

RA Proceeding Track 3B2 Slice of Day Workshops D.21-07-014

October 6, 2021

- Vistra principles for a well-functioning RA market
- RA reform should recognize commercial procurement reality
- RA reform changes to planning standards and requirements

Common acronyms used in the presentation:

California Public Utility Commission (CPUC)	Load Serving Entity (LSE)
California Energy Commission (CEC)	Loss of Load Expectation (LOLE)
California Independent System Operator (CAISO)	Loss of Load Probability (LOLP)
Capacity Procurement Mechanism (CPM)	Net Qualifying Capacity (NQC)
Central Procurement Entity (CPE)	Planning Reserve Margin (PRM)
Effective Flexible Capacity (EFC)	Resource Adequacy (RA)
Expected Unserved Energy (EUE)	RA Enhancements (RAE)
Integrated Energy Policy Report (IEPR)	Resource Adequacy Requirements (RAR)
Integrated Resource Planning (IRP)	

Vistra principles for a well-functioning RA market

Principles to support well-functioning RA market

- Maintain consistency between the CPUC and CAISO processes
 - CPUC (IRP & RA) and CAISO (RA & CPM)
- Support reliability and state environmental goals
- Promote efficient entry and exit of resources
- Establish system requirements based on 1:10 planning standard set by Loss of Load Expectation study capturing uncertainty factors
- Value use-limited and on-demand resources based on capability
- Require resources to be available all days it is physically capable
- Recognize RA commercial procurement realities
- Respect existing contracts

**RA reform should recognize
commercial procurement reality**

- Maintain consistency across CPUC (IRP & RA) & CAISO (RA & CPM)
 - Support forward planning on behalf of market-participants
 - Support more cost-effective market outcomes by reducing regulatory uncertainty, complexity, and administrative burdens
- Current RA construct is transactable and if we move the design in a new direction need to respect current commercial reality as much as possible
 - Recognize commercial reality RA products are largely bundled
 - Recognize commercial reality CPE awards multi-year bundled product
 - Respect existing contracts
- Current RA construct does not accurately capture value of use-limited and on-demands resources based on capability and a new direction should
 - Resource capacity valuation should be tied to their ability to show up when needed and to carry load through risks of loss of load
 - Capacity valuation of resources not available all days of the month should be effectively de-rated

Commercial reality is that changes here will impact local and flexible RA as well

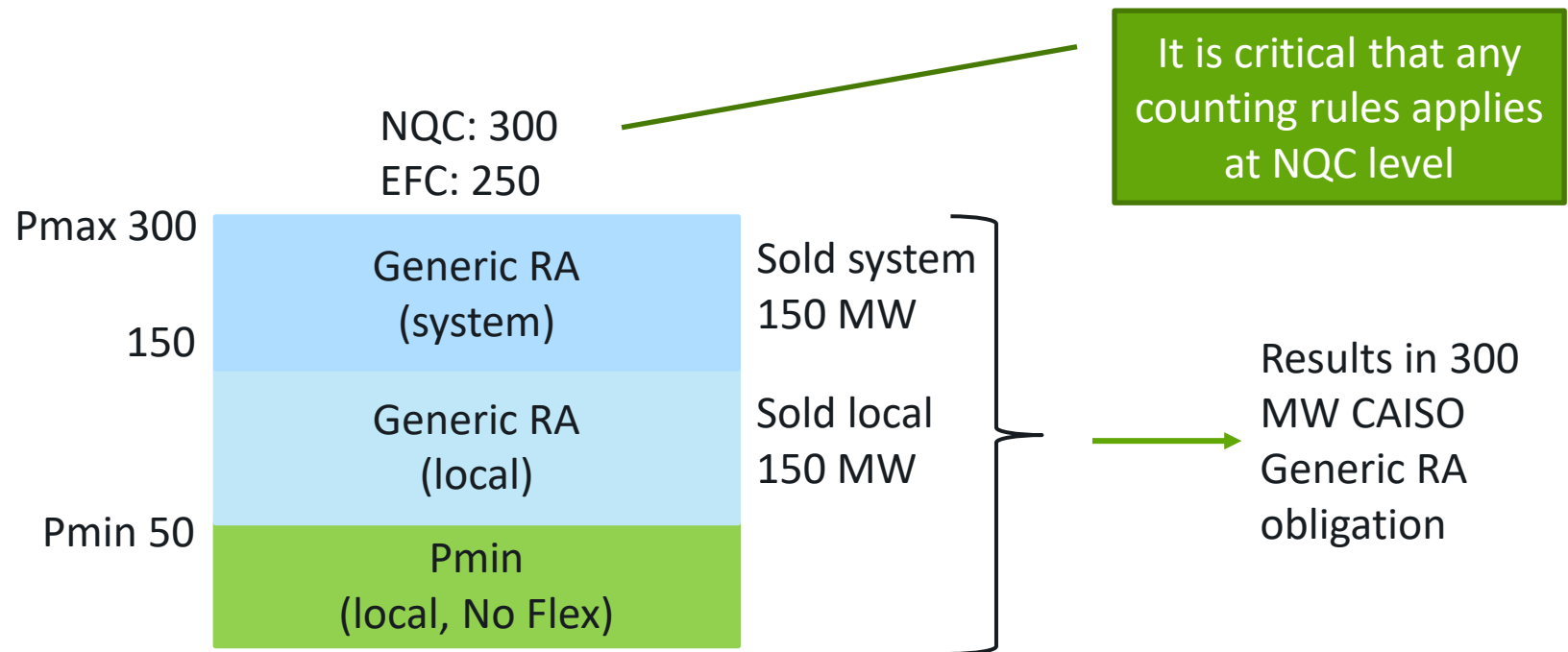


Vistra provides following commercial perspectives based on our experience:

- Under PG&E's CPE, multi-year local RA has been implemented such that the competitive solicitation is for bundled products that include all attributes of that RA
 - For example, a MW of bundled RA sold into PG&E CPE sells system, local, and any applicable flexible attributes associated with that MW
 - Reality is that there is now multi-year system and multi-year flex resource capacity being procured by the CPE within the local RAR
- In bilateral RA markets, regardless of whether we enter bundled RA, local RA or system RA contracts our obligation is the same:
 - In practice, our RA performance for system contracts results in a Generic RA obligation
 - A supplier cannot establish more Generic RA (system+local) than its NQC
 - The contract MW when shown meets both local and system needs

Commercial reality is that changes here will impact local and flexible RA as well cont.

- Resource capacity value sets the resource's NQC
 - NQC is maximum RA capacity that can be sold for Generic RA
- CAISO will use the NQC as input to calculating EFC
- CAISO sets Generic RA as sum of system and local MW, which cannot exceed NQC
- CAISO sets Flex RA as amount of flex MW shown, which cannot exceed EFC



Commercial reality is that changes here will impact local and flexible RA as well cont.



- Adopted framework should describe how CPE multi-year procurement for bundled product, which includes system, interacts with system RAR
 - E.G., if CPE awards bundled RA contracts it will meet portion of system requirements as well as local requirements, how should the process for system RA requirements take this into consideration?
 - We believe local requirements should be a subset of system requirements
- Since PG&E CPE is procuring MW with system, local, and any applicable flex it is prudent to explore potential counting rules that would still establish a single NQC value by month for each resource
 - This will not only support transactability within the CPE competitive solicitations but also bilateral markets to retain NQC structure
- Even without multi-year system RAR it is prudent for CPUC to require system RA requirement study to provide the system RA requirements for each year provided in the local RA requirement studies
 - Provides greater transparency on how the system and local RA requirements interact across the multi-year period

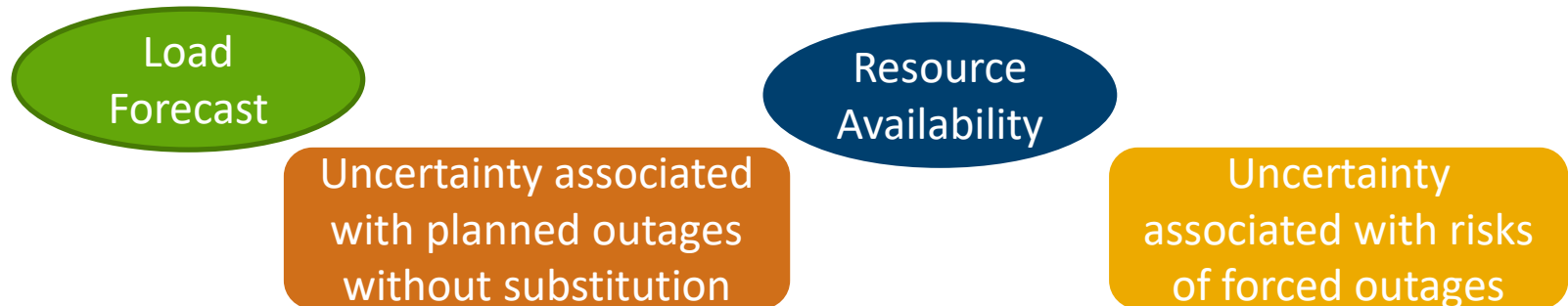
RA reform changes to planning standards and requirements

Principles for planning standard & requirements

- Maintain consistency across CPUC (IRP & RA) and CAISO (RA & CPM)
 - Support forward planning on behalf of market-participants
 - Support more cost-effective market outcomes by reducing regulatory uncertainty, complexity, and administrative burdens
- Establish system requirements based on One-Day-in-Ten-Years planning standard capturing relevant uncertainty factors
 - To balance grid reliability and consumer costs some amount of risk must be accepted, however current level is too high
 - A probabilistically determined PRM through a LOLE study set to achieve the 1:10 standard adopted and revisited regularly as system conditions change will better support reliability
 - A LOLE study can further CPUC principle that framework should address hourly energy sufficiency while balancing consumer costs
 - Could determine hours of risk: Loss of Load Probability hourly
 - Could calculate risk of shortfall for those hours: probabilistically determined Expected Unserved Energy including uncertainties

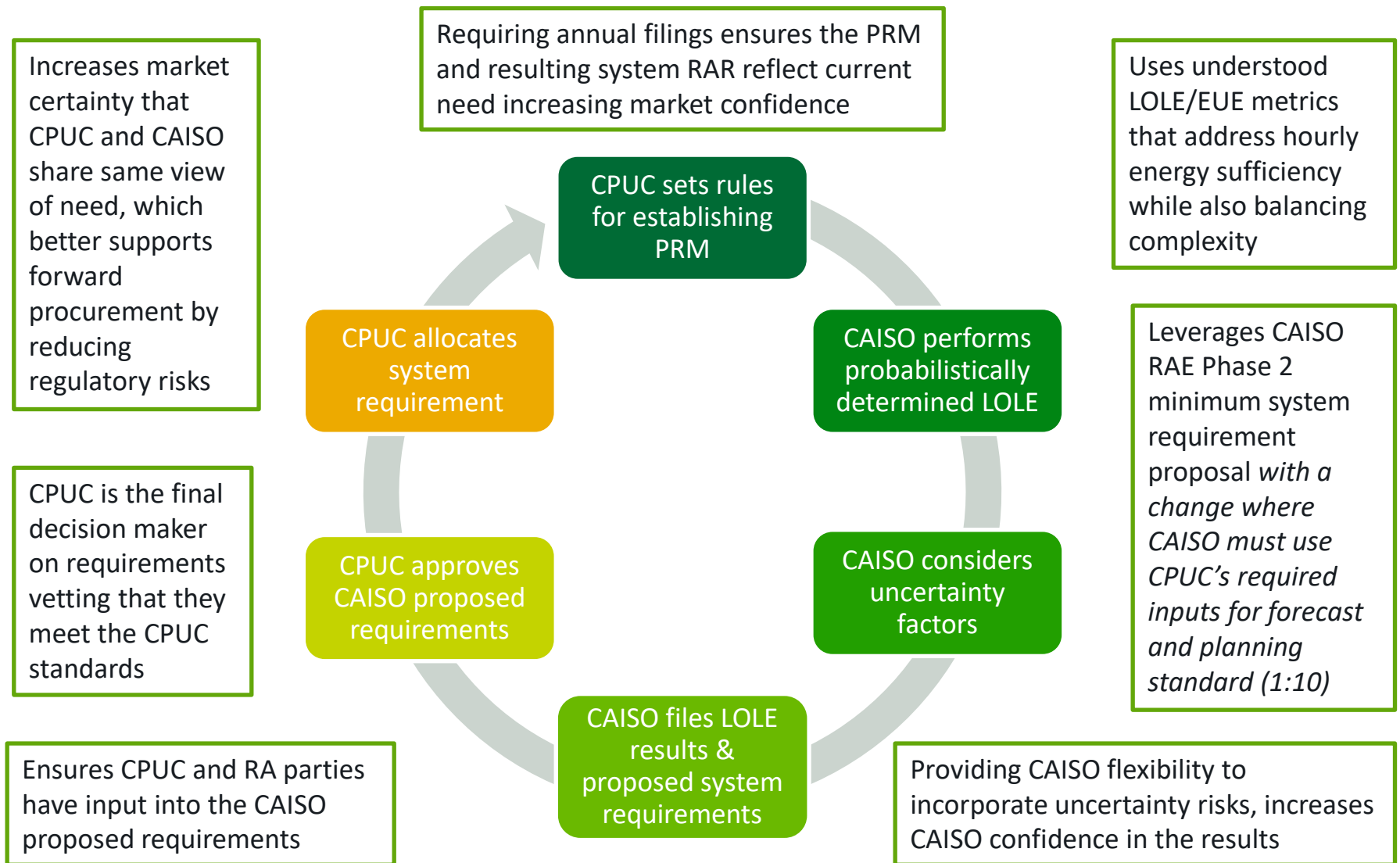
Adopt framework maintaining consistency in planning standards and requirements

- CPUC could require PRM to be determined by specified approach:
 - Using a probabilistically determined Loss of Load Expectation study
 - Using recent CEC IEPR forecast (full or update)
 - Meets a defined planning reliability standard e.g. One-Day-in-Ten-Years
 - Accounting for uncertainty factors



- PRM needs to be updated depending on whether resource capacity valuation will include outages/unavailability directly or not
- CPUC delegates to CAISO responsibility for performing the LOLE study to set PRM based on CPUC's PRM requirements
- CPUC to approve CAISO proposed requirements in RA proceeding

Benefits of a shared responsibility approach



Thank you!

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