BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 2024

In the Matter of ALLIANCE OF WESTERN ENERGY CONSUMERS, Petition for Investigation into Long-Term Direct Access Programs	PHASE I, OPENING COMMENTS NORTHWEST POWER AND CONSERVATION COUNCIL

Introduction

The Northwest Power and Conservation Council (Council) offers the following opening comments in Phase 1 of the Commission's Investigation into Long-Term Direct Access Programs. The only issue from the Phase 1 stipulated issues list that the Council is commenting on is the matter of resource adequacy.

The point that the Council is making in these comments is a simple one: The Pacific Northwest's electrical power supply and the region's economy face a serious resource adequacy problem. With the assistance of its Resource Adequacy Advisory Committee (Council Resource Adequacy Advisory Committee), the Council produces an annual assessment of regional power supply adequacy, looking out five years on a rolling basis. The Adequacy Assessment for 2024 (Council 2024 Adequacy Assessment) indicates the region's supply will become inadequate as early as 2021, seriously inadequate by 2024, and even more so by 2026 and 2028, as measured against the adequacy standard the Council developed in 2011. The reasons are obvious – the planned retirement or divestments in over 4,000 megawatts of baseload coal-fired generation serving load in the region. The adequacy alarm only increases with the probable retirement of the rest of the coal fleet in the region in the next 20 years; the requirements being embedded in state policies in the region and in the west that all generation be carbon free in 25 years, also removing the natural gas-fired elements of the region's generating resources; the capacity

limitation problems associated with most renewable resource developed to replace the retiring generation; and the increasing interest in policies that will electrify transportation and building heating and cooling, with the potential to significantly increase regional electricity loads in a way that has not been seen for decades.

The region's adequacy problem is not insurmountable – it can and will be solved – but it is serious; it requires the urgent attention of every entity with any connection to electricity supply, and it can be solved either in the most cost-effective and efficient and equitable manner or in a more costly, inefficient and inequitable manner. The Council is working on its next regional power plan for approval in 2021, with the central objective of providing cost-effective resource recommendations to help address the region's adequacy problem. At the same time, any and every action by utilities and regulators and customers and state and federal policymakers that affects the region's power supply should be carefully considered to make sure whatever arrangements are put in place help address and solve the region's resource adequacy problem rather than hinder our collective ability to solve the problem.

And that is the obvious link to this proceeding. The Council urges the Commission, as it undertakes this investigation, to consider and address the impact long-term direct access programs and their loads may have on the resource adequacy issue, which necessarily includes determining who will be responsible for ensuring resources are developed or acquired that are adequate to serve long-term direct access loads; how resource needs will be planned for and developed; and how the costs of resource development will be allocated in an equitable fashion. The Council understands that these are complicated matters of detail for the parties to brief and the Commission to resolve, and the Council expresses no opinion as to how the Commission should resolve these issues– only that the Commission needs to do so.

Background on the Council and Resource Adequacy

The Council is an interstate compact agency formed in 1981 by the states of Idaho, Montana, Oregon, and Washington as authorized in the Pacific Northwest Electric Power Planning and Conservation Act of 1980. The Northwest Power Act charged the Council with developing a regional conservation and generation power plan, which is a 20-year plan that the Act requires the Council review and update every five years. One purpose of

the Northwest Power Act and the Council's power plan is to "assure the Pacific Northwest an adequate, efficient, economical and reliable power supply."

In the simplest terms, resource adequacy refers to having sufficient resources – generation, efficiency and transmission – to serve future loads under a variety of conditions, including during extreme cold snaps or heat wave events. Thus, resource adequacy is dependent upon loads and the supply available to serve those loads. However, as the power system continues to evolve, determining resource adequacy is a task that continues to be more and more challenging. Additionally, there is not a uniform or mandatory standard for resource adequacy. Therefore, to provide a clear means of answering the question of whether the region has adequate resources to meet its load reliably, in 2011, the Council adopted a resource adequacy standard for the region. The Council's standard was designed to provide an early warning should resource development fail to keep pace with need, providing sufficient time for the region and the regional utilities to acquire or construct the resources or infrastructure needed to maintain an adequate system.

The Council's standard defines the regional power supply as adequate when the likelihood of a shortfall or the loss-of-load-probability (LOLP) is no more than five (5) percent during a future year.[1] That means for the regional system to be deemed adequate under the Council's standard, the likelihood of at least one shortfall event (a set of contiguous hours in which resources fail to serve all loads) occurring sometime during that future year must be five percent or less.

With the help of the Council's Resource Adequacy Advisory Committee, the Council assesses the adequacy of the region's power supply every year, five years into the future, publishing a report at the conclusion of the assessment. If the assessment deems the supply to be inadequate, the Council estimates how much additional capacity is required to bring the likelihood of a power supply shortfall back to five percent. To be clear, an LOLP greater than five percent should not be taken to mean that actual curtailments will occur, but rather that the likelihood of the region's utilities having to take extraordinary measures to provide continuous service exceeds the Council's tolerance for such events. Finally, this assessment is not a resource strategy assessment or a comprehensive

[1] The LOLP is the Council's metric for assessing adequacy and is defined as the likelihood that system demand will exceed the generating capacity during a given period.

resource strategy analysis. The Council will undertake a comprehensive resource strategy assessment in its next power plan, which will be completed in 2021.[2]

To summarize briefly and simply here, to assess adequacy the Council uses a stochastic analysis, relying primarily on the GENESYS model. The analysis assumes rate-based generating resources and a specified level of reliance on imported and within-region market supply, with the generating resources including only existing plants and planned resources that are sited and licensed and expected to be operational during the year being assessed. Additionally, the load forecast is adjusted to include the expected conservation savings from the Council's latest power plan. The GENESYS model then performs a chronological hourly simulation of the region's power supply over many different future combinations of stream flows, temperatures, wind and solar generation patterns, and forced generator outages. The GENESYS model cannot and does not take into account all contingency actions that utilities may have to avert a crisis. Thus, the Council's standard provides a regional outlook, reflecting the adequacy of the aggregate regional power supply; however, when the power supply is deemed inadequate in a future year in the Council's assessment, it should be a signal for utilities to examine individual resource plans to ensure that sufficient resources are under consideration to address future need.[3]

The Council completed the 2024 Assessment in October 2019, and as provided for above, the 2024 Assessment indicates the region faces significant resource adequacy issues in the coming years, largely due to the retirement of coal-fired generating facilities. The 2024 Assessment found the power supply to be adequate through 2020, and becoming inadequate in 2021, with an estimated LOLP of 7.5 percent. By 2024, the LOLP grows to 12.8 percent and to 26 percent in 2026, all mainly due to planned retirements.

These results can, of course, change with load or market supply adjustments or additional retirements, shifting the LOLP lower or higher, which is precisely the reason resource adequacy is important for this docket. Long-term direct access program

[2] For more information on the Council's power planning process and supporting materials for the upcoming power plan, see the Council's 2021 Power Plan webpage. The Council's current power plan, the Seventh Power Plan, is available here and also includes additional information on resource adequacy in Chapter 11.
[3] For more information on the assessment methods see the Council's Resource Adequacy Advisory Committee webpage.

customer loads impact the region's power supply and can pose a significant risk to an already inadequate system if the impact of these programs and loads is not considered with respect to resource adequacy.

Conclusion

The Council urges the Commission to carefully consider resource adequacy as it investigates long-term direct access programs to ensure solutions are developed for these programs and loads that help address the region's adequacy issue and not further exacerbate it. This will necessarily require the Commission to determine who is responsible for ensuring adequate resources are developed or acquired to serve long-term direct access loads; how these resource needs will be planned for and developed; and how the costs of serving these loads will be allocated equitably. The Council appreciates these are complicated matters, but these are matters that must be addressed.

Dated this 16th day of March 2020

Respectfully submitted,

/s/ Andrea Goodwin
Andrea Goodwin (OSB #114028)
Senior Counsel
Northwest Power and Conservation Council
851 SW 6th Ave., Suite 1100
Portland, Oregon 97204
(503) 222-5161