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URJASVINI

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Every edition of URJASVINI captures a defining chapter in the evolving journey of Bihar's power sector. The June 2026 issue marks one such milestone—where progress is no longer measured solely by transmission lines commissioned, substations energised or generation capacity added, but equally by innovation, sustainability and the institutions shaping the future of electricity.

The transformation underway in Bihar reflects a broader shift taking place across the global energy landscape. Reliable power systems today are expected not only to deliver electricity, but also to embrace renewable energy, strengthen resilience, improve consumer participation and accelerate digital transformation. The pages that follow capture this transition through stories of engineering excellence, policy innovation and institutional commitment.

A defining feature of this edition is Bihar's accelerating clean energy journey. The landmark power sector initiatives launched by the Hon'ble Chief Minister of Bihar on 14 June 2026 marked the operational rollout of the PM Surya Ghar: Muft Bijli Yojana through Bihar's innovative Utility-Led Aggregation (ULA) Model, covering the first phase of rooftop solar installations for 2.5 lakh Kutir Jyoti households. By placing distribution utilities at the centre of programme implementation, the ULA model demonstrates how utilities, communities and private developers can work together to simplify large-scale rooftop solar deployment. Alongside this, initiatives such as PM-KUSUM, government building solarisation and other emerging distributed renewable energy programmes reflect the State's long-term commitment to building a cleaner, more resilient and sustainable energy future.

Perhaps the most remarkable achievements of the power sector are often the ones consumers rarely notice. During this quarter, Bihar successfully crossed record peak electricity demand of more than 9,000 MW, while satellite imagery continued to portray the State among the brightest illuminated regions of the country. These milestones are not merely indicators of rising electricity consumption; they are the outcome of years of investment in transmission infrastructure, scientific planning, digital grid operations and the unwavering commitment of thousands of engineers, technicians and field personnel working round the clock to ensure reliable power for every consumer.

Such achievements are possible only when innovation is matched by operational excellence. This edition therefore also highlights the observance of National Electrical Safety Week–2026, the continued expansion of transmission infrastructure, strategic capacity enhancement, transparent project execution and Bihar's sustained pursuit of institutional excellence, reflected in BSPTCL once again being awarded the prestigious A+ Rating. Together, these initiatives demonstrate that reliability is built not only through new infrastructure, but also through safe operations, strong institutions and continuous improvement.

As Bihar's energy transition gathers momentum, URJASVINI remains committed to documenting this remarkable journey—from policy to implementation, from infrastructure to innovation, and from conventional electricity supply to a cleaner, smarter and more sustainable energy future.

We hope this edition offers not only a record of achievements, but also an insight into the vision, innovation and dedication that continue to power Bihar's progress.

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A New Chapter in Bihar's Clean Energy Journey

Hon'ble Chief Minister Launches Landmark Renewable Energy Initiatives

The launch of several landmark power sector initiatives on 14 June 2026 marked a defining moment in Bihar's journey towards a modern, sustainable, and consumer-centric energy ecosystem. On the occasion of the completion of 60 days of the present Government in office, Hon'ble Chief Minister Shri Samrat Choudhary inaugurated, launched, and dedicated major projects aimed at strengthening power generation, transmission, distribution, and renewable energy across the state.

A key highlight of the event was the launch of rooftop solar installations for 2.5 lakh Kutir Jyoti households under the PM Surya Ghar Muft Bijli Yojana, involving an investment of ₹1,512 crore. The initiative will provide free rooftop solar systems to eligible beneficiaries, enabling economically weaker families to meet their electricity needs through clean energy while

contributing surplus power to the grid. The programme represents a significant step towards promoting renewable energy, reducing dependence on conventional power sources, and empowering households with energy self-reliance.

Further strengthening Bihar's power infrastructure, the Chief Minister also inaugurated, launched, and dedicated 140 energy sector projects worth ₹1,278 crore. These projects will enhance the state's transmission and distribution network, improve the quality and reliability of power supply, and support the growing electricity demand driven by rapid economic development.

Another significant milestone was the launch of the Energy Accounting System in the state's power



distribution companies. Leveraging the Smart Prepaid Metering Project, the system will facilitate energy accounting from the feeder level down to individual consumers, enabling more accurate monitoring of power flow, improving operational efficiency, and reducing energy losses.

Addressing the gathering, the Chief Minister reaffirmed the State Government's commitment to expanding green energy, modernizing power infrastructure, and delivering better consumer services. He set an ambitious target of completing rooftop solar installations for 2.5 lakh households by November 2026 and expanding the programme to 25 lakh households by November 2027, reflecting Bihar's long-term vision for sustainable energy development.

These initiatives underscore Bihar's transformation into a state with a resilient, technology - driven, and environmentally sustainable power sector. By integrating renewable energy with robust infrastructure and digital innovations, the Energy Department is laying a strong foundation for reliable electricity access, improved energy efficiency, and inclusive growth. The projects also reaffirm the state's commitment to building a cleaner and greener future while ensuring quality power for every household.









The Next Frontier of Bihar's Energy Transition

How the Utility-Led Aggregation (ULA) Model is Transforming Rooftop Solar Deployment

The Next Frontier of Bihar's Energy Transition

"The future of electricity may not always be built through larger power plants. Sometimes, it begins on the rooftops of ordinary homes."

Across the world, the electricity sector is undergoing one of its biggest transformations since the expansion of the conventional power grid. For decades, electricity systems were designed around a centralised model—large generating stations produced electricity, transmission networks carried it over long distances and distribution utilities supplied it to consumers.

That model continues to remain the backbone of power systems. Yet a new chapter is steadily unfolding alongside it.

Today, consumers are no longer viewed merely as users of electricity. Increasingly, they are becoming active participants in the energy ecosystem by generating clean electricity on their own rooftops, consuming it locally and, where feasible, exporting surplus power back to the grid. This transition towards distributed energy generation is redefining the way modern electricity networks are planned and operated.

Grid Connected Rooftop Solar (GCRT) has consequently emerged as one of the fastest-growing segments of India's renewable energy transition. Unlike utility-scale solar projects, rooftop systems generate electricity close

to the point of consumption, making better use of the existing distribution network while reducing dependence on conventionally procured grid power. Beyond clean energy generation, widespread rooftop solar adoption also supports improved network utilisation, lower transmission losses and India's broader renewable energy and climate objectives.

Recognising this potential, the Government of India launched the PM Surya Ghar: Muft Bijli Yojana, one of the world's largest residential rooftop solar programmes. The initiative seeks to accelerate rooftop solar deployment through financial assistance and simplified implementation while enabling households to actively participate in India's clean energy transition.

For Bihar, however, the programme represents something even more significant.

The State views rooftop solar not merely as another renewable energy initiative but as an opportunity to strengthen the future of electricity distribution. Instead of limiting its focus to rooftop installations alone, Bihar has adopted a broader strategy that integrates innovative implementation models, utility-led coordination, community participation and institutional planning. Alongside residential rooftop solar under the PM Surya Ghar programme, the State is also expanding solar deployment across government buildings through the RESCO model, creating a comprehensive distributed solar ecosystem.

However, large-scale adoption depends on much more than financial assistance alone. Consumer awareness, vendor selection, financing, quality assurance, installation and long-term maintenance often determine the pace of implementation.

It is in addressing these practical challenges that Bihar has introduced the Utility-Led Aggregation (ULA) Model, placing the distribution utility at the centre of programme implementation.

Bihar's Utility-Led Aggregation Model - A

Different Approach to Scaling Rooftop Solar

Every national programme eventually encounters a simple reality—its success depends not only on policy, but also on implementation.

While the PM Surya Ghar framework provides a common roadmap for residential rooftop solar deployment across the country, each state faces its own implementation challenges. Consumer awareness, upfront investment, availability of quality vendors, financing, technical support and long-term maintenance often determine how quickly rooftop solar can be deployed at scale.

Bihar recognised these realities at an early stage.

Instead of expecting individual consumers to identify vendors, arrange finance and manage installations independently, the State redesigned the implementation

architecture itself through the Utility-Led Aggregation (ULA) model, placing the distribution utility at the centre of programme implementation.

Under the first phase of the programme, approximately 2.5 lakh Kutir Jyoti (BPL) households have been approved for installation of 1.1 kW Grid Connected Rooftop Solar (GCRT) systems, creating an aggregate capacity of about 275 MW. Each system comprises two 550 Wp solar modules and is expected to generate clean electricity over an operational life of around 25 years, while operation and maintenance will be undertaken by the selected developer for the initial 10-year RESCO period.

The programme entered its implementation phase following its formal launch by the Hon'ble Chief Minister of Bihar on 14 June 2026. The launch marked the operational rollout of the Utility-Led Aggregation (ULA) model under the PM Surya Ghar: Muft Bijli Yojana, signalling Bihar's transition from policy formulation to large-scale implementation.

The distinguishing feature of Bihar's model is its innovative financial structure.

Each 1.1 kW rooftop solar system, with an estimated project cost of around ₹60,500, is supported through a combination of Central Financial Assistance (CFA) of ₹33,000 under the PM Surya Ghar programme and State Financial Assistance (SFA) of ₹10,000 provided by the Government of Bihar. The balance project cost is financed by the selected RESCO developer, enabling eligible Kutir Jyoti consumers to receive rooftop solar without any upfront capital investment.





Rather than purchasing the system themselves, consumers simply provide consent and access to their rooftop. The selected RESCO developer designs, installs, finances, operates and maintains the system, recovering the balance investment through a competitively discovered RESCO tariff under a 10-year Power Purchase Agreement (PPA) with the DISCOM. At the end of the RESCO period, the rooftop solar asset is transferred to the consumer, while the system continues to generate electricity for its remaining useful life of approximately 15 years.

The ULA model also simplifies implementation at scale.

Instead of thousands of consumers independently selecting vendors and negotiating installations, the DISCOM aggregates consumer demand, undertakes competitive bidding, standardises technical specifications, appoints RESCO developers and monitors implementation across all project stages. This utility-led approach ensures uniform quality, transparent procurement and systematic project execution while significantly reducing the complexity faced by individual households.

Consumer mobilisation has been another key pillar of the programme.

Through extensive field-level outreach and the active participation of JEEViKA community institutions, awareness about rooftop solar has been taken directly to eligible households. More than 3 lakh consumers have already been identified and over 2.82 lakh consumer details uploaded, creating a strong implementation pipeline for large-scale deployment.

To facilitate systematic implementation and long-term operation & maintenance, Bihar adopted a cluster-based implementation strategy during the initial phase by selecting five Panchayats in each block. Rather than spreading installations across large geographical areas,

this approach creates concentrated implementation clusters that simplify logistics, strengthen quality supervision and enable more efficient inspection, consumer support and post-installation maintenance throughout the project lifecycle.

Bihar initially envisioned the implementation of the Utility-Led Aggregation (ULA) model for nearly 58 lakh eligible Kutir Jyoti (BPL) consumers across the State. As the first step towards this larger vision, the Ministry of New and Renewable Energy (MNRE) has approved the first phase covering approximately 2.5 lakh Kutir Jyoti households. The phased approach enables systematic implementation, quality assurance and performance monitoring while providing a scalable framework for progressive expansion in subsequent phases.

In essence, Bihar's Utility-Led Aggregation model is far more than an alternative procurement mechanism. It combines public financial support, private sector investment, utility-led implementation and community participation into a single framework that removes the traditional barriers to rooftop solar adoption. By making clean energy accessible without upfront investment for eligible consumers while ensuring professional long-term maintenance, the model demonstrates how policy innovation can accelerate the transition towards distributed renewable energy.

Beyond Homes : Powering Public Infrastructure

While residential consumers remain at the heart of Bihar's rooftop solar programme, the State has simultaneously expanded its vision to public infrastructure. Recognising the vast untapped potential of government rooftops, the State Government has approved the development of 500 MW of Grid Connected Rooftop Solar (GCRT) capacity on government buildings under the RESCO model.

BIHAR ULA MODEL

→ AT A GLANCE ←



TARGET CONSUMER

Kutir Jyoti
(BPL) Households



PHASE-I COVERAGE

2.5 lakh
consumers



SYSTEM SIZE

1.1 kW
(2 × 550 Wp panels)



AGGREGATE CAPACITY

275 MW



ESTIMATED COST PER SYSTEM

₹60,500

FINANCIAL STRUCTURE (Per System)

TOTAL COST PER SYSTEM

₹60,500

₹33,000

Central Financial
Assistance (CFA)
from MNRE

₹10,000

State Financial
Assistance (SFA)
from Government of Bihar

₹17,500

Balance Funding
by RESCO Developer

CONSUMER UPFRONT INVESTMENT



NIL

No Upfront Investment Required



O&M RESPONSIBILITY

10 Years

Under Power
Purchase Agreement
(PPA)



SYSTEM LIFE

~25 Years



Schools, hospitals, government offices and other public institutions together offer significant rooftop space that can be utilised for clean electricity generation without requiring additional land. By generating electricity close to the point of consumption, these systems reduce dependence on conventionally procured grid power while making better use of the existing distribution network.

The programme follows the same implementation philosophy that underpins Bihar's Utility-Led Aggregation (ULA) model. Instead of requiring government departments to make upfront capital investments or

manage technical operations, selected RESCO developers will design, finance, install, operate and maintain the rooftop solar systems throughout the contract period. This enables government institutions to benefit from professionally managed solar assets while allowing departments to focus on delivering public services.

Viewed together, the residential rooftop programme and the 500 MW government building initiative form two complementary pillars of Bihar's distributed solar strategy. One promotes household participation in the clean energy transition, while the other transforms public infrastructure into productive energy assets.

HOW BIHAR'S ULA MODEL WORKS



1

CONSUMER IDENTIFICATION & MOBILISATION

Eligible Kutir Jyoti (BPL) consumers are identified through DISCOMs with extensive mobilisation support from JEEViKA.



2

CLUSTER PLANNING

To facilitate efficient implementation and long-term O&M, five Panchayats in each block are selected to create geographically concentrated implementation clusters.



3

CONSUMER CONSENT

Willing households provide consent for rooftop solar installation under the PM Surya Ghar programme.



4

DEMAND AGGREGATION

Consumer demand is aggregated by the DISCOMs under the Utility-Led Aggregation (ULA) framework for large-scale implementation.



5

COMPETITIVE PROCUREMENT

RESCO developers are selected through a transparent competitive bidding process.



6

FINANCIAL SUPPORT

Central Financial Assistance (CFA) from MNRE and State Financial Assistance (SFA) from the Government of Bihar reduce the project cost, while the remaining investment is made by the RESCO developer.



7

INSTALLATION & GRID SYNCHRONISATION

The selected developer designs, installs, commissions and synchronises the 1.1 kW Grid Connected Rooftop Solar (GCRT) system with the distribution grid.



8

OPERATION & MAINTENANCE

The RESCO developer operates and maintains the rooftop solar system for 10 years under the Power Purchase Agreement (PPA), ensuring reliable system performance.

Bihar's efforts in government building solarisation have already received national recognition. Under the Surya Sankalp initiative of the PM Surya Ghar: Muft Bijli Yojana, the State was honoured by the Ministry of New and Renewable Energy (MNRE) in June 2026 for the successful solarisation of District Collectorate offices and official residences.

The recognition validates Bihar's early progress in integrating rooftop solar into public infrastructure and reinforces its commitment to scaling rooftop solar deployment across government buildings.

The significance of this approach extends beyond renewable energy generation. A rooftop solar system typically operates for nearly 25 years, reducing the requirement for conventionally procured electricity throughout its operational life. Over time, wider adoption of distributed solar can improve network efficiency, diversify the State's energy mix and help optimise long-term power procurement and subsidy commitments.

Bihar is also actively participating in other strategic components of the PM Surya Ghar: Muft Bijli Yojana.

Under the Model Solar Village initiative, district-level selection has commenced across all 38 districts through District Level Committees (DLCs). The initiative seeks to identify one Model Solar Village in each district, with each selected village becoming eligible for Central Financial Assistance (CFA) of ₹1 crore to develop community-based renewable energy infrastructure. This initiative complements Bihar's broader rooftop solar strategy by promoting community participation and demonstrating the potential of distributed renewable energy at the village level.

Bihar's vision, therefore, extends beyond increasing rooftop solar capacity. It is about creating a distributed energy ecosystem where homes, public institutions and local communities together contribute to a cleaner, more resilient and financially sustainable electricity system.

From Vision to Implementation

With the policy framework now in place, Bihar's rooftop solar programme has entered the implementation phase. Through competitive bidding, circle-wise project allocation, phased execution and rigorous quality assurance, the State is building a structured implementation ecosystem across both NBPDC and SBPDCL.



The programme places equal emphasis on quality and scale. Standardised technical specifications, inspection protocols, material quality verification and continuous monitoring have been integrated into every stage of implementation to ensure reliable system performance over the long operational life of rooftop solar installations.

Consumer mobilisation through JEEViKA, utility-led coordination, professional RESCO developers and institutional monitoring together provide a strong foundation for phased expansion across both residential consumers and government buildings. Rather than being a one-time initiative, the programme has been designed as a scalable framework capable of supporting Bihar's long-term distributed solar ambitions.





The Road Ahead

Significance of Bihar's rooftop solar programme extends far beyond the number of rooftop systems installed or the megawatts added to the grid. Its real achievement lies in demonstrating how policy innovation, utility leadership and community participation can together accelerate the transition towards distributed renewable energy.

As Bihar's electricity demand continues to grow, rooftop solar will increasingly complement investments in smart metering, Battery Energy Storage Systems (BESS), modern distribution networks and digital grid management. Together, these initiatives are laying the foundation for a cleaner, more resilient and consumer-centric electricity system.

For a state like Bihar, where the Government is extending substantial tariff support to domestic consumers, wider adoption of rooftop solar also offers an important long-term economic opportunity. Over the 25-year operational life of these systems, electricity generated at the consumer's premises can progressively reduce dependence on conventionally procured grid power for eligible households. Over time, this has the potential to moderate the State's long-term subsidy commitment while simultaneously advancing clean energy adoption and strengthening the financial sustainability of the power sector.

While the first phase focuses on Kutir Jyoti households, Bihar is also preparing a broader solarisation roadmap

for the remaining domestic consumer base, reflecting the State's long-term commitment towards distributed renewable energy.

The journey has already begun

From individual homes to government buildings, from community mobilisation through JEEViKA to utility-led implementation, Bihar is demonstrating that the transition towards clean energy is not driven by technology alone. It is built through thoughtful policy, strong institutions and sustained collaboration between government, utilities, private developers and citizens.

The future electricity system will not be shaped only by large generating stations located hundreds of kilometres away. Increasingly, it will also be shaped by millions of square metres of rooftop space generating clean electricity exactly where it is needed.

Through the PM Surya Ghar: Muft Bijli Yojana, the Utility-Led Aggregation (ULA) model and the large-scale deployment of rooftop solar across homes and public infrastructure, Bihar is laying the foundation for that future—transforming rooftops into productive energy assets, empowering consumers as active participants and building a cleaner, more resilient and financially sustainable electricity system for generations to come.

Chandrashekhar Kumar
ESE (Project-1), NBPDC

Empowering Agriculture through Clean Energy

Expanding Solar Irrigation under PM-KUSUM



Commissioning team at the 7.00 MW Amas Solar Plant, Gayaji, Gaya District — 12 May 2026

Bihar is writing a new chapter in its agricultural story. The state — whose economy is anchored in farming — is deploying Component C (Feeder Level Solarization) of the **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)** scheme to transform how its farmers access power. By solarizing entire agricultural feeder lines rather than individual pumps, Bihar is reducing carbon emissions, easing subsidy burdens on the state exchequer, and putting reliable daytime irrigation within reach of lakhs of farmers.

A Strong Foundation

Bihar's 2,762 dedicated agricultural feeders — already supplying power to pump sets across the state— provided the ideal backbone for feeder-level solarization. Bihar floated its first tender in mid-March 2024, sweetening the deal with an additional state subsidy of ₹0.45 crore per MW over and above the central financial assistance. This bold move drew strong developer interest and turned a late entry into a competitive, high-momentum rollout.

Together, under PM KUSUM Scheme Comp-C, Bihar will solarize 684 agricultural feeders and provide clean daytime power to over 1,39,190 pump connections across Bihar.

May 2026: Plans Become Reality

May 2026 marked a landmark moment as Bihar commissioned its first two solar plants under the scheme, followed by five plants in June 2026 making a total commissioned capacity of 16.9 MW under this Scheme.

Amas Plant, Gaya District (7.00 MW) : Developed by M/s Nawdharam Power Pvt Ltd at the Amas Power Sub-Station in the sacred town of Gayaji, this plant exemplifies successful private-sector participation in rural solar infrastructure.

Attaullah Plant, Arwal District (1.948 MW) : In a compelling demonstration of grassroots participation, local farmer Sri Ashutosh Kumar developed and commissioned this solar plant at Attaullah PSS in Arwal. His project illustrates the PM-KUSUM vision of turning farmers from energy consumers into energy producers — or Urjadas.

Manjhi Plant, Saran District (2.48 MW) : On 10 June 2026, Bihar commissioned its third solar plant under PM-KUSUM Component C — a 2.48 MW facility at Manjhi in Saran District. This plant further extends clean daytime solar power to farmers in Saran.

June 2026: Momentum Accelerates

Following the Manjhi commissioning, Bihar added four more solar plants in June 2026, further expanding the reach of PM-KUSUM Component C (FLS).

Karpi Plant, Arwal District (1.294 MW) : This solar plant, connected to Karpi PSS in Arwal District, was commissioned on 19 June 2026, bringing reliable daytime solar power to farmers in the Arwal region.

Kachana Plant, Nawada District (2.066 MW) : Connected to Kachana PSS in Nawada District, this plant was commissioned on 24 June 2026, extending the benefits of solarized agricultural feeders to farmers in Nawada.

Roh Plant, Nawada District (1.47 MW) : It is Commissioned on 24 June 2026, this plant is connected to Roh PSS in Nawada District, further strengthening solar coverage across Nawada and providing clean daytime electricity to more farming communities.

Mirjapur Plant, Sheikhpura District (0.66 MW) : The Solar Plant commissioned on 29 June 2026, this plant is connected to Mirjapur PSS in Sheikhpura District, further strengthening solar coverage across Nawada and providing clean daytime electricity to the local farming communities.

Overcoming Ground-Level Challenges

- **Land Aggregation** : Due to Bihar's exceptionally high population density, the available land parcels per capita are extremely low. Finding and aggregating contiguous patches of land large enough for multi-megawatt solar setups proved highly complex.
- **Financial Constraints** : Streamlining project financing required extensive, persistent co-ordination with banks, which traditionally maintain cautious lending profiles toward rural infrastructure projects.

How the Obstacles Were Resolved

These critical hurdles were successfully overcome through the relentless, targeted efforts of the **Solar Power Developers (SPDs) and BSPGCL**. The SPDs engaged directly with local communities at the grass-roots level to navigate fragmented land. Simultaneously, they worked hand-in-hand with financial institutions, turning these operational challenges into milestones of success.

Immediate Impact

The first seven plants together have solarized agricultural feeders and shifted pump connections to clean solar power across Gaya, Arwal, Saran, Nawada and Sheikhpura districts. Farmers in these districts now benefit from predictable, daytime electricity — enabling timely irrigation of paddy nurseries in summer and wheat crops through winter cycles, protecting Bihar's staple food grains and improving yields.



2.48 MW Solar Plant at Manjhi, Saran District — Commissioned 10 June 2026



Commissioning team at the 1.948 MW Attaullah Solar Plant, Arwal District — 21 May 2026

Financially, the state government stands to save significantly in agricultural electricity subsidies from these first six plants alone. With the combined installed capacity of 16.9 MW now operational across five districts, and as the remaining capacity comes online, those savings will grow exponentially, releasing state funds for broader rural development.

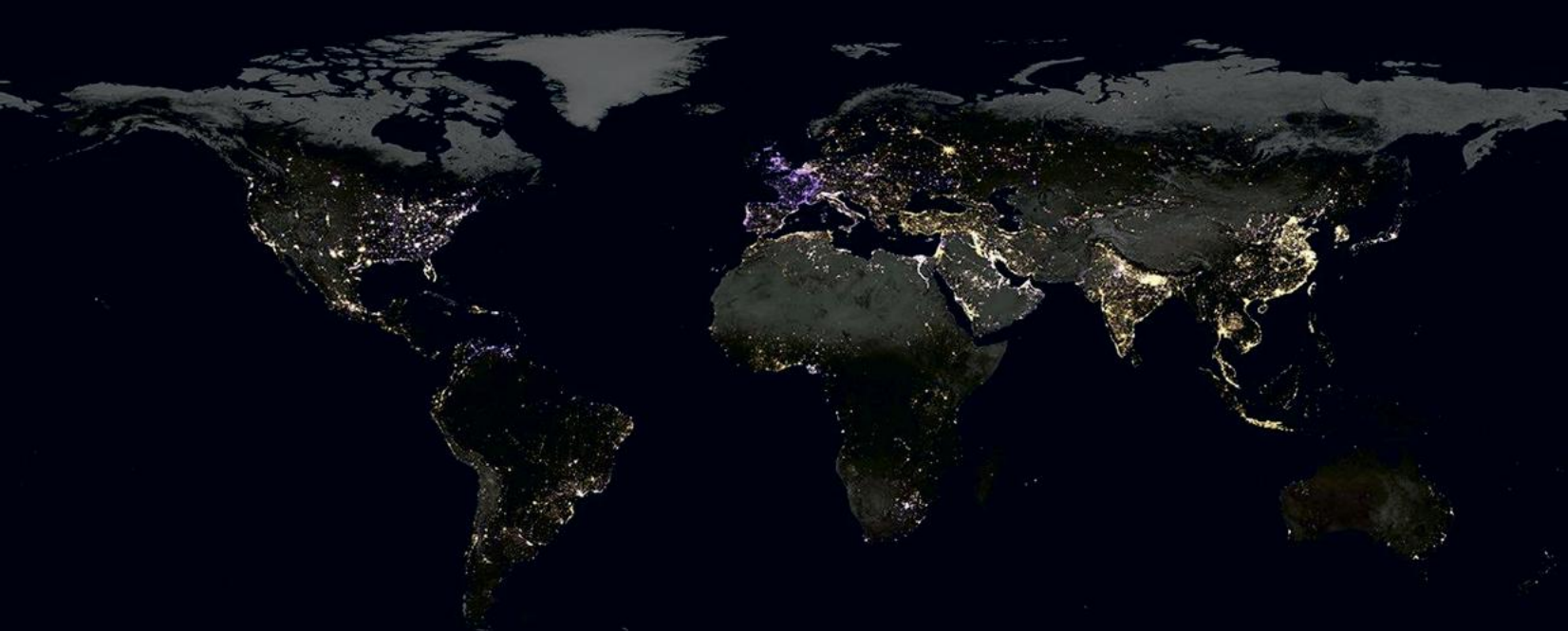
Looking ahead, Bihar is set to add approximately 40 MW of further solar capacity under PM-KUSUM Component C by the end of August 2026, with several projects at advanced stages of commissioning across the state. This upcoming addition will significantly expand the number of solarized agricultural feeders and pump connections benefiting from clean daytime power, accelerating Bihar's journey towards energy-secure farming communities.

A Model for Agrarian India

Bihar's experience proves that a late start is no barrier to leadership. With strong state-level subsidies, a ready feeder network, and growing farmer participation, the state has set a replicable model for Agri-solar integration and emerged as leader in eastern India for Component C (FLS). The green dawn in Bihar's fields is well and truly underway.

Rakesh Kumar
E.Ex.E, BSPGCL





Beyond the Bright Lights

The Invisible Engineering Behind Bihar's Modern Power System

Lighting the Bigger Picture

Every illuminated home visible from space tells only the final chapter of the story.

Long before a city lights up after sunset, engineers have already forecast the next day's demand, secured adequate power resources, optimised market purchases and scheduled electricity across the grid. By the time consumers switch on a light, thousands of operational decisions have already been made.

The successful management of Bihar's record **9,068 MW** peak demand met in June 2026 was one such moment. Behind this milestone lay a coordinated ecosystem of scientific demand forecasting, Resource Adequacy planning, diversified power procurement, digital scheduling and real-time grid operations working seamlessly together.

This article explores the invisible engineering behind Bihar's modern power system—showing how technology, data, infrastructure and human expertise come together every day to ensure reliable electricity for millions of consumers across the State.

A Story Written in Light

"The brightest stories are often the ones that remain unseen."

Earlier this year, **NASA's Earth at Night** imagery sparked widespread discussion across India. Among the illuminated landscapes of India, Bihar stood out with a remark-

BSPTCL_ERLDC_DATA						
	SCH	DWL	UI	% UI	DEM'MET	REV. NO
BSPHCL	7723	8065	342	4.4%	9067	139
SBPDCL	4170	3954	FREQUENCY		NEPAL LOAD	
NBPDCL	3553	4107	50.008		201	
GENERATION	AMARATA SOLAR	BTPS-ST-2 UNIT-8 UNIT-9	MTPS-ST-2 UNIT-3 UNIT-4		BUXAR THERMAL(SAUN) UNIT-1 UNIT-2	
1002	0	223	229	178	175	493
	NET SCHD		NET DRWL		NET UI	% UI
SBPDCL	4690		4463		-228	-4.9%
NBPDCL	3996		3758		-238	-6.0%
AGC - BTPS	STATUS		Delta P (MM)			

able glow. For many, the image symbolised the State's rapid development and expanding access to electricity.

For power professionals, however, the image conveyed something far deeper.

It captured the visible outcome of an engineering system that operates silently every hour of every day.

Only a few months later, Bihar quietly achieved another milestone.

On **24 June 2026**, at **10:56 PM**, the State successfully met its highest-ever peak electricity demand of **9,068 MW**. Hospitals continued functioning, industries remained operational, businesses stayed open and millions of homes received uninterrupted electricity. For consumers, it was simply another summer evening, for the engineers responsible for operating Bihar's power system, it represented the successful execution of thousands of carefully coordinated decisions.

Electricity is unlike almost every other public utility. It cannot be manufactured today and stored for tomorrow. Every additional megawatt demanded by a household, irrigation pump, hospital or factory must be generated, transmitted and delivered almost instantaneously. Maintaining this delicate balance requires far more than generating capacity alone. It depends upon accurate forecasting, prudent resource planning, reliable transmission infrastructure, economical power procurement, sophisticated digital platforms and continuous real-time grid management.

The lights visible from space therefore tell only part of Bihar's story.

The far more fascinating story lies beneath those lights—in the planning rooms, control centres, substations and field offices where engineers work around the clock to ensure that reliable electricity remains available whenever the State needs it.

This is the story behind Bihar's brighter nights

Growth Measured in Megawatts

Few indicators capture Bihar's transformation as clearly as its electricity demand. Since the formation of the State's power utilities in 2012, the growth in peak demand has mirrored Bihar's expanding economy, improving quality of life and rising energy aspirations.

At the time of unbundling in 2012, Bihar's peak electricity demand stood at approximately **1,802 MW**. Over the next decade, demand grew steadily to **5,891 MW** in 2019, **6,738 MW** in 2022, **7,576 MW** in 2023 and **8,005 MW** in 2024. On the night of **24th June 2026**, the State

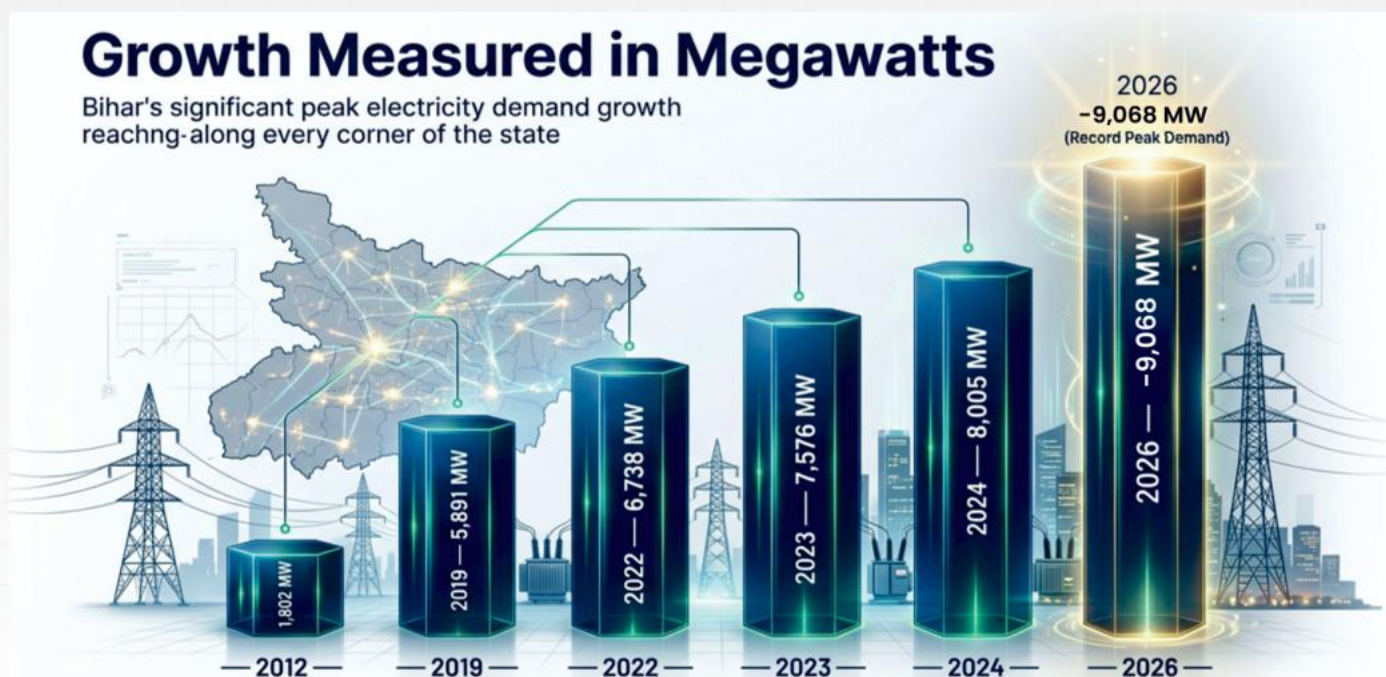
successfully met an all-time record peak demand of **9,068 MW**, setting a new benchmark in Bihar's power sector journey.

These figures represent much more than increasing electricity consumption. They reflect expanding industrial and commercial activity, growing urbanisation, improved agricultural electrification, rising household prosperity and increasing dependence on electricity for education, healthcare, digital services and everyday life. Simply put, as Bihar grows, so does its demand for reliable electricity.

However, rising demand also brings greater operational responsibility.

Successfully meeting a peak demand of 9,068 MW is not simply a question of having sufficient generating capacity. Every additional megawatt must be forecast, procured, transmitted and delivered precisely when consumers require it. The challenge lies not only in producing electricity, but in ensuring that the right quantity of power is available at the right place, at the right time and at the most economical cost.

The successful management of every new demand milestone therefore reflects much more than infrastructure expansion. It demonstrates the growing maturity of Bihar's power system—where scientific planning, strengthened transmission networks, diversified power procurement and modern grid operations work together to deliver reliable electricity even during periods of maximum demand.



Planning Every Megawatt

Every evening, millions of consumers across Bihar expect electricity to be available at the flick of a switch. What remains largely unseen is that this electricity has, in many ways, already been planned a day in advance.

The process begins at Bihar State Power Holding Company Limited's Power Management Cell, where engineers prepare a day-ahead forecast of the State's electricity requirement. Rather than relying solely on historical trends, the forecasting framework analyses multiple factors, including historical demand patterns, temperature, humidity, cloud cover, wind conditions, holidays, festivals and changing consumer behaviour. These inputs are processed using statistical and time-series forecasting techniques to estimate demand across **96 fifteen-minute time blocks**, creating a detailed load profile for the following day.

Forecasting, however, answers only one question— **how much electricity will be required?** The next challenge is ensuring that sufficient resources are available to meet that demand reliably and economically.

This is the objective of **Resource Adequacy**, which aligns

forecast demand with available generation resources, transmission capability and operational reserves. Rather than depending on a single source of electricity, Bihar has developed a diversified power portfolio that combines long-term power purchase agreements with hydroelectric resources, renewable energy and emerging Battery Energy Storage Systems (BESS), thereby enhancing both reliability and operational flexibility.

Long-term **Power Purchase Agreements (PPAs)** continue to meet nearly **96–98%** of Bihar's annual energy requirement. The remaining requirement is optimised through competitive power markets such as the **Day Ahead Market (DAM)**, **Real-Time Market (RTM)**, **Green Day Ahead Market (GDAM)** and **Term Ahead Market (TAM)**. Together, these markets provide the flexibility to bridge short-term demand-supply gaps while optimising procurement costs.

Once the demand forecast and resource plan are finalised, schedules are prepared through the **SAMAST** and **Web-Based Energy Scheduling (WBES)** platforms. By the time the next day begins, Bihar's electricity requirement has already been forecast, resources identified and schedules prepared.

Table 1: Bihar's Power Planning Framework

Stage	Purpose	Key Inputs / Platforms
Demand Forecasting	Estimate the next day's electricity demand across 96 × 15-minute time blocks	Historical load, weather forecasts, holidays, consumer behaviour, statistical forecasting models
Resource Adequacy	Ensure sufficient generation capacity, reserves and transmission capability to reliably meet forecast demand	Resource Adequacy Plan, generation availability, reserve margins, transmission constraints
Power Procurement	Optimise the power portfolio while ensuring reliability and least-cost procurement	Long-term PPAs (96–98% of energy requirement), DAM, RTM, GDAM & TAM
Scheduling	Prepare and communicate day-ahead schedules for all market participants	SAMAST & WBES
Real-Time Grid Operations	Continuously monitor, balance and optimise system operation throughout the day	SLDC, SCADA, ASBM , weather monitoring and market optimisation

The operating day then shifts from **planning** to **execution**—where every forecast must be translated into reliable electricity through continuous monitoring and real-time grid operations.

From Planning to Real-Time Operations

Preparing an accurate day-ahead forecast is only half the challenge. Once the operating day begins, the power system must respond continuously to changing conditions in real time.

Electricity demand rarely follows forecasts exactly. A sudden rise in temperature can sharply increase air-conditioning load, while thunderstorms may reduce demand within minutes. Generation outages, renewable energy variability or transmission constraints can further alter system conditions. The challenge is to continuously maintain the balance between electricity demand and supply despite these uncertainties.

This responsibility rests with the **State Load Despatch Centre (SLDC)**—the operational heart of Bihar's power system.

Operating round the clock, the SLDC supervises generation schedules, transmission flows, system demand and grid frequency, ensuring that electricity is delivered safely and reliably across the State.

Modern grid management is far more dynamic than relying solely on long-term power contracts. While approximately **96–98%** of Bihar's electricity requirement is met through long-term Power Purchase Agreements, organised electricity markets provide the flexibility needed to manage changing system conditions. The **Day Ahead Market (DAM)** is used to bridge anticipated shortfalls identified during scheduling, while the **Real-Time Market (RTM)** enables rapid corrections when actual demand differs from forecasts or unforeseen events occur during the operating day.

Supporting these operations is an integrated digital ecosystem built around **SAMAST** and **Web-Based Energy Scheduling (WBES)** for scheduling and transaction management, together with the **Automated System Balancing Mechanism (ASBM)** for operational decision support.

Rather than replacing human expertise, these platforms provide operators with continuous situational awareness. The ASBM platform offers real-time visibility of system demand, generation availability and network

conditions down to 33 kV feeders, while simultaneously displaying the expected system position for the next eight 15-minute blocks. This forward-looking perspective allows operators to anticipate emerging imbalances and take timely corrective action.

Operational decisions are further supported through continuous monitoring of weather conditions, transmission outages, market prices and field information. Together, these inputs enable engineers to optimise power procurement, minimise deviations and maintain grid stability under changing operating conditions.

The successful management of Bihar's record **9,068 MW** demand on **24 June 2026** demonstrated the effectiveness of this coordinated approach. The achievement was not the result of a single generating station or transmission corridor, but of seamless coordination between demand forecasting, scheduling, market optimisation, digital grid balancing and real-time operational decision-making.

Consumers experienced an uninterrupted supply of electricity.

That is perhaps the strongest evidence of a well-operated power system

Beyond the Milestone

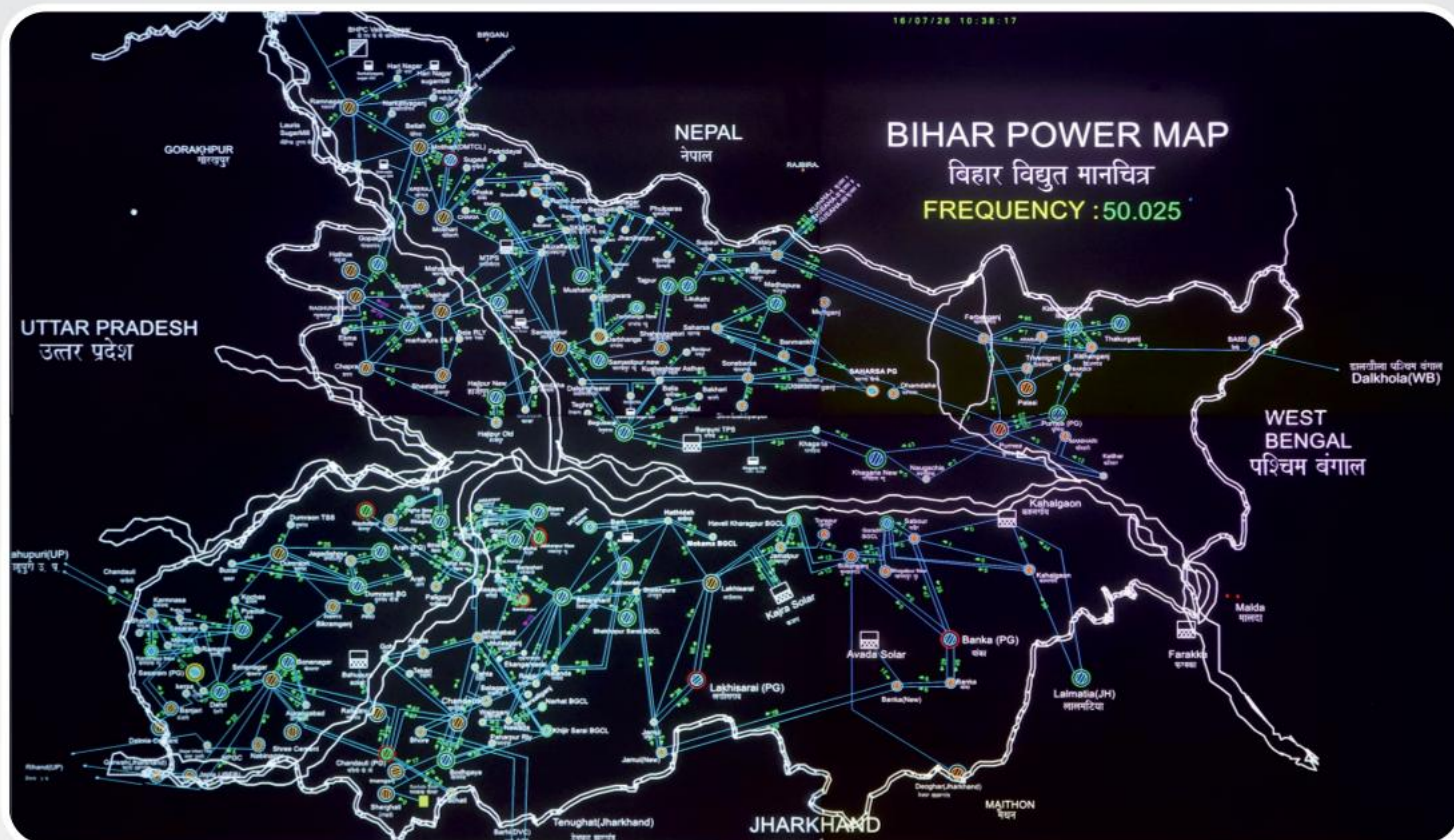
The successful management of Bihar's record 9,068 MW peak demand met marks far more than a numerical achievement. It reflects the evolution of the State's



INSIDE BIHAR'S DIGITAL GRID



 1 96 Scheduling Blocks Every Day Bihar's daily electricity demand is planned across 96 time blocks of 15 minutes each, enabling accurate forecasting, scheduling and real-time system management.	 4 SAMAST & WBES for Scheduling SAMAST and Web-Based Energy Scheduling (WBES) platforms are used for day-ahead scheduling, transaction management and communication of generation schedules across all stake holders.
 2 96–98% Power Through Long-Term PPAs Long-term Power Purchase Agreements (PPAs) form the backbone of Bihar's power portfolio, ensuring reliable and economical base-load power supply.	 5 ASBM for Grid Balancing The Automated System Balancing Mechanism (ASBM) provides real-time visibility of demand, generation and feeder-level conditions, supports next 8-block operational planning and assists in DSM optimisation.
 3 Real-Time Optimisation Through DAM & RTM Competitive power markets such as the Day Ahead Market (DAM) and Real-Time Market (RTM) provide operational flexibility to manage demand variations, contingencies and optimise procurement costs.	 6 24x7 Grid Monitoring by SLDC The State Load Despatch Centre (SLDC) continuously monitors generation, transmission, demand and grid frequency round the clock to ensure secure and reliable grid operation.



electricity sector from expanding infrastructure to operating an increasingly intelligent, integrated and digitally enabled power system.

Behind every new demand milestone lies a coordinated chain of activities—scientific demand forecasting, Resource Adequacy planning, diversified power procurement, digital scheduling, real-time grid balancing and the continuous efforts of engineers working across generation, transmission and distribution systems. Together, these ensure that reliable electricity reaches millions of consumers, often without them ever realising the complexity of the operations taking place behind the scenes.

As Bihar's economy continues to grow, so will its electricity requirements. Greater integration of renewable energy, Battery Energy Storage Systems (BESS), electric mobility and distributed energy resources will require even more accurate forecasting, enhanced operational flexibility and greater reliance on digital technologies. Preparing for this future will demand not only stronger infrastructure but also continuous innovation in planning and grid operations.

Bihar has already begun this transition. Modern forecasting techniques, Resource Adequacy planning, organised electricity markets, integrated scheduling platforms and advanced grid balancing systems are steadily transforming the way electricity is planned and

delivered across the State. These capabilities are helping build a power system that is more resilient, economical and consumer-centric.

Earlier this year, **NASA's Earth at Night** imagery drew global attention by depicting Bihar as one of the most brightly illuminated regions, reflecting the State's remarkable progress in electrification and power infrastructure. Those images celebrated the visible outcome of years of sustained investment and engineering excellence.

Yet, satellites can capture only the lights—not the science, planning and teamwork behind them.

They cannot show the engineers forecasting tomorrow's demand, the planners ensuring adequate resources, the operators balancing the grid in real time or the thousands of professionals who work around the clock to keep Bihar powered.

The next time the world looks at Bihar's illuminated landscape from space, it will once again witness millions of points of light. What it will not see is the invisible engineering that makes every one of those lights possible.

That is the story beyond the bright lights.

Murtaza Helal
CE (PMC), BSPHCL



Safety Beyond Compliance

Building a Stronger Culture of Electrical Safety

Electrical safety is the cornerstone of a reliable and resilient power system. Recognising its significance, **National Electrical Safety Week–2026** was celebrated with renewed commitment across Bihar under the theme, **"Today's Awareness, Tomorrow's Prevention – Let Us All Unite to Prevent Fire Hazards from Electrical Short Circuit."** The week-long observance served as a platform to strengthen awareness, promote safe work practices and reaffirm the collective responsibility of ensuring electrical safety in workplaces as well as in homes.

The inaugural programme, organised by **Bihar State Power Holding Company Limited (BSPHCL)** at Vidyut Bhawan-III, Patna, brought together senior government officials, power sector leaders, technical experts and employees from across the state. Officers and staff also participated virtually through video conferencing, reflecting the organisation's commitment to reaching every level of the power sector with the message of safety.

Inaugurating the programme, **Shri Ajay Yadav, IAS, Energy Secretary, Government of Bihar, and Chairman-cum-Managing Director, BSPHCL**, highlighted the remarkable transformation of Bihar's power sector over

the past decade. Today, the state provides electricity to nearly **22 million consumers**, while peak power demand has crossed **9,000 MW**—a testament to the sector's rapid expansion and operational excellence.

He observed that managing such an extensive electricity network demands unwavering adherence to safety standards. Emphasising that there can be no compromise on safety, he called upon officers, engineers, technicians and linemen to strictly follow Standard Operating Procedures (SOPs), obtain proper shutdowns before commencing maintenance work, ensure isolation, insulation and earthing of equipment, and mandatorily use Personal Protective Equipment (PPE). He underscored a simple yet powerful principle: every employee who reports for duty must return home safely.

Addressing the gathering, **Shri Rahul Kumar, IAS, Managing Director, North Bihar Power Distribution Company Limited (NBPDC),** stressed that compliance with SOPs, disciplined work practices and consistent use of PPE are fundamental responsibilities of every employee engaged in the power sector. He noted that a strong safety culture begins with individual accountability and is sustained through organisational discipline.

Dr. Nawal Kishore Chaudhary, IAS, Managing Director,



Bihar State Power Transmission Company Limited (BSPTCL), reiterated that safety must always precede every operational activity. He emphasised that accident prevention depends on strict adherence to established work procedures, continuous vigilance and compliance with prescribed safety standards, which together ensure a dependable and secure transmission network.

Highlighting the broader social dimension of electrical safety, **Shri Saurabh Jorwal, IAS, Managing Director, South Bihar Power Distribution Company Limited (SBPDCL)**, remarked that electrical safety is not confined to power utilities alone. He urged citizens to adopt safe electrical practices in their daily lives and actively spread awareness within their families and communities to minimise preventable accidents.

Similarly, **Shri Vishal Raj, IAS, Managing Director, Bihar State Power Generation Company Limited (BSPGCL)**, observed that Bihar's power sector has made significant technological and operational advancements in recent years. Sustaining these achievements, he noted, requires uncompromising adherence to safety protocols and continuous improvement in safety management practices.

A major highlight of the inaugural programme was the technical workshop featuring experts from the Government of Bihar and leading industry organisations. **Shri Arvind Kumar, Chief Electrical Inspector, Government of Bihar**, along with representatives from L&T, KPTL, Schneider Electric, Bajaj Electricals and Polycab India Limited, delivered insightful presentations on electrical safety management, prevention of fire accidents caused by short circuits, modern safety technologies, safe work practices, the safety aspects of Battery Energy Storage Systems (BESS) and the critical role of Personal Protective Equipment.

The technical sessions also covered best practices in





power generation, transmission, distribution and the safe domestic use of electricity. Particular emphasis was placed on compliance with electrical safety standards, workplace hazard mitigation, prevention of electrical fires and practical measures that can significantly reduce risks both in industrial environments and in households.

National Electrical Safety Week is more than an annual observance—it is a reminder that safety is a shared responsibility and a continuous commitment. As Bihar's power infrastructure continues to expand and modernise, embedding safety into every process, every workplace and every household remains essential. Through



awareness, training, technological innovation and strict compliance with safety standards, the state's power sector continues to strengthen its commitment to protecting lives while delivering reliable electricity to millions of consumers.

The inaugural programme concluded with a renewed pledge from all stakeholders to foster a culture where safety remains the highest priority. The collective resolve demonstrated during National Electrical Safety Week-2026 reflects Bihar's determination to build a power sector that is not only efficient and technologically advanced but also safe, sustainable and people-centric.





MEMORANDUM OF UNDERSTANDING

Between

REC Power Development & Consultancy Ltd.
(A wholly owned subsidiary of REC Limited, a Govt. of India Enterprise)



Bihar State Power Transmission Company Limited
(A Govt. of Bihar Undertaking)

For

Providing "Bid Process Coordinator" services for Intra-state Transmission Projects in Bihar through Tariff Based Competitive Bidding (TBCB)

Chief Guest

Shri. Nitesh Kumar alias Bulu Mandal
Hon. Minister, Department of Energy, Govt. of Bihar



Engineering Excellence Through Competition

Tariff-Based Competitive Bidding: A New Paradigm for Power Infrastructure

"Tomorrow's growth begins with today's investments in a stronger, smarter, and more resilient transmission network."

Electricity has become the foundation upon which every modern society is built. It powers industries, supports agriculture, enables healthcare, drives digital connectivity and illuminates homes across cities and villages alike. Yet behind every uninterrupted supply lies an extensive transmission network that quietly performs one of the most critical functions in the power sector—moving electricity safely and reliably from where it is generated to where it is needed.

As Bihar continues its remarkable journey of economic transformation, this network is preparing for its own transformation.

The state's electricity demand has grown steadily over the past decade and is expected to rise dramatically in the years ahead. Such growth cannot be addressed simply by adding a few more substations or transmission lines. It calls for a carefully designed transmission ecosystem that anticipates tomorrow's needs while serving today's consumers with reliability and efficiency. Recognising this, Bihar has embarked upon one of its

most ambitious transmission expansion programmes, embracing a modern approach to infrastructure development through Tariff-Based Competitive Bidding (TBCB).

Seeing beyond the horizon

"Infrastructure succeeds when planning extends beyond the present."

Every enduring power system begins with the courage to think decades ahead. As Bihar accelerates along its path of economic growth, industrial expansion and social transformation, electricity has become the lifeblood of progress. The state's highest-ever peak demand of 8,818 MW, recorded on 20 May 2026, marks a significant milestone in this journey. Projections indicate that this requirement will rise to 18,708 MW by 2034–35, reflecting the scale of Bihar's ambitions and the expanding energy needs of a rapidly developing economy.

Such a future calls for transmission infrastructure that combines engineering excellence with strategic vision.

Guided by this philosophy, BSPTCL undertook comprehensive power system studies extending through 2034–35, incorporating projected demand patterns, upcoming generation capacity, operational experience, network security and system reliability. These studies culminated in the Resource Adequacy Plan for Intra-State Transmission Projects, approved by the Central Electricity Authority (CEA) in June 2025, providing a definitive roadmap for the evolution of Bihar's transmission network.

The roadmap embodies one of the most extensive transmission development programmes in the state's history. It envisages the establishment of 47 new Grid Sub-Stations, with 16 already under construction, the addition of 23,430 MVA of transformation capacity, the creation of 5,422 circuit kilometres of transmission lines, and the reconductoring of 459 circuit kilometres of strategically important corridors. Together, these investments will strengthen every dimension of the network—capacity, flexibility, reliability and resilience—creating an electrical backbone equipped to support Bihar's aspirations for decades to come.

When Competition Powers Progress

"Every transmission corridor carries more than electricity—it carries opportunity."

The first set of projects identified under the TBCB framework reflects Bihar's long-term development priorities. New transmission systems are being planned to evacuate power from the upcoming ultra-mega thermal power projects at Pirpainti and Nabinagar, ensuring that the substantial generation capacity created at these locations can be integrated seamlessly into the state grid. At the same time, Patna's rapidly expanding urban landscape is set to benefit from a strengthened transmission network through the development of a high-voltage ring system designed to improve operational flexibility and reliability. Together, these strategic investments represent an estimated outlay of nearly ₹8,800 crore and form an essential part of Bihar's future transmission architecture.

Although these projects are described in terms of substations and transmission lines, their impact extends much further. Reliable transmission infrastructure supports industrial investment, strengthens public services, facilitates renewable energy integration and ensures that economic growth is never limited by the availability of electricity.

Turning Vision into Reality

"Ambitious ideas succeed when strong institutions work together."



Infrastructure of transformative scale is realised through the convergence of vision, institutional capability and strategic collaboration. As Bihar embarks upon one of its most ambitious transmission expansion programmes, the Government of Bihar has adopted a framework that combines technical excellence with transparent project delivery. To facilitate the implementation of transmission projects through the **Tariff Based Competitive Bidding (TBCB)** route, **REC Power Development and Consultancy Limited (RECPDCL)** has been entrusted with the responsibility of serving as the Bid Process Coordinator, bringing to the programme its extensive experience in developing and delivering complex transmission infrastructure across the country.

Following the approval of the State Cabinet on **29 April 2026**, the **Memorandum of Understanding** signed between **BSPTCL** and **RECPDCL** on **22 May 2026** marked the commencement of a partnership founded on shared expertise, robust governance and a commitment to timely execution. This collaboration establishes a structured pathway for attracting capable developers through a transparent and competitive bidding process, ensuring that every project is executed to the highest standards of quality, efficiency and accountability.

The strength of this initiative became evident even before the bidding process formally commenced. An investors' workshop organised by **RECPDCL** in **New Delhi** witnessed enthusiastic participation from leading transmission developers across the country, signalling widespread confidence in Bihar's evolving power sector. The strong investor response reflects the growing credibility of the state's long-term transmission strategy, the maturity of its institutional framework and the confidence inspired by its clear development roadmap.

As Bihar expands its transmission footprint, these partnerships assume significance far beyond project

implementation. They represent a shared commitment to building infrastructure that is resilient in design, efficient in execution and enduring in impact. By bringing together visionary planning, professional project management and private-sector expertise, Bihar is creating an ecosystem where investment, innovation and infrastructure advance together, strengthening the foundations of a reliable and future-ready power network.

Catalysing Value Beyond the Grid

"Competitive bidding does more than award projects—it elevates standards, inspires innovation and delivers enduring value."

The impact of the **Tariff Based Competitive Bidding (TBCB)** framework extends far beyond the creation of transmission infrastructure. It establishes an ecosystem where efficiency, innovation and accountability become integral to every stage of project development. By fostering healthy competition among developers, the framework delivers economically efficient transmission solutions that ultimately translate into lower costs for electricity consumers while ensuring optimum utilisation of public resources.

Equally significant is its ability to attract private investment into the transmission sector, broadening the pool of capital available for infrastructure development and accelerating the pace of network expansion. The competitive environment also encourages the adoption of advanced engineering practices, modern technologies and innovative construction methodologies, resulting in transmission systems that are more reliable, resilient and future-ready.

Well-defined contractual milestones, rigorous performance benchmarks and transparent governance mechanisms further promote timely project execution





and enhanced operational discipline. Together, these outcomes cultivate a culture of excellence where quality, efficiency and accountability drive every investment decision.

Ultimately, the true legacy of the TBCB framework lies in its ability to transform infrastructure delivery itself. It aligns Bihar's transmission development programme with national best practices, strengthens institutional confidence, enhances investor participation and creates a sustainable model of infrastructure development that will continue to power the state's growth for decades to come.

The Legacy We Build Today

"The finest transmission networks are remembered not for when they were built, but for the future they made possible."

Every generation inherits infrastructure built by those who came before it. The transmission lines being planned today will continue carrying electricity long after the present generation has moved on. They will power new industries, connect emerging cities, support cleaner sources of energy and enable opportunities that cannot yet be imagined.

By embracing Tariff-Based Competitive Bidding, Bihar is doing more than adopting a new method of project development. It is embracing a new way of thinking—one that values competition, innovation, efficiency and long-term planning in equal measure.

In the years ahead, these substations and transmission corridors may fade quietly into the landscape. Their contribution, however, will remain visible in every factory that begins production, every village that prospers, every entrepreneur who finds opportunity, and every home that glows with uninterrupted power.

Because in the end, **the most powerful transmission networks do not simply transmit electricity—they transmit progress.**





Strengthening the Backbone

Strategic Capacity Enhancement for a Future-Ready Grid

*Enhancing Reliability, Flexibility and Operational Security
Across Bihar's Transmission Network*

“System strengthening is the continuous process of preparing today's network for tomorrow's demands.”

Electricity consumers often judge a power system by its most visible outcome—the uninterrupted availability of power. Behind that outcome, however, lies an intricate transmission network whose reliability depends not only on the assets it possesses but also on its ability to adapt to changing operating conditions.

Transmission systems evolve continuously. Demand grows, load centres expand, industrial activity increases, and power flows shift in response to changing consumption patterns. Infrastructure that was adequate yesterday may gradually approach its operational limits tomorrow. A transformer may begin operating under higher loading conditions, a transmission corridor may experience increasing power flows, or a Grid Substation may become more dependent on a single source than originally intended.

Such developments are a natural consequence of growth. The challenge lies in identifying these emerging limitations before they affect system performance.

This is where system strengthening assumes significance. Rather than responding to problems after they arise, system strengthening focuses on anticipating future requirements and creating sufficient capacity, flexibility and redundancy within the network. It is a continuous process of enhancing the system's ability to withstand contingencies, accommodate demand growth and maintain reliable operation under varying conditions.

Over the past year, a series of targeted initiatives have contributed towards strengthening Bihar's transmission network. Transformer augmentations, alternate source arrangements, charging of additional circuits, bay formation works, and HTLS reconductoring projects have collectively enhanced the capability of the network while reinforcing its resilience.

These interventions may differ in scale and nature, but they share a common objective: ensuring that the transmission system remains prepared not only for present requirements but also for future challenges.

“Every reliable power system carries within it years of unseen preparation.”



Creating Room for Tomorrow's Demand

"Growth becomes sustainable only when infrastructure grows ahead of it."

One of the most fundamental requirements of a reliable transmission network is the availability of adequate transformation capacity.

As electricity demand increases, transformers play an increasingly critical role in maintaining system stability and operational flexibility. When transformation capacity begins approaching its limits, the network gradually loses the operational margins required to accommodate contingencies, maintenance activities and future load growth.

Creating additional transformation headroom is therefore not merely a matter of increasing installed capacity; it is an investment in reliability.

Recognizing this requirement, augmentation works were undertaken at multiple Grid Sub-Stations across Bihar during FY 2025-26. These initiatives have strengthened the network's ability to support growing demand while reducing loading on existing assets and improving operational flexibility.

Creating Capacity Where It Matters Most

The first phase of augmentation involved the commissioning of additional **50 MVA Power Transformers** at twelve Grid Sub-Stations spread across different regions of Bihar.

The programme commenced with successful charging at Rosera on 19 December 2025 and continued through Manihari, Shahpur Patori, Tarapur, Goh, Ekangarsarai, Tehta, Ramnagar, Banka, Simri Bakhtiyarpur, Dalsinghsarai and Lakhisarai over the subsequent

months. These augmentations have expanded transformation capacity across diverse load centres, enabling the substations to better accommodate growing demand while improving system reliability.

Preparing Substations for Future Requirements

80 MVA Power Transformers were successfully commissioned at Hajipur (Old), Siwan (Old), SKMCH, Dumraon, Muzaffarpur and Purnea. As demand patterns continue to evolve, strengthening transformation capability at these substations helps maintain the operational margins necessary for dependable system performance.

Further strengthening is underway at **Harnaut Grid Sub-Station**, where an 80 MVA Power Transformer has been received and associated bay works are presently in progress.

The benefits of augmentation extend far beyond additional installed capacity. Lower transformer loading, improved voltage regulation, enhanced contingency management capability and greater flexibility during maintenance activities collectively contribute to a more resilient transmission system.

Moreover, these augmentations support a broad geographic area. Consumers and industries served through the strengthened substations benefit from improved system robustness, while operators gain greater flexibility in managing power flows across the network.

"Every megavolt-ampere added today becomes operational flexibility tomorrow."

When One Path Is Not Enough

"Redundancy is not duplication—it is operational insurance."



The reliability of a transmission network is influenced not only by the strength of its assets but also by the availability of alternate pathways through which power can flow.

A Grid Sub-Station dependent on a single source may perform satisfactorily under normal operating conditions. However, maintenance requirements, equipment outages or unforeseen contingencies can significantly affect operational flexibility when alternate supply arrangements are unavailable.

This reality underscores the importance of second source connectivity and network redundancy.

Recognizing the importance of alternate supply pathways, several projects have been undertaken to strengthen second-source connectivity across Bihar. The ongoing construction of the **132 kV D/C Khagaria (New)-Bakhari Transmission Line**, **132 kV D/C Manihari-Barsoi Transmission Line** and **132 kV D/C Sitamarhi-Sheohar Transmission Line** will provide alternate source arrangements to Bakhari, Barsoi and Sheohar Grid Sub-Stations respectively. These schemes are being developed with associated bay formation works required for seamless integration of the new transmission links into the existing network.

The significance of these projects extends beyond the creation of additional transmission lines. Once commissioned, they will strengthen network security, improve restoration capability following outages and provide greater flexibility in managing power flows

across the system. They will also facilitate maintenance activities by ensuring that substations can continue to receive power through alternate routes when one source is temporarily unavailable.

The charging of second source connections across various locations has therefore played an important role in strengthening Bihar's transmission network. Beyond improving reliability, these arrangements facilitate maintenance planning, reduce restoration times and enhance operational flexibility during abnormal system conditions.

A network equipped with multiple pathways possesses an inherent advantage—it has options.

Those options often determine how effectively a transmission system responds when conditions deviate from the norm.

“In transmission planning, an alternate route is often the shortest path to reliability.”

Reimagining Transmission Corridors

“The strongest transmission corridor is often not the newest one—it is the one whose hidden capacity has been unlocked.”

Expanding transmission capability has traditionally been associated with constructing new transmission lines. While new infrastructure remains essential for network expansion, modern transmission planning increasingly focuses on extracting greater value from existing assets.



HTLS (High Temperature Low Sag) technology represents one such approach.

By replacing conventional conductors with advanced HTLS conductors, the power transfer capability of existing transmission corridors can be significantly enhanced without requiring extensive modifications to tower structures or Right of Way.

In essence, HTLS reconductoring allows the network to carry more power through corridors that already exist.

“The future of transmission is not always about building more—it is often about utilizing better.”

During FY 2025-26, seven strategically important transmission corridors were successfully strengthened through HTLS reconductoring.

Transmission Line	
132 kV	Dehri–Kochas S/C
132 kV	Kochas–Pusauli S/C
132 kV	Purnea–Dhamdaha S/C
132 kV	Darbhanga–Madhubani Ckt-II
132 kV	Darbhanga–Madhubani Ckt-I
132 kV	Chhapra–Ekma–Raghunathpur S/C
132 kV	Bettiah–Narkatiyaganj S/C

Total HTLS Reconductoring Completed: 340 Circuit Kilometres

These strengthened corridors span multiple regions of Bihar, including western, northern and eastern parts of the state, enhancing power transfer capability and reducing transmission bottlenecks.

Building upon these achievements, HTLS reconductoring of the **132 kV D/C Kajra–Lakhisarai Transmission Line (25 KM)** has also been planned to further strengthen the transmission corridor as well as facilitate power evacua-

tion from the 115 MW Phase-II Kajra Solar Power Plant.

The significance of HTLS reconductoring lies not merely in the replacement of conductors but in the creation of additional transfer capability, improved corridor utilization and greater operational flexibility—all without the need for entirely new transmission corridors.

Reliability Beyond Normal Operations

“Reliability is not tested during normal operation. It is tested when something unexpected happens.”

The true strength of a transmission network becomes apparent during contingencies.

Whether it is an equipment outage, maintenance shutdown or unexpected change in system conditions, the network's ability to continue operating reliably depends upon the flexibility built into it long before such events occur.

Second circuit charging, bay formation works and efforts aimed at improving N-1 preparedness represent important steps in this direction.

Collectively, these initiatives contribute towards a transmission system capable of adapting to changing circumstances while maintaining reliable operation.

A key component of this preparedness lies in strengthening the network's evacuation infrastructure. In this regard, the construction of **62 nos. of 33 kV bays at various Grid Sub-Stations of BSPTCL**, along with the development of additional **132 kV line bays** and **GIS line bays**, is being done to enhance the network's capability to integrate new assets, accommodate future expansion and improve operational flexibility. These infrastructure additions play a crucial role in facilitating transformer augmentations, second-source connectivity schemes and new transmission line integrations, thereby strengthening the overall reliability of the grid.



The charging of additional circuits and creation of new bays also contribute significantly towards improving N-1 preparedness. By enabling multiple pathways for power flow and facilitating operational reconfiguration during contingencies, these works help ensure that maintenance activities or equipment outages can be managed with minimal impact on consumers.

Another significant milestone in strengthening Bihar's transmission network has been the successful commissioning of the **400 kV Buxar Thermal Power Plant–Naubatpur Transmission Line**. With Circuit-I and Circuit-II successfully charged and synchronized on 16 May 2026 and 08 June 2026, respectively, this **126-kilometre** corridor has become the longest 400 kV transmission line within BSPTCL's network.

Beyond its impressive scale, the strategic importance of this transmission corridor lies in its ability to facilitate bulk power transfer from the Buxar Thermal Power Plant into the state transmission system. By enhancing evacuation capability, reducing transmission constraints and

strengthening the backbone of the network, the line contributes significantly to grid stability, operational reliability and future system readiness.

The commissioning of this corridor represents more than the addition of a transmission line. It strengthens the capacity of the network to accommodate increasing power flows, improves operational flexibility and supports the reliable integration of large-scale generation resources into the grid.

As Bihar's electricity demand continues to evolve, such investments become increasingly important in ensuring that the transmission system remains resilient under both normal and abnormal operating conditions.

"Contingencies are inevitable; preparedness is a choice."

The objective of system strengthening is not merely to address present requirements, but to create a network capable of responding effectively to future challenges. Whether through bay formation, additional circuits,



alternate source arrangements or high-capacity transmission corridors, each intervention contributes towards a common goal—a transmission system that remains reliable when reliability matters most.

“Operational flexibility is the quiet outcome of thoughtful engineering.”

The Strength Behind Reliability

The process of strengthening a transmission network is rarely defined by a single project or milestone. It is achieved through a series of interconnected interventions, each addressing a specific requirement while contributing towards a common objective.

Additional transformation capacity creates room for future demand. Alternate source arrangements reduce dependence on individual pathways. HTLS reconductoring unlocks greater capability from existing infrastructure. Second circuits and bay formation works strengthen preparedness for contingencies.

Together, these initiatives contribute towards a network that is more capable, more flexible and more resilient.

As electricity demand continues to evolve, the importance of such strengthening measures will only increase. The investments made today are not merely additions to

infrastructure; they are investments in reliability, operational security and the long-term capability of Bihar's transmission network.

Every augmentation, every corridor upgrade and every alternate connection contributes to a stronger foundation for reliability.





Powering Sustainability

The 3R Strategy for Responsible Resource Management

Every year on World Environment Day, the global discourse circles back to the need for accelerated transition towards renewable energy. The power sector, historically one of the largest contributors to greenhouse gas emissions and ecological degradation, stands at the centre of the global sustainability agenda. Recent disruptions in the Strait of Hormuz have further underscored the vulnerabilities of fossil fuel dependence for import-heavy economies like India, adding both urgency and strategic weight to the shift toward clean energy.

The contemporary crisis of the open-loop, extractivist economy finds a striking parallel in ancient Indian wisdom. The Puranas narrate the reign of King Vena, an era marked by unbridled consumption, resource exploitation, and adharma. Under his rule, humanity plundered the Earth without restraint, treating the planet as an infinite source and an infinite sink, until Mother Earth revolted, withdrawing her bounty and plunging civilization into scarcity. To correct this ecological collapse, the sages responded by enthroning King Prithu, who restored harmony through responsible governance, restraint, and stewardship, systematically

organizing the terrain to allow prosperity to return without destroying the source.

This philosophical parallel, while metaphorical, offers timeless guidance: true progress lies not in halting human ambition but in aligning it with ecological wisdom and dharma. On the 53rd World Environment Day in 2026, India's multi-tiered energy transition, and Bihar's proactive role within it, stands as a powerful modern manifestation of this shift from Vena's extraction to Prithu's enlightened stewardship, contributing meaningfully to the broader global movement.

In abandoning the unconstrained, linear energy models of the past, India is mapping the principles of Prithu onto a complex dual mandate: rapidly reducing carbon intensity while ensuring affordable, reliable electricity for a growing economy.

The Macro Matrix: Blending Global, National, and Regional Trajectories

At COP28 in Dubai, over 130 nations committed to tripling global renewable energy capacity to at least 11,000 GW by 2030, alongside doubling energy efficiency improvements. The International Energy Agency (IEA)

has highlighted the critical need for massive energy storage expansion, around 1,500 GW, to support this scale of integration.

India has embedded these goals firmly in its Nationally Determined Contributions (NDCs), targeting 500 GW of non-fossil fuel capacity by 2030. Having already surpassed 50% non-fossil share in installed power capacity ahead of schedule, the country's ambitious volume targets now depend on deep sub-national acceleration. Bihar has legally anchored its response through the "Bihar Policy for Promotion of New and Renewable Energy Sources 2025", targeting approximately 23.97 GW of renewables and 6.1 GWh of storage by FY 2029-30.

I. Responsibility:

Multi-Megawatt Innovation and Solar-Plus-Storage

Responsibility demands shifting from passive consumption to proactive, multi-tiered generation that delivers energy democracy and supports economic growth. Globally and nationally, this is reflected in massive utility-scale deployments, distributed systems, storage, and grid modernization. India is advancing this through solar and wind expansion, Production-Linked Incentive (PLI) schemes for domestic manufacturing, Green Energy

Corridors for efficient evacuation, the National Green Hydrogen Mission and policy support like Viability Gap Funding for Battery Storage.

Bihar is shouldering its responsibility through strategic infrastructure deployment:

Colossal Solar-Plus-Storage at Kajra

One of the most significant initiatives is the Kajra project. Phase 1, comprising 185 MW solar paired with 45.4 MW/254 MWh Battery Energy Storage System (BESS), was commissioned in early 2026, making it among India's largest operational battery-backed solar installations. Phase 2 will add 116 MW solar with a 50.5 MW / 241 MWh BESS, bringing the total to 301 MW solar / 495 MWh BESS. This hybrid facility helps shift away from older thermal plants and supplies reliable power, including during evening peaks.

Standalone Battery Storage

A 125 MW / 500 MWh BESS project is under implementation across 15 grid substations to tackle frequency instability in inverter-heavy grids, manage intermittency, and support peak demand.



Decentralized Generation

- Under the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) scheme, Bihar is transforming farmers into Urjadata (energy producers). Under Component-C, 456 MW capacity has been awarded for solarization of agriculture feeders. Of these, two projects have been commissioned: 7 MW at Amas, Gaya and 1.948 MW at Attaula, Arwal. The remaining projects are currently under various stages of implementation.
- Through the “PM Surya Ghar Muft Bijli Yojana” and the State Grid-Connected Rooftop Solar Programme, Bihar has achieved 22,665 domestic installations totalling 81.932 MW. Additionally, 115.7 MW of grid-connected solar capacity has been installed across 12,854 government buildings.

Public Solar Infrastructure

Under the “Mukhyamantri Solar Street Light Scheme”, 11,63,621 solar street lights have been installed across rural and urban areas, significantly enhancing public lighting infrastructure and reducing dependence on conventional grid power for street lighting.

II. Respect: Engineering Within Ecological Limits

Respect prioritizes minimal ecological disruption through innovative siting and dual-use models that

coexist with nature and local communities. Globally, nations are increasingly adopting agrivoltaics, floating solar, and biodiversity-inclusive planning to balance energy needs with food security and ecosystem health.

Faced with acute land-scarcity, Bihar is prioritizing non-invasive infrastructure that minimizes new land acquisition.

Canal Bank Engineering:

Bihar is transforming its extensive irrigation networks into energy corridors. The 2 MW pilot project at Bikram Lock, Patna, was commissioned in 2025, while a larger 10 MW project at Meh is in the pipeline. Feasibility studies for additional sites are underway.

Floating Solar PV (FSPV) Systems:

Under the “Neeche Macchli, Upar Bijli” initiative, Bihar is capturing the dual benefits of agriculture and green energy. Utilizing water bodies provides natural heat sinks that cool silicon cells, reducing thermal degradation and boosting annual Energy Yield Assessments (EYA). Bihar has operationalized installations in Darbhanga (1.6 MW) and Supaul (525 kW), with a 10 MW project under construction at Phulwaria (Nawada).

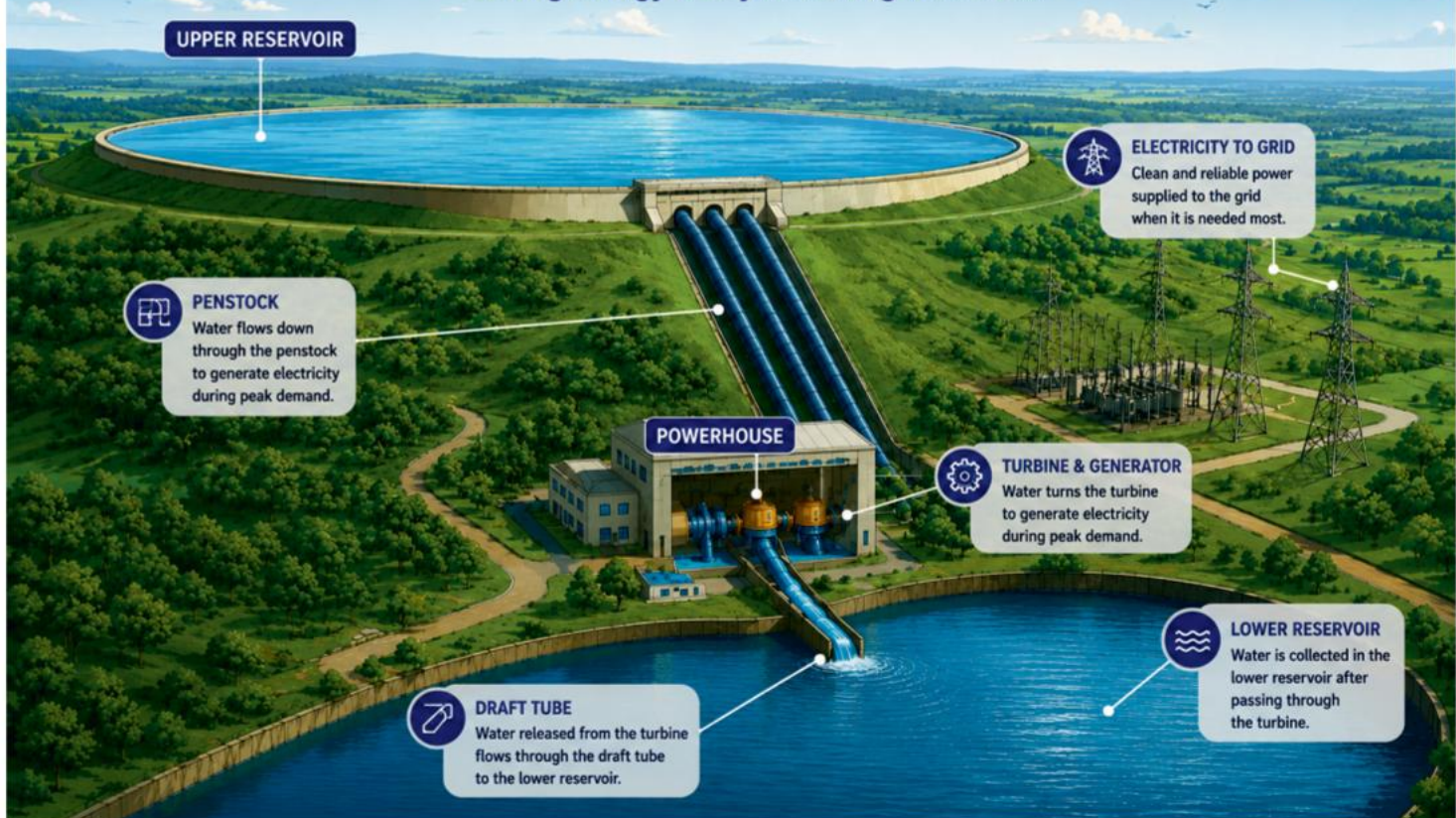
III. Restraint: Resource Efficiency and Sustainable Consumption

While renewable energy systems are cleaner during operation, they are not entirely resource-neutral. Solar



PUMPED STORAGE PROJECT

— Storing Energy Today, Powering Tomorrow —



modules require silicon, silver, aluminum, and copper; batteries need lithium, cobalt, nickel, and graphite. Excessive mining and processing of these materials can create ecological degradation if not managed responsibly. The principle of restraint therefore demands efficiency, circular practices, and diversified storage solutions to minimize ecological footprints and long-term resource dependence.

Pumped Storage Projects (PSP):

Recognizing this, Bihar has notified the “Bihar Pumped Storage Project Policy 2025.” In a major step, the state has signed MoUs for 2,120 MW of closed-loop pumped storage capacity across two mega-projects in Nawada district. With longer design lifespans, these “water batteries” use surplus daytime solar to pump water uphill and release it during peak demand, offering seasonal balancing with a much lower mineral footprint than equivalent battery storage.

Conclusion: Reclaiming Balance

Through this deeply collaborative and multi-layered approach — blending mega-scale innovations like the Kajra project with hyper-local solutions such as rooftop solar, farmer-led generation, canal-top and floating solar, and widespread public lighting — Bihar's renewable energy transition represents far more than a shift in fuel sources. It marks a systemic rebirth rooted in conscious

stewardship.

By integrating the “3 R Strategy” of “Responsibility” (scaling reliable and accessible clean energy), “Respect” (ecosystem-friendly siting and dual-use models), and “Restraint” (resource-efficient storage and circular practices), the state is translating ancient wisdom into modern governance.

While challenges such as transmission bottlenecks, financing gaps, skill development, and execution pace remain, proactive policies, regulatory frameworks, and growing public-private partnerships are steadily overcoming them.

On this World Environment Day, India and Bihar demonstrate that human progress can thrive within ecological boundaries when guided by ancient wisdom, moving decisively away from reckless extraction towards a future defined by responsibility, respect, and restraint. This balanced path not only secures energy for today but safeguards the planet for generations to come.

The journey from extraction to regeneration is well underway — one enlightened policy, one innovative project, and one conscious choice at a time.

Pragati
A.Ex.E, BSPGCL

Excellence Validated: BSPTCL Retains its Prestigious A+ Rating

Bihar State Power Transmission Company Limited (BSPTCL) has once again retained the prestigious **A+ Rating** in the latest performance evaluation conducted by **Power Finance Corporation Limited (PFC)**, reaffirming its position among India's leading state transmission utilities. The achievement reflects the organization's sustained focus on operational excellence, financial prudence, sound governance, and reliable transmission services, while reinforcing its commitment to building a resilient power transmission network for Bihar.

Established in 1986, **Power Finance Corporation Limited (PFC)** is a Government of India enterprise under the Ministry of Power and one of the country's premier financial institutions dedicated to the power sector. Besides financing generation, transmission, and distribution projects, PFC evaluates the performance of power utilities through a comprehensive rating framework that assesses operational efficiency, financial management, governance, infrastructure development, and service delivery. Widely recognised across the sector, the PFC rating serves as an important benchmark of institutional performance and operational capability.

Against this rigorous evaluation framework, BSPTCL's continued retention of the **A+ Rating** underscores the organization's ability to consistently meet high standards across key performance parameters. It reflects not only the strength of its operational systems but also its capacity to sustain reliable, efficient, and customer-focused transmission services in an increasingly dynamic power sector.

Over the past few years, BSPTCL has significantly strengthened Bihar's transmission infrastructure through the expansion of the transmission network, augmentation of transformation capacity, establishment of new Grid Substations, and development of high-capacity transmission corridors. These initiatives have enhanced network reliability, improved power

evacuation capability, and ensured seamless transmission of electricity to meet the state's steadily growing demand. The strengthened transmission system has also enabled distribution utilities to deliver quality and dependable power supply to consumers across Bihar.

The company's continued emphasis on timely project execution, adoption of modern technologies, and efficient operation and maintenance practices has further improved grid resilience and system reliability. By ensuring uninterrupted power flow and creating adequate transmission capacity for future growth, BSPTCL has played a pivotal role in supporting industrial development, infrastructure expansion, and the overall economic progress of Bihar.





सं: 02.06.ई.ए.: वर्गीकरण: 2026-27/09847

The Managing Director
Bihar State Power Transmission Company Limited (BSPTCL)
4th Floor, Vidyut Bhawan
Bailey Road, Patna Patna, Bihar -800001

विषय: राज्य विद्युत संस्थाओं

महोदय,

दिनांक 05 जून, 2026 को जारी अधिसूचना के आधार पर
बना हुआ है।

यह वर्गीकरण 13 मई, 2026 से लागू होगा तथा अगली वर्गीकरण

हम वर्गीकरण के लिए "BSPTCL" से प्राप्त प्रतिबद्धता और सहयोग
करते हैं।

Based on the recent categorization exercise notified
continues to remain as "A+".

This categorization will be with effect from 13th May
categorization is notified.

We appreciate the commitment and cooperation received
forward to your timely and continued support.

Retaining the PFC A+ Rating is more than an institutional recognition—it reflects the confidence placed in BSPTCL's systems, processes, and long-term vision.

It also demonstrates the organization's readiness to meet emerging challenges associated with renewable energy integration, increasing electricity demand, and the evolving requirements of a modern power system.

Above all, this achievement is a tribute to the collective efforts of BSPTCL's officers, engineers, and employees, whose professionalism, technical expertise, and unwavering dedication continue to strengthen Bihar's transmission network. As the state moves towards a more reliable, resilient, and sustainable power sector, BSPTCL remains committed to delivering world-class transmission infrastructure that supports inclusive growth and powers Bihar's development journey.

हरा-भरा बिहार

हाथों में लेकर रंगीन पेंसिल,
बचपन की वो पहली पेंटिंग,
जो हमने बनाई थी...
हम सबने बनाई थी।

नुकीले पहाड़,
बीच से बहती एक नदी,
पहाड़ों के पीछे ढलता सूरज,
आसमान में घूमते पंछी,
आसमान में घूमते पंछी,
खाना-दाना ढूँढ़ते पंछी।

और जब होती बरसात,
बैठकर खिड़की के पास,
बनाते घुँघराले बादल,
चमकती बिजली, काले बादल,
बूंदों की बजती थी पायल।
कागज़ की नावें बहती थी
गलियों में छोटे-छोटे सागर,
पेड़ों से फल तोड़ते,
तितलियों के पीछे भागते थे,
नदियों में नहाते,
और तारों संग जागते थे।

दोपहरी की तपती धूप में,
दिनभर खेलकर जब थक जाते,
ए.सी. की ठंडी हवा नहीं,
पेड़ों की छाँव में चैन पाते।

तब इतनी बिजली नहीं थी,
छतों पर सोते थे हम,
एकटक नभ को निहारते,
सैकड़ों तारे होते थे संग।

आजकल तारे कम दिखाई देते हैं,
मगर तार बहुत दिखाई देते हैं।
आसमान के तारे
रात को रौशन करते हैं,
और BSPTCL के तार
पूरे बिहार को रौशन करते हैं।

अगर प्रकृति और प्रौद्योगिकी
होते दो घनिष्ठ मित्र,
और ये 400 kV का ग्रिड,
ग्रिड नहीं, होता एक सुंदर चित्र।



ट्रांसफॉर्मरस होते पहाड़ बड़े,
विशाल, अडिग, गंभीर खड़े,
आंधी आए, तूफ़ान आए,
अपने कर्तव्य से जुड़े।

इन तारों को नदियाँ बनाते,
बहती अपनी धुन में जातीं,
गाँव, शहर और खेतों तक,
ऊर्जा की गंगा पहुँचातीं।

और ये ऊँचे-ऊँचे टावर...
लोहे की मीनार नहीं,
हरे-भरे वृक्ष हैं,
तारों का कोई भार नहीं।

कोई नीम, कोई पीपल,
कोई बरगद, कोई आम,
कोई शीशम, कोई महुआ,
कोई जामुन, सागौन।



CA होता चौकन्ना हिरण,
हर आहट पर रखता नज़र।
PA होती भोर की किरण,
अंधियारे को करती बेअसर।

जंगल की कोयल होती ये रिले,
हर संकट को करती डिले।
सर्किट ब्रेकर बादल का गर्जन,
फॉल्ट के आगे बनता अड़चन।

LA होता लंबा जिराफ़,
गगन देखता साफ़-साफ़।
इंसुलेटर होते ओस की बूँदें,
निर्मल, शीतल, उजली-उजली।
ढेरों चिड़ियाँ...
तारों पर बैठती
बस इस बार बेफ़िक्र होतीं।

और ये ग़िड... ग़िड नहीं,
एक छोटा-सा जंगल होता,
जहाँ प्रकृति का हर रंग होता।

सुंदर कल्पना है न?
आज जो हम
ये 400 पौधे लगा रहे हैं,
वे भविष्य में इसी कल्पना को
सच करने की राह बना रहे हैं।

ये सिर्फ़ पौधे नहीं
आने वाले वर्षों की छाँव हैं,
लौटती हुई चिड़ियों का भरोसा हैं,
ये मिट्टी की मुस्कान हैं।

इसलिए तकनीक के साथ
पर्यावरण का सामंजस्य भी ज़रूरी है,
प्रकृति के बिना, प्रगति अधूरी है।
इसी दिशा में हम

और भी कदम बढ़ा रहे हैं,
ऊर्जा की स्वच्छ उत्पत्ति हेतु
सोलर पैनल लगा रहे हैं।

इस पृथ्वी पर
पेड़, जंगल और जीव-जंतु,
सबका बराबर अधिकार हो,

और हमारा बिहार...
सिर्फ़ विकसित नहीं,
साँस लेता हुआ, मुस्कुराता हुआ,
हरा-भरा बिहार हो।

प्रिया राज

सहायक कार्यपालक अभियंता
(संचालन एवं सम्पोषण)
बी०एस०पी०टी०सी०एल०

प्रकृति और मानव

प्रकृति यानी शक्ति (Power) और इस प्रकृति का अभिन्न अंश 'मानव' — दोनों एक-दूसरे के पूरक। ब्रह्मांड में मानव मस्तिष्क एक 'शक्ति-पुंज' है, जो प्रकृति के साथ मिलकर प्रस्फुटित हो रहा है, फल-फूल रहा है। प्रकृति अपने संसाधनों को समेटे, यथा सौरमंडल, सूर्य, चाँद, सितारे, पर्वतों, जंगलों, नदियाँ, सागर, खनिजों से भरे समतल मैदान, पठार और उपजाऊ 'धरा' के साथ मानवहित में, मानव कल्याण के लिए सदैव कल्याणार्थ रहा है।

उपरोक्त तथ्यों से स्पष्ट है कि मानव और प्रकृति एक-दूसरे के पूरक रहे हैं। इस प्रकृति के साथ मानव की हर गतिविधियाँ, प्रकृति के साथ संतुलन बनाकर देश और राष्ट्रों के जन जीवन में उत्तरोत्तर विकास कर रही हैं।

परंतु प्रकृति और मानव, आज के परिप्रेक्ष्य में, एक-दूसरे के पूरक होने के बावजूद संघर्ष की परिस्थितियों में परेशान और हताश हो रहे हैं।

औद्योगिक विकास, शहरीकरण और अत्यधिक उपभोग ने संतुलन बिगाड़ दिया है, जिससे जलवायु परिवर्तन, प्रदूषण और वनों की कटाई जैसी न जाने कितनी गंभीर समस्याएँ उत्पन्न हुई हैं।

इस परिस्थिति में मानव को प्रकृति के साथ मिलकर सौहार्दपूर्ण सह-अस्तित्व और सतत विकास ही अब एकमात्र रास्ता है।

वर्तमान परिस्थिति में आज मानव अपने को प्रकृति से भी ज्यादा शक्तिशाली मान बैठा है और एक-दूसरे पर हावी होकर अपनी शक्ति का दुरुपयोग कर रहा है। वह ईर्ष्या, द्वेष, लालच और भय के भँवर-जाल में फँसकर अपनी को ही कष्ट दे रहा है। आज देश और राष्ट्रों के अंदर अपने को सबसे शक्तिशाली साबित करने में युद्ध जैसे हालात पैदा कर दिए हैं। आज विश्व, युद्ध जैसी विभीषिका से जूझ रहा है। इसके कारण मानवता के साथ वह प्रकृति का भी क्षरण कर रहा है। इन परिस्थितियों में मानव को अपनी सोच बदलनी होगी। प्रकृति के ज्ञान-विज्ञान से मानव को ऊर्जा प्राप्त कर, मानवहित में प्रकृति को संरक्षित करना होगा। आपसी वैमनस्य, कलह, द्वेष में एक-दूसरे पर हावी न होकर, एक-दूसरे के पूरक होकर आगे बढ़ना होगा।

तभी हम मानव, प्रकृति के साथ मिलकर विकास कर सकेंगे और एक उन्नत देश और राष्ट्र बनाने में एक-दूसरे को संरक्षित योगदान दे सकेंगे।

प्रकृति समृद्ध तो हम मानव भी समृद्ध। इस पंक्ति को अपना मूल मंत्र बनाना होगा।

राजा कुन्दन कुमार

परिचर

सा० बि० पा० डि० कं० लि०, पटना

कर्म ही

गीता का सच्चा ज्ञान

सुबह की भाग-दौड़ में, थकते कदमों के बीच,
मन हूँटे थोड़ी शांति, उम्मीदों की सीख।
तभी कहीं भीतर से, एक स्वर यह कहता है—
“कर्म करो निरंतर, यही जीवन रहता है।”

हार मिले या जीत मिले, मत मन को कमजोर करो,
अपने हर उत्तरदायित्व को साहस से तुम पूरा करो।
फल की चिंता छोड़ो, मानव, बस कर्म-पथ अपनाओ,
अंधेरों के हर मौसम में, दीप स्वयं बन जाओ।

कार्यालय हो या घर-आंगन, संघर्ष सभी के पास,
किसी की आँखों में सपने, किसी के मन में प्यास।
गीता हमें यही सिखाती— धैर्य कभी मत खोना,
सच्चाई के पथ पर चलकर, अपना जीवन होना।

जब मेहनत से तन थक जाए, मन भी होने लगे उदास,
याद करो अर्जुन को, जिसने पाया था नया प्रकाश।
कृष्ण ने कहा— “उठो पार्थ, जीवन-रण है कर्म का,”
जो कर्तव्य निभाता आगे, वही अधिकारी धर्म का।

नारी हो या कोई पुरुष, सबमें शक्ति महान,
अपने श्रम और निष्ठा से मिलता सच्चा सम्मान।
कार्यस्थल के हर संघर्ष को अवसर समझ निभाओ,
गीता के अमर संदेशों से जीवन सफल बनाओ।

न क्रोध तुम्हें भटका पाए, न भय तुम्हें रोक सके,
सच्चे कर्मों की ज्योति से हर अंधियारा झुक सके।
यही गीता का सार अमर, यही सफलता का मान—
कर्तव्य-पथ पर बढ़ते रहना, यही मनुष्य की शान।

श्वेता सुमन

कनीय विद्युत अभियंता (राजस्व)
सा० बि० पा० डि० कं० लि०

हवा का झोंका

ये जीवन आसान सा था,
पर न जाने कहाँ से
हवा का एक प्यारा सा झोंका आया।
इससे पहले कुछ समझ पाते,
हवा के उस झोंके ने
मन को सम्मोहित कर लिया।

उम्मीद बढ़ती गई,
लगाव बढ़ता गया।
ऐसा लगा मानो
आत्मा का जुड़ाव
और मन का तार
उससे जुड़ गए हों।

पर नियति को कुछ
और मंजूर था।
एक दिन उस हवा के
झोंके को अपना मान बैठे,
न जाने कैसी नादानी कर बैठे।
हवा का वो झोंका
एक तूफान बन गया
और सारी उम्मीदों को
उड़ा ले गया।

अब न हवा का वो
झोंका रहा, न तूफान रहा।
पर आज भी उस तूफान
पर हवा का एक झोंका भारी है।
दिल में एक कसक है,
उसे भूलने की कश्मकश है।

पर मन का जुड़ाव इतना गहरा है
कि अब मन भी वश में नहीं।
नफरत भी प्रेम सा लगने लगा है,
अलगाव भी गहरा लगाव सा लगने
लगा है।

उम्मीदों का दिया
अब भी जल रहा है।
शायद अब कोई तूफान भी
उसे बुझा न सके....



जयशंकर सहनी

मुख्य अभियंता
परियोजना-1 (ग्रामीण)
सांवि०पा०डि०कं०लि०, पटना

फिर सब काम में लगते हैं...

सबकी उम्मीदें पूरी करने की खातिर,
अपने सपनों की उड़ान को थामकर,
सब अपने काम में लगते हैं...

अपनी परेशानियों को दरकिनार करके,
सभी समस्याओं का समाधान करते हुए,
सब अपने काम में लगते हैं...

दुःखद समाचार मिलने पर भी,
भारी मन से और काँपते तन से,
सब अपने काम में लगते हैं...

जीवन को अधूरा छोड़ जो चले गए,
उनकी जिम्मेदारियाँ निभाते हुए,
सब अपने काम में लगते हैं...

हादसे-दुर्घटनाएँ होते रहे,
पर सबको सांत्वना देते हुए,
सब अपने काम में लगते हैं...

पर आज कुछ पल के लिए सब थम जाते हैं,
और अपनी-अपनी संवेदना को जगाते हैं।

जो छूट गए, जो टूट गए,
सबको याद कर लेते हैं,

फिर सब काम में लगते हैं...
फिर सब काम में लगते हैं...

अनमोल कुमारी

सहायक कार्यपालक अभियंता
राज्य भार प्रेषण केंद्र, पटना

पढ़ी-लिखी बेटियाँ

सभी कहते हैं, बेटी पढ़ाओ, बेटी बचाओ,
पर क्या हम पढ़ी-लिखी बेटियों को,
स्वीकार कर पाते हैं?
शिक्षा केवल अक्षरों का ज्ञान नहीं देती,
वह सिखाती है:-
प्रश्न करना, स्वर उठाना।
परन्तु प्रश्न करती हुई बेटियाँ,
अक्सर समाज को अभिमानी प्रतीत होती हैं।
अपने सम्मान हेतु,
स्वर उठाती बेटियों के संस्कारों पर
प्रश्न-चिह्न लगा दिए जाते हैं।
आज पढ़ी-लिखी बेटियाँ द्वंद्व में हैं:-
सभी रिश्तों को बचाने हेतु "मौन",
तो कभी स्वाभिमान के पक्ष में अड़ी।
फिर भी वे हारती नहीं,
धीरे-धीरे अपने अस्तित्व को खोती हुई भी
मौन ओढ़कर मुस्कुराती हैं,
एवं अपने धैर्य, साहस एवं संवेदनाओं से,
पीढ़ियाँ सँवारती चली जाती हैं।
कभी-कभी दंभी होने का तमगा लगने पर भी,
आवाज़ उठाती हैं,
क्योंकि उन्हें ज्ञात होता है कि-
हर मौन शालीनता नहीं होती,
अन्याय के विरुद्ध खड़ा होना ही श्रेष्ठ संस्कार है।

दीप शिखा

विद्युत कार्यपालक अभियंता
सा०बि०पा०डि०कं०लि०

श्रद्धांजलि



श्री रजत कुमार

सहायक कार्यपालक अभियंता

गहरे दुःख और शोक के साथ हम अपने विभाग के कर्तव्यनिष्ठ सहायक कार्यपालक अभियंता, श्री रजत कुमार को विनम्र श्रद्धांजलि अर्पित करते हैं, जिनका लेह में कार्डिएक अरेस्ट (हृदयाघात) से दिनांक 04.05.2026 को अचानक देहान्त हो गया। यह समाचार हम सभी के लिए अत्यंत पीड़ादायक था और इस अपूरणीय क्षति ने उनके परिवार के साथ-साथ पूरे विभाग को शोकाकुल कर दिया है।

श्री रजत कुमार अपने कार्य क्षेत्र के दक्ष एवं जिम्मेदार सहायक कार्यपालक अभियंता थे। उन्होंने अपने कार्यकाल में हमेशा तकनीकी उत्कृष्टता और अनुशासन का परिचय दिया।

श्री कुमार हर परिस्थिति में अपने कर्तव्यों का निर्वहन पूरी कर्मठता एवं लगन से करते थे।

श्री कुमार का व्यवहार सरल, सौम्य, मधुर एवं मृदुभाषी होने के कारण वह सदैव अपने सभी सहकर्मियों के बीच स्मरणीय रहेंगे।

लेह में भ्रमण के दौरान अचानक हुए कार्डिएक अरेस्ट (हृदयाघात) से उनका इस प्रकार असमय चले जाना न केवल उनके परिवार के लिए, बल्कि पूरे विभाग के लिए एक गहरा आघात है। उनके द्वारा दी गई सेवाएं और उनका समर्पण सदैव याद किया जाएगा।

आज वे हमारे बीच नहीं हैं, लेकिन उनकी यादें, उनका योगदान और उनका कर्तव्यनिष्ठ जीवन हम सभी को आगे हमेशा प्रेरित करता रहेगा।



BID ADIEU

Best wishes for your New Innings...



Vijay Kumar
Director (Operation)

SBPDCL



Sangeeta Prasad
General Manager (finance)

BSPHCL



Surendra Kumar Singh
Administrative Officer

SBPDCL



Pramod Kumar
Law Officer

NBPDCL



Ajay Kumar
Switch Board Operator Grade I

SBPDCL



Kumud Shekhar
Office Superintendent

SBPDCL



Munni Prasad
Technician Grade II

SBPDCL



Manoj Kumar Singh
Head Electrician

NBPDCL



Ajay Kumar
Junior Lineman

NBPDCL



Binod Kumar
Skilled Khalasi

SBPDCL



Md. Gaffar
Skilled Khalasi

NBPDCL



Ram Deo Sah
Lineman

NBPDCL



Sri Ramchandra Paswan
Technician Grade I

BSPTCL



Birendra Yadav
Junior Lineman

SBPDCL



Shiv Narayan Kumar
Electrician

NBPDCL



Ram Balak Mahto
Junior Lineman

NBPDCL



Abhiram Thakur
Electrician

NBPDCL



Tileshwar Raut
Attendant
BSPTCL



Awadhesh Kr. Singh
Telecom. Technician
BSPTCL



Sri Krishna Kumar
Technician Grade II
BSPTCL



Sri Bala Paswan
Technician Grade I
BSPTCL



Vijay Kumar
Accountant
SBPDCL



Bindeshwary Prasad
Sr. Store Keeper
SBPDCL



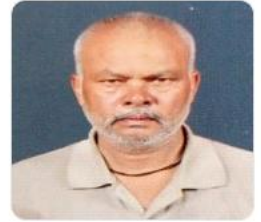
Sri Ramchandra Prasad
Switch Board Operator Grade I
SBPDCL



Ram Bilash Prasad
Switch Board Operator Grade II
SBPDCL



Naresh Prasad
Messenger/office Peon/Peon
BSPHCL



Ram Ishwar Paswan
Lineman
SBPDCL



Md. Rafique
Driver
SBPDCL



Bipin Kumar Raw
Fireman
SBPDCL



Mahesh Kumar
Foreman
SBPDCL



Ram Pravesh Chaudhary
Fire Fighting Driver
BSPHCL



Ajay Kumar
Technician Grade I
SBPDCL



Ashok Kumar Singh
Senior Attendant
BSPHCL



Savitri Devi
Messenger
NBPDC



Pramod Kr. Chaudhary
Switch Board Operator Grade I
NBPDC



Md. Gazi Ansari
Accountant
NBPDC



Vijay Kumar
Foreman
BSPTCL



Ram Jatan Prasad
Lineman
SBPDCL



Hari Prasad Bhagat
Attendant
BSPTCL



Akhtar Husain
Head Foreman
BSPTCL

PHOTO GALLERY

Welcoming the Hon'ble Energy Minister



Hon'ble Energy Minister's Visit



PHOTO GALLERY

Welcoming the Secretary, Energy-cum-CMD, BSPHCL



PHOTO GALLERY

Farewell to the Ex-Secretary, Energy-cum-CMD, BSPHCL



PHOTO GALLERY

Farewell to the Former MD, SBPDCL



PHOTO GALLERY

Welcoming the New MDs of BSPTCL, SBPDCL & BSPGCL



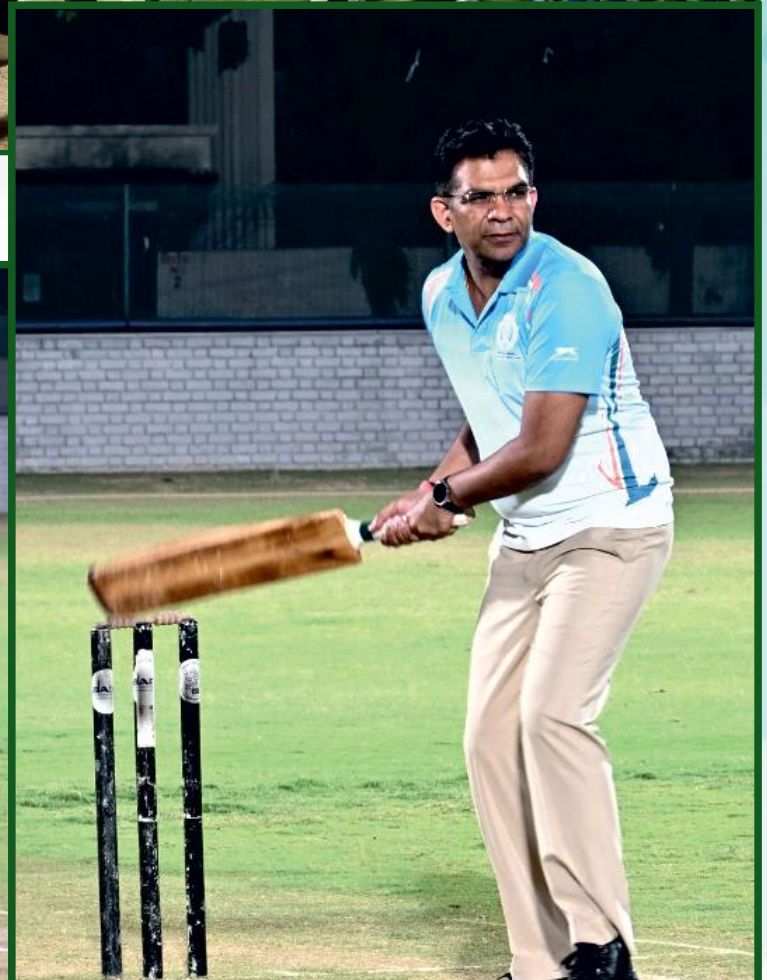
PHOTO GALLERY

JOHN KURIYAN



PHOTO GALLERY

JOHN KURIYAN





ई-ऊर्जस्विनी बिहार स्टेट पावर (होलडिंग) कंपनी लिमिटेड एवं इसकी अनुषंगी कम्पनियों के वेबसाईट पर भी उपलब्ध है।

Email - urjasvini.bsphcl@bihar.gov.in

हमारा आधार... ऊर्जस्वित बिहार...