PPP Models for ERP

Guidance for Countries in Assessing ERC Projects

Appendix C: PPP Models for ERP

The section lays out the different models for potential public-private partnerships (or PPPs) to generate emissions reduction credits (ERCs) from deploying technologies that reduce or remove emissions.

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Emission Reduction Program, Utopian City of Green

Watch this space. ***Unlocking Global Emission Reduction Credit*** *is intended to be a living document and will be reviewed at regular intervals. Check the page below, or visit* ***Strategic Guidance for Country System Assessments***, ***Guidance for Countries in Assessing ERC Projects***, *or* ***Mobilizing ERC Finance***. *Let us know what you think by taking a* ***Quick Survey***.

Introduction to the Models - Appendix C

In addition to the Project Guidelines developed, this Appendix lays out the different models for potential public-private partnerships (or PPPs) to generate emissions reduction credits (ERCs) from deploying technologies that reduce or remove emissions. These could also include activities that are part of larger infrastructure-type investments. ERCs in these models are expected to enable these projects to incorporate emission reduction or removal activities in the larger package while allowing them to either maintain their financial viability or recover their invest-ability, through the additional revenue streams from the sale of the credits.

The 12 models, as summarized in Table 1, are based on case studies across different sectors. They cover both existing and ongoing projects that have incorporated emissions reduction or removal activities into larger infrastructure projects, largely to improve their financial viability.

Table 1: PPP Models Detailed

#	Model	Applicable Methodology	
1	MRT Energy Efficiency Deployment	Mass Rapid Transit Projects	Existing-F
2	Rural Electrification	Electrification of communities through grid extension or construction of new mini grids	New-User
3	LED Streetlight Deployment	Demand-side activities for efficient outdoor and street lighting technologies	Existing-F

#	Model	Applicable Methodology	
4	Rooftop Solar Installation	Renewable electricity generation for captive use and mini-grid	New-Build
5	LED Lighting Deployment	Demand-side energy efficiency activities for specific technologies	Existing-R
6	E-Bus Deployment	Bus rapid transit projects	New-Refu
7	EV Charging Systems Installation	Methodology for Electric Vehicle Charging Systems	New-Build
8	Biodigester Deployment	Reduced Emissions From Cooking And Heating – Technologies And Practices To Displace Decentralized Thermal Energy Consumption	New-Build
9	Waste-to-Power	Avoidance of landfill gas emissions by in-situ aeration of landfills	New-Build
10	Waste Treatment Facility Installation	Avoided emissions from organic waste through alternative waste treatment processes	Existing-E
11	Climate Smart Farming Deployment	Adoption of Sustainable Agricultural Land Management	Existing-E
12	Reforestation Program	Afforestation and reforestation of lands except wetlands	New-Finar

The models will start by identifying the infrastructure project and the potential ERC-generating activities to be deployed along with it. This will then lead to a proposed PPP model based on the dimensions in Table 2, based on the learnings from the case studies and the specific considerations for this permutation of ERC activity and wider infrastructure project. It will then describe the case study, including how it was structured and the impact achieved or targeted, before going into the summary business plan. The business plan will feature a reconstructed version of the basic forecasts of revenues and costs for both the ERC and non-ERC component of the project, based on the information available from the case study and additional desktop research.

Table 2: Public-Private Partnership Model Dimensions

Dimension	Attribute	Description
Business	New	The PPP can either result to the creation of a new entity or the take-over of and existing business

Dimension	Attribute	Description
Existing		
Construction	Build	The project company may be obliged to undertake all activities relating to the construction of a new asset which will differ from refurbishing already existing assets
	Refurbish	
Private Funding	Finance	The private-led project company may carry the obligation to raise financing for the project
Service	Bulk	The project company may be delivering services to a single entity in the case of “Bulk” or delivering directly to the consumers of the service in the case of “User”
	User	
Revenues	Fees	The revenue streams in a project may stem from fees paid by a single or limited number of off-takers or from tariffs paid by a large number of consumers
	Tariffs	

Models



MRT Energy Efficiencies Model for ERP, carriage of a modern electric train for transporting passengers

MRT Energy Efficiencies Model for ERP



Rural Electrification Model for ERP, solar power plant

Rural Electrification Model for ERP



LED Streetlight Deployment Model for ERP - for Efficient Outdoor and Street Lighting Technologies, street lamps is

LED Streetlight Deployment Model for ERP - for Efficient Outdoor and Street Lighting Technologies



Rooftop Solar Installation Model for ERP, view of a green roof on a modern building with solar panels

Rooftop Solar Installation Model for ERP



LED Streetlight Deployment Model for ERP - for Specific Technologies, solar lighting

LED Streetlight Deployment Model for ERP - for Specific Technologies



E-bus Deployment Model for ERP, Electric Bus

E-bus Deployment Model for ERP


EV Charging Systems Installation Model for ERP, electric car green color parking for parking and charging

EV Charging Systems Installation Model for ERP


Biodigesters Deployment Model for ERP, large green tank with a green lid sits in front of a field

Biodigesters Deployment Model for ERP


Waste-to-Power Model for ERP, Landfill

Waste-to-Power Model for ERP


Waste Treatment Facility Model for ERP, aerial view of modern water cleaning facility at urban wastewater treatmen

Waste Treatment Facility Model for ERP


Climate Smart Farming Deployment Model for ERP, internet of things iot with farming smart concept agriculture

Climate Smart Farming Deployment Model for ERP


Reforestation Program Model for ERP, small plant growing out of dirt image

Reforestation Program Model for ERP

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This section is intended to be a living document and will be reviewed at regular intervals. The Guidelines have not been prepared with any specific transaction in mind and are meant to serve only as general guidance. It is therefore critical that the Guidelines be reviewed and adapted for specific transactions. Unless expressly stated otherwise, the findings, interpretations, and conclusions expressed in the Materials in this Site are those of the various authors of the Materials and are not necessarily those of The World Bank Group, its member institutions, or their respective Boards of Executive Directors or member countries. For feedback on the content of this section of the website or suggestions for links or materials that could be included, please contact the Public-Private Partnership Resource Center at ppp@worldbank.org.