Project Information Document/ Identification/Concept Stage (PID)

Concept Stage | Date Prepared/Updated: 18-Dec-2019 | Report No: PIDC207905

BASIC INFORMATION

A. Basic Project Data

Project ID	Parent Project ID (if any)	Environmental and Social Risk Classification	Project Name
P172974		Substantial	Vietnam Solar Transition Accelerator (VISTA)
Region	**Country**	**Date PID Prepared**	**Estimated Date of Approval**
EAST ASIA AND PACIFIC	Vietnam	18-Dec-2019	
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Trade and Industry (MOIT)	Ministry of Industry and Trade (MOIT)	

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	1.50
Total Financing	1.50
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	1.50
GLOBAL INFRASTRUCTURE FACILITY	1.50

B. Introduction and Context

Country Context

Vietnam has made remarkable progress in its economic development and poverty reduction in recent years and has graduated in December 2016 to lower-middle income country status. Vietnam has experienced rapid and inclusive economic growth since the early 1990s. Over the last two decades, the country has recorded among the highest growth rates in the world, which in turn enabled poverty reduction at record pace. Economic renovation through the Doi Moi reforms launched in 1986 have transformed Vietnam from one of the world's poorest countries to a lower-middle income country - with a power purchase parity Gross Domestic Product (GDP) per capita of USD 6,775 in 2017 from USD 3,609 in 2007. The

GDP growth has slowed down in 2012-13 to 5-5.5 percent growth due to the aftermath of the global financial and economic crisis but recuperated in 2015 and reached 7 percent in 2018.

Sectoral and Institutional Context

Vietnam, under the leadership of its state-utility Vietnam Electricity (EVN), multiplied by nine its installed capacity since 2000 harnessing most of its hydropower and now diversifying its grid with coal and gas. Around 47 GW of generation is installed today from 5 GW in 2000. Of this, 26 GW (accounting for 55 percent of the total power system) is owned directly by EVN and the generating companies operating under its aegis (EVN GENCOs 1, 2 and 3), 6 GW (13 percent) was owned by two state-owned enterprises, namely PetroVietnam and VINACOMIN, and 15 GW (32 percent) was owned by BOTs and other private investors. Vietnam has c. 18 GW of hydro generation (38 percent of total installed generation) but has almost harnessed its whole potential, and therefore is diversifying its energy mix with coal and gas, respectively representing around 32 percent and 17 percent of installed capacity. Under Vietnam's feed-in-tariff (FIT) scheme, 4.5 GW of solar PV and 300 MW of wind generation were installed. Vietnam is importing power from China and Lao representing around 1.3 GW and exports power to Cambodia. Vietnam has been supporting the development of a domestic coal industry for the last 10 years, but coal imports are required to answer the country's growing demand.

Even if the Government of Vietnam has ambitious Greenhouse Gas (GHG) emissions reduction targets and is expected to be one of the countries the most impacted by climate change, as economic development is the government's main priority, electricity prices must stay affordable leading to a decision to promote coal generation. Climate-induced impacts in Vietnam threaten the livelihoods of people in coastal or low-lying deltas which represents more than 50 percent of the total population, as well as the large percentage of the workforce whose income depends on natural resources and other key vulnerable assets. In its Nationally Determined Contribution (NDC), the Government of Vietnam committed to reduce by 8 percent by 2030 its emissions based on the business-as-usual scenario and reduce it by up to 25 percent with international support. In 2015, energy was the largest contributor to GHG emissions representing a share of 54 percent while agriculture represented 31 percent and industry 8 percent. However, as economic development is the government's priority the electricity generation needs to stay as affordable as possible leading to a decision to promote important investments in coal generation in the country.

With expected 7-8 percent demand increase per year, the current Vietnamese generation plan presents a path to 96 GW of installed capacity in 2025 and 130 GW in 2030 including 40 GW of new coal generation from today's levels. Under the revised National Power Development Plan VII for the period 2016-2020 with a vision to 2030 (Revised PDP 7), in 2025, coal is expected to represent 50 percent of its installed capacity (33 GW added from today's level), hydropower 21 percent, gas 15 percent and renewable energy 13 percent. In 2030, the current plan states a decrease in coal share, but it would still represent 42 percent with renewable energy representing 16 percent. In the next few years, coal imports are planned to grow from 20 million to 30 million tons in particular with domestic reserves declining. Despite the heavy reliance on coal in the current PDP, there are growing concerns that the targets for expanding coal generation may not be

achievable due to constraints on international financing (in part linked to the appetite of a growing number of investors to back coal projects), provincial resistance to new-build coal, and concerns over environmental protests from local communities. If these concerns are realized then this leaves a significant hole in the medium-term generation plan that will need to be filled by other sources, presenting a major opportunity for renewable energy if costs are demonstrated to be equivalent to new-build coal and gas.

In the last few years, the solar and wind power purchase agreement (PPA) signed were between US$ 2.5 and 5 cents per kWh in developing countries when promoted under the right deployment framework and could be least-cost compared to coal in Vietnam. When the PDP 7 was revised in 2016, prices of solar and wind were still not competitive with fossil production and targets of 12 GW of PV and 6 GW of wind by 2030 were announced. In 2017, the government decided to promote variable renewable energy (VRE) through a FIT scheme with fixed prices of US$ 9.35 cents per kWh for PV and US$ 7.8 cents per kWh for wind which was increased to US$ 8.5 cents per kWh in 2018. Discussion of a FIT 2 are ongoing with prices discussed in the range of US$ 6-9 cents per kWh. However, combining steep decrease in capital expenditure (CAPEX) cost, in particular solar module cost, high competition between solar independent power producers (IPPs) and the scale of the market, prices have drastically come down especially when the selection of IPPs was done under a competitive scheme. In 2019, Tunisia, Ethiopia, Uzbekistan, Zambia and Philippines announced PPA prices of US$ 2.44 cent, US$ 2.56 cent, US$ 3.9 cent and US$ 4.5 cent per kWh, respectively. For offshore wind, a recent ESMAP report shows that costs have fallen in Europe to around US$ 5 cent per kWh, and while new markets such as Vietnam will present new challenges and start-up costs, there is good reason to believe that offshore wind could be highly competitive in the medium term.

The World Bank is supporting Vietnam to move from its FIT scheme to a competitive bidding one for solar generation and if successful for onshore and offshore wind. Based on the work conducted since 2017 on solar deployment financed by ESMAP and GIF and in particular the Solar Competitive Bidding Strategy and Framework, the Government of Vietnam is designing a Solar Competitive Bidding Program to mobilize affordable private sector investment at scale. After a review of the different competitive schemes used internationally and the key challenges faced by Vietnam, two deployment schemes were recommended for the Vietnam Solar Competitive Bidding Program: (i) substation-based scheme; and (ii) solar park scheme. The key recommendations included (i) plan a medium-term strategy which has clear procurement processes and timeline for the MW being procured under the stated scheme; (ii) initiate the Solar Competitive Bidding Program through a pilot bid under the substation scheme, to be followed by a public solar park scheme; (iii) to enable solar parks to be developed in Vietnam, tackle the budget constraints for land clearing; and (iv) ensure that the legal framework based on the Investment Law is aligned with the scheme to be implemented. As competitive bidding procedures are not yet available under the Investment Law, it requires the Government of Vietnam to issue the relevant legal documents to align with the scheme to be implemented. The objective is to achieve these changes through the path of least resistance which is likely to be a Prime Minister Decision Circular. This World Bank support is absolutely critical to convince the Government of Vietnam to rely more on VRE in its future PDP8.

Relationship to CPF

As per the Vietnam Country Partnership Framework (CPF), renewable energy is core to the World Bank engagement. Under Focus Area 3: Ensure Environmental Sustainability and Resilience – promote low carbon energy generation, including renewables and energy efficiency and reduce GHG emissions the World Bank has committed to support the Government of Vietnam in harnessing its domestic renewable resources.

C. Project Development Objective(s)

Proposed Development Objective(s)

The Development Objective is to support the Government of Vietnam in implementing a sustainable solar competitive bidding program to mobilize private investments at scale.

Key Results

The expected key results of the Vietnam Solar Transition Accelerator project are:

- Launch and implementation of a Pilot Substation-Based Competitive Bidding (500 MW pilot bidding)
- Private capital mobilized under the Pilot Substation-Based Competitive Bidding (US$ 375 million mobilized)
- Reduction in carbon emissions (18 million CO2 tons for the 25 years of the solar projects life)
- Development of a pipeline of solar parks to be tendered as a second phase (subject to results of preliminary technical analysis)

D. Preliminary Description

Activities/Components

MOIT in December 2017 requested for World Bank/GIF support to develop a strategy to deploy their 12 GW targets under a competitive scheme. The World Bank Group task team (including World Bank Energy, GIF and IFC team members) together with consultants have developed such strategy based on an assessment of Vietnam market conditions, international experience of solar auctions, consultations with national agencies such as MOIT, EVN, Ministry of Planning and Investment (MPI), local authorities, local and international developers and financiers, and previous activities that the World Bank conducted on solar. The main recommendations of the Strategy are (i) to ensure there is fair risk allocation with associated bankable contracts (power purchase agreement (PPA), letter of support etc.), (ii) to integrate the potential grid constraints in the generation planning and in the selected deployment scheme, and (iii) to ensure that the Generation Master Plan and the Land Master Plan are aligned.

The Project is implemented in parallel to a Bank led technical assistance (TA) financed by the Energy Sector Management Assistance Program (ESMAP) and implemented under the Programmatic ASA (P171453). The parallel Bank led technical support will enable the Government to (i) select the substations for the Pilot

Substation-Based Competitive Bidding, (ii) understand better the needs for critical grid upgrades (battery storage, dispatch, voltage and frequency support) for VRE integration that could be financed under a new Investment Project Financing (IPF), and (iii) identify champion Provinces and select pieces of land for solar parks.

The Project, financed through a GIF grant, has three components, namely (i) transaction support for IPP selection under Substation-Based Competitive Bidding; (ii) transaction support for IPP selection under Solar Park Competitive Bidding and (iii) capacity building. More precisely:

Component 1: Transaction Support for IPP Selection under Substation-Based Competitive Bidding (US$ 750,000)

- Transaction advisory support (legal, procurement and technical) to prepare and conduct the 500 MW Pilot Substation-Based Competitive Bidding under which the site selection and everything related to safeguards are to be done by the winning IPPs. The government is only selecting the substation into which the IPPs will be able to connect their projects. Under the IPP selection process, environmental and social pre-requisites will need to be met before being selecting (i.e. meeting the national environmental and social policies).
- The Government will launch its Solar Competitive Bidding Program with the substation-based competitive bidding which shall be ready for request for qualification (RFQ) mid-2020 and signature of PPA end-2020.

Component 2: Transaction Support for IPP Selection under Solar Park Competitive Bidding (US$ 600,000)

- Transaction advisory support (legal, procurement and technical) to prepare and conduct the 500 MW Pilot Solar Park Competitive Bidding under which the site selection and the safeguards analysis will be done by the Government prior to launching the competitive selection of IPPs.
- Financing for this Component has been secured but is conditional to the results of the technical analysis on solar parks conducted under the PASA, and ESMAP Sustainable Renewable Risk Mitigation Initiative (SRMI) financing for feasibility studies and safeguards studies.
- The land selection will be conducted be done by MOIT and the Provinces under the Bank led technical assistance.

Component 3: Capacity Building (US$ 150,000)

- Direct support for MOIT and EVN to build internal capacity to reduce their reliance on external advisors for the next competitive selection processes. This Component will finance (i) training, (ii) embedded consultants in their team and (iii) knowledge exchange workshops.

The Project will exclusively focus on transaction advisory support (e.g., legal, procurement and technical) to prepare and conduct the Pilot Substation-Based Competitive Bidding as a first phase and conditional to the

results of prior technical studies and the Government's approval, as a second phase the Pilot Solar Park Competitive Bidding.

As per the request from the Government of Vietnam, the World Bank will lead the Substation-Based Competitive Bidding and the Ground-Mounted Competitive Bidding whereas the Asian Development Bank (ADB) will lead the Floating Solar Park Competitive Bidding Scheme. The World Bank and ADB will work together on the legal and contractual/risk allocation aspects to ensure full donor coordination.

Environmental and Social Standards Relevance

E. Relevant Standards

ESS Standards		Relevance
ESS 1	Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant
ESS 2	Labor and Working Conditions	Relevant
ESS 3	Resource Efficiency and Pollution Prevention and Management	Not Currently Relevant
ESS 4	Community Health and Safety	Not Currently Relevant
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8	Cultural Heritage	Not Currently Relevant
ESS 9	Financial Intermediaries	Not Currently Relevant

Legal Operational Policies

Safeguard Policies	Triggered	Explanation (Optional)
Projects on International Waterways OP 7.50	No	The project will neither finance nor support any civil works activities or detailed design and engineering studies that fall within the scope of application of OP 7.50.
Projects in Disputed Areas OP 7.60	No	The project will not be implemented in any disputed areas.

Summary of Screening of Environmental and Social Risks and Impacts

As part of environmental and social screening, the team has reviewed the project concept note, experience of relevant projects, related laws and regulations including Law on Environmental Projection, Land Law, Labor code. The project is expected to bring about substantial direct environmental benefits by increasing the deployment of renewable energy. In addition, building supply chains and experience in the sector is likely to yield indirect benefits through continued cost reductions, leading to additional solar power deployment outside of the Project. Transitioning to a higher percentage of renewable energy in the electricity mix has benefits for Vietnam's GHG emissions, air and water pollution, and use of water resources. Within this WB-financed TA no physical footprints and related direct environmental impacts are expected that could potentially generate adverse environmental and social impacts and risks. However, the TA is likely to result in substantial downstream investments in PV installations related to preparation and implementation of the substation-based competitive bidding and solar park bidding schemes and their outcomes. Given that the Project provinces are home to rich biodiversity, diverse natural habitats, and ecosystems, there is a risk that the development of the infrastructure for the solar parks may result in habitat loss due to significant land acquisition, conversion and encroachment of natural habitats and ecosystems. In addition, there could be potential adverse environmental impacts during construction such as excessive dust, noise and vibration; increased traffic of heavy machinery; soil, air, and water pollution; risk of unexploded ordnances; and disturbance of agricultural areas or cultural resources. There is a potential risk that environmental and social requirements to manage these risks are missed or inadequately incorporated in the related legal, procurement, technical, and bidding and contractual documents to be met by the IPPs, resulting in environmental and social noncompliance during implementation. The direct negative social impacts/risks of the Grant are relatively limited, embedding in (i) the mobilization of consultants supporting the Client in implementing the Grant activities; and (ii) the risk of failure to integrate E&S requirements in TORs and the Grant-generated outputs (legal, procurement and technical documents) and in the ESIA, feasibilities studies of the selected solar parks identified in the additional financing of this TA. Potential adverse impacts relate to the downstream implications of the technical assistance, as it enables the selection of private investors that will build solar projects under the substation based (500MW) or solar parks competitive bidding (500MW). Solar projects may put additional pressure on local resources, particularly on drinking water, and require the acquisition of land. Additional downstream risks may relate to labor and working conditions, and community health and safety concerns arising from worker influx for plant and substation construction and operation. However, those impacts are expected to be site specific, moderate in nature and intensity, and can be mitigated. In addition, the social risk rating is also identified, taking into account the uncertain capacity of IPPs, local authorities in addressing social risks/impacts per ESF requirements. The relevance of the ESSs to the project has also been assessed and include ESS1, ESS2, and ESS10. The Bank Policy on Projects on International Waterways and the policy on Projects in Disputed Areas are not triggered for the project. Prior to Bank Board Approval of the project, the Client will: 1) Develop and finalize ESCP and SEP; 2) Disclose the ESCP and SEP; and 3) Develop an ES addendum to the transaction advisory TORs about environmental and social principles for IPP owned land under the substation-based competitive bidding; these would also apply to ES requirements for the solar parks; and 3) Prior to project Appraisal, the draft ESCP and SEP will be disclosed in places accessible to the pubic to meet the requirements set out in ESS10.

CONTACT POINT

World Bank

Contact :	Ky Hong Tran	Title :	Senior Energy Specialist
Telephone No :	5777+8388 /	Email :	
Contact :	Sabine Mathilde Isabelle Cornieti	Title :	Young Professional
Telephone No :	5220+34596 /	Email :	

Borrower/Client/Recipient

Borrower :	Ministry of Trade and Industry (MOIT)

Implementing Agencies

Implementing Agency :	Ministry of Industry and Trade (MOIT)		
Contact :	Hoang Kim Phuong	Title :	General Director
Telephone No :	0084903289159	Email :	kimph@moit.gov.vn

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects