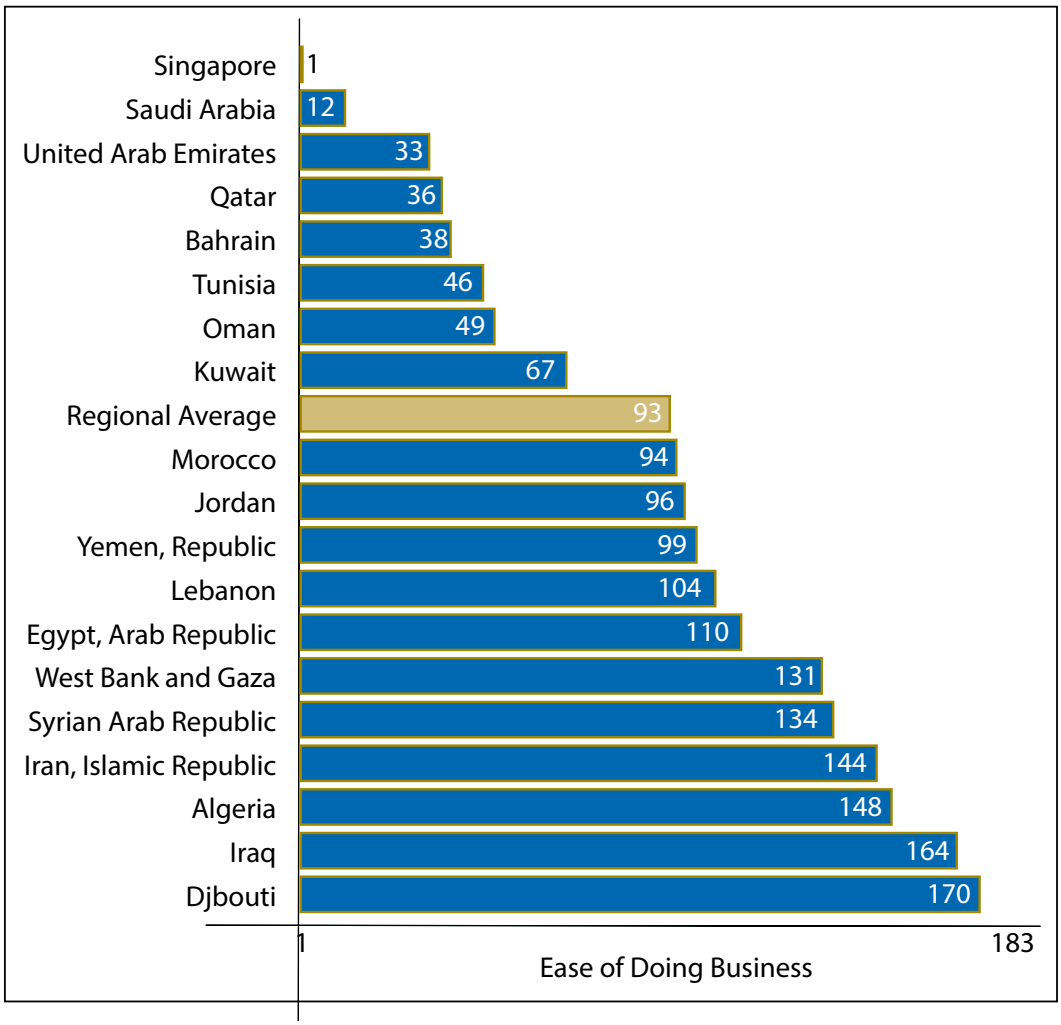
Each of these dimensions, which include registering a business, getting a building permit, transferring title to land, paying taxes, hiring and firing employees, and resolving commercial disputes, seeks to measure the number of procedures or documents, the total time, and the cost required to comply with applicable business regulations and administrative procedures.

As Figure 4.1 shows, Kuwait's business climate, though better than the average for the MENA Region, lags behind that of the other GCC countries. Saudi Arabia, ranked 12th in the world, is a clear leader,

but the UAE, Qatar, Bahrain, and Oman also rank considerably higher than Kuwait. Areas of particular weakness include:

- Starting a business: Kuwait ranks 142nd out of 183 countries worldwide. It takes 12 procedures and 32 days to register a company and requires paid-in capital equivalent to 71.8 percent of annual per capita income;
- Obtaining construction permits: Kuwait ranks 121st of 183 countries. It takes 130 days and costs 121.8 percent of annual per capita income to get a building permit;
- Trading across borders: Kuwait ranks 112th of 183 countries. The UAE, the regional leader, ranks fifth in the world in ease of exporting. In Kuwait, an importer must process 10 documents to import a consignment, versus only 5 in Saudi Arabia and the UAE, and it requires, on average, 19 days to clear an import shipment in Kuwait versus only 7 days in UAE. The cost to clear a container through Kuwaiti Customs for import or export is nearly double that in the UAE.
- Resolving commercial disputes: Kuwait ranks 117th out of 183 countries. It takes an average of 50 procedures and 556 days to resolve a commercial dispute through the court system.

Figure 4.1 Relative Ease of Doing Business, MENA Region



Source: World Bank, *Doing Business* 2012

Kuwait does enjoy a favorable ranking on certain other dimensions. It is 15th in the world in ease of paying taxes, and 29th in the world (and second in the MENA Region) in protection of investor rights.

The *Doing Business* indicators are far from perfect; however, they are of some use as a general indicator of the quality of a country's business environment. Most important, the rankings have become widely publicized to the extent that a poor ranking, or a failure to progress in the relative standings, can deter potential investors.

The findings from the *Doing Business* report are supported by consultant interviews with business people and government officials in Kuwait and the Gulf Region, and by the survey of international businesses carried out as part of the consultants' research. 46 percent of survey respondents reported an unfavorable impression of the ease of obtaining land in Kuwait, 46 percent reported an unfavorable impression of the ease of getting an operating license or project approval, and 46 percent also cited restrictions on business activities as an unfavorable aspect of the business environment.

The IMF, in the Staff Report of its Article IV consultation with the Kuwaiti Government, echoed these findings, stating that the effective implementation of the National Development Plan requires "enhancement of the business environment and development of streamlined procedures and processes and the needed legislative base for efficient and timely project screening and implementation."[7]

Several people working for companies in the petroleum industry, interviewed by members of the consultant team at the World Petroleum Congress in Doha in December 2011, referring to the difficulty and length of time required to obtain operating licenses and project approvals, said that Kuwait stands for "queue and wait."

Treatment of Foreign Investors

Kuwait, like most other Arab and GCC countries, treats foreign investors differently from domestic investors, particularly with respect to permitted and prohibited activities, percentage ownership requirements, and taxation. Also, Kuwait, in common with the other GCC countries, treats investors from other GCC countries as domestic, rather than foreign.

The most important laws applicable to foreign investment and to the possible establishment of the Kuwait Energy Gateway are:

- The Tax Decree of 1955 (Amiri Decree No 3 of 1955) as amended by Law No 2 of 2008;
- The Executive Byelaw on taxation issued by the ministerial order No 29 of 2008;
- Industrial Law No. 56 of 1996 and its Executive Regulations;
- Foreign Investment Law No. 8 of 2001;
- Resolution of the Minister of Commerce and Industry No. 23 of 2003 for implementation of the Foreign Investment Law;
- Council of Ministers resolution No. 1006/2 of 2003 on the incorporation of Kuwaiti Companies where foreigners possess 100 percent of their capital;
- Council of Ministers Resolution No.1006/1 of 2003, specifying the business activities for which a foreign business license may be granted;
- Council of Ministers Resolution No. 1006/2 for 2003, setting out conditions for 100 percent foreign ownership of a Kuwaiti joint stock company;
- Council of Ministers Resolution No. 738/9 of 2008 adding economic activities and enterprises which foreign investors are allowed to undertake in the State of Kuwait;

7 IMF (2011) Kuwait: 2011 Article IV Consultation—Staff Report; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Kuwait, Washington, July 2011, p. 11.

- Council of Ministers Resolution No. 1067/8 of 2009 adding economic activities and enterprises which foreign investors are allowed to undertake in the State of Kuwait;
- Commercial Law No. 68 of 1980;
- Commercial Companies Law No. 15 of 1960;
- Council of Ministers Resolution No. 1006/2 for 2003;
- Law of Labor in the Private Sector No. 6 of 2010;
- Law on Free Zones No. 26 of 1995.

The trend in Kuwaiti legislation and regulation on foreign investment has recently been in the direction of greater liberalization. The Foreign Investment Law of 2001, for example, for the first time made it possible for foreign entities to own 100 percent of a Kuwaiti company. Prior to this, foreign investors were subject to a ceiling of 49 percent stipulated under the Law of Commerce No. 68 of 1980 and the Commercial Companies Law No. 15 of 1960. The Explanatory Memorandum to the law states that "globalization of trade and privatization are international trends adopted by developed countries that have resulted in widening the role of the private sector while minimizing dependence upon the public sector."

The Council of Ministers Resolution No. 1006/1 of 2003 specified the following activities as eligible for 100 percent foreign ownership:

- Industries except for enterprises related to Oil or Gas exploration or production;
- Construction, operation and management of Infrastructure enterprises in the fields of water, power, drainage and communications;
- Banks, Investment Corporations and Foreign Exchange Companies, which the Central Bank of Kuwait may agree to incorporate;
- Insurance companies which the Ministry of Commerce and Industry agrees to incorporate;
- Information Technologies and Software Development;
- Hospital and Medicines manufacturing;
- Land, sea and air transport;
- Tourism, hotels and entertainment;
- Culture, information and marketing except for issuance of newspapers and magazines and opening of publishing houses;
- Integrated housing projects and zone development except for real estate speculation;
- Real estate investment through foreign investor subscription to the Kuwaiti shareholding companies as per the provisions of law No. 20/2002.

Council of Ministers Resolution 738/9 of 2008 added storage and logistics services to this list, and Resolution No. 1067/8 of 2009 added environmental services.

The new law also provided protection against expropriation or nationalization of foreign investments, guaranteed free repatriation of capital and profits, and provided a set of incentives and privileges that included:

- Tax exemptions for up to ten years;
- Benefits arising under double taxation treaties and encouragement and protection of investment;
- Total or partial exemptions from customs duties on import of specified terms such as equipment, machinery, spare parts, and raw materials;
- Total or partial exemption from other export and import restrictions;

- Allocation of land and real estate in accordance with the laws and regulations of the State of Kuwait;
- Recruitment of foreign labor required for the project in accordance with the laws and regulations of the State of Kuwait.

The 2001 Foreign Investment Law also established the Kuwait Foreign Investment Bureau (KFIB) to facilitate and promote inward foreign direct investment and the Foreign Capital Investment Committee, headed by the Minister of Commerce & Industry, to process applications for grant of licenses.

Passage of this law and accompanying regulations and resolutions, even though they substantially liberalized the investment environment for foreign companies, did not lead to a surge in foreign direct investment. Although the law now allows 100 percent foreign ownership in almost all key economic sectors, the number of 100 percent foreign-owned entities remains small and confined mainly to the banking sector. What accounts for this lackluster performance?

In spite of undeniable progress, reform in Kuwait has been tentative. Coface, the global export credit insurance group, which provides country risk assessments, cites "limited opening of the economy to the private sector and foreign direct investment" and "political foot-dragging on structural reforms" as key weaknesses, and notes that "economic liberalization measures have only made progress in gradual steps."[8] The U.S. Embassy in Kuwait writes, "While the Direct Foreign Capital Investment Law is on the books, foreign companies still report numerous delays in getting approval to operate in Kuwait and the law does not appear to have changed the investment climate all that much… Some reports claim that the Minister [of Commerce and Industry] will cancel or change [the Foreign Capital Investment Committee] into an authority after a…report by the Economic Reform Committee describing it as complete failure."[9]

The Foreign Investment Law of 2001 and the subsequent implementing resolutions and regulations, even though they represented a significant improvement over the previous framework governing foreign investment, did not go far enough in several key areas. The most significant shortcoming in the legislation and regulations is the discretionary character of the approvals process. Investments are subject to a "positive list" of permitted investments rather than a "negative list," which is now considered an international standard best practice, allowing investment in all areas not specifically prohibited. The investment law and regulations also require detailed review and approval of each company's investment license application rather than granting automatic or routine approval to most projects that meet certain stipulated conditions. This creates uncertainty and delays, and creates a perception that Kuwait is not as welcoming to foreign investment as it claims to be. Although the foreign investment law does allow for 100 percent foreign ownership, in practice most foreign companies wishing to do business in Kuwait are obliged to do so via a Kuwaiti agent or as a minority shareholder in a Kuwait company. This condition is especially onerous for foreign companies with intellectual property they wish to protect.

The powers granted by the law to KFIB are severely circumscribed; it has no power to grant investment approvals, but instead acts as an additional layer of bureaucracy, adding its review of investment applications to those conducted by the Foreign Capital Investment Committee of the Ministry of Commerce and Industry, which actually grants the industrial license, and those carried out by the Public Authority for Industry (PAI), which conducts detailed project assessments as a condition of granting industrial licenses.

8 Coface (2011), "Kuwait: Business Climate Assessment," http://www.coface.com/CofacePortal/COM_en_EN/pages/home/risks_home/business_climate/climate_file/Kuwait?extraUid=572157
9 U.S. Embassy in Kuwait (2005), "Investment Climate," http://kuwait.usembassy.gov/investment_climate.html

KFIB must decide within a month of receiving an investment application whether to pass it on to the Foreign Capital Investment Committee, which has up to four months (longer, if the Minister deems it necessary) to rule on the application. The law provides no right of appeal of a negative ruling, and bars the applicant from submitting another application for one year. Similarly, KFIB has no authority to grant the investment incentives and privileges allowed by law, and simply submits its recommendation to the Foreign Capital Investment Council.

Manufacturing companies—and the law is vague on what constitutes manufacturing—have to jump over additional hurdles and obtain an industrial license from the PAI. The implementing regulations stipulate that the PAI must rule on an application within 60 days of submission; but the documentary requirements are significant and include, for each project, a detailed integrated economic feasibility study, a marketing study, and an engineering and technical plan. No exemptions are made based on the size of the project or the specific industrial activity involved.

Many countries have abolished general industrial licensing entirely, and simply require projects in certain industries to obtain clearances from public health and safety or environmental authorities. Even in those countries, such as Egypt, which have retained a general system of industrial licenses, the licensing requirement has been abolished for most projects and is retained only for the largest and riskiest projects, especially those that consume large amounts of water and/or electricity, both of which are in short supply and subsidized.

Although new legislation and regulations have reduced discrimination against foreign investors, they have not eliminated it. Corporate income tax is levied on foreign companies and the foreign portion of foreign-domestic joint ventures, but not on Kuwaiti or other GCC investors. The 2008 executive bye-law on taxation reduced the corporate income tax from a sliding scale that could reach 55 percent of profits to a flat rate of 15.5 percent, while the Foreign Investment Law allows up to 10 years of tax-exempt status. However, tax holidays tend to be worth less than they appear, since many new projects will fail to make a profit for the first several years of operation. The incentives, moreover, including both tax holidays and import duty exemptions, are discretionary. Though a tax holiday of up to 10 years may be granted, the law does not automatically grant it, and the criteria by which the award and the level of the tax holiday are determined, are nowhere specified. Similarly, the Foreign Investment law allows for a full or partial exemption from import duties, but does not specify the basis for their determination.

The fiscal burdens from these conditions are not onerous. Kuwait is a low-tariff country, while the earnings of many foreign investors, even if they are totally exempted from Kuwaiti taxes, will be taxed by their home countries when repatriated. But their discriminatory character and the lack of certainty at the outset of the investment application process send a signal to foreign investors that they are not entirely welcome in Kuwait. When investors compare these conditions with those in other GCC countries as they make their location decisions, they often decide in favor of Kuwait's competitors.

As Table 4.1 illustrates, Kuwait's overall treatment of foreign investors with respect to taxation and foreign ownership, though it is not the best in the GCC, is not substantially worse than in the other GCC countries. Each of those countries, however, has one or more zones in which foreign companies can operate with fewer restrictions. These zones, which include free zones, special economic zones, economic and industrial cities, and science and technology parks, offer foreign companies a less restrictive business environment. Kuwait does not have any such zones. The different models and features of economic zones and similar structures, the benefits they offer, and international best practices in zone governance and management are discussed in detail in Chapter 5.

Table 4.1 Foreign Ownership and Taxation in GCC Countries

	Maximum foreign ownership	Corporate income tax on foreign investors	Payroll taxes	Equal tax treatment for foreign and domestic companies?	Can non-GCC foreigners own land?
Kuwait	100%§	16.0%–8.5%*	11.0%	N	N
Bahrain	100%	0%**	12.0%	Y	y
Oman	70%§§	12.0%	10.5%	Y	y∞
Qatar	100%§	10%***	10.0%	N	y∞
Saudi Arabia	100%	20.0%†	9.0%	N	y∞
UAE	49%§§§	0%††	12.5%†††	Y	y

sSources: Deloitte, PKF Chartered Accountants, Ernst & Young, U.S. Foreign Commercial Service, World Bank

* 15.0 percent corporate income tax + 1.0 percent contribution to Kuwait Foundation for the Advancement of Science + 2.5 percent National Labor Support Tax (for companies listed on Kuwait Stock Exchange

** 46 percent on oil companies

*** 35 percent in oil and gas. Qatari and GCC investors exempt from 10 percent corporate tax.

† 30 percent in the natural gas sector and 85 percent in the oil and hydrocarbons sector. 20 percent rate applies only to non-Saudi or GCC investors

†† except oil and gas, (50 percent/55 percent by Dubai/Abu Dhabi), branches of foreign banks (20 percent)

††† only on national employees; no payroll taxes on foreign employees

§ allowed on a case by case basis

§§ 100 percent may be granted in exceptional circumstances. 100 percent also allowed in free zones

§§§ 100 percent allowed in Free Zones; otherwise, foreign ownership limited to 49 percent

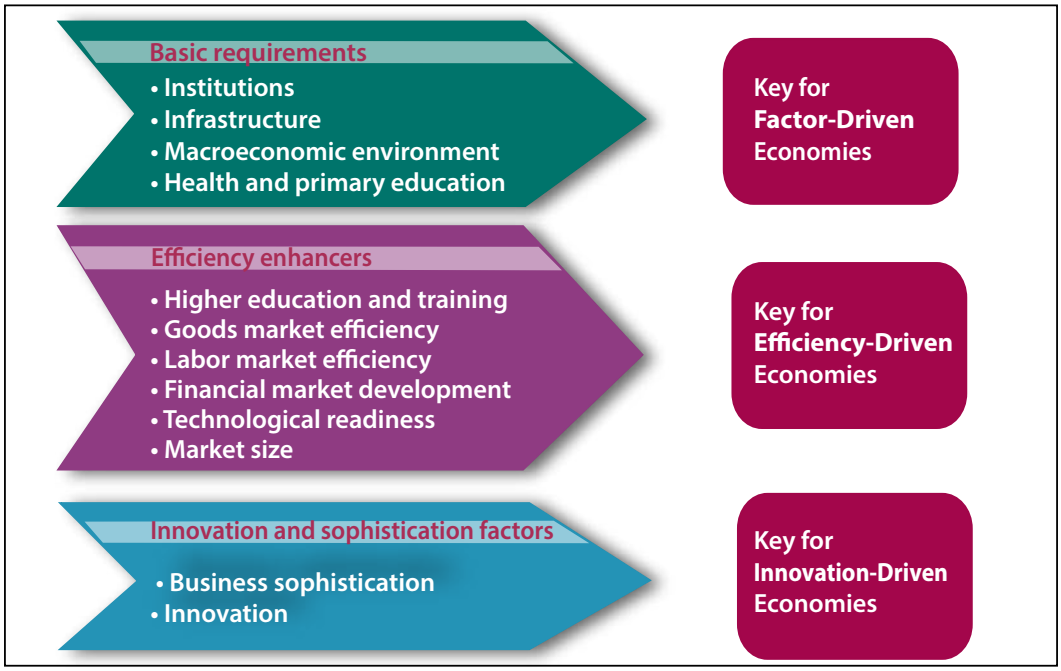
∞ In designated areas only; long-term leaseholds more widely available

Competitiveness

According to the World Economic Forum, which has become famous for its annual Global Competitiveness Ranking, based on a methodology developed jointly with Professor Michael Porter of Harvard Business School, competitiveness is "the set of institutions, policies, and factors that determines the level of productivity of a country." A country's level of productivity is important because it determines the rates of return obtained by investments in an economy. Foreign investors, naturally, seek the highest possible returns on investment so, all things being equal, they will choose to invest in more competitive economies.

The WEF Global Competitiveness Rankings methodology is based on a comparative assessment of 12 pillars of competitiveness, illustrated in Figure 4.2. Typically, poorer countries' economies tend to be factor-driven, middle-income economies efficiency-driven, and rich countries innovation-driven.

Figure 4.2 The 12 Pillars of Competitiveness



Source: World Economic Forum, 2011

The GCC countries do not fit neatly into this pattern. Kuwait, Qatar, and Saudi Arabia, despite being among the richest countries in the world, have economies that are mainly factor-driven. The WEF classifies each of these three economies as being in a stage of transition from Stage 1 (factor-driven) to Stage 2 (efficiency-driven). Bahrain and parts of the UAE, whose energy resources are much more modest, have been forced to diversify and become Stage 3 innovation-driven economies. Oman is classified in a transitional phase from Stage 2 to Stage 3 (innovation-driven).

Despite its abundant oil wealth, Kuwait faces increasing pressures to move up the competitiveness ladder. New technical challenges in exploiting its oil resources require more innovative solutions. At the same time, a large cohort of Kuwaiti graduates of Kuwaiti and foreign universities seek employment. Government has traditionally been the employer of last resort, and could continue to absorb all or most of these graduates, but as more Kuwaitis pursue higher education, this could put strains on the budget. More important, government cannot offer enough stimulating and challenging jobs. Placing graduates in make-work positions, even if it is affordable, wastes one of the country's most valuable resources and could, over time, lead to social discontent.

Since 2002, the WEF and the Organization for Economic Cooperation and Development (OECD) have collaborated on a periodic assessment of competitiveness in the Arab world. All of the GCC countries score relatively high among the 142 countries the WEF evaluates, but the 2011–2012 report shows Kuwait near the bottom of the GCC rankings.

Table 4.2 WEF Global Competitiveness Index Rankings of GCC Countries

Economy	Rank
Qatar	14
Saudi Arabia	17
UAE	27
Oman	32
Kuwait	34
Bahrain	37

Source: World Economic Forum 2011

The classification of Kuwait, Saudi Arabia, and Qatar as Stage 1 factor-driven economies has implications for the rankings, since it places greater weight on the basic requirements of institutions, infrastructure, macroeconomic environment, health, and primary education, areas in which the Gulf countries perform well. For Bahrain and the UAE, the critical requirements for innovation-driven economies are given greater weight. Consequently, although Kuwait scores slightly higher than Bahrain on the overall ranking, the measurements are not directly comparable. The report attributes Kuwait's relatively strong ranking largely to its macroeconomic stability which, it says, compensates for weaknesses in other areas.[10]

The report observes that a number of challenges must be addressed for Kuwait to become more competitive, and mentions the education system and the poor quality of primary, math and science, and management education as particular concerns. In addition, *"domestic rules on Foreign Direct Investment keep foreign investment from coming into the country, thereby depriving the economy of beneficial spill-over effects in management practice, technology, and innovation."*[11]

There is a strong argument to be made for economy-wide reforms that would make Kuwait a more welcoming environment for foreign investors, especially the kind that will bring the technology, innovation, and management know-how the economy and society need. However, Kuwait, like many countries in the Arab world as well as in Asia, Africa, Europe, and Latin America, may find such sweeping reforms difficult to enact. Kuwait, as the most democratic country in the Region, may have political factions that can resist and even block them. The difficulty of rapid and comprehensive liberalization is one of the reasons for the proliferation of economic zones of various kinds, since they can serve as laboratories for reform: controlled environments in which new practices can be tested before being introduced in the wider national economic and political context.

10 See Annex 5 for details on the composition and structure of the GCI.
11 World Economic Forum (2011), *Arab World Competitiveness Report 2011–2012,* World Economic Forum and OECD, 2011, Geneva, p. 19.

5 Comparative Models of Economic Zones and Technology Parks

Chapter 5 Summary Findings and Conclusions

An economic zone (EZ) is defined as a geographically delimited area administered by a single body, which offers certain incentives or benefits to businesses that physically located within its boundaries, and almost always have different legal and regulatory conditions than those found in the wider economy.

An economic zone can provide a more attractive business environment and overcome barriers to investment in the wider economy by offering liberalized investment regimes, simple and non-discriminatory incentives, simplified labor regimes, streamlined approvals and administrative procedures, and streamlined compliance and reporting requirements.

One-stop administration: Successful economic zones are governed by streamlined, customer-oriented institutions with sufficient autonomy and authority to promote, authorize, and regulate economic activity in the zone.

Specialized parks are defined as property-based vehicles for securing economic development through improved efficiency in turning knowledge and research results into employment generating new business activity.

The public sector policy drivers for the creation of specialized parks are diverse across different countries, emphasizing different outcomes as their key priority. Often, they target one of the following: increased high quality employment, FDI, more efficient technology transfer, stronger technology based sectors, diversification of the business base, more and better business innovation, technology commercialization from the knowledge base.

Economic Zones: Need and Purpose

An economic zone is defined as a geographically delimited area administered by a single body, which offers certain incentives or benefits—and, almost always, different legal and regulatory conditions than those found in the wider economy—to businesses that physically locate within its boundaries. Over 130 countries have economic zones of some kind. There are an estimated 3,500 economic zones worldwide, directly employing more than 60 million people and exporting over US$600 billion annually.

The purpose of an economic zone is often to attract foreign direct investment and to increase exports, but ***the essential feature of an economic zone is to create an environment in which businesses can operate free of many of the administrative barriers and regulatory difficulties that enterprises often encounter in the national economy.***

There are many kinds of economic zones, and the terminology can be confusing. Table 5.1 illustrates the range of different kinds of zone. They include free trade zones (FTZs), also known as commercial free zones (FZs), which are enclosed duty-free areas, offering warehousing, storage, and distribution

facilities for trade, trans-shipment, and re-export operations; export processing zones (EPZs), which are industrial estates aimed primarily at attracting export-oriented investments in manufacturing industries; and special economic zones (SEZs), also called free ports, which are larger zones—some cover hundreds or even thousands of square kilometers and may be cities in their own right. SEZs typically host a wide range of industrial and service sectors and often include on-site residence. There are also many kinds of specialized zones, which go by different names, targeted at specific sectors or economic activities. Examples include science and technology parks, petrochemical zones, medical centers, logistics parks, airport-based zones, and so on. Such zones may limit access only to companies in priority sectors or companies providing essential services to those companies, and their infrastructure tends to be tailored to the needs of their priority sectors.

The terms FTZ, FZ, EPZ, and SEZ are often used interchangeably and without much consistency. All of these configurations are forms of ***economic zone,*** and we will use the term economic zone as an umbrella designation. An ***economic*** zone can be an FTZ or EPZ, or it may incorporate certain common elements of FTZs or EPZs, but this is not essential. ***An economic zone offers a range of benefits to companies and investors, but it does not necessarily incorporate the export incentives and requirements typical of an FTZ or EPZ.***

This is an important point with respect to the potential of companies located in a Kuwaiti Economic Zone to export to other Arab countries. Under the Greater Arab Free Trade Agreement (GAFTA), as well as under the GCC economic agreement, products from free zones are not considered as originating in the country in which the free zone is located and, hence, do not qualify for the preferential tariff treatment allowed to member states. This prohibition is not terribly important for sales from the Gateway to other GCC countries, which have a maximum common external tariff of 5 percent, but it could be significant for products exported from the KEG to Iraq or other GAFTA (but not GCC) countries

The free port or FTZ concept long predates that of economic zones. Free ports have existed for hundreds of years and, in some form, can be traced back to Roman and Hellenic times, but what we now think of as an SEZ principally dates back to 1979 and 1980, when China established four SEZs: Shenzhen, Zhuhai and Shantou in Guangdong Province, and Xiamen in Fujian Province.

Economic zones serve several important purposes:

- ***Controlled liberalization:*** An economic zone can allow authorities to experiment with liberalized trade and investment policies in a controlled environment. When China established the Shenzhen Special Economic Zone in 1979 it was intended to be "an experimental ground for the practice of market capitalism within a community guided by the ideals of 'socialism with Chinese characteristics.'"[12] Many of the liberal reforms first introduced in Shenzhen were subsequently introduced into the wider economy, once the authorities felt it was safe to do so. Zones may offer benefits that may not be available to investors in general, such as 100 percent foreign ownership of companies.
- ***Access to land:*** In countries in which investors, especially foreign investors, have difficulty obtaining land, zones can offer land that is already zoned for purpose, either for sale or on long-term leasehold.
- ***Infrastructure:*** Zones may be endowed with superior infrastructure, such as access roads, water, and electricity, as well as security. In countries with poor infrastructure, this can be a powerful attraction for investors.

12 *The Economist (2010),"*The spirit of enterprise fades: Capitalism in China," The Economist, January 23, 2010.

- ***Regulatory simplicity:*** In many countries, complicated bureaucratic procedures, such as business registration and licensing, can deter investors. Zones often offer a simplified system, insulating investors from the bureaucracy and streamlining investment approvals.
- ***Fiscal incentives:*** Zones often offer special tax exemptions or deferments. They also typically offer tax and duty exemptions on imported equipment and inputs, which can help make exports more cost-competitive.

Types of Economic Zones

Table 5.1 Types of Economic Zones

Type of Zone	Development Objective	Physical Configuration	Typical Location	Eligible Activities	Markets	Examples
Free Trade Zone (Commercial Free Zone)	Support trade	Size < 50 hectares	Ports of entry	Entrepot and trade-related activities	Domestic, re-export	Colón Free Zone, Panama
"Pure" EPZ	Export manufacturing	Size < 100 hectares; total area is designated as an EPZ	Any	Manufacturing, other processing	Mostly export	Karachi EPZ, Pakistan
"Hybrid" EPZ	Export manufacturing	Size < 100 hectares; only part of the area is designated as an EPZ	Any	Manufacturing, other processing	Export and domestic market	Lat Krabang Industrial Estate, Thailand
Special Economic Zone	Integrated development	Size > 10 km2	Any	Multi-use	Domestic, internal and export markets	Aqaba Special Economic Zone, Jordan; Clark Freeport Zone, Philippines
Enterprise Zone, also Empowerment, Urban Free zones	Urban revitalization	Size < 50 hectares	Distressed urban or rural areas	Multi-use	Domestic	
Single Factory EPZ	Export manufacturing	Designation for individual enterprises	Country-wide	Manufacturing, other processing	Export market	Mauritius Mexico Madagascar Togo

Source: FIAS—World Bank/IFC, 2005

As Table 5.1 illustrates, there are many types of development zones, each of which accommodates different kinds of economic activities and targets different kinds of investors. Many of these variations are oriented mainly or exclusively towards export-oriented manufacturing industries, especially factories set up by foreign investors. This model is often appropriate, especially for countries with large pools of cheap labor, and can serve as a powerful engine of economic development, as seen in countries such as Mauritius, Madagascar, Thailand, Sri Lanka, Mexico and Pakistan.

Table 5.2 Examples of Freeports/SEZs

Zone	Size (km2)	Date Established
City States		
Singapore	693	1819
Gibraltar	6.5	1830
Hong Kong	1,042	1841
Macau	25	1887
Islands		
Labuan, Malaysia	92	1990
Batam, Indonesia	416	1978
Cities/Provinces		
Iquique, Chile	2.4	1975
Shenzhen, China	327	1980
Subic Bay, Philippines	300	1992
Kaliningrad, Russia	15,000	1995
Aqaba, Jordan	375	2000
Howard, Panama	1,500	2004

Source: FIAS/World Bank, unpublished report 2002

EPZs in these cases have brought substantial benefits through foreign direct investment (FDI), which has contributed technology, management and marketing know-how and market access to countries that previously had little of any of these.

The pure EPZ model may be less appropriate, however, for countries with a large domestic or regional market, adequate domestic capital resources, an existing industrial base, and relatively high income levels and labor costs. For such countries, there is less of a need to develop export-led manufacturing and economic growth. Such countries may instead need ways to encourage investment in underdeveloped regions, to increase domestic value added in manufacturing and service industries, to improve the skills base of their work force, and to become innovation-led economies.

Just as more developed countries experience a shift in the share of GDP and employment represented by the service sector, so do SEZs in more advanced economies seek to encourage investment in service industries as much as, or more than, they do manufacturing investments.

The SEZ concept is broader than that of an EPZ in that it typically involves integrated and multifaceted development that may include manufacturing, services, tourism, and residential development. Instead of focusing narrowly on export markets, SEZs are more likely to accommodate a wider range of investments that target domestic, regional and international markets. As such, the kinds of benefits and incentives offered to investors in an SEZ are unlikely to involve specific export subsidies or incentives and instead will offer a similar and common set of benefits to all investors. Many zones that started out as free zones or free trade zones, and which still may be referred to as FZs or FTZs, have in fact evolved into SEZs. Such is the case, for example, with the Jebel Ali Free Zone in Dubai, the first major zone development in the Gulf Region.

As illustrated in Table 5.2, it is not uncommon for SEZs to encompass an entire city, region or province of a country or, in the case of Singapore, Hong Kong, Macau and Gibraltar, an entire country or territory.

SEZs are fundamentally different from traditional free zones. Instead of platforms designed exclusively to promote exports and attract FDI, or enclaves rigidly isolated from the national economy, they are intended as platforms for diversified economic growth that not only could but also should spill over into the national economy. Some of the main features that distinguish SEZs from Free Zones and EPZ models are:

- Larger size. SEZs typically cover larger areas, and therefore offer more flexibility to firms in locating their plants and in the scope they provide for linkages among firms in a zone and between firms in a zone with firms outside the zone.
- Broader range of permitted activities. Companies located in an SEZ can typically undertake any legal activity including manufacturing, tourism, residential development,

duty-free shopping, ICT manufacturing and services, warehousing, transshipment, re-packaging activities, business development services, and many others. Most zones allow individuals, whether foreigners or nationals, to reside in the zones, permanently or temporarily.;

- Duty-free privileges. Most SEZs allow for all kinds of merchandise to be brought into the zone duty- and tax-free by registered enterprises or individual residents. Enterprises are allowed to import any merchandise in any quantity duty- and tax-free, and are not limited to goods directly used in the manufacturing process as is the case for EPZs. Duty- and tax-free merchandise can be sold at retail or wholesale and sometimes may be consumed within the zone area. This is in contrast to EPZs or even commercial free zones that do not permit retail sales or on-site consumption of duty- and tax-free products.
- Full access to the domestic market on a duty-paid basis. EPZ enterprises are usually required to export at least 80 percent of their production. Most SEZs, by contrast, allow enterprises to sell any amount to the export market, local market or to consumers located temporarily or permanently within the Zone. Sales to the domestic customs territory are unrestricted so long as all applicable import duties, taxes and other charges are fully paid.

Specialization of Zones

Although the SEZ concept tends to favor integrated development across many different sectors, the concept is also flexible enough to allow for a higher degree of specialization than is normally the case for EPZs and FTZs. As Table 5.3 illustrates, many SEZs now specialize in a specific sector like science and technology, logistics, tourism, financial services or heavy industry. This ability to specialize illustrates the flexibility of the SEZ concept. Unlike EPZs, which generally focus on a narrow range of labor-intensive manufacturing industries such as garments or electronics assembly, the SEZ concept can be adapted to the specific needs, advantages, opportunities and challenges of a given country, region or city.

Table 5.3 Specialized Zones

Type of Zone	Development Objective	Typical Location	Activities	Markets	Example
Technology or Science Parks	Promote high tech and science-based industries	Adjacent to universities, institutes	High technology activities	Domestic and export	King Abdullah Science Park, Saudi Arabia; Qatar Science & Technology Park; Knowledge Oasis Muscat
Petrochemical Zones	Promote energy industries	Petrochemical hubs; efficient energy sources	Petrochemicals and other heavy industry	Domestic and export	Jubail and Yanbu Industrial Cities, Saudi Arabia
Financial Services	Development of offshore financial services	None	Offshore financial & non-financial services	Export	Labuan Offshore Financial Centre, Malaysia
Software and Internet	Development of software and IT services	Adjacent to universities, urban areas	Software and other IT services	Export	Dubai Internet City, UAE

Table 5.3 Specialized Zones, continued

Type of Zone	Development Objective	Typical Location	Activities	Markets	Example
Airport-based	Air cargo trade and trans	Airports	Warehousing, transshipment, sub-dividing	Re-export and domestic	Kuala Lumpur Airport Free Zone, Malaysia ; Dubai Airport Free Zone
Health Care Zones	Promote medical services	Urban areas	Hospitals, clinics, biomedical research, medical schools	Domestic and export	Dubai Health Care City
Education Zones	Attract international institutions and students, upgrade local skills base	Urban areas	International universities, technical schools, e-learning, business partnerships	Domestic and export	Dubai Knowledge Village; Dubai International Academic City
Renewable Energy/Clean Technology	Alternative energy/green technology/ energy efficiency	Any	Manufacturing, tourism, logistics, technology	Export and/or domestic	Masdar City, Abu Dhabi; Aurora Pacific Ecozone, Philippines; Inspira Renewable Energy SEZ, Aurangabad, India
Tourism	Integrated tourism development	Tourism areas	Resorts and other tourism	Export and domestic	Baru Island, Colombia; Bay Islands Free Zone, Honduras; Emerald Coast Tourism and Financial Free Zone, Cameroon
Logistics or Cargo Villages	Support logistics	Airports, ports, transport hubs	Warehousing, transshipment	Re-export	RAKIA Poti Industrial Free Zone, Georgia; Dubai Logistics City

Sources: Foreign Investment Advisory Service, World Bank Group; Koios Associates research

Zone Features and Incentives

An SEZ is a type of zone that provides greater flexibility than most other zone concepts. Its critical features are:

- Openness to many different kinds of developments including industrial, commercial, residential, tourism and services;
- Enterprises in SEZ can engage in domestic or international trade or both;
- Tendency to accommodate investments in more than one sector or industry;
- Greater ability to create competitive industrial and/or service clusters;
- Streamlined regulations and administrative procedures.

A World Bank/IFC study of trends in economic zone development and management identified several important features of SEZs as they have evolved since the early 1980s.[13]

- Evolution towards large, integrated economic communities;

13 FIAS (2008), *Special Economic Zones Performance, Lessons Learned, and Implications for Zone Development,* Foreign Investment Advisory Service—World Bank/IFC—Washington, April 2008.

- A leading role for the private sector in development and management of zones;
- The potential for zones to be laboratories and catalysts for wider economic and policy reform at the national level (examples include China, Jordan/Aqaba, Korea, Kuwait, Malaysia);
- Integration of Zones into global production networks and supply chains;
- Decline of the enclave/export platform concept;
- Importance of services and integration of marketing and logistics services with manufacturing for development of competitive clusters.

Many countries in the 1990s had bad experiences with incentives-based competition. In Brazil, as well as in the U.S. and Canada, different states and provinces competed with one another to attract big investments, especially in automotive manufacturing, and offered ever-more generous packages of tax breaks and other fiscal incentives. Competition between countries was also common, with many countries offering such generous fiscal and financial incentives, including cash and in-kind grants, that the economic benefits from investment projects could not conceivable outweigh the cost of the incentives. Examples include Botswana's Financial Assistance Policy of the late 1980s and 1990s, which was finally scrapped in 1999 after several highly visible failures cost the government tens of millions of dollars. Ireland's incentives have also been questioned, especially in the case of Intel's first major investment in the country, which reportedly cost the government well over US$1 billion in fiscal incentives.

Most countries have now accepted that incentives-based competition can be a ruinous exercise in which the "winner" may end up being the loser in terms of net fiscal impact and other measures. There has been a tendency for countries and regions to offer broadly similar packages of incentives, so that competition among countries and regions is increasingly based on other criteria. Table 5.4 illustrates the kind of incentives on offer in most economic zones. Although incentive packages may not be identical, in general a less generous benefit in one area may be compensated by a more generous incentive in another.

The conclusion for Kuwait is that its economic zones incentives package should be comparable to those offered by other economic zone regimes, especially in the Gulf/MENA Region.

The Table 5.4 describes some of the incentives used around the world. In the case of Kuwait, the features of the zone should be customized and may all of the features listed below. Generally speaking policy incentives, as outlined in Box 5.1 are generally more important to investors than fiscal incentives.

Table 5.4 Types of Economic Zone Incentives Found Worldwide

Incentive Type	Description
Fiscal/Taxes	• Tax exemptions, tax holidays or reduced tax rates on corporate profits
	• Exemption from VAT and/or property taxes
	• Reduced tax rates or exemptions on salaries paid to foreigners
Investment Conditions	• Unrestricted repatriation of capital
	• Unrestricted repatriation of profits
	• No limits on foreign participation in capital
	• Land ownership by foreigners
	• Equal treatment of domestic and foreign investors

Table 5.4 Types of Economic Zone Incentives Found Worldwide, continued

Incentive Type	Description
Infrastructure	• Highest quality and guaranteed availability of water, electricity, sewerage, telecommunications and roads • Availability of serviced plots for sale or rent • Pre-built warehouse and factory buildings for rent or sale • Access to national and international transport • Deregulation of utilities, allowing for independent power projects and other private infrastructure development and operation
Customs	• Exemption from all import duties • Exemption from all export levies and tariffs • Duty exemption for capital equipment • Duty exemptions for imported raw materials and intermediate goods
Labor	• No restrictions or reduced restrictions on work and residence permits for foreigners • Liberalized labor regulations for local staff (e.g., fewer restrictions on working hours)
Administration	• Streamlined, simplified and transparent procedures for company registration and investment project approval and licensing • "One-stop-shop" for investment approvals • Investors deal with zone administration and are insulated from contact with national and municipal regulatory and licensing authorities • Insulation/exemption from external health, tax, labor and safety inspections
Currency and Foreign Exchange	• No foreign exchange controls • No foreign exchange surrender requirements

Box 5.1 Typical Economic Zone Policy Incentives

- ***Broader economic activity authorization:*** SEZs generally promote a broad range of economic activities, actively promoting synergies between investments in industry, information technology, ports, airports, utilities, tourism, commercial, and residential development, promoting cluster-based development not possible in traditional free zones.
- ***Policy liberalization:*** SEZs generally grant full duty-free status (often including duty-free consumption), liberalized investment regimes, simple and non-discriminatory incentives, simplified labor regimes, streamlined approvals and administrative procedures, streamlined compliance and reporting requirements, dedicated dispute resolution mechanisms, best practice customs procedures and technologies, and full access to the domestic market on a duty-paid basis. They can also offer such sector-specific features as offshore financial centers
- ***Deregulation of utilities:*** Many SEZs deregulate telecommunications, power, and other utilities within the zone, offering enormous advantages to companies.
- ***One-stop administration:*** Successful SEZs are governed by streamlined, customer-oriented institutions with sufficient autonomy to promote, authorize, and regulate economic activity in the zone. Effective SEZ administrations are lean, and outsource or privatize a variety of public sector functions. Broad development authority can be granted to master developers, or multiple development contracts can be entered into with different service providers.

Management and Business Models for Zones

One of the most striking trends in zone development over the past 15 years has been the growth in private sector involvement in the development and management of economic zones. Traditionally, public zone authorities have owned, operated and regulated zones, receiving financing from government to establish zones and offering subsidized facilities and services. Often these authorities have had little interaction with and little authority over other government bodies. Most zones traditionally have focused on manufacturing exclusively and have done little to recognize or encourage investment in logistics, finance and business support services that can foster the emergence of competitive industrial clusters. This model has had some success in developing countries that have large pools of cheap labor, and in a small number of specific industries such as garments and electronics assembly. Even in these limited cases, however, many zones have failed precisely because they have adhered too rigidly to a government-driven, command-and-control model.

The new paradigm of economic zone development is different. Its key features include:

- Public zone authority as a regulator of zone development and of activities within a zone;
- Reliance on private developers to build, operate, and, often, own zones on a cost-recovery basis via Build-Operate-Transfer (BOT) or Build-Operate-Own-Transfer (BOOT) arrangements;
- One-stop shop set up within the zone (by the zone authority) for quick processing of permits and paperwork;
- Extension of zone enterprise designation to service intermediaries such as financial institutions, advertising and marketing companies, accounting and consulting firms, engineering firms and transport and logistics providers rather than being reserved only for manufacturers;
- Greater use of policy incentives and business development services in place of fiscal incentives.

Figure 5.1 illustrates some of the salient features of the new generation of economic zones.

Figure 5.1 Features of New Economic Zones

Strategy	Design & Management	Incentives
• Economic Zone strategy is strongly linked to national development, investment and industrial strategies. • Different Economic Zones in one country are not fragmented development initiatives; they must complement each other	• Move towards the development of SEZs and SZs (industry and services with high value added • Independent regulatory bodies backed up by a law • Private sector development & management of zones • PPPs for infrastructure provision/ PPP financing • Cluster zone modelling and supply chain management • Fully integrated zones with on-site residence	• Focus on regulatory and administrative incentives • Fully inclusive Single window & one stop shop services. • Innovative development policy incentives linked to R&D, skills development, SMEs & regional development. • Less reliance on tax incentives and more focus on services (business development services)

Source: OECD (2010), *Designing Economic Zones for Effective Investment Promotion,* MENA-OECD Investment Programme, Amman, February 15–16, 2010.

As Figure 5.2 illustrates, there is a range of different roles or actors in the SEZ development process. In all cases, the regulator is a public sector body. The developer and operator—these can be the same or different entities—can be public bodies or private sector companies. The older generation of free zones tended towards a fully public mode of regulation, development, and operation, often with one entity exercising all three functions. Over the past 15 years, the model has shifted in favor of private development and operation. This occurs irrespective of the question of land ownership. It is possible to have private zone development and operation on land owned by the state, provided a sufficiently long lease is granted to enable the private companies to make an appropriate return on their investment.

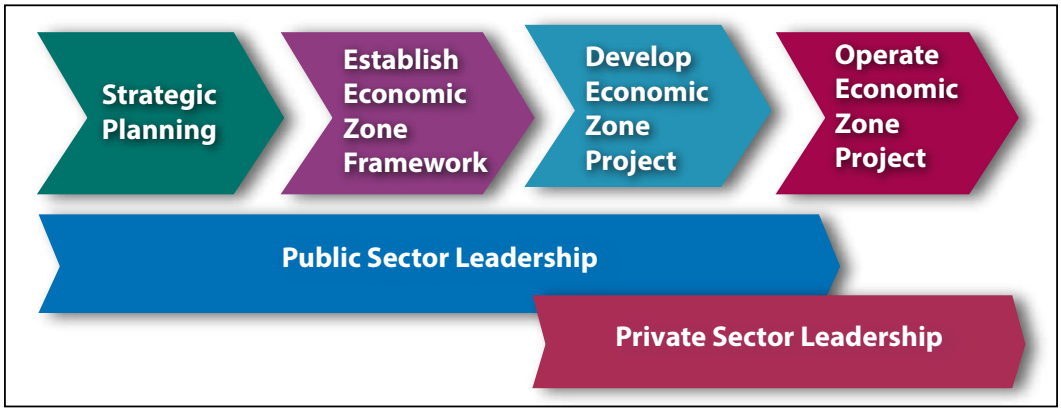
Figure 5.2 Key Roles in the Economic Zone Development Process

Many successful economic zones programs, including those in Thailand and the Philippines, started out with zones owned, developed, and operated by the zone authority: the Philippines Economic Zones Authority (PEZA) in the Philippines, and the Industrial Estates Authority of Thailand (IEAT) in Thailand. After developing the first two or three public zones, these authorities shifted to a private sector model for development and operation. Even though the original zones remain in public hands and are operated by the relevant authority, all newer zones have been developed and are operated by private companies, many of them foreign investors. The same holds true in Egypt, where the original Free Zones program was developed and run entirely by the General Authority for Investment (GAFI). This program was replaced by a new generation of "investment zones," regulated by GAFI but developed and operated by private companies.

Figure 5.3 illustrates the steps in the economic zone planning process. The public sector naturally plays a leading role in the initial stages of the process and maintains an important role throughout, but the private sector ideally should be involved in consultation from the earliest phases. The point at which the lead shifts from the public to the private sector depends on many factors but is ultimately based on the market perception of risk. If private entities are willing to undertake the investment required to develop a specialized park according to the standards set by the government, there is no compelling reason for government to do so. In many, if not most, cases, however, early-stage economic zone development is unlikely to occur without a significant level of public sector participation.

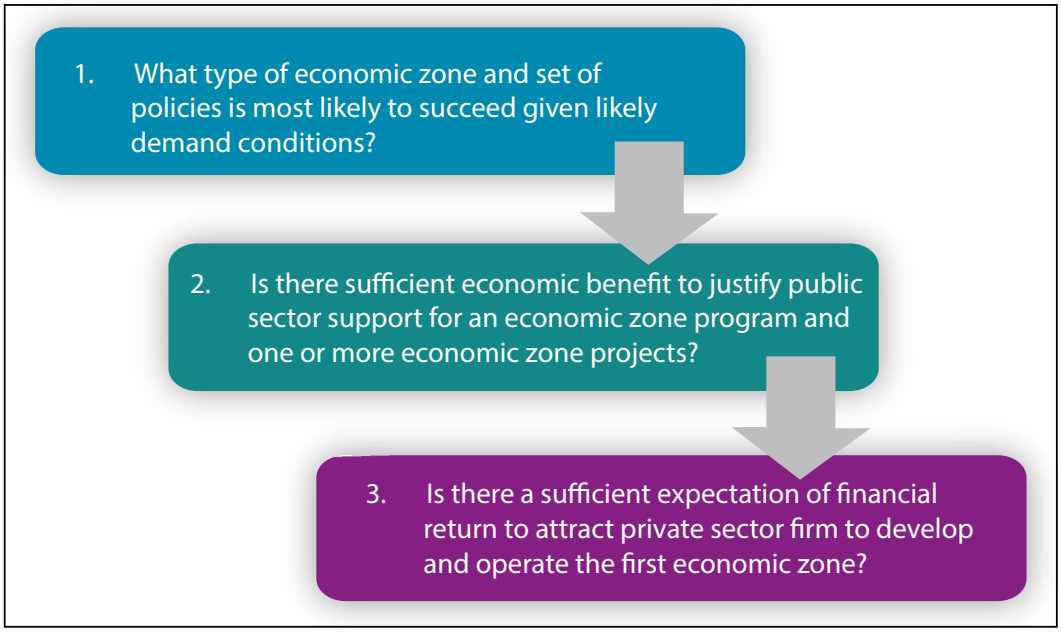
Even in a development model largely dominated by private initiative and capital, the public sector will be called on to grant fiscal and other incentives and, in almost all cases, to invest in off-site infrastructure such as connecting roads, power lines, water mains, and upgraded port and airport facilities, as well as in social infrastructure such as the schools, medical facilities, and safety and security services that may be required as people are drawn to the area of the zone in pursuit of jobs.

Figure 5.3 Steps in the Economic Zone Planning Process



Governments, consequently, must answer several key questions, as illustrated in Figure 5.4. Most fundamentally, government must determine whether the expected benefits, however measured, justify the public expenditure required. This determination should take into account not only the public capital investment but also the revenue effects of forgone customs duties and taxes and the opportunity cost of providing land for the purpose of an economic zone instead of another, competing use.

Figure 5.4 Key Questions Governments Ask in Deciding Whether and How to Develop an SEZ



Critical Factors for Zone Success

There are nearly as many failed zones in the world as there are successful ones. A failed zone project or program can harm a country's overall image as an investment destination, but almost all zone failures could have been avoided had they been evaluated, planned, and implemented correctly. The main factors that can help ensure the success of a zone are:

Acceptance and endorsement by principal public and private stakeholders

Zones, especially SEZs, which typically encompass a much broader range of economic activities than traditional free zones or EPZs, touch on the responsibilities and prerogatives of a great many public and private sector bodies. Depending on the precise mix of activities and incentives, Ministries of Trade and Industry, Finance (including tax and customs authorities), Land, Housing, Tourism, Agriculture, Health, Environment, Labor, and Education, as well as investment and trade promotion agencies and local government authorities, may potentially exercise some authority with respect to zone development and/or economic activities that take place within a zone. Their acceptance—and, ideally, their endorsement and active collaboration—can be critical. Governance structures and procedures that involve these bodies can help ensure zone success.

Enabling legislation and implementing regulations

Well-crafted enabling legislation is important, since it establishes mechanisms for setting up zones and defines what kinds of entities can establish zones and what kinds of activities may be permitted or prohibited. Enabling legislation should also identify or create the entity responsible for governance and oversight of a zones program as well as defining governance structures for individual zones. Regulations should specify procedures for creating new zones and approving applications by prospective zone tenants (ideally including some form of one-stop shop mechanism for approvals). Incentives, privileges, and guarantees for zone developers and occupants should also be specified in legislation or regulations when such instruments are absent, zones can fail to fulfill their intended purpose and can become vehicles for real estate speculation instead of promoting sustainable economic growth, job creation, transfer of technology and know-how, and increased domestic value addition. Kuwait's existing Free Trade Zone, widely regarded as a failure, illustrates some of the potential pitfalls in zone development. The enabling legislation (the Law on Free Zones of 1995) was vague with respect to governance. The National Real Estate Company (NREC), a private company, was awarded the mandate to develop and operate the zone. The Cabinet subsequently issued an agreement that gives the government 80 percent of the profits from the FTZ if NREC utilizes the Port Authority's facilities and only 10 percent if it does not. This undoubtedly affected NREC's decisions with respect to the companies it attracted to the zone, and resulted in an excess of unproductive tenants.

Public oversight and regulation

Another reason for the failure of the Kuwait Free Trade Zone (KFTZ) is a lack of public oversight. The 1995 Law on Free Zones designated the Ministry of Commerce as the governing authority, but a detailed set of implementing regulations, drafted subsequent to enactment of the law, was never ratified (See Annex 6). These regulations, which conform to internationally accepted best practice, would have established a Kuwait Free Trade Zone Authority, responsible for approval, oversight, and regulation of all free zones in Kuwait. Absent these regulations, the Ministry of Commerce never established appropriate oversight and regulatory structures and procedures. NREC pursued its own agenda to the detriment of the national interest. Though private initiative—in particular, private development and operation of zones—is preferable, it can lead to worst-case outcomes in the absence of effective public oversight. In addition to an umbrella structure and regulations for a national economic zones program, each zone should have a governing board that includes national and local government authorities together with the private operator.

Public-private partnership in development and operation

Even when the public sector drives the economic zone development process, private sector participation is essential. The level of private sector participation is, largely, a function of perceived risk. In posing the fundamental questions shown in Figure 5.4, government must determine to what degree private investors may be willing to share the risk of development. In very poor or conflict-affected countries private investors are unlikely to show much willingness to assume the risks of economic zone development, which may not repay the capital investment for many years. In such circumstances, private involvement may be limited to construction contracts for zone development and management contracts for zone operation. In less risky environments, private sector participation may range from concession or some variant of build-operate-transfer arrangements to outright ownership. In many countries foreign ownership of land is restricted, in which case the state may own the land and lease it to private developers or, in the now-common model of zone development in Dubai, the government provides land as its contribution to a joint venture with private developers.

Location

One of the main causes of failure of economic zones is poor location. Governments, for understandable reasons, seek to promote development in remote and undeveloped areas, and often develop zones in such locations. Private investors, on the other hand, want to locate their businesses where they have ready access to transport infrastructure, electricity, and labor, which tends to steer them in the direction of commercial and population centers. Foreign companies especially want to be able to attract foreign management and technical staff and their families, which typically require a location convenient to schools, medical facilities, and entertainment and recreation. The risks of poor location are lower in Kuwait, given its small geographic size, but the location of the Gateway site must still take into account existing and planned infrastructure and residential developments.

High-quality infrastructure and built environment

To attract international companies, a zone should offer on-site infrastructure and a built environment that equals or surpasses those offered by other locations within the country as well as that offered by competing zones in the Region. The on-site structures should be complemented by the best possible off-site infrastructure, especially transport links. In locations in which the electric utility cannot supply adequate power at a reasonable cost, independent power projects should be allowed within zones, subject to compliance with environmental standards. The objective in developing both on-site and off-site infrastructure should not be to offer below-market rent to induce companies to locate there, but instead to command premium rents, justified by superior quality.

Value-added services

Zone operators should offer a suite of business support services that increase the zone's attractiveness to investors. These include, at a minimum, single window or one-stop processing of investor applications and compliance with other administrative formalities such as work permits and visas for foreign staff, and registration with tax and labor authorities. The zone should already be designated by planning and environmental authorities for certain uses, with specific conditions attached, so that any new investor in compliance with those designations and conditions should not be subjected to lengthy planning and environmental approvals. Any zone with duty-free privileges should have a dedicated customs post within or adjacent to the duty-free area to speed customs clearance for incoming and outgoing shipments. Beyond this administrative simplicity, zone operators can offer additional services such as business matchmaking, training and skills development, R&D facilities, standards and testing facilities, business incubators, and commercial and recreational facilities. Many of these services can be outsourced to specialist providers but can enhance the total package

the zone offers. Together with first-class infrastructure and built environment, these services can enable a zone to command premium rents.

Technology Parks: Definition and Importance

In Chapter 1 of this report, it was noted that there are numerous terms to describe the various types of specialized science and technology parks. The type of specialized park depends upon its major function. Specialized parks may be focused as a science and technology park, technology park, science park, research park, industrial park, business park, or innovation hub, to name but a few. In addition, when there is substantial residential and urban development surrounding the particular type of park, these types of initiatives are sometimes called "cities."

This section of the chapter provides background information about the different kinds of technology parks—the generic term used for this analysis—in order to contextualize the framework and business model proposed for the Kuwait Energy Gateway that are put forward in Chapters 9 and 10.

> ***For the Kuwait Energy Gateway, the key point to be drawn from the discussion below is the following: across the wide spectrum from pure research to technology development to technology commercialization, the specialized park concept can be uniquely configured to meet local strengths, weaknesses, opportunities and needs.***

A technology park (TP) is defined as a property-based institution for securing economic development through improved efficiency in turning targeted capacity into employment-generating new business activity.

There are three important functions of a successful technology park:

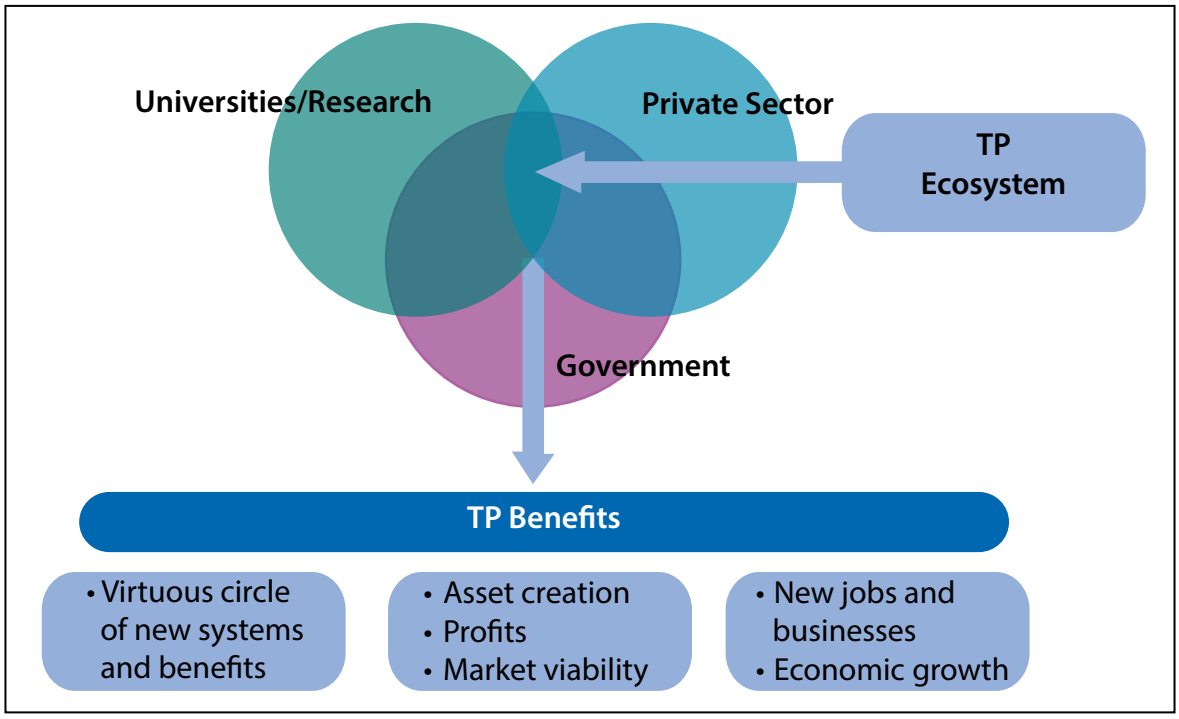
- A technology park is not and cannot be a 'stand-alone' venture. It is intimately connected to and involved in the implementation of national and regional economic development policies.
- Connectivity and networking at all levels are essential to the technology park and its tenants.
- Technology parks were originally considered mainly as physical locations housing scientific research activities. Then, at the turn of the century, location was considered by many to be less important and the focus turned to 'brains, not bricks.'

These points confirm that the purpose of a technology park is to play an important role in innovation by working closely with relevant national bodies, assiduously building and working networks and using their built environment to aid the processes of innovation. The Kuwait Energy Gateway is called, more specifically, a technology business park because it is focused on technology commercialization across the broad energy sector for Kuwait and the Region.

The above points are illustrated in Figure 5.5 starting from the Venn Diagram representation which places a TP as a proactive ecosystem for drawing on research centers and government resources to deliver innovation through the business sector, which in turn delivers economic development outcomes. The lower half of the diagram shows the TP benefits that can be achieved by delivering both public sector goods and private benefits in the form of business and employment creation through technology innovation and commercialization.

A well-conceived and implemented TP is therefore a powerful and sustainable economic development initiative that goes on producing its economic development outputs for many decades and should amply repay any public sector investment made in its early years.

Figure 5.5 The TP as a Proactive Ecosystem



Evolution of Technology Parks

A useful approach for classifying technology parks is to examine the chronological "generation" to which they best align. Three different generations can be identified in much the same way as mobile wireless services have progressed through 2G to 3G and now 4G becoming more widespread. The three generations are broadly characterized below.

First Generation

TPs started during and before the 1980s largely fit within this generation. The key features include:

- A well landscaped site with good quality buildings;
- An association with one or more Higher Education Institutions (HEIs), e.g., Philadelphia Science Center in Pennsylvania, USA has 22, and Research Triangle Park in North Carolina, USA has three;
- Active links with the associated HEIs to foster technology transfer in support of innovation within the companies located in the park.

Second Generation

It was during the 1990s that many TPs began to realize that the smaller technology businesses they were supporting were not growing as fast as expected and that this was largely because the companies' management teams were relatively inexperienced. Gradually, TPs began to expand the support they could offer these young management teams, providing access to finance, business start-up training, including mentoring and coaching programs. In some cases these programs were delivered by the parks themselves and in other cases networked from outside into the park.

At the same time, TPs began to see themselves as an important vector in the innovation infrastructure of their region. They had learned how to help companies access at least one HEI, which led, in response to client demand, to the creation of stronger and more complex networks to help their client companies to access and secure the resources they needed.

Thus, a second generation TP can be characterized as having all the features of a good first generation TP plus:

- Business support infrastructures for start-up and early stage technology businesses. Most frequently this takes the form of a technology business incubator together with mentoring services and a range of other services. Depending on what is, or is not available from elsewhere within the local infrastructure, the TP may also develop and provide other support measures such as: "seed funds", business angel funding networks, start-up programs, entrepreneur training, etc.
- Proactive networks to support innovation. These networks are created by the TP and are driven by the needs of their clients. The networks therefore look out from the needs of the businesses towards the universities, research and technology organizations, and technology supplier businesses. The networks are often given a focus through a program of workshops or seminars that bring people together around a particular interest. However, the real power of the network lies in its ability to address and resolve particular technological issues for individual businesses.

Most well managed TPs created in the first generation era have evolved to become second generation parks.

Third Generation

The third generation of technology parks was defined in 2006 when some 30 of the world's leading park directors, developers, researchers and consultants gathered in Manchester. U.K. Their findings were written up by John Allen[14] and later published. They argued that the third generation will have all the features of a good second generation TP, and it would likewise be physically constructed to create spaces and environments that are conducive to high levels of creativity and innovation. These spaces are made available to the occupiers of the TP but would also draw in other companies and suppliers of services to create a rich soup of organizations and people that improve the productivity of the highly complex processes involved in taking knowledge, turning it into a product or service and bringing it to market.

Annex 5 briefly describes the history and current activities of four well known, world-class technology parks: Research Triangle Park (RTP) in North Carolina (USA), Sophia Antipolis (France), and two science parks in Cambridge (UK)—The Cambridge Science Park and the St John's Innovation Center. All but The Cambridge Science Park have been highly proactive in stimulating their local and regional economy by becoming a substantive node or player in their regional business innovation infrastructure. Cambridge Science Park, despite its reputation, is probably best classified as second generation. The three other parks are excellent projects, but are most fairly given the designation of 2.5th generation STPs, simply because they cannot achieve third generation due to their site layout and buildings that were not appropriately designed from the outset.

14 John Allen (2007), *Third Generation Science Parks,* Manchester Science Parks, Manchester, U.K.

Policy Drivers of TP Founders

With a few exceptions, the majority of TPs have been initiated by the public sector and have received significant public subsidies. The public policy agenda behind these subsidies and grants has invariably centered on economic development for either a region or country. However, the particular economic development outcomes have tended to vary widely from one project to another. In Table 5.5, some of the more usual policy drivers attributable to TP projects in different countries are identified. This is not to say that some projects in one of the countries identified in the Table may not be different, but there do appear to be general trends within a given country or region.

Table 5.5 Policy Drivers for the Creation of TPs

Countries	Primary Policy Driver (post 1985)	Secondary Policy Drivers (post 1985)
USA	Regional economic development to create high value employment	Increasing number of high tech businesses
West and North Europe	Translation of R&D into new business activity (Innovation)	Foreign Direct Investment (FDI) of technology businesses
China	FDI of tech manufacturing to strengthen and grow indigenous tech manufacturing.	Attract returner ex-pats, with high tech skills from the USA and Europe
Brazil	Regional economic development	FDI, employment for qualified graduates
Russia	Exploit their research results in overseas markets	Income for universities and employment for their staff and students
Japan	Increase R&D as a driver of innovation	Regional economic development
Taiwan	Develop and support their microelectronics industry	Develop other technology sectors, e.g., life-science based.

Thus, in Northern and Western Europe, improving the processes of innovation so that more and better technology-based business activity is created is the dominant policy driver, with good quality high value added employment being one of principal desired outcomes. The European Union (EU) policies and programs for innovation and regional development have undoubtedly had the effect of reinforcing the national TP programs of individual Member States in the EU.

China, by contrast, combined special economic zone ideas with TP concepts to attract international technology product manufacturers to establish manufacturing facilities in China. The Chinese were successful to some extent, but soon moved to increase China's own technology product manufacturing capability by buying relevant overseas companies and then relocating the manufacturing to a Chinese TP. The purchase of IBM's PC and laptop business is a case in point. This business was renamed Lenovo and moved into the Beijing Science Park. China also established programs to encourage the formation and growth of new technology-based businesses and actively sought to bring back Chinese nationals with high tech business experience who had emigrated to the USA and Europe. Initially, this policy had limited success as the returnees had no business networks in China and had developed Western/world business mindsets that failed to gain traction in Chinese markets. However, new and more sophisticated returnee programs are starting to overcome these problems.

Another contrast to the rest of the world is the scale of China's STPs. Beijing Science Park has over 500,000 employees and the park has well over 10 million sq. meters of developed buildings.

The TP Movement Today in Statistics

Scale and Nature

International TP statistics provide a useful guide to the scale and nature of TPs. Generally, TPs are not necessarily large property developments; although a few, such as Beijing, are truly huge. More generally, 64 percent of TPs have a built environment of less than 80,000 sq. meters (Figure 5.6) and a similar percentage, 67 percent, have a total land area (developed or serviced land) of under 600,000 sq. meters.

On another measure of scale, approximately 50 percent of TPs accommodate between 50 and 500 tenant organizations. Of those, most TPs with fewer than 50 tenants are either recently formed or are single building parks (see Figure 5.7).

Figure 5.6 Scale of TPs Across the World Land Area Committed and Developed (sq. meters)

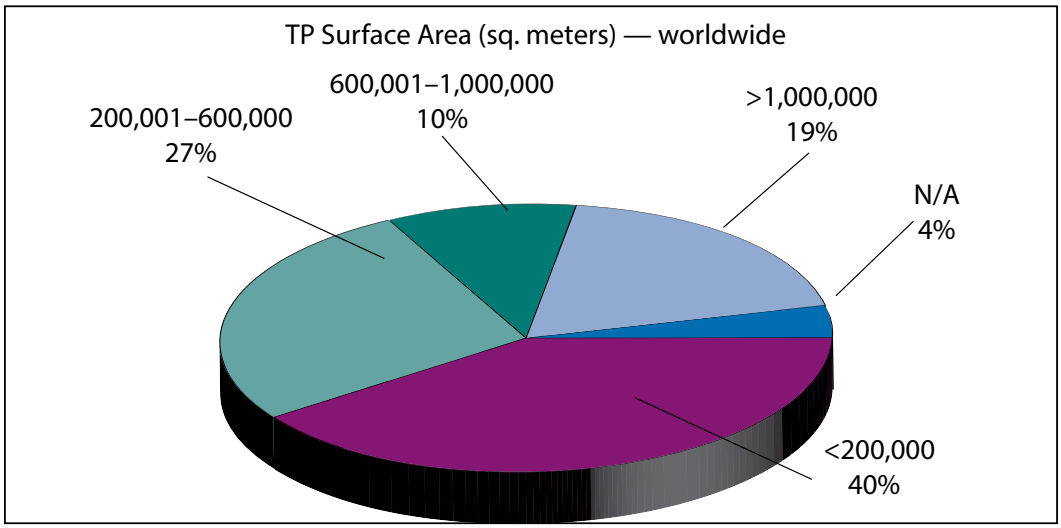
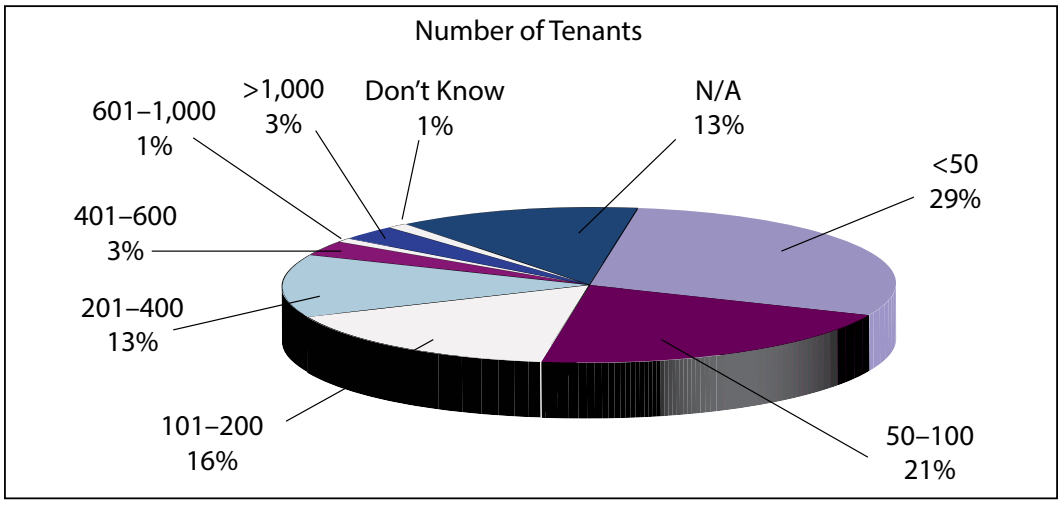


Figure 5.7 Scale of TPs Across the World—Number of Tenants



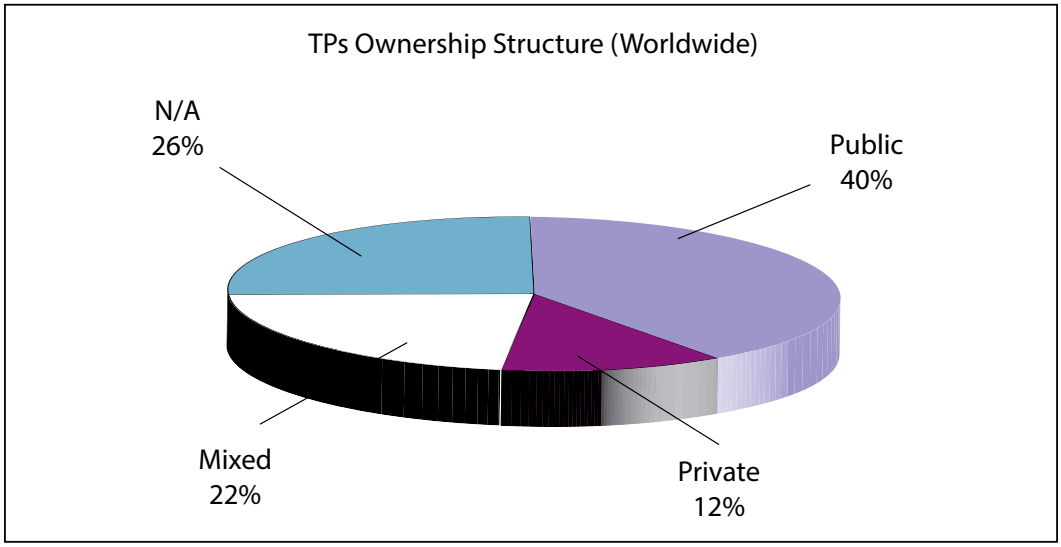
Ownership

Figure 5.8 shows that across all TPs, sole public ownership represents 40 percent of the total, with mixed public and private ownership in a further 22 percent and sole private ownership in only 12 percent. These data are distorted by the high level of "not available" data. If these TPs are eliminated from the

sample, then ownership is 54 percent, 30 percent and 16 percent respectively for the above ownership categories. There is a very broad spectrum of public bodies that have ownership in TPs, but taken together, central, regional and local government account for 54 percent, universities a further 18 percent, and Chambers of Commerce 8 percent. Within the private sector owned TPs, the private ownership consists of 70 percent private companies and 10 percent private universities. Where there is a mixed public/private ownership 61 percent have a public sector majority ownership structure.

The above ownership levels do not necessarily reflect the proportions of the investments made by the different categories of owner, but they do highlight the point that TPs are usually supported in some measure by the public sector, and often to a high degree.

Figure 5.8 Composition of TP Ownership



TP Business Models

There are very little reliable data about the business models employed by TP owners. But anecdotal evidence suggests that in only a few cases is the public sector prepared to be the owner, sole investor and provider of revenue support as required irrespective of how important the public good benefits are deemed to be.

Nevertheless, the public sector does intervene with a wide range of support measures to ensure the viability of TPs. As shown in Figure 5.9, government grants and subsidies are the most common forms of support.

These different forms of support are usually framed into a business model in which:

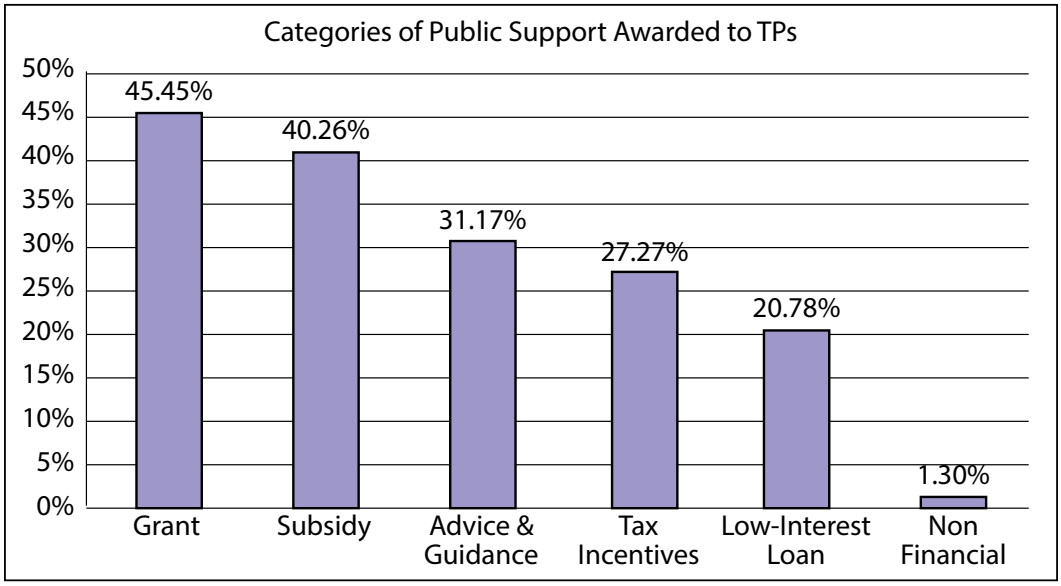
- Capital is invested by the public sector to initiate the technology park and revenue support is provided to cover any deficit between incomes and expenditures on operations for the first few years only.
- Further capital may be provided when there is evident demand and need but:
  - There is no private sector organization willing to invest, or;
  - It can be invested in such a way as to leverage private sector investment consistent with the park's mission.
- Revenue support for new initiatives, as opposed to ongoing operations, is derived, at least in part, from organizations that are not the original owners.

Such a model is based on the principles that:

- The private sector should be encouraged to participate to the greatest extent possible consistent with securing the public benefits for which the project was conceived in the first place.
- The board and management should operate the TP as a financially sustainable entity which does not require endless revenue grants or subsidies once the first significant phase of development has been completed.
- As the TP expands and proves its model, the proportion of investment coming from the private sector should markedly increase.
- Public financing is "patient money" that gives time for the organization creating the TP to secure the right clients, tenants and partners so that the public benefits are secured as opposed to maximizing investment returns, which then frequently conflicts with the public objectives.

This model is compatible with IASP statistics that show that as TPs become more developed, the level of public sector involvement decreases.

Figure 5.9 Nature of Public Support Provided to TPs



Success Factors for Technology Parks

Success factors can be looked at from two perspectives: first, historically looking at what seem to be the factors that have led to a successful TP, and, second, what should be done by a new park to give the best chance of success. These are subtly but importantly different approaches. Successful technology parks:

- Changed and adapted from their original concept as they have learned what can be done as they respond to what is needed within their local, regional or national economy;
- Continued to grow their physical structures over decades, strongly supported by a good policy environment at every stage of their development;
- Had strong leadership at board and executive levels—the CEOs of many of the most success are widely recognized;

- Obtained access to funding for the development of their TP whether public or a combination of public and private;
- Developed important human infrastructures to provide services critical to the success of innovation led businesses where national institutions or structures are inadequate for success;
- Set out to be "gateways" for business opportunity and growth within their region by drawing international, national and local businesses into the TP as an integral part of the process.

The implications for any group of stakeholders setting out to establish a successful new TP are that they must ensure that the TP is led so that it:

- Becomes a well-recognized component of the regional or national innovation infrastructure. To achieve this, a TP needs to operate on a much larger scale than its own in-house staff, by being prepared to work in partnership with others. In this way, the TP can reach out and think globally, not just regionally;
- Is integrated into regional or national development plans, and plays a part in encouraging community development, including as an exemplar of a sustainable community;
- Appoints a board and engages senior management of the highest quality. They should define a long-term strategy with clear objectives;
- Acts on the basis that the park is a gateway for opportunity and not simply an office location. This can be achieved by ensuring that the focus of the TP's management is on process, rather than location, property or place, although these aspects remain important in aiding the process;
- Is managed as a sustainable business, and reinvests a portion of any surplus to enhance support services offered to clients;
- Develops a built environment under a carefully designed, attractive and environmentally sustainable master plan, as an important aid to creativity, interaction and innovation;
- Grows a strong two-way relationship with associated university(ies) or research and technology organizations, so that the these partner organizations can assists the TP as an essential member of its family of operations, and the TP helps to influence and shape the university's/research and technology organization's core activities;
- Builds active networks of all kinds and at all levels, and measures their effectiveness;
- Establishes an understanding of each tenant's needs and provides access to networks and services to help meet those needs, especially services offering commercial advice and support.

Nearly all of the above action areas are relevant to making the Kuwait Energy Gateway a success. At the same time, there is little evidence that any one business model, ownership, management or financing structure is better than any other, *provided* they adhere to the success factors set out above. Later in Chapter 10, these success criteria set out above are developed to establish a business model and ownership structure that should be effective in the Kuwaiti context.

SECTION TWO: MARKET ANALYSIS

Section Two of this report provides a market analysis for the Kuwait Energy Gateway. Based upon the context described in the previous section, this section focuses on the potential market for the kind of entity being contemplated. The section addresses the following key questions:

- What is the potential demand for the types of legal framework, facilities and services contemplated to be offered in this initiative?
- What are the competitive alternatives available to target companies in the Region and country?
- What types of companies should be targeted as potential tenants of the new development?
- Within the wide scope of the energy sector, which segments and activities should be prioritized?
- What is the value proposition for this target market?

This section contains three chapters. Chapter 6 is an analysis of the potential demand by companies in the energy sector to establish a significant presence in Kuwait and of the facilities, services and legal framework that would be attractive to them. Chapter 7 provides a competitive analysis exploring the various options, both regionally and within Kuwait, open to companies seeking a business location. Chapter 8 describes the target market, specifically types of companies and activities that should be targeted as potential clients and the value proposition that might motivate these companies to locate within the KEG.

6 Demand Analysis

Chapter 6 Summary Findings and Conclusions

Although this chapter lists 18 detailed conclusions, the principal summary conclusions derived from the detailed market research are:

Experience and interest for doing business in Kuwait

- There is significant demand for securing new business in Kuwait and significant interest in locating company staff in the country if increased capacity can be tied to strategic business drivers.

Experience and interest in doing business with K-Companies

- It is broadly recognized that effective engagement with the K-Companies is a strategic business driver for companies in the energy sector. In addition, it is a common perception that their procurement processes make it difficult for them to acquire new and emerging technologies, even when these technologies are a better overall value.

Demand drivers for technology parks and/or special economic zones

- For the Gateway to be attractive, it must provide a platform for demonstrating and positioning new technologies in a way that creates competitive advantage and provides specific services to attract the appropriate technical capacity to be located in Kuwait.
- The Gateway must also provide a legal framework that overcomes some of the perceived barriers to doing business in Kuwait and provides value-added services to stimulate creation of business opportunities.
- Experience and interest in expanding operations in Iraq and using Kuwait as a gateway.
- Although its geographical location and logistical infrastructure present competitive advantages for Kuwait as a gateway to Iraq, the type of TP/SEZ needed to serve that market is different than the KEG and should be addressed independently of this study.

The purpose of this chapter is to provide an analysis of the potential demand for the type of offering being contemplated by the Gateway. Unlike market research that is focused on defining a target market's willingness to buy a specific product at a specific price, the approach taken in this first phase of the Feasibility Study was to get a broader understanding of the potential clients/tenants for different kinds of potential offerings and to help identify the best strategic niche for the KEG.

The introduction of a new technology requires continual efforts by the offeror, which cannot be sustained by remote communication and sporadic visits. A local or regional presence is essential for building client relationships, and this is the essential rationale for the Gateway. The name, Kuwait Energy Gateway, emphasizes the role the new entity can play as a gateway for companies wanting to do business in Kuwait and the Region. Providing specialized facilities and services to energy sector technology and service companies creates the entry point for companies seeking to develop new business opportunities.

The market research approach used for this analysis is largely based upon interviews with staff members from potential target market companies. The methodology employed is described below in the first part of this chapter. The second part provides an analysis of the potential demand for a TP/SEZ for the energy sector in Kuwait and the broader region.

Market Research Methodology

Data Sources

Several market research methods were used to assess the potential demand for a potential TP/SEZ in Kuwait. There were three major sources of input for the market research methodology. Although the research conducted by the project team has provided valuable insight into the issues and opportunities associated with a TP/SEZ, the research approach has not attempted to produce statistically significant, quantitative data. In contrast, the information received has been used to assess the appropriate market niche for a specialized park that can attract the types of companies and activities that would be the most valuable for Kuwait and provide an opportunity for leadership in the Region.

The first and most important data source was a large number of interviews with staff members from companies attending two different petroleum industry conferences. The second source of data was from an on-line survey completed by a sub-set of the companies interviewed. Although the survey has a limited sample size and was completed only by companies in the petroleum and petrochemical sectors, the data support many of the key conclusions reached by the consulting team. The final part of the market research was desk research concerning markets for similar types of TP/SEZs, both in the region and around the world.

Industry Conference Interviews

The large majority of interviews with potential client companies was conducted during the World Petroleum Congress (WPC) held in Qatar from December 5-8, 2011. This event is only held every three years and is generally recognized as one of the premier conferences focused on the petroleum sector. There were an estimated 6,000 attendees with over 300 exhibitors. Four members of the project team attended the WPC and spent four days interviewing the companies represented. Every exhibition was visited, but interviews were only conducted with approximately 150 companies that were determined to be relevant for the purposes of the study.

Members of the consultant team also attended the Heavy Oil Conference held in Kuwait on December 12–14, 2011. Although this conference was much smaller than the WPC, with only around 65 exhibitors and some companies attending both, it did provide some valuable insight into the specific

needs of equipment and service providers serving the heavy-oil sector of the industry. Interviews were conducted with about 25 companies.

The interviews followed a similar process. After a brief introduction of the purposes of the feasibility study, questions were asked as appropriate addressing five core issues:

- Company sector and profile
- Experience and interest in doing business in Kuwait
- Experience and interest in doing business with K-Companies
- Experience and interest in special economic zones and/or technology parks
- Experience and interest in expanding operations in Iraq and using Kuwait as a "gateway"

Business cards were collected from each of the companies interviewed and each day the team members reviewed their conversations and compared observations. This yielded a profile of demand for the Gateway and constitutes the primary source for the conclusions presented at the beginning of this chapter.

The second source of market research information comes from the results of an on-line survey developed by the project team. Based upon the oral interview, an email inviting the person interviewed to complete a survey was sent to the appropriate companies. A more detailed review of the on-line survey is covered below. Some companies were not sent an email invitation because of the project team member's subjective assessment of relevance of the company and level of willingness to respond indicated by the individual during the interview.

This survey is not intended to serve as a valid quantitative calculation of the potential demand for various potential designs the KEG might take. Since the survey was completed by the same people who were interviewed, it is not surprising that the two sets of data reinforce each other. The survey data were used by the consulting team to help form its qualitative conclusions and should not be considered a representative sample that warrants significant statistical analysis.

The third category of information is a combination of key informant interviews and desk research conducted by members of the project team before and after the trip to Kuwait in December.

On-line Survey Methodology

In this part of the chapter, the general framework and profile of respondents for the survey are discussed. The specific questions of the survey were presented in a different sequence than presented below in an effort to create a more logical flow for the respondent, but the framework outlined below is organized around the core issues of interest. The framework for the survey instrument is made up of five sections consisting of 26 questions, as follows:

- **Section One—Respondent Profile.** This section of the survey contains 10 questions addressing the following issues:
  - Segment of the energy sector
  - Size in revenue and employees
  - Country of origin and regional footprint
  - Current gulf operating locations
  - Willingness of respondent to engage in follow up interview
- **Section Two—Experience and Interest in Working in Kuwait.** This section of the survey contains four questions addressing the following issues:
  - Experience working in Kuwait

- Interest in working in Kuwait
- Considering establishing a presence in Kuwait
- Perceptions of working in Kuwait

▼ **Section Three—Experience and perceptions of working with the K-Companies.** This section of the survey contains two questions addressing the following issues:

- Experience working with K-Companies
- Perceptions of working with K-Companies

▼ **Section Four—Perceived demand drivers for special economic zones and/or technology parks.** This section of the survey contains seven questions addressing the following issues:

- Factors affecting location decision within the Gulf Region
- Future plans for locating in Gulf Region
- Gulf Region locations under consideration
- Experience with special economic zones (SEZ)
- Perception of desired features for a TP/SEZ in Kuwait
- Preferences for type of facility requirements

▼ **Section Five—Experience and Perception of Kuwait as a gateway to emerging opportunities in Iraq.** This section of the survey contains three questions addressing the following issues:

- Experience in Iraq
- Interest in Iraq
- Perceptions of potential for Kuwait to serve as a gateway to Iraq

Survey Section One—Respondent Profile

The invitation to complete the survey was sent to 105 companies with responses from 31. The profile of the respondents is as follows:

Segment

Table 6.1 How would describe your major business focus?
(check all that apply)

Answer Options	Response Percent
Exploration and production	31.0%
Upstream services	37.9%
Oil and gas equipment manufacturing	34.5%
Engineering and construction	31.0%
Downstream support technologies and services	31.0%
Petrochemicals and refining	24.1%
Health and safety	3.4%
Environmental equipment and services	13.8%
Transportation and logistics	3.4%
Safety and security	3.4%
Renewable energy equipment and services	0.0%
Specialized training and education	3.4%
Project management	27.6%

It may be noted that the various segments are not mutually exclusive. Some companies provide products and services in more than one segment.

Size

Table 6.2 How many employees does your company have globally?

Answer Options	Response Percent
1–500	26.7%
501–5,000	26.7%
Over 5,000	46.7%

Table 6.3 How many employees does your company have in the Gulf region?

Answer Options	Response Percent
None	13.3%
1–500	53.3%
501–5,000	30.0%
Over 5,000	3.3%

Table 6.4 How many employees does your company have in Kuwait?

Answer Options	Response Percent
None	75.9%
1–500	17.2%
501–5,000	6.9%
Over 5,000	0.0%

Table 6.5 What is the annual gross revenue or sales of your company?

Answer Options	Response Percent
Less than US$10 million	0.0%
US$10 million to US$50 million	17.2%
US$50 million to US$500 million	41.4%
More than US$500 million	37.9%

Current company location(s)

Table 6.6 Where is the corporate headquarters of your company located?

Answer Options	Response Percent
Europe	35.5%
North America	29.0%
Middle East/North Africa	22.6%
Asia	9.7%
Australia, New Zealand	0.0%
Latin America and the Caribbean	0.0%
Sub-Saharan Africa	3.2%

Table 6.7 If your company has any regional office(s), apart from the headquarters office, where are they located? (check all that apply)

Answer Options	Response Percent
Europe	64.0%
North America	64.0%
Middle East/North Africa	84.0%
South Asia	40.0%
Central Asia and the Caucasus	40.0%
Southeast Asia	56.0%
East Asia	32.0%
Australia/New Zealand	28.0%
Latin America and the Caribbean	56.0%

Table 6.8 In which Gulf states does your company have offices? (check all that apply)

Answer Options	Response Percent
None (then go to question 10)	10.3%
UAE	65.5%
Bahrain	27.6%
Qatar	48.3%
Saudi Arabia	37.9%
Kuwait	13.8%
Oman	20.7%
Iraq	10.3%
Iran	3.4%

Table 6.9 Would you be willing to be contacted at a later date to provide more in-depth information on your views?

Answer Options	Response Percent
Yes	51.6%
No	48.4%

Potential Demand Analysis

Survey Section Two—Interest in Doing Business in Kuwait

At the center of the analysis concerning the potential demand an energy gateway in Kuwait is the perception of doing business in Kuwait in general. About half of the companies interviewed have had experience working in Kuwait, and most of those without experience in Kuwait expressed a strong interest in exploring business opportunities in the country. In addition, even though a large majority of companies interviewed do not currently have staff located in Kuwait, most of them expressed considerable interest in establishing a presence in Kuwait. These findings provide a solid foundation for exploring more closely what can be done to attract more companies to locate staff in Kuwait.

When asked about the perception of doing business in Kuwait, there were very mixed responses. Some companies thought Kuwait was a great country in which to live and work. Others had less favorable opinions. In general, the respondents expressed a strong inclination to establish a presence in Kuwait if there were specific business opportunities and a more business-friendly" environment.

One of the important parts of this market research is to explore the potential for Kuwait to become a hub for the Gulf Region. Most of the companies surveyed have already set up their regional base of operations in UAE, Qatar or Saudi Arabia and have no intention of moving and are not actively looking for that kind of facility and services. Opportunities in Kuwait were of interest, but only a small fraction of the companies interviewed currently have operations in Kuwait. Before Kuwait can play a leadership role in the Region, it needs to have domestic business opportunities to attract companies to establish a significant footprint in Kuwait.

As stated in the research methodology description above, the primary insights and conclusions reached by the project team came from direct interviews with companies during the two conferences attended. the following survey data reflect very similar responses.

Table 6.10 Does your company have experience working in Kuwait?

Answer Options	Response Percent
Yes	43.3%
No	56.7%

Table 6.11 Are you interested in business opportunities in Kuwait?

Answer Options	Response Percent
Yes	90.3%
No	9.7%

Table 6.12 If your company does not currently have a presence in Kuwait, are you considering it?

Answer Options	Response Percent
Yes	84.0%
No	12.0%

Table 6.13 What are your general perceptions of doing business in Kuwait?
(On a scale of 1-5, with 1 being unfavorable and 5 being very favorable)

Answer Options	Rating Average
Getting a business registered	2.88
Finding a qualified agent	2.65
Dealing with your agent or equity partner	2.86
Access to land	2.29
Getting project approval/operating license	2.68
Getting necessary building permits, environmental clearances, etc.	2.54
Government honoring its commitments to provide infrastructure or other facilities	2.86
Restrictions on business activities	2.35
Taxation	2.90
Investment incentives	2.44
Getting work and residence permits for staff	2.80
Finding qualified Kuwaiti staff	2.60
Expatriate living conditions in Kuwait	2.62

Conclusions

- ***There is very strong interest in new business opportunities in Kuwait.***
- ***There is a high interest in establishing and/or expanding operations in Kuwait if warranted by strategic business drivers.***
- ***There is a clear perception of significant hurdles to doing business in Kuwait.***

Survey Section Three—Experience with K-Companies

Since many of the companies interviewed did not have experience in Kuwait, there was not a strong feeling from many of the companies about working with the K-Companies. However, for some of the companies that had worked with K-Companies in the past, or which had attempted to win business with them, there was a general sense that they are difficult to work with, both during and after the procurement process.

There is a broad perception that the procurement process is based almost entirely on price and largely ignores questions of quality. This in turn makes it very difficult to propose newer technologies, since these are almost always more costly than older techniques. Many respondents stated that there is often a difference between what the technical experts recognized as benefits of new technologies and the technical specifications in bid requests and the eventual selection.

Many respondents also expressed a perception that K-Companies often select less efficient technical solutions because inefficiencies provide larger orders for older approaches, which can favor established incumbent suppliers. One specific example related to a technical approach to horizontal drilling that is widely used in other countries. This approach could reduce the number of wells drilled from 500 to 125, thus saving significant amounts on the overall development. However, the more advanced technical solution was rejected because "established suppliers of traditional equipment and services would have lost a lot of money and they were able to persuade the procurement contractors to avoid risk by accepting a familiar but more expensive and outdated technical approach."

For technical representatives and procurement officers to be able to understand and develop specifications for new and emerging technologies, they need to have adequate exposure to these products and methods. In addition, newer and more cost-effective technologies have often not been adopted by K-Companies because the technologies have not been demonstrated in Kuwaiti conditions, even though they may have been proven in numerous other settings. Overcoming this challenge is believed by the project team to be a primary area of focus for the Gateway.

This is not to say that the K-Companies are not interested in new and emerging technologies or that they are not committed to leading edge R&D. During the interview with the head of KPC research, it was openly discussed that getting new technologies into practice is a priority need, and this challenge has often created bottlenecks. There is a strong demand in the target market for an effective way to collaborate with the K-Companies to introduce new products and services into the Kuwaiti energy sector.

The following survey data add additional detail to this analysis:

Table 6.14 Have you done, or are you currently doing, business with Kuwait Petroleum Corporation and/or any of its operating subsidiaries?

Answer Options	Response Percent
Yes	38.7%
No	58.1%

Table 6.15 If yes, what has been your experience dealing with Kuwait Petroleum Corporation and its operating subsidiaries with respect to:
(On a scale of 1-5, with 1 being not favorable and 5 being very favorable)

Answer Options	Rating Average
Information on new business opportunities	2.60
Quality of Request for Proposal	2.78
Fair and open procurement process	2.80
Timeliness of making procurement decisions	2.30
Contract terms and conditions	2.80
Opportunity to find appropriate bidding partners	2.67
Openness to new technologies and approaches	2.20
Willingness to consider and pay for superior performance, efficiency and quality	1.89
Professionalism and respect for contractors	2.60

Conclusions

- ***K-Companies hold the key to business opportunities in the energy sector for Kuwait and must be engaged in any new initiative to attract more capacity to be located in the country.***
- ***K-Companies have difficulties contracting and paying for new and emerging technologies.***
- ***Contracting logistics, timing and lack of decision-making are generally acknowledged and seen as impediments to investing in Kuwait capacity.***

Survey Section Four—Perceived Demand Drivers for Special Economic Zones and/or Technology Parks

The large majority of companies interviewed are currently operating in the Gulf Region, and many of them have experience with SEZs and technology parks. An important part of this phase of the feasibility study is to analyze the competition with other countries in the region for attracting capacity to locate in that country. The competitive analysis is covered in the next chapter of this report. However, information in this area is also important for understanding the demand drivers for an SEZ/TP in Kuwait.

There was broad recognition of the value created by SEZs in the Region. The legal framework created by SEZs often were seen to be a major factor in determining whether to operate from within a country, or simply cover marketing and implementation requirements from a regional hub. But location decisions were more often driven by strategic business opportunities in the country and/or region. More importantly, most companies expect to expand their business in the Gulf Region in the near future and to expand their facility footprint. Once again, there appears to be strong interest in expanding operations in Kuwait to meet increasing demand for specific types of services. Well-designed SEZs can play an important role in attracting such investments.

The issue of protecting intellectual property was often expressed as a concern because Kuwait has historically required majority ownership of a joint venture to be Kuwaiti owned. This exposure was seen as limiting product development work to occur within the country. In addition, the regulatory barriers to setting up a new company were seen as making technology demonstration and adaptation a difficult challenge.

Discussions concerning the perceived value of technology parks revealed some interesting insights. Most companies interviewed saw technology parks as a "special niche." Technology parks were seen as adding significant value when there are specific technology demonstration and commercialization opportunities. Since most companies interviewed have significant investments in technology R&D and manufacturing capacity in their country of origin, few have any interest in pure product development in the Region. However, ***the large majority of companies interviewed expressed interest in a technology park specifically dedicated to helping companies introduce new technologies and support for local adaptation. This is the primary demand driver identified through the market research.***

In a similar fashion, it was generally perceived that simply offering office space in a technology park has very little added value. Most companies felt that traditional downtown offices or regular business parks were sufficient for their marketing, operations and administrative functions. Some companies did express interest in industrial parks providing facilities for equipment fabrication and assembly.

The related survey data are provided below. It should be noted, however, that this is a set of issues where more insight was gained through conversation than through the limited number of questions asked in the survey.

Table 6.16 If your company already has one or more offices in the Gulf region, rate the following factors in choosing the country or countries where your company opened these offices. (On a scale of 1-5, with 1 being the least important and 5 being the most important)

Answer Options	Rating Average
Significant business opportunities within a specific country	4.38
Ease of serving the entire Gulf region from that location	3.52
Incentive package offered by the government	2.71
Living conditions (housing, schools, medical, safety) for international staff	3.13

Table 6.17 If you do not have an existing presence in the Gulf region, is your company planning to establish one in the near future?

Answer Options	Response Percent
Yes	63.2%
No	31.6%

Table 6.18 If yes, please indicate which country/countries that you are currently considering. (check all that apply)

Answer Options	Response Percent
UAE	50.0%
Bahrain	41.7%
Qatar	33.3%
Saudi Arabia	16.7%
Kuwait	58.3%
Oman	50.0%
Iraq	33.3%
Iran	0.0%

Table 6.19 Does your company currently operate in a Special Economic Zone/Free Trade Zone?

Answer Options	Response Percent
Yes	46.7%
No	53.3%

Table 6.20 What is your perception of the value of the following features of Special Economic Zones for your business? (On a scale of 1-5, with 1 being the least important and 5 being the most important)

Answer Options	Rating Average
Ease of registration and compliance with other business formalities	4.08
Ownership terms (ability to have 100% ownership without local partnership requirement)	4.00
Investment terms (e.g., repatriation of profits)	3.88
Customs duty exemptions	3.70
Tax exemption or holidays	3.87
The ability to co-locate with other companies with similar or complementary interests	3.55
Facilitation of new technology development and commercialization	3.05

Table 6.21 If Kuwait offered a Special Economic Zone/Free Trade Zone regime with the benefits mentioned above, would you be more likely to consider establishing an operation in Kuwait?

Answer Options	Response Percent
Yes	69.2%
No	30.8%

Table 6.22 Please indicate your preferences for property types within the Gulf region.

Answer Options	Response Percent
Small office (less than 500 sq. mt.) in downtown location	41.9%
Small office in Business or Science/Technology Park	19.4%
Larger downtown office accommodation	9.7%
Business Park (mainly office)	16.1%
Science or Technology Park with office or mixed office/ workshop/lab/demo space	9.7%
Industrial Park	32.3%
Warehousing/logistics	12.9%

Conclusions

- ***Perceived strategic business drivers***
  - Amount and nature of new business opportunities in Kuwait.
  - Access to K-Company collaboration in demonstrating new and emerging technologies.
  - Access to procurement information prior to RFP finalization.
- ***Perceived potential for Kuwait to be a regional hub for global companies***
  - Many of the small and medium sized businesses expect to expand operations in the Region and are actively considering regional office locations.
  - Kuwait needs to demonstrate its attractiveness as a regional hub by providing appropriate incentives, logistical improvements and a more business-friendly legal and regulatory environment.
- ***Perceived value of SEZs***
  - Most companies recognize the value of an SEZ for establishing a presence.
  - Most companies thought a well-designed SEZ would be an important factor in making decisions concerning the number and functions of staff located in Kuwait.
- ***Perceived value of technology parks***
  - Need to establish a strong "value-add" for new technology demonstration and adaptation.
  - Access to risk capital to support technology demonstration and adaptation were perceived as extremely valuable.
  - Technical capacity required for new technology commercialization is often the same technical capacity required to support marketing and operations; therefore, a successful technology park would need to support a range of technical services and not be limited to R&D.
  - Legal structure would need to address the legitimate concerns around intellectual property.
  - Lease and occupancy terms should be flexible enough to allow changes in staff levels based upon evolving needs over time.

Survey Section Five—Gateway for Iraq

One of the issues put forth for analysis during this phase of the feasibility study was the potential for Kuwait to serve as a gateway for the expected boom in Iraq. Security concerns, lack of infrastructure and import restrictions suggest that a staging ground outside of Iraq would be attractive to companies wanting to get a share of the new business. Kuwait's proximity seems to be a natural competitive advantage in this area.

The perceived potential for this kind of gateway service center received mixed reviews. In the interviews conducted by the project team, there was broad interest in the basic idea. However, there were numerous legitimate challenges raised. A consistent concern was Kuwait's ability to move quickly enough to take advantage of the current window of opportunity. Another was the general perception that Iraq would be better served by establishing capacity in Iraq itself rather than in another country. There were also many comments noting the difficulty for Kuwaiti citizens to cross the land border between Kuwait and Iraq. Finally, there were several insightful comments concerning current legal constraints In Kuwait that might impede efforts to have it adopt this kind of regional role.

The one area where there was significant interest was in the area of shipping and logistics. If the significant investments made in Kuwait's port and staging capacity developed in support of the US military needs could be converted for commercial uses, this could give Kuwait a strong advantage.

> ***However, it was recognized that the kind of technology-oriented business park contemplated for the Gateway was very different from the kind of logistically-oriented center needed to serve as a staging point for*** *Iraq. Nevertheless, the same type of SEZ features being proposed for the KEG provides an excellent framework for another kind of development closer to the border.*

The survey data addressing this issue are below:

Table 6.23 Is your company currently doing business in Iraq?

Answer Options	Response Percent
Yes	51.6%
No	48.4%

Table 6.24 Is your company interested in exploring new opportunities for doing business in Iraq?

Answer Options	Response Percent
Yes	86.7%
No	13.3%

Table 6.25 What is your overall perception of the potential for Kuwait to serve as a "gateway" for business in the energy sector in Iraq?
(On a scale of 1-5, with 1 being the least favorable and 5 being the most favorable)

Answer Options	Rating Average
Information on new business opportunities	2.95
Coordination of bidding efforts for Iraqi opportunities	3.05
Provide port services for equipment destined for Iraq	3.11
Provide staging and storage capacity for equipment	3.33
Provide logistics and transportation services	3.32
Provide border crossing facilitation services	3.47
Living conditions for staff working in Iraq and their families	2.63

Conclusions

- ***The type of SEZ and park that would be needed to facilitate an "Iraq Gateway" initiative are very different than the requirements for a SEZ and technology park near Kuwait City supporting technology commercialization.***
- ***There is high interest in the Iraq gateway concept, but also the need to sharpen the specific value proposition and planning.***
- ***Timing is critical since many of the relevant decisions will be made in the next few years***
- ***Cross-border challenges need to be addressed.***

7 Competitive Analysis

Chapter 7 Summary Findings and Conclusions

The summary conclusions from the competitive analysis include:

- Potential stakeholders and sponsors need to determine the amount of investment and legal concessions they are willing to make to capture the best cost/benefit ratio.
- The focus of the competitive analysis during the first phase of this feasibility study is to determine the specific kinds of companies and activities the Gateway will seek to attract and the value propositions it will offer.
- There is significant regional competition from several technology parks/special economic zones that are more developed. However, there is a clear market gap that the Gateway can fill.
- The Gateway should not position itself as an alternative location as a regional center for target companies, but should instead try to attract the technical capacity of those companies.

The purpose of this chapter is to provide an analysis of the potential competition for the Kuwait Energy Gateway and to provide insights to help assess the specific gap to be addressed by investing in a technology business park/special economic zone dedicated to the energy industry. Since this initiative is still in the first phase of the feasibility study, this competitive analysis is different from a more traditional approach that assumes a product and target market have already been defined. In this traditional type of competitive analysis, the focus involves comparing the alternatives a potential buyer would have when selecting among similar product offerings and tries to estimate market share potential for one product against others. This is not the case here.

A competitive analysis has different objectives when conducted during the early phases of a potential project where the primary effort is focused on identifying the appropriate market niche for an offering that has yet to be designed. In this case, it is necessary to identify the specific gap not being filled by other regional or domestic entities and how the proposed Gateway can the fill that unmet need. The primary factors that make this type of competitive analysis different are that neither the product offering nor the target market has yet been defined. Thus, the challenge In this type of competitive analysis is to better understand the ecosystem within which a new technology business park/special economic zone would operate so that the specific features of such a development would have a compelling value proposition to the companies it wants to attract; and, most importantly, to help assess the potential economic and social benefits that would result from the level of investment necessary to construct, market and operate such a program.

In addition to the facilities, services and legal framework of the Gateway, there are other factors that can differentiate the KEG from its potential regional competitors. Some of these include opportunities for business in Kuwait; availability, quality, and cost of the work force; the presence of high-caliber educational and scientific institutions; and the existing commercial and living environment. In addition, this analysis identifies potential competition from existing or planned domestic facilities and initiatives.

The basic questions addressed in this analysis are:

- If a company in the energy industry wants to locate some or all of its operations in the Gulf Region, what are its alternatives and how does the proposed KEG compare?
- What kind of technology or business park could be created that will attract the kinds of companies that would support the stated development goals of the Kuwaiti Government and its relevant stakeholder institutions?
- How does the proposed Gateway compete with, or complement, other initiatives and facilities sponsored by the same key Kuwaiti stakeholder institutions that need to support the KEG? These key stakeholders include: KISR, KPC and other K-Companies, KFIB, NTEC, KFAS, KU, PIA, and potentially others.

The objectives of this competitive analysis are to better understand the relevant ecosystem of the stakeholders' interests and the target companies' strategic drivers and the various alternatives both groups face; as well as to help define the ideal market niche for the Gateway to give it competitive advantage over other options the target companies can choose among, both regionally and domestically.

This chapter has three parts: (1) a brief discussion of the framework used for this competitive analysis; (2) a benchmarking analysis against the most relevant technology parks and special economic zones in the Gulf Region; and (3)the set of domestic alternatives from which a company has to choose in Kuwait.

Competitive Analysis Framework

The framework for this competitive analysis consists of four elements:

- Cost/Benefit Analysis
- Target Market Drivers
- Rating of Value-added Market Niche
- Competitive Alternatives for Companies
  - Regional Benchmarking
  - Domestic Benchmarking

Cost/Benefit Analysis

The starting point for the competitive analysis component of the first phase of this feasibility study is to understand the different stakeholders' interests, and the cost and benefits of various investment scenarios. Deciding how much to invest in what kind of park or zone is partially determined by the potential payoffs and risks involved with different approaches. The decision by public or private institutions to invest in such developments is based upon their analysis of the costs and benefits as well as the risks of doing so and the opportunity costs of not investing.

There is no doubt that the Government of Kuwait could allocate enough money to build a world-class technology park with adequate incentives to attract almost any target company to become a tenant. The value proposition that can be offered to potential tenants is directly related to how much money and political capital are invested in the facilities, services and legal framework of the project.

The Gateway's facilities-and-services offering needs to be defined in a way that optimizes the benefits to stakeholders, both public and private, and provides a good return on investment for the eventual private investors. For public sponsors, benefits will not be a simple financial return on investment, but will include a broader range of social and economic outcomes. For a private business, the payback should be understood in terms of access to new opportunities and competitive advantage, as well as a financial calculation. So during this competitive analysis the most important element is the relative cost/benefit associated with developing the various components of the technology/business park with special economic zone features as contemplated for the KEG. An analysis of the potential investment case is discussed in Chapter 11 of this report.

There must be sufficient value in reaching its development goals for the Kuwaiti Government to invest in such a project. If the need is simply for a traditional business park, then private real estate developers will fill that need. The reasons the Government might decide to act as a lead investor in the initiative are that the type of park designed fills an important niche in the energy sector and will facilitate private sector development and employment. In addition, if Kuwait wants to be a leader in the Region, it is going to have to invest in special economic development programs like most of its neighbors. The KEG has features of both an SEZ and a business technology park. The value add is that the Gateway will provide high caliber services to its clients, coupled with technical and financial capabilities and support that can come from other Kuwaiti institutions (e.g., KISR, KPC/R&D, KFAS, etc.).

Science parks, technology parks, business parks, industrial parks have all been demonstrated to be viable vehicles for attracting and developing private sector companies. Which type of park is appropriate in a particular situation is driven by the objectives of the sponsoring organizations. Many of the techniques and approaches used to attract international companies have a cost. The greater the incentives offered to attract companies, the greater the investment the sponsors must make. This represents a key trade off that is part of determining the appropriate model for the facilities, services and special framework to be offered by the Gateway.

Target Market Drivers

As discussed in more detail in the next chapter, the term "target market" refers to the types of companies and activities the KEG hopes to attract. Companies consider a number of factors, both internal and external, in deciding where to locate an operation. These factors include sales and marketing, manufacturing and distribution, customer service, regional or business unit management, and developing and commercializing new products and services.

Corporate location decisions are typically prompted by one or more of three principal drivers:

1. efficiency-seeking—achieving lower costs of production;
2. resource seeking—obtaining proximity to natural resources or certain factors of production;
3. market-seeking—achieving greater proximity to key markets and customers.

Since Kuwait is not a low-cost business environment, the Gateway is likely to attract investors motivated by some other business function or functions. More specifically, the KEG will attract companies by offering some combination of:

- Significant new business opportunities;
- Competitive advantage in demonstrating new products and services;
- Access to relevant business information;
- Protection of intellectual property;
- Lower barriers to entry and expansion;

- Special legal advantages;
- Access to human resources with relevant skills;
- Appropriate facilities;
- Flexibility to expand or reduce facilities based upon project activity
- Access to project finance for technology demonstration;
- Reasonable cost;
- Ease of serving the entire Gulf Region;
- Opportunities for collaboration with other businesses;
- Appropriate living conditions (housing, schools, medical, safety) for international staff.

Rating the Value-added Market Niches

Based upon the market research conducted for this project and the competitive analysis discussed above, the specific recommendation for a value proposition is put forward in the next chapter. However, based upon the insights from this research, a brief overview of the appropriate market niche to be served in light of competitive alternatives is discussed here. The essential components of the KEG's value proposition will be the combination of facilities, services and special legal arrangements offered to the target market. If the Gateway is managed properly and provides the right type of services and support, then it could be attractive as a hub for the Region. Although the details of what facilities, services and special incentives should be offered will be discussed in detail in the Chapter 9, the following competitive market niche for the KEG is discussed below.

The competitive analysis is a function of the intersection between what the sponsors of the Gateway want to accomplish and what kinds of facilities, services and legal framework the target companies need. An important element of this analysis depends on what functions, a company needs to support in Kuwait and/or the Region.

Based upon the competitive analysis of both regional and domestic alternatives, the priorities for Kuwait and the needs of the target companies, Table 7.1 reflects the rating of value-added market niche potentials.

Table 7.1 Rating of Value-added Market Niche

Business Function	Priority for Kuwait	Priority for Company	Competitive Advantage for KEG	Overall Rating
Regional or Business Unit Management	Medium	Medium	Low	Medium
Sales and Marketing	Medium	High	High	High
Logistics	Low	Medium	Low	Low
Field Services	Medium	Medium	Low	Medium
Product R&D	Medium	Low	Medium	Medium
Technology Demonstration & Commercialization	High	High	High	High
Technical Support	High	Medium	High	High
Accounting/Legal				
Information Technology	Medium	Low	Low	Low
Administration	Low	Low	Low	Low

Competitive Alternatives for Companies

The core of a competitive analysis is comparing the alternatives target companies may have. In general, companies face the choice of operating from a similar facility in another country in the Region or locating in another similar facility within Kuwait. The following sections provide competitive benchmarking for potential competitors from the Region as well as domestically.

Regional Benchmarking

As discussed in Chapter 5, the KEG will not operate in a competitive vacuum. Numerous other specialized parks and economic zones in the Gulf Region seek to promote economic development. The KEG will have to structure its offering so as to compete effectively against those other locations. It can do so in several ways: 1) ***functional specialization***—attracting investments in a given set of business functions that are distinct from those that competing zones seek to promote, such as logistics, R&D, or IT; 2) ***industry sector focus***—identifying particular industries, such as medical, energy, or information technology; 3) ***infrastructure and services***—offering infrastructure, buildings, and services superior to those offered in other zones in the Region; 4) ***price***—offering lower rental and service charges than competing zones; 5) ***incentives***—provision of a set of fiscal incentives such as tax holidays, and non-fiscal investment incentives such as R & D grants or rebates, that are more generous than those offered by competing zones.

There are, of course, other factors that can differentiate the KEG from its competitors. Some of these are inherent, such as location. Kuwait's proximity to the oil fields in southern Iraq and in Iran may make the KEG more attractive to investors that seek to enter or expand in those markets. Other advantages are not inherent in the same way as location, and can be developed or enhanced, but for the most part only in the medium or long term. These would include the availability, quality, and cost of the work force; the presence of high-caliber educational and scientific institutions; and, the existing commercial and business environment, especially the presence of domestic suppliers and/or subcontractors.

There are more than 40 SEZs and similar structures in the Gulf Region, including 32 in the UAE alone. Of these, several have a mandate similar, though not identical, to that proposed for the KEG. There are approximately 19 operational STPs in the Gulf Region, 11 of them in Iran. There are a further five to seven STPs being planned, including one STP in Basra, Iraq. This last is particularly significant because if it should move from planning into implementation, it might have a significant adverse impact on of Kuwait's ability to set up a logistics-focused industrial park/SEZ to serve as a gateway to Iraq.

Although not all of these are SEZs, all of them have some characteristics of SEZs, including 100 percent foreign ownership, low or zero tax environments, simplified business registration and licensing, and a wide range of value-added services, which typically include business incubation, matchmaking, mentoring, and establishment of links between international and domestic companies. Of those entities profiled, only two—Dharan Techno-Valley and Qatar Science and Technology Park—have a mission similar to that proposed for the KEG, namely, commercialization of innovation and technology. This, however, is a fairly broad functional specialization, which leaves ample room for additional specialization that could capitalize on Kuwait's unique set of opportunities and challenges.

Six of the ST/SEZs in the Gulf Region are highlighted in Table 7.2.

1. UAE—Masdar based in Abu Dhabi
2. Qatar—Qatar Science and Technology Park (QSTP)
3. Saudi Arabia—Dhahran Techno Valley (DTV)
4. UAE—Dubai Biotech and Research Park (DBRP)
5. Oman—Knowledge Oasis Muscat (KOM)
6. UAE — CERT Technology Parks based in Abu Dhabi and Dubai (CERT)

Table 7.2 Comparison of Selected Gulf Region Technology Parks

	Focus	SEZ	Activities	Sectors	Size (m2 under roof)	Anchor Tenants	Competitive Challenge to KEG
Masdar	Investment in environmental and renewable energy technologies at the demonstration and early market deployment stage anywhere in the world— only some projects in UAE.	√	• Research and development • Light industry • Finance • Retail • Business • Education • Residential	Renewable Energy	35,000 (expect to reach 100,000 by end 2012)	Schneider Electric, GE, Siemens. International Renewable Energy Agency,	High— for Renewable Energy Technology Low— overall
Qatar Science & Technology Park	An STP focused on product development in Qatar leading to early commercialization of technologies in energy, healthcare, environment and IT	√	• Offices • Laboratories • Business incubator • Incentive loans	Energy Medical ICT Environment	45,000	EADS, ExxonMobil, GE, Microsoft, Shell, Total, Carnegie Mellon, Texas A&M	High for technology development in the specific energy issues Medium— for tech demonstration
Dharan Techno-Valley	A classical STP created by bringing together a number of relevant organizations seeking to attract technology based FDI companies and incubate local businesses in the fields of energy, petroleum and IT.	no	• Science park • Innovation center • Consulting and services center • Business incubator • Science and technology center • Liaison office	Petroleum, Petrochemicals and ICT		Siemens, GE, Aramco, Baker Hughes, Schlumberger, Halliburton Siemens, Honeywell, Dresser Rand	High— with many of the target companies already resident
Knowledge Oasis Muscat	A convention office based STP with an incubator	no	• Offices • Business incubator	ICT	22,000	HP, Oracle, Microsoft, NCR, Motorola, Huawei	Low
Dubai Biotech and Research Park	A single sector STP, but with little innovation. Provides mainly a logistics and lab based technical support facility to large pharmaceutical companies operating in the Middle East	√	• Labs • Warehouses (for storage and manufacturing)	Health Care and Pharmaceuticals	200,000	Pfizer, Amgen, Merck Serono and Genzyme	Low
CERT Technology Parks	2 parks—conventional STPs promoting the exchange of technical knowledge between the educational and business communities	no	• Offices • Training • Consultancy services • Technology transfer • Business incubator • Venture capital	ICT Broad range	50,000	IBM, Intel, Honeywell and Alcatel-Lucent	Low— primarily focused on other sectors

Masdar

Masdar is a unique type of TP/SEZ, which has much broader objectives than simply securing investment from major international companies. It seeks to attract the global leaders in the renewable energy business and make Abu Dhabi a global center of excellence in the renewable energy and clean technology sectors.

The project was founded in 2006; and, compared to its initial objectives, it has attracted relatively few companies to establish a presence within the park. However, the primary clients include: IRENA—the International Renewable Energy Agency, Siemens, GE and Schneider Electric.

The key SEZ features include: no import tariffs, no taxes on companies and individuals, no restrictions on capital movements, 100 percent foreign ownership, and no currency restrictions.

Masdar has created five operating organizations:

- ***Masdar Institute***—an independent, research-driven graduate institute developed with the ongoing support and cooperation of the Massachusetts Institute of Technology.
- ***Masdar Capital***—seeking to build a portfolio of the world's most promising renewable energy and clean technology companies. It plans to help its portfolio companies to grow by providing capital and management expertise.
- ***Masdar Power*** a developer and operator of renewable power generation projects focused on concentrating solar, solar photovoltaic and on-shore and off-shore wind energy
- ***Masdar Carbon***—manages projects that bring reductions in carbon emissions through energy efficiency and waste heat/CO2 recovery, as well as through carbon capture and storage (CCS).
- ***Masdar City***—aspires to be one of the most sustainable cities in the world, with an area of approximately 6km2 located 17km from the center of Abu Dhabi, the City at full build out is expected to house 40,000 residents and hundreds of businesses. It currently accommodates staff from the Masdar Institute.

Masdar is a serious attempt to increase the innovation capability of Abu Dhabi in the clean energy and environment sectors by investing in research, development, demonstration and early deployment. As such, it concentrates on investing in projects across the world as it attempts to keep up with the state of the art. Whenever possible it prefers to invest in projects in the Middle East. Example projects include a thin film solar photovoltaic cell manufacturing plant in Germany, a large offshore wind farm in the UK, and a carbon capture and storage facility in Abu Dhabi. The last of these projects is the type of demonstration project that the KEG might initiate in its targeted areas of specialization. Therefore, Masdar is worth a closer look to understand how it brought about this project, funded it, and secured the relevant partners to deliver it. In addition, there are some interesting similarities between the work of NTEC in Kuwait and Masdar Capital that could be worth further investigation.

> ***Masdar represents a significant competitive challenge in the area of renewable technology. This sector is the primary focus of Masdar, which and has already invested a great deal to try to capture the early mover advantage in the Gulf Region. The design of the KEG needs to be realistic concerning its ability to compete directly with Masdar in the renewable segment. Any significant investment in this segment by the Gateway should thus be narrowly focused, for example, on the use of solar as a power source for off-grid applications, such as on the significant power requirements for enhanced recovery techniques and oil field water treatment.***

By and large, since Masdar's focus is limited to the renewable segment of the energy sector, it should not be a significant competitor in the petroleum, petrochemical and broader power segment of the energy sector.

Qatar Science and Technology Park (QSTP)

Qatar Science and Technology Park has set out to become a center for technology innovation and development in the areas of energy (including petroleum), environment, health, and ICT. QSTP aims to attract major companies to undertake investment new technology development and innovative product creation.

The QSTP was founded in 2004 and currently has 46 resident companies including: Shell, Rolls Royce, Maersk Oil, Microsoft, Williams, Tata, ConocoPhillips, Chevron, GE and ExxonMobil.

To help attract the kinds of projects it wants to promote, the Qatar National Foundation has established a fund that enables QSTP to co-invest so as to induce projects to locate in Qatar. Unlike Masdar, QSTP does not invest outside Qatar. Most companies, including the major oil companies, have utilized the project loan funding offered that provides up to 50 percent of the cost of a qualifying project. If a project proves to be successful, the loan is repaid from royalties on the implementation of the technologies developed. If the technology development is not successful, the loan does not have to be repaid.

Likewise, in order to strengthen the R&D base in Qatar, the Foundation has established an "Education City" adjacent to QSTP, which has attracted Carnegie Mellon, Texas A&M and the Weill Cornell Medical College. These universities have established degree awarding programs and research teams that are matched with the R&D interests of the businesses at QSTP.

QSTP now employs over 850 people, 40 percent of whom have PhDs and 40 percent of whom are Qatari nationals. The research programs include: carbon capture and storage in Qatari gas fields, development of diesel and aviation fuel from Qatari gas, development of new technologies for mass transit metro systems for the GCC countries starting with Qatar, and the development of new high-value sun-resistant chemicals derived from a plant native to Qatar.

QSTP has an SEZ status tailored to its specific mission allowing companies 100 percent foreign ownership, no tax, ability to trade directly in the Qatar economy without a local agent or sponsor, duty-free import of goods and services, and unrestricted repatriation of capital and profits. To retain their SEZ status, companies have to provide their innovation plans each year to the QSTP administration for approval before renewing their lease and re-qualifying for SEZ incentives.

As a model for securing greater investment by multinational companies in Qatar and for creating highly skilled employment opportunities for Qatari nationals, the project is showing clear initial success. The next stage in the development of QSTP is expected to scale up its activities four or five times.

Although QSTP does have an incubation program for early stage companies, this is a relatively low priority and has contributed little to the initiative's objectives, while absorbing considerable management time.

QSTP represents a significant competitive challenge to the KEG. They are well along in their agenda with a beautiful facility, close collaboration with numerous R&D institutions, existing high-profile tenants, a significant amount of risk money in its fund and aggressive expansion plans.

On the other hand, the QSTP is attempting to focus on four different market sectors. Since the KEG is expected to focus more narrowly on the energy sector, it should be able to compete effectively in this area. In addition, the primary focus is on R&D of new technologies. If the KEG focuses on technology demonstration and commercialization instead of more basic R&D, it will serve a distinctly different market niche and QSTP should present little direct competition.

Dhahran Techno Valley (DTV)

Dhahran Techno Valley's functional specialization is the commercialization of innovation, technology transfer and joint university/industry research and development. DTV specializes in supporting technologies in the fields of petroleum, petrochemicals and ICT, which are aligned with the main research strengths of the university. Founded in 2002, DTV is the oldest STP in the Region, although the first phase of construction was not completed until 2004, which means that by international standards it is a relatively young park.

For a project of its age, the number of resident companies is relatively small, being listed as 19. However, it does include several well-known, large international corporations including: Schlumberger, Siemens, Honeywell, GE and Weatherford.

DTV is organized into six operating units:

- King Abdullah Bin Abdulaziz Science Park (KASP)
- Sultan Bin Abdulaziz Science and Technology Center (SciTech)
- Innovation Center
- Business Incubator
- Liaison Office
- Consultancy Services Center (CSC)

These units are located in the same geographic area close to the King Fahd University of Petroleum and Minerals. Together, these components can be considered as a single entity reflecting the features, facilities and programs of a 2.5 generation TP. The SEZ features of DTV are limited and include only general national investment incentives.

The DTV represents the only primary competitor for the KEG in the Gulf Region. It is well established and already has as clients several of the same oil field equipment and service companies the KEG should try to attract. In addition, its location in Saudi Arabia makes it an outstanding platform for developing, demonstrating, adapting and commercializing new and emerging technologies in the upstream and downstream dimensions of the energy sector.

On the other hand, Kuwait also has a significant amount of domestic oil production and represents a huge market for the types of equipment and service companies proposed to be targeted by the KEG. Identifying the specific priority needs for Kuwait's own petroleum and petrochemical industries and creating opportunities for companies to create a competitive advantage by demonstrating and adapting their new technology is the KEG's "sweet spot". Finally, Kuwait has significant advantages over Saudi Arabia in terms of quality of life for international staff.

Knowledge Oasis Muscat (KOM)

Knowledge Oasis Muscat is an STP located 30 km from Muscat, Oman and neighboring the Sultan Qaboos University. The KOM claims to have over 60 client companies, although their current tenant directory records only 40. They focus on the IT sector and have well known international companies such as Microsoft, Oracle, HP, Motorola and Huawei. KOM has an SEZ status and its buildings extend to 22,000 sq. meters of mainly office accommodation making it a small to medium scale STP.

The SEZ features of the KOM are the same as general Oman investment incentives, including 100 percent foreign ownership, free repatriation of profits and capital, no personal income tax, no foreign exchange controls, and up to 10-year corporate tax exemption.

KOM operates an incubator program that provides free mentoring and a range of practical common services that are found in well-designed incubators.

> ***KOM is not a direct competitor for the KEG. It focuses on the ICT sector and not the energy sector. It does not attempt to provide the kind of platform for technology demonstration and commercialization envisioned for the KEG.***

DuBiotech—Dubai Biotechnology and Research Park (DBRP)

Dubiotech is a young STP, launched in 2005. It has a community of 70 biotech, pharmaceutical, lab equipment and test lab companies including international businesses such as Pfizer, Amgen, Merck Serono and Genzyme.

At first glance, DBRP appears to be an exciting project bringing substantial investment in the life sciences to the Middle East. However, upon a closer examination it is revealed to be principally a base for warehousing, as well as some standard manufacturing and technical support services for major pharmaceutical businesses.

The hope is that, over time, these companies will expand their activities to include research, development and innovation based on local skills. If this does occur, then the project will deserve to be counted a success in attracting life science technology companies to the UAE.

For now, it is best considered as a regional logistics and manufacturing SEZ providing 100 percent foreign ownership; full repatriation of profits and capital; customs duty exemption on goods and services; and a guaranteed 50-year exemption from personal, income and corporate taxes.

In addition, it does offer, through a single office, services such as regulatory affairs management, partner development, registration, licensing, government services and facility leasing services.

> ***DBRP is not a direct competitor for the Gateway. It focuses on the biomedical/pharmaceutical sector and not the energy sector. It does not attempt to provide the kind of platform for technology demonstration and commercialization envisioned for the KEG.***

CERT Technology Parks—Abu Dhabi and Dubai

The CERT Group of Companies began as the commercial arm of the Higher Colleges of Technology in the United Arab Emirates, and has grown to be the largest private education provider in the Middle

East. CERT also claims to be the largest Middle East and North African investor in the discovery and commercialization of technology, investing US$ 35 million in 2006.

CERT Technology Park, which comprises two separate locations, was created in 2003 and is reported to accommodate 25 companies including IBM, Intel, Honeywell and Alcatel-Lucent.

The two parks were established along conventional STP lines to promote the exchange of technical knowledge and expertise between the education and business communities. In order to facilitate this exchange, the CERT Parks offer cost-effective office facilities, access to quality resources of the Higher Colleges of Technology and close proximity to other high tech organizations. They also provide training and consultancy services to foster technology transfer, as well entrepreneurship, and business incubator services for high technology and innovative business ventures.

CERT is not a significant competitor for the KEG. It primarily focuses on other sectors and is not dedicated to the energy sector. In addition, the CERT Parks are explicitly conceived as a bridge between academia and business instead of serving as a gateway to new business opportunities..

In considering regional competition, it is important to look beyond the focus on STP/SEZs and assess the broader regional challenges. Most of the global companies in the energy sector have their regional and business unit headquarters in the UAE. Both Dubai and Abu Dhabi have created business and social environments that are attractive to international companies.

Although Kuwait could compete with the UAE and other GCC states as the primary operating hub in the region, it would need to make significant changes in its business and social environments. And the key question is why Kuwait would want to be the regional hub of choice for global companies. Kuwait does not benefit significantly from simply having management, marketing and administration staff resident in the country. The point is not to simply attract companies to locate in Kuwait; the point is to attract the specific functions of the business that add value in Kuwait and meet its economic and social development objectives.

The KEG should seek to attract international companies to locate technical operations and staff to Kuwait. Technology development and commercialization have important benefits to Kuwait's energy industry but also contribute to the development of domestic technical expertise and the creation of high-quality jobs for Kuwaiti citizens. By creating an environment where this can happen and by offering a compelling business rationale for companies to build domestic technical capacity, Kuwait can become the regional leader in commercialization of energy-related technology.

No other facility in the region serves this market niche. The proposed approach of focusing on near-term priority needs for Kuwait's energy industry not only provides significant benefits to Kuwait, but positions it to become the high-tech leader in the energy sector for the Gulf region—and beyond.

Domestic Benchmarking

In addition to the potential regional alternatives described above, there are also domestic alternatives that might be considered as competition for attracting the same companies to establish or expand their operational footprint in Kuwait. The following section of this chapter addresses the two sets of potential domestic competitive alternatives for meeting the needs of the companies within the target market.

First Set of Domestic Alternatives— Select from Existing Facilities, Services and Legal Framework

Business-as-Usual

There is already a large number of petroleum equipment and service companies operating in Kuwait. Because of existing laws, most of these are joint ventures with international companies, or they are simply marketing arrangements where international companies have "representative agents". This arrangement is woven into the fabric of KPC and the other K-Companies and has benefitted the Kuwaitis who have these relationships. Any change to this approach will encounter stiff resistance from those vested interests. Maintaining the status quo is by far the greatest competitive challenge to the contemplated KEG initiative.

Currently, there is no entity that focuses on housing and supporting the companies engaged in energy-related demonstration and commercialization. The status quo does not have an entity specifically focused on meeting the needs of the energy-focused private sector while it works with KISR and other technology-based institutions in Kuwait. The Kuwait oil sector is among the most sophisticated in the Region, and for numerous technologies that are used by the sector, Kuwait has been pioneer. Of course, KISR, and recently KPC/R&D, are working with private sector companies and have been facilitating energy related technology demonstration and commercialization for a long time. The need is for an initiative to help attract and support those companies. The KEG would build on Kuwait's pioneering efforts and focus on the needs of the companies working with technology development and commercialization activities.

The business-as-usual scenario has limited the development of the private sector and overall economic development because most companies have set up operations in other regional locations to service specific Kuwaiti contracts. This limits companies' investments in the country and limits the employment opportunities for young Kuwaitis. It is because of the limitations of the business-as-usual scenario that KISR undertook the responsibility to explore a better way to facilitate technology transfer and promote private sector development.

One of the main functions of the KEG would be to attract the engineering, consulting, service and training companies, etc., that are essential for supporting the oil, gas, and energy industry. Tenants of the KEG can have the benefit of working with KPC/R&D to demonstrate their technologies and services, and the benefit of receiving support from KISR to adapt and customize their technologies.

Business Office Space

One of the most tangible features of a park-like development is the office space it rents to tenants. Any type of park-like development will face direct competition from other places that offer office space. In Kuwait there is currently a significant over supply of office space, which is expected to continue as many of the new downtown towers are currently under construction.

It is true that overall growth in the energy sector will lead to greater opportunities for companies providing technology and service to the Region. But the KEG should not attempt to compete with private developments for simply providing office space for small and medium-sized businesses. The KEG needs to provide additional value-added services and special regulatory framework to attract companies to establish operations.

There is no competitive advantage by simply offering office space to international or domestic companies. The Gateway should not focus on office space for traditional tenants. The value-add must be in the

unique legal framework, the opportunity for new business, and the increased competitive advantage for new technology commercialization and professional services.

Industrial Space

Many energy sector equipment and service companies need light industrial facilities and warehousing. There is currently a shortage of this type of facility in Kuwait. For some companies the need for this type of facility may seem to create competition for the KEG.

Although there may be special facilities for light fabrication and assembly of equipment as a part of the technology commercialization activities, the KEG should not attempt to be an industrial park and will not be directly competing with developments focused on this type of facility. Therefore, there is a minimal competitive challenge from industrial park style initiatives.

Second Set of Domestic Alternatives—Select Facilities, Services and Legal Framework to Be Offered by Other Kuwaiti Initiatives

This second type of domestic competition is a much more serious challenge than potential competition from existing commercial real estate developments. Virtually every one of the key institutional stakeholders for the KEG has a similar alternative initiative under consideration. This is a major issue. These institutions must recognize that their initiatives can be complementary instead of competitive, or none of them will optimize the results that the country requires. It is imperative that these institutions cooperate instead of compete.

One of the essential challenges for designing the KEG is to identify the niche that complements the other efforts to promote research and development, technology transfer, energy-industry innovation and job creation in order to avoid direct competition to attract the same companies or provide the same services. The KEG should be designed to be complementary to these efforts. The relevant initiatives that may potentially seem like duplicative efforts must be understood and taken into consideration in the value proposition of the Gateway.

There is no reason why there should be only one such initiative in Kuwait. For example, the UAE currently has 32 SEZs and is planning more. Kuwait so far has only the unsuccessful Kuwait Free Trade Zone. There is likely to be ample scope for multiple developments, each with different goals and target market.

Since the various other initiatives are in the early planning stages, this review is only a high level view of how the various efforts can be seen as an opportunity positive competition, sometimes referred to as "co-opetition."[15] This means that the various institutions and initiatives may have some aspects that are competitive, but they also need to cooperate for the best interests of the country.

The new initiatives that include technology development and commercialization related to the energy industry within Kuwait include:

KISR R&D Center

Commercialization of new technologies has been part of the KISR mandate since 1981. In addition to its more traditional R&D role, KISR has plans to expand its work in technology commercialization. There is a risk that KISR will see the Gateway initiative as independent from their other technology commercialization activities and create a competitive relationship. In fact, the KEG should be designed to

15 Co-opetition is a term that was first used in the early 2000s to describe the business alliances that were created among information technology and internet-based companies that may compete against each other in some markets and cooperate with each other in other markets.

service the private sector companies engaged with KISR's activities. Companies need to have facilities and services that make it easier to work with KISR, KPC and other related institutions.

KISR should see the KEG initiative as a creative extension of its mission and not as a separate effort. KISR has a critical role to play in building the technical capacity of Kuwait and in any technology-oriented initiative developed in the country. The KEG should be designed to serve the private sector with facilities and services that complement KISR's work.

KPC Research and Development Center Initiative

Based upon several comments during the project team's data gathering interviews, it was stated that KPC is in the planning process for its own technology research and development capacity. This initiative is clearly a potentially important competitor. Similar to the situation with KISR's R&D activity, the KEG should help connect the private sector companies to the technologies being developed by KPC.

Strong engagement by KPC and the other relevant K-Companies, particularly KOC, is a critical success factor for the Gateway. Without this strong support and ongoing participation from the K-Companies, target companies from the energy sector will hesitate to locate in a technology park that is only theoretically focused on energy opportunities. Developing the working relationship that bridges these institutional barriers should be a very proactive effort and should begin during the current planning phase of the KEG initiative.

PAI Industrial Technology Park Initiative

The Public Authority for Industry is also sponsoring an industrial zone, for which it has already commissioned a feasibility study. The PAI initiative has been given a large area of land for light industrial and warehousing activities. As a part of this overall development, an industrial technology park is being designed. This is another example of potentially significant competition for the KEG.

While there is some potential for overlap and competition, the Gateway should be designed to appeal to a different set of business functions. There is no reason a particular company could not have capacity located in both developments, each serving a different set of needs. A high level of cooperation among the groups planning these two initiatives is necessary to assure a complementary set of facilities and services.

NTEC Incubator Initiative

The National Technology Enterprises Company (NTEC) also has a similar initiative in the planning process. NTEC has historically focused on early-stage, technology-based companies. It provides financial, technical, marketing and facility support for a small number of companies. It is hoping to include its incubator and other venture support services into the PIA Industrial Technology Park discussed above.

While NTEC has an important role to play in commercializing new technology in Kuwait, it is not dedicated to the energy sector. In addition, it is historically focused on investing in emerging technologies and not working with big international companies that need to demonstrate and adapt technologies they have developed in other countries. Both functions are important, and again, they should be seen as complementary and not competitive.

KFIB Initiative

The Kuwait Foreign Investment Board (KFIB) has also commissioned a feasibility study to be conducted by the World Bank. KFIB is an important stakeholder in the country's effort to attract investment in priority technologies. In addition, it plays a key role implementing the Foreign Investment Law, which

the KEG will use to provide a streamlined platform for attracting target companies and activities. Co-operation with KFIB is essential; it therefore be a key stakeholder of the Gateway during the design as well as subsequent operation, KFIB's engagement will be required if the KEG is to offer streamlined and expedited foreign investment approvals.

The following points summarize the key observations discussed above.

- Current domestic initiatives for energy sector technology development will not attract the kind of companies and the kind of functional capacity required to meet the goals of the Gateway or its key stakeholders.
- Several new initiatives sponsored by different Kuwait public entities have the potential to be either major competitors or major collaborators. The need to establish the complementarity of these initiatives is thus a high priority.
- There is a clear niche for a well-focused technology park that provides facilities, services, financial incentives and collaborative engagement for promoting new technology utilization for priority needs of the Kuwaiti and regional energy sector.

8 Target Market Framework

Chapter 8 Summary Findings and Conclusions

The appropriate types of companies and activities selected as the target market are directly related to the goals for the Gateway.

The broad range of potential companies and activities that might be defined as the target market needs to be narrowed and prioritized and a recommended prioritization framework is provided..

There are certain types of companies and activities that should not be permitted to operate within the KEG.

The proposed value proposition is a clear opportunity to introduce, demonstrate, -that address specific priority needs of the energy sector in Kuwait and/or the Region.

Providing unique insight and access to the technical, operational and procurement staff of the eventual tenants of the Gateway's products and services will be a key feature of its offering. The highest priority set of target companies should be large and medium-sized companies from all segments of the energy industry interested in commercializing emerging technologies and services that address key challenges facing the Kuwaiti and Regional energy sector.

An aggressive sales and marketing program will need to be developed and adequately resourced.

The purpose of this chapter is to discuss the framework for determining what types of companies should be targeted as potential tenants for the KEG and provide a recommendation for defining that target market. The chapter also provides a brief overview of the sales and marketing requirements that will be needed to attract the target companies to actually become clients. It is important to create a match between the needs of the companies in the target market and the value proposition to be offered by the KEG. Designing a successful "fit" between the KEG offering and its target market is at the heart of this study.

For purposes of this report, the term, "product" and "offering," are used to refer to the total package used to attract a potential client or tenant. The KEG product or offering will include a special legal framework, a physical facility, a set of services, and financial incentives.

This chapter consists of three major parts. The first outlines a methodology for defining a target market and explores a range of alternatives that need to be considered during the initial phase of the project. The second section puts forward a proposed target market segmentation and prioritization framework. Finally, the third section highlights the sales and marketing approach required for effective marketing to priority target companies.

Determining the Appropriate Target Market

There is no single set of companies that constitute the target market. Moreover, the nature of the target market and the specific companies it includes will change over time. The appropriate target market is derived from both the overall objectives the Kuwait Government sets for the Gateway and the investments the Government is willing to make in order to create a highly attractive offering to prospective tenants. For review, the development objectives of the initiative include:

1. Create productive work opportunities for young Kuwaitis and other GCC nationals;
2. Provide an environment for effective technology transfer for oil and energy related industries;
3. Place Kuwait as a regional center for advanced technical support and R&D services for the oil, gas, petrochemicals and power industries;
4. Promote socio-economic development through encouraging start-ups of SMEs.

So the key question is what kind of companies should be attracted and supported by the KEG to best accomplish these objectives. The answer to that question becomes the definition of the appropriate target market for the KEG.

As discussed in Chapter 3 above, rising global energy consumption will stimulate increased supply globally, in the Gulf Region, and in Kuwait, where the Government is already committed to increasing oil production to 4 million b/d. The objective for the Gateway is to deliver the kinds of activities and services that promote Kuwait's development goals. It is not only the kind of company that makes up the target market, but also the kind of services that the KEG offers that are key to accomplishing the above objectives.

In the proposal put forward by KISR to provide direction for this study, the following types of companies were identified in the oil, gas, petrochemicals, power and renewable energy sectors:

- Major international core business and service companies, such as ExxonMobil, Shell, Total, Chevron, Shlumberger, GE, Siemens, Hitashi, etc.
- Small and medium sized businesses, with emphasis on:
- Technology-intensive companies
- Service companies
- Engineering companies
- Consulting companies
- Research and development companies and institutions
- Human resources development companies

The KISR proposal further noted that *"the Region currently has limited availability of dedicated infrastructure facilities that attract the required businesses. The Petroleum, Petrochemical, and Energy Technology and Services City in the State of Kuwait is proposed to establish such an infrastructure facility."*

Attracting the kinds of companies identified above is at the heart of the proposed KEG approach, which is outlined in the next chapter. But these kinds of general criteria are insufficient for providing direction to the design of the KEG offering. The next part of this chapter provides a more robust framework for identifying the characteristics that make up the target market for the KEG.

Finally, the competitive analysis discussed in the previous chapter clearly indicates that there is not a "limited availability of dedicated infrastructure facilities" in the Region, or in Kuwait. The Gateway must therefore offer more than facilities to attract the kind of companies and activities needed to meet the Kuwaiti Government's development objectives.

Target Market Characteristics

It is important to clearly define the term, "target market." In addition, it is important to make a distinction between priority tiers within the overall target market and a boundary defining what types of companies and activities will not be permitted within the KEG.

For purposes of this study, the term "target market" refers to the types of companies and functions the KEG hopes to attract as clients, or tenants, and includes the following characteristics:

1. Segments within the energy industry
2. Legal structure
3. Current operating locations
4. Size
5. Functions
6. Facility requirements

A proposed framework for describing the potential target companies includes:

1. ***Sector and Segment***—which segment, or segments, of the energy sector does a company serve? The first point of clarification is that the focus of the KEG is limited to the energy industry sector. Although energy is a broad sector, this boundary definition excludes all of the other sectors such as medical, information technology, finance, etc., unless these other sectors also interact with the energy sector. For example, many emerging technologies in the energy sector include information technology as a component. Similarly, water treatment is not specifically an energy segment, but it has significant applications specific to energy. Consequently, there is not always a clear distinction between segments within the energy sector.

   Decision concerning the eligibility of a company, or one of its functions, to occupy space within the Gateway should be made by KEG management as part of a standard "qualification and registration" process. However, the scope of the Kuwait Energy Gateway should be limited to companies serving some segment of the energy sector.

   Although many of the companies within the energy sector actually serve more than one segment, the broad segmentation of the energy sector proposed for the target market includes:

   Petroleum
   - Exploration and production oil companies, including IOCs
   - Upstream field services
   - Upstream technology and equipment
   - Engineering and construction
   - Transportation and shipping

   Petrochemical and Refining
   - Petrochemical operations
   - Refinery operations
   - Downstream technologies and services

   Power Generation
   - Hydrocarbon-based power generation
   - Renewable energy equipment and services

- Transmission and distribution
- Electricity equipment and services

Professional Services

- Engineering
- Health and safety
- Environmental equipment and services
- Transportation and logistics
- Safety and security
- Specialized training and education
- Project management
- Other

2. ***Legal Structure***—where is the company legally incorporated?
   - International (incorporated outside of Kuwait, with possible subsidiary companies)
   - Kuwaiti
   - Joint Venture

3. ***Current Operating Locations***—where does the company currently have operations?
   - Global
   - Gulf Region
   - Kuwait

4. ***Size***—how much revenue and how many employees does a company have?

	Small	Medium	Large	Very Large
Globally	1–500	501–5000	5000 & over	
Gulf Region	1–100	100–500	500–2500	2500 & over
Kuwait	1–100	100–500	500–2500	2500 & over
	<US$ 10 m	<US$ 50 m	<US$ 500 m	>US$ 500 m

5. ***Functions***—which functions within a company will be targeted? For example:
   - Regional or business unit management
   - Sales and marketing
   - Logistics
   - Field services
   - Product R&D
   - Technology demonstration and commercialization
   - Technical support
   - Accounting/legal
   - Information technology
   - Administration

6. ***Facility Requirements***—what kind of operating facility does the company need? For example:
   - Office accommodation
   - Business park (mainly office)
   - Technology park with office or mixed office/workshop/lab/demo space
   - Industrial park with light fabrication and assembly
   - Warehousing/logistics

- Serviced office accommodation (small units <500 sq. meters) in:
  - Downtown location
  - Business/technology park

Range of Target Markets

The appropriate target market for the Gateway can be defined by aligning the strategic goals for the Gateway with the product offering capable of attracting the kinds of the companies that allow the KEG to accomplish those goals. How broadly or narrowly the target market is defined is part of the decision process involved in this phase of the feasibility study.

On the one hand, the target market for many technology/business/industrial parks is defined very broadly. Virtually any company can become a tenant if it is willing and able to sign a lease. A privately financed business park or technology park is typically driven by the need to generate financial returns for the investors and many therefore appeal to a wide range of companies in any sector for any function. On the other hand, some parks are developed with a very narrow target market to achieve very specific objectives. Examples include specialized biomedical science parks, petrochemical zones, tourism zones, and agriculture/agribusiness parks.

The introduction of the KISR project proposal states:

> *"To build-up regional technical capabilities related to oil, gas, petrochemical, and power industries, Kuwait is in a proper position to assume an important role. This document presents a proposal for the establishment of a technology business park in Kuwait that can attract international institutions specialized in this field, and serve as a regional base for growth of technology based national and regional enterprises. The proposed City aims at attracting consulting and engineering firms, high-tech service companies, and other small and medium new start-up enterprises to establish their regional operating facilities in the proposed City."*

In light of this statement of purpose, the challenge for this phase of the feasibility study is to develop a design for a new park that balances the needs of the market with the objectives of Kuwait. If the purpose is simply to provide office space for companies responding to the growing market demand, then the Government need not involve itself in such development. In contrast, provision of facilities, services and a legal/regulatory framework that attract the type of company and the type of activity within those companies—needed to drive overall private sector development and employment—such a combination merits significant Government participation.

An important issue in the design of the KEG is whether it is primarily intended to serve as a platform for servicing the domestic Kuwaiti market or whether it is primarily intended to serve as a platform from which to service the entire Gulf Region. In the opinion of the consulting team, this is a false distinction. Kuwait is well behind other GCC states in reaching out to the global business community with incentives that make it an attractive regional hub. After several decades of governments from other GCC countries, notably UEA and Qatar, investing hundreds of millions of dollars to provide a business-friendly environment and world-class facilities, Kuwait is well behind in attracting companies simply because of the potential growth of the energy sector in the overall Region.

It is a core conclusion of the consulting team that before Kuwait can serve as a high-tech leader in the energy sector in the Region, Kuwait's energy must actually lead in the commercialization of high-tech solutions to common priorities of the Region. No new park initiative is going to "place Kuwait as a

regional hub." However, creating a specialized park to serve the technology commercialization needs of the Region and attract leading edge professional service companies is a niche that the KEG can fill. In addition to providing office space for the professional service firms cited as the target market in the original KISR proposal, the KEG will need to offer value-added services that can help position Kuwait as the regional leader in technology commercialization. This value proposition should make a compelling case for both service companies and technology-based equipment companies for why choosing to locate their technical staff in Kuwait in order to best serve the Region.

Strategic Market Drivers

The KISR project proposal states:

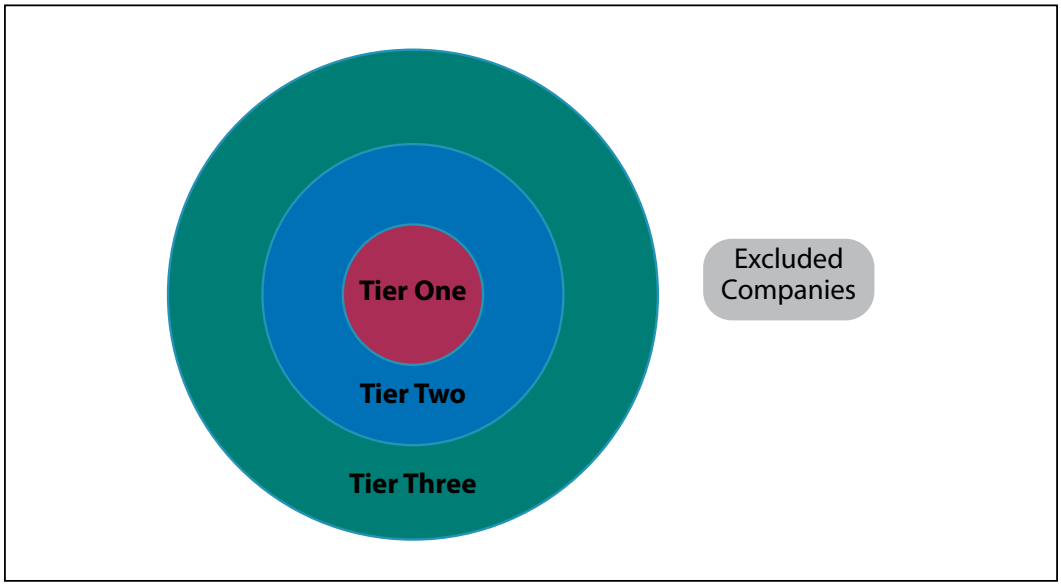
> *"In addition to the total growth in the segments of the energy sector, it is important to note that the industry will require in the future more advanced technical support. The drivers for these needs are the following:*
>
> - *Exploration of deeper oil and gas resources;*
> - *The need for secondary and tertiary oil recovery techniques to enhance production in aging conventional oil fields;*
> - *Changes in crude oil properties towards higher densities and sulfur levels*
> - *The increasing complexity of petroleum refining due to crude oil quality and the need to produce cleaner fuels;*
> - *Solar and wind energy will start to play an increasing role in power generation in the region;*
> - *Complexity of environmental problems;*
> - *The need to optimize and streamline production activities to reduce cost and increase revenues.*
>
> *The required technical support will include consultancy, engineering works, and technical services, specialized information and communication technology (ICT) services, analytical services, human resources development, etc. Furthermore, to maximize the benefits from available resources, the R&D capabilities of the region must be strengthened and efforts should be made to develop technological solutions customized to the specific challenges facing the industries."*

Prioritizing Segments of the Target Market

The overall target market should be divided into priority tiers. Thus, companies and activities within the top priority tier will be aggressively solicited, while companies in lower tiers will be welcomed but not pursued as a priority. In addition, the KEG needs to establish clear "exclusion criteria" for what types of businesses and activities will not be allowed in the facility.

The following graphic illustrates the target for distinguishing among priority tiers within the overall market, with a clear boundary for which kinds of companies and activities will be excluded.

Figure 8.1 Target Market Priority Tiers



Proposed Value Proposition and Target Market

Value Proposition

Based upon the market research and discussion above,, the key elements of the proposed value proposition to attract a company to become a tenant of the Gateway include the following:

- A gateway to introduce, demonstrate, adapt and commercialize their new technologies and professional services addressing specific priority needs of some segment of the energy sector in Kuwait and the Region;
- Access to technical, operational and procurement staff of the tenant companies' customers in Kuwait and the Gulf;
- Potential to gain a competitive advantage in open procurement processes based on experience having had the chance to establish their product or service's features and benefits through mutually agreed collaboration with potential buyers;
- Access to financing for the adaptation and demonstration of their product or service offering, usually with the collaboration of a sponsoring institution such as KISR, KPC, KFAS, NTEC and others;
- Providing a "soft-landing" for entry into the country;
- One-stop shop for administrative formalities;
- Protection of intellectual property rights;
- Access to business services that facilitate technology demonstration and commercialization.

Target Market Priorities

Table 8.1 provides a recommendation for how the KEG should prioritize its marketing efforts to attract target companies. Although some activities are explicitly excluded, others will be the object of more or less marketing efforts based on their perceived competitive advantages and their ability to achieve Kuwait's development goals.

Table 8.1 Target Market Companies for the KEG

Characteristic	Tier One	Tier Two	Tier Three	Excluded
Segments	• Upstream services • Upstream equipment • Engineering • Specialized downstream tech. & services	• Specialized solar energy • Specialized water treatment • Major oil companies	• Environment equip. & services • Transportation and logistics • Health & safety • Project Management	• Warehousing • Manufacturing • Non-energy industry related • Nuclear
Legal Structure	International	Kuwaiti & Joint Ventures	All	N/A
Locations	Gulf Region	Kuwait	Global	N/A
Size	Medium & Large	S,M,L,XL	Small &Medium	N/A
Functions	• Technology demonstration & commercialization • Technical support • Product R&D	• Regional or Business Unit Management • Sales and Marketing • Logistics	• Accounting/legal • Information technology • Administration	• Manufacturing
Facility Requirements	• Technology park with office or mixed office/ workshop/lab/demo space	• Office space	• Light fabrication and assembly	• Warehousing

Sales and Marketing Requirements

No matter how attractive the Gateway offering may be, a concerted marketing effort will be required to attract the quality and quantity of companies desired. There is a risk of under-estimating the resources required for effective marketing of the Gateway, which carries with it a risk of wasted investment. The benefits of the Gateway may be self-evident to its promoters and developers, but not necessarily so to target companies. A "build it and they will come" approach is doomed to failure. As compelling as the Gateway's value proposition may be, it must be communicated in a way that will attract a critical mass of high quality tenants.

Positioning

Positioning is a fundamental marketing technique, which entails creation of a unique set of attributes that differentiates a product from competing products and which entails communicating those attributes to potential customers. For the Gateway to succeed, its offering must distinguished in fact and in perception from its competitors. If it is perceived as a genuinely new concept, globally or in the Gulf Region, then the Gateway is likely to succeed—and to command a premium price. If not, it will be forced to compete on price and/or accept tenants unlikely to fulfill the Government's development objectives. Proper position must inform the detailed design of the distinctive mix of facilities and services the Gateway will offer, together with effective communication of these distinctive attributes. Effective communication, in turn, must be a coordinated effort involving all of the KEG's core stakeholders. These will include not only Kuwait's scientific research institutions but also its economic development and investment promotion agencies.

Direct Sales

The success of the KEG in attracting the right kind of companies and meeting its strategic objectives will be closely related to the effectiveness of its direct sales program. In many examples around the world, significant investments have been made in similar developments that have not been successful. In many cases, this is because the sponsoring organizations have not implemented an effective direct sales program. There are three aspects of the direct sales program that need to be pointed out at this early stage.

The first is to identify and communicate with the target companies, and, more importantly, with the right people within those companies. This requires a great deal of research and takes a lot of time.

The second is to understand and manage the sales cycle. The process that each company must go through in order to eventually make the investment decision to establish a presence in the KEG requires a great deal of timely interaction with a sales representative.

Finally, the sales approach, and possibly even the features of the offering, needs to be continuously adapted in response to market feedback. The agility to adjust to meet the needs of potential clients is what often distinguishes between successful and unsuccessful developments of this type.

Resource Requirements

Significant financial resources will need to be committed to the sales and marketing program. A robust sales team staffed by experienced professionals will be required, with the budget to travel often to the headquarters of the target companies and to participate in key sector and industry trade fairs, conferences and exhibitions. In addition, the cost of marketing and communication tools will be significant and must be included in the planned budget.

SECTION THREE: PROPOSED APPROACH

This section of the report turns to specific proposals and discussion of the proposed approach to designing the features of the Kuwait Energy Gateway. Chapter 9 provides a description of the proposed facilities, services and legal/regulatory framework for the Gateway. A business model and governance structure are recommended in Chapter 10, and some preliminary economic and financial projections about the Gateway are found in Chapter 11.

9 Proposed Features of the Gateway

Chapter 9 Summary Findings and Conclusions

This chapter provides the recommended features of the offering for the Gateway's facilities, services and legal/regulatory framework. The offering proposed is expected to attract the target companies and activities outlined in the previous chapter that will be needed to help make Kuwait a high-tech leader for the energy sector in the Region. The chapter provides a framework for designing the Gateway so that it reaches its goals and supports the broader socio-economic development goals of Kuwait.

The first part of this chapter puts forward a recommended set of defining statements; including the vision, mission, goals and purpose of the Gateway.

The next parts of the chapter cover the proposed physical infrastructure and the professional services that will be at the heart of attracting and supporting the intended target market companies.

The final element of the proposed Gateway design is a legal and regulatory framework that will attract and encourage the kind of companies and activities targeted.

It is the combination of the proposed facilities, professional services and legal/regulatory framework that makes the Gateway a unique concept within the Gulf States and therefore will provide Kuwait with a competitive advantage in becoming a Regional leader as a high-tech leader in the energy sector.

Vision and Purpose for the Gateway

Proposed Vision, Mission and Goal Statements

The proposed vision statement for the Kuwait Energy Gateway is:

> A specialized business technology park/special economic zone dedicated to serving private sector companies that provide the technology-based products and services necessary to support the growth and innovation of the petroleum, petrochemical and power segments of the energy sector in the Gulf Region and Kuwait.

The proposed mission statement is:

> To provide facilities, services and a legal/regulatory framework to attract and support the kinds of companies and activities needed to position

> Kuwait as a high-tech leader within the Region, to help meet the priority needs of the energy sector in the Region and Kuwait and that leads to broad private-sector growth and employment in Kuwait. In pursuing its mission, the Kuwait Energy Gateway will be mindful of environmental sustainability, equal opportunities and important social and cultural issues.

The overall strategic goals for the Gateway are recommended to be:

- Provide an environment for private-sector equipment and service companies to facilitate technology commercialization for priority needs of the energy sector in the Region and in Kuwait;
- Contribute to Kuwait becoming a regional center for advanced technical support and R&D services for the petroleum, petrochemical and power industries;
- Provide an environment conducive to national development by attracting and supporting the right kind of professional-services and technology-based private sector companies;
- Create productive work opportunities for young Kuwaitis in knowledge-based positions within the energy industry.

The specific objectives for the Kuwait Energy Gateway include:

- Within one year from the date that the project is approved, the Board of Directors and core management team will have been established and marketing activities will have begun.
- Within two years the Gateway Hub buildings, including specialized facilities that are identified as valuable, will be constructed and operational.
- Within five to seven years, the Gateway is expected to have played a valuable role in:
  - Attracting at least five leading equipment and service companies to locate in the Gateway to serve both the regional and domestic needs of the energy sector and serve to help attract other smaller companies to the Gateway;
  - Supporting the tenant companies in the process of demonstrating and adapting of new technologies in up-stream oil production;
  - Facilitating public/private collaboration for the introduction of high value-added products and services related to the petrochemical industry;
  - Serving the private sector needs for facilities, services and legal framework necessary to work with Kuwaiti R&D institutions to bring alternative energy solutions to the Regional and domestic markets.
- The 10 year impacts of the Gateway are targeted to:
  - Support 150 domestic and international private-sector businesses to locate or expand their operations in Kuwait;
  - Attract an adequate level of technical staff and professional service firms to establish Kuwait as a high-tech center for the Region;
  - Facilitate 35 significant technology demonstration projects and up to 100 technology transfer support projects;
  - Create more than 5,000 new high-quality, private-sector jobs, one half of which will be held by Kuwaiti nationals.

While demanding, these targets are achievable given the scale of the potential market in the Gulf Region, as discussed in Chapter 3, and Kuwait's investment in R&D. The key to meeting these objectives

is harnessing and focusing Kuwait's capabilities across its energy sector and institutions in order to deliver the critical commercialization and facilitation services (see below under Professional Services) which are designed to set the KEG apart from other initiatives in the Gulf Region.

What the Proposed Gateway is Not

Before describing the specific function and features recommended for the Gateway, it is valuable to also briefly describe what approaches have been discarded by the consulting team as not viable for the meeting the priority needs of the Kuwaiti energy sector or national development goals. These include:

A pure research / science park

The emphasis in these projects is on technology R&D and often has considerable lead times before a new technology is widely taken up by the market. The clear imperative seen in Kuwait is for the implementation of existing world-class technology in the near-term to address priority issues. Furthermore, the Region already has a number of pure science/technology park projects which are starting to gain recognition and become accepted as good locations for businesses looking for such R&D facilities in the Gulf Region.

A start-up business incubator

A start-up business incubator concentrates on early stage ventures and helps provide the basic business support services required for a start-up. The Gateway should focus on well-established companies and not start-ups. The time to bring new businesses from start-up to a scale where they are creating significant numbers of jobs or economic impact is often five to seven years, or more. Likewise, the kind of technology commercialization proposed for the Gateway will require significant financial commitments, which generally are beyond the reach of start-ups and small companies. Therefore, although creating some business incubation within the Gateway is a possibility, it should be a low priority until the principal activities are well established. In addition, NTEC is already addressing this need, so the Gateway should be complementary to those efforts.

A technology incubator

A technology incubator is focused on supporting companies that are developing new technology-based products. There is already sufficient R&D capacity focused on new technology development in the Region and Kuwait. The Gateway should not be focused on developing new technologies, but on helping emerging technologies get into the market through technology commercialization support for companies that have already completed the R&D phase and have commercial-ready technologies.

A traditional business park

A traditional business park is a real-estate development that provides quality infrastructure, mainly office space, but with a management that is essentially just a landlord or leasing agent. Such managers have neither the skills nor the financial incentive to stimulate business activity through project-based work, as proposed for the Gateway. Providing any value-added services increases cost of operation and is typically limited in conventional business parks. In addition, the current oversupply of good office space in Kuwait and the Region suggests that a conventional business park which simply offers infrastructure facilities to its clients does not significantly add to the national development agenda. A specialized business park that can offer its clients a package of unique services, both commercial and technical, may be successful, taking into consideration the growing demand for engineering, consulting, service companies, training companies, etc. However, this type of commercial development does not need government support.

An industrial or logistics free zone

Other GCC countries have developed successful free zones that accommodate light industry and a wide range of logistics, warehousing, and trade activities. Businesses interviewed clearly see Dubai and Abu Dhabi as the preferred FZ locations in the Region. It would be hard for Kuwait to catch up simply by implementing a "me-too" copy of a logistics free zone.

The Gateway's Purpose

The Gateway should be designed to attract technology and services companies supporting the broad scope of the energy sector, including: petroleum, petrochemical, power and renewables. In addition to simply attracting these companies as tenants, the Gateway intends to proactively facilitate technology commercialization and innovation support for products and services that address priority needs of the energy sector in the Region and Kuwait.

The purpose for the Gateway initiative put forward by KISR in its proposal is stated as follows:

> "provide a forum for interaction among industrialists, consulting companies, engineering companies, service providers, business promoters, and investors, that are active in the oil, gas, and power related industries. It will also foster collaboration between these businesses and the local and regional scientific and technical institutions and promote innovative culture within the petroleum and energy community in Kuwait and the Region."

Although the target market analysis for the Gateway was addressed in the previous chapter, it is critical to keep the needs of the companies targeted in mind while developing the offering for the Gateway. The proposed value proposition of the Gateway should be to establish an environment and services that meet a specific set of private-sector company needs. The priority focus of the management of the Gateway should be to work proactively to create business opportunity for Gateway clients.

The primary client base for the Gateway should be technology and services companies bringing advanced solutions for the priority issues facing the Region and Kuwait. Many secondary services businesses that supply these primary clients will also want to co-locate in Gateway premises. This is expected to include a wide range of professional and petroleum industry service sector organizations. They should be made welcome and encouraged to join the Gateway community of companies.

Excluded from the Gateway would be businesses that have no relevance to its mission and goals. Furthermore, the dispensations secured under the FIB for undertaking any technology development, prototyping or demonstrations would not apply when the same business trades in the domestic Kuwaiti market. Like any other international business, companies in the Gateway will need an agent or JV operation when it wishes to compete for contracts through the normal procurement process.

There are four reasons for recommending that supporting private-sector companies engaged in technology commercialization is the primary focus of the Gateway:

- Many of the issues facing the energy sector require the introduction of solutions available elsewhere in the world, but which are new in terms of investment and operational experience in Kuwait and the Region.
- Technology commercialization and innovation are significant drivers of economic growth.

- Supporting companies during the commercialization stage requires focusing on demonstrating technologies in the pre-competitive stage in ways that avoid any risk of distorting commercial markets.
- The Gateway regulatory framework allows new technology companies to avoid procurement competition based mainly on price, since the emphasis is more on proving the viability of the technology being demonstrated or tested.

The backbone of Kuwait's technology and innovation infrastructure in the energy, water and environment spheres is KISR. In 2007, a review of research and innovation in Kuwait proposed that KISR should work towards transforming its research divisions into Centers of Excellence in the fields of petroleum, water, and energy, commercializing its R&D output, and partnering with international entities. In the report, KISR, KU, KFAS, and others were mandated to collaborate to enhance the productivity of the science and technology output of the country. In addition, KPC is now well advanced in its plans to establish its own R&D center. It is not the intention of this study to suggest that the Gateway should override or compete with the existing and proposed new initiatives. Rather, the Gateway should work with, and complement, the existing institutional infrastructure for technology commercialization by focusing on supporting the private-sector companies necessary to bring new innovations to the market. Indeed, the proposed focus for the Gateway directly supports the R&D and technology commercialization efforts from these other institutions by creating facilities, services and a special legal/regulatory framework that caters to the private-sector companies necessary to technology transfer.

The clear differentiating factor between the Gateway and the other elements of Kuwait's R&D institutions, such as KISR, KPC, NTEC and others is that it will operate on behalf of its private-sector clients that must be attracted and supported in working with the existing public institutions. To accomplish this facilitation role, the Gateway will need to engage with the commercialization teams and departments in these organizations to find ways of assisting the Gateway's client base in order to bring new technologies and services to the market. The Gateway should be designed to be a complementary market pull on innovation rather than technology push. Separating the "pull" team from the "push" teams is well recognized as best practice in technology commercialization.

Finally, in practical terms, the value proposition for the Gateway is built around three key components:

- A carefully conceived property offering;
- The professional services designed to help businesses to access the large energy markets in Kuwait and other Gulf States;
- The legal/regulatory framework found in a special economic zone.

The above three features are designed to reinforce each other to address the energy technology priorities of Kuwait and other Gulf States with similar issues. At the core of the offering is a commercialization and business opportunity program designed to create early joint investment in energy commercialization projects within Kuwait that also have relevance to other Gulf States. This near and early market approach to the commercialization of technology sets the KEG apart from any other technology park and SEZ offerings in neighboring Gulf States.

Physical Infrastructure

Location, Land and Physical Infrastructure

A suitable location for the Gateway has not yet been identified. Although the Government of Kuwait controls numerous plots of land, the appropriate location for the Gateway will depend upon the scope, scale and focus of the design eventually adopted. If the Kuwait Government does not choose to provide appropriate land and support for the Gateway with a start-up investment, then the Gateway initiative could be a private sector business park providing office space and special services to the small and medium-sized service companies that may be attracted to Kuwait as a regional base for selling into a growing energy sector. In either case, the recommendations for the preferred location include:

- Land near existing R&D institutions to facilitate collaboration among the public sector and the private-sector companies located at the Gateway;
- Land near Kuwait City so that there is not a need for significant investment in housing, schools and related social and retail infrastructure nearby;
- Land where there is access to electric power, high standard telecoms and water;
- Good road access to the principal Kuwaiti Institutions;
- Access to the international airport within 30 minutes by car;
- The Gateway should not be put outside of the current activity centers in one of the remote areas identified in the government's expansion plans because this will be a major obstacle to attracting the kinds of companies targeted;
- Extending the concept of the Kuwait Energy Gateway location to become a City zone is largely a matter of deciding how much residential and related development will be incorporated into the plan. It is recommended that the Gateway campus be located close enough to existing infrastructure that these issues will not need to be addressed.

It is estimated that the amount of land required will be 12 hectares and grow to approximately 40 hectares within 15 years.

Designing the Gateway's Hub Facilities

Getting the right mix of physical buildings and value-added services is critical to the success of the Gateway. However, as noted in Chapter 5, it is only recently that serious thought has been given to how to create built environments that aid the processes of technology transfer. Current best practice suggests the concept a "Hub Facility".

The Hub Facility is a set of core buildings in the initial stage of the roll out of the Gateway. However, the Hub is more than just the buildings. The physical facilities should be designed to facilitate the processes of technology commercialization and innovation. These processes entail multiple interactions involving many people. People need to meet at many levels; one-to-one, in small groups, in facilitated sessions, in seminars, workshops, and in conferences. Furthermore, experience shows that there must be a facilitating organization that plans and orchestrates programs using purpose-designed facilities that are directed towards technology commercialization and business innovation.

There is no architectural drawing of the proposed Hub Facilities in this phase of the feasibility study. There are numerous models that can be used to design the appropriate campus of buildings. The key issue at this time is not some architectural conceptualization of how a set of buildings can best meet the needs of the Hub, but rather, the focus at this point is on getting agreement on the functions of the Hub Facilities. Detailed architectural renderings are a part of the work in phase two of this feasibility study.

In order to create a "center of gravity" during the first phase of implementing the Gateway, the recommendations for the Hub Facilities to be constructed include six elements:

- Business Center
- Training Center
- Specialized Facilities
- Casual Meeting Space
- Leisure Space
- Realities of Life Space

The Business Center

The role of the Business Center is to provide small areas of office space where companies can:

- First set up in Kuwait and provide a "soft landing" for such companies;
- Take extra space at short notice to advance a specific new business opportunity;
- Gain regular access to specialized facilities at the Gateway;
- Take the initial step in becoming an integral part of the Gateway community of business service provider. This is particularly relevant to medium or smaller service businesses that form part of the technology supply chain for the larger businesses located either within or outside the Gateway;
- Together with their Kuwaiti and Regional clients, proactively identity specific technology commercialization opportunities and facilitate the development of priority demonstration projects.

The proposed approach to designing the Business Center is to provide small units of high-quality office space. However, the units should be designed to be capable of easy re-fit for rapidly changing needs. In addition, options for workshop, large open areas or lab space should be planned. All units will be well serviced, easily accessible by people, and provide for the movement of equipment.

The Hub Facilities should also accommodate the Gateway's professional and administrative teams, including:

- ***The Technology Commercialization Team,*** which will have specialists in each of the areas of technology where the Gateway is seeking to stimulate the introduction of innovation.
- ***The Business Environment Team,*** who will operate all the procedures related to the SEZ status of the Gateway, plus the "soft Landings" program and other routine administrative activities on behalf of their client companies, such that businesses do not perceive any impediment or delay in securing the licenses, registrations or other services that they require to operate effectively in Kuwait.
- ***The Business Services Team,*** who will provide: broadband, telecoms, photocopying, phone answering, meeting room hire, secretarial services etc. for any Gateway client.
- ***The Management and Administration Services Team,*** providing overall facility and services support to clients of the Gateway.

The Business Center should have a few meeting rooms and a small area for light snacks and refreshments. The Business Center should link easily into the Training Center with its far greater diversity of spaces for creative situations.

The Training Center

A purpose-built training center should be able to serve a broad spectrum of training needs of tenants, external business and other users. It can also be utilized and paid for by the Gateway's professional management team for the programs of events and activities promoted by them. A good kitchen, dining area and lounge is essential for the more relaxed forms of interaction. The training center's viability would be predicated on the broader market and would be an invaluable asset for the park team in fulfilling its mission. Furthermore, for many technology and service businesses, selling and exploiting their offerings involves extensive market education and customer training for which the training center would be ideal.

Specialized Facilities

For the Kuwait Energy Gateway, it is recommended that this part of the concept is adapted to create a few highly specialized resource centers that will help in advancing the Gateway's technology commercialization agenda. There is a wide variety of potentially useful specialized facilities to make the technology demonstration and adaptation process more efficient and effective. Some examples include:

- Facilities to support technology demonstrations and training;
- Large pavilion that supports a rotating technology expositions;
- Test bed environments for the evaluation and testing of products new to Kuwait or the Region;

Leisure Space

While the Training Center offers formal space for directed and managed activities, informal interaction among tenants and other collaborating institutions play an important role and should be designed into the facility. Informal leisure space includes such details as kitchenettes and small areas of relaxation space within the business center and a dining room and lounge within the training center. However, the park should anticipate having one or two bistro cafés, and eventually one or two independent restaurants to aid casual, relaxed mixing and meeting.

Realities of Life Space

This type of space is designed to provide the daily necessities of life. Some of the more usual facilities that prove highly popular are: 24/7 shopping, child-care facilities, banking, a pharmacy, dry cleaning, newsagent, etc. People need these facilities every day. If they are not provided, clients will drive off site to find them. This raises traffic issues and will increase the carbon footprint of the Gateway. It also reduces the time when the all-important casual meetings are more likely to take place.

Beyond the Hub

As important as it is to get the Hub correct, it is far from representing the entirety of the Gateway's physical environment. As the Gateway project progresses in attracting more businesses, many of which stay and grow, so additional premises will need to be provided. Initially this is most likely to be multi-occupier buildings accommodating two to ten businesses—consisting of companies that initially start their activities in the Business Center and businesses that want a larger presence from the outset. The largest companies may also want to have their own single occupier leased building or may become an owner-occupier of a building constructed to meet their individual requirements. Over time, these leased premises will come to represent the majority of the developed floor space in the Gateway.

The Gateway facilities should be developed in phases, anticipating demand but not building well ahead of demand. Thus the initial development of the Hub campus together with an initial tranche of multi-function office premises might only require about 20 hectares. Over time, the scale of development that

the principal site could require within 10 years is likely to be more than double this area to about 50 hectares and rising to about 100 hectares after 20 years.

The principal off-site Infrastructure requirements will depend heavily on the location selected but may involve:

- Road improvements / upgrade or the construction of a new intersection to an existing highway, or conceivably, the building of a new road;
- Increasing existing drainage capacity or building new capacity;
- Increasing the capacity of existing electricity, water and telecoms fiber optical distribution systems or construction of new a distribution system to serve the location.

Professional Services

The central theme of the Gateway's activity is attracting and supporting private-sector companies bringing new technology-based products and services to address priority needs of the energy sector in Kuwait and the Region. The key to the opportunity is facilitating the application of technological innovation that has not yet been deployed in the energy sectors in Kuwait and the Region. These activities fall into pre-competitive activity since normal procurement processes will be required for mature products and services. It is therefore in the interests of both potential suppliers and users to enter into exploratory projects to validate technologies and services under the conditions that prevail in Kuwait and similar circumstances that may also occur elsewhere in the Gulf.

The Gateway's role in this activity would be to offer a range of facilitation services designed to help its clients address known and pre-determined opportunities within Kuwait. Success with these projects would provide a platform from which the companies should be able to generate future commercial orders in the Gulf Region. The three broad objectives of business facilitation are:

- Provide business opportunity creation services;
- Improve the ease of doing business for their clients;
- Support new clients setting up in the KEG.

Business Opportunity Creation

The creation of business opportunity would take two forms. First, this would occur through the formation of partnership projects involving appropriate Kuwaiti state companies and institutions and international companies. The companies would be identified as having a proprietary technology that could address an aspect of one of Kuwait's national priorities (petrochemical, heavy oil, electricity production, water) in some meaningful way. Furthermore, the issues being addressed should also be of relevance to other countries in the Gulf Region. The companies would also have to be willing to work with their Kuwaiti partners to establish by demonstration, or other means, the technical and economic validity of the technology. Gateway staff would work with their client companies in facilitation mode to nurture such projects with the full knowledge and active support of the prospective Kuwaiti partner organization(s).

The second of the business opportunity services would be to ensure that KEG clients are made aware of relevant tendering opportunities within Kuwait and, where the tenders are open and public, to similar opportunities in other parts of the Gulf Region as well. The service would extend to ensuring that clients understood the procedures they must follow to submit a valid tender. (See Facilitation of Market Opportunities below.)

Improve the Ease of Doing Business

Under decentralized administrative powers, the Gateway management team would provide, through a single office, an access to all the procedures that will allow a foreign client company to register a 100 percent wholly owned subsidiary company (and, if they intend to trade within Kuwait, then also a joint venture company). All other operating licenses and permits that a client would need could be obtained through the same office, together with advice on other relevant regulatory and compliance issues. The KEG team would also need to establish a series of bilateral relationships with other single entry point offices at SEZs and Parks in other GCC countries, to which they can refer their clients when a client secures a business opportunity in one of these countries. Other activities would include:

- Networking events and meetings. These might cover the broader policy, strategy and political environment of Kuwait and other Gulf region countries or assist clients to work with each other to mutual advantage, etc. (See also Facilitation of Market Opportunities);
- Providing procurement information and briefings;
- Information and advice on banking, legal and accountancy services within Kuwait and other Gulf states.

Support to New Clients

Most international businesses entering a new country start with a small team. The speed with which these teams can establish themselves, secure orders and start delivering on them is governed in part by the administrative and regulatory issues identified above. However, significant further improvements in the efficiency of these small teams are achieved where most of the everyday administrative issues are taken care of by others and a full range of office services are available. Such environments are sometimes generically referred to as "soft-landings" programs and they are increasingly common in good STPs. These services would include:

- All those services described for the Business Center under the Physical Infrastructure discussion above;
- Training, seminars and workshops;
- Support recruitment of employees including young newly qualified Kuwaiti graduates;
- Offer specialized facilities for exhibitions and technical training.

Other Elements in Business Facilitation

In addition to the three objectives discussed above, there are further essential activities associated with business facilitation. These are:

- Identification of target technologies and activities;
- Facilitation of market opportunities;
- Facilitation support for existing Kuwaiti investment funds;
- Specialized demonstration facilities;
- Project-based Internships.

Identification of Target Technologies and Activities

Establishing the activities and technologies where the Gateway should be stimulating investment and defining who has what responsibilities for initiating and delivering the projects is critical to success. The following are proposed as the general guidelines that need to be followed:

- The Technology Advisory Committee (see Chapter 10) with the relevant stakeholders should define the priorities and the type and nature of projects that the Gateway should be proactively seeking.

- All demonstration projects should have a "sponsor" organization, most likely KISR or a "K" company that hosts and actively participates in setting up and managing the demonstration so that it meets their needs. The sponsor would be directly involved in selecting the business(es) to perform a demonstration, agreeing what costs each party will bear, how the project should be conducted and how the performance of the project will be monitored.
- Development and prototyping projects would also have a sponsor organization but the sponsor may elect to ask the Gateway to manage smaller projects on their behalf as an alternative to managing it themselves, although there would always need to be someone from the sponsor organization actively engaged in the project.
- Project proposals submitted to the Gateway or a "sponsor" in a priority technology area but for which there was no advertisement will need to be considered by the Technology Advisory Board and the "sponsor" organization and a decision reached on whether to accept the proposal or not.

Facilitation of Market Opportunities

The primary driver for the private sector is new business opportunity. A dedicated part of the management team of the Gateway should be dedicated to helping its clients identify and capture new market opportunities. This service of the Gateway might include:

- Information and briefings on new procurement opportunities;
- Technical workshops on the priority needs of the energy sector in the Region;
- Public presentations of request for proposals;
- Match-making for prime contractors and potential sub-contractors;
- Proposal development support.

Facilitation in Support of Existing Kuwaiti Investment Funds

There are several existing investment funds within different Kuwaiti agencies and institutions that are designed to promote private sector development and encourage the development of new technologies and services. The consultant team believes that the proposed approach for the Gateway could play an important facilitating role in interaction between these funds managers and different private companies, aimed at encouraging commercialization of new technologies for the energy sector.

Specialized Demonstration Facilities

The Gateway would have a few carefully selected specialized facilities located on its premises that relate directly to the priority technologies it is seeking to see adopted or developed to meet Kuwait's needs. These should be chosen so as to complement and support the priority demonstration and development programs being promoted by the Gateway.

Although business clients will be expected to pay towards the cost of operating the facilities, pricing must reflect the reality that the overall objective is to move clients forward to a position where they grow and sustain a larger investment in Kuwait by employing significant numbers of qualified individuals. This implies that pricing should be closer to marginal operational costing rather than full recovery of capital as well as running costs.

Project-based Internship Program

One of the clear mandates that all potential stakeholders for the Gateway endorsed was that it should stimulate high-grade employment opportunities for Kuwaiti graduates. It is anticipated that significant numbers of new job opportunities demanding high-level skills and educational attainment will be cre-

ated through investment of the companies participating in the Gateway programs. To supplement this and to encourage the early recruitment of new and recent graduates who have less relevant experience, the Gateway will provide a project based internship program. Available data show that a high proportion of graduates who participate in structured project based internships and who perform well are offered permanent employment by their host company at the conclusion of the project. This provides the justification for operating the program.

In brief, the program will be operated by inviting companies located in, or otherwise working with, the Gateway to put forward project ideas suitable for a graduate to undertake. These projects would include appropriate aspects (non-critical) of the demonstration and development work being undertaken through the Gateway. Indeed, it would be part of the role of the Gateway to encourage companies undertaking demonstration and development work to make use of the internship program. The incentive to companies is that the cost of the interns will be heavily subsidized. Projects could be as short as three months duration or as long as two years and could employ one or several graduates. Each project would have appointed to it one or more specialist staff from one of KISR, KU or a Center of Excellence who would act as a scientific and technology supervisor to the intern(s). The program cost would be shared between the Gateway and the host company.

Legal / Regulatory Framework

It is possible to establish the Gateway within the framework of existing Kuwaiti laws. Existing legislation in Kuwait is largely, if not entirely, adequate to the task of establishing the KEG. The principal legislative instruments under which the KEG would operate are the Free Trade Zones Law of 1995, together with the Foreign Investment Law of 2001. Other pertinent legislation includes:

- Resolution of the Minister of Commerce and Industry No. 23 of 2003 for implementation of the Foreign Investment Law;
- Council of Ministers resolution No. 1006/2 of 2003 on the incorporation of Kuwaiti Companies where foreigners possess 100 percent of their capital;
- Council of Ministers Resolution No.1006/1 of 2003, specifying the business activities for which a foreign business license may be granted;
- Council of Ministers Resolution No. 1006/2 for 2003, setting out conditions for 100 percent foreign ownership of a Kuwaiti joint stock company;
- Council of Ministers Resolution No. 738/9 of 2008 adding economic activities and enterprises which foreign investors are allowed to undertake in the state of Kuwait;
- Council of Ministers Resolution No. 1067/8 of 2009 adding economic activities and enterprises which foreign investors are allowed to undertake in the state of Kuwait.

The various Council of Ministers resolutions allow foreign investors to undertake almost any kind of activity appropriate to the KEG, while the Foreign Investment Law of 2001 allows for 100 percent foreign ownership of companies operating in these areas. The Free Trade Zones Law of 1995 gives the Council of Ministers the authority to establish one or more commercial free zones and gives the Minister of Commerce and Industry broad discretion as to the activities to be permitted within each zone. The law also provides for tax- and duty-free treatment of all goods brought into a zone, and imposes no restrictions on such goods apart from those present in existing Kuwaiti law.

The Free Zones Law contains four critical articles, which should enable the Minister of Commerce and Industry, with the support of the Council of Ministers, to create the structures, institutional framework, regulations, and procedures under which the Gateway will operate.

Article 11 of the Free Zones Law states, "The Ministry of Commerce and Industry will supervise the free zones, this ministry may entrust the management of these zones to the specialized party in the private sector after the approval and the conditions determined by the Council of Ministers."

Article 12 states, "The parties authorized to manage the free zones may, in order to perform its works, duties and obligations, obtain the assistance of all the concerned authorities in the state within the extent determined by the Council of Ministers."

Article 16 states, "The Minister of Commerce and Industry shall issue the organization resolutions and the executive procedures related to the free zones," and Article 17 states, "The ministers, each with his jurisdiction shall implement the provisions of this law."

These articles mean, in effect, that the Minister of Commerce and Industry, with the approval of the Council of Ministers, can delegate management of the Gateway to a private entity which could, as specified in Chapter 4 of this report, equally be some form of corporate entity jointly owned by public and private interests. These articles empower the Minister of Commerce and Industry to establish the regulations and procedures needed for the KEG to operate effectively, and bind the other ministries to cooperate in their implementation.

One reason many economic zones fail is the lack of an adequate legal, regulatory and institutional framework and, especially, the failure or refusal of some critical government bodies to cooperate in ways essential for the zone to function effectively. If the customs and tax authorities, or local government planning authorities, or business registration and licensing authorities refuse to provide the authorizations necessary for a zone to function effectively, it is almost certain to fail. The Free Zones Law of 1995 provides a framework that can guarantee the necessary degree of cooperation.

Given this, it is important to ask why the existing Kuwait Free Zone in the western part of the port of Shuwaikh has failed to attract the volume and kind of investment that would justify its existence. Though detailed information on the zone's performance is scant, by all accounts it has, for the most part, been a vehicle for real estate speculation and petty commerce. It has not contributed in any meaningful way to employment, innovation, or exports, and has not attracted the kinds of international companies that could do so.

There are, no doubt, multiple reasons for this disappointing performance, but the principal one appears to be the lack of an adequate institutional and regulatory framework. A highly detailed set of implementing regulations for the 1995 Free Zones Law was drafted in 1998, but they were never enacted. These regulations, reproduced in Annex 6, reflect best international practices in economic zone governance as they were understood in 1998, and indeed, to a large degree, as they are understood today. Essential features of the regulations are:

- Creation of a Kuwait Free Trade Zone Authority (KFTZA), a non-profit corporate body, headed by a General Manager who reports to a Board of Directors that includes members of both the public and private sectors;
- Ability of any corporate entity to submit an application to establish an FTZ;
- Detailed procedures for application for a license to set up an FTZ and for review of applications by the KFTZA;
- Ability of service companies to locate in a zone to provide services to other zone tenants and to benefit from all free zone privileges and benefits;
- Minimum standards for infrastructure and buildings in a zone;

- Authorization for zone operators/developers to provide power, water, telecommunications and other utilities and services to tenants;
- Requirement that a customs post be established within each zone;
- Requirement that a zone operator, in collaboration with relevant authorities, set up a one-stop center for processing of all applications and declarations by FTZ Enterprises and issuing all certificates, permits and approvals at a central location (the Customs Office to be located within the one-stop center);
- Ability of zone enterprises to sell into the national customs territory on payment of applicable taxes and duties;
- Treatment of sales from the domestic customs territory into a free trade zone as exports;
- The right of zone operators to sell or lease property and buildings within a zone and to determine the price for such transactions.

These regulations could be adopted, with minor changes, with the approval of the Minister of Commerce and Industry and the Council of Ministers, and could form a sound basis for establishment of the KEG and any other economic zones the Kuwait Government may decide to create or authorize.

It is proposed that the draft regulations in Annex 6 be adopted, with the following modifications:

- The regulations refer to "Economic Zones" instead of "Free Trade Zones;"
- The proposed Kuwait Free Trade Zone Authority (KFTZA) instead be named the "Kuwait Economic Zones Authority (KEZA);"
- The regulations state that the Free Trade Zones described in the Free Trade Zones Law No. 26 of 1995 henceforth be referred to as "Economic Zones;"
- Article 8(b) of the proposed regulation, specifying fees and charges to be paid by a zone operator or developer to the Authority be deleted, charges instead to be set by the Board of Directors as per Article 8(d);
- Article 11 of the proposed regulations should be amended to allow zone developers to be public-private entities as well as 100 percent private entities;
- Article 13 of the proposed regulations should be amended to allow zone operators to be public-private entities as well as 100 percent private entities;
- The regulations should clearly state that KEZA may not itself develop or operate a zone. This is to ensure separation from the regulatory authority from any development or operating function.

10 Business Model Options and Recommendations

Chapter 10 Summary Findings and Conclusions

This chapter describes the proposed business model framework for the Gateway. Emphasis is placed on assuring clear roles and responsibilities and governance mechanisms. In addition to a strong management team and an active Board of Directors, the governance models proposes creating Technology and Policy Advisory Committees in order to ensure that stakeholders guide and oversee the KEG's strategic priorities and operations.

The business model combines public-private collaboration in setting strategic direction and oversight, along with a transitional approach to financing from initial public funding to full private-sector responsibility, using a phased roll-out approach.

Beyond the transitional financing period, the Gateway is designed to become sustainable on a revenue basis by ensuring that certain services, management functions and property rents generate sufficient revenue to cover costs.

An appropriate mechanism to achieve this would be to constitute the Gateway as a public-private company incorporated under Kuwaiti commercial law.

A business model defines the way in which a business or project will be organized to deliver sustainable value to its stakeholders. In a pure for-profit company, the way in which the business monetizes its offering lies at the heart of a business model.

For a more complex activity such as establishing a TP/SEZ, there is usually a public benefit that cannot be directly monetized, at least in the near term. The public benefit usually consists of activities that contribute to improving or developing a local, regional or national economy. The more common economic benefits are: increased business investment, more and better employment opportunities, increased innovation or increased research and development, and increased international trade. In addition to securing definable public benefits, TP/SEZs are usually required to become sustainable following a public sector investment. Public investment usually comes at the start and early years of the project. In some projects, the public investment is confined to the provision of raw or serviced land, while in others the financing of some or all of the property investment required and even some or all of the operational costs is seen as necessary to secure the public benefits being sought.

Level and Role of Public Sector Investment

What defines the level of public sector investment in a TP/SEZ is the extent of change that the project is expected to create in the economy. In the case of the Gateway, other institutions that provide a stimulus to innovation within Kuwait's energy sectors are highly relevant.

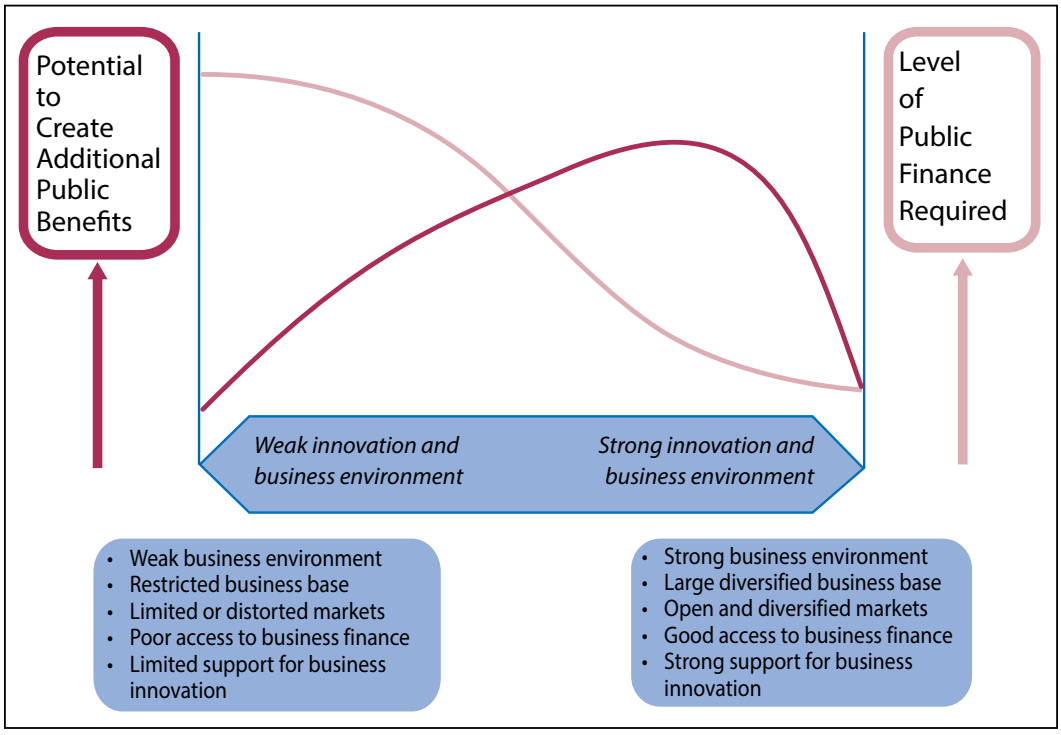
Figure 10.1 illustrates the above point by identifying the polar extremes of dimensions that define where little public sector intervention is required and those where more significant public investment

is required. In a situation where an economy has a large and diversified private business sector, serving diversified markets, good access for business to all forms of working capital and investment finance, and powerful and effective institutions supporting business innovation, then investment in an STP can be left entirely to the private sector or with minimal financial assistance from the public sector. Favorable conditions like those that exist in Silicon Valley (California, USA) and Cambridge (UK) are often not available in different parts of the world. In most areas of the world, public sector intervention is required and the minimum investment is usually the provision of serviced land and—in most cases—additional support services.

At the other extreme, there is a weak private sector that is not well diversified; markets are narrow or distorted; access to finance of all types is poor, institutions for supporting business innovation are absent or weak; and there are limited private sector commercial property markets. Under these conditions, any specialized park/economic zone project would have to secure considerable public sector finance. This is due to an "enabling environment" being largely missing from the economy with features that are essential pre-requisites to establishing a vibrant technology-based business community. The government sponsor would need to finance all or most property investments in the absence of a normal commercial property market.

An illustrative example of a project facing adverse conditions in many of the above dimensions is the Innovation Hub in Gauteng, South Africa.[16] The project is nevertheless delivering valuable economic development outcomes with all its buildings and the innovation support systems being financed substantially by the public sector.

Figure 10.1 STP Business Environments and Public Sector Investment



16 See www.theinnovationhub.com

Business Model Framework

The Gateway is seen as a property-based initiative but with a strong business facilitation program to promote technology commercialization and serve as the driver for creating more business investment within Kuwait and more employment.

There are three clear advantages to choosing a public-private partnership (PPP) as opposed to a public only organization. These advantages are:

- The Gateway must be business-like (entrepreneurial) in its management style if it is to be credible to its intended client base of national and international businesses. Above all, it must not be seen as a bureaucratic or institutionalized structure. It must nonetheless operate transparently and with full regard to public accountability given the substantial public sector investment it will be managing.
- While the initial investments made to establish the Gateway will come from the public sector, it is important to plan for later investments coming from the private sector.
- There is every chance that in due course the Gateway will be able to cover all its operational costs from rental and services income. By having a separate legal entity—as opposed to a department of a government agency—the medium and long-term sustainability issues are much clearer to measure and assess as are the public good outcomes achieved in relation to the public sector investments made.

It is therefore recommended that the Gateway be constituted as public-private special purpose vehicle (SPV) incorporated as a company under Kuwait commercial law.

Rollout of the Gateway

The successful implementation of the Gateway concept is critically dependent on:

- Identifying and recruiting a high caliber management team supported by a relevant and motivated staff in all the necessary professional disciplines;
- Ensuring a strong Board of Directors to set the strategic vision and to monitor and control the progress of the management team;
- Appointing advisory committees of: (i) specialists in the technical areas that the Gateway team is seeking to move forward; and (ii) stakeholders who can ensure that national policies are aligned to help the Gateway achieve its goals.

This structure is described in more detail below.

Given the right structure and policy environment, the Gateway Board and management would proceed by first identifying from among its mission statement priorities, those technology areas where the Technical and Stakeholder Advisory Committees (described below) believe: (i) there is the greatest national need, and (ii) there are strong grounds for expecting that Kuwaiti organizations will want to participate meaningfully. This provides the background from which the initial marketing and sales plan will be developed to attract national and international partners into the program.

In parallel, the following actions will need to be taken:

- Design and construction of the core hub buildings (described in Chapter 9);
- Development and implementation of the regulatory framework from which the Gateway will derive its ability to create an SEZ providing the business environment necessary to secure its mission;

- Identification, design and construction of the specialized facilities that would be a valuable resource to meet the initial program objectives.

As further mission priorities are sanctioned by the Gateway Board for implementation, the above processes would be repeated, broadening the sales and marketing plan and building in any further desirable elements of the innovation infrastructure and specialized facilities.

When a business client's operational needs start to exceed the capacity of the Hub's business center to accommodate them, then additional properties will need to be designed and built. Initially, these buildings will probably need to be developed on an investment risk basis, anticipating a demand. There are tried and tested models for creating such buildings based on modular designs, enabling a building to accommodate a variety of scale for business operations. This approach gives each occupant a high degree of independence and security and an opportunity for growth without having to leave the building.

Ownership and Investment Requirements in the Gateway

Land Issues and Ownership Structure

The Gateway will not have the resources to buy land on the open market, nor will it generate sufficient income to be able to pay a commercial ground rent on leased land. It will therefore be dependent on the grant of publically owned land, or, and perhaps more likely, the grant of a long lease—preferably 60 years or more—on public land at a nominal rent, at least initially. A lease of less than 60 years could reduce investment values of properties developed, potentially making the KEG less attractive to private investors.

The lease could contain the following provisions to safeguard the public interest:

- No sub-lease can be created by the Gateway in favor of a private company unless:
  - It is to enable the construction of a property that has the approval of the Board of Directors and the Policy Advisory Committee of the Gateway.
  - There is a building agreement between the Gateway Company and the private sector organization that includes the design drawings and specification of the building.
  - There is an agreement to lease (the land) that runs contemporaneously with the building agreement that can only be called into effect by the private sector organization once the building has been completed and the Gateway Company has been able to confirm that the building has been constructed in all material respects to the agreed design and specifications.
- No development of the land can be undertaken by the Gateway Company itself without the approval of the Board of Directors and the Policy Advisory Committee.
- All land developed by the Gateway Company would be subject to formulae defining under what circumstances and when a ground rent should start to be paid and of what magnitude.
- Land developed by the private sector through an approved sub-lease by the Gateway may be disposed of by either:
  - A single capital premium that must equate to a level at which the public sector would normally dispose of land for private sector development of commercial premises.
  - A ground rent at a level that the public sector would normally find acceptable as above.
  - A combination of premium and ground rent equating to an acceptable value.

- Premium capital receipts for the grant of long sub-leases by the Gateway should be recorded as such and held on the balance sheet as both a liability (to the public sector in the event of a winding up) and an asset (for the company).
- Ground rents and other rental streams received by the Gateway that are derived from land and property should not be subject to the creation of liabilities to the public sector.

Balancing Financial Investment, Sustainability and Public Benefits

Securing the public benefits identified through the proposed Gateway project will require significant public sector investment in establishing the project and seeing it through its early years. This public investment will be made up of:

- Provision of land;
- Development of the physical infrastructure as identified in Chapter 9;
- Construction of the Hub buildings comprising the business center, training center and specialized facilities. Each of these buildings could be designed to be built in phases, with second phase investment being made once the first phase uptake is proven to be a success;
- Construction of some of the life and leisure space—but building them into either the training center or business center initially apart from some small scale essential retail space. Most of the casual meeting, life and leisure areas should become a commercial proposition once site occupancy starts to rise;
- Construction of the first phase of larger unit multi-occupancy premises for rent;
- Revenue grant to cover the operating costs of the Gateway over the first three—five years, but on a declining annual budget basis as the Gateway-generated income starts to rise.

The Training Center and the multi-occupancy leasable premises should be able to generate commercial incomes after a few years, more than covering their costs. This gives the potential to generate income that the Gateway can collect and may be allowed to retain to defray its regular operating requirements. There would also be net revenue to be earned from the operation of the Business Center but this would be modest. There is less potential for generating net revenues from the specialized facilities since there would be high staff operating costs to be covered from fees earned from commercial clients.

The development of further multi-occupancy leasable premises for companies located in the Gateway and any single occupier premises should be attractive to the private sector once the site has been proven to be an attractive business location. The first one-three buildings of this type (totaling about 10,000 sq. meters) will almost certainly require public subsidy. The specification of the buildings will be such that they can be used for a combination of office, light workshop or even lab uses.

Once approximately 5,000 sq. meters of this type of space have been built with public sector financing and successfully leased to companies, the private sector developers and financiers should be prepared to either:

- Buy out the existing buildings so that the public sector can "recycle" the funds into a new building investment, or, better still;
- Construct new multi-lease buildings to meet anticipated demand.

When an international company is prepared to commit to lease an entire building (of at least 2,000 sq. meters) for 15 years or more on the Gateway land ahead of it being constructed, then it should be possible to finance and develop the required building on a purely private sector basis. It may even be possible for such a project to proceed on a purely private sector basis where the lease commitment by the

prospective occupier is 10+ years, provided the specification for the building conforms to conventional commercial space. Under such circumstances, the developer has a good prospect of being able to re-lease the premises should the original occupier decide not to renew their lease after 10 years.

In the situation where the private sector is encouraged to develop leasable multi-occupier buildings and pre-lease single occupier properties, it is critically important that the procedures identified above under the heading "Land Issues and Ownership Structure" be followed. This will ensure that the integrity of the Gateway is protected from any speculative land dealing. The process also gives a way in which private investors might be allowed to increase their stake in the Gateway in order to give a more balanced public private sector partnership. In acquiring land for the Gateway's growth,, the private sector will either have to pay for the land by way of a single premium sum or as a ground rent over the period of their lease of the land. Either way, these payments could lead to the developer being granted shares in the Gateway. This is not essential, but would be one mechanism to give the private sector an increasing involvement in the project over time and encourage more private sector investment.

Sustainability of the Gateway

The Gateway can only become sustainable once the income it generates starts to exceed all its costs. Income comes from value creation which most tangibly will result from:

- Property developed on the land;
- Technical and technology services offered;
- Other property and non-property services.

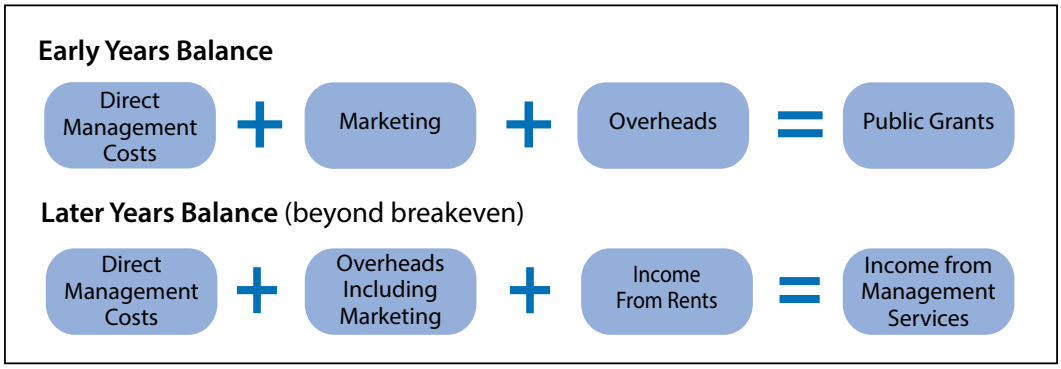
In order for the Gateway to be sustainable, it must be allowed to manage and control sufficient quantities of value-producing activities, but not necessarily all of the above. Some of the more obvious activities that the Gateway might undertake that would help to ensure the integrity of the project and that help to generate value are:

- Overall land and site management, including security;
- Management of the business center and the services provided by the business center to Gateway occupiers;
- Management of the specialized facilities, but not the technical project work being undertaken in the facilities;
- Management of the training center building, including the development of training programs related to the priority technology areas in the Gateway;
- The management of internet, voice and data services across the Gateway.

The final significant cost that needs to be brought into the sustainability equation is the cost of marketing. In most property based projects, the marketing undertaken during construction and for a period afterwards is considered to be part of the essential capital outlay to secure appropriate occupiers. It is proposed that this approach is taken for the Gateway project. The marketing capital could be allocated at the start but only drawn down from the public sector source against an approved annual budget. This would be an appropriate mechanism for the first three-five years when the marketing costs are likely to be particularly heavy as the Gateway seeks to establish its relevance and credentials with the international and national businesses who are its prospective clients.

The sustainability equations are shown in Figure 10.2.

Figure 10.2 Financial Sustainability Equations for the Gateway



Governance Structure for the Gateway

It is very important that stakeholders have a meaningful opportunity to influence the strategy and action plans of the Gateway. Only then can there be assurance of united action across the several parties necessary to promote the business-opportunity-through-business services and activities which the Gateway will be created to deliver.

The Board of Directors

The make-up of the Board of Directors must be individuals of high personal standing in the Kuwaiti or international business community. No Director should be appointed in an ex-officio basis. The initial Board will be appointed by shareholders. Thereafter, the Board will appoint new Board Members as necessary in accordance with the company's constitution. The Board would be expected to consult with the Chair of the Policy Advisory Committee (see below) on the appointment of any new Board Chair or Deputy Chair.

Collectively, the Board must have the understanding necessary to run a property-based company with a strong public interest and a client base of large private sector companies operating across the energy sectors that are the target market for the Gateway. Specifically, the Board will need to have skills in the following areas:

- Private and public sector property development and investment;
- Technology transfer, innovation and, critically, technology commercialization;
- The nature of the oil, petroleum, electricity and water company sectors in Kuwait (similar knowledge about these sectors in other Gulf states would be helpful);
- International and national private sector business in the petroleum and other energy sectors;
- Finance and financial reporting;
- Loan fund experience (but only if the Gateway has responsibility for the proposed loan funds);
- Employment issues with specific reference to employment of graduates in Kuwait's private sector.

The Board must be represented on both the Policy and Technical Advisory Boards to ensure proper communication between these important advisory groups and the Board of Directors.

In addition to the above governance structure, the Board may want to appoint from among its Directors (but externally when necessary) the following functional committees:

- An Audit Committee responsible for overseeing the conduct of the external audit and if or when thought appropriate appointing and overseeing an internal auditor. The Committee would review audit reports and make recommendations to the full Board of whether or not to accept the findings. They should also receive and review the risk management report prepared annually by the management of the company.
- A Remuneration/HR Committee responsible for overseeing the development of suitable HR policies and procedures for the staff employed by the Gateway and for reviewing and recommending to the Board the remuneration package of the Chief Executive Officer and other senior staff.

In addition to the Board of Directors, it is proposed that two other committees be established:

- Policy Advisory Committee; and
- Technical Advisory Committee.

Policy Advisory Committee

The functions of the Policy Advisory Committee would be to:

- Ensure that the Board of Directors is fully aware of all relevant government department policies as they affect the operations of the Gateway;
- Encourage the Directors to update strategies and plans to take advantage of favorable policy changes and avoid foreseeable difficulties;
- Review annually the corporate plan and advise the Board of any complicating issues they believe might arise and ways of avoiding unnecessary complications;
- Review at least annually for the first five years and periodically thereafter the workings of any devolved authority from the Foreign Investment Bureau (or if created the Authority for Encouraging Direct Investment) within the SEZ status that will be created for the Gateway.

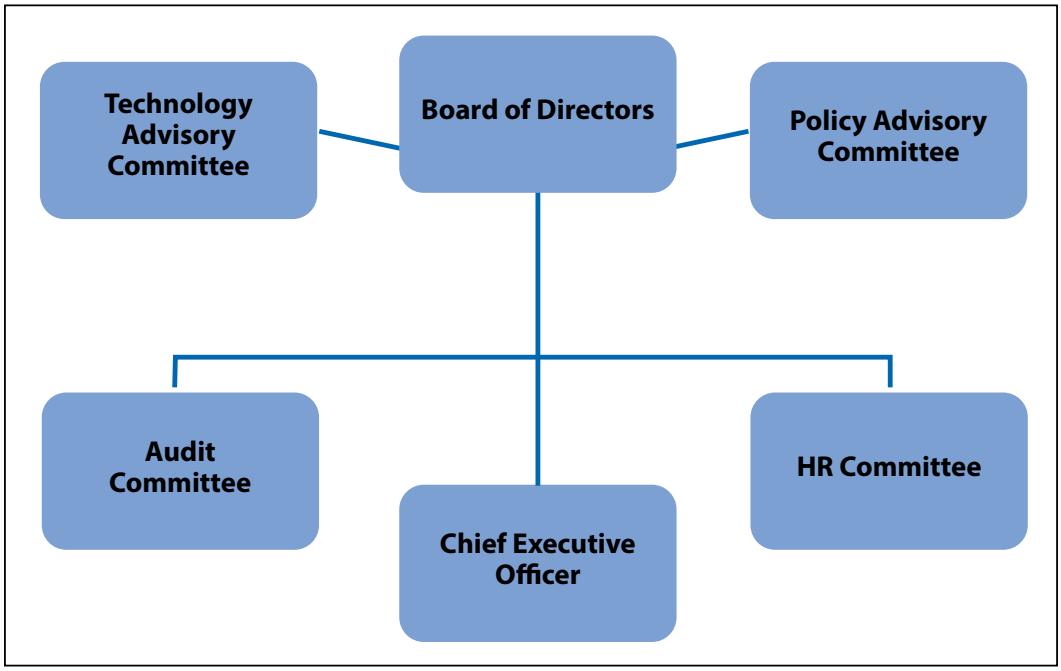
The membership of the Policy Advisory Board would be drawn from board level or senior staff from such organizations as PIA, KPC, Ministry of Commerce and Industry, Chamber of Commerce, and the Supreme Council for Planning and Development.

Technical Advisory Committee

The functions of the Technical Advisory Committee would be to:

- Advise the Board on the technologies that the Gateway should be prioritizing for demonstration and development projects;
- Keep the Board informed of any national or international companies whose technologies are likely to be of interest for demonstration;
- Advise on the nature and technical specification of the specialized facilities to be created at the Gateway as part of its offering to attract companies;
- Review annually the corporate plan—concentrating on the effectiveness and delivery of the programs designed to attract and engage appropriate businesses in innovation activities and their successes or difficulties.

Figure 10.3 KEG Governance Structure



The membership of the Technical Advisory Board would be potentially drawn from senior staff of KISR, KU, NTEC, KFAS, relevant Centers of Excellence, technical departments of the "K" companies and technical departments of relevant private sector organizations.

Figure 10.3 shows the overall governance structure down to and including the Chief Executive Officer. It is good practice to appoint the CEO as a Board Director but that person should not become the Chair of the Board.

Organization and Management

The executive arm of the Gateway Company will be headed by the Chief Executive Officer. This person's key skills need to be a profound understanding of innovation and technology commercialization matters, particularly in the petroleum and energy industries. Equally important will be proven leadership abilities. If the CEO is unfamiliar with formal property construction and development issues, this can be compensated for by ensuring that property professionals in one or more of the stakeholders are designated to advise the CEO during the first two–three years together with one or more of the Board Directors who have commercial property experience and, if necessary, appropriate property consultants and lawyers. If the CEO is business savvy, this level of support should be sufficient to ensure that the company makes good property related decisions. By contrast, It would be very much harder for a CEO to succeed who is a proven property professional but does not have with the technology commercialization skills that are essential for this post.

Reporting to the CEO will be:

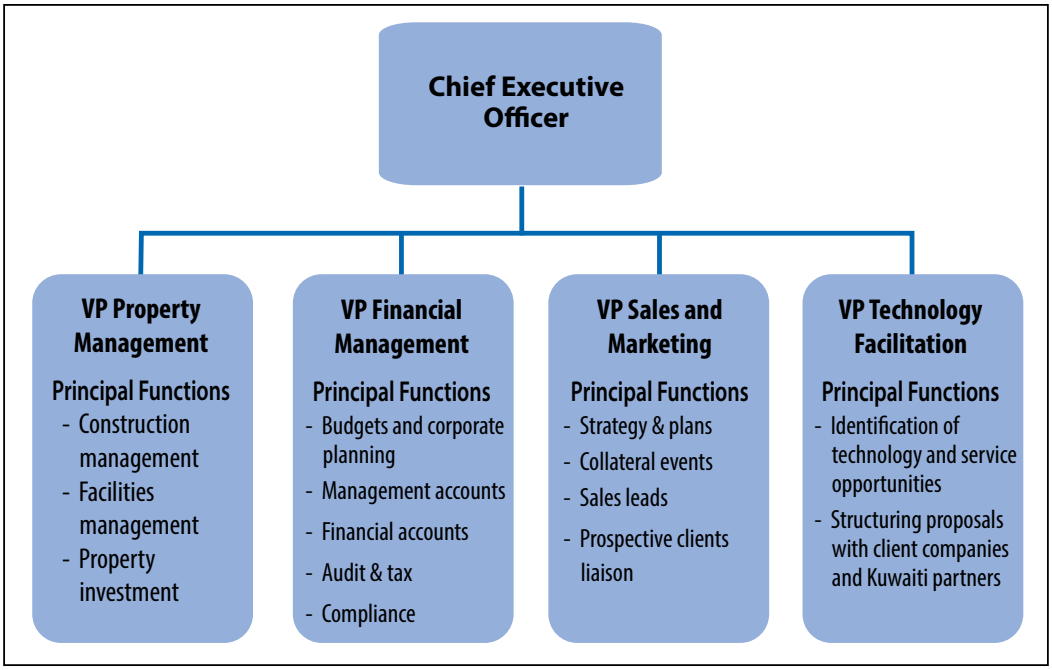
- A Technology Facilitation VP responsible for developing and facilitating—in conjunction with the tenant companies—the technology services being generated through the Gateway;

- A Marketing VP responsible for devising and implementing the marketing strategy; marketing collateral, web and internet presence, planning of marketing events and activities, sales lead generation and pursuit;
- A Finance VP responsible for the preparation of management and financial accounts, preparation for the external audit, taxation and other financial compliance matters and the financial aspects of business and strategy formulation;
- A Property VP responsible for the management of any/all facilities for which the Gateway Company has overall management responsibility.

Not all the management team and their support staff will have to be put in place at the start of the project. The team should be built as the work load dictates. Thus, if in the first two-three years there is a strong emphasis on heavy oil related projects and nothing on renewable technologies or water treatment, then the specialist positions relevant to the latter need not be appointed. Strong marketing and property VPs will be required from early in the project, but until the work load builds up the team under them should be very small. In this way, the amount of revenue support required by the executive team can be minimized until the income the company generates rises to cover operating costs. It will also be good discipline for the management team to have to behave commercially like their clients.

Figure 10.4 shows the management organization in its fully developed form, identifying the key functions as described above. The chart does not attempt to define lower level posts in the organization.

Figure 10.4 Proposed Management Structure for KEG



11 Economic and Financial Analysis

Chapter 11 Summary Findings and Conclusions

Development of the Gateway will require substantial public investment, on the order of KD 50–60 million.

This investment should not be considered as a real estate development, but as an investment in essential public infrastructure, similar to a road or bridge, or university facilities, the benefits of which are economic rather than financial, and which result in multiple spill-over effects.

Although the Gateway is expected to become financially self-sustaining by its fourth year of operation, and to have generated a positive cumulative cash flow by Year 8, it is unlikely to ever generate a positive financial return on the initial investments.

The positive economic impacts of the Gateway will be substantial. They include:

- Creation of 5,000 direct technical and managerial jobs, of which at least 50 percent will go to Kuwaiti citizens
- Through typical oil and gas multiplier employments effects, creation of an additional 15,000 indirect and induced jobs
- Contributions to accelerated development of new oil productions, lower oil production costs, and greater efficiencies in the use of electricity and water, with benefits potentially in the billions of KD.

A comprehensive financial investment analysis will be conducted in phase two of the feasibility study, taking into account site selection, master planning, and detailed market analysis and costing exercises, also to be completed in phase two. The purpose of the analysis presented in this phase one report is to:

- Estimate the investment required to create the Kuwait Energy Gateway;
- Gauge the probable level of required public sector investment;
- Estimate the economic and social benefits;
- Describe a path to financial sustainability for the project.

This project is not, and should not be evaluated as, a pure real estate investment. It is a development initiative intended to generate a substantial public good which, though difficult to calculate with precision, is almost certain to be a substantial multiple of the required public investment. Just as construction of a road, a bridge, a hospital, or a school may not generate a positive financial return, and is rarely evaluated in such terms, so, too, should the KEG be evaluated in terms of its overall economic and social impacts rather than in narrow financial terms. Although the Gateway, as shown in this section of the report, will generate sufficient rental income to cover its operating costs and even generate a surplus, it

is unlikely that the rental income alone will fully repay the initial capital investment undertaken with public funds.

Estimating the Social and Economic Returns

The benefits of the KEG initiative can be estimated on several dimensions. These include:

- Employment creation and the savings to government from slowing growth in government payrolls;
- Accelerated growth in Kuwait's oil output through development and application of enhanced recovery techniques developed and proven in Kuwait;
- Reductions in the cost to extract a barrel of oil through use of enhanced recovery techniques, more efficient use of water, and employment of off-grid solar power technologies;
- More cost-effective production of downstream petroleum-derived products through application of newly adopted technologies.

Phase Two of the feasibility study will attempt to calculate these benefits in a rigorous fashion. At this stage, however, it is only possible to provide some estimates.

Employment

One of the key objectives cited repeatedly by prospective stakeholders and participants in the Gateway is to secure more high quality technical and managerial jobs for Kuwaitis, especially graduates. The innovation, development, and demonstration activities that will take place in the KEG offer such opportunities, which both require and can help develop high levels of technical competence and commercial, management, and financial know-how. The Gateway will explicitly groom Kuwaitis to take up some of these jobs through its remunerated internship program, as described in Chapter 9.

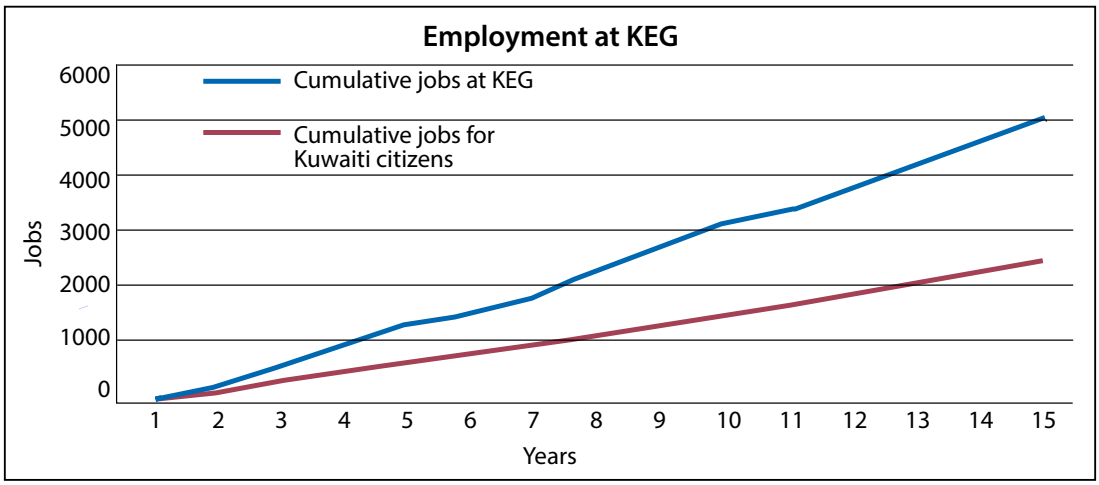
Based on the assumptions on the build-up of occupancy within the Gateway's premises, the KEG is expected to have about 3,000 staff working for tenant companies within the first 10 years of operation, and 5,000 after 15 years. The experience at Qatar's Science and Technology Park (QSTP), which has 850 jobs after being fully operational for five years, shows that 40 percent of all jobs are held by Qataris, most of them graduates. Although the mix of tenants and projects in the Gateway will not be identical to that of the QSTP, both are based on innovation. Kuwait's educational attainment and knowledge economy are, however, more developed than that of Qatar,[17] so it is reasonable to expect that at least 50 percent, or 2,500, of the projected 5,000 jobs will be taken up by Kuwaiti graduates.

We can assume that if these people were not employed in private sector companies operating in the Gateway, they—or an equivalent number of similarly qualified graduates—would instead have to be employed in public sector positions. Figure 11.1 shows the increase in employment, rising from 172 jobs in the first full year of operation, to 5,000 by Year 15, half of which will be filled by Kuwaiti citizens. Assuming a starting salary for a recent graduate of KD 1,000 per month, the cumulative savings to

17 Kuwait scores higher on the World Bank's "Knowledge Economy Index (KEI)" than Qatar. The KEI seeks to capture whether: (i) an economic and institutional framework that provides incentives for the efficient creation, dissemination, and use of knowledge to promote growth and increase welfare is in place; (ii) an educated and skilled population that can create and use knowledge has been established; (iii) an innovation network composed of firms, research centers, universities, consultants, and other organizations that can tap into the growing stock of global knowledge, adapt it to local needs, and transform it into products valued by markets (good and market effects) has developed; and (iv) a dynamic information infrastructure that can facilitate the effective communication, dissemination, and processing of information has been put in place. Source: World Bank (2007), *New Challenges Facing the Education Sector in MENA,* http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDIQFjAC&url=http%3A%2F%2Fsiteresources.worldbank.org%2FINTMENA%2FResources%2FEDU_03-Chap03-Education.pdf&ei=1i4qT9924-LZBeCs8e4O&usg=AFQjCNEsoFsbS45oIrJnmPJ6DR2hOeo4yw&sig2=-xb9ynAMNQ0SMDAfVbQlBg

Government over the 15-year period will be at least KD 211.8 million. In present value terms, using the current Central Bank of Kuwait (CBK) discount rate of 2.5 percent, this equates to KD 158.6 million.

Figure 11.1 Employment Creation at KEG



The economic impacts, of course, are not limited to direct employment by companies located in the KEG. A 2009 study on the economic impact of the U.S. oil and gas industry calculated that for every direct job created in the industry, approximately three additional indirect and induced jobs are created, while for every dollar of income earned by direct industry employees a further dollar in Indirect and induced income is produced, as shown in Tables 11.1 and 11.2. Indirect employment and income are generated by activities that supply goods and services to the oil and gas industry, while induced employment and income result from the expenditure on goods and services by people employed directly by the industry. The income multiplier is substantially lower than the employment multiplier because direct jobs tend to be more highly remunerated than indirect and induced jobs.

Based on these multiplier effects (we have used the example of Texas as the U.S. state in which the direct impact of the oil and gas industry is the greatest), the projected 5,000 direct jobs created in the Gateway, would spark creation of a further 15,000 indirect and induced jobs outside the Gateway. Most of these jobs would be in the private sector; however, given the preponderance of non-Kuwaitis in the private sector (according to the mid-range development plan 83 percent of Kuwaitis work in the public sector), most of these jobs would go to non-Kuwaitis.

Normally, an economic analysis of a project like the KEG would calculate its fiscal impact. This is difficult, if not impossible, to calculate in a zero-tax environment. The profits of foreign companies—and the foreign share of joint venture companies - are subject to a 15 percent tax; however, this study strongly recommends that companies located in the KEG be exempted from income tax regardless of the nationality of their shareholders, in order to maintain a business environment that is competitive with other GCC countries.

Table 11.1 Direct and Indirect Employment Effects of the Texas Oil Industry, 2007
(Employment is defined as the number of payroll and self-employed jobs, including part-time)

	Employment			
Sector Description	**Direct**	**Indirect**	**Induced**	**Total**
Direct Impact of the Oil and Natural Gas Industry	432,147			432,147
Indirect and Induced Impacts on Other Industries:		421,747	918,441	1,340,188
Services		189,790	456,200	645,991
Wholesale and retail trade		42,091	213,166	255,257
Finance, insurance, real estate, rental and leasing		61,647	106,893	168,541
Construction		62,091	5,900	67,991
Manufacturing		24,198	34,031	58,229
Transportation and warehousing		18,372	26,270	44,642
Agriculture		4,156	22,648	26,804
Information		8,611	12,308	20,919
Utilities		2,271	2,381	4,652
Mining		612	189	801
Other		7,908	38,455	46,363
Total Impact	432,147	421,747	918,441	1,772,335

Source: PriceWaterhouseCoopers (2009), T*he Economic Impacts of the Oil and Natural Gas Industry on The U.S. Economy: Employment, Labor Income and Value Added,* prepared for the American Petroleum Institute, September 8, 2009, p. A–45

Table 11.2 Direct and Indirect Labor Income Effects of the Texas Oil Industry, 2001
(Labor income is defined as wages, salaries, benefits, and proprietors' income)

	Employment			
Sector Description	**Direct**	**Indirect**	**Induced**	**Total**
Direct Impact of the Oil and Natural Gas Industry	77,924			77,924
Indirect and Induced Impacts on Other Industries:		24,742	38,276	63,017
Services		10,907	16,378	27,285
Wholesale and retail trade		2,465	7,885	10,350
Finance, insurance, real estate, rental and leasing		3,113	5,506	8,619
Manufacturing		1,966	2,472	4,438
Construction		3,209	304	3,513
Transportation and warehousing		958	1,376	2,335
Information		728	1,034	1,762
Utilities		713	663	1,376
Agriculture		51	276	327
Mining		54	17	70
Other		578	2,365	2,943
Total Impact	77,924	24,742	38,276	140,941

Source: PriceWaterhouse (2009).

According to the IMF, Kuwait plans to introduce a value added tax (VAT) in 2013 as part of the GCC-wide introduction of VAT, and is also considering introduction of comprehensive personal and corporate income taxes.[18] Neither the timetable nor the rates have been fixed for Kuwait and the other GCC

18 IMF (2011), *Kuwait: 2011 Article IV Consultation—Staff Report; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Kuwait,* International Monetary Fund, Washington, D.C., July 2011.

countries, though most observers expect the initial VAT rate to be no more than 5 percent. Introduction of a VAT and personal income tax would, of course, have a significant positive fiscal impact, and would increase the economic return on government's expenditure to develop the KEG.

Accelerated Growth in Kuwait's Oil Output

Kuwait seeks to increase its oil production to 3.5 million b/d by 2015 and 4.0 million b/d by 2020. Heavy oil is a significant component of this planned increase, with 60,000 b/d projected by 2015, and 270,000 b/d by 2020, from heavy oil reserves in northern Kuwait, estimated at 13 billion barrels. These projected production levels are substantially lower than the initial forecasts of 750,000 b/d. An additional potential source of increased production comes from the cleanup of large pools of crude that have remained after the Iraqi invasion. The US$3.5 billion soil remediation program, to be paid out of the UN reparations fund, is expected to yield significant volumes of crude over several years.[19]

To the extent that technologies adapted and commercialized in the KEG can contribute even to incremental increases in production volumes, they can potentially generate huge economic benefits for the country. KPC, for example, signed a memorandum of understanding in July 2010 with Japan Oil, Gas and Metals National Corporation (JOGMEC) to assess the feasibility of injection of carbon dioxide as a potential enhanced oil recovery (EOR) technique.[20] Many such agreements have failed to achieve their promised results, at least in part because Kuwait lacks the kind of facilities and environment in which such companies can work effectively and transform research projects into commercial ventures. To the extent that the KEG can contribute to developing and commercializing technologies of this kind, the benefits could be enormous, measured in the billions of KD. It is, however, almost impossible to calculate the extent to which increased oil production or reduced production costs may be directly attributed to the KEG.

Investment Capital Required

There are two kinds of investment capital required to make the Gateway a success:

- Capital expenditure for site infrastructure and buildings, including the hub premises as described in Chapter 9, amounting to between KD 50 million and 60 million.
- Investment in marketing to identify existing and emerging technology needs in Kuwait and the region and to attract participation by:
  - National and international businesses that are able to offer relevant technology for demonstration or are willing to partner in late stage development;
  - Kuwaiti public and private companies in the relevant subsectors, engaging them to lead, support, or participate in specific projects as appropriate.

An SEZ or technology park investment usually includes a significant allocation for marketing. During the initial five-year development phase of the Gateway, an annual marketing budget might be in the order of KD 350,000. This will be essential to enable participation in international events, real estate investment exhibitions and conferences which alone would cost KD 10–20,000, Furthermore, there would need to be relevant international advertising, production of web based and printed marketing collateral, constant professional input into social media and development of the web site and many visits to potential client company decision-makers around the world. (See Chapter 12, Phase 2 Study Elements, item 12 for the additional work needed to produce a more accurate estimate.)

19 U.S. Department of Energy, (2011), *Kuwait Country Analysis,* U.S. Energy Information Administration, Washington, July 2011, http://www.eia.gov/countries/cab.cfm?fips=KU
20 ibid.

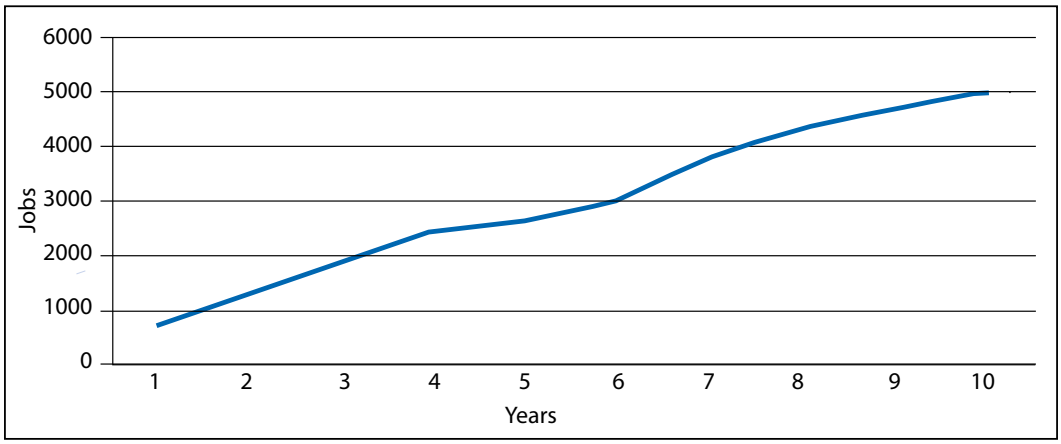
Investment in Property

As explained in Chapter 9, much of the initial construction needed to make the Gateway attractive to foreign investors would need to be publicly financed. This is because private investors may view the Gateway, as an untested concept in Kuwait, as excessively risky. It is also because the KEG, as a pure real estate investment, is unlikely to offer attractive returns, at least in the near term. As mentioned previously, the rental income alone will likely be insufficient to generate a positive financial return, although the residual value of the properties could do so.

This initial construction will consist mainly of the Hub properties, as defined in Chapter 9, but should also include an additional development of 10,000 sq. meters of larger, multiple occupancy units to accommodate new tenants that may require space immediately, as well as the rapid expansion of space requirements by existing Hub tenants. The total cost of this investment, spread over 8 years, including on-site infrastructure, car parking, roads, hard landscaping etc., is estimated at KD 50 million to 60 million. Starting from Year 4, once the Gateway has proven its ability to attract tenants on financially sustainable terms, private investment in additional buildings may occur, initially in single-occupier, pre-let premises, but later in larger multi-occupancy units built on a speculative basis.

Figure 11.2 charts the growth of public sector investment in infrastructure and buildings in the Gateway over the first 10 years. Annex 8 contains the summary spreadsheet that modeled the investment in property, showing the parameters and assumptions used. In addition, Annex 9 provides further explanation and statement of the assumptions used in deriving the capital investment requirements for the KEG.

Figure 11.2 Capital Investment in the Kuwait Energy Gateway



Revenue Model and Sustainability

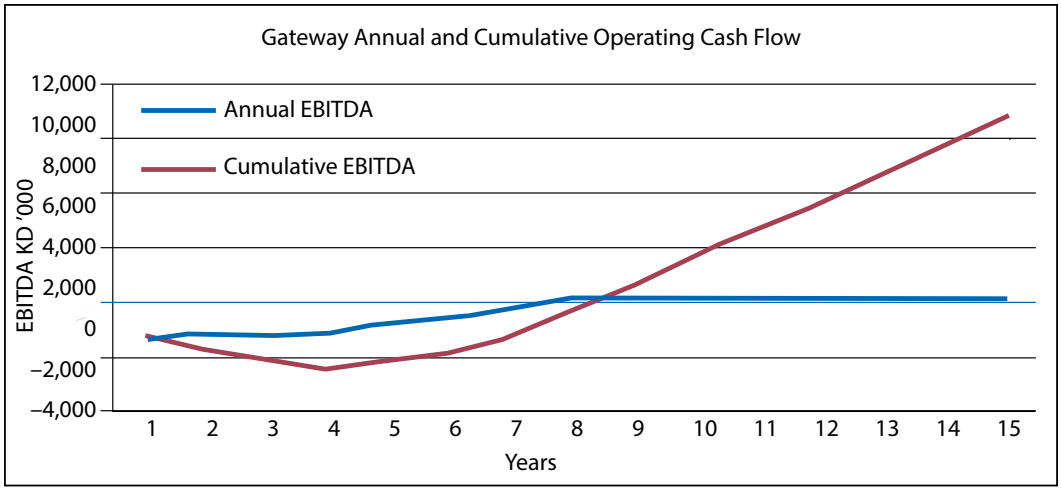
A cost profile for operating the Gateway has been developed based on the organizational structure developed in Chapter 10. For any STP, the principal operating costs are for staff. The value-added services offered by an STP require more, and more highly qualified, personnel than an ordinary industrial or business park. Overheads typically range from 20 percent to 50 percent of direct salary costs for most STPs, so a figure of 40 percent was selected as a starting point.

As noted above, marketing costs during the main construction period are usually built into the development capital costs, and this has been assumed for the revenue model. However, after Year 5 an annual marketing budget of KD 100,000 has been budgeted. This is relatively generous by the standards of most STPs, but has been maintained to ensure that the Gateway can continue to expand its marketing cover-

age and play a vital role in attracting new international companies to respond to the evolving technical needs of the energy sector in Kuwait and neighboring countries.

In spite of these considerable recurrent expenditures, the Gateway is projected to become financially self-supporting, even using relatively conservative estimates for occupancy and utilization of Gateway facilities reaching year-on-year break-even EBITDA (earnings before interest, taxes, depreciation, and amortization) by Year 5 and cumulative positive EBITDA by Year 8, as shown in Figure 11.3

Figure 11.3 Gateway Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)



This is a basic model only to illustrate the potential. A far more inclusive and detailed model is required at the master planning stage in order to fully evaluate sustainability, but this analysis gives a degree of confidence that a management team can be sustained at a scale appropriate for managing a property development of the level proposed, together with the professionals needed to coordinate and facilitate the demonstration and development projects which are to be the focal activity of the Gateway in stimulating higher levels of business investment in Kuwait.

Provided there is land available and Kuwait continues to take an active interest in innovating in areas critical to its economic future, there is no reason why the Gateway should stop growing after 15 years. Indeed, most STPs keep growing for much longer than this. Therefore, the number of jobs can keep growing.

Furthermore, once a technology has been successfully demonstrated, then full commercialization can start. At this point the number of jobs will multiply rapidly, both within and outside the Gateway, especially when Kuwait itself constitutes a principal market for the technology. Since Kuwait is expected to be the initial market for most of the technologies commercialized in the Gateway, total job creation resulting from Gateway initiatives will be a significant multiple of the number of jobs created directly in the Gateway itself. Phase Two of the feasibility study will model this multiplier effect in greater detail.

Given below is a financial and economic summary of projects costs for the Gateway. The total public sector investment is shown as KD 65.8 million. However, since the site has not yet been identified, and since budgets for the specialized facilities, including their associated equipment and the several contingency factors built into the costs, have yet to be established, we anticipate a total public sector capital commitment in the range of KD 50–60 million, spread over 10 years.

Table 11.3 Financial and Economic Summary (KD '000)

	Phase 1 (Years 1–5)	Phase 2 (Years 6–15)	Total
Capital Investment	26,000	24,000	50,000
Annual Operating Expenditure (average)			
• Salaries	830	1,170	
• Marketing	100	100	
• Overheads	332	468	
Annual Revenues (average)			
• Rental	812	2,946	
• Services			
Earnings Before Interest, Taxes, Depreciation, and Amortization (cumulative)	–1,748	12,076	10,328
Benefits			
• Direct Employment for Kuwaitis	900	2,500	2,480
• Indirect and induced employment of Kuwaiti citizens (cumulative)	900	2,500	
• Fiscal Impact (Present value of net savings to government)			158,600

SECTION FOUR: PHASE TWO WORK PLAN AND CONCLUSIONS

This final section consists of two chapters. Chapter 12 examines the proposed work plan requirements for completing the second phase of the feasibility study. The final chapter then offers some general conclusions about the viability of the Gateway drawn from the research, interviews, and analyses conducted by the consultant team in the course of the phase one assignment.

12 Feasibility Study Phase Two Work Plan

Chapter 12 Summary Findings and Conclusions

Phase two of this feasibility study consists of a more detailed quantitative and qualitative analysis of the project, which will provide all information needed to undertake the project. It will include:

- Site selection;
- Detailed demand assessment and 15-year projections of space requirements;
- Competitive assessment and benchmarking of the Gateway offering relative to other facilities in the Gulf Region
- Physical and technical site evaluation;
- Conceptual master plan and development strategy;
- Project capital and operational costing analysis;
- Recommendations on legal, regulatory and institutional framework for KEG administration and governance;
- Structuring of public-private partnership;
- Environmental and social analysis;
- Organizational design, policies and staffing plan;
- Marketing and promotion strategy plan
- Preparation of tender documents for detailed design and construction works.

Execution of phase two of the feasibility study will require a team of approximately 16 international and Kuwaiti experts. It will take an estimated six months to complete and require approximately 600 person-days of level of effort, not including project logistical and administrative support.

This chapter of the report presents a work plan for completion of the Phase Two study. In broad terms, the second, detailed phase of the feasibility study should be conducted by an international firm or team of international and Kuwaiti experts with extensive and complementarity experience in feasibility studies for special economic zones, technology parks, and similar developments. The team's expertise entails a diverse set of resources that includes capabilities in project management, civil engineering, urban planning, business economics, financial analysis, law, business process engineering, market research, marketing, investment banking, environmental and social impact assessments, procurement,

and institutional development and capacity building, together with in-depth expertise in technologies and their commercialization that will be the highest priorities of the KEG.

Phase Two Study Elements

The elements of phase two of the feasibility study should include:

1. ***Site selection***—Government will take the ultimate decision on the location of the Gateway. The consultants should, however, identify potential sites based on a set of location criteria that take into account size and availability of land, zoning and planning designation, proximity to existing infrastructure, soil, gradient, and drainage characteristics, environmental sensitivity, probable development cost, distance from residential and commercial areas, and existing land use. Starting with a long list of potential sites, the consultants should present the client with a short list of no more than three sites, with clear justification for the recommendation.

2. ***Demand assessment***—Phase one of the feasibility study established that there is substantial interest on the part of international companies to establish operations in Kuwait, and has provided some estimates of the amount of building space they will require and the probable pace of construction, but these will need to be defined with much greater precision. The consultants should conduct interviews with potential tenants in the Gateway, while also taking into account overall economic growth in Kuwait, the pace of development of the upstream and downstream petroleum sector, the need for leading-edge technology, and the kinds of value-added services and facilities that potential Gateway tenants will require. This will involve detailed and extensive interviews with a wide range of potential investors, both within and outside Kuwait, and will provide essential information that will inform the master plan. The demand assessment will include sensitivity analysis using a base case, pessimistic, and optimistic demand scenarios, with the implications of each for space and investment requirements and for the timing of successive development phases.

3. ***Benchmarking and competition assessment***—The feasibility study Phase one identified and assessed other SEZs and technology parks in the Gulf Region. Phase two will refine and further develop this assessment, to the extent of evaluating the technology development and commercialization activities of a wide range of service and supply companies in the energy sector, to determine what kind of offering could induce them to establish operations in the Gateway. This set of tasks will evaluate investment incentives available under existing Kuwaiti laws, with reference to incentives available in other locations in the region, and propose an appropriately competitive incentives package. This task will also evaluate incentives in the context of the GAFTA and GCC regulations on preferential tariff treatment of outputs from free zones.

4. ***Site evaluation***—The selected site (or short-listed sites) will be evaluated with respect to geotechnical, drainage, and soil characteristics and the implications of each for site safety and development cost.

5. ***Conceptual master plan and development strategy***—The purpose of the master plan and development strategy is to establish a long-term plan consistent with a world-class development. This plan should help ensure that the Gateway development exhibits the unique quality and vision of KISR and other stakeholders, and should include recommendations—in the event that the selected site is situated outside the main urban

areas—for the development of the corridors that lead to the Gateway. The conceptual master plan will include—

- A conceptual site plan for buildings and facilities;
- Concept plans for the various site systems, such as utilities, traffic and parking, building locations and design;
- Concept plans and design for landscaping, lighting, common and green areas, and pedestrian systems;
- Design standards and covenants for development of sites in accord with the master plan;
- Concept plan for signage.

6. ***Project cost analysis***—In accordance with the conceptual plan, cost estimates will be developed for all site and required off-site infrastructure, utilities, buildings, and other systems. These will be prepared principally on a per-unit basis (sq. meter, linear meter, etc.) to ensure scalability of overall cost estimates and projections.

7. ***Financial analysis—This section will include the following:***
   - Development of a comprehensive financial model to include a 15-year income statement (P&L), balance sheet, and cash flow projections, together with NPV and IRR calculations, including sensitivity analysis based on the different demand scenarios.
   - An economic analysis, which will quantify the external benefits and costs of the project that are not reflected in the financial cash flows. This will include government expenditure and revenue effects, employment and income multipliers, and other such other factors normally taken into account when Kuwaiti ministries consider investments in economic development investments designed to achieve national development objectives and enhance employment opportunities.

8. ***Legal, regulatory, and institutional framework***—The consultant team will draft a detailed set of proposals, for Government approval, for the powers and authorities to be delegated or assigned to the Gateway administration, and the policies and procedures by which those powers will be exercised. The KEG will actively promote itself to a given set of companies in selected sub-sectors. It will also, however, accommodate other companies engaged in activities that may not be among the first order priorities but which are nevertheless consistent with the mission and objectives of the Gateway and should therefore be permitted. These sub-sectors need to be defined with some precision, and a detailed set of criteria and procedures for evaluating applications by potential tenants must be articulated, to ensure that all tenants conduct appropriate activities and conform to all planning and environmental guidelines, and to guarantee, to the extent possible, their legal bona fides and financial stability. In addition, as described in Chapter 5 of this report, the policy incentives offered by an SEZ can be among its most valuable selling points, which can prove decisive in attracting investors. Typically, SEZs establish some form of "one-stop shop" for investment approvals, which provides streamlined investment approvals and regulatory compliance. The approvals may include company registration, business licensing, environmental approvals, issuance of work and residence permits for expatriate employees, building permits and certificates of occupancy, registration of domestic employees, and tax clearances for companies and individuals. Zone administrations also often house a customs post for efficient clearance of inward and outward transfers of goods and equipment. The power to issue these approvals may be delegated by the relevant authorities to the Gateway administration or, alternatively, be handled by secondment of staff from the issuing authority to the zone administration. The

consultants will establish an inventory of essential and desirable powers to be housed in the Gateway administration and propose, in consultation with the relevant public authorities, a mechanism and procedures for exercising them.

9. ***Structuring of public-private partnership***—Although the Gateway is likely, in its first phase, to be developed principally with public funds, private sector participation is considered essential for the success of the venture. The consultant team will identify and propose models for public-private partnership that provide for the maximum possible private participation in the management and operation of the Gateway, as well as some measure of financial risk sharing with private investors as early and as extensive as possible.

10. ***Environmental and social analysis***—This section will include a description of any adverse environmental impacts of the development of the KEG on the selected site and proposals for any mitigation measures required to ensure that the sites compliance with applicable national and international standards and regulations, including health and safety. To this end, the review will include (but not be limited to) a description of:

    - The environmental impacts associated with the physical investments required for the Gateway;
    - How environmental considerations should be taken into account in the design of project components;
    - Environmental and safety precautions to be taken during construction, maintenance and operation of the sites;
    - Contingency planning and emergency response should any Gateway activities or outputs be associated with hazardous processes or materials;
    - Compliance with current and expected future legislation and regulations, including an outline of permitting procedures and a time frame for obtaining required environmental permits, approvals and agreements;
    - Public participation and/or consultation issues, particularly in the context of any land use, ownership, or occupancy issues on the designated site;
    - An assessment of the need, if any, for resettlement or compensation of affected third parties as a consequence of implementing the Gateway project;
    - Assessment of the impact of the project on external vehicle traffic, and recommendation of remediation measures;
    - Depending on site location, an assessment of public services and social infrastructure that may be required, whether on or off the Gateway site, including housing, commercial developments, recreational facilities, schools, mosques, medical services, and public safety services.
    - An assessment of the socio-economic impact of establishing the KEG in terms of its effects on economic, technology, and industrial development, employment, and government revenues and expenditures

11. ***Organizational design, policies, and staffing plan***—This report provides an indicative framework for the Gateway administration and its operations, as well as highlighting the main elements of professional staff requirements. Phase two of the feasibility study will refine this framework, proposing a departmental organization of the Gateway administration, developing position descriptions and required qualifications for key

positions, and outlining key organizational and human resources policies, including compensation. This plan may also identify initial IT and telecommunications requirements for the Gateway administration.

12. ***Marketing and promotion strategy and plan***—An annual marketing budget of KD 350,000 has been suggested. The consultant team will prepare a detailed first-year marketing and promotion plan and a three-year strategy. This plan and strategy will be developed in coordination with key stakeholders, including KISR and the KFIB, and will identify and budget for key marketing events and exhibitions and the level and kind of desirable Gateway participation (including jointly with other Kuwaiti exhibitors and participants); internet, print, and other advertising campaigns, targeted promotion missions, and other marketing and promotion initiatives as appropriate. The plan and strategy will also include at least an initial design of the KEG web site for promotion purposes.

13. ***Preparation of tender documents***—At the client's request, the consultant team should be prepared to draft a package of documents for recruitment of forms to carry out detailed design and construction of the Gateway. These could be issued for separate design and construction contracts or a single design-build contract.

Personnel Requirements

Successful execution of this second phase of the Gateway feasibility study will require a considerably larger team than Phase 1. Key positions on the team will include:

- Team leader
- SEZ expert
- Science and technology park management expert
- Market research specialist
- Civil engineer/urban planning specialist
- Quantity surveyor
- Organizational design and human resources expert
- Marketing expert
- Financial analyst
- Environmental specialist
- International and Kuwaiti legal experts
- Investment banking/corporate finance specialist
- Web site designer
- IT specialist
- Procurement specialist
- Relevant energy technology and commercialization specialists

Additional resources will be needed for geographic information system (GIS) and computer-aided design (CAD) images and resources, as well as for soils and water testing laboratory services. It is assumed that these services are available locally in Kuwait.

Timing

Phase two of the feasibility study is expected to take five to six calendar months and require an estimated 500 to 600 person-days of consultant level of effort, not including project logistical and administrative support.

13 Conclusions

In this last chapter, some of the key conclusions of the phase one feasibility study are re-stated below. In brief, a number of key "success factors" and strategic conclusions must be taken into account if there is any expectation that the Gateway can meet its intended goals. In effect, the Gateway cannot be successful without taking into account the past economic and business history in Kuwait and the Region, as well as the nature of current and future market conditions. Stated another way, the success factors and strategic considerations are based on the characteristics of the current Kuwait business environment, the nature of the competition from other technology parks and economic zones in the Region for attracting international companies, and the need for understanding the expectations that international businesses would have in opening or expanding their operations in Kuwait.

In light of the above, some of the key success factors and strategic conclusions are highlighted below.

Business Environment

- The political, regulatory, and institutional barriers to doing business in Kuwait are well known, but solutions have proven elusive.
- These well-known barriers affect Kuwaiti's ability to attract targeted international companies and encourage the growth of Kuwaiti knowledge-based and technology service firms.
- Special economic zones and technology parks have been discussed for many years in Kuwait as potential (partial) solutions to these problems, but little progress has been made.
- This initiative has the chance to demonstrate concrete movement in overcoming these well-known problems.

National Context and Need for the Gateway

- There is a clear long-term need for new technologies in the Kuwaiti hydrocarbon sector—as well as in the Gulf Region more generally—to expand output and achieve stated targets (e.g., heavy oil and enhanced recovery).
- Similarly, there is growing importance to address long-term needs in power generation, water, and green technologies.
- In the energy sector broadly defined, expanded and enhanced engagement of knowledge-based businesses is required.
- The Gateway initiative could be an important aspect of government policy for creating private-sector job opportunities for young Kuwaitis.

Competitive Analysis

- Other countries in the Gulf States have successfully used SEZs/TPs to attract companies, particularly UAE, Qatar and Saudi Arabia, and they represent a significant competitive hurdle for Kuwait.
- At the same time, Kuwait has the opportunity to develop a regional technology leadership role in the energy sector.
- Many of the target types of companies for the Gateway currently have sales agents in Kuwait but do not have significant technical capacity or presence in the country.
- Many of the target types of companies are interested in Kuwait but need a compelling value proposition to invest in expanding capacity.

Market Niche and Strategic Approach for Establishing the Kuwait Energy Gateway

- Kuwait can be a leader in the Region by becoming the hub for the advanced technologies required for heavy oil, enhanced recovery and other priority needs where Kuwait can establish a leadership role.
- For a successful business technology park/special economic zone model to be implemented, key stakeholders must be brought into the planning process in the early stages of development and rollout.
- The Gateway should attempt to avoid the need for new legislation.
- The KEG should be a legal entity with both public and private participation, in short, a public-private partnership with government funding only for the initial start-up years.
- The Gateway should be a geographically-bounded location with a common legal and regulatory environment for targeted businesses.
- The Gateway should offer first-class infrastructure, support services, and built environment to targeted businesses.
- The management role of the Gateway should proactively facilitate collaboration among Kuwaiti and international businesses and institutions with similar interests in the energy sector. This will include marketing of the Gateway to potential business clients.
- The roll-out approach should be incremental with the initial focus on clear, short-term priority needs.

Policy Choices and Investment Decisions

In examining options for creating the Kuwait Energy gateway, a key question for senior Kuwaiti policy-makers is to ask what are the expected socio-economic benefits from the Gateway. In other words, why should the Government of Kuwait commit resources to this project in the face of other competing demands for the use of public funds and management oversight resources?

The consultant team's view is that there are essentially two reasons—two value-propositions—that support the creation of the Kuwait Energy Gateway. These are the traditional socio-economic benefits and a second category, the wider institutional benefits.

Socio-economic Benefits

KISR's revised TOR of December 2011 listed six essential socio-economic objectives that it was hoped would be supported by the creation of the KEG. These are:

- Providing an environment for effective technology transfer for oil and energy related industries;

- Placing Kuwait as a regional center for advanced technical support and R&D services for the oil, gas, petrochemicals and power industries;
- Encouraging the start-up of new technology-focused SMEs;
- Helping to diversify the economy by attracting international knowledge-based companies and promoting the growth of similar Kuwaiti firms;
- Promoting the commercialization of new energy technologies that help to diversify the Kuwaiti economy and promote Kuwait's comparative advantages, both regionally and globally;
- Employing returning Kuwaiti youth who have studied abroad by providing them with opportunities to find professional satisfaction from working in entrepreneurial companies, rather than seeking employment in the public sector.

As discussed in Chapters 9, 10 and 11, the consultant team believes that virtually all of these socio-economic objectives could be supported by the creation of the Gateway, given other countries' experience in developing and effectively supporting science and technology parks and economic zones. To be successful, however, the Gateway cannot simply be a real estate development effort to furnish office space for small and medium sized technology and service companies, no matter how much public funding is made available from the Kuwaiti Government. The KEG will need a clearly defined market niche that corresponds to Kuwait's comparative advantages, strong public-private collaboration, and a dedicated and well qualified management team and Board of Directors.

For purposes of the feasibility study, there was not clarity, agreement or sufficient data on the size and scope of the Gateway in order to make a true cost-benefit analysis of the expected socio-economic returns from the KEG. As explained in Chapter 12, those issues will be covered as part of phase two of the feasibility study. But, again by using international comparators, the team feels strongly that the Gateway could in five-seven years work with more than 150 local and international businesses, leading many of them to make significant new investments in Kuwait, such that more than 5,000 new high quality jobs would become available to Kuwaiti citizens.

Institutional Benefits

Beyond the socio-economic impacts of the Gateway, the consultant team believes there is a far more important impact that could emerge from moving forward with the creation of the KEG. In literally every conversation the team had with both Kuwaiti senior public officials and mangers and representatives from private companies, the barriers and constraints in the Kuwaiti business environment was the common denominator of every discussion. All were acutely aware of the problem and nearly all were exasperated and disappointed that so little progress had been made in resolving the issues. Despite policy statements and numerous studies and recommendations, progress on improving the situation has been slow to materialize.

The consultant team feels strongly that the creation of the Gateway, using the business model recommended in a technology park/special economic zone and employing an effective public-private management structure, could help to break down some of the barriers to an improved Kuwaiti business environment. If the KEG were launched, along with some of the ongoing similar initiatives (such as the NTEC Business Incubator Initiative and the PAI Industrial Technology Park Initiative), then there is a good chance that some of the business environment issues could begin to be overcome.

The consultant team recognizes that this issue cannot be addressed in solely technocratic terms, that there are political realities that must be taken into account. This is one of the main reasons that the

team feels no new legislation is required to launch the Gateway, only modification to existing laws and decrees.

The establishment of the Gateway and the other similar business enhancing initiatives should be seen by all Kuwaiti companies, both those well established and small and start-up companies, as a significant opportunity—not threat—to expand their businesses and grow their companies in new and exciting (and profitable) directions.

To the extent the successful launching of the Gateway and other similar initiative can be achieved, then far more compelling benefits will be achieved for Kuwait than the actual number of jobs created and company tenants in the Gateway. Rather, the KEG and the other initiatives could represent the first steps in improving the Kuwaiti business environment by showing tangible and focused results, thereby demonstrating the achievement of a major development goal spelled out in Kuwait Vision 2035.

Concluding Comments

This feasibility study has sought to provide KISR with the requisite information needed to effectively examine the issues and options for moving forward with the full design, construction, and development of the proposed Kuwait Energy Gateway. The report has examined the wider macro context for the establishment of the Gateway as well as key market issues for the Gateway, notably initial examination of the market and competitive requirements for attracting international companies and filling a technology niche that allows the Gateway to meet pressing national priorities and position Kuwait as a regional leader in key industries and sectors. This study has underscored the point that although Kuwait is far behind other GCC countries in creating technology parks and economic zones, Kuwait does have a "window of opportunity" to establish such a technology park/special economic zone that can help to address important national development goals, as articulated in the Mid-Range Development Plan and the longer-term Kuwait Vision 2035.

The report has given considerable attention to describing a recommended scope, business model and governance structure for the Gateway. This recommended approach was based on analyzing the distinct characteristics of the Kuwait environment, not applying a generic or boilerplate approach that would not have a chance of succeeding.

Following this phase one feasibility study, phase two consists of full business model/business plan development and engineering design, followed by a phase 3 construction stage. These phases are largely technical in nature, and follow traditional planning and construction methodologies. It is not the mandate of the consultant team to comment on these next phases, but the team would like to mention what we consider are key ingredients for ensuring effective movement from phase to phase and into full launch of the Gateway. Four considerations are discussed below.

Advisory Support

KISR has already moved forcefully in creating an Advisory Committee of well-respected Kuwaiti officials to review this phase one feasibility study. This process is critical for reaching broad consensus and ensuring buy-in from the wide range of stakeholders interested in, or impacted by, the KEG. This process should be continued through the design and construction phase, with careful attention being given to the transition from the design and construction to the rollout of the Gateway with a physical and legal presence. In Chapter 10, our study has recommended that the Gateway should have a Board of Directors and both a Policy Advisory Committee and Technical Advisory Committee to meet different functional requirements for the success of the Gateway. These advisory bodies can play an important role in providing strategic direction and oversight. In each phase, the advisory roles are distinct and

may require different backgrounds and skill sets. Effectively transitioning between the advisory needs in each phase should be given high priority by KISR management.

Management Requirements for the New Entity

In Chapter 10, the consultant team has recommended that the management team for the Gateway be recruited well before the construction phase is ended and the doors are opened for business. Even as the physical infrastructure is being built, there are several management priorities that must be given attention. These include, to name but a few, creating the policy and procedures for tenant leases, developing a short-to medium term operating budget and business plan, defining the role and scope of key business facilitation service, and the technology projects these services will focus on promoting to prospective clients, putting in place management tracking and accounting systems, working with the newly appointed Board of Directors, recruiting core staff, and initiating an extensive marketing campaign to publicize the Gateway and attract prospective tenant companies (discussed below). These kinds of activities and the myriad other tasks associated with start-up institutions, whether public or private, are very important if the Gateway is be effective in getting off the ground and avoiding the embarrassment of becoming a "white elephant" as has happened to other science and technology parks in the Region and around the world. Thus, the financial requirements for these management activities must be factored into the design and construction phases for the Gateway.

Marketing Considerations

A major marketing campaign will be needed for the Gateway well before the physical structure is in place and ready to accept tenants. This report has given high priority to proactively understanding the needs of potential tenants—seeking them out, understanding their business strategies and perceptions of business opportunities, as well as determining the kinds of incentives and inducement that increase the value proposition of the Gateway. Starting this kind of marketing campaign early is critical because prospective tenant companies will need months, if not years, to make a decision and actually establish a presence in the Gateway. Expecting such companies to come on their own accord, without proactive encouragement, is a receipt for failure. It would also be a mistake to think that these marketing requirements can be done "on the cheap." A marketing budget of KD 1 million over three years, starting even before the Gateway is fully built, would not be unreasonable.

Institutional Collaboration

During the course of the consultant team's research and analysis, it became apparent that there are multiple initiatives that have similar or related objectives to those of the KEG. All share a common purpose of seeking to improve the Kuwait business environment and to promote foreign investment and Kuwaiti entrepreneurship. Some of these initiatives were highlighted in Chapter 7. It is the opinion of the consultant team that addressing the institutional concerns about overlap and duplication, of perceived threats to existing ways of doing business—this will be probably more important than the technical or financial issues associated with designing the Gateway. In any bureaucratic or organizational setting, initiating change and creating new institutions is never easy, regardless of the country. And Kuwait is no exception. Addressing this challenge and encouraging a sense of collaboration, not competition, among the interested parties will be one of the key responsibilities for the Advisory Boards or Committees during all phases of Gateway's design, construction and implementation.

ANNEXES

Annex 1: Frequently Asked Questions (FAQs)

1. What is a Special Economic Zone?

A special economic zone (SEZ) is a geographically delimited area administered by a single body, which offers certain incentives or benefits—and, almost always, different legal and regulatory conditions than those found in the wider economy—to businesses that physically locate within its boundaries. SEZs are often used as a means to overcome deficiencies in a country's business environment by offering streamlined regulations and procedures and reliable infrastructure. Fiscal incentives and duty exemptions are often—but are not always—a feature of SEZs. An SEZ differs from a free trade zone (FTZ) or an export processing zone (EPZ) in that it is not necessarily devoted to manufacturing enterprises and is not typically subject to the same export performance requirements that an FTZ or EPZ is.

2. What is a Technology Park?

A technology park (TP) is most frequently seen as an instrument of economic development through which knowledge and technology are harnessed to foster business innovation, which in turn drives business growth. TP projects can be developed and tuned to improve different aspects of business innovation which extends from research at one end to early stage commercialization at the other. Where this involves public sector grants or subsidies, as it frequently does, then the specific outputs required of the TP are usually derived from national public policy priorities. These outputs include the nature and extent of the employment generated, and the development or creation of new businesses or improvements in the productivity of specific industries. In recent years as the industry has matured, the private sector has come to play an increasingly important role in the development and management of TPs.

3. How does Kuwait compare with other Gulf States in having Special Economic Zones and Technology Parks?

There are more than 40 SEZs and similar structures in the Gulf Region, including 32 in the UAE alone. Of these, several have a mandate similar, though not identical, to that proposed for the Gateway. There are approximately 19 operational TPs in the Gulf Region, 11 of them in Iran. There are a further five to seven TPs in the planning stage, including one TP in Basra, Iraq.

However, there are only a very few of these developments that have targeted a similar market niche as that proposed for the KEG, namely, energy technology demonstration and commercialization. Therefore, most of the existing TPs/SEZs are not direct competitors.

4. What is the Kuwait Energy Gateway (KEG) intended to do?

The model for the KEG has outlined the following intended outcomes:

- Attract knowledge-based businesses in the energy sector to locate their technical and engineering staff in Kuwait that is required in the areasoftechnology development and commercialization;
- Enhance Kuwait regional leadership role in advanced technology and services for the energy sector;

- Support theKuwaiti oil sector to achieve it stated targets of expanded output by attracting companies with new technologies in priority areas such as heavy oil and enhanced recovery;
- Facilitate new technologies coming into Kuwait to address the country's priority needs in petroleum, petrochemicals, power generation, water treatment, green technologies;
- Create high-quality job opportunities for young Kuwaitis;
- Provide a creative approach to overcome well known difficulties with Kuwait's business environment to enhance private sector growth for both Kuwaiti and international companies.

5. How will the KEG support Kuwaiti's national development objectives?

The design of the KEG is specifically meant to help address key Kuwaiti national development objectives, namely knowledge-based jobs creation for Kuwaiti citizens, diversification of the economy, and meeting long-term energy requirements for Kuwait, both in terms of energy production and consumption. As such, the Gateway is not a financial investment capable of attracting private investors, at least in the early years (although this would be possible by year five of the project).

6. Why is the KEG needed at this particular time?

There is general recognition that concrete movement is critically needed to stimulate improvements in the Kuwaiti private sector, attract foreign investment, and accelerate the growth of technology, services and knowledge-based companies in the Kuwaiti economy. The KEG represents one tangible way of addressing this challenge.

7. How will the KEG be funded and how much funding is necessary?

At least in its initial stages, the KEG will be funded by the Kuwaiti Government. This is because private developers may be reluctant to invest in a concept as yet unproven in Kuwait. Also, the high capital investment required for the KEG to offer a quality standard of facilities and services may limit financial returns. An investment of between KD 60 million to 70 million will be required in the first five to seven years, principally for site infrastructure and buildings, after which time the Gateway can become financially self-sustaining (See FAQ 9).

8. Based on other countries' experience, how long would it take to build and launch the KEG if Government approval is given to fund the project and begin construction?

Once a TP project is approved there are usually three significant factors that determine the speed of initial development:

- The purchase or allocation of land
- Securing essential permissions or licenses to commence construction
- Securing requisite packages of funding to finance the first stage of development

Once these are all in place, then infrastructure development can commence along with the development of the first few buildings. Since TP buildings are seldom particularly large or highly complex structures, a construction period of 10–18 months is normally sufficient for any given building. Thus within two years from the start of construction, it should be possible to complete sufficient infrastructure and buildings to allow the TP to start full operations. Further development can then proceed at an agreed pace.

9. How long is Government funding necessary? Will the KEG become financially self-sustaining?

Preliminary estimates suggest that by year five, the KEG could be financially self-sustaining, and that by year eight, the KEG could be generating a positive gross margin for private investors.

10. Who will own the Gateway?

The Gateway is designed as an instrument of public policy that will stimulate new business investment in Kuwait by medium and larger national and international businesses in the broad energy sectors selected as the priorities for the Gateway. As a consequence the public sector will drive the mission and goals of the KEG from the outset. However, over time the investments in the property of the Gateway will be made by both public and private sectors in similar proportions, albeit that necessarily much of the public sector's investment will be made early in the project's life. Therefore, the KEG is seen a public private partnership (PPP) with both represented as shareholders and directors of a Gateway company. The company will need to be structured so that shareholdings can change as the balance between public and private sector investment in the KEG changes over time.

11. What is the proposed management structure for the KEG?

The management structure for the KEG would be centered around creating a separate Kuwaiti company to run the Gateway which is governed by a board of directors from the public and private sectors. Because of the public funding that would be needed to launch the KEG, it would be created as public-private partnership. The management team running the KEG would be hired from the private sector with experience in technology commercialization, property management and other required skills for the spectrum of business requirements for the KEG to proactively support tenant companies.

12. What kinds of businesses will be targeted for inclusion in the Gateway?

The primary businesses that will be targeted are medium and larger national and multi-national businesses in the petroleum, petrochemical, power generation, water purification and solar energy sectors. Whenever a key business in any of these sectors is attracted to the KEG, then, additionally, the relevant supply chain of service companies will also be targeted to ensure that a full infrastructure of relevant businesses is built up within the KEG. This will ensure that follow on investment by the larger companies can be fully supported from the business base developed within the KEG.

13. How many jobs will be created?

Based on figures from other science and technology parks in the Gulf region and worldwide, companies located in the KEG are expected to create 3,000 direct new jobs within 10 years, and 5,000 jobs within 15 years. An estimated 50 percent of these will go to Kuwaiti citizens. Due to multiplier effects on employment and income, a substantial number of indirect jobs may also be created.

14. Will the Gateway be recruiting fresh graduates or experienced professionals?

There is a difference between the KEG management team that will manage the Gateway and the companies that the KEG will attract to engage initially with its technology demonstration and development activities and later with larger scale investment in Kuwait. The KEG team is likely to be quite small with less than 40 staff but with more than half of the posts requiring graduate level skills along with relevant experience. A few posts would be amenable to fresh graduates. However, the staff employed by the companies will be far more numerous (see FAQ 13) and a high proportion of these posts will require graduate level skills. It is further expected that of these posts

about 50 percent will be available to Kuwaitis. The Gateway will operate a remunerated internship program to deploy many fresh graduates into the KEG based companies on project assignments every year. Experience shows that graduates who perform well in these roles are frequently offered full employment. Therefore, the Gateway will become a place where a plentiful supply of exciting jobs for new graduates will be created.

15. Who are the main customers of the client-tenants using the Gateway?

The main customer groups can be broken down into three main categories:

- The first group of customers will be the broad energy businesses in Kuwait to whom the KEG clients/tenants would be supplying technology and technology based services that have been demonstrated to be effective under Kuwaiti conditions;
- Second, the same companies are expected to be able to sell to energy industries in other countries in the Gulf Region where operating conditions are similar to Kuwait;
- Third, service sector businesses attracted to the KEG that will sell and support components of the technologies and systems to the main contractors who in turn are delivering to the first and second markets above.

The demonstration and development projects the KEG will stimulate with its Kuwaiti partners to open these market are not commercial sales and therefore are not customer contractor relationships. Rather they are partnership projects designed to reduce or eliminate the risks to Kuwaiti energy companies of placing large contracts for technologies otherwise not proven to be effective under Kuwaiti operating conditions. It has to be stressed that, in contractual terms, there will be no link between these partnership projects and the winning of commercial contracts that are tendered by Kuwait energy companies.

16. What regions/countries will KEG clients target for their business activities?

The business roll-out model for the Gateway is that the tenant businesses would target their activities for both Kuwait and the Gulf Region. Initially, this approach may entail focusing first on Kuwait, but within two-three years expanding the focus of interest to seek out new business opportunities for technology commercialization within other Gulf States.

17. What are the differences between the Gateway and other similar projects such as the KPC's planned R&D center, PAI's industrial technology park, NTEC's technology park, and Kuwait University's research park, and KFIB petroleum park?

There are, and have been, a number of other initiatives trying to accomplish similar objectives within the same ecosystem in Kuwait. One of the essential challenges for this initiative is to identify the niche for the KEG that complements the other efforts to promote technology transfer, energy industry innovation and job creation. Instead of these initiatives competing to attract the same companies or provide the same services, the KEG should be designed to be complementary to these efforts. The relevant initiatives may seem like potentially duplicative efforts, but the proposed market niche for the Gateway is very important and not currently being served by other initiatives. This target market for the KEG will be energy-industry technology and service companies with new or adaptable products and services that address priority needs in Kuwait and the Region.

18. The KEG overlap with the roles of KPC R&D Center and KISR?

The Gateway will not overlap with these two R&D initiatives, but it will be designed to be highly complementary. The KEG will focus on attracting and supporting the private companies that both KISR and KPC need to actually commercialize new technology developments. The Gateway should be seen as a vehicle to help both organizations get their research and development deployed by the private sector.

19. In 10 and 20 years, what do you envision a review or a commentary of the KEG would say?

Within a timescale of 10 years the principal commentary would be:

> *"Ten years on and the highly acclaimed Gateway has been shown to have "kick-started" much larger investments in new technology within the Kuwait's energy industries than has been seen for decades and in the process over 3,000 high value added jobs have been created with more than 1, 500 Kuwaiti graduates employed in newly created demanding technological and managerial roles. "*

In 20 years, the commentary might describe the KEG as follows:

> *"It's now 20 years since the Kuwait Energy Gateway opened its gates and created the flood of beneficial new technologies that transformed our Energy Industries here in Kuwait. To add to this, the KEG has been announcing every three to four years the development of technologies in which Kuwait has a stake and which are forming the basis of substantial new business activity. The latest of these is a new water treatment technology based on nanotechnology offering significant improvements in water purity with reduced energy, capital and operating costs where the core nanotechnology membrane material has now started manufacture in Kuwait and is being sold worldwide. Over 1,000 jobs will be created from this development alone to add to other energy related developments announced over the last 10 years. A spokesperson from the Gateway confirms that since inception the companies associated with the KEG have generated approximately 10,000 jobs with over 5,000 being taken by Kuwaiti nationals—most of them with university and graduate school training. "*

Annex 2: Officials Interviewed in Kuwait

Arab Fund for Economic and Social Development	Dr. Saad Akashah, Advisor
Capital Markets Authority	Dr. Mahdy I. Al-Jazzaf, Vice President
Kuwait Chamber of Commerce	Dr. Rabah A. Al-Rabah, Director General
Kuwait Energy	Mrs. Sara Akbar, Chief Executive Officer
Kuwait Foundation for the Advancement of Sciences	Dr. Adnan A. Shihab-Eldin, Advisor
Kuwait Foreign Investment Bureau	Sheikh Meshaal Jaber Al-Ahmed Al-Sabah, Chief
Kuwait Petroleum Corporation	Dr. Bader Naser Al-Khashti, Managing Director Research, Development and HSE Mr. Mohammad A. Al-Qenaei, R&D Team Leader Research and Development
National Bank of Kuwait	Mr. Daniel Kaye, Senior Manager Economic Research Mr. Elias G. Bikhazi, Assistant General Manager Economic Research Mr. Saud Y. Al-Qemlas, Executive Manager Corporate Banking Group Mr. Pradeep Handa, Deputy General Manager Corporate Banking Group
National Technology Enterprises Company	Dr. Anas Meerza, General Manager Mr. Abdullah A. Al Mutairi, Senior Manager Mr. Imtiaz Murshed, Senior Manager Mr. Mohammad Al Dowaisan, Assistant Manager
General Secretariat of the Supreme Council for Planning and Development	Dr. Adel A. Al-Wugayan, Secretary General

Annex 3: Companies Contacted at World Petroleum Congress and Heavy Oils Conference

3M Svenska AB

Air Products and Chemicals, Inc.

Al-Zahem International Group

American Petroleum Institute

Apadana Petro Bazargan

Ares Software Corporation

Aveva Solutions, Ltd.

Baker Hughes

Beijing Jerrywon Energy Equipments Company, Ltd.

BP Exploration Operating Company, Ltd.

Buzwair Industrial Gases and Factories

Callidus Technologies-Honeywell

Caltec Ltd

CH2MHill (Water Business Group)

Chevron Corporation

China Shengui Valve Company. Ltd

Chiyoda Corporation

CNOOC Energy Technology and Services, Ltd.

College of the North Atlantic—Qatar

Conoco Phillips Corporation

Dolphin Heat Transfer. LLC

Draeger Safety UK Ltd.

Emerson Industrial Automation

Emek Boru

Evonik Industries AG

Expro Group

Falcon Oil Field Services, Inc.

FMC Technologies

GAC

Gastech

GCE Group

GDF SUEZ

GEA Heat Exchangers

General Dynamics UK, Ltd.

GE Oil and Gas

GL Noble Denton

Glasspoint Solar Corporation

Global Education Facilitators, Inc

Godrej & Boyce Manufacturing Company. Ltd.

Golder Associates

Global Thermoelectric

Gulf Warehousing Company

Gulf International Service Company, Ltd.

Halliburton

Hooper Welding

Hydroflame Technologies

HS Pipe Equipment Ltd.

Hydra-Slide, Ltd.

Idemitsu Kosan Company, Ltd.

Industrial Maintenance International

INOVx Solutions

Industrial Scientific

Jiangsu Sinopetro Superbskill Machine Company, Ltd.

JMJ Associates

JOGMEC (Japan Oil, Gas and Metals National Corporation)

JX Nippon Oil and Energy Corporation

KBCat

Kentz Group

Kuwait Energy Company

Madina Group

Maersk Oil Middle East A/S

MAPNA Group

Maxon Corporation

Mincom

MSE Oil and Engineering

Nexen, Inc.

Occidental Petroleum Corporation (OXY)

ORYX GTL, Ltd.

Panalpina World Transport

Petro SAS

Progress Industrial Systems SA

PSI

PTPA Joint Stock Company

R&M Energy Systems

Radial Drilling

Redline Communications

Regent Energy Group Ltd

Rongsheng Machinery Manufacture Ltd.

Rosen Middle East FZE

Rouge Pipeline Services

Sasol

Schlumberger

Shanghai Shenkai Petroleum Equipment Co. Ltd.

Siemens AG

Statoil

The EIC

TDE-Austria

TECHNIP

Thermtech AS

TNO (Dutch Research Organization)

Toshiba Mitsubishi-Electric Industrial Systems Corporation

Trican Well Service

TRSA

UNI Klinger, Ltd.

UNOP

United Engineering Services LLC

Usha Martin Industries Ltd

Velosi Certification, LLC

Veolia-VWS Oil and Gas

Weatherford UAE

Weatherford Kuwait

WesternGeco

Wintershal

WorleyParsons

Zenith Oilfield Services

Zhejiang Wanli Valve Manufacture Co.

Annex 4: Composition and Structure of the Global Competitiveness Index

Weight (%) within immediate parent category

BASIC REQUIREMENTS

1st pillar: Institutions 25%

A. Public institutions 75%

1. Property rights 20%
   - 1.01 Property rights
   - 1.02 Intellectual property protection

2. Ethics and corruption 20%
   - 1.03 Diversion of public funds
   - 1.04 Public trust in politicians
   - 1.05 Irregular payments and bribes

3. Undue influence 20%
   - 1.06 Judicial independence
   - 1.07 Favoritism in decisions of government officials

4. Government efficiency 20%
   - 1.08 Wastefulness of government spending
   - 1.09 Burden of government regulation
   - 1.10 Efficiency of legal framework in settling disputes
   - 1.11 Efficiency of legal framework in challenging regulations
   - 1.12 Transparency of government policymaking
   - 1.13 Provision of government services for improved business performance

5. Security 20%
   - 1.14 Business costs of terrorism
   - 1.15 Business costs of crime and violence
   - 1.16 Organized crime
   - 1.17 Reliability of police services

B. Private institutions 25%

1. Corporate ethics 50%
   - 1.18 Ethical behavior of firms

2. Accountability 50%
   - 1.19 Strength of auditing and reporting standards
   - 1.20 Efficacy of corporate boards
   - 1.21 Protection of minority shareholders interests
   - 1.22 Strength of investor protection

2nd pillar: Infrastructure 25%

A. Transport infrastructure 50%

- 2.01 Quality of overall infrastructure
- 2.02 Quality of roads
- 2.03 Quality of railroad infrastructure
- 2.04 Quality of port infrastructure
- 2.05 Quality of air transport infrastructure
- 2.06 Available airline seat kilometers

B. Electricity and telephony infrastructure 50%

- 2.07 Quality of electricity supply
- 2.08 Mobile telephone subscriptions
- 2.09 Fixed telephone lines

3rd pillar: Macroeconomic environment 25%

- 3.01 Government budget balance
- 3.02 Gross national savings
- 3.03 Inflation
- 3.04 Government debt
- 3.05 Country credit rating

4th pillar: Health and primary education 25%

A. Health 50%

- 4.01 Business impact of malaria
- 4.02 Malaria incidence
- 4.03 Business impact of tuberculosis
- 4.04 Tuberculosis incidence
- 4.05 Business impact of HIV/AIDS
- 4.06 HIV prevalence
- 4.07 Infant mortality
- 4.08 Life expectancy

B. Primary education 50%

- 4.09 Quality of primary education
- 4.10 Primary education enrollment rate

2nd pillar: Infrastructure.....25%

A. Transport infrastructure.....50%
- 2.01 Quality of overall infrastructure
- 2.02 Quality of roads
- 2.03 Quality of railroad infrastructure
- 2.04 Quality of port infrastructure
- 2.05 Quality of air transport infrastructure
- 2.06 Available airline seat kilometers

B. Electricity and telephony infrastructure.....50%
- 2.07 Quality of electricity supply
- 2.08 Mobile telephone subscriptions
- 2.09 Fixed telephone lines

3rd pillar: Macroeconomic environment 25%
- 3.01 Government budget balance
- 3.02 Gross national savings
- 3.03 Inflation
- 3.04 Government debt
- 3.05 Country credit rating

4th pillar: Health and primary education.....25%

A. Health.....50%
- 4.01 Business impact of malaria
- 4.02 Malaria incidence
- 4.03 Business impact of tuberculosis
- 4.04 Tuberculosis incidence
- 4.05 Business impact of HIV/AIDS
- 4.06 HIV prevalence
- 4.07 Infant mortality
- 4.08 Life expectancy

B. Primary education.....50%
- 4.09 Quality of primary education
- 4.10 Primary education enrollment rate

EFFICIENCY ENHANCERS

5th pillar: Higher education and training.....17%

A. Quantity of education.....33%
- 5.01 Secondary education enrollment rate
- 5.02 Tertiary education enrollment rate

B. Quality of education.....33%
- 5.03 Quality of the educational system
- 5.04 Quality of math and science education
- 5.05 Quality of management schools
- 5.06 Internet access in schools

C. On-the-job training.....33%
- 5.07 Local availability of specialized research and training services
- 5.08 Extent of staff training

6th pillar: Goods market efficiency 17%

A. Competition.....67%

1. Domestic competition.....variable
- 6.01 Intensity of local competition
- 6.02 Extent of market dominance
- 6.03 Effectiveness of anti-monopoly policy
- 6.04 Extent and effect of taxation
- 6.05 Total tax rate
- 6.06 Number of procedures required to start a business
- 6.07 Time required to start a business
- 6.08 Agricultural policy costs

2. Foreign competition.....variable
- 6.09 Prevalence of trade barriers
- 6.10 Trade tariffs
- 6.11 Prevalence of foreign ownership
- 6.12 Business impact of rules on FDI
- 6.13 Burden of customs procedures
- 6.14 Imports as a percentage of GDP

B. Quality of demand conditions.....33%
- 6.15 Degree of customer orientation
- 6.16 Buyer sophistication

7th pillar: Labor market efficiency 17%

A. Flexibility.....50%
- 7.01 Cooperation in labor-employer relations
- 7.02 Flexibility of wage determination
- 7.03 Hiring and firing practices
- 7.04 Redundancy costs
- 6.04 Extent and effect of taxation

B. Efficient use of talent.....50%
- 7.05 Pay and productivity
- 7.06 Reliance on professional management
- 7.07 Brain drain
- 7.08 Female participation in labor force

8th pillar: Financial market development.....17%

A. Efficiency.....50%
- 8.01 Availability of financial services
- 8.02 Affordability of financial services
- 8.03 Financing through local equity market
- 8.04 Ease of access to loans
- 8.05 Venture capital availability

B. Trustworthiness and confidence.....50%
- 8.06 Soundness of banks
- 8.07 Regulation of securities exchanges
- 8.08 Legal rights index

9th pillar: Technological readiness.....17%

A. Technological adoption.....50%
- 9.01 Availability of latest technologies
- 9.02 Firm-level technology absorption
- 9.03 FDI and technology transfer

B. ICT use.....50%
- 9.04 Internet users
- 9.05 Broadband Internet subscriptions
- 9.06 Internet bandwidth
- 9.07 Mobile broadband subscriptions
- 2.08 Mobile telephone subscriptions*
- 2.09 Fixed telephone lines

10th pillar: Market size.....17%

A. Domestic market size.....75%
- 10.01 Domestic market size index

B. Foreign market size.....25%
- 10.02 Foreign market size index

INNOVATION AND SOPHISTICATION FACTORS

11th pillar: Business sophistication 50%

11.01 Local supplier quantity
11.02 Local supplier quality
11.03 State of cluster development
11.04 Nature of competitive advantage
11.05 Value chain breadth
11.06 Control of international distribution
11.07 Production process sophistication
11.08 Extent of marketing
11.09 Willingness to delegate authority
7.06 Reliance on professional management

12th pillar: R&D Innovation.....50%

12.01 Capacity for innovation
12.02 Quality of scientific research institutions
12.03 Company spending on R&D
12.04 University-industry collaboration in R&D
12.05 Government procurement of advanced technology products
12.06 Availability of scientists and engineers
12.07 PCT patent applications
1.02 Intellectual property protection

	Factor-driven stage (1)	Efficiency- driven stage (2)	Innovation- driven stage (3)
Weight for basic requirements subindex	60%	40%	20%
Weight for efficiency enhancers subindex	35%	50%	50%
Weight for innovation and sophistication factors subindex	5%	10%	30%

Annex 5: A Brief Overview of Science and Technology Parks

The Early Years

Science and technology parks first came into existence in the early 1950s in the USA. The Stanford Research Park is often described as the first STP, although the Research Triangle Park probably predates Stanford in terms of legal foundation but acquired its first tenants after Stanford. Stanford was a serendipitous project. The University had unused land which became taxable as a property asset. Stanford University therefore decided to build an industrial park on the land to develop some income to cover its tax bill. By chance, the first occupiers of the park were organizations that wanted a base for their R&D—Kodak and a biotech manufacturer of contraceptive pills (the 3rd was the *Wall Street Journal*). Other technology companies followed, attracted by the location and its excellent climate. Hewlett Packard (HP), a local start-up company, only moved onto the park once their business had become established. In those days there were no incubators. HP is now the single largest occupier and is to be found on each of the phases of the park as it was developed.

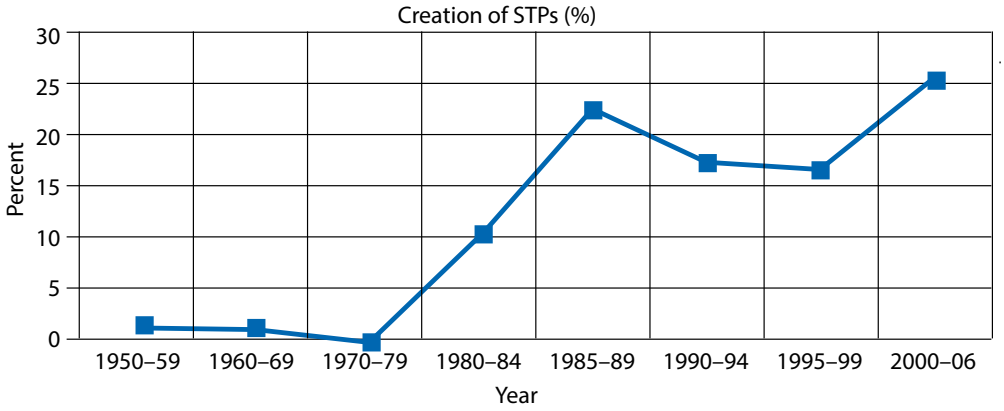
After these projects, there was a lull in activity until the early 1970s when in the USA and Europe several new STPs were started. In Europe it was Sophia Antipolis Technology Park, Herriott Watt Research Park and the Cambridge Science Park that led the way.

However, it was not until the mid-1980s that the STP movement really started to burgeon across the world with universities and regional and national governments beginning to see the potential that STPs offered for economic development based on the new knowledge based industries of ICT and Biotechnology. Figure 5. 6 shows the percentage of the current total population of STPs that were initiated by year of formation, which clearly shows not only the lift-off off period in the 1980s but also the sustained growth of the movement since then. The spread and growth of the movement was first across North America and then Europe, but by the late 1990s had embraced over 70 countries around the world. Today there are probably some 700 to 1,000 STPs across the world, of which 381 are members of the International Association of Science Parks (IASP). These members represent the majority of the larger, better known and more successful parks and therefore statistics from IASP are used in this report.

The new technology industries found that STPs offered several advantages over industrial parks:

- The association with a university or research center offered:
  - A supply of talent
  - Access to R&D facilities
  - Opportunities for solving technical problems requiring research.
- The buildings offered the right types of facilities for the companies and the campus style developments were attractive to the staff of the companies, making it easier for those businesses to recruit the skills and talents they required.

Creation of STPs by Year as Percentage of Current Total



Private sector developers, who were following this trend closely, started providing business parks at much the same time, with similar specification properties for commercial and professional service businesses. Technology-based businesses, particularly operations that had relatively low R&D requirements, found the business parks equally attractive, leading STPs to start differentiating their offering by providing more services to their client base by capitalizing on the relationship with a university/ research center.

By the mid-1990s, existing and new STPs were starting to see themselves as providing, or providing access to, a wide range of services designed to help entrepreneurs start and develop new technology based businesses, help SMEs to innovate, and provide a link between their larger company clients and a stakeholder university or research center. It was this thinking that led most new STPs formed after the mid-1990s to start with a business incubator and those that had not started this way to create one.

Four of the World's Better Known Science and Technology Parks

The following paragraphs outline the key characteristics of the Sophia Antipolis Technopole (France), Research Triangle Park in North Carolina (USA) and two Cambridge Science Parks in the U. K. , focusing on some of the key elements that are helpful to understanding the opportunity and mission for KEG.

Sophia Antipolis in France

Based on ideas generated and promoted by Senator PierreLafitte in 1960, first the French minister Jean-Marcel Jeanney and then five local authorities all worked together to bring about the Technopole project. Under the five original communes (Antibes, Biot, Mougins, Valbonne and Vallauris), the Alpes-Maritimes Local Council and the French Riviera Chamber of Commerce and DATAR (the then newly created agency for regional policy) were enjoined. The project received official recognition through the Interministerial Committee for Land Development in April 1972, led by a joint syndicate developer, in 1974, under the name of SYMIVAL (which later became SYMISA.) In 1974 SYMIVAL delegated the operational activities of Sophia Antipolis to the French Riviera Chamber of Commerce. The land dedicated to the park is 2, 400 hectares but Sophia Antipolis has maintained a policy that 2/3 of all land brought into development must remain "green".

There are essentially two governing bodies that oversee the technopole's activities. The SYMISA (Syndicate of Sophia Antipolis) has 44 members who are responsible for general management, financial policy, promotion and services to companies. One of the major functions of the SYMISA is to decide whether to approve an application for technopole residency. In making this decision, the SYMISA considers the following four factors:

- The technological nature of the activity
- The absence of pollution or other nuisance factors
- The type and number of jobs created
- The proportion of surface area occupied to the number and type of jobs created.

A second body, the SAEM Sophia Antipolis Cote D'Azur, acts as the authorized agent for SYMISA and governing body. Functions of the SAEM Sophia Antipolis Cote D'Azur include negotiating the initial land sale or lease contract and assisting a company in obtaining government permits.

The early development of the park concentrated on attracting multinational technology businesses and French public sector Higher Education and Research organization. Then from the mid-1980s onwards the infrastructure of the park deepened first with the establishment of INRIA (the National Institute of Computer Research and Automation). INRIA brings together 29 research teams, of which 8 work in partnership with universities, institutes and research laboratories. INRIA operates a proactive policy in the area of technology transfer. The result of this can be seen, for example, through the starting up of technology companies and their technology dissemination programs.

Then in 1984, the "Foundation Sophia-Antipolis" was created as a public utility to stimulate innovation by organizing events and activities of benefit to occupiers of the park. In 2004 the Foundation Sophia-Antipolis modified its status to become "Foundation for sheltering research", which enables it to create research foundations around research projects. These "sheltered foundations" encourage public/private partnership for the funding of research. Today the ongoing Foundation program of events and activities is extensive covering the themes of research, innovation and small business development.

In 2001, the first business incubator and business support program Paca—Est and Club Sophia Start-up respectively became operational and more recently Institute Eurecom and Sophia Eurolab added a technology improvement program and seed fund activity respectively to support the business creation activities on the park. All supported by the public sector. Today there are also several private sector business centers including a World Trade Center and a Regus serving the needs of the smaller international operations attracted to Sophia Antipolis.

The only reason that Sophia Antipolis cannot be counted as a 3rd generation science park is that its physical development has not been designed from the outset to foster innovation activities and business creation

Finally, it is worth noting that the original parties, their successors and new members enjoined to create the park, both private and public, have bound themselves to a series of principles as to the way that the park will be developed both to foster economic development and to protect the environment.

Research Triangle Park (RTP) in North Carolina, USA

Research Triangle Park (RTP) is believed to be the oldest example of a Science Park in the developed world. Its achievements in transforming the economy of North Carolina and its scale also make it one of the most impressive.

What follows are some extracts from a paper by Rick Weddle, RTP's CEO, on the history of the park. Prospective Gateway stakeholders may be interested in the organizational forms selected to manage and drive RTP and to hold it true to its original mission.

The idea for RTP stemmed from the need to reverse a number of adverse economic trends facing the North Carolina economy. In the mid-1950s, North Carolina's per capita income was one of the lowest in

the USA due to the fact that the state's economy was dominated by low-wage manufacturing industries such as furniture, textiles, forestry, and small-scale agriculture. The state was facing a serious "brain drain" as graduates in the state were leaving in search of better jobs, and those attending college outside the state were not returning.

Upon the urging of some private sector leaders such as Robert Hanes, the president of Wachovia Bank and Trust Company, and Romeo Guest, a Greensboro building contractor, and with the help and support of North Carolina State Chancellor Carey Bostian, Governor Luther Hodges commissioned a concept report on the idea of the establishment of a research park to diversify the state's economic base. By the end of 1956, the University of North Carolina and Duke University joined the effort and the Research Triangle Development Council was formed. The vision was to attract research-intensive companies from around the nation to locate in a parcel of land surrounded by the state's research universities.

During the next year, various subcommittees were formed. The groups decided that the Research Triangle project idea was a valid concept and should be undertaken as a private effort with engagement of the three flagship universities rather than as a state/government sponsored venture. The agreed end goal of the partners was to "increase opportunities of the citizens of this state for employment and to increase the per capita income of the citizens of the state. "

The RTP Development Council needed to raise the funds to acquire, promote and develop the parcel of land that was to become RTP. The Council achieved this by beginning to assemble parcels of land to make up the park. An effort led by Romeo Guest optioned 3, 430 of the identified 4,000 acres under the name "Pinelands, Inc. " For its part, the State of North Carolina played an important role as organizer—both for political support and support and engagement from the universities.

Initial attempts to sell stock in the Pinelands locally proved difficult. In August 1958, Archibald Davis, an executive with Wachovia Bank and Trust, was enlisted to support the effort. Davis recognized that it would be much easier to raise money from corporations and institutions that were interested in serving the state rather than trying to find private investors. As such, Davis began a fundraising campaign on December 1, 1958, and by January 1959 had raised nearly US$1. 5 million to purchase the first parcels of land. Contributions came from across the entire state.

With the secured contributions the Research Triangle Committee reorganized as the non-profit Research Triangle Foundation of North Carolina and was charged with developing and managing the park. In addition to forming the Research Triangle Foundation, the founders set aside US$500,000 to establish the Research Triangle Institute (RTI). The purpose of the Institute was to undertake contract research for business, industry and government. It was intended to keep university faculty interested in the park concept, as well as signal to the corporate community that the Research Triangle leaders had enough faith in the concept to establish the first organization at the park.

The guidelines for the park mandated that:

> *"Eligible occupants of the research park be design, research and related operations… or in more general terms, uses that require a high degree of scientific input and which can benefit from a location relationship with the academic community. "*

While it was decided initially that "no manufacturing or processing enterprises" could be conducted within RTP, the decision was later amended to allow for certain manufacturing.

An important element of the planning of the park was the commitment to sacrifice the total amount of building space that could be accommodated in order to preserve the natural balance and integrity of the land. The early planners of the park used the topography, drainage patterns, and vegetation of the land to create an environment with the highest possible physical quality for the researchers' work experience. Development standards and an architectural review board were created to ensure the integrity of the covenants.

The early development of RTP was slow and did not really take off until 1965 when IBM committed to establish a substantial research facility in the park quickly followed by the Federal National Environmental Health Science Center. Since then the park has averaged six new companies and added 1, 800 employees a year so that today it has some 150 companies and 44,000 employees.

From the creation of RTI onwards RTP has believed in the creation of Institutes involving one or more of its founding Universities with a mission to conduct research and aid innovation in the new technology businesses sectors. For this reason an organization TUCASI was established in 1974 to stimulate the formation and development of new interdisciplinary Institutes. A 120 acre plot was set aside for future Institutes. Today, the TUCASI campus is home to the National Humanities Center, the Microelectronics Center of North Carolina, the North Carolina Biotechnology Center, the National Institute of Statistical Sciences and the Burroughs Wellcome Fund. The First Flight Venture Center—a technology incubator is also located on this site. The innovations, spin-out activity and new business derived from the work of these Institutes makes for an impressive role call along with a Nobel prize winner and US Presidential and National Foundation Awards. Some of the Institutes themselves have developed a high international reputation that attracts high-level talent to RTP.

The cumulative effect of the park over the last 50 years has been to transform the region and the state. This impact has resulted in a change in the composition of the region's industries, an upgrading of the capacities at the three flagship universities—as well as throughout all institutes of education in the region and state, and to create one of the leading areas for high-technology innovation in the USA. As a direct consequence North Carolina is now in the top 10 percent of the income/ per capita amongst US States.

Two Cambridge, UK Science Parks—The Cambridge Science Park and St John's Innovation Center

The Cambridge Science Park was the brainchild of John Bradfield the Bursar of Trinity College Cambridge as a response to a report by the Mott Committee, a special Cambridge University Committee set up under the Chairmanship of Sir Nevill Mott to consider an appropriate response from Cambridge to an initiative of the Labour Government following its election in 1964. Whitehall had urged UK universities to expand their contact with industry with the objective of technology transfer and also to increase the payback from investment in basic research and an expansion in higher education, in the form of new technologies.

The minutes of the public meeting Chaired by John Bradfield that was held to convince other local stakeholders and luminaries of the merits of the idea, show that Trinity were indeed seeking to use property as a means for anchoring knowledge based businesses close to the University in order to facilitate technology transfer. This was carried through in the terms of the planning consent given on the land, which was then enshrined in the leasehold agreements signed by all tenants.

The park became operational in 1972 but was slow to develop until the mid 1980s when Napp Laboratories constructed their iconic labs and production facilities there and the IT sector started to burgeon as a significant industry in the UK for whom traditional property offerings were not appropriate. This

upsurge of technology business was particularly marked around Cambridge with spin-outs emerging in significant numbers from the University, Cambridge Scientific Instruments, Cambridge Consultants and Pye laboratories. The first wave of spin-outs from these organizations then went on to begat successive generations of new technology based businesses. This became known as the "Cambridge Phenomenon" as documented by the Cambridge consultants SQW.

Cambridge Science Park is based on land owned by Trinity College on which the College has undertaken a number of developments. On other plots developers have been permitted to take an interest in the land and develop properties.

In many ways the Cambridge Science Park was a beneficiary of the "Cambridge Phenomenon" rather than its instigator, although as a flagship initiative it has undoubtedly given a tangible focal point for the phenomenon. It has an innovation center which is a private for profit project with no in-house professional start-up and early stage business development programs. Rather it relies on the well-established community of business support and seed funding sources that have clustered in increasing numbers in Cambridge over the last two decades, including the St John's Innovation Center sited on land opposite to the entrance to the Trinity Park. The park does however, have a well-developed park center with conferencing, restaurant, café and bar facilities and a separate fitness and spa center.

St John's Innovation Center was founded by St John's College Cambridge who funded its first and most well known building the St John's Innovation Center and a further five lettable properties as well as an extension to the Innovation Center which added a restaurant and conference center. The Center became operational in 1987 and the first Director of the Center, Walter Herriot quickly established the Center as one of Cambridge's key focal points for knowledge-based enterprise and entrepreneurship. While the Center accommodates about 65 businesses they work with about 600 businesses each year across the East of England helping entrepreneurs to form, grow and finance their knowledge-based businesses. The Center also operates an European Union Innovation Relay Center to help foster innovation across the region in existing SMEs. The Center is well known for its excellent ability to network its clients into the wide variety of individuals and organizations that form the Cambridge Network and make the Cambridge the well-recognized UK powerhouse for technology innovation that it has become.

An independent report by SQW in 1997/98 confirmed the highly beneficial effect that the St John's Innovation Center has had in contributing and adding to the "Cambridge Phenomenon" despite its much smaller size than the Cambridge Science Park.

Thus while Cambridge Science Park represents a typical 2nd generation science park (albeit larger than average for the UK), the St John's Park is definitely a 2. 5th Generation project due to the greater contribution that it makes in fostering growth in the local and regional economy.

Annex 6: Kuwait's Draft Free Trade Zone Regulations

PROPOSED KUWAIT FREE TRADE ZONE REGULATIONS

CHAPTER INDEX

CHAPTER I: GENERAL PROVISIONS

Article 1. Legal Authority

(a) This Order will set forth the Implementing Regulations necessary to implement the provisions of Law No. 26 of 1995 Concerning Free Trade Zones. These Regulations may be cited as the Free Trade Zone Regulations, 1998, or also referred to as the "Regulations."

(b) The FTZ Law and these Regulations shall be the only law, regulations, or legally authoritative enactments defining and governing FTZ entities and the Kuwaiti FTZ regime.

(c) All applications, certificates and other documents required within the framework of these regulations shall be written in both Arabic and English, and all applications, appeals, and other written materials may be submitted to the KFTZA in either Arabic or English; however, the original and official Arabic version of the Law and its Regulations shall be the legally binding text.

Article 2. Definitions

(a) "FTZ Law" shall mean Law No. 26 of 1995 establishing the Free Trade Zone Regime in Kuwait.

(b) "Minister" shall mean the Minister of Commerce and Industry.

(c) "Authority or KFTZA" shall refer to the Kuwait Free Trade Zone Authority established by these regulations.

(d) "General Manager" shall refer to the General Manager of the KFTZA or to staff of the KFTZA authorized by the General Manger to exercise functions granted to him by these regulations.

(e) "Board" shall refer to the Board of Directors of the KFTZA.

(f) "FTZ entity or FTZ entities" shall refer to all FTZ Developers, FTZ Operators, and FTZ Enterprises.

(g) "FTZ Developer" shall refer to any party holding a valid FTZ Developer Certificate.

(h) "FTZ Operator" shall refer to any party holding a valid FTZ Operator Certificate.

(i) "FTZ Enterprise" shall refer to any party holding a valid FTZ Enterprise Certificate.

(j) "National Customs Territory" shall refer to the territory under the jurisdiction of Kuwaiti Customs legislation.

(k) "Private entity" shall refer to an entity satisfying the requisite incorporation and legal status requirements permitting it to be designated as a FTZ Developer, FTZ Operator or FTZ Enterprise, respectively, under the FTZ Law.

CHAPTER II: STRUCTURE AND ACTIVITIES OF THE KUWAIT FREE TRADE ZONE AUTHORITY

Article 3. Establishment of the Kuwaiti Free Trade Zone Authority (KFTZA)

(a) The KFTZA shall be a non-profit body vested with the powers of a corporation and operated according to commercial principles.

(b) The KFTZA shall be legally constituted and organized within thirty (30) days following the adoption of these Regulations as specified in Article 58.

Article 4. Powers and Authorities of the Kuwait Free Trade Zone Authority

(a) To carry out its functions under the FTZ Law, the KFTZA is vested with the following powers:

(1) to succeed in its corporate name, to sue and be sued in such corporate name, and to adopt, alter, and use a corporate seal which shall be judicially noticed;

(2) To adopt, amend, and repeal its by-laws;

(3) to enter into, make, perform, and carry out contracts of any kind which are necessary to the realization of its legal purposes with any person, firm, or corporation, public or private;

(4) to receive donations, grants, bequests, and assistance of all kinds from local and foreign governments and private sector entities and utilize the same;[1]

(5) to exercise oversight functions over the FTZs established under the auspices of the Kuwait FTZ Law and its Regulations; and,

(6) to promulgate all necessary rules and perform any measures necessary to implement the Kuwait FTZ regime, provided they are consistent with the actual and implied intent of the FTZ Law and these Regulations.

(b) No member of the KFTZA's Board of Directors, KFTZA employee, or other representative of the Authority shall disclose to any person or persons any information acquired in the course of their duties regarding the finances, technological processes, business plans, or any other information of any FTZ Developer, Operator, or Enterprise, unless required to do so by a court of law.

(c) Neither the Board of Directors, nor any of its members or employees of the KFTZA, shall be personally liable for an act which is done or purported to be done in good faith by such person, on

[1] FTZ Authorities are often given the power to borrow money; this has been omitted here to limit the powers of the KFTZA, as the Kuwaiti situation calls for more power being assigned to the management relative to the Authority.

the direction of the Authority, or in the performance or intended performance of any duty or exercise of any power under the FTZ Law or its Regulations.

Article 5. Organizational Structure of the Kuwait Free Trade Zone Authority

The KFTZA shall consist of the following:

(1) a General Manager;

(2) a Board of Directors; and,

(3) additional staff as necessary to carry out its functions while satisfying the Authority's mandate to operate on a commercial basis.

Article 6. Activities and Compensation of the Board of Directors

(a) The Board shall have the following powers and duties:

(1) supervise and coordinate the activities of the KFTZA in order to implement the Authority's responsibilities under the FTZ Law and these Regulations;

(2) select, hire, and if necessary fire, a General Manager for the KFTZA;

(3) determine and adopt a compensation and benefit program for the General Manager and other employees of the KFTZA;

(4) approve an annual budget authorizing expenditures for the KFTZA and to approve a general work program for the Authority;

(5) select an accounting firm which will conduct an annual audit of the KFTZA's activities and accounts for submission to the Minister;

(6) approve and make available to the public an annual report on the KFTZA's activities;

(7) review and approve applications seeking designation for a FTZ Developer, FTZ Operator and a Proposed Zone Area, in accordance with these Regulations;

(8) review and adjust as necessary and as allowed by these Regulations the fees, penalties, and other charges assessed on FTZ Developers, FTZ Operators and FTZ Enterprises;

(9) decide on any appeal submitted to it by FTZ Developers, FTZ Operators or FTZ Enterprises; and,

(10) decide as necessary on other matters pertaining to the implementation of the FTZ Law and these Regulations and to authorize the General Manager to carry out activities deemed essential to implementing the FTZ Law and its Regulations.

(b) The Board shall draft and adopt corporate by-laws governing all meetings and rules of procedure of the Board not addressed by the FTZ Law or its Regulations, including but not

limited to internal rules regarding voting procedures, members' absences and resignations, and the compilation and distribution of minutes for each meeting.

(c) The Board shall meet as often as its business requires, but it shall meet at least twice per year.

(d) The Board shall have public sector and private sector representatives, appointed by the Minister. FTZ entities and their principles, agents and employees shall not be eligible to serve as members of the Board.

(e) Private sector members of the Board shall be compensated for their expenses incurred in completion of their duties as Board members. Such compensation shall not exceed the sum of US$250 per meeting, for a total not to exceed six (6) meetings per annum.[2] The amount of compensation may be adjusted upward but shall not be increased within two (2) years of its last increase. Public sector members of the Board of Directors shall serve as representatives of government, and as such, shall be ineligible for compensation.[3]

Article 7. Activities and Responsibilities of the General Manager

(a) The General Manager shall be appointed by the Board, and his conditions and terms of employment, including renumeration, shall be set by the Board.

(b) The General Manager shall be the chief executive of the KFTZA and shall carry out the duties of the Authority in accordance with the overall direction of the Board.

(c) The General Manager shall have the following duties:

(1) provide up-to-date information necessary for the formulation of appropriate decisions by the Board, and submit for the consideration of the Board such policies or measures as considered necessary to carry out the purposes of the FTZ Law and its Regulations;

(2) prepare for the Board's approval annual work plans and budgets for the KFTZA;

(3) execute, administer, and implement the policies and measures approved by the Board;

(4) employ, administer, and dismiss personnel needed to operate the Authority;

(5) sign any agreements and contractual documents on behalf of the KFTZA;

(6) submit a quarterly report to the Board on the activities of the KFTZA and the progress of the Kuwait FTZ program;

(7) open and operate bank accounts in the name of the KFTZA;

[2] The compensation paid to board members obviously varies substantially from country to country (e.g., in Jamaica, members receive the equivalent of US$40 per meeting, for 12 meetings per year; Philippine board members receive the equivalent of $200 per meeting, not to exceed 4 meetings per month; in Cameroon, board members -- in a highly controversial decision -- recently voted themselves compensation totalling tens of thousands of dollars to cover their cost of participation over the past two years.) The amount of compensation in Kuwait should be set to reflect reasonable practice within the country. A maximum may be set on the number of meetings per year to ensure that board members do not misuse meetings to augment their earnings.

[3] Typically, public sector board members are not compensated in order to avoid a conflict of interest. Should civil service regulations permit in Kuwait, however, these members could receive compensation.

(8) represent the KFTZA in all meetings with third parties, whether public or private or domestic or foreign;

(9) ensure that proper books of accounts are kept of all income and expenditure, assets and liabilities, and other transactions of the KFTZA;

(10) review applications from potential FTZ Developers and FTZ Operators and applications for the sale of FTZs in accordance with these Regulations;

(11) delegate part of his powers and functions on a temporary, as-needed basis to the KFTZA staff to serve in his absence; and,

(12) exercise such other powers and functions as may be vested in him by the Board.

(d) The General Manager shall participate in all Board of Directors' meetings on a non-voting basis.

(e) Should the Board of Directors find that the General Manager is failing to execute his duties as directed by these Regulations or Board directives, the Board may remove and replace the General Manager by majority vote without consultation of public or private entities or representatives of government.

Article 8. Assessment of Fees and Other Charges

(a) The KFTZA shall cover its operating expenses from any one or all of the following sources:

(1) annual contributions from FTZ Developers and FTZ Operators;

(2) application fees, payable upon submission of an application to the KFTZA by a potential FTZ Developer or FTZ Operator;

(3) other grants, fees and service charges as decided by the Board;

(4) annual contributions from the Government of Kuwait as established by the Ministry of Commerce and Industry; and,

(5) the proceeds of fines and penalties assessed in accordance with Article 47 of these Regulations.

(b) The annual contributions and application fees shall be assessed at the following rates:

(1) Annual contributions shall be paid by the FTZ Developer or FTZ Operator of each FTZ at a rate of US$1 per square meter of occupied under-roof space per FTZ Enterprise in the zone per year (US$1/sq.m./year). The minimum assessment from any FTZ Developer or FTZ Operator per Enterprise shall be US$2,000, regardless of the actual under-roof space occupied, and the maximum contribution of each FTZ Developer or FTZ Operator per Enterprise shall not exceed US$10,000, regardless of the actual under-roof space occupied.[4] The contribution shall be

[4] Alternatively, these fees may be assessed in Kuwaiti Dinars. A maximum contribution is established so as not to unfairly

assessed per zone, and the payment shall be made by the FTZ Developer or FTZ Operator, as determined by the contractual arrangements between the two parties.

(2) Application fees shall be assessed on each application at the rate of US$5000 for FTZ Developers, US$1,000 for FTZ Operators and US$500 for FTZ Enterprises and service firms.[5] Such fees may be assessed on a one-time basis only, payable at the time that the application is submitted for review, and shall be refundable if the application is rejected.

(3) Application fees for the sale of FTZ designation by one FTZ Developer or FTZ Operator to another FTZ Developer or FTZ Operator shall be US$5,000.

(d) As necessary, the Board may periodically revise these fees and charges, provided that such revision does not occur at intervals of less than one (1) year.

Article 9. Information Dissemination Requirements

(a) Each FTZ Developer or Operator, each FTZ Enterprise, and Kuwaiti Customs shall provide the KFTZA with all the statistical information required for monitoring the performance of the Kuwait FTZ program,[6] provided that such requests do not require the release of proprietary or financial information and are limited to the following:

(1) for FTZ Developers or Operators: number of FTZ firms per zone; number of FTZ employees per zone; total under-roof space constructed; total under-roof space occupied;

(2) for FTZ Enterprises: exports by total value, quantity, type, and destination; numbers of employees; nationality of equity; inputs by value and source; under-roof space occupied; and,

(3) for Customs: total value of FTZ exports and imports per zone; destination and origin of exports and imports by zone.

(b) These data shall be collected on a quarterly basis and will be published publicly. The KFTZA shall be responsible for distributing the appropriate data collection forms for this purpose to FTZ Developers, Operators and Enterprises.

(c) All data provided for such statistical purposes shall be kept completely confidential and will be published by the KFTZA only in aggregate form.

(d) The KFTZA shall publish, on an annual basis, a report discussing the progress and developments of the Kuwait FTZ program.

(e) The KFTZA shall be audited by an independent auditor on an annual basis and the results of

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discriminate against large firms. A typical FTZ enterprise occupies 1,000 to 3,000 sq.m., thus a minimum fee is set at US$2000, rather than at a higher figure, so as not to penalize smaller FTZ firms. For administrative simplicity, the assessment is applied only to the developer/operator, who then passes on the fee -- to the extent and in whatever form it chooses -- to individual enterprises.

[5] Application fees are a source of up-front funds for the FTZA. These could be denominated in Kuwaiti Dinars and raised further. However, a moderate fee should be assessed to FTZ operators so as not to overly discriminate against developers who do not wish to operate the zones, while covering some of the KFTZA's costs.

[6] The purpose of such information collection is to provide a consistent source of data on the program. Its collection is recommended because such data serves as a good promotional tool for the FTZ program.

this audit shall be made publicly available.

CHAPTER III: PROCEDURES FOR DESIGNATING FREE TRADE ZONE DEVELOPERS

Article 10. Designation of Free Trade Zone Developers

(a) All parties interested in receiving designation as a FTZ Developer must submit a completed and notarized FTZ Developer application to the KFTZA. The application shall be made on an application form issued by the KFTZA and shall be accompanied by the correct application fee.

(b) Each FTZ Developer must own, lease, or have an option to purchase or lease all the land within the Proposed Zone Area, and must hold a legally enforceable bona fide contract for such land. In the case of land that is to be leased, the Developer must have access to the land for a minimum of thirty (30) years.

(c) A completed FTZ Developer application shall contain the following physical and engineering information:

(1) a physical master plan, showing facilities proposed, planned infrastructure, overall layout, precise geographic and physical location, and proposed security measures to ensure lawful operation in accordance with Article 18 below;

(2) a copy of the pre-investment engineering or technical analysis to demonstrate that the site's soil conditions, hydrology, infrastructure availability, vegetation, and area land-use are compatible with the proposed type of zone development;

(3) a copy of the executed contract, in accordance with subsection (b) above, demonstrating that the Developer has full legal access and authority to the land comprising the proposed FTZ;

(4) the services to be provided;

(5) the construction schedule, including the date on which the initial phase of zone development is expected to be operational, as defined in Article 14 below, and the planned implementation of subsequent phases of development planned for the proposed FTZ area; and,

(6) demonstration that the Proposed Zone Area will proceed in accordance with the pertinent environmental, safety, and infrastructure requirements as specified in Articles 14-18 and Article 42 of these Regulations.

(d) The proposed Developer must also submit the following financial information to demonstrate that the Developer has sufficient financial means to complete the proposed construction and operation of the zone:

(1) proposed ownership and management structure;

(2) statement demonstrating that the Developer has previously completed projects of a

similar size and nature, thereby indicating a capability to complete the proposed FTZ project;

(3) credit references, including references provided by the lenders, if any, which will help to finance the proposed project;

(4) statement demonstrating the financial strength of the development consortium; and,

(5) statement of the proposed paid-up share capital and the proposed loan capital for the project.

(e) The proposed Developer must also submit a completed project feasibility study to show that the proposed project is financially feasible. This study shall include the following information:

(1) estimation of demand and market/sector orientation of the proposed FTZ;

(2) capital cost estimate and financial projections;

(3) leasing or sale arrangements and proposed rates; and,

(4) estimated five-year financial statement for the proposed zone.

(f) Developers that propose to provide and operate basic services such as power or telecommunications within the FTZ, which will be provided independently of such services provided by Kuwaiti government agencies, must demonstrate their capabilities to deliver such services, or must show that they shall be contracting for such services with other competent entities.

(g) Each proposed Developer shall submit two (2) notarized copies of the Developer's application to the KFTZA, one (1) copy of which must be an original.[7] Upon the submission of two completed copies of the application form, the General Manager of the KFTZA shall review the application to determine that it is complete. If the application is complete, the General Manager will submit it to the Board for review. If the application is clearly not complete, the General Manager may return the application to the Developer.

Article 11. Review of the Developer Application

(a) The Board will have thirty (30) days to review the Developer application to assess its veracity and ensure that the proposed Developer satisfies the requisite criteria to receive designation as a FTZ Developer. As part of this review, the KFTZA may conduct credit and criminal checks to assess the veracity of the information provided.

(b) In reviewing the application, the Board shall assess whether the proposed Developer satisfies the following criteria to receive designation:

[7] It is typical practice for most investment applications (including non-FTZ investments) worldwide to be notarized, including investments made in liberal investment climates such as Singapore and Panama. Under liberal investment regimes, such notarization can be completed in the investor's home country, by the Embassy's legal counsel (or appointed representative if there is no diplomatic representation in that country). (Under less liberal regimes, the investor must travel to the proposed country of investment to receive notarization.) Notarization provides a useful initial legal authorization of a document's authenticity; if, however, it is completely at odds with typical Kuwaiti legal practice, it can probably be eliminated.

(1) The financial information provided on the application and the credit references demonstrate that the Developer has sufficient financial means to complete the project. In particular, the minimum subscribed capital for the proposed project, or the cash resources committed by the Developer to the project, must be equivalent to at least 20 percent of the total estimated project cost for the first phase of proposed FTZ development.

(2) A criminal check does not reveal that the Developer has been convicted of a serious offence under the laws of the State of Kuwait or another country.

(3) A bona fide contract, as defined in Article 10(b) above, accompanies the application.

(4) The Developer and any partners and participants are private entities.

(5) The Developer or the Developer's partners have previous experience in constructing projects of a similar size and nature.

(6) The project feasibility study and the submitted physical and engineering information indicate that the project is financially feasible and that construction and operation will proceed in conformance with these Regulations governing environmental, safety, and infrastructure requirements. The KFTZA, however, shall not conduct its own project feasibility study on the proposed site, but shall simply review the study provided by the Developer.

(c) If the Board decides that the application is accurate and satisfies the criteria for designation as a developer, the KFTZA shall issue the Developer's Certificate designating the FTZ Developer and the Proposed Zone Area as a FTZ. The KFTZA shall also issue an Operator's Certificate to the Developer at this time. Upon receipt of the Developer's Certificate, the Developer may commence with construction or other measures necessary to begin the zone.

(d) If, however, the Board decides that the application is inaccurate or fails to satisfy the requisite criteria, the KFTZA shall notify the Developer in writing by special delivery mail that the application has failed to qualify for designation. This notification will state the specific reason(s) why the Developer has failed to qualify for FTZ designation. The Authority must notify the potential Developer of any problems within thirty-five (35) calendar days following the submission of the application.

(e) Following receipt of the KFTZA's negative findings, a Developer may request a rehearing. This rehearing must be held within thirty (30) calendar days following the Developer's receipt of the KFTZA's written notification. Prior to the rehearing, the Developer shall resubmit the application to the KFTZA. The Developer may either amend the application or may resubmit the original application accompanied by a letter stating why the KFTZA's assessment of ineligibility was incorrect.

(f) The Board shall again review the application. If the Board decides that the application is now satisfactory, the KFTZA shall inform the Developer that the application has been approved and issue the Developer's Certificate designating the FTZ Developer and the Proposed Zone Area as a FTZ. The KFTZA shall also issue an Operator's Certificate to the Developer at this time

(g) If, however, the Board concludes that the application is still inaccurate or fails to satisfy the requisite criteria, it shall inform the Developer accordingly and the area selected by the Developer shall be open for designation and development as a FTZ site by another Developer.

Article 12. Sale of a FTZ to Another Developer

(a) A FTZ Developer may sell his interests and rights in a zone to another private entity. The proposed purchaser of the zone shall complete a Developer Application form demonstrating that he satisfies the requisite criteria needed to qualify as a FTZ Developer. The required information to be submitted in this form by the purchaser shall be identical to the required information submitted by the original Developer of the zone, as specified in Article 10(c).

(b) This application shall be submitted to the KFTZA, accompanied by the appropriate application fee.

(c) If the proposed purchaser intends to develop and operate the zone in accordance with the feasibility study and other information originally submitted by the Developer in his application for FTZ Developer designation, the proposed purchaser must submit a copy of this original application and a notarized statement indicating this intent. If the new Developer intends to alter the development plans for the FTZ in any fashion, these changes must be specified on the applicable portions of the Developer application.

(d) Approval of the application by the KFTZA shall be automatic if the proposed purchaser satisfies the criteria to be designated as a Developer as listed in Article 10(c) with the exception that the new Developer must have available 20 percent of the financing needed to complete any remaining development of the zone, rather than 20 percent of the total project's cost;

(e) The application review and rehearing procedures to be followed by the KFTZA for the resale of a FTZ to another Developer shall be the same as those used for the review of Developer applications as outlined in Article 11.

Article 13. Designation of Free Trade Zone Operators

(a) A FTZ Developer may contract with a private entity to serve as Operator of the FTZ. In such cases, a sub-contract shall be signed between the FTZ Developer and the proposed Operator setting forth this business arrangement. The Developer may at any time during the construction or operation of the FTZ choose to designate a FTZ Operator to operate and manage the zone.

(b) Upon signing the sub-contract, the proposed Operator shall complete a FTZ Operator's application and submit a notarized copy to the FTZ Developer. This application will be on a form provided by the KFTZA and will contain the following information:

(1) the names, addresses, nationality, and other particulars of the proposed Operator and the Operator's management team;

(2) credit references for the proposed Operator and the Operator's management team;

(3) a statement describing the proposed Operator's previous experience in operating and managing projects of a similar nature; and,

(4) a statement that the Operator is a private entity as defined in the FTZ Law.

(c) Following receipt of the completed application, the FTZ Developer shall issue a FTZ Operator

Certificate to the proposed Operator. The Developer will be able to issue the Certificate by signing over to the proposed Operator the Operator's Certificate received by the FTZ Developer when the Developer's application was approved by the KFTZA.

(d) The FTZ Developer will then submit the notarized application, a copy of the sub-contract signed between the two parties, and the appropriate application fee, to the KFTZA for review.

(e) The General Manager of the KFTZA shall review the application within ten (10) calendar days following receipt of the application. Credit and criminal checks may be performed as part of this review. The KFTZA shall automatically approve the assignment of FTZ Operations to the proposed Operator if this review indicates that the information provided on the application is substantially accurate. In this case, no further action or notification is required.

(f) If, however, this review reveals that the information provided is false, the proposed Operator is not a private entity as defined in these Regulations, or members of the proposed management team have been convicted of a serious offence under the laws of Kuwait or another country, the KFTZA shall notify the Developer that the information provided is inaccurate and the application is refused. This notification must state the specific reason(s) why the application is refused, and must be sent to the Developer in writing and by special delivery mail within fifteen (15) calendar days of the issuance of the Operator's Certificate to the proposed Operator.

(g) Following receipt of the written notification from the KFTZA, the proposed Operator has the right to a rehearing before the Board of Directors of the KFTZA within ten (10) calendar days. At the rehearing, the proposed Operator will explain why the information provided on the application is correct, and why the application should be approved.

(h) The Board of Directors shall rule on the proposed Operator's application. Any decision by the Board shall be final.

CHAPTER IV: FTZ ADMINISTRATION AND MANAGEMENT

Article 14. Commencement of FTZ Development

(a) The FTZ Developer shall be required to make a free trade zone operational within two (2) years from the date on which the FTZ Developer's Certificate is received.[8] For these purposes "operational" shall mean the completion of site development work thus permitting the establishment of the first FTZ Enterprise within the zone; however, it is not necessary that the zone have any tenants in order to be classified as "operational."

(b) When the Developer is unable to meet the commitment to operationalize the designated zone by the end of the two-year period, he may request that the KFTZA extend the development deadline by one (1) year. This request must be submitted in writing, and must explain why the zone will not be operational within the original two-year period. An extension may be granted for the following reasons:

[8] Two years, with a possible one-year extension, is proposed in order to allow sufficient time for development (and allowing for any concomitant delays), while discouraging the holding of designations simply for speculative purposes.

(1) failure to develop owing to conditions equivalent to *force majeure,* including war, natural disasters, or civil unrest which make it impossible for work to proceed; or,

(2) failure to develop owing to normal and documented business delays such as loss of markets, difficulty in obtaining financing, and the like.

(c) The KFTZA has thirty (30) calendar days to review the request and issue an extension. If adequate reasons are submitted with the request explaining why the zone is not operational and demonstrating that an extension will allow the zone to become operational within the additional one year period, the KFTZA must issue the extension. An extension shall be issued automatically should the FTZ fail to review the request within the 30-day deadline and issue a response.

(d) An extension shall be granted for one (1) year only. No further extensions may be granted.

(e) Should the site fail to become operational by the end of the two-year period, and should the developer fail to provide a written statement requesting an extension and stating a valid reason explaining the delay, the FTZ designation for that site shall be canceled by the KFTZA.

(f) The KFTZA shall notify the Developer in writing of said cancellation. Following the cancellation, the Developer is no longer eligible for the benefits and incentives granted to FTZ entities under the FTZ Law.

(g) Subject to that cancellation, the proposed FTZ area shall again be open to designation upon application from another FTZ Developer.

Article 15. Adoption of Internal Rules and Procedures

(a) Each FTZ Developer or FTZ Operator shall adopt internal rules and procedures to govern activities within the FTZ. These rules shall ensure compliance by FTZ Enterprises with the customs, security, environmental, and any other requirements stated in the FTZ Law, these Regulations or in any other applicable laws and regulations.

(b) It shall be the FTZ Developer's or FTZ Operator's responsibility to ensure compliance with these internal rules and procedures.

Article 16. Entry/Exit Procedures

(a) Access to a FTZ by any party shall be subject to presentation of a pass.

(b) All persons entering a FTZ shall wear a visible badge of identification at all times. The color, content, and shape of this identification will vary among three types of users in order to allow easy differentiation by security forces. These three types of users are: permanent users, defined as personnel, working regularly within the zone; temporary users, such as repairmen or short-term employees; and visitors.

(c) Permanent users will retain a badge for use at all times when entering or working in a zone. This badge will be surrendered to FTZ security forces upon a permanent worker's termination of employment.

(d) Temporary users and visitors shall wear a numbered badge provided by FTZ security forces at the entrance to the zone. Such badges must be returned to the security services when exiting the zone.

Article 17. External Maintenance Requirements

(a) All FTZ Developers and Operators are expected to maintain the appearance of buildings, to see that all trash and refuse is regularly collected and disposed of, and to conduct and maintain routine landscaping.

(b) Each FTZ Developer or Operator must demonstrate, either in the internal rules and procedures, or in covenants contained in the leases to be signed by each tenant, that requirements and responsibilities have been established regarding external maintenance requirements. These requirements shall state zone rules regarding, *inter alia,* the types of permissible signs, maintenance requirements and responsibilities, building requirements; permissible architectural features and construction materials, policies regarding painting and other upkeep, and trash collection and disposal.

Article 18. Physical Security and Construction Requirements

(a) In order to guarantee the safety of persons and goods, each FTZ must be constructed to satisfy the following requirements:

(1) A barrier at least three (3) meters high shall be built around the entire perimeter of the FTZ. This barrier may be composed of either metal fencing or masonry construction.[9]

(2) An entrance and exit for persons and goods shall be located on the same segment of the barrier, and shall be guarded on a permanent basis.

(3) The offices provided for customs and security shall be located within, and at the entrance of, the zone in order to facilitate the inspection of in-coming and out-going persons and goods.

(4) All industrial and office buildings shall be constructed at least five (5) meters from the barrier.

(5) Entrances and roads within the zone shall be built in such a way as to facilitate the movement of vehicles, machines, persons, and customs and security forces.

(6) Adequate lighting, which must be operational at all times, shall be installed on a permanent basis throughout the zone and must illuminate the barrier surrounding the perimeter of the zone.

[9] Requirements worldwide vary: typically, such fences or walls are masonry or chain link, or some combination of the two, and regulations often specify a certain type of barrier; in a few cases, two barriers are required. Masonry is often more attractive (important for higher scale zones), and is preferred in some countries because it is less penetrable; it is also more expensive. This can be left to the developer's discretion, unless current practice in Kuwait (for security or other reasons) dictates that the barrier be a specific type of material.

(b) Access into a FTZ shall be controlled by the FTZ security forces, as hired by the FTZ Developer or Operator, and by the Customs agents assigned to that zone.

CHAPTER V: PROCEDURES FOR DESIGNATING FREE TRADE ZONE ENTERPRISES

Article 19. Establishment of Free Trade Zone Enterprises

(a) In order to locate within a FTZ, a private entity or entities must first submit to the FTZ Developer or FTZ Operator a completed FTZ Enterprise application. The application shall be made on an application form issued by the KFTZA. The completed application form must demonstrate that the proposed FTZ Enterprise shall satisfy the following requirements:

(1) the Enterprise will not be involved in any fashion in the purchase, sale or storage of prohibited or illegal items, as specified in Article 43 of these Regulations;

(2) the Enterprise will not have a deleterious effect on the environment, as specified in Article 42 of these Regulations; and,

(3) the Enterprise satisfies the requisite incorporation and legal requirements, as specified in Article 41 of these Regulations.

(c) If the completed application form demonstrates that the requirements cited in subsection (b) above are satisfied, the FTZ Developer/Operator may choose to negotiate and enter into a contract for the rental or purchase of property with the proposed FTZ Enterprise. No such contract may be signed, however, if the Enterprise application indicates that these criteria will be violated.

(d) Submission of a completed application form does not obligate the FTZ Developer/Operator to rent or sell property within the FTZ to the proposed FTZ Enterprise, nor does it automatically entitle the Enterprise to receive a Certificate. In the event that a contract is not signed between the FTZ Developer and the proposed FTZ Enterprise, no Certificate shall be issued.

(e) Any contract reached between the two parties must be legally enforceable under the Kuwaiti legal system.

(f) Once a bona fide contract is signed between the Developer/Operator and the Enterprise, the FTZ Developer shall issue a FTZ Enterprise Certificate to the proposed Enterprise within one (1) day, legally establishing the entity as an FTZ Enterprise.[10] On the same day that the FTZ Enterprise Certificate is issued, the Developer/Operator shall submit the completed application form, accompanied by a copy of signed contract between the two parties and the appropriate application fee to the KFTZA. The KFTZA shall have ten (10) calendar days to review the application and assess its veracity.

[10] Typically, FTZ Enterprise Certificates are issued by the FTZ Authority for perpetuity, regardless of whether the Enterprise has found a site within a zone. In the case of Kuwait, it is more appropriate to give the FTZ Developer or Operator the power to issue FTZ Enterprise Certificates. This power can be exercised once the Developer or Operator has decided to award a site to a qualified applicant.

established as a legally independent and private company[11] under applicable Kuwaiti law, and provides services solely to FTZ entities operating within that same FTZ.

(c) In order to conduct such activities within a FTZ, all service firms shall enter into a legally enforceable bona fide business contract with the FTZ Developer/Operator for that zone.

(d) Once a bona fide business contract has been signed between the FTZ Developer/Operator and the service firm, the service firm shall apply for and obtain a FTZ Enterprise Certificate from the FTZ Developer.[12] The FTZ Developer/Operator shall submit this application, accompanied by a copy of the contract between the two parties and the appropriate application fee, to the KFTZA. The application shall be subject to the same review, approval, and rehearing procedures governing other FTZ Enterprises as outlined in Article 19(f)-(j) above.

(e) The FTZ Enterprise Certificate issued to a service company will specify that the company is a service firm and will clearly identify the services to be provided by that company within the FTZ. A service company shall benefit from all the incentives provided to FTZ Enterprises for as long as said company holds a bona fide contract with the FTZ Developer/Operator and continues to provide services to other FTZ Enterprises within the zone. A service company will cease to be eligible for FTZ incentives, however, immediately upon termination of its contract with the FTZ Developer/Operator or the cessation of its provision of services within the zone.

CHAPTER VI: CUSTOMS RULES AND PROCEDURES

Article 22. Establishment of Customs Zone Offices within FTZs

(a) A Customs Zone Office shall be established within each Free Trade Zone. This Office shall have the following responsibilities:

(1) enforcing physical security measures;

(2) inspecting in-coming merchandise when it is unloaded at each FTZ entity;

(3) inspecting out-going merchandise when it is loaded at each FTZ entity;

(4) inspecting zone merchandise in the inventories of FTZ entities;

(5) maintaining records of merchandise entering and leaving the FTZ; and,

(6) preparing and submitting reports as required by these Regulations.

(b) The operational and equipment costs of the Customs Office in each FTZ shall be covered by the Developer or Operator of that FTZ. Each FTZ Developer or Operator will provide Customs agents with appropriate office facilities located within, and at the entrance of, the FTZ. In order to

[11] Since these firms will be receiving FTZ incentives, they should be established as legally independent entities, with separate accounting records, from any parent or related companies operating in the Kuwait National Customs territory, in order to reduce the potential for tax evasion by the parent company. The actual language used to describe such a company, obviously, must be adjusted to reflect Kuwaiti corporate law.

[12] Since these firms will receive FTZ incentives, they should have to formally apply for FTZ enterprise designation and be subject to final review and approval by the KFTZA.

expedite customs formalities, these office facilities shall be equipped with the equipment required for their operation, including computer terminals and printers appropriate for customs recordkeeping requirements, as well as telephone, telex, and facsimile machines.

(c) The salaries of Customs agents shall be paid by the Kuwaiti Customs Service during normal working hours.[13] All work conducted by Customs agents outside of normal working hours shall be paid for directly by the FTZ Developer/Operator.[14]

(d) FTZ Developers, Operators, and Enterprises must permit Customs agents access to FTZ facilities and accounting records to conduct merchandise examinations and inventory checks, to review records, and to carry out other lawful tasks. FTZ personnel will provide Customs agents with explanations of all records and operating procedures as needed; furnish special equipment necessary for conducting such inspections such as weighing equipment or protective clothing; and will cooperate with Customs agents to ensure the prompt completion of customs duties.

(e) Only the Customs agents assigned to the Customs Zone Office for that specific zone will have authority to access FTZ entities' facilities and records.

Article 23. Customs Procedures to Facilitate FTZ Operations

(a) Except for exceptional circumstances, customs approvals, inspections and controls shall be carried out within twenty-four (24) hours from the time that the documents are received for processing by the competent Customs Office.

(b) Official documents forwarded to a Customs Office by facsimile, as well as photocopied documents, shall be valid for administrative purposes and must be processed in order to provide the requested service in time. However, the originals of such documents must be retained by the FTZ entity and made available to Customs agents upon request.

Article 24. Zone Physical Controls

(a) Customs agents assigned to each Customs Zone Office shall be responsible for ensuring that the physical and security requirements listed in Article 18 above shall be maintained at all times.

(b) Customs agents shall be responsible for assuring that fenced FTZ areas are protected against improper intrusion and unauthorized transfer of zone merchandise through:

(1) the posting of security guards and/or Customs agents at strategic locations throughout the zone;

(2) limited personnel access to zone facilities through controlled entrances and only with proper authority and reason; and,

[13] This follows the practice in many FTZ countries, including the Dominican Republic, Costa Rica, and Cameroon, where the government continues to pay Customs agents' salaries during normal working hours. In Togo, the developer is responsible for paying the entire salary of customs agents assigned to a zone; annual salaries in Togo are so low that this does not represent an excessive burden on the developer, but this practice is not recommended in Kuwait owing to higher labor costs.

[14] In most FTZs, Customs agents are permanently available on a 24-hour basis.

(3) the use of properly prepared and authorized documentation to enter or remove merchandise into or from each FTZ facility.

Article 25. Procedures Regarding Imports

(a) The Customs Office of the port or airport where in-coming goods are unloaded shall grant authorization to transfer the goods from the point of entry to a FTZ upon receipt of a properly prepared FTZ entry declaration from the FTZ entity or its agent.

(b) The FTZ entry declaration for such transfer shall include detailed documentation stating clearly the origin, destination, identity, quantity and value of the goods concerned. This documentation shall consist of all normal international shipping documents and will include the following:

(1) commercial invoice;

(2) bill of lading (either an airbill or waybill);

(3) packing list;

(4) certificate of origin; and

(5) any other commercial documentation which establishes the merchandise identity, quantity, owner, value, source, destination, and other associated information.

Pro-forma invoices or other documents will be accepted only in unusual situations and only for provisional use until the final, official documents are made available.

(c) The entry declaration and accompanying documentation may be submitted to the Customs Office at the point of entry either at the time of arrival of the goods, or when the supporting documentation becomes available. The Customs office at the point of entry will accept and process the entry declaration and supporting documentation as soon as it is received, even if submitted before the arrival of the goods, and customs policies and personnel shall encourage and support pre-arrival processing whenever possible.

(d) The Customs Office shall review the entry declaration to ascertain compliance with the provisions of the Customs Code and, in case of conformity, issue an attestation to the applicant for the immediate release of the goods. Such attestation shall amount to authorization for such goods to leave the port of entry and to be transferred to the zone. No other authorization shall be necessary. The Customs Office shall immediately place a customs seal on the merchandise container or package and release the goods without any inspection or verification for immediate transport, under customs escort, to the zone of destination under the authority of the consignee, owner, or designated agent.

(e) The deferral of merchandise inspection and examination at the port of arrival is a privilege provided by the government to all FTZ entities that have not violated pertinent laws and regulations and have not otherwise demonstrated a lack of competency and trustworthiness. This privilege may be temporarily suspended for FTZ entities that have been found to violate such laws and regulations in accordance with Article 32(f) below.

(f) Until the merchandise arrives at the FTZ destination, the consignee or owner assumes all responsibilities for assuring the safety of the merchandise and will be required to pay all duty, import taxes, and any assessed fines and penalties on merchandise that does not arrive at the FTZ. The owner or consignee, however, shall not be required to post a bond or guarantee for the goods during transit.

(g) A copy of the entry declaration will be presented to the Customs agent at the FTZ to document the arrival of the merchandise at the FTZ and to enable the entry of the goods into the FTZ. The entry declaration shall be supported by detailed documentation establishing the identity, quantity, and origin of such goods.

(h) Upon the arrival of the goods at the designated FTZ entity within the zone, the merchandise will be held until an agent from the Customs Zone Office authorizes the breaking of the customs seal and the opening of the container or package. The Customs agent shall examine and verify the goods as they are unloaded onto the premises of the FTZ entity concerned. This inspection shall verify that no prohibited articles or materials, as defined in Article 43 below, are included in the shipment, and that the accompanying documentation is in accordance with the actual goods being unloaded.

(i) Upon the entry of the goods into the zone of destination and following inspection and verification by the zone's Customs services, the Customs Zone Office shall prepare a report on the results of its verification to be forwarded to the Kuwaiti Customs Authority clearly showing the quantities received, surpluses, possible deficits, and consistency with the related commercial documents.

(j) Should any discrepancies be detected by Customs inspectors between the shipping documents and the content of the goods, the KFTZA must be notified of such discrepancies at this time.

Article 26. Procedures Regarding Exports

(a) Prior to the loading and shipment of goods for export, the representative of the FTZ entity shall submit to the Customs Zone Office an application for the transfer of goods from the zone for export. All transfers from the zone shall be reported and authorized on a copy of the applicable FTZ declaration upon which the merchandise was originally entered into the zone.

(b) The Customs Zone Office shall immediately take the necessary steps to examine the goods to be transferred to ensure that no prohibited articles as defined in Article 43 are included, and to ensure that the merchandise corresponds to the accompanying documentation. This examination and loading shall take place at the premises of the FTZ entity exporting the goods. Upon approval of the supervising Customs agent, the FTZ entity may package or containerize the material in preparation for shipment.

(c) Following the packaging or containerizing of the material, the Customs agent shall affix seals on the packages or containers and allow the shipment to be transferred to the port or airport of shipping. The approved zone transfer declaration, bearing the stamp of Customs approval, shall be the only authority needed for the FTZ entity to remove the merchandise from the zone and transfer it, under Customs escort, to the point of international embarkation.

(d) Until the merchandise arrives at the point of embarkation, the consignee or owner assumes all responsibilities for assuring the safety of the merchandise and will be required to pay all

applicable duties, import taxes, and any assessed fines or penalties on merchandise which does not arrive at the point of embarkation. The owner or consignee, however, shall not be required to post a bond or guarantee for the goods during transit.

(e) Once the goods have exited the zone, the Customs Zone Office shall forward a detailed report to the Kuwaiti Customs Authority on each such transfer, indicating the description, quantities, and destination of the goods in question.

(f) FTZ merchandise arriving at the point of embarkation shall be placed under constructive Customs custody pending loading on the exporting vessel. The Customs Office at that location shall ensure that the custom seals are unbroken. If the seals are unbroken, the Customs Office shall immediately authorize, under its supervision, the loading of the goods for export.

(g) The Customs Office at the point of embarkation shall not open the container or package or inspect FTZ merchandise destined for export unless the customs seals are broken or otherwise show evidence of tampering.

(h) The deferral of merchandise inspection and examination at the point of embarkation is a privilege provided by the government to all FTZ entities who have not violated pertinent laws and regulations, and who have not otherwise demonstrated a lack of competency and trustworthiness. This privilege may be temporarily suspended for FTZ entities who have been found to violate such laws and regulations in accordance with Article 32(f) below.

(i) Upon the departure of such goods, the Customs Office which processed the shipment shall forward a copy of the declaration of export to the Kuwait Customs Authority.

Article 27. Procedures Governing the Export of Goods from FTZs to the National Customs Territory

(a) FTZ goods and services sold to the national customs territory shall be considered as imports and assessed for all applicable custom duties and taxes as provided for in applicable legislation.

(b) Prior to the loading and shipment of goods for consumption in the national customs territory, the representative of the FTZ entity shall submit to the Customs Zone Office an application for the transfer of goods from the zone for export.

(c) The Customs Zone Office shall immediately take the necessary steps to examine the goods to be transferred and supervise the loading of such goods. This examination and loading shall take place at the premises of the FTZ entity exporting the goods. Upon approval of the supervising Customs agent, the FTZ entity may package or containerize the material in preparation for shipment. Goods destined for the national customs territory will not be sealed by Customs agents.

(d) Goods entering the national customs territory will be accompanied by the approved zone transfer declaration bearing the stamp of Customs approval, and an entry declaration for consumption prepared in accordance with the applicable regulations. At the time of entry of such goods into the national customs territory, Customs agents shall assess such taxes and duties as may be due.

(e) FTZ entities shall be able to sell damaged, sub-standard, or sample goods without restriction to the national customs territory, subject to the payment of all applicable taxes and duties and the

provisions of Article 37 below, should a buyer be available for the purchase of such goods.

Article 28. Procedures Governing the Temporary Entry of FTZ Goods into the National Customs Territory

(a) FTZ entities shall be permitted to temporarily import duty-free FTZ goods into the national customs territory for maintenance and repairs or for exhibition at publicity events or for other promotional purposes. Such imports may be made in small quantities only, may not include samples of goods which are intended to be distributed as promotional items, and may not be imported for a period of longer than two (2) weeks.

(b) FTZ entities wishing to import temporarily such goods must provide the Customs Zones Office with a detailed list of such goods, including complete descriptions, sizes, and quantities to be imported. Customs shall inspect such temporary imports upon entry into Kuwait from a FTZ.

(c) Customs shall inspect such temporary imports upon their return to the FTZ. Any discrepancy between these items and the list of goods originally submitted to Customs will be the responsibility of the FTZ entity, and full duties and any other taxes shall be assessed on these missing items.

Article 29. Procedures Governing the Import of Goods from the National Customs Territory to a FTZ

FTZ entities shall keep separate accounting books for goods purchased from Domestic Kuwaiti Businesses located within the national customs territory, and shall be able, at any time, to identify such goods held within and those transferred from the zone.

Article 30. Procedures Governing the Transfer of Goods Between FTZs

(a) Zone merchandise may be transferred from one FTZ to another FTZ on a permanent basis if documented with the proper transfer declaration and carried out in accordance with Customs review and approval procedures governing imports into a FTZ as outlined in Article 25 above.

(b) Zone merchandise may be transferred from one FTZ to another FTZ for temporary purposes such as, but not limited to, repair, equipment loans, or cleaning services. Temporary transfers must be supported by the appropriate declaration and will be subject to Customs review and approval procedures governing imports into a FTZ as outlined in Article 25 above.

Article 31. Recordkeeping Requirements.

(a) FTZ Developers, Operators, and Enterprises shall keep complete accounting and inventory records relating to transfer of merchandise, equipment, and materials to and from the FTZs.[15]

[15] Despite the liberalized nature of customs operations in FTZs, it is still necessary to ensure that merchandise is truly entered into the zone and not improperly diverted into domestic commerce. Documentation on FTZ imports and exports is necessary to develop statistical information by which to measure the economic impact of zone operations, and to assess duties, taxes, and penalties when merchandise is missing or is transferred to the national customs territory. Since these records are usually computerized, it does not represent a burdensome requirement on FTZ entities.

(b) The documents shall clearly show the identity of all goods exempt from custom duties and taxes, be they of local or foreign origin. The documents shall specify, in particular, if such goods have been received, shipped or stored; if they are manufactured within the zone concerned; if they have been damaged within the said zone, or if they have been lost or used within the zone. All records shall be kept on a current basis and will be made available to Customs agents for review and verification of actual inventory on-hand.

(c) The FTZ Developer or Operator, and each FTZ Enterprise within a zone shall submit to the Customs Zone Office, on a monthly basis, a complete report on the flow of goods, specifying:

(1) the quantity and description of local or foreign goods that are available at the beginning of the month in question;

(2) the quantity and description of local or foreign goods that are used within that period;

(3) the quantity and value of goods imported;

(4) the quantity and description of material consumed or wasted with appropriate segregation of waste into valuable and non-valuable waste;

(5) the quantity and value of exports and the country of export; and,

(6) the stock of goods remaining at the end of the period.

All this information shall be filed on standard forms made available by Customs agents.

(d) Each Customs Zone Office shall submit to the Kuwaiti Customs Authority on a monthly basis, a complete report on the movement of incoming and outgoing goods within their respective zones, and consistent with their customs registers, inspection reports as well as authorization forms processed during that period. The report shall be submitted no later than fifteen (15) days after the end of the month in question.

(e) The Kuwaiti Customs Authority shall prepare on a quarterly basis a consolidated report, comparing the monthly reports of FTZ Developers, Operators, and Enterprises with those submitted by the Customs Zone Offices, and prepare a summary report on FTZ customs activities.[16] This report shall be made available to the Minister no later than thirty (30) days after the end of the quarter in question.

Article 32. Fines and Penalties for Violations of Customs Procedures

(a) Irregularities recorded by Customs agents or reported by FTZ entities may give rise to fines or penalties where they result from acts aimed at:

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[16] In some FTZ countries, a Customs office is set up within the FTZA which is responsible solely for coordinating customs arrangements for the FTZs. In these countries, this unit would be responsible for compiling the customs records and reports from individual zones into a single report; this is usually a matter for customs officials, rather than the FTZA itself, to handle, given that customs issues tend to be highly specialized and arcane. Since there are no customs officials assigned to the KFTZA, this responsibility is given to the regular Customs Authority; this may not be workable, however, if the FTZ regulations do not have the legal authority to require a that a non-FTZ entity perform certain duties.

(1) prejudicing illegally the amount of duties and taxes owed to the Government of Kuwait;

(2) introducing unauthorized goods and items into the FTZ or into the national customs territory; or

(3) evading the provisions of the FTZ Law, these Regulations or other applicable legislation.

(b) FTZ entities shall report to the Customs Zone Office all shortages, overages, damaged merchandise, or other discrepancies noticed during or after the unloading of goods. The presence of a Customs agent during the unloading process will not relieve the FTZ entity of this responsibility.

(c) The designated zone user will be responsible for all merchandise entered into its FTZ facilities and will be liable for duty, import taxes, and any fines and penalties for any merchandise determined to be missing or discovered to have exited the zone without proper documentation and approvals.

(d) FTZ entities shall not be penalized for discrepancies between actual available quantities and the quantities shown on the official documents if it can be shown that a shortage resulted from reasonable causes. If, however, Customs is not satisfied that relief from liability is warranted, the FTZ entity will be responsible for payment of all appropriate import duties and taxes as if the merchandise had been imported into the national customs territory for consumption, plus any applicable fines and penalties.

(e) In any case, adequate adjustments shall be made to the books regarding discrepancies in the quantities of goods for which enterprises are to be subsequently accountable.

(f) Customs shall have the authority to apply a system of fines and penalties against violators for merchandise shortages. In the case of firms found guilty of multiple offenses, Customs may suspend for a period of up to one (1) year the privilege whereby merchandise inspection and examination is deferred at the port of arrival and port of departure as discussed in Articles 25(e) and 26(h) above. In the case of severe and repeated violations, Customs may request that the certificate of a FTZ entity be canceled. Such request shall be forwarded to the KFTZA which shall decide on such cancellation in accordance with the violation procedures outlined in Article 47(f)-(g) below.

CHAPTER VII: THE FREE TRADE ZONE REGIME

Article 33. Eligibility for Free Trade Zone Benefits

All FTZ entities are entitled to the full range of benefits and incentives of the Kuwait FTZ Regime as established by the FTZ Law and these Regulations. Any FTZ entity possessing a FTZ Developer Certificate, a FTZ Operator Certificate, or a FTZ Enterprise Certificate shall be defined as eligible for these benefits.

Article 34. Tax and Duty Exemptions for FTZ Entities

(a) All FTZ entities shall be entitled to 100 percent exemption from the payment of taxes and fees applicable within the national customs territory.

(b) Goods and capital equipment imported to an FTZ or exported from an FTZ to a point outside the national customs territory shall be exempted from all Customs duties, levies and charges applicable within the national customs territories.

(c) The above notwithstanding, FTZ entities shall be subject to the service fees and charges mandated for FTZ entities by the KFTZA.

Article 35. Importation and Use of Vehicles by FTZ Developers, Operators, and Enterprises

(a) FTZ Enterprises, Operators, and Developers may import free of all tax and duties any transportation equipment, with the exception of passenger and private cars and fuel used exclusively within the FTZ, needed for use in FTZ operations.

(b) Each FTZ Enterprise, Operator, and Developer may import duty- and tax-free a maximum of four (4) vehicles each year.[17]

(c) Any vehicle which will be used by a FTZ entity and which will of necessity travel temporarily outside of a FTZ shall bear a special identification plate indicating that it is a FTZ vehicle. This plate must be displayed on the vehicle at all times.[18]

(d) All FTZ vehicles must be registered with the proper authorities in a manner similar to that used for diplomatic vehicles in Kuwait.[19]

(e) FTZ vehicles may not be transferred to any person or entity outside the zone for a period of five (5) years following importation of the vehicle. This prohibition does not apply to the transfer, sale, or lease of vehicles to other FTZ entities.

(f) At the end of the five-year period following the importation of the vehicle, the vehicle may be sold to a non-FTZ entity. Such sales will be treated as imports into the national customs territory, and as such, shall be subject to all applicable import duties, taxes, or other fees normally levied on such sales. At the time of sale, the special identification plate indicating that it is a FTZ vehicle shall be removed and resubmitted to the issuing authority.

(g) Such vehicles may also be donated to educational, charitable, or other institutions. Payment of

[17] The number of vehicles can be raised or lowered. It is not uncommon to limit the number of vehicles which may be imported (for example, two are allowed in the Dominican Republic) in order to limit opportunities for fraud and misuse.

[18] The purpose of identifying FTZ vehicles is to deter fraudulent use of the vehicles for non-FTZ purposes when outside the zone. There is a somewhat simpler alternative to the design, creation, and issuance of special FTZ license plates. In Taiwan, the side of each vehicle is painted with foot-high letters stating "Property of XYZ FTZ" which makes identification fairly simple, and makes fraud -- through the temporary removal of the identification -- fairly difficult.

[19] Conversely, vehicle registration could be handled by the KFTZA, in which case regulations must be written by which this task is delegated from the appropriate motor vehicle authority. It may be simpler, however, to utilize an existing system that presumably operates without much delay or bureaucratic problems -- the registration of diplomatic vehicles -- rather than create a new one.

any duties and taxes before such vehicles may be imported to the national customs territory will be subject to pertinent Kuwaiti law or regulations governing donations of duty-free items to such institutions.

Article 36. One Stop Center

The FTZ Developer/Operator, in cooperation with Customs and other relevant agencies, will establish a one-stop center for receiving all applications and declarations by FTZ Enterprises and issuing all certificates, permits and approvals at a central location. The Customs Office will be located within the one-stop center.

Article 37. Rights and Obligations of FTZ Developers and Operators

(a) FTZ Developers and Operators shall have the right to:

(1) manage, operate and maintain an FTZ in the designated area, including all infrastructure, buildings, warehouses, factory shells and other facilities and improvements necessary for its operation;

(2) freely make investments and earn monies from such investments made in connection with operating the FTZ;

(3) sell, lease or sublet real property within the FTZ, including land and buildings thereon, to FTZ Enterprises;

(4) impose and collect rents, service charges and other fees from FTZ Enterprises;

(5) provide and coordinate the provision of utility services such as water, electricity and other power, telecommunications, sewerage and other services to FTZ Enterprises within the zone;

(6) engage contractors and sub-contractors, agents and suppliers of services, for the performance of services in the FTZ;

(7) advertise and promote the FTZ to prospective local and foreign investors, service providers and other businesses;

(8) contract with public and private service providers for the provisions of infrastructure, utilities and other services;

(9) freely assign partial or complete rights to the revenues of the FTZ to a public or private entity, whether foreign or domestic;

(10) freely receive debt financing from public and private entities, whether foreign or domestic, including the free issue of bonds and other securities;

(11) adopt and apply rules within the FTZ which promote its safe, successful and efficient operation in compliance with the FTZ Law and these Regulations; and

(12) enjoy all other rights, incentives and other benefits accorded to an FTZ Developer, Operator or Enterprise under these Regulations without the need for any other licenses, approvals or authorizations.

(b) FTZ Developers and Operators shall have the responsibility to:

(1) comply with the FTZ Law, these Regulations and other applicable legislation;

(2) ensure that FTZ Enterprises comply with the FTZ Law, these Regulations and other applicable legislation;

(3) maintain adequate security measures within the FTZ, including adequate fencing and enclosures to separate the FTZ from the national customs territory;

(4) provide facilities in the FTZ for the Customs Office;

(5) maintain adequate and proper financial records and accounts and other records relating to the operation of the FTZ;

(6) report to the Authority and specific government departments on FTZ activities, performance and development on a regular basis; and

(7) conduct other activities required of an FTZ Developer and Operator by these Regulations.

Article 38. Domestic Sales to Free Trade Zones

(a) Sales by Domestic Kuwait Businesses to FTZ entities within a Free Trade Zone shall be treated as exports, and as such, shall receive the full benefits and incentives granted to exporters under Kuwaiti law.[20]

(b) These sales shall be subject to the same conditions, procedures, and lines of administrative authority currently governing all non-FTZ exports from Kuwait.

Article 39. FTZ Sales to the National Customs Territory

(a) All sales to the local market within the national customs territory will be subject to the full range of duties and taxes affecting imports as provided for in Article 27.

(b) For the purpose of assessing duties, the value of the merchandise upon importation into the national customs territory shall be calculated in terms of the price paid or payable for the inputs of both foreign and domestic origin comprising the merchandise when they entered the zone, less international and domestic shipment and insurance costs.[21]

[20] This is to encourage backward linkages from the FTZs to Kuwaiti exporters located in the national customs territory.

[21] Using this method, duty is assessed only on a product's components, rather than its final value -- i.e, duty is not assessed on the value-added that occurs in the FTZ. This method of assessment gives FTZ firms a slight cost advantage over importers of similar products, who are assessed duty on the total value of the final product, not on the product's components.

(c) All sales to the national customs territory shall be subject to the customs inspection and reporting requirements specified in Article 28.

CHAPTER VIII: APPLICABLE PROVISIONS OF THE KUWAITI LEGAL CODE

Article 40. General Applicability of the Kuwaiti Legal Code

As stated in Article 1, the FTZ Law and these Regulations are the only applicable legal and authoritative enactments governing the activities, purpose, and operation of the FTZ regime and FTZ entities within Kuwait. Notwithstanding that limitation, the following defined provisions of the Kuwaiti legal code shall apply to all FTZ entities.

Article 41. Legal and Incorporation Requirements

All private entities, in order to be eligible to receive a FTZ Developer, Operator or Enterprise Certificate, must satisfy the following specified legal and regulatory requirements for incorporated companies under the laws of Kuwait:

[the specific requirements must be completed by an Kuwaiti lawyer]

Article 42. Environmental Protection

(a) FTZ Enterprises are forbidden to undertake any kind of industrial and commercial activities which may have a deleterious impact on the environment prohibited by Kuwaiti environmental legislation.

(b) A FTZ Certificate shall be automatically denied by a FTZ Developer or Operator to any enterprise whose application demonstrates that its activities in any fashion will have such a deleterious environmental impact.

(c) A FTZ Certificate may be issued subject to conditions relating to environmental protection which shall be specified in the Certificate.

Article 43. Prohibited and Illegal Substances

(a) As specified in the FTZ Law, FTZ Enterprises are forbidden to utilize, produce, store, or take into a FTZ the following prohibited goods and substances:

(1) goods subject to international or local ban;

(2) narcotics and alcohol, except such materials as may be required in the manufacture of medicines and pharmaceutical products as determined by the Ministry of Health;

(3) firearms, ammunition, and explosives, save as determined by the competent security and defense authorities;

(4) toxic or hazardous materials as determined by the KFTZA and other competent authorities.

(b) A FTZ Certificate shall be automatically denied by a Developer to any enterprise whose application demonstrates that its activities in any fashion will involve the above listed substances or any other items prohibited by the laws of Kuwait or binding international conventions to which Kuwait is a signatory.

Article 44. Free Trade Zone Labor Regulations

(a) FTZ Enterprises and FTZ Developers and Operators may freely negotiate and establish contracts of employment with their workers that specify their terms of employment. These negotiated terms of employment shall take legal precedence over existing or future provisions of the Kuwait Labor Code and any related regulations. Notwithstanding this precedence, any contract of employment between a FTZ Enterprise, FTZ Developer, or FTZ Operator and their employees must include the following:

[to be completed by a Kuwaiti lawyer -- insert relevant provisions regarding minimum age requirements for the employment of children and minimum health and safety occupational standards, maximum weekly working hours, overtime pay, etc.]

CHAPTER IX: ENFORCEMENT, DISPUTES, AND DISPUTES SETTLEMENT

Article 45. Enforcement

(a) The KFTZA, through its General Manager and Board of Directors, shall be the only agency, institution, or regulatory body empowered to enforce the FTZ Law and these Regulations, and to determine whether any violations of this Act and these Regulations has occurred. The Kuwaiti Customs service will assist the KFTZA in this role insofar as such enforcement may involve the import or export of goods, the documentation applicable to such goods, or the physical security of such goods.

(b) The KFTZA may, should it elect to do so, invite the assistance of other specialized agencies of the Government of Kuwait to assist in the evaluation or determination of such violations, but these agencies may participate only in an advisory role, and only upon invitation from the KFTZA.

Article 46. Right of the KFTZA to Investigate Possible Violations

(a) The General Manager shall have the right to investigate possible violations of the FTZ Law or these Regulations. These investigations may be made without prior notification; however, no FTZ entity may be visited for investigatory purposes more than two (2) times per year without prior written notification. Upon such visits, the General Manager shall comply with internal company rules and procedures regarding safety and the protection of sensitive materials or processes.

(b) FTZ entities which have previously been fined or warned following a violation, as discussed in Article 47, shall be subject to inspection without notification or limit for up to one (1) year from the date of the last violation.

(c) Any FTZ entity that believes that the General Manager is conducting his investigations without justification or with the intent of harassment, may complain in writing to the Board and request an inquiry.

Article 47. Violations of the FTZ Law or the FTZ Regulations

(a) All FTZ entities are required to comply with the conditions and requirements of operation listed on their FTZ Developer, Operator, or Enterprise Certificate. The violation of such conditions are grounds for the imposition of fines and/or the revocation of the Certificate.

(b) Any FTZ entity found to be producing, storing, or utilizing any prohibited substances as defined in Article 43 shall automatically lose its FTZ Certificate and all the benefits and incentives offered to FTZ entities under the FTZ Law and these Regulations.

(c) Any FTZ entity whose operations are found to violate environmental legislation or the conditions of the Certificate with respect to environmental protections as defined in Article 42 shall automatically lose its FTZ Certificate and all the benefits and incentives offered to FTZ entities under the FTZ Law and these Regulations.

(d) Any discrepancies detected by Customs agents between a FTZ entity's imports, exports, or transfers and the accompanying documentation may be subject to a fine imposed by the KFTZA. The KFTZA shall have one (1) month from the time that Customs informs the KFTZA of such activity to take action.

(e) Any FTZ entity that is found by the KFTZA to have violated any other provision of the FTZ Law or these Regulations may be officially warned and may be fined by the General Manager of the KFTZA.

(f) Any FTZ entity that has previously been warned and/or fined by the KFTZA for an offense of any type, and that is found to have committed continuing violations, may be liable for the permanent revocation of its Certificate.

(g) The Board shall have the exclusive power to revoke a Certificate belonging to a FTZ entity. Any decision by the Board to revoke a certificate may be appealed by the FTZ entity in accordance with the procedures contained in Article 49.

Article 48. Violations by Foreign Nationals

(a) All foreign nationals working for a FTZ entity are expected to observe the requirements and conditions governing the employment of foreign nationals in Kuwait. The work permit of any foreign national failing to observe these requirements may be revoked by the KFTZA, after proper notice and hearing.

(b) Should the KFTZA believe that a foreign national employed in a FTZ has violated the terms

of his work permit, the KFTZA shall notify the foreign national in writing of the alleged offense. The foreign national then has thirty (30) calendar days to respond and to explain in writing or in person why the alleged offense is untrue.

(c) Should the foreign national fail to satisfactorily demonstrate that the allegation is without merit, or should the foreign national fail to respond to the Authority's charges, the KFTZA may decide to revoke the foreign national's work permit. The KFTZA shall accordingly inform the [ministry/agency responsible for issuing foreign national work permits] of this ruling, and shall direct [said ministry/agency] to revoke the employee's permit.

(d) Any foreign national whose work permit has been revoked shall be prohibited from continuing to work in a FTZ or elsewhere in Kuwait. The expulsion of such foreign nationals shall only take place in accordance with the provisions of the relevant Kuwaiti laws and regulations in force.

Article 49. Disputes and Dispute Settlement

(a) A dispute between a FTZ entity or a foreign national and the KFTZA concerning a fine, revocation of a Certificate, revocation of a foreign national's work permit or any other such dispute may be appealed to the Board.

(b) In case the Board fails to resolve the dispute to mutual satisfaction, the FTZ entity or foreign national may seek resolution through the Kuwaiti national court system.

(c) With the agreement of the parties, the dispute may also be submitted to local arbitration for resolution as provided for in Kuwaiti law.

(d) Parties may also refer disputes to international arbitration as provided in binding international conventions to which Kuwait is a party.

(e) In the case of a dispute between FTZ Developers, Operators, and/or Enterprises, resolution of such dispute shall be governed by the contractual agreements negotiated between the parties. Should such agreements fail to provide for dispute resolution, the parties to the dispute may seek resolution through local arbitration or through legal action in the courts of Kuwait.

CHAPTER X: MEASURES REGARDING THE BANKRUPTCY OR LIQUIDATION OF FTZ DEVELOPERS, OPERATORS, AND ENTERPRISES

Article 50. Bankruptcy and Liquidation Measures

(a) The bankruptcy or liquidation of FTZ Developers, Operators, or Enterprises shall be carried out in accordance with the laws and regulations relating to bankruptcy and liquidations in force in Kuwait.

(b) All liabilities incurred for reasons relating to bankruptcy and liquidation shall be governed by the appropriate provisions of Kuwaiti law.

CHAPTER XI: PROTECTION OF PROPERTY AND OTHER RIGHTS

Article 51. Guarantee of Rights and Privileges

(a) The rights and privileges granted to all FTZ entities under the FTZ Law may not be abridged in any fashion by any law or regulation or by the establishment of additional obligations, without the payment of prompt, adequate and effective compensation.

(b) Any FTZ entity seeking redress for the abridgement of their rights and privileges shall do so in accordance with the rules and procedures governing the settlement of disputes as outlined in Article 49.

Article 52. Protection of Property

(a) All FTZ entities have an absolute right to control of their properties. This right may not be usurped by the Government of Kuwait for any reason, except where this is done in accordance with due process of law, in pursuance in good faith of a public purpose, without discrimination on the basis of nationality and against the payment of prompt, adequate and effective compensation.

(b) Should the investor decide that the compensation offered by the State of Kuwait is not appropriate, the investor has the right to appeal the decision in accordance with the dispute settlement guidelines established in Article 49.

(c) Compensation according to the above criteria shall not be due in case the investment is taken by Court order as a sanction against an investor who has violated the State's laws and regulations. Any disputes regarding claims for compensation in this case shall be settled in accordance with the provisions of Article 49.

CHAPTER XII: MISCELLANEOUS PROVISIONS

Article 53. Issuance of KFTZA Decisions and Circulars

As needed, decisions and circulars may be issued under these Regulations by the KFTZA in order to notify interested parties regarding the clarification, updating, or any other changes in procedures, rules, regulations and fines, or other matters pertinent to the operation of the Kuwait FTZ regime.

Article 54. Date of Effectiveness of the FTZ Regulations

These Regulations shall take effect upon their issuance by the Minister of Commerce and Industry and their publication in the [Official Gazette.]

Annex 7: Online Survey Used in Market Analysis

The Government of Kuwait is exploring options to create a special economic zone focused on supporting the business opportunities for energy technology and services companies. The concept for the zone is to host technology and service provider companies—both those well established as well as business start-ups—focusing on petroleum and petrochemicals, renewable energy, and power generation.

Your assistance in answering the questions below would be very useful in determining what range of business support services would be of most interest to potential clients or tenants for the "Kuwait Energy Gateway. "

Your answers will remain strictly confidential and not shared with any outside source. The survey should take no more than 5 minutes to complete.

Thank you very much for your help in taking the time to complete this survey.

GENERAL BACKGROUND INFORMATION ABOUT YOUR COMPANY

1. How would describe your major business focus?
(check all that apply)

_____ Exploration and production
_____ Upstream services
_____ Oil and gas and gas equipment manufacturing
_____ Engineering and construction
_____ Downstream support technologies and services
_____ Petrochemicals and refining
_____ Health and safety
_____ Environmental equipment and services
_____ Transportation and logistics
_____ Safety and security
_____ Renewable energy equipment and services
_____ Project management
_____ Other (Please specific)

2. How many employees does your company have globally?

_____ 1–500
_____ 501–5,000
_____ Over 5,000

3. How many employees does your company have in the Gulf Region?

_____ 1–500
_____ 501–5,000
_____ Over 5,000

4. How many employees does your company have in Kuwait?

_____ None
_____ 1–500
_____ 501–5,000
_____ Over 5,000

5. What is the annual gross revenue or sales of your company?

_____ Less than US$ 10 million
_____ US$10 million to US$50 million
_____ US$50 million to US$500 million
_____ More than US$500 million

6. Where is the corporate headquarters of your company located?

_____ Europe
_____ North America
_____ Middle East/North Africa
_____ Asia
_____ Australia, New Zealand
_____ Latin America and the Caribbean
_____ Sub-Saharan Africa

7. If your company has any regional office(s), apart from the headquarters office, where are they located? (check all that apply)

_____ Europe
_____ North America
_____ Middle East/North Africa
_____ South Asia
_____ Central Asia and the Caucasus
_____ Southeast Asia
_____ East Asia
_____ Australia, New Zealand
_____ Latin America and the Caribbean
_____ Sub-Saharan Africa

8. In which Gulf states does your company have offices? (check all that apply)

_____ None (then go to questions 10)
_____ UAE
_____ Bahrain
_____ Qatar
_____ Saudi Arabia
_____ Kuwait
_____ Oman
_____ Iraq
_____ Iran

COMPANY OPERATIONS IN THE GULF REGION

9. If your company already has one or more offices in the Gulf Region, rate the following factors in choosing the country or countries where your company opened these offices. (On a scale of 1–5, with 1 being the least important and 5 being the most important)

	1	2	3	4	5	N/A
Significant business opportunities within a specific country	_____	_____	_____	_____	_____	_____
Ease of serving the entire Gulf Region from that location	_____	_____	_____	_____	_____	_____
Incentive package offered by the government	_____	_____	_____	_____	_____	_____
Living conditions (housing, schools, medical, safety) for international staff	_____	_____	_____	_____	_____	_____

10. If your company does not have an existing presence in the Gulf Region, is your company planning to establish one in the near future?

_____ Yes
_____ No (if no, go to question 12)

11. If yes, please indicate which country/countries that you are currently considering. (check all that apply)

_____ UAE
_____ Bahrain
_____ Qatar
_____ Saudi Arabia
_____ Kuwait
_____ Oman
_____ Iraq
_____ Iran

COMPANY EXPERIENCE IN SPECIAL ECONOMIC ZONES

12. Does your company currently operate in a Special Economic Zone/Free Trade Zone? .

_____ Yes

_____ No

13. What is your perception of the value of the following features of Special Economic Zones for your business? (On a scale of 1–5, with 1 being the least important and 5 being the most important)

	1	2	3	4	5	N/A
Ease of registration and compliance with other business formalities	_____	_____	_____	_____	_____	_____
Ownership terms (ability to have 100% ownership without local partnership requirement)	_____	_____	_____	_____	_____	_____
Investment terms (e. g. , repatriation of profits)	_____	_____	_____	_____	_____	_____
Customs duty exemptions	_____	_____	_____	_____	_____	_____
Tax exemption or holidays	_____	_____	_____	_____	_____	_____
The ability to co-locate with other companies with similar or complementary interests	_____	_____	_____	_____	_____	_____
Facilitation of new technology development and commercialization	_____	_____	_____	_____	_____	_____

14. If Kuwait offered a Special Economic Zone/Free Trade Zone regime with the benefits mentioned above, would you be more likely to consider establishing an operation in Kuwait?

_____ Yes

_____ No

15. Please indicate your preferences for property types within the Gulf Region.

_____ Small office (less than 500 sq. mt.) in downtown location

_____ Small office in Business or Science/Technology Park

_____ Larger downtown office accommodation

_____ Business Park (mainly office)

_____ Science or Technology Park with office or mixed office/workshop/lab/demo space

_____ Industrial Park

_____ Warehousing/logistics

DOING BUSINESS IN KUWAIT

16. Does your company have experience working in Kuwait?

_____ Yes
_____ No

17. Are you interested in business opportunities in Kuwait?

_____ Yes
_____ No

18. If your company does not currently have a presence in Kuwait, are you considering it?

_____ Yes
_____ No

19. Have you done, or are you currently doing, business with Kuwait Petroleum Corporation and/or any of its operating subsidiaries?

_____ Yes
_____ No (if no, go to question 21)

20. If yes, what has been your experience dealing with Kuwait Petroleum Corporation and its operating subsidiaries with respect to:
(On a scale of 1–5, with 1 being not favorable and 5 being very favorable)

	1	2	3	4	5	N/A
Information on new business opportunities	_____	_____	_____	_____	_____	_____
Quality of Request for Proposal	_____	_____	_____	_____	_____	_____
Fair and open procurement process	_____	_____	_____	_____	_____	_____
Timeliness of making procurement decisions	_____	_____	_____	_____	_____	_____
Contract terms and conditions	_____	_____	_____	_____	_____	_____
Openness to new technologies and approaches	_____	_____	_____	_____	_____	_____
Willingness to consider and pay for superior performance, efficiency and quality	_____	_____	_____	_____	_____	_____
Professionalism and respect for contractors	_____	_____	_____	_____	_____	_____
Other (please specify)						

21. What are your general perceptions of doing business in Kuwait?
(On a scale of 1–5, with 1 being unfavorable and 5 being very favorable)

	1	2	3	4	5	N/A
Getting a business registered	_____	_____	_____	_____	_____	_____
Finding a qualified agent	_____	_____	_____	_____	_____	_____
Dealing with your agent or equity partner	_____	_____	_____	_____	_____	_____
Access to land	_____	_____	_____	_____	_____	_____
Getting project approval/operating license	_____	_____	_____	_____	_____	_____
Getting necessary building permits, environmental clearances, etc	_____	_____	_____	_____	_____	_____
Government honoring its commitments to provide infrastructure or other facilities	_____	_____	_____	_____	_____	_____
Restrictions on business activities	_____	_____	_____	_____	_____	_____
Taxation	_____	_____	_____	_____	_____	_____
Investment incentives	_____	_____	_____	_____	_____	_____
Getting work and residence permits for staff	_____	_____	_____	_____	_____	_____
Finding qualified Kuwaiti staff	_____	_____	_____	_____	_____	_____
Expatriate living conditions in Kuwait	_____	_____	_____	_____	_____	_____
Other (please specify)						

PERCEPTIONS OF THE POTENTIAL FOR KUWAIT TO SERVE AS A "GATEWAY" TO BUSINESS IN IRAQ

22. Iraq is planning a major investment in its oil and gas infrastructure which is expected to include 10,000 new wells. In this context, is your company currently doing business in Iraq?

_____ Yes
_____ No

23. Is your company interested in exploring new opportunities for doing business in Iraq?

_____ Yes
_____ No

24. What is your overall perception of the potential for Kuwait to serve as a "gateway" for business in the energy sector in Iraq?
(On a scale of 1–5, with 1 being the least favorable and 5 being the most favorable)

	1	2	3	4	5	N/A
Information on new business opportunities	_____	_____	_____	_____	_____	_____
Coordination of bidding efforts for Iraqi opportunities	_____	_____	_____	_____	_____	_____
Provide port services for equipment destined for Iraq	_____	_____	_____	_____	_____	_____
Provide staging and storage capacity for equipment	_____	_____	_____	_____	_____	_____
Provide logistics and transportation services	_____	_____	_____	_____	_____	_____
Provide border crossing facilitation services	_____	_____	_____	_____	_____	_____
Living conditions for staff working in Iraq and their families	_____	_____	_____	_____	_____	_____

25. Would you be willing to be contacted at a later date to provide more in-depth information on your views?

_____ Yes
_____ No

26. If yes, please provide the following contact information:

Name: _____

Company: _____

Telephone: _____

E-mail: _____

Best time to contact you: _____

KEG Indicative P&L Summary Estimates

Property Under Management	Floor Area		Rent/Income	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15
The KEG main site	Net utilizable Sq meters	Rent Kd/m2/mo.	Fully utilized yield KD '000															
Business Center																		
Phase 1—occupancy	3000	15	540	0	0.25	0.5	0.75	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Phase 2—occupancy	3000	15	540	0	0	0	0	0	0.25	0.75	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Muti–occupancy larger Units																		
Phase 1—occupancy	4100	15	738	0	0.25	0.5	0.75	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Phase 2—occupancy	4100	15	738	0	0	0	0	0.25	0.5	0.75	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Training Center																		
Phase 1—occupancy	3000	15	540	0	0	0.25	0.5	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Phase 2—occupancy	3000	15	540	0	0	0	0	0	0	0.25	0.5	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Gross Revenue				**0**	**320**	**774**	**1229**	**1740**	**2059**	**2649**	**2975**	**3110**	**3110**	**3110**	**3110**	**3110**	**3110**	**3110**
Operating Costs																		
Salaries				415	595	950	1095	1095	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170
Overheads (incl. rent, power, water, phones, stationery, copying, computers and other IT		40% of salary costs		166	238	380	438	438	468	468	468	468	468	468	468	468	468	468
legal, property, taxation and IP advice, audit																		
Sub Total																		
Marketing budget (after year 5 —before that from capital)	100								100	100	100	100	100	100	100	100	100	100
TOTAL Operating Costs				581	833	1330	1533	1533	1738	1738	1738	1738	1738	1738	1738	1738	1738	1738
Earnings before interest, taxes, depreciation			**Annual EBITDA**	**–581**	**–514**	**–556**	**–305**	**207**	**321**	**911**	**1237**	**1372**	**1372**	**1372**	**1372**	**1372**	**1372**	**1372**
and amortization (EBITDA) KD '000			**Cumulative EBITDA**	**–581**	**–1095**	**–1651**	**–1955**	**–1748**	**–1427**	**–516**	**721**	**2093**	**3466**	**4838**	**6211**	**7583**	**8955**	**10328**

Indicative Staff Costs and Personnel Structure

Staff Posts	Anticipated Qualifications	Minimum Experience Years	Approx. Salary KD (000)	Recruiting and building the Team Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
Chief Executive Officer	PhD + MBA	15	90							
PA to CEO	Degree	5	25							
Deputy CEO	PhD or MSc	10	75							
Marketing Team										
Marketing Executive	MBA	10	50							
Marketing Officer	Degree	7	30							
Finance Team										
Finance Controller	ACA equivalent	10	60							
Receivables Officer	CMA equivalent	7	50							
Payables Clerk	Acct. Technician	5	30							
Credit Control Clerk		5	25							
Property Team										
Property manager	Chartered Surveyor	15	60							
Facilities Officer	Degree	10	50							
Administrator		5	25							
Facilitation Team										
Programme Director	PhD + MBA	10	75							
PA to Director	Degree	5	25							
Oil Sector Manager	PhD/MSc + MBA	7	60							
Supporting Executive	Degree	5	40							
Petrochemical Sector Mgr	PhD/MSc + MBA	7	60							
Supporting Executive	Degree	5	40							
Power & Renewables Mgr	PhD/MSc + MBA	7	60							
Supporting Executive	Degree	5	40							
SEZ Services Manager	MBA	7	60							
Supporting Executive	Degree	5	40							
Business services Mgr	MBA	7	60							
Supporting Executive	Degree	5	40							
Total Payroll Costs			1170	415	595	950	1095	1095	1170	1170

Annex 9: Working Assumptions for the KEG Financial Model

The following working assumptions relate directly to the analyses contained in Section 3, Chapters 9, 10 and 11.

Table A9.1 Unit Capital Costs for Infrastructure and Buildings

Cost Assumptions Structure or Civil Works Type	Base KD/m2	Contingency %	Design %	Complexity %	Total KD/m2
Buildings					
Specialized facility based on lab (1)	500	7%	15%	80%	1010
Business Centre based on office (2)	500	7%	15%	20%	710
Spec single & multi occupied office (3)	500	7%	15%	0%	610
Training Centre based ratio to office—1. 36 (4)	680	7%	15%	0%	830
Leisure facility ratio to office—1. 82 (5)	910	7%	15%	20%	1292
Commercial Space					
Kiosk Café—ratio to office—1. 21 (5)	605	7%	0%	0%	647
Restaurant/Brasserie—ratio to office—1. 5(5)	750	7%	0%	0%	803
Retail—24/7 store etc ratio to office—1. 21 (5)	605	7%	0%	0%	647
External works—piazza					
Block/paved surface + landscape features (6)	100	0%	0%	0%	100
Shaded area in the piazza (but not sealed) (6)	500	0%	0%	0%	500
Water features—Pool (6)	55	0%	0%	0%	55
Other External Works					
Site distributor roads (7)	100	0%	0%	0%	100
Car Parking—decked car parking/car space(7)	3000	7%	0%	0%	3210

Notes to Table A9. 1

General Notes

Land costs are not included in the costs, nor are offsite infrastructure costs.

Onsite infrastructure is limited to the provisions of: access and distributor roads, lighting, main services and a central covered piazza feature with a pool water feature and associated landscaping. Distributor roads are provided at the rate of 100 linear meters per 10,000 sq m of built floor space. This ratio works reasonably well as a first estimate for a standard square or rectangular site where the buildings are 2–4 stories and individually 4 –8,000 sq. m. , and the site density is 25 percent or higher. Site density is defined as the ratio of the gross floor area built to the land area occupied by the buildings, together with their associated infrastructure, landscaping and car parking.

Specific Notes

1. Based on office costs as advised by UNDP/KISR but increased by 80 percent to allow for basic laboratory fit-out. Design and engineering costs of 15 percent of construction costs, as advised by UNDP/KISR. A 7 percent contingency is also applied.
2. Based on the office costs advised by UNDP /KISR but increased by 20 percent for the added complexity required in a modern business center compared to a standard office building. This ratio is based on the experience of the consultant team in development of business and technology parks. The 15 percent design and 7 percent contingency are also applied.
3. The costs advised by UNDP/ KISR for good quality office accommodation. The advisable 15 percent design component is included to ensure a high quality of architectural design is utilized to give the KEG some clear distinguishing features marking it out as a special environment.
4. The cost ratio to office space for the training Centre is based on a 2010 costing for STP properties for a comparable proposed development in which members of the consultant team were directly involved. Numbers were produced by chartered quantity surveyors.

5. The cost ratio to office space for the leisure facilities and the commercial types of space are based on a 2010 costing for STP properties for a comparable proposed development in which members of the consulting team were directly involved.
6. The costs for the external works other than car parking and roads are based on a 2010 costing for STP properties for a proposed development comparable proposed development in which members of the consulting team were directly involved. These were Architect produced numbers and they already include a contingency.
7. The costs for the roads and lighting, etc. are based on numbers provided by UNDP/KISR. On-site distributor roads are assumed to be single track 7. 3 meters wide, except for a double-land entrance road, assumed to be 250m in length. The covered/decked external car parking unit costs are based on numbers provided by UNDP/KISR. Car parking is provided at the rate of 1 space per 23 sq. m. of built floor space, which approximates to 1 space per person.

Table A9.2 Capital Investment Assumptions

KEG Capital Investment Summary Analysis	Phase 1 Area sq m	Phase 1 KD million	Phase 2 Area sq m	Phase 2 KD million	Total KD million
Capital Investment					
Specialized Facility 1 and 2	9000	10. 57	3000	3. 52	14. 09
Business Centre	4000	3. 30	4000	3. 30	6. 60
Speculative multi-occupier units	10000	7. 09	0	0. 00	7. 09
Training Centre	6000	4. 98	6000	4. 98	9. 96
Leisure facilities	500	0. 75	0	0. 00	0. 75
Commercial/retail space	1175	0. 92	0	0. 00	0. 92
Total Buildings	30675	31. 12	13000	21. 80	58. 41
Common area hard landscape	note 1	3. 65		0. 10	3. 75
External works	note 2	5. 89		3. 06	8. 95
Total External works		9. 73		3. 15	12. 70
Total Capital Investment		40. 89		24. 96	65. 85

Notes to Table A9. 2

General Notes

The commercial/retail space identified in the Table is the sum of the three components identified under the heading "Commercial space" in Table A10. 1. They are aggregated here to simplify the table as each by itself is a very small part of the total.

The total public sector investment is shown as KD 65. 8 million. However, since the site has not yet been identified, and since budgets for the specialized facilities, including their associated equipment and the several contingency factors built into the costs, have yet to be established, we anticipate a total public sector capital commitment in the range of KD 50–60 million, spread over 10 years.

Specific Notes

Note 1. This cost is made up of the separate elements identified as "External works—piazza" in Table A9. 1

Note 2. This cost is made up from the elements of infrastructure identified under the heading "Other External Works" in Table A9. 1

Annex 10: Key Documents Cited or Recommended

Allen, John, (2007), T*hird Generation Science Parks,* Manchester Science Parks, Manchester, UK, www.msp.co.uk

Al Masah Capital Limited (2011) *GCC Real Estate—Back on growth track?,* Dubai.

Al Tamimi & Company (undated), *The GCC Economic Agreement & Customs Law: Implications for GCC Nationals Conducting Economic Activity in the Gulf,* Dubai.

BP (2011), *Energy Outlook 2030,* British Petroleum, London, UK. www.bp.com/liveassets/bp_internet/spain/…/energy_outlook_ 2030.pdf

Coface (2011), "Kuwait: Business Climate Assessment," http://www.coface.com/CofacePortal/COM_en_EN/pages/home/risks_home/business_climate/climate_file/Kuwait?extraUid=572157

Deloitte (2011), *International Tax: Kuwait Highlights.*

The Economist (2010), The Spirit of Enterprise Fades: Capitalism in China, The Economist, January 23, 2010.

Etzkowitz, Henry and Loet Leydesdorff (2000), *The Dynamics of Innovation: from National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government,* Research Policy 29 , pp 109–123, 2000.

FIAS (2008), *Special Economic Zones Performance, Lessons Learned, and Implications for Zone Development,* Foreign Investment Advisory Service, World Bank/IFC. Washington, April 2008.

IMF (2011), *Kuwait: 2011 Article IV Consultation—Staff Report, International Monetary Fund,* Washington, D. C.

IASP (2001), *Evolution Applies to Science Parks Too,* International Association of Science Parks, International Conference Proceedings, Bilbao.

International Energy Agency (2011), *2011 World Energy Outlook,* Paris; November 2011.

Mian, Sarfraz, et. al. (2006)Building Knowledge Regions in North America: Emerging Technology Innovation Poles, Northampton, USA. Edward Elgar Publishing Inc.

PKF Chartered Accountants (2011), *Doing Business in the Sultanate of Oman.*

PKF Chartered Accountants (2009), *Saudi Arabia Tax Guide 2009.*

Republic of Iraq, *Customs Tariff Table According to the Harmonized System,* Ministry of Finance, Public Commission of Customs, Baghdad, (undated).

OECD (2010), *Designing Economic Zones for Effective Investment Promotion,* Organization for Economic Cooperation and Development, MENA-OECD Investment Programme, Amman, February 15–16, 2010.

OPEC (2011), World Oil Outlook 2011. Organization of the Petroleum Exporting Countries, OPEC Secretariat, Vienna, Austria. Accessed on: November 28, 201, http://www.opec.org/opec_web/en/publications/340.htm

PriceWaterhouseCoopers (2009), *The Economic Impacts of the Oil and Natural Gas Industry on The U. S. Economy: Employment, Labor Income and Value Added,* prepared for the American Petroleum Institute, September 8, 2009.

State of Kuwait (2009), *Mid-range Development Plan of the State of Kuwait 2010/2011–2013/2014 : A Draft General Framework,* The General Secretariat of the Supreme Council for Planning and Development, June 2009. *General Framework,* The General Secretariat of the Supreme Council for Planning and Development, Kuwait City, June 2009.

State of Kuwaiti (2010), *Kuwait Vision 2035,* Parliament of Kuwait, Kuwait City, February 2010.

U. S. Department of Energy (2011), *Kuwait Country Analysis,* U. S. Energy Information Administration, July 2011, http://www.eia.gov/countries/cab.cfm?fips=KU

U. S. Department of Energy (2011), *International Energy Outlook 2011,* U. S. Energy Information Administration, Washington, September 2011.

U. S. Embassy in Kuwait (2005), *Investment Climate,* http://kuwait.usembassy.gov/investment_climate.html

World Bank (2007), *New Challenges Facing the Education Sector in MENA,* Washington, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0CDIQFjAC&url=http%3A%2F%2Fsiteresources.worldbank.org%2FINTMENA%2FResources%2FEDU_03-Chap03-Education. pdf&ei=1i4qT9924-LZBeCs8e4O&usg=AFQjCNEsoFsbS45oIrJnmPJ6DR2hOeo4yw&sig2=-xb9ynAMNQ0SMDAfVbQlBg

World Economic Forum (2011), Global Competitiveness Ranking, Geneva.

World Economic Forum (2011), *Arab World Competitiveness Report 2011–2012,* World Economic Forum and OECD, Geneva.

United Nations Development Programme
UN House, Mishref, Diplomatic Square, Block 6
Kuwait

http://www.kw.undp.org

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