



BIMSTEC ENERGY CENTRE

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Editorial



Welcome to the 5th Edition (July 2026) of the BIMSTEC Energy Centre (BEC) Quarterly E-Newsletter (April–June 2026).

The April–June 2026 quarter witnessed a series of impactful knowledge-sharing workshops and collaborative engagements that further strengthened the BIMSTEC Energy Centre (BEC) as a regional institution promoting energy cooperation, technical collaboration, knowledge sharing, and capacity building among the BIMSTEC Member States. The quarter also marked the successful completion of BEC's first year since its operationalization on 1 April 2025. During this period, BEC organized several capacity building programmes and knowledge-sharing workshops, while undertaking technical analyses and studies to support regional energy cooperation. In recognition of these achievements, the BIMSTEC Secretariat conveyed its appreciation to BEC for its valuable contribution towards advancing regional cooperation in the energy sector.

During the quarter, BEC organized three online Knowledge Sharing Workshops on Power System Operation & Grid Management, Planning of New Transmission Systems, and Implementation of Planned Transmission Systems. These workshops enabled the exchange of best practices on modern grid operation, transmission planning, renewable energy integration, digital technologies, project governance, and sustainable infrastructure development, providing valuable insights for strengthening reliable and resilient power systems across the BIMSTEC region.

This edition also features a special article on the *Global Energy Crisis and Policy Responses*, along with a *Correlation Analysis of Electricity Demand Patterns* across the BIMSTEC Member States. Together, these articles provide insights into strengthening energy security, enhancing regional load diversity, promoting cross-border electricity exchanges, and advancing regional grid integration.

The activities and developments presented in this edition reflect the collective commitment of the BIMSTEC Member States towards energy transition, renewable energy integration, power system modernization, and a resilient regional energy future. BEC remains committed to fostering regional energy cooperation through knowledge sharing, technical collaboration, and capacity building for a sustainable and integrated BIMSTEC energy sector.

(Ghanshyam Prasad)
Executive Director

Knowledge Sharing Workshop on “Best Practices in Power System Operation & Grid Management”



BEC organized an online Knowledge Sharing Workshop on Best Practices in Power System Operation & Grid Management on 07 April 2026. The workshop provided a platform for experts from BIMSTEC Member States to exchange national experiences and best practices in power system operation, grid management, system reliability, renewable energy integration, and operational innovations. In his inaugural address, Shri Ghanshyam Prasad, Executive Director, BEC highlighted that the existing cross-border interconnections among several BIMSTEC Member States make such knowledge-sharing initiatives valuable platforms for mutual learning. He encouraged participants to actively engage in discussions and emphasized that the key learnings from the workshop could support policy reforms, strengthen grid codes, improve operational practices, and serve as a useful regional reference.

Salient Points Highlighted by the Member States in the Workshop:

(Presentations & Workshop Recording - <https://bimstecenergycentre.org/programs/best-practices-in-power-system-operation-grid-management/>)

Bangladesh: Focused on real-time monitoring, SCADA/WAMS, cybersecurity, contingency planning, and preparation for integrating a new nuclear power plant.

Bhutan: Highlighted disciplined operational procedures, hydro-based system management, forecast-based scheduling, and cross-border import-export coordination.

India: Showcased large-scale deployment of WAMS and PMUs, advanced grid analytics, AI/ML-based forecasting, Security Constrained Economic Dispatch (SCED), and digital grid management practices implemented by GRID-INDIA, Gujarat SLDC, and Maharashtra SLDC.

Myanmar: Presented a five-pillar framework covering planning, real-time operations, reliability, renewable integration, resilience, and dynamic line rating.

Nepal: Discussed its transition from load shedding to surplus power, integrated resource planning, AI-based transmission management, and regional electricity exports.

Sri Lanka: Highlighted rooftop solar integration, battery storage systems, solar forecasting, and maintaining grid frequency despite high renewable penetration.

Thailand: Shared a real-life transmission fault case study demonstrating contingency response, restoration procedures, and preventive maintenance practices.

Knowledge Sharing Workshop on “Best Practices in Planning of New Transmission Systems”



BEC organized its second online Knowledge Sharing Workshop of the quarter on Best Practices in Planning of New Transmission Systems on 13 May 2026. The workshop provided a platform for planners and experts from BIMSTEC Member States to exchange national experiences and best practices in transmission planning, with a focus on developing reliable and resilient transmission systems. In his inaugural address, Shri Ghanshyam Prasad, Executive Director, BEC emphasized that the rapid growth of renewable energy, battery energy storage systems (BESS), and evolving power markets necessitate modern transmission planning approaches. He highlighted India's experience in dynamic and potential-based transmission planning, which has significantly reduced transmission development timelines and facilitated faster renewable energy integration. The BIMSTEC Secretariat appreciated the initiative and emphasized that robust transmission infrastructure is essential for strengthening regional energy security, enabling cross-border electricity trade, and supporting future regional power market integration.

Salient Points Highlighted by the Member States in the Workshop:

(Presentations & Workshop Recording - <https://bimstecenergycentre.org/programs/best-practices-in-planning-of-new-transmission-systems/>.)

Bangladesh: Presented a comprehensive transmission planning framework covering long-term load forecasting, network expansion, system stability, renewable energy integration, climate resilience, cross-border interconnections, and asset optimization.

The presentation also highlighted systematic planning through load flow, fault, and reactive power studies to support future demand growth.

Bhutan: Highlighted integrated generation-transmission planning with emphasis on reliability, renewable energy integration, energy storage, smart grids, AI-based forecasting, climate resilience, and coordinated planning with India. The need for harmonized grid codes and regional stability studies to strengthen interconnected power systems was also emphasized.

India: Presented India's transmission planning framework based on the CEA Transmission Planning Criteria 2023, incorporating future demand projections, renewable energy integration, GNA, multiple planning scenarios, and advanced system studies. The presentation also covered emerging technologies such as AI-based predictive maintenance, dynamic line loading, process bus technology, grid-forming inverters, synchronous condensers, BESS, the OSOWOG initiative, and Telangana's transmission planning practices.

Myanmar: Presented a structured transmission planning methodology covering demand forecasting, network expansion, modernization, reliability assessment, digital control systems, and system stability studies using NEPLAN software. The presentation also addressed regional interconnections, project prioritization, financing, and challenges related to terrain, social impacts, system losses, and grid resilience.

Nepal: Highlighted integrated transmission planning based on demand forecasting, generation expansion, and regional market integration, supported by deterministic and probabilistic planning approaches, comprehensive system studies, and the development of cross-border transmission lines to facilitate electricity exports.

Sri Lanka: Presented its long-term transmission development framework focusing on demand forecasting, transmission expansion, system stability, battery energy storage systems, grid flexibility, and the integration of large-scale solar and wind projects to enhance system reliability and operational flexibility.

Knowledge Sharing Workshop on “Best Practices in Implementation of Planned Transmission Systems”



BEC organized its third online Knowledge Sharing Workshop of the quarter on Best Practices in Implementation of Planned Transmission Systems on 09 June 2026. The workshop provided a platform for experts from BIMSTEC Member States to exchange national experiences and best practices in the implementation of transmission infrastructure projects. In his inaugural address, Shri Ghanshyam Prasad, Executive Director, BEC highlighted the critical role of transmission infrastructure in supporting the energy transition across the BIMSTEC region. He emphasized that the timely development of transmission systems is essential for integrating renewable energy, despite implementation challenges such as land acquisition, environmental clearances, right-of-way issues, and construction constraints. He also highlighted India's experience in developing long-distance transmission networks and the growing adoption of advanced technologies, including HVDC transmission, STATCOMs, synchronous condensers, dynamic line rating, and innovative tower designs to enhance grid reliability and flexibility. The BIMSTEC Secretariat reiterated the importance of knowledge sharing, institutional capacity building, and continued cooperation among Member States to address common implementation challenges and support sustainable transmission infrastructure development.

Salient Points Highlighted by the Member States in the Workshop:

(Presentations & Workshop Recording - <https://bimstecenergycentre.org/programs/online-capacity-building-program-on-best-practices-in-implementation-of-the-planned-transmission-systems/>)

Bangladesh: Emphasized integrated project preparation through timely land acquisition, feasibility studies, environmental clearances, financing, stakeholder engagement, right-of-way management, and terrain-specific construction practices.

Bhutan: Highlighted integrated transmission development aligned with national plans and hydropower projects, emphasizing climate resilience, environmentally sensitive construction, innovative techniques for difficult terrain, and stakeholder participation.

India: Showcased structured project implementation through digital monitoring, transparent right-of-way management, LiDAR-based route optimization, modern construction methods, workforce development, quality assurance, and advanced asset management technologies.

Myanmar: Presented a holistic implementation framework integrating technical, institutional, financial, and social aspects, with emphasis on stakeholder engagement, risk management, engineering surveys, sustainable financing, and adaptive project management.

Nepal: Highlighted the use of GIS, LiDAR, UAV surveys, PLS-CADD modelling, and geotechnical investigations, while emphasizing timely project preparation, strong project monitoring, and workforce development.

Sri Lanka: Presented integrated transmission planning to support renewable energy expansion through technical studies, proactive route planning, stakeholder consultation, structured project governance, diversified financing, and grid flexibility measures.

Key Energy & Power Developments across the BIMSTEC Region (April-June 2026)

Bhutan:

- ✚ Druk Green Power Corporation Limited (DGPC) signed three separate Memorandums of Understanding (MoUs) on 5 May 2026, with Druk Wang Alloys Limited (DWAL), Singapore-based Solis Verde Holdings Pte. Ltd., and Thailand-based Sitron Power Public Company Limited to strengthen renewable energy development in Bhutan through hydropower and solar energy initiatives.
- ✚ The DGPC (Druk Green Power Corporation Limited) –Tata Power hydropower partnership expansion was announced and the amended MoU was signed on 8 May 2026 in Thimphu, Bhutan. The amendment added the 404 MW Nyera Amari I & II Integrated Hydropower Project, increasing the total identified hydropower capacity under the partnership from 4,500 MW to 5,033 MW.
- ✚ On 24 June 2026, Druk Green Power Corporation Limited (DGPC) and Carbon Resources (CRPL) signed the Shareholders' Agreement for the joint development of the 104 MW Dangchhu Hydropower Project in Bhutan.

India:

- ✚ On 9 April 2026, India and Bhutan signed (i) Tariff Protocol of Punatsangchhu-II Hydroelectric Project, and (ii) The Methodology for Reactive Energy Accounting of the reactive power exchange.
- ✚ On 20 May 2026, Druk Green Power Corporation (DGPC) and NTPC Vidyut Vyapar Nigam Limited (NVTN) signed the Power Purchase Agreement (PPA) for the sale of surplus electricity generated by the Punatsangchhu-II hydroelectric project to India after meeting domestic demand.
- ✚ The 11th BRICS Energy Ministers' Meeting was convened on 25 June 2026 in Gurugram, Haryana, under India's BRICS Chairship 2026, under the overarching theme "Building for Resilience, Innovation, Cooperation and Sustainability." The meeting brought together Energy Ministers, Vice Ministers, and senior officials from BRICS member countries to deliberate on key global energy challenges and opportunities and to advance practical cooperation across the energy sector.

Myanmar:

- ✚ Myanmar commissioned the Thazi and Thapyaywa 40 MW solar power projects during April 2026.
- ✚ Ministry of Electric Power announced 40 new energy and electricity projects under its 100-day programme. The programme includes Expansion and rehabilitation of transmission infrastructure, Construction and upgrading of substations, Installation of new transformers, Rural electrification projects etc.

Sri Lanka:

The International Monetary Fund (IMF) reached a staff-level agreement with Sri Lanka on US\$700 million in financial assistance. The IMF emphasized reforms in the electricity sector, appropriate electricity tariff adjustments, financial sustainability of

the power sector and improved fuel pricing mechanism to strengthen Sri Lanka's economic recovery while ensuring long-term sustainability of the energy sector.

BIMSTEC Region

During the April–June 2026 quarter, Bangladesh, Bhutan, India, Nepal, Sri Lanka, and Thailand recorded their highest peak electricity demand to date, as summarized below:

Country	Max Demand Met (MW)	Date
Bangladesh	17,200	20.05.2026
Bhutan	1660	23.05.2026
India	270,820	21.05.2026
Nepal	2,479	28.06.2026
Sri Lanka	3,162	07.04.2026
Thailand	35,951	22.04.2026

Global Energy Crisis and Policy Responses

I. Introduction

The recent geopolitical tensions in the Middle East have highlighted the vulnerability of the global energy system to geopolitical and market shocks. Disruptions to international fuel supply chains and uncertainty in global energy markets have resulted in significant volatility in oil and natural gas prices, raising concerns over energy security, affordability, and the reliability of energy supplies across many countries.

The crisis underscored the interconnected nature of global energy markets, where disruptions in one region can rapidly influence fuel availability, electricity generation costs, industrial production, transportation, and household energy expenditure worldwide. The varying impacts across countries reflected differences in their dependence on imported fuels, domestic energy resource availability, and the resilience of their energy systems.

The evolving situation reinforced the need for governments to enhance preparedness against future energy supply disruptions while accelerating the transition towards more diversified, resilient, and sustainable energy systems. The crisis also highlighted the importance of energy diversification, strategic reserves, regional cooperation, demand-side flexibility, and investment in clean energy technologies as essential components of long-term energy security.

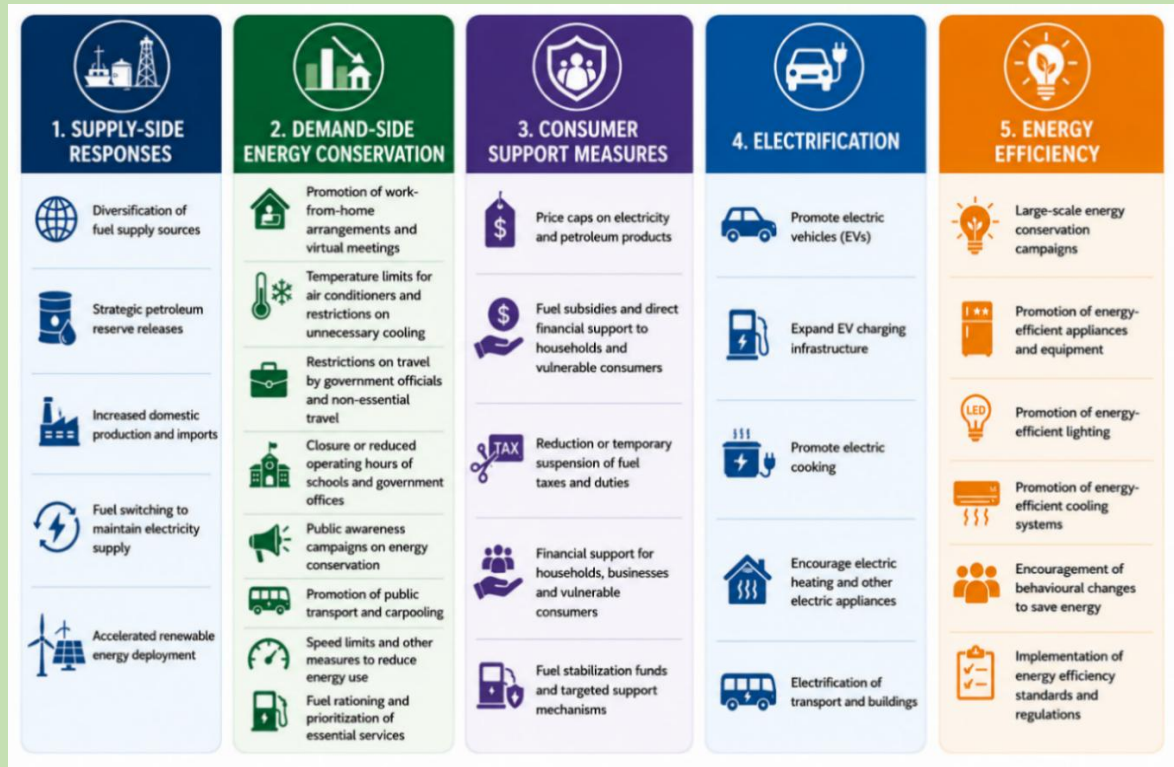
Accordingly, governments across the world adopted a combination of immediate response measures to address short-term supply disruptions and consumer impacts, while simultaneously introducing structural policy initiatives aimed at strengthening the resilience and sustainability of their energy sectors. These measures ranged from ensuring fuel availability and promoting energy conservation to accelerating electrification and improving energy efficiency.

Against this backdrop, this article presents an overview of the broad policy responses adopted globally, followed by a summary of the measures implemented by the BIMSTEC Member States. The experiences of the Member States provide valuable insights into strengthening regional energy cooperation and supporting the

development of secure, reliable, affordable, and sustainable energy systems across the BIMSTEC region.

II. Global Policy Responses to the Energy Crisis

Governments worldwide adopted a combination of immediate response measures and long-term structural reforms to mitigate the impacts of the global energy crisis. The broad categories of policy responses are illustrated below:










III. Policy Responses of the BIMSTEC Member States to the Global Energy Crisis

Energy Conservation Measures:

MEMBER STATES	WORK FROM HOME	COOLING	GOVERNMENT TRAVEL LIMIT	SCHOOLS AND UNIVERSITIES	CAMPAIGN	TRANSPORT LIMIT
Bangladesh	-	Limit to 25°C	-	Close public and private universities	Ask public and businesses to save energy, including unnecessary lighting	Limit fuel supply for vehicles. Promote public transport
Bhutan	Prepared contingency plans for work-from-home arrangements	-	-	-	-	Prepared localized fuel rationing to curb non-essential fuel consumption
India	Encourage working from home	-	Instruct state banks to prioritise EVs and video calls	-	Cap industry natural gas usage. Speed up rollout of piped natural gas to replace domestic LPG. Ration commercial LPG use	Ask citizens to use public transport where possible and avoid unnecessary foreign travel
Myanmar	Mandate remote work on Wednesdays for public officials	-	-	-	-	Alternate driving days. Ration fuel with quotas based on engine size
Nepal	Close government offices for one additional day per week	-	Restrict use of government vehicles	Close academic institutions for one additional day per week	Ration LPG for cooking (half-fill cylinders). Ask public to limit travel and adopt efficient practices	-
Sri Lanka	Close public offices on Wednesdays. Encourage online meetings and remote work	Limit offices to 26 degrees. Encourage 1-2 hr switch off daily. Prioritising fans	Limit public official travel and encourage public transport	Close schools and universities on Wednesdays	Switch off billboard lighting at 9 pm. Launch energy saving campaign	Introduce nationwide QR code-based fuel rationing system for private cars and motorcycles
Thailand	Encourage remote work and video conferencing in all public and private sectors	-	Avoid overseas travel for public officials	-	Ask office workers to limit demand (incl. taking stairs, turning off devices). Reduce rural street lighting	Encourage carpooling and limit unnecessary travel. Ensure higher-octane-content gasoline is cheaper

Consumer Support & Structural Policy Measures:

Member States	CUSTOMER SUPPORT POLICIES				STRUCTURAL POLICIES
	Price Caps	Fuel Subsidies	Taxation	Other Support Measures	Electrification
 Bangladesh	-	-	-	-	-
 Bhutan	-	-	-	-	-
 India	Cap domestic jet fuel prices	-	Cut gasoline and diesel excise duty. Exempt ethanol blended fuel from excise duty	Cap oil refinery and fuel retail margins. Launch jet fuel price stabilisation fund	Promote shift to electric cookstoves, instruct state-run financial institutions to transition their vehicle fleets to EVs
 Myanmar	-	-	-	-	Introduce ICE vehicle to EV trade-in scheme. The EV imports to scrapping fossil fuelled vehicles
 Nepal	-	-	-	-	Start preparing guidelines and standards for the conversion of existing fossil-fuelled vehicles to EVs
 Sri Lanka	-	Subsidise diesel and gasoline prices	-	Limit offices to 26 degrees. Encourage 1-2 hr switch off daily. Prioritising fans	-
 Thailand	Freeze fuel cooking prices until May'26	Introduce subsidy on diesel	-	Provide fuel subsidies under the oil fuel fund. Targeted emergency borrowing for households and energy transition	Provide low-interest loans for electric vehicles

Note: '-' indicates no specific measure announced or not applicable.

Source: Global policy responses and country-specific measures have been compiled and adapted from the International Energy Agency (IEA) Energy Crisis Response Tracker 2026 and official government publications.

IV. Key Lessons

The global energy crisis reaffirmed that a diversified energy mix, resilient supply chains, strategic fuel reserves, effective demand-side management, and accelerated deployment of clean energy technologies are fundamental to enhancing energy security. The combination of short-term emergency interventions and long-term structural reforms has enabled many countries to improve the resilience, affordability and sustainability of their energy systems. These experiences provide valuable lessons for the BIMSTEC region in strengthening regional energy cooperation and building a secure, reliable and sustainable energy future.

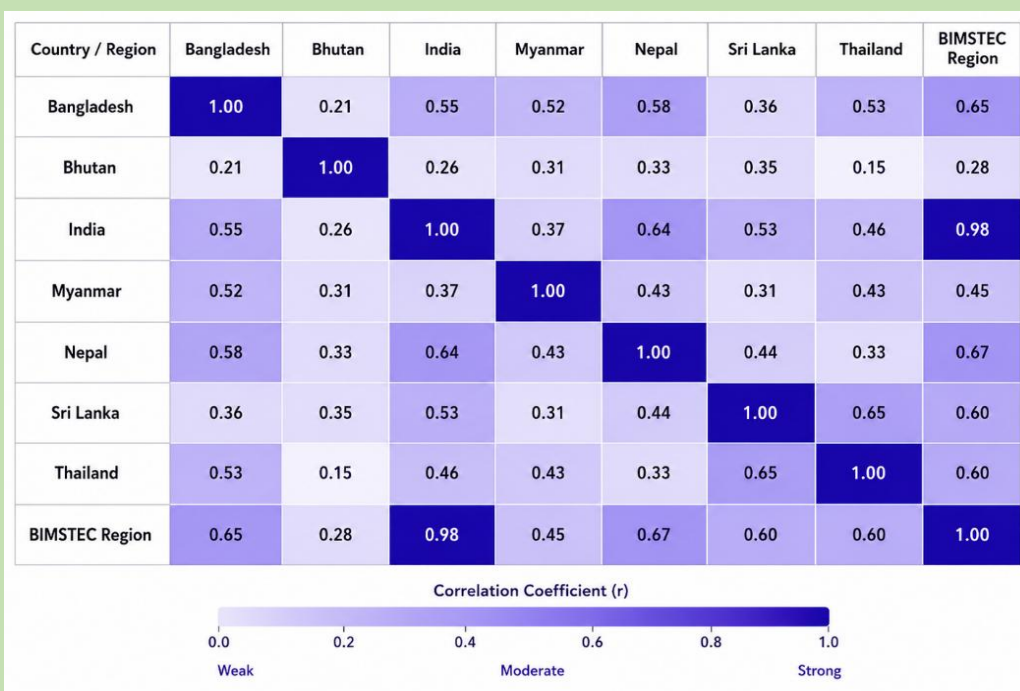
Correlation Analysis of Electricity Demand Patterns across BIMSTEC Member States

In the previous e-Newsletter (January–March 2026), a comprehensive analysis of half-hourly electricity demand across the BIMSTEC Member States—Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand—was presented. Based on one year of time block-wise demand data (01 September 2024 to 31 August 2025), collected from the Member States and their respective official websites/portals, the study covered key demand characteristics, including maximum and minimum demand, the BIMSTEC

regional diversity factor, average and aggregated daily demand profiles, yearly demand/load profiles, and diurnal and seasonal demand variations.

Building upon the previous analysis, this edition presents the correlation analysis of electricity demand among the BIMSTEC Member States and the overall BIMSTEC Region. The Pearson correlation analysis provides insights into the degree of similarity between electricity demand patterns among the BIMSTEC Member States, highlighting similarities and differences in demand behaviour and the potential for regional electricity cooperation. The analysis supports a better understanding of regional load characteristics and provides useful inputs for cross-border power system planning, regional power trade and grid integration within the BIMSTEC region.

Demand Correlation Matrix among BIMSTEC Member States and BIMSTEC Region (For the period Sep 2024 to Aug 2025):



Key Observations:

- ✚ Sri Lanka and Thailand exhibit the highest bilateral correlation (0.65), indicating comparable daily and seasonal electricity demand patterns.
- ✚ India and Nepal (0.64), followed by Bangladesh and Nepal (0.58), also demonstrate relatively strong correlation in electricity demand patterns.
- ✚ Bhutan exhibits comparatively lower correlation with most Member States, particularly Thailand (0.15), Bangladesh (0.21) and India (0.26), indicating a relatively distinct electricity demand profile and greater diversity in electricity demand patterns.
- ✚ The BIMSTEC Region shows a very high correlation with India (0.98), reflecting India's dominant contribution to the regional electricity demand profile.
- ✚ Cross-country demand correlation measures the degree to which electricity demand patterns of two countries move together over time.

Correlation Coefficient	Interpretation	Power system perspective
0.80 to 1.00	Highly demand pattern similarity	Similar peak demand profiles; limited opportunity for non-coincident peak support
0.50 to 0.79	Moderately similar demand patterns	Some potential for regional power exchanges
0.20 to 0.49	Greater demand diversity	Better opportunities for regional load balancing
< 0.20	Highly diverse demand patterns	Greater potential for complementary electricity exchanges

Note: Lower correlation between electricity demand profiles indicates greater diversity in demand behaviour among Member States. Such diversity can create favourable conditions for cross-border electricity exchanges by enabling non-coincident peak demand support, improving utilisation of regional generation resources, enhancing operational flexibility and reducing reserve capacity requirements.

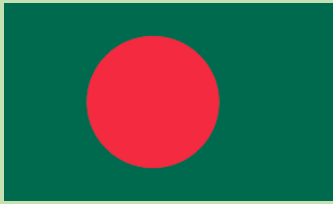
Pearson Correlation Coefficient - Mathematical Basis:

The relationship is quantified using the **Correlation Coefficient (r)**:


$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum(X - \bar{X})^2 \cdot \sum(Y - \bar{Y})^2}}$$


Where:


- X, Y = hourly demand of two countries
- \bar{X}, \bar{Y} = average demand
- r ranges from **-1 to +1**



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