

**BEFORE THE WASHINGTON  
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

AVISTA CORPORATION d/b/a AVISTA UTILITIES,

Respondent.

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DOCKET NOS. UE-200900 and UG-200901 (*Consolidated*)

**PAUL J. ALVAREZ AND DENNIS STEPHENS**  
**ON BEHALF OF THE**  
**WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL**  
**PUBLIC COUNSEL UNIT**

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**EXHIBIT PADS-22**

Avista Response to Public Counsel Data Request No. 286

**April 21, 2021**

**AVISTA CORP.  
RESPONSE TO REQUEST FOR INFORMATION**

JURISDICTION:	WASHINGTON	DATE PREPARED:	04/02/2021
CASE NO.:	UE-200900 & UG-200901	WITNESS:	Heather Rosentrater
REQUESTER:	Public Counsel	RESPONDER:	Glenn Madden
TYPE:	Data Request	DEPT:	Substation Engineering
REQUEST NO.:	PC - 286	TELEPHONE:	(509) 495-2146
		EMAIL:	glenn.madden@avistacorp.com

**SUBJECT: Capital Additions, Test Year (Electric)**

**REQUEST:**

**Refer to Avista’s response to PC DR 211, which states “Avista plans, designs, operates, and maintains its transmission system and substations to be capable of supporting loads during peak periods of heavy demand and, and specifically to avoid the next outage, referring to the need for contingency planning.”**

- a) Provide a list of all outages on the Avista system, 2014 through 2020, which were a result of substations being loaded in excess of 80 percent. An example might be a substation transformer failure, which resulted in load not being able to be picked up because a backup bank was loaded in excess of 80 percent.
- b) Provide a list of substation banks presently loaded at peak in excess of 80 percent.
- c) For each of the substation banks listed in response to subpart (b), provide a list of alarms by type that have occurred over each of the years since each bank has been loaded to over 80 percent.

**RESPONSE:**

- a) The example provided in this part of the request presumes that a contingency load won’t be picked up in the event the transformer intended to carry the switched load is already above 80 percent loading. The 80 percent planning standard referred to in this example does not govern the loadings applied during contingency in realtime operations, as described by the Company in response to PC-DR-289, part (a). We have not, by design, planning and operation, experienced customer outages as a result of such loadings on our substation equipment because our planning standards have provided the contingency reserve needed to pick up and carry customer loads as intended. As noted elsewhere in our responses, we typically experience a small number of transmission and substation outages each year that result in a loss of service for our customers. This low number is of no surprise, however, since our transmission and substations systems, like that of all utilities, and consistent with the interest and intent of a range of federal regulations governing the bulk electric system, are designed, to the extent reasonable and cost effective, to withstand isolated outages and to have other equipment and circuits in the network ‘pick up’ and carry those additional loads safely, reliably, and without failure due to overloading.
- b) In PC-DR-286 Attachment A, Avista provides records of alarms indicating when the transformer banks listed in PC-DR-099 Attachment A, with the Reason listed as Overloading, were loaded in

excess of 80 percent for the period 2016 to the time of replacement.<sup>1</sup> Although the Westside #2 230-115kV transformer did not experience any in-service overloading in the subject period, the need for its replacement based on overloading in contingency events is documented and described in response to PC-DR-166 Attachment B, Westside Transformer Replacement, and in response to PC-DR-289 parts (c) and (d).

- c) Please refer to PC-DR-286 Attachment B for the list of Transformer Major and Minor Alarms for the transformer banks listed in PC-DR-099, Attachment A, with the Reason listed as Overloading.

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<sup>1</sup> Alarms for Lee & Reynolds #2 115/13.8kV transformer are not presented because it was a new install and not a replacement for the existing unit.