

Renewable Energy procurement through Competitive Bidding: Challenges and Way Forward

Background Presentation

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Roundtable on

*Renewable Energy Procurement through Competitive Bidding:
Challenges and Way Forward, organized by Prayas Energy Group*

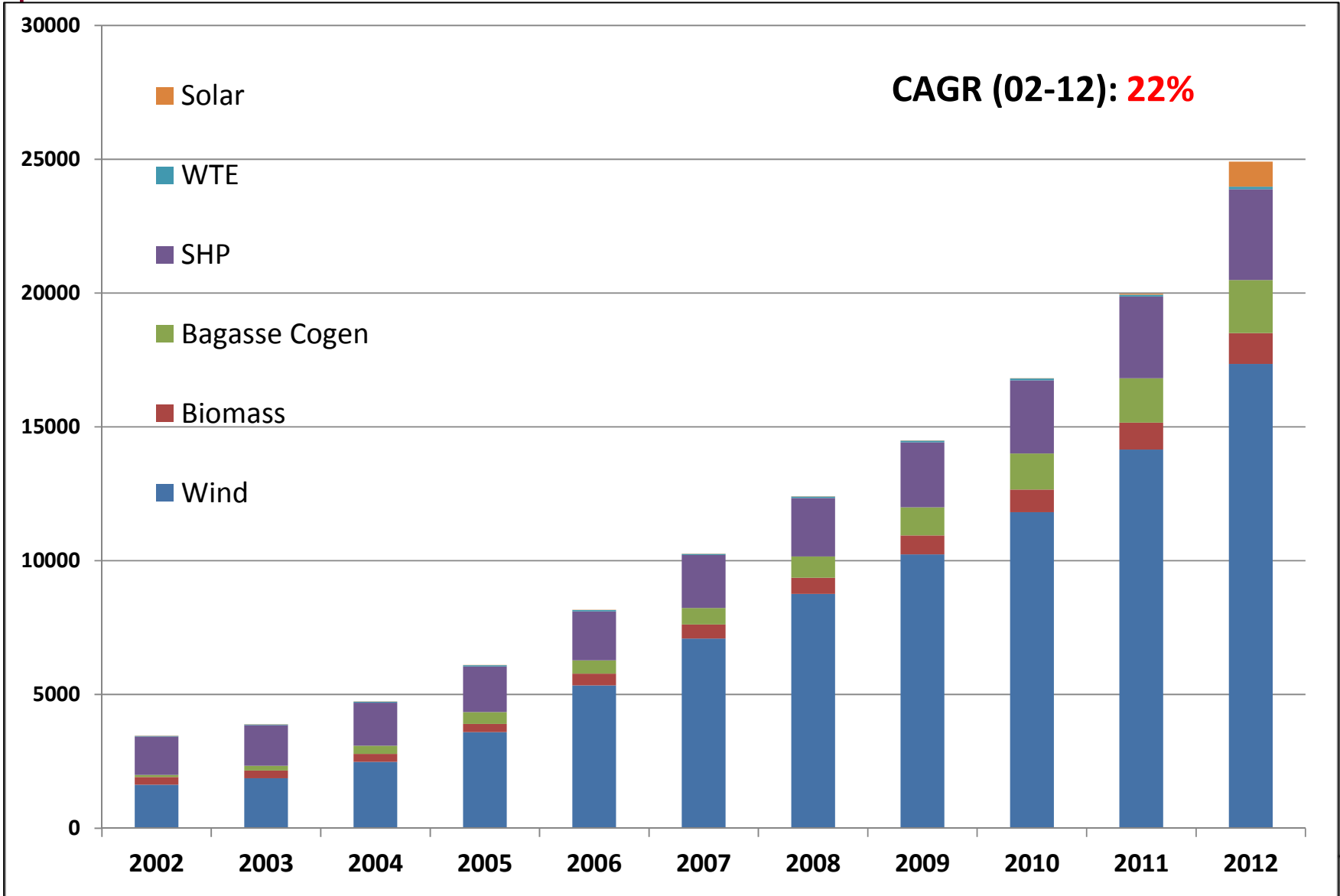
11th September, 2012, India Habitat Centre, New Delhi



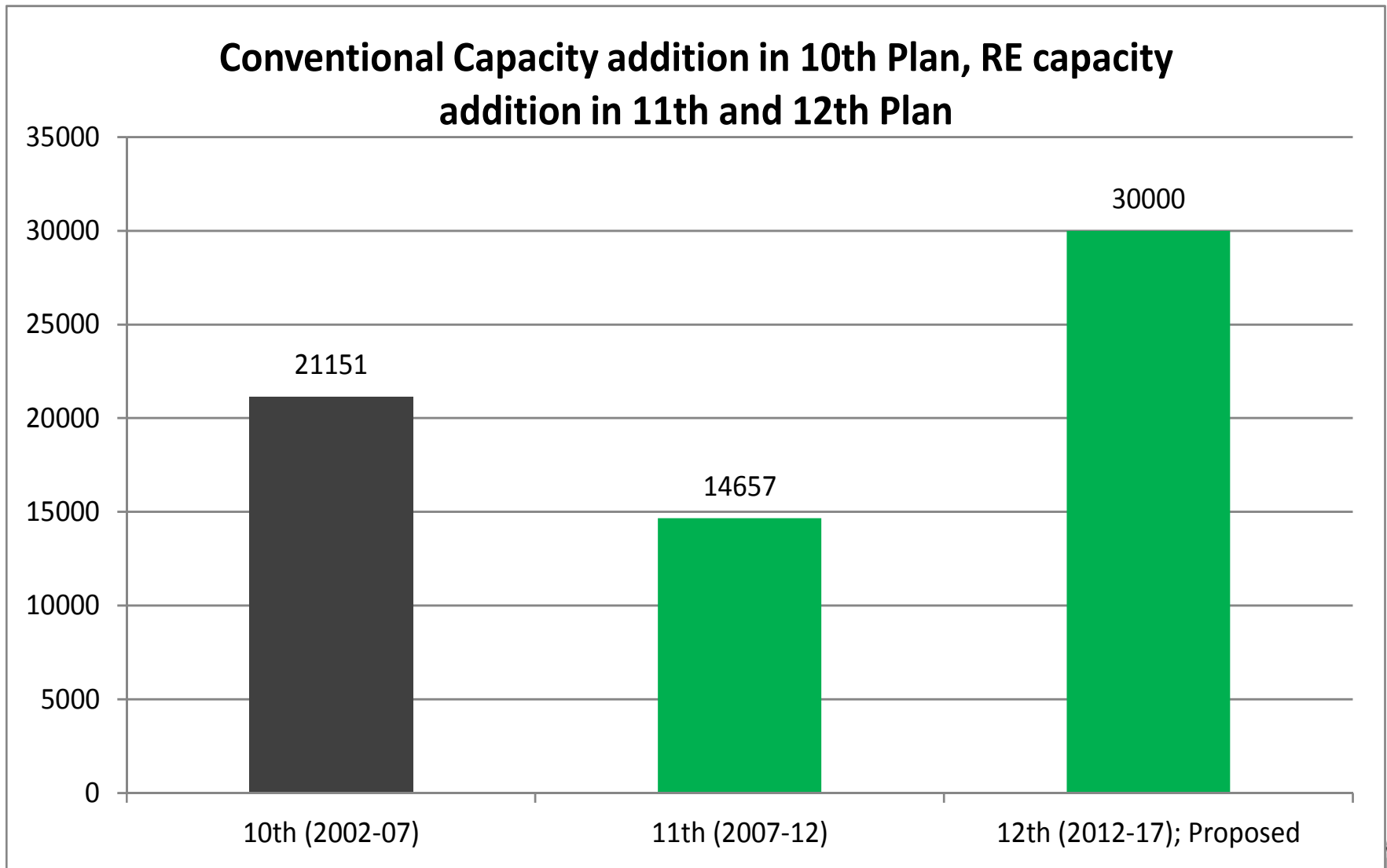
Outline

- Mainstreaming of the Renewable Energy (RE) Sector
- The need for Competitive Bidding (CB) for RE procurement
- The Indian Scenario w.r.t Competitive Bidding for RE
- Learnings and Challenges
- Conclusions and Way Forward

RE capacity addition from 2002-12



RE Growth, in absolute terms



Envisaged RE Capacity going forward

- Latest PGCIL Study: 12th plan RE capacity addition (5 RE rich states) considered **40 GW** (10 GW solar, 30 GW wind)
- Generation Capex ~ **2,50,000 Cr.** Total cost of integrating RE – **42,557 Cr** (Transmission system strengthening - 92% of the cost).
- By 2030 (Mid 15th Plan) – 200 GW (164 GW wind, 35GW solar)
- MNRE presentation at FoR, ~ 180 GW by 2027 (~16% penetration)

Scenario	Energy Penetration %	Capacity Penetration %
Present	4	12
2016-17	13	21
2030	21	35

Legal and Policy Mandate for RE Comp Bidding

- Provisions under **Electricity Act, 2003**
 - Preamble – “promoting competition”
 - Section 63 – tariff determined through competitive bidding
- Mandated by **National Policies** (since 6 years under Section 3(2) of Act)
 - National Electricity Policy, 2005, Section 5.12.1: reduce capital costs, promote competition. 5.12.2: renewable power *“purchase by distribution companies shall be through competitive bidding process.”*
 - National Tariff Policy, 2006: Utility procurement for future requirements should be done *“as far as possible through competitive bidding”* under section 63 of the Act, *“within suppliers offering energy from the same type of non-conventional sources”*
 - National Action Plan on Climate Change, 2008, Section 4.2.2: *“Procurement of renewables be based on competitive bidding”*

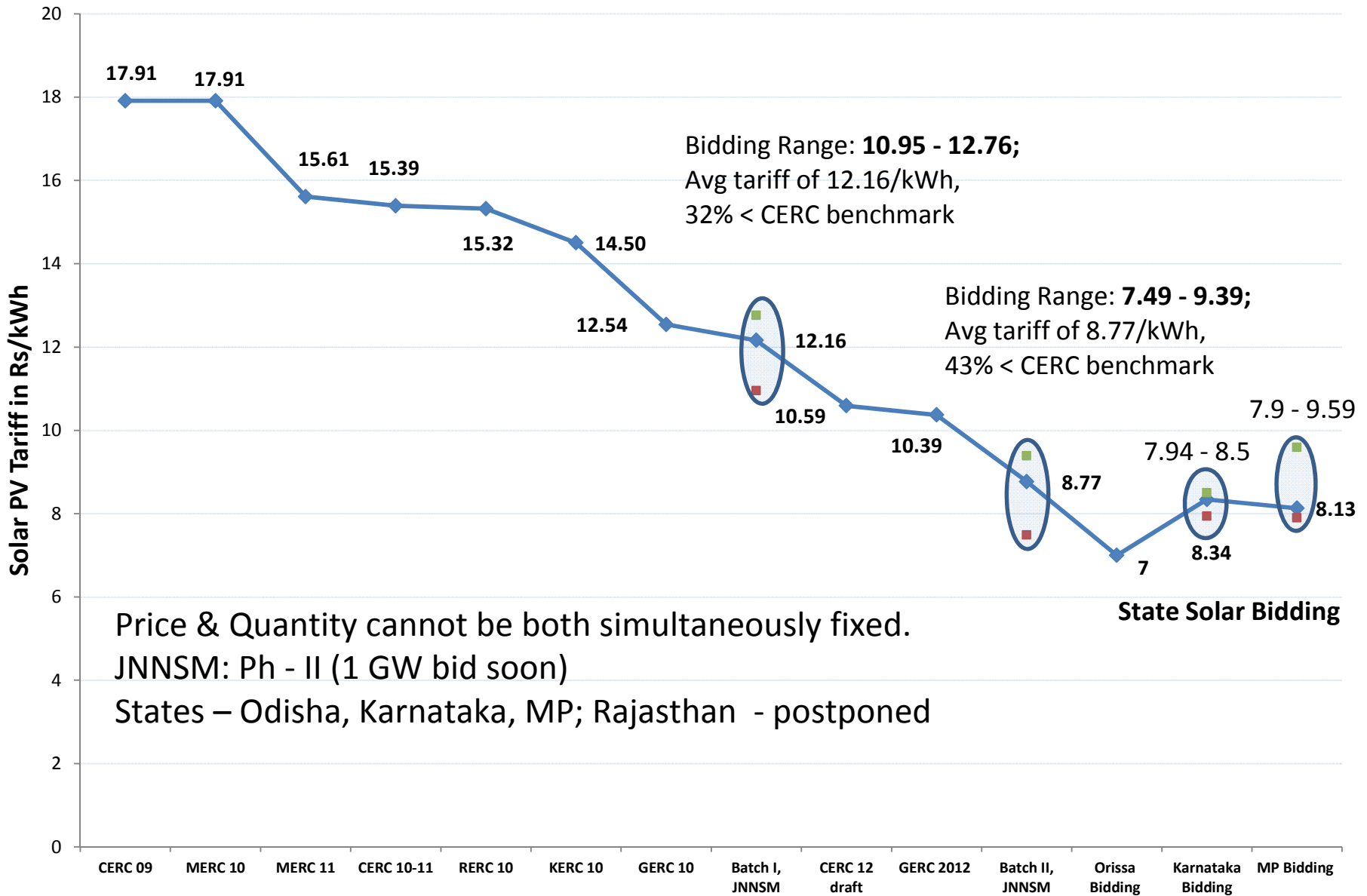
Limitations of Indian Feed in Tariffs

- Information asymmetry & Paucity of reliable public information. Difficulty in benchmarking input assumptions (CUF, CapEx, Interest & Discount Rate, ROE) – vary significantly
- Dynamic sector – Technology evolution (higher hub heights & rotors - lower LCOE). Not captured by indexing formula for CapEx.
- Wind Power FiTs increasing (No degression. Internationally reducing.)
- FiT payment duration not linked to actual performance (CUF): (FiT applicability (in years) varies as per actual performance in Germany (reference yield at standard site))

Advantages of Competitive Bidding

- Market price discovery and possibility of price reduction leading to uptake of higher RE targets (solar experience).
- Large scale orders under CB – leading to lower transaction and specific costs/MW; Inter-state OA transactions (connected to higher voltages (ISTS) – may be cheaper than REC.
- No fuel related risk in RE (wind/solar).
- Increased competition in the vertically integrated Renewable Energy sector – higher innovation across value chain

Solar Competitive Bidding in India



Price & Quantity cannot be both simultaneously fixed.

JNNSM: Ph - II (1 GW bid soon)

States – Odisha, Karnataka, MP; Rajasthan - postponed

Wind Power Competitive Bidding in India

- **GERC:** Wind tariff order (11th August, 2006) mentioned CB for tariff discovery but postponed the decision to future when wind capacity is increased. Gujarat - 2884 MW on 31st March 2012 (second highest state).
- **KERC:** KERC allowed CB in 2007; Case in APTEL against order; APTEL order - go ahead for CB in 6 months; APTEL order stayed by Supreme Court in 2011.
- **RERC:** RERC allowed CB for wind (2009 Regulations); Solar Policy 2011 and draft wind policy 2011 both mention CB for tariff discovery; RRECL petitions for approval of bid documents. Petition not admitted since under section 63, Only in accordance to Gol guidelines (SBG).
- **MP Wind policy 2012:** CB four times a year, in case of CB for the projects to be set up on a government land among more than one bidder, the project will be awarded to the developer who quotes a higher premium amount.

Moving towards CB in RE

- Need to build on the rich State/National/Intl experience of CB in RE & Conventional Power.
- For functionally competitive auction market place must be liquid, homogenous.
 - Liquid
 - high number of participants; market certainty (credible long term target),
 - bids at regular interval - must for industry growth. Long term RE procurement plan for Utilities under MYT process.
 - Homogenous – Bidding *“within suppliers offering energy from the same type of non-conventional sources”*
 - Policy should allow multiple procurement options in the transition period to continue momentum in RE growth.
 - Start with Wind and Solar sector. Start with smaller solicitations to gain experience before scaling up.

Moving towards CB in RE (2)

- Interaction of Competitive Bidding with the REC Mechanism.
 - CB to replace FiT
- SERCs to fix the RPO mix (since resource specific CB).
- Bidding guidelines could incorporate non-price parameters like dispatch ability, storage, peaking supply etc in the selection process.
- Treatment of incentives?
- Minimum indigenous manufacturing requirement?

Bidding Framework

- Reverse Bidding with SERC FiT as ceiling
- Similar to conventional power, Case 1 / Case 2 approach
 - land bank - for case 2 bidding, concerned State Govts will need to work on wind/solar park infrastructure. (Only land leasing on footprint basis be allowed)
 - Realistic norms which can be precisely defined, monitored and firmly enforced should be incorporated - Effective M&V framework.
 - Pre-qualification norms (net worth; min equity, preference shares etc)
 - Milestones
 - Bid Evaluation Criteria
 - Appropriate Penalties (milestone linked bid-bonds) for preventing under-bidding and attrition
- Central information repository
- Ensure transparency and accountability
 - Adopt good practices from CB for conventional power

Conclusions and Way forward

- Renewable Energy moving from margins to mainstream – cannot remain isolated from the core approach of the electricity sector.
- Going forward, procurement through Reverse Competitive Bidding (with SERC tariff as ceiling) is a must for price discovery, promoting competition, lowering costs, thereby increasing targets.
- MNRE/MoP to finalize CBG and other SBDs, MoP to notify after comprehensive public stakeholder consultation. Lessons learnt from past CB processes (state/national/intl) should be used while drafting CBGs, open for continuous improvement.

THANK YOU

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Plan wise (past and future proposed) RE and Conventional power generation capacity addition (MWs)

