



BIMSTEC ENERGY CENTRE

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Editorial

Welcome to the 4th Edition (Apr 2026) of the BIMSTEC Energy Centre (BEC) Quarterly E-Newsletter (Jan-Mar 2026).



The January–March quarter marked a dynamic phase of engagement and achievement, reinforcing BEC’s emergence as a vibrant regional hub for energy cooperation, knowledge exchange, and capacity building across BIMSTEC Member States.

During this period, BEC successfully convened a regional workshop on *Best Practices in Transmission System Maintenance*, enabling rich exchange of country experiences in preventive, predictive, and condition-based maintenance. The programme highlighted the growing adoption of advanced diagnostics, digital asset management, and innovative technologies, fostering deeper technical collaboration and harmonization across the region.

The Centre further strengthened its regional and global presence through active participation in Bharat Electricity Summit 2026, providing a strategic platform to showcase its initiatives, build partnerships, and engage with key stakeholders from across the global energy landscape.

BEC also undertook a brief analysis of electricity demand across BIMSTEC Member States. One year of time block-wise demand data (from 01.09.2024 to 31.08.2025) was compiled from Member States as well as official websites and portals. The analysis aims to identify demand patterns, peak characteristics, and regional complementarities to support cross-border electricity trade and grid integration. A brief report on the analysis is annexed to this newsletter.

Overall, the quarter reaffirmed BEC’s growing role as a catalyst for regional integration—driving collaboration, advancing best practices, and supporting the transition towards a resilient, sustainable, and interconnected energy future for the BIMSTEC region.

(Ghanshyam Prasad)
Executive Director

Knowledge Sharing Workshop on “Best Practices in the Maintenance of Power Transmission System”



BIMSTEC Energy Centre (BEC) conducted an online Knowledge Sharing Workshop on ‘Best Practices in the Maintenance of Power Transmission System’ on 10 February 2026.

The program aimed to facilitate exchange of best practices in the maintenance of power transmission systems among Member States, thereby fostering mutual learning and regional cooperation. In the Workshop, Speakers nominated by the Member States have shared their national practices.

The session featured presentations from the Member States, covering key aspects such as preventive and predictive maintenance, condition monitoring, asset management strategies, and the use of modern diagnostic tools. Common challenges and innovative solutions in maintaining transmission lines, substations, and associated equipment were also discussed.

The programme was inaugurated by Shri Ghanshyam Prasad, Executive Director, BEC, who highlighted the importance of such collaborative platforms in strengthening regional cooperation. In his special address, Shri Prashant Chandran from the BIMSTEC Secretariat emphasized the critical role of transmission system maintenance in ensuring reliability and resilience, and appreciated BEC’s efforts in capacity building and knowledge sharing.

Salient Points Highlighted by the Member States in the Workshop:**(Link for Member States's Presentations & Workshop's Video -****<https://bimstecenergycentre.org/best-practices-in-maintenance-of-transmission-systems/>)****❖ Bangladesh:**

- Adopted preventive, predictive, corrective, and condition-based maintenance.
- Strengthened transmission line maintenance and emergency fault response.
- Used drone-based inspection with advanced analytics.
- Implemented comprehensive substation and transformer monitoring (DGA, Tan Delta, etc.).
- Emphasized safety, environmental protection, and CMMS-based asset management.

❖ Bhutan:

- Shifted from reactive to proactive and predictive maintenance with a strong safety culture.
- Implemented integrated asset management systems and online monitoring tools.
- Adopted advanced diagnostics like thermography, LiDAR, and partial discharge monitoring.
- Addressed terrain challenges through specialized field measures and resilience planning.
- Focused on training, SOPs, and KPI-driven performance monitoring.

❖ India:

- Adopted ISO 55001-aligned asset management and risk-based maintenance strategies.
- Implemented Reliability Centered Maintenance (RCM) and digital tools (AI/ML-based monitoring).
- Established centralized monitoring through NTAMC and advanced dashboards.
- Strengthened resilience via hotline maintenance, ERS deployment, and automation.
- Achieved high system availability with optimized manpower and global benchmarking.

❖ Myanmar:

- Maintained an extensive transmission network with multi-level voltage systems.
- Identified key outage causes including equipment failure and environmental factors.
- Adopted comprehensive maintenance practices (preventive to emergency).
- Introduced ultrasound-based inspection technology for early fault detection.
- Focused on capacity building, safety training, and system strengthening initiatives.

❖ Nepal:

- Adopted preventive, condition-based, and breakdown maintenance approaches.
- Conducted routine inspections, testing, and vegetation management.
- Used thermography, DGA, and online monitoring for condition assessment.
- Implemented emergency restoration practices and ERS deployment.

- Promoted digital initiatives like SCADA, shutdown portals, and future-ready technologies.

❖ Sri Lanka:

- Transitioned towards condition-based and predictive maintenance strategies.
- Implemented CMMS and risk-based asset management practices.
- Focused on routine maintenance suited to tropical conditions.
- Adopted comprehensive condition monitoring (DGA, SFRA, thermography, etc.).
- Strengthened asset replacement planning and hotline maintenance practices.

❖ Thailand:

- Developed a Smart Digital Maintenance Platform for transmission assets.
- Shifted from paper-based to mobile-enabled inspection systems.
- Integrated TBM and CBM data for automated performance assessment.
- Established centralized dashboards for asset monitoring and decision-making.
- Achieved improved efficiency, reliability, and cost optimization through data-driven maintenance.

BEC in Bharat Electricity Summit 2026 held at Delhi on 19-22 March 2026.



The BIMSTEC Energy Centre (BEC) actively participated in the Bharat Electricity Summit 2026, held in New Delhi from 19–22 March 2026. The summit brought together key stakeholders from the power sector, including policymakers, industry leaders, utilities, and technical experts, providing an excellent platform for dialogue, collaboration, and knowledge exchange.

BEC showcased its initiatives and regional activities through an exhibition stall

organized in collaboration with the Central Power Research Institute (CPRI). The stall highlighted BEC's ongoing efforts in promoting regional cooperation among BIMSTEC Member States in areas such as power system operation, grid interconnections, renewable energy, and capacity building. The display also featured information on BEC's knowledge products, training programs, and the BIMSTEC Energy Database, attracting significant interest from visitors and delegates.

The participation in the summit provided BEC with valuable opportunities to engage with a wide range of stakeholders, strengthen institutional partnerships, and enhance its visibility within the regional and international energy community. It also facilitated meaningful discussions on emerging trends, challenges, and best practices in the power sector, further reinforcing BEC's role as a key platform for fostering energy cooperation in the BIMSTEC region.

Key Energy & Power Developments/Events across the BIMSTEC Region during January-March 2026

Bhutan:

- ❖ The World Bank Group has approved an \$815 million package for Bhutan's 1,125 MW Dorjilung project, set to boost national power generation by 40% and expand clean energy exports.

India:

❖ India Energy Week 2026 at Goa

- India Energy Week 2026 held in Goa (27–30 Jan 2026) brought together 75,000+ participants, 700+ exhibitors, and delegates from 125 countries under the Ministry of Petroleum and Natural Gas.
- Focused on energy security and clean transition, the event promoted a balanced mix of oil, gas, LNG, renewables, hydrogen, and biofuels, while strengthening global partnerships and investments

❖ Bharat Electricity Summit at New Delhi

- Bharat Electricity Summit 2026 (New Delhi, 19–22 Mar 2026) marked India's flagship global power event under the Ministry of Power, with 25,000+ participants, 500+ exhibitors, and delegates from 80+ countries.
- It brought together policymakers and industry leaders to advance a resilient, future-ready power sector and accelerate the clean energy transition.

❖ India–Bhutan Hydropower Cooperation

- High-level meeting between India and Bhutan held on 3 February 2026 in New Delhi to strengthen hydropower cooperation.
- Focus on expediting ongoing projects and advancing future hydropower development and joint planning of cross-border transmission infrastructure up to 2040 to deepen long-term energy partnership.

Nepal:

- ❖ Nepal Electricity Authority, in collaboration with the Government of Germany, has begun construction of the Lekhnath–Damauli 220 kV Transmission Line Project in Tanahun. Co-financed by KfW Development Bank, the project includes a 45 km double-circuit transmission line and modern substations, with a capacity of around 1000 MW.

Sri Lanka:

❖ Electricity Act, 2024 Operationalized

Sri Lanka operationalized key provisions of the Electricity Act, No. 36 of 2024 with effect from 09 March 2026, marking a major step in power sector reforms. The initiative aims to restructure the electricity industry and strengthen planning and regulatory frameworks. The Act was notified through a Gazette issued on 05 March 2026 by the Minister of Energy, following completion of key preparatory measures.

❖ Renewable Energy Project Development Plan Released

Sri Lanka released its Renewable Energy Project Development Plan on 20 January 2026, outlining a strategic roadmap for renewable energy deployment during 2025–2030. The plan aims to accelerate clean energy adoption and support the country's long-term energy transition goals.

Thailand:

- ❖ The Asian Development Bank (ADB) and Gulf Renewable Energy Company Limited (GRE), a subsidiary of Gulf Development Public Company Limited (GULF), have signed a \$350 million loan to expand renewable energy generation and decarbonize Thailand's power sector. The financing will support the construction of three projects: two solar-plus-battery energy storage systems (BESS) with a total contracted capacity of 126 megawatts (MW) and 151 megawatt-hours of energy storage, and a solar power plant with a contracted capacity of 68 MW.

ELECTRICITY DEMAND ANALYSIS OF BIMSTEC MEMBER STATES & THE REGION

1. Introduction

This report presents a detailed analysis of half hourly electricity demand across BIMSTEC member states Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka and Thailand. One year Time Block wise demand data (from 01.09.2024 to 31.08.2025) has been collected from the Member States/from the website or portals of the respective member states. The objective is to identify demand patterns, peak characteristics, and regional complementarities to support cross-border electricity trade and grid integration.

2. Data Description

The dataset contains half-hourly electricity demand (MW) from 1st Sept 2024 to 31st Aug 2025, standardized to Thailand's time zone for uniform regional comparison. This ensures consistency in analyzing load patterns across countries by aligning all data to a common reference time. The analysis focuses on load patterns, peak demand, load factors, and inter-country correlations.

3. Key Statistics for the data period

Member State	Maximum Demand (MW)	Minimum Demand (MW)	Average Demand (MW)	Load Factor
Bangladesh	16794	6024	11636	0.69
Bhutan	2120	392	905	0.43
India	242124	127110	194904	0.80
Myanmar	3034	1065	2174	0.72
Nepal	2525	403	1577	0.62
Sri Lanka	2821	1088	1947	0.69
Thailand	34568	11791	24542	0.71
BIMSTEC Region	289379	157736	237680	0.82

4. Demand/Load Pattern Analysis

i. Average/aggregated daily demand profiles:



ii. Yearly Demand/Load profile



iii. Diurnal and Seasonal demand:


Bangladesh			
Months/Period	Daily Peak occurs at (Thailand Time Zone)	Daily Peak occurs at (Respective country Time Zone)	Yearly demand trend
April to September	~ 20:00 to 24:00 Hrs	~ 19:00 to 23:00 Hrs	<i>April -September is the high demand period</i>
October	~ 20:00 to 22:00 Hrs	~ 19:00 to 21:00 Hrs	
November to February	~ 19:00 to 20:00 Hrs	~ 18:00 to 19:00 Hrs	<i>November-February is the low demand period</i>
January to March	~ 14:00 & ~ 20:00 Hrs	~ 13:00 & ~ 19:00 Hrs	
Bhutan			
April to September	~18:00 to 19:00 Hrs	~17:00 to 18:00 Hrs	<i>July-August is the high demand period</i>
October to December	~17:00 to 19:00 Hrs	~16:00 to 18:00 Hrs	
January to March	~11:00 to 17:00 Hrs (Scattered)	~10:00 to 16:00 Hrs (Scattered)	
India			
April to June	~16:00 to 18:00 Hrs	~14:30 to 16:30 Hrs	<i>April – June is the high demand period</i>
July	Scattered	Scattered	
August to October	~20:00 Hrs	~18:30 Hrs	
November to March	~ 11:00 to 13:00 Hrs	~ 09:30 to 11:30 Hrs	<i>November- January is the low demand period</i>
Myanmar			
June to October	~ 09:00hrs to 16:00 Hrs (Scattered)	~ 08:30hrs to 15:30 Hrs (Scattered)	<i>June to October is the high demand period</i>
November to February	~10:00 Hrs & ~18:00 to 20:00 Hrs	~09:30 Hrs & ~17:30 to 19:30 Hrs	<i>November-February is the low demand period</i>
March to May	~18:00 to 20:00 Hrs	~17:30 to 19:30 Hrs	
Nepal			
June to August	~21:00 to 22:00 Hrs	~19:45 to 20:45 Hrs	<i>June-August is the high demand period</i>
September to October	~ 21:00 Hrs	~19:45 Hrs	
November to January	~19:00 to 20:00 Hrs	17:45 to 18:45 Hrs	<i>November-January is the low demand period</i>
February to May	~21:00 Hrs	~19:45 Hrs	
Sri Lanka			
April-March (Full period)	~ 21:00hrs	~19:30hrs	<i>April to July is relatively high demand period</i>
Thailand			
March to September	~18:00 to 21:00hrs		<i>April-May is relatively high demand period</i>
October to February	~ 18:00 to 19:00hrs		<i>December-January is the low demand period</i>


5. Key Insights


- a) Load factors vary significantly, indicating differences in system utilization. Opportunities exist for cross-border electricity trade to optimize generation. Hydro-dominated systems (Bhutan & Nepal) show higher variability (Lower Load Factor) compared to others.
- b) Member State-wise trends show consistent seasonal demand variation across the Region, with most systems experiencing minimum demand in winter and peak in summer months, though variability differs by system size and composition. All countries show winter dip (Nov–Jan) and summer peak (Apr–Jun).
- c) Regional curve reflects aggregated seasonal demand pattern. India + Thailand dominate seasonal peaks, shaping the regional curve. While individual countries exhibit varying levels of demand volatility, the aggregated BIMSTEC regional curve appears smoother, highlighting the diversity effect and potential benefits of regional integration.
- d) Diversity Factor of the BIMSTEC Region:
 - Sum of individual country peaks = 303,987 MW
 - Coincident (regional) peak = 289,379 MW
 - Diversity Factor = 1.05
 - A diversity factor of ~1.05 means peaks are not fully coincident, but still highly correlated across countries.



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