

Resource Adequacy Metrics Determination

January 13, 2020

Current Status

Section 14(1)(f) of CETA requires each utility to determine metrics for resource adequacy (RA) for the resource plan consistent with the forecasts. The CETA does not define resource adequacy and to-date no state or federal agency provides any definition beyond broad sweeping terms. NERC defines the reliability of the interconnected BPS in terms of two basic and functional aspects, Adequacy and Operating Reliability. NERC differentiates these further:

Adequacy: is the ability of the electric system to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled and reasonably expected unscheduled outages of system components.

Operating Reliability: is the ability of the electric system to withstand sudden disturbances, such as electric short circuits or unanticipated loss of system components

In Pacific Northwest, it has been in the purview of the either the Balancing Area, or the Load Serving Entity to determine what, if any, RA standards it may strive to meet.

Currently, Clark Public Utilities as an LSE uses a 12% planning margin as the metric for RA. CPU calculates a deterministic load/resource balance for each month of the year using 112% of a one-hour peak load as its obligation. Normal weather drives the peak load forecast. Subtracting expected resources from the 112% of load calculation determines CPU's resource adequacy.

Regional Focus

Aside from the newfound interest at the state level in resource adequacy, the Pacific Northwest utility community is also shining a bright light on resource adequacy through several different efforts.

Pacific Northwest Power Supply Annual Adequacy Assessment

The first effort is really a continuing effort that began in the late 1990s timeframe. The Northwest Power and Conservation Council (Council) publishes an annual Adequacy Assessment for the region as a whole. For the past 15 or so years, most members of the utility community ignored the outcomes. Results indicated plenty of surplus resources as loads held steady or shrank due to conservation and resource levels held steady or

even increased. This state of adequacy provided no reason for concern by any individual utility regardless of its own position.

Recently the Adequacy Assessment has signaled some concern about the region's position. If an individual were to apply the Council's own standard, the region appears to be resource inadequate starting next year (2021) with a small departure from its own established metric and by 2026, the region is very resource inadequate.

The Council is exploring many RA metrics and standards that more clearly delineate and comprehensively define RA. The Council's Resource Adequacy Advisory Committee (<https://www.nwcouncil.org/energy/energy-advisory-committees/resource-adequacy-advisory-committee>) is the forum for these efforts and discussions.

Northwest Power Pool Resource Adequacy Program

The Northwest Power Pool (NWPP) is a voluntary organization of primarily major generating utilities serving the Pacific Northwest of the United States and the Pacific Southwest of Canada. The NWPP primarily focuses on utility operations, planning, and operating reserve sharing. From these common interests, RA has emerged as a topic of great interest to the NWPP membership. The NWPP began a journey in October 2019 toward developing an RA program for its members.

(<https://www.nwpp.org/resources/?name=&workgroup=12>)

As this effort has just started, no definitive answers or requirements of the program are available. However, given the history of the NWPP and its abilities to bring the utilities together to form arrangements for the betterment of the region and its member utilities, it is highly likely that standards or standard approaches will materialize from these efforts.

Conclusion

Clark Public Utilities believes it has always met the CETA requirement that each IRP include RA metrics. The use of the 12% planning margin serves that purpose. CPU will stay involved with both the Council's efforts and the developments of the NWPP's RA program. CPU will update or change its approach toward RA metrics and standards as conditions require.

For Further Reading/Viewing

https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2019.pdf

<https://www.nwcouncil.org/sites/default/files/2024%20RA%20Assessment%20Final-2019-10-31.pdf>

https://www.nwpp.org/private-media/documents/2019.11.12_NWPP_RA_Assessment_Review_Final_10-23.2019.pdf