Implementation Framework

USAID
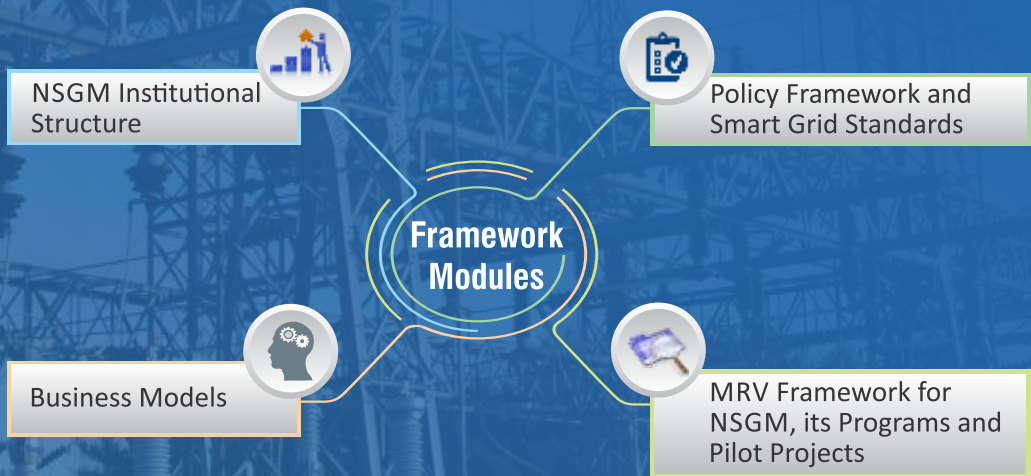FROM THE AMERICAN PEOPLE

National Smart Grid Mission
Ministry of Power
Government of India

Overview

The Ministry of Power (MOP) established the National Smart Grid Mission (NSGM) in March 2015 for planning, implementation and monitoring Smart Grid activities in India. To ensure effective rollout of the NSGM activities and day to day operations, MOP required the NSGM to have a comprehensive Implementation Framework that details the institutional structure, key decision-making and activity stages.

The U.S.-India bilateral Partnership to Advance Clean Energy – Deployment Technical Assistance (PACE-D TA) Program provided support to the NSGM to develop the Implementation Framework, which includes:

- Roles, goals and processes for various functional processes within the NSGM and its relationships with the states, the utilities and other stakeholders.

- Long-term roadmap and immediate priorities for roll out of policies, standards, programs, projects, research and demonstration and development, and capacity building initiatives.

- Business models for public, private and public-private partnership modes of investing in various domains of Smart Grids starting with Smart Meters.

- Monitoring Review and Verification (MRV) framework for the NSGM activities as well as for Programs and Projects supported by it.

NSGM Institutional Structure

Policy Framework and Smart Grid Standards

Framework Modules

Business Models

MRV Framework for NSGM, its Programs and Pilot Projects

Module 1: NSGM Institutional Structure

- Sets a vision and objective for improving the quality, reliability and access of power.

- Details the role of the center and states in governance structure and the actions to be taken to achieve the roll out of Smart Grid in the country. Spells out operations and process flows of four core operational units (Project Planning and Monitoring Unit, Information and Cyber Security Unit, Technology and Standards Unit, and Capacity Building and Communication Unit).

- Provides a structure of the human resources required for each operational unit.

Outcome

- Streamlined operations at the NSGM.

- Coordination across the four NSGM Project Management Units (NPMUs).

Module 2A: Policy Framework

- Establishes the scope, principles and process of policy development

- Outlines policies relating to information and operational technologies such as interoperability consumption.

Outcome

- Robust processes for policy formulation.

- Faster formulation and adoption of policies at the national and state levels.

Module 2B: Smart Grid Standards

- Sets the scope, principles and process of standards development.

- Identifies Smart Grid standards' requirement and gaps that need to be addressed.

Outcome

- Faster rollout of standards.

- Economies of scale resulting in competitive markets for Smart Grid.

- Boost to public and private sector technology development.

Module 3: Business Models

- Outlines potential Smart Grid Programs.

- Provides Business Model Framework (features, value derived, and potential sources of revenue, savings, costs and sharing of risk-rewards across participants).

Outcome

- Development of market-based approaches for Smart Grid programs.

- Increased investment in Smart Grid programs.

Module 4:MRV

- Lists performance indicators that are essential for the monitoring of activities under the four units of the NPMU.

- Describes MRV framework for Smart Grid Rollout, Programs, Policies, Standards and Financing.

Outcome

- Appropriate performance goals.

- Baseline information for measuring benefits.

- Framework for review and monitoring.

- Learning for future roll out.

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