



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	PCB-free electricity distribution in Georgia		
Country(ies):	Georgia	GEF Project ID: ¹	9227
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	150214
Other Executing Partner(s):	Ministry of Environment and Natural Resources Protection	Submission Date:	31. July 2015
		Resubmission date:	24. August. 2015
GEF Focal Area(s):	Chemicals and Wastes	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP	<input type="checkbox"/>
Name of parent program:	[if applicable]	Agency Fee (\$)	371,450

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CW-2 Program 3 (select)	GEFTF	3,910,000	17,620,000
(select) (select) (select)	GEFTF		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost	(select)		
		3,910,000	17,620,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Ensuring sound PCB management in Georgian electricity distribution network						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Component 1. Legal, institutional and capacity strengthening	TA	1. Regulatory instruments and guidelines for safe PCB management adopted . 2. Capacity for PCB regulation enforcement created.	1.1. Development of PCB specific amendments in waste legislation 1.2. Development of technical guidelines covering all stages of PCB life-cycle 1.3. Training of PCB holders and state inspectors in implementing the guidance. 1.4. Upgrading government capacity	GEFTF	500,000	1,000,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

			to enforce PCB regulations, including PCB information management 1.5. Undertake targeted awareness raising for high-risk population groups.			
Component 2. Management and disposal of equipment containing high concentration PCB oils	TA	2.1 Process for managing high-risk PCBs established. 2.2. Reduction of health and environmental risks locally and globally	2.1. Verify pure PCB equipment and manage them safely until replacement 2.2. Transportation and disposal of 300 tons of PCB oils and associated equipment.	GEFTF	1,000,000	6,000,000
Component 3. Technology transfer for long lasting PCB management capacity in the electricity distribution sector	TA	3.1 PCB holders fully competent in PCB management. 3.2 workers health and and environmental performance of sector increased.	3.1. Detailed inventory of the PCB containing transformers in all industrial sectors 3.2. Updated transformer maintenance with PCB management in place.	GEFTF	400,000	2,000,000
	Inv	3.2. Technology transfer capacity established 3.3 Sustainable PCB processing introduced in Georgia.	3.2. Procurement and testing of mobile PCB de-contamination technology 3.3. 1,000 tons of PCB containing oils rendered harmless in electricity distribution network.	GEFTF	1,700,000	8,000,000
4. Monitoring and Evaluation	TA	Assessment of the impact of project activities including lessons learned	4.1 Project impact indicators designed, applied and project implementation monitored and evaluated	GEFTF	130,000	260,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					3,730,000	17,260,000
Project Management Cost (PMC) ⁴				GEFTF	180,000	360,000
Total Project Cost					3,910,000	17,620,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministry of Environment and Natural Resources Protection	In-kind	900,000
Recipient Government	Ministry of Energy	In-kind	300,000
Private Sector	Georgian State Electro System and private electricity distribution companies	Equity	11,345,000
Private Sector	Georgian State Electro System and private electricity distribution companies	In-kind	5,000,000
GEF Agency	UNIDO	Grants	75,000
Total Co-financing			17,620,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNIDO	GEFTF	Georgia	Chemicals and Wastes	POPS	3,910,000	371,450	4,281,450
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					3,910,000	371,450	4,281,450

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$140,000					PPG Agency Fee: 13,300		
GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
UNIDO	GEF TF	Georgia	Chemicals and Wastes	POPS	140,000	13300	153,300
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					140,000	13,300	153,300

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>1,100 metric tons consisting of 100 tons pure PCBs and 1,000 tons of PCB contaminated oils.</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1. The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

- Persistent organic pollutants (POPs) are chemical substances that pose toxic properties, resist biodegradation, bioaccumulate and are transported, through air and water across international boundaries and deposit in long-distances away from places of release, where

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

they accumulate in terrestrial and aquatic ecosystems, having significant impacts on human health and the environment.

2. The Stockholm Convention on persistent organic pollutants (POPs) recognizes that the polychlorinated biphenyls (PCB) “possess toxic properties, resist degradation, accumulate and are transported through air, water and migratory species, across international boundaries and deposited far from their places, where they accumulate in terrestrial and aquatic ecosystems”. Exposure to PCBs, due to contamination of traditional foods and biomagnification effects, represents the public health concerns, in particular for women and through them, upon future generations.
3. The main barriers with sound PCB management in Georgia are technical and financial. The PCBs containing and contaminated equipment are difficult to identify, further their disposal is requires advanced waste infrastructure. These technical requirements give rise to the financial barriers particularly on establishing disposal capacity as well as financing the replacing equipment. Finally, the lack of incentive inform of regulatory requirements to manage PCBs comprises a barrier.

2. The baseline scenario or any associated baseline projects

4. Georgia signed Stockholm convention on May 23, 2003 and it was ratified by the Georgian Parliament in April 2006. The aim of Stockholm convention is to take measures for reducing or eliminating POPs releases from intentional and unintentional production and use, also the releases from existing stockpiles and wastes.
5. The GEF/UNDP project on “Preparation of the Persistent Organic Pollutants (POPs) National Implementation Plan under the Stockholm Convention” was developed the Persistent Organic Pollutants National Implementation Plan. Government of Georgia approved it (#907) 2011.
6. Priority POPs issues have been identified through consultations with major stakeholders that resulted the following priority directions:
 - Pesticides (obsolete stockpiles)
 - PCBs (polychlorinated byphenils)
 - Unintentional products (dioxins and furans)
7. The PCB data collection covered state, municipal and private sectors, functioning in various fields such as energy, metallurgy, chemistry and petrochemistry, transport, agriculture and food, timber processing sectors. The inventory was carried out both in regional big capacity sub-station transformers (35, 110, 220, 500 kV) and distribution network small capacity transformers (6 and 10 kV).
8. The results of collected data can be summarized as follow:
 - 216 transformers with PCB contamination were identified. Out of the 216 identified PCB containing transformers 46 are not anymore in use. An additional 50 kg of pure PCB-oil is stockpiled. Extrapolating from the chemical analysis it can be estimated that some 20-25% of the existing medium to small size transformers, totaling in some 2000 pieces of equipment, are contaminated with PCBs. The amount of PCB contaminated oil is

estimated to approximately 1,200 tons and the total volume of the PCB contaminated equipment is around 4,300 tons

- The survey on capacitors was extended to some 110 companies and potential holders of industrial size capacitors. The data was obtained from 7 regions out of 14 but the main industrial regions were covered by the survey. It is approximated that some 20% of the potential holders were covered in the regions surveyed.
 - Altogether 2,600 PCB capacitors were identified. The amount of PCB oils included in these capacitors totals in 50 tons with a total equipment weight of 150 tons. Direct extrapolation would indicate a total amount of PCB containing capacitors to be in 750 tons. Additional tonnage of pure PCB containing equipment exists in transformers.
9. The significant quantities of PCB-containing electrical equipment are unattended and in needs replacement and disposal. If this is done without proper management, will probably have high social costs in a form of negative consequences for the health of population, deterioration of the environment and excessive expenditures for late mitigation measures.
10. PCBs have mainly been identified at electricity distribution companies. These companies maintain transformers and regenerate within its facilities used oils without checking their PCB content. This further worsens the situation as further electric equipment becomes contaminated in their distribution systems.
11. The NIP Action Plan clearly describes tasks and activities that are to be implemented in the country for PCB management/elimination. The Action Plan tasks are as follows:
- Strengthen the regulatory and management framework for PCBs
 - Detailed inventory (Phase 2)
 - Establishment of national collection system of PCB containing wastes
 - Promotion of replacement and collection of PCB-containing equipment
 - Demonstration Project “sustainable capacity building and PCB elimination in a pilot region”
 - Establishment of interim regional PCB storage facilities
 - Collection of PCB and PCB containing equipment nation-wide
 - Removal and destruction of PCB containing waste
 - Continuation of PCB phasing out programme by national authorities and industries
12. No PCB related projects in the country after preparation of POPs NIP. However, there were number of international and national POPs related projects implemented including: “Disposal of POPs Pesticides and Initial Steps for Containment of Dumped POPs Pesticides in Georgia” and “Capacity Building on Obsolete and POPs Pesticides in Eastern European, Caucasus and Central Asian (EECCA) Countries” supported by GEF as well as “ENPI East Waste Governance project” and Twinning Project “Strengthening the Capacity of the Ministry of Environment Protection in the Field of Waste and Hazardous Substances Management and Improving the Environmental Conditions in Georgia” was financed by European Union (EU)

13. Georgia adopted the framework waste management law in 15.01.2015. However, no regulations specifically addressing PCBs and the management of PCB-containing electrical equipment have been developed. There are no specific standards and guidelines that would provide a progressive phase-out and elimination of PCBs and PCB-containing electrical equipment.
14. Despite of progress on POPs and hazardous waste management, Georgia is still missing the capacity of processing highly hazardous waste such as PCB oils of various concentrations as well as equipment containing pure PCBs. This together with full-knowledge of the PCB situation at company level as well as lack of PCB considering maintenance systems and neutralizations technologies are along the reasons for urgent action proposed.
15. Associated baseline projects consist of ongoing regulatory and managerial functions provided by Ministry of Environment and Energy. In addition to this the baseline projects are the ongoing electricity distribution network upgrading and maintenance efforts undertaken by related industries. These include:
16. JSC “Georgian State Electro System” (GSE) is a 100% state-owned joint stock company providing transmission and exclusive dispatch services to about 50 eligible companies in Georgia. GSE carries out technical control over the entire power system to ensure the availability of the system for uninterrupted and reliable power supply; and transfers, without the right of purchase or sale, the electricity imported or generated in Georgia to distribution companies, direct customers or the power systems of neighboring countries.
 - Cross-Border Projects, i.e. the projects affecting capacity and reliability of the transit flows among the power systems of Georgia and its neighboring states, e.g. all internal 500 kV OHLs and 500/400/330/220/154 kV cross-border lines;
 - Internal Projects, including the projects interconnecting two or more nodes of the transmission network (creating the loops) with effect on power transfer capacities between Georgian regions and/or provide integration of new HPPs with 100 MW and more installed capacity into the system;
 - Local Projects, comprising 220 kV, 110 kV dead-end feeder lines and all OHLs with rated voltages of 110 kV and lower.
 - The annual Capital expenditure including equipment like transformers and capacitors is 66 million GEL (US\$ 28 million)
17. JSC “Telasi” is one of the major network companies of Georgia, carrying out distribution and sale of electric power in Tbilisi. At present, Telasi is carrying out works for technical re-equipment and upgrade of electric grid. Main attention is focused on rehabilitation and upgrade of the most vulnerable from the technical point of view segments of distribution grid. The foreground task is bring to minimum the quantity of technical incidents and reduce substantially level of electric power losses.

Most recent data accounts for annual investments of JSC “Telasi” Company 30 mln GEL (US\$ 14 million). The important part of that year investment was directed to Investments in construction and expansion – 4.5 mln GEL, Investments in reconstruction and modernization – 12.8 mln GEL and Investments and equipment of not included in the construction cost estimate – 1.7 mln

GEL. In the forthcoming 5 years Company JSC “Telasi” plans implementation investment projects. Such investments annually vary between 15-25 mln GEL (US\$ 7-12).

18. SC “ENERGO-PRO Georgiadistributes electricity in several regions of GeorgiaAt present it manages and maintain 15 medium and small size hydro power plants with total capacity of 469,25 MW. Also it maintains and operate Gardabani gas turbine power plant with total capacity 110 MW. Annual investments in upgrading the transmission networks are in tens of millions GEL.

3. The proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components of the project

19. In-line with Chemicals and Waste Focal Area strategies for GEF-6 particularly CW 1: Develop the enabling conditions, tools and environment for the sound management of harmful chemicals and wastes and CW 2: - Reduce the prevalence of harmful chemicals and waste and support the implementation of clean alternative technologies/substances program 1. The proposed GEF Full-Sized Project will consolidate ongoing and planned activities in implementing Georgia’s obligations for PCB elimination as per requirements of the Stockholm Convention. In this phase the emphasis is put on the ensuring that PCB are safely managed in the upgrade of the electricity distribution networks.
20. The project is divided in three components:
 - Legal, institutional and capacity strengthening activities, including laboratory testing capacities
 - Management and disposal of equipment containing high concentration PCB oils and
 - Technology transfer and its piloting for long lasting capacity in the power sector.

It is foreseen that the main part of the assistance for PCB disposal operations and de-contamination will be assisting State owned enterprises like JSC “Georgian State Electro System” (GSE)

Component 1. Legal, institutional and capacity strengthening

21. Georgia has already made progress towards legislation on hazardous waste, however, specific work both at regulatory side as well as technical guidance on PCBs is lacking. Coupled with these aims the enforcement and related laboratory analytical capacity requires strengthening. Finally there is a need for targeted training and awareness for companies engaged in electric equipment maintenance as well as identified communities and groups that may have higher risk of PCB exposure. This work will also lay the ground for the sustainability and replicability of the project approach. This work is largely under the domain of Ministry of Environment and Natural Resources Protection, in close cooperation with other line ministries as well as PCB holders
22. Expected outputs are:

1.1. Development of PCB specific amendments in waste legislation. This will entail review of current waste and hazardous waste legislation to identify coverage of PCB and containing waste and carrying out regulatory process for ensuring coverage as required by Stockholm Convention.

1.2. Development of technical guidelines covering all stages of PCB life-cycle. These guidelines in Georgian language are to cover all stages of PCB management from identification, laboratory analysis for various matrixes; labeling, maintenance and risk reduction of PCB containing equipment in use; transportation and disposal of PCB containing equipment and waste.

1.3. Training of PCB holders and state inspectors in implementing the guidance. Targeted training workshops on the developed guidance for enforcement officials and companies owning PCB waste or equipment on guidance developed under 1.2.

1.4. Upgrading government capacity to enforce PCB regulations, including PCB information management. Linked to 1.3, but ensuring that the administrative structures, such as reporting and tracking of PCB equipment, supporting PCB management are in place.

1.5. Undertake targeted awareness raising towards population groups especially at risk due to location or susceptibility. These locations are based on high concentration of PCB equipment or contamination that may be in directly exposed to specific population groups.

Component 2. Management and disposal of equipment containing high concentration PCB oils

23. Disposing of pure PCB containing equipment (transformers and capacitors) as well as waste oil require fixed hazardous waste processing installations costing tens of millions USD to establish. In the short to medium term, it is not expected that such facility is available in Georgia. There for the project will adopt a strategy to export such waste for sound disposal. It is expected that some 300 tons of pure PCB capacitors, transformers and waste oil will be disposed through export operations. This will consist of 100 tons pure PCBs and 200 tons of associated equipment.

24. Related outputs are:

2.1. Verifying pure PCB equipment and manage them safely until replacement. This will entail confirming exact location and condition of identified PCB equipment and take risk reduction measures until disconnection and transport as part of disposal in 2.2.

2.2. Transportation and disposal of 300 tons of PCB oils and associated equipment. This includes packing and transportation in-land and internationally for safe disposal of pure PCBs and associated equipment/material.

Component 3. Technology transfer for long lasting PCB management capacity in the electricity distribution sector

25. Low contaminated PCB oils can be flexibly and cost-effectively be removed from on-line transformers using mobile technologies. There are multiple benefits in this including extending the technical life of the transformer, retaining and re-using the oil. Also the use of such equipment provides the flexibility of working through the normal transformer maintenance cycle and create a sustainable as well as affordable system in place after the

projects. This project component will introduce such mobile technology for the benefit of managing PCBs when upgrading and maintaining electricity distribution system.

26. Expected outputs are:

- 3.1. Detailed inventory of the PCB containing transformers in all industrial sectors. This excludes those industrial sectors are fully inventorized by the NIP update project. Also complimentary inventorization at companies sites as targeted with action under activity 3. 2 & 3.4 may be included.
 - 3.2. Updated transformer maintenance with PCB management in place at company level. This entails setting up separate maintenance lines for clean and contaminated oils and equipment in order to avoid further cross-contamination as well as ensuring minimization of worker exposure and potential environmental releases of PCBs from maintenance operations.
 - 3.3. Procurement and commissioning of mobile PCB de-contamination technology
 - 3.4. Regeneration of 1,000 tons of PCB containing oils in electricity distribution network. Using technology procured under 3.3, low PCB contaminated (< 2,000 ppm) transformers are decontaminated while leaving equipment in operation.
27. Overall the project would set up a mechanism for management cycle of PCBs that can be scaled-up to cover additional PCB holders. This replication can either be done to geographic areas not covered by the demonstration or other companies. The sustainability considerations for the selected approach include flexibility as well as possibility of re-using resources such as transformer oils.
28. The project is highly aligned with UNIDO's programming thrust on Inclusive and Sustainable Industrial Development, ISID, by providing assistance directly to industries creating jobs and prosperity as well as capacity building to the national regulatory and enforcement structures. The work will contribute directly to Sustainable Development goals 7,9 and 12.

4. Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

29. The companies providing electricity and maintaining the electricity network are conducting their business without consideration of PCBs. Adding PCB management to their concerns and burden is therefore fully incremental. The only way of recovering additional PCB management related costs would be to charge additional fees from corporate and retail consumers, a move ill-afforded by the affected.
30. Required by the Stockholm Convention, the PCB-related work is all incremental to the PCB-holders. In the project financing scheme the PCB holders are expected to contribute with investments in replacement equipment, providing maintenance and operational crews as contribution to the PCB management effort. This contribution is expected at US\$ 16.3 million.
31. While the government and public institution have continuing responsibilities to provide regulation and enforcement to waste legislation, the work targeting especially PCBs and associated equipment is based on Stockholm Convention obligations and would not be targeted as priority in the baseline scenario. Therefore the associated action and activities are

fully incremental, but will be co-financed to the tune of US\$ 1,200,000 in form of staff time, facilities as well as coordination.

5. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

32. The global environmental benefit of the project is the prevention of the release of potentially PCB-contaminated oil into the environment and it will facilitate implementation of existing Multilateral Environmental Agreements like the Stockholm Convention and the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal to which Georgia is a party to.
33. The project will safely dispose of 100 tons of pure PCB oils and 200 tons of associated equipment as well as render harmless an additional 1,000 tons of PCB contaminated oils from global circulation. There will be significant climate co-benefits from the project. These co-benefits stems from the energy-efficiency gains both by the upgrade and smarter electricity distribution as well as the more energy efficient equipment introduced as replacement of the PCB containing transformers and capacitors.

6. Innovation, sustainability and potential for scaling up

34. While introducing mobile technologies for PCB neutralization is not anymore a global level innovation, its application in the Georgian setting is a novelty which would hardly happen without a GEF intervention. This aspects also provides the main sustainability to the approach as the companies can continue the PCB clean-up from the distribution networks after the project phases out. The scaling-up can happen regionally, while replication is envisioned in the Georgia, by targeting other sectors holding PCB containing equipment.
35. The sustainability of the approach comes from the structure which clearly puts onus on the PCB holders to take action through regulatory requirement. Helping or incentivizing the action at company level comes from the considerably low costs as PCB holders can undertake clean-up action with in-house crews during regular maintenance works. Mobile technology will further provide flexibility when it comes to the location of the PCB-containing equipment.
36. The ongoing NIP update will result with a plan for the next 10 years implementation. This project will play a crucial role for the countrywide PCB elimination. As a result of the project implementation the major sources of PCB wastes and contamination will be addressed adequately. Moreover, as one of the main outcome of the project country will get new technology with technology transfer component and treat all available PCB containing equipment in various industries.
37. It is foreseen that additional efforts beyond the targeted power distribution sector for sound PCB management will be required for Georgia to comply with convention deadlines. The experiences from the project can be directly utilized in this replication and scaling-up effort in other industrial or transport/utility/defense sectors that are in possession of PCB equipment.

2. *Stakeholders.* Will project design include the participation of relevant stakeholders from [civil society](#) and [indigenous people](#)? (yes ☒ /no ☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

38. The principal stakeholder of the project is the Ministry of Environment and Natural Resources Protection of Georgia. It is expected to be the main national project coordinating institution. Other executing entities will be identified during the PPG stage

39. Involved key stakeholders are:

- Ministry of Environmental and Natural Resources protection (MoEPNR) through the Waste and Chemicals Service Unit
- Ministry of Energy
- Ministry of Health
- Ministry of Economy and Sustainable Development
- Ministry of Finance
- Private Companies - “Georgian State Electro System” as well as other private electricity distribution companies holding PCBs .
- Civil society and NGOs

40. The Ministry of Environment and Natural Resources Protection is a government entity having a mandate for environmental and resource strategy development, legislation and policy formulation, environmental impact assessment and development of environmental quality standards.

41. Ministry of Energy with its main goal to fully satisfy demand of industrial and domestic-communal sector on energy resources on the basis of full utilization of energy resources existing in the country and diversification of imported energy carriers.

42. Ministry of Labour, Health and Social Affairs of Georgia implements state governance and state policy in the fields of labour, health and social affairs, and its mission is to promote the population's good health and functional capacity, promote healthy working and living environments, ensure that there are sufficient social and health services.

43. The Ministry of Economy and Sustainable Development with its subsidiary body - Technical and Construction Inspectorate carries out control of Limited Market Access Materials.

44. Ministry of Finance and Customs Department is a body that controls import, export and transit of the different products/goods.

45. Civil society organizations will be involved in the project to share all important information and experience accumulated in the public and local communities with regard to environmental and health aspects of PCB releases and accumulation in the environment. Also they will be involved in the project preparation and implementation process as one of the main stakeholders, such participation includes attendance of project related meetings/events and revision of project documents. Civil society organizations will further be engaged in public consultation as per established UNIDO policies.

3. *Gender Considerations.* Are [gender considerations](#) taken into account? (yes ☒ /no ☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

45. Gender and Development (GAD) considerations will be made an integral part of the project strategy in consideration of the Gender policies of the GEF, UNIDO as well as those of Government of Georgia.
46. Gender is a critical component in the area of sound management of chemicals because men and women have different health reactions when they are exposed to toxic chemicals. The health implications arising from even low levels of POPs and hazardous chemicals for society in general is serious. As a group, POPs are of concern to human health, most notably, because of their potential effects on the endocrine system, but also because of how they affect the immune system, liver, cognitive ability and the reproductive system. Genetic and other biological differences may contribute to differing susceptibility to chemicals between men and women. Susceptibility may be increased or it may be reduced due to gender. Therefore, patterns of cancer among women exposed to certain chemicals may well differ from pattern observed among men. Gender considerations in POPs management plays a critical role also because of the transfer of POPs chemicals from child bearing mothers to unborn children, making this group as well as women intending to have children a particular risk group .
47. Initial assessment of the PCB situation as well as the planned project intervention indicates that the majority of POPs handlers as well as workers in companies holding POPs are men. This is because traditionally the electricity distribution maintenance jobs have been male dominated. The same goes for the heavy industries that are potentially holders of PCB containing equipment. The exposure to women can be of a higher risk from PCB contaminated transformers potentially found in public spaces including hospitals and other strategic locations. The higher numbers of men handling PCBs as well as the possible exposure to the more susceptible group, young women, will be taken into focus as a part of the Gender assessment to be undertaken during the PPG stage. In this respect it should be noted that male exposure may be more direct due to handling of oils while female PCB exposure is predominantly indirect through environment and food.
48. In addition, mandatory UNIDO gender markers will be applied, and that the project shall be rated for gender relevance. Gender marking entails inclusion in project reporting of the following data by year 2 and on completion, including: (i) Total number of full-time project staff that are men/women; (ii) Number of jobs created by the project that are held by men/women; (iii) Number of gender sensitive publications produced.

4 Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

Risks	Level of risk	Risk mitigation measures
Political instability with potential policy shift and staff turnover in the Ministry of Environment and Natural resources Protection and in other key stakeholders	Low	The project will ensure a close and adequate contact with key decision makers on the important objectives of the project. Further, the project steering structures would include a broad gathering of key line ministries for ensuring the approval of technical staff influencing political decisions
Shortage of national technical expertise, especially on PCB related issues	Low	The project will ensure training and capacity building of local experts and stakeholders representatives to facilitate the project implementation process
Complementing project activities with the ongoing and future investment projects will not be achieved	Low	During the project preparation/implementation phase active consultation meetings will be held with donors/investors, the industrial companies and state institutions to address this risk. Such coordination will clearly identify the complementing activities, their timelines and budgets, including rights and responsibilities of the concerned parties
Technical staff, participating in the project implementation, and, in particular, contacting with PCB-contaminated equipment will be excessively exposed to PCB harmful influence	Low	The technical staff will be trained on proper handling of PCB wastes and equipment. Relevant guidelines will be developed or adjusted and introduced at the technical facilities of the project . Risk mitigation will be incorporated in the company level PCB management and associated maintenance plans.
Weak coordination among stakeholders	Low	Hold regular consultations and workshops to clarify specific roles of each stakeholder and facilitate its fulfillment
Difficulties in ensuring financing for the transformer replacement and decontamination program by the PCB holders.	Mod erate	Regulatory requirements and government incentives will decrease the risk. Also lower cost de-contamination and oil regeneration approach has been selected as a part of the project intervention to mitigate this risk.
Weak implementation of national regulations	Mod erate	Proper enforcement and training coupled incentives to compliant entities, as well as penalties for non-compliance.
Climate change induced flooding making transport and handling of PCBs more risky	Low	Ensure that the PCB Management plan take into account weather disturbances during its execution. This will be further addressed in the project's Environmental and Social management plan.
Increased flooding episodes making previously safe transformer sites more risky operations	Low	This risk will be included in the priority setting criteria, when deciding on the equipment to be targeted

5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives.

49. In spite of the fact that country has no experience of implementation of PCB related projects, hence there is no rich experience of having clear coordination mechanisms between different stakeholders and institutions in this regard. However, there are some

ongoing POPs related projects and competent institutions that might be closely coordinated with project preparation and implementation process.

50. Ministry of Environment and Natural Resource Protection will ensure the coordination with the relevant ongoing projects that are to be coordinated on a regular basis. Some of main active projects are as follows:

- The Global Environment Facility (GEF) and Green Cross have financed the “Demonstrating and Scaling up Sustainable Alternatives to DDT for the Control of Vector Borne Diseases in Southern Caucasus and Central Asia” project with total budget – 5.482.000 USD

The project aims to demonstrate the applicability and cost-effectiveness of alternatives to DDT for vector control in the selected demonstration sites; develop national capacity for planning and implementation of vector control in the context of integrated vector management (IVM); identify and manage DDT stocks and wastes; coordinate dissemination and sharing of country experiences among countries and regions concerned

- The Food and Agriculture Organization of the United Nations (FAO) and European Union (EU) have financed “Improving capacities to eliminate and prevent recurrence of obsolete pesticides as model for tackling unused hazardous chemicals in the former Soviet Union” project with total budget – 8.000.000 EUR

The general aim of the project is the management of pesticides through the disposal of stockpiles and the building of capacities in such areas as legislative reform, pesticide registration processes, the promotion of alternatives to the most hazardous chemicals in use and the development of communication strategies to raise awareness among stakeholders, farmers and the public

- The Global Environment Facility (GEF) and United Nations Environment Programme (UNEP) have financed the “Review and update of the national implementation plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Georgia” project with total budget 169.132 USD. The project implementation dates: 2014-2016 years.

The project aims to “minimize releases of POPs from obsolete pesticide stockpiles in Georgia and create capacity in management of the POPs pesticide stockpiles”. And it will directly contribute to the broader goal “support to sustainable development through elimination of POPs from the environment”. Project main objective is to review and update the National Implementation Plan (NIP) in order to comply with reporting obligations (Article 15) and updating of National Implementation Plans (Article 7) under the Stockholm Convention.

51. The active coordination with the particular ongoing project, at least at PPG phase, will be the crucial to identify and harmonize PCB related activities. Especially inventory components will be discussed to exclude double work or overlapping. The ongoing NIP update project will address old and new POPs and with limited scope will cover PCB inventory. As of current perspectives the ongoing project during PCB inventory sub-phase

will focus on some industries that potentially possess the PCB containing waste, however the project limited resources will not be enough to make countrywide detail inventory of PCB waste and PCB containing equipment, moreover there will be applied expert extrapolation to figure out PCB quantities. Hence, the proposed project will complement with its inventory sub-component that will accomplish the detail countrywide PCB inventory including carrying the laboratory analysis of every sample. The project will draw upon and coordinate on technical matters with ongoing UNIDO PCB program. This program engages Azerbaijan, Congo, India, Indonesia, Lao PR, Macedonia, Mongolia, Morocco, Nepal, Peru, Philippines, Russia, Serbia and Ukraine.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

52. The National Implementation Plan on POPs was approved by the Government of Georgia in 2011. It is a strategic document aimed at setting maximum effective strategy for POPs management in the country.

53. PCB management was identified as second priority in the first POPs NIP for Georgia adopted by the government in 2011. The first priority was on POPs pesticides and buried POPs pesticide risk mitigation, which has already been addressed.

54. The current proposal is addressing the first NIP action plans 1,2 and 4 on Improvement of Legal Framework and Planning, Institutional Capacity Building and PCBs, respectively. For detailed information on these action plan, visit the official submission by the Government of Georgia at <http://chm.pops.int/Implementation/NIPs/NIPTransmission/tabid/253/ctl/Download/mid/13657/Default.aspx?id=68&ObjID=15209>

55. Georgia is currently undertaking the project for the Review and Update of its National Implementation Plan (NIP) for the Stockholm Convention. Updated information on neither PCBs or the adjusted priorities are not yet available from this process.

56. Within its National Environmental Action Plan for 2011-2015 (NEAP-2), Georgia has identified Sector Specific problems that in Waste and Chemical include - Pollution of environment by hazardous wastes and Pollution from accumulated hazardous wastes

57. NEAP-2 long-term goal for waste management is the establishment of a modern waste management system in the country, and in the next 5 years the following targets should be reached: 1. Improvement of household and hazardous waste management and 2. Reduction of environmental pollution and protection of human health and the environment accumulated wastes.

7. *Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

58. For the preparation and implementation of the project there will be taken best practices and lessons learned from other relevant projects and initiatives. Best practices will be

drawn from the entire UNIDO PCB project portfolio of more than 14 country projects with a specific emphasis on projects in Macedonia, Mongolia, the Philippine and others where non-combustion approaches, in some cases in mobile configuration have been deployed. The vast UNIDO experience on PCB management underlines the comparative advantage of the agency.

59. The project will on its part be plugged in the knowledge management systems established by both project and portfolio as well as country evaluations conducted by UNIDO and GEF Secretariat's Independent Evaluation offices. Further efforts for wider dissemination will be explored during the PPG including information sharing wider in the energy distribution and efficiency constituencies.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT⁹ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Nino Tkhlava	Head of environmental policy and international relations department	MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES PROTECTION OF GEORGIA	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁰ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Mr. Philippe R. Scholtès Managing Director Programme Development and Technical Cooperation Division UNIDO GEF Focal Point		08-24-2015	Klaus Tyrkko	+431- 260264261	k.tyrkko@unido.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

⁹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

For newly accredited GEF Project Agencies, please download and fill up the required [**GEF Project Agency Certification of Ceiling Information Template**](#) to be attached as an annex to the PIF.