

INTERVIEW WITH LALIT JALAN, CEO RELIANCE ENERGY



MI What is the structure of Reliance Energy and Reliance Infrastructure?

JALAN Reliance Infrastructure Ltd is not only India's largest private sector enterprise in power utility but also the largest private sector player in many other infrastructure sectors of India. In the power sector the company is involved in generation, transmission, distribution and trading of electricity and constructing power plants as EPC partners.

In the infrastructure space the company is focused on roads, urban infrastructure and real estate.

MI What is your personal background?

JALAN I joined Reliance Industries Limited as Chief Executive Officer, Polypropylene Business in 1995 as the youngest CEO at Reliance. I was the Executive Director of Reliance Infrastructure prior to my appointment to the position of full-time director of the company on April 25, 2007. I am the chairman of BSES Rajdhani Power Limited and BSES Yamuna Power Limited. I also sit on the boards of Reliance Power Transmission Limited and Reliance Digital World Limited. I am responsible for the entire distribution, transmission, trading and shared services of the company. I did my MBA in Finance from

the prestigious Wharton School, University of Pennsylvania and MS in Computer Science from Moore School, University of Pennsylvania. I did my BTech from the Indian Institute of Technology, Kanpur.

MI What role does Reliance Energy play today and what is your vision?

JALAN Reliance Energy used to be BSES and was acquired in 2003 by Reliance, starting with Mumbai customers as well as a power plant for the Maharashtra region. It has been a long journey. Today Reliance Energy distributes more than 28 billion units of electricity to cover 25 million consumers across different parts of the country, including Mumbai and Delhi. Reliance Energy-owned Power Plants generate 941 MW of electricity, from power stations located in Maharashtra, Andhra Pradesh, Kerala, Karnataka and Goa. Reliance Energy is also executing the first 100% private sector power transmission project for a western grid with an investment worth US\$0.5 billion. Reliance Energy is also a leading EPC player with an order book of about US\$2 billion worth of contracts in the power sector.

I want the consulting to SEBs to grow at a higher pace and also see Reliance as the largest transport company around, whilst remaining within the top three trading companies in India and number one player in executing EPC projects.

MI What are the major challenges?

JALAN The challenges are specific depending on the vertical. From my point of view, within generation the major obstacle is and will be land clearance and ongoing supply of fuel. In terms of distribution, the biggest challenge is that 90% of

all Indian utilities are still state-owned, which makes them less flexible in terms of competitiveness and technology upgrades.

My vision is to move more utilities to the private sector in order to achieve realistic targets as well as work more closely with government and planning bodies. Within the transmission vertical, privatisation is equally applicable and an increased number of privatised companies would allow them to be more competitive in the future and ensure supply security for an ever-growing Indian economy.

MI What metering projects are under way?

JALAN Metering has been transformed from ground zero (using static meters) to state of the art meters today. Reliance undertook a lot of research into global case studies, whilst keeping in mind unique Indian challenges (such as tampering and revenue protection). They solved the major problems by designing their own meter according to Reliance's specifications and are satisfied with the product, which I would describe as a 'future-proof' state of the art AMR meter.

Within Delhi, Reliance has implemented optical meter reading, AMR for all high-end customers. We are using our own solution for meter reading as well as our own Reliance specific software as third-party software product cost is too high. Load information is online 24/7. These solutions are currently implemented for Reliance companies, but we plan to market them to SEBs within India and in the medium-term to utilities worldwide.

Another project worth mentioning is how we connect a smart meter to a 'smart substation', which not only provides online information of various power-related parameters of a distribution transformer, but also includes data such as humidity level, oil level, etc of DTR. This exercise is currently undergoing a pilot study.

In terms of finding solutions for the grid, all technologies are automated facilitating ABT (availability-based tariff); and SEBs have started using Reliance specifications for vendor requirements. Our SCADA site is world-class with fully automated Mumbai-based control centres.

MI What CRM and R&D projects are under way?

JALAN Reliance doesn't see their energy customer as an 'electricity customer' but rather as a customer that requires and gets world-class customer service, including a 24/7 multilingual bill in a language of their choice and other personalised billing services.

They are proud of their excellent recovery team, using very good software products. In terms of non-payment, Reliance can disconnect and ultimately remove customer meters. Regarding theft, Reliance uses energy accounting to help discover theft at any time. They also work with task teams, cooperating closely with the police to enforce this policy. Tampering led to several power-theft arrests with US\$2.042 collections from energy theft alone. We employ 15 enforcement teams and while one does not expect the major hotel chains or big paper mills as well as high-income groups to steal electricity, this does occur to a great extent.

In terms of R&D, we have our own laboratory. This is accredited by the government of India, with a metering team in Mumbai and Delhi, a team of business analysts to catch tampering and an R&D department that is working on new design requirements due to the customer getting smarter and smarter.

MI What is your vision for the future?

JALAN To be one of the two largest power producers, the largest distribution company and the largest private electricity trader and EPC in India, whilst also playing an active role in the privatisation process.

Split-core Current Transfor

The split core current transformer design is used for energy efficiency monitoring and automation applications. These include sub-metering cost allocation, dynamic energy consumption and peak load analysis. The JC series of AC current transformers are a simple to use, compact split-core design which is easily installed for metering applications. They are ideal for distributed measurement systems and can be retro-fitted in installations and non-interruptible equipment as there is no need for disconnection and reconnection of wiring.

- Sensing aperture: Choice of 10/16/24/36 mm
- Choice of primary current ranges: 5-600 Arms
- Turns Ratio: 1/100~1/3000 (Standard Models)
- Turns Ratio: 1/4000~1/20000 (On request)
- Phase Angle Error: $+0.5\pm 0.5^\circ \sim +2.0\pm 1.0^\circ$
- Linearity Error: $\pm 1\%$



Split-core Current Transdu

The split core current transducer is designed for use in energy management with convenient connection to electronic metering and other devices. It may be applied for current measurement in a system of distributed power line carriers (PLCs) or in remote control systems via SCADA software for automation and supervision. Other applications include security, condition monitoring, load monitoring, in protection systems and for predictive maintenance of conveyers, pumps or HVAC motors. The CT is an all-in-one compact arrangement with the following features improving productivity:

- Sensing aperture: Choice of 10/16/24/36 mm
- Choice of primary current ranges: 5-500 Arms
- Choice of standard output types: 4-20 mA, 0-5 V or 0-10 V
- Accuracy: $<2\%$ of primary current.



Current Transformer for Electronic Watt-hour Meter

J&D Electronics also supplies the JDT series of DC tolerant CTs for electronic Watt-hour meters compliant with IEC 62053-21, -23 and EN 50470-3. Features of the JDT series CTs include:

- Choice of primary current ranges: 40-120 Arms (Standard Models)
- Choice of primary current ranges: 5-400 Arms (On request)
- Choice of shielded type (On request)



Since 1994, J&D has been manufacturing Current Transformer the core component of power instrument industry. J&D has been acknowledged through customer satisfaction as industry leader of specialized enterprises offering a prompt, accurate innovative product development and manufacturing system.

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