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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Seventy-third Meeting
Paris, 9-13 November 2014

PROJECT PROPOSAL: NIGERIA

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

Phase-out

- HCFC phase-out management plan (stage I, fourth tranche) UNDP and UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Nigeria

(I) PROJECT TITLE	AGENCY
HCFC phase out plan (Stage I)	UNDP (lead), UNIDO

(II) LATEST ARTICLE 7 DATA (Annex C Group l)	Year: 2013	334.46 (ODP tonnes)

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2013
Chemical	Aerosol	Foam	Fire fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22				46.4	167.4				213.8
HCFC-141b		35.9		84.7					120.6
HCFC-141 in imported pre-blended polyol		38.6							38.6

(IV) CONSUMPTION DATA (ODP tonnes)			
2009 - 2010 baseline:	398.2	Starting point for sustained aggregate reductions:	398.2
CONSUMPTION ELIGIBLE FOR FUNDING (ODP tonnes)			
Already approved:	90.2	Remaining:	308

(V) BUSINESS PLAN		2014	2015	Total
UNDP	ODS phase-out (ODP tonnes)	9.2	5.5	14.7
	Funding (US $)	541,616	322,472	864,088
UNIDO	ODS phase-out (ODP tonnes)	0.0	3.5	3.5
	Funding (US $)	0	208,451	208,451

(VI) PROJECT DATA			2010	2011	2012	2013	2014	2015	Total
Montreal Protocol consumption limits			n/a	n/a	n/a	398.2	398.2	358.4	n/a
Maximum allowable consumption (ODP tonnes)			n/a	n/a	n/a	398.2	398.2	358.40	n/a
Agreed funding (US $)	UNDP	Project costs	855,603	836,515	503,829	503,829	299,974	0	2,999,750
		Support costs	64,170	62,739	37,787	37,787	22,498	0	224,981
	UNIDO	Project costs	550,000	550,000	645,172	0	193,908	0	1,939,080
		Support costs	41,250	41,250	48,388	0	14,543	0	145,431
Funds approved by ExCom (US $)		Project costs	1,405,603	1,386,515	1,149,001	0	0	0	3,941,119
		Support costs	105,420	103,989	86,175	0	0	0	295,584
Total funds requested for approval at this meeting (US $)		Project costs					503,829*		503,829
		Support costs					37,787*		37,787

*Planned for 2013 but only submitted to the 73rd meeting.

Secretariat's recommendation:	For blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Nigeria, UNDP as the lead implementing agency, has submitted to the 73rd meeting a request for funding for the fourth tranche of stage I of the HCFC phase-out management plan (HPMP)[1], at the amount of US $503,829, plus agency support costs of US $37,787 for UNDP only. The submission includes a progress report on the implementation of the third tranche of the HPMP and the tranche implementation plan for 2014 and 2015.

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

Upgrade of system houses to produce methyl formate-based pre-blended polyols (UNDP)

2. A laboratory has been constructed at Vitapur (one of the systems houses that is developing methyl formate (MF) pre-blended polyols in Nigeria) and the installation of testing equipment was near completion. Temperature control and drumming equipment were purchased; partitioning was made to provide a climate-controlled room for drum conditioning. Adaptations to the mixing tank will be implemented in October 2014. Project commissioning and safety inspection is planned for early December 2014. An agreement between Vitapur and Komaj (the other system house in the country), through which Komaj will commercialize with its own brand name the MF pre-blended polyols systems, and the two enterprises will jointly develop the market, has been drafted. Conversion plans for 19 downstream foam enterprises have been developed for Komaj and Vitapur customers, and will start after the signing of the agreement in September 2014.

Phase-out of HCFC-141b in the refrigeration foam sector (UNIDO)

3. The equipment for the conversion of the insulation foam of 30 ice-making enterprises arrived in June 2014; installation and training on operation are expected in October 2014. Once completed a total of 86.35 metric tonnes (mt) (9.50 ODP tonnes) of HCFC-141b will be phased out. The bidding for equipment for the second group of 45 ice-making enterprises has been completed; the equipment is expected to be delivered by early 2015; and the installation and training are planned to take place at the end of March 2015, resulting in the phase-out of additional 130.5 mt (14.36 ODP tonnes).

Demonstration project for the production of hydrocarbon refrigerant (UNDP)

4. The safety audit for the hydrocarbon (HC) production facility has been completed. The production is on a trial basis, and it is expected to be in the full production by the end of 2014[2].

5. Marketing of HC refrigerants and training for technicians have started. A training workshop was organized on 25-27 September 2013 with participation of 100 technicians, and distribution of tool kits for good management of HC refrigerants. Two awareness-raising workshops were held to further publicise the project.

[1] The HPMP for Nigeria was approved at the 62nd meeting to reduce HCFC consumption by 10 per cent of the baseline by 1 January 2015. The fourth tranche was originally planned for 2013 but only submitted to the 73rd meeting.

[2] HC production project was planned in the HPMP to address safety issues from the wide spread use of "cooking gas" (a mixture of propane and butane) as a refrigerant in Nigeria. The initiative was to provide quality HC refrigerants to the market, to demonstrate the technology at manufacturers of commercial refrigeration equipment and provide training in good refrigerant management to assure that the use of HCs in the market will occur in a safe way.

Verification report on the national HCFC consumption targets

6. A verification report on the HCFC consumption in 2013 was submitted. The report examined HCFC import data and the distributors' records. It was confirmed that the Government of Nigeria is implementing a licensing and quota system for HCFC imports and exports and that the quota issued was 398.2 ODP tonnes and the total consumption of HCFCs for 2013 was 334.4 ODP tonnes.

Level of fund disbursement

7. As of September 2014, of the US $1,149,001 approved for the third tranche, US $247,035 had been disbursed for UNDP. The balance of US $256,794 will be disbursed in 2015. The funding disbursement status is shown in Table 1 below.

Table 1. Funding disbursement status of stage I of the HPMP for Nigeria

Tranche	Agency	Approved (US $)	Expended (US $)	Disbur-sement rate (%)	Balance (US $)	Obligated (US $)
First tranche	UNDP	855,603	855,603	100	0	
	UNIDO	550,000	537,330	98	12,670	
	Total	1,405,603	1,392,933	99	12,670	
Second tranche	UNDP	836,515	554,257	66	282,258	
	UNIDO	550,000	499,681	91	50,319	
	Total	1,386,515	1,053,938	76	332,577	
Third tranche	UNDP	503,829	247,035	49	256,794	
	UNIDO	645,172	0	0	645,172	645,000
	Total	1,149,001	247,035	21	901,966	645,000
Totals	UNDP	2,195,947	1,656,895	75	539,052	
	UNIDO	1,745,172	1,037,011	59	708,161	
	Total	3,941,119	2,693,906	68	1,247,213	645,000

Implementation plan for the fourth tranche of the HPMP

8. During the fourth tranche of the HPMP, the following activities will be implemented:

(a) The upgrade of the system house at Vitapur will be finalized by November 2014, and full production of MF-based pre-blended polyols systems is expected to start in January 2015;

(b) Technology transfer and training will be provided to 19 foam downstream users to convert to MF-based polyols systems, resulting in the phase out of 412.8 mt (45.4 ODP tonnes) of HCFC-141b;

(c) The production of HC refrigerants (HC-600 and HC-290) will be initiated at Pamaque by December 2014. The refrigerant will be packed in 300 g containers and 3-5 kg refillable cylinders and provided to trained technicians. Refilling of the used cylinders will be done at a specially designed semi-automatic filling machine at Pamaque; and

(d) Training to refrigeration technicians on proper use of HC refrigerants and awareness raising activities with the support from the HC producer.

9. The total funding requested for the fourth tranche is US $503,829, of which US $467,829 is for the conversion of end-users at Vitapur and Komaj and US $36,000 for project co-ordination.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

HCFC consumption and licensing system

10. The 2009-2013 HCFC consumption in Nigeria is shown in Table 2. The HCFC consumption in 2013 of 334.46 ODP tonnes is below the maximum allowable consumption of 398.2 ODP tonnes in the Agreement between the Government of Nigeria and the Executive Committee. The HCFC import quota issued for 2014 is 241.51 ODP tonnes, which is below the baseline.

Table 2. HCFC consumption in Nigeria (2009-2013 Article 7 data)

Substances	2009	2010	2011	2012	2013	Baseline
HCFC-22, mt	4,298.3	4,739.2	5,244.83	5,958.20	3,887.83	4,518.77
HCFC-141b, mt	1,214.2	1,506.5	1,575.45	1,680.51	1,096.60	1,360.33
Total mt	**5,512.5**	**6,245.7**	**6,820.28**	**7,638.71**	**4,984.43**	**5,879.10**
HCFC-22, ODP t	236.4	260.7	288.47	327.70	213.83	248.6
HCFC-141b, ODP t	133.6	165.7	173.30	184.86	120.63	149.6
Total ODP t	**370.0**	**426.4**	**461.77**	**512.56**	**334.46**	**398.2**

11. The reduction of HCFC consumption in Nigeria from 2012 to 2013 was mainly due to the implementation of the activities in the HPMP. Conversion of several investment projects are at an advanced stage. The system house Vitapur has started using MF in their in-house operation. Also, the consumption of HCFC-141b contained in the imported pre-blended polyols had been included in the consumption in Article 7 data reporting in previous years until 2012. In 2013, this consumption (38.6 ODP tonnes) has been reported to the Ozone Secretariat separately. In order to keep consistency in data reporting and correctly measure the progress in HCFC reduction, the Secretariat has advised the Government of Nigeria to inform the Ozone Secretariat the nature of the HCFC-141b contained in the imported pre-blended polyols in baseline years.

Technical issues

12. In view of the potential supply of HC refrigerants assisted by the Multilateral Fund, the Secretariat enquired about the potential markets, safety in using them, relevant standards and whether they will be used on equipment designed for HC refrigerants. UNDP clarified that the potential customers of HCs could be HCFC-22 equipment manufacturers and servicing workshops in Nigeria and other countries in Africa. Under the assistance of UNDP, the Government has developed a comprehensive plan to ensure safe introduction of HC refrigerants. The plan has the following components:

(a) Development of training procedures based on the European standards (EN378 and the guidelines for the safe use of HC refrigerants developed by the Federal Ministry for Economic Cooperation and Development of Germany (GIZ);

(b) Adoption of relevant standards and Nigeria's HC certification system;

(c) Implementation of a technician certification programme. Technicians will be trained and equipped with skills and tools to retrofit and service equipment and manage refrigerants in a safe manner; and

(d) Supply of HC refrigerants only to the workshops and technicians who had been trained and certified and are prepared to function as trainers at a later stage.

13. The Secretariat enquired about the retrofits of HCFC-based equipment and reminded UNDP of decision 72/17 on retrofit of HCFC-based refrigeration and air-conditioning equipment to flammable or toxic refrigerants. UNDP responded that the pilot project in the HPMP is only a demonstration of production of HC refrigerants with limited technical assistance for downstream users in safe handling of HC refrigerants. The training programme does not have a component for retrofits of equipment but it will present the best practices of retrofits to HC in order to ensure that the use of HC occurs in a safe manner. The use of HC refrigerants will be limited to domestic and small commercial refrigeration applications.

14. The Secretariat enquired about whether the Government of Nigeria will implement a ban on the imports of HCFC-141b contained in the pre-blended polyols once all the foam enterprises using polyols are converted. UNDP advised that the Government of Nigeria is willing to implement a ban once all the consumptions are phased out. At this moment, the imports of HCFC-141b pre-bended polyols are controlled through the licensing and quota system.

Conclusion

15. The Secretariat notes that the implementation of the HPMP for Nigeria is progressing. The conversion of systems houses is at the advanced stage. With the assistance of the equipment supplier, it is expected that technical issues related to the adaptations of the mixing tank will be resolved by the end of 2014. The conversion of foam insulation at 75 ice-making enterprises is in progress, which will result in the phase-out of 86.35 mt (9.5 ODP tonnes) of HCFC-141b by the end of 2014 and 216.5 mt (23.8 ODP tonnes) by April 2015. The technical assistance activities for the remaining ice-making enterprises will start once the fifth tranche is approved. The production of HCs has started on a trial basis and commercial production is expected in early 2015. The training programme for technicians in using HCs for servicing has been conducted and will continue in the fourth tranche. The verification indicated that the HCFC consumption in 2013 was below the maximum allowable consumption set in the Agreement. In view of the progress achieved in the implementation of the HPMP and the funding disbursement rate, the Secretariat recommends approval of the funding for the fourth tranche.

RECOMMENDATION

16. The Fund Secretariat recommends that the Executive Committee takes note of the progress report on the implementation of the third tranche of stage I of the HCFC phase out management plan of (HPMP) in Nigeria, and further recommends blanket approval of the fourth tranche of stage I of the HPMP for Nigeria, and the corresponding 2014-2015 tranche implementation plan, with associated support costs at the funding level shown in the table below, on the understanding that Nigeria assumed all responsibilities and risks associated with retrofitting HCFC-based refrigeration and air-conditioning equipment to flammable or toxic refrigerants and associated servicing:

	Project title	Project funding (US $)	Support cost (US $)	Implementing agency
(a)	HCFC phase-out management plan (stage I, fourth tranche)	503,829	37,787	UNDP

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