

AVISTA CORP.
RESPONSE TO REQUEST FOR INFORMATION

JURISDICTION:	WASHINGTON	DATE PREPARED:	06/17/2021
CASE NO.:	UE-200900 & UG-200901	WITNESS:	DiLuciano/La Bolle
REQUESTER:	Public Counsel	RESPONDER:	Larry La Bolle
TYPE:	Data Request	DEPT:	Transm Ops/System Planning
REQUEST NO.:	PC – 354	TELEPHONE:	(509) 495-4710
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SUBJECT: Joint Rebuttal Testimony Exh. JD/LL-1

REQUEST:

RE: Capital Additions, Test Year (Electric)

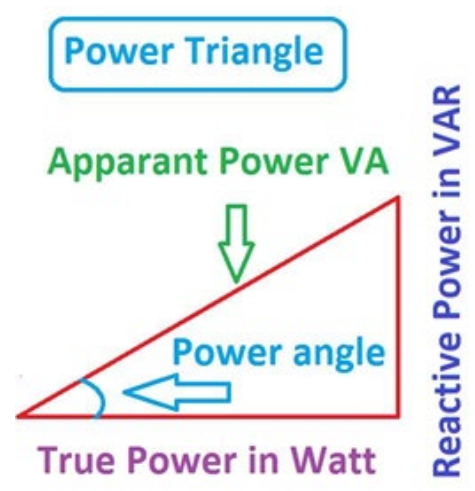
Please refer again to the Rebuttal Testimony of Larry D. La Bolle and Joshua D. Diluciano, Exh. JD-LL-1T, at 44:13-15, which states “Some of our substations are on radial transmission, and in addition, there are no interconnected ‘adjacent substations’ that can pick up the customers in the event of an outage....”

Provide a list of substation Avista operates. For each substation, provide, in MS Excel format:

- a) Rated capacity in MW.
- b) Highest recorded peak load in MW, and the year such peak was recorded.
- c) Recorded peak load in MW by year from 2016 through 2020.
- d) Peak load capacity forecast for 2021 through 2025 by year in MW.
- e) Whether or not the substation is radially-served or not.
- f) The identities of all substations to which the listed substation is tied.
- g) The count of customers served by the substation as of 12/31/2020.

RESPONSE:

- a) Please see the Excel file containing the requested information provided as PC-DR-354 Attachment A. The rated capacity is provided in column G. This capacity is limiting for most operating conditions, however, for colder ambient temperatures, standards permit operation above nameplate based on ambient temperature. Such operation can occur without taking loss of life on the equipment. Similarly, during very hot periods, typically in excess of 104 degrees F, the capacity is below the nameplate rating to prevent additional loss of life on the equipment. Also, note that nameplate capacity is provided in MVA, while loading is provided the requested units of MW. Avista provides this simple illustration at right showing the relationship between the components of real (MW), apparent (MVA) and reactive (MVAR) power.



- b) The highest peak load and the year of such peak load is provided in PC-DR-354 Attachment A, in columns H and I, respectively. The highest peak load in the period 2016 through 2020 exceeds the nameplate capacity at four stations on this list, Barker Road 115kV, Spangle 115kV, Valley 115kV, and Wilbur 115kV. All of these exceedances occurred during winter months; Avista is still for the most part a winter-peaking utility.

- i. Exceedances at **Spangle** and **Wilbur** reflect the fact that these rural substations are not experiencing any significant load growth and they have no interconnections with any other substations, which would subject them to contingency loading. Consequently, Avista continues to operate them near 100% capacity during peak loading, and in excess of that at times during the colder winter months, as described above in part (a).
 - ii. Peak loading at the **Valley** station is operated more consistently closer to its 100% nameplate capacity, owing in part to its more-limited ability to pick up adjacent loads (see “Partial” in the discussion below).
 - iii. Peak loading at **Barker Road** substation occurred in January 2016. As noted, peak loads in the subsequent years are substantially reduced from the 2016 peak, owing to Avista shifting loads to interconnected stations, away from the Barker Road substation, to efficiently and cost-effectively relieve this overloading.
- c) Peak loads in MW by year for 2016 through 2020 are provided in PC-DR-354 Attachment A in columns J through N.
 - d) Avista objects to this request because it seeks future information that is neither within the scope of this proceeding nor is it reasonably calculated to lead to the discovery of admissible evidence. The information requested pertains to future investments that have not yet been made, that are not subject to a prudence review in this current case, and for which the Company is not seeking any cost recovery at this time. The only capital projects included in this case for the period 2021 and beyond, relate to Wildfire, Colstrip, EIM and AMI.
 - e) Please see column O in PC-DR-354 Attachment A for the substations that have no interconnections with other substations. Please see also column Q that lists the ‘offload’ capability for substations that do have interconnections, as well as column R, which indicates whether offload capabilities are year-round, or restricted based on seasonal capacity constraints. These capabilities are described briefly below:

None No interconnected capability to transfer customer loads.

Partial The substation CANNOT be fully offloaded – only a portion of the load of each feeder can be picked, or only a portion of the feeders can be picked up, without considering the further limitations of seasonal capacity constraints.

Full One transformer in the substation can be fully offloaded, subject to limitations of seasonal capacity constraints.

Results of these classifications, described above, are summarized in the table below. Of particular import, Avista has no distribution substations in its Washington service territory that are capable of being offloaded 100% of the time. Obviously, Avista makes the most effective use possible of the available windows for conducting inspections, testing, maintenance, repairs and equipment replacements.

No Interconnection	Partial Interconnection	Full	Interconnections Seasonally Constrained
21%	25%	55%	100%

- f) Interconnected substations are listed in PC-DR-354 Attachment A, column P.
- g) Customer count is provided in column S of PC-DR-354 Attachment A.

Facility Name	Abbreviation	Serves non-Avista customers	Connected Generation	City	State	Rated Capacity (MVA)	Peak load (MW)	Year of Peak Load	2016 Peak Load (MW)	2017 Peak Load (MW)	2018 Peak Load (MW)	2019 Peak Load (MW)	2020 Peak Load (MW)	Radially Served	Substation Ties	Full or Partial Load Offload Capabilities	Seasonal Constraints	Avista Customers as 12/30/2019
Airway Heights 115kV	AIR	Yes, IPL	No	Airway Heights	WA	40	31.721	2018	29.85	29.02	31.721	30.203	31.69	No	SUN, SLK	Full But w/ Seasonal Constraints	Yes	3903
Arden 115kV	ARD	No	No	Colville	WA	9.375	7	2019	6.531	6.531	5.943	7	6.825	No	ORI	Partial But w/ Seasonal Constraints	Yes	945
Barker Road 115kV	BKR	No	No	Spokane Valley	WA	20	20.33	2016	20.33	14.51	14.355	13.065	11.93	No	BLD, GRA, LIB	Full But w/ Seasonal Constraints	Yes	3815
Beacon 230kV	BEA	No	No	Spokane	WA	60	44.1	2018	42.84	42.945	44.1	42	43.26	No	MIL, 9CE, ROS, 3HT, NE	Full But w/ Seasonal Constraints	Yes	7797
Boulder 230kV	BLD	No	No	Spokane Valley	WA	30	7	2020	0	0	0	4.91	7	No	BKR, LIB	Full But w/ Seasonal Constraints	Yes	679
Chester 115kV	CHE	No	No	Spokane Valley	WA	40	24	2020	19.12	19.5	20.25	23	24	No	MIL, 9CE, GRA	Full But w/ Seasonal Constraints	Yes	6024
Chewelah 115kV	CHW	Yes, City of Chewelah	No	Chewelah	WA	20	15.358	2020	13.795	15.057	12.974	14.063	15.358	Yes	None	None		2336
Colbert 115kV	COB	No	No	Colbert	WA	20	17.58	2018	16.43	16.97	17.58	16.76	17.36	No	MEA, MLN	Full But w/ Seasonal Constraints	Yes	4320
College & Walnut 115kV	C&W	No	No	Spokane	WA	60	40.7	2017	39.137	40.7	39.3	39.225	38.3	No	ROS, 3HT, SUN, FWT, PST	Full But w/ Seasonal Constraints	Yes	11844
Colville 115kV	CLV	No	No	Colville	WA	49.375	32.571	2018	28.664	28.664	32.571	23.947	29.387	No	ORI	Partial But w/ Seasonal Constraints	Yes	5496
Critchfield 115kV	CFD	No	No	Clarkston	WA	20	12.499	2020	11.7	11.8	12.3	11.539	12.499	No	PDL	Partial But w/ Seasonal Constraints	Yes	2922
Davenport 115kV	DVP	No	No	Davenport	WA	9.375	5.795	2016	5.795	5.708	5.309	5.561	5.774	No	RDN	Partial But w/ Seasonal Constraints	Yes	1163
Deer Park 115kV	DEP	Yes, IPL	No	Deer Park	WA	20	15.8	2019	13.3	14.83	13.67	15.8	12.08	No	MLN, LOO	Full But w/ Seasonal Constraints	Yes	3533
Diamond 115kV	DIA	No	No	Colfax	WA	4.687	3.61	2019	4.687	3.61	3.61	3.61	3.04	No	EWN	Partial But w/ Seasonal Constraints	Yes	966
Dry Gulch 115kV	DRY	No	No	Clarkston	WA	20	10.843	2019	7.545	8.825	9.342	10.843	8.972	No	PDL	Full But w/ Seasonal Constraints	Yes	1403
East Colfax 115kV	ECL	Yes, IPL	No	Colfax	WA	20	11.4	2016	11.4	10.991	10.4	10.843	9.022	No	TUR	Partial But w/ Seasonal Constraints	Yes	2024
East Farms 115kV	EFM	No	No	Newman Lake	WA	20	14.46	2017	12.345	14.46	11.5	11.7	11.7	No	LIB, PVW	Full But w/ Seasonal Constraints	Yes	2543
Ewan 115kV	EWN	Yes, IPL	No	St. John	WA	4.687	4.12	2016	4.12	3.62	3.41	3.8	3.5	No	DIA	Partial But w/ Seasonal Constraints	Yes	423
Ford 115kV	FOR	No	No	Ford	WA	9.375	4.31	2020	3.192	3.528	3.192	3.36	4.31	No	L13	Partial But w/ Seasonal Constraints	Yes	625
Francis & Cedar 115kV	F&C	No	No	Spokane	WA	60	50.3	2018	42.8	44.7	50.3	46.71	48.89	No	L&S, NW, INT, WAK	Full But w/ Seasonal Constraints	Yes	13493
Ft Wright 115kV	FWT	No	No	Spokane	WA	40	29.221	2019	22.654	27.384	26.634	29.221	24.521	No	C&W, SUN, NW	Full But w/ Seasonal Constraints	Yes	7279
Garfield 115kV	GAR	No	No	Garfield	WA	4.687	3.376	2017	3.28	3.376	3.04	3.216	2.452	No	TKO	Partial But w/ Seasonal Constraints	Yes	601
Gifford 115kV	GIF	No	No	Gifford	WA	16.687	12.57	2020	9.618	10.3	11.23	9.972	12.57	Yes	None	None		2632
Glenrose 115kV	GLN	No	No	Spokane	WA	20	18.14	2020	15.854	16.15	17.2	16.57	18.14	No	9CE, SE, 3HT	Full But w/ Seasonal Constraints	Yes	5227
Greenacres 115kV	GRA	No	No	Spokane Valley	WA	30	20.7	2019	18.08	17.78	19.06	20.7	20.46	No	BKR, LIB, SIP, CHE	Full But w/ Seasonal Constraints	Yes	5117
Greenwood 115kV	GRN	No	Yes	Kettle Falls	WA	20	9.728	2016	9.728	9.6	6.8	8	7.774	No	KET	Partial But w/ Seasonal Constraints	Yes	2071
Hallett & White 115kV	H&W	No	No	Spokane	WA	60	24.4	2019	16.16	15.323	15.643	24.4	20.31	No	SUN, SLK	Full But w/ Seasonal Constraints	Yes	723
Harrington 115kV	HAR	No	No	Harrington	WA	4.688	1.38	2017	1.27	1.38	1.12	1.17	1.145	Yes	None	None		358
Indian Trail 115kV	INT	No	No	Spokane	WA	20	16.1	2017	12.3	16.1	13.5	13.286	14.223	No	NW, F&C, WAK	Full But w/ Seasonal Constraints	Yes	3416
Kettle Falls 115kV	KET	No	No	Kettle Falls	WA	20	12.84	2020	10.836	11.844	11.088	10.836	12.84	No	GRN	Partial But w/ Seasonal Constraints	Yes	965
Latah Jct. 115kV	LAT	No	No	Fairfield	WA	7.5	4.209	2018	3.567	3.7	4.209	4.2	3.698	No	ROK, TKO	Partial But w/ Seasonal Constraints	Yes	746
Lee & Reynolds 115kV	L&R	Yes, BBEC	No	Othello	WA	60	24.62	2020	18.4	21.3	17.7	20.13	24.62	No	OTH, SOT	Partial But w/ Seasonal Constraints	Yes	883
Leon Junction 115kV	LEO	No	No	Uniontown	WA	7.5	5.4	2017	5	5.4	4	4.6	4.6	Yes	None	None		1317
Liberty Lake 115kV	LIB	No	No	Liberty Lake	WA	40	35.97	2018	31.752	27.216	35.97	31.248	28.224	No	BLD, BKR, GRA	Full But w/ Seasonal Constraints	Yes	5245
Lind 115kV	LIN	No	Yes	Lind	WA	20	19.41	2017	1.729	1.829	-15.53	-19.2	-19.41	Yes	None	None		405
Little Falls 115kV	LTF	No	No	Reardan	WA	12	5.2	2017	4.6	5.2	5	4.7	4.8	Yes	None	None		453
Long Lake 115/13kV	L13	No	No	Reardan	WA	4.687	3.39	2019	2.98	3.08	3.12	3.39	3.063	No	FOR	Partial But w/ Seasonal Constraints	Yes	476
Loon Lake 115kV	LOO	No	No	Loon Lake	WA	7.5	6	2020	5.239	5.703	5.559	5.698	6	No	VAL, DEP	Full But w/ Seasonal Constraints	Yes	1830
Lyons & Standard 115kV	L&S	No	No	Spokane	WA	60	36.234	2018	35.404	33.296	36.234	32.704	34.712	No	NE, ROS, F&C, WAK	Full But w/ Seasonal Constraints	Yes	9547
Marengo 115kV	MGO	Yes, BBEC	No	Ritzville	WA	3.75	2.04	2020	1.18	1.37	1.37	1.3	2.04	Yes	None	None		0
Mead 115kV	MEA	No	No	Mead	WA	30	17.908	2016	17.908	16.472	13.272	12.656	17.087	No	NE, WAK, COB	Full But w/ Seasonal Constraints	Yes	2912
Metro 115kV	MTR	No	No	Spokane	WA	40	30.46	2019	20.34	23.457	29.3	30.46	19.24	No	PST, 3HT	Full But w/ Seasonal Constraints	Yes	*
Milan 115kV	MLN	Yes, IPL	No	Chattaroy	WA	40	9.78	2017	9.04	9.78	8.77	8.23	7.48	No	COB, DEP	Full But w/ Seasonal Constraints	Yes	1781
Millwood 115kV	MIL	No	No	Millwood	WA	65	38.255	2018	33.084	35.632	38.255	36.294	37.957	No	OPT, SIP, BEA, 9CE, CHE	Full But w/ Seasonal Constraints	Yes	7308
Ninth & Central 115kV	9CE	No	No	Spokane Valley	WA	60	29.3	2020	26.78	27.315	28.9	28.15	29.3	No	MIL, CHE, GLN, BEA, 3HT	Full But w/ Seasonal Constraints	Yes	6215
Northeast 115kV	NE	No	No	Spokane	WA	40	29.682	2017	28.486	29.682	27.757	28.791	29.532	No	ROS, BEA, L&S, WAK, MEA	Full But w/ Seasonal Constraints	Yes	6312
Northwest 115kV	NW	No	No	Spokane	WA	40	28.533	2020	23.588	26.949	26.366	26.56	28.533	No	FWT, F&C, INT	Full But w/ Seasonal Constraints	Yes	7121
Odessa 115kV	ODS	No	No	Odessa	WA	4.687	2.875	2019	2.54	2.6	2.707	2.875	2.64	Yes	None	None		802
Opportunity 115kV	OPT	Yes, MEWCO	No	Spokane Valley	WA	20	14.67	2016	14.67	14.6	14	12.9	12.4	No	SIP, MIL	Full But w/ Seasonal Constraints	Yes	2828
Orin 115kV	ORI	No	No	Colville	WA	9.375	5.758	2020	5.5	4.8	4.5	5.2	5.758	No	ARD, CLV	Full But w/ Seasonal Constraints	Yes	2075
Othello 115kV	OTH	No	No	Othello	WA	40	24.465	2020	23.1	23.448	22.948	23.096	24.465	No	SOT, L&R	Partial But w/ Seasonal Constraints	Yes	1144
Palouse 115kV	PAL	No	No	Palouse	WA	8.437	4.662	2017	4.41	4.662	4.536	4.41	3.78	Yes	None	None		1038
Post St. 115kV	PST	No	Yes	Spokane	WA	60	41.709	2016	41.709	29.98	37.796	18.049	18.201	No	PST, MTR, ROS, C&W	Full But w/ Seasonal Constraints	Yes	520**
Pound Lane 115kV	PDL	No	No	Clarkston	WA	40	27.54	2016	27.54	25.935	25.635	26.712	27.479	No	DRY, CFD, SLW	Full But w/ Seasonal Constraints	Yes	5999
Reardan 115kV	RDN	No	No	Reardan	WA	7.5	4.788	2016	4.788	4.788	3.906	4.788	3.906	No	DVP	Partial But w/ Seasonal Constraints	Yes	908
Ritzville 115kV	RIT	Yes, BBEC	No	Ritzville	WA	9.375	4.5	2017	3.735	4.5	4.4	3.9	4.326	Yes	NA	None		1180
Rockford 115kV	ROK	No	No	Rockford	WA	7.5	2.321	2020	1.775	1.89	1.991	2.265	2.321	No	LAT	Partial But w/ Seasonal Constraints	Yes	330
Rosalia 115kV	RSA	Yes, IPL	No	Rosalia	WA	9.375	6.2	2019	4.65	4.7	5.2	6.2	5.45	Yes	None	None		656
Ross Park 115kV	ROS	No	No	Spokane	WA	57	56.74	2016	56.74	44.74	44.83	49.25	51.451	No	BEA, 3HT, C&W, PST, NE, L	Full But w/ Seasonal Constraints	Yes	12114
Roxboro 115kV	ROX	Yes, BBEC	No	Lind	WA	40	23.76	2016	23.76	23.76	18.144	21.6	19.872	Yes	None	None		74
Silver Lake 115kV	SLK	No	No	Medical Lake	WA	20	14.782	2018	13.985	13.8	14.782	14.142	13.132	No	AIR, H&W	Full But w/ Seasonal Constraints	Yes	3106
South Othello 115kV	SOT	No	No	Othello	WA	20	16.898	2020	13.5	15.3	13.7	10.375	16.898	No	OTH, L&R	Full But w/ Seasonal Constraints	Yes	2712
South Pullman 115kV	SPU	No	No	Pullman	WA	50	30.3	2016	30.3	29.466	26.9	27.5	27.729	No	TUR, TVW	Full But w/ Seasonal Constraints	Yes	3725
Southeast 115kV	SE	No	No	Spokane	WA	60	41.5	2017	40.361	41.5	41	41.077	41.5	No	GLN, SUN, 3HT	Full But w/ Seasonal Constraints	Yes	12010
Spangle 115kV	SPA	Yes, IPL	No	Spangle	WA	7.5	7.56	2019	6.93	7.434	7.182	7.56	6.426	Yes	None	None		244

Spirit 115kV	SPI	No	Yes	Colville	WA	9.375	5.213	2020	4	4.412	3.8	4.005	5.213	Yes	None	None	1196	
Spokane Ind. Park 115kV	SIP	No	No	Spokane Valley	WA	44.687	33.431	2016	33.431	33.08	31.487	30.638	32.426	No	OPT, GRA, MIL	Full But w/ Seasonal Constraints	Yes	2592
Sprague 115kV	SPR	No	No	Sprague	WA	3.75	1.89	2016	1.89	1.73	1.32	1.62	1.4	Yes	None	None	457	
Sunset 115kV	SUN	No	No	Spokane	WA	55	42.5	2017	41.45	42.5	37	38.5	39.5	No	SE, C&W, 3HT, FWT, AIR, E	Full But w/ Seasonal Constraints	Yes	11661
Tekoa 115kV	TKO	No	No	Tekoa	WA	9.375	4.9	2018	4.268	3.4	4.9	4.5	4.45	No	GAR, LAT	Partial But w/ Seasonal Constraints	Yes	862
Terre View 115kV	TVW	No	No	Pullman	WA	20	9.368	2020	7.9	8.974	7.7	8.8	9.368	No	TUR, SPU	Full But w/ Seasonal Constraints	Yes	1982
Third & Hatch 115kV	3HT	No	No	Spokane	WA	90	56.49	2018	51.3	52.53	56.49	54.421	49.448	No	SE, GLN, ROS, BEA, 9CE, C	Full But w/ Seasonal Constraints	Yes	9436
Turner 115kV	TUR	No	No	Pullman	WA	60	18.655	2017	17.3	18.655	15.6	16.4	15.16	No	ECL, SPU, TVW	Full But w/ Seasonal Constraints	Yes	9713
Valley 115kV	VAL	No	No	Valley	WA	9.375	9.643	2018	8.424	7.677	9.643	8.811	9.201	No	LOO	Partial But w/ Seasonal Constraints	Yes	2226
Waikiki 115kV	WAK	No	No	Spokane	WA	40	36.26	2019	29.232	29.988	33.768	36.26	31.03	No	L&S, F&C, INT, NE, MEA	Full But w/ Seasonal Constraints	Yes	6941
Washtucna 115kV	WAS	No	No	Washtucna	WA	3.75	1.9	2016	1.9	1.5	1.7	0.21	1.043	No	Franklin PUD K-1	Full But w/ Seasonal Constraints	Yes	234
Wilbur 115kV	WIL	No	No	Wilbur	WA	7.5	8.933	2017	8.193	8.933	7.936	8.437	7.452	Yes	None	None	1329	

*Downtown Network Service Customers Only.

**Not including Downtown Network Customers served.