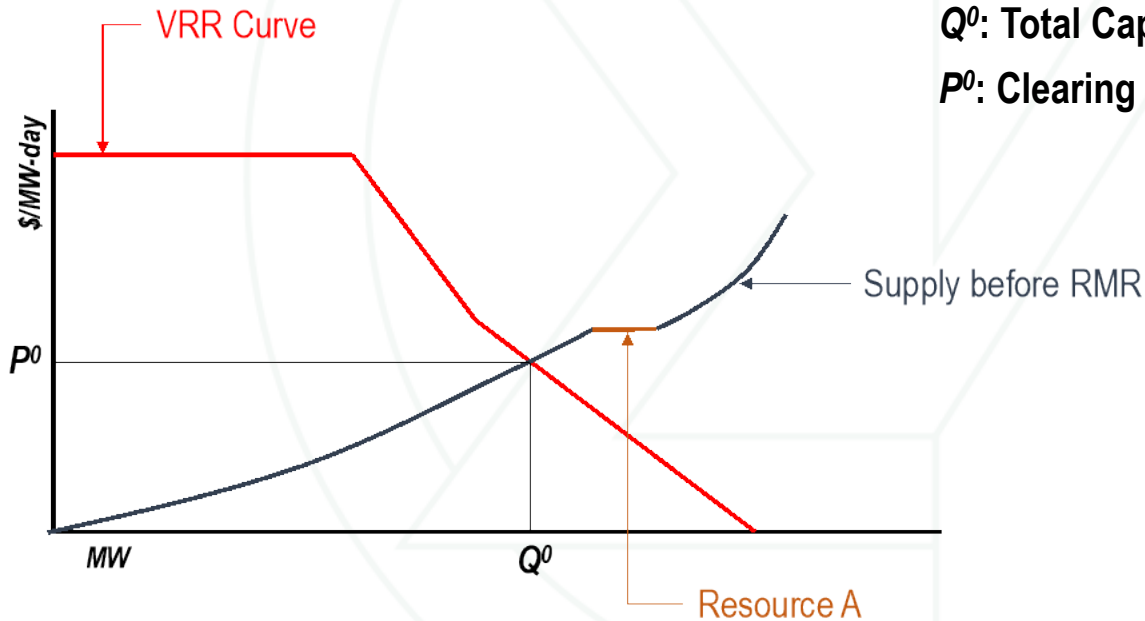# Part V (RMR) CETO Impacts

DESTF

IMM

08.19.2024

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**

Monitoring Analytics

Impact of RMR on the Capacity Auction
Before RMR

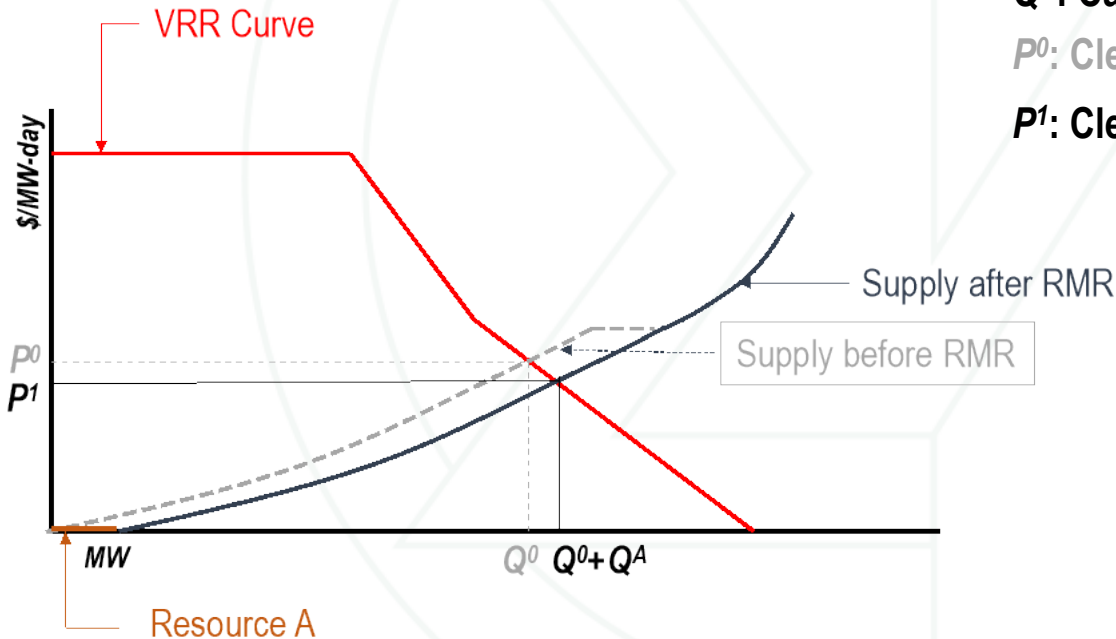Q^0: Total Capacity Cleared before RMR (UCAP MW)

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

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

VRR Curve

Supply before RMR

P^0

MW

Q^0

Resource A

Monitoring Analytics

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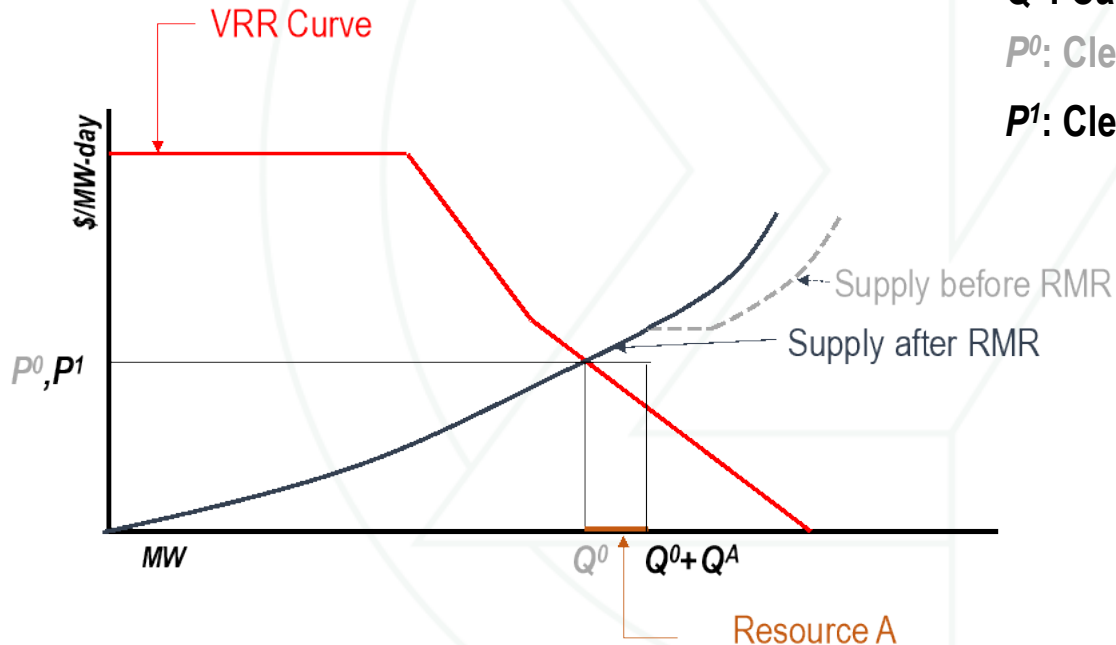
Q^A: **Capacity of the Resource A (UCAP MW)**

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**

Monitoring Analytics

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**
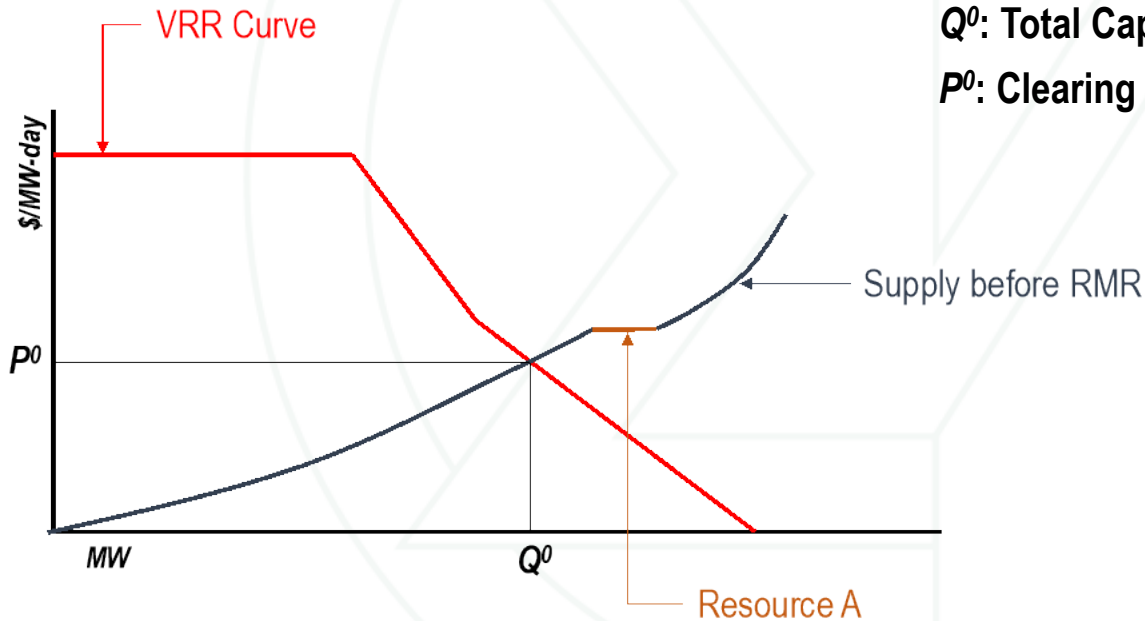
Monitoring Analytics

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**

Monitoring Analytics

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.**

Monitoring Analytics

Removing RMR Resource from CETO and RR
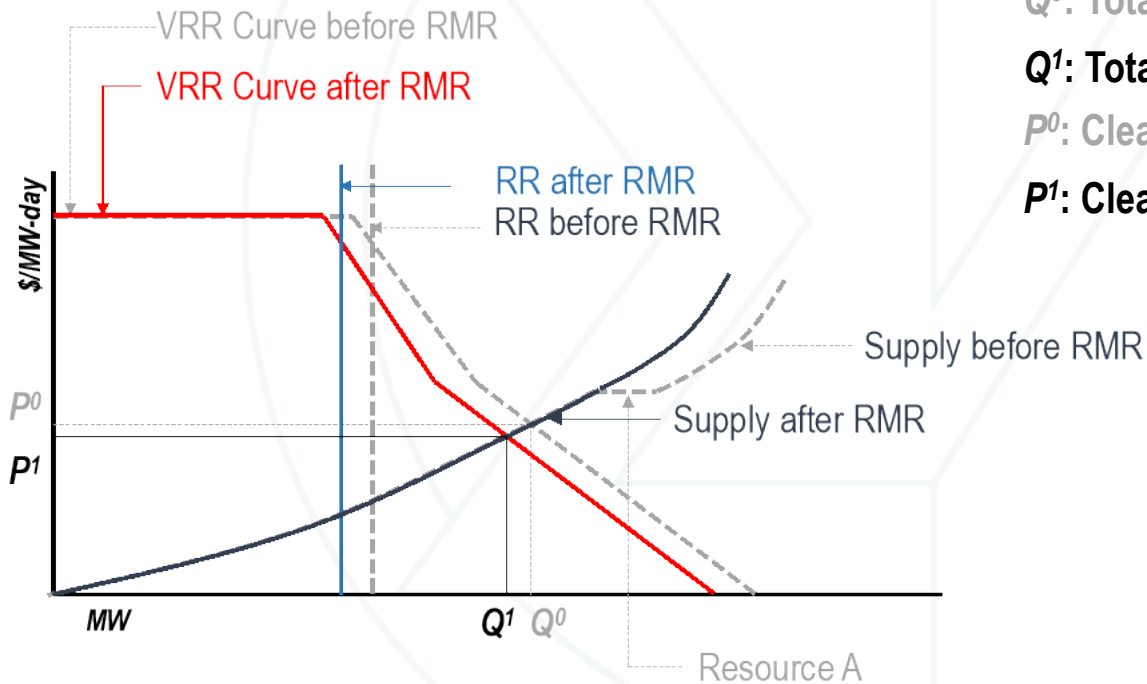## Before RMR

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**

Monitoring Analytics

Removing RMR Resource from CETO and RR
After RMR
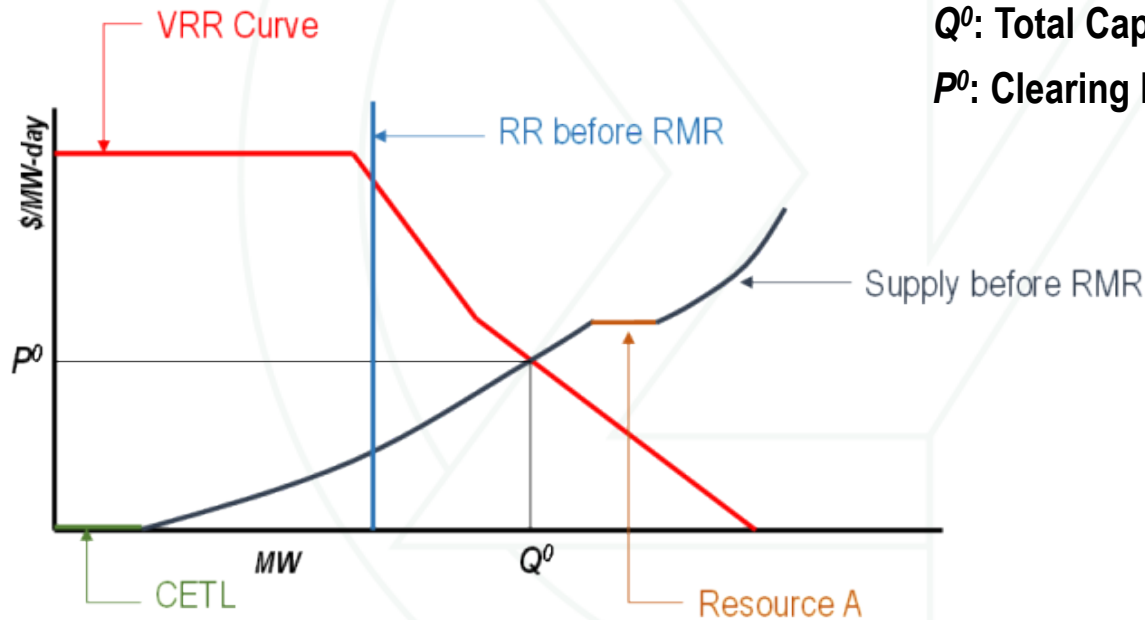
Q^0: Total Capacity Cleared before RMR (UCAP MW)

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**

VRR Curve before RMR

VRR Curve after RMR

RR after RMR

RR before RMR

Supply before RMR

Supply after RMR

P^0

P^1

MW

Q^1 Q^0

Resource A

Monitoring Analytics

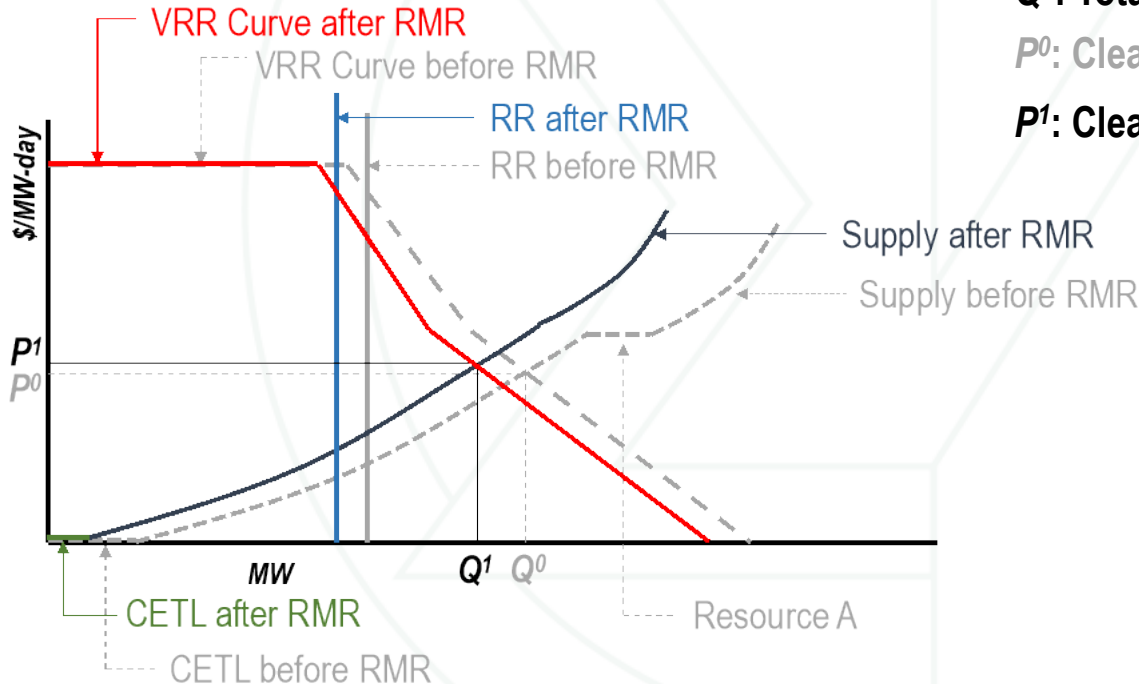# Removing RMR Resource from CETO, RR and CETL
Before RMR

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)**

Monitoring Analytics

Removing RMR Resource from CETO, RR and CETL
After RMR and reduced CETL

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**
- **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**

Labels in figure:
- VRR Curve after RMR
- VRR Curve before RMR
- RR after RMR
- RR before RMR
- Supply after RMR
- Supply before RMR
- Resource A
- CETL after RMR
- CETL before RMR
- $/MW-day
- P^1
- P^0
- MW
- Q^1
- Q^0

Monitoring Analytics

Monitoring Analytics, LLC

2621 Van Buren Avenue

Suite 160

Eagleville, PA

19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

Monitoring Analytics