

E&AS Offset Straw Proposal Education

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Brattle Recommendation

- Develop a forward looking E&AS methodology
 - 3 year historical can be distorted by anomalous events
 - 3 year historical not consistent with how new units view entry decisions or existing unit view exit decisions
 - 3 year historical 4-6 years out of date by the delivery year



ISO-NE Brattle Recommendation

2018/19 E&AS Margin

= Historical E&AS Margin * $\frac{2018/2019 Mass Hub On-Peak Prices}{Historical Mass Hub On-Peak Prices}$

- Very simplistic adjustment that takes forward energy prices to adjust E&AS margins
- Does not account for changes in fuel costs that may not move in lock step with energy prices



PJM Straw Proposal Outline

- Builds on the simplicity of what Brattle has proposed for ISO-NE
- Incorporates gas prices both historically and in the forward curves
- Looking at this monthly over the year
 - Forward market heat rate by month
 - Historic market heat rate by month

PJM Straw Proposal— Historic Monthly Market Heat Rate

Historic Monthly Market Heat Rate = <u>Monthly Western Hub Onpeak Average</u> <u>Monthly Henry Hub Average</u>

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PJM Straw Proposal— Future Monthly Market Heat Rate

Future Monthly Market Heat Rate =

Future Monthly Western Hub Onpeak Average Future Monthly Henry Hub Average

$$January 2018 Market Heat Rate = \frac{\frac{52.83 }{MWh}}{\frac{4.50 }{MWh}} = \frac{11.74 }{MWh}$$

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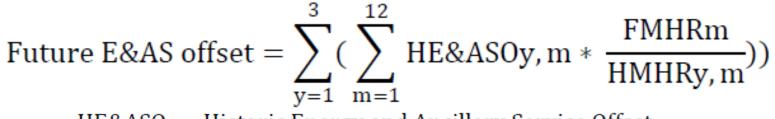


PJM Straw Proposal—Example for January

January 2018 E&AS offset = $\sum_{y=1}^{1} \left(\sum_{m=1}^{1} \text{HE&ASOy, m} * \frac{\text{FMHRm}}{\text{HMHRy, m}} \right) =$ $\$1,265 * \frac{11.74}{28.51} = \521



PJM Straw Proposal—Putting it All Together



HE&ASO = Historic Energy and Ancillary Service Offset

FMHR = future market heat rate

HMHR = Historic market heat rate

y = yearm = month

Going Forward

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- Straw proposal accounts for monthly variance, but not dayto-day or monthly variance
 - Simpler than doing a methodology like the energy and environmentally limited offset
 - Question about whether or not to use a representative year for price shapes or use the most recent three years as proposed.