



NRDC Slice of Day Wrap-Up Issues and Straw Proposal October 6, 2022 RA Workshop

Resource Adequacy Summer 2022 Implementation Workshop Series (R. 21-10-002)

NP Energy on behalf of the Natural Resources Defense Council



Disclaimer: This presentation is offered for policy development and discussion purposes only. Formal positions offered by NRDC within the proceeding may evolve through the stakeholder process.

Presentation Contents

- Wrap-Up Proposals
 - PRM Calibration
 - Standardized Products

- NRDC Integrated Straw Proposal

PRM Calibration Proposal

PRM Calibration Proposal

- NRDC supports the PRM calibration framework adopted in D.22-06-050 and refined by SCE
- SCE's proposal is consistent with [NRDC's Slice of Day Calibration Proposal and Tool](#) (adopted by D.22-06-050) two modifications:
 - Use of an annual LOLE study in lieu of monthly LOLE study – *NRDC supports*
 - Use of a single annual PRM set at the highest load month-day – *NRDC supports with amendments*
- NRDC proposes a final calibration step to ensure:
 - The PRM for all 'at-risk months' should reflect the **full annual portfolio requirement** when integrated with load forecast and resource counting
 - The required portfolio for all months is **feasible** based on existing and planned resources
- The PRM for remaining months should be informed by the full annual portfolio requirement while avoiding inefficiencies like over procurement for low-risk months; e.g. apply a fixed annual PRM as proposed by SCE
 - Future proceedings should explore opportunities to improve accuracy/precision for off-peak months

PRM Calibration Proposal – Amendments to SCE Proposal

SCE Proposal (*NRDC Amendments in Red*)

1. Determine volume and mix of resources that achieves reliability and other targets (Iterative LOLE process)
2. Convert nameplates and characteristics to slice-of-day counting (hourly ELCC, daily limitations, etc)
3. Create system-level 24-Hourly-Slice RA stack consistent with steps 1 and 2 that maximizes PRM achieved for the highest load day while satisfying slice-of-day requirements
4. Resulting PRM becomes the annual RA PRM

5. Adjust monthly PRM requirements, as needed, to achieve the following conditions:

- a. The monthly portfolio requirement for any ‘at-risk’ month is equivalent to the identified annual portfolio requirement*
- b. The monthly portfolio requirement for non-‘at-risk’ months should be established based on the annual PRM*
- c. Energy Division should have discretion to balance competing policy, reliability, and ratepayer impact priorities in establishing both annual and monthly PRM values*

Policy Rationale

5a. Ensuring a Full Portfolio Showing in All Summer Months

- Months with LOLE risk should all require full ‘annual portfolio’
- Adjustments to monthly PRMs for summer months may be necessary to address non-linear scaling of load, resources, and PRM across summer months

5b. Establishing Reasonable Portfolio Requirements in Non-Summer Months

- Months without LOLE risk to have requirements set based on annual PRM

5c. “Sanity Check” Discretion for Energy Division

- Energy Division should maintain discretion to adjust requirements based on competing policy priorities
- E.g. adjustments to requirement to reflect resource gaps infeasible to cure on short-run RA horizon



Standardized Products

Standardized Products

- Transitioning from *ELCC+MCC* to *Slice of Day* represents a significant step change in complexity for the RA program, with corresponding benefits for long-term LSE planning and compliance
- NRDC supports efforts to identify opportunities for simplifications to Slice of Day to ease the transition:
 - Minimize number of moving parts
 - Limit resource profiles to a finite set of standardized products
- NRDC supports the current trajectory to establish a limited set of regional products for variable resources
- NRDC supports the establishment of a limited set of products to reflect thermal use limitations, and supports future inclusion of additional real-world thermal limitations (e.g. UCAP)

Standardized Products: Binned Use Limits

- Thermal resources may face a range of environmental and engineering use limitations
- Reflecting these limitations as a continuous variable (e.g. number of available hours) may result in 24 or more distinct, non-standard products
- To reduce trading friction, the Commission should consider establishing a limited set of standardized products by ‘binning’ thermal limitations
- Product bins could be aligned with current MCC buckets (4-, 8-, 16-, 24-hour), or an alternative set of bins determined after thermal limitation data is collected and analyzed (e.g. 4-, 24-hour)
- Standardized products can significantly reduce complexity for market participants in evaluating and negotiating products, and reduce the risk of stranding attributes in a manner that contributes to system-level over-procurement.

NRDC 'Straw Proposal'

NRDC Straw Proposal

- **Resource Counting:**
 - **Solar/Wind:** Worst-Day / LOLE-Informed Profiles
 - [NRDC 8/23 Presentation](#)
 - **Thermal Limitations:** Reflect thermal limitations through standardized Products
 - NRDC 10/6 Presentation
- **PRM Calibration:**
 - **LOLE Modeling:** Annual refresh with multi-year forecasting and risk identification integrated with IRP
 - [NRDC 8/17 Presentation](#)
 - **PRM Calibration:** NRDC/SCE Proposal with monthly adjustments
 - NRDC 10/6 Presentation
 - **Resource Gaps:** Mid-term resource gaps to be filled by IRP; Energy Division should balance competing policy priorities in RA requirements in the context of near-term gaps
 - NRDC 10/6 Presentation



Nick Pappas
Consultant to NRDC
NP Energy
Nick@NPEnergyCA.com
925-262-3111

Mohit Chhabra
Senior Scientist
NRDC
MChhabra@NRDC.org
720-251-3561