

Part V (RMR) CETO Impacts

DESTF

08.19.2024

IMM



Monitoring Analytics

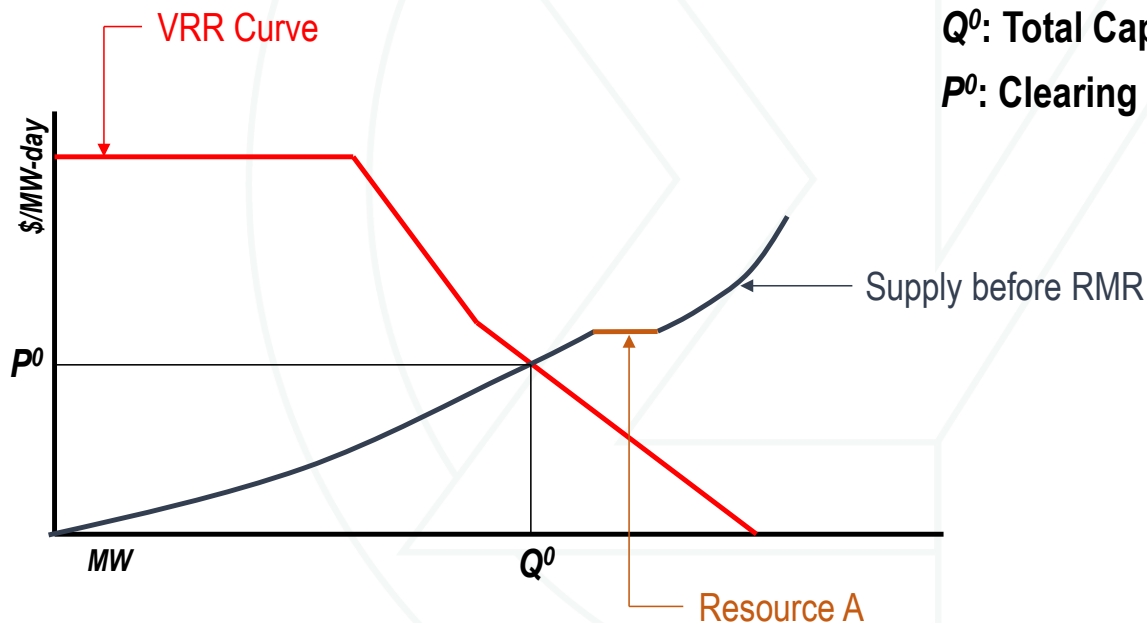
RMR Offer Options in Capacity Auctions

- Offer prior to retirement decision
- Offer after PJM designation as RMR:
 - Offer as price taker
 - Do not offer



Impact of RMR on the Capacity Auction

Before RMR



Q^0 : Total Capacity Cleared before RMR (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

- Resource A is offered is extra marginal in the capacity auction

Impact of RMR on the Capacity Auction

After RMR (RMR Resource is offered as a Price Taker)

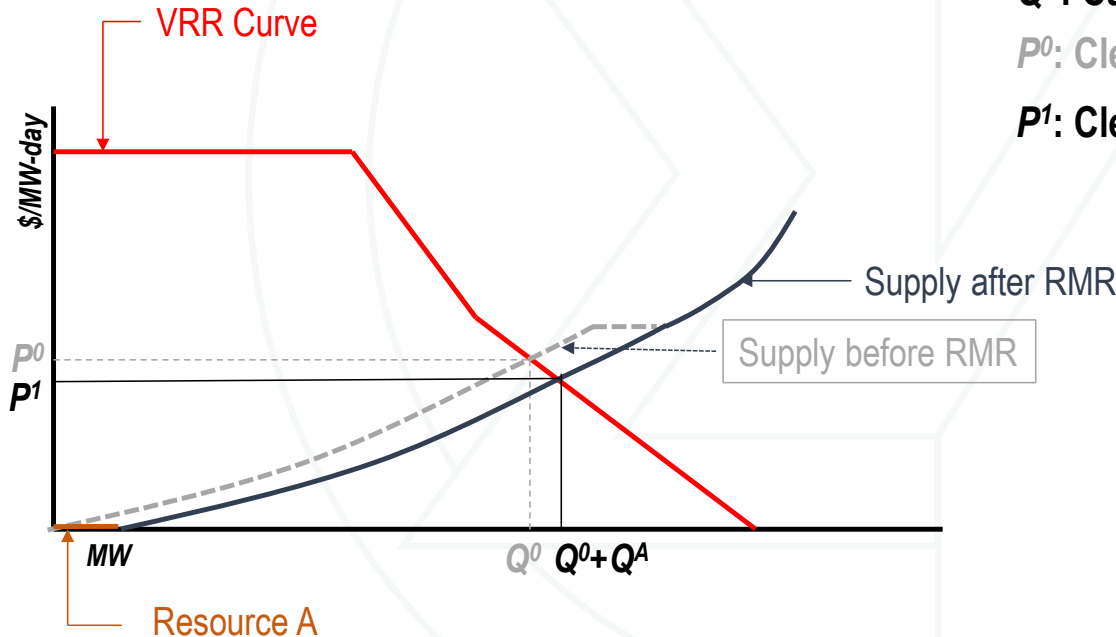
Q^0 : Total Capacity Cleared before RMR (UCAP MW)

Q^A : Capacity of the Resource A (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

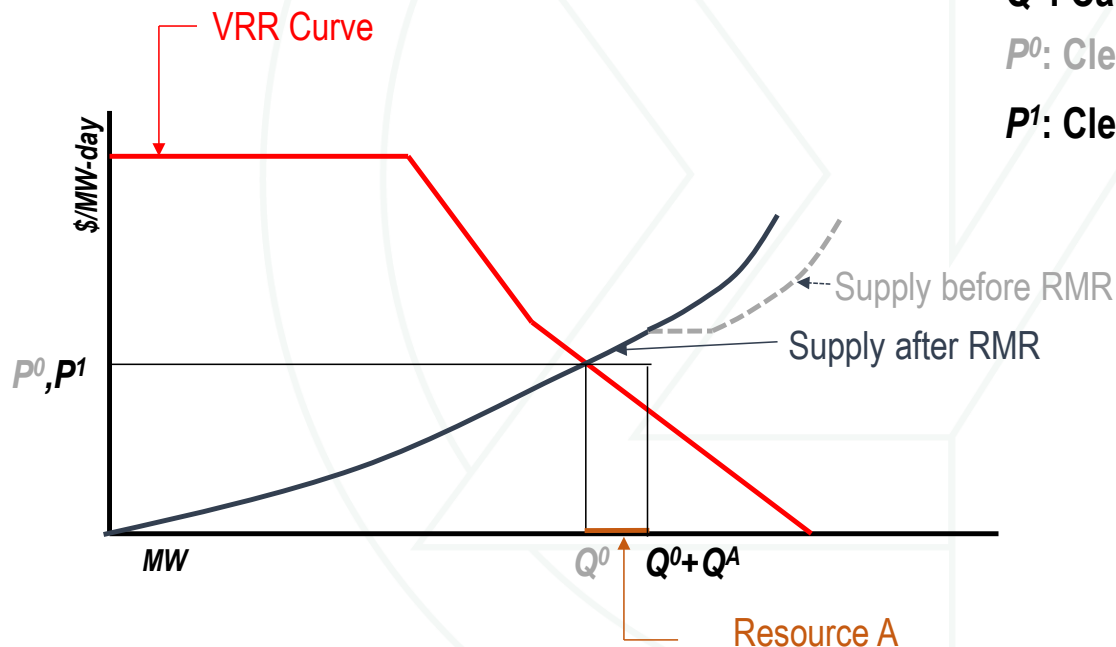
P^1 : Clearing Price after RMR (\$/MW-day)

- Resource A is offered as price taker
- Lower clearing price
- RMR resource has a capacity performance obligation
- Load pays for RMR cost recovery



Impact of RMR on the Capacity Auction

After RMR (RMR Resource is not offered)



Q^0 : Total Capacity Cleared before RMR (UCAP MW)

Q^A : Capacity of the Resource A (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

P^1 : Clearing Price after RMR (\$/MW-day)

- Resource A is not offered in the capacity auction
- No change in the clearing price
- RMR resource has no capacity performance obligation
- Load pays for RMR cost recovery

Removing RMR Resource from CETO and RR

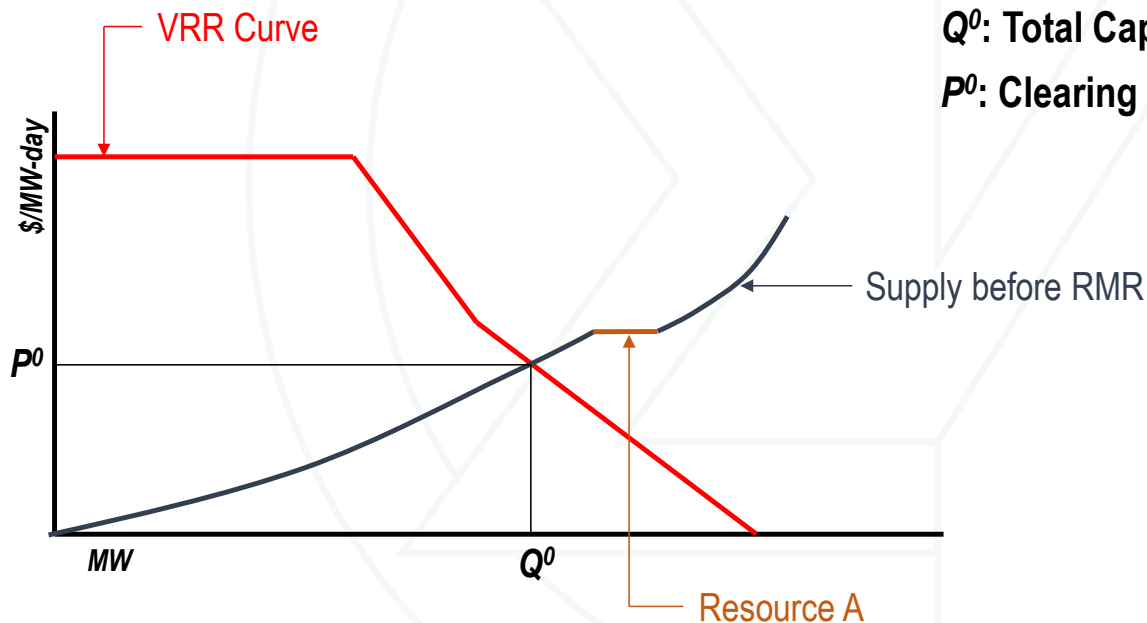
- **Reliability Requirement (RR) = Capacity Emergency Transfer Objective (CETO) + Projected Internal Generation**
- **Projected Internal Generation includes installed and planned capacity**
- **Removing an RMR resource increases CETO**
- **The MW increase in CETO is less than the MW size of the removed RMR resource based on the characteristics of the RMR resource (e.g. outages).**
- **Projected internal generation is reduced by the full MW size of the removed RMR resource**
- **Therefore, removing RMR resource decreases the Reliability Requirement**

CETO Definition

- **The CETO is defined to be the import capability required by the LDA to comply with a Transmission Risk LOLE of one event, on average, in 25 Years.**
- **The CETL is defined to be the actual emergency import capability of the test area.**
- **The CETO is a function of the level of generation, unit characteristics and performance, and load shape within the test area.**
- **An area passes the deliverability test if its CETL is equal to or greater than its CETO. (Manual 20)**
- **LDA is modeled in the capacity market if CETL is less than or equal to 1.15 times its CETO.**

Removing RMR Resource from CETO and RR

Before RMR



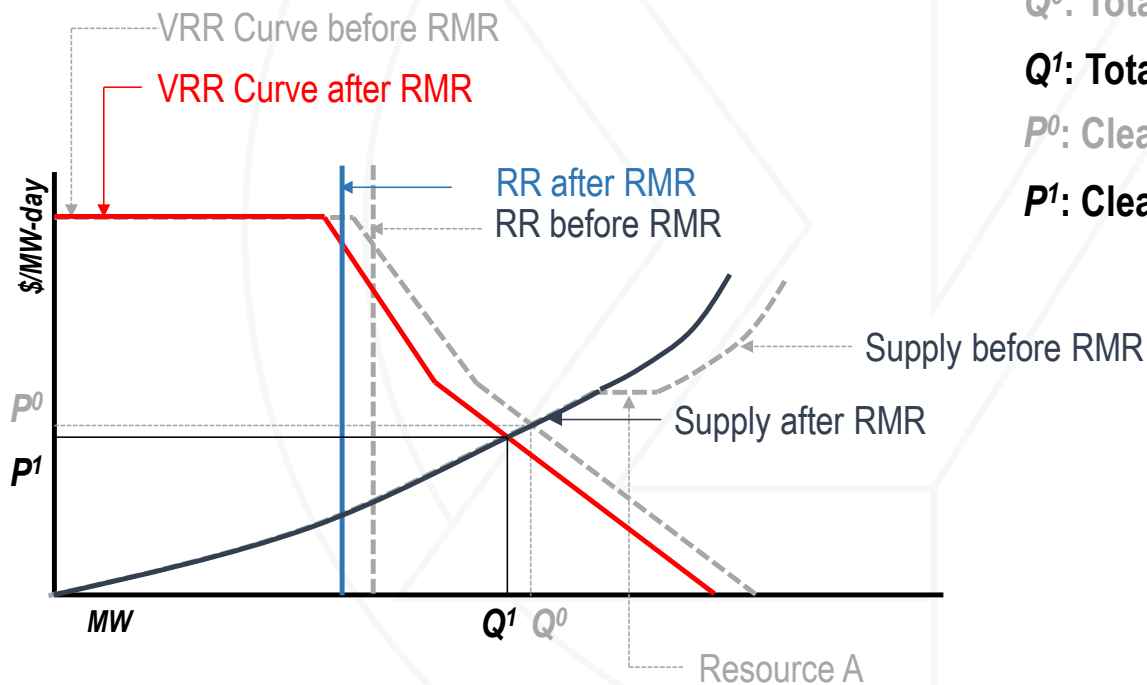
Q^0 : Total Capacity Cleared before RMR (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

- Resource A is offered as extra marginal in the capacity auction

Removing RMR Resource from CETO and RR

After RMR



Q^0 : Total Capacity Cleared before RMR (UCAP MW)

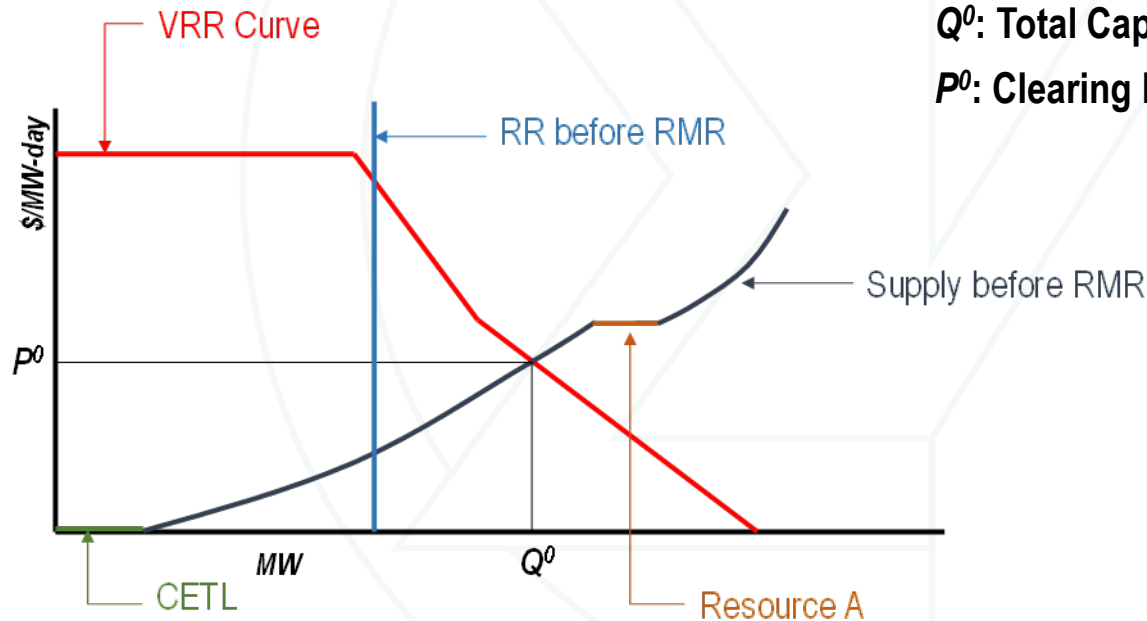
Q^1 : Total Capacity Cleared after RMR (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

P^1 : Clearing Price after RMR (\$/MW-day)

- Resource A is not offered in the capacity auction
- CETO would be higher
- RR would be lower
- Clearing price would be lower
- Load pays for RMR cost recovery

Removing RMR Resource from CETO, RR and CETL Before RMR

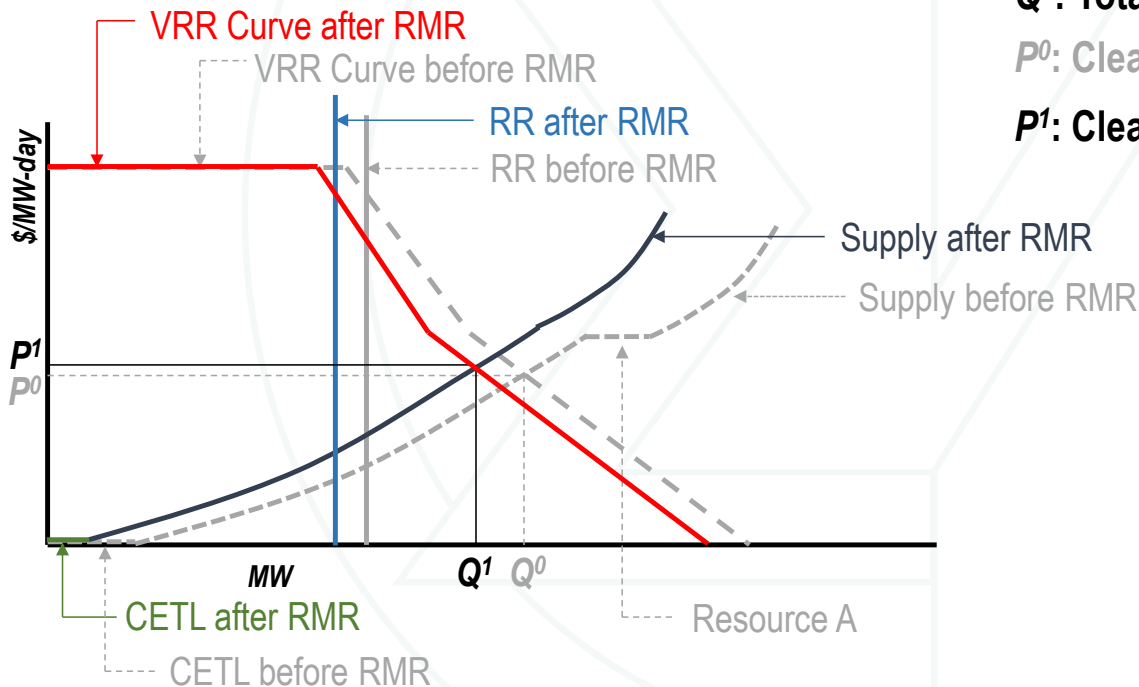


Q^0 : Total Capacity Cleared before RMR (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

- Resource A is offered as extra marginal in the capacity auction
- CETL is binding (LDA price separated)

Removing RMR Resource from CETO, RR and CETL



Q⁰: Total Capacity Cleared before RMR (UCAP MW)

Q¹: Total Capacity Cleared after RMR (UCAP MW)

P^0 : Clearing Price before RMR (\$/MW-day)

P^1 : Clearing Price after RMR (\$/MW-day)

- Resource A is not offered in the capacity auction
- CETO would be higher
- RR would be lower
- Lower CETL is binding
- Clearing price would be higher
(depends on the size of decrease in CETL relative to the size of increase in RR)
- Load pays for RMR cost recovery

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

