

Integrated Day Ahead Market (IDAM)

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Power sector at a glance



Policy Framework for RE



Genesis for Integrated Day Ahead Market

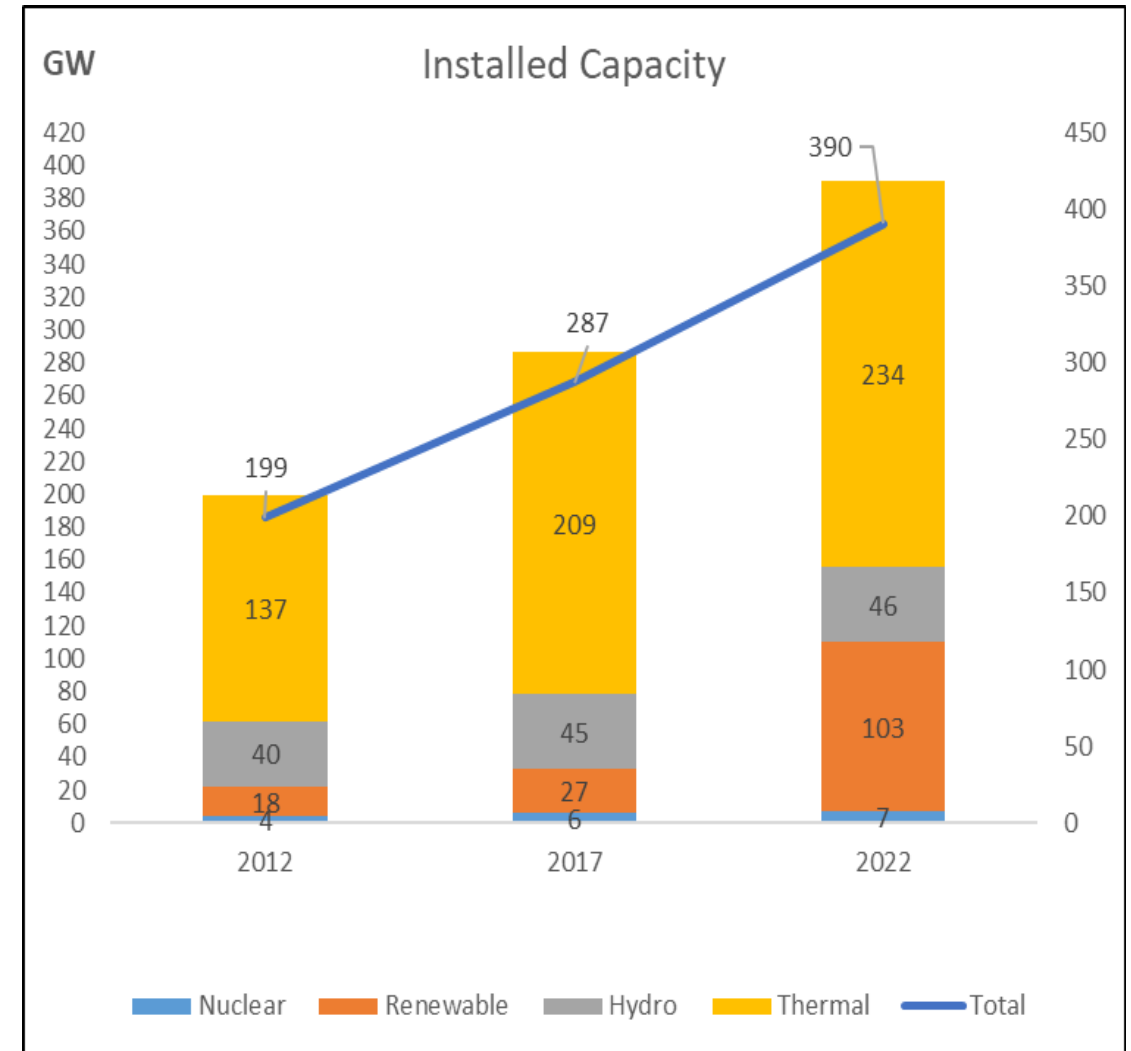


Features of Integrated Day ahead Market

Power Sector at a Glance



- Installed Generation capacity has crossed 390 GW.
- Ambitious targets but slow progress in 8th, 9th, 10th plan (0.3(0.16), 0.40(0.18), 0.41(0.21) GW}.
- 11th and 12th Plan performance driven largely by private investments.
- 13th Plan thrust on renewable energy seen a major expansion in solar and wind energy generation.
- Large portions of new capacity being kept for merchant transactions.

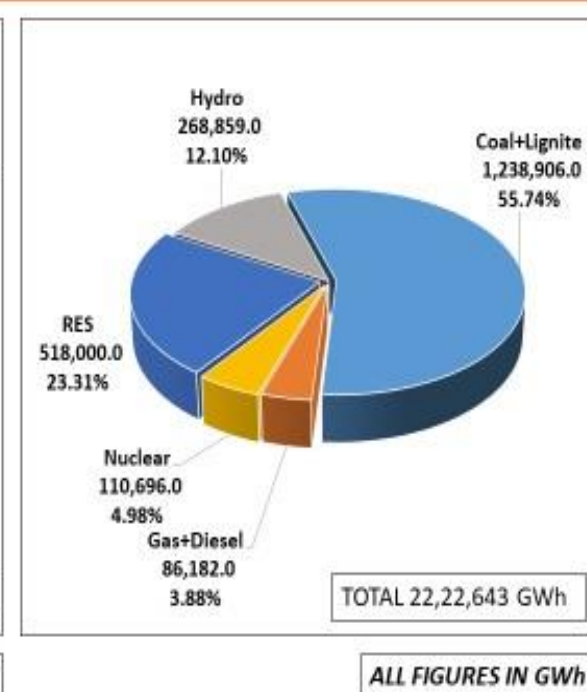
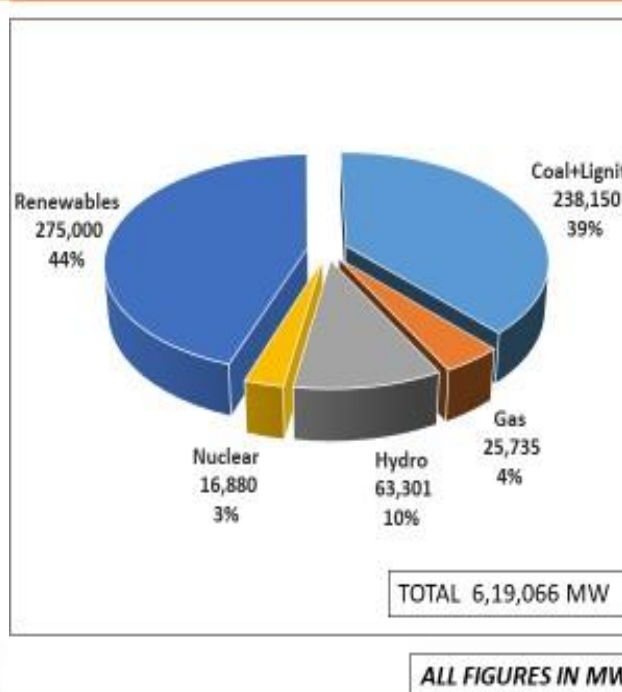
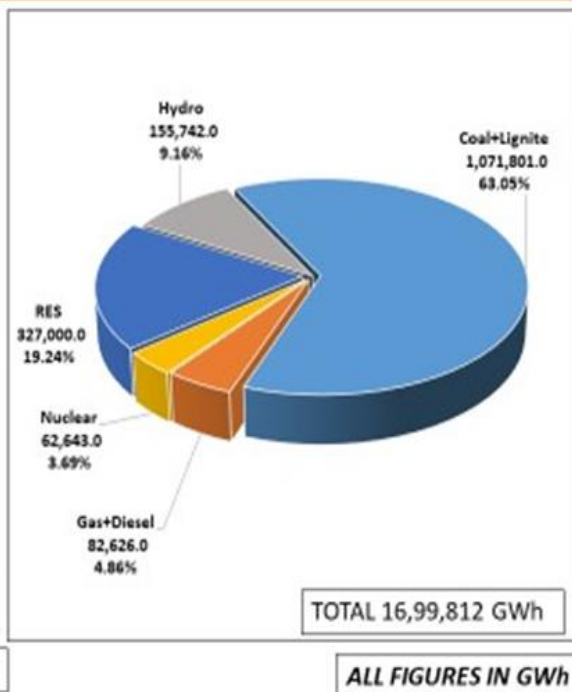
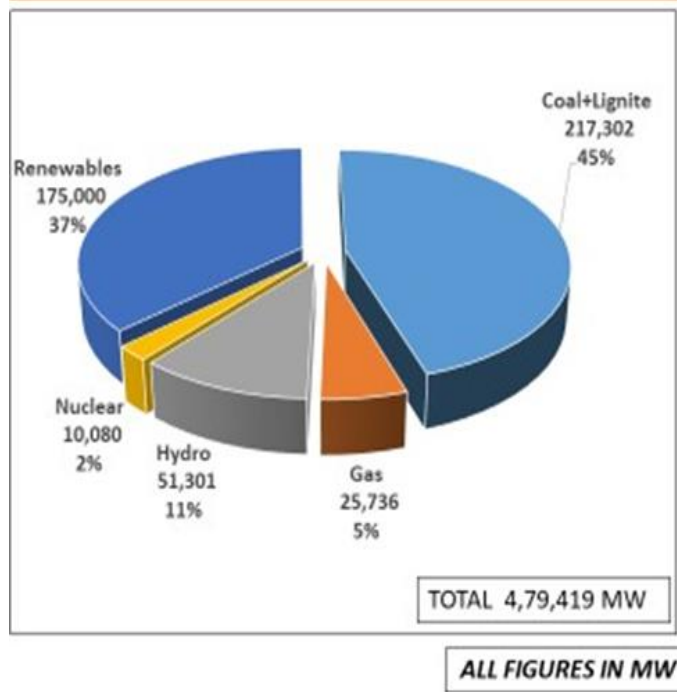


Installed Capacity and Generation- Projection

Year	Electrical Energy Requirement (BU) Ex Bus	Peak Electricity Demand (GW)
2021-22	1566	225.751
2026-27	2047	298.774

PROJECTED INSTALLED CAPACITY (MARCH, 2022) AND GENERATION(2021-22)

PROJECTED INSTALLED CAPACITY (MARCH, 2027) AND GENERATION (2026-27)



Source: 19th EPS Survey

Policy Framework for Renewable Energy (RE)



- National Solar Mission: Notified in 2010, had set a target of 20 GW by 2022 but later revised it to 100 GW by 2022. 40 GW from Roof top solar and 60 GW from grid connected solar projects.
- Provision for “Must Run Status” for renewable energies in IEGC code. Promotion of Generation of Electricity from Must-Run Power Plant Rules, 2021 dated 22nd October 2021 allows compensation provision in case curtailment is done.
- Green Energy Corridor: In 2013 Government of India announced a National Green Corridor Program (NGCP) worth Rs. 43,000 Crore to enable the flow of renewable energy into the National Grid Network and for Setting up Renewable energy management cell (REMC).
- National Offshore wind energy policy 2015: Offshore wind energy potential is to the tune of 302 GW which needs to be harnessed, policy envisage a target of 5 GW of offshore installation by 2022 and 30 GW by the end of 2030
- National wind solar hybrid policy: In 2018, government of India notified the national wind solar hybrid policy to promote large scale grid connected wind-solar PV hybrid system for optimum utilization of transmission infrastructure and land.
- Promotion of Renewable purchase obligation (RPO): Ministry of Power in consultation with MNRE set a trajectory of RPO as 10.5% for both solar and non-solar for FY21-22.

Genesis for Integrated Day Ahead Market



- India ranks third in the electricity consumption and 2nd in Coal consumption.
- Being a developing country and having a per capita consumption still on a lower side (1200 KWh as compares to world average of 3260 KWh), India has a massive growth potential.
- To achieve both the motive of growth and energy requirement, India has committed to achieve 175 GW in renewable energy by 2022 and envisions 450 GW of renewable energy to be added by the end of 2030 thus eyeing sustainable development.
- As the penetration of renewable energy in the grid is increasing with a rapid pace, need for a market platform is felt to schedule such large scale of renewable energy integration through competitive mechanism on daily basis.

Benefits of Green Day Ahead Market

- Signaling investment for the sector
- Ensuring payment to generators
- Unlocking untapped renewable energy potential

All Values in GW

Type	Hydro Potential	Wind Energy potential	Solar Potential	Small Hydro Plant	Biomass generation	Total
Total Potential	146	302	748	20	20	1236
Achieved till now	46	40	50	5	10	151
Untapped potential	100	262	698	15	10	1085

Source: MNRE

- Option to meet RPO from the market at competitive price
- Reduction in curtailment of power
- Mitigating DISCOMs' price risk in purchasing long-term power

- Running two similar markets i.e. Day ahead market and Green day Ahead Market separately have following limitations:
 - Bidding timing will differ and thus user has to move from one market to another market with a time difference which is prone to error.
 - This will increase the timelines of submission of results to NLDC by exchanges and congestion management will require considerable time which will make the whole process cumbersome.
 - End user may end up getting the final schedule, obligation etc comparatively at the later stage as compared to present timing i.e. around 4 PM.
- Integrated market overcomes the above hurdle and is a better way of providing a seamless transaction to market participants.

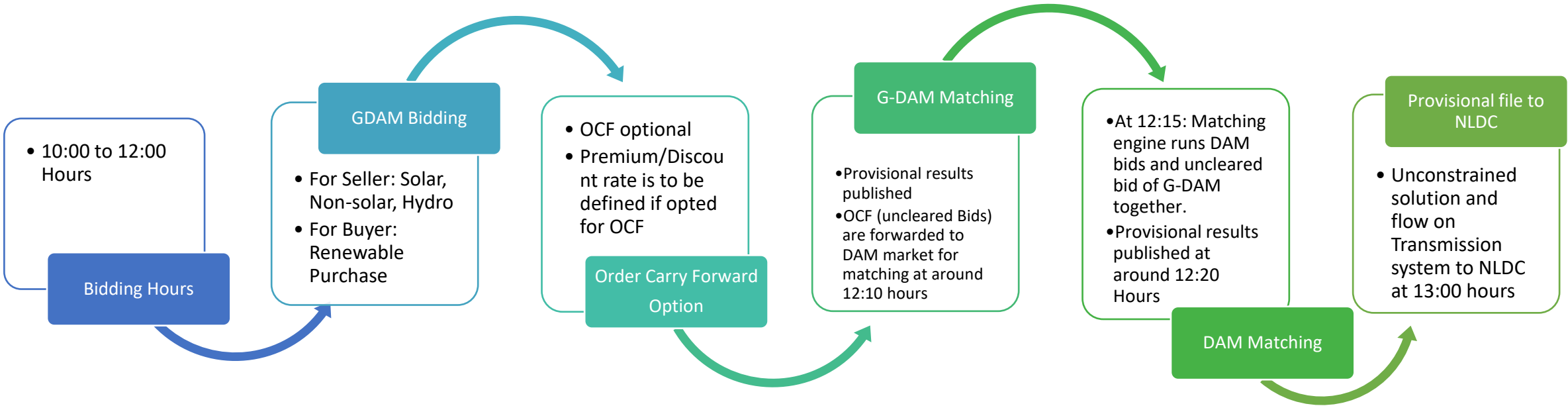
Features of Integrated Day Ahead Market



- Pre condition for participation in G-DAM
 - Seller has to provide the NOC clearly depicting the type of energy as Solar, Non-solar and Hydro.
 - DAM NOC will be valid for buyer in G-DAM market.
- While placing the bid, seller and buyer will have an option for exercising Order carry forward. If opted then in case any bids in G-DAM segment for that buyer remains uncleared will be considered in DAM market for clearance.
- There would be an option whether the seller/buyer wants a premium/discount on their uncleared G-DAM bid to be considered in DAM market.
 - For example:
 - Buy Bid: 100 MW @ 2400 Rs/MWh for RTC
 - OCF selection: YES
 - Premium/Discount: Premium @ 100 Rs/MWh
- In above case if no bid is selected during G-DAM matching process, then for DAM this OCF bid will be treated as:

 - Buy Bid: 100 MW @ (Dam Price +Premium Amount) Rs/MWh
 - = 100 MW @ 2500 Rs/MWh.
- Participants can meet their RPO obligation by purchasing power in G-DAM market.

Features of Integrated Day Ahead Market



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