

S.No. 14 (A)

PLANNING COMMISSION
(ENERGY DIVISION)

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DEVELOPMENT OF AN ENERGY INFORMATION PORTAL FOR INDIA

BACKGROUND

Energy data for India is available through a range of national governmental sources (such as MoSPI, Petstat, CEA reports, Census, etc) as well as through international reports such as BP's Statistical Review and IEA's World Energy. Due to the diversity of data sources and data collection and reporting methodologies, compiling or integrating energy data can be a challenging task, and can have inconsistencies across multiple data sources.

A centralized, consolidated and verified energy information portal will, in turn, facilitate more informed policy research within and outside the government.

OBJECTIVES

- 1.1 To create an energy information portal that will collate and report energy data at a national and state level, through a user-friendly and interactive web interface.

TERMS OF REFERENCE

- 2.1 The study will reconcile energy data from different sources, identify data gaps and inconsistencies, and thus identify future scope of energy data collection and reporting.
- 2.2 It will involve the development of an energy information portal where data is consolidated and provided through an easy to use web interface, and results of some basic analysis of such data are provided.
- 2.3 Data will be query-able and portable to different formats.
- 2.4 The energy information portal will allow users to perform multiple levels of analysis focused on specific energy sub-sectors, over time-series / historical energy data, and be resolvable over spatial, temporal and other dimensions.

DELIVERABLES

- 3.1 A proof-of-concept energy information portal that will be query-able, user interactive and provide a range of data visualization options.
- 3.2 A report on the study conducted.
- 3.3 A workshop where the information portal, analyses and key insights will be discussed with stakeholders and sector experts in a workshop.

PLANNING COMMISSION
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FEASIBILITY ASSESSMENT OF RENEWABLE ENERGY INTEGRATION ON THE
GRID

BACKGROUND

The Planning Commission initiated the development of an energy modeling project, India Energy Scenarios 2047 earlier this year, with energy security as the key consideration, in collaboration with energy sector experts, think-tanks and research organizations. This initiative explores a range of potential future energy scenarios for India, across energy supply sectors such as renewable energy, oil, gas, coal, and nuclear, and energy demand sectors such as transport, industry, agriculture, cooking, lighting and appliances, etc. The outcomes of this model also evaluate costs, emissions, and land-use implications for different energy scenarios.

The outcomes of India Energy Scenarios 2047 model create opportunities to identify energy secure, sustainable pathways for the country, which are likely to feature reductions in fossil fuel consumption, and higher degrees of renewable energy penetration. However, high levels of renewable energy penetration will be accompanied by variability and uncertainty in geographical distribution and generation, and pose challenges to the planning and operation India's electric grid.

OBJECTIVES

- 1.1 To assess feasibility of large scale grid-integration of variable renewable power sources

TERMS OF REFERENCE

- 2.1 The study will analyse the flexibility of the electric system, assess grid operability and hourly resource adequacy for high levels of renewable energy integration.
- 2.2 It will also assess the inter-regional transmission capacity needed to support ambitious long-term targets for renewable energy
- 2.3 Evaluate storage technologies and feasibility of various storage options

2.4 Perform an indicative assessment of the cost of ancillary services that will be needed with higher levels of renewable energy penetration, such as load following, spinning reserves and voltage support

DELIVERABLES

- 4.1 Draft report of the study will be discussed with stakeholders and sector experts in a workshop.
- 4.2 Study Report - 50 copies