
ECONOMIC REFORMS
A STEP TOWARDS REAL INDEPENDENCE

65 years of independence

Freedom to separate from personal ideologies

Freedom to intellectually challenge ourselves to find real solution for good of the whole

Economy in India

- India has witnessed economic ups and downs.
- Trend-line of falling GDP growth in past few years.
- From 9.4% in quarter ending in March 2010 to hitting a low of 5.3% in Jan-March 2012.

Four Pillars of Growth Driven Economy

- Investor Confidence
- Sustainable Economic Development
- Sound Government Policies
- Certainty

Recent critical developments that dented Investors' confidence:

The nullification of the Supreme Court judgment in the landmark Vodafone case by introducing retrospective amendment in Budget 2012- Such retrospective amendments with effect from 1961 were harshly criticized for the lack of respect shown for the judiciary.

Introduction of General Anti-Avoidance Rules ('GAAR') – The language of GAAR provisions particularly disturbed the Foreign Institutional Investors (FII's) which account for the largest proportion of investments in Indian equities.

The delay in roll out of Direct Tax Code ('DTC') and Goods and Services Tax ('GST') regime.

The long drawn process and debate on proposal to allow 49% FDI by foreign carriers in various sectors like Indian airlines, pharmaceuticals.

What India needs??

- Political Courage
- E-governance
- Tough Decisions
- Quick Actions
- Simplified Legislations
- Certainty in tax laws

The new Finance Minister, after confessing to the economic slowdown, promised that the Government would now implement positive steps to regain the investor's belief and bring the economy back on the desired track by following measures:

Clarity in tax laws

A stable tax regime

A non-adversarial tax administration

A fair mechanism for dispute resolution

An independent judiciary to provide assurance to investors

Further, a few corrective measures have already been taken by the government on the tax front post the Budget 2012 to bring in a certain level of stability, like:

Issuance of clarifications that the completed assessments would not be re-opened solely by virtue of the retrospective amendments. Deferring GAAR by one year to 2013 and issuance of draft guidelines on implementation of GAAR was a very welcome move.

Prime Minister has constituted an 'Expert Committee on GAAR' to undertake stakeholder consultations and bring in transparency in order to settle upon implementation of GAAR by 30 September 2012.

Prime Minister has also constituted a Committee to Review Taxation of Development Centres and the IT Sector to have a fair tax system in line with best international practice which will promote India's software industry.

Based on the advice of NASSCOM and the advisory group on taxation, the Finance Ministry has approved the circular to avoid multi level withholding tax ('WHT') on software products under Section 194J.

- Indian government has started taking the steps needed to optimistically drive on a high growth path.
- Government is trying to launch a road map with the ultimate aim of a positive portrayal of the Indian economy
- All these efforts would help to pull the Indian economy out of the downward spiral and fulfill the dream of true **‘ECONOMIC INDEPENDENCE’!**

INDIAN POWER SECTOR

12TH PLAN- HIGHLIGHTS

(YEAR 2012 – 2017)

GENERATION

- Planned addition- 75785 MW (base case)
- Captive- 13000 MW
- Renewable - 30500 MW
- Peaking power plants- 2000 MW

TRANSMISSION

- Inter-regional transmission capacity addition- 38000 MW
- Growth in 765kV Transmission System
- Transmission Schemes- 1,09,000 ckm of lines, 2,70,000 MVA of AC transf. capacity, 13,000 MW of HVDC systems

DISTRIBUTION

- Up-gradation of sub-transmission & distribution network
- APDRP & RGGVY
- Smart Grid Implementation
- Other distribution projects

OTHER AREAS

- Research & Development
- Human Resource Development
- Demand Supply Management
- R&M of existing plants

GENERATION

Generation Capacity Addition

Sector	Hydro	Coal	Gas	Nuclear	Total
Central	5632	10600	826	2800	19858
State	1456	12080	260	0	13796
Private	2116	40015	0	0	42131
Total	9204	62695	1086	2800	75785

Captive Generation

- Installed capacities of CPP by end of FY11 was about 31,000 MW.
- Expected addition of around 12,000 MW during 11th Plan.
- Expected capacity addition during 12th Plan approximately 13,000 MW.

Renewable Energy Sources

Envisaged addition of 30,500 MW through Wind, Biomass, Small Hydro and Solar sources.

- Huge supply demand gap; govt. alone cannot do it.
- Can be a solution for rural India.
- PPP in RE- still in early stage.
- Government support critical in making PPP further successful in Generation.
    - So far, land acquisition has proved to be stress point.
- 'Efficient' PPP in coal is no more just an option.
    - Thorough technical study a pre-requisite.

The estimated fund requirement during 12th Plan for generation, including renewable, works out to about Rs 6,38,600 Crs ($ 1,14,756 million) including Rs 2,72,582 Crs ($ 48,983 Million) for advance action for 13th Plan projects.

TRANSMISSION

GRID AUGUMENTATION

Item	UOM	Addition
Transmission Lines (AC & HVDC)		
HVDC Bipole lines	Ckm	9440
765kV	Ckm	27000
400 kV	Ckm	38000
220 kV	Ckm	35000
Total	Ckm	109440
Substations (AC & HVDC)		
HVDC Terminal Capacity	MW	13000
AC Substation Capacity	MVA	270000

FOCUS

- Deficit in transmission is far greater than that in generation.
- Opportunity at all levels – interregional lines, intra-state lines and even cross-border lines.
- PPP in Transmission is slowly making a beginning.
- PPP can bring much needed technological advancements.
- Government support critical in making PPP further successful in Transmission.

The total fund requirement for development of transmission system is estimated to be of the order of Rs 1,80,000 Crore($ 32,346 Million) (Rs 1,00,000 Cr - $ 17,970 Million in Central Sector, Rs. 55,000 Cr - $ 9,883.5 Million in State Sector and Rs. 25,000 Cr - $ 4492.5 Million in Private Sector).

ENDURANCE

HINDUSTAN TIMES, NEW DELHI
WEDNESDAY, AUGUST 08, 2012

htvalue+
INSIDE THE COMPLEX WORLD OF BUSINESS

RECKONER

MONDAY STRATEDGY
TUESDAY TECHNOLOGY
WEDNESDAY RECKONER
THURSDAY LEADERSHIP
FRIDAY CARS AND BIKES
SATURDAY YOUR MONEY

Grid-locked in the power corridor

TRIPPING THE COUNTRY HT takes a look at last week's successive power failures that raises questions on India's high growth aspirations

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In one of the biggest ever blackouts, a major power crisis was triggered in the country on July 31 across 20 states after three electricity grids — carrying about 55,000 mw — connecting these states and the national capital collapsed in the afternoon. The incident left over 640 million people powerless, that is half India's total population, and was the second grid failure in less than 48 hours. Just a day prior on July 30, a major power failure had stuck the northern region in the early morning (2.30am), tripping power supplies in eight states, including Delhi, Haryana, Himachal Pradesh, Punjab, Uttar Pradesh, Uttrakhand, Jammu and Kashmir and Rajasthan, home to nearly 360 million people.

What is a power grid?
A power grid works in the manner similar to funnelling salt to small shaker from a large bag. Without the funnel, the salt will pour out. Likewise, power generated by plants using various fuels such as coal, hydel, etc, flows to grids through transmission lines.

How does a grid function?
Grids collect extra high voltage electricity from power generating stations and convert these into manageable voltage levels. This electricity is finally transported to final consumers by power distribution companies such as BSES and Tata Power in Delhi through power substations and transformers.

How many grids are there in India?
There are five power grids — northern, southern, western, eastern and north-eastern — carrying electricity from various power plants to respective regions and states across the country. All of them are inter-connected, except the southern grid.

What are RLDCs?
RLDCs or the regional load dispatch centres — a total of five, one being for each grid — act like the gatekeepers for the power drawing schedule.

What is a grid failure?
A grid failure is a tripping of the network of transmission lines carrying electricity load from the source (or a power plant) to the users that include state distribution companies. The disruption in carriage of electricity by these transmission lines causes power outages or blackout in areas that are supplied power through these lines.

What is the cause of a grid failure?
It is the overdrawing of power by states that leads to fluctuations and tripping of transmission lines carrying power load. Many states deviate from the drawn schedule. It is similar to a river that flows through many states where states keep on diverting water to their parched regions. Likewise, many states overdraw power from the grids leading to their collapse. This leads to fluctuations in the normal frequency (or the rate of change measured in cycles per second or Hertz) at which electricity is transmitted. Technical fault in transmission lines carrying power is another cause of a grid collapse.

What are safe frequency levels?
A 50 Hertz frequency is considered ideal for maintaining grid discipline and a frequency variation in the range of 49.5 to 50.5 Hertz is permitted.

Why do states overdraw?
Overdrawing takes place mostly in summers when states have high requirement of power for meeting their agricultural needs. This year, due to late arrival of monsoons, heavy overdrawing from the grid resulted in a massive increase in load resulting into a failure.

What is the importance of northern grid?
With an installed capacity of 51,000 mw, this grid carries nearly 35,000 mw power every day across nine regions including Punjab, Haryana, Rajasthan, Delhi, Uttar Pradesh, Uttarakhand, Himachal Pradesh, J&K and Chandigarh and caters to about 28% of India's population

How did the three grids – northern, eastern and north-eastern – collapsed at the same time?
As the three grids are connected, a tripping of lines in northern grid is believed to have a cascading effect on the other grids leading to a collapse of all three. Experts feel that sensors installed on these lines were faulty and led to simultaneous failure of grids.

What is the impact of grid collapse?
Life comes to a halt as essential services including hospitals, water supplies, local transport and railways were hit.

What do the two successive grid failures indicate?
The two successive massive grid failures raised serious concerns about India's outdated transmission infrastructure as also the government's inability to meet its huge appetite for energy as the country aspires to become a regional economic superpower.

Have there been grid failures earlier?
In 2001, a major collapse of the northern grid was triggered following a failure of a sub-station in Uttar Pradesh; Restoration took at least 12 hours. Also in 2008 and 2010, the country saw minor tripping of the northern grid due to technical snags caused by fog in winters. Restoration took 3 to 4 hours.

How can we reduce the impact of a blackout on emergency services?
Islanding of states is a way to prevent such failures. Under the scheme, uninterupted supply can be maintained for essential services such as the railways, local metro, hospitals, airports and water systems across the country.

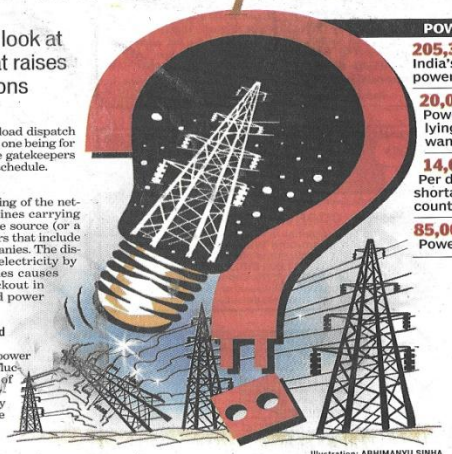

Illustration: ABHIMANYU SINHA

POWER SUDOKU: PUZZLES TO BE SOLVED

205,340 mw India's installed power capacity
20,000 mw Power capacity lying idle for want of fuel
14,000 mw Per day power shortage in the country
85,000 mw Power capacity addition targeted by 2017
385 million No. of consumers who faced blackout on the first day of grid collapse on July 30
600 million or half of India's population suffered after the second grid collapse on July 31
3,000 mw Power overdrawn by Uttar Pradesh from the northern grid that brought three grids down
1000-2000 mw. Range of overdrawing by other states including Haryana, Punjab, Rajasthan and Uttarakhand.

"It was an accident but I assure that such a failure will not happen again."
VERAPPA MOILY, power minister

"It is an accident that has happened after 10-11 years. We must appreciate that while a country like the US took 6-7 days, we restored the grid in just few hours."
SUSHIL K SHINDE, former power minister

WAY FORWARD: HOW TO AVOID SUCH FAILURES

Ensuring strict grid discipline and imposing heavy penalties on states that overdraw power from the grid. Regional Load Despatch Centres (RLDCs) — organisations that manage the regional grids — should be given more powers to completely disconnect those states that are overdrawing from the grid.

DE-CODED

ISLANDING OF AREAS OR CITIES

An islanding system de-links a designated part of the network from the rest of the grid in the event of a major power failure. Frequency sensors are installed, which disconnect the designated sector from the grid if the frequency dips below the designated levels that trigger a grid collapse.

For instance, if islanding facility is set up in Delhi then even in case of a technical problem in the northern grid, the city will continue to draw power directly from selected power generating stations or dedicated power plants as special censors installed in the transmission system supplying power to Delhi will de-link the city's transmission network from the main grid. The islanding facility is already in operation in parts of Mumbai and Kolkata.

BLACKOUT TURNS INTO OPPORTUNITY

India's recent electric grid failure on July 30 and 31 has been determined the world's largest blackout. This event will no doubt spur some movement toward efficiency and discipline. India requires new and innovative thinking and effectiveness through structural change. This is also the time to focus on renewable energy, “India is the Saudi Arabia of renewable energy sources and, if properly utilized, India can realize its place in the world as a great power,”“but political will is required for the eventual shift from fossil fuels to renewable energy.”

RENEWABLE GRID

Power Grid Corporation has a Rs 42,000-crore plan for setting up an exclusive countrywide green corridor for renewable energy transmission. Presenting the company's Q1 results here on Wednesday, Mr R. N. Nayak, Chairman and Managing Director, said this would be done over a period of five years. The investment was for transmission of 40 GW of renewable energy capacity by 2030. About Rs 20,000 crore would be for intra-state strengthening and Rs 22,000 crore for inter-state transmission systems for grid integration. This would also include other work such as energy storage, real time monitoring system and setting up of renewable energy management centre.

DISTRIBUTION

Distribution- Augmentation

Item	Unit	Physical	Fin (Cr)
New Lines			
33kV line	Ckm	135000	13770
11 kV line	Ckm	560000	44800
LV	Ckm	610000	34160
New S/S	MVA	88000	22000
Installation of DTs	No	850000	30760
Aug of S/S	MVA	100000	20000
Capacitors	MVAR	16000	1280
Service Connections	No	50000000	25000
Re-conductoring of lines	ckm	1600000	33000
Schemes & Misc			81465
Total			**306235**

Various Schemes:

- R-APDRP
- Feeder Separation Scheme
- RGGVY
- Productive Load Scheme
- Smart Grid
- R&D, HRD
- IT Facilities & Scada

FOCUS

- PPP in Distribution has proved to be successful through some cases of DF.
- Solution to key problems- high technical & commercial losses, poor infrastructure, weak financial position & lack of customer orientation.
- Government support further needed in making PPP further successful in Generation.
  - Resistance towards DF from employees.
- Success of various schemes is contingent to implementation of PPP.

The total fund requirement for development of distribution system is estimated to be of the order of Rs 3,06,235 crore.

12TH PLAN- TOTAL PLANNED OUTLAY

• **Capacity Addition**	**Fund req (Million $)**
Generation	1,14,756.4
CPP	11,680.5
R&M of power plants	5,730.1
Transmission	32,346
Distribution	55,030.4
Renewable	24,277.5
Others	2,831.7
Total	**2,46,652.6**