Concept Note
For an IEG Category I Learning Product on Financial Sustainability of the Electricity Sector in Developing Countries – Lessons from World Bank Interventions: FY2000-2016

March 15, 2016

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The purpose of this learning product[1] is to deepen the understanding of factors that drive the effectiveness of World Bank efforts for improving the financial sustainability of the electricity sector in client countries. The report is based mainly on existing IEG sector and project level evaluations on the subject -- specifically Development Policy Operations and Specific Investment Loans with financial covenants, and/or financial sustainability components -- supplemented by a targeted literature survey.

Background and Context

1. About 1.1 billion people around the world, mostly poor, lack access to electricity, holding them back from the potential for human development and quality of life that can result from such connectivity. In Sub-Saharan Africa alone there are over 600 million people without electricity[2], and this figure may rise significantly if the pace of new electricity connections remains at the average rate experienced during the ten year period 2005-2014, and population growth is taken into account.[3] Against this background, the World Bank Group has joined the United Nations in the Sustainable Energy for All (SE4All) initiative, which seeks to achieve universal access to energy by 2030, along with improving energy efficiency and the use of renewable energy. This initiative is reinforced by the Sustainable Development Goal 7 – "ensure access to affordable, reliable, sustainable and modern energy for all" – and the WBG's goals of reducing extreme poverty and increasing shared prosperity.

2. Maintaining the financial viability of the electricity sector is essential for the provision of adequate and reliable electricity services, regardless of whether the service delivery agents are under public or private ownership. Financial viability entails the ability to generate sufficient income to meet operating payments and debt commitments, and to allow for growth while also maintaining service standards. Several World Bank government clients regulate electricity services and set retail tariffs below full cost recovery (operating costs and capital costs), citing concern about the affordability of service for the poor, and often without provision of adequate and timely subsidies from the Government to cover the financing gaps of the service providers.. Inadequate revenues limit the ability to make needed investments on a timely basis for access expansion (generation, transmission, and distribution) and to support required operations

[1] As per IEG Guidelines, an IEG Learning Product Category I involves a synthesis of evaluation findings, cross-cutting lessons and good practices from existing IEG evaluations, supplemented by other relevant sources.
[2] 2015. Global Tracking Framework; http://trackingenergy4all.worldbank.org/reports
[3] IEG. 2015. "World Bank Group's Support for Electricity Access 2000-2014". Washington D.C.

maintenance. In time, these factors lead to the progressive deterioration of service reliability and performance efficiency, including technical and nontechnical losses, extended service restoration times after outages, chronic power supply inadequacy from insufficient generation capacity, and downgraded performance of existing generation plants. Clearly, political economy and fiscal limitations play a key role in determining level of tariffs and subsides.

3. The "Directions Paper"[4] (2013) for the Energy Sector highlights the WBG's support for ensuring efficient, financially sound sectoral performance and its contribution to equitable economic development. It states that the WBG will help address underpricing, revenue under-collections, protection offered to inefficient parastatal energy monopolies, large technical and commercial losses, and weak regulatory frameworks and capacity.

World Bank Support for financial viability of the electricity sector

5. World Bank (IBRD and IDA) support for the financial sustainability at the sector level has been delivered primarily through development policy operations (DPOs), and financial covenants accompanying investment lending through Specific Investment Loans (SILs), supplemented by analytical and advisory activities. These interventions relate mainly to grid-based electricity. Off-grid electrification has gradually increased in importance in the last two decades, and several models of service delivery have been employed, outside of the electricity grid. The financial viability of off-grid electricity services is covered in a separate learning product being prepared by IEG during FY16.[5]

6. DPOs provide quick-disbursing budget support to governments for achieving specific policy and institutional reforms – typically drawn from the government's reform program – that are considered critical to achieving sustainable improvements in the sector's financial performance. All DPOs require prior actions, which are reform measures to be fulfilled by the government before the operation is approved and the funds disbursed. Prior actions in support of sector reforms tend to focus on the adoption of cost-recovery tariffs, payments collection, and reduction of commercial losses, cost rationalization, and government subsidy transfers. The use of legal covenants for tariff-setting, though once prevalent, are much less frequently used now. The use of financial covenants in investment lending is generally restricted to standard financial ratios and payments collection and loss reduction.

7. The World Bank funded 28 DPOs in 13 countries during FY2000–2016 that addressed the electricity sector alone or in combination with other sectors. They represented total commitments of $6.6 billion, of which $5 billion was for actions related to the electricity sector.

[4] World Bank. 2013. Towards a Sustainable Future for All: Directions for the World Bank Group's Energy Sector. Washington DC.

[5] http://ieg.worldbank.org/Data/reports/Off-Grid_Electricity_Svcs_Concept_Note.final_.pdf

Most of the DPOs were in high- and universal-access countries. Only three DPOs were in low-access countries, accounting for $87 million in commitments for the electricity sector. Seventeen of the DPOs belonged to programmatic series of two or more sequenced operations, and the rest were one-off interventions. (See Annex 1 for the list of DPOs) In most DPOs, financial viability or sustainability of the electricity sector (or national utility) was explicitly included as a development objective, but almost all DPOs contained key performance indicators related to sector financial performance.[6]

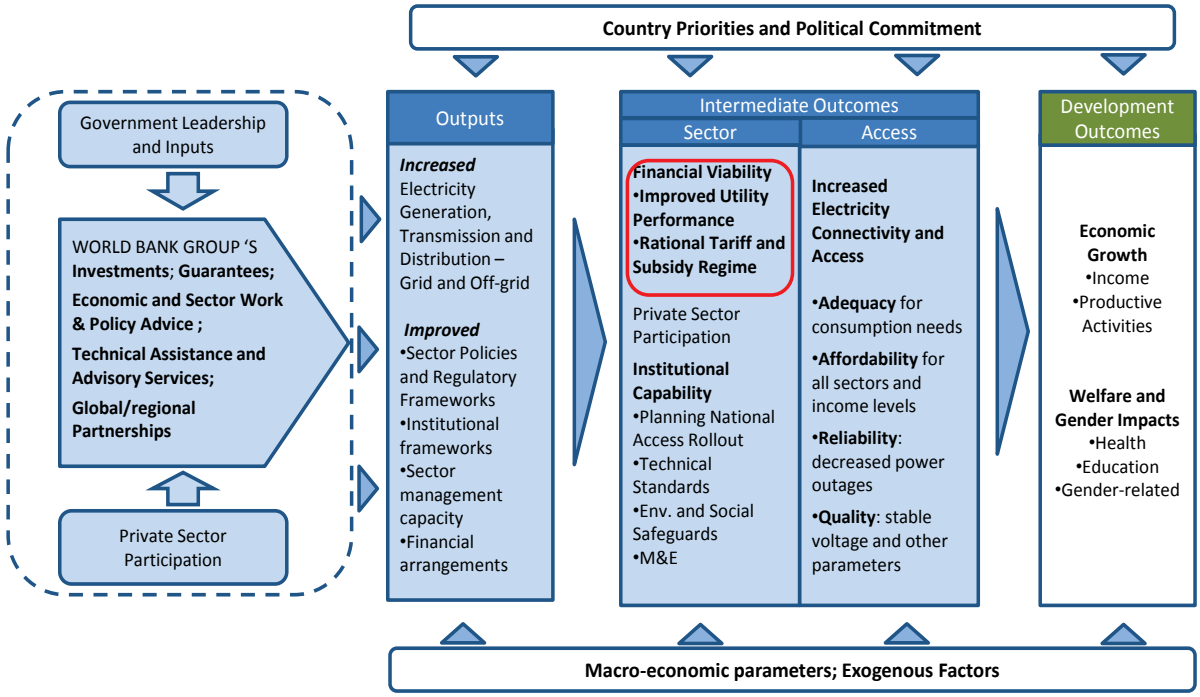
9. In the past, under many Bank-funded investment projects, particularly those implemented in the 1990s and early 2000s, the typical approach was to combine specific investment lending with sector reform conditionality, including measures intended to improve financial performance (tariff adjustment, payment collections, commercialization, privatization, etc.). The use of this approach has declined considerably since then. The main reasons are that the binding of investments and policy reforms did not have a generally good record in supporting sustainable performance-enhancing reforms for a variety of reasons, including a lack of strong government political commitment to address the underpricing of power or rampant nonpayment. Also, policy and investment activities often operate on such different timelines, and with different stakeholders, that it may be unwieldy to bind them together too closely. However, there are some significant instances of projects approved in the last 10-15 years that have attempted to combine specific investment lending with elements of sector reform relating to financial sustainability. Among these are the Kazakhstan Electricity Transmission Rehabilitation Project (P065414: FY2000-2009), the Senegal Electricity Sector Efficiency Project (P073477: FY2005-11), and the Vietnam System Efficiency Improvement, Equitization, and Renewable Energy Project (P066396; FY2002-2013)

Rationale for the Learning Product

10. The IEG Evaluation of the World Bank Group's Support for Electricity Access (2015)[7] recognized financial viability of the electricity sector as one of the key drivers of performance towards universal electricity access, implying that countries that have transitioned to High/Universal access[8] from Low/Medium access levels, ensured the financial sustainability of power companies through a variety of means including the adoption of rational electricity tariffs and well-designed subsidy policies. In its Results Framework for Electricity Access, financial viability is indicated as one of the main intermediate sector outcomes affecting adequate and reliable access. (Figure 1). The related evaluation question posed was to what extent has the WBG been effective in supporting a viable electricity sector in client countries through lending, policy support, and advice.

[6] IEG considers key performance indicators evaluable when baseline value, original (or revised) target value, and actual value achieved at completion are present.
[7] IEG. 2015. An Evaluation of the World Bank Group's Support for Electricity Access
[8] The access categories used are: Low: upto 50%; Medium: 50% to 75%; High: >75% -95%; High: >95%

Figure 1: Electricity Access: Results Framework



11. Against this background, an in-depth examination of the financial sustainability aspect from a more focused perspective by stocktaking of evaluative lessons and findings on what works or has not in specific country and institutional contexts, is expected to be of considerable value informing both strategy and operations going forward for the WBG to support client countries in moving towards financially sustainable electricity sectors.

Learning Product Objective and Methodology

12. The purpose of this learning product is to inform World Bank strategy and operations in their support to client countries for improving the financial sustainability of their electricity sectors.

13. The findings and lessons relate to the following issues that have been raised collectively in the IEG sector and project-level evaluations:

- To what extent has the World Bank in its country partnership strategies, identified issues and strategies for supporting the financial viability of the electricity sector in client countries?
- To what extent do DPOs and SILs adequately identify and address the drivers of poor sector finances including political economy aspects?

- To what extent have DPOs been effective in supporting client countries in improving the financial sustainability of their electricity sectors? In what manner have the design features of the DPOs (programmatic; stand-alone etc.) influenced the outcomes of the operations.
- To what extent have components in SILs, including financial covenants. been effective in improving financial sustainability.
- To what extent improvements in financial viability as a result of WB support have been sustained following loan/credit closures.

14. The learning product will draw upon IEG evaluations of (DPOs) and SILs with components that aim to support financial sustainability at the sector level, or related financial covenants, approved and completed during the period FY2000-2016, covering ICR reviews, Project Performance Assessment Reports (Annex 2), and sector evaluations. The study will draw upon and update the detailed background information and analysis compiled for IEG's recent evaluation of the World Bank Group's Support for Electricity Access (2015). The study will also include a literature review, incorporating findings from the WBG's research papers, publications and other economic and sector work including non-lending technical assistance reports; as well as relevant literature from development partners, donors and academic journals on financial sustainability issues in the electricity sector. Relevant examples will be elaborated to present success factors considering the specificity and political economy situation of the countries involved. Portfolio analysis will be conducted to assess the effectiveness of the World Bank operations (IDA and IBRD) on financial sustainability. In addition, financial performance of national utilities in 40 countries, to the extent possible, will be assessed during 2000-2015 in order to see how their financial performance evolved over time. Findings from previous IEG assessments on DPOs will also be drawn upon where relevant.

15. Members of the IEG team for this study will meet with representative staff and management of the Energy & Extractives GP working on financial sustainability issues in the electricity sector, to confirm the findings and lessons. The study draft will be sent for comments and discussed with the GP before being finalized and submitted to the Board's Committee on Development Effectiveness (CODE).

16. Quality Assurance and Peer Review. Quality Assurance of the concept paper will be handled internally through the IEG Methods Advisor, Department Heads, and IEG Management. The concept paper will be peer reviewed by Sheoli Pargal, Lead Energy Economist, and Sunil Mathrani, Senior Energy Specialist, who together bring strong research and operational experience the electricity sector. They are also requested to peer review the final learning product.

Dissemination

17. The main audience for this learning product is the Global Practice for Energy and Extractives. Energy practices in other multilateral development banks and bilateral donors may also find this to be of interest to their own activities in the electricity sector. After the standard process of review and comments from the Bank management, the learning product will be disclosed as per regular procedure. IEG will actively engage with the Bank management in internalizing the lessons and findings from the final report. The report will be disseminated through the IEG website, and through presentations at appropriate forums.

Milestones and Deliverables

Circulate draft concept note for virtual review	February 29 2016
Deadline for comments on concept note	March 11, 2016
Draft Report	May 2, 2016
One-Stop Meeting	May 16, 2016
Final report	May 23, 2016

IEG Staff Resources

Ramachandra Jammi (Task Team Leader): Senior Evaluation Officer, IEGSD
Istvan Dobozi: Senior Consultant and electricity sector expert
Ebru Karamete, Evaluation Specialist (ETC), IEGSD
Thao Thi Phuong Nguyen: Consultant, data analysis, IEGSD
Yunsun Li, Consultant

ANNEX 1

World Bank DPOs in the Power Sector, 2000-2016

Project ID	Project Name	Appr. FY	Country	Tot. Commit. (M$)	Of Which for Power Sector projects (M$)
P074801	BD DSC IV/DPL	2007	Bangladesh	200	140.00
P090832	Bangladesh Development Support Cr. III	2006	Bangladesh	200	130.00
P107797	Power Sector DPL	2008	Bangladesh	120	120.00
P108843	Bangladesh DSC IV-Supplemental Financing	2008	Bangladesh	75	59.25
P110110	BD DSC IV-Supplemental Financing II	2008	Bangladesh	100	25.00
P076905	Energy Sector Reform Loan	2002	Brazil	455	431.82
P082712	DO Power Sector Program Loan	2005	Dominican R.	150	150.00
P113301	GH-EGPRC (fast-track)	2009	Ghana	300	249.00
P117924	Poverty Reduction Support Credit (PRSC-7)	2011	Ghana	215	133.30
P127314	GH-PRSG 8	2012	Ghana	100	57.00
P094288	LB - Reform Implementation DPL	2008	Lebanon	100	73.00
P099618	MA-Energy Sector DPL	2007	Morocco	100	78.00
P090690	PK PRSC II	2007	Pakistan	350	189.00
P113372	Poverty Reduction & Econ. Support Operation	2009	Pakistan	500	350.00
P128258	PK: Power Sector Reform DPC	2014	Pakistan	600	600.00
P098867	PK PRSC I - Supplemental Financing	2006	Pakistan	150	78.00
P105279	SN-Energy. Sector Recovery Dev Policy Financing	2008	Senegal	80	68.00
P128284	First Governance and Growth Sup Project	2013	Senegal	55	31.90
P143645	TZ First Power and Gas Sector DPO	2013	Tanzania	100	57.00
P121877	Tonga Energy Develop. Policy Operation	2011	Tonga	5	5.00
P126453	Economic Recovery Operation	2012	Tonga	9	6.48
P110643	Programmatic Electricity Sector DPL	2009	Turkey	800	800.00
P117651	ESES DPL2	2010	Turkey	700	350.00
P121651	ESES DPL 3	2012	Turkey	600	378.00
P115874	VN-Power Sector Reform DPO	2010	Vietnam	312	311.80
P124174	VN-Power Sector Reform DPO2	2012	Vietnam	200	200.00
P107218	ZM-First Poverty Reduction Support Cr.	2010	Zambia	20	15.00
P117370	ZM-PRSC 2	2011	Zambia	30	15.00
Total commitment				**6,625.35**	**5,101.55**

Annex 2

Project Performance Assessment Reports

Table D.1. List of Recent IEG Project Performance Assessment Reports for Electricity Sector Projects (2008-2014)

PPAR year	Country	Project ID	Project name
2014	Bangladesh	P071794 P078707 P107797	Rural Electricity Renewable Energy Development Power Sector Development Technical Assistance Power Sector Development Policy Loan
2010	India	P038334	Rajasthan Power Sector Restructuring
2008	Lao PDR	P044973	Southern Province Rural Electrification
2013	Senegal	P105279 P073477	Senegal Energy Sector Recovery Development Policy Financing Electricity Sector Efficiency Enhancement—Phase 1, APL-1
2014	Vietnam	P074688 P045628 P066396	Second Rural Energy Project Transmission, Distribution, and Disaster System Efficiency Improvement, Equitization, and Renewable

Source: World Bank Business Intelligence
Note: APL = Adaptable Program Loan; PPAR = Project Performance Assessment Report.