

REGULATORY IMPACT ASSESSMENT OF ELECTRICITY GENERATION SECTOR IN INDIA

A. BACKGROUND

1. The Government of India has set an ambitious target of US\$1025 Billion as total investment in infrastructure between 2012 and 2017 (The 12th Five Year Plan). Almost half of the required investment is expected to come from the private sector. This is seen across sub-sectors, and the power sector, specifically, has evolved to a model of increased private participation in generation. A strong possibility exists that some existing and potential regulations of the Central and State Governments could unduly constrain consumer and producer welfare by restricting or undermining competition, and imposing huge and unintended enforcement and compliance costs.
2. A review of such policies, statutes and regulations including estimation of associated costs and benefits needs to be undertaken. Such review is referred to as Regulatory Impact Assessment (RIA) in the literature on regulation. ADB proposes to undertake a study on RIA in the Indian electricity sector focusing on certain sub-sectors, viz. coal, hydro and solar. The benefits and outcomes of such an analysis would then be used to derive a set of general recommendations to improve conditions for doing business in the sector. This study would help in improving the quality of business regulatory governance in India and hence reduce the cost of doing business, keeping in mind consumer welfare.
3. The study will focus on three specific regulatory issues of significant importance for independent power producers (IPPs): environmental clearances required for coal generating units, land acquisition for hydro plants, and financing issues for solar power. The relevant regulations will be mapped out for each segment, and the impact of those regulations assessed for IPPs interested in setting up an electricity generating unit of that type. This will help characterise the cost of doing business associated with these regulations, which can be assessed against the protections they provide and inform any future discussions of regulatory reform.

B. SCOPE OF WORK

1. Relevant laws and regulations relating to the generation segment in the relevant sub-sector (coal, hydro or solar), framed by the Ministry of Power, Central Electricity Regulator and the State Electricity Commissions of the identified states (Rajasthan, Himachal Pradesh or Gujarat), will be identified and mapped against indicators for doing business. The objective of mapping will be identification of relevant regulations for application of the RIA which will be undertaken by evaluating costs and benefits to IPPs, with the intent to provide possible (broad level) solutions to address the problems identified.
2. As described in the Table 1, the study will focus on the generation segment of electricity supply industry and analyse impacts on IPPs. Within each sub-sector, viz. coal, hydro and solar, the study will look into a specific regulatory issue that is vital, viz. environmental clearance, land acquisition and finance (investment and revenue realisation), respectively. The proposed states are selected on the basis of intensity of engagement by IPPs and number of on-going projects in the relevant sub-sector.

Table 1: Sector, Regulatory, and Geographic Parameters for RIA Study

Type of Generation	Regulatory Issues	Case Study
Coal	Environmental Clearance	Rajasthan
Hydro	Land Acquisition	Himachal Pradesh
Solar	Finance (Investment & Revenue)	Gujarat

3. The RIA will also help understand if any of the existing or the proposed regulatory instruments will lead to (i) policy coherence, (ii) enhanced competition in market, (iii) increased innovation, (iv) consumer welfare, (v) labour welfare, (vi) realisation of full potential by the small and medium enterprises, and (vii) sustainable development. The assessment aims to focus on the procedure, time, and cost involved for IPPs in setting up an electricity generating facility in India and also goes further to analyse cost of doing business. The assignment is conceptualised into three stages: pre-RIA literature review and stakeholder outreach; application of RIA; and consolidating and disseminating results of the RIA.

Stage I (Pre- RIA)

- a) **Preparatory work and literature review:** Information and data required for undertaking research will be collected through preliminary literature review, which will involve, *inter alia*, study of policies, regulations, and research reports. On the basis of desk research and literature review the research methodology will be prepared and the indicators against which regulations (central and state) will be mapped will be identified. The regulations and indicators will be selected on the basis of perceived importance, expected problems, and plausibility of reform.
- b) **Research Design Meeting:** A research design meeting comprise of select experts will be convened to discuss the overall research methodology including the draft chapter scheme, selected segments, and indicators identified for mapping of relevant regulations to be used in the RIA. This meeting will include participation from the government, Planning Commission, regulatory bodies, subject experts, ADB, and other key stakeholder groups. Following this CUTS team will consolidate inputs from the research design meeting and review the progress of the project. Recommendations made during the research design meeting will be used to finalise the key indicators, relevant segment for mapping of regulations, and the draft chapter scheme of the report.
- c) **Map/document the relevant regulations:** The study will then map/document the relevant regulations issued by regulatory bodies and Ministry of Power for the relevant segment, based on the key indicators determined. To ensure exhaustive coverage and avoid omission of key regulations, regulatory bodies in the project states will be consulted regularly. This engagement will also assist in validation and finalisation of the regulations mapped at the macro level. State consultations will also help to ensure that the assessment is inclusive and secure early buy-in of stakeholders to the findings and recommendations of the assessment.
- d) **Identification of key regulations and stakeholder specific interviews:** From the pool of regulations issued by the Ministry of Power and the relevant regulatory bodies, mapped according to the indicators identified, the study will identify key regulations that will potentially impact business the most. To validate these findings, stakeholder specific interviews in the project states and one to one meetings with subject experts

will be conducted. Inputs from the interviews will be considered in finalising the key regulations to undertake RIA.

Stage II (Application of RIA)

- e) **The cost-benefit analysis:** A cost-benefit analysis of the identified regulations will be conducted to assess their impact. This will involve evaluating different types of assessable costs involved in doing business in the sector, i.e. tangible, intangible, direct, indirect, real, pecuniary, substantive, administrative, etc., emanating from the selected regulations. The costs will be compared with the benefits arising to the stakeholders (business and consumers) from such selected regulations. This process will include listing out various clearances/ approvals required under the selected regulation for setting up a generating plant; analysing the time taken to obtain such clearance/approval and estimating the associated costs. Similarly, costs associated with reporting requirements and supervisory checks will be assessed to determine their relevance. Through this cost-benefit analysis, the study will assess the impacts of regulatory policies and their possible implications for IPPs.
- f) **Possible solutions:** While conducting the RIA, depending on availability of data, the possibility of reduction in gestation period for approvals and connected costs will be evaluated and summarised, characterising the benefits anticipated from the identified changes. Additional possible solutions to address the identified issues will also be suggested. Prioritisation of possible remedial actions will also be conducted, on the basis of ease of application, burden measurement, and potential benefits.
- g) **Draft report:** A draft research report incorporating the findings of the RIA and the possible solutions will be prepared and shared with subject experts for their comments and inputs.

Stage III (Post RIA)

- h) **Final report:** The report will be finalised by taking into account comments received by the subject experts.
- i) **Dissemination of the findings:** The report will be finalised, published in an electronic format, and publicised to stakeholder groups upon completion.