

MINUTES OF THE TWENTY FIRST MEETING
OF
FORUM OF REGULATORS (FOR)

VENUE : Hotel Courtyard By Merriott, Chennai (Tamil Nadu)
DATE ; 27th - 28th November, 2010

The meeting was chaired by Dr. Pramod Deo, Chairperson, CERC/FOR. The list of participants is at **Annexure-I**.

At the outset, Chairperson, FOR mentioned about a reference made by MERC to the Competition Commission of India (CCI) and requested MERC Chairperson to apprise the Forum about developments in that case. Chairperson, MERC informed that a reference was made to CCI on the question of interpretation 'market domination' under Section 60 of the Electricity Act, 2003. The issue is whether the action of TATA Power as a generator in Mumbai refusing to supply electricity to Reliance discom can be interpreted to mean that TATA Power is misusing its dominant position to thwart competition. Similarly, whether the discom as a natural monopoly is limiting consumer's choice. In reply the CCI stated that it could comment on any such issue only after a decision has been taken by MERC in this regard or, if a reference is made to it by MERC in the form of a draft order.

After discussion it was felt that Electricity Act, 2003 being a comprehensive code by itself (as already articulated by the Supreme Court of India) the powers of the Electricity Regulatory Commissions under Section 60 of the Act are absolute and the Electricity Regulatory Commissions should interpret the provision based on their best judgments and circumstances prevailing in relation to a particular case.

Chairperson, FOR also underscored the need for framing regulations under Section 60. After discussion it was decided to evolve terms of reference for commissioning a study to evolve a model regulation in this regard.

Another issue raised was in relation to the treatment of PPAs of Central Generating Companies after the expiry of their term. There was a need for clarity as to whether the buyers should have the first right of refusal on continuation of PPA or whether such generating companies would be free to enter into PPA with new players. It was desired that this issue be examined by the Secretariat.

The FOR thereafter took agenda items for consideration.

Agenda Item No. 1: Confirmation of the Minutes of the 20th Meeting of “FOR” held on 25th – 26th September, 2010 at Thiruvananthapuram (Kerala).

The Forum confirmed the minutes of the 20th Meeting of FOR held at Thiruvananthapuram (Kerala) on 25th – 26th September, 2010 as circulated.

Agenda Item No. 2: Draft Model Regulation on “Consumer Grievances Redressal Forum, Ombudsman and Consumer Advocacy”.

Shri S.K. Chatterjee, Deputy Chief (RA) mentioned that the draft model regulations have been evolved after analyzing provisions of the similar regulations framed by SERCs under Section 42(5) and (6) of the Act. The model regulations incorporate the recommendations already made by FOR in its report on Protection of Consumer Interests as also other important features representing best practices in the regulations of SERCs.

A presentation was made by M/s. CRISIL, the consultant engaged for assisting the FOR in evolving model regulations. A copy of the presentation is **enclosed (Annexure-II)**. The presentation covered comments received from various State Commissions on the draft model regulations and consultant’s views/secretariat views thereon. The Forum considered and approved in principle the model regulations with following modifications:

- . It should be clarified in the report that creation of CGRF would not debar a consumer to have issues settled through the existing internal channels in the distribution license. In fact, normally latter will be the first course of action.
- . Age limit for occupying the post of Chairperson or independent member in CGRF should be 65 years with 3 years term of office.
- . Clause 2.6(a) should be modified to provide for a person other than judicial officer to be eligible for appointment as Chairperson of CGRF.
- . Clauses 2.4 and 3.4 be modified to remove the reference that the orders of CGRF and Ombudsman are binding. This reference is

redundant in view of the clear provisions in the Act, in regard to channels of representation/appeals against the orders of CGRF and Ombudsman.

- . Clause 3.3 be modified to provide for a Search Committee to be constituted by the Commission for recommending names for appointment of Ombudsman by the Commission.
- . Clause 3.6 providing for restrictions (two years bar for an officer of licensee) for appointment to the post of Ombudsman may be deleted.
- . Clause 3.5 be modified to include any other person of equivalent level to be eligible for appointment of Ombudsman.
- Subject to the above modifications, the changes proposed by M/s. CRISIL in their presentation be incorporated.
- Editorial changes be made wherever necessary.

Agenda Item No. 3: Automated Demand Response

A presentation (copy **enclosed** - **Annexure-III**) was made on “Automated Demand Response – A Critical System Resource for Power Sector” by M/s. Honeywell highlighting the features of a possible technological solution to mitigate peak power requirement in States. M/s. Honeywell emphasized the need for regulatory intervention to promote the automated demand response which would be in the interest of the utility as well as the consumer. They urged that the DSM regulations be framed by State Commissions at the earliest incorporating measures/targets for reduction of consumption during peak period. They also requested support for a few pilot studies in select cities. After discussions, it was agreed that they could

approach the SERCs of Maharashtra, U.P and A.P. for pilot studies in the cities of Mumbai, Greater Noida and Hyderabad.

Agenda Item No. 4: Electricity for All – Ten Ideas towards Turning Rhetoric into Reality.

A presentation (copy **enclosed** - **Annexure-IV**) was made on “Electricity for All : Ten Ideas towards Turning Rhetoric into Reality” by Prayas Energy Group. In its presentation, Prayas highlighted its findings on the measures/interventions required by various stakeholders in addressing the problems of the poorer sections of the society. The idea was appreciated by the regulators. Prayas offered to discuss its findings in greater detail with State Commissions if they so desired, in the meetings of the State Advisory Committees. SERCs noted the suggestion.

Any other issue

Nagaland Chairperson wanted to know the status of formation of district coordination committees as envisaged under section 166 of the Electricity Act, 2003. It was informed that such committees have already been formed in Bihar and Orissa. Chairpersons of Bihar and Orissa ERCs agreed to send copies of the notification to Nagaland.

The Forum also thanked TNERC for making excellent arrangements for the meeting. The meeting ended with a vote of thanks to the Chair.

LIST OF PARTICIPANTS ATTENDED THE TWENTY FIRST MEETING

OF

FORUM OF REGULATORS (FOR)

HELD DURING 27TH – 28TH NOVEMBER, 2010

AT HOTEL COURTYARD BY MERRIOTT, CHENNAI (TAMIL NADU)

S. No.	NAME	ERC
01.	Dr. Pramod Deo Chairperson	CERC – in Chair.
02.	Shri A. Raghotham Rao Chairperson	APERC
03.	Shri B.K. Halder Chairperson	BERC
04.	Shri Manoj Dey Chairperson	CSERC
05.	Dr. P.K. Mishra Chairperson	GERC
06.	Shri Yogesh Khanna Chairperson	HPERC
07.	Shri S. Maria Desalphine Chairperson	J&KSERC
08.	Shri Mukhtiar Singh Chairperson	JSERC
09.	Dr. V.K. Garg Chairperson	Joint ERC for Goa & all UTs except Delhi
10.	Shri M.R. Sreenivasa Murthy Chairperson	KERC
11.	Shri K.J. Mathew Chairperson	KSERC
12.	Shri V.P. Raja Chairperson	MERC
13.	Shri S.I. Longkumer Chairperson	NERC

14.	Bijoy Kumar Das Chairperson	OERC
15.	Shri D.C. Samant Chairperson	RERC
16.	Shri S. Kabilan Chairperson	TNERC
17.	Shri Manoranjan Karmakar Chairperson	TERC
18..	Shri V.J. Talwar Chairperson	UERC
19	Shri Rajesh Awasthi Chairperson	UPERC
20.	Shri Shyam Wadhera Member	DERC
21.	Shri Sushanta K. Chatterjee Deputy Chief (Regulatory Affairs)	CERC
22.	Ms. Neerja Verma Assistant Secretary	FOR

Model Regulations for Consumer Grievance Redressal Forum, Ombudsman and Consumer Advocacy

Forum of Regulators

28 November, 2010

Recommendations of the FOR Working Group

Recommendations of the FOR Working Group (1 of 3)

- **Representation by Advocates**

- CGRF: Organ of licensee. Proceedings may not be Adversarial. Both parties shall not be represented by Advocates
- Ombudsman: Proceedings being Adversarial, both parties can be represented by Advocates

- **CGRF as First-level grievance redressal mechanism**

- Consumer to have right to approach CGRF directly without approaching any other mechanism setup by licensee
 - Periodic interactions with local utility staff to be encouraged to help solve petty disputes

- **Chairperson of CGRF not to be serving officer of licensee**

- ‘Officers of licensee’ as specified in Rule 7 does not imply ‘serving officers’ as long as he is paid by licensee

- **CGRF to be easily accessible to consumers**

- To be located at a place in forum’s jurisdiction easily accessible by consumer
- Sittings should be held at different places at predetermined dates

Recommendations of the FOR Working Group (2 of 3)

- **Expenditure of CGRF to be borne by licensee**
 - CGRF being an internal organ of the licensee
- **Non-compliance of CGRF orders by licensee to be dealt under Sec. 142**
 - Treated as contravention of SERC regulations
- **Time-limit of 45-60 days for CGRF to dispose grievance**
 - If not disposed within the specified time:
 - Consumer to have right to approach Ombudsman
 - Sec. 142 can be invoked for non-compliance of SERC regulations
- **Ombudsman to be a 'Full-time' institution**
 - Practice of appointing an SERC officer as Ombudsman to be discontinued

Recommendations of the FOR Working Group (3 of 3)

- **Separate post for Ombudsman is not needed to be created**
 - Provision for appointment has already been made in Sec. 42(6) of the Act
 - Ombudsman not to be treated as regular employee of Commission
- **Office expenses of Ombudsman to be funded by SERC**
 - To be funded through separate budgetary allocation
 - Expenses can be recovered from licensee directly
- **Reporting by Ombudsman to be institutionalized by SERCs**
 - In accordance with Rule-7 of GoI
- **SERC to notify a consumer charter based on model charter**

Brief Snapshot of the Model Regulations

1. CGRF

Constitution

- **Number, Locations, Sitzings**

- Urban areas: May have **Multiple Forums in each revenue district**. Rural areas: Single Forum for 3-4 revenue districts
- **Atleast one sitting to be conducted in each revenue district each week**
- Licensee can **decide number, locations**, areas of jurisdiction, sittings so that all grievances are disposed within time-limit

- **Appointment of Members**

- **Eligibility criteria**
 - **Member 1 (Chairperson): Retd. Judicial officer with 10 yrs experience as SDM**
 - **Member 2: Serving officer of licensee, atleast Exec. Engr. or eqv. with 10 yrs experience in Supply & Distribution**
 - **Member 3: Rep. of consumer organization with 5 yrs standing or person should have 5 yrs experience in consumer matters. Not worked for licensee for past 3 yrs**
- Member 1 & 2 to be appointed by licensee, Member 3 by Commission

- **Remuneration of Members**

- Member 1 & 2 to be decided by licensee, Member 3 by Commission
- **Licensee to meet all operating costs related to Forum and can recover them through ARR**

Handling and redressal of grievances

- **Submission process**
 - Can be submitted to Forum or Complaint-receiving centres of licensee
 - **Prioritization**
 - Disconnection of supply (to be solved within 15 days)
 - Meter-related issues
 - Billing-related issues
 - Other issues
 - **Following grievances cannot be entertained**
 - Proceedings pending before any court/ authority or verdict passed by such court/ authority
 - Sections 126, 127, 135 to 139, 152, and 161 of the Act
 - Grievance submitted 2 yrs after the cause of action arisen
 - Frivolous, malafide
 - **Order**
 - Decision by majority voting. Chairperson to have casting vote
 - Contents of Order (if against licensee): i) remove cause of grievance ii) return undue charges paid by Complainant along with interest
 - Licensee to comply with order within 21 days, else can be dealt under sec. 142
 - Interim Order and **Review Order** provided for
- Compensation under SOP removed**

Grievance redressal

- **Investigation process**

- Licensee to respond within 15 days of receipt of grievance
 - Forum may call for records from any party if needed
 - Forum may require licensee to conduct inspection or engage a 3rd party to conduct the same
- Forum may try to seek redressal through discussions with licensee. If licensee agrees, the decision is recorded as an Order
- If licensee does not agree, Forum may call parties for hearing
- No party may be represented by Professional Counsel

2. Ombudsman

Constitution

- **Appointment**

- Commission to appoint
- Multiple Ombudsmen can be appointed

- **Eligibility criteria**

- **Nature of experience**
 - Retd. District Judge
 - Retd. Secretary to State Government
 - Any person who was a member or chairperson of any statutory quasi-judicial body at state level for min 3 yrs
- Should not have worked for licensee for past 2 yrs

- **Remuneration and Office expenses**

- Remuneration to same as for any Member of the Commission
- Expenses to be borne by Commission who can recover it from licensees, who can in-turn recover from the ARR

Redressal process (1 of 2)

- **Preconditions for entertaining any representation**
 - Should be filed only by Complainant
 - Forum should have been approached earlier
 - Matter should be not be pending before any court or any verdict should not have been passed by such a court
 - Complainant is not satisfied with redressal provided by Forum/ Forum rejected the grievance/ Forum did not pass order within time-limit
 - Representation filed within 30 days from date of Forum decision/ expiry date for Forum decision
 - If compensation is claimed, then fees should have been paid
- **Settlement by conciliation**
 - Ombudsman will try to settle case through mutual agreement
 - If both parties agree, decision is recorded

Redressal process (2 of 2)

- **Investigation process if mutual agreement is not reached**
 - Call for records from Forum
 - Require licensee to furnish records if required
 - Call both parties for hearing
- **Order**
 - Contents of Order
 - Decisions and reasons
 - Directions, if any, to licensee or complainant
 - **To be issued within 60 days of filing of representation**
 - Complainant/ licensee can file appeal against order with any judicial body
 - Provision for Interim Order and Review of Order

3. Consumer Advocacy

Consumer Advocacy

- **Consumer Advocacy Cell to be instituted by the Commission**
- **Duties of the Cell**
 - Provide legal advice and support to Complainants to represent their case before Ombudsman
 - Analyze reports submitted by licensee with regards to levels of performance achieved on SoP guidelines
 - Suggest any improvements needed in Regulations based on historical review of grievances/ representations redressed
- **Operationalization of the Cell**
 - Such a Cell shall be funded by the Commission

Formats

Grievance submission before Forum

- **Details of complainant (name, contact details, name of licensee, nature of connection, consumer number)**
- **Category of grievance (billing, meter, supply issues, deficient service, etc.)**
- **Employee/ department of licensee against whom grievance has been filed**
- **Facts of the grievance**
- **Nature of relief sought**
- **List of documents enclosed**
- **Standard Declaration**
- **Facility for Nomination**

Submission of Representation before Ombudsman

- Details of complainant (name, contact details, name of licensee and Forum, nature of connection, consumer number)
- Date of submission of grievance to Forum
- **Final decision of the Forum, if received**
- Facts of the representation
- Nature of relief sought
- List of documents enclosed
- Standard Declaration
- Facility for Nomination

Reporting by Forum

- Quarterly Report (Format provided)
 - Contents
 - Status on grievance redressal in terms of total grievance pending in the quarter, grievances attended and redressed, in the process of redressal or escalated to Ombudsman. All these details have to be provided for defined categories of grievances
 - Status of compliance by licensee
 - Submission: 15 days of close of period
- Annual Report
 - General review of activities during the financial year
 - Submission: 45 days of close of period
- To be submitted to licensee, Commission and Ombudsman

Reporting by Ombudsman

- Half-yearly Report
 - Contents
 - Facts of the representations and Responses of parties
 - Opinion of Ombudsman on compliance of standards of performance by licensee
 - Directions issued to licensee and/ or complainant in the order
 - Compliance of Order by licensee and/ or complainant
 - Submission: 30 days of close of period
- Annual Report
 - General review of activities
 - Submission: 45 days of close of period
- To be submitted to Commission

Response to comments from States

1. Comments on CGRF

Constitution (1 of 2)

S. No	Comment	Clause/s	Response	State/s
1	Multiple Forums may not be required. Licensee may decide on the number depending upon work-load	2.2	Already specified in the Regulation	Punjab
2	Forum should be required to have atleast 'one sitting each week' and not 'one sitting each week in each revenue district' (otherwise, in rural areas, forum may have to go to 3-4 revenue districts per week)	2.2	FOR recommendation <CGRF should be located at a place easily accessible by consumers. CGRF should hold sittings at predefined places on predefined dates> There could be some consumers with disconnection related grievance who cannot wait for long time to be heard. Hence Forum must visit each district each week. The figure of 3-4 would be reduced to 2. Number of Forums can be increased by licensee if the need is felt	Gujarat
3	Chairperson to be chosen by Commission from any 2 persons suggested by licensee	2.4, 2.5	GoI Rule-7 <licensee has power to establish the Forum. Commission's role has been only envisaged for the 3rd member> FOR Reco <Forum is an internal organ of the licensee> & - that implies licensee has full power to select Member 1 and 2. 7 of 9 states studied have allowed Licensee to select Chairperson without taking approval from Commission. Hence, Licensee can select Chairperson without seeking Commission's approval.	Gujarat
4	Age-limit of 65 yrs to be 'for appointment' instead of 'for occupying'	2.8	Regulation may be modified as: The Upper Age-limit for 'occupying' the office for all members would be same and equivalent to retirement age of Member 2 (serving officer of licensee)	Gujarat

Constitution (2 of 2)

S. No	Comment	Clause/s	Response	State/s
5	Should members work 'full-time'?	2.10	Regulation may be modified as: All 3 members to work 'Full-time'	Gujarat
6	Eligibility criteria for Chairperson: May be extended to retd. Civil servant not below Collector or retd. Elect Engr not below Chief Engr in retd. Judicial officers. Chairperson & Member 2 to be serving officers of licensee	2.6 a)	Judicial officer was felt necessary as the process of decision making is akin to adjudication. However, previous FOR meetings have indicated that some grievances are non-legal in nature. Further, FOR Reco <Chairperson should not be serving officer of licensee>. Hence the eligibility criteria of Chairperson is restated as: Retd. Judicial Officer with min 10 years of experience as Sub-divisional District Magistrate or Retd. Suptd. Engr. of a Distribution Licensee. Member 2: Serving Exec. Engr. or eqv. of licensee with experience in S&D or Accounts/ Finance	Gujarat , Punjab
7	Member 1, 2 & 3 may be renamed Chairperson, Technical Member and Independent Member	2.4	May be renamed as: Chairperson, Technical/ Finance Member, Independent Member	Gujarat
8	Remuneration of Chairperson to be approved by Commission	2.14	FOR Reco <Chairperson is an officer of the licensee, not necessarily 'serving'> Hence Commission cannot approve his remuneration (as is done in case of 3rd Member who is selected by Commission and his remuneration is decided by Commission)	Gujarat

Grievance submission and redressal process

S. No	Comment	Clause/s	Response	State/s
1	Format for grievance submission should only be as a guideline and not mandatory	2.31	Format is critical to enhance reporting. The following may be added in the clause: 'Provided CGRF shall take cognizance of any grievance submitted based on merit of the case and will not reject any grievance for the sole reason of not being submitted in the format specified'	Gujarat
2	Section 86.1.f) may be added as a section under which a grievance cannot be filed with the Forum	2.33 b)	It is amply clear that CGRF has been established for redressing Consumer grievances. Hence there is no need to include the said section as it pertains to non-consumer related matters	Chattis gadh
3	Solving grievance related to disconnection of supply in 15 days: Since licensee has been provided 15 days to respond and the grievance also needs to be solved in 15 days, this may not be tenable. Since Interim order has been provided for, the need to solve the grievance within 15 days may be done away with	2.47 , 2.35	It is necessary to specify the time limit for solving the grievance as it is the most critical amongst all categories. The following may be added: In case of disconnection of supply, licensee would have to respond within 5 days	Chattis gadh
4	Barring Professional Counsel to represent is against natural justice	2.40	FOR Reco <Proceedings before CGRF are non-adversarial. CGRF is an internal selfcorrecting mechanism within the licensee to solve grievance amicably. Most Consumers are not able to bear cost of Advocates - hence to ensure fair play, even licensees should not be allowed to use Advocates>	Punjab

Forum Order

S. No	Comment	Clause/s	Response	State/s
1	Interest rate may be specified for the utility to pay to the Complainant on return of undue charges. The rate could be that for consumer security deposit, rate of nationalized banks on deposits or the market rate	2.45 b)	The rate may be fixed as: SBI's deposit rate for the period nearest to the duration for which the undue charges were withheld by the licensee	Chattis gadh
2	Review of its own order by Forum is not judicious and not called for in view of prescribed timelines for decision making	2.53	May be removed	Punjab
3	In case of Non-compliance of Forum order by Licensee, Complainant should also be given right to approach Ombudsman in case licensee does not comply with Forum order	2.50	Sec. 42 (5) & (6) allow complainant to appeal to Ombudsman only in case of non-redressal of grievance by Forum. Non-compliance of Forum order by licensee may not fall under this category. In any case, Clause 2.50 & 2.51 provide Forum powers to take up the matter with higher authorities of licensee to ensure compliance and also inform the Commission who can take action under Sec. 142. Hence the Complainant should not be allowed to approach Ombudsman if licensee does not comply with Forum's order	Gujarat
4	Penalty for loss or damage caused and Compensation under SoP guidelines should be included in the Order	2.45	FOR Reco <Power to impose penalty under Sec. 57 rests only with the Commission>. Further, SoP is a standard for the licensee and Forum, being an internal organ of the licensee, cannot impose penalty on the licensee itself	Gujarat , Chattis gadh

2. Comments on Ombudsman

Constitution

S. No	Comment	Clause/s	Response	State/s
1	Eligibility criteria may be extended to Retd. Chief Electrical Inspector or Chief Engr.	3.5	Eligibility criteria cannot be extended to Chief Engr. since Chairperson of the Forum has been specified as Suptd. Engr. Most states require persons of eminence at this post. Hence the present regulation is proper in this regard	Gujarat
2	The restriction of not having worked for licensee in past 2 years may be removed as such a restriction is also not placed while appointing Chairman and Member of Commission	3.6	The restriction is needed as cases might come to Ombudsman from those licensees where the Ombudsman might have worked earlier creating a conflict of interest and reduction in independence and immunity. Further, there is no correlation in appointment terms between Members of Commission and Ombudsman which has been specified in the EA Act	Chattis gadh
3	Remuneration: May be decided by Commission rather than keeping it same as for a Member	3.9	Agreed. Regulation may be suitably modified	Gujarat
4	Expense of office to be 'borne out of SERC Fund' rather than 'borne by licensee'	3.14	FOR Reco <Expenses to be borne by SERC which can be recovered from licensee>. This has been already provided in the Regulations - hence no need to change	Gujarat

Redressal process

S. No	Comment	Clause/s	Response	State/s
1	Precondition for entertaining representation: Consumers should pay some share of disputed amount while submitting representation. This would discourage flimsy appeals and attempts by consumers to avoid paying dues to licensee by delaying the decision	3.19	AGREE. Complainant may be required to deposit 1/3rd of amount decided by Forum (as in case of Delhi)	Punjab
2	Rejection of Representation on grounds of complexity (elaborate oral & documentary evidence to be analyzed) may be examined further. May cause financial hardships to small consumers if they have to approach High Court	3.21 d)	May be removed	Chattis gadh

Order

S. No	Comment	Clauses/s	Response	State/s
1	Is Ombudsman an 'adjudicating officer' under the Act? If not, then as per Section 111, no appeal can be filed against Ombudsman's order in APTEL	3.40	Accepted. The reference to APTEL may be deleted	Gujarat
2	Review of its own order by Ombudsman is not judicious and not called for in view of prescribed timelines for decision making	3.42	May be removed	Punjab
3	Penalty for loss or damage caused and Compensation under SoP guidelines should be included in the Order	3.37	FOR Reco <Power to impose penalty under Sec. 57 rests only with the Commission>	Chattis gadh

3. Miscellaneous Comments

Miscellaneous

S. No	Comment	Clause/s	Response	State/s
1	Reporting Requirement of Ombudsman: Presently provides for 'Opinion of Ombudsman on compliance of SoP by licensee'. It should be with reference to grievances only	3.17 c)	GOI Rule-7 (4) (a) <The Ombudsman shall prepare a report on a six monthly basis giving details of the nature of the grievances of the consumer dealt by the Ombudsman, the response of the licensees in the redressal of the grievances and the opinion of the Ombudsman on the licensee's compliance of the standards of performance as specified by the Commission under section 57 of the Act during the preceding six months> Thus it cannot be changed	Gujarat
2	Definitions: Both 'Complaint' & 'Grievance' have been used alternatively in the regulations. 'Complaint' needs to be defined separately	1.5 d)	'Complaint' may be replaced with 'Grievance' everywhere in the Regulations	Gujarat
3	Forum, Ombudsman to adjudicate disputes based on provisions made in the Act, Regulations and Codes issued by Commission and modified from time to time	-	As Forum & Ombudsman are established under the EA Act and guided by Regulations drafted by SERCs, it is not necessary to specifically mention this	Chattis gadh



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Automated Demand Response

A Critical System Resource for Power Sector

**21st Forum of Regulators Meeting
28 November 2010
Chennai**

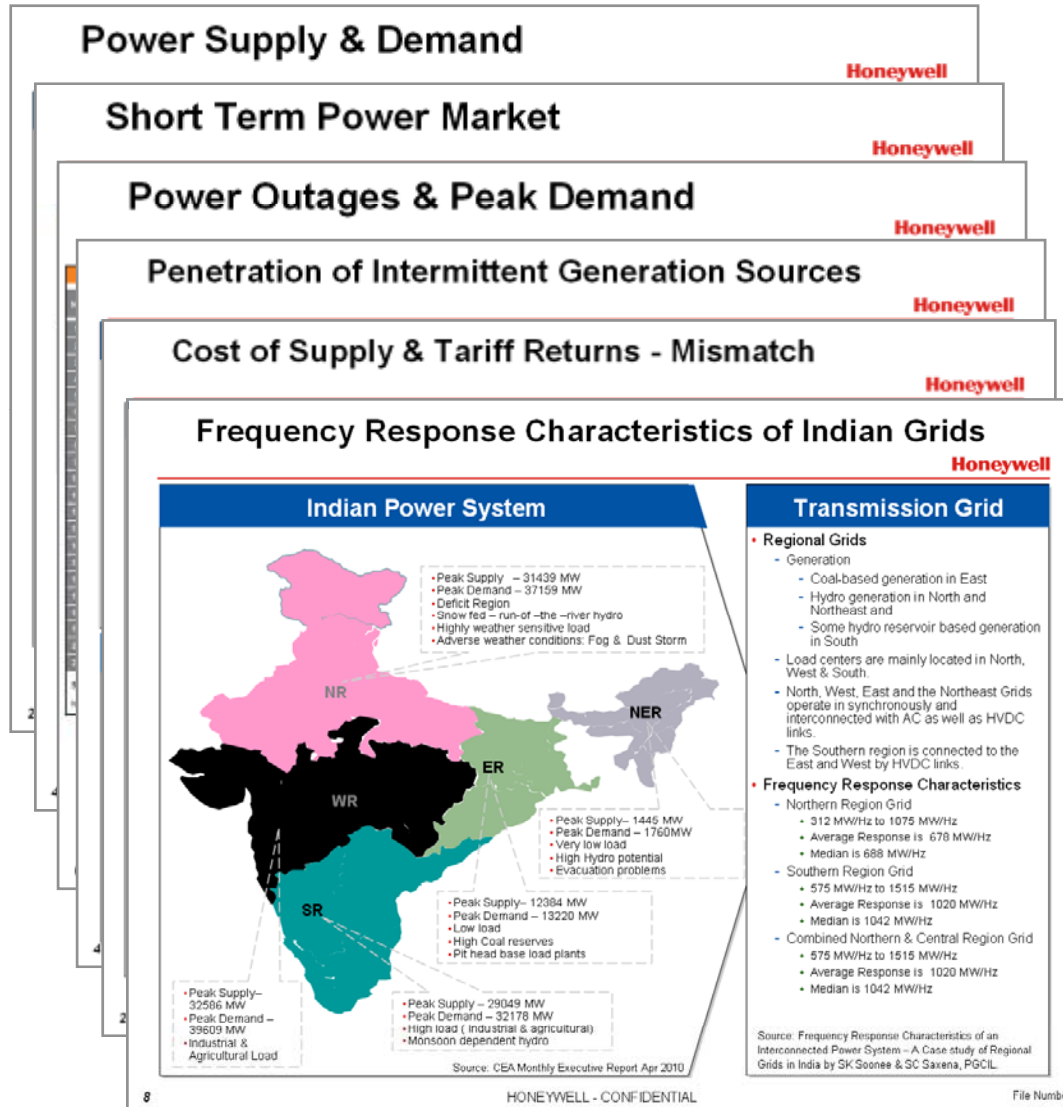
Honeywell

Agenda

- **Power Market – Today**
- **Need for Shift – Demand Side**
- **Automated Demand Response – Introduction**
- **Demand Response – India Market Potential**
- **What AutoDR can Enable?**
- **AutoDR – Technology Overview**
- **DR Delivery Mechanisms**
- **Benefits**
- **Noida Power – A Case Study**
- **Regulator Support – Observations & Way forward**
- **Summary**

Power Market - Today

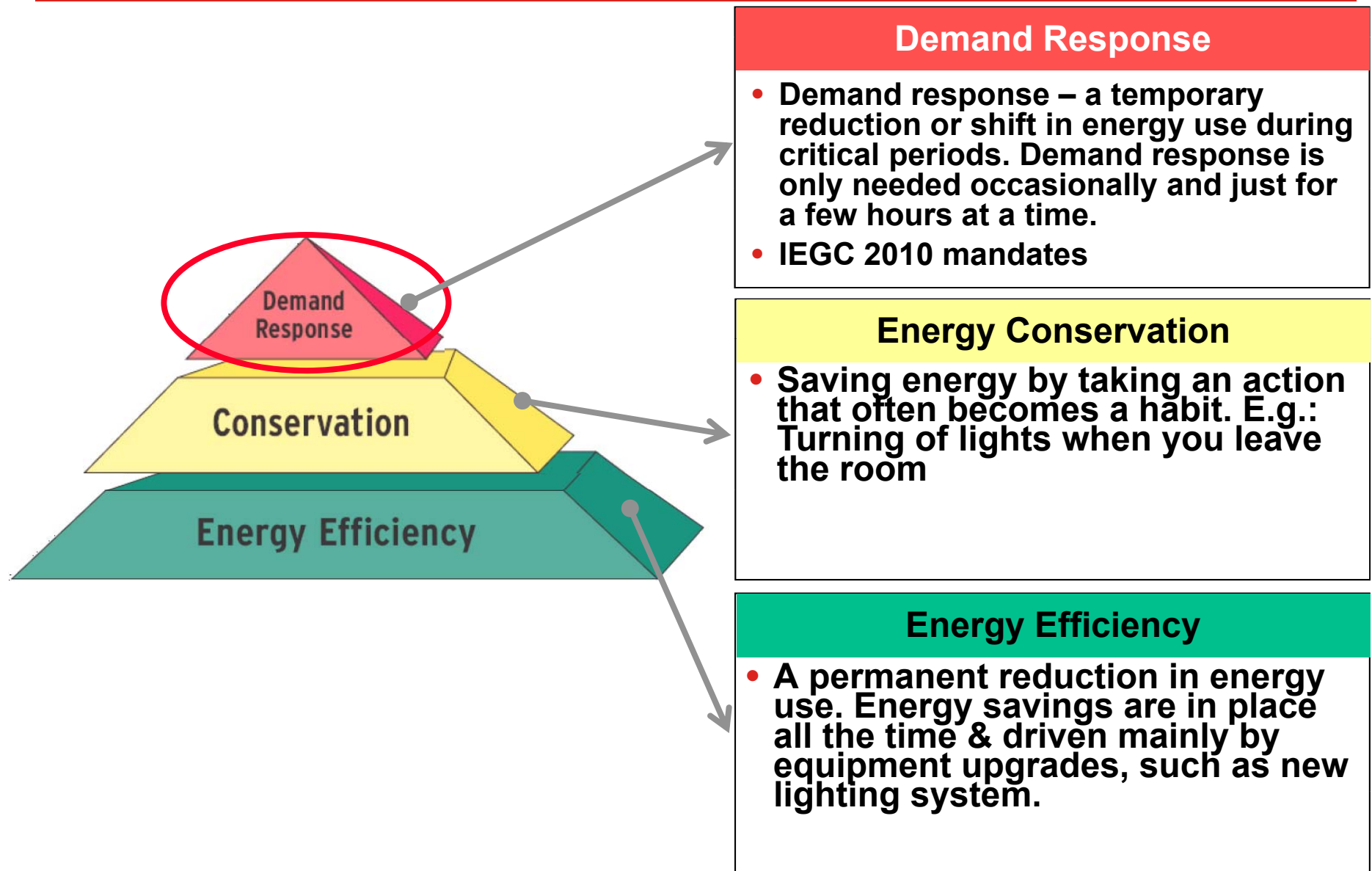
Honeywell



- Peak energy and power deficit in India stands at 12.7 % and 10.1% respectively
- Need to add 30~40GW per year to be able to close the supply-demand gap by 2017.
- Discoms procure about 5% of their power requirements at market determined rates (@ ~3X) → rising power procurement costs.
- High price burden on buying State Discoms
- Higher load shedding where Discoms cannot afford higher prices
- Power outage resulting in lost economic opportunities for the end-customers.
- Focus on supply side initiatives – Intermittent Energy Source Mix is on raise
- Liquidity crunch (fixed tariffs on consumer side, but rising procurement costs and as truing up is annual exercise.)
- Declining Industrial load and raising domestic and commercial load with efficient electronic load control devices

Need for Shift in Focus – Demand Side

Honeywell

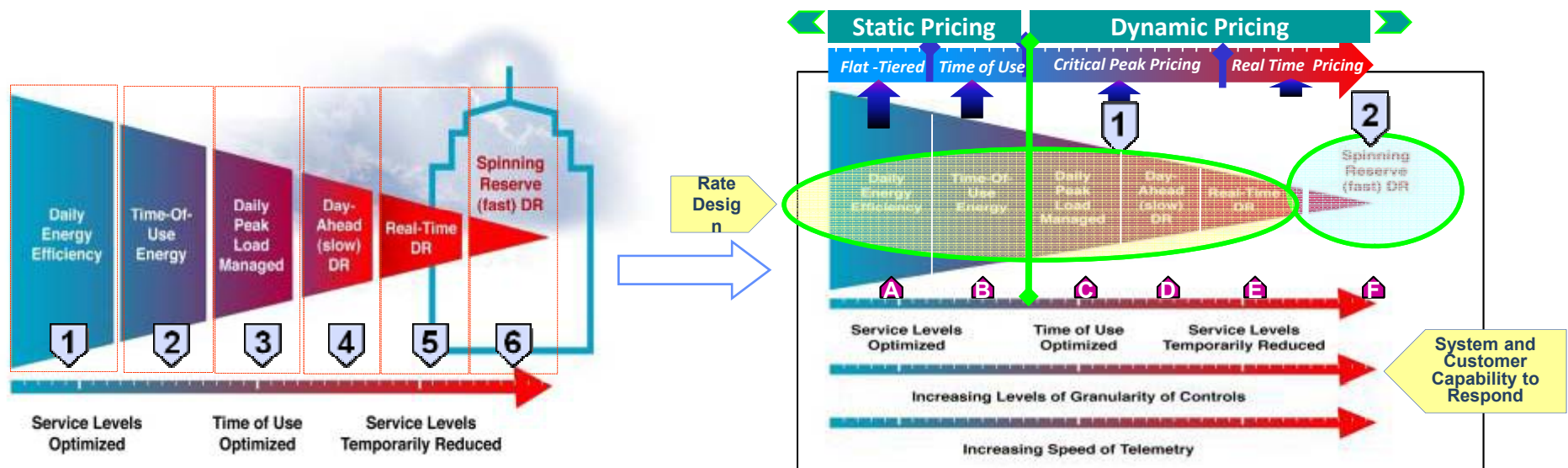
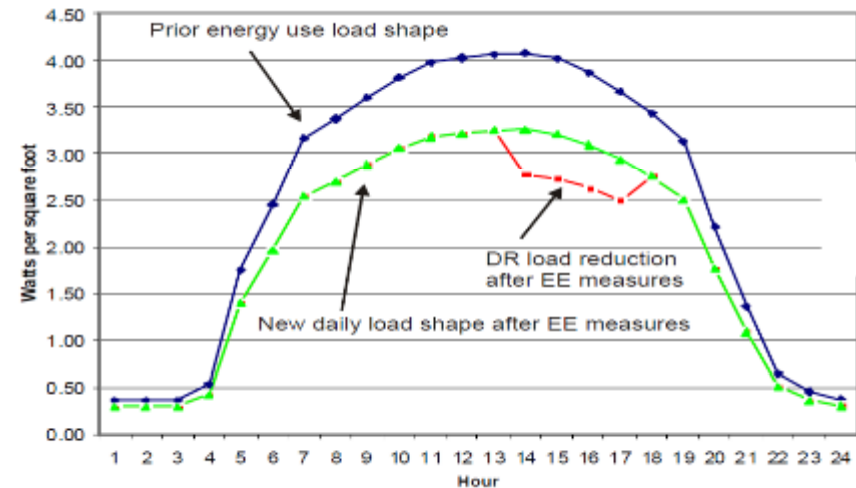


Automated Demand Response

Honeywell

What is Automated Demand Response?

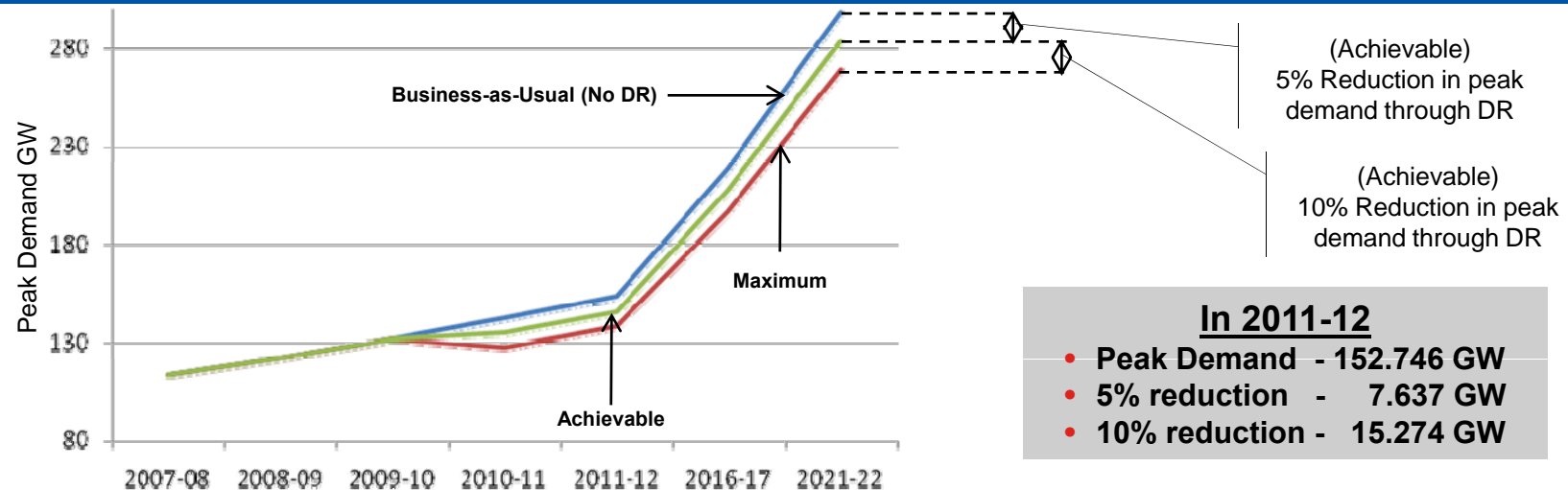
- Customers receive automated, electronic price and reliability signals.
- Customers link signals directly to building energy management systems and control devices
- Customers automate customized site-specific DR strategies.
- Utilities get dispatchable operational capability similar to conventional generation resources.
- Supports direct control, bidding, and pricing options.



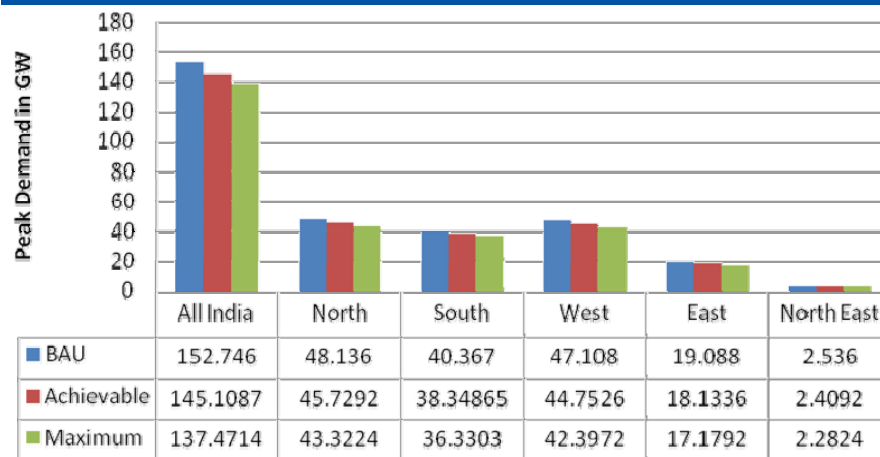
Demand Response - Market Potential

Honeywell

India Market DR Potential



Region wise DR Potential



Key Observations:

- Northern, Western, Southern regions contribute about 90% of India peak demand
- Assuming that C&I sector contributes 50% to peak demand with rest 50% by Residential & Rural sectors
- In 2011-12, at 50% of C&I contribution to peak demand
 - All India C&I DR Market Size - 3.81~7.63 GW
 - N, W & S Region C&I DR Market Size - 3.39~6.78GW

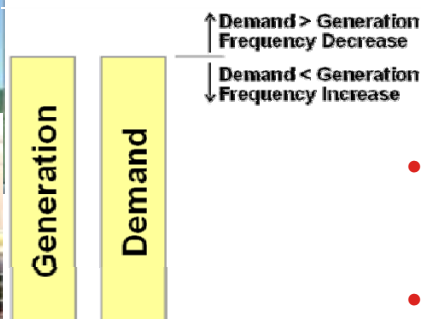
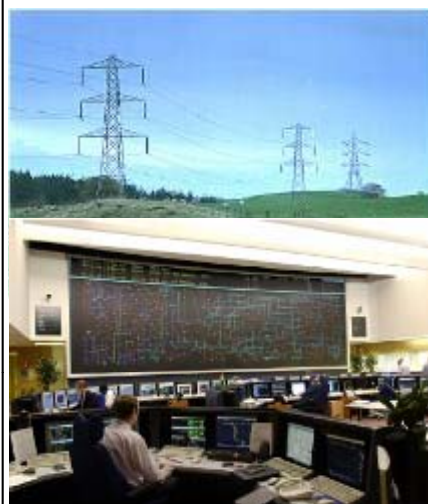
Key Assumptions:

- Type of programs pursued
- Market Acceptance of the programs, and
- Overall cost-effectiveness of the programs

What AutoDR Can Enable?

Honeywell

Ancillary Services



- **Deliver Frequency Response as part of Load Generation Balancing Services.**
 - With a less than 4 seconds instruction can reduce and maintain demand for 30~60 mins, a demand greater than 3MW.
 - With a less than 30 seconds instruction can reduce and maintain demand for at least 10 min, a demand greater than 10MW.
- **Deliver Spinning Reserves/Fast Reserves**
 - With a less than 2 mins instruction can reduce and maintain demand for at least 15min, a demand greater than 50MW.
- **Deliver Short-term Operating reserves**
 - With a less than 240mins or 4hrs instruction can reduce and maintain demand for at least 2 hours, a demand greater than 3MW.

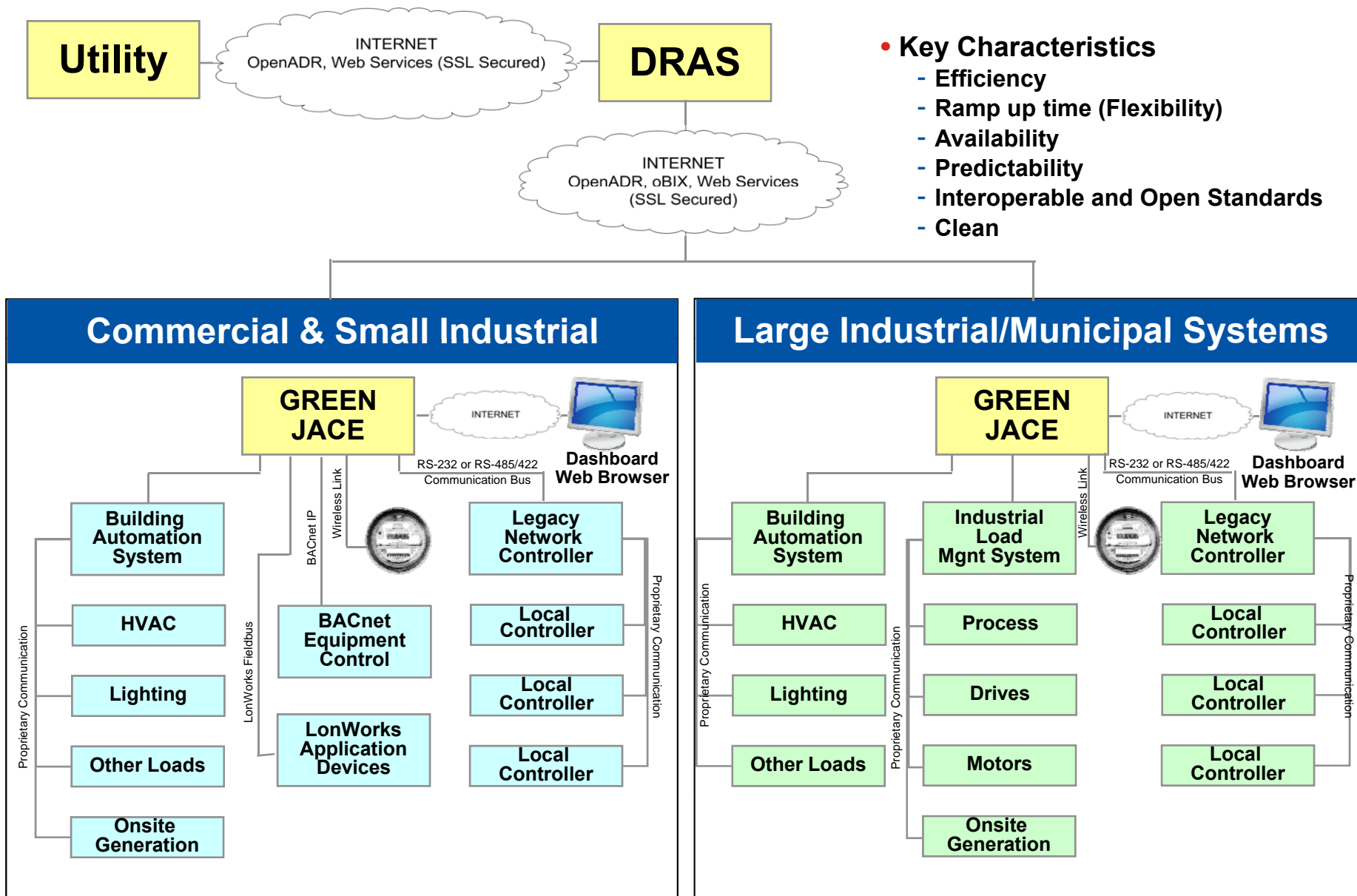
Distribution Utilities

- **Deliver dispatchable operational capability similar to conventional generation resources.**
 - With a less than 10 minutes instruction can reduce and maintain demand for 30~60 mins, a demand greater than 100 kW/customer.
- **Deliver capability to avoid overdraw from grid during peak hours.**
- **Deliver predictable reduction in demand if unable to tie-up supply resources or sudden non-availability of scheduled generation resource**



Automated Demand Response - Technology Overview

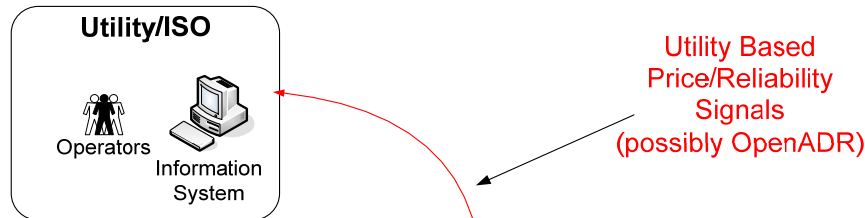
Honeywell



DR Delivery Mechanisms

Honeywell

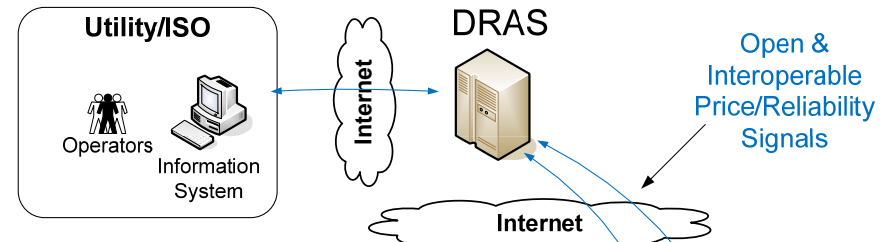
Aggregator/ESCo Model



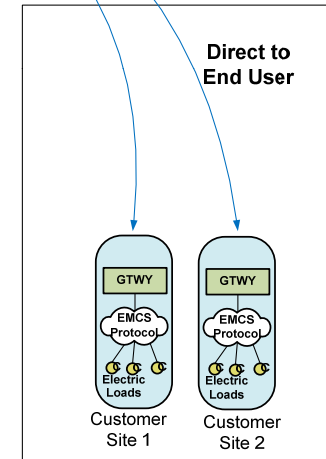
- Utility will not have direct customer relationship
- Utility will engage Honeywell to provide Turnkey Demand Response Services
 - ADR infrastructure
 - Design & Development of DR Program
 - Incentive Payment (as received from Utility)
 - DR Program Marketing & Management
 - Customer Recruitment & Contract Management
 - Facility Commissioning & Shed Strategy Development
 - BMS Programming & Management
 - Customer Training & Problem Resolution
 - Customer Web Portal
 - Delivery of Peak Demand Reduction

For Distribution Utilities and CTU/STUs

DR Solution Provider Model



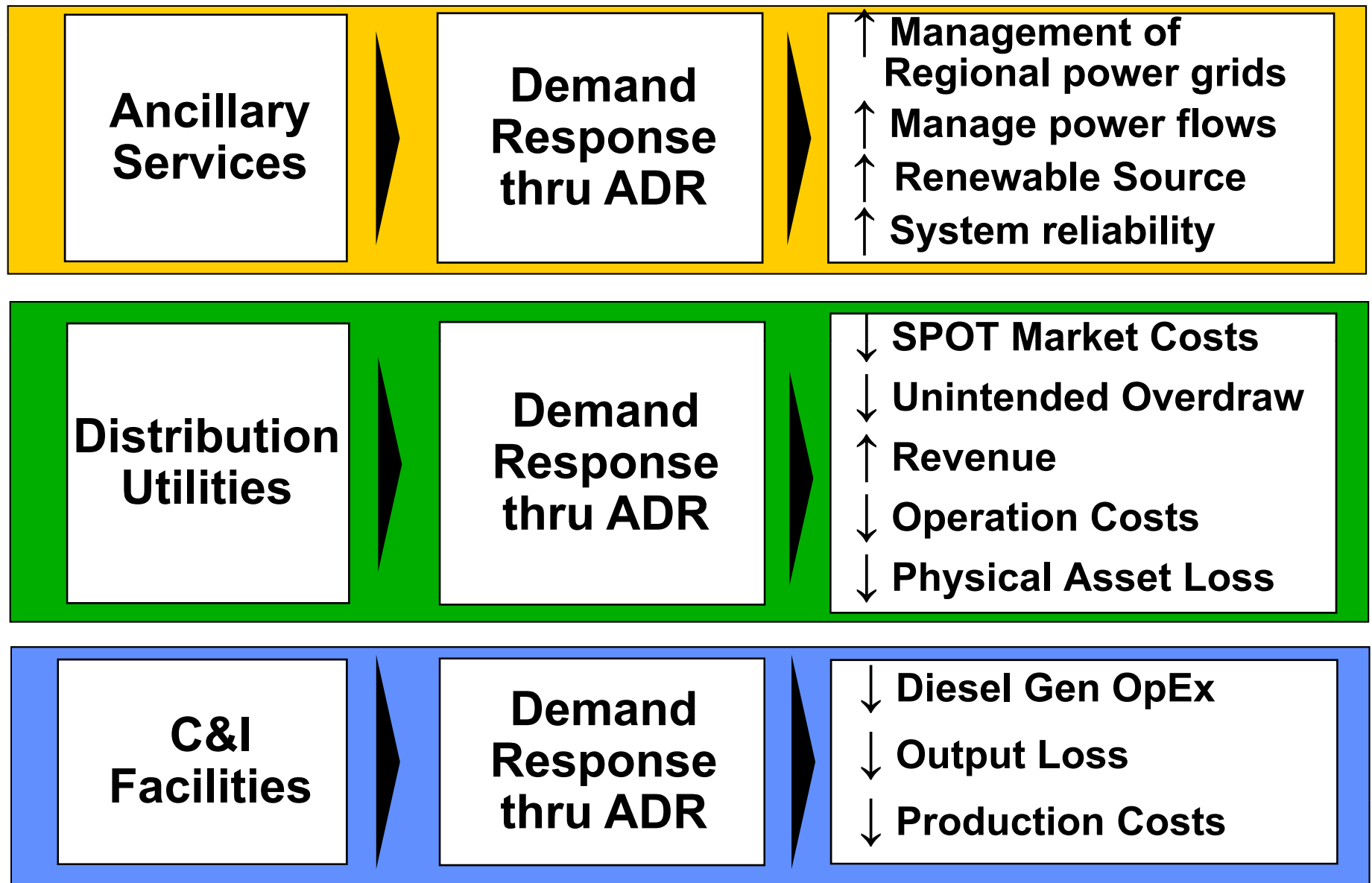
- Utility will have direct customer relationship, contract and pay incentives.
- Utility will design, develop, market and program manage the DR program.
- Utility will engage Honeywell to provide multiple services:
 - ADR infrastructure
 - Facility Commissioning & Shed Strategy Development
 - BMS Programming & Management
 - Customer Training & Problem Resolution



For Distribution Utilities Only

Benefits

Honeywell

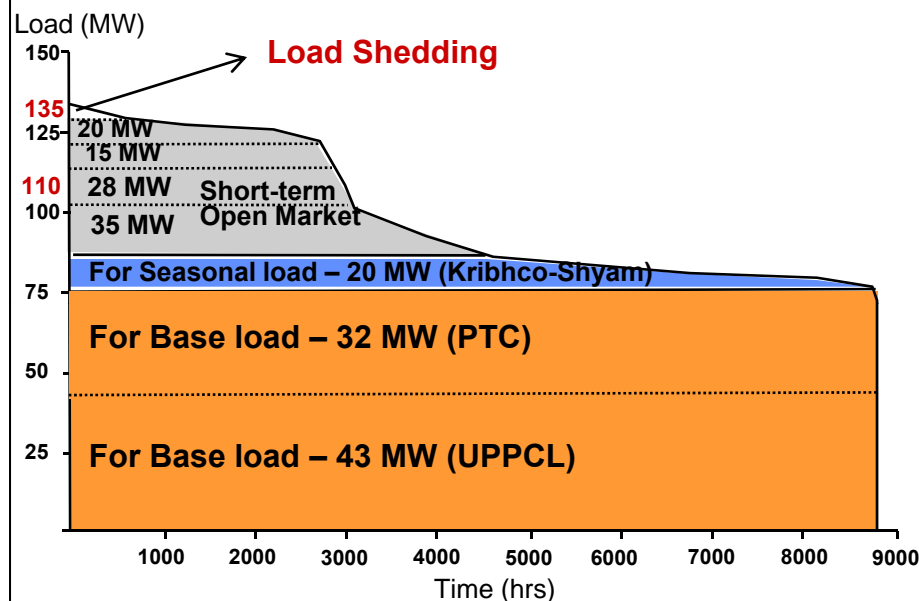


Noida Power A Case Study

Noida Power Load Duration Curve

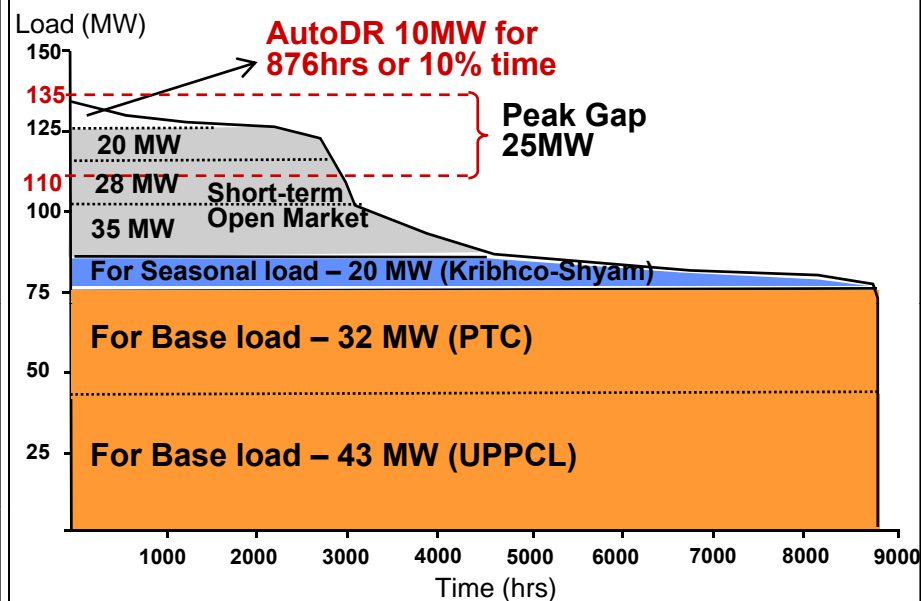
Honeywell

Unrestricted Load Duration Curve (LDC) – 2009~10



Power Purchased/Period	MW	₹ Cost/Unit
UPPCL (Apr'09~Mar'10)	43	2.69
PTC, WB (Apr'09~Mar'10)	32	4.93
Kribhco-Shyam (Oct'09~Mar'10)	20	5.06
STOA (Apr'09~May'09)	28	10.00
STOA (Jun'09~Sep'09)	35	10.00
STOA (Oct'09~Dec'09)	15	10.00
STOA (Jan'10~Mar'10)	15	10.00

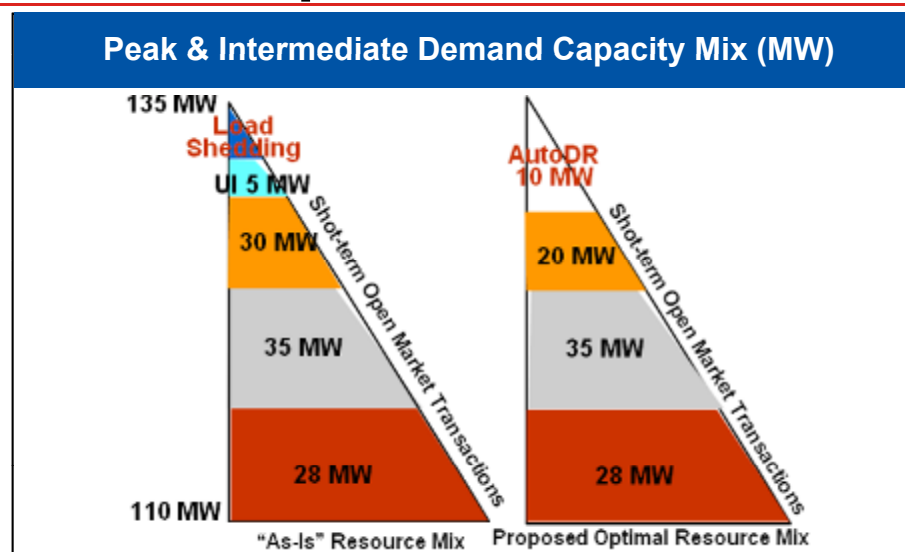
Unrestricted LDC – 2009~10 with AutoDR



DR Size (MW)	Program Type (Notification Time)	Program Hour Limits (Hours/Season)		Capacity Availability
10	3~5 Minutes	Summer	Max 438	1800~2200 Hrs (Weekdays)
		Winter	Max 438	0700~2100hrs (Weekdays)

Auto DR can operate as peak & intermediate solution during peak and non-peak months

Honeywell



• DR Cost Effectiveness

Total Resource Cost Perspective

- Utility benefits (avoided costs): ₹~44 Cr
- Utility program administration costs: ₹~6.75 Cr
- Customer incremental/installed costs: ₹2.02 Cr
- Impact on Non-participant – (₹0.153)
- TRC benefit/cost ratio: 6.53

This program is a cost-effective resource from the perspective of all of Noida Power's ratepayers.

Customer Perspective

- Customer energy cost savings: ₹7.65 lac
- Incentive paid to customer: ₹~0.9 Cr
- Customer incremental/installed costs: ₹~2.75 lac

This program is a cost-effective resource from the perspective of Noida Power's customers.

10 MW Plant - ₹6 Cr AutoDR Vs. ₹60 Cr Peak Plant

Regulatory Support

Key Observations

- **Establish an environment conducive for Demand Response in India**
 - Need for mandatory implementation of ToU or Real-time pricing that may reflect the market condition and able to manage the peak demand scenarios.
- **Grants, incentives and other funding for pilots to drive Demand Response and induce participation**
 - Utility pays for the DR and recovers the costs through the ARR mechanism
 - Through the APDRP mechanism
- **Budgets/ funds for increasing Customer Awareness of and Education on Demand Response**
- **Desirable to promote Demand Response for Ancillary Services Markets in India targeted at System Operator**
- **Similar to Renewable purchase obligation, outline role of Demand Response in Operation and Long-term Planning and Recovery of Associated Costs.**

Virtual Peaking Plants – Build-up of Capacity

Honeywell

- **Virtual Peaking Plants requirements for both Ancillary Services and Discoms to be quantified and notified. Suggestion for all India.**

Peak Demand by 2016/17	AutoDR Capacity
218200 MW	4500 MW (2.1%)

- **Who will own the VPP?**

Year	Cumulative MW	
	Discoms	Aggregators
2011-12	300	200
2013-14	400	300
2014-15	600	400
2015-16	600	500
2016-17	600	600

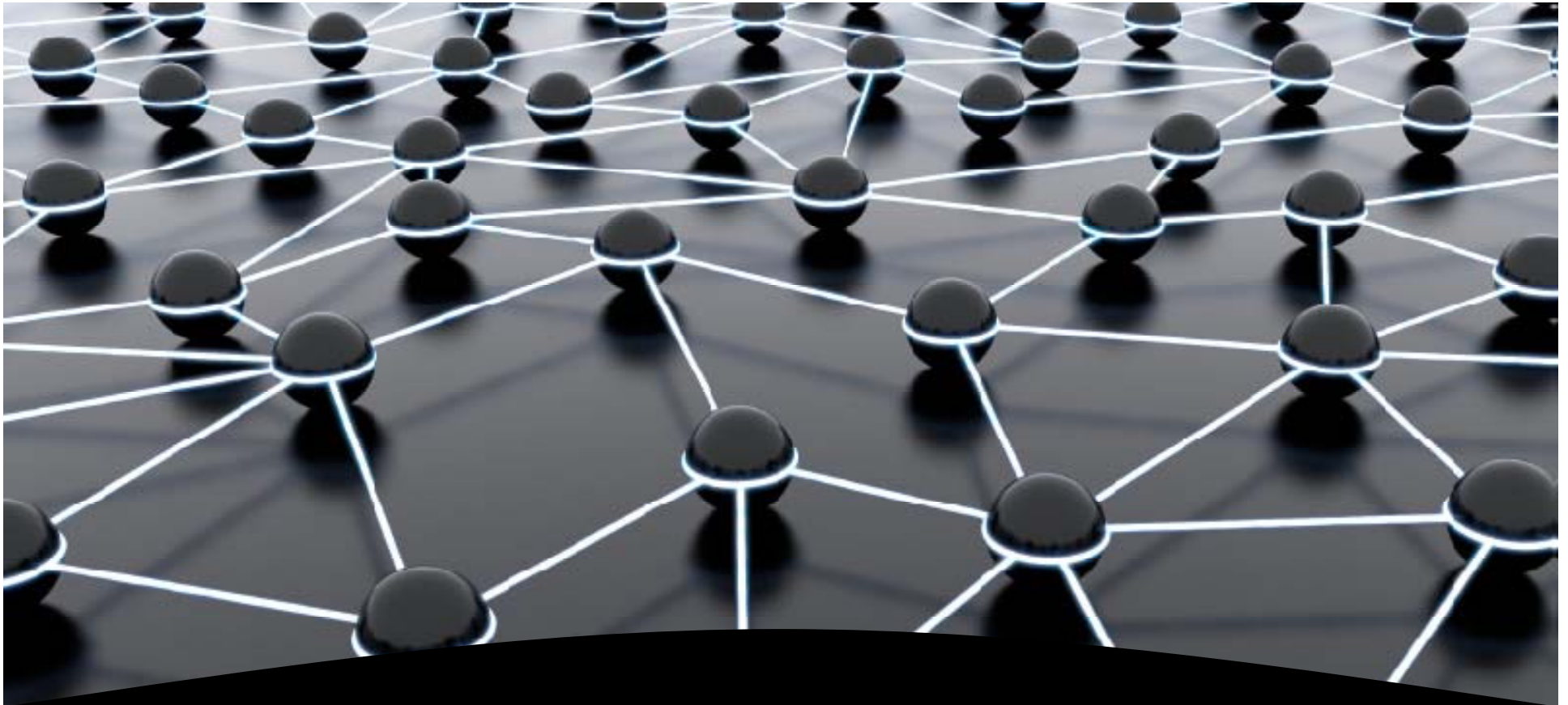
- **Potential Carbon Emissions Avoided – 1 Mn Ton**

Way Forward

- **Formulate DSM Rules & Regulations**
 - Focus on Demand Response
 - Criteria for size and type of DR resources needed
 - Appropriate price for peak kW savings procurement
- **Complement Indian Electricity Grid Code 2010 focus on peak management with**
 - Strengthening of DSM Cells in Utilities
 - Steps to make DR plans operational
- **Approval and funding for conducting pilots to demonstrate and articulate the benefits of DR for all stakeholders**
 - Mumbai or cities alike good candidates

Summary

- **Demand Response is a critical resource in the energy industry**
 - A resource for managing peak demand
 - A resource for managing capacity-constraints
 - Intelligently integrates supply and demand to keep the grid reliable and stable – and it does so automatically and quickly.
 - Capabilities can extend to supporting distributed energy resources and to complementing traditional ancillary services.
 - A key player in the movement from integrated resource planning to integrated resource operations.



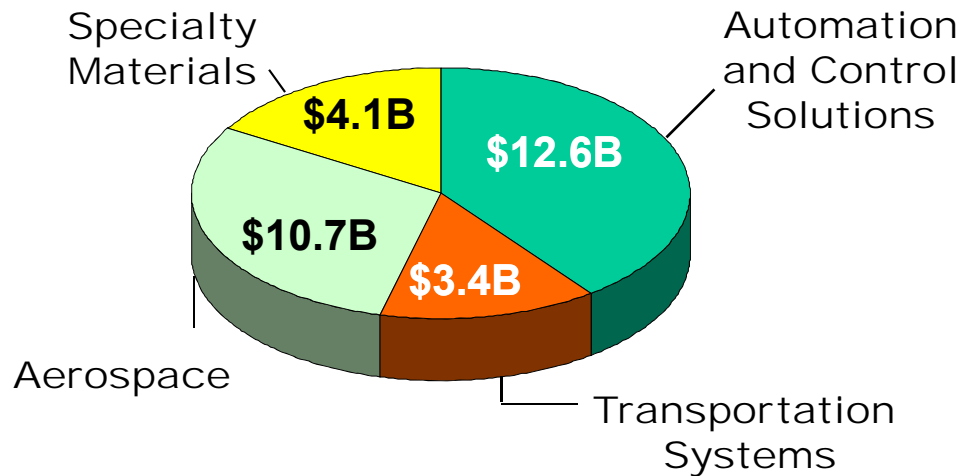
Thank You

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About Honeywell

Honeywell International

Honeywell



- A Fortune 100 company – US \$31 Billion (2009)
- 128,000 employees in more than 100 countries
- Headquartered in Morristown, NJ
- 4 Diversified Businesses
- Exemplifying innovation for over 100 years



• AEROSPACE

- World's premier supplier of aircraft engines & systems, avionics
- For airliners, regional & business aircraft & spacecraft
- Customers: Boeing, Lockheed Martin, U.S. DoD, NASA, Sikorsky



• AUTOMATION & CONTROL SOLUTIONS

- A 'sensing & control' pioneer; today's technology and integration specialist
- Solutions for homes, buildings, manufacturing plants, infrastructure, vehicles, devices



• TRANSPORTATION SYSTEMS

- Leading innovator of automotive turbochargers
- Engine downsizing, emissions, fuel efficiency
- Maker of consumer automotive product brands Prestone®, Autolite®, FRAM®



• SPECIALTY MATERIALS

- World leader in high-performance materials
- Fluorocarbons, specialty films, advanced fibers, Packaging, reflective coatings, ballistic materials
- Anso® carpet fiber, Spectra® high performance fiber

Honeywell in India

Honeywell

Profile

Approx. \$1 b Activity

Strengths

- Market Leader
- Strong Local Organization
- Global Exports
- Installed Base

HAIL

- Leading automation system integrator
- 2450 People (10 times in 5 years)
- HQ in Pune. 10 regional offices



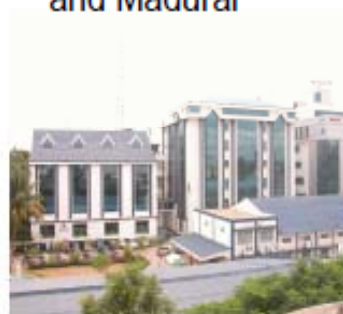
Honeywell Intl.

- Aerospace
- Specialty Chemicals
- HQ Delhi



Technology Solns.

- Research & Development Organization
- 5000 employees Pune, Bangalore and Madurai



Honeywell Turbo

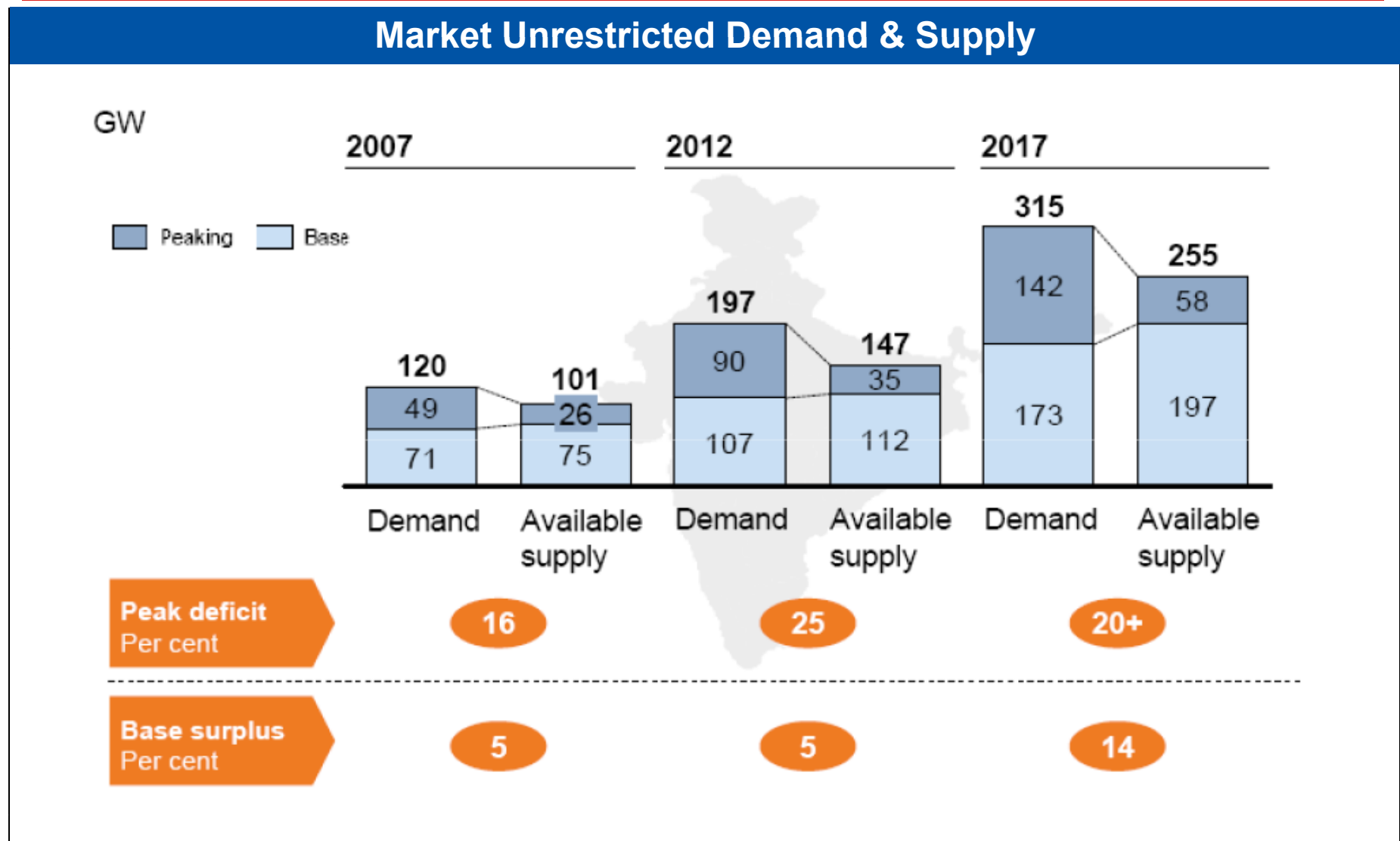
- Established Turbo charger business in India
- HQ in Pune



HON India - 8000+ Employees

Power Supply & Demand

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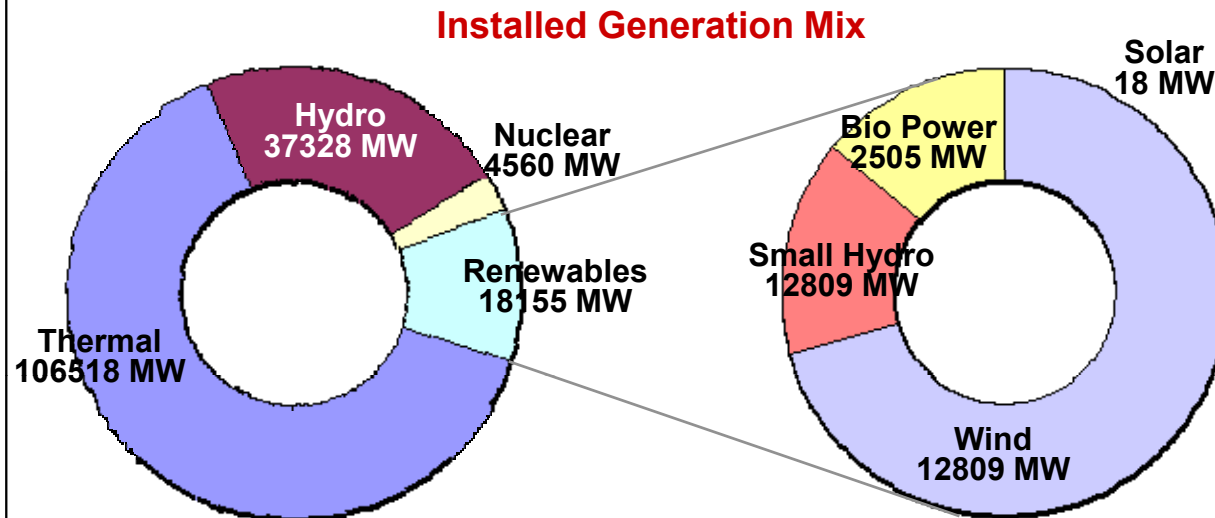


Peak Demand is an Major Issue

Penetration of Intermittent Generation Sources

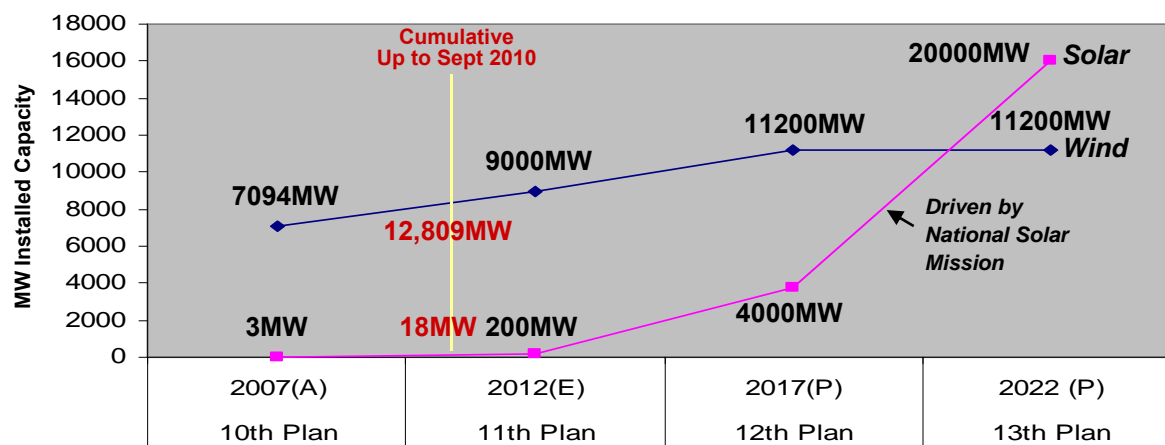
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Growing Portfolio of Intermittent Renewable Sources in Generation Mix



- **Installed Capacity**
 - Projected to reach a capacity of 455100MW by 2022
 - 2516 BU by 2022
 - Increasing size of the generating unit
- **Projected contribution of Grid-interactive Renewable Power**
 - Grown from 2% to around 11% in only 8 years, and is contributing about 4.13% to the electricity generation mix.
 - 15.9% of Installed capacity or 72400 MW by 2022
 - 6.4% of electricity mix by 2022
 - 173 BU by 2022.

Growth in Wind & Solar Generation Sources

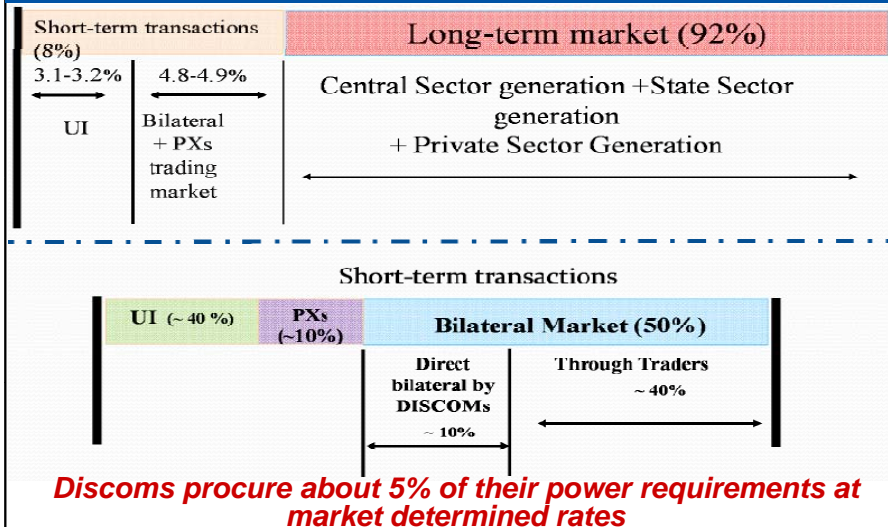


- **Grid tied Wind Power**
 - Targeting a installed capacity of 38500MW by 2022
 - 77BU of Generation mix
 - 15% contribution to total electricity mix by 2022.
- **Grid tied Solar Power**
 - Aided by National Solar Missions targeting for a 20GW solar installed capacity by 2022.
 - 30 BU of Generation mix
 - 10% contribution to total electricity mix by 2022.

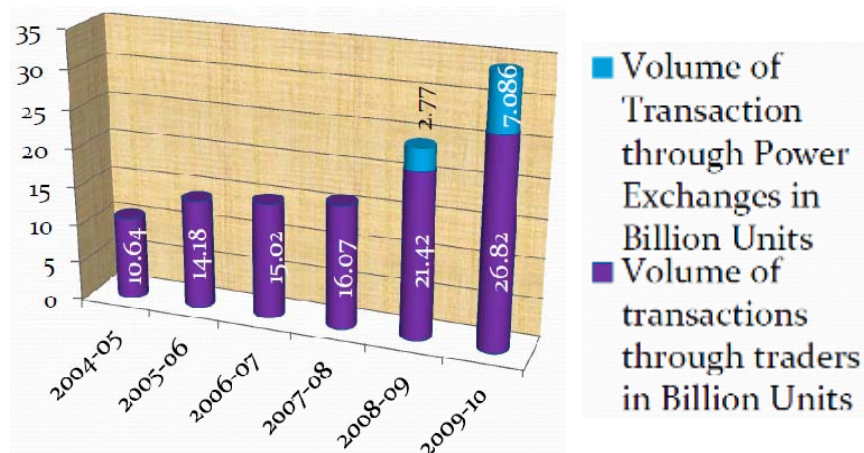
Short Term Power Market

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Market Breakup

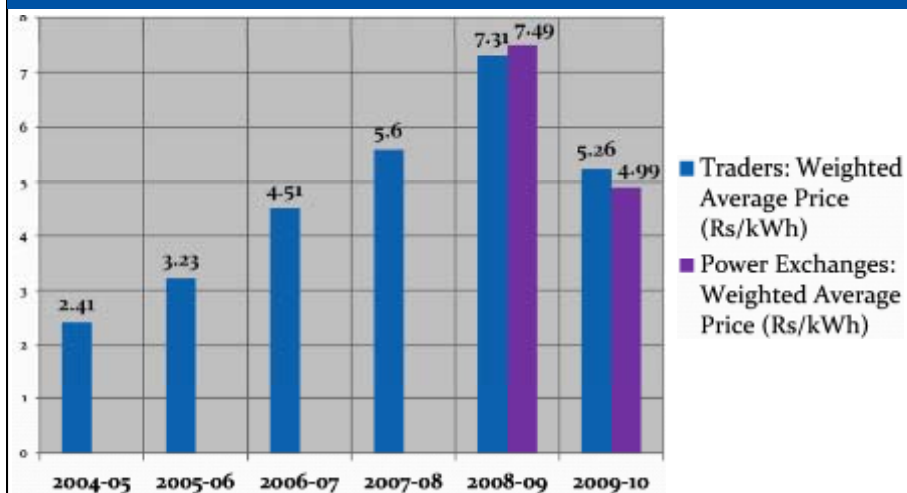


Short Term Market – Volume of Transactions



Short term volumes are increasing

Yearly Avg Price in OTC & Px



Short term prices showing downward trend

Short Term Market Size

Year	Transaction thru Traders		Transaction thru Power Exchanges		Size of Market thru Traders \$ Mn	Size of Market for Px \$ Mn	Total Short Term Market Size \$ Mn
	Vol in Bn units	Wt. Avg Price	Vol in Bn units	Wt. Avg Price			
04-05	10.64	₹2.41	-	-	570.00	-	570.00
05-06	14.18	₹3.23	-	-	1017.11	-	1017.11
06-07	15.02	₹4.51	-	-	1505.33	-	1505.33
07-08	16.07	₹5.60	-	-	2000.00	-	2000.00
08-09	21.42	₹7.31	2.77	₹7.49	3780.00	461.11	4241.11
09-10	26.82	₹5.26	7.086	₹4.99	3145.00	786.00	3931.00

By volume – OTC (90%) & Px (10%); IEX (88%) & PXIL (12%)

Short term is large, in % it looks small (4%)

Cost of Supply & Tariff Returns - Mismatch

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Key Findings

- Weighted Average Power Prices in 2009 less than 2008

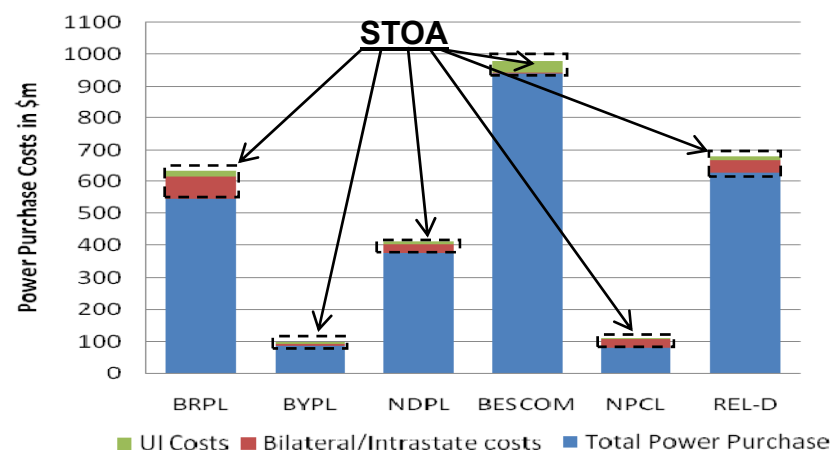
	2008	2009
Trader	\$0.16	\$0.12
Px	\$0.17	\$0.11

- Although prices are showing a downward trend, prices are still on higher side
 - Internationally prices in the range of \$0.05~ \$0.07/ kWh
- Average price through Traders higher than price in Power Exchange in 2009
 - Contrary to normal perception
 - Desperation to procure in day ahead power exchange market higher than procurement weeks ahead through traders
 - Exchange provides equal bargaining power as is anonymous platform unlike negotiated market where parties conditions are well known
 - Is worrisome as Traders market is 3 times PX market
 - PX prices more volatile than traders market over last year



- High price burdening buying state Discoms
 - Financial health of Discom further deteriorating
 - Share of short term purchase in portfolio low but rising
 - Price Volatility adding to the problem

Impact of High prices on Discoms



- At aggregate national level, DISCOMs procure ~5% of requirement from short term market
 - Translates into 7 to 8 % of total cost
- For certain DISCOMs volume of power purchase from short term market much higher
 - JVVNL - 25~30%; Haryana DISCOMs - 10~12%; Reliance Infra - 13~15%; Noida Power - 30~40%
- Higher consumer tariffs wherever higher costs could be passed on
- Even where higher costs could be passed on
 - Liquidity crunch (fixed tariffs on consumer side, but rising procurement costs and as truing up is annual exercise)
- Higher DISCOM losses where these costs could not entirely be passed on to consumers
- Higher load shedding where DISCOMs could not afford higher prices

Power Outages & Peak Demand

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Severity of Power Outages Across Week

No	City	Peak Season							Non-peak Season						
		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	Bangalore	1.5	1.5	1.5	1.5	1.5	1.5	1.5							
2	Bhopal	2.5	2.5	2.5	2.5	2.5	2.5	2.5							
3	Chennai	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5
4	Coimbatore	2	2	2	2	2	2	2	1	1	1	1	1	1	1
5	Delhi	2	2	2	2	2	2	2							
6	Faridabad	5	5	5	5	5	5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
7	Gurgaon	5	5	5	5	5	5	5	4	4	4	4	4	4	4
8	Hyderabad	1	1	1	1	1	1	1							
9	Indore	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	Kanpur	7	7	7	7	7	7	7	6	6	6	6	6	6	6
11	Lucknow	3.5	3.5	3.5	3.5	3.5	3.5	3.5	1	1	1	1	1	1	1
12	Ludhiana	4	4	4	4	4	4	4	4	4	4	4	4	4	4
13	Madurai	2	2	2	2	2	2	2	1	1	1	1	1	1	1
14	Mumbai														
15	Mysore	2.5	2.5	2.5	2.5	2.5	2.5	2.5							
16	Navi Mumbai	2	2	2	2	2	2	2	1	1	1	1	1	1	1
17	Noida	5	5	5	5	5	5	5	2	2	2	2	2	2	2
18	Pune	3	3	3	7	3	3	3	Infrequent up to 1hr 5 Infrequent up to 1hr						
19	Rajkot	Infrequent up to 3 hours. No fixed pattern							Infrequent up to 1 hour. No fixed pattern						
20	Vadodara	Infrequent up to 3 hours. No fixed pattern							Infrequent up to 1 hour. No fixed pattern						
21	Vishakapatnam	2	2	2	2	2	2	2							

Severity of Daily Outage No outage 0 < 3 hours 3 < 6 hours >= 6 hours

Note : Numbers in the table indicate the average daily outage hours

Duration of Peak and Non-Peak Outage Seasons

No	City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Bangalore												
2	Bhopal												
3	Chennai												
4	Coimbatore												
5	Delhi												
6	Faridabad												
7	Gurgaon												
8	Hyderabad												
9	Indore												
10	Kanpur												
11	Lucknow												
12	Ludhiana												
13	Madurai												
14	Mumbai												
15	Mysore												
16	Navi Mumbai												
17	Noida												
18	Pune												
19	Rajkot												
20	Vadodara												
21	Vishakapatnam												

Severity of Daily Outage No outage Non peak months Peak Months

- Existing Practices for Peak Demand Management
 - Selective load shedding at Feeder level
 - High cost power procurement from short-term market.

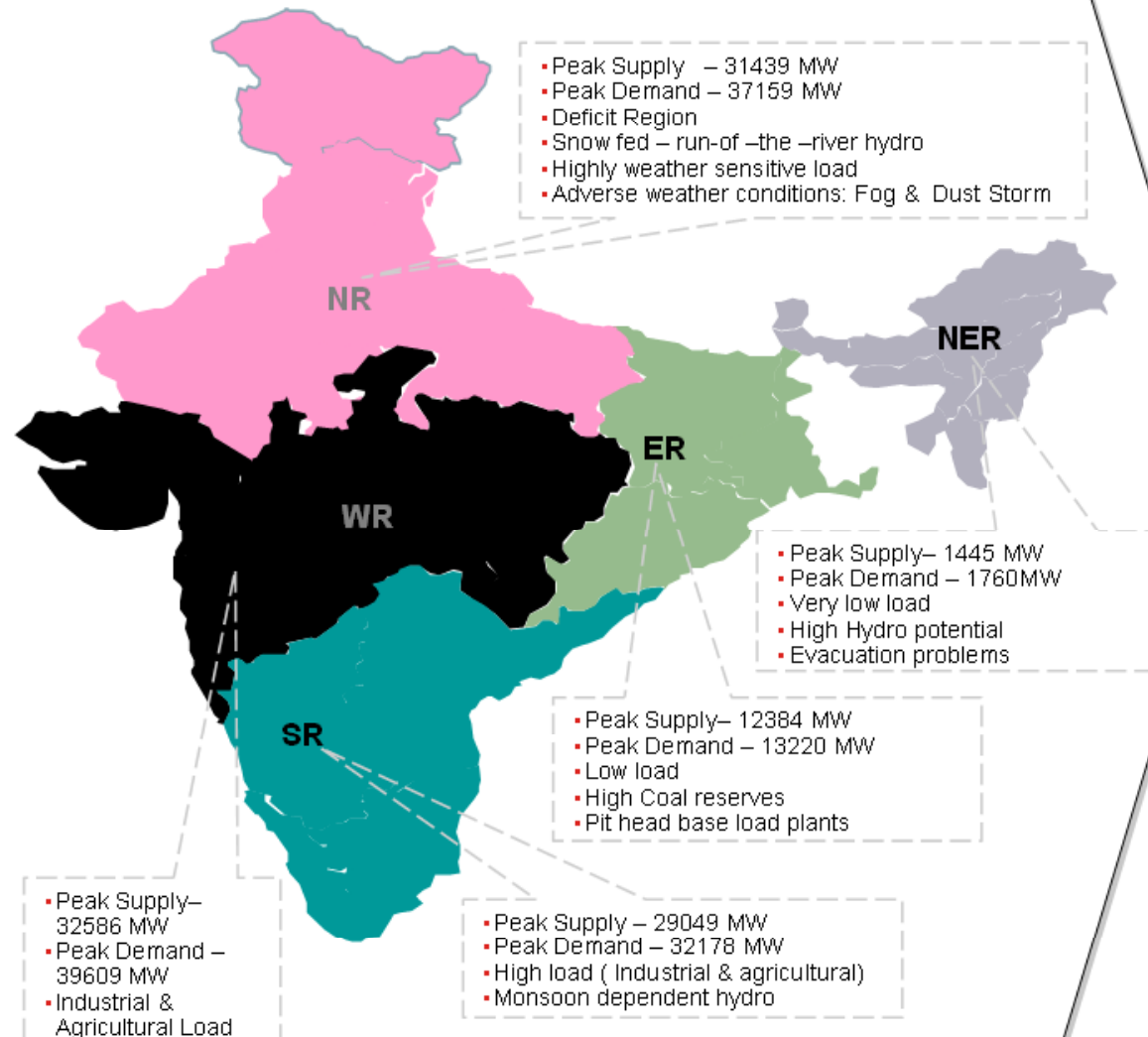
- Power outages result in lost economic opportunities for the end customers.
 - Power Grid India estimated that VoLL in India is \$0.75~\$2.50/kWh
 - Value of lost opportunity for the India is estimated at \$64 Bn → 6% of GDP.

Existing Peak Practices impeding Economic Growth

Frequency Response Characteristics of Indian Grids

Honeywell

Indian Power System



Source: CEA Monthly Executive Report Apr 2010

Transmission Grid

• Regional Grids

- Generation
 - Coal-based generation in East
 - Hydro generation in North and Northeast and
 - Some hydro reservoir based generation in South
- Load centers are mainly located in North, West & South.
- North, West, East and the Northeast Grids operate in synchronously and interconnected with AC as well as HVDC links.
- The Southern region is connected to the East and West by HVDC links.

• Frequency Response Characteristics

- Northern Region Grid
 - ♦ 312 MW/Hz to 1075 MW/Hz
 - ♦ Average Response is 678 MW/Hz
 - ♦ Median is 688 MW/Hz
- Southern Region Grid
 - ♦ 575 MW/Hz to 1515 MW/Hz
 - ♦ Average Response is 1020 MW/Hz
 - ♦ Median is 1042 MW/Hz
- Combined Northern & Central Region Grid
 - ♦ 575 MW/Hz to 1515 MW/Hz
 - ♦ Average Response is 1020 MW/Hz
 - ♦ Median is 1042 MW/Hz

Source: Frequency Response Characteristics of an Interconnected Power System – A Case study of Regional Grids in India by SK Soonee & SC Saxena, PGCIL.

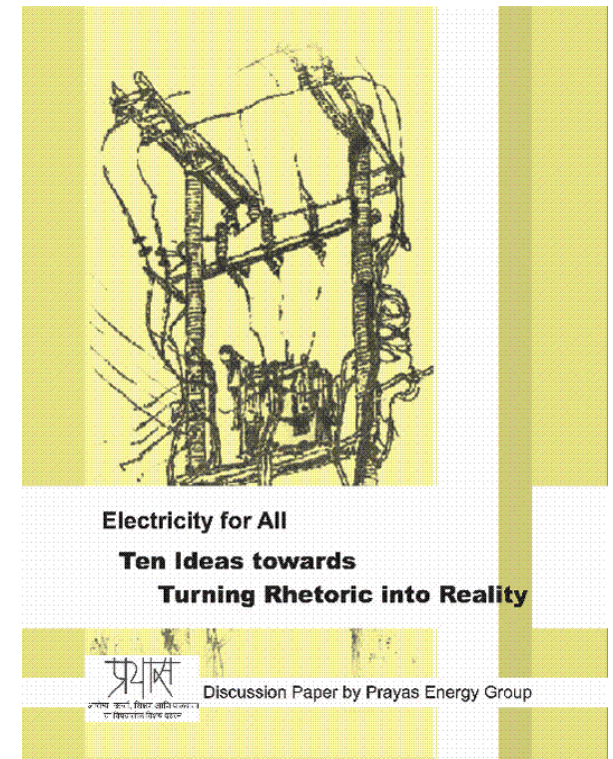
Electricity for All: Ten Ideas towards Turning Rhetoric into Reality

21st Meeting of the Forum of
Regulators
Chennai, November 28, 2010

Prayas Energy Group, Pune

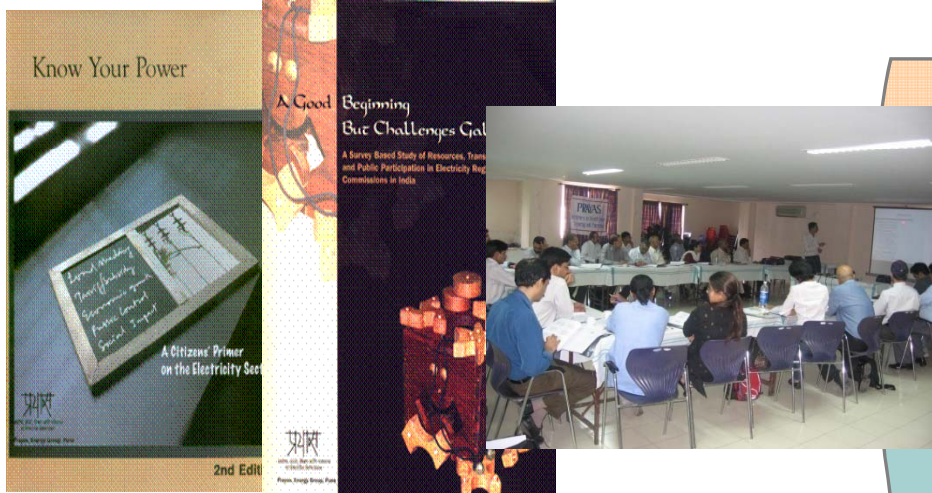
www.prayaspune.org/peg

energy@prayaspune.org



www.amulya-reddy.org.in

Prayas.

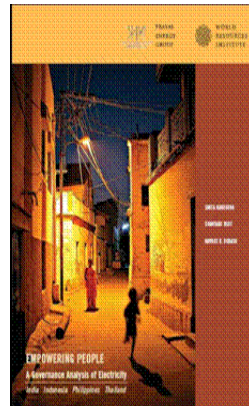
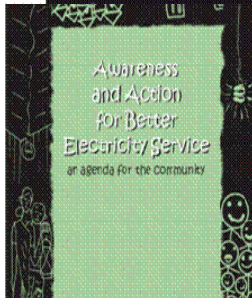
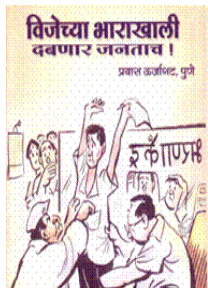


**'Prayas' means
'Focused Effort'**

Based at Pune, India

**Research based,
policy advocacy
Voluntary Org.**

**Focus on protection
of "Public Interest"
in
electricity sector**



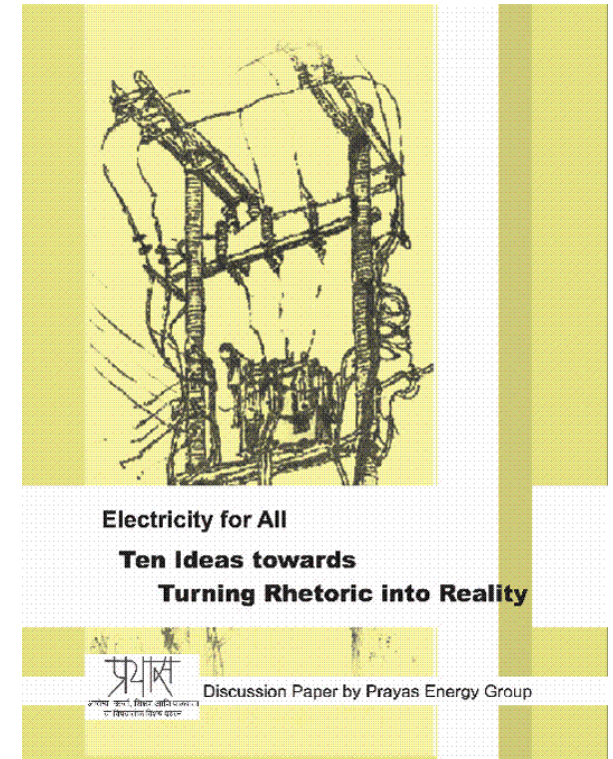
Activities:

- Research & intervention (regulatory, policy)
- Civil Society training, awareness, and support

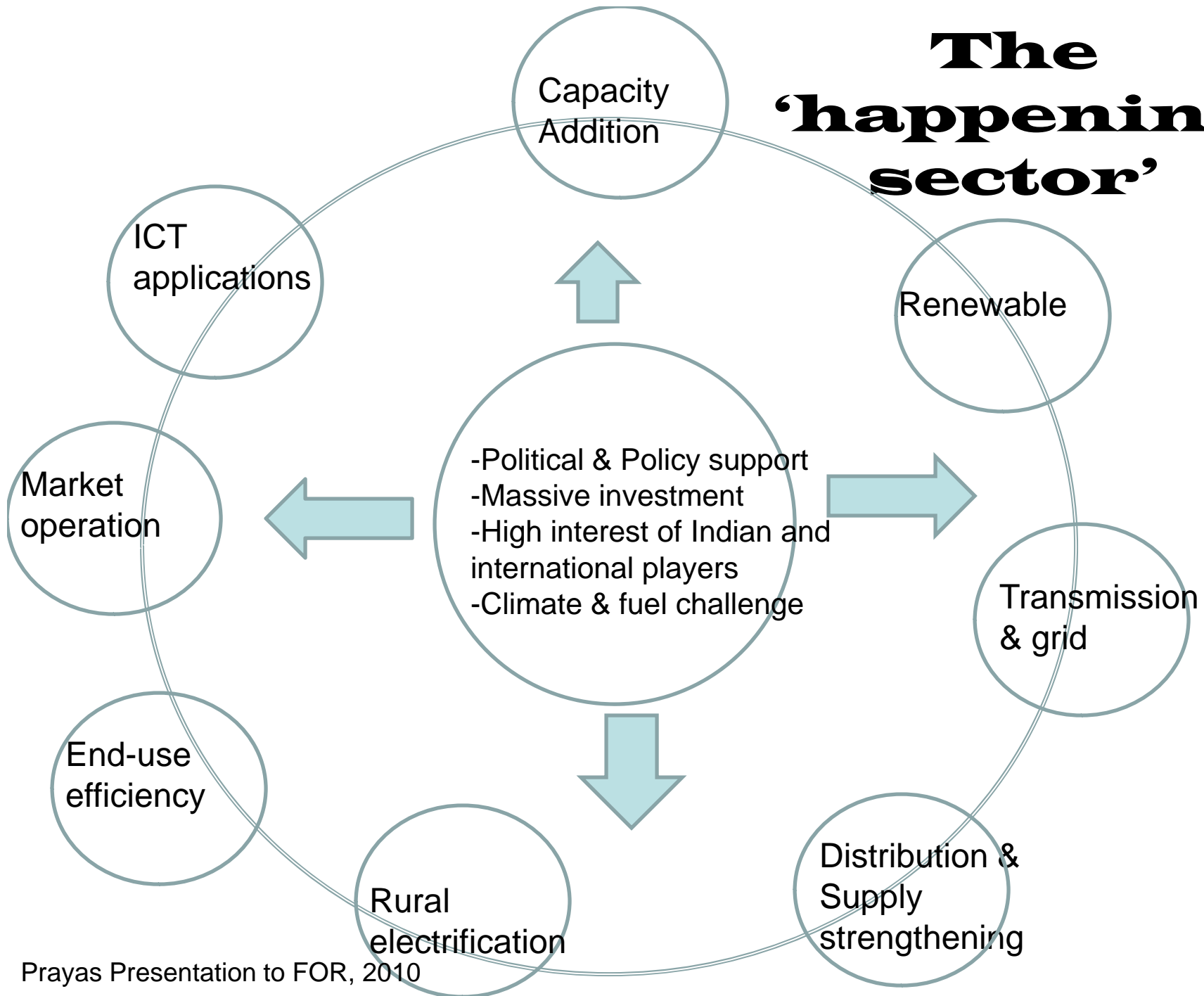
Prayas Presentation to FOR, 2010

Presentation Plan

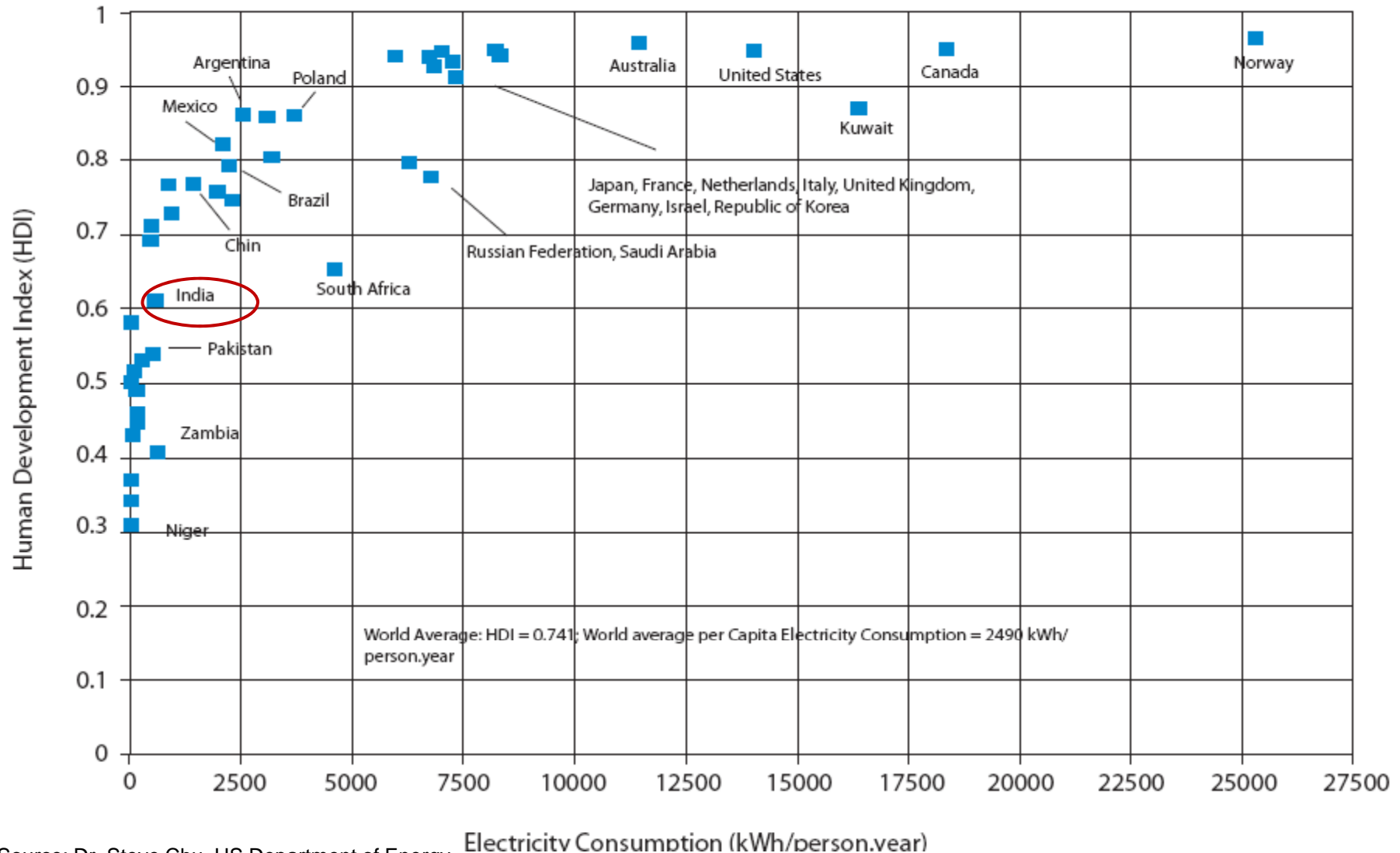
- Great expectations from the 'happening sector'
- Uncomfortable truths before us
- Change of mindset needed
- Ten Action Ideas
- What to do next?



The 'happening sector'



Great Expectations: Correlation between 期待 HDI & Electricity



Source: Dr. Steve Chu, US Department of Energy

Two way relation in terms of cause and effect. For India, small change in electricity use⁵ could make a big difference in HDI

Great expectations: National Commitments

“Electricity is an essential requirement for all facets of our life. It has been recognized as a basic human need. It is a critical infrastructure on which the socio-economic development of the country depends. Supply of electricity at a reasonable rate to rural India is essential for its overall development.” (National Electricity Policy)

- National commitments
 - Electricity for all by 2012 (RGGVY continuation order -2008)
 - Per capita availability of electricity to be increased to over 1000 units by 2012 (National Electricity Policy)
 - Minimum lifeline consumption of 1 unit/household/day as a merit good by year 2012 (National Electricity Policy)
- Massive ongoing investments
 - To the tune of Rs.50,000 Cr/year

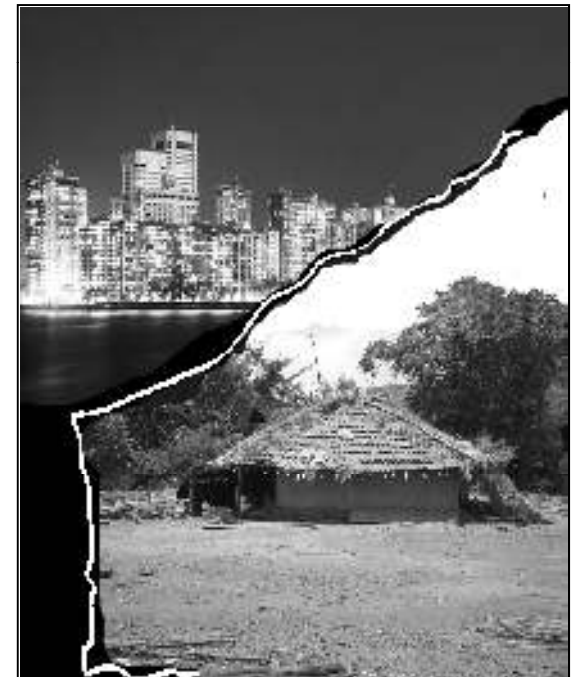
Great expectations: Markets & Commercial orientation will deliver

- High attention on market issues, commercial viability
 - Promotion of captive (Electricity Act, Electricity Rules-2006, Amendment -2007 removing the need for license)
 - Measures to encourage open access, trading, markets, exchanges
 - Promotion of merchant power (Electricity Policy, Hydro Policy, State Policies)
 - Increase in revenue is the major performance index for DISCOMs

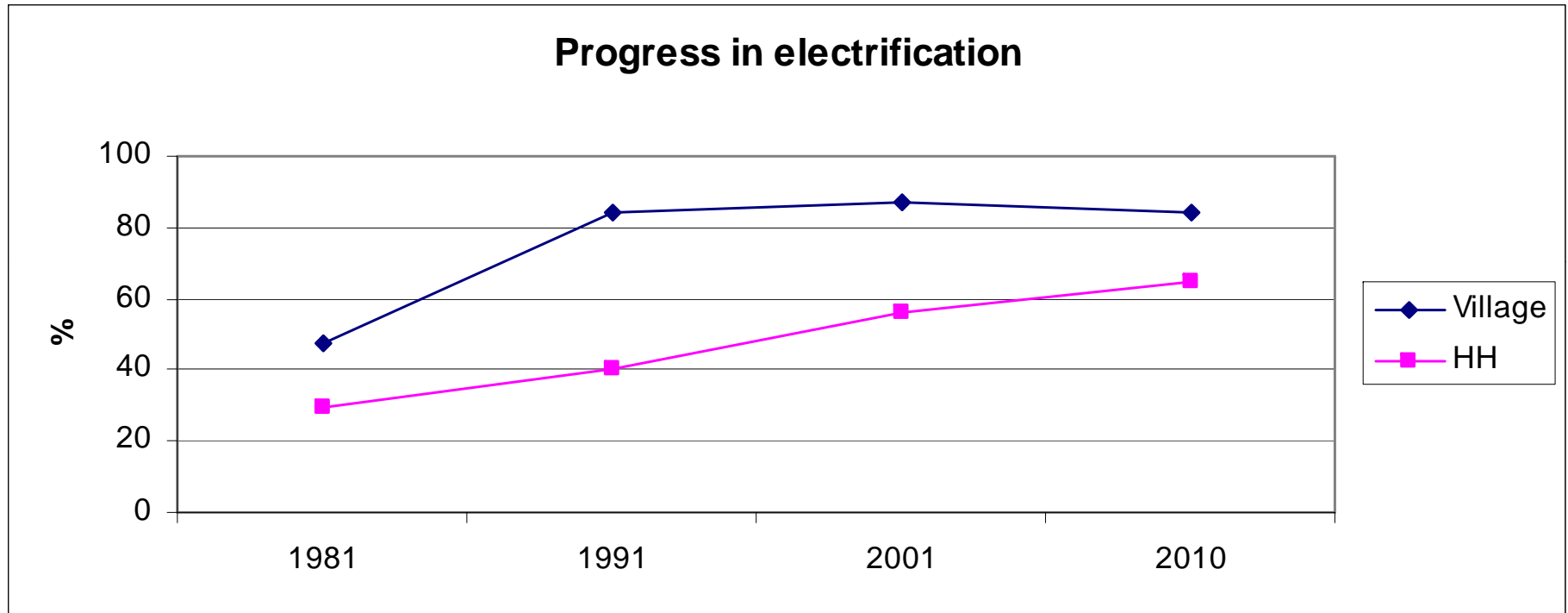
Uncomfortable truths before us - अविश

Poor are missing the electricity bus

- Half of India's rural households do not have access to electricity. This constitutes a third of the world population without electricity and thus India has the largest population without electricity
- Electricity supply increased 60%, household access by 10% in last decade
- Most consumers poor: those paying monthly bill > Rs 150: 25% of households
- Anecdotal/typical data
 - Average hours of supply in rural areas: 2-6 hours
 - De-electrification of villages: 10%
 - Un-authorized connections: 30%
 - Permanent disconnections: 15-20%
- Promised Fundamental changes or Trickle down effect not showing results



Uncomfortable truths: Slow progress of household electrification



China (99%); Brazil (98%); South Africa (75%) HH Electrification, 2009

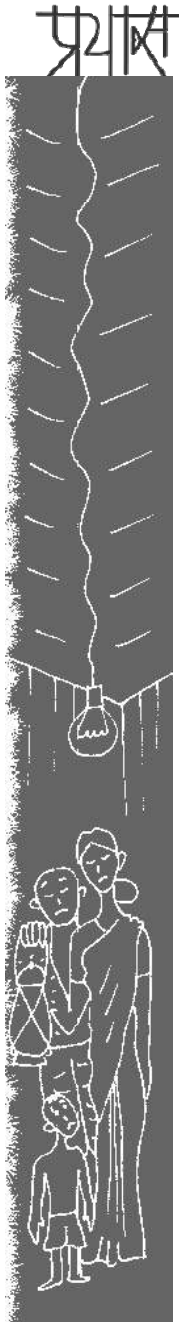
Data tough to gather: e.g. HHE; Village electrification - CEA = 84%; RGGVY = 94%

RGGVY: Implementation issues; will BPL connections sustain?; What of APL?

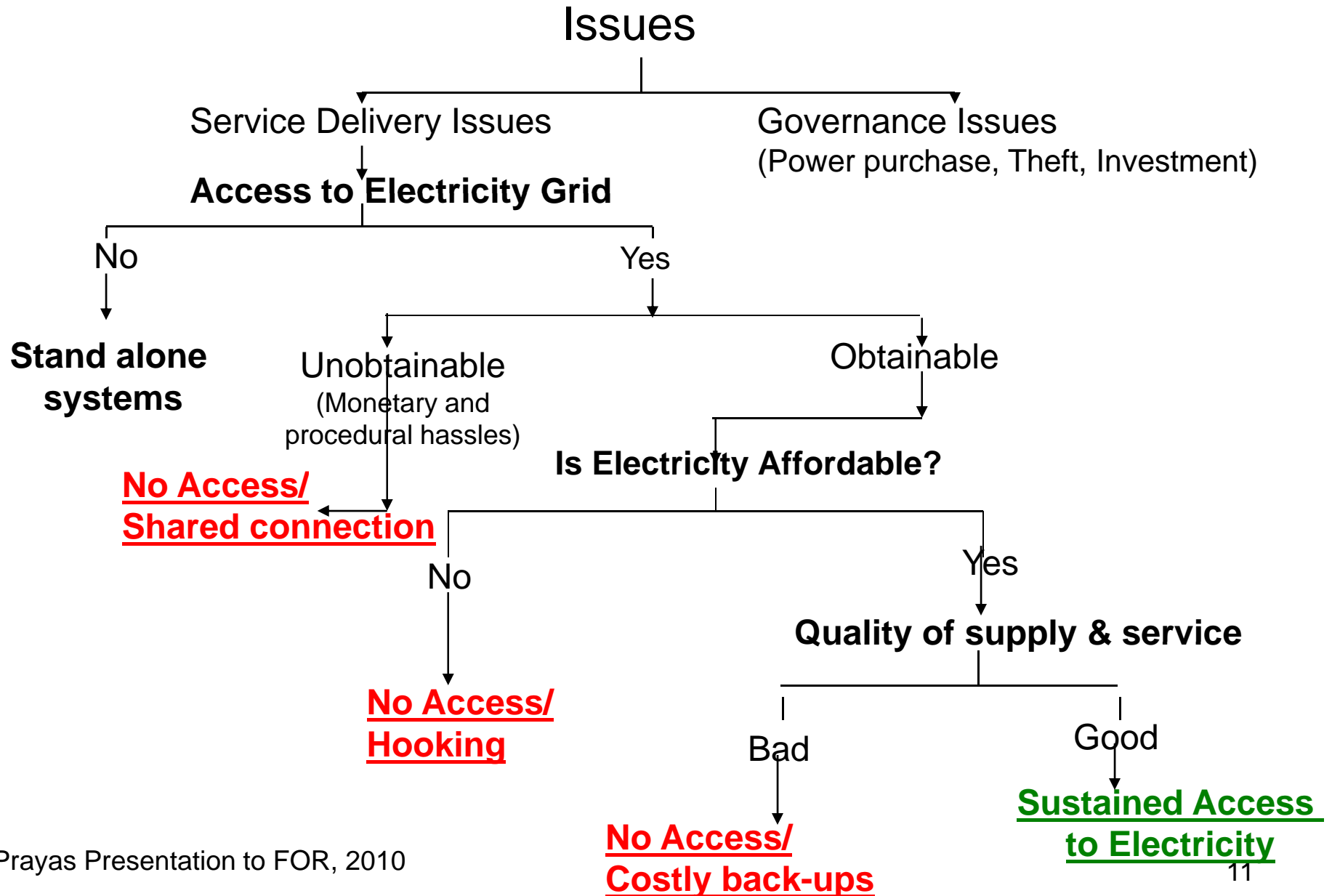
Prayas Presentation to FOR, 2010

Change of mindset needed to address the issue

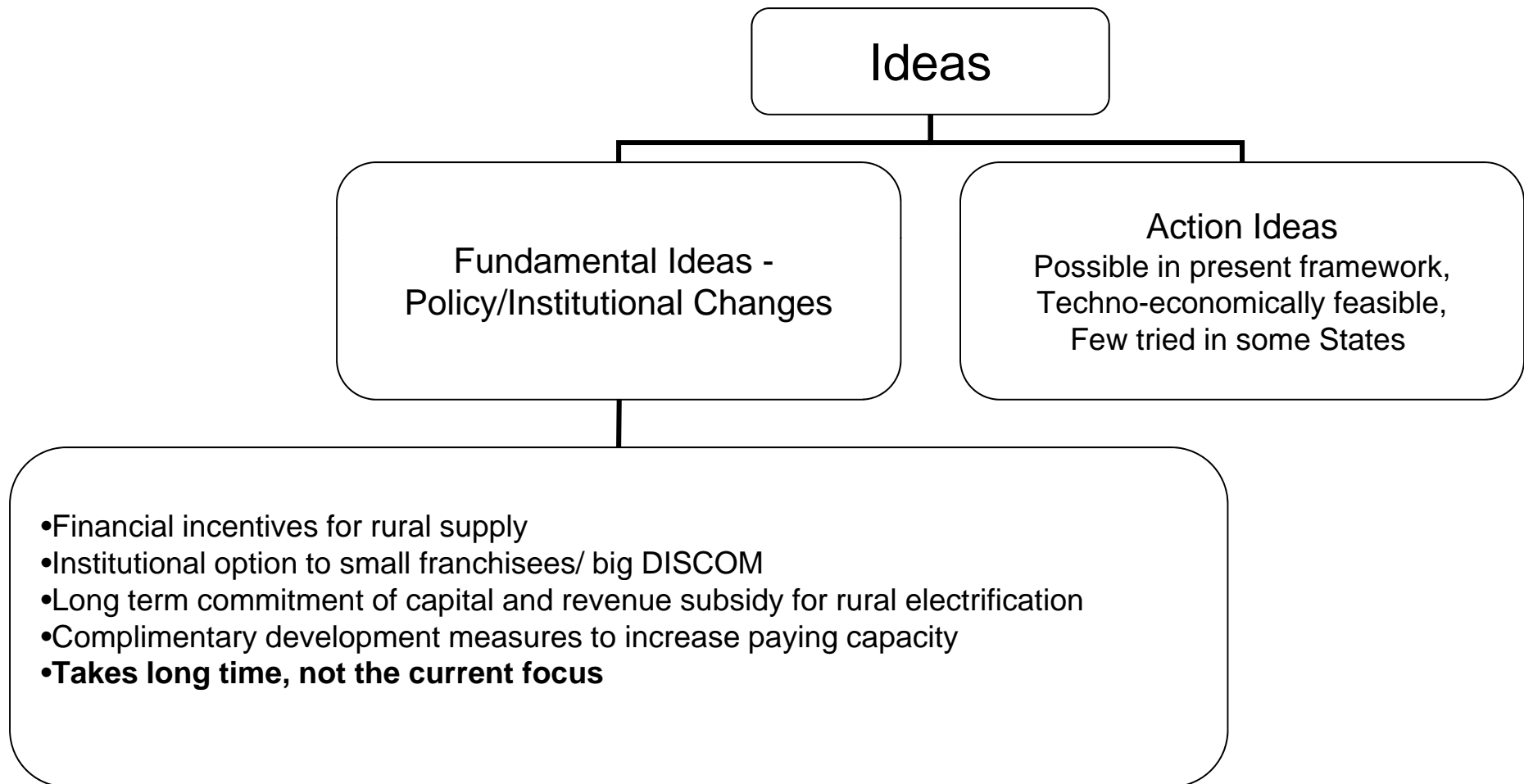
- Different kind of steps needed to correct this shameful state of affairs
- Bits and pieces approach will not do
- Pro-active, comprehensive initiatives, urgent & essential
- Prayas has some ideas on this, which are to be improved through discussion & debate

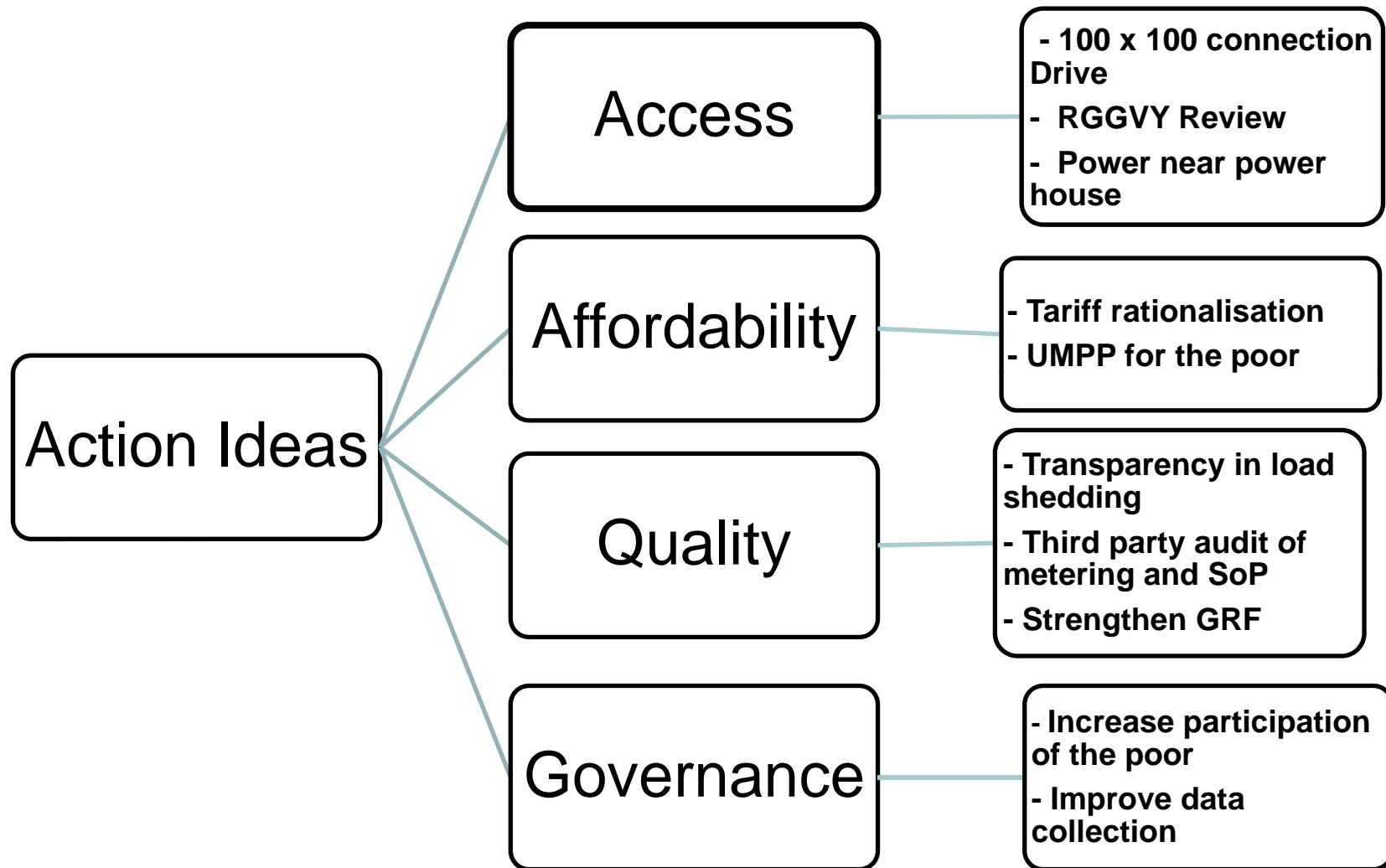


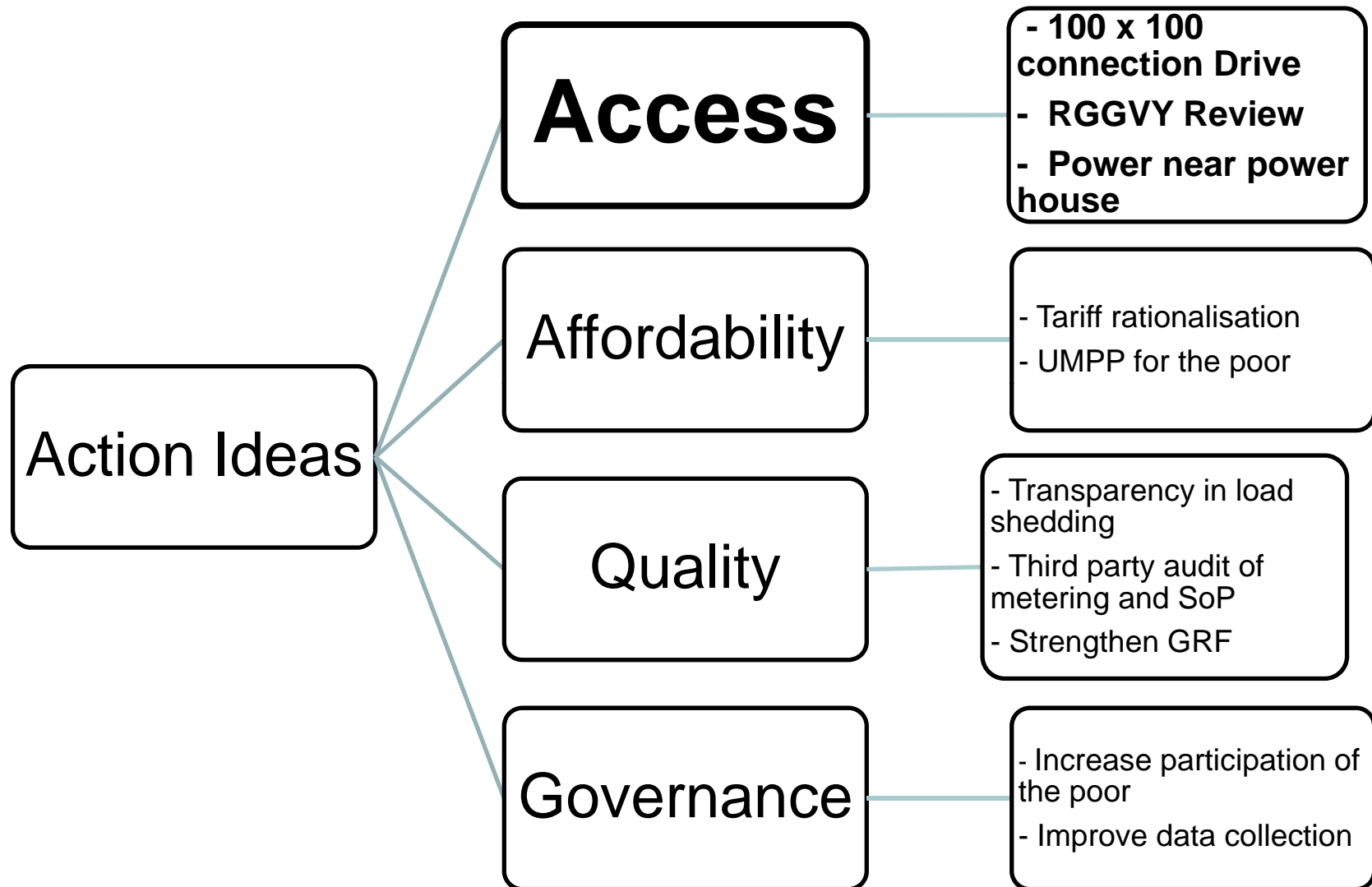
Affordable, quality electricity access – a bumpy long road



Ideas to address Access, Affordability and Quality of electricity supply







100 x 100 connection drive: Mountain to go to Mohammed

- Background & Rationale
 - Free upfront connection only for certified “BPL”
 - Procedural problems, corruption and cost the causes for people not taking connection
 - High number of illegal connections: No policing can eliminate this, Bad record keeping of HH connections
 - Universal access is any way the target
- **Action Ideas**
 - **Change of mind set: One time connection drive: DISCOMS to offer connections to all within 100 meters of the power line**
 - **Incentivise staff to meet connection targets**
 - **Recover the cost through ARR or State support**
 - **Rough estimate for Maharashtra:Rs.1200 Cr**
 - **Take up drive to regularise illegal connections with low arrears, no theft cases**
- Impact assessment: Win-win-win option
 - Consumer: Easy, safe, quality, cost effective electricity
 - DISCOM: Increased revenue, better planning of distribution capacity
 - Society: Improvement in quality of life, safety, support to income generation activities

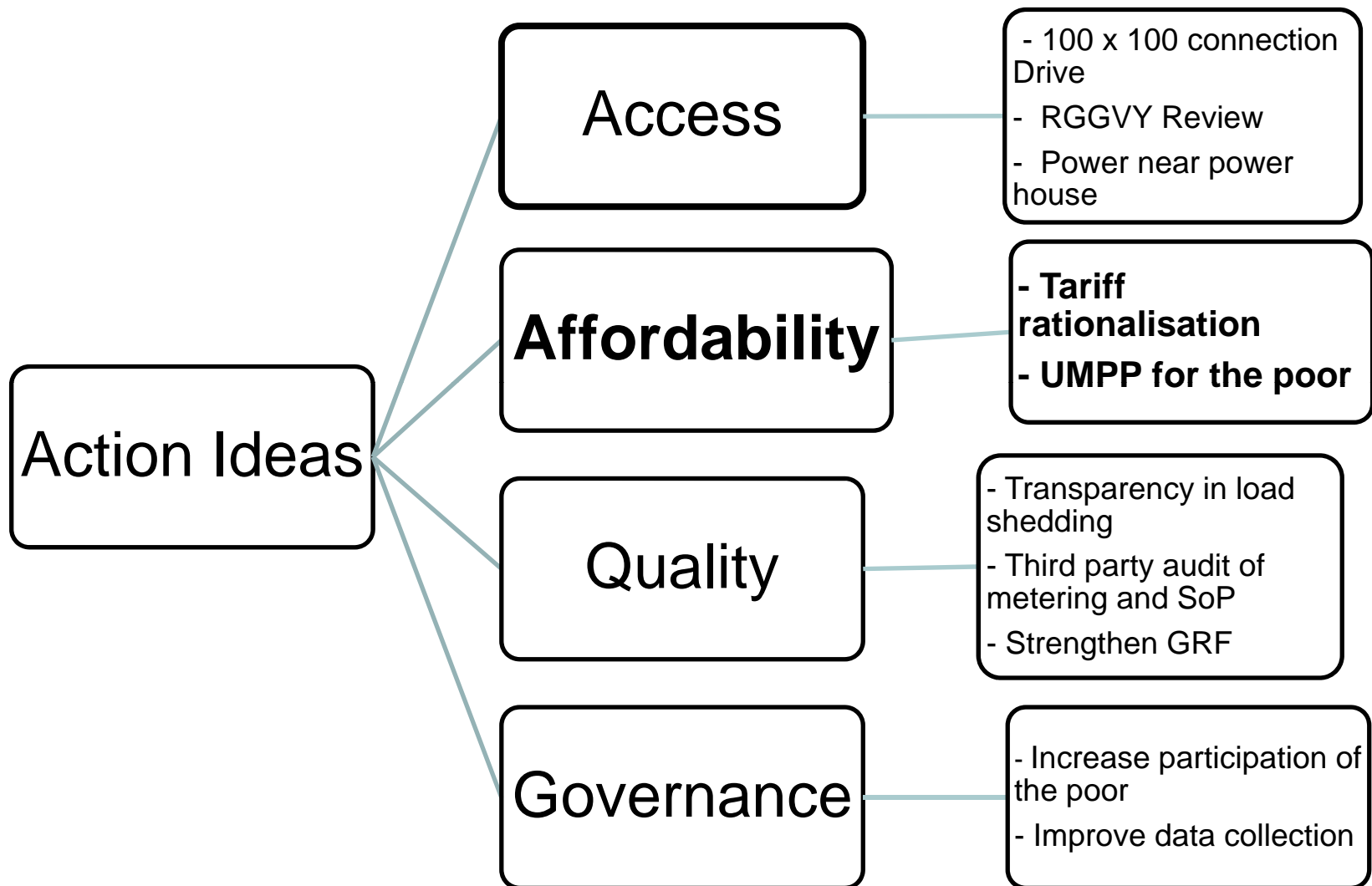
For whom the RGGVY tolls?

Organise public reviews

- Background & Rationale
 - Rajiv Gandhi Grameen Vidyutikaran Yojana -Biggest rural electrification program
 - Planning and Implementation issues
 - “... the Committee are deeply concerned to note that the Ministry (of Power) have lost sight of their target of 100 per cent rural electrification due to unrealistic planning and poor programme implementation capacity. The Committee, while deploring the poor implementation of the RGGVY, expect the Ministry to review all aspects of implementation of RGGVY, to make realistic planning in future and to speed up the pace of implementation of the programme.” (Parliamentary Committee on RGGVY -2009)*
- Action Ideas
 - **SERCs to include RGGVY in public hearings**
 - Regulated DISCOMs have to manage the network
 - SERCs have the mandate to ensure universal access (Rural Electrification Policy)
 - **REC/MoP**
 - Commissioning studies to assess impact (as envisaged in the RGGVY memo)
 - National level consolidation for mid course corrections
- Impact assessment
 - Proper utilisation of public money ~ Rs.40,000 Crore

Power power everywhere, where is the light for homes near the power house?

- Background & Rationale
 - Homes in the vicinity of power plants do not have electricity
 - Limitations of existing schemes
 - National Hydro Policy -2008
 - MoP Scheme of power supply within 5 km of central power house -2010
 - Need better and mandatory provisions for all power plants
- **Action Ideas**
 - **All within 5 km of the power house to be given load shedding free power supply**
 - **To be done by all projects with 100 MW or more capacity – government or private, hydro, coal, nuclear or renewable**
 - **Power supply to support social and economic needs**
- Impact assessment
 - Reduce opposition to siting of power plants

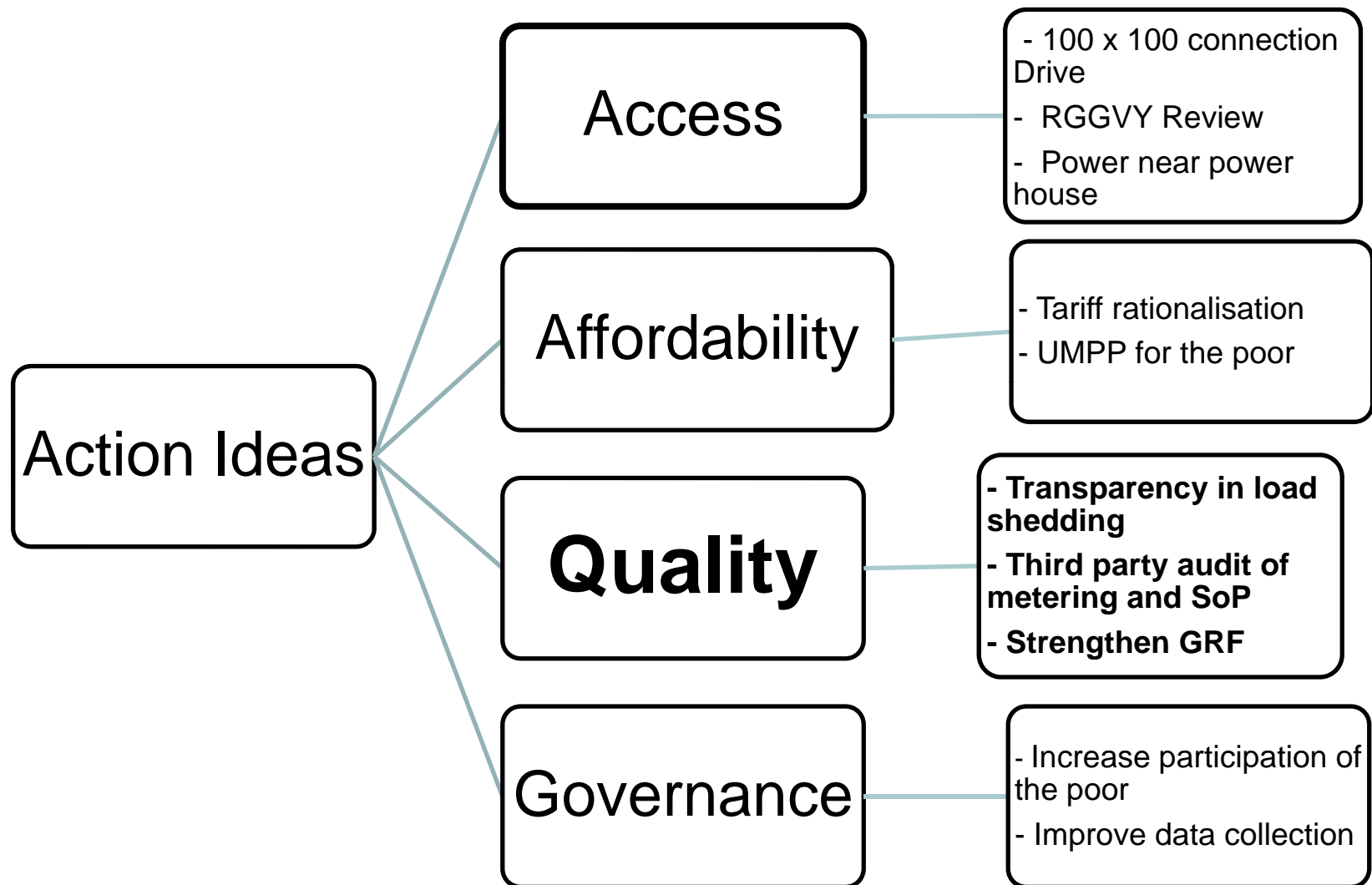


Rationalising tariff structure: A just and fair tariff for the poor

- **Background & Rationale**
 - After getting a connection, staying legally connected is a challenge
 - Some States have electrical BPL category, Number of electrically “BPL” much less than the official BPL list
 - Maharashtra has 60 lakh BPL HHs but 2.5 lakh BPL connections
 - Monthly limit of 30 Units too low, Occasional high consumption results in exit from BPL category
 - High fixed charges, surcharges etc make the tariff high
 - Customer charge + minimum charge of Rs. 65/month in AP
- **Action Ideas & Impact assessment**
 - **Electrical BPL Category in all States**
 - Annual limit on consumption, easy re-entry to BPL category
 - No fixed or other charges
 - Improve metering & billing practices
 - **All LT consumers (residential, commercial and industry) under a single category with a graded tariff**
 - Reduces complexity, reduces harassment
 - BPL category (annual limit of 600 U, 50p/U), Tariff slabs with high slab totally subsidising low slabs

A UMPP for the east, a UMPP for the west, how about a UMPP for the poor?

- Background & Rationale
 - Poor quality of electricity one of the reasons for poverty
 - Backward districts caught in a “bad power – bad development” vicious cycle
 - Low cost power possible through UMPP etc
- Action Ideas
 - **Make 100-120 districts with low HDI load shedding free for LT consumers**
 - **Power supply through Dedicated Ultra mega Power Project, Un-allocated central generation, State’s share of free power, cheap Generation**
 - **Quality of supply & service through Infrastructure improvement through RGGVY, R-APDRP; Greater management attention**
 - **Accountability measures to monitor supply, impact by metering, sample monitoring of consumer supply**
- Impact assessment
 - Catalyses kick start of development of backward areas



Transparency and equity in load shedding: Share the shortage

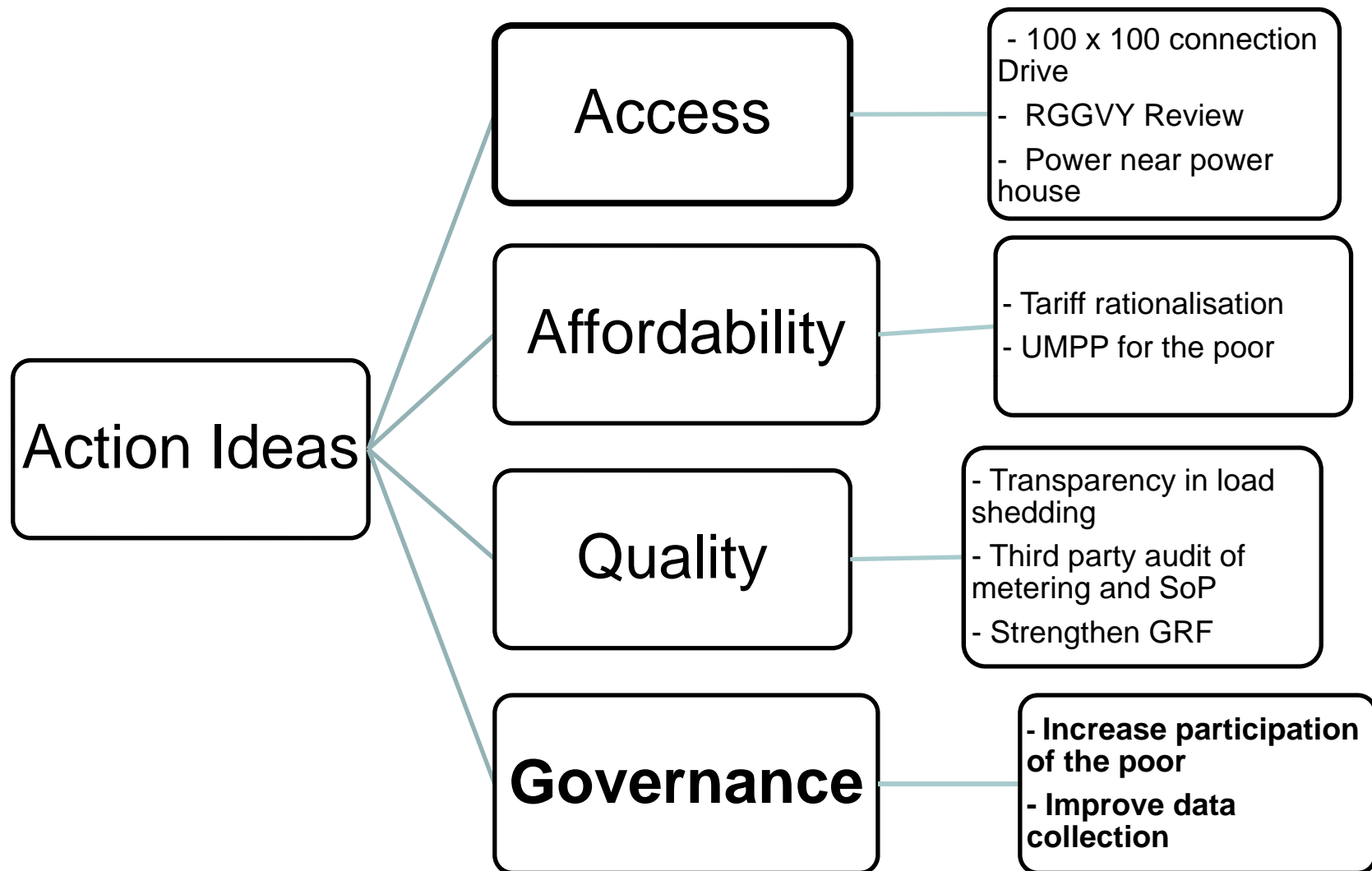
- Background & Rationale
 - No Fairness, Transparency and Predictability
 - Problem for all, but small consumers most effected
 - Not consulted, longest duration, no predictability
 - Cannot afford costly back-ups
- **Action Ideas**
 - **Consultative process by SERCs to decide load shedding protocol**
 - **Link load shedding duration to AT&C loss**
 - **Mechanism to oversee implementation of load shedding protocol**
 - Representative committees
 - Publication of hourly HT feeder data on DISCOM website
 - Sample monitoring at consumer locations
 - **Maharashtra, Uttarakhand, Orissa examples**
- Impact assessment
 - Consumer satisfaction due to predictability
 - Equitable use of electricity

Third party audits of DISCOM metering and billing: Set your house in order first

- Background & Rationale
 - 80% of complaints to CGRFs on metering & billing
 - Underreporting of consumption of high end consumers and over-reporting of consumption of small consumers
 - IT systems available to improve
 - National Electricity Policy suggestion about third party audit of metering, Practice by few other sector service providers
- **Action Ideas**
 - **SERCs to initiate third party audit of metering & billing systems of DISCOMs**
 - **Start from examples from Delhi, Uttarakhand etc**
- Impact assessment
 - Only way to address the thorny issue

Make grievance redressal mechanisms effective: Reach out to people

- Background & Rationale
 - Electricity Act mandated consumer forums, standards of performance, reporting by SERC
 - CGRFs not becoming a pressure on DISCOM to improve performance
 - Awareness among consumers is low
 - Hardly any compensation paid by DISCOMs for not meeting standards of performance
 - Cost of a complaint = Rs.1 lakh! Pune story
 - 15 lakh consumers, 98 complaints in 5 years, Rs.85 lakh spent on CGRF
 - SERCs not publishing annual reports on SoP
- Action Ideas
 - **DISCOM to give wide publicity to CGRF, Ensure Consumer member with voting rights, Chairman not to be a DISCOM employee, Take pro-active steps like awareness meetings, complaint camps; Make complaint filing easy – toll free number, post card, email, internet**
 - **SERC to improve implementation of SoP regulations with annual reports, better DISCOM reporting formats, third party audit, raise compensation from employee – not ARR**



Listen to the poor: Bring their voice into regulatory forums

- Background & Rationale
 - SERCs and CGRFs have provided opportunities for the poor to voice their concerns
 - Participation by public has been low, often limited to interest groups and very low by those representing the poor
 - There are some pro-active efforts to increase public participation, But pro-poor focus is low
- **Action Ideas**
 - **SERC to take pro-active measures to increase consumer participation**
 - Capacity building programs in line with National Electricity Policy and FOR reports
 - Officer specifically to interact with small consumers
 - Identification and handholding of groups which represent the poor
 - Public hearing on important issues at multiple locations
 - Separate public hearing on issues like load shedding, rural quality of service
 - Material in local languages and audio-visuais
 - Consumer surveys with participation of consumer groups

How can one fix what one does not know: Data collection and analysis for small consumers

- Background & Rationale
 - Data collection, analysis and reporting efforts are low
 - Year-wise household electrification data – State wise/district wise, Hours of supply in rural areas, Consumption levels or usage pattern
 - Very few studies on:
 - Positive impact of electrification
 - Negative impact due to poor quality of supply & service
- **Action Ideas**
 - **Mechanism to regularly collect, report and analyse data related to small consumers**
 - **CEA or FOR could take this up**
 - **Special surveys commissioned by SERC to study issues of the poor**
- Impact assessment
 - Better plan and implementation of pro-poor programs

What to do next?

- These ideas will not solve all problems, but will surely be a good first step
- DISCOMs, SERCs, FOR, Governments and Government agencies have roles
- Detail and prioritise based on the local context
- Start by replicating ideas already implemented in some States
- Relevant issues to be simultaneously taken up



What to do next?

- Demonstrate commitment to the poor through actions
 - Actions which will immediately benefit
 - Internalise that quality access to the poor is viable and essential from a long-term socio-economic perspective
 - Use the existing framework, which has scope for taking up pro-poor measures and signalling their priority ordering



What could Regulators do?

- Start with:
 - Reporting and Monitoring of DISCOM Standards of Performance; Metering & Billing
 - Transparency & predictability in Load shedding
 - Public hearing sessions on issues of the poor
- Work on pro-active ideas, with other actors
- Prayas ready to be a supportive fellow traveller in this journey

