ODEC Old Dominion Electric Cooperative℠

CCPPSTF

September 11, 2017

Outline

- Motivation

- Perspective

- Proposal

- PJM's Questions

Motivation

Reliability Pricing Model

PJM identifies

"the essential elements of the capacity market are:

- procurement of capacity three years before it is needed through a competitive auction;

- locational pricing for capacity that varies to reflect limitations on the transmission system and to account for the differing needs for capacity in various areas of PJM; and

- a variable resource requirement curve, which is the energy demand formula used to set the price paid to market participants for capacity"
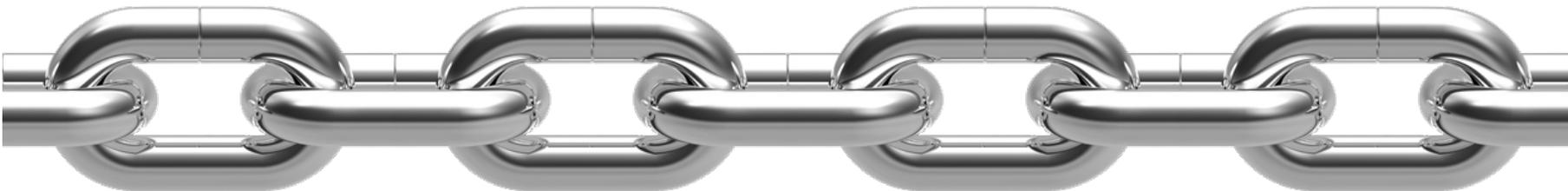
http://learn.pjm.com/three-priorities/buying-and-selling-energy/capacity-markets.aspx

Reliability Pricing Model

More simply stated – the tenets of the market are:

- Competitive

- Reliability driven

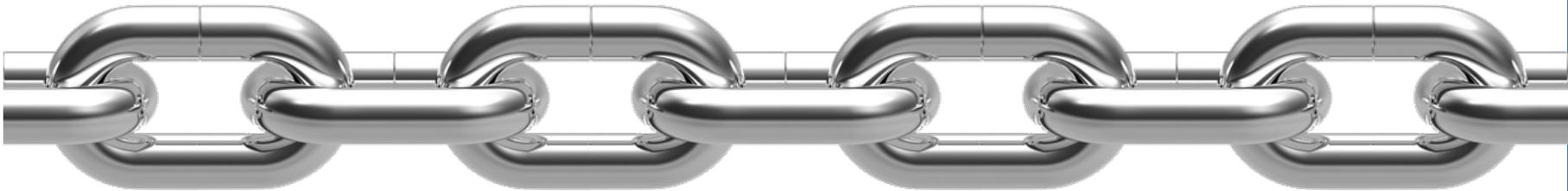- Price signal that varies based on the reliability level

Core Links Must Be Maintained
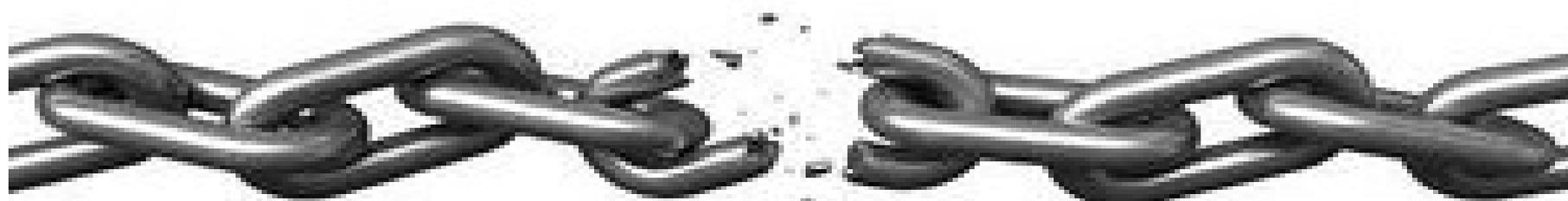
Competitive Markets

For a competitive bidding process to work properly, there needs to be tension between a supplier's desire to

- Clear the capacity market, and
- Establish a high clearing price

Core Links Must Be Maintained

Motivation

De-linking the RPM Core Tenets Through Two-Stage Repricing Puts the Competitive Process At Risk

Two-stage approaches explicitly de-link:

- Supply offers that set the capacity obligation

- Different supply offers that set price

Figure 1. First Stage of Auction, Cleared Capacity Determined

Figure 2. Second Stage of Auction, Capacity Price Determined

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Figure 1.   First Stage of Auction, Cleared Capacity Determined

Figure 2.   Second Stage of Auction, Capacity Price Determined

Flaws with two-stage de-linking and reference pricing:

- Removes the tension between the offer made and the likelihood of clearing for some resources

- Encourages subsidies for generation owners with a long position – offer whatever and clear

- Creates a race-to-the-bottom for resources without subsidies – just get me some $$$

- Removes connection between reserve levels and clearing prices in the reference price zone

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Flaws with two-stage de-linking:

- Reference price levels not consistent with competitive offer price levels

- Fundamental change to the Reliability Pricing Model – not an accommodative approach

- Increases cost to load without associated reliability benefit – overshoots stated goal

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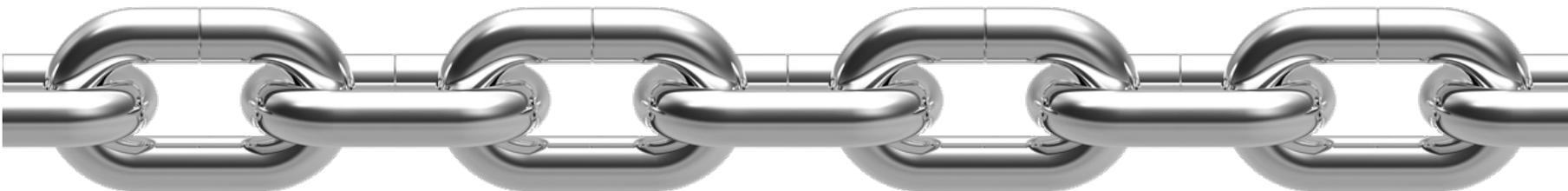- Increases cost to load without associated reliability benefit – overshoots stated goal

ODEC

Perspective

Status Quo

Core Links Maintained

Competitive

Reliability Driven

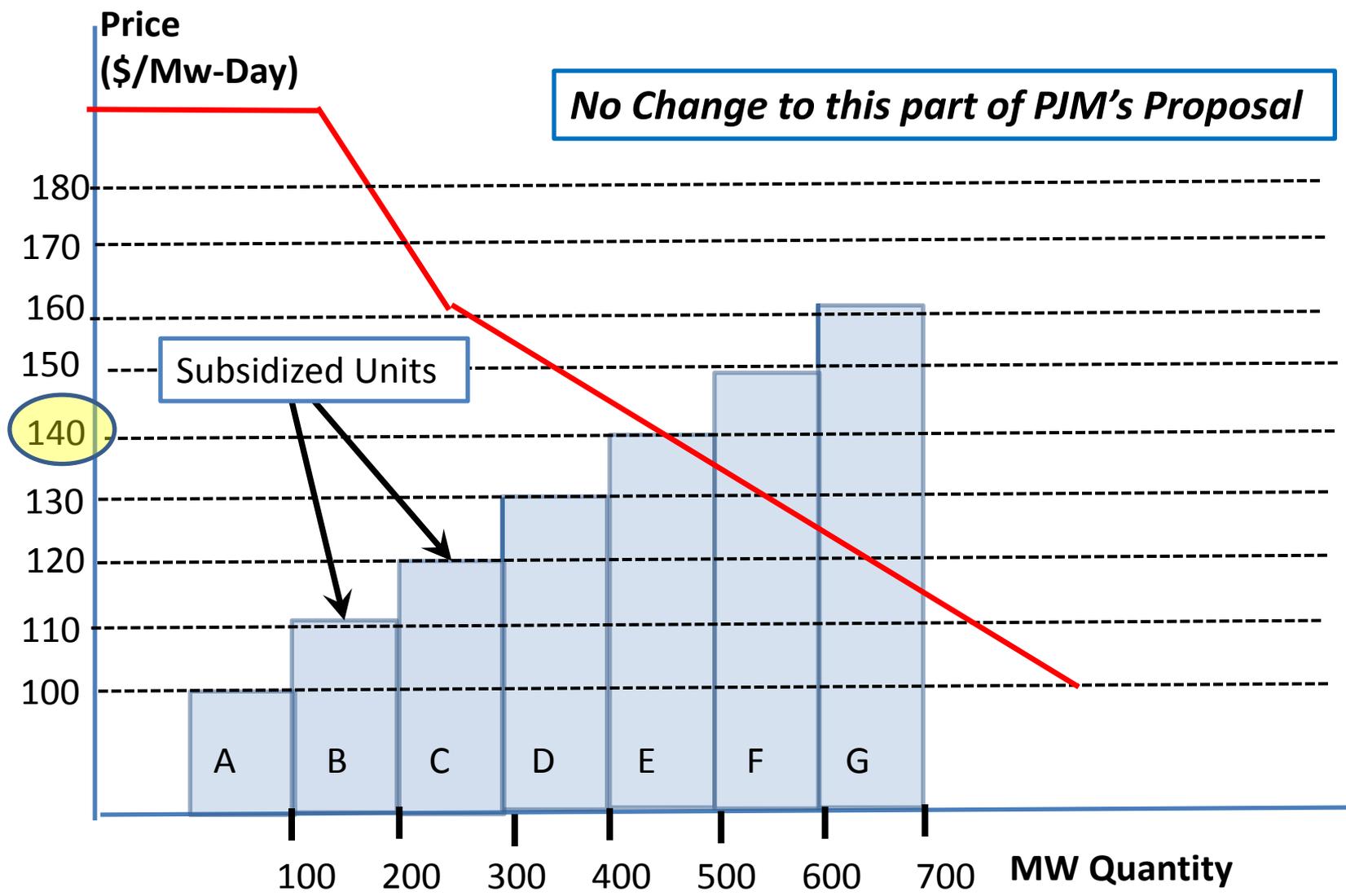Price Signal Based on the Reliability Level
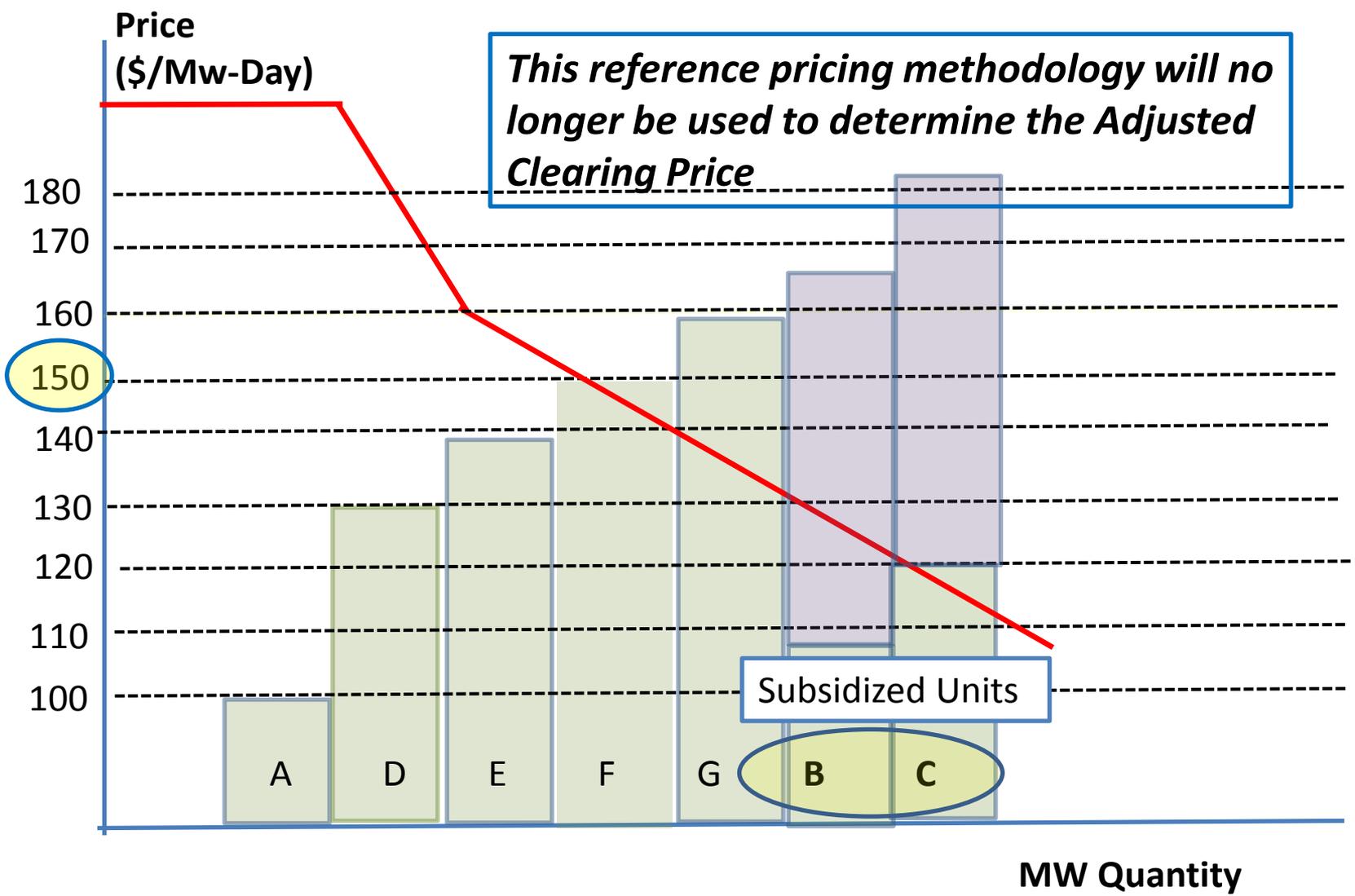
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Proposal

ODEC Proposal

- Reduces the de-linkage of PJM's two-stage proposal
- Replaces offers from subsidized resources with the competitive offers in the market

PJM "Stage 1" – Determination of Cleared Offers

No Change to this part of PJM's Proposal

Subsidized Units

Price ($/Mw-Day)

MW Quantity

18

PJM's Existing Stage 2 Methodology

Price ($/Mw-Day)

This reference pricing methodology will no longer be used to determine the Adjusted Clearing Price

Subsidized Units

A D E F G **B** **C**

MW Quantity

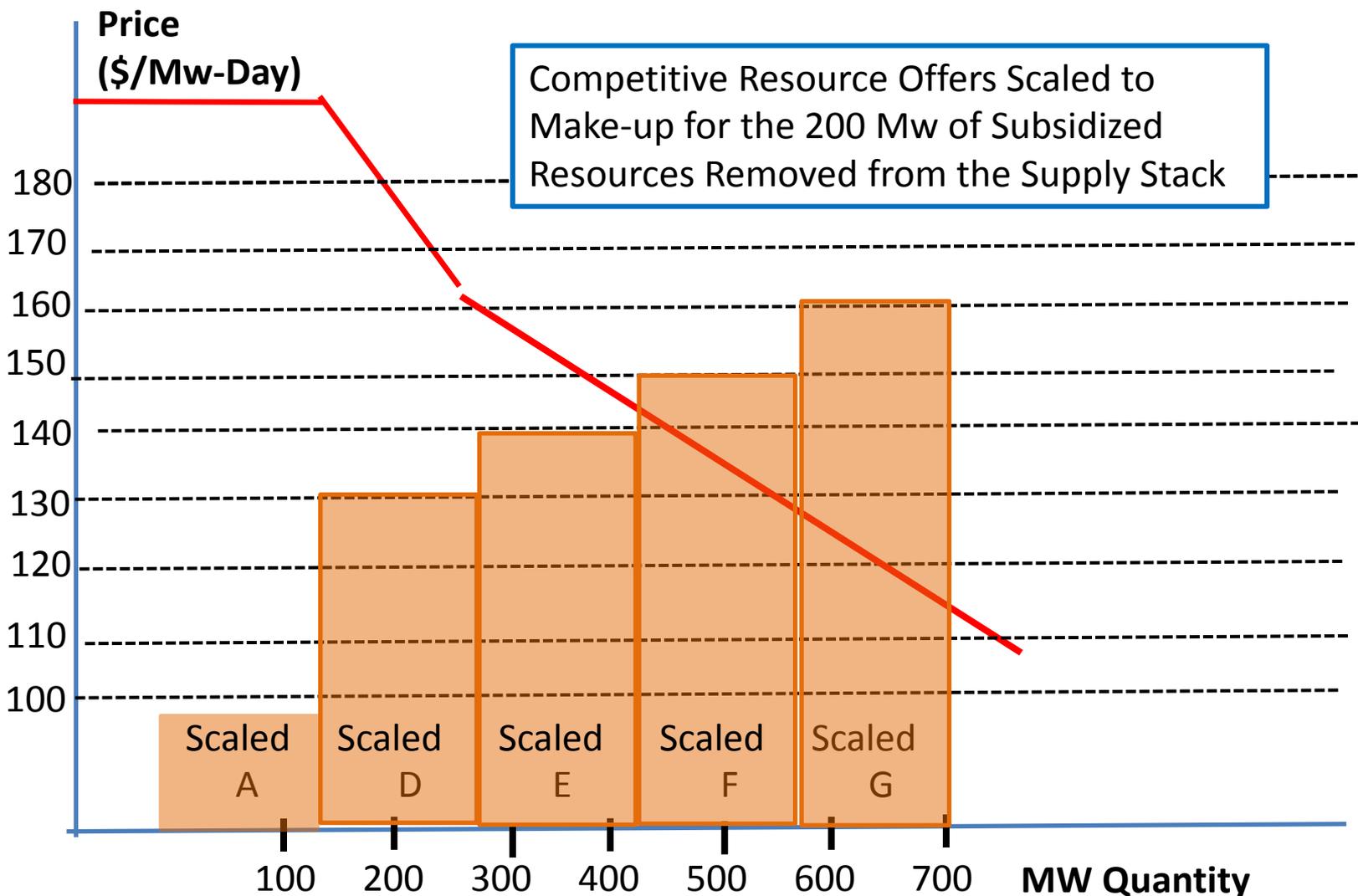# "Stage 2" Reconfigured Supply Curve Offers

Proposal

For Stage 2 process, existing competitive supply offers are scaled to reflect the amount of subsidized offers that are removed from the supply curve.

	Original Offer Stack			Reconfigured Offers	
Resource	Size (MW)	Offer Price ($/MW-day)	Subsidized	Size (MW)	Offer Price ($/MW-day)
A	100	100	No	140	100
B	100	110	Yes		
C	100	120	Yes		
D	100	130	No	140	130
E	100	140	No	140	140
F	100	150	No	140	150
G	100	160	No	140	160
Total	700			700	

$$\text{Extrapolation \%} = \frac{\text{Subsidized Resource (Mws)}}{\text{Competitive Resources (Mws)}} = \frac{200}{500} = 40\%$$

Proposed Methodology for Stage 2 Repricing

Competitive Resource Offers Scaled to Make-up for the 200 Mw of Subsidized Resources Removed from the Supply Stack

Price ($/Mw-Day)

MW Quantity

Scaled A, Scaled D, Scaled E, Scaled F, Scaled G

PJM's Questions

- How do you define the problem that you are trying to solve with your proposal?

- Does your proposal accommodate resources with state government preferences on a non-discriminatory basis? How?

- Will your proposal encourage or frustrate state policy objectives or other subsidies?

- What is your definition of an actionable subsidy (you may include specific factors such as MW or economic thresholds, timing of payment, rate and reasons for the subsidy, etc.)?

- What impact does your proposal have on energy markets?

- Will your proposal result in or mitigate long term price suppression in the capacity market and/or the energy market?

- How do you think your proposal will impact bidding behavior?

- Please address the effects of your proposal on potential market manipulation.

- Please address the potential for "leakage" (the effects of one jurisdiction's actions on other jurisdictions).

- What is the preferred implementation timing?

- For repricing proposals, please explain your treatment for "in between" resources and why you believe it is the right approach ("in between" resources are those that did not clear in one stage of a repricing proposal but offered at a level less than the final clearing price determined in a second stage).