



METE



## PROJECT DOCUMENT

PIMS 3611  
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### **PIMS 3611: The Country Programme of Albania under the Global Solar Water Heating Market Transformation and Strengthening Initiative**

#### **Brief Description:**

As a part of the UNDP/UNEP/GEF Global Solar Water Heating Market Transformation and Strengthening Initiative, this country programme of Albania aims at accelerating the market development of solar water heating in Albania with an objective to facilitate the installation of 75,000 m<sup>2</sup> of new installed collector area over the duration of the project, an annual sale of 20,000 m<sup>2</sup> reached by the end of the project and with expected continuing growth to reach the set target of 520,000 m<sup>2</sup> of total installed SWH capacity by 2020. This has been estimated to correspond to over 300 MW of avoided, new fossil fuel power capacity by using solar instead of electricity for water heating, and estimated cumulative GHG reduction potential of over 800,000 tons of CO<sub>2</sub> by the end 2020.

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## ACRONYMS

ADA	Austrian Development Agency
APR	Annual Project Report
ASI	Albanian Standards Institute
CEE	Albanian Centre for Energy Efficiency
CEO	GEF Chief Executive Officer
CCU	Climate Change Unit within the MoEFWM
CO	UNDP Country Office
CO <sub>2</sub>	Carbon dioxide
CTA	Chief Technical Adviser
EE	Energy Efficiency
ERE	Electricity Regulatory Authority
ESCO	Energy Service Company
EU	European Union
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GPMU	Project Management Unit of the Global SWH Project
HQ	UNDP Headquarters
IEA	International Energy Agency
MDG	UN Millennium Development Goals
MoETE	Ministry of Economy, Trade and Energy
MoEFWM	Ministry of Environment, Forestry and Water Management
M&E	Monitoring and Evaluation
MYFF	Multi-year Funding Framework
NEA	National Energy Agency
NES	National Energy Strategy
QPR	Quarterly Progress Report
PDF	Project Development Facility
PIR	Project Implementation Review
PM	Project Manager
PMT	Project Management Team
PSC	Project Steering Committee
RCU	UNDP Regional Co-ordination Unit
SESCO	Solar Energy Service Company
SWH	Solar Water Heating
SRF	Strategic Results Framework
TPR	Tripartite Review
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services

## SECTION 1: ELABORATION OF THE NARRATIVE

### Part I: Situation Analysis

#### *Climate*

1. Albania has a typical Mediterranean climate, with favourable conditions for utilizing solar water heating compared to, e.g., Northern and Central Europe. According to radiation measures undertaken by the Institute of Hydrometeorology radiation varies between 1170 [kWh/m<sup>2</sup>, year] in the North East part of Albania and 1680 [kWh/m<sup>2</sup>, year] in Fier, with a country average of 1460 [kWh/m<sup>2</sup>, year]. This compares to averages of 913 [kWh/m<sup>2</sup>, year] in the Netherlands, 1095 [kWh/m<sup>2</sup>, year] in Denmark, 1387 - 1679 [kWh/m<sup>2</sup>, year] in France and North of Italy and 1679 [kWh/m<sup>2</sup>, year] in Spain, South of Italy and Greece.

#### *Energy*

2. Due to the collapse of industries, and a growth in the residential and commercial sectors, these two latter sectors now occupy more than 60% of the total energy demand and 62% of the electricity demand. Up to 1990, supply and demand for heating, cooking, domestic hot water and fuels (mainly wood) were more or less in balance with electricity produced mainly from local hydro sources. In the beginning of 1990's, the amount of fuel wood supplied by the state enterprises to urban areas was largely reduced, resulting in extensive illegal cutting of trees as well as increasing electricity consumption. The trend was further strengthened due to low prices and poor payment discipline.

3. Electricity is the only energy commodity, for which prices have not yet been liberalized. This, combined with the higher, liberalized prices of competing fuels, has inevitably led to the increasing electricity consumption in meeting the households' energy needs, thereby contributing to the growing electricity demand-supply imbalance in Albania. While traditionally over 90% of country's electricity demand has been met by domestic hydro power generation, the government is trying to cover the current imbalance through electricity import and new fossil fuel power plant construction. The World Bank has helped the government to draw up an investment plan to expand its installed capacity by 823MW by 2015 and 75% of this new capacity is expected to come from fossil fuels.

4. The government and the local utility KESH have programmes to increase electricity prices and enforce payment discipline and improve opportunities for energy saving and renewable energy. In 2004, the average electricity price was 5.46 lek/kWh<sup>1</sup>, while the low voltage (0,4 kV) tariffs approved by the Energy Regulatory Authority (ERE) in 2006 were, in average, between 7 and 8 Leks per kWh (without a VAT) in 2006 depending on the consumer category. While the average tariff is still below the calculated long-term marginal running cost of generation/transmission/distribution of 13.6 lek/kWh, the tariffs are expected to continue to increase.

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<sup>1</sup> one US\$ is about 97 Albanian Lek (November, 2006).

Table 1 The electricity tariffs as approved by ERE (situation in February 2007) and estimated pay-back time of SWH for different consumer groups.

Consumer	Tariff Lek/kWh (incl VAT)	Annual Savings <sup>2</sup> USD/m <sup>2</sup>	System Costs <sup>3</sup> USD/m <sup>2</sup>	Payback in years with a loan interest of:		
				0%	5%	10%
Residential	8,4	52	400	7,7	10,0	15,4
Private Commercial Consumers	9,6	59	300	5,1	6,0	7,4
Public Institutions	12,0	74	300	4,0	4,6	5,4

5. In 1999, the “non-technical” losses, meaning the electricity taken from the network through illegal connections or unpaid electricity, were 1,295 GWh or 50% of total amount of electricity produced. In 2002, this percentage was 38% and in 2004 and 2005, losses have been further reduced due to very strict measures taken by the Ministry of Economy, Trade and Energy, and the Group of Donors in co-operation with KESH. While there are still a number of non-payers, who would not find SWH an attractive investment, there are others, who already now need to pay a full price for the electricity consumed and also need to subsidise the non-payers, which is likely to make SWH a particularly attractive option for this category of consumers.

6. Over 70% of domestic hot water needs of the household and service sector in Albania is supplied by electric boilers. According to studies conducted as a part of the National Energy Strategy preparation (2002) and following the baseline development, the demand for hot water in Albania is projected to grow from 600 GWh in 2000 to 875 GWh in 2015, in the residential sector alone.

#### *Institutional Framework*

7. The Ministry of Economy, Trade and Energy (MoETE) is responsible for the overall energy sector development, including:

- Supervision of the development, periodic update and implementation of the National Energy Strategy;
- Drafting new energy sector legislation;
- Creating an enabling environment for the promotion of domestic and foreign private investments for energy sector development; and
- Facilitating the required energy sector market reforms to achieve the national objectives for integration with EU and development of a regional electricity market;

8. The National Energy Agency (NEA) was established in June 1998 on the basis of a Government decree and by building on the former National Committee of Energy and the Executive Agency for Household Heating, both created in 1993. The NAE was reporting to MoETE, and according to its defined responsibilities was to:

- Develop and evaluate the implementation process of the National Energy Strategy of

<sup>2</sup> With an estimated yield of 600 kWh/m<sup>2</sup>

<sup>3</sup> Including installation and with VAT

Albania;

- Prepare different development scenarios and carry out analyses in energy field (including energy efficiency) with the goal of orienting the government towards a sustainable development of energy sector;
- Gather, assemble and analyze the data dealing with production, supply and consumption of energy sources in all economic sectors, including the creation of a database according to IEA and EUROSTAT standards;
- Prepare annual energy balance of the country according to IEA and EUROSTAT formats;
- Forecast and propose action plans for rational and efficient use of energy in different economic sectors;
- Carry out studies for the promotion of renewable energy;
- Prepare, in cooperation with other institutions, environmental norms related to exploitation of local energy sources; and
- Support the MoETE in drafting new energy sector laws and by-laws in general and for energy efficiency and renewable energy in particular.

9. Other institutions under the auspices of the MoETE have included: the National Petroleum Agency, the Institute for Product Quality of Oil and Gas, the Institute for Pressurized Vessels and Electricity Appliances and the National Scientific Center of Hydrocarbons Research (Oil and Gas Institute).

10. In 2007, the Government of Albania decided not to continue the operations of the NAE as a separate entity, but to merge it together with other institutions into a new National Agency for Natural Resources.

11. Energy Regulatory Authority (ERE) is responsible for issuing licenses, approving tariffs and developing and monitoring the implementation of the energy sector market rules. The agency is still relatively small, however, because the electricity sector is still un-liberalized. KESH is the single, vertically integrated electric power utility Albania, responsible for generation, transmission and distribution. As a signatory of the Athens process for a regional electricity market for South-Eastern Europe, Albania is moving towards meeting the requirements of this process, which are to unbundle the sector, to strengthen and make the regulator independent and to open the sector for market activities in general.

12. The Ministry of Environment, Forestry and Water Management (MoEFWM), created in 2005 from the Ministry of Environment, is the highest governmental body responsible for environmental protection and formulation of environmental policy and legislation in the Republic of Albania, thereby affecting also the energy sector development. The MoEFWM is also the Focal Point for the Global Environment Facility (GEF) and the United Nations Framework Convention on Climate Change (UNFCCC).

13. The Climate Change Unit (CCU), established in 1998 and located in the premises of the MoEFWM, serves as the National Focal Point for the UNFCCC. The CCU provides policy advice and technical support on climate change and energy related issues and has also been managing the preparation of Albania's first and second National Communication to the UNFCCC as well as the Technology Needs Assessment. During this process, the CCU has also been closely co-operating

with the NAE and other local institutions, which have been contributing to preparation of these reports.

14. The Albanian Center for Energy Efficiency (CEE) was established with EU funding in 1995 as an independent body promoting energy efficiency and renewable energy in Albania. The CEE is one of the few national bodies, which has supported the introduction of solar thermal awareness raising and demonstration activities in Albania so far, including workshops, seminars and public awareness raising campaigns. CEE is also the main local implementing partner for the ongoing Solar Water Heating project supported by the Austrian Development Agency (ADA).

15. As Albania is still at the early stages of solar thermal market development, there are only 3 small manufacturers and another 3 importing and installation companies. There is no industry association yet representing the sector. Further information on manufacturers and suppliers is provided below in the section “Technology Introduction and Supply Chain”.

#### *National policy framework*

16. The recently adopted National Energy Strategy (NES) sets as its goals to:

- Guarantee the security of energy supply with a specific emphasis on electricity;
- Enhance the efficient and economic use of energy with minimal environmental impacts, in order to support the sustainable development of the different economic sectors of Albania.

17. The strategy identifies a number of objectives and activities in pursuing these goals. One of these activities is to promote solar thermal water heating with an objective to reduce the current imbalance of electricity supply and demand, in particular, during the peak periods.

18. Concerning the legal and regulatory framework of Albania in general, it is expected to gradually move towards the adoption of EU directives and legislation in line with the Government’s policy to harmonise the Albanian legislation with the one of the EU.

19. Among others, the EU Directive 2002/91/EC on the Energy Performance of Buildings, adopted in 2002 and which should enter into force in all the Member Countries by early 2006, is expected to give a further impulse for the adoption of building codes and regulations, which are forcing especially new building construction towards more efficient energy use as well as the increasing use of solar water heating. As an example, in Netherlands this has been piloted since 1996 and the use of solar water heaters in new buildings has reached 20% without further forms of subsidy.

20. Article 5 of the Albanian “Law on Energy Saving in Dwellings and Public Buildings” (adopted in 2002) defines the maximum heat consumption  $W / [m^3, ^\circ C]$  that the buildings of different types and in different climatic zones can not exceed. They should also have in place (as an obligatory requirement) the thermal installations which allow for central or district heating. After the law, the Government Decree No. 38 of January 2003, has set the 'Norms, Rules and Conditions for design and construction, and as well for generation and conservation of heat within Dwellings and Public Buildings". As a part of the proposed project, the role of solar thermal heating in the mentioned legislation is also sought to be strengthened.

21. Other EU directives to be taken into account are the recently adopted “Directive on Energy End- Use Efficiency and Energy Services (2006/32/EC) and the currently discussed proposal for a “Directive to Promote Renewable Energy Cooling and Heating” to complement the earlier Directive 2001/77/EC on the Promotion of Electricity Produced from Renewable Energy Sources in the Internal Electricity Market”. The target set for the proposed new Renewable Energy Cooling and Heating Directive is to meet at least 25 % of EU cooling and heating demand by renewables in 2020.

22. As concerns the other development needs in the form of required amendments to the already existing legislation, development of by-laws or development of effective enforcement mechanisms, the following can be mentioned:

- The “Law on Energy Efficiency” adopted in April 2005, includes provisions to create an Energy Efficiency Fund, an energy efficiency labeling system and an energy audit scheme. While the basic legal framework for the establishment of the Energy Efficiency Fund already exists, its capitalization and effective operationalisation has been pending for some time already<sup>4</sup>.
- The Law “On Creating Favorable Conditions to Build Up New Sources for Electricity Generation”, adopted in October 2002, exempts imported power generation equipment from import duties and other corresponding taxes. In order to promote the price reduction also for SWH equipment, this law is proposed to be amended to include also imported SWH systems and materials. Consultations during the project preparatory phase with the Ministry of Economy, Trade and Energy have indicated that they would support this amendment. In order to address the concerns about the possible misuse of the law especially for imported materials, it is also proposed that the custom duties paid by the local SWH manufacturers for the materials will be reimbursed retroactively on the basis of the actual SWH units produced.
- The Government Decree on Energy Building Code, No. 38 of January 2003, would need to be amended to secure the approval by Municipal Councils of the Territory Adjustment and/or the National Council of the Territory Adjustment of construction licenses for residential and service sector building SWH installations;
- The Power Sector Law, adopted on May 23, 2003 for the development of power sector in Albania includes some articles about the promotion of renewable energy sources, but with a focus on renewable energy sources for electricity generation only. Complementary provisions should be made to the law to include also solar thermal applications, such as SWH; and
- Drafting and approving a Government Decree for setting up minimum standards for the SWH systems, a system of certification and the procedures for the labeling of the SWH systems, in accordance with the relevant EU regulations.

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<sup>4</sup> A Government Decree for the establishment of the Energy Efficiency and Renewable Energies Fund as required by Law “On energy efficiency”, No.9379, dated 28.04.2005 will need to be drafted before the Fund becomes effective.



### *Technology Introduction and Supply Chain*

23. The total sale in 2005 was estimated as 7,000 m<sup>2</sup> (3,000 domestic and 4,000 service sector) with a total, estimated installed area of 33,000 m<sup>2</sup> reached by the end of 2005, out of which the service sector (hotels etc.) was estimated to account for about 18,000 m<sup>2</sup> and the residential sector for the remaining 15,000 m<sup>2</sup>. The flat collectors were estimated to account for about 79% of the total installed area, the evacuated tubes for 18% and the uncovered plastic absorbers (used mainly for heating of swimming pools and other low temperature applications) for the remaining 3 %. The combisystems used for both heating and hot water preparation were estimated to account for about 9% of the total installed area in 2005<sup>5</sup>.

24. The SWH systems installed into residential houses are typically of so called thermosyphon type. This is a simple, relatively cheap technology predominant in most southern countries, which is not using any circulation pump or electronic regulation, but relies on natural circulation. This can be considered as an appropriate technology also for Albanian conditions, especially as power cuts of several hours are still quite frequently experienced. A typical unit price of a family size SWH system in Albania consisting of a 2-3 m<sup>2</sup> collector and a 150-200 liter water tank is around USD 1,000 (including installation) with an expected minimum lifetime of 15-20 years.

25. Larger SWH systems for multiapartment buildings, hotels, public buildings etc. can generally be constructed by using the same collectors, but with a larger tank and with a difference that they generally require a circulation pump. The average price in Albania can be estimated as USD 285 per m<sup>2</sup> (including installation).

26. The product guarantees currently available in the Albanian market are typically: A one year guarantee for the solar collectors and water storage tank and a two year guarantee covering all the other materials. These guarantees refer to the maximum guarantees proposed by certain manufactures. No other quality control or certification system is currently in place in Albania.

27. The market review conducted in early 2006 identified 6 local companies in Albania that supply solar thermal equipment. Three out of these six companies are manufacturing or assembling the SWH systems themselves by relying on Greek (2) or Turkish (1) technology, while the other three are relying on imported equipment with the main supplying countries (the situation early 2006) being Greece, Italy, Germany and Austria. Furthermore, SWH systems have been imported by individuals themselves.

28. The market share of domestic production in 2005 has been estimated at 22 %, with the biggest manufacturer producing about 1,000 systems per year. At the moment, the local manufacturers largely do their own sales, marketing and installation and provide their own after sales service, while installation companies mostly install imported products. No specific national quality standards or certification system are currently in place for either manufacturing or installation. In the interviews conducted, the availability of trained installers and the lack of professional distribution networks and applicable quality control mechanisms (covering also the installation)

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<sup>5</sup> Source: Market Analysis for the Solar Water Heating – Albania, Energy and Environment for the Sustainable Development Center (EESDC), April 2006;

were mentioned as barriers to increase the SWH market in Albania. The illegal import was also mentioned as a problem.

29. The raw materials used for manufacturing the solar collector systems such as copper sheets and pipes, aluminum sheets and sections, black paint, glazing, silicon as well as the insulation materials can be easily provided/found in the Albanian market. Most of the above-mentioned raw materials are imported from Greece, Italy and Turkey by the manufactures themselves or by other companies, depending on the use of raw materials also in construction sector.

30. The consultations conducted during the project preparatory phase with the representatives of the SWH supply chain produced useful information for further project design. The views brought up by the interviewed stakeholders are briefly summarized below:

31. Manufacturer views:

- A lower VAT rate for solar products and no import duties for solar products and materials would be a strong instrument. Could lower the price with 33%.
- The informal market is a problem
- An installer training program would be useful. The company has organized foreign training for own installers e.g in Greece and Italy, but organizing this kind of training also for the distribution chain outside the company would promote quality and product sale. Ready to co-operate on this.

32. Distributor views:

- an initial market in Albania for SWH systems already exist. The main future potential in the short term was seen in the hotel sector, which can be supported by the market in private residential buildings.

Key barriers:

- High cost and low government support. The removal of import duties and VAT would make a difference of 30% in price;
- Lack of effective government regulations;
- Informal market – i.e illegal import (no import duties) and installation without paying taxes;
- Lack of organisation in the supply chain.

Opportunities:

- in some cases the vendors have allowed the client to pay by instalments with good experiences so far, which may pave the way for different future financing arrangements by using vendor or ESCO type of financing with possible risk sharing by the project;
- on the question about the affordability, at least 30-40 % of the population living on the coastal line should be able to purchase SWH systems .

Needs:

- Reduction of taxes and the import duties in particular;

- Training of domestic producers;
- Introducing a certification system for local products
- Reducing the negative impacts of the informal market
- Consumer financing

### 33. Consumer Views (Regional Development Association dealing with the Tourism sector)

- Biggest potential in hotels;
- In a short investigation 80 out of 100 hotels were interested in SWH. A commercial chain owning several hotels is not usual, but typically one owner owns one hotel;
- A problem with electricity. Most hotels need a costly back-up system running on diesel;
- Tourist sector in the growth path: Many foreign travel agencies have included Albania into their programs and over the past couple of years more tourists have been received from countries such as Germany, Sweden, UK, Japan - New tourist sites and facilities are under development;
- Growing interest in eco and agro-tourism;
- Quality of installations an issue.

### 34. In addition to the growing commercial market, there are about 15 older, big solar water heating demonstration systems funded by different donors, including:

- Solar water heating for the Administration and Education Center at Prespa National Park, funded by UNDP;
- 48 m<sup>2</sup> of solar panels and solar water heating system installed on Hospital 5 in Tirana (1993), by the Center for Energy Efficiency;
- Solar water heating system for an elderly people's home in Tirana (1995), by the Center for Energy Efficiency;
- Solar water heating systems in three SME's in Tirana, Fieri, and Durrresi, by the Center for Energy Efficiency (1999);
- Solar water heating systems in 2 high schools in Tirana and Rrogozhina, by the Center for Energy Efficiency (1998); and
- Solar panels installed under the ASIPE (Archaeological Site Protection implementing Renewable Energy Resources) project at Butrint Archaeological site in Southern Albania, and funded by the EU under the PECO programme.

### *SWH financing environment*

35. Considering the overall financing environment in Albania, several financing sources for SWH exist. The market analysis conducted during the PDF B phase of the project concluded that less than 15 % of the interviewed representatives of most target groups would prefer or have a possibility for 100% cash payment vs. other forms of payment (see table 1 below). An acceptable down-payment for most customer groups appear to be between 10 and 30%

Table 2. The preferred financing method for purchasing SWH systems across different market segments and customer groups (Source: Market Analysis for the SWH, EEDC, April 2006)

	Cash	By installments / vendor financing	Commercial bank loan	Leasing
Hotels	12 %	45 %	37 %	6 %
Recreation facilities & restaurants	9 %	47 %	39 %	5 %
Hospitals, schools and other public buildings	0%	79 %	21 %	0%
Urban households (zone I)	16 %	35 %	39 %	10 %
Rural households (zone I)	13 %	43 %	34 %	10 %
Urban households (zone II)	8 %	69 %	10 %	13 %
Rural households (zone II)	14 %	51 %	12 %	22 %
Urban households (zone III)	6 %	49 %	41 %	4 %
Rural households (zone III)	6 %	61 %	29 %	5 %

36. Based on the above, a variety of different financial mechanism to support the financing of SWH panels could be considered, including:

Bank and Other Lender Loans.

37. The banking sector in Albania is quite liquid and has been strongly growing during the recent years. Loans are primarily disbursed via the commercial banking system. However, some micro-credit entities have been providing loans as well, mostly to SMEs. Credits are based on banks' own funds and on soft loans from International Finance Institutions (IFIs) or donors.

38. During 2005, the banking system was improved and developed both in commercial and consumer lending market, of which the latter has been steadily increasing during the recent years. The consumer lending market in 2005 was dominated by mortgages, which counted for roughly 90% of the total lending volume for this category. The remaining part was used to finance cars and/or other consumables. At the end of 2005, the credit to economy constituted 15,3 % of GDP, marking a growth of 9 % compared to 2004. At the same time, the number of banks active in the lending market increased creating a very competitive environment.

39. Regarding SWH Panels, banks have expressed interest to pursue this market area. The price of the panel makes it a relatively small risk item and the panel itself may be used as collateral. This interest was confirmed in the interviews with a few selected banks in October 2006, expressing their readiness to lend for SWH purchase and also accept the SWH equipment as collateral up to 60-65% of their purchasing value without an additional guarantee. The total lending potential for the SWH market in Albania has been estimated to be around 20 million euros over the next 5-6 years, which the banks should be able to easily cover by using their own resources.

40. For all the interviewed banks, the primary qualification criteria for individual (family) applicants continues to be the family income, which in general would need to be in the range of at least USD 300+ per month for a loan needed for a typical SWH investment of USD 1,000. Based on the results of the market survey, the majority of the targeted households in Albania should be able to meet this requirement.

41. A typical interest rate for the local currency (lek) loans is the 12-month's treasury bill rate (about 5,8% at the time of the survey) + 4-6 % risk premium depending on the bank, the client and the estimated risk (situation in October 2006). According to one bank, this premium/margin could go further down to even 3%. For euro based loans, the base rate is 12-month Euribor. The banks' premium/margin on the top of that is usually the same as for lek based loans. The available loan duration looks adequate for SWH investments. For one interviewed bank this was up to 7 years for hotels and up to 12 years for individuals.

42. The situation described above is confirming the earlier conclusion that there does not seem to be a need for any new revolving loan fund type of arrangement, as the banking sector is quite liquid already and is actively searching for new lending opportunities. Also, given the fact that the banks appear to already accept the SWH equipment as collateral up to 60-65 % of their purchasing value and in smaller loans may just need to look the net annual income of the applicant families, there is not likely to be a need for a specific guarantee fund either, with the exception of the ESCO type of companies, which still could require the backing of some kind of guarantee instrument. Another special group in the need for guarantees for launching some new type of financing instrument could be the targeted clients in those rural areas, which are not covered by the network of commercial banks yet or which for some reason do not currently qualify for bank lending otherwise, but can still be seen to have enough income to be attractive clients for the SWH market.

43. In general, the bank loans seem to be quite realistic option for financing SWH investments, given the strong liquidity position of the banks in Albania and the approach adopted by several banks to explore new niche markets.

### Leasing

44. Albania introduced the "Leasing Law" only last year, in May 2005. Since then, four private leasing companies have been established, including:

- Tirana Leasing – the Leasing arm of the Tirana Bank;
- LandesLease - a privately owned company
- Bi Leasing – an Albanian privately owned company; and
- Raiffeisen Leasing where the majority shareholder is RZB Albania.

45. In accordance with the Banking Law, the commercial banks in Albania are licensed to establish leasing companies and operate them in the market.

46. A typical leasing deal in Albania is a financing lease (compared to an operating lease), and as such very similar to a bank loan, except the collateral requirement imposed by the banks. Even this difference, however, may disappear, as all the interviewed banks confirmed that they would also be willing to accept the SWH equipment itself as collateral up to 60-65 % of their purchasing value. This may leave leasing otherwise similar, but just more expensive financing option compared to a normal bank loan.

47. Leasing has also been facing many problems and challenges to become efficient. Despite the law being passed last year, there are no regulations in two important areas: fiscal and accounting. The Leasing Law does not mention the fiscal and accounting treatment of lease transactions and

there are no regulations issued from the respective bodies in this regard. Efforts are underway, however, to address these important concerns.

48. The National Accounting Committee has been working for the introduction of new national accounting standards in compliance with IAS, which has recently been adopted. The new standards (standard No. 7) will address the accounting treatment of lease transactions. Consultations are also being held with the fiscal authorities to address the important issue of the fiscal treatment of lease transactions. Current taxation regulations deal only partially with leasing, namely imposing VAT payment on financial lease payments, creating another obstacle for the leasing market.

### Vendor Financing

49. As mentioned before, the SWH vendor market in Albania is currently comprised by three manufacturers and a similar amount of distributors. The estimated share of domestic production of all the SWH panels in the Albanian market is about 22 %. The overall market for SWH panels amounts to about 1 million euros annually.

50. Offering sale on credit for SWH panels will depend a lot on the amount of the annual turnover as well as the liquidity position of the vendor under consideration. Given the current figures and the lack of experience of the financial management of the local private companies in general, it seems that neither manufacturers nor distributors will be able to finance the targeted growth in the market without additional and substantial back-up by an experienced financial entity.

51. On the positive side, some vendors have already allowed a few clients to pay by instalments with good experiences so far, which may pave the way for new financing arrangements by using vendor or ESCO type of financing.

### Solar Energy Service Companies (SESCO)

52. Solar Energy Companies (or SESCOs) follow an approach similar to Energy Service Companies (ESCOs), where an ESCO will finance the initial investment together with a performance guarantee to secure the promised savings, and the client will pay back to the ESCO from the achieved savings, which will be shared (for the agreed duration) between the client and the ESCO.

53. The proposed solar energy services companies (SESCO) would basically operate in a similar way on a fully commercial basis, catering the requirements of the potential users and offering least costs energy services in general rather than just promoting SWH. The SESCOs could fill up the missing link between the manufacturer and the users and meet the requirements of diverse users and end-use applications by offering a variety of services such as:

- energy supply against payments related to energy saved;
- installation of solar thermal with or without an O&M contract;
- performance contracting; and
- technical design/consultancy

54. A local electric utility could also act as a SESCO as a part of its overall demand side management strategy, and with a possibility to collect the payments for SWH devices through the

electricity bills from achieved savings. Until now, however, the MoETE supervising the operations of the KESH has not been warming to such idea

### Financial and fiscal incentives

55. A variety of specific financial and fiscal incentives to support the growth of the SWH market can also be considered. In elaborating these financial market stimulation schemes in further detail, the following lessons learnt from the past activities dealing with different public incentive schemes need to be taken into account (as summarized also in the draft project document of the global SWH project) so as to design a financial and fiscal scheme that can effectively boost the market, but without risking its longer term sustainability.

56. *Short-term incentive programs may just disrupt the market:* The stability and, in particular, the predictability of financial incentives is a key condition for sustainable growth of the solar thermal market. For this reason, regulations or incentives based on law have typically stronger effects than short-term incentive programs based on ad-hoc budget lines. The latter have been often applied, at the national or regional level, but their short-term success has often turned into a barrier to growth in the long-term. If the budget of the incentive program is not enough to cover the demand, the funds can be disbursed long before the end of the budget period. In this case, the targeted clients typically expect a reactivation of the incentive program and postpone the purchase of a solar system. This leads to short-term overheating followed by breakdown of the market, when incentives are temporarily stopped.

57. The impact of such a stop-and-go dynamic is particularly negative, as the long-term growth of solar thermal relies on the development of a strong network of specialized distributors, system designers and installers, which can get quite discouraged by the instability of the political framework. The suggestion is that whatever incentives are applied, they should be set and be fully predictable over a long term.

58. *Simple interaction between investors and public hand:* The administrative burden linked to direct incentives is often too high. The transaction costs should be minimized. In those countries where incentives are provided by different kind of authorities (national, regional, local), the national government should make sure that a potential investor can get information and apply for all incentive programs by interacting with a single office, like the national or regional energy agency.

59. Finally, it is essential to develop the support mechanism in such a way that it will encourage the suppliers for further price reduction and system optimization through a competitive environment, while at the same time maintaining adequate product quality.

60. The competitive disadvantage of solar thermal and renewables in general is to a great extent politically determined. Fossil fuels and nuclear power often receive substantial subsidies, directly and indirectly. The society pays for their external costs in terms of environmental damage, health risks, insurance premiums and import dependency, with heavy consequences on the international political stability. In order to create a level playing field for solar water heating and renewables in general, the possible forms of financial and fiscal incentives to be adopted by the Government could

include a direct SWH user subsidy or internalisation of environmental externalities and social costs of the competing fuels, for instance, through a CO<sub>2</sub> or energy tax.

61. Financial support for SWH could also be financed by the revenues from specific levies on conventional heating fuels, similar to the model of the German law for the promotion of renewable electricity. This scheme would have an advantage to create a double incentive to switch to renewable heating and to be neutral from the point of view of public budgets.

62. While in Albania, neither one of the options discussed above has been seriously considered yet, the “Law on Energy Efficiency” adopted in April 2005, includes provisions for the creation of an Energy Efficiency Fund. The Ministry of Economy, Trade and Industry has also agreed to contribute to the promotion of SWH systems with an amount of 100,000 euros per year for 5 years by using the budgetary resources of the Ministry.

#### Green heating certificates

63. The green heating certificates are market oriented mechanisms, which might be an interesting option to stimulate the growth of solar thermal and residential heating in general. Additional research is needed, however, to investigate the technical and political feasibility of these kind of schemes in Albania. Given the decentralized nature of most heating applications, developing specific quotas for them would also require the improvement of statistical data collection in order to create the conditions for reliable and constant monitoring of the data. So far, official statistics concerning solar thermal (and other residential heating applications) are hardly available.

#### Interest rate softening:

64. On interest rate subsidies, there have been some efforts by the GoA to introduce such a Facility. So far, there have been two schemes in Albania subsidizing the interest rates:

- By using a grant provided by the Greek government, the GoA tried to subsidize half of the interest rate of mortgage loans for the people, who lost their homes in the 1997 financial crises. This scheme was to be run with several commercial banks, but its success has been very limited - primarily because the project never really became effective and the amount disbursed was very small; and
- By using budget funds, the government used to subsidize half of the interest rate for a selected group of government officials and other public employees for mortgage loans. This scheme was run by RZB Albania and it was claimed that certain success was achieved. Currently, the scheme has been restructured and operates under different criteria.

65. In principle, interest rate subsidies and the associated low interest loans could be used as a part of the overall SWH marketing package to generate consumers’ interest and encourage the purchase of SWH panels among the targeted residential and commercial users, and could be an effective measure to help banks to build loan portfolios in specific target sectors. The advantage would also be that by assuming the entire credit risk, the bank’s interest are fully aligned with those of the donor, both in terms of minimizing defaults and continuing lending activity after the donor support has been phased out. On the other hand, this approach is subtle and therefore will only work in larger SWH markets where banks can be confident of building sizeable loan portfolios quickly. In



less developed markets, transaction costs might outweigh the benefits for the bank. Concerns are sometimes also expressed about the market distortion.

### Guarantees

66. Albania does not have a rich history in guarantee facilities. One guarantee facility was established by the World Bank and the GoA during 1997-2003 in order to issue political risk guarantees to foreign investors in the country. The WB provided US\$ 10M to backstop any claims from political risk losses incurred by the investors. The guarantee offered to cover 100% of the investment and this was one of the main features that made the facility to work. In addition, efforts were initiated to leverage additional funds through the reinsurance with the public and/or private insurance market, but this was not finalized. By the end of the project, more than 45% of the funds had been disbursed with guarantees worth roughly US\$ 8,7M. Through a partnership with the EBRD, an effort was also made to use this guarantee fund to soften the interest rate payments of the loans made to SMEs through the EBRD credit line, operated by a local commercial bank. Because of several constraints, and probably a lack of interest from the commercial sector to get involved in a program with increased administrative burdens, this project didn't work. As for now, there have not been any other experiences involving guarantee schemes in Albania.

67. In another development during the last 2-3 years, private insurance companies have started to issue guarantees to the banks for loans made mostly to business customers, which, for some reason can not provide other collateral for their borrowing. These guarantees usually cover 70-80 % of the loan amount, but can also go up to 100%. The guarantees generally come with a steep price tag of 2% on top of the interest rate charged by the banks themselves. It is estimated that 6% of the current insurance market comes from this activity with an annual value of approximately EUR 1,6M.

68. In general, the guarantees supported by external donors are most effective at addressing elevated banker perceptions of risk: Once a bank has gained experience in managing a new portfolio of loans, they are in a better position to evaluate true project risks. Partial risk guarantees can ensure debt-servicing payments to selected lenders or other investors in a project, usually for specific time periods or exposure levels. Partial credit guarantees can also be used to extend loan repayment periods, thus improving the project's cash flow. Both forms of guarantee can motivate banks to lend for projects that they would perceive too risky otherwise. Buying down the risk can mean lower costs of financing for the borrower or decreased security requirements. Other types of guarantees could be linked specifically to the performance of the SWH systems or to underwrite their collateral value (the latter reducing the risk of the targeted financiers as regards their lack of experience of the second hand market, if SWH systems are used as collateral)

69. Regarding the use of the guarantees in Albania to promote the purchase of SWH panels and as discussed before, they could be useful for some specific target groups provided that a right approach is taken to address the identified barriers and that private underwriters will be involved.

70. Recently the GoA has signed a deal with the Government of Italy on a Credit Line for SMEs. It is anticipated that a part of this Credit Line, close to EUR 2,5M, will be used to set up a guarantee fund. The beneficiary of the project is MoE. While the project is still in the inception phase, its

further progress and relevance for advancing the commercial loan market for SWH panel purchase is worth following up

71. Fiscal incentives: Apart from straight forward subsidy schemes, fiscal measures normally have a more structural impact on the market development. These can be found in tax-deduction for private home owners (as implemented, e.g., in Greece) or corporate tax incentives for companies or non-profit organisations. The possible import duty exemptions for SWH equipment and/or materials to reduce the price of SWH systems also fall under this category.

72. By taking into account the above, the following recommendations can be made for designing a successful financial-incentive program for SWH panels:

- Educate the public about SWH panels' technologies and the available incentive program;
- Develop a long term, coordinated package of financial incentives, which have enough budgetary resources to back them up. These incentives can decrease over the time as the market matures, but they have to be predictable (i.e the targeted stakeholders need to be aware, to the extent possible, of any expected changes over a longer period);
- Allow flexibility for program modification and fine-tuning on the basis of the customers' response, but without creating a damaging "stop and go" dynamics and without punishing the early decision makers;
- Design an easy and concise application process;
- Allow also the public sector consumers to use incentives;
- Ensure utility cooperation to the extent possible;
- Track the details of program use and costs, as well as energy savings, and make this information publicly available and easily accessible.

#### *Other Planned or Ongoing Projects*

73. A SWH market promotion project supported with 300,000 euros by the *Austrian Development Agency (ADA)* was started in October 2005, in parallel to the ongoing PDF B phase of the UNDP/GEF project. The main local counterpart for the project is the Albanian Center for Energy Efficiency (CEE). The main stated activities of the project consist of:

- monitoring the performance of 4-6 already installed SWH systems, with 2-3 systems of local production;
- training local producers to improve their product quality;
- a market survey targeting a total sample of about 600-800 potential clients (which eventually will be transformed to something else given the market survey already conducted under the PDF B phase of the UNDP/GEF project);
- solar seminar;
- training of local experts abroad (2 from EEC, two from outside);
- improvement of the curricula of vocational schools, including 2-3 grant financed demo projects;
- 10 grant financed demo projects (thermosyphon) - 7 for schools, 3 for public buildings;
- introducing a national quality assurance and labelling (certification?) scheme; and
- public awareness raising

74. The development of the GEF project has been closely co-ordinated with the mentioned ADA project identifying the gaps and feasible collaboration mechanisms for facilitating the targeted market transformation in a broader scale. For further details, see sections “Project Financing” and “Project Management and Implementation Arrangements”.

75. The *KfW* has been supporting a 9 million euro project to promote small hydro and energy efficiency with a possibility to support also SWH demonstration projects or, if applicable, possible incentive schemes under the energy efficiency window. The review of the proposals to receive this support s currently underway.

## **Part II: Strategy**

76. The GEF’s experience to date has shown that the barriers being removed generally relate to five market characteristics: policy; finance; business skills; information; and technology. As identified in the second Climate Change Program Study (CCPS2, 2004) as well as in the new draft programming framework for GEF-4, the removal of market barriers relating to these qualities “can form the basis for a market development strategy that is applicable to all of GEF’s Operational Programs as well as being replicable, sustainable, and cost-effective”. The project goal, objectives and expected outcomes have been defined on the basis of this strategic approach.

### ***Project Goal and Objective***

77. The long term goal of the project is to accelerate a sustainable market development of solar water heating in Albania with good quality products and services. Under the estimated business as usual scenario, 184,000 m<sup>2</sup> of new solar thermal panels would be installed in Albania by 2020, while in the Alternative scenario, new solar thermal installations of 520,000 m<sup>2</sup> are expected by 2020. The GHG emissions reduction resulting from this alternative scenario has been estimated at 146,000 tons of CO<sub>2</sub> per year in 2020 or at the cumulative amount of over 800,000 tons of CO<sub>2</sub> by 2020 from the project start<sup>6</sup>.

78. The objective of the project during its lifetime is to accelerate the market development of solar water heating in Albania with the aim of facilitating the installation of 75,000 m<sup>2</sup> new solar water heating capacity during the project and an annual sale of 20,000 m<sup>2</sup> reached by the end of the project and with continuing growth to reach the stated longer term goal of 520,000 m<sup>2</sup> of total installed capacity by 2020.

### ***Project Outcomes and Outputs***

79. The project intervention is presented according to the logical framework approach. The essence of this approach is that outputs are clustered by outcomes: sustainable growth in demand by an i) enabling policy framework, ii) enhanced awareness and iii) available financing, iv) supply of reliable technology and services and v) replication, which together will achieve the project

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<sup>6</sup> In calculating the CO<sub>2</sub> emission reduction impact, it has been assumed that the SWH systems will reduce the need for new fossil fuel based power generation capacity running on oil and the direct use of LPG, resulting an average annual emission reduction factor of 0,28 tons of CO<sub>2</sub>eq per installed m<sup>2</sup>.

objective. The envisaged project components leading to these outcomes are summarized below with further details in the Logframe Matrix in section II.

80. The envisaged co-ordination and cost-sharing arrangements with the parallel ADA supported project are discussed in further detail in sections “Project Financing” and “Project Management Arrangements”. The specific outputs and set targets are presented in further detail in the project’s logframe matrix, in section II.

**Outcome 1: An enabling legal and regulatory framework to promote sustainable SWH market (*policy*)**

81. The outputs and activities under this subcomponent will raise the awareness of the key national policy makers on the benefits of SWH and facilitate the development and adoption of a legal and regulatory framework conducive for sustainable development of the SWH market in Albania.

82. Typical policy instruments to promote the SWH market include: 1) obligations to use solar water heaters in certain types of buildings, such as the Spanish, Cyprus and Israeli models; 2) general energy performance requirements in the building regulations, which can create a good basis for solar water heaters; 3) a regulatory framework for quality control and certification; and 4) different direct or indirect financial and fiscal incentives, as discussed earlier in this document. While the experiences gained from in and outside the EU show that obligatory regulations can be the most single effective tool to rapidly accelerate the solar thermal market and reach a level achieved, e.g., in Cyprus and Israel, their feasibility and political acceptance needs to be assessed on a country-by-country basis.

83. By building on the earlier discussion about the existing legal and regulatory framework in Albania, the specific laws and regulatory measures to be looked at the Albanian context include:

- Secondary legislation for the 2005 “Law on Energy Efficiency” to establish the Energy Efficiency Fund and to set criteria and application procedures for the financial incentives to be provided through the Fund for supporting the SWH investments;
- Updating of the 2002 Law “On Creating Favourable Conditions to Build Up New Sources for Electricity Generation”, to allow import duty and related tax exemptions also for imported SWH equipment and materials, as discussed in further detail in the chapter “Situation Analysis”;
- The Power Sector Law, adopted on May 23, 2003 for the development of power sector in Albania includes some articles about the promotion of renewable energy sources, but with a focus on renewable energy sources for electricity generation only. Complementary provisions should be made to the law to include also solar thermal applications;
- Amending the Government Decree on Energy Building Code, No. 38 January 2003, to allow approval by Municipal Councils of the Territory Adjustment and/or the National Council of the Territory Adjustment of construction licenses for residential and service sector building SWH installations.

- Reviewing the “Law on Energy Saving in Dwellings and Public Buildings” to make sure that SWH is adequately taken into account in the calculation methodology as an option to meet the defined energy performance (EP) criteria. Preferably, the minimum requirements should be set dynamically: a long term, gradual increase of the minimum energy performance would provide an incentive to make a long-term investment such as solar thermal; and
- A Government Decree to set up the minimum standards for the SWH systems, a system of certification and the procedures for the labeling of the SWH systems, in accordance with the relevant EU regulations and taking into account international best practices and, to the extent possible, proposed or adopted quality control systems in other countries (such as the European Solar Keymark);

84. In addition, the feasibility of other complementary or alternative measures can be explored such as:

- Permission to start the construction of a new building should be granted only after an assessment of the potential for the use of renewable energy sources in that building has been done;
- Obligation to install solar thermal systems into certain categories of buildings with large heat consumption (swimming pools, hospitals) or public buildings with high visibility;
- Obligation to install piping for hot water up to the roof of new buildings and on buildings undergoing a major renovation. This increases only marginally the costs at the time of construction/renovation, but makes it much easier and cheaper to install a solar thermal system later on;
- Abolition of regulations hampering the diffusion of solar thermal. In some areas, it is necessary to ask a permission to install a solar system on the roof. The long procedure discourages potential users. The permission may even not be granted, for example, due to aesthetic restrictions, often set without reflecting on the consequences for solar energy;
- Household applications (dishwasher, washing machine) compatible with solar thermal systems (adapted to get hot water from pipes) should be widely available on the market. An “A” label should be given only in this case. Customers should be explicitly and clearly informed, if this is not the case; and
- Most hot water storage tanks sold in the market should be compatible with solar thermal, and make possible integration at a later time. Customers should be explicitly and clearly informed, should this not be the case.

**Outcome 2: Enhanced awareness and capacity of the targeted end-users and building professionals to consider and integrate SWH systems into different types of buildings (information).**

85. In most countries, solar thermal is not yet perceived as a standard option. Building the trust and raising the awareness among the targeted end users, building constructors, architects, mechanical and HVAC engineers, plumbers, local government and business decision makers about the technical

feasibility and the environmental and cost benefits of SWH technology is, therefore, essential for positive market development.

86. The outputs and activities under this subcomponent will complement the marketing efforts of the private sector by raising the awareness of the targeted end-users on the benefits, economic feasibility and other characteristics influencing a positive purchasing decision. The SWH industry in most countries consist of relatively small, SME type of enterprises, which have difficulties to launch systematic and effective promotion campaigns themselves<sup>7</sup>. As a neutral, from commercial ties independent actor, the project may also be in a better position to provide impartial and better trusted information to the targeted end users about the characteristics, financial and environmental benefits of the technology, the available suppliers and installers and public support available.

87. The general public awareness raising activities will be complemented by educational activities at secondary schools and at the architecture, building, energy and environmental engineering branches of the university (linked also to the envisaged use of the testing facility under component 4 for educational purposes) as well as by specific articles or supplemental annexes in the professional magazines dealing with energy and environment, thereby targeting those professional groups that are often influencing the decision making of the final end-users

88. Existing learning and training materials from other countries will be made available and will be translated and revised to the Albanian situation. The “train the trainer” and “learning by doing” approaches will be used to the extent possible. Beside addressing the integration of solar system into building design and into their heating and cooling installations in general, the technical engineering of larger commercial solar system will also be addressed. For further details about the supply side strengthening strategy and the activities associated with it, see also activities under Outcome 4 and in Annex I.

89. In order to fulfill their purpose, the campaigns and the information mechanisms and channels to be used need to be carefully designed to reach the actual decision makers. This can be either in a specific market segment (single-family house owners, hotels, larger public sector buildings, industrial facilities etc.) or a geographical area, in which the built environment, the climatic conditions, the solar thermal market structure as well as the psychological and economic preferences (or other priorities and decision making “drivers”) of the targeted clients need to be taken into account. In areas where solar thermal is not yet widely used, demonstration projects can also be a useful tool to support awareness and promotion campaigns.

90. The activities will be coordinated by the PMU, which will seek to establish contacts and enter into co-operation with various information channels and program formats in TV and radio and use also printed materials (newspaper and magazine articles, leaflets, posters), public discussion events etc. in reaching its objectives. The design of the marketing campaign(s) is envisaged to be supported by professional market research and marketing companies.

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<sup>7</sup> The marketing and sales cost in the supply chain can easily run up to 50-60% of system cost, if there is no general awareness, whilst it could be reduced to 20-30% provided that the basic awareness raising can be supported by other means.

91. There is no need to start the preparation of public awareness material from the scratch, but useful materials can be made available through the knowledge management component of the global SWH project, which is further envisaged to co-operate and facilitate contacts with organizations such as European Solar Thermal Industry Federation (ESTIF), the Soltherm Europe Initiative ([www.soltherm.org](http://www.soltherm.org)), the International Solar Energy Society (ISES) as well as with SWH projects in other countries, from where results, experiences and best practices can be taken and applied for local conditions. To the extent possible, materials will also be drawn from the already existing, highly visible demonstration projects in Albania. This will include projects implemented under normal commercial conditions by the private sector, thereby demonstrating not only the technical, but also the financial feasibility and benefits of SWH. Hence, beside complementing the marketing efforts of the private sector, the approach to build and utilize the materials already available reflect the incremental nature of this component.

**Outcome 3 Increased demand for SWH systems by the availability of attractive end-user financing mechanisms or other delivery models, such as SESCOs or utility driven models (finance).**

92. Component 3 is designed to generate demand for the technology through applicable consumer financing and, as applicable, financial support schemes with an objective to leverage at least USD 15 million (about 50% of the total investments needs) for the set target of 75,000 m<sup>2</sup> of new SWH capacity through these financing mechanisms.

93. Beside the cash market that continues to exist in Albania, bank lending has emerged as one of the most prospective options for financing the purchase of SWH systems. While the general financing environment in Albania has rapidly developed and matured over the past few years, financing of SWH investments continues to be an area, where the banks have not collected much experience yet and may need some marketing or other support to build up the initial loan portfolio. The training for loan officers from several commercial banks operating in Albania could be organized through the Bankers' Association or the Institute for Bankers' Training.

94. The main aim of the training sessions would be to familiarize the bankers with the SWH panels' market, its trends and development and financing experiences from other countries. The sessions can be run by experienced international experts in the SWH panels' area by making use of industry data and case studies to educate bankers on the advantages of and lending opportunities for this alternative energy source.

95. By building on the outcome of the initial market survey, the project also aims to support the development and introduction of new financing instruments such as concessional loans, vendor financing or financing through SESCOs to effectively stimulate the market, and which could be offered to the consumers as a part of the overall SWH marketing campaign. In this respect, the project seeks to raise the awareness and build the capacity of the local financing institutions and other key stakeholders, such as local vendors, power utilities etc. to structure and introduce new or apply existing financing products or other delivery models, which are expected to be attractive for the targeted end users and thus promote the demand.

96. GEF resources under this component are not sought for the actual capitalisation of any new financing instruments, but for technical assistance to support their design, development and launching. The project is seeking to combine the different available public and private resources into a coherent and sustainable public incentive and financial support scheme, which can accelerate the SWH market development and leverage additional commercial financing for SWH investments, while also taking into account the sustainability concerns discussed earlier in chapter “Situation Analysis”.

97. In structuring financing for the possible new financing instruments, the project is looking forward to co-operate, among others, with the following partners:

- The Ministry of Economy, Trade and Energy of the Government of Albania with a commitment to support the SWH market development with the budgetary resources of the Ministry by at least 100,000 euros per year for 5 years as well as by presenting amendments to the Law “On Creating Favorable Conditions to Build Up New Sources for Electricity Generation”, adopted in October 2002 to exempt also SWH equipment and materials from import duties and other corresponding taxes;
- The Ministry of Environment with a commitment to contribute 150,000 euros over the duration of the project to support its activities;
- The Government of Italy with an intention to contribute up to 1,000,000 euros over the duration of the project for the establishment of a financial support mechanism for the acceleration of the SWH market in Albania (not yet confirmed);
- Private commercial banks and, as applicable, insurance companies and rural micro-credit entities in Albania;
- Local SWH manufacturers and distributors as well as companies, which have expressed interest to explore the opportunities to start to operate as SESCOs;
- As applicable, the local electric utility KESH; and
- Other potential partners such as the KfW supported renewable energy and energy efficiency project and EBRD, of which EBRD has just recently completed a Demand Study for the Regional Environmental Credit Facility. This project is seeking to finance investments by Albanian entities in the EE/RE sectors and is expected to be in operation by the end of 2007.

**Outcome 4: A certification and quality control scheme applicable for Albanian conditions and enhanced capacity of the supply chain to offer products and services promoting sustainable SWH market (*technology and business skills*).**

#### *Product Standards and Certification*

98. After creating the demand for the technology, component 4 is about ensuring that consumers have a satisfactory experience with it. Certification and quality assurance contribute to a trouble free use of solar water heating and subsequently increase consumer confidence in the technology. As such, it should be seen as an explicit part of awareness campaigns and all other incentives to stimulate the market and gain public acceptance.



99. A quality control scheme typically consists of:

- product standards looking at safety, performance and durability of the system components (such as collectors, tanks etc.) as well as the system as a whole (i.e. configuration of the components);
- a methodology for testing; and
- a certification procedure (basically a surveillance system that guarantees constant quality).

100. Given the current level of maturity of the Albanian market, the quality control system is expected to start as a voluntary system driven by the supply side - i.e. the responsibility for the certification will be laid upon representatives of the supply side of the market, which would need to submit their products for independent testing before they can label their products. All the test documents will be made available for the selected institute for verification, which will then issue certificates for products that meet the standards. Since the certification is mainly technically driven, a practical and cost effective way of issuing the certificate at this market stage would be that the testing institute will decide on granting the certificate. In this process, a committee representing the interest of the supply side must play the role of a 'watch dog'. The testing results should be public and possible to replicate, if doubts about the results are raised.

101. The system of SWH standards and certification will be developed in co-operation with the Albanian General Directory for Standardisation. In due time, after further market experience has been gained, the standards can be harmonised and imposed under the normal Albanian building products standardisation system. While the local circumstances such as the climate, the maturity of the market, availability of components and possibilities for surveillance of a certification system (such as adequate testing facilities) need to be taken into account during this process, the well developed EU/CEN product standards and the Solar Keymark certification scheme are sought to be duplicated to the extent possible or at least used for general guidance to select appropriate issues, so as to serve harmonization and to provide a common baseline product quality also for Albania.

102. At the product level, a set of requirements and criteria will be developed that proves the conformity of the products with the standards. At the current phase of market development in Albania, the criteria are mainly expected to look technical quality issues: safety, performance and durability. All standards should be published in relevant and publicly accessible documents, available through a website. A simplified version will be made available for promotional use.

103. Given the voluntary nature of the system, it is also essential for its proper functioning that it will be formally accepted by all the key supply side stakeholders in Albania. The adequate consultations during the development will, therefore, be important. For this purpose, the supply side will be encouraged to establish a specific committee and/or appoint a representative for these consultations, which can later, as applicable, form the basis for the establishment of a specific industry and/or trade association.

104. As the market matures, standards can become mandatory and regulated more formally by an independent certification institute. In such a phase, the certification mechanism will also involve organisational issues and put more emphasis on the quality control of production and testing facilities and on the process of issuing the certificate. Over the time, the certification mechanism

will have the potential to grow into a full sized formal certification system like the Solar Keymark. Given the current status of the market in Albania, however, this is not expected to happen within the duration of the project. Manufacturers with export ambitions have an option of gaining a Solar Keymark abroad.

### *Compliance (Testing)*

105. The introduction of a certification system will need to be complemented by adequate testing facilities to check compliance, which to large extent is still missing in Albania. Test facilities will be established and methods implemented to test both Albanian, and as applicable, imported systems according to the adopted standards. The applied quality control system for the testing will be tuned to the demands of the adopted certification system. While some product and system tests could also be conducted abroad (which should also be recognized in Albania, if done by internationally certified testing laboratories), it is considered as essential for the sustainable promotion of the SWH market to have some basic testing facilities also in Albania to serve not only the certification needs, but also the product development, training and education.

106. The consultations during the project preparatory phase have led to the decision for the purchase of a mobile (container) testing facility, which will be hosted and managed by the local technical institute (Harry Fultz) in Tirana with support from the Albania-EU Energy Efficiency Center and the Austrian Development Agency. This testing facility is expected to gradually grow into a recognized center of excellence for promoting the SWH technology in Albania with following functions:

- Performing approximately 15 tests of solar collectors (in accordance with the European Standard EN 12975-2) and 5 tests of SWH systems per year for Albanian manufacturers;
- Product quality and certification services in order to enable the manufacturers to check if their products are in accordance with the requirements;
- Training services for policy makers, local government and business decision makers about the environmental and cost benefits of solar thermal technology;
- Consultancy services as well as practical information for the manufactures, suppliers, importers, installers and the consumers on the public support available;
- Focal Point of a future “Albanian Solar Thermal Industry Association” with the involvement of different key stakeholders to develop the local SWH market.

107. The staff conducting and supervising the testing will be trained by other European test institutes.

### *Training and Recognition of SWH Installers*

108. For the installation part, a set of criteria will be developed for showing the know-how and capacity of the installers to install units at acceptable level. As highlighted by the EU supported “SUNTRAIN” programme, “Training of installers is not only important to ensure good quality of the installation. In many situations, installers play a decisive role in marketing solar thermal systems, because they have a strong influence on the decisions of their customers. Installers, which

are experienced with solar water heating systems are likely to be more motivated to recommend solar thermal systems to customers, while the installers, who have not yet acquired the necessary skills tend to recommend more conventional heating systems”.

109. For the introduction of a recognition scheme for SWH installers, the activities under this component will support the development of a course and exam for SWH installers. Each installer passing the exam will be recognised as a “Solar Trained Installer” and will be able to display a quality logo in their promotion. Solar trained installers will be included in a publicly accessible list and included in the project’s awareness campaigns, thus creating incremental promotional value for these companies or individuals. They will also be entitled to free technical consultancy for engineering, commissioning etc. The materials to be made available through the knowledge management component of the Global SWH project, including the EU supported SUNTRAIN programme, will be utilized to the extent possible and adapted to the Albanian conditions.

110. While for the household system installation, the main target group for training will be the plumbers, for the commercial building sector the training activities will focus on mechanical / HVAC engineers. Integration of solar system in heating and cooling installations will be part of training scheme, and in particular for larger commercial solar systems, the technical engineering aspects will be addressed.

111. The training provided is also sought to be embedded into the curricula of vocational schools in order to be continued after the project. The training facilities can be combined with the testing facilities with an objective to provide the theoretical and practical background for designing, building and installing solar thermal plants. The main content of the training can consist of: i) preconditions for solar energy utilization, ii) the solar resource (solar potential), iii) design of solar thermal system designs, iv) types of collectors, their materials, and performance criteria, v) other control, vi) manufacturing possibilities, vii) installation, viii) system design of small and large-scale solar thermal systems, ix) European standards for solar thermal collectors and systems; and x) test procedures and quality requirements.

#### *Capacity Building of the Local Hardware Supply Chain*

112. The establishment of the quality control/improvement scheme discussed above will be complemented by technical assistance to the local SWH supply chain to meet the requirements and to improve the quality of their products and services in general. This technical support is not going to be limited to local manufacturers, but can also facilitate the access of international manufacturers to enter the market, either alone or through joint ventures, so as to promote competition and, as applicable, technology transfer.

113. Beside the training activities already discussed, the specific forms of technical assistance to be offered to the local supply chain are expected to consist of:

- Direct technical assistance for local supply side entities in getting certification for products and installers. At the initial phase, this support can be facilitated by the project free of charge (each supplier can demand for technical assistance for a limited duration in order to improve his product or installation design), but should gradually be transferred into a self sustaining

service provided by a recognized centre of solar expertise such as the suggested Albanian Solar Centre or Solar Thermal Industry Association (For more details, see Outcome 5 and Annex 1, “Development of the SWH Supply Chain ”);

- Study tours, match making missions and trade seminars can be organized for local SME's interested in import or manufacturing of SWH and in getting contact with foreign suppliers, experiences and lessons learnt, thereby facilitating technology transfer. The foreign contacts can aim at countries, which are well developed on solar market like Greece and Austria. A spin off effect of these missions can be that companies with the same interest can meet and, as applicable, form a basis for a national SWH industry or trade association;
- A series of solar seminars in Albania can transfer know how for the various target groups: producers, importers, plumbers, planners, architects, mechanical and HVAC engineers, builders and housing associations. The program for the seminars will be compiled from product knowledge, knowledge of improved thermosyphon systems, theoretical backgrounds, costs, quality systems and other outcomes of the project - all prioritised towards the target groups. Technical materials, syllabus etc., will be prepared, distributed and made available also through the internet.
- Support for evaluating the feasibility and for introducing new delivery and marketing approaches such as vendor financing or the scheme of “Guarantee Solar Results” piloted by some suppliers in other countries, including a specific performance contract similar to the one used by Energy Service Companies (ESCOs) in the energy efficiency field.

114. To support the launching and early operation of an Albanian Solar Centre or a Solar Thermal Industry Association (see component 5), the supply side capacity building activities described above are sought to be channelled, to the extent possible, through this new entity. .

115. For further details about the project’s supply side capacity building in general and the issues to be consider in that respect, see Annex 1, “Development of the SWH Supply Chain ”);

**Outcome 5: The provided support institutionalized and the results, experiences and lesson learnt documented and disseminated (including monitoring, learning, evaluation and other feedback for adaptive management).**

116. Component 5 is designed to ensure continuing SWH market monitoring and promotion in Albania after the project has ended, and to support next generation project designers and governments with experience and recommendations from the project by compiling and disseminating the project results and lessons learnt, thereby also serving the knowledge management component of the global SWH project.

117. While the required follow-up actions at the policy side are expected to be addressed under outcome 1, the outputs and activities under outcome 5 will focus on facilitating the required follow-up activities in the field of further capacity building, market promotion, supply chain strengthening and financing needs, including support for the establishment of sustainable institutional structures for that such as an Albanian Solar Center or a Solar Thermal Industry Association, which could

continue the market monitoring and support for facilitating sustainable growth of the SWH market on a self sustaining basis. For further details, see Annex 1, “Development of the SWH Supply Chain”).

### ***Project Indicators, Risks and Assumptions***

118. The key indicators of the success of the project are as follows:

- The target of 75,000 m<sup>2</sup> new installed SWH capacity reached by the end of the project.
- An annual sale of 20,000 m<sup>2</sup> reached by the end of the project with a growing trend at the average rate of 20% per year to reach the stated longer term goal of 520,000 m<sup>2</sup> of installed capacity by 2020;
- Adoption of a national system for adequate product standards, labelling and quality control scheme, to the extent possible harmonized with international schemes such as CEN/GENELEC “Solar Keymark” supported by the EU;
- Enhanced capacity of the supply chain to offer their products and services and verified customer satisfaction

119. The main envisaged challenge and at the same time the risk will be ensuring adequate and concrete policy support of the Government of Albania for promoting the stated project goal, including issues related to the tariff policy, public incentives and later to harmonization and enforcement of product standards as well as full involvement of the private and especially the financing sector to enter a new market area, in which they may have not had such a strong experience before.

120. The project tries to address this risk by extensive stakeholders consultations, awareness raising, capacity building and other advocacy work during and, as applicable, in prior the implementation of the project.

121. Another risk is at the actual enforcement of the new laws and regulations i.e. even if adopted the country may lack the capacity or political will for their effective enforcement. Similarly, the project is seeking to address this risk by proper stakeholder consultations, involvement of the relevant institutions responsible for the actual enforcement and implementation of the new laws and regulations in the project activities and paying specific attention not only on the design and adoption of an enabling policy framework, but on the specific mechanism and incentives on how it can be effectively implemented and enforced.

122. Thirdly, there is risk of the lack of motivation and ultimate interest of the targeted supply side stakeholders to participate in and learn from the training and capacity building activities organized by the project. This risk and possible measures to overcome it have been discussed in further detail in Annex I “Development of the SWH Supply Chain”.

123. The key assumptions in order to successfully promote the SWH market in any particular country are that:

- The basic framework conditions for increasing the interest and demand for SWH systems exist, as indicated, in particular, by the financial feasibility of SWH compared to other energy sources;

- Political will to promote the SWH systems, as indicated by the Government strategies, laws, regulations and incentives already adopted;
- Active and committed local stakeholders(s) can be identified to act as “local champions” in promoting the project goals.

124. For further details on how these assumptions are foreseen to be met in the case of this project, please see section “Country Drivenness”.

### ***Global and National Benefits***

125. The incremental, direct GHG reduction resulting from reaching the target of 75,000 m<sup>2</sup> of new installed SWH capacity<sup>8</sup> by the end of the project compared to the expected baseline development during the same period has been estimated at 134,000 tons of CO<sub>2</sub>eq over 15 years lifetime of the systems. The cumulative, GHG reduction potential including both direct and direct post project GHG reduction by reaching the target of 520,000 m<sup>2</sup> of installed SWH capacity has been estimated at over 800,000 tonnes of CO<sub>2</sub>eq by the end of 2020.

126. The main national benefits are expected to be:

- Reduced costs of hot water preparation for the local population;
- Economic costs savings at the national level and reduced dependency and expenditures on imported energy;
- Reduced load on the power system reducing the imbalance between the supply and demand especially during the peak periods
- Reduced environmental pollution produced by conventional energy sources;
- Enhanced employment opportunities and development of the country’s SME sector in the SWH field, including increased export opportunities; and
- Enhanced product quality.

### ***Country Ownership***

#### Country eligibility

127. According to the Instrument for the Establishment of the Restructured Global Environment Facility, Albania qualifies for GEF financing on the following grounds:

- It receives development assistance from UNDP’s core resources;
- It has ratified the United Nations Framework Convention on Climate Change (UNFCCC) in October 1994 as a non-Annex I country to the Convention;

#### Country drivenness

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<sup>8</sup> With the total of 122,000 m<sup>2</sup> installed by the end of 2012, compared to the expected baseline of 90,000 m<sup>2</sup>.

128. Documents like Albania’s First National Communication (FNC) to the UNFCCC, the Technology Needs Assessment (TNA) and the National Energy Strategy (NES) have stimulated this proposal. The NES, which was prepared as an integral part of the National Strategy for Social and Economic Development (NSSED) has already integrated many findings and outputs from Albania’s FNC and TNA, which are linking up with the current energy sector challenges in Albania.

129. A primary objective of the NES is to improve Albania’s energy security position. As mentioned before, there has been a growing imbalance between the power demand and supply in Albania over the past several years leading to frequent power cuts, and solving this situation has become one of the key priorities to the Government.

130. On the demand-side, the NES proposes a number of measures in order to reduce the growth rate of energy consumption, including:

- Thermal insulation of dwellings to reduce the energy demand for space heating;
- Promotion of LPG to reduce the amount of electricity and fuel wood used for cooking and space heating;
- Promotion of central and district heating schemes to serve space heating and domestic hot water preparation needs, especially in new blocks of multi store dwellings;
- Promotion of solar water heating systems for domestic hot water preparation, thereby reducing the amount of electricity used for this purpose; and
- Promotion of energy efficient light bulbs to reduce the quantity of electricity used for lighting.

131. The proposed project has been formulated in collaboration with the Albanian National Agency for Energy (NAE) to support the NES implementation in the area of transforming the market for hot water preparation in the residential and service sectors from the currently used electric boilers to SWH systems, which has been identified as one of the priority measures to reduce country’s GHG emissions also by Albania’s FNC and TNA.

132. By building on the draft list presented in the executive summary of the global SWH project, the market information reviewed to assess the market potential and country drivenness of Albania is listed below with a conclusion that adequate framework conditions for effectively promoting the SWH market in Albania exist.

Table 3. Summary of the market information reviewed

<b>Information reviewed</b>	<b>See page:</b>
Existing policy framework	7-8
Tariff structure and other determinants of energy prices	4-5, Table 1
Current size of the SWH market	8
Market potential across different sectors	31, Table 3
Local SWH system costs and technology availability	9
Economic comparison with competing energy sources	5, Table 1
End-user profiles	31, Table 3
Maturity and level of finance sector engagement	12-13
Available public incentives or other promotional measures	16 (none)

Existence of local NGOs, trade associations or Government entities, which can act as local champions for the project	5-7
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***Sustainability (including financial sustainability)***

133. The economic and financial competitiveness of solar water heating is obviously the most critical factor in ensuring sustainable market growth. Although electricity prices are not up to EU averages in Albania yet, using electricity to heat water is highly inefficient. Given the not uniform tariff structure of Albania, SWH can already now also present quite an attractive alternative for many end-user groups, with expected further tariff increases to gradually approach the “true” market prices. For further detail, see Table 1 of the chapter “Situation Analysis”.

134. The project has addressed the sustainability aspects in its design by taking into account the international experiences and observed best practices, many of which are relatively well documented. As concluded, for instance, by the review<sup>9</sup> conducted in 2002 on global incentives used for promotion of solar water heating: “In each country where SWH use has increased significantly, there has been a partnership between the government and industry to address the issues of quality standards, promotion and public perception. National targets appear very important and funding assistance (fiscal and /or financial) from government is very common. The successful initiatives appear to follow a number of key principles, which include: significant support from governments; fiscal measures to stimulate the market; improving building regulations to stimulate uptake of SWH; and information and promotion programmes.”

135. Other lesson learnt highlight the importance of having a policy environment, including possible fiscal and financial incentives, which is predictable, transparent and long term enough to enable sustainable market growth. The analysis of the 40% grant subsidy offered to the industrial and service sectors in Greece, for instance, suggests that the incentive was not successful largely because grants were offered and withdrawn without notice and in an unpredictable manner. Hence business gearing up to make a solar thermal investment may have suddenly found the grant scheme withdrawn just as the business had raised the capital to make the investment.

136. It is obvious that in order to facilitate sustainable market transformation, there is a need for both demand and supply side measures, which together can increase the global market demand for solar water heating, while simultaneously ensuring the supply of reliable, customer friendly technology, thereby building the long term confidence and customer satisfaction.

137. As highlighted by experiences from some countries with more mature markets, word of mouth impressions are particularly important in guiding the decisions of second-generation investors, when there is still relatively little actual experience with the technology and little support data, upon which investors can make their investment decisions. To some extent, this problem can be

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<sup>9</sup> “Review of Overseas Initiatives That Have Been Taken to Increase the Uptake of Solar Water Heating” prepared for the Energy Efficiency & Conservation Authority and Solar Industries Association of New Zealand, February 2002



addressed through manufacturer’s warranties. In the long run, however, sustainability will depend on a broad base of cost effective, trouble free customer experience with the technology.

138. As also highlighted by the experiences from promoting the SWH systems elsewhere, it is not only the hard facts, but the perception of those facts, which has a decisive impact on whether a potential client will actually buy a system or not. In other words, subjective information has a decisive impact on the purchasing decision. Beside building up general customer confidence through good quality products and their trouble free operation, this is addressed in the project through its public awareness activities as well as training of designers, sales persons, plumbers and heating and hot water systems installers, which often are the first points of contact to the customer thinking the installation of a new hot water system or changing the old one.

139. The commitment of Government to engage itself with a long and stable programme to stimulate investment in solar thermal is reflected in the attached support letters. As a part of that, due attention is to be given that necessary incentives will be in place to keep the national activities and initiatives in line with the international best practices.

140. For the financing part, the program will be designed to give investors a three to five year payback period on their investment, which, based on the results and experience from other countries is expected to be a rate of return that this attractive enough for the purchase of solar water heating systems. The same conclusion was drawn from the market survey conducted in Albania as a part of the PDF B phase of the project in early 2006. Alternatively, the purchase of SWH systems can be made attractive through specific financial arrangements, where the client will just pay for a monthly fee, which will be kept lower than his/her current spending on the gas or electric water heaters and in which case the duration of the pay-back period is expected to be less important.

141. The different possible modalities of public support to facilitate sustainable market growth in the light of the project’s targets from one side and of the available public resources from another side will be further explored during the implementation of the project.

142. It is also to be highlighted that no GEF resources are sought for direct investment subsidies, but any financial and fiscal incentives required are sought to be primarily covered by the Government of Albania, thereby contributing to the financial sustainability of the project.

***Replicability***

143. Based on a study conducted during the project preparatory phase, a realistic market potential for SWH systems in different sectors by 2020 was estimated, as presented in table below:

Table 3: Estimated SWH market potential in selected service and public sector buildings and households

Market Segment	Market Survey Potential by 2012 m <sup>2</sup>	Desk Study	
		Assumed penetration rate in 2020	Potential by 2020 m <sup>2</sup>
Hotels	34 000	New: 25% Existing: 10%	115 000

Recreational facilities and restaurants	3 000	New: 15% Existing: 10%	11 000
Hospitals, residential and nursing homes	67 000	New: 12.5% Existing: 7%	33 000
Educational facilities and kindergartens		New: 20% Existing: 15%	150 000
Other public buildings		New: 12% Existing: 8%	28 000
<b>All public and service sector buildings</b>	<b>104 000</b>	n.a.	<b>337 000</b>
<b>Residential Buildings</b>	<b>71 000</b>	10% – 54%, depending on the zone and the type of the building	<b>180 000</b>
<b>TOTAL</b>	<b>175 000</b>	<b>n.a.</b>	<b>517 000</b>
Penetration Rate (m2 per 1000 people)	~ 50		~ 140

144. The replication strategy of the project will be based on the following features of the project design:

- technical assistance activities that are intended to lay the necessary foundation of a supportive legal and regulatory framework, institutional structures and national capacities to initiate, develop and manage sustainable promotion of the solar water heating market at the national level;
- international networking and review of international experiences, success stories and best practices facilitated, in particular, by the knowledge management component of the global SWH umbrella project;
- adoption of (to the extent possible) internationally harmonized product standards, labelling testing and quality control schemes;
- through the use of appropriate risk sharing instruments, supporting and demonstrating commercial viability of new financing and service models for solar water heating, thereby encouraging the increasing involvement of private sector for replicating the models introduced;
- close monitoring and evaluation of the project implementation and results, thereby providing lessons learned for future action; and
- ongoing public awareness raising efforts and effective dissemination of the project results.

145. It is evident that effective replication of project activities will require a combination of policy related changes as well as effective dissemination of the project results and lessons learned, thereby providing applicable examples for the implementation of the things in practice. Sometimes results at the practical side are needed, before the necessary changes at the policy level can be effectively promoted and implemented.

146. The project will facilitate continuing contacts and co-operation between the different stakeholder groups at the national and international level by organizing seminars, workshops and other public events, thereby bringing the project proponents, the policy makers and the potential investors / other donors together.

### **Part III: Project Management Arrangements**

147. This national subcomponent (later referred as the “Project”) of the joint UNDP/UNEP Global Solar Water Heating Market Transformation and Strengthening Initiative will be executed by the Ministry of Economy, Trade and Energy under the UNDP national execution modality (NEX). The executing agency will appoint a National Project Director (NPD), who will be responsible for supporting the implementation of the project. The NPD serves as the focal point on the part of the Government of Albania to ensure effective communication between the government and other relevant national stakeholders/actors, and monitors the progress towards expected outputs and strategic results of the project.

148. For supervising and guiding the project implementation, a Project Steering Committee (PSC) will be established with the participation of the Ministry of Economy, Trade and Energy, the Ministry of Environment, Forestry and Water Management, UNDP CO as well as representatives of other institutions providing direct cost-sharing for the project activities. The responsibilities of the PSC are envisaged to consist of:

- Providing the necessary political support to the project implementation;
- Commenting on project workplans and progress reports;
- Mobilizing cost-sharing and follow-up financing;
- Approving main project outputs;
- Assuring coordination between this project and other ongoing Gov’t activities and programmes;
- Assuring all stakeholders are appropriately involved in the project planning and management;
- Facilitating linkages with high-level decision-making.

149. On as needed basis, the meetings of the Project Steering Committee can be extended to “Project Advisory Committee” meetings, with additional participation of the Climate Change Unit of the Ministry of Environment, EU-Energy Efficiency Center, other donors such as the Austrian Development Agency, representatives of the private SWH system manufacturers, importers and/or installers as well as other entities, which the PSC may invite to join the meetings and consultations.

150. For day to day management of the project, a Project Management Unit will be established as a part of the Climate Change Umbrella Program of the UNDP CO located in Tirana, led by a full time national project manager and supported by the required required professional and administrative staff. The PMU is also supported by a part time International Technical Advisor (ITA), i.e. an international SWH expert (or company) to support the monitoring and provision of advise for the implementation of the project to make sure that best practices and lessons learnt about similar activities in other countries are adequately taken into account in project implementation and management. Through networking, the PMU is also expected to enter into partnerships with different foreign institutions, incl. certification bodies, testing centers etc. so as to draw from their experience and to make sure that the activities supported by the project are in line with international best practices.

151. The UNDP Country Office in Albania will monitor the progress towards intended results through regular contacts with the Project Management Unit and monitoring visits, on

implementation matters and problem solving. UNDP will also provide administrative support upon request and ensure financial oversight in accordance with the guidelines for nationally executed UNDP projects.

152. Finally, the project will benefit from the technical backstopping provided by the knowledge management component of the global SWH umbrella project and will also be subject to the agreed monitoring and evaluation activities<sup>10</sup> and the associated country program reporting obligations under the global project, thereby contributing to the global knowledge sharing and effective dissemination of the best practices and lessons learnt.

153. In co-operating with other donors, the project will build on the activities already initiated by a parallel SWH project financed by the Austrian Development Agency in Albania and take stock on the experiences of the MEDREP project supported by the Ministry of Environment of the Government Italy in other Mediterranean countries. The envisaged cost-sharing and co-operation arrangements with both projects have been elaborated in further detail in the section Project Financing and Budget. The co-ordination of the UNDP/GEF project activities with the ADA supported project will take place through the Project Advisory Committee as well as by regular contacts between the two project management teams.

154. The Ministry of Economy, Trade and Energy has recently signed an Agreement with KfW for “Promotion of Renewable Energy Sources and Energy Efficiency” and close co-operation is also sought with this project. The representatives of the KfW can be invited to the co-ordination meetings of the Project Advisory Committee as and when relevant.

### ***Stakeholder Involvement***

155. The basic institutional framework of the project has already been discussed earlier in this document in the section “Situation Analysis”. By building on that, the key stakeholders to be involved in the implementation of the project will include:

- The Government of Albania in a number of different capacities:
  - drafting and approving new legislation as needed to activate the solar thermal programme;
  - financing and implementing selected project components, including a program of fiscal and financial incentives to stimulate demand for solar thermal technology, required legal and regulatory changes etc.;
  - executing the project in co-operation with UNDP and facilitating the co-ordination with the other related Government activities;
- Local SWH manufacturers, dealers and installers for the development and introduction of a voluntary (which may later graduate to a mandatory) quality control scheme with associated capacity building;
- Domestic banking community and SWH vendors for the development and introduction of attractive financing mechanisms for SWH purchase;

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<sup>10</sup> For further details, see the section “Monitoring and Evaluation Plan and Budget”.

- The MoETE and KESH, as applicable, for exploring the possibility for utility driven delivery and financing mechanisms as a part of a broader demand side management strategy; and
- Public media, professional market research and marketing companies and the targeted end users and decision makers (incl. building professionals) for developing and implementing the project's public awareness raising and marketing activities.

156. In providing technical backstopping for country specific activities and working with international experts, major emphasis will be placed on making sure that the work will be done jointly and in close co-operation with local experts and interest groups, thereby also facilitating the associated on-the-job training.

157. The Albanian Center for Energy Efficiency (CEE) is envisaged to be a key partner for project implementation. While the project will be continued to be managed by a specific Project Management Unit familiar with both the local SWH and financing market as well as with specific UNDP project management procedures, its responsibilities and experience are to be gradually transferred (supported by associated capacity building) to a more permanent institutional structure, such as the proposed Albanian SWH industry or trade association, the annual operational costs of which can be covered by the membership fees, the testing or other services provided by it and, if applicable, possible public support of the Government of Albania. During this process, the local SWH industry as well as the CEE are foreseen to be key partners.

158. Both Greece and Turkey, close to Albania, have a relatively mature manufacturing sector with excess capacity. Greece is currently exporting about 40% about its production, while the share of export in Turkey has been estimated to be around 10%. Possible links and co-operation possibilities with the foreign manufacturers and industry associations will be further explored during the implementation of the project.

#### **Part IV: Monitoring and Evaluation (M&E) Plan and Budget**

159. While the project will be monitored and report to the GEF as a part of the global SWH umbrella project (for further details see the relevant sections of the M&E plan of the global project), this country program will otherwise follow the standard UNDP and GEF procedures for nationally executed UNDP/GEF projects. The Logical Framework Matrix in section II provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's M&E system will be built.

160. The following sections outline the principle components of the project's M&E plan and its indicative costs. This plan will be presented and finalized at the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of M&E responsibilities of the project staff.

#### ***Monitoring and Reporting***

##### Project Inception Phase

161. A Project Inception Workshop will be organized with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the Global SWH Project Management Unit (GPMU) and, as applicable, the UNDP-GEF Regional Coordinating Unit (RCU) or UNDP-GEF (HQs).

162. The main objective of this Inception Workshop is to assist the project team to understand and take ownership of the project's goals and objectives, as well as to finalize the preparation of the project's first annual workplan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes of the project.

163. Additionally, the purpose and objective of the Inception Workshop (IW) is to: (i) introduce project staff with the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and the responsible GPMU and, as applicable, UNDP/GEF staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO, GPMU and RCU staff vis a vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and M&E requirements, with particular emphasis on the joint Annual Project Reports and Project Implementation Reviews (APR/PIRs), Tripartite Review Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews and mandatory budget rephasings.

164. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structure, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference of the project staff (and decision-making structure) will be reviewed and, as needed, revised in order to clarify for all each parties the responsibilities during the project's implementation phase.

#### Monitoring responsibilities and events

165. A detailed schedule of project review meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated into the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

166. *Day to day monitoring* of implementation progress will be the responsibility of the project manager based on the project's Annual Workplan and its targets and performance indicators. The project team will inform the UNDP-CO of any delays or difficulties faced during implementation so that appropriate support or corrective measures can be adopted in a timely and remedial fashion.

167. The project manager and the responsible GPMU staff and, as applicable, UNDP/GEF RCU or HQ staff will jointly fine-tune the progress and performance/impact indicators of the project in consultation with the project team at the Inception Workshop with support from UNDP-CO. Specific targets for the first year implementation progress indicators together with their means of

verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form a part of the Annual Workplan. The local implementing agencies will also take part in the Inception Workshop, in which a common vision of overall project goals will be established. Targets and indicators for subsequent years will be defined annually as part of the internal evaluation and planning processes undertaken by the local project management team and its international support staff (including the GPMU).

168. Measurements of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop and outlined in the annual APR/PIR template. The measurement of these will be undertaken, as applicable and needed, through subcontracts or retainers with relevant institutions or through specific studies that are to form a part of the projects activities (e.g. measurement of carbon benefits or through surveys for capacity building efforts).

169. *Periodic monitoring* of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

170. The representatives of the UNDP CO and the GPMU will conduct yearly visits to assess first hand project progress or more often based on an agreed schedule to be detailed in the project's Inception Report / Annual Workplan. Any other member of the Project Steering Committee can also accompany, as decided by the PSC. A Field Visit Report will be prepared jointly by the CO and the GPMU and circulated no less than one month after the visit to the project team, all PSC members and the responsible UNDP-GEF Task Manager.

171. *Annual Monitoring* will occur through the **Tripartite Review (TPR)**. This is the highest policy-level meeting of the parties directly involved in the implementation of the project. The project will be subject to Tripartite Review (TPR) at least once every year. The first such meeting will be held within the first twelve months of the start of full implementation. The project proponent will prepare an Annual Project Report/Project Implementation Review (APR/PIR) and submit it to UNDP-CO, the GPMU and the UNDP-GEF regional office at least two weeks prior to the TPR for review and comments.

172. The APR/PIR will be used as one of the basic documents for discussions in the TPR meeting. The project proponent will present the APR/PIR to the TPR, highlighting policy issues and recommendations for the decision of the TPR participants. The project proponent also informs the participants of any agreement reached by stakeholders during the APR/PIR preparation on how to resolve operational issues. Separate reviews of each project component may also be conducted if necessary.

173. The annual APR/PIRs of the national country programs will form the basis for the consolidated APR/PIR of the global project to be prepared by the GPMU and submitted to the GEF to report on the progress of the global SWH project as a whole.

*Terminal Tripartite Review (TTR)*

174. The terminal tripartite review is held in the last month of project operations. The project manager is responsible for preparing the Terminal Report and submitting it to UNDP-CO, the GPMU, the UNDP/GEF RCU and the responsible UNDP/GEF task manager. It shall be prepared in draft at least two months in advance of the TTR in order to allow review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation or formulation.

175. The TPR has the authority to suspend disbursement, if project performance benchmarks are not met. Benchmarks will be developed at the Inception Workshop, based on the performance and impact indicators defined in the projects logical framework matrix.

### Project Monitoring Reporting

176. The project manager will be responsible for the preparation and submission of the following reports that form part of the monitoring process. Items (a) through (f) are mandatory and strictly related to monitoring, while (g) through (h) have a broader function, the frequency and nature of which will be project specific and is to be defined during the project implementation.

#### *(a) Inception Report (IR)*

177. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan should include the dates of specific field visits, support missions from the UNDP-CO, the GPMU or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame.

178. The Inception Report will also include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of the project partners. In addition, a section will be included on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

179. When finalized the report will be circulated to project counterparts, who will be given a period of one calendar month to respond with comments or queries. Prior to this circulation, the UNDP Country Office, the GPMU and, as applicable, the responsible UNDP-GEF's task manager will review the document.

#### *(b) Annual Project Report and Project Implementation Review (APR/PIR)*



180. The APR is a UNDP requirement and part of UNDP CO's central oversight, monitoring and project management. It is a self-assessment report by project management to the CO and provides input to the country office reporting process and the ROAR, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work.

181. The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome;
- The constraints experienced in the progress towards results and the reasons for these;
- The three (at most) major constraints to achievement of results;
- AWP, CAE and other expenditure reports (ERP generated);
- Lessons learned;
- Clear recommendations for future orientation in addressing key problems in lack of progress

182. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Review must be completed by the CO together with the project manager. The PIR is usually prepared after the end of each UNDP/GEF financial year (June 30) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result has been agreed upon by the project, the executing agency, UNDP CO, the GPMU and, as applicable, the responsible UNDP/GEF task manager.

183. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for a joint annual APR/PIR report, which is available from UNDP/GEF's M&E Unit.

*(d) Quarterly Progress Reports*

184. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office, the GPMU, the UNDP-GEF RCU and the responsible UNDP/GEF task manager.

*(e) Periodic Thematic Reports*

185. As and when called for by UNDP or the GPMU, the project team will prepare Specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.

*(f) Project Terminal Report*

186. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

*(g) Technical Reports (project specific- optional)*

187. Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project team will prepare a draft Report List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project and their tentative due dates. Where necessary this Report List will be revised and updated, and included in subsequent APRs. Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

*(h) Project Publications (project specific- optional)*

188. Project publications will form a key method of crystallizing and disseminating the results and achievements of the project. These publications may be scientific or informational texts on the activities and achievements of the project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these reports, or may be summaries or compilations of a series of Technical Reports and other research. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, GPMU, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

***Independent Evaluation***

189. The project will be subject to at least two independent external evaluations as follows:

Mid-term Evaluation

190. An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring

decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the GPMU and, as applicable, the responsible UNDP/GEF task manager.

### Final Evaluation

191. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the GPMU and, as applicable, the responsible UNDP/GEF task manager.

### ***Audit Clause***

192. The Government will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

### ***Learning and Knowledge Sharing***

193. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums facilitated, in particular, by the knowledge management component of the global SWH umbrella project. In addition:

- the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for senior personnel working on projects that share common characteristics;
- the project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may benefit the project implementation through lessons learned.

194. The project will identify, analyze, and share lessons learned that may benefit the design and implementation of similar future projects. Identifying and analyzing lessons learned is an on-going process and the need to communicate such lessons not less frequently than once every 12 months is one of the project's central contributions. The GPMU shall provide a format and assist the project team in categorizing, documenting and reporting the lessons learned. To this end a percentage of project resources will need to be allocated for these activities.

Table 4: Indicative Monitoring and Evaluation Work plan and corresponding Budget

Type of M&E activity	Responsible Parties	Budget US\$ Excluding project team staff time	Time frame
Inception Workshop	Project Manager , UNDP CO, GPMU, UNDP GEF (as applicable)		Within first two months of project start up
Inception Report	Project Team, UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be finalized in Inception Phase and Workshop.	Start, mid and end of project
Measurements of Means of Verification for Project Progress and Performance (on an annual basis )	Oversight by CO, GPMU and Project Manager  Measurements by COs and local IAs	To be determined as part of the Annual Work Plan's preparation.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team, UNDP-CO, GPMU and , as applicable, UNDP/GEF	None	Annually
TPR and TPR report	Project Team, Government Counterparts, UNDP CO, GPMU and, as applicable UNDP-GEF	None	Every year, upon receipt of APR
Steering Committee Meetings	Project Manager, UNDP CO	None	Following Project IW and subsequently at least once a year
Periodic status reports	Project team	None	To be determined by Project team and UNDP CO
Technical reports	Project team Hired consultants as needed	10,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	Project team, UNDP- CO, GPMU, UNDP-GEF (as applicable), External Consultants (i.e. evaluation team)	25,000	At the mid-point of project implementation.
Final External Evaluation	See above	30,000	At the end of project implementation
Terminal Report	Project team, UNDP-CO External Consultant	None	At least one month before the end of the project
Lessons learned	Project team GPMU (suggested formats for documenting best practices, etc)	15,000 (average 3,000 per year)	Yearly
Audit	UNDP-CO, Project team	5,000 (average \$1000 per year)	Yearly
Visits to project sites (UNDP staff travel costs to be charged to IA fees)	UNDP Country Office, GPMU, UNDP-GEF (as applicable), Government representatives	15,000 (average one visit per year)	Yearly
<b>TOTAL INDICATIVE COST</b> <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 100,000	

## **Part V: Legal Context**

195. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Albania and the United Nations Development Programme, signed by the parties on \_\_\_\_\_. The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement

196. The UNDP Resident Representative in Albania is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- Revision of, or addition to, any of the annexes to the Project Document;
- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- Inclusion of additional annexes and attachments only as set out here in the Project Document.

## SECTION II: STRATEGIC RESULTS FRAMEWORK

Project Strategy	Indicator	Baseline	Target	Sources of Verification	Assumptions
<p><b>Objective:</b> To accelerate and sustain the solar water heating market in Albania as a part of the Global SWH Market Transformation and Strengthening Initiative.</p>	<p>The total installed SWH capacity and annual sale.</p> <p>Level of customer satisfaction on the SWH systems installed .</p>	<p>33,000 m<sup>2</sup> of installed collector area in 2005 with 7,000 m<sup>2</sup> of new SWH capacity installed in 2005 with the expected 5% annual growth.</p> <p>Mixed</p>	<p>At least 75,000 m<sup>2</sup> of new installed collector area during the project, and an annual sale of 20,000 m<sup>2</sup> reached by the end of the project with expected continuing growth to reach the set target of 520,000 m<sup>2</sup> of installed SWH capacity by 2020.</p> <p>Positive experience by over 80% of the clients, who have purchased a SWH system on the basis of problem free good quality products and after sale services.</p>	<p>Official import statistics and local supply side surveys</p> <p>Ex-post project evaluations</p> <p>Market surveys</p>	<p>Economic and financial feasibility of the SWH investments to be promoted</p> <p>Continuing support of the key stakeholders to meet the project objectives.</p>
<p><b>Outcome 1</b> An enabling institutional, legal and regulatory framework to promote sustainable SWH market.</p>	<p>The adoption and effective enforcement of the recommended legal and regulatory changes to promote sustainable SWH market development</p>	<p>No specific building regulations, fiscal or public financial incentives in place to promote sustainable SWH market</p> <p>No specific regulations for SWH standards, certification or quality control mechanisms in place</p>	<p>The recommended amendments of the legal and regulatory framework to promote sustainable SWH market adopted and effectively enforced, including:</p> <ul style="list-style-type: none"> <li>▪ setting of specific targets for the heat produced by renewable energy by 2020;</li> <li>▪ required amendments to the building code and building law to encourage the installation of SWH into new buildings and in those going through a major renovation;</li> <li>▪ sustainable financial incentive mechanisms in place by using the resources of the Energy Efficiency Fund or other public resources;</li> <li>▪ required fiscal incentives such as exempting the imported SWH equipment and materials from import duties and related taxes with associated safeguard mechanisms to prevent their illegal use;</li> <li>▪ a decree to set up a SWH quality control system corresponding (to the extent feasible) to the relevant EU regulations and systems in place.</li> </ul>	<p>Official government publications.</p> <p>Project monitoring and evaluation reports.</p>	<p>See above</p>

<b>Project Strategy</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Target</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<b>Output 1.1</b> Analysis, recommendations and the associated advocacy work for the introduction of adequate public financial and fiscal incentives to promote the SWH market finalized.	The status of the proposal for the new public financial or fiscal incentives to stimulate the SWH market.	Required financial and fiscal incentives to stimulate the SWH market not effectively promoted.	With the key stakeholders discussed and agreed proposal for the required financial and fiscal incentives and their effective operationalisation submitted for final Government approval.	Project reports  Official Gov't publications	Support of the key Government stakeholders.
<b>Output 1.2</b> Analysis, recommendations and the associated advocacy work for the adoption of the required amendments into the building law and building code to encourage the installation of SWH into new buildings and in those going through a major renovation finalized.	The status of the proposal for the required amendments into the building law and building code	Required amendments into the building law and building code not effectively promoted.	With the key stakeholders discussed and agreed proposal for the required legal and regulatory changes (incl. their effective enforcement) encouraging the installation of SWH systems into new buildings and in those going through a major renovation submitted for final Government approval.	See above	See above
<b>Output 1.3</b> Analysis, recommendations and the associated advocacy work for setting up the required regulatory framework for a SWH quality control system finalized.	The status of the proposal for setting up the required regulatory framework for a SWH quality control system.	No legal or regulatory framework for a SWH quality control system in place	With the key stakeholders discussed and agreed proposal for a quality control system for SWH equipment and installation submitted for final Government approval for those institutional, legal and regulatory aspects that require the approval of public authorities.	See above	See above
<b>Outcome 2</b> Enhanced awareness and capacity of the targeted end users and building sector professional to consider and integrate SWH systems into different types of buildings.	The demand for additional information, as measured by market surveys.  The share of new and renovated buildings (across different types) integrating SWH into their design.	According to initial market survey, more than 50% responded of not having made a positive decision yet, because of the lack of information and > 90% said they would like to have more information for final judgement	Over 80% of the end users and designers participating the market survey indicate that they have had enough information about SWH systems to make their decision.  For all new and renovated buildings suitable for the integration of SWH systems, SWH has been considered as an option and over 20 % from each group of these buildings is integrating SWH into their final design.	Market surveys.	Interest of the key stakeholders to participate the marketing campaign.

<b>Project Strategy</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Target</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<b>Output 2.1</b> Materials for public awareness raising and marketing campaigns as well as for training of building designers developed and/or adapted into Albanian conditions and made available in printed and electronic format.	The availability of suitable public awareness raising and marketing material.	Shortage of effective and good quality public awareness raising and marketing material.	Public awareness raising, marketing and training material developed and adapted for Albanian conditions and made available in printed and electronic format.  A specific SWH web-site established and regularly updated	Project reports	
<b>Output 2.2</b> Final design of the marketing campaign	Design of the marketing campaign agreed with the key stakeholders. Level of cost-sharing.	No systematic marketing campaign possible to organise by the supply chain on its own.	Agreed design of the marketing campaign with the key stakeholders, including the financing of the implementation of it with a cost-sharing ratio of at least 1:1 (in-cash or in-kind). <sup>11</sup>	Project reports	Interest of the key stakeholders to participate in the marketing campaign.
<b>Output 2.3</b> Public awareness raising and marketing campaigns implemented in co-operation with relevant public entities and private SWH suppliers and manufacturers.	The level of public awareness raising and marketing campaign implemented .	No major public awareness raising and marketing campaign conducted yet.	Public awareness raising and marketing campaigns tailored to the specific needs and expected decision making “drivers” and information channels of the targeted end users implemented in co-operation with the relevant public entities and private SWH suppliers and manufacturers by using different media channels.	Project reports	See above
<b>Output 2.4</b> Trained building designers and other key professionals to consider SWH as an option in the design of new buildings and renovation of the existing one.	The number of trained professionals  The share of new or renovated buildings including SWH as an option.	Lack of information and expertise among the local architects, building engineers and other key professionals about SWH.	Architects, building engineers and other key professional, as well as the students in the associated fields are informed about the opportunities provided by SWH and different types of SWH equipment and are trained to integrate SWH into the design of new buildings and the renovation of the existing ones.	Project reports	
<b>Output 2.5</b> Improved curricula of SWH training courses in relevant academic and technical institutions and	The curricula adopted by the targeted educational entities	Need to updated the curricula	An improved curricula and training program adopted by the targeted educational entities, including co-operation with two vocational training systems (Swisscontact) and at least one	Project reports	Support of the targeted educational entities

<sup>11</sup> This may include Government and other donor cost-sharing, private supply side contribution, free program time or advertising in public media etc.



<b>Project Strategy</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Target</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
vocational schools			vocational school (Beqir Cela) in Durres.		
<b>Outcome 3:</b> Increased demand for SWH systems by the availability of attractive end-user financing mechanisms or other delivery models, such as SESCOs or utility driven models.	The amount of financing leveraged through new financing models specifically tailored for SWH market needs.	No specific longer term financing and new delivery mechanisms offered and marketed for the SWH purchase.	The agreed financial support mechanisms and new delivery models in operation with a cumulative target of USD 15 million leveraged by them for SWH financing by the end of the project	Project monitoring reports	Initial demand for the financial services created and interest of the local financing sector to enter new market areas.
<b>Output 3.1</b> Enhanced awareness of the key financial sector stakeholder and local suppliers on the specific characteristics and financing opportunities in the SWH market.	The level of interest created.	Lack of information on the specific SWH market characteristics and financing models tested in other countries.	All the key financial sector stakeholders and local suppliers informed on the specific characteristics and opportunities provided by the Albanian SWH market (by building on the results of the market analysis), and on the experiences and lessons learnt from the financing models tested in other countries.	Project reports	See above
<b>Output 3.2</b> Design, the financial structuring and the implementation arrangements for the specific purpose financing vehicles responding to specific SWH market needs finalized and agreed with the key stakeholders, and integrated into the overall SWH marketing package.	New financing instruments and, as applicable, delivery models made available.	No financing and delivery models specifically tailored for SWH market requirements available.	New financing instruments and business models (such as specific purpose bank loans, vendor financing, SESCOs etc.) specifically tailored and marketed for the SWH purchase offered to the end users as a part of the overall marketing package, including, as applicable, the integration of possible public incentives.	Project reports	See above
<b>Output 3.3</b> As required, trained SWH supply side stakeholders to effectively operate and/or market the new financing services.	The capacity of the SWH supply side to operate and/or market the new financing services.	Lack of financing knowledge and expertise of the SWH supply side.	Trained SWH supply side stakeholders to effectively operate and/or market the new financing services.	Project reports	See above

<b>Project Strategy</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Target</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<b>Outcome 4</b> A certification and quality control scheme applicable for Albanian conditions and enhanced capacity of the supply chain to offer products and services promoting sustainable SWH market.	The share of supply side entities adopting the proposed quality control schemes.  The level of customer satisfaction with the systems installed.	Lack of adequate incentives for and, in some cases, lack of capacity of the supply side to offer equipment and associated services at the required level to sustain the market growth.	Adoption of a voluntary quality control, certification and labelling scheme for the SWH equipment and installation services by the majority of the SWH equipment and service providers with a market share of over 80% in the end of the project.  Over 90% of customer satisfaction on the certified equipment and services provided.	Project reports and supply side surveys.  Demand side market surveys	
<b>Output 4.1</b> Set of SWH standards and an associated certification and labelling system developed (or adapted) for Albanian conditions.	Availability of a quality control system for SWH equipment suitable for Albanian situation.	No system available in Albania. International systems are available, but need to be adapted to Albanian conditions	A quality control system consisting of required standards and associated certification and labelling scheme suitable for Albanian situation developed and adopted first on a voluntary basis, and which may later graduate to a mandatory requirement.	Project reports	Support of the SWH supply chain recognizing the value added.
<b>Output 4.2</b> A pilot testing facility to check compliance with adopted standards.	The number of locally tested systems according to adopted standards.	No testing facilities available.	A pilot SWH testing facility fitted to the current market situation in operation with a capacity to test at least 15 collectors per year in accordance with the applicable EU standards and with an ability to sustain its services also after the project.  Over 80% of the SWH systems in the Albanian market tested for compliance by the end of the project.	Project reports	See above
<b>Output 4.3</b> Technical support to local manufacturers and importers to obtain a certification and to improve their product quality in general.	The number of manufacturers receiving TA  The number of missions and trade seminars organized	Lack of local capacity to meet the requirements and to improve their product quality in general.	Technical support received by the Albanian SWH manufacturers to improve their product quality.  Up to 4 match making missions and an annual SWH trade seminar in Albania	Project reports	See above
<b>Output 4.4</b> A training and recognition system in place for SWH system installers	The availability of the system.  The number of SWH system installers trained.	No training and recognition system in place for SWH system installers.	A training and recognition system in place for SWH system installers.  Over 75% of the installers required to meet the SWH market development targets trained and recognized by the end of the project.	Project reports	See above

<b>Project Strategy</b>	<b>Indicator</b>	<b>Baseline</b>	<b>Target</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<b>Outcome 5</b> The provided support institutionalized and the results, experiences and lesson learnt documented and disseminated (including monitoring, learning, evaluation and other feedback for adaptive management).	Continuing support for SWH market development also after the end of the project.	No sustainability of the required market support  No results and experiences documented and disseminated.	Local institution(s) continuing to promote the SWH market after the end of the project.  The reports and other public material from the project can be easily found and accessed.	Final evaluation  Project reports	
<b>Output 5.1</b> The reporting framework and arrangement for the SWH market monitoring established and continuing after the end of the project.	Agreed reporting format and institutional arrangements for SWH market monitoring established.	No systematic reporting format and institutional arrangements for SWH market monitoring.	Updated baseline assessment and agreed reporting format and institutional arrangements for SWH market monitoring established and continuing after the end of the project.	Project reports and final evaluation	Agreed co-operation between the vendors and other business entities involved in SWH market
<b>Output 5.2</b> An agreed business and financing plan for the establishment of an Albanian Solar Center, a Solar Thermal Industry Association or a similar entity to sustain the required market promotion activities.	The status of the business and financing plan.	No active institution in place yet to represent and support the local SWH industry and to promote the sustainable market growth of SWH in Albania in general.	An agree business and financing plan to facilitate the operation of the Association on a self sustaining basis.	Project reports	Recognition of the benefits of the proposed institution by the local supply chain.
<b>Output 5.3</b> An established Albanian Solar Center, a Solar Thermal Industry Association or a corresponding entity	The Association established and in operation	See above .	An Albanian SWH Industry Association established and in operation on a self sustaining basis, with gradual build up of its capacity to support the Albanian SWH industry to expand and enhance its competitiveness and the quality of the products and services provided, and to promote the Albanian SWH market in general.	Project reports	See above.
<b>Output 5.4</b> Project midterm and final evaluation.	Status of the evaluations	No evaluations	Project midterm and final evaluations conducted on schedule	Project reports	
<b>Output 5.5</b> The project final results and lessons learnt documented and disseminated.	Available report	No results and lessons learnt compiled, analyzed and disseminated	Report finalized and disseminated	Project reports and final evaluation	

### SECTION III: TOTAL BUDGET AND WORKPLAN

197. The total costs of this country programme have been estimated at USD 2,750,000<sup>12</sup>, of which the GEF is requested to finance USD 1,000,000 from the country program budget of the Global SWH Market Transformation and Strengthening Initiative (PIMS 3611) approved for GEF Work Program Entry by GEF Council in August 2006 under GEF 3.

198. The confirmed co-financing sources of the listed project activities include:

- a) The Ministry of Economy, Trade and Energy (MoETE) with a commitment to support the SWH market development with the budgetary resources of the Ministry by at least 100,000 euros per year for 5 years equal to 500,000 euros (or about USD 735,000<sup>13</sup>) over the duration of the project<sup>14</sup> and with an in-kind contribution of 30,000 euros (equal to about USD 44,000) to cover the costs of the staff of the Ministry to participate in the implementation of project's activities and other logistic support;
- b) The Ministry of Environment, Forestry and Water Management (MoEFWM) with a contribution of 150,000 euros (equal to about USD 220,000<sup>11</sup>) over the duration of the project;
- c) UNDP, through its CO Core Resources, will support the project with USD 150,000 over its duration;
- d) The Austrian Development Agency through a parallel activity under implementation with a total budget of 300,000 euros (equal to about USD 440,000<sup>11</sup>), including cost-sharing of the procurement of a mobile SWH collector testing facility with an amount equal to 25,000 euros;
- e) The Harry Fultz Institute (HFI) to host and operate the testing lab, with an estimated in-kind contribution of USD 30,000 over the duration of the project.
- f) The intended contribution of 148,230 Swiss Francs of the Government of Switzerland (about USD 131,000 at an exchange rate of 1 CHF = 0,89 USD, as of Nov. 30, 2007) to support the activities under outcome 4 and 5.

199. Others resources sought to be leveraged during the implementation, include:

- g) The intended contribution of the Ministry of Environment and Territory of the Government of Italy to support the activities under outcome 3 and 4 with USD 1,000,000 over the duration of the project. The Italian Ministry has continued to express its intent to provide this support, but the final confirmation is still pending;

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<sup>12</sup> with a possibility up to USD 3,750,000 with an expanded program

<sup>13</sup> with an exchange rate of 1 euro = USD 1,47 as of November 30, 2007

<sup>14</sup> in addition, the GoA is considering a proposal to exempt the imported SWH equipment and material from import duties and the corresponding taxes with an estimated value of USD 1,4 – 1,75 million over the duration of the project.

h) Private sector (commercial banks, SWH vendors and manufacturers eventual micro-credit entities, end users etc<sup>15</sup>;

i) Other potential partners such as the KfW supported renewable energy and energy efficiency project, EBRD etc.

200. The summary of the project financing across the different components is presented in tables 6 and 7 below.

Table 6: Project Financing<sup>16</sup>

<b>OUTCOMES</b>	<b>TOTAL USD</b>	<b>GEF USD</b>	<b>GOVERNMENT USD</b>	<b>OTHERS USD</b>
<b>Outcome 1</b> An enabling institutional, legal and regulatory framework to promote sustainable SWH market.	195,000	130,000	30,000 (MoEFWM) 10,000 (in-kind)	25,000 (UNDP)
<b>Outcome 2</b> Enhanced awareness and capacity of the targeted end users and building sector professional to consider and integrate SWH systems into different types of buildings.	475,000	190,000	40,000 (MoEFWM)	25,000 (UNDP) 220,000 (ADA) <sup>17</sup>
<b>Outcome 3</b> Increased demand for SWH systems by the availability of attractive end-user financing mechanisms or other delivery models, such as SESCOs or utility driven models.	1,040,000 (conf.) 1,000,000 (not conf.)	190,000 (TA)	735,000 (MoETE) 115,000(MoEFWM)	Gov. of Italy 1,000,000 (not confirmed)
<b>Outcome 4</b> A certification and quality control scheme applicable for Albanian conditions and enhanced capacity of the supply chain to offer products and services promoting sustainable SWH market.	596,000 (conf.)	200,000	35,000 (MoEFWM) 10,000 (in-kind)	220,000 (ADA) <sup>15</sup>  Swiss Gov. 131,000 (Confirmed)
<b>Outcome 5</b> The provided support institutionalized and the results, experiences and lesson learnt documented and disseminated, including monitoring, learning, adaptive feedback and evaluation.	290,000	200,000	10,000 (in-kind)	50,000 (UNDP)  HFI: 30,000 (in-kind)
Project management <sup>18</sup>	154,000	90,000	14,000 (in-kind)	50,000 (UNDP)
<b>TOTAL</b>	<b>2,750,000</b>	<b>1,000,000</b>	<b>955,000 (cash)</b> <b>44,000 (in-kind)</b>	<b>721,000 (cash)</b> <b>30,000 (in-kind)</b>  <b>1,000,000 (not confirmed)</b>

<sup>15</sup> The Letters of Intent received from a few regional tourist associations as well as local manufacturers indicated investments plants worth of over USD 10 million over the duration of the project

<sup>16</sup> The conversation from Euros to USD with an exchange rate of 1 euro = 1,47 US dollars, as of of Nov 30, 2007

<sup>17</sup> Based on the estimated share of the funding used for different activities and per the exchange rate of Nov 30, 2007

<sup>18</sup> Covering the tasks related to the administrative management of the project. Technical contributions of the PMT covered under the Outcome budgets.

Table 7 Project co- and parallel financing (in USD equivalent, as of November 30, 2007)

<b>CO-FINANCING SOURCES</b>				
Name of Co-financier (source)	Classification	Type	Amount (US\$)	Status*
The Government of Albania	Government	Cash	220,000	Confirmed
		Cash	735,000	Confirmed
		In-kind	44,000	Confirmed
Harry Fultz Institute	Agency	In-kind	30,000	Confirmed
UNDP	Agency	Cash	150,000	Confirmed
Austrian Development Agency <sup>19</sup>	Bilateral	Cash	440,000	Confirmed
The Government of Switzerland	Bilateral		131,000	Partially confirmed with some conditions attached
The Government of Italy <sup>20</sup>	Bilateral	Cash	1,000,000	Not confirmed
<b>Sub-Total Co-financing</b>			<b>1,750,000</b>	<b>Confirmed</b>
			<b>1,000,000</b>	<b>Not confirmed</b>
<b>Private</b>			<b>&gt; 20,000,000</b>	<b>To be leveraged</b>

<sup>19</sup> A parallel project under implementation contributing to the goals of the UNDP/GEF project, but managed separately by the ADA.

<sup>20</sup> As reflected in the project's financing table (table 1), the contribution of the Government of Italy, if so decided, can be utilized for activities related to component 3 "Increased demand for SWH systems by the availability of attractive end-user financing mechanisms or other delivery models, such as SESCOs or utility driven models" and component 4 "A certification and quality control scheme applicable for Albanian conditions and enhanced capacity of the supply chain to offer products and services promoting sustainable SWH market." In this context, the project would also seek to promote technology transfer and partnership building between the Albanian and foreign companies, including Italian companies.

**Table III-3 Total Project Workplan and Budget in Atlas**

<b>Award ID:</b>			Tbd									
<b>Award Title:</b>			PIMS 3611 Global - Solar Water Heating Market Transformation and Strengthening Initiative: Albania Country Program									
<b>Business Unit:</b>			Tbd									
<b>Project Title:</b>			PIMS 3611 Global - Solar Water Heating Market Transformation and Strengthening Initiative: Albania Country Program									
<b>Implementing Partner (Executing Agency)</b>			Ministry of Economy, Trade and Energy (MoETE)									
<b>GEF Outcome/ Atlas Activity</b>	<b>Responsible Party/ Implementing Agent</b>	<b>Fund ID</b>	<b>Donor Name</b>	<b>Atlas Budgetary Account Code</b>	<b>ATLAS Budget Description</b>	<b>Amount Year 1 (USD)</b>	<b>Amount Year 2 (USD)</b>	<b>Amount Year 3 (USD)</b>	<b>Amount Year 4 (USD)</b>	<b>Amount Year 5 (USD)</b>	<b>Total (USD)</b>	<b>See Budget Note:</b>
<b>Outcome 1</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71200	International Consultants Sht Term	15,000	10,000				25,000	
				71300	Local Consultants Sht Term	15,000	15,000	5,000	5,000		40,000	
				71400	Contractual services – individuals	5,000	5,000	5,000	5,000	5,000	25,000	
				71600	Travel		3,000	2,000		5,000	1)	
				72100	Contractual services - companies	5,000	5,000	5,000	5,000		20,000	2)
				74200	Printing and publication costs	1,000	1,000	1,000	1,000	1,000	5,000	3)
				74500	Miscellaneous	3,000	2,000	2,000	2,000	1,000	7,000	4)
			<b>Sub-total GEF</b>	<b>44,000</b>	<b>41,000</b>	<b>20,000</b>	<b>18,000</b>	<b>7,000</b>	<b>130,000</b>			
		<b>4000</b>	<b>UNDP</b>	71300	Local Consultants Sht Term	5,000	10,000	10,000			25,000	
					<b>Sub-total UNDP</b>	<b>5,000</b>	<b>10,000</b>	<b>10,000</b>			<b>25,000</b>	
<b>TOTAL OUTCOME 1</b>						<b>49,000</b>	<b>51,000</b>	<b>30,000</b>	<b>18,000</b>	<b>7,000</b>	<b>155,000</b>	
<b>Outcome 2</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71200	International Consultants Sht Term	5,000	15,000	10,000	8,000		38,000	
				71300	Local Consultants Sht Term	5,000	5,000	5,000	2,000		17,000	
				71400	Contractual services – individuals	4,000	4,000	4,000	4,000	4,000	20,000	
				72100	Contractual services - companies	15,000	20,000	10,000	10,000	5,000	60,000	2)
				74200	Printing and publication costs	1,000	10,000	8,000	6,000	5,000	30,000	3)
				74500	Miscellaneous	5,000	5,000	5,000	5,000	5,000	25,000	4)
					<b>Sub-total GEF</b>	<b>35,000</b>	<b>59,000</b>	<b>42,000</b>	<b>35,000</b>	<b>19,000</b>	<b>190,000</b>	
		<b>4000</b>	<b>UNDP</b>	72100	Contractual services - companies	5,000	10,000	10,000			25,000	
					<b>Sub-total UNDP</b>	<b>5,000</b>	<b>10,000</b>	<b>10,000</b>			<b>25,000</b>	
		<b>31700</b>	<b>MEFWA</b>	71300	Local Consultants Sht Term	5,000	5,000	5,000	5,000	5,000	25,000	
				72100	Contractual Services – Companies	5,000	5,000	5,000	5,000	5,000	25,000	
					<b>Sub-total MEFWA</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>50,000</b>	
		<b>TOTAL OUTCOME 2</b>						<b>50,000</b>	<b>79,000</b>	<b>62,000</b>	<b>45,000</b>	<b>29,000</b>
<b>Outcome 3</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71200	International Consultants						0	
				71300	Local Consultants Sht Term	15,000	15,000	10,000	10,000	5,000	55,000	
				71400	Contractual services – Individual	15,000	15,000	15,000	15,000	15,000	75,000	
				72100	Contractual Services – Companies	10,000	15,000	12,000	5,000	5,000	47,000	2)

				74500	Miscellaneous	3,000	3,000	3,000	2,000	2,000	13,000	4)		
					<b>Sub-total GEF</b>	<b>43,000</b>	<b>48,000</b>	<b>40,000</b>	<b>32,000</b>	<b>27,000</b>	<b>190,000</b>			
		<b>31700</b>	<b>MEFWA</b>	71600	Travel	7,000	7,000	7,000	7,000	7,000	35,000			
				74500	Miscellaneous	3,000	3,000	3,000	3,000	3,000	15,000			
					<b>Sub-total MEFWA</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>50,000</b>		
						72600	Grants	142,718.4	142,718.4	142,718.4	142,718.4	142,718.4	735,000	
			<b>METE</b>	75100	Facilities and Administration	4,281.6	4,281.6	4,281.6	4,281.6	4,281.6	21,408			
						<b>Sub-total METE</b>	<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>735,000</b>		
					<b>TOTAL OUTCOME 3</b>		<b>200,000</b>	<b>205,000</b>	<b>197,000</b>	<b>189,000</b>	<b>184,000</b>	<b>975,000</b>		
<b>Outcome 4</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71200	International Consultants Sht Term	5,000	15,000	12,000			32,000			
				71300	Local Consultants Sht Term									
				71400	Contractual services – individuals	10,000	10,000	10,000	10,000	10,000	50,000			
				71600	Travel		5,000	5,000		10,000	1)			
				72100	Contractual services - companies		10,000	10,000	10,000	3,000	33,000	2)		
				72200	Equipment		20,000	20,000	10,000	50,000	5)			
				74200	Printing and publication costs	3,000	3,000	3,000	3,000	3,000	15,000	3)		
				74500	Miscellaneous	2,000	2,000	2,000	2,000	2,000	10,000	4)		
			<b>Sub-total GEF</b>	<b>20,000</b>	<b>65,000</b>	<b>62,000</b>	<b>35,000</b>	<b>18,000</b>	<b>200,000</b>					
				<b>31700</b>	<b>MEFWA</b>	73400	Rental and Maintenance of Other Equipment	5,680	5,680	5,680	5,680	5,680	28,400	
		75100	Facilities and Administration			1,320	1,320	1,320	1,320	1,320	6,600			
			<b>Sub-total MEFWA</b>			<b>7,000</b>	<b>7,000</b>	<b>7,000</b>	<b>7,000</b>	<b>7,000</b>	<b>35,000</b>			
				<b>TOTAL OUTCOME 4</b>		<b>27,000</b>	<b>72,000</b>	<b>69,000</b>	<b>42,000</b>	<b>25,000</b>	<b>235,000</b>			
<b>Outcome 5</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71200	International Consultants Sht Term			20,000		30,000	50,000	6)		
				71300	Local Consultants Sht Term			10,000		10,000	20,000			
				71400	Contractual services – individuals	10,000	15,000	15,000	15,000	10,000	65,000			
				71600	Travel			3,000	2,000	2,000	8,000	1)		
				72100	Contractual services - companies		15,000	10,000	10,000	10,000	45,000	7)		
				74500	Miscellaneous	3,000	3,000	2,000	2,000	2,000	10,000	4)		
			<b>Sub-total GEF</b>	<b>13,000</b>	<b>33,000</b>	<b>60,000</b>	<b>30,000</b>	<b>64,000</b>	<b>200,000</b>					
				<b>4000</b>	<b>UNDP</b>	72100	Contractual services – companies	5,000	5,000	5,000	5,000	5,000	25,000	
						74200	Printing and publication costs			5,000	10,000	10,000	25,000	
			<b>Sub-total UNDP</b>			<b>5,000</b>	<b>5,000</b>	<b>10,000</b>	<b>15,000</b>	<b>15,000</b>	<b>50,000</b>			
				<b>TOTAL OUTCOME 5</b>		<b>18,000</b>	<b>38,000</b>	<b>70,000</b>	<b>45,000</b>	<b>79,000</b>	<b>250,000</b>			
<b>Project Management</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>	71400	Contractual services – Individual.	15,000	15,000	15,000	15,000	15,000	75,000			
				71600	Travel	3,000		2,000		5,000	1)			
				74500	Miscellaneous	2,000	2,000	2,000	2,000	2,000	10,000	4)		
					<b>Sub-total GEF</b>	<b>20,000</b>	<b>17,000</b>	<b>19,000</b>	<b>17,000</b>	<b>17,000</b>	<b>90,000</b>			
				72400	Communication	3,000	3,000	3,000	3,000	3,000	15,000			



				72500	Office supplies	3,000	3,000	3,000	3,000	3,000	15,000	
				74500	Miscellaneous	4,000	4,000	4,000	4,000	4,000	20,000	
					<b>Sub-total UNDP</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>50,000</b>	
		<b>31700</b>	<b>MEFWA</b>	74200	Production Costs	12,000	12,000	12,000	12,000	12,000	60,000	
				74500	Miscellaneous	5,000	5,000	5,000	5,000	5,000	25,000	
					<b>Sub-total MEFWA</b>	<b>17,000</b>	<b>17,000</b>	<b>17,000</b>	<b>17,000</b>	<b>17,000</b>	<b>85,000</b>	
					<b>TOTAL PROJECT MANAGEMENT</b>	<b>47,000</b>	<b>44,000</b>	<b>46,000</b>	<b>44,000</b>	<b>44,000</b>	<b>225,000</b>	
<b>Total</b>	<b>METE</b>	<b>62000</b>	<b>GEF</b>			<b>175,000</b>	<b>263,000</b>	<b>243,000</b>	<b>167,000</b>	<b>152,000</b>	<b>1,000,000</b>	
<b>Total</b>	<b>METE</b>	<b>04000</b>	<b>UNDP</b>			<b>25,000</b>	<b>35,000</b>	<b>40,000</b>	<b>25,000</b>	<b>25,000</b>	<b>150,000</b>	
<b>Total</b>	<b>METE</b>	<b>31700</b>	<b>METE</b>			<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>147,000</b>	<b>735,000</b>	
<b>Total</b>	<b>METE</b>	<b>31700</b>	<b>MEFWA</b>			<b>44,000</b>	<b>44,000</b>	<b>44,000</b>	<b>44,000</b>	<b>44,000</b>	<b>220,000</b>	
<b>Project Total</b>						<b>391,000</b>	<b>489,000</b>	<b>474,000</b>	<b>383,000</b>	<b>368,000</b>	<b>2,105,000</b>	

**Budget Notes:**

<b>Number</b>	<b>Note</b>
1	<b>Required travel for co-ordination, consultations and exchange of information</b>
2	<b>Can be used for both international and national contracts on as needed basis</b>
3	Including public awareness raising and marketing support as well as training materials
4	<b>Miscellaneous expenses, including the costs of training workshops and stakeholder consultation meetings</b>
5	Required equipment for training of operators, installers and other supply side professionals
6	<b>Including the costs of international experts for independent mid term and final evaluations</b>
7	Including, among others, audit costs

## **SECTION IV: ADDITIONAL INFORMATION**

### **Part I: Other agreements (Endorsement letter)**

Commitment letters are attached in a separate file.

## **Part II: Terms of Reference for Key Project Staff and Main Subcontracts<sup>21</sup>**

### **Project Steering Committee (PSC)**

#### Duties and responsibilities

The Project Steering Committee (PSC) is the main body to supervise the project implementation in accordance with UNDP rules and regulations and referring to the specific objectives and outcomes of the project with their agreed performance indicators;

The main functions of the PSC are:

- General monitoring of the project progress in meeting of its objectives and outcomes and ensuring that they continue to be in line with the national development objectives;
- Facilitating the co-operation between the different Government entities, whose inputs are required for successful implementation of the project, ensuring access to the required information and resolving eventual conflict situations raising during the project implementation when trying to meet its outcomes and stated targets;
- Supporting the elaboration, processing and adoption of the required institutional, legal and regulatory changes to support the project objectives and overcoming of the related barriers;
- Facilitating and supporting other measures to minimize the identified risks to project success, remove bottlenecks and resolve eventual conflicts;
- Approval of the annual work plans and progress reports, the first plan being prepared at the outset of project implementation;
- Approval of the project management arrangements; and
- Approval of any amendments to be made in the project strategy that may arise due to changing circumstances, after the careful analysis and discussion of the ways to solve problems.

#### PSC Structure and Reimbursement of Costs

The PSC will be chaired by the Project Director or another person assigned by the National Executing Agency for this purpose. The PSC will include a representative from each of the key Ministries and Agencies involved in the project, a representative of UNDP and, as applicable, representatives of project's other cofinancing partners. Other members can be invited by the decision of the PSC, however, by taking care that the PSC still remains operational by its size. The project manager will participate as a non-voting member in the PSC meetings. When and as needed, the meetings of the PSC can be extended to Technical Advisory Group meetings.

The costs of the PSC's work shall be considered as the Government's or other project partners' voluntary in-kind contribution to the project and shall not be paid separately by the project.

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<sup>21</sup> Standard basic ToRs

Members of the PSC are also not eligible to receive any monetary compensation from their work as experts or advisers to the project.

### Meetings

It is suggested that the PSC will meet at least twice a year, including the annual TPR meeting. A tentative schedule of the PSC meetings will be agreed as a part of the annual work plans, and all representatives of the PSC should be notified again in writing 14 days prior to the agreed date of the meeting. The meeting will be organized provided that the executing agency, UNDP and at least 2/3 of the other members of the PSC can confirm their attendance. The project manager shall distribute all materials associated with the meeting agenda at least 5 working days in prior to the meeting .

### National Project Director

As a representative the Government and project's executing agency, the National Project Director is having the main responsibility to ensure that the project is executed in accordance with the project document and the UNDP guidelines for nationally executed projects.

His/her main duties and responsibilities include:

- Supervising the work of the Project Manager through meetings at regular intervals to receive project progress reports and provide guidance on policy issues;
- Certifying the annual and, as applicable, quarterly work plans, financial reports and requests for advance of funds, ensuring their accuracy and consistency with the project document and its agreed amendments;
- Authorizing the project contracts, following the approval of UNDP;
- Unless otherwise agreed, chairing the Project Steering Committee and representing the project in other required meetings;
- Taking the lead in developing linkages with the relevant authorities at national, provincial and governmental level and supporting the project in resolving any institutional or policy related conflicts that may emerge during its implementation;

### Project Manager (full time)

Duties and responsibilities:

Operational project management in accordance with the project document and the UNDP guidelines and procedures for nationally executed projects, including:

- General coordination, management and supervision of project implementation;
- Managing the procurement and the project budget under the supervision of the Executing Agency and with support from UNDP to assure timely involvement of local and international experts, organisation of training and public outreach, purchase of required equipment etc. in accordance with UNDP rules and procedures;

- Submission of annual Project Implementation Reviews and other required progress reports (such as QPRs) to the PSC, Executing Agency and the UNDP in accordance with the section “Monitoring and Evaluation” of the project document;
- Ensuring effective dissemination of and access to information on project activities and results, (including an regularly updated project website);
- Supervising and coordinating the contracts of the experts working for the project;
- Communicating with international investors and financial organizations to define fields of cooperation and attracting additional financing in order to fulfill the project objectives; and
- Ensuring successful completion of the project in accordance with the stated outcomes and performance indicators summarized in the project’s logframe matrix and within the planned schedule and budget otherwise.

**Expected Qualifications:**

- Advance university degree and at least 15 years of professional experience in the specific areas the project is dealing with, including good knowledge of the international experiences, state of the art approaches and best practices (by applying different policy measures, new financing mechanisms etc.)
- Experience in managing projects of similar complexity and nature, including demonstrated capacity to actively explore new, innovative implementation and financing mechanisms to support the SWH market and leveraging of financing for that;
- Demonstrated experience and success on the engagement of and working with the private sector and NGOs, creating partnerships and leveraging financing for activities of common interest;
- Good analytical and problem solving skills and the related ability to adaptive management with prompt action on the conclusion and recommendations coming out from the project’s regular monitoring and self-assessment activities as well as from periodical external evaluations;
- Ability and demonstrated success to work in a team, to effectively organise it works and to motivate its members and other project counterparts to effectively work towards the project’s objective and expected outcomes;.
- Good communication skills and competence in handling project’s external relations at all levels;
- Good working knowledge of English in addition to the national languages of the host country; and
- Familiarity and prior experience with the specific UNDP and GEF requirements are considered as assets

**Project Assistant (full time)**

**Duties and responsibilities:**

Supporting the project manager in the implementation of the project, including:

- Responsibility for logistics and administrative support of the project implementation, including administrative management of the project budget, required procurement support etc.

- Maintaining the business and financial documentation up to date, in accordance with UNDP and other project reporting requirements;
- Organizing meetings, business correspondence and other communication with the project partners;
- Supporting the project outreach and PR activities in general, including keeping of the project web-site up to date;
- Managing the projects files and supporting the project manager in preparing the required financial and other reports required for monitoring and supervision of the project progress;
- Supporting the project manager in managing the contracts, in organising correspondence and in ensuring effective implementation of the project otherwise

Expected Qualifications:

- Fluent in English and the national languages of the host country
- Demonstrated experience and success of work in a similar position
- Good administration and interpersonal skills
- Ability to work effectively under pressure
- Good computer skills

**International Project Adviser(s) (part time)**

Duties and Responsibilities:

Support UNDP and the project management to monitor the progress of the project and its different subcomponents, and, as needed, build the capacity of the local experts working for the project to successfully implement the project activities ensuring that they comply with the agreed benchmarks and success indicators of the project as well as international best practices and lessons learnt.

The specific responsibilities include, among others to:

- support the local project team in organising the implementation of the different sub-components of the project at the inception phase and after that, including support to the project manager in the preparation of the project inception report and the annual work plans, drafting of Terms of Reference for the national and, as needed, additional international experts and subcontractors, required tender documents etc;
- support the project manager in supervising the work of the contracted individual experts and companies, including review of the feasibility studies and the technical design, financing and implementation arrangements of the planned pilot projects;
- support the project manager in arranging co-operation with the current project partners and, as applicable, in establishing new, additional national and/or international partnerships to support the project goals and objectives;
- support the local project team in monitoring and evaluating the performance and outcome of the SWH installations supported by the project;

- monitor the progress of the project and participate in developing periodic progress reviews and, as applicable, the annual Project Implementation Reviews;
- train personally or, as needed, organize other training for the local stakeholders to successfully implement the project and to meet its capacity building objectives; and
- provide advice on the required institutional, legal and regulatory changes to support the reaching of the stated outcomes of the project and provide other required advice on the successful implementation of the specific project subcomponents and activities by drawing from the international lessons learnt and best practices.

Expected Qualifications:

- A university degree in the area the project is dealing with;
- Demonstrated experience and success in supporting similar projects (or its subcomponents) in other GEF programme countries;
- Good knowledge of the international experiences, state of the art approaches and best practices in the specific areas the project and its subcomponents are dealing with;
- Good analytical skills and effective communication and training skills and competence in handling external relations at all levels;
- Ability to work in a team and to motivate other team members and counterparts;
- Good knowledge of the working languages of the local team in addition to English, including the ability to review, draft and edit required project documentation
- Familiarity with the specific UNDP and GEF requirements is considered as an asset.

## **PART III**

### **Development of the SWH Supply Chain**

Development of the SWH market is a balanced process, in which the increased demand must be matched by the availability of decent quality products, and along with it an infrastructure of sufficiently trained installers. Consistency in market stimulation programs (whether they be the development of legislation, building codes, tax credits, subsidies or other) is essential to create a long-term basis for investment in these new activities.

The identified steps in the supply chain are:

- Availability of hardware (collectors, tanks, and systems components like controls, pumps etc.) through local manufacturing or imports;
- Distribution structure (wholesalers or warehousing and distribution network); and
- Trained Installer and Engineering base for SWH.

Typical supply chain development in emerging SWH markets will start with a small group of suppliers (either local manufacturers or importers), who take the responsibility for the whole supply chain, including products, distribution and (assistance in) installation work. Once the volume increases, the three elements will gradually separate and the different actors can take their (normal) role in the supply chain (suppliers, wholesalers, installers).

In some markets, the wholesale activities (warehousing and logistics) remain in the hands of the suppliers, as for the typical character of the solar systems (it is bulky and vulnerable because of the glass), they may not be particularly liked by the wholesalers in the installation sector, who are used to pipes and fittings or by wholesalers in the building industry, who are used to brick, concrete, wood etc.

The marketing and quality issues and the related capacity buildings needs as a part of the supply chain development are briefly discussed below. Typically the companies involved in the supply chain are SME's. Only after the market has taken shape and more substantial volume has been reached, larger companies will enter the market - assuming that they can link it with their current sales portfolio. This is the case now, e.g., in Europe where almost all major multinational heating boiler industries are involved in SWH production, sales and marketing.

#### Capacity building of hardware suppliers.

In order to build the basic capacity either in manufacturing or at the level of importers in a country, the conditions for these companies must be such that they need to recognize a beginning demand. Most likely these early starters will take an international orientation and start with imports of hardware. In such an approach, the local importers build up their expertise based on the technical knowledge of more experienced exporting companies. After some economies of scale have been reached, local manufacturing of some of the hardware components will start. This is mainly collector production and tank manufacturing. Although there is not one rule available, it is generally



believed that once a supplier can sell more than 5000 m<sup>2</sup> per year (or 2000 systems), it can be more economical to start local production or assembling. But many companies start also with smaller size turnover levels. To assist this process the following conditions can be created:

*Match making missions:* Trade missions for local interested SME's in import or manufacturing can be organized to international solar trade shows and events. These missions should include a series of seminars where detailed information is provided with regard to basic SHW manufacturing and product issues, quality and certification and import related issues (either for complete systems or for hardware components to be used in manufacturing like glass, spectral selective material etc). The project could foresee in developing a format, including making available the necessary experts for the seminars, and generally assist in the organization in these match making missions. This format can be used in two ways: in the country or outside the country. A spin-off effect of these missions will be that companies with the same interest will meet and most likely will form the basis for a national trade association (which is an essential part of the supply chain development- see later).

*Review of import duties and potential barriers:* If companies get active in the supply or manufacturing, the barriers to get them started must be kept as low as possible. Complicated import procedures or high duties will frustrate the process of capacity building at that end. Any project to support the local SWH market development must see that this issue is sufficiently covered in the countries' support mechanisms.

#### Capacity building in distribution structure

Apart from activating installation capacity, there are no specific unique elements, which would need to be addressed to cover this issue. Normally the physical distribution structure will follow normal patterns once the market size develops.

The lack of craftsmen properly trained to install and maintain solar thermal systems can, however, become a key barrier to growth. This is particularly relevant for the main market segment of single-family houses, as installers can often decisively act as the decision maker. If installers know solar thermal systems, they may motivate potential users to buy them. If they are not specifically trained, they may discourage consumers or even provide a poor installation, with a negative impact on the functionality of the system and on the image of the technology.

Overcoming this barrier to growth requires proactive measures in partnership between the solar industry and public authorities. The market is currently still too small for manufacturers to be able to build up their own widespread network of installers. Therefore, the solar thermal industry has to rely on the craftsmen usually working on the heating systems and/or the roofs. Heating specialists are always relevant, but in some countries and situations, roof specialists are involved as well. The main problem is that most installers are reluctant to invest time and money to attend courses, which are of limited value to them as long as the solar thermal market has not reached a critical mass.

As with the suppliers of the hardware, it is important to get the installation companies interested in the issue and thus make them part of the overall capacity building process. As financial instruments are not likely to be effective to that extent, the best suggestion is to create some form of incremental sales value for these installers like a label of recognition i.e. "authorised solar installer". Once this is

done on a national basis and is open to all installers, such an approach will at the same time allow the possibilities to get the proper training programs to the installers and develop criteria for entry. It is most effective, if this approach can be shaped in strong cooperation with the local installers' trade association. However, if this is not possible or it is not available, another body should be identified to create installer "identity" and organize training and motivation programs. The project could foresee providing assistance in building up this organizational structure.

Another strong measure could be to make specific training of the installer a mandatory condition to grant direct incentives for a new solar system. However, where such a scheme has been used, it has partly fired back by creating a "chicken and egg" problem: if there are only few installers who qualify, potential investors may find it difficult to find and contact them. The market price of the installation tends to grow. Most installers remain excluded from the subsidy scheme and will therefore prefer to market conventional heating. As such, a measure like this must be carefully examined in collaboration with industry experts, as it may not work well at the initial phase of market development

It is suggested that in the beginning solar thermal training should be strictly voluntary and the training should be subsidised in order to lower the barrier for the installers to attend these courses. Additionally, promotional campaigns targeted at installers could help in attracting their attention. When the market matures, solar thermal campaigns can include a list of properly qualified installers, but only when a sufficient network of trained installers is available, should solar thermal investment incentives be linked to the qualification of installers.

The long-term goal should be that every installer, who wishes to install solar thermal systems has taken part in mainstream training courses, but the requirements to attend such courses should come gradually. In parallel, the mandatory inclusion of solar thermal skills in the initial education program of the craftsmen can be considered.

To address this topic, it is also necessary to look separately the residential market (small SWH for residential buildings) and the commercial market (large systems for hotels, hospitals, industries etc). These two markets require a very different approach in any of the capacity building plans.

*Domestic market:* The availability of trained installers is crucial for market development. In the past few years, there has been a development of a wide range of solar installer training programmes. In most EU countries, there are training programmes available as there are also coordinated training modules developed like the one offered by the ECI. For developing countries there are some training modules on the market developed by consultants through bilateral programs. It will not be too complicated to compile from the available material a dedicated training program for participating countries as this is normally open information. Such a training program must include modules for installation, commissioning, operation and maintenance and should be completed with some basic marketing information. The project can offer to provide a dedicated training programme for installers, based on the available training modules (source in ECI / ESTIF-instaltrain / Soltherm, etc). The training can be offered through networks, as described before, in order give the installer an incremental value in the market (the "authorized solar installer"- concept).

*Commercial market:* The commercial market requires, apart from trained installers, also knowledgeable solar engineers to make the proper solar designs for commercial applications. The installers in this segment are typically some larger companies which have experience with larger air conditioning and heating installations and are therefore more open to new technical development. Furthermore, the typical solar installation skills for these larger systems are more in line with general large HVAC systems and will be adequately engineered and specified by the consulting engineer who is responsible for the project. Therefore, the needs for this segment are mainly focused on the knowledge transfer to mechanical engineers. This category of professionals is relatively easy to identify in a country and dedicated training modules can be offered to them. In order to develop a proper program, a “train the trainer” approach would be most effective. This implies that the project would foresee in some sort of apprenticeship or scholarship to follow a technical training in a country or company, where there is a large knowledge base for large systems for someone, who could develop this further in a dedicated training module for engineers in the selected country.

### Quality control and certification

The issue of quality of products, systems and installation will arise shortly after the market development shows effects in volume of products produced and installed. In countries like China, Turkey and Nepal with a solid and stable market development, it is considered as a major issue to establish quality criteria for creating a level playing field internally, to avoid malfunctioning systems and to stimulate exports from these countries based on internationally accepted standards.

ISO standardization for solar hot water products would be welcomed in order to provide a common baseline product quality for all countries.. The well developed EU/ CEN product standards and Solar Keymark certification scheme can be duplicated for that purpose or at least used for general guidance to select appropriate issues. It will require, however, that also the local circumstances like technical state of the art, availability of components, climate and possibilities for surveillance of a certification systems will be taken into account. Often a phased approach is appropriate moving the market in a stepwise set of improvements.

The following issues need to be addressed:

- Quality requirements and evaluation methods for:
  - Product quality (system components like collectors, tanks etc)
  - System quality (a configuration of components)
- Certification mechanism (basically a surveillance system that guarantees constant quality)

*Quality requirements and evaluation methods:* The easiest way would be to fully duplicate the currently proven EU technical requirements and test methods for collectors and systems as described in the EN standards. There is quite good expertise available at the moment and the experience has been good in general so far. Further improvements of the standards are foreseen in the near future and these can be fully duplicated as well. On the other hand, it needs to be recognized that the EN standards are specifically developed for the European climate zone and also for the EU sophisticated installation sector. For many of the targeted countries both the climate

conditions as well as the typical state of the art in the installation sector are different from the EU. Therefore, the standards cannot be duplicated 1 to 1. It will require a review of the various technical requirements of the standards to match the local climate and technical capabilities. The EN standards, however, can be used as the start and a template. The same must be considered once reviewing the test methods to match available testing infrastructure. A further consideration and crucial condition is that the requirements and the test methods must keep pace with the market volume and potential and the cost connected to the testing in order to keep it affordable to the targeted suppliers. For this component, the project can offer excellent assistance and support on the following levels:

- the assessment of quality standards based on the EN standard, but optimised for the local circumstances
- the building of national or regional testing facilities and creating links between these and the already well established testing facilities in more advanced countries;
- initial help in reducing the cost for suppliers to get the products and systems tested

*Certification mechanism:* The certification mechanism must serve the purpose of guaranteeing the constant quality of the products supplied in the market, thus providing the basis for consumer confidence. Like the EN standards, the EU certification scheme Solar Keymark can be used as template to create a national or regional certification system. For all clarity: these certification schemes are dedicated for the hardware only. In some countries there is experience with certification schemes for installers as well. This element is addressed and could be further developed as part of the capacity building of the installer sector.

The development of the certification scheme will normally imply a procedure to guarantee the evaluation of conformity of the supplier. To avoid bureaucratic mechanisms, which could frustrate the supply-side of the market instead of stimulating it, the certification scheme must be pragmatic and kept affordable to avoid excessive cost in the system. The project can play a major role in assisting in the development of such a scheme in collaboration with local institutes and parties. Furthermore, it can play a facilitating role in the implementation and adoption of the certification scheme, related labelling and surveillance structure at the national level (strengthening institutional capacity, testing facilities etc.).

### Trade Associations

In order to effectively build up the capacity in the supply chain as well as create a broad support from the industry for quality programs, an essential step is that the supply side will be organised in some sort of solar trade association. These associations always have played a crucial role in market development. They serve as communication channel and will create the platform for new initiatives to develop the market further.

The project should actively support the formation of such trade associations and use the network to make international contacts between these associations.

## SIGNATURE PAGE

Country: Albania

<b>UNDAF Outcome 2:</b>	A transparent and accountable government, developing and implementing effective national policies.
<b>Expected Outcome 2:</b>	Policies developed and implemented that support the achievement of the MDGs.
<b>Expected Output 2.1</b>	NSDI (National Strategy for Development and Integration) and other national development plans adequately reflect issues related to gender and minority equality, decentralization, environment and other issues related to MDGs.
<b>Implementing partner:</b>	Ministry of Economy, Trade and Energy of Albania;
<b>Other Partners:</b>	Ministry of Environment, Forestry and Water Administration of Albania

*Programme Period:* 2008-2013

*Programme Component:* MYFF Goal-Fostering Democratic Governance

*Project Title:* Global Solar Water Heating Market Transformation and Strengthening Initiative: Albania Country Programme PIMS 3611

*Atlas Award:* 50767

*Project ID:* 62847

*Project Duration:* 4.5 years

*Management Arrangement:* National Execution Modality

### **Allocated resources:**

#### Cash contribution:

- Government of Albania: USD 955,000
- UNDP TRAC: USD 150,000
- GEF: USD 1,000,000

**Total budget- UNDP managed: USD 2,105,000**

#### In-kind contribution:

- Government of Albania: USD 44,000
- Harry Fultz: USD 30,000

#### Parallel financing:

ADA: USD 440,000

Government of Switzerland: USD 131,000

**Agreed by Ministry of Economy, Trade and Energy**  
**Mr. Genc RULI**  
**Minister**

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**Agreed by United Nations Development Programme**  
**Mrs. Gülden Türköz-COSSLETT**  
**UN Resident Coordinator and UNDP Resident Representative**

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