



Assembly Concurrent Resolution 188 (ACR188 Report)

Initial Stakeholder Meeting
10/17/2022

Reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO permission.
- Calls are structured to stimulate open dialogue and engage different perspectives with the understanding that stakeholders have reviewed the material.
- In the interest of time, please refrain from repeating or reiterating what has already been said.
- If you need technical assistance during the meeting, please send a chat to the event producer.

Thank you for joining us, and we look forward to an engaging discussion.

Questions

- Please raise your hand using the “raise hand” feature in Zoom, or submit your question through the chat.
- Please state your name and organization when asking your question.

Agenda

Topic	Presenter
Meeting logistics and introductions	Isabella Nicosia
Welcome <ul style="list-style-type: none">• ACR 188 background• Partnering with California Balancing Authorities	Stacey Crowley
ACR 188 overview	Phil Pettingill
Project schedule and stakeholder engagement	Phil Pettingill
National Renewable Energy Laboratory (NREL) Introductions	Scott Haase
Review of draft “List of Studies”	CAISO & NREL
Questions	CAISO & NREL
Next steps	Phil Pettingill

CA Balancing Authorities (BAs) are partnering with us on the report



BANC



Regional coordination background

California Senate Bill 350 - directed the ISO to study the impacts of expanding the electricity grid over the western United States

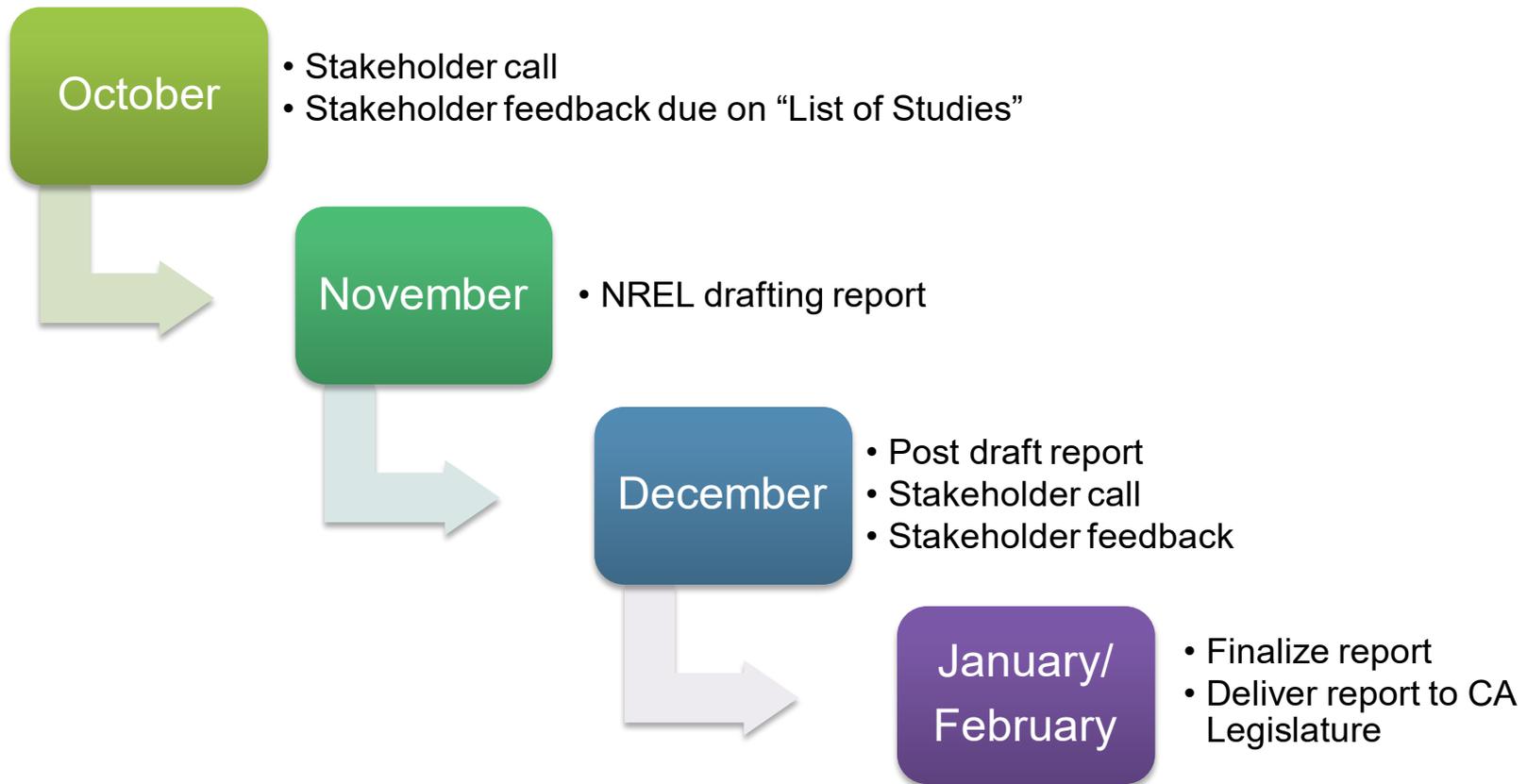
- Conducted by leading experts, the study (2016) assessed impacts to the economy, disadvantaged communities, emissions of greenhouse gases, grid reliability and integration of renewable resources
- The study concluded that a multi-state, regional electric market and grid overseen by the ISO would provide significant environmental and economic benefits to California and the West
- SB 350 added language on the intent to pass legislation to restructure ISO governance but the legislation did not pass

Assemblyman Holden introduced ACR 188 to provide the legislature with the most recent information on organized energy markets and regional transmission organization efforts in California and the west in order to assess what can be done to realize these benefits.

ACR 188 overview - [Assembly Concurrent Resolution 188](#)

- Resolution requires ISO, in consultation with the CA BAs, to produce a report identifying and summarizing:
 - Recent relevant studies on the impacts of expanded regional cooperation on California
 - Key issues to most effectively advance the state’s energy and environmental goals
 - Impact of regionalization on transmission costs and reliability for California ratepayers
 - Relevant updates to specified transmission development and resource diversity estimates (SB 100)
 - Updates to specified transmission development and resource diversity estimates, and discusses regional transmission organizations in Colorado, Nevada, and other regional states
 - Collaboration between states on energy policies to maximize consumer savings while respecting state policy autonomy, and engagement between neighboring states on the future of regional transmission organizations in the west
 - Report to be delivered to the CA Legislature on February 28, 2023
- ISO has engaged NREL to author the report on relevant studies

Timeline and opportunity for stakeholder input



ACR 188 – draft “List of Studies” review



- Initial list of Studies includes 30 publically available reports
- Study list is not static - NREL would like feedback on:
 - Any additional studies to consider
 - Specific comments on any report relevancy, content, or shortfalls
 - Any report that should not be included (provide supporting comments)
 - General comments on the list

ACR 188 – draft “List of Studies” review



Theme: technical

Type	Title	Year	Prepared for
Technical	Regional and Interregional Transmission Have Significant Economic Value	2022	US Department of Energy (DOE)
Technical	Western RTO Economic Impact Study - Region-Wide Analysis	2022	Advanced Energy Economy
Technical	The State-Led Market Study	2021	DOE, State energy offices of Utah, Idaho, Colorado, and Montana
Technical	Colorado Transmission Coordination Act Evaluation of Market Alternatives	2021	Colorado Public Utilities Commission
Technical	Implications of a regional resource adequacy program on utility-integrated resource planning	2020	DOE
Technical	Western Flexibility Assessment: Investigating the West’s Changing Resource Mix and Implications for System Flexibility	2019	Western Interstate Energy Board
Technical	Senate Bill 350 Study: The Impacts of a Regional ISO-Operated Power Market on California	2016	CAISO
Technical	Analysis of Benefits of an Energy Imbalance Market in the NWPP	2013	Northwest Power Pool
Technical	WECC EDT Phase 2 EIM Benefits Analysis & Results (October 2011 Revision)	2011	Western Electricity Coordinating Council

ACR 188 – draft “List of Studies” review



Theme: policy

Type	Title	Year	Prepared for
Policy	Arizona Corporation Commission docket memo from Office of Chairwoman Lea Marquez Peterson	2021	Arizona Corporation Commission
Policy	Colorado Transmission Coordination Act: Investigation of Wholesale Market Alternatives for the State of Colorado (CO PUC)	2021	Colorado Legislature
Policy	CO PUC, Commission Decision Determining Market Participation is in the Public Interest	2021	Colorado Public Utilities Commission
Policy	Regional Transmission Organization Study: Oregon Perspectives	2021	The Oregon Legislature
Policy	Staff paper: Qualitative Assessment of Potential Reliability Benefits from a Western Energy Imbalance Market	2013	FERC

ACR 188 – draft “List of Studies” review



Theme: other

Type	Title	Year	Prepared for
Periodic report	WEIM Quarterly Reports	2014-2022	CAISO
Other	In Support of Western Regional Resource and Transmission Planning Coordination	2021	Western Interconnection Regional Electricity Dialogue (WIRED)
Other	Prospect of a New Western Regional Transmission Organization	2021	Congressional Research Service
Other	Transmission Benefits All Users of the Power Grid	2021	Grid Strategies
Other	Potential customer benefits of interregional transmission	2021	American Council on Renewable Energy (ACORE)
Other	Grid Vision: The Electric Highway to a 21st Century Economy	2019	American Wind Energy Association (AWEA)
Other	Improving Transmission Planning: Benefits, Risks, and Cost Allocation	2019	Midwestern Governors Association & Organization of MISO States
Other	A Regional Power Market for the West - Risks and Benefits	2018	Next 10
Other	Enhanced Western Grid Integration: A Legal and Policy Analysis of the Effects on California’s Clean Energy Laws	2017	Yale Environmental Protection Clinic
Other	Regulation and Markets: Ideas for Solving the Identity Crisis	2017	Wilkenson Barker Knaur
Other	Evaluation of Jurisdictional and Constitutional Issues Arising from CAISO Expansion to include PacifiCorp Assets	2016	CAISO

ACR 188 – draft “List of Studies” review



Market Proposal

Type	Title	Year	Prepared for
Market Proposal	A Proposal for Southwest Power Pool's Western Day-Ahead Market and Related Services [DRAFT]	2022	SPP
Market Proposal	Benefits of the SPP RTO Expansion into the WEIS Footprint	2022	Western Area Power Administration
Market Proposal	NWPP Resource Adequacy Program - Detailed Design	2021	Northwest Power Pool
Market Proposal	Extended Day-Ahead Market: Feasibility Assessment - Update from EIM Entities	2019	EIM Entities
Market Proposal	Examination of Potential Benefits of an Energy Imbalance Market in the Western Interconnection	2013	DOE, PUC EIM Group



California ISO

Questions



ACR 188 Project Webpage:

<http://www.caiso.com/informed/Pages/RegionalSolutions.aspx>

❖ Stakeholder comments due by October 26th

Questions or comments on ACR 188 – send to:

infoACR188@caiso.com

Appendix: draft “List of Studies”

Type	Title	Year	Prepared for	Prepared by	Link
Technical	Regional and Interregional Transmission Have Significant Economic Value	2022	US Department of Energy (DOE)	Lawrence Berkeley National Laboratory (LBNL)	“Regional and Interregional Transmission Have Significant Economic Value”, August 1, 2022
Technical	Western RTO Economic Impact Study - Region-Wide Analysis	2022	Advanced Energy Economy	Energy Strategies, LLC, and Peterson & Associates	“Western RTO Economic Impact Study - Region-Wide Analysis”, July 27, 2022
Technical	The State-Led Market Study	2021	DOE, State energy offices of Utah, Idaho, Colorado, and Montana	Energy Strategies, LLC	“The State-Led Market Study”, July 30, 2021
Technical	Colorado Transmission Coordination Act Evaluation of Market Alternatives	2021	Colorado Public Utilities Commission	Siemens	https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=948065&p_session_id=
Technical	Implications of a regional resource adequacy program on utility-integrated resource planning	2020	DOE	UT Austin (Carvalho, Zhang, Leibowicz); LBNL; WIEB (Carr, Galbraith), Larsen	“Implications of a regional resource adequacy program on utility-integrated resource planning.” November 2020
Technical	Western Flexibility Assessment: Investigating the West’s Changing Resource Mix and Implications for System Flexibility	2019	Western Interstate Energy Board	Energy Strategies	“Western Flexibility Assessment: Investigating the West’s Changing Resource Mix and Implications for System Flexibility”, December 10, 2019
Technical	Senate Bill 350 Study: The Impacts of a Regional ISO-Operated Power Market on California	2016	CAISO	Brattle Group, E3 Consulting, Berkeley Economic Advising and Research, Aspen Environmental Group	“Senate Bill 350 Study: The Impacts of a Regional ISO-Operated Power Market on California”, July 8, 2016
Technical	Analysis of Benefits of an Energy Imbalance Market in the NWPP	2013	Northwest Power Pool	Pacific Northwest National Laboratory	“Analysis of Benefits of an Energy Imbalance Market in the NWPP”, October 2013
Technical	WECC EDT Phase 2 EIM Benefits Analysis & Results (October 2011 Revision)	2011	Western Electricity Coordinating Council	E3 Consulting	“WECC EDT Phase 2 EIM Benefits Analysis & Results (October 2011 Revision)”, October 11, 2011
Policy	Arizona Corporation Commission docket memo from Office of Chairwoman Lea Marquez Peterson	2021	Arizona Corporation Commission	Chairwoman Lea Marquez Peterson	Arizona Corporation Commission re: Docket E-00000A-21-0271.. October 6, 2021
Policy	Colorado Transmission Coordination Act: Investigation of Wholesale Market Alternatives for the State of Colorado (CO PUC)	2021	Colorado Legislature	Colorado Public Utilities Commission	CO PUC, “Colorado Transmission Coordination Act: Investigation of Wholesale Market Alternatives for the State of Colorado,” December 1, 2021
Policy	CO PUC, Commission Decision Determining Market Participation is in the Public Interest	2021	Colorado Public Utilities Commission	Colorado Public Utilities Commission	CO PUC, “Commission Decision Determining Market Participation is in the Public Interest.” November 12, 2021
Policy	Regional Transmission Organization Study: Oregon Perspectives	2021	The Oregon Legislature	Oregon Department of Energy, Oregon Public Utility Commission	“Regional Transmission Organization Study: Oregon Perspectives”, December 2021
Policy	Staff paper: Qualitative Assessment of Potential Reliability Benefits from a Western Energy Imbalance Market	2013	FERC	FERC Staff	“Staff paper: Qualitative Assessment of Potential Reliability Benefits from a Western Energy Imbalance Market”, February 26, 2013
Periodic report	WEIM Quarterly Reports	2014-2022	CAISO	CAISO Staff	WEIM Quarterly Reports, 2014 through 2022
Other	In Support of Western Regional Resource and Transmission Planning Coordination	2021	Western Interconnection Regional Electricity Dialogue (WIRED)	Gridworks, Center for the New Energy Economy	“In Support of Western Regional Resource and Transmission Planning Coordination”, October 2021
Other	Prospect of a New Western Regional Transmission Organization	2021	Congressional Research Service	Congressional Research Service	“Prospect of a New Western Regional Transmission Organization”, September 8, 2021
Other	Transmission Benefits All Users of the Power Grid	2021	Grid Strategies	Michael Coggin	“Transmission Benefits All Users of the Power Grid”, October 11, 2021
Other	Potential customer benefits of interregional transmission	2021	American Council on Renewable Energy (ACORE)	Submitted by General Electric International	“Potential customer benefits of interregional transmission”, November 29, 2021
Other	Grid Vision: The Electric Highway to a 21st Century Economy	2019	American Wind Energy Association (AWEA)	American Wind Energy Association (AWEA)	“Grid Vision: The Electric Highway to a 21st Century Economy”, May 2019
Other	Improving Transmission Planning: Benefits, Risks, and Cost Allocation	2019	Midwestern Governors Association & Organization of MISO States	Johannes Pfeifenberger, the Brattle Group	“Improving Transmission Planning: Benefits, Risks, and Cost Allocation”, November 6, 2019
Other	A Regional Power Market for the West - Risks and Benefits	2018	Next 10	PaulosAnalysis	“A Regional Power Market for the West - Risks and Benefits”, July 2018
Other	Enhanced Western Grid Integration: A Legal and Policy Analysis of the Effects on California’s Clean Energy Laws	2017	Yale Environmental Protection Clinic	Juliana Brint, Josh Constanti, Franz Hochstrasser, and Lucy Kessler	“Enhanced Western Grid Integration: A Legal and Policy Analysis of the Effects on California’s Clean Energy Laws”, May 2017
Other	Regulation and Markets: Ideas for Solving the Identity Crisis	2017	Wilkinson Barker Knauer	Tony Clark	“Regulation and Markets: Ideas for Solving the Identity Crisis”, July 2017
Other	Evaluation of Jurisdictional and Constitutional Issues Arising from CAISO Expansion to include PacifiCorp Assets	2016	CAISO	Ann E. Carlson and William Boyd	“Evaluation of Jurisdictional and Constitutional Issues Arising from CAISO Expansion to include PacifiCorp Assets”, August 1, 2016
Market Proposal	A Proposal for Southwest Power Pool’s Western Day-Ahead Market and Related Services [DRAFT]	2022	SPP	SPP Staff	“A Proposal for Southwest Power Pool’s Western Day-Ahead Market and Related Services,” Draft
Market Proposal	Benefits of the SPP RTO Expansion into the WEIS Footprint	2022	Western Area Power Administration	Brattle	https://www.wapa.gov/About/keytopics/Documents/2022-spp-rto-brattle-study.pdf
Market Proposal	NWPP Resource Adequacy Program - Detailed Design	2021	Northwest Power Pool	Northwest Power Pool	https://www.westernpowerpool.org/private-media/documents/2021-08-30-NWPP-RA-2B-Design-v4-final.pdf
Market Proposal	Extended Day-Ahead Market: Feasibility Assessment - Update from EIM Entities	2019	EIM Entities	Brattle Group and E3 Consulting	“Extended Day-Ahead Market: Feasibility Assessment - Update from EIM Entities”, October 3, 2019
Market Proposal	Examination of Potential Benefits of an Energy Imbalance Market in the Western Interconnection	2013	DOE, PUC EIM Group	National Renewable Energy Laboratory	“Examination of Potential Benefits of an Energy Imbalance Market in the Western Interconnection”, March 2013