

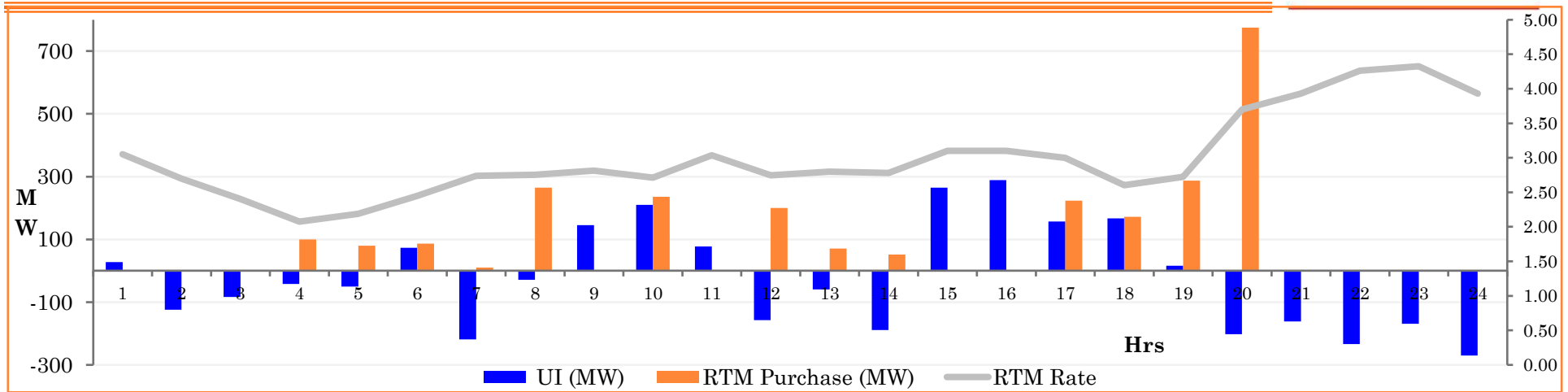
**PERSPECTIVE OF MSEDCL  
(MAHARASHTRA)  
ON  
REAL TIME MARKET**



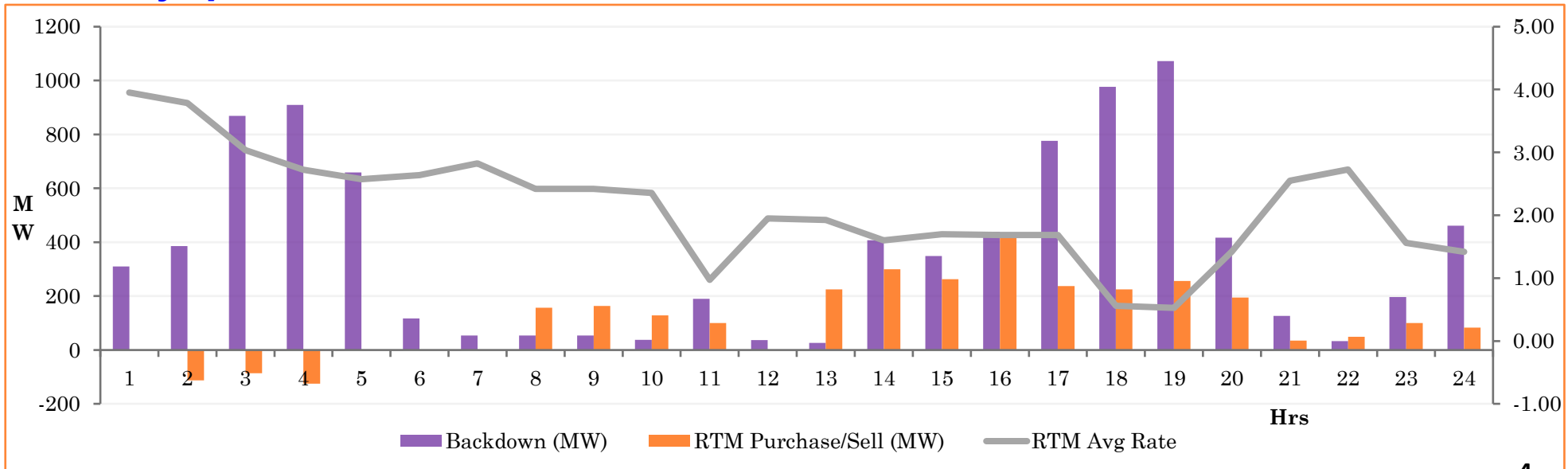
- CERC has introduced a Real Time Market (RTM) platform from 01<sup>st</sup> June-2020 in the Country.
- MSEDCL welcomes the good initiative taken by MoP & CERC for implementation of Real Time Market in the Country .
- RTM is a Half Hourly market
  - ❖ Conducted every half an hour (48 times per day)
  - ❖ Delivery for 30 minutes in two time blocks of 15 minutes each
- RTM is helpful for the management of real-time Load Generation Balance.

- **Management of Real time deviations:**
  - Shortfall due to forced outages/unexpected rise in demand.
  - Surplus due to sudden drop in demand.
  - Unexpected variation in RE generation
- **Cost optimization :**
  - Backing down of costly thermal generation & utilizing cheap power in RTM
- **Hydro Resource optimization:**
  - Koyna Hydro generation is utilized to meet peak demand and in real time deviation, due to limited allocation of water quota, cheap RTM power helps to save the water .
- **Meeting out the shortfall in DAM purchase :**
  - Meeting out Balance Power requirement when complete Power in DAM is not cleared.
- **DSM sign change:**
  - RTM helps for DSM sign change to some extent.

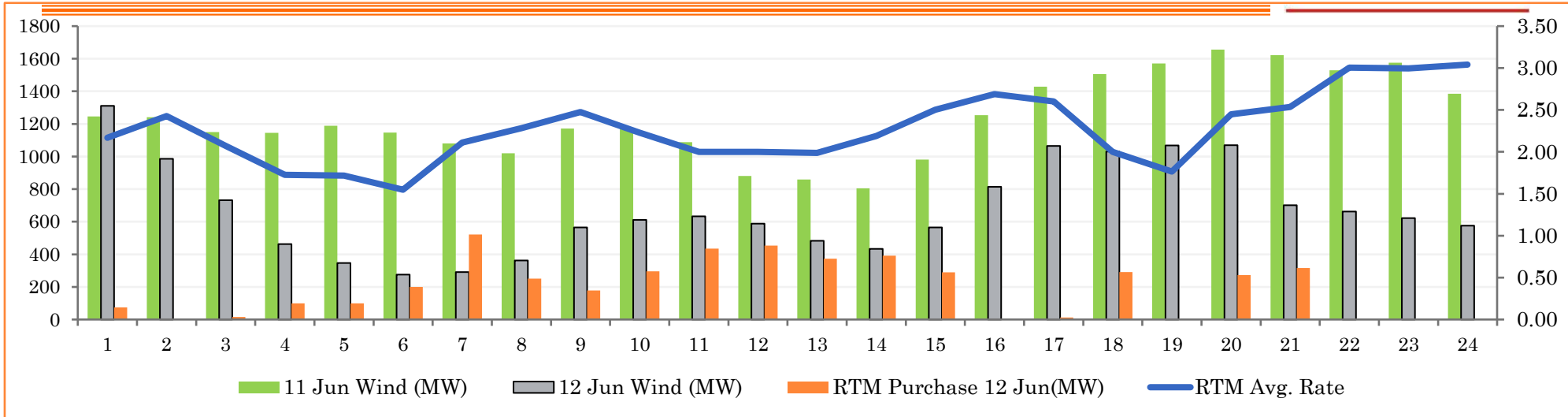
# Case-I – Management of UI with RTM after force outage of 660 MW APML unit & unavailable of Koyna Hydro 4 M/cs(1000 MW) – Dt 14<sup>th</sup> July 2020



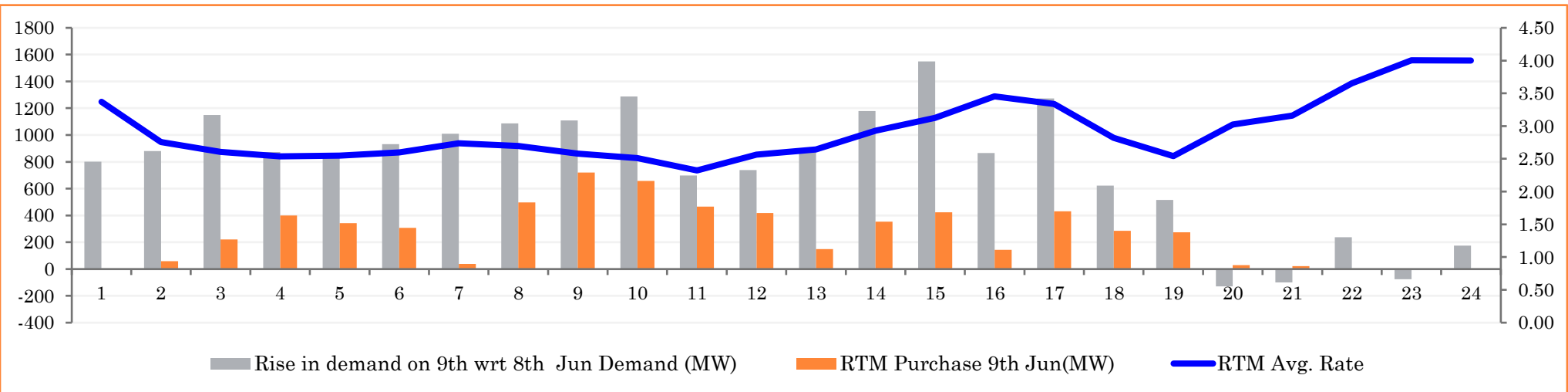
# Case-II – Cost Optimization with RTM – by back-down of on-bar thermal generation ( 19<sup>th</sup> July 20



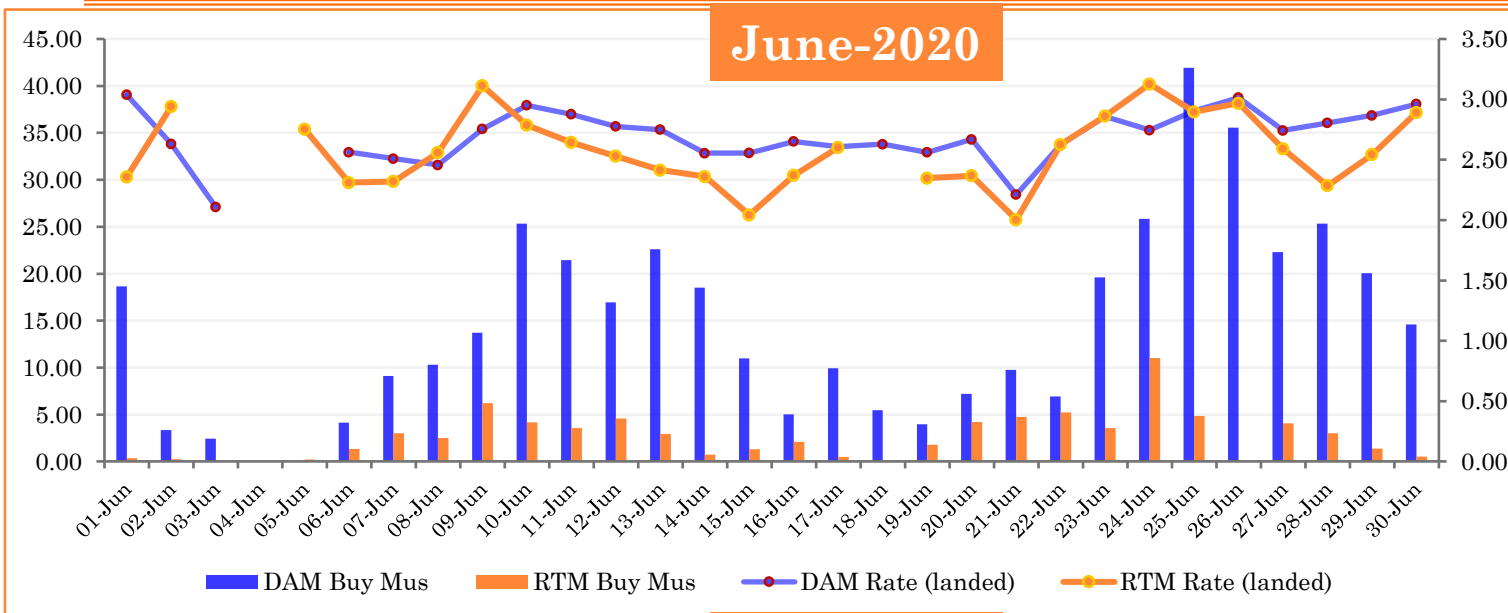
### Case-III – Variation in wind generation is managed with RTM (12<sup>th</sup> June)



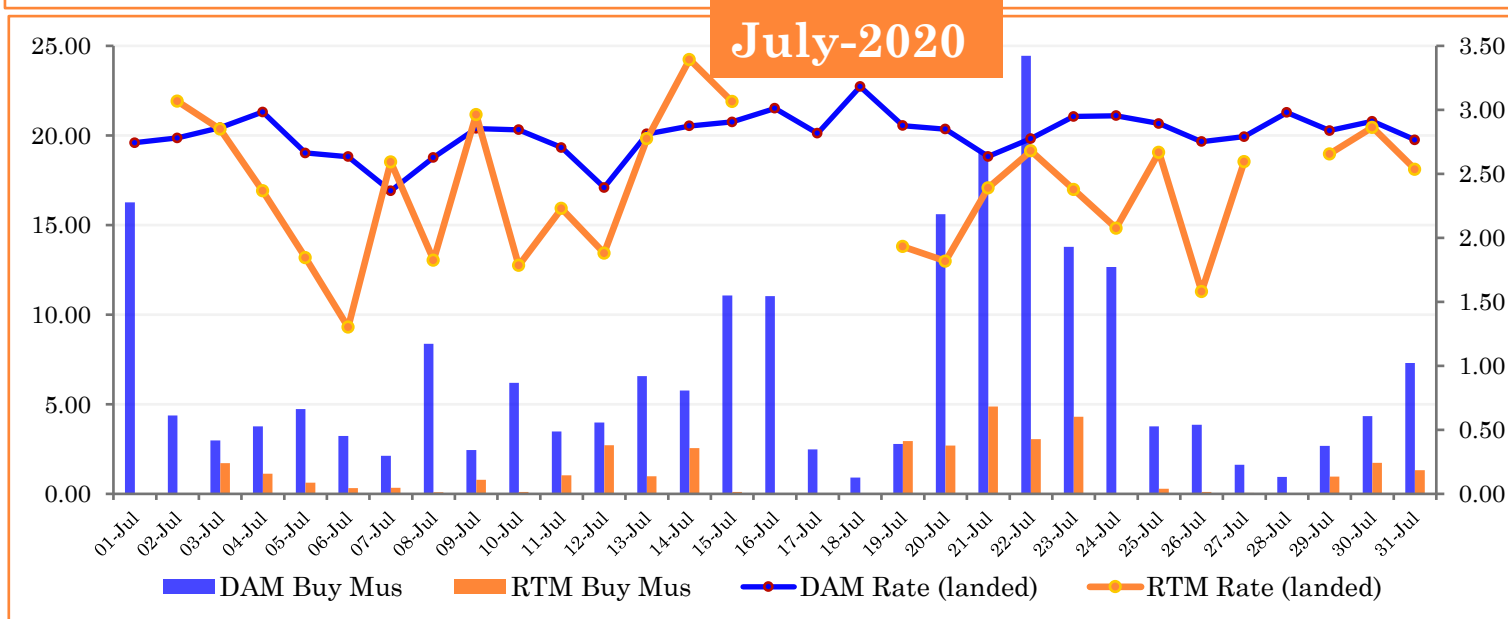
### Case-IV – Rise in Demand is managed partly with RTM (9<sup>th</sup> June)



# MSEDCL – Power Purchase in DAM & RTM & RTM Benefits



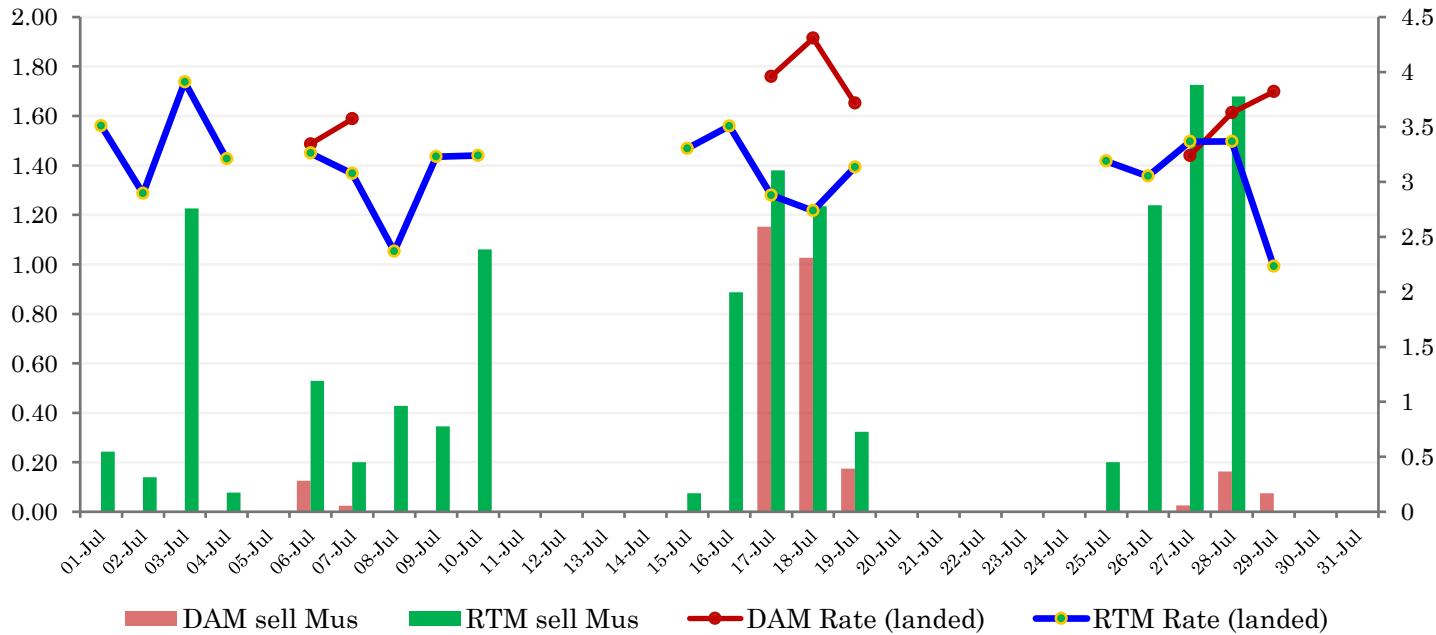
June-2020	
DAM Buy MUS	431.16
DAM Rate (Landed) (Rs/kWh)	2.78
RTM Buy Mus	78.33
RTM Rate (Landed)(Rs/kWh)	2.65
<b>RTM Benefits (in CRs)</b>	<b>5.26</b>



July-2020	
DAM Buy MUS	212.64
DAM Rate (Landed) (Rs/kWh)	2.80
RTM Buy Mus	34.79
RTM Rate (Landed)(Rs/kWh)	2.42
<b>RTM Benefits (in CRs)</b>	<b>4.25</b>

# MSEDCL – Power Sell in DAM & RTM & RTM Benefits

July-2020



July-2020	
DAM Sell MUS	2.77
DAM Rate (Landed) (Rs/kWh)	4.01
RTM Sell Mus	13.00
RTM Rate (Landed) (Rs/kWh)	3.22
<b>RTM Benefits (in CRs)</b>	<b>1.30</b>

## **Suggestion for Betterment – Reduction in Gate Closure time & Implementation of NOAR**

- Presently, 4 time blocks are kept after Gate Closure time for RTM clearance for checking of Corridor availability & for scheduling process.
- **Issue**  
Reduction in flexibility available with DISCOM to manage deviation arising mainly on account of variation in RE
- **Observation**
  - From the last two months experience , it is seen that provisional result of Market are available within 2-3 minute after closing of sessions.
  - It is possible to reduce these 4 blocks to 2 blocks with the following process:
    - NLDC to furnish the available transmission corridors to the Power Exchange(s) before the trading for RTM before specific Gate Closure time.
    - Result of Market to be provided to NLDC & all RLDC/SLDC immediately for scheduling & based on corridor given by NLDC,
    - Schedule to be prepared in immediate 2<sup>nd</sup> time block from bid submission time block (instead of 4<sup>th</sup> time block) & SMS/Email alert to all Participant in RTM by Market operator.
    - Fast Track implementation of National Open Access Registry (NOAR)
- Possibility shall be explored to make market for 15 min instead of 30 min.



- For Reduction in power purchase cost and utilization of RTM Power,
  - Accurate Demand Forecasting, Power Schedule Optimizer is required.
  - Good communication network for monitoring generation & load point data in real time is required.
- **Development of National level Demand Forecasting & Schedule Optimizer software and to be made available to all DISCOMs/system operators.**
- **Strengthening of Communication network for real time data transfer**

**THANK YOU**