Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 01-Mar-2018 | Report No: PIDISDSC23764

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Philippines	P165341		Philippines Stage II HCFC Phase-out (P165341)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	Aug 06, 2018	Nov 30, 2018	Environment & Natural Resources
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Department of Finance	Environmental Management Bureau	

Proposed Development Objective(s)

The project development objective is to contribute to the Philippines' efforts to meet the 2020 HCFC consumption phase-out obligations of the Montreal Protocol and the initial requirements of the Kigali Amendment.

Financing (in USD Million)

SUMMARY

Total Project Cost	4.31
Total Financing	4.31
Financing Gap	0.00

DETAILS

Total Government Contribution	1.56

Environmental Assessment Category	Concept Review Decision
B-Partial Assessment	Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

1. Hydro-chlorofluorocarbons (HCFCs) are ozone-depleting substances (ODS) subject to consumption and production control measures of the Montreal Protocol on Substances that Deplete the Ozone Layer (MP). They are mainly used as refrigerants in refrigeration and air-conditioning equipment and as blowing agents for insulation foam. HCFCs are also very potent greenhouse gases (GHG), and consequently have an impact on both ozone depletion and climate change. The phase-out of HCFCs usually presents an opportunity to reduce direct and indirect GHG emissions through the use of low Global Warming Potential (GWP) alternatives and improvement of product design to enhance energy efficiency of the products, thereby leading to multiple benefits to the climate.

2. The Philippines signed the MP on September 14, 1988 and ratified both the Vienna Convention and the MP in July 1991. As an Article 5 signatory of the MP, the Philippines has fulfilled its obligations to phase out consumption of all controlled substances except for HCFCs. It has committed to freeze consumption of HCFCs in 2013 and to reduce HCFC consumption by 10% in 2015, by 35% in 2020, by 67.5% in 2025, 100% by 2030 while allowing for servicing an annual average of 2.5% during the period 2030 to 2040. In accordance with Decision 68/36 (c), the Philippines has agreed to a revised baseline consumption level at 162.87 ODP tonnes. HCFC consumption reduction schedule is shown in Table 1.

Table 1 Philippines' HCFC Consumption Baseline and Montreal Protocol Obligations (ODP Tonnes)

Maximum Allowable Consumption Levels of Annex C Substances	Consumption[1] Limit (ODP tonnes)
2009 Consumption	161.65
2010 Consumption	164.10
Baseline (2009-2010 Average)	**162.87**
2013 – Freeze	162.87
2015 – 10% Reduction	146.58
2020 – 35% Reduction	105.87
2025 – 67.5% Reduction	52.93
2025 – 97.5% Reduction	4.07
2040 – no consumption	0

3. To meet the first two obligations of the MP in 2013 and 2015, the Executive Committee (ExCom) of the Multilateral Fund for Implementation of the Montreal Protocol (MLF) approved in 2012 a total grant fund of US$2,521,955 to support implementation of Stage I HCFC Phase-out Project. The Project entailed HCFC phase-out in the foam sector and to control growth of HCFCs in the refrigeration, air-conditioning, and servicing sectors. The implementation of Stage I HCFC Phase-out Project is completed in July 2017. The Philippines were in compliance with the 2013 and 2015 consumption reduction targets. The latest independent verification of HCFC consumption shows that HCFC consumption in 2016 reduced to 114.85 ODP tons

[1] Pre-blended HCFC-141b is not included, as it is not considered as consumption under the MP.

(equivalent to 2,107.15 MT).

4. The Stage II HCFC Phase-out Project is to support the Philippines in continuing to meet its obligation under the MP- 35% of HCFC consumption reduction in comparison to the baseline level by January 1, 2020. This will be achieved by eliminating the manufacturing and import of HCFC air-conditioners by 2021 through financing the conversion of four eligible air-conditioner manufacturers to HCF-32, and controlling the growth of HCFC consumption in the commercial refrigeration manufacturing sector and the servicing sectors.

Sectoral and Institutional Context

5. As the Philippines does not produce any HCFCs, its demand for HCFCs is met through imports. Based on the definition of the Montreal Protocol, the total amount imported within the calendar is considered as consumption. HCFC consumption in the Philippines is primarily attributed to HCFC-22, HCFC-141b, HCFC-123, and blends of HCFC-225ca and HCFC-224cb. World Bank survey in 2016 in preparation of the Stage II HPMP reveals that HCFCs are used mainly in manufacturing, solvent, and servicing sectors. The HCFC importation data by sector as recorded in the POD database from 2011 to 2016 is shown in Table 2.

Table 2: Official HCFC Import Data from 2011 to 2016

	Quantity of HCFC Imported (MT)						
Type of HCFC	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
HCFC-22	2,934.91	1,850.84	2,409.13	1,641.46	1,860.03	1,837.44	1,685.12
HCFC-123	142.55	203.81	221.64	69.05	206.07	227.35	263.06
HCFC-141b	524.21	502.50	533.79	408.66	390.64	159.72	158.55
HCFC-225ca	0.69	0.93	1.47	1.39	0.42	1.52	0.21
HCFC-225cb	0.69	0.93	1.47	1.39	0.42	1.52	0.21
Total	3,603.05	2,559.01	3,167.50	2,121.95	2,457.58	2,227.55	2,107.15

6. Imported HCFCs are used for manufacturing new products as well as for servicing existing products that have already been placed in the market. The manufacturing sector using HCFC include refrigeration and air-conditioning industry, fire protection industry, and solvent cleaning industry. For servicing, HCFCs are used for maintaining air-conditioners and refrigeration systems. HCFC consumption by sector is shown in Table 3.

Table 3: 2016 HCFC Consumption by Sector

Sector	**Substance**	**2016 HCFC use**			
		Mt	**Mt (%)**	**ODP tonnes**	**ODP tonnes (%)**
Refrigeration/Air-conditioning manufacturing	HCFC-22	223.91	10.63	12.33	14.8
RAC servicing		1,461.21	69.35	80.39	67.19
	HCFC-123	49.74	2.36	1..00	1.05
	HCFC-141b	129.8	6.16	14.68	
Foam	HCFC-141b	0	0	0	0
Solvent and cleaning		28.47	1.35	3.13	14.25
Solvent and cleaning	HCFC-225	.42	0.02	0.01	0.07
Firefighting	HCFC-123	213.32	10.12	4.28	2.64
	HCFC-141b	0.28	0.01	0.03	
Total		2,107.15	100.0	114.85	100.0

7. The servicing sector is the largest HCFC consuming sector in the Philippines due to a large number of installed air-conditioners. The second largest HCFC consuming sector is in the manufacturing of air-conditioners. The 2016 survey reveals that most commercial refrigeration manufacturers have already converted to HFC blended alternatives. Early phase-out of HCFC in the air-conditioning manufacturing sector is therefore critical to continue reduction of HCFC in the servicing sector and the overall HCFC consumption in the Philippines.

Relationship to CPF

8. The Country Partnership Strategy for the Republic of the Philippines for the period FY2015 – 2018 lays out the World Bank Group's program and development solutions to promote inclusive growth, reduce poverty and support shared prosperity in five engagement areas. The development objectives of the proposed Stage II HCFC Phase-out Project are specifically linked to "Engagement Area 4 – Resilience to Climate Change, Environment and Disaster Risk Management".

C. Proposed Development Objective(s)

9. The project development objective is to contribute to the Philippines' efforts to meet the 2020 HCFC consumption phase-out obligations of the Montreal Protocol and the initial requirements of the Kigali Amendment.

Key Results (From PCN)

10. The objective will be achieved by reducing HCFC consumption in the air-conditioning manufacturing and servicing sectors and introducing the use of low Global Warming Potential (GWP) alternatives.

11. The HCFC consumption will be limited to the level not exceeding 129.52 ODP tons during 2018 – 2019 and 105.87 ODP tons by 2020 and 82.56 ODP tons by 2021. This represents a HCFC consumption reduction of 64.02 ODP tons from the maximum allowable level of 146.58 ODP tons in 2015. Carbon dioxide (CO2) emission reduction from the use of lower GWP alternatives and improved energy efficiency will be captured through result indicators. The net climate benefit of the Stage II HPMP phase out project will be at minimum of 2 million CO2-eq tonnes of emissions avoided, while additional benefits will accrue due to the ban on the import of HCFC22 based equipment.

D. Concept Description

12. The proposed project will build on the infrastructure and capacity established under the ODS project (i.e., Philippines Ozone Desk (POD), Project Management Unit (PMU), and Land Bank – the financial agent of the earlier Bank-funded ODS project) to deliver the required assistance to beneficiaries and stakeholders primarily in the sectors similar to the previous ODS Project. The proposed project is designed to address a specific reduction target (i.e., 2020 35% HCFC consumption reduction target and 40% by 2021) in accordance with the agreed phase out schedule with the Multilateral Fund. The project implementation period will be about five years from 2018 to 2022.

13. The overarching strategy of the Stage II HPMP is to leverage industry cooperation to extend the effect of the Stage I HPMP particularly in the service sector to further reduce the demand of HCFC-22 in the service sector, and to request additional funds to address HCFC phase-out in the air-conditioning manufacturing sector.

14. The project will provide technical and financial assistance to eligible manufacturers, primarily in the air-conditioning sector, to redesign their products and retrofit their manufacturing processes in order to adopt non-ozone depleting and low global warming technologies consistent with the Kigali Amendment of the Montreal Protocol. The project will also finance technology transfer that may be required by the beneficiary enterprises. To ensure sustainability of HCFC phase-out and to transform the markets to non-ozone depleting and low global warming technologies, technical assistance to strengthen monitoring and enforcement capacity and to revise relevant safety and energy efficiency standards, will be provided to relevant government agencies, non-government agencies, and standard bodies and/or agencies. The project will also build capacity in the service industry by providing training on the maintenance and servicing of equipment using the new technology. On the policy side, the project will support the government in developing appropriate policies to ban production and import of HCFC 22 upon conversion of the enterprises.

Component 1: Investment in HCFC Consumption Reductions (US$2.0 million)

15. The project will finance conversion of manufacturing facilities in the four selected air-conditioner manufacturers, that are the only eligible[2] enterprises in the Philippines, from HCFC technology to non-ozone depleting and low global warming technology (HFC-32). Costs to be covered by this component include: new manufacturing equipment compatible with HFC-32; development, testing and certification of new products; safety equipment, training, technology transfer; equipment for installation and servicing of new products; and other incremental operating costs such as production of new brochures and catalogues, and etc. The maximum level of funding for each enterprise is pre-determined by the ExCom based on the enterprise's baseline HCFC consumption, baseline equipment, and its local ownership. Grant funds will be channeled to the eligible enterprises through sub-grant agreements between the enterprises and the Land Bank.

Component 2: Technical Assistance (US$0.53 million)

16. Technical assistance component is designed to strengthen capacities of relevant government agencies, technical institutes and private entities that are in charge of HCFC import/export, handling, use, and end-of-use. Training on proper installation and maintenance of new HFC-32 and baseline HCFC-22 air-conditioners will be financed by this component. This is critical to proper functioning of the new products and safety of the users as well as service technicians. Technical assistance activities in relation to policy and standard development to support safe use of new HFC-32 products in the market will also be carried out and finance by the project. Technical review on alternatives for solvent cleaning applications will be conducted and disseminated to the industry that are still using HCFC-141b and HCFC-225 in these applications.

17. This project component also includes activities/tasks to strengthen local authorities' understanding of the Montreal Protocol requirements and their enforcement capacity to ensure that there is no diversion of HCFCs to applications where such uses are prohibited.

18. Expenditures to be incurred by this component include goods, consultant services, and incremental operating costs (such as workshops, training, and others). Activities under this component will be implemented by both Environment Management Bureau (EMB) and the Land Bank. Specific roles and responsibilities of

[2] Conversions of manufacturing equipment at enterprises with local ownership and established prior to September 2007 are eligible for grant funds from the Multilateral Fund.

EMB and the Land Bank will be delineated during the project preparation.

Component 3: Project Management (US$0.22 million)

19. The project will finance the PMU that is established under the Stage I HCFC Phase-out Project and hosted within DENR-EMB. The PMU has recently completed implementation of the Stage I HCFC Phase-out Project financed through UNIDO and UNEP. Assessment of the PMU's roles and responsibilities will be conducted during the preparation of the Stage II HCFC Phase-out Project. A review and restructuring of the PMU is anticipated in order to ensure that the roles and responsibilities of the PMU are compatible with the new environment and business needs. The project will include the Land Bank of the Philippines (LBP) as a financial agent of the Project.

20. The project will also finance LBP-PMU. LBP-PMU will be responsible for managing, supervising, monitoring and reporting on the implementation of Component 1 and some activities under Component 2 of the Project. To ensure timely and effective implementation, opportunities to increase role and responsibility of LBP-PMU for Component 2 will also be explored.

21. EMB-PMU will undertake implementation some activities under Component 2. Grant funds of this component will cover costs of consultants, costs of performance and financial audits, office equipment, technical and fiduciary/governance trainings, and incremental operating costs.

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The project activities will be undertaken at the existing manufacturing facilities which are located in the National Capital Region, mainly in the Metro Manila area and in industrial zones in Regions 3 and 4. The main activity and investment in the project is the replacement or conversion of process trains which produce air-conditioners and refrigeration equipment containing HCFC refrigerant into process trains which produce equipment containing non-HCFC refrigerant. A total of 4 air-conditioner manufacturers have been initially identified. These are all large private firms, most of whom have environmental and quality standards certification (ISO 14000). No land acquisition will be done under this project. Retooling of process trains will happen within the premises of the individual companies.

B. Borrower's Institutional Capacity for Safeguard Policies

DENR is mandated to enforce the law controlling the use and disposal of chemical substances in the country which includes the regulation of HCFCs. The Chemicals section of the Pollution Management Division of the EMB of DENR is in charge of regulating HCFCs in the country.
EMB has experience in Bank safeguards through World Bank projects they have executed. Furthermore, they are very experienced at EA as they are responsible for the review of environmental assessments of development projects and monitor compliance of projects. They will have overall oversight of the safeguards under the project. EMB will also need to coordinate closely with the implementing partners including Air-conditioner and Refrigeration Manufacturers, Bureau of Customs and Land Bank of the Philippines.

C. Environmental and Social Safeguards Specialists on the Team

Maria Loreto Padua, Social Safeguards Specialist
Gerardo Pio Francisco Parco, Environmental Safeguards Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Investments in new equipment and possible construction work in the facilities of the air-conditioner and refrigeration equipment manufacturers would need screening and assessment of likely impacts. Impacts of new refrigerant alternatives which may be slightly flammable also need to be assessed. The team proposes a Category B rating for this project. An Environmental and Social Management Framework will be prepared to guide the PMUs and Implementing Agencies on how to work with the private entities participating in the program, in ensuring that impacts are screened, assessed and mitigated.
Natural Habitats OP/BP 4.04	No	N/A
Forests OP/BP 4.36	No	N/A
Pest Management OP 4.09	No	N/A
Physical Cultural Resources OP/BP 4.11	No	N/A
Indigenous Peoples OP/BP 4.10	No	N/A. All activities will be done within the existing facilities that are in urban areas thus no presence of indigenous people.
Involuntary Resettlement OP/BP 4.12	No	All activities in relation to conversion to new refrigerants will be done within the existing facilities of air-conditioner and refrigeration equipment manufacturers. Experience in the phase-out of CFC refrigerants shows that there will be no land acquisition or displacement of persons in these activities.
Safety of Dams OP/BP 4.37	No	N/A
Projects on International Waterways OP/BP 7.50	No	N/A
Projects in Disputed Areas OP/BP 7.60	No	N/A

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Aug 15, 2018

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

January – July 2018

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APPROVAL

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