Annual Project Report (UNDP conclusion)

[Name of project] Demonstration project for conversion from HCFC-22/HCFC-142b technology to CO2 with methyl formate co-blowing technology in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd.

[Date of report] January 10, 2015

Project annual report rating

Item rated	*Rating provided*
Overall quality of the report	*4*
Does the project still fit with the Country office Strategic direction	*4*
Is the project still Relevant within the country setting	*5*
Sustainability	*4*
Efficiency: Financial performance (overall)	*4*
Efficiency: Financial performance (reporting period)	*3*
Effectiveness: Activity implementation (overall)	*4*
Effectiveness: Activity implementation (reporting period)	*4*
Partnership Effectiveness (if applicable)	*4*
Total	*36*

Partnership Effectiveness (only for joint inter-UN agency initiatives)

Overall assessment

The project, generally, implemented well, the activities are expected under the agreement, indicators are met, but the disbursements to the final beneficiaries are needed to be accelerated.

Sustainability (either separate or as part of the overall assessment)

The issue was addressed in the report to some extent.

Reduction of minimum 12.3 ODP tonnes in the project was achieved.

The technologies could be replicated in other enterprise in China.

CO2 with methyl formate co-blowing technology has some safety problems in transportation, utilization. Safety must be played high attention. Otherwise, it will affect the utilization of the technology.

Management steps to be taken

The project is expected to be finished the end of the 2014, but it is delayed. Actually the payment of investment cost to the enterprise from FECO is not finished now. The last verification should be made and disbursement should be made too quickly.

Signed by

Date 30 Jun - 2015

Annual Project Report

Demonstration project for conversion from HCFC-22/HCFC-142b technology to CO_2 with methyl formate co-blowing technology in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd.

[15th, Jan, 2015]

Basic Project Information

Project Title: Demonstration project for conversion from HCFC-22/HCFC-142b technology to CO_2 with methyl formate co-blowing technology in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd.	
UNDP Award ID	00063444
UNDP Project ID	00080517
Project Duration	2011-2013
Reporting Period	January-December 2014
Total Approved Project Budget	$1,973,300
Participating UN agencies	UNDP
Implementing Partners/ National collaborating agencies	FECO/MEP
International collaborating agencies	
Cost-sharing third parties	
UNDP Contact officer	Hong Yun
Project website	

Executive Summary

The Demonstration Proposal was prepared and submitted to the 62nd ExCom meeting. The Executive Committee approved the XPS Demonstration Project in 64th meeting in July 2011 at a funding level of US $ 1,973,300. The Project Document between FECO/MEP and UNDP was signed in November 2011 and the first payment from UNDP to FECO/MEP has been made in January 2012. The project contract between FECO/MEP and the beneficiary enterprise-Nanjing Feininger was signed in March 2012. The

implementation plan of the demonstration project has been formulated and agreed by FECO/MEP in February 2012. The phase-out activity at the enterprise was practically initiated in March 2012. The equipment installation has been completed at the end of 2012 and the second payment from UNDP to FECO/MEP has been made in January 2013. The trail run was successful according to the contract in December 2013. The project was implemented smoothly according to the program schedule and was completed in June 2014.

1. Background

Development Context

During the 64th Meeting of the Executive Committee, the demonstration project for conversion from HCFC-22/HCFC-142b technology to CO_2 with methyl formate co-blowing technology in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd. (CPR/FOA/64/DEM/507) was approved by the Executive Committee with UNDP as the implementing agency. Total approved funding from MLF was US $1,973,300. This demonstration project, upon successful completion, has established the suitability of CO_2 with methyl formate co-blowing technology as a viable replacement to HCFC-22/HCFC-142b technology in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd. The project will provide an environmentally safe and cost-effective alternative for enabling the replication of this technology in similar applications and enterprises in the XPS Foam Sector in China. This will contribute to the viability of a large number of enterprises in this sector, and result in reductions in HCFC consumption of 12.3 ODP tonnes, contributing to the compliance with the 2013/2015 control targets. It will also lead to net annual emission reductions of 420,250 tonnes CO2-eq. The implementation of the project will follow the rules and procedures of National Execution (NEX). The Performance Based Payment (PBP) mechanism will be applied for the implementation.

Project Objectives and Strategy

The objective of this demonstration project is to establish the suitability of CO_2 with methyl formate co-blowing technology as a viable replacement of the currently used combination of HCFC-22 and HCFC-142b as blowing agent in the manufacture of XPS foam at Feininger (Nanjing) Energy Saving Technology Co. Ltd. The project will be

implemented in conjunction with the Sector Plan for HCFC phase-out in the XPS Foams Sector and submitted simultaneously.

2. Key Results

Project Outcomes

The phase-out activity at the enterprise was practically initiated in March 2012. The equipment installation has been completed at the end of 2012 and the second payment from UNDP to FECO/MEP has been made in January 2013. The trail run was successful according to the contract in December 2013. The project Completion verification has been carried out in June 2014.

Activities and Outputs

Activity 1.1 Implementation of Conversion

FECO organized the last on-site verification--project completion verification on June 2014. The UNDP official, the FECO official, the technical experts and the finical expert worked together for the verification.

According to the verification results, the demonstration project was successfully implemented. The industrial application feasibility of methyl formate together with CO2 and ethanol in the production of XPS foam board has been well verified. It could be concluded that as for an environmental and climate-friendly technology, the CO2/methyl formate co-blowing foaming technique has certain application potentiality. The project directed by Feininger Company should have certain demonstration effects, especially in some hot regions or countries.

Activity1.2 Project Management

In order to make the XPS Demo project be finished as soon as possible, FECO/MEP officials and experts often discussed with the enterprise on how to speed up the remaining work like the completion report. In June 2014, the project has been completed smoothly.

Sustainability

The successful implementation of this demonstration project will result an annual reduction of minimum 12.3 ODP tonnes. It will also demonstrate an environmentally safe and cost-effective alternative for enabling replication of this technology in similar applications and enterprises in the XPS Foam Sector in China, contributing to China's compliance with the 2013 and 2015 control targets.

Partnership Effectiveness

Feininger invited a lot of polymeric foam processing experts to conduct training. Feininger had carried out almost 60 person/time of technical training on the research staff, the technical and safety training for equipment operators. Furthermore, the experts often discussed with the enterprise on how to speed up the remaining work such as the completion report, and share the experience of the implementation of the project with them.

Cross-cutting Issues

The successful implementation of this project will result in an annual reduction of at minimum 12.3 ODP tonnes and annual emission reductions of 420,250 tonnes CO2-eq. This project will demonstrate an environmentally safe and cost-effective alternative for enabling replication of this technology in similar applications and enterprises in the XPS Foam Sector in China, and contribute to China's compliance with the 2013 and 2015 control targets.

3. Project Management and Oversight

Implementation status

Due to the complexity of the CO_2 with methyl formate co-blowing technology, the actual implementation progress of the project has a slight delay with regard to the Implementation Plan. The equipment installation completed at the end of December 2012. The trial run had lasted a long time and was completed in December 2013 and passed the Project Completion Verification in June 2014.

Human Resource Management

FECO organized the last on-site verification---project completion verification. The UNDP official, the FECO official, the technical experts and the finical expert worked together for the verification.

Monitoring and Evaluation

The experts often discussed with the enterprise on how to speed up the remaining work such as the completion report, and share the experience of the implementation of the project with them. FECO organized the last on-site verification---project completion verification on June 2014. The UNDP official, the FECO official, the technical experts and the finical expert worked together for the verification.

Communication and advocacy

Communications between FECO and the enterprise were conducted to require them to pay attention to the implementation plan and monitor the smooth progress of the project.

4. Financial Management

	Source of Fund	Budget	Expenditure
Expenditure Vs. Approved project budget by source of funding	UNDP	$1,093,478	$468,888.5
	Government Cost Sharing		
	Third Party Cost-sharing		
	Other (please specify)		
	Total	$1,093,478	$468,888.5

Output	Activities	Source of Funding	Budget Description	Annual Budget (USD)	Annual Expenditure (USD)	Note
Output 1	**1.1 Technical Assistance and supporting implementation**	MLF	Local consultants, travels for performance verification	$9,660	$1,598	
			International experts, travels and other implementing supervisor cost	$18,000.00		
Output 2	**1.2 Implementation of Conversion**	MLF	Subcontract of Incremental Capital Cost (ICC) including equipment procurement, training and assessment, etc.	$778,817.5	467,290.5	
Output 3	**1.3 Converted system running**	MLF	Subcontract of Incremental Operational Cost (IOC) of materials and equipment maintenance, etc.	$287,000		
			Total	$1,093,478	$468,888.5	

5. Management recommendations

5.1 Recommendation

Experts specialized in XPS Foam Sector should offer great assistance to the proposal formulation and give improving considerations to the future phase-out work in the sector. The demonstration project needs more experts from universities and research institutions to provide technical advices.

5.2 Recommendation

Standards and other policy issues are of great importance to address a successful HCFC phase-out in the XPS foam sector. Learning the advanced technologies from developed countries would be helpful to identify suitable technologies for local industries.

6. Annexe/s