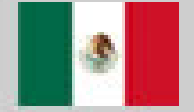




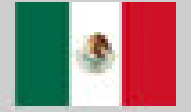
WIRAB Monthly Update

Maury Galbraith & Eric Baran
WIRAB Staff

September 3, 2020



Introductions and Roll Call



WIRAB Leadership Update: Kara Fornstrom, WIRAB Chair

Outline

- **WECC Activities**
 - WECC Update
 - Jordan White, WECC
 - WIRAB Advice on Western Focused Long-Term Reliability Assessment
- **WIRAB Activities:**
 - Upcoming Meetings





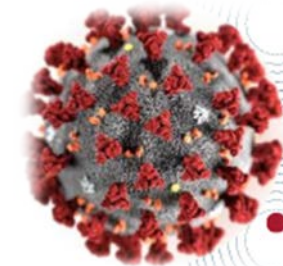
WIRAB Update

September 3, 2020

Jordan White
Vice President of
Strategic Engagement and
Deputy General Counsel

COVID-19 and WECC

- No target date for office re-opening. The health and safety of staff and stakeholders is most important
 - Initial re-opening will be voluntary
- All stakeholder meetings will be held **virtually through end of 2020**
- Go to wecc.org, click on COVID graphic for more information



Join Us Next Week!



Reliability and Security Workshop



State of the Interconnection Tool



The SOTI tool is an interactive data summary of last year's performance and review of trends in the Western Interconnection.

Coming Soon!

- WECC Resource Adequacy Forum
 - November, 2020
 - Agenda almost finalized
 - More information coming soon!



Stakeholder Engagement Task Force

- Task Force Created
- Reinventing the way WECC interacts with stakeholders with focus on committees
- 3 meetings have taken place to date
- Update to the Board in September
- Tasked with making recommendations to the Board by the end of 2020



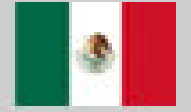


Contact:

Jordan White

Vice President of Strategic Engagement and
Deputy General Counsel

jwhite@wecc.org



Western Focused Long Term Reliability Assessment (LTRA)

Western Focused LTRA – Problem Statement

- Western utilities have been relying on market purchases (i.e., Front Office Transactions) to meet resource adequacy requirements.
- If multiple utilities rely on the same market supply for resource adequacy, then one or more utilities may be left short when supply and demand conditions are tight across the West.
- The NERC LTRA has contributed to the perception that there are significant surpluses of capacity in the Western Interconnection.



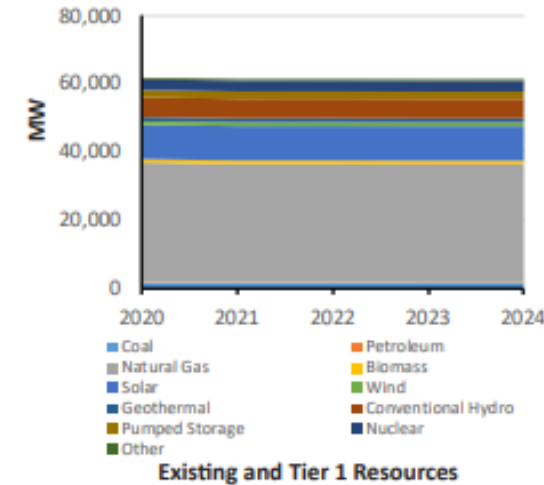
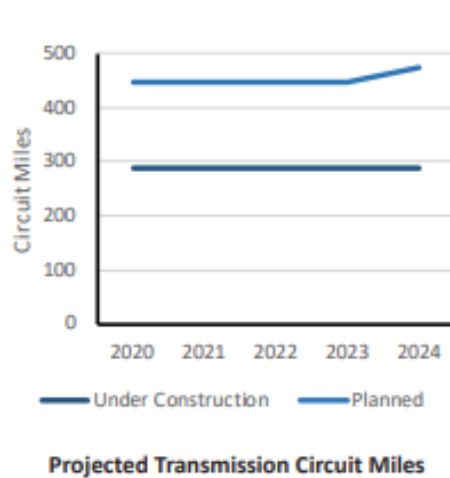
Four Steps to Improved Western LTRA

1. Calculate and show capacity surpluses/deficits prior to net firm imports.
2. Show and communicate capacity surpluses/deficits in megawatts, instead of reserve margin percentages.
3. Use the least favorable resource assumptions. The Western Focused LTRA should be an early warning system.
4. Provided detailed tables to inform public decision making.



2019 LTRA – CAMX Assessment Area

Demand, Resources, and Reserve Margins (MW)											
Quantity	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2029
Total Internal Demand	54,214	54,629	54,780	55,173	55,740	56,105	56,394	56,281	56,302	56,777	13,374
Demand Response	910	900	916	905	905	905	905	905	905	905	0
Net Internal Demand	53,303	53,729	53,864	54,268	54,835	55,200	55,489	55,376	55,397	55,872	13,374
Additions: Tier 1	92	470	485	491	941	946	952	1,172	1,172	1,172	614
Additions: Tier 2	2,032	2,046	2,046	2,046	2,046	2,046	2,046	2,046	2,046	2,046	825
Additions: Tier 3	0	0	0	0	0	0	0	0	0	0	1,465
Net Firm Capacity Transfers	659	1,427	817	1,216	2,020	2,945	3,050	2,995	3,033	3,560	1,400
Existing-Certain and Net Firm Transfers	62,371	62,383	61,773	62,121	62,481	63,110	63,215	63,095	63,133	63,660	14,684
Anticipated Reserve Margin (%)	17.18%	16.98%	15.58%	15.37%	15.66%	16.04%	15.64%	16.06%	16.08%	16.04%	14.39%
Prospective Reserve Margin (%)	21.00%	20.79%	19.38%	19.14%	19.39%	19.75%	19.32%	19.75%	19.77%	19.70%	20.55%
Reference Margin Level (%)	13.74%	13.87%	13.88%	13.84%	13.91%	13.87%	13.86%	13.89%	13.91%	13.89%	9.73%



Revisualization of CAMX Assessment Area

Quantity	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Net Internal Demand	53,303	53,729	53,864	54,268	54,835	55,200	55,489	55,376	55,397	55,872
Reference Reserve Margin (%)	13.74%	13.87%	13.88%	13.84%	13.91%	13.87%	13.86%	13.89%	13.91%	13.89%
Reference Capacity (MW)	60,627	61,181	61,340	61,779	62,463	62,856	63,180	63,068	63,103	63,633
Existing-Certain Capacity	61,712	61,712	61,712	61,712	61,712	61,712	61,712	61,712	61,712	61,712
Retirements	-	(756)	(756)	(807)	(1,251)	(1,547)	(1,547)	(1,612)	(1,612)	(1,612)
Additions: Tier 1	92	470	485	491	941	946	952	1,172	1,172	1,172
Anticipated Internal Capacity	61,804	61,426	61,441	61,396	61,402	61,111	61,117	61,272	61,272	61,272
Surplus/Deficit Capacity (MW)	1,177	245	101	(383)	(1,061)	(1,745)	(2,063)	(1,796)	(1,831)	(2,361)
Net Firm Transfers (MW)	659	1,427	817	1,216	2,020	2,945	3,050	2,995	3,033	3,560
Adjusted Surplus (MW)	1,836	1,672	918	833	959	1,200	987	1,199	1,202	1,199

Revisualization of WECC-CAMX in NERC 2019 LTRA (page 99)

1. Communicates in capacity surplus/deficit (MW) instead of reserve margins (%).
2. Explicitly shows capacity retirements. Regulators and policy makers still need more detail.
3. Shows capacity surplus/deficits prior to net firm imports.



Risk Determinations - 2024

	Summer Peaking Assessment Areas			
	With Firm Transfers		Without Firm Transfers	
Assessment Area	Expected Capacity Surplus or Shortfall (MW)	Assesment Result	Expected Capacity Surplus or Shortfall (MW) Without Firm Transfers	Assesment Result
WECC-AB				
WECC-BC				
WECC-CAMX	959	Adequate	(1,061)	Marginal
WECC-NWPP-US	3,288	Adequate	792	Adequate
WECC-RMRG	589	Adequate	589	Adequate
WECC-SRSG	915	Adequate	(565)	Marginal
Total	5,752		(244)	

Revisualization of Risk Determination in NERC 2019 LTRA (page 12)

1. Shows capacity surplus/deficits prior to net firm imports. Several “marginal” regions with shortfalls larger than the surpluses in the “adequate” regions?
2. What happens in west-wide heat wave?



View From the Other Shore

- All four summer peaking regions of the Western Interconnection begin to show capacity shortfalls in the 2019 NERC LTRA:
 - WECC-CAMX (2023)
 - WECC-NWPP (2026)
 - WECC-SRSG (2023)
 - WECC-RMRG (2026)
- Instead of showing or discussing these results, the 2019 LTRA assumes that each region will rely on the other regions for resource adequacy, in the form of Net Firm Transfers.



Four Steps to Improved Western LTRA

1. Calculate and show capacity surpluses/deficits prior to net firm imports.
2. Show and communicate capacity surpluses/deficits in megawatts, instead of reserve margin percentages.
3. Use the least favorable resource assumptions. The Western Focused LTRA should be an early warning system.
4. Provided detailed tables to inform public decision making.



Upcoming Meetings

WIRAB Monthly Teleconference Meeting

First Thursday of every month at 11:00 AM MT

Next Meeting: October 1, 2020 at 11:00 AM MT

Fall 2020 Joint CREPC-WIRAB Meeting

In-person meeting canceled

Virtual alternative TBD





Thank You

Maury Galbraith

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