

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC19888

Project Name	SL- Climate finance for renewables (P151800)
Region	SOUTH ASIA
Country	Sri Lanka
Sector(s)	Other Renewable Energy (100%)
Theme(s)	Climate change (100%)
Project ID	P151800
Borrower(s)	Ministry of Mahaweli Development and Environment, Ministry of Power and Renewable Energy
Implementing Agency	Ceylon Electricity Board, The Sri Lanka Climate Fund (Private) Limited (SLCF)
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	10-Mar-2016
Date PID Approved/ Disclosed	16-Mar-2016
Estimated Date of Board Approval	31-Oct-2016

I. Introduction and Context

Country Context

Sri Lanka is a rapidly growing lower middle-income country. Economic growth between 2009 and 2014 was over 7 percent, an increase from the average annual growth rate of 6 percent in the preceding five years. Sri Lanka's Adjusted Net Savings (ANS) indicator has remained positive since 1990, steadily increasing from 17 percent to 22 percent in 2014, when the average ANS value in the South Asian region was 13.1 percent. This prolonged period of positive ANS suggests that Sri Lanka has adequate savings to offset the depletion of its natural assets. Among its neighbors in the region, Sri Lanka stands out for its environmental stewardship, and for being one of the most progressive, clean and sustainable nations.

Economic growth has accompanied an increased demand for energy investment and use, which in turn has led to increased air pollution, greenhouse gas (GHG) emissions, and growing economic vulnerability to volatility in fossil fuel supplies. Sri Lanka already spends 50 percent of its total export income (approximately US\$ 5 billion per year) to import fossil fuels, and over 40 percent of Sri Lanka's primary energy is dependent on imported fossil fuels, mainly coal, fuel oil and petroleum. Sri Lanka met the increased energy demand by oil-fired thermal power plants, as all large hydro resources were nearly utilized by 1995. The share of oil-fired thermal plants in Sri Lanka's power sector rose from 6 percent in 1995 to 54 percent in 2011. Sri Lanka's power sector

has begun to transition away from its oil dependence and became coal dominated since 2012.

To counter the twin challenges of dependence on imported energy and climate change, Sri Lanka has announced its aspirational goal of being energy self-sufficient by 2030. The Government of Sri Lanka (GoSL) also set an ambitious target of achieving 20 percent energy in its generation mix from Non-Conventional Renewable Energy (NCRE) sources which include wind, mini hydro (hydro less than 10 MW), biomass/dendro and solar by 2020.

Sri Lanka requires an installed NCRE capacity of at least 1,000 MW by 2020 and 1,900MW by 2034 to achieve the aspirational target. NCRE currently accounts for 9.85 percent of total generation. Therefore, the target represents a doubling of NCRE capacity. The country's long-term generation expansion plan (LTGEP 2015-2034) establishes a "business-as-usual" basis for meeting forecast electricity peak demand rising from 2,400 MW in 2015 to about 6,000 MW by 2035. The LTGEP describes a base case generation expansion plan that will complete the exploitation of the remaining large scale hydro capability, support a very modest growth in NCRE resources, retire aging oil fired and diesel generating plant by 2025 and commence an ambitious program of building incremental units of higher efficiency sub-critical coal fired generating plant. Ceylon Electricity Board (CEB) forced 20 percent NCRE in its new LTGEP 2015-2034, lowering the share of coal-based power in the total generation mix from 70 percent in the previous LTGEP plan to 52 percent in the new LTGEP.

Sri Lanka has committed to achieve emission reductions of 4.88 million tCO₂ by 2030 from the energy sector, a 4 percent reduction compared to the 2010 baseline, under its Intended Nationally Determined Contribution (INDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) on October 22, 2015. The cumulative emission reduction for the period of 2015-2030 will be 74.56 million tCO₂ from the energy sector. In addition, Sri Lanka has set a voluntary target to achieve 3.33 million tCO₂ reduction in 2030, and a cumulative emission reductions of 30.21 million tCO₂ for the period of 2015-2030 through future NCRE development under international external support, which would further reduce emissions by 16 percent against the 2010 baseline.

Sectoral and Institutional Context

Sri Lanka has an installed capacity of 3,932 MW of power and generates 12,000 GWh per annum. It has achieved a remarkable 98 percent rate of electrification and currently has a small power surplus. Although coal is the least cost generation option, the NCRE targets and their inclusion in the LTGEP indicate that GoSL recognizes the need for diversification of power sources in order to strengthen fiscal resilience (as Sri Lanka imports 100 percent of its coal requirement).

Sri Lanka would need to deploy additional 300-500 MW of new projects to achieve 20 percent NCRE target by 2020, even if 249 NCRE projects in the Sustainability Energy Authority's (SEA) provisionally approved pipeline with a total capacity of 600 MW are all commissioned. One of the largest NCRE projects planned by CEB is the 375 MW Mannar Wind Farm. Developing such a large-scale wind farm would still need to overcome several policy, regulatory, technical and grid-related challenges in NCRE deployment, thereby facilitating the creation of a conducive business environment for further development of large NCRE projects in Sri Lanka.

Sri Lanka would also need to arrive at a fair comparison of the cost of energy from different sources such as oil, coal and NCRE in order to ensure economic and commercial viability of its power

projects. At present, thermal coal-based power is considered the least cost option, while the tariff for wind and solar projects has been criticized as being excessively generous. In levelized US\$ terms, the current tariff for wind power computes to 12.4 US\$/kWh. While this is above current levels of feed-in tariff in China and India, it is below that of the Philippines and Indonesia. Although political and regulatory supports in the form of feed-in tariffs and on-time payments from CEB to power producers are in place to ensure that NCRE projects are economically viable, the sector continues to face several market and regulatory barriers to development, including access to finance, cost of grid integration and the lack of a strong policy framework for NCRE development.

Access to climate finance could help address these challenges, accelerate NCRE deployment and reduce the perceived risk for such projects by demonstrating their economic viability as an alternative to fossil fuel based power. However, at present, none of the domestic financial institutions is accredited to receive or deploy international climate finance. Raising private investment from domestic sources for climate change mitigation and adaptation projects has been a challenge, and private sector involvement in NCRE, especially large-scale projects, remains limited.

Sri Lanka's National Climate Change Policy provides guidance and direction for all stakeholders in meeting the challenge of climate change, but a strategy to access to climate finance needs to be further strengthened. The policy articulates the guiding principles for energy, transport, industry, waste management, and agriculture and livestock. Resource mobilization including international resources to support implementation of the national climate change policy is key to accelerate mitigation measures in these sectors, including the use of market/ non-market mechanisms.

Relationship to CAS

The national policy and strategic framework for development and growth in Sri Lanka between 2010 and 2016, aims at accelerating growth, with particular emphasis on the achievement of equitable development. The proposed project aligns with the main strategic objectives of the Country Partnership Strategy (CPS) FY2013 – FY2016, which aims to help GoSL achieve the goals set out in its development policy framework. In particular, the proposed project will facilitate sustained private and public investment in the energy sector in development of renewable energy by leveraging climate finance as well as developing appropriate methodologies, monitoring, reporting, and verification systems. The proposed project forms a part of the Bank's emerging engagement with Sri Lanka in the renewable energy sector together with scaled-up wind power development (P157023) and would also contribute to that project, by helping to create an enabling environment necessary for private sectors participation in the wind sector and catalyze international climate financing such as Green Climate Fund (GCF).

II. Proposed Development Objective(s)

Proposed Development Objective(s)

- i) To support institutional development and capacity building to access international climate finance
- ii) To reduce Greenhouse Gas (GHG) emissions by increasing renewable energy generation

Key Results

- 1. Cumulative GHG reductions achieved and verified
- 2. Cumulative renewable energy generation accountable for the proposed result-based climate financing
- 3. Cumulative financial flows from climate finance

III. Preliminary Description

Concept Description

The proposed project will support GoSL's efforts for the development of renewable energy to increase the share of NCRE in the energy mix to 20 percent by 2020. Given that Sri Lanka heavily relies on imported fossil fuels to meet the growing energy demand, diversifying energy generation away from imported fossil fuels is critical to accommodate fluctuations in international oil and coal markets to improve the country's fiscal resilience. Renewable energy provides an opportunity for Sri Lanka to limit import dependence and vulnerability to fossil fuel price shocks, and move toward energy self-sufficiency.

Climate finance is key for increasing renewable energy generation and mitigating barriers to renewable energy development in Sri Lanka. In addition, the country needs to build capacity and prepare a robust institutional framework to access international climate finance. With the recent operationalization of the GCF, climate finance is expected to grow rapidly and reach the level of US \$100 billion per annum as agreed in the Copenhagen Accord (2009). Based on lessons learned from Clean Development Mechanism (CDM), result-based climate finance at the sectoral level would be ideal for supporting the national NCRE target by reducing high transaction costs which Sri Lanka had faced for CDM development, and further accessing a bulk of funds available from GCF or other sources to support the country's NCRE target.

The proposed project will enhance Sri Lanka's capacity to access international climate finance and improve fiscal resilience through the achievement of national NCRE targets. It will also assist GoSL in identifying and developing a long-term strategy to achieve green and climate resilient growth by facilitating low-carbon interventions across various different sectors. The proposed components, based on the consultations with the government and relevant stakeholders, are the following:

Component 1: Supporting institutional development and capacity building to access international climate finance

The proposed project will enable Sri Lanka to receive direct access to climate finance, including GCF, develop business models, including public-private partnerships, and enhance the effectiveness of financial instruments, with the objective of catalyzing and supporting private sector investment in renewable energy. This component will be supported by a combination of multi-trust funds, including the Public-Private Infrastructure Advisory Facility (PPIAF).

Component 1-1: Strengthening the capacity of Sri Lanka Climate Fund to play a catalytic role for GHG reduction by accessing climate finance and promoting public private partnerships

Sri Lanka Climate Fund (Private) Limited (SLCF) was established under the purview of Ministry of Environment and registered under the Companies Act No.7 of 2007. SLCF's objective is to promote clean technologies and channelize climate finance from different sources toward climate change mitigation and adaptation projects in order to reduce GHG emissions at the country level. SLCF also aims at demonstrating commercially viable, public-private business models as a way to address climate change and environmental problems more effectively. The SLCF's corporate structure is allowed to unlock sources of private finance to address investment needs specific to climate-relevant sectors, and act as a conduit for receiving international climate finance.

SLCF still needs to grow to use a combination of public and private sector participation to achieve its objectives, as opposed to the wholly government-owned model that it adopted initially. Hence, there is significant scope for capacity building within SLCF to leverage investments and the expertise of its investors effectively to promote private participation for scaling up climate mitigation activities in the country. Accordingly, GoSL has requested the Bank to assist Sri Lanka in strengthening the capacity of SLCF in order to facilitate dialogue with the private sector, accelerate mobilization of private sector investment and expertise, and increase access to international climate finance.

Activities: In order to strengthen the capacity of SLCF, the proposed project plans to:

- a. Improve their knowledge on basic PPP concepts and fundamentals and various climate financing options as well as developing financing instruments, where possible;
- b. Strengthen SLCF's capacity to develop climate transactions through PPP-based GHG mitigation activities and access to climate finance including accreditation of GCF application;
- c. Update SLCF's business strategy to scale up the business model; and
- d. Identify potential GHG mitigation activities to begin piloting under the Carbon Partnership Facility.

Component 1-2: Supporting participation of the Green Climate Fund readiness activities

The Climate Change Secretariat (CCS) under the Ministry of Mahaweli Development and Environment is the national designated authority (NDA) for Sri Lanka to GCF. The CCS submitted Sri Lanka's request for GCF readiness support on March 31, 2015 and requested that the World Bank become a technical partner to implement the readiness program.

Activities: As a part of the Bank's readiness support to Sri Lanka, the proposed project will support CCS in preparing, implementing and managing GCF readiness activities funded by the GCF Secretariat and provide the requisite technical expertise in order to help increase Sri Lanka's capacity to access the Green Climate Fund through local institutions.

Component 1-3: Supporting a South-South exchange to formulate a nation-wide carbon neutral strategy

The Costa Rican government has an ambitious plan in place to begin offsetting all of the country's CO₂ emissions by using budgeting, laws, and incentives, including measures to promote biofuels, hybrid vehicles, and clean energy. Since Costa Rica has made significant progress in its transition toward low carbon growth. Sri Lanka's economy will likely be required to undergo a similar transformation in order to implement its ambitious energy development plan and become a carbon neutral nation.

Activities: Sri Lanka will benefit by learning from Costa Rica's experiences by contextualizing various initiatives in the energy sector, foreseeing potential challenges and formulating a nation-wide strategy that reflects development priorities. The proposed project will provide an opportunity for capacity building exchanging knowledge and lessons learned from Costa Rica. This will inform and guide Sri Lanka's national strategy to achieve carbon neutrality.

Component 2: Developing a result-based climate financing with sectoral methodology and MRV systems

The World Bank supports GoSL’s objective of promoting NCRE generation by demonstrating new applications of result-based financing through the Carbon Partnership Facility (CPF). CPF is one of the carbon trust funds managed by the World Bank to promote scaled-up carbon crediting activities via a sector-wide program or an economy-wide policy associated with GHG emission reduction impacts.

The World Bank as a Trustee of CPF will purchase emission reductions under the agreed CPF methodology and MRV systems to be developed by the project and as a return generate financial flows to promote further NCRE generation in the country. GoSL has appointed SLCF and Ceylon Electricity Board as implementing entities to manage the CPF program and agree on emission reductions purchase agreement with the World Bank on behalf of GoSL.

There would be no direct financing by the Bank to development of any individual renewable energy projects. Subject to further discussion with GoSL, carbon revenues generated by the CPF program will be either injected to the existing Sri Lanka Sustainable Energy Fund or utilized by individual project developers for their own NCRE development.

The following key methodological elements will be discussed to set up a robust carbon-crediting scheme for the whole NCRE development in the country:

- Setting a baseline at the sector level to reflect the share of NCRE in the total generation mix without the support of carbon finance;
- Establishing ex-ante aspirational targets for NCRE power generation in the next 10 years;
- Establishing an approach for determining the “own effort” of Sri Lanka which can be differentiated from the creditable amount of GHG emission reductions;
- Establishing an approach for determining creditable greenhouse gas emission reductions based on the performance achieved beyond the baseline, after deducting the “own effort”;
- Developing monitoring, reporting and verification (MRV) systems; and
- Monitoring the implementation progress towards meeting these aspirational targets.

With carbon revenue and appropriate methodologies and MRV systems on emission reductions at the sectoral level, this component will facilitate the removal of barriers and create a favorable business environment, thereby catalyzing greater private sector investment in renewable energy generation, and help increase the share of renewable energy in Sri Lanka’s electricity generation mix. Furthermore, the establishment of a robust MRV system will also help the country fulfil its reporting requirements under the UNFCCC and other relevant international organizations.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	✗		
Natural Habitats OP/BP 4.04	✗		
Forests OP/BP 4.36		✗	
Pest Management OP 4.09		✗	
Physical Cultural Resources OP/BP 4.11		✗	
Indigenous Peoples OP/BP 4.10		✗	

Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	12.00	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			0.00
Carbon Fund			12.00
Total			12.00

VI. Contact point

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