EDAM Resource Adequacy Workshop #2: RA Primer, Foundational Principles, and Governance

May 7, 2026

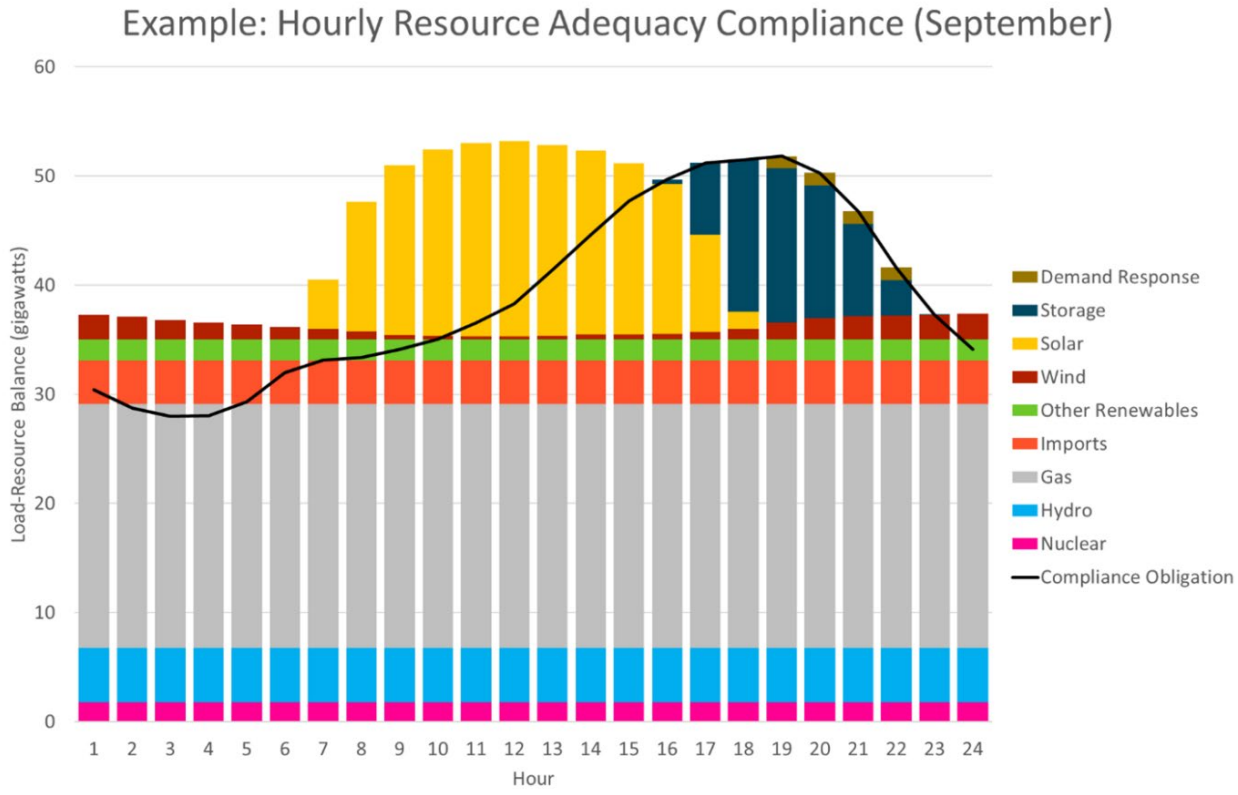
Agenda

- Resource Adequacy Primer
- Foundational Principles
- Governance

Resource Adequacy Primer

RA Primer: What is Resource Adequacy?

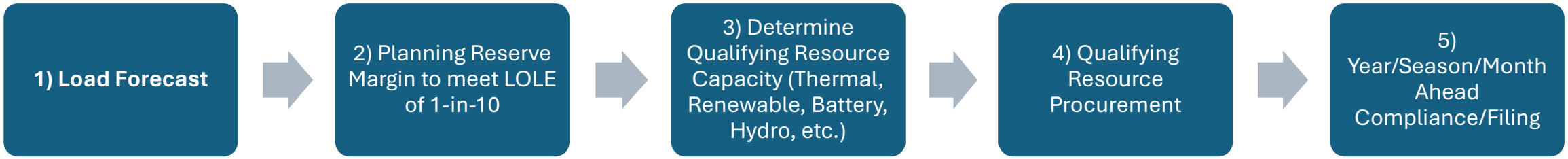
- Resource Adequacy (RA) is:
  - A compliance program
  - A bi-laterally tradable product
- RA compliance programs verify there are sufficient resources on a system available to meet peak load demand.
- RA programs are forward looking
  - Determine adequate resources exist, agnostic to whether they run.



RA Primer: What *isn't* Resource Adequacy?

- RA is not an operational operating plan:
  - Day-ahead and real-time resources are dispatched in most economical manner regardless of RA procurement.
- RA is not power flow modeling
  - Does not look at frequency, voltage support, etc..
- RA calculations are separate from Ancillary Service products/requirements.
  - RA is not: Spin, Non-spin, Reg-Up, Reg-down

RA Primer: General RA Program Workflow



1) Load Forecast:

- Have to know what load is expected and should be planned for
- Routine process across the industry
- Result is a value to use for base calculations

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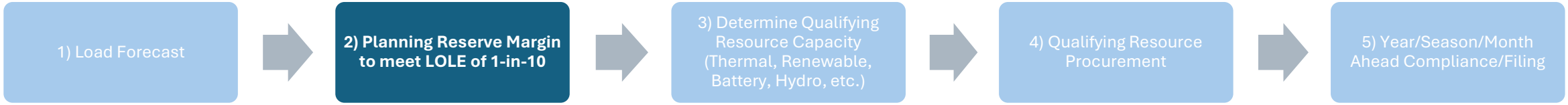
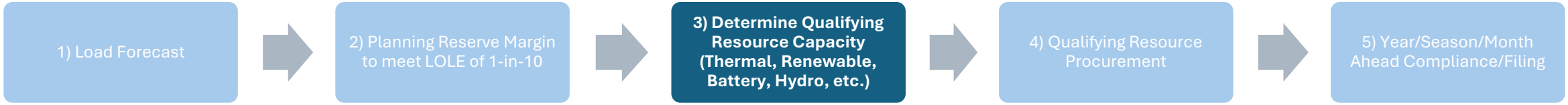


2) Planning Reserve Margin (PRM):

- PRM= Generating capacity over and above the load forecast
- Accounts for variance in load and system conditions
  - load will not perfectly follow forecast
  - not every resource will be online and generating every hour
- Standard Loss of Load Expectation (LOLE) of 1 in 10
  - Achieved by simulating multiple years of load/generation
  - 1 in 10 LOLE means 1 day in 10 years where load loss is expected
  - Ensures system reliability; balanced with ratepayer costs
- Result is final target needed to be procured for
  - Monthly, seasonal, or hourly

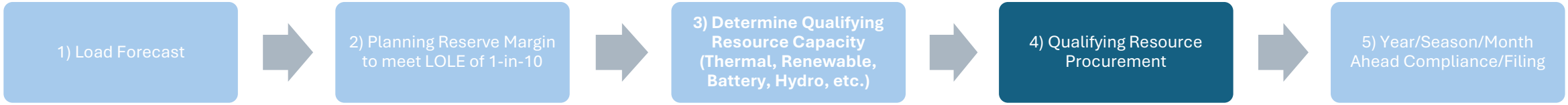
RA Primer: General RA Program Workflow



3) Determine Qualifying Capacity (QC) Values:

- To demonstrate RA compliance, participants must show sufficient Qualifying Capacity (QC) to meet the overall RA requirement
- Unit contribution towards planning target:
  - Unit outages
  - Intermittent resources
  - Batteries have to charge
  - Hydro dependent on weather/water year
  - Transmission line de-rates
- Several methods for determining these
  - Effective Load Carrying Capability (ELCC)
    - A 100 MW addition serves 50 MW of peak load
  - Exceedance Percentage
    - 80% of the time, x resource is generating 50 MW
- End result is a Qualifying Capacity value for each resource

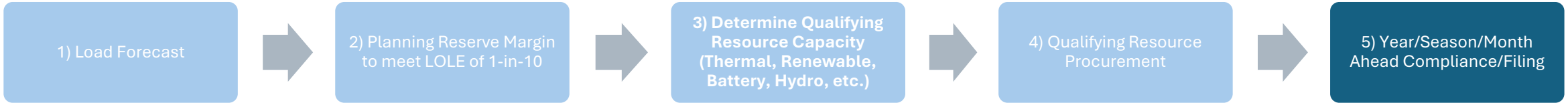
RA Primer: General RA Program Workflow



4) Qualifying Capacity Procurement:

- Target obligation (Peak Load + PRM)
- Contribution of each resource towards target obligation
- Evaluate obligation versus existing portfolio and proceed :
  - Short: Need to procure capacity
    - RA contract
    - New build
    - Firm energy contract
  - Long: Can look to sell excess

RA Primer: General RA Program Workflow



5) Year/Season/Month Ahead Compliance Filing:

- The compliance time-period may vary across programs
- Compliance filings/forward showings also vary
  - 18, 12, 6, X months out
  - Different levels of coverage may be required i.e. 90% twelve months out, 100% 60 days out
- Consequences of failure to meet target:
  - Vary by program: financial incentive or cost
  - Goal is to ensure accountability and reliability

RA Primer: Summary

- Goals of RA programs are to determine sufficient resources on system to meet peak demand plus planning reserve margin
- Concept of RA is straightforward; design and methodology are complex
- Multiple regional programs exist today:
  - Utilize similar approaches/methodologies
  - Share a common end purpose
  - Different structures, time frames, incentives
- A well-designed RA program identifies when resource procurement is necessary to maintain system reliability while balancing affordability

Foundational Principles

Foundational Principles

1.	Establish a common, transparent capacity counting standard, with mechanisms to incentivize adherence to the standard
2.	Enhance reliability by ensuring that participating entities procure adequate, deliverable capacity capable of supporting both local and system needs
3.	Support efficient EDAM market operations by clarifying forward obligations, performance expectations, and the relationship between RA capacity and day-ahead scheduling, utilizing market dispatch for delivery
4.	Does not infringe upon or impede other regional RA programs
5.	Leverage transmission connectivity of the EDAM/WEIM to enable capacity savings for RA program participants and their customers
6.	Minimize administrative burden and costs for participants without sacrificing reliability
7.	Operate as a voluntary program
8.	Ensure non-discriminatory, comparable treatment across similarly situated program participants
9.	Align incentives, penalties and any backstop mechanisms with cost causation and waivers that address commercial feasibility

Governance

Governance: Questions

- What are important elements to consider when designing a strong governance structure for an RA program?
- What governance models should the RA Sponsors and Work Group review for the RA program?

Governance

The proposed structure is intended to give stakeholders enough specificity to provide constructive feedback and frame a discussion, but should not be construed as a firm proposal.

The concepts proposed represent possible design options that the RA Sponsors and Work Group have been able to coalesce around to present to stakeholders for input as an initial starting point.

Written comments and discussion during spring workshops are meant to draw out areas of stakeholder support, identify questions that need to be answered, flag issues that may require continued refinement through the initial stakeholder process and determine areas that may need a different approach.

Governance: Program Functions

- Program administration and oversight
- Technical policy governance
- Participant-driven technical development
- Structured stakeholder engagement
- Operational execution and modeling
- Independent program assessment

Governance: Suggested Roles

Role	Proposed Entity
An independent board is desired for general oversight of the program	ROWE
A Program Coordinator would be responsible for program administration and oversight	ROWE
A Technical Oversight Committee (TOC) would serve as the primary body for technical policy governance, including key technical and policy decisions	*New committee to be created
A Program Service Provider would be responsible for operational execution and modeling activities	CAISO
The Regional Advisory Group would participate as a stakeholder engagement body, providing input but holding no oversight or voting authority	BOSR and Public Power representative
A Program Assessor would provide independent assessment of the program	Department of Market Monitoring

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Independent Board and Program Oversight: ROWE

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- ROWE Board offers independent oversight and alignment with the governance of the EDAM
- Opportunity to have both resource adequacy and energy markets under the same governance structure
- The ROWE Board would have responsibility for:
  - Administration of the FERC Tariff associated with this program, including Federal Power Act Section 205 rights for filing of any initial and subsequent amendments to the FERC Tariff
  - Managing and overseeing administrative processes
  - Contracting with the Program Service Provider (CAISO) to execute the program
  - Ensuring compliance procedures are executed consistently with the program design

Technical Oversight Committee (TOC)

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Questions:

- What models or approaches should be considered when establishing the membership of the TOC?
- What types of voting models should be considered for the TOC?
- What models should be considered for oversight of RA Business Practice Manual changes?
- What is the appropriate stakeholder model for durable, diverse input about an RA program, and what modifications from the ROWE stakeholder process are appropriate for RA?

Technical Oversight Committee (TOC)

- Provides a central venue for program participants to engage on matters related to technical design, implementation, and ongoing program administration
- Facilitates participant input on issues directly affecting program participation, including compliance approaches, modeling frameworks, and operational considerations
- Meets the need for a dedicated participant forum to support consistent application of methodologies, transparent evaluation of assumptions, and ongoing refinement of program design as system conditions evolve
- Provides a structured venue for participant expertise to inform technical standards and implementation details
- OPEN ISSUE:
  - The RA Work Group has not proposed a particular closed or open meeting structure for the TOC (outside of program participants), nor yet considered the potential interaction between the TOC and committees comprising other sectors and stakeholders

Technical Oversight Committee (TOC)

Attributes:

- TOC would be made up of program participants (those bound by program compliance obligations)
- Role would not be decisional, but it is anticipated that material program elements would come to TOC for consideration and TOC would make recommendations either in support or opposition directly to the ROWE Board
- It is anticipated that most TOC meetings would be public, subject to usual exceptions (to be specified in a later iteration of governance documents)

Technical Oversight Committee (TOC)

Stakeholder Process:

- ROWE Stakeholder Representatives Committee (SRC) would feed into the TOC and *vice versa*
- TOC would not sit above or below the SRC; it would sit side by side
  - TOC would hold a particular role as it relates to RA program design
- Broader stakeholder forums offer a high value opportunity to originate and vet program design changes
  - The stakeholder process should play an important role in shaping program design under the ROWE alongside TOC
  - The RA Work Group anticipates exploring potential multi-committee structure in more detail with stakeholders

Technical Oversight Committee (TOC)

Voting:

- Work Group deferred consideration of whether a formal voting structure is needed
- Other programs have adopted voting mechanisms like House/Senate models to balance varying sector interests or to reflect imbalances in the size of participants.
- Work Group anticipates a formal structure is needed and seeks feedback on:
  - whether a voting construct is needed
  - if so, would a House/Senate model best meet needs

Technical Oversight Committee (TOC)

TOC Responsibilities:

- Review technical and policy program design elements
- Evaluate proposed changes to the FERC Tariff and Business Practice Manual (BPM)
- Develop technical or policy recommendations for the ROWE's consideration

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Program Service Provider (PSP): CAISO

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- As the Market Operator of EDAM, CAISO as the PSP would leverage the value of the existing operational structures, systems, software, optimization, and technical subject matter expertise currently in place
- PSP would have the technical and operational responsibilities, including performing modeling and creating analytical work products supporting operational processes into a resource adequacy system
- Limited to the execution and implementation; would not include authority to establish policy, approve tariff changes, or independently define compliance requirements
- PSP would be routinely consulted by the TOC and other stakeholders throughout policy development, providing input on policy implementation within the market framework and serving in a technical advisory role for program modelling

Regulatory Advisory Group (RAG): BOSR & Public Power Representative

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Questions:

- Is BOSR's role as contemplated by the ROWE stakeholder process appropriate for state oversight of the RA program?
- BOSR currently has two public power liaisons that serve in an advisory capacity. What changes to the BOSR public power representation should be considered, specifically for the RA program governance and oversight?

Regulatory Advisory Group (RAG): BOSR & Public Power Representative

- Advisory body providing state and local perspectives and feedback on program design, governance design, and major policy choices brought forward through the stakeholder and technical review processes
- Ensures proposals are informed by state and local interests and regulatory considerations early and transparently
- It is anticipated RAG would articulate its views directly to the ROWE Board
- No parallel Section 205 rights for the RAG due to the voluntary nature of the program and it not being a required element of market participation
- Need for feedback from regulators and stakeholders on how the role of states can be enhanced

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Program Assessor (PA)

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Question:

- How should the RA program approach oversight to prevent market manipulation?

Program Assessor (PA)

- Work Group identified need for independent evaluation and assessment of the program
  - Question of how and who might fill this role remains open
- CAISO's Department of Market Monitoring (DMM) as a third-party evaluator is a possibility
  - DMM currently provides monitoring and oversight of the EDAM, DMM has access to relevant participant data that would support evaluations of market power
- Governance framework is intended to preserve flexibility to adopt a different independent evaluation construct in the future if program scope, regulatory expectations, or stakeholder needs evolve
- PA role is intended to independently review program design, implementation and outcomes to ensure consistency with program policy

Program Assessor (PA)

Question:

- How should the RA program approach oversight to prevent market manipulation?

Spring Schedule

May 19: Workshop #3
Modeling & Metrics

Consideration Design
Document released May 12

May 21: Workshop #4
Compliance Submittal Requirements/Load Forecasting/Transmission

Consideration Design
Document released May 14

May 26: Workshop #5
Compliance Structure/ Reporting & Transparency

Consideration Design
Document released May 19

Comment Period Ends June 10th

Summer Workshops Announced in July

Where to find materials

All workshop dates, **zoom links**, and materials are located at:
https://rowesternenergy.org/regional-resource-adequacy/

Reach out with questions or comments by emailing:
resourceadequacy@rowesternenergy.org

The ROWE is not a sponsor of the initiative or the initial stakeholder process, but is lending the use of its website for hosting materials.

Open Forum for Discussion

- Please raise your hand to be unmuted
- Announce your affiliation/entity you represent

Next Steps

Review Consideration Design Document: Modeling and Metrics (published May 12) to prepare for Workshop #3 (May 19)