

**Minutes of the 5th meeting of the Coordination Forum held on 11.11.2009
in Conference Room of CERC New Delhi**

List of participants is attached at ***Annexure-1***.

Dr. Pramod Deo, Chairperson, CERC was in Chair.

1) Review of discussion/decision held in the meeting on 17.08.09

- (i). The forum was apprised that as discussed in the last meeting, major reason for congestion on inter-state transmission system was voltage problem and CTU was to come up with appropriate solutions for addressing the increasing demand for reactive power. It was also discussed that the funds available in UI pool account and congestion revenue could be utilized for providing such ancillary services. POWERGRID informed that they are taking necessary action in this regard and to be informed to this forum about the progress shortly.
- (ii). Secretary, CERC also apprised that the issues of further narrowing the permissible frequency range in the grid and the issues relating to licensing and tariff for the transmission lines being developed through competitive bidding after the expiry of first license period of 25 years are before CERC for appropriate decision.

2) Agenda Item No.1 : Presentation by POWERGRID on issues related to connectivity as desired by them in the last meeting

A detailed presentation was made by POWERGRID, a copy of which is enclosed at ***Annexure-2***. It was informed that POWERGRID has received about 222 nos. of application so far for Long term Access in ISTS with generation capacity of about 1,99,000 MW seeking transfer of about 1,59,000 MW power in next 3-4 years. Out of this, LTOA for 94 applicants with generation capacity of about 75,000MW and quantum of long-term transfer of about 55,000MW have already been granted based on target regions. Further, beneficiaries are not yet firmed up in almost all the cases. It was emphasized that if such a huge capacity addition from IPPs takes place in next 3-4 years, India would be in power surplus situation by about 35000 MW. Nevertheless, to cater to above quantum of power transfer requirement, there is a need to develop high capacity transmission corridors to optimize RoW requirement so as to achieve flexibility in power transfer requirement as in most of the cases beneficiaries are not yet identified. This shall also encourage market based development.

Member(VS), CERC stated that POWERGRID needs to develop adequate transmission from the IPPs to target regions and provide open access for transmission of power. Provision of open access was required to ensure financial closure of the power project(s).

Member(PS), CEA emphasized that the transmission planning has to cater to various dispatch scenarios and also ensure that no generation was stranded and the utilities are able to meet their loads. Also it was likely that under certain conditions, State utility may reduce their own generation and would draw power from these generation projects

if available at cheaper price. For this, it was not only necessary to facilitate evacuation of power from these generation projects but also to develop adequate transmission capacity for last leg connectivity in order to have open market for electricity as envisioned in Electricity Act 2003. However, recovery mechanism for the investment in transmission in the absence of firm beneficiaries as well as taking into account uncertainties in materialization of IPPs project as per schedule need to be addressed.

POWERGRID informed that already 7 nos. of high capacity transmission corridors have been identified for a group of generators coming up in the similar time frame to facilitate transfer of power from LTA granted capacity (about 55000 MW) with an estimated investment of about Rs 50,000 Cr. DPR of these schemes as well as initial tendering activities of above schemes are already under progress.

POWERGRID indicated that in view of non-finalisation of beneficiaries, commitment for payment of transmission charges from IPPs remains a major concern. However, to facilitate timely implementation of transmission scheme and recovery of investment, POWERGRID has proposed a Bank Guarantee(BG) of 10% of estimated cost of transmission project to be submitted by IPPs in proportion to the Long term Access(LTA) capacity. POWERGRID mentioned that even with this arrangement i.e, getting the BG from IPPs, payment security towards recovery of investment is not ensured as it is likely that at time of signing of BPTA for a transmission corridor, one group of generators give BG and other delay it. In such situation, BG for the balance amount needs to be shared by the IPPs who have already submitted BG as additional BG.

Even if all IPPs submit BG and POWERGRID take up implementation of transmission corridors, it is quite likely that in between the construction period, few of the IPPs in a group inform delay in their commissioning schedule. Under such situation, who will bear the transmission charges for the balance capacity ?

POWERGRID highlighted that appreciating the need for finalizing beneficiaries to take up implementation of transmission augmentation, CERC in its regulations indicated that exact source of supply or destination of off-take, as the case may be, shall have to be firmed up and accordingly informed to the nodal agency at least 3 years prior to the intended date of availing LTA to facilitate such augmentation.

Joint Secretary, Ministry of Power said that the power project developers are intimating ambitious commissioning schedules in order to justify their demand for fuel linkage. The IPPs are reluctant to give bank guarantee in support of their commitment to pay transmission charges. He expressed the difficulties of CTU in taking investment approval in view of this uncertainty.

Member(PS) clarified that as very few utilities had floated bids for procurement of power under case I bidding route, the IPPs were finding it difficult to tie up long term PPAs and as on today we have to treat most of them as merchant power plant. Accordingly the amount of bank guarantee sought by PGCIL appears to be reasonable. Further PGCIL had also assured that amount of bank guarantee would be reduced in proportion to the capacity tied through PPAs by the IPPs on long term basis. He,

therefore, suggested that CERC may issue necessary advise/corrigendum to the regulations in this regard.

Member(PS) CEA also stated to levy the additional transmission charges only on the existing generators and loads due to delay in the commissioning of the IPP project would not be fair to the existing generators and loads. He suggested that after commitment of the commissioning date by the IPP in the BPTA he should also be made liable to pay the transmission charges as the investment in transmission system had been made by PGCIL and their transmission capacity was stranded due to delay in the commissioning of IPP. This would result in the existing generators and loads from being overburdened due to implementation of additional transmission system by POWERGRID

After discussions, the Forum was of the view that CTU should take action in accordance with the provisions of the Tariff Policy which provided that prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up the execution after due regulatory approvals. The Forum also noted that the new transmission pricing framework being developed by CERC in accordance with the Tariff Policy would enable the approved revenue requirement of POWERGRID to be recovered from the users of the grid.

3) Agenda Item No. 2 : Difficulties being faced by private sector developers of transmission lines (by M/s Adani Power Ltd)

A presentation was made by Sh. A.K. Asthana, President, Adani Power Ltd (APL), a copy of which is enclosed at **Annexure-3**. Sh. Asthana informed that APL is establishing two generation projects in Western region viz. Mundra TPS (4620 MW) with beneficiaries as Gujarat & Haryana and Tiroda TPS (3300 MW) with beneficiary as Maharashtra. For Mundra TPS, dedicated transmission system is being built by M/s APL whereas for Tiroda TPS, transmission system is being built through ITP route with consent of native state i.e., Maharashtra.

APL highlighted several concerns of IPPs like Discom which are not coming up in a big way for long term power procurement and still preferring short-term power procurement route. APL added that process for identification/approval of Transmission Scheme involves a lengthy & time consuming process, because it requires detailed system studies as well as approval and vetting by agencies like STU/ CTU/ CEA/SERC/RPC. He further deliberated that IPPs also face delays in getting approvals under EA 2003 Section 68 & 164 in particular for development of their transmission system which adversely affects timely completion of the projects. APL suggested that procedure for obtaining section 164 approvals must be reviewed so as to get faster approvals. They suggested that authorization under section 164 for survey and initial works to the transmission developer may be given along with section 68 approval by Ministry of Power.

APL emphasized the need for development of transmission highways to facilitate bulk quantum of power transfer with flexibility and indicated that IPPs are ready to sign TSA

with CTU for constructing such corridors. APL further deliberated that apart from dedicated lines & inter-regional/regional lines, intra-state lines are equally important for power delivery. However states generally take substantial time in evolution/identification of such intra-state network as well implementation of the project. In this situation, IPP power may remain bottled up.

APL suggested that to develop associated transmission JV route is preferable over ITP route as ROW and other requisite clearances gets expedited. Once States are associated acquisition of land for substations by States will also be quicker. In such a scenario, State's skilled & experienced manpower will be gainfully utilized whereas IPPs can provide required funds, deploy latest project management techniques for timely completion of the project.

APL also suggested that for new generation projects at least one connection to existing substation should be planned so that situation of stranded capacity doesn't arise . Further, IPP must be allowed to develop critical ATS through JV route and process for grant of Transmission License as well as clearances like Section 68/164 with a view to reduce approval time must be reviewed.

Member (PS), CEA emphasized the need of adopting standard tower design for reducing the project execution time. He said that CEA is working in this regard with the States and POWERGRID.

Joint Secretary, Ministry of Power said that certain new issues have come up regarding the legal position of dedicated transmission lines under the Electricity Act.

After discussions, the Forum agreed on the following:

- a) Ministry of Power may like to review the procedure for granting authorization under section 164 with the objective of reducing the time involved in giving such authorizations.
- b) CEA may accelerate their efforts to facilitate adoption of standard tower design.
- c) The Empowered Committee which deals with tariff based competitive bidding for transmission projects at interstate level may look into the suggestion of pre-qualifying the bidders without reference to a particular project.
- d) Ministry of Power may resolve the new issues regarding the legal position of dedicated transmission lines under the Electricity Act taking a holistic view of the sector and also the earlier statutory order passed by the government in the matter.
- e) The Forum of Regulators may discuss the need for expediting long term procurement by the state utilities through tariff based competitive bidding.

The meeting ended with a vote of thanks to the Chair.

5TH MEETING OF THE COORDINATION FORUM
HELD ON 11TH NOVEMBER, 2009

LIST OF PARTICIPANTS

1. Dr. Pramod Deo, Chairperson, CERC ... **In Chair**
2. Mr. R. Krishnamoorthy, Member, CERC
3. Mr. S. Jayaraman, Member, CERC
4. Mr. V.S. Verma, Member, CERC
5. Mr. V. Ramakrishna, Member (PS), CEA
6. Mr. Sudhir Kumar, JS, MOP
7. Mr. R.N. Nayak, Director (Oprn), POWERGRID
8. Mr. I.J. Kapoor, Director, NTPC
9. Mr. Alok Kumar, Secretary, CERC
10. Mr. Pankaj Batra, Chief (E)
11. Mr. A.K. Asthana, President (Power Trans), Adani Enterprises Ltd.
12. Mr. S.K. Soonee, Exec. Dir (SO), POWERGRID
13. Mr. Pankaj Kumar, GM, POWERGRID
14. Mr. A Basu Roy, NTPC
15. Mr. Prashant Kaul, NHPC
16. Mr. G.P. Singh, Advisor, J.P. Associates

Long Term Access – Concerns and Issues

11th Nov, 2009

LTA Applications - Status

- **LTA applications received so far : 222 nos.**

- Capacity : about 198,900MW
- Quantum of LTA sought : about 158,772 MW

- **LTA granted so far: 94 nos. (Target regions)**

- Capacity : about 75,200 MW
- Quantum of LTA sought : about 55,000MW

- **Demand – Supply Scenario by 2012-13**

- Peak Demand (17th EPS) : about 175,700 MW
- Availability (Existing+planned CS/SS+UMPP) : about 157,630 MW
- Availability including LTA capacity granted : about 212,630 MW

- **To accommodate capacity, it is assumed that demand by 2013-14 & beyond would be made through above capacity addition**

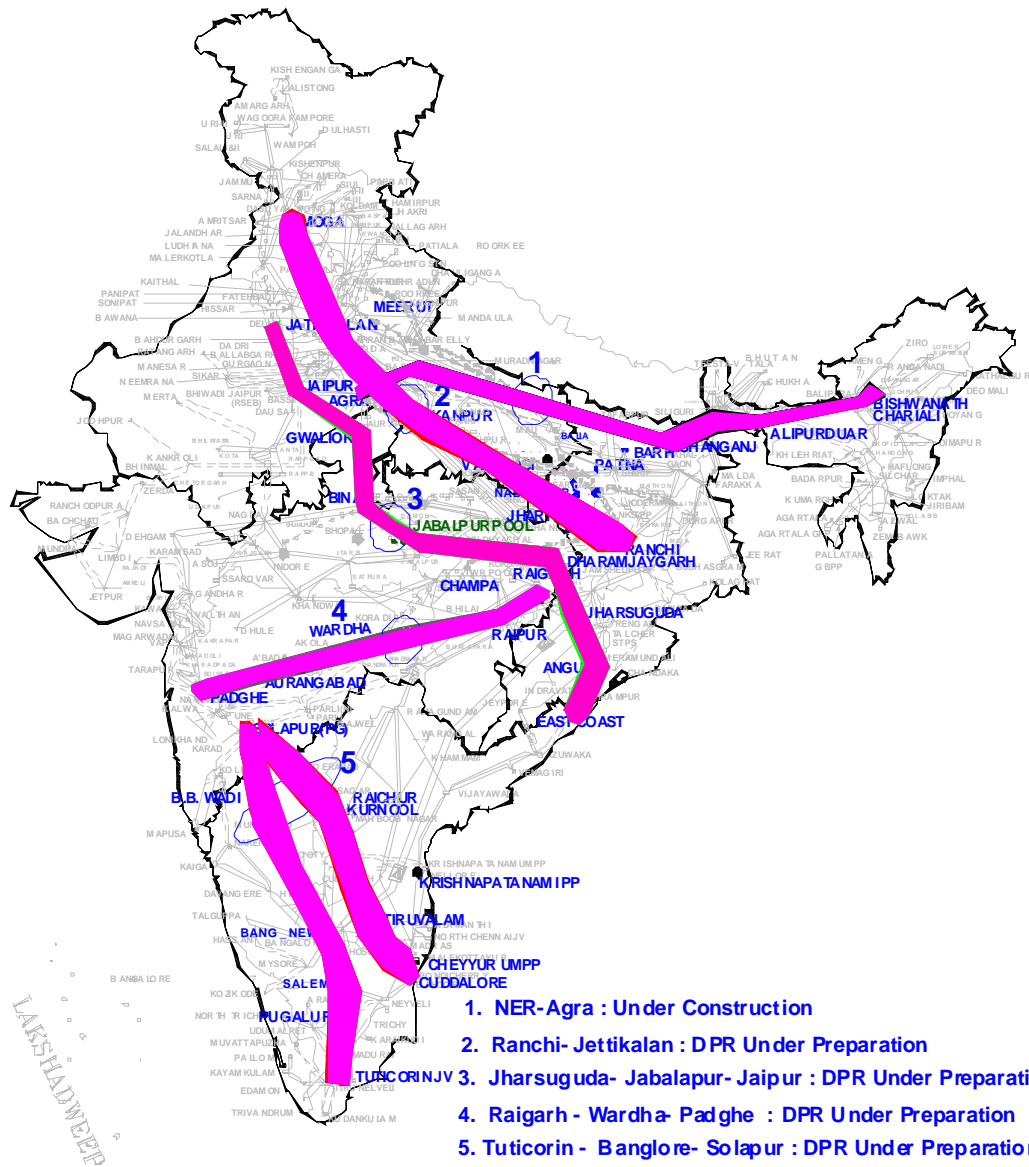
Transmission System for Long Term Customers

- 7 nos. of high capacity Trans. corridors identified to facilitate power transfer from LTA capacity (granted)
- Estimated cost – Rs. 49,850 Crs

1	765kV Angul-Jharsuguda – Dhramjaygarh- Jabalpur – Bina – Gwalior - Jaipur – Bhiwani	DPR under preparation
2	765kV Raigarh – Raipur – Wardha – Aurangabad - Padghe	DPR under preparation
3	\pm 800 kV, 3000 MW Champa – Kurukshetra HVDC bipole (to be upgraded to 6000 MW in future)	DPR under preparation
4	\pm 600 kV, 4000 MW Raigarh – Dhule HVDC bipole and 765 kV Aurangabad – Dhule – Vadodara	DPR under preparation
5	765 kV Tuticorin – Salem – Madhugiri (New Bangalore)	DPR under preparation
6	765kV Ranchi-Gaya – Varanasi -Kanpur -Jhatikra	DPR under preparation
7	Orai – Bulandshahar – Meerut – Sonipat	Under Approval

- Initial Tendering activities of above schemes under progress

Proposed High Capacity Transmission Corridors Under Various IPP'S



1. NER-Agra : Under Construction
2. Ranchi- Jettikalan : DPR Under Preparation
3. Jharsuguda- Jabalapur- Jaipur : DPR Under Preparation
4. Raigarh - Wardha- Padghe : DPR Under Preparation
5. Tuticorin - Banglore- Solapur : DPR Under Preparation

Security Mechanism included in BPTA

- **In absence of firm beneficiaries, Commitment for payment of transmission charges (BPTA) are taken from IPPs**

- **Payment Security Mechanism proposed-**
 - In the construction stage, BG of 10% of estimated cost of transmission system to be taken from IPPs in proportion to their LTA capacity
 - ✓ 10% of estimated cost works to about Rs. 10-15 lakhs / MW
 - ✓ In the new regulation this value capped at Rs. 5 Lakhs/MW
 - In Operation stage, BG/FD equivalent to six months of estimated Trans. Charges to be taken

Issues with regard to Present BPTA

- **With the Estimated cost – Rs. 49,850 Crs, construction stage BG works out to about Rs. 5000 Crs**
 - As per recent CERC Regulations, this BG is pegged to Rs. 5 Lakhs/MW which amounts to total BG of about Rs 2500 Crs

Actions Taken by POWERGRID

- **Carried out statutory function of Tr. System planning**
 - Evolved system is mostly concurred at standing committee/RPC forums
- **All the project preparation activities have been initiated**
 - FR/DPR preparation including preliminary survey, land identification for pooling stations, tendering activities etc. initiated
- **Draft BPTA being initialed with IPP developers**
 - BG is being pursued
- **All the above activities undertaken with the contention that beneficiaries shall be finalized, by the time investment decisions are required.**

Now Commissioning of IPPs are approaching and Decision on Investment is necessary

Concerns

- **Beneficiary States not yet finalized for almost all cases**
- **Large investment required**
- **Commissioning Schedules of number of generation projects appear to be uncertain**
- **BPTA initialled by IPPs in Orissa, Sikkim, Chhattisgarh**
 - After repeated request, IPPs in Orrissa/Sikkim reluctant to submit BG

Issues to Proceed further

- **Transmission corridors proposed for a group of generators coming up in the similar time frame**
 - Unlike specific transmission element for a particular generator
- **In case of delay in materialisation of few generators, Trans. requirement may not reduce proportionately**
 - Burden on remaining IPPs for sharing of Trans. charges would increase
 - IPPs reluctant to share additional burden
- **In case construction of corridors commenced and then an IPP defer date of commissioning by 1-2 years, who will bear the additional liability ?**

Issues to Proceed further

...contd

- Even after putting best efforts by generators, physical progress is slow in many cases.
 - Requests for deferrment of COD
- Most of the IPPs deferring the schedule continuously by 3-6 months. Under such scenario, investment in Trans. development does not give requisite security & recovery.

How to deal with such applications ?

A common meeting of CERC, CEA, MoP and POWERGRID may be convened by CERC to exclusively deliberate above issues and provide direction



Thank You



ADANI

Issues of Concern
In
Developing Transmission

Difficulties being faced
By
Private Sector Developers

November 11, 2009

Power Transmission



- Electricity – Critical input for economic growth
- Generation as well as power market development warrant an efficient transmission system
- Open Access regulations issued by state & central regulators
- Role of Private Sector in transmission development:
 - Seek connectivity / open access
 - Develop dedicated transmission lines
 - As JV partner - transmission license required
 - As ITP - transmission license required

Development of Transmission



- Concerns of IPPs
- Issues of private developers not having IPP concerns

ADANI EXPERIENCE : Power Projects & Utilities

- Mundra Thermal Project: 4620 MW : Gujarat, Haryana, CTU
- Tiroda Thermal Project : 3300 MW : Maharashtra

ADANI EXPERIENCE : Transmission Lines

Dedicated Lines (No License)

- 400 kV D/C Mundra – Sami – Dehgam (432 km) (Operational)
- 500 kV HVDC Mundra–Mohindergarh (1000 km) (under construction)
- 400 KV D/C Mohindergarh – Bhiwani (60 km)

Transmission Licensee (ITP route) with state's consent

- 400 KV D/C Tiroda - Warora : 220 km
- 2x765 KV S/C Tiroda– Koradi– Akola : 700 km

Overview - Generation Capacity



<u>Generation</u>	<u>Total</u>	<u>Private Sector</u>
Upto X th Plan	1,32,500 MW	22,000 MW
XI th Plan (addition)	78,000 MW	24,000 MW
XII th Plan (addition)	1,00,000 MW	50,000 MW

- IPPs now geared up to play an important role in capacity addition
- Substantial funds so saved by PSUs can be utilized gainfully towards improvement in distribution
- IPPs need matching transmission for power evacuation
- IPPs also needs improved distribution

Overview - Transmission Capacity



<u>Transmission</u>	<u>Upto Xth Plan (ckm)</u>	<u>Additions in XIth Plan (Expected) (ckm)</u>	<u>Additions in XIIth Plan (Projected) (ckm)</u>
765 kV	2184	5450	25000
HVDC 500/800 kV	5872	5200	5000
400 kV	75700	49300	50000
220 kV	114600	35400	40000

Development of Transmission – Concerns of IPPs



Role: Seek connectivity / open access

- Despite acute shortage, Discom not coming in a big way for long term power procurement
- Discoms still preferring short-term power procurement, costly power
- Major transmission system 765kV, 400kV, HVDC can be planned only once buying utilities are known
- Lengthy process for Transmission Scheme identification
 - Application, System Studies, approval and vetting by STU/ CTU/ CEA/ SERC/ RPC
- IPPs ready to sign TSA with CTU for constructing lines for target regions
- Criticality of timely completion of new substations/pooling stations
- **SUGGESTION: PLAN AT LEAST ONE CONNECTION TO EXISTING SUBSTATION TO ENSURE THAT POWER IS NOT BOTTLED_UP FOR WANT OF GRID CONNECTION**

Role: Dedicated Transmission Lines

- Duty of generating company as Electricity Act 2003
- No License required

- Delays in approvals ([Section 68 & 164](#) in particular)

- **Criticality of timely completion**

- **SUGGESTION:**
 - REVIEW PROCEDURE FOR SECTION 164 APPROVAL
 - ALLOW AUTHORISATION UNDER SECTION 164 FOR SURVEY AND INITIAL WORKS AND GIVE THIS ALONG-WITH SECTION 68 APPROVAL
 - CONDITION OF COMPLIANCE FOR AUTHORISATION OF FURTHER WORKS UNDER SECTION 164 COULD BE SPECIFIED IN FIRST APPROVAL

Transmission System for IPP Power



- Apart from dedicated lines and inter-regional/regional lines, intra- state lines are equally important for power delivery

ADANI EXPERIENCE SO FAR

- States are taking substantial time in evolving transmission scheme
- States are taking their own time in award of contracts
- Projects on Tariff based ITP route getting further delayed due to lengthy procedure – bid, selection, award, agreements, license, section 68, section 164

CONCERN : INTRA-STATE TRANSMISSION



- Execution by states generally not progresses as per schedule due to
 - ▶ Right of way issues
 - ▶ Not adequate funds
 - ▶ Not attaching priority for completion matching with generation
- Due to non-availability of line, power cannot be transmitted.
- Ultimately IPP power will remain bottled up, situation needs to be avoided.

Independent Power Transmission Route

- 100% Fund mobilization by Company
- Developer selected through ICB Process
- Competitive Transmission Service Charge
- Technical, Managerial and Financial Strength
- Build, Own, Maintain Basis, operation by CTU /STU

Despite RFQ, RFP & TSA have been notified by MoP

None of IPTC route project has yet been implemented

Joint Venture Route

- Equity Stake upto 26% by CTU /STU -74% by private
- Financial & Managerial Strength
- Transmission Charges – Cost plus basis under CERC / SERC Supervision.

Seven Projects, one implemented, others are in execution stage

Allow IPP to construct lines critical for evacuation & utilisation of its power, either through JV or ITP



- IPP develop associated transmission either as JV or as ITP
- It would be under the overall supervision of Regulatory Commission : **License Required;**
Capex & ARR approval by the regulator;
- Would ensure matching completion.

JV route preferable :

- ROW, other clearances will get expedited, once states are associated.
- Acquisition of land for substations by states will be quicker.
- State's skilled & experienced manpower, will be utilized
- IPPs can provide required funds, deploy latest project management techniques for timely completion

Mismatch between Generation & Transmission



- Completion Schedule for 500 MW Unit : **33 months**
- Completion of Associated Transmission lines
(**2 months** ahead of synchronization schedule : 31 months
of unit)

Time Frame for Execution

- Identification of Transmission Scheme : 3 months
- Obtaining of Transmission License : 4 months
- Section 68 and 164 : 6 months
- Award of Contract : 3 months
- Engineering / Designing / Testing : 4 months
- Execution Schedule(Depending on length of line): 24/27 months

Total : 38 /41 months

Reducing implementation time



Suggestions

- Expedite transmission planning process
- Plan at least one connection to existing substation

Allow IPP to develop of Critical ATS through JV route

- Review process for grant of Transmission License with a view to reduce time
- Section 68/164 – Issuance Procedure need a review, can reduce time of construction activity by 3 months.
- Tested dower design will reduce by 3 months.
- For not so critical transmission, bids from short listed bidders only : standard RFQ / RFP.
- Advance action for route survey, MOEF proposal, land acquisition for substation.

Presentation by Adani Power



Thank You