

NWPP RESOURCE ADEQUACY **STAKEHOLDER** **ADVISORY COMMITTEE** **MEETING**

AUGUST 21, 2020 8:30AM-12PM



OBJECTIVES

- Provide an update on recent NWPP RA program work and accomplishments
- Introduce SPP
- Discuss SAC process improvements and engagement in Phase 2B
- Discuss the preliminary program conceptual design and solicit SAC member feedback, questions, ideas
- Discuss the E3 evaluation and its findings and walk through an illustrative workbook
- Provide an open forum for discussion/questions from SAC members on any program-related topics

AGENDA

8:30-8:45 **Status Update**
Frank Afranji, NWPP

8:45-9:00 **SAC Process Improvements and
Phase 2B Engagement**
Lea Fisher, PGP

9:00-10:30 **Preliminary Program Conceptual
Design**
Gregg Carrington, Chelan PUD
Andrew McLain, Northwestern
Joel Cook, BPA
Mark Holman, Powerex

10:30-10:45 **Break**

10:45-11:45 **E3 Evaluation**
Ray Johnson, Tacoma Power

11:45-12:00 **Open Q&A /Wrap-Up**



STATUS REPORT AND TIMELINE

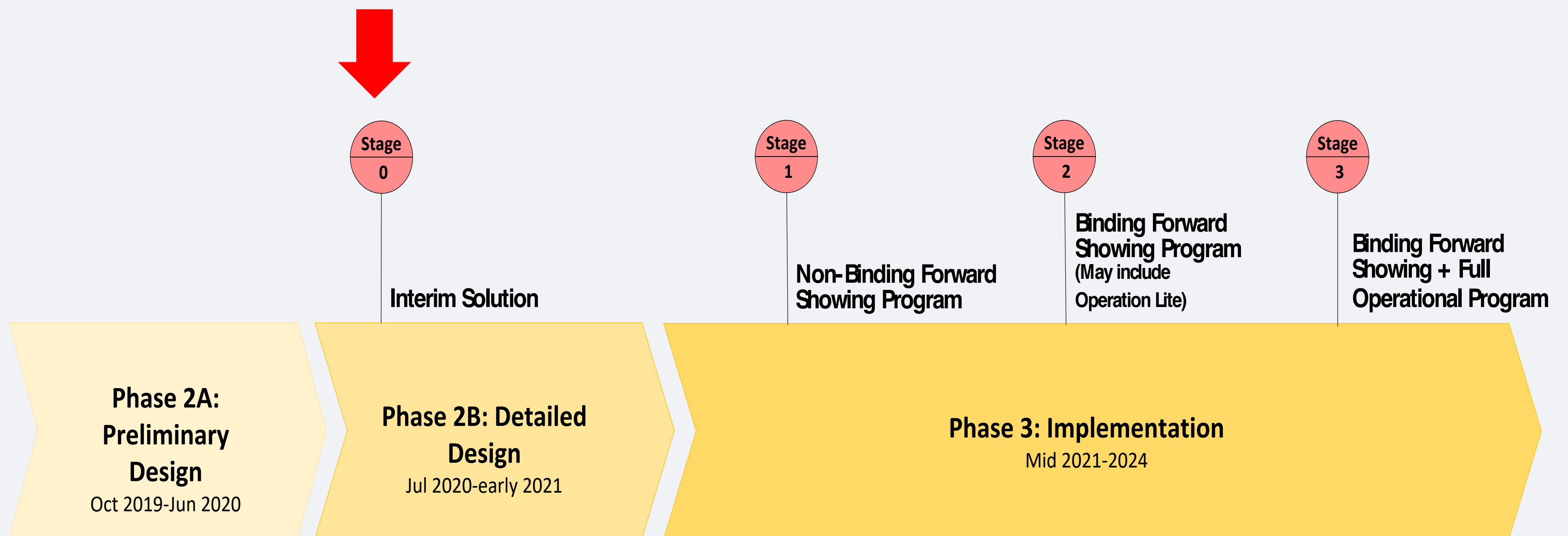
FRANK AFRANJI, NWPP PRESIDENT



STATUS REPORT

- Calpine joined the Steering Committee—19 total participating members
- Completed preliminary program conceptual design
- Hired Southwest Power Pool in Program Developer role
- Completed E3 evaluation
- P99 interim solution go-live
- Phase 2B: Detailed Design phase launched

OVERVIEW OF PROJECT TIMELINE



SAC PROCESS IMPROVEMENTS AND PHASE 2B ENGAGEMENT

PRESENTER: LEA FISHER, PGP



SAC PROCESS FEEDBACK

- Concerns raised:
 - › *Feedback loop is not clear—how are my concerns, suggestions being considered?*
 - › *Will there be a meaningful opportunity to provide input on program design?*
 - › *The current meeting schedule/process may not be sufficient to engage deeply on these*

PROCESS IMPROVEMENTS UNDERWAY

- 1-on-1 check-ins with SAC members
- 1-on-1 SAC engagement with Steering Committee members on key issues of concern
- Steering Committee will take written comments on conceptual design and produce a comment matrix summary of SAC comments and SC responses
- Steering Committee is open to ideas and recommendations on changes to SAC process and meeting schedule to accommodate a deeper review of issues
 - › *Additional working group meetings on key program design areas?*
 - › *Bring in other regional RA experts to debate design concepts or share alternative ideas*
 - › *SAC member presentations at working group meetings?*

PRELIMINARY CONCEPTUAL DESIGN PROPOSAL

***PRESENTERS: JOEL COOK, BPA, GREGG CARRINGTON, CHELAN
PUD, ANDREW McCLAIN, NORTHWESTERN, MARK HOLMAN,
POWEREX***



CONCEPTUAL DESIGN DOCUMENT OVERVIEW

- Background
 - › *Project management phases, staged functionality, capacity RA program focus, RA program goals and objectives*
- Forward showing program conceptual design
- Operational program conceptual design
- Legal/Regulatory Considerations
- Appendix A: program design considerations/support, Appendix B: glossary

****Focus today is on forward showing program and operational program conceptual design, design elements previously discussed in depth with the SAC in prior meetings are in Appendix slides***

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY OF STORAGE HYDRO RESOURCES

- **Initial Recommendation**

- › *Based on each resource's actual generation output, residual generating capability, water in storage, reservoir levels (if applicable) and flow constraints*
- › *Critical hours occurring on the same calendar day will be evaluated together, taking into consideration the useable water (energy) in storage and inflows/outflows during that calendar day*
- › *Impact of forced outage rates as well as the appropriate treatment of planned outages*

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY OF STORAGE HYDRO RESOURCES

- **Considerations**

- › *A 10-year period is intended to ensure that the methodology will capture*

Impact of varying seasonal/annual water conditions

Each resources reservoir level, flow, and other operating constraints as they vary from period to period

- › *Transparent and objective in order to facilitate validation of a resource's Qualifying Capacity against the resource's actual capability during past capacity critical hours*

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY OF WIND RESOURCES

– Initial Recommendation

- › *ELCC methodology will be used to determine the Qualifying Capacity based on 3 years of historical data*
- › *Multiple geographic wind zones within the NWPP footprint will be determined, and each wind resource's Qualifying Capacity will be calculated based on the ELCC for resource's wind zone*

– Considerations

- › *The ELCC approach is a widely-used, industry accepted approach*
- › *Defining wind zones will ensure that the geographical differences in wind production are captured (e.g. the Gorge area vs Montana) and will allow the Capacity Contributions of wind resources to be tailored accordingly*

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY OF SOLAR RESOURCES

- Initial Recommendation**
 - › *An Effective Load Carrying Capability (ELCC) methodology will be used to determine the Qualifying Capacity based on 3 years of historical data*

- Considerations**
 - › *The solar ELCC methodology defines the amount of incremental load a solar resource can reliably serve while considering the variable output of solar generation, and can be tailored specifically to the Resource Adequacy objective targeted by the program*
 - › *ELCC approach is a widely-used industry accepted approach*

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY OF RUN-OF-RIVER HYDRO RESOURCES

- **Initial Recommendation**

- › *ELCC methodology will be used to determine the Qualifying Capacity of run-of-the-river hydro resources using 3 years of historical data*

- **Considerations**

- › *The run-of-the-river hydro ELCC methodology defines the amount of incremental load a run-of-the-river hydro resource can reliably serve load while considering the variable output of run-of-the-river generation, and can be tailored specifically to the Resource Adequacy objective (1-in-10 LOLE) targeted by the program*

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY CONTRIBUTION OF SHORT-TERM STORAGE (PUMPED STORAGE AND BATTERIES)

- » **Initial Recommendation**
 - As increasing penetration of storage resources is expected, a methodology should be developed to calculate the Qualifying Capacity of short-term storage resources
- » **Considerations**
 - Further work required

FORWARD SHOWING PROGRAM

QUALIFYING CAPACITY

CONTRIBUTION OF THERMAL

RESOURCES

- **Initial recommendation**
 - › *Unit-specific UCAP methodology*
- **Considerations**
 - › *Unit specific (as opposed to resource class averages) allows for the differentiation of resources based on their availability and provides an effective feedback / incentive mechanism based on the unit-specific outage rates/availability, particularly during capacity critical hours*

FORWARD SHOWING PROGRAM **QUALIFYING CAPACITY CONTRIBUTION OF** **DEMAND RESPONSE PROGRAMS**

- **Initial Recommendation**

- › *A methodology will be developed to calculate the Qualifying Capacity of demand response programs*

- **Considerations**

- › *As many NWPP member entities have existing demand response programs, and such programs are expected to continue to proliferate, the RA program will include consideration of the demand response and their treatment with respect to Qualifying Capacity contribution*

FORWARD SHOWING PROGRAM PLANNED OUTAGES

– Initial Recommendation

- › *Planned outages will be identified before the showings period and will be factored into the capacity contribution determination for the period*
- › *Rules governing the scheduling of planned outages after the showings deadline of a binding Compliance Season must include:*

Full autonomy to take planned outages

Fully accepting, without consequence, planned outages that do not cause an entity to have a showing deficit

Ability to provide substitute capacity for planned outages

Consequences (e.g., penalties) for planned outages that cause an entity to have a showing deficit and sufficient substitution has not occurred

FORWARD SHOWING *PROGRAM* **PLANNED** **OUTAGES**

– Considerations

- › *RA program rules and requirements need to be clear in order to ensure appropriate consequences for planned outages that cause an entity to have a showing deficit*
- › *NWPP Entities should maintain local autonomous authority with respect to the scheduling of planned outages*

FORWARD SHOWING PROGRAM RESOURCE ADEQUACY OBJECTIVE

- **Initial Recommendation**

- › *Loss of load expectation (LOLE) objective of 1 day in 10 years where capacity is expected to be insufficient to meet load plus contingency reserves. Seasonal LOLE objectives will be determined separately for summer and winter periods*

- **Considerations**

- › *The 1-in-10 year LOLE target is a common approach taken by other RA programs and is considered an acceptable RA target level for the NWPP footprint*
- › *The 1-in-10 year LOLE target is considered to be generally consistent with NWPP member entities resource planning practices*

FORWARD SHOWING PROGRAM

LOAD FORECASTING

- **Initial Recommendation**

- › *Participating entities will provide the Program Administrator historic load data (currently suggested as 5-years of hourly data, adjusted for curtailed loads, demand response, and known incremental energy efficiency measures not already captured)*
- › *Participating entities will also provide relevant forward-looking data and forecasts, supported by evidence, to help inform the Program Administrator's load forecasting*

- **Considerations**

- › *Accurate and consistent load forecasting will be a critical aspect of the RA program*

FORWARD SHOWING PROGRAM

TREATMENT OF

CONTINGENCY RESERVES

- **Initial Recommendation**

- › *The RA requirements should be sufficient to meet NERC defined contingency reserve obligations during capacity critical hours*
- › *The RA program must recognize, and be aligned with, the NWPP Contingency Reserve Sharing Program*

FORWARD SHOWING PROGRAM

TREATMENT OF

CONTINGENCY RESERVES

- **Considerations**

- › *Contingency Reserves must be set aside in both the operational and the RA planning time horizons, to allow the electric system to recover from generation failure and other disturbances*
- › *Failure to include Contingency Reserves in RA program requirements could leave the NWPP footprint exposed to insufficient capacity commitments to meet Contingency Reserve requirements during critical capacity hours*

FORWARD SHOWING PROGRAM

PLANNING RESERVE MARGIN

- Initial Recommendation**

- › *The planning reserve margin should be determined via the design of a comprehensive modeling approach, resulting in a level that ensures the NWPP RA footprint will meet the RA Objective (1-in-10 LOLE)*
- › *The RA program requirements should also ensure sufficient capacity is available to meet Contingency Reserve requirements, either within the planning reserve margin or separately*

FORWARD SHOWING PROGRAM

PLANNING RESERVE MARGIN

– Considerations

- › *Rather than targeting a specific PRM, which would subsequently define the level Resource Adequacy that is achieved, the PRM should be driven by the RA Objective metric and determined via comprehensive modeling of the NWPP RA footprint*
- › *The PRM should be updated on an ongoing basis to reflect changes in load, shifts in the critical capacity hours, resource mix changes, etc.*

FORWARD SHOWING PROGRAM

PENALTY FOR NON-COMPLIANCE

- **Initial Recommendation**

- › *If an entity fails to meet showing obligations after the cure period, the program will assess a cost of new entry (CONE) penalty against the non-compliant entity*

- **Considerations**

- › *The penalty should be of sufficient magnitude such that entities would never choose to fail the RA program showings requirements*
- › *The CONE is based on publicly available information relevant to the estimated annual capital and fixed operating costs of a hypothetical new capacity resources*
- › *The CONE value and applicable multiplier should be based on an approach that is consistent with FERC policy and well justified*
- › *Leveraging financial penalties has been identified as a particular point of FERC jurisdiction consideration (i.e. an entity that leverages financial penalties likely needs to be a “public utility,” with the proper degree of independence)*

FORWARD SHOWING PROGRAM

TRANSMISSION AND DELIVERABILITY

- **Initial Recommendation**

- › *Development of a zonal model to ensure that major transmission constraints are appropriately reflected*

Where zonal constraints are identified, zone-specific RA requirements will be set to ensure the RA program adequacy objective will be met within the constrained zone

Zonal model will be updated on an ongoing basis consistent with changing grid constraint conditions

FORWARD SHOWING PROGRAM

TRANSMISSION AND DELIVERABILITY

- **Initial Recommendation**

- › *RA participants serving between zones will need to demonstrate sufficient firm transmission right across the constraint*
- › *RA participants within a constrained zone may access regional diversity through the set aside of the applicable quantity of firm transmission, for subsequent use by the operational program*

FORWARD SHOWING PROGRAM

TRANSMISSION AND DELIVERABILITY

- **Considerations**

- › *Similar to the NWPP Contingency Reserve Sharing Program, consideration must be given to the deliverability of RA resources via the definition of transmission constraints with the NWPP footprint*
- › *A zonal approach of sufficient granularity to capture all major constraints that might impact the delivery of RA capacity*

FORWARD SHOWING PROGRAM

CONTRACTUAL SUPPLY

QUALIFICATION REQUIREMENTS

– Initial Recommendation

- › *Qualification requirements for supply contracted to meet RA Showings requirements should be clearly defined*
- › *In order to qualify as counting towards RA requirements, a committed firm physical supply contract will need to be demonstrated*
- › *Requirements for imports from outside the footprint*
- › *Requirements for import transactions within the footprint*

FORWARD SHOWING PROGRAM

CONTRACTUAL SUPPLY

QUALIFICATION REQUIREMENTS

– Considerations

- › *Contractual import requirements must meet both the reliability objectives of the program but also support maximum competition and access to imported resources from both within and outside the footprint require*

OPERATIONAL PROGRAM

FRAMEWORK FOR ACCESSING POOLED CAPACITY

- **Initial Recommendation**

- › **Accessing:**

A member entity is only able to call on pool capacity when $\text{Load} + \text{Contingency Reserves} > \text{Forecasted peak load} + \text{PRM} - \text{excessive forced outages} - \text{VER underperformance} + \text{VER overperformance}$

Participants can only access pooled capacity equal to the amount of load they are experiencing over their reliability metrics (i.e. they are responsible for meeting their loads up to those metrics: $P50 + \text{PRM}$)

OPERATIONAL PROGRAM

FRAMEWORK FOR ACCESSING POOLED CAPACITY

- **Initial Recommendation**

- › **Providing:**

Program Administrator (PA) will request that entities not experiencing loads over their regional RA obligations (P50 + PRM) deploy capacity to assist participants experiencing high load events

PA could request up to the difference between a participants' forecasted load and their RA obligations (P50 + PRM), but not in excess of that amount

OPERATIONAL PROGRAM

FRAMEWORK FOR ACCESSING POOLED CAPACITY

– Considerations

- › *There is no expectation that the PA would control deployment of any specific resources*
- › *There is no “resource sufficiency” test anticipated in this program*
- › *There may need to be an accommodation for working seamlessly with EIM/EDAM efforts*
- › *There is no intent to create a capacity market or make any significant changes to the structure of the region’s markets*

OPERATIONAL PROGRAM

TRANSMISSION AND DELIVERABILITY

- **Initial Recommendation**

- › *The operational program will require modeling with sufficient detail to identify any transmission considerations in the operational time frame*
- › *The SC has considered the problems associated with transmission availability in the operational time horizon, but will make recommendations to address the issue in Phase 2B*

OPERATIONAL PROGRAM

TRANSMISSION AND DELIVERABILITY

– Considerations

- › *In the operational time horizon, we are not concerned about transmission requirements related to resources used to meet loads less than their compliance obligation (e.g. P50 + PRM)*
- › *Transmission in the operational time horizon is primarily concerned with ensuring participants can reliably access the pooled capacity held by other program participants*

OPERATIONAL PROGRAM

DELIVERY FAILURES

- **Initial Recommendation**

- › *The SC has not specifically recommended penalties for delivery failures, though has discussed the importance of motivating participants to deliver in the operational time horizon*
- › *The Operational Program Administrator will be responsible for identifying and reporting on delivery failures*

OPERATIONAL PROGRAM

DELIVERY FAILURES

– Considerations

- › *Leveraging financial penalties has been identified as a particular point of FERC jurisdiction consideration (i.e. an entity that leverages financial penalties likely needs to be a “public utility,” with the proper degree of independence)*
- › *Given that the region does not have an ISO/RTO structure with a must-offer obligation, the program cannot provide backstop energy if an LSE or generator fails to deliver*

E3 EVALUATION

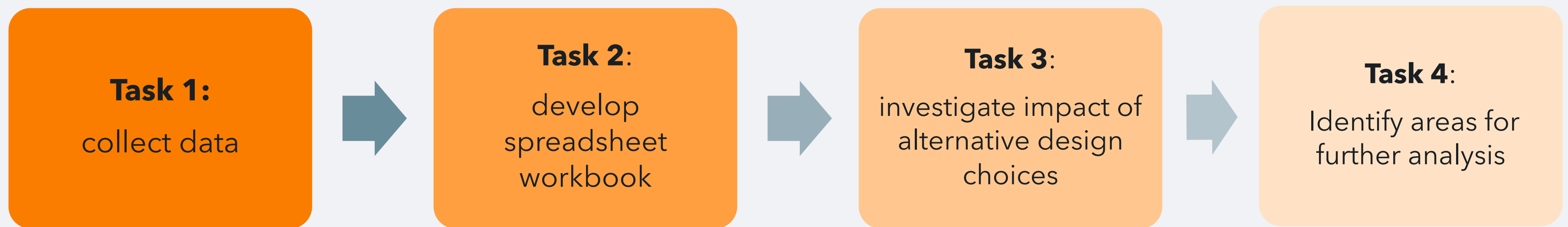
***PRESENTERS: RAY JOHNSON,
TACOMA POWER***



E3 SCOPE OF WORK

- » E3 developed an excel spreadsheet workbook comprised of load and resource data from each entity and relied upon prior loss-of-load probability modeling in the Northwest to estimate capacity contributions for resources, providing a template for resource qualification

E3 EXCEL WORKBOOK



TOPICS E3

EXPLORED

- The mechanics of calculating capacity needed to achieve the RA target (e.g., the Planning Reserve Margin) – **a PRM was not calculated in this effort**
- Possible methodologies for distributing that capacity need across the participants in the program (e.g., RA allocation)
- The mechanics of assessing capacity contributions of various resource types to count toward the RA capacity need (e.g., qualifying capacity) – **specific capacity contributions for each resource type were not calculated in this effort**
- How imports/exports to other regions impact the region's RA projections
- The benefits of looking at RA as a region vs. individual participants (e.g. diversity benefit)

E3 EVALUATION

LIMITATIONS

The initial evaluation did **not** investigate all elements of an RA program

- Did **not** investigate deliverability via transmission-related constraints (both within the internal NWPP and external to other regions), which can significantly impact individual entity obligations and their resource portfolio location
- Did **not** consider variation of capacity contribution for renewable resources located in different parts of the region

E3 EVALUATION

LIMITATIONS

- Did **not** examine a wide variety of potential methodologies for calculating capacity contributions or loss of load probabilities that could be used in RA modeling, and thus **did not suggest capacity contributions** for specific resources
- Did **not** provide an assessment of regional RA capacity situation, estimated PRM, or any other regional adequacy metrics

E3 EVALUATION FINDINGS

- » The E3 process provided a strong foundation of data collection and understanding for the relationship of different data elements
- » Regional capacity requirement reduction of approximately 3% or 1700 MW is available through tapping into the load diversity of the footprint. Additional savings will accrue for supply diversity which will be considered in the next phase of analysis and work



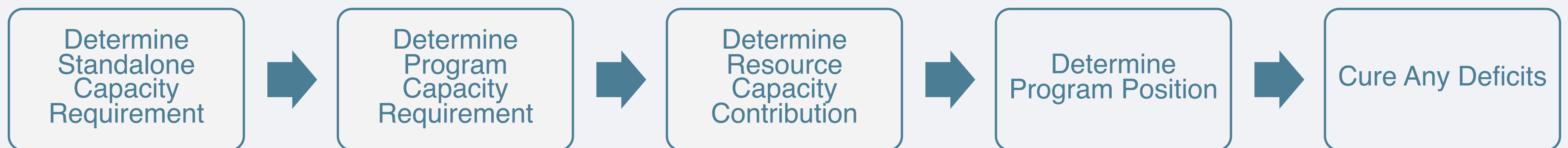
HYPOTHETICAL WORKBOOK

- » Tool to help stakeholders better understand the mechanics of a resource adequacy program forward showing process and build intuition about possible impacts on their utilities



ILLUSTRATIVE EXAMPLE

OVERVIEW



ILLUSTRATIVE EXAMPLE

STEP 1: DETERMINE STANDALONE CAPACITY REQUIREMENT

Example

- Assume the LSE is a BAA
- What would be the “standalone” pure capacity requirement?
- **Values are for illustrative purposes only**

		Unit	Summer	Winter
LSE Inputs				
	1-in-10 Peak Load (Historic High)	MW	431	1055
	1-in-2 Peak Load (Historic Mean)	MW	384	960
	Difference	MW	47	95
Standalone				
	1-in-2 vs. 1-in-10 Load Variation	% of 1-2 NCP	12.2%	9.9%
	Contingency Reserves (using 1-in-10)	% of 1-2 NCP	6.7%	6.6%
	Standalone PRM	% of 1-2 NCP	19.0%	16.5%
	1-in-2 Peak	MW	384	960
	Load Variance	MW	47	95
	Contingency Reserves	MW	26	63
	Standalone Capacity Requirement	MW	457	1118

ILLUSTRATIVE EXAMPLE

STEP 2: DETERMINE PROGRAM CAPACITY REQUIREMENT

Example

- Assume the LSE joins a resource adequacy program
- Assume a program diversity benefit of 2% (this number is made up actual number could be higher or lower)
- What is the requirement in the program?
- **Values are for illustrative purposes only**

Program				
	Program Footprint Load Variance	% of 1-2 NCP	10.2%	7.9%
	Contingency Reserves (using 1-in-10)	% of 1-2 NCP	6.7%	6.6%
	Program PRM	% of 1-2 NCP	17.0%	14.5%
	1-in-2 Peak	MW	384	960
	Load Variance	MW	39	76
	Contingency Reserves	MW	26	63
	Program Capacity Requirement	MW	449	1099
			TRUE	TRUE
Program Diversity Benefit (MW)			8	19

ILLUSTRATIVE EXAMPLE

STEP 3: DETERMINE RESOURCE CAPACITY CONTRIBUTIONS

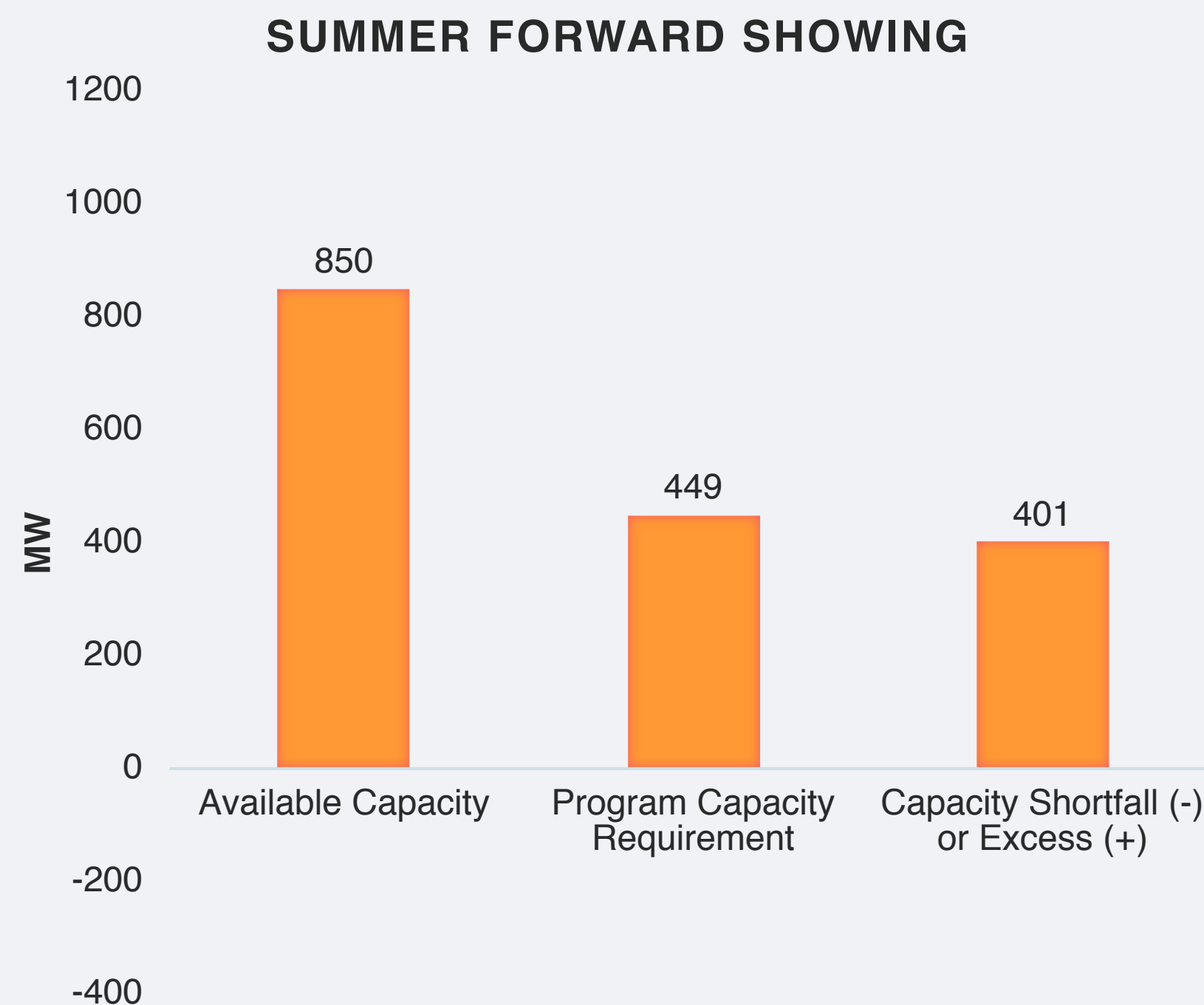
Example

- Determine nameplate (maximum) generation capability for each resource
- “Qualifying Capacity” (QC) is the amount of resource adequacy (RA) capacity provided by a resource during capacity critical hours
- **Values are for illustrative purposes only**

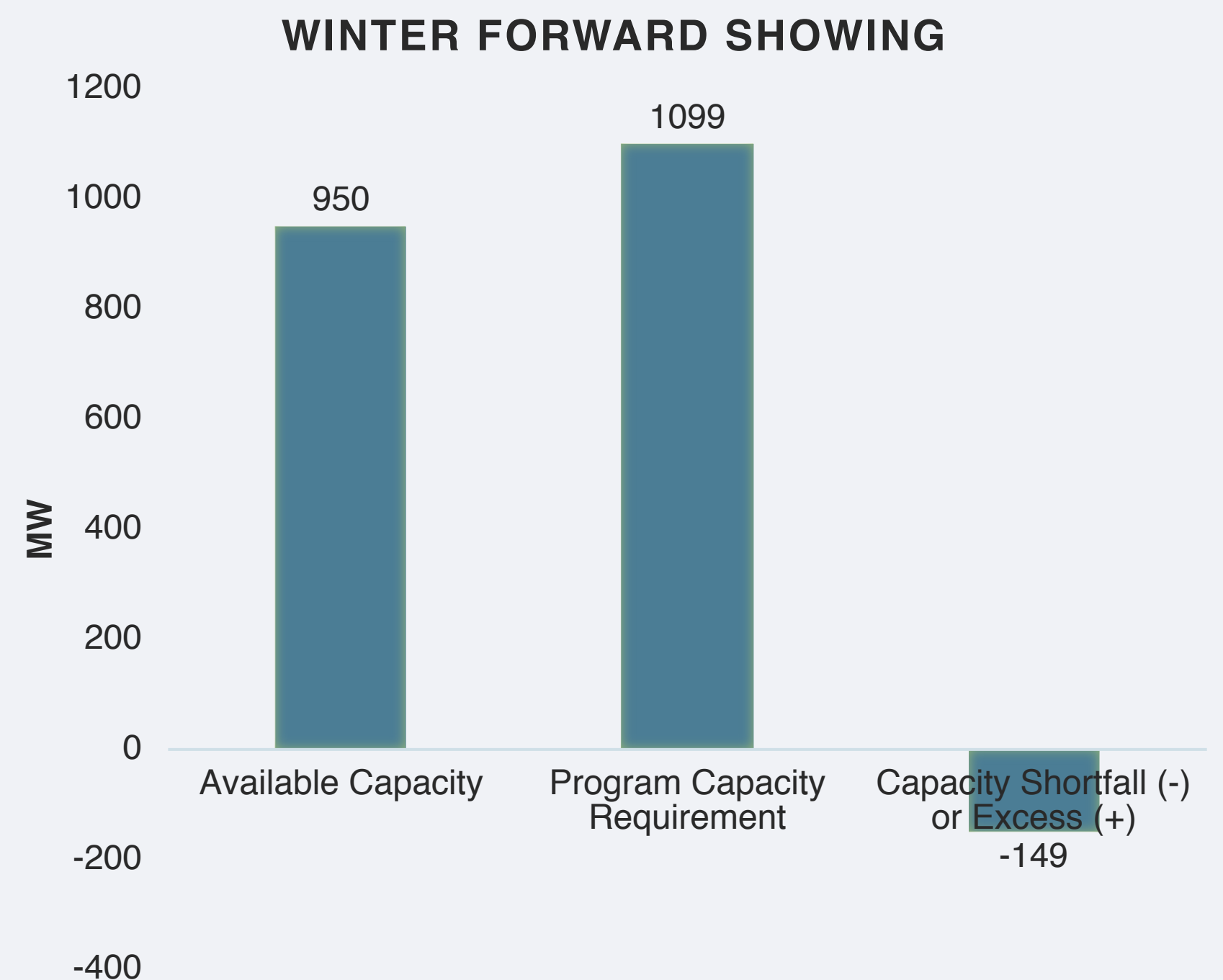
Summer	Resource	Nameplate (MW)	QC%	Pure Capacity (MW)
	Dams	500	90%	450
	Slice	300	100%	300
	Block	100	100%	100
				0
				0
				0
				0
				0
				0
				0
Total		900		850
Winter	Resource	Nameplate (MW)	QC%	Pure Capacity
	Dams	500	90%	450
	Slice	300	100%	300
	Block	200	100%	200
				0
				0
				0
				0
				0
				0
				0
Total		1000		950

ILLUSTRATIVE EXAMPLE

STEP 4: DETERMINE POSITION



LSE **EXCEEDS CAPACITY REQUIREMENT**

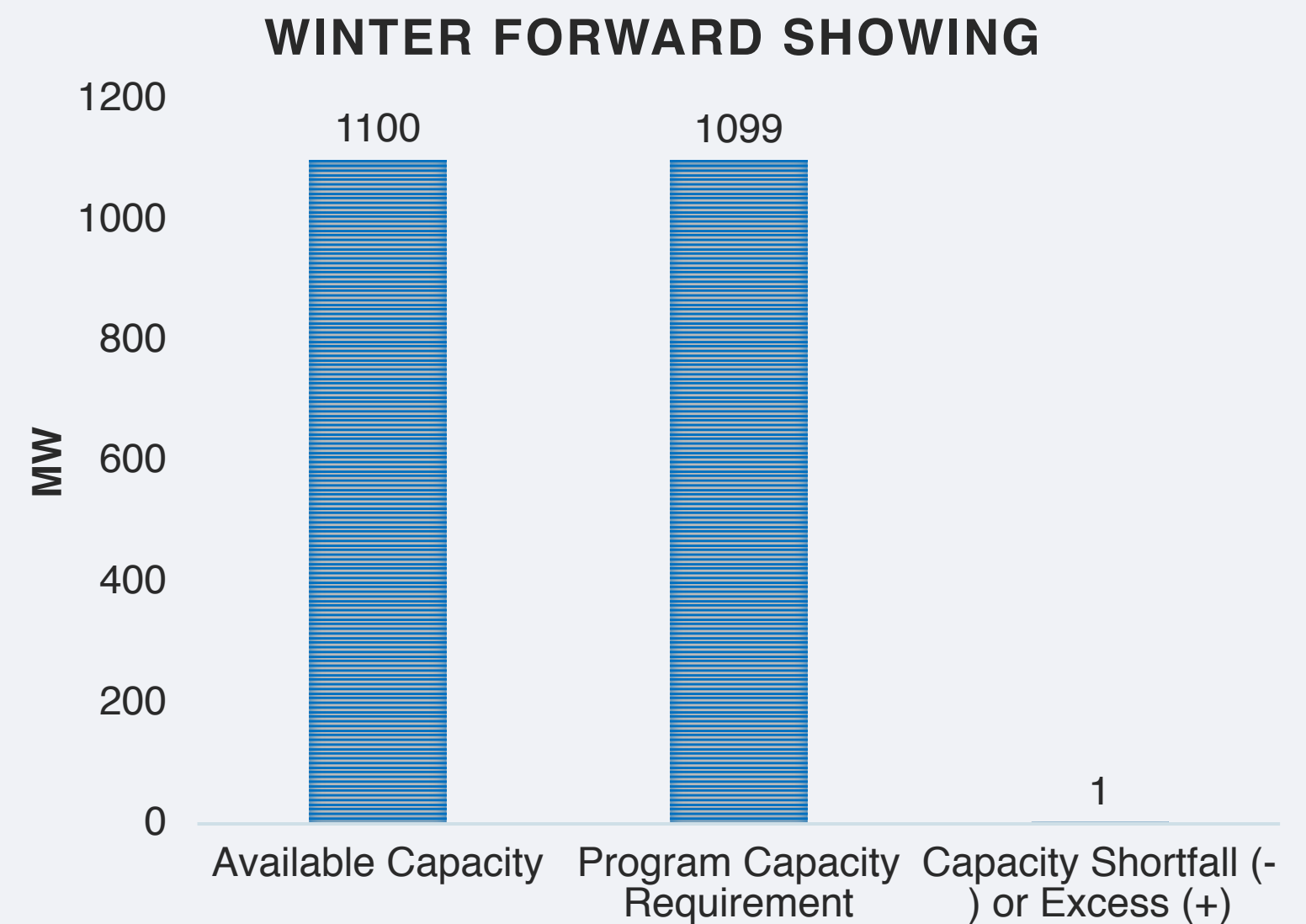
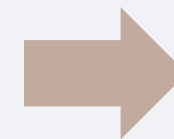


LSE **FALLS SHORT OF CAPACITY REQUIREMENT**

ILLUSTRATIVE EXAMPLE

STEP 5: CURE ANY DEFICITS

Winter	Resource	Nameplate (MW)	QC%	Pure Capacity
	Dams	500	90%	450
	Slice	300	100%	300
	Block	200	100%	200
	New Contract	150	100%	150
				0
				0
				0
				0
				0
				0
Total		1150		1100



QUESTIONS AND NEXT STEPS

- Questions?
- Next meeting
- Conceptual design review process:
 - › *Comments due on conceptual design due Friday, September 11*

APPENDIX

FORWARD SHOWING PROGRAM

REGIONAL IMPORT AND EXPORT ASSUMPTIONS

– Initial Recommendation

- › *Contracted imports, that meet defined qualification requires, ahead of the showing deadline will be included as a credit in the Showing Module workbook for the applicable entity (i.e. a “private” asset)*
- › *Contracted exports, that are not curtailable, entered into ahead of the showing deadline will be included as an obligation in the Showing Module workbook for the applicable entity (i.e. a “private” obligation)*

FORWARD SHOWING PROGRAM

REGIONAL IMPORT AND EXPORT ASSUMPTIONS

– **Considerations**

- › *Firm energy/capacity commitments between regions can be made both before and after the RA showing deadlines, including within the Binding Compliance Season*

As such care must be taken to ensure that the impact of those commitments on the RA footprint are appropriately captured

- › *Preliminary Sensitivity analysis indicated that imports and exports can have significant impact on the definition of critical hours, which will in turn have an impact on the Qualifying Capacity contribution of various resources*

as import export patterns shift during the day, the QC contribution of solar, storage hydro, and battery resources can be significantly impacted

FORWARD SHOWING PROGRAM

SEASON DEFINITION AND COMPLIANCE PERIODS

– Initial Recommendation

Season	Binding/Advisory	Duration	Compliance Showing Date	Cure Period
Winter	Binding	November – March	March 31	April 1 – May 31)
Summer	Binding	June – September	October 31 (of prior year)	November 1 – December 31 (of prior year)
Spring	Advisory	April – May	N/A	N/A
Fall	Advisory	October	N/A	N/A

FORWARD SHOWING PROGRAM

SEASON DEFINITION AND COMPLIANCE PERIODS

– Considerations:

- › Capacity shortfall risk in the NWPP footprint is known to exist in both the summer and winter seasons and is understood to be relatively lower in the spring and fall seasons.
- › Entities with surplus in the summer and/or winter seasons currently monetize this surplus through commercial transactions.
- › Entities need continued flexibility to take planned maintenance outside of their own peak demand season.
- › Duration of each season must cover period when extreme weather events could occur (informed by past experience).

FORWARD SHOWING PROGRAM

COMPLIANCE PERIOD SHOWING DEADLINE (LEAD TIME)

- **Initial Recommendation**
 - › *Each binding compliance period will have a deadline that is 7 months in advance of the binding compliance period.*

COMPLIANCE PERIOD SHOWING DEADLINE (LEAD TIME)

- **Considerations**

- › The lead time should provide time sufficient for a cure period and avoid showing module failure consequences (e.g., penalties)
- › The lead time should be sufficient to allow the Program Administrator to validate the Resource Adequacy of the NWPP footprint well in advance of the Compliance Periods
- › As many of the member entities also participate in the CPUC/CAISO RA program, the proposal should align, to the extent practical, with the timelines of the CPUC/CAISO RA program
- › The lead time should be short enough to allow entities to secure monthly OATT transmission as required to meet the RA deliverability requirements

FORWARD SHOWING PROGRAM

COMPLIANCE CURE PERIOD

- **Initial Recommendation**
 - › *Cure Period will be a two-month period starting on the Compliance Season Showing Deadline date.*
- **Considerations**
 - › *The duration of the Cure Period is considered to be sufficient time for entities to be able to make portfolio adjustments and is generally consistent with cure periods defined in other RA programs (e.g., CPUC/CAISO RA program)*

FORWARD SHOWING PROGRAM

LOAD SHAPING WITHIN BINDING COMPLIANCE PERIODS

- **Initial Recommendation**
 - › *One binding Compliance Period peak load forecast, with further exploration of potentially shaping the load forecast to recognize the varying load conditions across the Compliance Period*
- **Considerations**
 - › *The definition of the binding Compliance Period should be consistent with the probability of the occurrence of peak load event*
 - › *Experience over the last decade highlights that summer heat waves and winter cold snaps can occur across a fairly broad range of the summer and winter seasons*