Benefits Calculation

May 18, 2018

Energy Benefits Key Elements and Recent Updates

- Simulation Years*
  - Simulate benefits for RTEP year only
- Trend Extrapolation*
  - Fix benefits beyond RTEP year at RTEP year benefits
- Benefit Calculation Period*
  - 10 years after project in-service date, capped at RTEP+10
- Sensitivities*
  - Mandatory sensitivities
    - To be defined prior to the beginning of market efficiency window
    - Have a B/C ratio threshold of 1.00
  - Optional sensitivities
    - To be defined during market efficiency project evaluation process
    - Do not have to pass any B/C ratio threshold

* Updated since last MEPETF Meeting on 4/20/18

Energy Benefits Key Elements and Recent Updates (cont'd)

- Benefit Adjustment for In-Service Date*
  - It is PJM's goal to address energy constraints by the RTEP year, and to incentivize projects that are designed and proposed to be in service by RTEP year
  - PJM will adjust energy benefits of projects that are proposed to be in service later than the RTEP year to account for any savings forgone due to later in-service date
  - Example:

Proposal 1:	Proposal 2:
Annual benefit = $10M Annual revenue requirements = $4M In-Service year = RTEP B/C Ratio = 2.50	Annual benefit = $10M Annual revenue requirements = $4M In-Service year = RTEP+1 Lost savings in RTEP = $6M B/C Ratio = 2.27

* Updated since last MEPETF Meeting on 4/20/18

Capacity Benefits Key Elements and Recent Updates

- Simulation Years
  - RPM and RTEP years
- Benefit Calculation Period*
  - 2 years
- In-Service Date*
  - To be in service prior to establishing planning parameters for the next BRA planning period.
  - In the event a transmission expansion cannot be attained by the RPM year, PJM will consider capacity market solutions beyond RPM year, and before RTEP year.
- Benefit Adjustment for In-Service Date*
  - PJM will adjust capacity benefits of projects that are proposed to be in service later than the RPM year to account for any savings forgone due to later in-service date

* Updated since last MEPETF Meeting on 4/20/18

Negative Benefits

- PJM does not include the zones which have an increase in total Net Load Payments (over project evaluation period) when calculating total energy benefits.
- However, annual negative benefits for transmission zones with a positive total benefit are included in project benefit calculation.

Zonal Benefit	Year 1	Year 2	Year 3	Year 4	Year 5	…	Year 14	Year 15	Benefit NPV	Zone included?
Zone 1	$(751)	$(348)	$(348)	$55	$458	…	$3,020	$3,261	**$8,932**	**Yes**
Zone 2	$385	$231	$77	$(77)	$(234)	…	$(712)	$(766)	**$(1,515)**	**No**

- Including zones with a total negative benefit in energy benefit calculation will
  - penalize zones that are paying high LMPs by not addressing the congestion
  - reduce the chance of approving market efficiency projects
  - make benefit calculation inconsistent with cost allocation