

THINK PAD

Version 4.0

For the “Super Braves” in the Indian Power Sector



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6th Floor, Le Meridien Commercial Tower, Raisina Road, Connaught Place
New Delhi - 110001

Board Line - 011 - 49556666 Fax: +91 11 4955 6677

www.ippai.org | info@ippai.org

KEY ISSUES IN THE POWER SECTOR

Imagination has brought mankind through
the dark ages to its present state of
civilization. Imagination led Columbus to
discover America. Imagination led Franklin
to discover electricity.

- L. Frank Baum

Key Issues in the Power Sector

1. Power Demand-Supply Mismatch

(a) Power Surplus India!

In a first, India to have power surplus in FY17: Piyush Goyal

DNA | Tue, 2 Aug 2016, Mumbai, DNA Webdesk

Goyal was answering a question in the Rajya Sabha about the power situation in the country.

India is expected to have surplus power supply in 2016-17, Power Minister Piyush Goyal told the Rajya Sabha on Tuesday. He was responding to a question on the power situation in the country. He said, "according to the Load Generation Balance Report (LGBR) for the year 2016-17 published by the Central Electricity Authority (CEA), surplus power is anticipated for 1.1% in terms of energy and 2.6% in terms of peak."

This is the first time that India will witness a power surplus situation, he told the Upper House. While explaining the surplus, Goyal said, it wasn't possible because demand has gone down, instead, the surplus power generation has been possible despite a 7.03% growth in demand in the last two years against 5.65% in the earlier ten years.

"Surplus power has been possible because we have been able to unclog the system, and get a lot of projects working that were stuck due to environmental clearances, financial difficulties.

"We have got them all back on track and increased the installed capacity significantly," he said. In FY16, peak hour deficit stood at 3.2% and non-peak hour deficit was 2.1%.

(b) Lots of cheap electricity ... but ... few takers, large power cuts!

Lots of cheap electricity, few takers, large power cuts; check out why that is Lots of cheap electricity, few takers, large power cuts

By: The Financial Express | Updated: June 9, 2016

Power minister Piyush Goyal's regular afternoon tweets on power being available in the country's power exchanges at reasonable rates of around ₹2.5 per unit come as more than a bit of a surprise considering the long power cuts in most areas of the country every day. While it is true the Central Electricity Authority (CEA) took everyone by surprise when it said that India would be power surplus in FY17 with a peak surplus of 3.1%—the east, north-east and north, though, have a deficit—what is not clear is whether Goyal's tweets imply India has licked its power problem or whether they are symptomatic of a deeper malaise. As FE reported on Wednesday, with an average of 1,621 million units of power available on the spot market every month, this can more than cover the deficit of most of the big states. Uttar Pradesh, which has the largest deficit of 846 million units per month just buys 22 million units per month. Karnataka, with a 239 million unit shortage purchases a mere 5 million units; Rajasthan with a 27 million unit shortage buys just 3 million units. It is only Bihar which has a shortage of 21 million units that buys 309 million units from various power exchanges.

Despite this, the main reason why state electricity boards (SEBs) do not buy much spot electricity is that it is just not viable to do so. For one, most have expensive PPAs already tied up, so the actual cost of buying spot power is not the ₹2.3-2.5 that Goyal tweets about, but has to include the capital charge that will have to be paid to generating companies being asked to back down. In many areas, there is a shortage of adequate transmission and distribution capacity, so while it is profitable to buy spot power and supply it to customers, the grid simply cannot handle it—this is where Goyal's Deendayal Upadhyaya Gram Jyoti Yojana and Integrated Power Development scheme comes in, but it will take at least a few years for it to be fully rolled out. While the UDAY scheme has played a big role in reducing SEB debt, in cases like Uttar Pradesh, there are still huge outstandings to suppliers which makes further borrowing to buy spot power difficult. By far the biggest reason, though, is that with 40-50% power theft levels, the real cost of the spot power works out to around ₹5 per unit, a rate which is much higher than that paid for by a very large proportion of customers—in which case, SEBs are being rational in preferring to restrict supplies instead of just generating more losses. Piyush Goyal would do well not to declare victory till UDAY actually fixes these issues—right now, the only progress to report is that banks have been arm-twisted into taking a 5-6 percentage point hit on SEB loans.

Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, I am told that India will be surplus in power from 2017. What are your thoughts?*

Mega Watt Ji- Kilo Watt Ji, this is the best news! In fact, we have already become power surplus now. There is so much power 24X7. Recently, people are not able to switch off their power. It is burning! Even during the day, lights are burning! We are trying very hard to find out new technology to switch off the surplus power.

Kilo Watt Ji- *But I am told there is darkness in most of the rural parts of the country*

Mega Watt Ji- Arey Papaji ... this is Indian ingenious thinking ... they must have found out a way to switch off surplus power!!!

Kilo Watt Ji- *Mega Watt Ji, I am not able to understand ... Power Minister is saying that there is lots of cheap electricity ... so why are there only a few takers and large power cuts?*

Mega Watt Ji- *Electricity is free. Where is the question of cheap or expensive? It has been free. It will always be free. Who needs to pay?*

Kilo Watt Ji- *You mean to say there is no such thing as cheap electricity? And he is saying there are few takers?*

Mega Watt Ji- *Kilowatt Ji, when it is free, we are all taking. Who said there are few takers? It's all free!*

Kilo Watt Ji- *But Megawatt Ji, are any meters not there?*

Mega Watt Ji- Arey Kilowattji ... why do you need meters for free power? People have a fundamental right to free power, as per the Constitution!!!



Sarcasm is just like electricity.
Half of the people don't get it!
- Anonymous

Key Issues in the Power Sector

2. Stressed Assets and Bankers!

Bankers list hurdles in financing power projects

Cite low PLF, no long-term PPAs, delays in land acquisition and green nod as key hurdles

Sanjay Jog & Abhijit Lele | Mumbai July 21, 2016

Bankers highlighted key issues in financing power projects at a recent meeting convened by the Union power ministry with states. They said some issues were low plant load factor (PLF), which ranges between 58 per cent and 62 per cent, far short of the normative PLF of 85 per cent. They also cited lack of long-term power purchase agreements (PPAs), fuel supply agreements and delays in acquisition of land and grant of environmental clearances.

Power ministry official said bankers pointed out that about 12,000 Mw of capacity was idling for want of long-term PPAs and another 12,400 Mw of projects were awaiting fuel supply.

A State Bank of India executive said stranded power projects could be picked up by stressed asset funds to collaborate with operating partners for revival. Taking over power projects is not a feasible option for banks.

A Maharashtra government official said the power ministry had assured bankers coal linkages without penalty would be auctioned soon. Besides, a mid-term bidding platform will also be launched. The power ministry asked bankers to accept PPAs for seven years instead of 25 years and suggested only one PPA in place of three separate documents for imported coal, linkage coal and captive coal.

Loans for power projects? Banks tight-fisted

By KVL Akshay, ET Bureau | Sep 05, 2016

Banking consortia are delaying lending decisions for stranded power projects that are close to completion, pushing investment of nearly INR 2 lakh crore towards becoming non-performing assets (NPAs), industry executives say.

At stake are plants with total capacity of 25,000 MW, with nearly complete coal-based projects being the most vulnerable. Gas-fired plants stranded by fuel scarcity have gained from government's auction of imported gas, the latest beneficiaries being nine firms including Ratnagiri, GVK Power (BSE -1.96 %) and Lanco Infratech (BSE -1.75 %), which emerged winners in the fourth phase of auction on Saturday.

Bankers say normal lending cannot resume unless various issues are resolved in the sector, which first saw a rush of investment, but was hit by fuel scarcity, policy drift in the previous regime, absence of power purchase pacts and cancellation of coal mines by the Supreme Court. Banks are reluctant to fund infrastructure, particularly the heavily-indebted power sector, as bad loans have eaten into their profits.



Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, I am not able to understand ... these banker fellows are now finding hurdles in financing power projects? What are the hurdles?*

Mega Watt Ji- *Arey yaar ... there is no hurdle in financing. The hurdle is in recovering, and they are trying to unnecessarily mislead the public by saying there are hurdles in financing. In fact, my rich friend who lives on the 102nd floor of his skyscraper penthouse has found a banker friend who is willing to help remove all hurdles in one shot! It is only an excuse that there are hurdles. Power projects are willing to take as much finance as possible. Bankers are always looking for an excuse!*

Kilo Watt Ji- *You mean there are no hurdles?*

Mega Watt Ji- *Arey bhai!! Where are the hurdles? There is only 4 lakh crores requirement for funds. Let the bankers finance it!!!*

Kilo Watt Ji- *So, how will new power projects be financed keeping private sector participation in mind?*

Mega Watt Ji- *Mostly by the state, however, the 'canteen' and ancillary services of each plant will be outsourced to the private sector through long term competitive bidding!*



With great power comes great
electricity bill.

Source- Funny Quotes

Key Issues in the Power Sector

3. Fuel Demand-Supply Mismatch!

Too much coal, too few takers; government revokes Coal India's 1-bt target

By Debjoy Sengupta, ET Bureau | Sep 01, 2016

The government's plan to push Coal India (BSE 0.45%) to produce one billion tonnes of coal by 2020 has taken a back seat as officials now think that the Indian economy is not yet equipped to consume the quantity and huge unsold stocks are testimony to it. Now the company has been asked to produce to match demand.

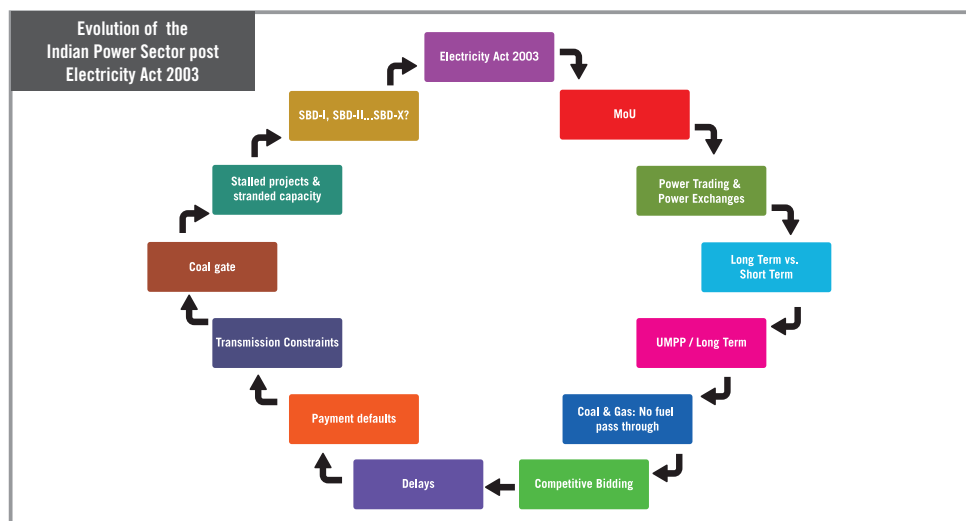
This is likely to mean that Coal India will have to be content with producing less than the initial targets set for each year leading to less than one billion tonnes of production by 2020.

"Coal India has now been asked to produce as much as the market can consume. It has also been asked to devise ways so that more coal is sold, including import substitution as well as devise new types of e-auction that can lead to more coal sales," a coal sector official said.

In 2015, when the one billion tonne target was set, coal was in short supply and a number of coal fired power plants were languishing due to non-availability of the fossil fuel, production targets for each years starting 2015-16 to reach one billion tonnes by 2020.

Coal India responded extremely well to the government's new production target and managed to meet it in the first year - 2015-16. However, it resulted in coal surplus at almost all coal plants consistently for the last several months as well as huge unsold stocks at pit heads. If coal is stocked beyond a point it tends to catch fire and hence is risky.

In fact, at present total coal stocks has been hovering around 73 million tonnes, of which 28 million tonnes which is enough to produce power non-stop for 21 days has been lying with power plants. The rest at 45 million tonnes is stacked at mine yards.



Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, now I am told there is too much coal. Before, they said there was no coal. Then there was Coalgate.*

Mega Watt Ji- *Kilowattji, Coalgate is my favourite toothpaste! However, it has not whitened my teeth much! But let me tell you – yeh hai bhi aur nahi bhi!! There is coal, but it is not available for people who generate power or who make steel or who make cement and other things.*

Kilo Watt Ji- *Then who is it available for?*

Mega Watt Ji- *It is available only for those people who have got long term contracts to supply power to distribution companies.*

Kilo Watt Ji- *But Megawatt Ji, I am seeing that the distribution companies are not buying power for long term?*

Mega Watt Ji- *Kilowattji ... that's beside the point. They may not be buying long term power, but who's listening? So we have surplus coal, surplus power, free coal, free power. Life is becoming very liberating!!!*



Key Issues in the Power Sector

4. Transmission Constraints

Unsold power at exchange could have lit three million homes in August

By Debjoy Sengupta, ET Bureau | Sep 02, 2016

In August, the opportunity to lit at least 3 million homes was lost every day because no utility was willing to buy that power available at exchanges and send it to homes. In fact, during July too, the country lost the opportunity to light a similar 3 million households.

According to data released by India Energy Exchange, during August average daily sell bids was 8,904 MW and average daily buy bids were 5,518 MW - around 3386 MW of power remained unsold every single day. In July, average daily purchase bids of 5,360 MW were placed and sell bids of 9,061 MW were received - 3,701 MW remained unsold daily.

Transmission congestion added to the woes and in the inter-state corridors. About 118 million units were lost due to transmission congestion in August, against 68 million units in the previous month.

Grid curtailment to affect credit profiles of green projects: Ind-Ra

August 1, 2016, Economic Times in ET Commentary | Environment, India | ET

NEW DELHI: Spread of grid curtailment has started to threaten the credit worthiness of renewable energy projects and has the potential to impede capacity addition, says India Ratings and Research (Ind-Ra).

The non-availability of the grid has majorly impaired the operational strength of some wind projects, given the sizable installed capacities, Ind-Ra said in a statement.

The failure to address grid issues can gradually destabilise the solar projects in the ensuing years. Grid curtailment is unpredictable, thus the ill-equipped developers have been grappling to manage their finances, barring the large ones.

The uncertain source supply (uncontrollable) and grid non-availability (controllable), despite its 'must run' status, is slowly shaking the fledgling renewable energy sector, it said.

It further said the front runner in renewable energy Tamil Nadu widely curtailed the grid availability in the last three years; the phenomenon appears to have spread to Rajasthan in FY17 and FY16.



Key Issues in the Power Sector

Kilo Watt Ji- Mega Watt Ji,
*I am told now with the onset
of Renewable Energy, the
transmission constraints are
going to disappear*

Mega Watt Ji- Kilowattji, please note we are very logical people. We have given priority to renewable power which costs more than INR 10/unit, instead of thermal power which costs INR 2/unit – all in the name of saving our environment!!! It is a different matter altogether that we have got epidemics of chikungunya, dengue, malaria, typhoid, cholera...but we are making progress in saving our environment by going solar and wind!!!!

Kilo Watt Ji- *Megawatt Ji, but what does this have to do with transmission congestion?*

Mega Watt Ji- Kilowatt Ji, there is no transmission congestion. It is all in your mind. We are building super highways and flyovers and green transmission corridors which will go over the existing transmission lines. In fact, there is a project where we are working on wireless transmission of green energy. So don't worry. There is no problem with our transmission. The problem lies in the overall mission!!!



We're electrical items and when we die the electricity goes somewhere else. When we die our energy goes into the galaxy.

- Dominic Monaghan

Key Issues in the Power Sector

5. Distribution Segment

(a) Ailing & Failing DISCOMs!

Surplus power may cause Rs 8K cr loss to discoms in FY'17

PTI | Aug 9, 2016, Times of India

New Delhi, Aug 9: State power distribution companies (discoms) are staring at a net loss of Rs 8,000 crore in the current fiscal owing to purchase agreements in excess of power demand, according to India Ratings and Research (Ind-Ra).

Ind-Ra's expectation is based on the assumption that discoms will surrender the power purchase agreements (PPAs) with the highest variable cost by paying the fixed costs based on the agreement, it said in a statement.

According to the statement, 18 out of 36 states/UTs are expected to be power surplus in FY2016-17, as per the Central Electricity Authority's (CEA) Load Generation Balance Report 2016-17.

It said that these discoms are likely to surrender some of the excess power they have tied-up in past five to seven years at a loss, thereby further weakening their financial position.

The discoms in the western and southern regions are expected to be the worst hit due to PPA tie-ups in excess of the power demand in the region.

Ind-Ra estimates losses of around Rs 4,000 crore by discoms in the western region and Rs 2,450 crore in the southern region due to the maximum amount of long term PPA with a provision of fixed tariff in the past.

The long-term commitments at a fixed cost in PPAs are preventing some state power distribution companies (discoms) from procuring low cost merchant power traded on the power exchanges.

(b) Separation of Carriage & Content in the Power Sector

Power distribution: Separation in carriage and content not binding on the states

Pankaj Shah | TNN | Dec 22, 2015, Times of India

Lucknow: Union Power ministry has informed the delegation of National Coordination Committee of Electricity Employees and Engineers (NCCOEEEE) that 'separation of carriage and content' in power distribution as per proposed Electricity Bill 2014 shall be enabling provision and not binding on the state government.

The 'separation of carriage and content' in power means that while a distribution company will bring electricity to consumer door, the supply and revenue recovery would be done by a private company.

Chairman of All India Power Engineers Federation, Shailendra Dubey, who was part of delegation, said that the NCCOEEEE held hour long discussion with Union power minister, Piyush Goyal and other officials at New Delhi on Monday on the various provisions of the said bill.

He said that it has been assured by the government that the proposed electricity amendment act shall be enabling provision and not mandatory on states. Further cherry picking will not be allowed and all power supply companies including private ones shall have universal power supply obligation.

State governments will have option to go with only Government supply companies for power supply and there would be no compulsion of opting for private supply companies. State governments will have to notify their road map in 5 years-time after enactment of Act for segregation of carriage and content without any time limit for implementation.

Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, I am very confused. Now surplus power is causing a loss of 8000 crores! I thought we had power shortages!*

Mega Watt Ji - *Kilowattji, here it doesn't matter whether there is a power deficit or surplus. Loss is guaranteed. It is the fundamental right of the power sector to declare a loss, otherwise how will they be eligible under Suryoday scheme, Chandroday scheme, Pawanputra scheme, Bhumiputra scheme, and most importantly, Pitradoshi scheme!!!?*

Kilo Watt Ji- *Mega Watt Ji, what is this content and carriage separation?*

Mega Watt Ji - *Oh Kilowattji, that's easy!! Carriage separation is when the wheel is separated from the carriage, and when that is separated, there is bound to be an accident! That's the fear with content and carriage separation. There will never be a separation, otherwise it will lead to a mechanical failure.*

Kilo Watt Ji- *I still don't understand how this can happen in the power sector*

Mega Watt Ji - *Oh Ji, it can happen in any sector. By the way, there is hardly any content in power. Mostly, it is carriage. Not only carriage, at the moment, there is miscarriage!! But never mind ... we are optimistic that somebody will carry us forward and the carriage will move.*

Kilo Watt Ji- *What about issues in short term versus long term contracts of generators?*

Mega Watt Ji - *It's a 'must take no pay' contract, so where is the problem?*



When I was young, I was scared of the dark.
Now when I see my electricity bill, I am
scared of the lights.

- Yoddler

6. Open Access: Open or Switched Off?

Mumbai: Open access power consumers will now have to pay duty

The state government expects to earn Rs 464 crore per year through this move.

By: Express News Service | Mumbai | Published: June 29, 2016

In a move that may deter consumers from getting electricity from a third party instead of state agencies by opting for open access, the Maharashtra government has decided to introduce a new Electricity Duty Act to include such users under its ambit and charge them electricity duties.

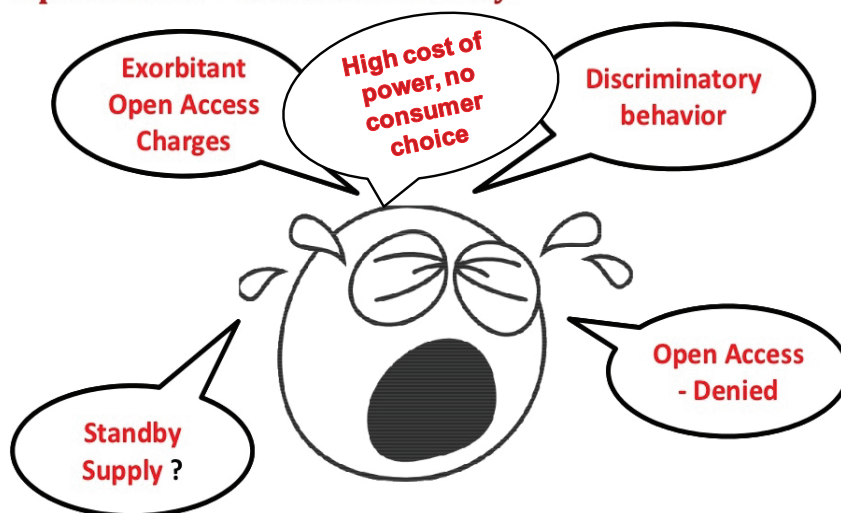
The state Cabinet on Tuesday decided to repeal the Maharashtra State Electricity Duty Act, 1958, and replace it with Maharashtra State Electricity Duty Act, 2016, to include open access consumers and electricity traders, who were otherwise exempt from electricity duty. The state government expects to earn Rs 464 crore per year through this move.

Currently, 415 consumers across the state, mostly large industrial and commercial consumers, have opted for open access and are procuring power from private parties. High-end industrial and commercial consumers help the Maharashtra State Electricity Distribution Company cross-subsidise electricity tariff for the state's low-end power users such as domestic consumers and farmers. A large number of consumers opting for open access thus hurts the balance.

Following the change, consumers opting for open access will have to pay electricity duty to the state as a percentage of their monthly bill as per their category.

Residential consumers will have to pay 16 per cent, commercial consumers will have to pay 21 per cent, while those in the industries category will have to pay 9.3 per cent. Cinema houses will be charged 19 per cent.

Open Access – Consumer Reality



Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, ye Open Access kya hai?*

Mega Watt Ji - *Kilowattji, it is not gentlemanly to use such unparliamentary language!! The power sector is very, very proper. You don't use such phrases while discussing such a serious subject!*

Kilo Watt Ji- *But Megawatt Ji, I am asking you about Open Access in the power sector*

Mega Watt Ji - *Kilowatt Ji, there is no such thing as Open Access in the power sector!*

Kilo Watt Ji- *But isn't it provided for in the Electricity Act 2003?*

Mega Watt Ji - *I am not sure which Act you are talking about. Otherwise, we are all great actors, and as Shakespeare said – "All the world's a stage"*

Kilo Watt Ji- *So you mean we should continue acting?*

Mega Watt Ji - *Kilowatt Ji, you are so right. We are all acting that there is Open Access!!!*



Why is electricity so expensive these days? Why does it cost so much for something I can make with a balloon and my hair?

- Dennis Miller

Key Issues in the Power Sector

7. Mainstreaming Renewable Energy

The renewed thrust on renewables is also welcome and the interest shown by all stakeholders in the value chain has been overwhelming. But how do we make renewable power truly mainstream and meaningful in fulfilling our energy needs?

The big ‘elephant in the room’ that still remains is the infirm nature of renewable power and the consequent challenges in keeping the grid stable. The grid becomes increasingly unstable if the share of infirm power increases beyond 20 per cent to 25 per cent of the total generation capacity.

India wastes 15-20% of its renewable energy due to lack of storage: Panasonic Energy head

TCA SHARAD RAGHAVAN, Updated: September 14, 2016, The Hindu

The variations in wind and solar energy, and the lack of adequate electricity storage facilities, result in about 15-20 per cent of all renewable energy generated in India going to waste, according to a top official in Panasonic India's energy division.

Grid management

“On average, if 24 hours is the potential of electricity generation, then you can easily say that 15-20 per cent is wasted because the grid can't manage the kind of variation in the electricity sourced from wind and solar generation,” Atul Arya, Head, Energy Systems, Panasonic India told The Hindu in an interview.

The variability of generation from renewable sources—where wind changes direction and speed on an hourly basis and solar intensity can vary by the minute—is not that big a problem if renewable energy forms a small proportion of the overall grid, as it does currently in the national grid, Mr Arya said.

“But if you look at state-specific grids, then the picture changes,” he added. “For example, look at the Tamil Nadu grid. Percentage-wise, wind is pretty high in the Tamil Nadu grid and that is what is creating problems for them. With wind changing its speed and direction, it becomes horrible from a grid stability point of view.”



Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, what is your take on solar projects?*

Mega Watt Ji - *Kilowattji, they need energy storage because the sun doesn't shine at night!!*

Kilo Watt Ji- *So where do we stand?*

Mega Watt Ji- *We are in the stone age!!!*

Kilo Watt Ji- *But we have to envision a world free from carbon emissions, don't we?*

Mega Watt Ji- *Ya...soon we'll have solar powered chainsaw which will make us less guilty about deforestation!*

Kilo Watt Ji- *So what do you think is our most powerful renewable sources?*

Mega Watt Ji- *Denial!*

Kilo Watt Ji- *In some states, wind energy reaches a maximum during monsoon nights when demand is at its lowest. How do we absorb this power?*

Mega Watt Ji- *Boy! This I've got to see ... so will the system operators/grid managers*

Kilo Watt Ji- *But these plants have been given 'must run' status. So shutting them suddenly will prove costly. Will it not?*

Mega Watt Ji- *Well we are working on a new provision whereby all plants will come under the 'must stop' category and we will get wireless electricity!*

Kilo Watt Ji- *Really, when will that happen?*

Mega Watt Ji- *Tesla / Einstein, where are you???*



Key Issues in the Power Sector

8. Nuclear Power

India powers past 6,000 MW mark in nuclear energy

B Sivakumar | Sep 1, 2016, Times of India

CHENNAI: With synchronization of the second unit of the Kudankulam power plant, India's civil nuclear programme has reached a couple of landmarks: the Kudankulam project turned a page on protests and a legal challenge over its safety parameters in the Supreme Court, and India crossed the 6,000MW mark in nuclear power.

Once the output of Unit II is scaled up to a full 1,000 MW in two months, India's 22 nuclear power reactors will be able to generate 6,780MW of power and the Nuclear Power Corporation of India Limited (NPCIL) expects four more reactors to be commissioned in a year. Unit II is functioning smoothly as scientists seem to have incorporated the right lessons from hitches that marred Unit I's functioning after attaining criticality in 2013.

Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, I believe we are now going to have lots of nuclear power.*

Mega Watt Ji - *Kilowattji, we already have nuclear power.*

Kilo Watt Ji- *No, no, Megawatt Ji. I meant electric power*

Mega Watt Ji - *Oh! We have now got a waiver under the Civil Nuclear Liabilities Act passed by the Governor of Majuli which will insulate all private companies operating in India from their laws. We have ensured that we are very civil in our liabilities and have thus attracted a large number of private investors who wish to set up nuclear power plants in our country.*

Kilo Watt Ji- *Megawatt Ji, where is Majuli?*

Mega Watt Ji- *Kilowatt Ji, we are looking for the Governor since he has also been extradited recently by the Federal Government of Timbaktu.*

Kilo Watt Ji- *So who will actually sign these contracts and guarantees?*

Mega Watt Ji- *Rab Raakha!!!*



Key Issues in the Power Sector

9. Promoting Competition & Consumer Choice

(a) Promoting Competition

Competition among discoms may trip on power line monopoly

Except for a few big cities, distribution network is controlled by state utilities

Written by Anil Sasi | New Delhi | Published: February 16, 2015

A radical reform move in the country's power sector readied by the NDA government, which envisages the advent of multiple suppliers in the loss-laden distribution side, is facing flak for a fundamental flaw — that even after competition at the retail level is introduced, consumers will still have to deal with the same monopoly wire service provider for getting a new connection, breakdown or faults, billing or metering problems or a change of load.

The scheme for separation of 'carriage and content', likely to figure among the Budget 2015-16 announcements, aims at the elimination of the territorial distinction that exists among electricity distribution companies in each state and envisages multiple supply licensees on the consumer-end being able to compete with each other, with the retail consumer having the option to migrate from one supplier to another.

While the proposal is being touted as a game changer that has the potential of ushering in competition in the electricity sector on the lines of what was done in telecom, concerns stem from the fact that even after competition in the retail sale of electricity is ushered in, the consumer will remain connected to the monopoly network service provider or wire company.

(b) Consumer Choice

Regulatory hurdles trip open access market for energy consumers: ICRA

Under the provisions of the Electricity Act, 2003, open access is permitted and involves the non-discriminatory use of transmission and distribution infrastructure of the licencees by any consumer with demand greater than or equal to 1 MW to procure electricity from the source of their choice.

PTI | Aug 02, 2016, ET Energy World

New Delhi: Regulatory hurdles like high cross subsidy charges and resistance from utilities are affecting the growth of open access market for energy consumers, domestic ratings agency Icra said.

"...regulatory challenges, especially levy of high cross-subsidy surcharge (CSS) and other charges, and resistance from utilities is adversely impacting power generating companies (gencos) and high tension (HT) customers and thus affecting the growth of the open access market," Icra said in a release.

"ICRA notes that the high level of open access charges to avail energy supply by HT consumers, primarily owing to the increase in CSS coupled with the levy of additional surcharge by regulators in a few states like Andhra Pradesh, Gujarat and Rajasthan, has constrained procurement from the open market for such consumers.

"This apart, the open access market has also faced discouragement from utilities and state governments in some states, which has restricted growth," Icra Ratings Senior Vice President Sabyasachi Majumdar said.

Under the provisions of the Electricity Act, 2003, open access is permitted and involves the non-discriminatory use of transmission and distribution infrastructure of the licencees by any consumer with demand greater than or equal to 1 MW to procure electricity from the source of their choice.

This is subject to the regulations and charges as approved by the respective State Electricity Regulatory Commissions (SERCs), which are to be paid by the consumers for using the transmission and distribution infrastructure.

Among the states studied by Icra, namely Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Rajasthan and Tamil Nadu, the CSS level remains high in Tamil Nadu and Maharashtra, while there has been a significant y-o-y increase in other states like Andhra Pradesh, Karnataka and Gujarat.

Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, we believe that now there is going to be proper competition in the power sector. How do you view this?*

Mega Watt Ji- *Very easy Ji! There are going to be Consultative Committees where birds and fish will have a discussion and the hippopotamus will sleep in the same bed as the little monkey. There is, of course, a slight apprehension in case the hippopotamus rolls over, but other than that, we are ready in all respects!!!*

Kilo Watt Ji- *Mega Watt Ji, I am told that soon, consumers will get a choice. They will be able to finally get power from a supplier of their choice.*

Mega Watt Ji- *Kilowattji, this is India. We believe in arranged marriage, not love marriage. So there is no real choice.*

Kilo Watt Ji- *Megawatt Ji, does that mean that if you are married, you can't even get a divorce?*

Mega Watt Ji- *Kilowatt Ji, In the Indian context in the power sector, you can commit two things to get an exit – Sati or Jauhar. There is no escape from your marriage to the discom where you are located! Even if you try to get an extra-marital relationship through Open Access, you will be penalized besides being threatened – driving you almost to committing suicide. Therefore, please remember this is India. We believe in arranged marriage, so there is no real choice!!*



Wives are like electricity.
If handled with care,
they will light up your life.
But if mishandled, will give shock through your life.
Source- Funny Quotes

10. Sanctity of Contracts

Aptel order leaves power producers reeling

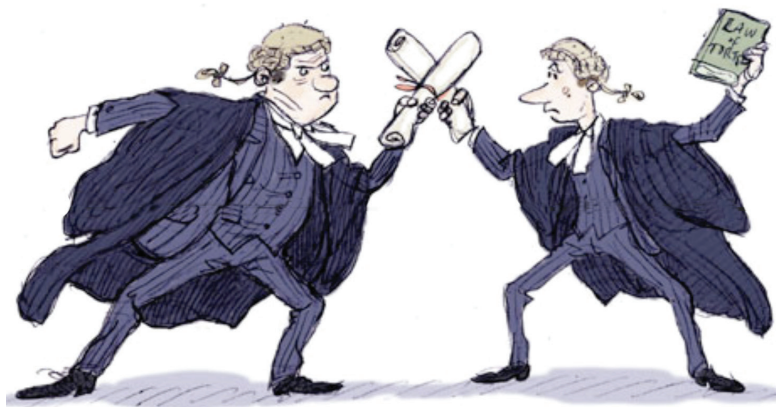
While its order on tariff has shielded consumers from frequent increases in electricity costs, it has plunged power companies back into darkness

Jyoti Mukul | New Delhi April 28, 2016

There's ample evidence to suggest that power producers for projects awarded through tariff-based bidding have erred in not recognising the unpredictability of fuel costs. In its April 7 order, the Appellate Tribunal for Electricity (Aptel), however, shut the doors on compensatory tariff as a way out for developers to address the increase in fuel costs.

For companies like Tata Power, Adani Power and a host of others that were hoping for a compensatory tariff mechanism, the order has added to uncertainty on power rates. The order says the Central Electricity Regulatory Commission (CERC) has no powers under Section 79(1) (b) of the Electricity Act to vary or modify the tariff or otherwise grant compensatory tariff to generating companies in case the tariff has been determined through a competitive bidding process in accordance with Section 63 of the Act. "This would be contrary to the entire scheme of the competitive bidding process," the Aptel order says.

Yet, the Aptel order has not been completely oblivious to the issue of fuel cost increase. By stating that the change in Indonesian coal laws, which affected the cost of fuel for many Indian power companies, be treated as force majeure, and by directing CERC to determine the extent of its impact on power companies within the next three months, Aptel has provided some relief to Tata Power and its subsidiary Coastal Gujarat Power.



Key Issues in the Power Sector

Kilo Watt Ji- *Mega Watt Ji, we are people of great honour and tradition. Once we give our word, our ancestors have given their lives for it.*

Mega Watt Ji- *Kilowattji, we have always honoured our contracts. We have made sure that the Gurgaon toll naaka, Kolhapur toll naaka, Noida toll bridge, besides other infrastructure projects - their sanctity is maintained. In public interest, we have made them free. So our sanctity remains intact and we always honour the public interest. In fact, in our effort to maintain sanctity, we have reinvented parts of the Electricity Act such as regulatory assets and other instruments which today run into thousands of crores, but are not found anywhere in the Electricity Act!!! This only shows our firm commitment, innovation and dedication to honouring sanctity of contract!!!*



If you're a human being, you can attempt to do what other human beings have done. We don't understand talent any more than we understand electricity.

- Maya Angelou

Key Issues in the Power Sector

11. Piyush Goyal: India is a power surplus country, have sufficient coal to ensure we never have a shortage:

Financial Express, June 9, 2017

Minister of State for Power, Coal, New and Renewable Energy and Mines Piyush Goyal on Friday said India is a power surplus country and has sufficient coal in country to ensure 'we never have a shortage'.

Earlier on Friday, Goyal gave an interview to All India Radio News, where he said the Centre has envisaged growth in the power sector and he is working on a 'transformative agenda'. "Even after 70 years of Independence there were more than 18,051 villages which did not receive electricity. Hon'ble PM had made it his agenda that this will end. Today, there are around 4000 villages left which are still bereft of electricity and this issue will end in the next 6-8 months."

He said that, there is enough production of coal in the country today, he added. There are less chances of coal being depleted here, than in other countries. 35 to 40 per cent of the coal we have is fly ash. So, if we transport it, half of it does not have any calorific value. So, we have problems while transporting coal, he said. He added that we are certainly self-dependent when it comes to coal in domestic use. Highlighting some challenges in growth in the power sector, the minister said, "We have shortage of coking coal for which we have to depend on imports because the previous government never imagined that we can be coal independent. We have the third largest reserves of coal."

12. Maharashtra expected to see surplus power availability of 13% of demand in FY17-18, says report

The Indian Express, July 29, 2017

Maharashtra is going to have an availability of 163,053 units. In comparison, the requirement is only 144,266 units, the report said. That translates to an excess of 13 per cent.

In 2016-17, the electricity authority (CEA) had predicted that the state would see an energy surplus of 7.4 per cent. However, Maharashtra ended the year with a nil surplus or deficit. Still, that was an improvement over the deficit of 0.3 per cent reported in 2015-16. Maharashtra is not the only state predicted to report an energy surplus in 2017-18.

While this is a sharp improvement, it doesn't necessarily mean that there won't be power cuts on the ground. In many states, power requirement projections aren't keeping pace with the actual demand because state electricity boards don't have enough money to pay for generators.

Key Issues in the Power Sector

Kilo Watt Ji- Now, we are surplus in power and coal. We should celebrate. No?

Mega Watt Ji- It is true, we should celebrate. Many states are still short and are purchasing power on the exchange @ 9 per kWh highest in the past 7 years. But we can celebrate anyway.

Kilo Watt Ji- Certain states seem to be racing ahead and to have surplus availability of power. This is commendable. Don't u think, they deserve due recognition?

Mega Watt Ji- Yes, you are right, they are surplus after load shedding in the rural areas and after purchasing thousands of MW of power. Therefore, there seems to be slight disconnect. They need due recognition.



Key Issues in the Power Sector

13. Delhi heatwave: Power Demand at all-time high of 6361 MW

Hindustan Times, July 20, 2017

The sweltering heat sent Delhi's power demand soaring to an all-time high of 6,361 MW on Monday. With day temperatures hovering above 44 degrees Celsius, the peak demand breached last year's record. The 6,000 MW-mark was breached for the first time on May 19 last year and then the demand had touched 6,261 MW on June 30 in 2016.

Government officials said the demand was on the expected lines and that power utilities are prepared to take maximum load without considerable load shedding.

We have arranged to supply nearly 6,600 MW of power. Although the demand is unlikely to go beyond this, the early spike in demand has raised an alert," an official said. Discom officials said the power demand usually peaks towards the end of June and in July as humidity rises between 90% and 50% apart from the scorching heat. "People run ACs for longer duration because of which power demand goes up," an official said.

14. Solar Power tariff falls further to Rs. 2.44 per unit

Livemint, May 12, 2017

India's solar power tariff hit a new low of Rs2.44 per unit during the auction of a 500MW capacity at Bhadla park in Rajasthan.

Acme Solar Holdings Pvt. Ltd and SBG Cleantech Ltd placed winning bids of Rs2.44 per kilowatt-hour (kWh) and Rs2.45 per kWh, respectively. Acme Solar will develop 200MW, and SBG Cleantech, a joint venture between Japan's SoftBank Group Corp., India's Bharti Enterprises Ltd and Taiwan's Foxconn Technology Co. Ltd, the balance 300MW.

These tariffs are lower than the average rate of power generated by the coal-fuelled projects of India's largest power generation utility, NTPC Ltd, at Rs3.20 per unit.

India's Wind Power tariff falls to a record low of Rs. 2.64 per unit

Livemint, October 6, 2017

India's wind power tariff falls to a record low of Rs2.64 per unit in an auction conducted by SECI for 1 GW of wind power contracts that ended early morning Thursday.

While ReNew Power Ventures Pvt. Ltd and Orange Sironj Wind Power Pvt. Ltd bid Rs2.64 per kilowatt hour (kWh) to win contracts for 250 megawatts (MW) and 200MW each, Inox Wind Infrastructure Services Ltd and Singapore-based Sembcorp Industries Ltd's Green Infra Wind Energy Ltd bid a tariff of Rs2.65 per unit for securing contracts of 250MW each. Adani Green Energy (MP) Ltd also bid Rs2.65 per unit to win a 50MW contract.

These tariffs are lower than the average rate of power generated by coal-fuelled projects of India's largest power generation utility, NTPC Ltd, at Rs3.20 per unit. The price gap between electricity generated from thermal, solar and wind projects has been bridged. This is primarily due to costs of solar modules and wind turbine generators falling by 80% and 20%, respectively, over the past five years.

Key Issues in the Power Sector

Kilo Watt Ji- Power demand in Delhi seems to be cross all-time high. This shows that economy is doing well. No?

Mega Watt Ji- With Regulatory Assets in the range of Rs. 25000 Crores, litigation pending and rising demand. Three Cheers for consumers who are enjoying free power.

Kilo Watt Ji- The price of power has been brought down disastrously. Isn't it good news?

Mega Watt Ji- Yes, it is good media news for some developers. SunEdison filed for bankruptcy losing \$10billion in market value in weeks.

SunEdison#RIP
Competition#RIP?



Key Issues in the Power Sector

15. Coal stocks run low at 23 power plants: CEA Data

Economics Times, October 10, 2017

Coal stocks at power plants continue to be low at a fifth of the monitored power plants, giving an opportunity to gas-based projects to operate. Data available with the Central Electricity Authority showed that 23 of the 114 plants had low coal stocks, much higher than just three a year ago.

Coal stocks have dropped as the country ramped up coal-based generation to meet the deficit arising out of low generation from hydro, nuclear and renewable power plants. Irrigational demand and warmer weather conditions have also led to higher power demand. Power companies had earlier not maintained adequate coal stocks since they did not anticipate the deficit arising out of lesser power supply from other sources, government officials said.

16. India Mission, Vedanta adopt UJALA Scheme in UK:

May 15, 2017

Indian High Commission in London and metals tycoon Anil Agarwal led Vedanta Group will be among the first to adopt India's UJALA scheme of replacing all their old lamps with energy-saving LED bulbs in the UK.

India has been able to replace 560 million bulbs with LED in two years. There is no reason why we can't use the same distribution network in the UK and have a similar scale up," Goyal said at the launch in London yesterday.

UJALA offers a great business opportunity in the UK, which can also become a base to foray into other countries in Europe. We can start with the London-listed Vedanta Group and I don't see any reason why UJALA cannot become a way of life in London, which is such a global city," he said, setting a target for the EESL to replace 100 million incandescent bulbs with LEDs in the UK by March 2019.

Key Issues in the Power Sector

Kilo Watt Ji- What are your views about coal stock runs low?

Mega Watt Ji- Hogwash, bakwas; I only believe in the statement (financial express June 9, 2017) that India is a power surplus country, and has sufficient coal.

Kilo Watt Ji- I am confused. Are we bringing energy efficiency in India? Is the UJALA Scheme for India?

Mega Watt Ji- Oh, Kilo Watt Ji, think global and just forget about local.



Key Issues in the Power Sector

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on its right side, suggesting it's resting on a surface.

Takeaways from the RPR

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.



NEW DELHI ▼

6th Floor, Le Meridien Commercial
Tower, Raisina Road, Connaught Place
New Delhi - 110001
Board Line - 011 - 49556666
Fax: +91 11 4955 6677

KOLKATA ▼

P-104 B, Block F, New Alipore
Kolkata - 700053
T: +91 33 2399 6042 F: +91 33 2397 4361

www.ippai.org
info@ippai.org

MUMBAI ▼

104, 10th Floor
Maker Chamber VI
Nariman Point, Mumbai - 400 021
T: +91 22 4342 3300 F: +91 22 4342 3322

LONDON (UK) ▼

C/o. GEPL
Southbank House, Black Prince Road,
London SE1 7SJ
T: 020 35671460

BENGALURU ▼

503, 15th Main, 7th Cross
3rd Block, Koramangala Extension
Bengaluru - 560034
T: +91 80 2550 6753 F: +91 80 4125 4958

DUBAI ▼

C/o. GEPL
Office No. 310, W2 DAFZA, Dubai
T: +97 14295 6655