GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.1638
ANSWERED ON 15.12.2025

GLOBAL PARTNERSHIPS FOR IMPROVEMENTS IN POWER SECTOR

1638 SMT. SANGEETA YADAV:

Will the Minister of **POWER** be pleased to state:

(a) whether Government has engaged with foreign governments or industry representatives to explore international partnerships in power generation, transmission, and distribution, and if so, the details thereof;

(b) the reforms undertaken to modernise India's power legislation, services, and sectoral governance;

(c) whether technological or operational improvements have been considered to strengthen power sector activities, and if so, the details thereof; and

(d) the steps taken to strengthen digitalisation, green energy integration, and innovation across the power sector?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The Ministry of Power actively engages with foreign governments and industry representatives to explore international partnership in power generation, transmission, and distribution.

Further, multilateral engagements have been undertaken under the umbrellas of G20, BRICS, Clean Energy Ministerial (CEM), International Solar Alliance (ISA), etc. In addition, the Ministry continues to advance regional power sector cooperation through platforms such as SCO[1], SASEC, SAARC, BIMSTEC, ASEAN, and the One Sun One World One Grid (OSOWOG) initiative. Moreover, the Public Sector Undertakings (PSUs) under the purview of this Ministry also under take commercial agreements with foreign entities as per their business requirements. A list of MoU/agreements etc. executed with foreign entities by this Ministry and its PSUs, is attached at **Annexure.**

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[1] Shanghai Cooperation Organisation (SCO); South Asia Sub-regional Economic Cooperation (SASEC); South Asian Association for Regional Cooperation (SAARC); Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC); Association of Southeast Asian Nations (ASEAN).

(b, c & d): Comprehensive reforms have been undertaken to modernize the power sector, improve service delivery, strengthen governance across the power sector, achieving technological and operational improvements and strengthening digitalization, green energy integration and innovation, including:

i. Electricity (Late Payment Surcharge and Related Matters) Rules have been notified to ensure timely payment by the utilities, and a structured framework for liquidation of past dues.

ii Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules provide Green Open Access for consumers with load above 100 kW, with time-bound approvals, and uniform and reasonable charges.

iii Frameworks for Renewable Consumption Obligations, waiver of Inter-state transmission charges, energy storage deployment have been notified to facilitate renewable integration.

iv Framed Rules and Guidelines for Resource Adequacy Framework to promote energy security through a time-bound and structured approach for future demand assessment and advance capacity procurement.

v Monthly automatic pass-through of Fuel & Power Purchase Adjustment Surcharge (FPPAS) is enabled for timely recovery of power purchase costs.

vi Electricity (Rights of Consumers) Rules, 2020 notified to ensure 24×7 supply, reliable services, and consumer-centric protection measures.

vii STELLAR Model (State-of-the-art Totally Indigenously Developed Resource Adequacy Model) has been launched by the Central Electricity Authority (CEA) in April 2025, for enabling states to undertake integrated planning of generation, transmission, storage, and demand response, thereby improving long-term resource adequacy and grid reliability.

viii Under Revamped Distribution Sector Scheme (RDSS) infrastructure works including smart metering works worth Rs 2,83,525 Cr with Gross Budgetary Support (GBS) of Rs. 1,21,637 Cr from Government of India have been sanctioned.

ix Installation of Smart Meters is promoted through the RDSS scheme, which enables automated energy accounting, real-time monitoring, improved billing accuracy, and reduced commercial losses.

x Use and development of Artificial Intelligence (AI) and Machine Learning (ML) based solutions is encouraged and supported under the scheme of RDSS for demand forecasting, predictive maintenance, asset management, and consumer analytics etc. through initiatives like Powerthon.

xi Energy Storage Systems (ESS) have been defined under Rule 18 of Electricity (Amendment) Rules 2022 notified in December 2022. ESS can now be owned, developed, leased or operated by consumers along with other power sector entities.

xii Inter-State Transmission (ISTS) charges for co-located BESS projects commissioned by June 2028 have been waived for 12 years. For non-co-located BESS, 100% waiver for projects which are commissioned by June 2025, and thereafter graded reduction in waiver at the rate of 25% annually.

xiii Viability Gap funding (VGF) scheme for the development of ~43.2 GWh of BESS capacity in the country has been launched.

xiv Under Green Energy Corridor scheme, 12 number of Renewable Energy Management Centre (REMCs) and one EMC at South Andaman were established in different parts of the country mainly to forecast, schedule and monitor the wind and solar Variable Renewable Energy (VRE) resources. These REMCs are co-located with the existing RLDCs/SLDCs.

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xv Guidelines have been issued for installation of Automatic Weather Station (AWS) in RE Plants for using the recorded weather data for data assimilation and validation for further improving the weather forecast.

xvi Central Financial Assistance (CFA) is provided to the States for setting up Transmission infrastructure for RE integration within their State under the Green Energy Corridor Scheme.

xvii Flexibilization of Thermal generation is mandated to address the variability of RE generation.

xviii CEA (Technical Standards for Connectivity to the Grid) Regulations lay down the minimum technical requirements for the RE generating plants to ensure the safe, secure and reliable operation of the grid.

xix Indian Electricity Grid Code mandates that RE plants participate in the primary and secondary frequency control in case of contingencies.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (A) OF UNSTARRED QUESTION NO. 1638 ANSWERED IN THE RAJYA SABHA ON 15.12.2025.

List of MoUs/ Agreements of MoP and its PSUs with foreign entities

Sl. No	Company/Country Name
1	BRICS Memorandum of Understanding on Energy Efficiency and Energy Savings, among Brazil, Russia, India, China, and South Africa
2	South Asia Forum for Infrastructure Regulation (SAFIR) Sectt.: Central Electricity Regulatory Commission with Energy Regulators Regional Association (ERRA)
3	Memorandum of Understanding between the Ministry of Power, the Republic of India and the Ministry Of Climate, Energy And Utilities, the Kingdom of Denmark on (India-Denmark) Energy Cooperation
4	Government of the Republic of India and Government of Nepal for electric interconnections
5	The Government of the Republic of India and the Royal Government of Bhutan for cooperation in energy efficiency
6	Memorandum of understanding between the Government of the Republic of India and the Government of the Republic of Mauritius on Cooperation in the field of Power sector
7	Government of the Republic of India and Government of the Democratic Socialist Republic of Sri Lanka
8	The Government of the Republic of India and the Government of the People's Republic of Bangladesh
9	The Government of the Republic of India and the Government of the Republic of the Union of Myanmar
10	Ministry of Power of the Republic of India and Ministry of Energy and Infrastructure of the United Arab Emirates
11	The Government of the Republic of India and the Government of the Kingdom of Saudi Arabia
12	Central Electricity Authority and the US -Department of Energy
13	NHPC Limited with the Investment Board, Government of Nepal (IBN)
14	NHPC Limited with Vidhyut Utpadan Company Limited (VUCL), Nepal
15	NHPC Limited with M/S Rastriya Prasaran Grid Company Limited(RPGCL),Nepal
16	NHPC Limited with M/s Ocean Sun AS, Norway
17	NHPC Limited with GGGI(Global Green Growth Institute)
18	NTPC Limited with Nepal Electricity Authority
19	NTPC Limited with ESKOM Holdings Soc Ltd. (ESKOM), South Africa
20	NTPC Limited with MASEN, Morocco
21	NTPC Limited with Fortescue Future Industries, Australia
22	NTPC Limited with Saudi Electricity Company, Saudi Arabia
23	NTPC Limited with ASEAN Center for Energy
24	NTPC Green Energy Ltd. and ENEOS Corporation, Japan.
25	NTPC Ltd and Sustainable Energy for All, Austria
26	NVVN and Nepal Electricity Authority
27	Tripartite Agreement among NEA, NVVN and Bangladesh Power Development Board (BPDB)
28	NEEPCO Ltd. With Norwegian Geotechnical Institute AS (NGI), Norway
29	Central Electricity Regulatory Commission with Federal Energy Regulatory Commission, USA
30	Bureau of Energy Efficiency with Russian Energy Agency, Ministry of Energy of Russian Federation
31	Power Grid Corporation of India with Nepal Electricity Authority
32	Power Grid Corporation of India with DEPP, Ministry of Electric Power, Myanmar
33	Power Grid Corporation of India with POWER Engineers Inc, USA
34	Power Grid Corporation of India with Government of Sri Lanka
35	Grid Controller of India Limited and Lawrence Berkeley National Laboratory, USA (LBNL)
36	SJVN Limited with Govt. of Nepal represented by Ministry of Water Resources
37	SJVN Limited with the Investment Board, Government of Nepal (IBN)
38	SJVN Limited with Nepal Electricity Authority

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