

**Sample terms of reference for Power Sector Regulation
For regulatory development and tariff modeling (taken from World Bank/PPIAF
Toolkit for Hiring and Managing Advisors)**

Privatization of Acadia's Electricity System

Scope of Work for Regulatory Development and Tariff Modeling

Background

Acadia, a small state and former Portean colony with about 1.2 million inhabitants, has decided to privatize its electricity sector. The Department of Energy (DOE) is planning to sell its transmission and distribution assets to strategic, institutional and/or private investors. The new industry structure will allow for the development of IPPs in Acadia to sell electricity to the new utility and directly to major users. There are currently no generation assets in Acadia as the DOE purchases its power from a grid that is interconnected with bordering states. Insufficient power has resulted in loadshedding and pent up demand among Acadia's industrial, tourism and residential communities.

In advance of the transaction, the African Development Bank is managing several areas of technical assistance to strengthen the ability of the state government to conduct the privatization and regulate the privatized entity. Following a business and investment plan already conducted by the firm Sigmund & Pumpkin, the African Development Bank intends to retain a utility economics consulting firm to design an electricity tariff for Acadia and to design and help implement a new regulatory framework for the sector. The following proposal outlines the goal of the project, the purpose of the technical assistance, the work plan and deliverables that should be conducted as part of these studies as well as the bidding criteria that will be used to select the appropriate firm.

Goal of the Privatization

By allowing the private sector to invest in and manage the electric utility, the Department of Energy expects to increase the availability of affordable electricity to the domestic and industrial consumers of Acadia. Reliable access to electricity in turn will lead to increased opportunities for economic development, job creation, and poverty alleviation.

Purpose of the Technical Assistance

The two related objectives of this assignment are to establish a regulatory framework for the electricity sector and to design a sustainable and efficient tariff schedule. To support this objective, the consultant is expected to provide training to local counterparts, allowing them to develop the skills required to assist the future regulator and to share their experience on further power sector reform initiatives throughout the region.

Work Plan

The following section sets out the tasks to be undertaken by a utility consulting firm, in conjunction with an international lawyer, to implement a regulatory framework in the context of the sector's imminent privatization and then to design a workable tariff for Acadia's electricity sector.

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Phase I: Electricity Regulatory Design

In order to develop a regulatory framework that will allow the State of Acadia to monitor and negotiate with a private owner of Acadia's electricity system, the African Development Bank will retain a utility economics consulting firm, in conjunction with a utility lawyer and an Acadian economics consulting firm, to conduct the tasks outlined below:

a) *Review of Acadia's Regulations (Weeks 1 to 3):* Review existing regulatory framework as it applies to the Department of Energy (DOE) including the responsibilities and relationships of relevant government entities at different levels, in order to identify the opportunities, issues and constraints that would/could arise with the introduction of private participation in the system/commercial company's activities;

b) *Review of Regional Regulatory Frameworks (Weeks 1 to 3):* Review the most relevant regulatory arrangements applicable from other states in the region and other sectors in Acadia; identify lessons learned and evaluate the strengths and weaknesses of the approaches used; review other states' arrangements for multisectoral regulation;

c) *Regulatory Needs Assessment (Weeks 2 to 6):* For the private participation transaction structure being developed by IFC, assess the need to modify each element of the existing regulatory framework;

d) *IPP Licensing and Direct Sales Plan (Weeks 4 to 6):* Suggest a plan for allocating licenses for future IPPs with the State of Acadia, and the permissibility of these IPPs to contract with captive industrial buyers vis-à-vis selling to the grid;

e) *Recommended Modifications (Weeks 5 to 7):* Work with the team of international and domestic lawyers to specify ways in which the regulatory framework should be modified to ensure the future viability of the sector, including what types of laws or decrees need to be passed, if any, and what form of new regulatory bodies need to be established; recommend an outline of modifications if framework is to be expanded to included other sectors;

f) *Allocation of Regulatory Responsibilities and Institutional Design (Weeks 6-10):* The consultant will define any new regulatory functions and responsibilities and prepare a blueprint for how these would be allocated to existing and/or new entities. This includes defining the institutional arrangements for any new regulatory framework to perform effectively, including staffing, management, operating procedures, salary standards, job descriptions, equipment and other resources required by the regulatory body being established.

g) *Time Schedule (Weeks 10-11):* Recommend approval steps and time frame necessary to implement the proposed framework of changes.

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***Phase II: Regulatory Seminar and Tariff Design:
(Begins at completion of Phase I)***

a) *Dissemination (Weeks 1 to 2):* Prepare and present findings on recommended regulatory structure and the nature of independent regulation to government officials in Acadia. This seminar will be developed in conjunction with the African Development Bank ESMAP and the PSDPP. Contribute findings to any presentation or article material being prepared by ESMAP/PSDPP as part of the African Development Bank's internal dissemination practices.

b) *Future Training and TA Recommendations (Weeks 1 to 3):* Prepare recommendations on the requirements for technical assistance support and training for any proposed regulatory institution and how the costs for this and for the day-to-day operations of such institutions will be met. Provide clear indication of role of Acadian-counterparts in future training and regulatory development.

c) *Review of Current Tariffs (Weeks 1 to 3):* Review existing and historic tariffs for different categories of customers including an assessment of the extent and reasons for previous non-payment of bills to determine the basis for tariff setting, any cross-subsidies and subsidies given, the relationship between tariffs and costs (marginal vs. average), the tariff adjustment process and treatment of financial and social objectives. In addition, prepare an assessment of the adequacy of existing tariffs to cover estimated costs and support future requirements;

d) *Demand Forecasting (Weeks 2 to 4):* With the technical consultant, taking into account existing electricity demand forecasts, convert existing long-term demand forecasts under different sets of assumptions, into forecasts by category of customer and other agreed upon profiles;

e) *Estimate Future Average Tariffs (Weeks 4 to 8):* Prepare a projection of a future average cost recovery tariff, according to the tariff structure recommended in the Regulatory component described below. The tariff schedules should be based upon the three capital expenditure scenarios (high, medium and low). This will be used to assist the Government of Acadia in selecting the optimal tariff/expenditure mix. In case industrial users are given the right to purchase directly from IPPs, the tariff model should allow for a sensitivity analysis to determine the impact on the average tariff.

f) *Propose Tariff Schedules (Weeks 7 to 10):* Design a tariff schedule that reflects the different customer categories that will be served by the privatized utility. The tariff should take into consideration the poor's ability to pay, the impact of industrial users being served directly by IPPs, and must demonstrate the energy efficiency objectives of tariff setting. Review any elasticity analysis or willingness/ ability to pay studies that have been conducted in Acadia to estimate the maximum tariff level consumers could theoretically bear. If such analysis is not available, discuss this issue with key stakeholders to estimate highest practicable level of tariff and feasible time schedule for increasing the tariff, if necessary.

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Prepare alternative tariff schedules that “soften” any increase in tariffs (by deferring returns, timing expansions, extending the duration of the license, or through any other means available) and present options to Government of Acadia.

g) Reconciliation of Recommendations with Other State Tariff Structures (Weeks 10 to 11):

Co-ordinate with on-going African Development Bank funded work on power sector tariff issues in Acadia and attempt to reconcile any inconsistency in outcomes. The consultant should also review the industry and agricultural tariff cost studies that the African Development Bank and the UK’s DFID are jointly carrying out elsewhere in the region. If differences can not be reconciled, explain source of difference in written memo form to Government of Acadia and the African Development Bank team.

h) Review of Private Contract Document (As document is prepared - 1 week):

Review and comment on relevant sections of the draft private contract document especially as it relates to tariff setting, cross-subsidies, restrictions on immediate cost recovery (through ramped up tariffs, etc.) or any other issues that relate to the expected revenues of the business.

Deliverables

Phase I: Electricity Regulatory Design

Regulatory Review (Week 3):

Brief paper describing the status of the regulatory arrangements that exist in law and in practice in Acadia. Should include discussion of the national requirements for regulation as well as the precedence set in other states.

Regulatory Needs Assessment and IPP Licensing Plan (Week 6):

Description of regulatory or legislative changes required to modify each element of the existing regulatory framework, and specific treatment of impact of IPP policy as described in 4.2.d) above.

Proposed Regulatory Framework (Week 10):

A plan for implementing necessary changes to the regulatory framework in order to ensure the future viability of the sector should be proposed. This should also include the institutional recommendations described in 4.1.f).

Reconciliation of Recommendations with those elsewhere in the region (Week 12):

Memorandum explaining any differences between the proposed regulatory framework and tariff structure and those elsewhere in the region.

Phase II: Tariff Design (Begins after Phase I Completion)

Dissemination (Week 2):

Prepare and offer seminar as discussed in 4.2.a) above.

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Future Training and TA Recommendations (Week 3):

Prepare recommendations on the requirements for technical assistance support and training for proposed regulator.

Tariff Structure Review (Week 4):

Brief paper describing the status of the current tariff in Acadia. Should include a discussion of any current willingness and ability to pay analysis conducted to date or the stakeholders' view on acceptable tariff levels.

Results of Tariff Model (Week 9):

The preliminary results of the tariff model should be presented with discussions of the average tariff and alternative "shapes" of the tariff over time.

Proposed Tariff Schedule (Week 10):

A full tariff schedule as discussed in 4.2 f) above should be presented. *Review of Private Contract Document (when contract/license is prepared):*

Commentary on tariff-related sections of draft private contract document.

Duration

It is expected that the regulatory analyses will last about 10 weeks and the tariff work about another 11 weeks.

Resources

It is expected that the consulting firm will form a consortium with an Acadian firm. The lead international advisor will provide a project manager with several years experience in the privatization and regulation of electric utilities, as well as two to three staff with regulatory and institutional strengthening experience and one with proven tariff modeling capabilities. The Acadian firm should provide at least one manager and one analyst to work with the lead consultant. On the regulatory component, the consortium will be asked to work with an international utility lawyer, who will be appointed directly by the IFC/CFS. The lawyer will provide input on required changes to the laws of the State of Acadia in order to accommodate the recommendations made by the consulting firm.

Evaluation Criteria for Phase II Work

- Curriculum vitae of proposed staff: 30%
 - Firm Experience in Electricity Privatization, Regulation and Tariff Design: 20%
 - Relevant Firm Experience in the region: 15%
 - Proposed Approach to Capacity Building of Local Counterparts to Provide Future Regulatory and Tariff Development Assistance: 10%
 - Proposed Approach (understanding of and elaboration on above Work Plan): 15%
 - Proposed Management Plan (time allocations and use of senior staff): 10%
- Firm qualifications should include at least the following information: Client name and contact information, dates of assignment, approximate budget, names of staff involved, location of lead office, description of work completed.

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Level of Effort

The consultancy is estimated to require approximately 190 persons-days for international consultants and 125 person-days for local consultants. The bidder should present a management plan that delineates, through bar charts, the expected time that each proposed consultant will spend on the project and how much of that time will be spent in Acadia. The bids should also contain fees for each consultant built up from his/her daily rates and the number of days each corresponding consultant is committed to the project. Traveling and other out-of-pocket expenses should be broken out by trip and by consultant. Any additional costs should be included and a total cost for fees and expenses should be provided.