Exh. ELJ-9
Dockets UE-200900, UG-200901, UE-200894
Witness: Elaine L. Jordan

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **AVISTA CORPORATION, d/b/a AVISTA UTILITIES,** **Respondent.**	**DOCKETS UE-200900, UG-200901, UE-200894 (*Consolidated*)**

EXHIBIT TO
TESTIMONY OF

Elaine L. Jordan

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

Demand Response Excerpt of Avista's 2021 Electric IRP

April 21, 2021

Table 11.3: 2021 Preferred Resource Strategy (2042-2045)

Resource	State	Time Period	ISO Conditions (MW)	Equivalent Winter Peak Capacity (MW)	Energy Capability (aMW)
Palouse Wind	WA/ID	2042	-105	-5	-36
Solar w/ storage	WA	2042	117	2	31
4-hour storage (lithium-ion)	WA	2042	58	9	-2
Solar w/ storage	WA	2043	122	2	31
4-hour storage (lithium-ion)	WA	2043	61	9	-2
Liquid Air Energy Storage (LAES)	WA	2044	12	7	-1
Solar w/ storage	WA	2045	149	3	40
4-hour storage (lithium-ion)	WA	2045	75	11	-2
Liquid Air Energy Storage (LAES)	ID	2045	10	6	-1
Total New Resources			**604**	**49**	**94**
Net of Removed Resources			499	44	58

Demand Response Selections

Demand Response (DR) resources are integral to Avista's strategy to meet customer peak load requirements with non-emitting resources. Avista does not currently offer any load management programs, although it has piloted programs in the past[3]. To understand the potential for new DR programs, Avista contracted with Applied Energy Group (AEG) to estimate the amount of DR available in our Idaho and Washington service territories. Chapter 6 – Demand Response provides an overview of DR programs, their potential and expected costs. The DR estimate includes 16 programs to reduce as much as 169 MW of winter peak load and 245 MW of summer peak load. Some programs offer reductions in both winter and summer, while others only in one season or the other. Avista's primary needs are for winter peak reduction, and several programs were found cost effective. The 2021 PRS incorporates the first DR programs in 2024, ramping up to include all cost-effective DR options by 2027. Table 11.4 shows each DR program selected as part of the PRS. Figure 11.1 illustrates when DR enters the system and how the penetration of DR programs increase through 2045.

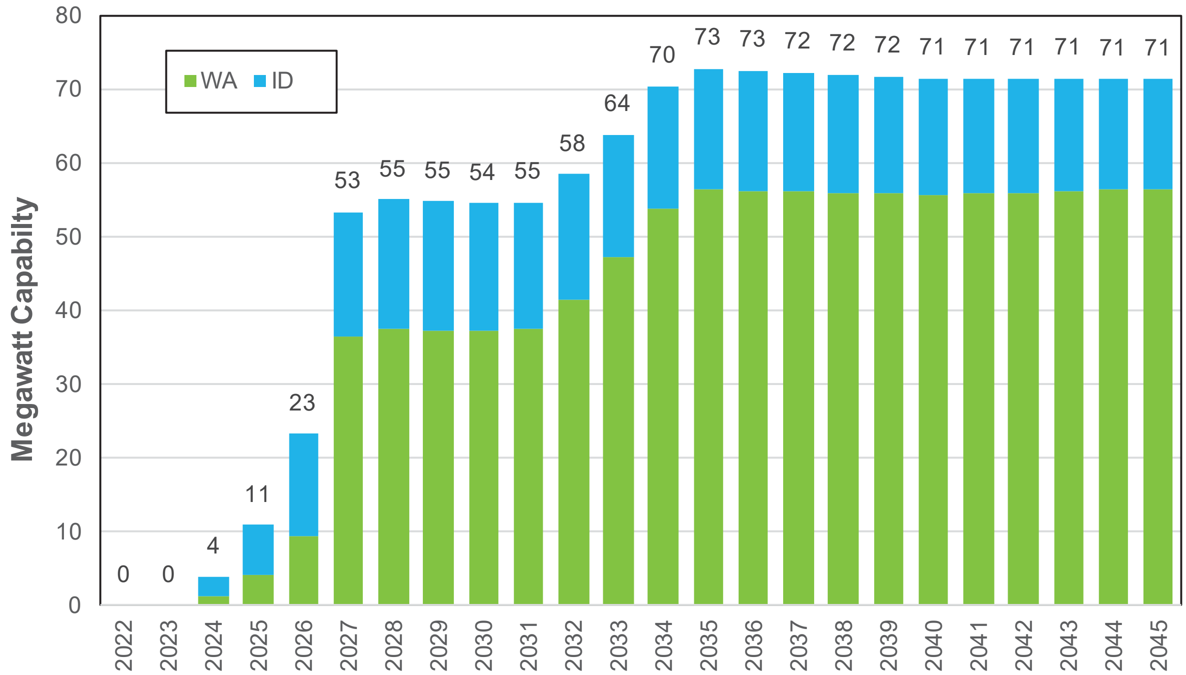
Meeting reliability targets with DR depends on the length of time each program can reduce loads. Avista assumes a 60 percent on-peak capacity credit for DR. Due to the limited duration of the DR programs, Avista's ARAM model demonstrates these programs achieve 60 percent of the reliability benefits of a natural gas-fired CT. Actual experience and program design will ultimately determine the amount of reliable capacity contribution from these resources.

[3] Avista does not have any current plans to institute DR programs specifically for low income energy assistance and has not performed an assessment of low-income DR programs. If the Company elects to perform such an assessment, it would be coordinated through the Energy Assistance Advisory Group or the Equity Advisory Group.

Table 11.4: PRS Demand Response Programs

Program	Washington	Idaho
Time of Use Rates	2 MW (2024)	2 MW (2024)
Variable Peak Pricing	7 MW (2024)	6 MW (2024)
Large C&I Program	25 MW (2027)	n/a
DLC Smart Thermostats	7 MW (2031)	n/a
Third Party Contracts	14 MW (2032)	8 MW (2024)
Behavioral	1 MW (2041)	n/a
Total	56 MW	16 MW

Figure 11.1: Annual PRS Demand Response Capability



Energy Efficiency Selections

Energy efficiency meets more than two-thirds of all future load growth. This IRP studied over 7,300 energy efficiency programs and measures. Avista models energy efficiency programs individually to ensure each program's capacity and energy contributions are valued in detail for the system. This method ensures an accurate accounting of peak savings that is not possible if programs were bucketed or simply compared to a levelized price of energy. As described in Chapter 3, long-term energy and peak demand forecasts already include the benefits of energy efficiency. This requires adjusting the load forecast used in PRiSM to exclude projected energy efficiency additions so specific program selections can occur. An iterative process with PRiSM ensures maximum cost-effective energy efficiency quantities are included in the PRS. PRiSM adds both supply- and demand-side resources to the PRS. Selected energy efficiency is then reinserted into the model by increasing the amount of load forecast by the selected energy efficiency