

# SMART METERS IN INDIA

How they can play a critical role in addressing the challenges of the billing systems

At the 4th Edition of the Smart Meter Summit 2024, organized by Aayera in New Delhi, industry experts discussed various aspects of smart meter deployment utilizing advanced technologies.

In India, the average billing efficiency is 83%, indicating that 17% of electricity is not billed, resulting in significant revenue losses. This unbilled electricity amounts to approximately Rs 100,000 crore, assuming a per-unit cost of Rs 5. Smart meters can play a critical role in addressing the challenges of the current billing systems.

## Building trust

Will the introduction of smart meters lead to an increase or decrease in consumer bills? Sharing his thoughts at the 4th Edition of the Smart Meter Summit 2024, organized by AAYERA in New Delhi, Rajesh Bansal, Energy Consultant and Former CEO of BSES Rajdhani Power Ltd, said, "Smart meters offer various benefits, but the way they are implemented can either build or damage consumer trust. On one hand, smart meters allow for monitoring, disconnection, and payment notices. On the other hand, they provide flexibility, enhance safety, improve power quality, enable faster outage management, and raise awareness to enrich the consumer experience."

Which of these aspects will build trust, and which will damage it? Mr. Bansal adds, "Positive consumer engagement will undoubtedly aid utility operations, while eroding trust can severely hinder project progress."

Amit K Gupta, Head-Business & Policy for India, SEA and Africa, Secure Meters said, "Smart metering in India is not just an opportunity for the Advanced Metering Infrastructure Service Providers (AMISPs) and technology stack providers but also an important responsibility to collaborate in building trust and a robust smart metering infrastructure for the nation." Mr. Gupta is also the Chairman of the International Business Division of Indian Electrical & Electronics Manufacturers' Association (IEEMA) – the apex association of manufacturers of electrical, industrial electronics and allied equipment in India.



AMIT K GUPTA



RAJESH BANSAL



MEENAKSHI KUMAR



KAVINDER SINGH KOHLI

## Leveraging data

The future of smart meters hinges on our ability to optimize the data they generate. In today's scenario, despite their advancements, a lot of the data collected by smart meters remains untapped.

Meenakshi Kumar, Managing Director – Utilities Industry Lead, Accenture Technology India delved into how data-driven insights are transforming the energy landscape.

She said, "Data plays a crucial role in India's smart meter rollout, enhancing monitoring and predictive capabilities across the utility value chain, from generation to retail. Beyond improving billing efficiency, customer data offers significant opportunities for Indian distribution companies (discoms). As data usage accelerates, focusing on security and reliability becomes essential. Engaging in discussions with fellow panellists high-

lighted these critical aspects and opportunities."

Amit Gupta adds, "Against the conventional monthly kWh billing single data, Smart meters with the ability to provide up to 30/15/5 min interval data, can result in generating tens of 1000s of data points monthly. It is a sheer waste if such huge amount of data is not leveraged for improving efficiencies."

## Promoting Make in India

Smart Metering has huge opportunity with "Make in India" programme. According to Amit K Gupta, "India has been leading the smart metering world by not just making in India, but also exporting to the developed world." However, he observes, "Indian industry needs to empower the consumers with appropriate engagement to ensure benefits delivery to end consumers and also

empower the utilities to leverage the smart prepaid metering technology and the data to improve its operational and financial metrics."

## Smart Meter Summit

Commenting on the event, Kavinder Singh Kohli, VP - Customer Success, Kimbal Technologies said, "The SMS Conference offered an insightful exploration into the latest advancements in smart metering technology. Attendees were introduced to cutting-edge solutions and industry trends that are shaping the future of energy management."



Read the news here: <https://bit.ly/mojo-sms24>

# 'Semiconductor industry is the next step for us'

Manish Walia, Head Automation South Asia (India, Bangladesh, Sri Lanka, Nepal), Delta Electronics, shares insights into the company's plans and innovations

India's semiconductor industry is on a trajectory of significant growth, driven by strategic government initiatives and international partnerships. These concerted efforts are all set to make India a reliable and strategic player in the global semiconductor industry.

## business growth in the semiconductor sector?

It's too early to comment on the business volume, but we are optimistic. Delta, along with Universal Instruments, has top-notch equipment for the semiconductor industry, and we aim to become a key player in this segment. The semiconductor industry is evolving rapidly, and we believe there are significant opportunities for growth. Our focus is on providing advanced solutions that meet the high standards of the semiconductor manufacturing process. By leveraging our expertise and innovative technologies, we aim to capture a substantial share of the market and contribute to the growth of the semiconductor industry in India.

## Where does Delta Electronics India stand today in the industrial automation business, and what are your objectives for the next five years?

We are one of the fastest-growing industrial automation businesses in India among all our peers. This growth has been consistent, driven by the strong capabilities of our team. Our strategic objective for the next five years is to further expand our product lines and market presence. We aim to leverage our strengths in industrial automation to address emerging market needs and capitalize on new opportunities. Our growth strategy includes investing in research and development, enhancing our manufacturing capabilities, and strengthening our customer relationships. By doing so, we aim to continue our trajectory of growth and innovation, maintaining our position as a leader in the industrial automation sector.

## Can you discuss Delta Electronics' commitment to the 'Make in India' initiative?

The Krishnagiri facility (in Tamil Nadu) is growing, with thousands of employees and significant investments. This facility caters not only to domestic consumption but also to global exports. Our R&D setup is expanding, with a target of over 2,000 engineers. Delta is committed to 'Make in India' for India and the World. Over the last five years, we have seen significant progress in



MANISH WALIA

## Is EV as a segment going to contribute to your growth?

We are heavily investing in new energy sectors like electric vehicles (EVs), battery manufacturing, and storage. Our focus is not only on being a product supplier to integrators and line builders but also on building high-end equipment for assembly lines in these industries. This includes advanced solutions for EV manufacturing and battery production, which are critical for the growth of these sectors. Our expertise in automation and manufacturing allows us to develop and provide solutions that enhance efficiency, precision, and reliability in these emerging markets. We see significant potential in the new energy sector and are committed to supporting its growth through our innovative solutions and advanced technologies.

our operations and investments in India. The Krishnagiri facility is a testament to our commitment, to serving as a major manufacturing and R&D hub. It supports a wide range of products for both domestic and international markets. We are continuously investing in this facility to enhance its capabilities and expand its workforce. Our goal is to support India's growth by providing advanced automation solutions and contributing to the global supply chain. Delta's commitment to 'Make in India' reflects our dedication to supporting local industries and fostering innovation in the country.

## How does Delta Electronics plan to address the pain points of industries in India?

We understand the specific needs of industries in India. Our experience as an electronics company with a strong manufacturing base globally helps us provide customized and standard solutions for local industries. We bring our global knowledge and expertise to address the challenges faced by our customers in India. Whether it is electronics line equipment or component-level solutions, we work closely with our customers to develop solutions that meet their unique requirements. Our approach involves identifying pain points, developing tailored solutions, and continuously improving our offerings to ensure customer satisfaction. By leveraging our global experience and local insights, we aim to provide solutions that drive efficiency, productivity, and growth for industries in India.

## What are your views on the semiconductor industry?

The semiconductor industry is the next step for us. We see significant medium- to long-term investments coming from both Indian and international groups. While it's too early to comment on the exact business volume, we are optimistic about the potential of this sector. Delta, along with Universal Instruments, offers top-notch equipment for the semiconductor industry. Our solutions are designed to meet the high standards and demands of semiconductor manufacturing, ensuring efficiency and precision. We believe that with the right investments and strategic partnerships, the semiconductor industry in India has the potential to become a significant player in the global market. Delta is well-positioned to contribute to this growth and play a key role in the industry's development.



Watch the video here: <https://bit.ly/delta-semicon-1>

## What are your projections for



In a landmark decision aimed at fostering eco-friendly transportation, the Uttar Pradesh (UP) government has introduced a 100 percent waiver on registration fees for hybrid vehicles. This initiative is part of the state's broader efforts to promote sustainable mobility and reduce carbon emissions. The waiver will be applicable until October 2025, offering a significant incentive for those considering the purchase of hybrid vehicles.

## Impact on popular hybrid models

Several popular hybrid models are set to benefit from this initiative. Notable among them are the Maruti Suzuki Grand Vitara, Toyota Innova Hycross, and Urban Cruiser Hyryder. For instance, the average registration cost for hybrid variants of the Grand Vitara and Urban Cruiser Hyryder is approximately Rs 1.8 lakh in UP. Under the new policy, this cost will be completely waived, making these vehicles more accessible to consumers.

Vinkesh Gulati, Chairman of Research & Academy at the Federation of Automobile Dealers Association (FADA), shared his thoughts on the policy. He said, "In 2022, the Uttar Pradesh government introduced an electric vehicle policy, which began implementation in June 2023. The policy encourages the purchase of electric and hybrid vehicles within UP, requiring these vehicles to be registered in the state. While this initiative is commendable, it's worth noting that hybrids are generally expensive. This makes them less accessible to the average person in UP, who has lower purchasing power compared to residents of metropolitan areas like Delhi or Mumbai. As a result, the benefits for UP's general population



# Zero registration fees on hybrid vehicles

UP Government offers 100 percent waiver

are quite limited."

He further added, "On July 11, the UP



Vinkesh Gulati

government held a meeting with stakeholders to explore ways to adjust the policy to better benefit the general public. This ongoing development is noteworthy, especially given UP's significant role as a major state in India. The policy includes a registration fee of 10 percent for vehicles costing over Rs 10 lakh, with road tax exemptions for vehicles priced at Rs 25 lakh, amounting to a potential saving of Rs 2.5 lakh. This policy reflects the state's commitment to promoting greener, more efficient vehicles and a safer environment. However, it may take three to six months to fully implement, and it is hoped that other states will introduce

similar incentives."

Randheer Singh, CEO of ForeSee Advisors and former Director of EMobility at NITI Aayog said, "The UP government's push to promote electric vehicles (EVs) is a notable advancement. The recent policy update, which includes hybrids, aligns well with national schemes like Faster Adoption & Manufacturing of Electric Vehicles (FAME) II and the Advanced Chemistry Cell (ACC) PLI, focusing on battery components. By syncing with these national policies, UP is making itself more appealing to manufacturers, driving demand, and encouraging consumer interest."

He further added, "The policy supports research and development, potentially leading to more innovative and cost-effective production methods. Additionally, it aligns with national programs, providing benefits such as waiving road tax and registration fees, which typically range from 4 percent to 10 percent of the vehicle's cost. For example, a Rs 10 lakh EV could save between Rs 40,000 and Rs 1 lakh in road tax."

The UP government's decision to waive registration fees for hybrid vehicles is a progressive step towards encouraging eco-friendly transportation. By making popular hybrid models more affordable, this initiative not only supports environmental sustainability but also offers substantial financial benefits to consumers. As we move forward, such policies could pave the way for a greener and more sustainable future on our roads.



Watch the video here: <https://bit.ly/mojo-up-ev>

# How Maharashtra will power data centres?

N.K. Jain, Director of N K Jain Consulting Engineers, shares insights

Data centres, the backbone of our digital world, consume approximately 3% of the world's electricity—a figure expected to rise as data storage and processing demands increase. In India, Mumbai has emerged as a crucial hub for these facilities, housing nearly half of the country's data centres.

In 2023, the city became the third-largest data centre market in the Asia-Pacific region, boasting a total capacity of 2,337 MW, just behind Shanghai and Tokyo. Major players such as Amazon Web Services (AWS), AdaniConneX, Airtel Nxtra, Colt Data Services, CtrlS, Equinix, NTT, Reliance, Sify, STT Global, WebWerks, and Yotta have already made significant investments in the region. This Q&A explores how Maharashtra plans to

power these energy-intensive data centres, featuring insights from N.K. Jain, Director of N K Jain Consulting Engineers.

## How do you view the current energy consumption of data centers, given their significant power usage in the energy sector?

Data centers are indeed significant power consumers, often described as "power guzzlers" due to their high energy usage. In Tier I cities, including those in India, modern data centers typically consume around 50 megawatts (MW) of power each. Some campuses, housing multiple data centers, might use between 200 and 300

MW—akin to a mini power station. Therefore, ensuring adequate power availability, generation, and grid capacity is crucial. Additionally, there is a strong emphasis on utilizing renewable energy, with data centers striving to source as much green power as possible from the grid.

## Given the large number of data centers already established in Mumbai and its suburbs, how prepared are the local power infrastructure and utilities to meet these data centers' energy needs?

There has been a notable shift in how utility companies, particularly government-owned

ones, handle power supply for data centers. Historically, these utilities were less proactive, and consumers faced lengthy application processes and waits for power. However, the situation has improved significantly. Both government and private utilities are now more responsive and are actively working to meet the power demands of data centers.

Data centers require Extra High Tension (EHT) power rather than Low Tension (LT) or High Tension (HT). They typically need power at 110 KV, 132 KV, or 200 KV. Moreover, data centers often request dual feeders—two separate lines from different substations—to ensure a reliable power supply. Utilities are increasingly accommodating these rigorous requirements to support the expanding data center industry.



Watch the video here: <https://bit.ly/mojo-data-centre>

N. K. Jain