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Contingency Mitigation Option Development and Triggering

2016 Integrated Energy Policy Report

Sacramento, California

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Terminology

- Contingency
  - The things that go wrong and lead to a potential reliability problem
- Mitigation Options
  - Measures designed to resolve a specific problem
  - Each is developed as far as possible and put “on the shelf” waiting to be triggered if necessary
- Triggering an Option
  - A recommendation that an “on the shelf” mitigation measure be launched into its established approval process, and if approved, its development process

Framework

- Enhanced Monitoring & Assessment Systems
  - Track resource and transmission project development closely for both preferred and conventional resources
  - Use monitoring data to update future projections
  - If expected resource development falls short compared to reliability requirements, consider triggering mitigation
- Contingency Mitigation Measures
  - Goal – have measures “on the shelf” ready to be triggered
  - Mitigation Measures Being Evaluated
    - OTC facility deferral
    - New conventional generation
- Update Agency Leadership Regularly

MITIGATION BY OTC DEFERRAL

OTC Compliance Date Deferral

- OTC Policy Recognizes Possible Need to Shift Compliance Dates to Ensure Reliability
- Two Forms of Deferral:
  - 90 day emergency triggered by ISO
  - Proposals for longer delays reviewed by SACCWIS
- SACCWIS Process
  - Composed of 6 state agencies and CAISO
  - Reviews any specific requests, reviews progress toward compliance, and provides a recommendation to SWRCB
- SWRCB Chooses How to Respond to a Request

Approval Considerations

- Specificity – Units to be Deferred and the Rationale
- Assure Compliance – How and When will Compliance be Achieved
- Use Existing Processes – SACCWIS
- Be Timely – Transparent Decision-making Suggests about One Year Lead Time for Approval
- Recognize Consequences – Requests for Compliance Dates beyond 12/31/2022 Require Additional Mitigation

Deferral Timeline

Step	Elapsed Time
Conduct analyses and prepare a draft request to SACCWIS ready for public comment	Various depending on complexity and need for new analyses
Comment period for draft request	30 days
Respond to comments, revise request and conduct SACCWIS meeting	45 days
SWRCB review of SACCWIS report and preparation of the staff recommendation	60 days
Public notice, comment, comment response, Board consideration	120 days
Board Reconsideration (if needed)	60 days (if needed)
Preparation of OAL package and review by OAL	90 days

Remaining Issues

- How Far Ahead of Official Compliance Date to Submit Request?
  - As soon as it is clear compliance cannot occur
  - Once we know the deferral time interval
  - When specific units can be identified
- Who Submits Deferral Request to SACCWIS?
  - Technical staff of the energy agencies concerned about reliability consequences of an OTC closure
- How are Maintenance and Operating Costs Repaid?

NEW GENERATION OPTION

Previous Options

- Option 1: Utility Request for Offer (RFO) to Elicit Project Proposals from Developers
- Option 2: Utility Develops Project through Permit, Turn Over to Developers once Triggered
- Option 3: Rely Exclusively on a Pool of Already Permitted Projects without Power Purchase Agreements (PPA)

Approach: Rely on Permitted Projects

- Step 1: Monitoring Pool of Permitted Projects
  - CEC staff monitors pool of developer initiated projects that have received permits
- Step 2: Project Selection and Approval
  - Utility uses selects project from pool
  - Developer submits modifications to permit, if required
  - Utility submits PPA to CPUC for approval
- Step 3: Project Construction
  - Developer orders equipment & selects contractor
  - Project team constructs the project

Timeline

Step	Activity	Elapsed Time
Monitoring	CEC monitors pool	ongoing
	Surplus/Deficit analysis leads to triggering decision	3 months
Project Selection	IOU select project	5 months
	Final permitting	0-9 months
	IOU submits PPA and CPUC approves PPA	6 months
Construction	Equipment ordering, contractor selection, actual construction, acceptance testing	21-35 months

Pool of Projects

Project Name	Capacity	Location	Expected Date Permit Granted	Nominal Date Permit Expires	Permit Status
Carlsbad, Unit 6	100MW	San Diego	October 2015	October 2017	Permitted in October 2015 by the CEC as part of NRG's 600 MW Carlsbad project
Huntington Beach, Phase 2	200MW	Orange County	December 2016	December 2018	In CEC AFC permitting process as part of AES's 840 MW Huntington Beach project
Alamitos, Phase 2	400MW	West LA Basin	December 2016	December 2018	In CEC AFC permitting process as part of AES' 1,040 MW Alamitos project

Next Steps for this Option

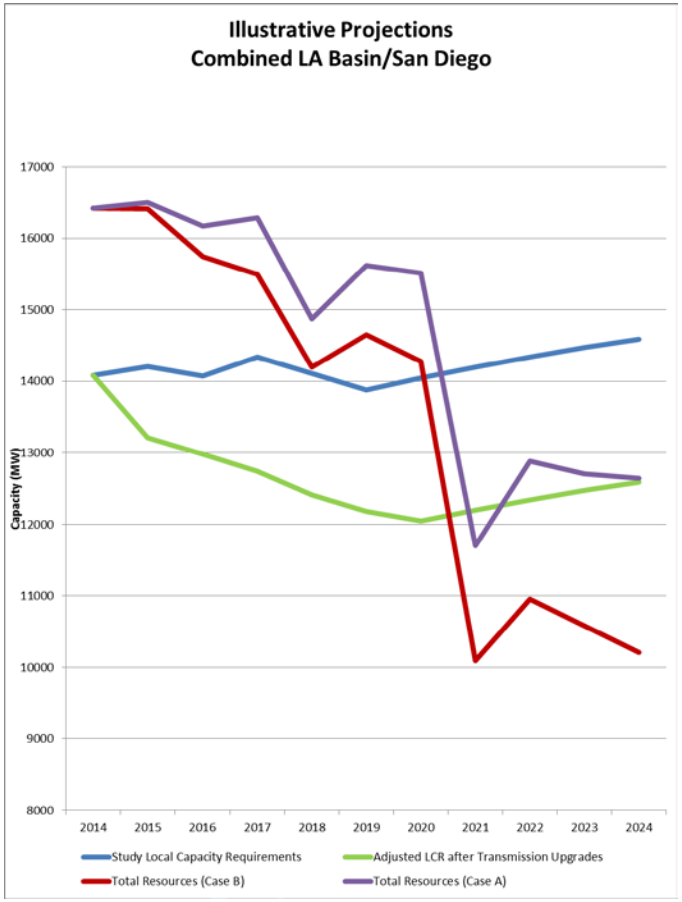
- OTC deferral option is ready to be implemented, if needed
- Generation construction option continues to have detailed questions:
  - longevity of initial permits,
  - steps to “refresh” permit, “update” a permit, “start over” with new permit
  - Initiate effort to resolve remaining issues

USING THE TOOL TO INFORM TRIGGERING PROCESS

Analyses to Support Decisions

- Regular Activity
  - Update and run LCAAT periodically or as significant new information becomes available.
  - Communicate results to staff of other agencies.
- If LCAAT Results Show Future Deficits
  - Identify any independent information that can inform a decision.
  - Brief agency management team.
  - Request ISO to conduct a power flow study.
- If Power Flow Studies Confirm LCAAT
  - Provide analyses and recommendation to decision-makers

Triggering Mitigation Measures

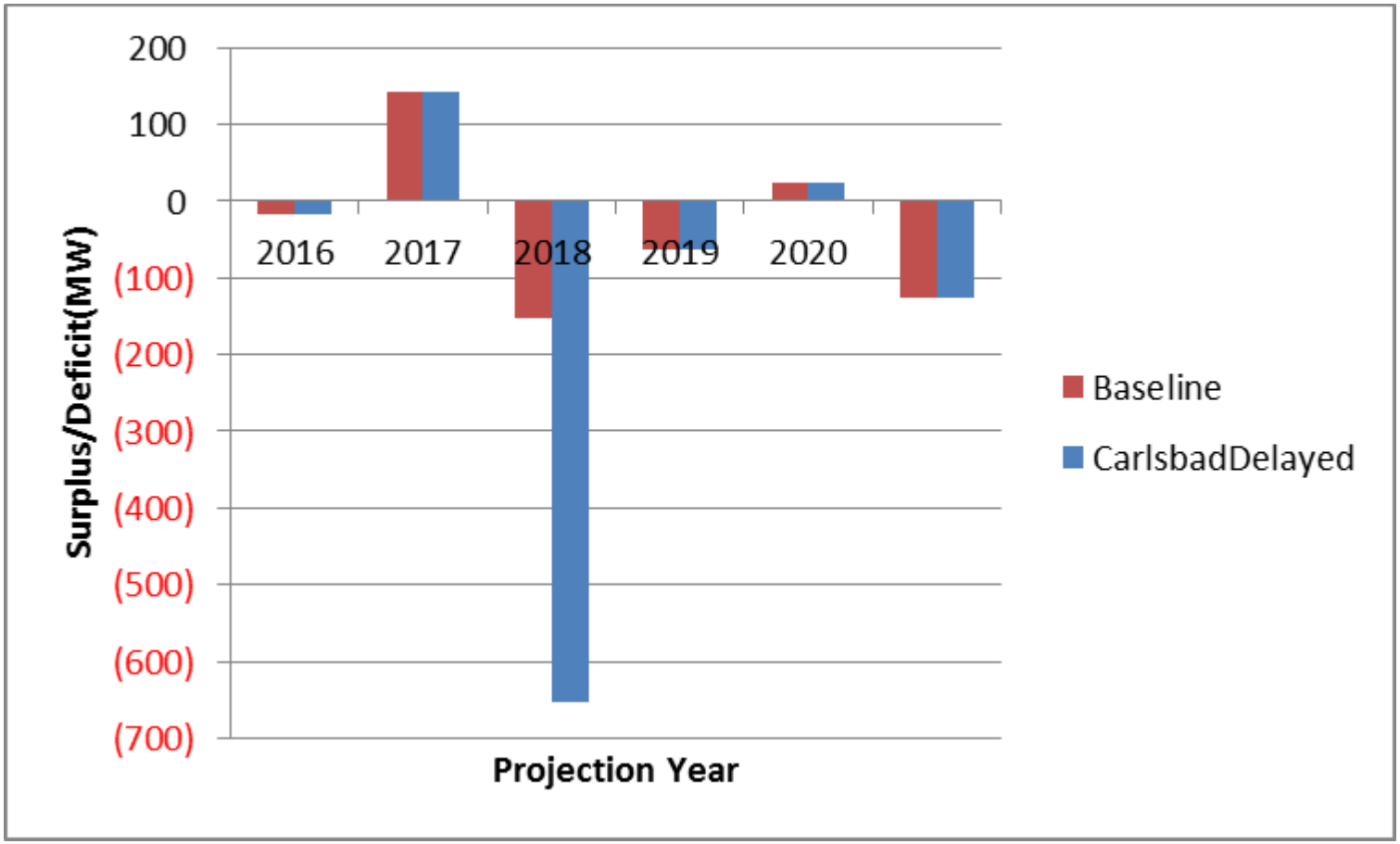


- Projection pattern dictates mitigation
- Case A - projections show a temporary gap
  - Trigger submission of a compliance date deferral request to SWRCB
- Case B - projections show a permanent gap
  - Trigger new fossil capacity option

Mitigation Measure Selection

- Nature of the surplus/deficit
  - Amount: small or large
  - Time period: limited or permanent
  - Area in which deficit is predicted to occur
- Considerations
  - The uncertainty of shortfall estimates
  - Other planning information not used in studies
  - The elapsed time from triggering until the solution could be operational
  - Feasibility of off ramps if new information emerges

Example: Carlsbad in SD Subarea



Current Situation

- Carlsbad is now sufficiently delayed that the agencies will likely need to make an deferral request – the issues are how much Encina capacity to defer and for how long
- Serious concerns now exist for deferral of Redondo Beach or Alamitos due to expected delays in Mesa Loop-In transmission project
- California ISO intends to provide study results
- SACCWIS will consider Encina deferral

QUESTIONS?