



**United Nations
Environment
Programme**

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/69/23
13 March 2013

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Sixty-ninth Meeting
Montreal, 15-19 April 2013

PROJECT PROPOSAL: CHINA

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposal:

- HCFC phase-out management plan (stage I, second tranche)

UNDP/UNEP/UNIDO
World Bank/ Germany/Japan

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
China

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (stage I) XPS foam	Germany (lead), UNIDO

(II) LATEST ARTICLE 7 DATA (Annex C Group I)	Year: 2011	20,739.03 (ODP tonnes)
---	------------	------------------------

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2011	
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab Use	Total sector consumption
				Manufacturing	Servicing				
HCFC-123				12.0	3.5				15.4
HCFC-124					0.4				0.4
HCFC-133									
HCFC-141b		6,992.7				512.6			7,516.5
HCFC-142									
HCFC-142b		1,094.9		6.5	344.2				1,445.7
HCFC-22	70.5	1,488.3		6,721.8	3,478.9				11,759.5
HCFC-225ca						1.5			1.5
HCFC-225cb						0.0			0.0

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	19,269.0	Starting point for sustained aggregate reductions:	18,865.4
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	3,445.19	Remaining:	15,420.25

(V) BUSINESS PLAN		2012	2013	2014	2015	Total
Germany	ODS phase-out (ODP tonnes)	46.5	7.5	7.5	7.9	69.5
	Funding (US \$)	4,122,047	667,002	667,002	703,687	6,159,738
UNIDO	ODS phase-out (ODP tonnes)	86.5	42.6	71.9	82.8	383.8
	Funding (US \$)	7,417,500	3,652,850	6,159,750	19,188,750	36,418,850

(VI) PROJECT DATA			2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	19,269.0	19,269.0	17,342.1	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	18,865.4	18,865.4	16,978.9	n/a
Agreed funding (US \$)	Germany	Project costs	459,023	390,977	0	0	500,000	1,350,000
		Support costs	51,260	47,059	0	0	60,181	158,500
	UNIDO	Project costs	21,372,000	10,217,000	3,998,000	6,330,000	6,733,000	48,650,000
		Support costs	1,602,900	715,190	279,860	443,100	471,310	3,512,360
Funds approved by ExCom (US \$)		Project costs	21,831,023	0	0	0	0	21,831,023
		Support costs	1,654,160	0	0	0	0	1,654,160
Total funds requested for approval at this meeting (US \$)		Project costs	0	10,607,977	0	0	0	10,607,977
		Support costs	0	762,249	0	0	0	762,249

(VII) Request for funding for the second tranche (2012)		
Agency	Funds requested (US \$)	Support costs (US \$)
Germany	390,977	47,059
UNIDO	10,217,000	715,190

Secretariat's recommendation:	For individual consideration
--------------------------------------	------------------------------

PROJECT DESCRIPTION

1. On behalf of the Government of China UNIDO, as the lead implementing agency for the extruded polystyrene (XPS) foam sector plan (XPS Foam Sector Plan), has submitted to the 68th meeting of the Executive Committee a request for funding for the second tranche of the XPS Foam Sector Plan at a total cost of US \$11,370,226, consisting of US \$10,217,000, plus agency support costs of US \$715,190 for UNIDO, and US \$390,977, plus agency support costs of US \$47,059 for the Government of Germany.
2. Pursuant to decision 68/22(d), UNIDO has resubmitted the second tranche of the XPS Foam Sector Plan to the 69th meeting. The Secretariat has prepared this present document based on the information contained in paragraphs 36 to 49 of document UNEP/OzL.Pro/ExCom/68/24/Rev.1, and the new information submitted by UNIDO.
3. The XPS Foam Sector Plan was approved at the 64th meeting, to reduce the consumption of HCFC-22 and HCFC-142b in the XPS foam sector by at least 338.0 ODP tonnes by 2013, and an additional 254.0 ODP tonnes by 2015. The XPS Foam Sector Plan was approved at a total funding level of US \$50,000,000, plus agency support costs of US \$3,670,860. The first tranche of the XPS Foam Sector Plan was also approved at the 64th meeting in the amount of US \$21,372,000, plus agency support cost of US \$1,602,900 for UNIDO, and US \$459,023, plus agency support cost of US \$51,260 for the Government of Germany

Progress report on the implementation of the first tranche of the HPMP

4. The following activities have been implemented since the approval of the XPS Foam Sector Plan:
 - (a) Public awareness activities through which information concerning the XPS Foam Sector Plan, including regulations, strategy, HCFCs phase-out commitment and activities, and implementation modalities was disseminated through various media (i.e., China Plastics Magazine, China Environment Newspaper, Ozone Action in China, as well as the internet site of the Plastic Industry). A workshop was also conducted in December 2011 with the participation of representatives from the Government, UNIDO, Germany and the and largest XPS foam enterprises;
 - (b) Contracts for the implementation of the XPS Foam Sector Plan between UNIDO and FECO, and the Government of Germany and FECO were drafted. The Contract between FECO and UNIDO¹, at a total amount of US \$21,372,000 was signed in March 2012, through which FECO shall complete the work by 31 December 2016. The Contract between FECO and the Government of Germany, at a total amount of US \$1,350,000 was signed in August 2012; and
 - (c) The Project Implementation Manual (PIM), which describes the sub-project cycle (i.e., ODS project rationale, roles and responsibilities of key stakeholders (including FECO, UNIDO, the Government of Germany industrial associations, local environmental protection agencies, and relevant consulting agencies and experts), project implementation procedures, financial management and disbursement, procurement, monitoring and verification measures, and policies and regulations), was drafted and signed on October 2012.

¹ The contract sets out the principles of performance-based implementation modalities that ensure the timely compliance of China's obligations under the Montreal Protocol. It contains provisions for monitoring and evaluation, including regular performance verification and technical verification reports, and meetings with project beneficiaries to confirm that actual phase-out of HCFCs is according to the work plan targets and that the identified alternative technologies are suitable, adequate and eligible in the context of the Protocol.

5. With regard to policy actions, the Government of China has established the quota management system to control the annual consumption level of HCFCs in accordance with the targets set out in the XPS Foam Sector Plan and has published the quota for 2013. Based on the current status of the XPS foam sector and the rules stipulated in the ODS Management Regulation, enterprises with annual consumption of over 100 metric tonnes (mt) of HCFCs should apply for the quota permits through FECO. The detailed enforcement procedure of the quota management system in the XPS foam sector will be in close coordination with other consumption sectors as well as the production sector.

6. Further to a notice issued by FECO in March 2012 inviting XPS foam enterprises to submit a project application request including basic information, by July 2012, 16 enterprises submitted project applications. Further to a screening process, 12 enterprises with a total consumption of 3,978.0 mt (234.70 ODP tonnes) of HCFCs were audited *in situ* by FECO, in conjunction with independent experts and the audit agency², and were requested to submit project proposals to FECO for review. However, after the verification was completed, one enterprise withdrew its application due to a lack of counterpart funding. In November 2012, the 11 enterprises formulated and submitted their project implementation plans (including procurement plans) to FECO for review, which were assessed in December 2012 by an independent expert selected by FECO. Signing of the sub-contracts between FECO and the 11 enterprises at a value of US \$18,965,620 and a phase-out of 3,801.8 mt (224.30 ODP tonnes) of HCFCs was proposed for January and February 2013.

7. Considering that the phase-out target set out for the first tranche of the XPS Foam Sector Plan is 4,367.0 mt (257.65 ODP tonnes) of HCFCs, contracts with additional enterprises for the balance of 565.2 mt (33.35 ODP tonnes) of HCFCs would need to be signed. Consequently, in December 2012 FECO invited additional XPS foam enterprises to submit their applications for conversion. By 10 January 2013, 10 enterprises announced their interest and submitted the required documentation to FECO. The consumption as reported by these enterprises is approximately 4,000 mt (240.0 ODP tonnes) of HCFCs. Part of this consumption will be addressed under tranche 1 (in order to achieve the phase-out target of 4,367.0 mt); partially by tranche 2 (in order to achieve the phase-out target of an additional 2,131.0 mt in 2013); and the remaining consumption through subsequent tranches. The detailed allocation of the amount of HCFCs to be phased through each funding tranche will be available as soon as the verification on consumption data is finalized.

8. In support of the activities implemented at the enterprise level, technical activities have also been carried out, including training workshops; on-site verifications and commissioning of projects; research on alternative technologies to improve their use and performance; and verification of local suppliers of CO₂ foaming equipment for XPS production which will be used as a reference to the beneficiary enterprises when purchasing equipment. An Implementation Support Agency (ISA) has also been selected to assist FECO in the day-to-day operational management, in pre-reviewing the project documents submitted by the XPS foam enterprises and in providing supervision, commissioning and on-site verification. The terms of reference to review and update the existing technical and safety standards on different XPS foam products have been prepared.

Level of funding disbursement

9. As of January 2013, of the total funding of US \$21,831,023 approved so far (for both UNIDO and the Government of Germany), US \$11,075,023 had been disbursed from UNIDO and the Government of Germany to FECO. Of this amount, US \$6,802,187 will be disbursed by FECO to the beneficiary enterprises by the end of March 2013 (i.e., over 31 per cent of the total funding approved in tranche 1). In accordance with the contract between FECO and UNIDO, FECO will release payments as follows: 20 per cent of the incremental capital costs upon signing the contracts with beneficiary enterprises; an

² The audit verified the eligibility of the enterprises, the levels of HCFCs consumption, equipment in the baseline and its capability, the last three years financial data to assess the business conditions.

additional 20 per cent upon signing of the equipment procurement contracts; an additional 40 per cent upon completion of equipment installation; and the remaining 20 per cent upon commissioning and acceptance by the Government of China and UNIDO.

Annual plans for the second tranche of the HPMP

10. The US \$10,607,977 associated with the second tranche will be used for the conversion of 5 to 10 XPS foam enterprises (in addition to those being converted with the first funding tranche), with an associated phase-out of 2,131.0 mt (125.73 ODP tonnes). The conversion of the enterprises will be supported with technical assistance activities that began during implementation of the first tranche.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

11. The Secretariat raised issues related to the demonstration project on the suitability of CO₂ with methyl formate co-blowing technology in the manufacture of XPS foam (approved for UNDP at the 64th meeting); safeguards that will be put in place to ensure the timely implementation of the conversion of the enterprises given the limited time available between now and the freeze (2013) and the 10 per cent reduction (2015); the contracts between the Government of China and UNIDO and the Government of Germany; the quota management for HCFC control; the monitoring mechanism to be put in place; and project implementation modalities. The issues were addressed as summarized below.

12. With regard to the status of implementation of the demonstration project, UNIDO (as the lead implementing agency) indicated that the project document between FECO and UNDP was signed in November 2011; the sub-contract between FECO and the enterprise was signed in March 2012; and the production equipment was delivered and installed in December 2012. Testing the alternative technology is planned for June 2013. A full evaluation of the results achieved, including a cost-effectiveness analysis, is not expected before end of August 2013 as the produced boards need to mature for three months before formal testing can commence. As soon as the technical and cost evaluations are finalized, the results will be disseminated to stakeholders and experts.

13. With regard to safeguards that will be put in place to ensure the timely implementation of the conversion of the enterprises, UNIDO indicated that China will establish a policy system to complement the funding provided by the Multilateral Fund; the key policies for HCFC phase-out in the XPS foam sector will focus on the management of consumption quotas of HCFCs in parallel with controlling and monitoring the production, sales, import and export of HCFCs. Secondly, FECO will facilitate and accelerate the implementation of the first batch of investment projects to ensure that all beneficiary enterprises have sufficient financial resources to fully convert to the CO₂ technology by end of 2013. In 2013 and in consecutive years additional XPS foam enterprises will commence their conversion to contribute to meeting the reduction target in 2015. Furthermore, FECO, in collaboration with UNIDO and the Government of Germany, will carry out technical assistance activities (e.g., selection of experts, formulation and revision of technical standards, research and development of alternative technologies) with a view to provide additional support and assistance to the enterprises.

14. With regard to the mechanism that will be established to monitor and ensure that converted enterprises do not revert back to the use of HCFCs, UNIDO explained that it will be responsible for conducting the required verification and assisting as needed in regular supervision missions including site visits to selected beneficiary enterprises.

15. According to the project proposal, the 2009-2010 average (baseline) consumption of the 11 enterprises that have been assessed and selected for conversion amounted to 2,922 mt of HCFCs while

their consumption in 2011 was 3,800 mt (i.e., a 30 per cent growth). Based on the 2009-2011 consumption trends, the consumption in 2012 would be over 4,200 mt, representing more than 40 per cent of the total amount to be phased out in the XPS Sector Plan. Given this situation, the Government of China will be able to achieve the HCFC phase-out target by converting a smaller number of XPS foam enterprises than originally considered. Consequently, several eligible enterprises might not receive assistance from the Fund as there will no longer be any consumption eligible for funding. UNIDO responded by indicating that, when selecting the first batch of XPS beneficiary enterprises, FECO gave priority to the larger ones taking into account cost-effectiveness, maturity of alternative technologies and the demonstration effect they could have in the overall sector. However, this would not be the case in subsequent tranches, as medium-sized enterprises will be converted.

16. The Secretariat noted that three of the XPS foam enterprises already assessed and selected (namely Shanghai Xinzhaoh, Nanjing Feininger, and Tianjin Tiande) manufacture extruders and asked if they are capable of manufacturing equipment for the CO₂ technology being introduced. UNIDO indicated that as of mid-January 2013, FECO had received six applications from equipment suppliers (including the three enterprises mentioned above), and is currently working closely with UNIDO, the Government of Germany and technical experts on a methodology to ensure that the suppliers are able to provide equipment of acceptable quality and safety standards suitable for the conversion to the alternative technology.

17. The Secretariat noted that the implementation of the XPS Foam Sector Plan is progressing well. Within the time available between the approval of the HPMP and the presentation of the report, a holistic and thorough implementation plan has been prepared, agreements between the Government of China, the Government of Germany and UNIDO have been signed, and subcontracts between FECO and eleven beneficiary enterprises were finalized and will be signed in March 2013 (as per contractual requirements, technical specification will be prepared by the enterprises within two weeks from the time the contracts are signed). The Secretariat further noted the information provided on funds disbursed, from FECO to beneficiary enterprises, which was one of the issues raised when the second tranche of the HPMP for China was submitted to the 68th meeting.

RECOMMENDATION

18. The Executive Committee may wish to consider:

- (a) Noting the progress report on the implementation of the first tranche of stage I of the extruded polystyrene foam sector plan for China; and
- (b) Approving the second tranche of stage I of the extruded polystyrene foam sector plan and the corresponding tranche implementation plans, at the amount of US \$11,370,226, consisting of US \$10,217,000, plus agency support costs of US \$715,190 for UNIDO, and US \$390,977, plus agency support costs of US \$47,059 for the Government of Germany.
