Education and Background

Capacity Senior Task Force (CSTF)

September 13, 2012

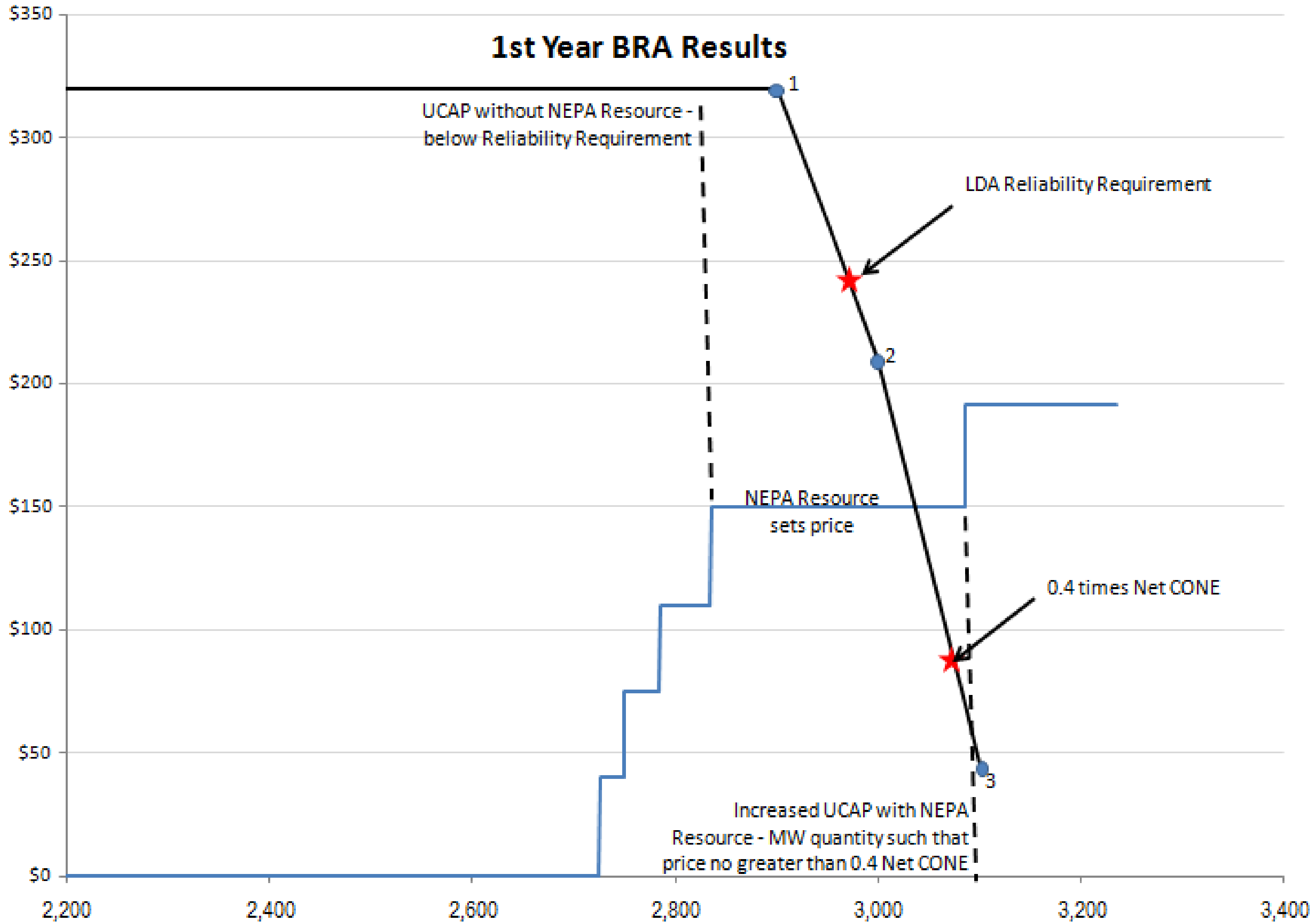
New Entry Price Adjustment (NEPA) Today

- Purpose is to provide price assurance and incent new generation in small LDA’s
- Resources qualifying for NEPA lock in price for 3 year period beginning with delivery year

New Entry Price Adjustment (NEPA) Rules

- PJM OATT describes NEPA available to:
  - Planned generation (DD, 5.14.c)
  - Energy efficiency (DD-1, M.4)
  - Existing generation submitting a sell offer with an Avoidable Project Investment Recovery Rate (APIR) component that is based on a project investment of at least $450/kW (DD, 6.8.a)
- Eligible new entrants must provide notification of NEPA election when it submits sell offer in BRA for 1st delivery year (5.14.c.1)
- Acceptance of such offer in 1st BRA must increase total UCAP in LDA from a MW quantity below LDA reliability requirement to MW quantity corresponding to point on VRR curve where price is no greater than 0.4 times Net CONE (see illustration on next slide) (5.14.c.2)
- Resource must be marginal and set price in 1st BRA (5.14.c.3(i))

New Entry Price Adjustment (NEPA)



Minimum Resource Size Needed to Qualify for NEPA (Based on 2014/2015 BRA parameters)

- In order to qualify for NEPA, acceptance of offer in 1st BRA must increase total UCAP in LDA from a MW quantity below LDA reliability requirement to MW quantity corresponding to point on VRR curve where price is no greater than 0.4 times Net CONE
  - Table below shows the minimum resource size needed to qualify for NEPA
- Table demonstrates narrow focus of current NEPA on offer from single new resource that is large enough relative to LDA size to have very large downward impact on price in the LDA

LDA	Reliability Requirement (excluding STRPT) (MW)	MW Quantity @ 40% of Net CONE (MW)	Minimum resource Size to Qualify as NEPA (MW)
MAAC	70,519.7	73,024.0	2,504.3
EMAAC	39,084.9	40,472.4	1,387.5
SWMAAC	16,968.8	17,571.0	602.2
PS	12,804.4	13,258.9	454.4
PS NORTH	6,077.0	6,292.4	215.5
DPL SOUTH	2,954.0	3,058.7	104.7
PEPCO	8,761.9	9,072.5	310.5

New Entry Price Adjustment (NEPA) Subsequent Two Delivery Years

- Resources meeting the 1st delivery year requirements are eligible for NEPA in the BRAs for the two immediately succeeding delivery years
- Sell offers in next two BRAs equal to lesser of
  - 1st year offer price, or
  - 0.9 times the then-current Net CONE (5.14.c.3)
- If resource clears then it receives the RCP for the LDA (5.14.c.3(ii))
- If resource does not clear then as per 5.14.c.3(ii):
  - Resource is resubmitted at highest price at which it will clear all NEPA MW
  - RCP and cleared resources re-determined to reflect resubmission
  - NEPA resource is paid at its sell offer price for the BRA
  - Difference between sell offer price and RCP is treated as a resource make-whole payment which is collected pro-rata from all buyers in the LDA

Brattle's 2011 Reliability Pricing Model (RPM) Assessment Overview

- Driven by concerns regarding lack of long-term contracting and capacity-price uncertainty, Brattle assessed several options proposed by stakeholders:
  - Extending the RPM forward period
  - Expanding NEPA
  - Introducing mandatory long-term procurement by PJM
  - Voluntary long-term auctions
- Brattle assessed the advantages and disadvantages of each option (see Brattle Report starting on page 155)
- Brattle Study recommended that PJM consider introducing voluntary long-term forward auctions
  - Best option to facilitate long-term contracting at this point

Brattle's 2011 RPM Assessment Details

- Developers cannot get long-term financing for projects at the time the report was released
  - This was consistent with PJM being long on capacity
- A long-term, voluntary auction would increase forward price transparency and forward market liquidity
- Can offer differing terms (3,5,7 years)
- Voluntary long-term auction would reduce potential distortions associated with other possible mechanisms
  - Extending NEPA beyond three years can create the need for capacity market uplift
  - Mandatory long-term procurement

Brattle's 2011 RPM Assessment Options (p. 155)

- Extend the RPM forward period from 3 to 5 years
  - Going beyond 3 years increase the costs of commitment risks without enhancing the advantages of the 3 year commitment for retirement signals and to meet challenges of environmental rules
- Expanding current NEPA provisions
  - Mismatch between single year market conditions and terms of NEPA payments
  - For example transmission solutions may reduce the need for additional capacity in future years, but prices get locked in and creates need for "uplift"
  - Does not reflect the value of delayed retirement or DR in meting capacity needs in a year
- Mandatory long-term procurement
  - Forces PJM and stakeholders to come to agreement on how much capacity is to be purchased and for how many years rather than a market driven solution
  - Increases deficiency risk for suppliers, although may reduce financing costs
  - At time of delivery, the prices may be "out of the market" and costs could be above efficient costs
  - Market participants are in the best position to assess their own risk profiles

Brattle's 2011 RPM Assessment Options (p. 155)

- Voluntary Long-term Auction
  - Allows market participants the ability to decide how much and for how many years based on their own risk profiles and preferences
  - Could facilitate long-term capacity as a standardized commodity that could be liquidly traded without worrying about counterparty risk
  - Could facilitate financially settled contracts such as those recently established by NYMEX for the NYISO.
  - Should eliminate the need for market power mitigation on both the buyer and seller side of the market, but there still could be a need for MOPR-type mitigation
  - No need to model transmission constraints, but…
  - LDAs should be consistent with those modeled in a BRA
  - Need to make forward views of parameters such as CETL, load forecasts available
  - Think about ways to handle zonal price risk for LDAs modeled for a BRA but not in the LT auction
  - Conduct LT auctions before BRAs

2011 Stakeholder Process

- Current NEPA provisions are intentionally limited in their ability to provide long-term revenue assurances and are focused on mitigation of price impact of lumpy investments (large new entrant resource relative to size of LDA)

- Results of NEPA stakeholder process of 2011:
  - Stakeholders did not support altering the original intent of NEPA
  - Stakeholders did support further efforts to develop a long-term auction within RPM that could support capacity investment

- Stakeholders provided support for development of a long-term market mechanism
  - Included in FERC compliance filing
  - Problem statement & charge approved at March 29 MRC meeting