Regional Cooperation on Electric Power System Resource Adequacy

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Oregon House of Representatives
Energy and Environment Committee

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Western Interstate Energy Board

The Western Interstate Energy Board (WIEB) mission is to promote energy policy that is developed through the cooperative efforts of WIEB member states and provinces, and in collaboration with the federal government.

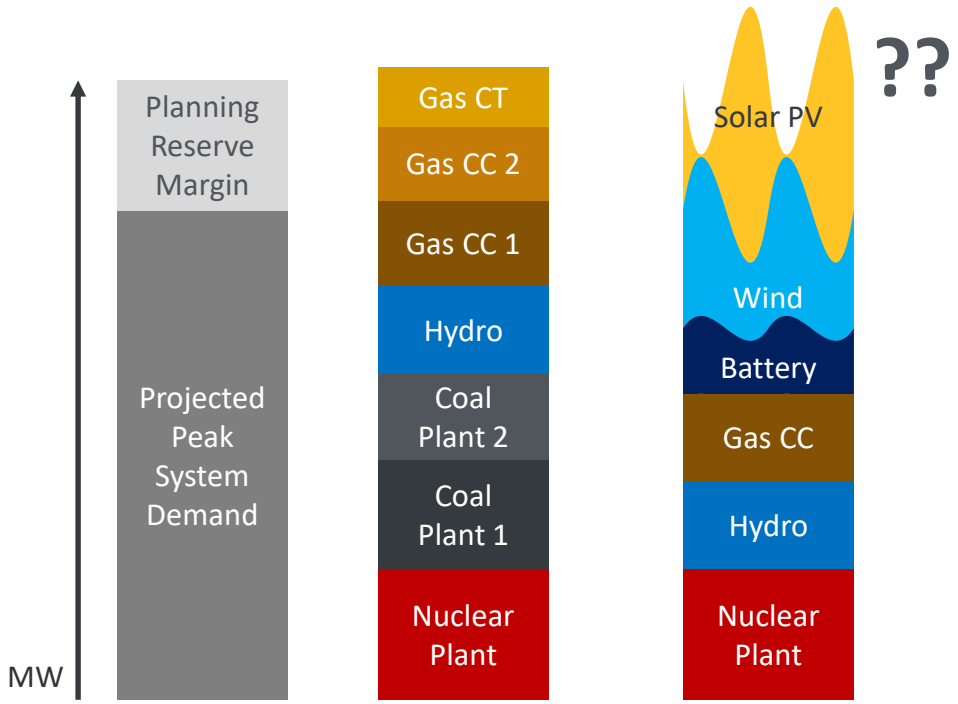
WIEB accomplishes this mission by providing the tools and framework necessary to support cooperative efforts among the states and provinces in the West.

Framework for Cooperative Efforts

WIEB provides technical expertise and staff support to the following regional committees:

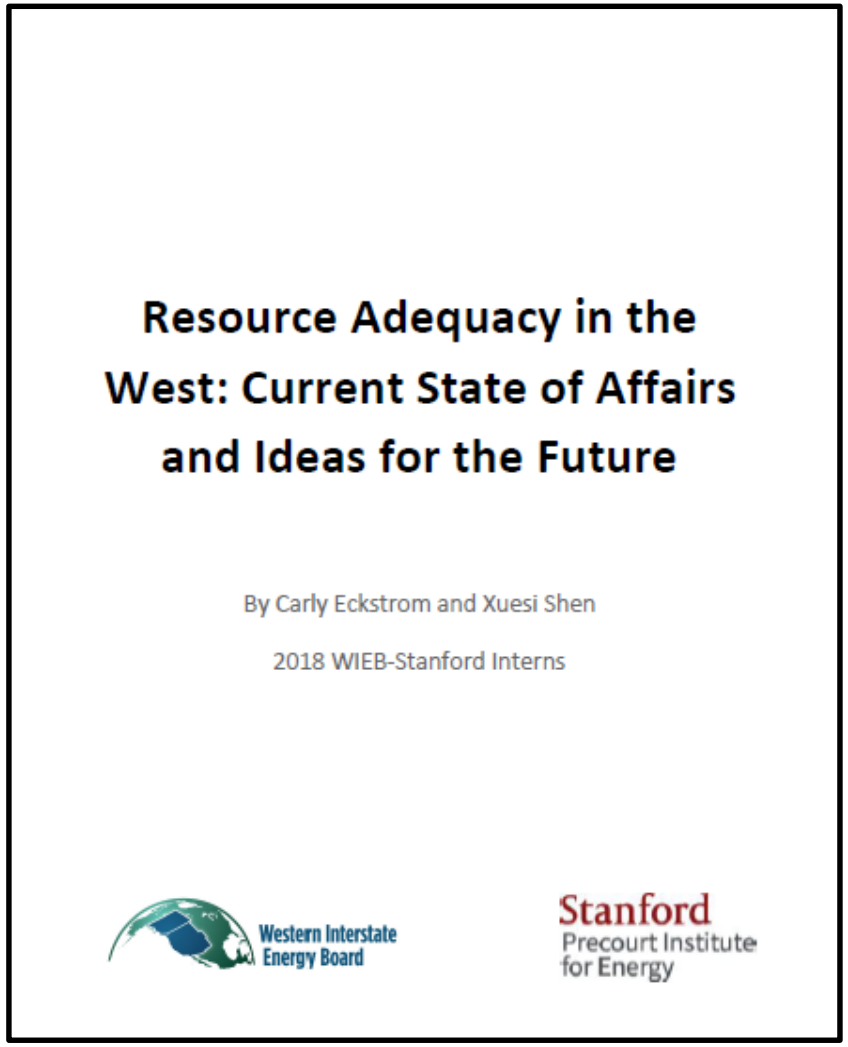
- High-Level Radioactive Waste Committee (HLRWC)
- Committee on Regional Electric Power Cooperation (CREPC)
- Western Interconnection Regional Advisory Body (WIRAB)
- Western EIM Body of State Regulators (EIM-BOSR)

Resource Adequacy



- Resource adequacy (RA) refers to the ability of an electric power system to meet demands for electricity using its supply-side and demand-side resources.
- RA is becoming increasingly complex due to plant retirements and higher penetration of variable renewable energy resources that translate to higher uncertainty with the amount of generation that will be available during periods of peak demand.

Lack of Data on Capacity Commitments

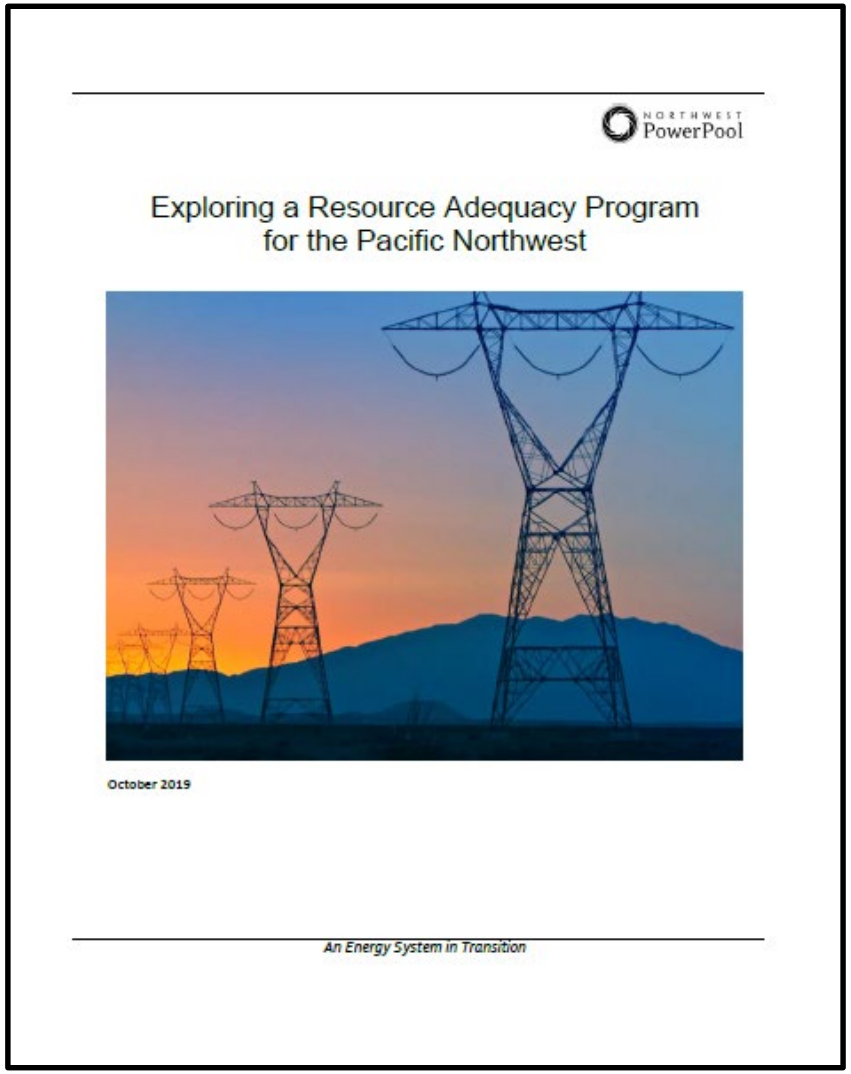


"Our proposal seeks to fill the need for an information collection framework that will allow regulators to easily track physical capacity and ensure that there is sufficient, dispatchable built generation to meet FOT obligations during coincident peaking events. This information collection framework will allow regulators to track built capacity, especially capacity that is dispatchable."

Initial Conclusions

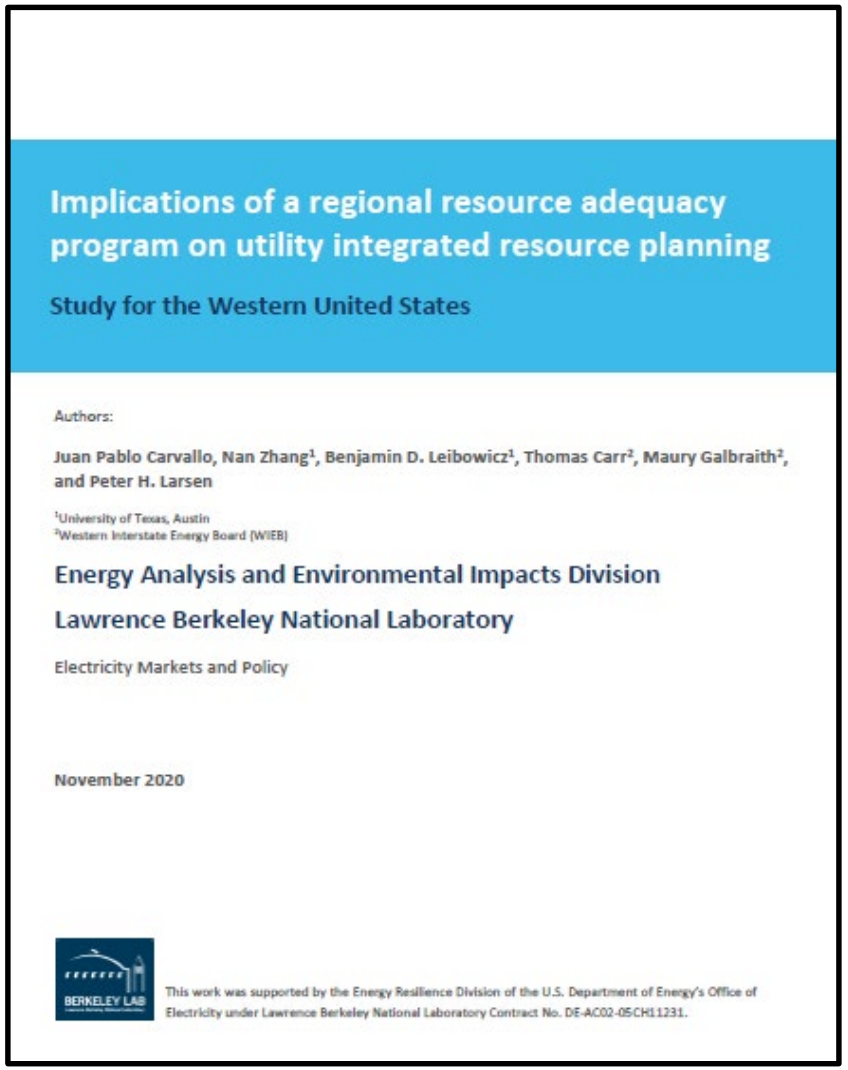
- Skepticism about the single utility approach because it can result in a costly regional overbuild of capacity.
- Skepticism about reliance on market purchases because currently there is no identification of physical resources.
- Data-driven analysis of capacity commitments and information sharing is the solution.

Industry Response to the Problem



"A regional RA program could offer ratepayers two key benefits. First and foremost, an RA program would ensure that sufficient generation is available to reliably serve demand during periods of grid stress. Second, a regional RA program could also produce cost savings by allowing utilities to rely on other entities' resources rather than building their own at higher cost."

Impact on State Processes



Implications of a regional resource adequacy program on utility integrated resource planning

Study for the Western United States

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"IRP processes will not fundamentally change when an LSE joins a regional RA program. However, some key IRP assumptions or resource adequacy components will be impacted. This report identifies two resource adequacy components of IRP that will be highly impacted: (1) RA targets and (2) resource capacity accreditation."

RA Components of Utility IRP

High Impact
Medium Impact
Low Impact

IRP RA Component Impacted	Impact of Regional RA Program	Control Allocation
RA Reliability Targets		Regional
Load Forecast		Shared
Demand-side Resources		Local
Modelling Approach		Local
Resource Capacity Credit		Regional
Market Transactions		Local
Transmission Expansion		Shared
Emerging Technologies		Local
Load Uncertainty		Local
Power Supply Uncertainty		Local
Preferred Portfolio / Utility Resource Mix		Local

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More Conclusions

- A Regional RA Program can produce reliability benefits and cost savings by allowing utilities to rely on other entities' resources rather than building their own at higher cost.
- IRP processes will not fundamentally change when a utility joins a Regional RA Program.
- Two components of IRP could be highly impacted: (1) RA targets and (2) resource capacity accreditation.
- WIEB, CREPC, and WIRAB will continue to track the development of the NWPP Regional RA Program on behalf of Western states.

Questions?

Thank You!

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