Exhibit LDK-1T
Dockets UE-200900/UG-200901/UE-200894
Witness: Lance D. Kaufman
(REDACTED)

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)*
In the Matter of the Petition of AVISTA CORPORATION d/b/a AVISTA UTILITIES, For an Accounting Order Authorizing Accounting and Ratemaking Treatment of Costs Associated with the Company's Wildfire Resiliency Plan.	

RESPONSE TESTIMONY OF LANCE D. KAUFMAN

ON BEHALF OF

INLAND EMPIRE PAPER COMPANY

(REDACTED VERSION)

April 21, 2021

TABLE OF CONTENTS TO THE
RESPONSE TESTIMONY OF LANCE D. KAUFMAN

EXHIBIT LIST

Exhibit No. LDK-2 – Curriculum Vitae
Confidential Exhibit No. LDK-3C – Cogen Study
Confidential Exhibit No. LDK-4C – Generation Model
Confidential Exhibit No. LDK-5C – Marginal Cost Study

I. INTRODUCTION AND SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Lance Kaufman, and my business address is 4801 W. Yale Ave, Denver, CO 80219.

Q. PLEASE STATE YOUR OCCUPATION AND ON WHOSE BEHALF YOU ARE TESTIFYING.

A. I am the Principal Economist of Aegis Insight and am testifying on behalf of the Inland Empire Paper Company ("IEP").

Q. PLEASE PROVIDE A BRIEF SUMMARY OF YOUR BACKGROUND.

A. I am an economist with eight years of experience in the utility industry. I have previously worked for the Public Utility Commission of Oregon Staff and for Alaska's utility public advocate organization under the Alaska Department of Law. I have provided testimony and analysis on a wide variety of utility proceedings and filings in front of Commissions in Alaska, Oregon, Idaho, Wyoming, and Washington. I have a Ph.D. in Economics from the University of Oregon. My CV is attached as Exhibit LDK-2.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In UE-190334, Washington Utilities and Transportation Commission ("Commission") Staff proposed that IEP transition from a Schedule 25 customer to a special contract as a way to address the unique characteristics of Schedule 25. IEP is in the process of negotiating a special contract with Avista. My testimony supports certain terms of the Special Contract included in the term sheet attached as Exhibit KR-2 to IEP witness Mr.

Kevin Rasler's testimony; supports the economic analysis of a cogeneration system IEP could install at its paper mill to avoid purchasing nearly all of its electricity requirements from Avista; and sponsors the marginal cost study IEP performed that supports an economic bypass rate for IEP which ensures IEP continues to contribute to Avista's fixed costs.

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. I show that under Schedule 25 rates it is economic for IEP to self-generate electricity and bypass Avista's energy service. I calculate the long run marginal cost to Avista to serve IEP's bypassable load. I illustrate how the special contract affects cost of service rates. These studies show that the special contract, on the terms IEP proposes, contributes to Avista's fixed costs and is in interests of Avista's other ratepayers. I describe the demand response component of the special contract and provide an avoided cost basis for the demand response rate. I recommend that the Commission approve a special contract for IEP with the terms identified in Confidential Exhibit KR-2.

Q. WHY IS THE SPECIAL CONTRACT IN THE PUBLIC INTEREST?

A. The special contract results in lower rates for Avista's remaining customers over the term of the contract. If IEP bypasses Avista's system, the share of fixed costs paid by the special contract would be paid by Avista's remaining customers. The special contract also gives Avista access to a valuable demand response resource. Demand response resources will play a key role in Avista meeting its carbon free energy goals. Finally, the special contract ensures that IEP will not develop a new natural gas fired generation resource in Washington at least during the term of the special contract.

II. IEP COGENERATION FACILITY IS FEASIBLE

Q. HOW IS COGENERATION RELEVANT TO THE SPECIAL CONTRACT?

A. IEP is Avista's largest customer and accounts for [redacted] of Avista's revenue. IEP's revenue contributes to Avista's fixed costs and reduces rates for other Avista customers. If IEP begins to self-generate, Avista's rates will increase by 2 percent.[1/] Avista can avoid most of this rate increase by establishing a special contract rate with IEP that continues to contribute to fixed costs.

Q. IS IT IN IEP'S ECONOMIC INTEREST TO SELF-GENERATE?

A. Yes, IEP can substantially reduce long term energy costs by constructing a cogeneration facility. I assisted in a feasibility analysis of IEP self-generation ("Cogen Study").[2/] The Cogen Study shows that self-generation is highly economic and has a positive internal rate of return across all sensitivities studied. If IEP is unable to secure a special contract, it would be prudent for IEP to continue developing a cogeneration plant. The Cogen Study is attached to my testimony as Confidential Exhibit LDK-3C.

Q. PLEASE SUMMARIZE THE COGEN STUDY.

A. Cogeneration is the simultaneous generation of heat and electricity. Cogeneration facilities improve on the efficiency of generation facilities by capturing waste heat for use in space heating or other industrial processes. The Cogen Study evaluated the technical and economic feasibility of a [redacted] reciprocating engine cogeneration plant similar to Avista's Boulder Park facility. This plant meets 97 percent of IEP's energy needs. The

---

1/ Calculated as current contribution to fixed cost of [redacted] divided by remaining current retail revenue of [redacted]

2/ Exh. Confidential LDK-3C

study finds that the plant has an internal rate of return of [redacted] and a net present value of [redacted] under the expected scenario.[3/] The study included conservatively high costs and explored a range of scenarios that captures reasonable expected outcomes. The study was designed to meet the Environmental Protection Agency's ("EPA") Combined Heat and Power guidelines for supporting a procurement decision.[4/]

Q. WHAT ARE THE EPA GUIDELINES FOR SUPPORTING A PROCUREMENT DECISION?

A. The EPA recommends that a procurement decision follow a feasibility study that meets the following guidelines:

1) Be based on measured data including load curves for consumption of electrical and thermal energy.
2) Use refined estimates of system capital, operation, and maintenance costs, including grants and incentives.
3) Calculate net present value, internal rate of return, and payback period.
4) Confirm system design meets facility's functional requirements.
5) Include plans for meeting interconnection and permitting requirements.
6) Be conducted by an experienced engineer or project manager.

[3/] Exh. Confidential LDK-3C at 15.

[4/] Combined heat and power is an alternative term for cogeneration. The EPA sponsors an industry partnership between combined heat and power stakeholders. This partnership serves as a knowledge base for enhancing the understanding of combined heat and power, including cogeneration. The partnership has identified industry best practices for combined heat and power project development. The Cogen Report was designed to meet the level 2 feasibility study, which "facility managers can use as a basis for deciding whether or not to proceed with procurement of a CHP system." (US Environmental Protection Agency, Combined Heat and Power (CHP) Partnership, L2 Feasibility Analysis) available at: https://www.epa.gov/chp/chp-project-development-steps (last accessed April 21, 2021).

Q. HOW DOES THE COGEN STUDY MEET THE EPA GUIDELINES?

A. The Cogen Study meets these guidelines in the following manner:

1) Financial performance is measured against three years of IEP's actual hourly electricity and thermal load.
2) Costs were refined through direct communication with Wartsila, the manufacturer of the proposed generation facility.
3) The study reports annual cashflows and project life financial performance including net present value, internal rate of return, and payback period.
4) The system meets all of IEP's functional requirements. The study ensures this by selecting a highly flexible generation technology and by meeting net requirements through existing steam facilities and standby generation from Avista.
5) The study includes preliminary findings from third party planning firms with permitting expertise. Please see the Response Testimony of IEP witness Mr. Greg Summers for more detail on the permitting requirements for the cogeneration facility.
6) The study was conducted by Ph.D. level engineers and economists with experience in cogeneration systems and feasibility analysis.

Q. HOW DOES THE STUDY INCLUDE CONSERVATIVELY HIGH COSTS?

A. The study modeled several non-cash costs as expenses. For example, IEP currently owns the land for the proposed generation site; however, the capital investment includes land purchase costs. IEP has resources that qualify for carbon offsets. In the Cogen Study, carbon offsets are included at a market cost. The study includes a stand-by generation charge and assumes that Avista provides standby generation service. However, the

generation facility is oversized and designed to allow for individual unit outages constraining IEP's energy supply. Standby generation would only be needed if the plant experienced multiple unit outages, which would occur rarely. It would likely be more economic for IEP to respond to outages by curtailing manufacturing production.

Q. HOW DOES THE STUDY EXPLORE A RANGE OF REASONABLE SCENARIOS?

A. The study contains nine scenarios. Scenarios include permutations of medium and high capital costs, low, medium, and high electricity price growth rates, with and without tax credits, and with and without stand by generation charges or carbon offset costs. Confidential Table 1 summarizes the internal rate of return for each scenario.

Confidential Table 1

Q. HOW DO YOU DETERMINE THE RANGE OF ELECTRICITY PRICE GROWTH RATES?

A. Electricity price growth rates are assumed to be 5% annually in the base scenario, with 4% and 6% as low and high growth scenarios, respectively. Under the Commission's recently passed rules governing Clean Energy Implementation Plans, the Commission adopted a cost cap for compliance with the Clean Energy Transformation Act ("CETA") that equates to 5% annual rate growth.[5/] Because this cost cap only applies to CETA-related investments and not more traditional utility investments such as distribution system replacements and technology upgrades, a 5% growth rate is a reasonable, if not conservative, assumed rate going forward.

Q. WHAT COSTS WERE INCLUDED IN THE COGEN STUDY?

A. The Cogen Study evaluates the following costs and benefits:

- Initial capital
- Permitting costs
- Federal tax incentives
- State and local sales tax
- Generation fuel
- Displaced boiler gas
- Generation O&M
- Displaced purchased electricity
- Standby generation charges
- Carbon cap and trade allowances
- Carbon offsets
- Property tax
- Federal income tax
- Financing

[5/] WAC § 480-100-660(2).

Q. PLEASE DESCRIBE HOW YOU DETERMINED THE COSTS OF EACH OF THESE ITEMS.

A. Initial capital costs are the engineering, procurement, and construction costs of the project, including the installation of pollution controls, acquisition of land, and generation step-up. These costs were based on data provided by Wartsila. Permitting costs are described in the Response Testimony of Mr. Greg Summers. A 10 percent Federal Tax credit is offered on the first 15 MW of cogeneration.[6/] State and local taxes are included when necessary.[7/] Generation fuel is available to IEP for a five-year fixed price contract at [redacted]. Gas price is assumed to grow at 4% per year, consistent with Avista's IRP assumptions. Cogeneration scenarios reduce IEP's gas used by existing steam boilers. This gas reduction reduces the cost of cogeneration. Generation operation and maintenance costs include labor to operate and manage the plant, a manufacturer service agreement, and reagent costs for emissions control equipment. These costs are provided by the manufacturer and IEP's internal procurement options. IEP's Avista energy bill savings are calculated at IEP's marginal energy rate. Avista does not currently have a standby generation charge; however, it is possible that Avista would develop a standby generation tariff if IEP began to self-generate. Standby generation charges are modeled based on other utility standby tariffs – including PacifiCorp's Schedule 47 in Oregon and Puget Sound Energy's Schedule 46 – and equal 50 percent of Avista's current demand charge. Property tax impacts were investigated and found to be

6/ 26 U.S.C. § 48(a)(1), (a)(2)(A)(ii),(c)(3)(B)(i)-(ii).

7/ Cogeneration equipment is not subject to state sales tax. However, some scenarios analyzed did not include heat recovery equipment and required the inclusion of sales tax on the initial capital expenditure.

zero due to IEP's current tax treatment. Federal income tax impacts are calculated assuming that IEP's parent company claims 100% bonus depreciation. Fifty percent of the project is assumed to be financed using an existing IEP credit facility.

Q. HOW DO YOU MODEL COSTS AND BENEFITS OVER THE LIFE OF THE PROJECT?

A. I model annual cash flows over the life of the project and calculate both net present value and internal rate of return. I use IEP's hourly energy loads from 2017 to 2019 to dispatch the cogeneration plant. The hourly dispatch model includes planned maintenance and random forced outages. Gas use is based on the manufacturer's heat rate curves. The hourly dispatch model results in annual averages for self-generation, fuel consumption, steam production, emissions, and retail energy. Annual average dispatch results are applied to nominal prices over the 30-year life of the project. Confidential Exhibit LDK-4C includes the annual cash flows for all scenarios.

Q. HOW WOULD SELF-GENERATION AFFECT IEP'S CARBON FOOTPRINT?

A. The Cogen Study includes 100% carbon offsets for incremental carbon produced by the generation facility. This was assumed to ensure that the generation facility would meet any potential mitigation requirements from the permitting authority. Mr. Summers provides additional testimony on this issue. The study also includes the purchase of carbon allowances under a future cap and trade framework, if one is passed in Washington. This effectively double counts the cost of carbon but may be necessary to comply with future legal requirements.

Q. WHAT PRICES DID YOU ASSUME FOR THE COST OF EMISSIONS OFFSETS AND ALLOWANCES UNDER A POTENTIAL CAP AND TRADE PROGRAM?

A. I assumed $8 per offset. This price is consistent with prevailing trading prices for offsets in markets for these products, such as those purchased by British Columbia.[8/] I assumed an allowance price of $15, which is consistent with the prevailing price for allowances in California's cap and trade market. It is important to note, however, that higher assumed prices for offsets and allowances would not impact the economic feasibility of the generation facility to IEP. It is also, of course, important to note that IEP currently would have no obligation to purchase allowances associated with the generation facility, as no cap and trade program has been developed in Washington.

Q. WAS THE STUDY INFORMED BY INPUT FROM OTHER PARTIES?

A. Yes, draft versions of the study were provided to Avista, Staff, and the Public Counsel Unit of the Washington Attorney General's Office. Comments from these parties were incorporated into the modeling and final draft.

Q. IS SELF-GENERATION ECONOMICALLY FEASIBLE FOR IEP?

A. Yes, self-generation is economically feasible for IEP. Table 1, above, summarizes the results of the analysis for all scenarios. The internal rate of return for the project exceeds Avista's requested cost of equity in every scenario. Avista's cost of equity provides a reasonable basis to judge the feasibility of self-generation because it reflects market-based cost of equity for a large industrial firm. However, it is important to acknowledge

8 Exh. Confidential LDK-3C, at 9, n.9.

that non-financial considerations, such as a reduced carbon footprint from cogeneration, could make the project attractive to IEP even with returns below Avista's cost of equity.

Q. IS SELF-GENERATION TECHNICALLY FEASIBLE FOR IEP?

A. Yes. The facility meets IEP's operational needs. IEP has sufficient existing gas supply to meet incremental gas needs of the facility.[9/] IEP has space to locate the facility at its existing manufacturing site.[10/] The project can be permitted, as Mr. Summers testifies. The Cogen Study did not encounter any technical restrictions that would prevent the construction and operation of the facility. The Response Testimony of Mr. Kevin Rasler provides more information on IEP's technical ability to install and run the generation facility.

Q. WHAT IS YOUR RECOMMENDATION RELATED TO THE COGEN STUDY?

A. I recommend the Commission find that IEP can feasibly bypass the majority of the energy currently served by Avista. I also recommend that IEP continue the procurement process for the cogeneration facility unless a special contract between IEP and Avista is approved.

III. THE COST TO SERVE IEP IS BELOW SCHEDULE 25 RATES

Q. WHAT IS AVISTA'S COST TO SERVE IEP?

A. IEP's costs and revenues are summarized in Confidential Table 2 below. Variable cost includes only energy costs and is calculated using annual average prices at the Mid-Columbia hub. IEP's contribution to fixed costs at current rates is [redacted]. The

9/ Exh. Confidential LDK-3C, at 17.
10/ Id. at 16.

proposed special contract rate in the term sheet attached as Exhibit KR-2 to Mr. Rasler's testimony under Avista's filed case is [redacted] (I provide additional discussion of the special contract rate below). This results in a contribution to fixed cost of [redacted]. I performed a long-term marginal cost study and found IEP's long-term marginal cost to be [redacted]. This means the special contract rate in Exhibit KR-2 would contribute [redacted] above IEP's long-term costs, and thus would contribute substantially to Avista's fixed costs.

Confidential Table 2

[redacted]

Q. HOW IS COST TO SERVE IEP RELEVANT TO THE SPECIAL CONTRACT?

A. To account for the fact that IEP has the option to self-generate, which it would give up during the term of the special contract, it is appropriate that the special contract use a bypass rate. A bypass rate is a rate that recovers all of the variable costs to serve Avista and contributes to a portion of its fixed costs. This is consistent with the Commission's rules governing special contracts, which require, "at a minimum, that the contract charges recover all costs resulting from providing the service during its term, and, in addition, provide a contribution to the … electric … company's fixed costs."[11/]

[11/] WAC § 480-80-143(5)(c).

IEP's contribution to fixed cost equals revenue minus variable cost. The marginal cost of serving IEP provides a baseline for establishing the appropriate size of IEP's contribution to fixed costs under the special contract.

Q. WHAT ARE VARIABLE COSTS?

A. In this context, variable cost is the amount that Avista's cost would decrease if IEP stopped service or substantially reduced service. If IEP completely bypassed Avista's system, Avista may be able to eliminate some distribution and billing costs. However, these costs are *de minimis* and IEP is contemplating remaining on Avista's system for a reduced demand. This means Avista would continue to experience distribution and billing costs, and a small amount of variable energy costs.

Q. WHAT ARE FIXED COSTS?

A. Fixed costs are costs that do not decrease if IEP stopped service. For example, executive salaries would probably not decrease if IEP stopped service, nor would Avista likely reduce its total number of employees by a significant amount.

Q. ARE THERE ANY FIXED COSTS THAT COULD BE AVOIDED AFTER A SUFFICIENTLY LONG WAITING PERIOD?

A. Yes, the cost of replacing certain long-lived assets could be avoided given sufficient time. For example, if IEP stopped service, Avista would still have to recover the net plant invested for the facilities connecting IEP to Avista's transmission facilities, so these costs should be considered fixed costs. However, once the facilities are fully depreciated, Avista would not have ongoing costs.

Q. HOW DO YOU STUDY IEP'S COSTS?

A. I developed a long-run marginal cost study of the cost to serve a flat [redacted] block of IEP's load. I designed the marginal cost study to be consistent with IEP's bypass option. That is, the study focuses on the marginal cost of only the portion of IEP's load that would bypass Avista's system. The portion of energy that would not bypass Avista's system is modeled at Avista's embedded costs. The study does not identify the cost to IEP of serving its load; rather, it identifies the cost to Avista of serving a new load that is equivalent to IEP's load. This study reflects both variable costs and fixed costs that can be avoided in the long run. The complete study is provided in Confidential Exhibit LDK-5C.

Q. WHY DO YOU STUDY LONG-RUN MARGINAL COSTS?

A. IEP's contribution to fixed costs should be large enough to cover the future replacement costs of fixed assets serving IEP. If the special contract rate exceeds IEP's variable energy costs, Avista customers would receive a benefit from IEP remaining on the system in the short term. However, over time, Avista may invest additional capital to serve IEP. If the special contract rate exceeds long-run marginal costs, Avista's customers receive a benefit from IEP remaining on Avista's system as a retail customer in both the short and long term.

Q. WHAT RANGE OF SPECIAL CONTRACT RATES DOES YOU COST STUDY SUPPORT?

A. The cost study indicates that the Special Contract rate should be at least [redacted]. If IEP's rate revenue is set to [redacted], IEP would contribute [redacted] to Avista's existing fixed costs. If the special contract rate were set below [redacted], IEP would

continue to contribute to fixed costs, but there is some risk that over time this would not be enough to cover future capital costs of serving IEP.

Long Run Marginal Cost Model

Q. PLEASE SUMMARIZE YOUR COST-OF-SERVICE STUDY.

A. I performed a cost-of-service study for IEP that separately estimates the cost of serving IEP's base load and variable load. IEP's base load is represented by a flat [redacted] block of energy. The study calculates the long-run annual cost to serve base load. IEP's remaining load is treated as cost of service load that is not under threat of bypass. The cost of serving IEP's remaining load is calculated using Avista's embedded cost of service model. Thus, the model is a hybrid of marginal and embedded costs.

Q. WHY DO YOU ESTIMATE COSTS USING A HYBRID MODEL?

A. The purpose of the study is to identify an appropriate floor for IEP's special contract rate. The special contract rate should be high enough that Avista's cost of service customers benefit more from the special contract than from IEP bypassing Avista's system. My hybrid approach mirrors IEP's bypass option, which would serve IEP's base load through self-generation but would continue to rely on Avista for variable energy needs. Matching the cost-of-service study with the bypass option ensures that the special contract rate is set high enough that it benefits Avista's remaining customers relative to the scenario in which IEP pursues self-generation.

Q. HOW DO YOU ESTIMATE LONG-RUN MARGINAL COST?

A. I estimated production, transmission, and distribution costs. I use a combination of market rates and levelized costs. All costs were provided by Avista. I use the midpoint cost for inputs where Avista provided a cost range.

Q. HOW DO YOU MODEL PRODUCTION COSTS?

A. I modeled production costs using market rates. The market rate reflects a five-year physical contract with 70 percent of the contract energy purchased from a specific carbon free source. I also include transaction costs and collateral costs necessary for a long-term contract. This results in production cost of [redacted] per MWh, or [redacted].

Q. WHAT OTHER OPTIONS DID YOU EXPLORE FOR PRODUCTION COSTS?

A. I calculated a total of eight production scenarios. The eight scenarios are presented in Confidential Table 3 below. I selected the five-year physical contract with 70% specified carbon free sources because it reflects Avista's current carbon mix, provides long-term certainty, and simplifies modeling transmission costs. This scenario has the second highest production costs and ensures that marginal production costs are conservatively high. The contract price reflects Mid-Columbia energy hub pricing for 2021 and 2022.

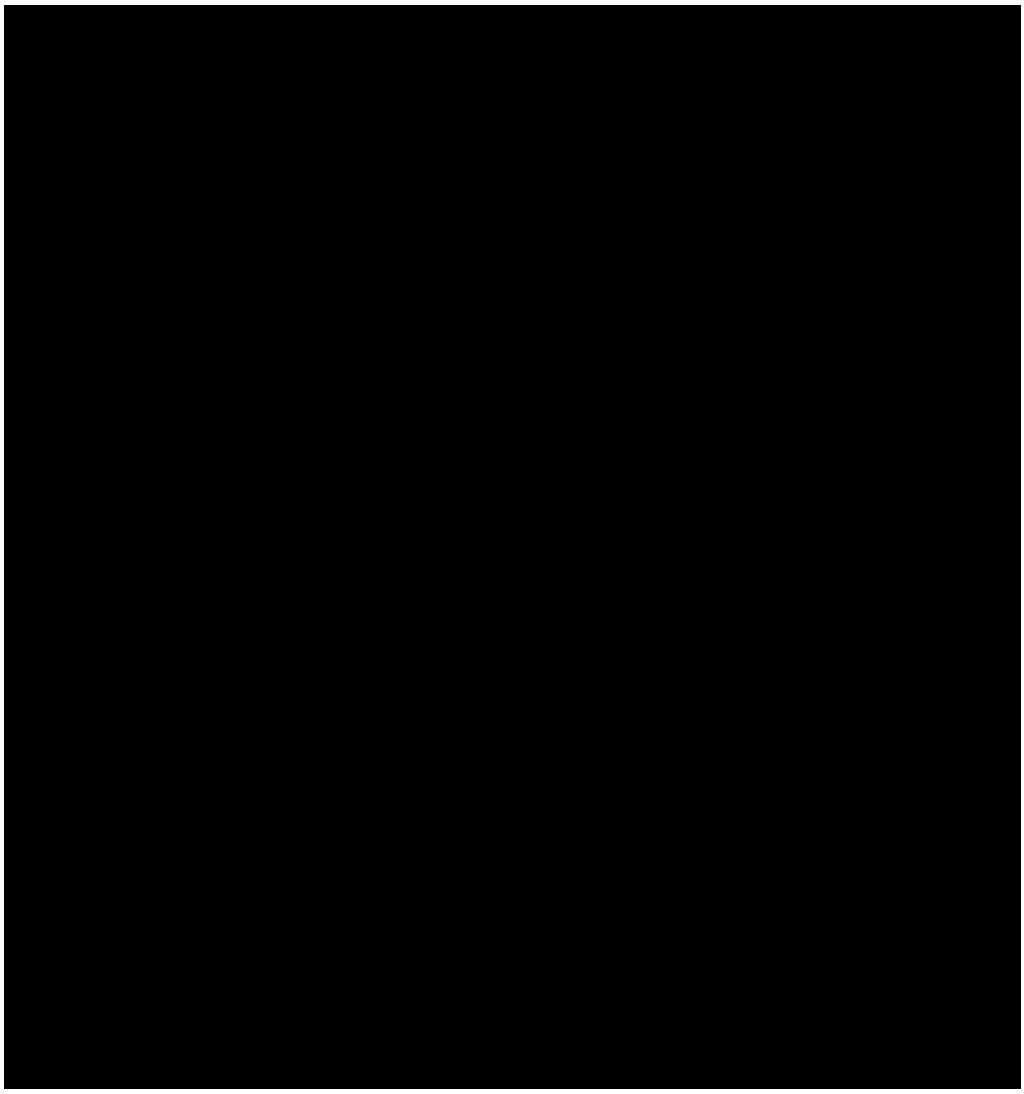
Confidential Table 3

[redacted]

Q. HOW DO YOU MODEL TRANSMISSION COSTS?

A. I modeled transmission costs by calculating the cost of a direct transmission path from IEP to the Mid-Columbia energy hub. This is consistent with the energy source modeled for production costs. Costs include BPA rates, interconnection costs, and scheduling costs. The transmission path follows an existing Bonneville Power Administration transmission line from Mid-Columbia to the Trentwood substation, three miles east of IEP. The BPA transmission cost uses BPA proposed point-to-point rates in the ongoing BP-22 rate case, and current rates for ancillary services. Confidential Table 4 presents the components of the BPA transmission expense.

Confidential Table 4



From the substation I modeled a hypothetical direct transmission connection to IEP's site. The direct transmission connection uses Avista's internal cost estimates for new transmission and interconnections. Confidential Table 5 below presents the estimated interconnection cost.

Confidential Table 5

Purchasing and transmitting energy to IEP relies on Avista's scheduling staff and facilities. I calculated costs using both an allocated cost model and market costs. The allocated cost model assumes a full-time staff of 14 FTE and [redacted] in capital costs. IEP is allocated three percent of the annual scheduling costs based on the [redacted] share of peak demand. This results in a cost of [redacted]. The market rate of [redacted] is used as a conservative measure of marginal scheduling costs.

Confidential Table 6

Q. WHAT ARE TOTAL TRANSMISSION COSTS?

A. Total transmission costs are [redacted], as summarized in Confidential Table 7.

Confidential Table 7

Q. HOW DO YOU MODEL DISTRIBUTION COSTS?

A. IEP's baseload energy is received at the transmission level. The only distribution costs that I include are metering and networking costs. Confidential Table 8 presents distribution costs.

Confidential Table 8

[redacted]

Q. HOW DO YOU MODEL EMBEDDED COSTS FOR IEP'S REMAINING VARIABLE ENERGY REQUIREMENTS?

A. I used Avista's embedded cost of service model to calculate the embedded cost of a [redacted] block of energy served by Schedule 25, and IEP's full load. I used the difference between these values as the embedded cost of IEP's net energy requirements. The results of both the embedded cost of service model and my hybrid long-run marginal cost model are summarized in Confidential Table 9 below.

Confidential Table 9

[redacted]

Q. HOW DOES IEP'S LONG-RUN MARGINAL COST COMPARE TO IEP'S EMBEDDED COST?

A. IEP's long-run marginal cost is [redacted] less than IEP's fully embedded costs.

Special Contract Pricing

Q. WHAT IS THE IMPACT TO REMAINING CUSTOMERS IF IEP BYPASSES AVISTA'S SYSTEM?

A. If IEP bypassed Avista, IEP would reduce energy purchases by approximately [redacted]. In the short run, Avista's power costs would reduce approximately [redacted] and Avista's revenue would decrease by [redacted].[12/] If the bypass coincided with a rate case, rates for remaining customers would increase by [redacted]. Over time, Avista may have additional avoided costs, as demonstrated by the long-run marginal cost study.

Q. WHAT RATE WOULD ENSURE THAT AVISTA CUSTOMERS BENEFIT FROM THE SPECIAL CONTRACT?

A. Any rate greater than the short-term market energy rate of [redacted] would benefit remaining Avista customers in the short run. However, as discussed above, it is possible that over time Avista would avoid additional costs. A rate that results in revenues above the long-run marginal cost of [redacted] would give a very large benefit to customers in the short run and ensure that the benefit remains positive over time. To further the conservative nature of the analysis and ensure IEP contributes to fixed costs under all plausible scenarios, an additional buffer of $1 million above the long-run marginal cost, or [redacted], provides for a 5 percent margin of error in the study. Thus, the special contract rate should be set such that the contract revenue is at least [redacted].

[12/] This assumes that revenue associated with the lost load equaled the fully embedded cost. In reality, Schedule 25 rates exceed fully embedded costs, and lost revenue would be substantially higher.

Q. WHAT METHODOLOGY DO YOU RECOMMEND FOR ESTABLISHING THE SPECIAL CONTRACT RATE?

A. I recommend that the contract rate be set to [redacted].

Q. WHAT IS IEP'S EMBEDDED COST OF SERVICE?

A. IEP's embedded cost of service depends on revenue requirement inputs. These inputs are uncertain and depend on the Commission's resolution of this proceeding. The range of reasonably potential outcomes is no increase, up to Avista's requested increase. Confidential Table 10 below presents the special contract rate and the resulting contribution to fixed cost under a range of revenue increase outcomes.

Confidential Table 10

[redacted]

Q. WHY DO YOU RECOMMEND THIS METHODOLOGY?

A. While IEP's transition to a special contract benefits customers relative to a bypass, it may be perceived by other customers as a cost increase. This is because IEP is currently subsidizing other customers by virtue of paying above its cost of service,[13/] and when IEP transitions to a special contract this subsidy will decrease. As IEP's subsidy of other customers decreases, rates for other customers will increase. I recommend that the

[13/] See Exh. JDM-1T at 6 (Table 3) (showing Schedule 25 at 15% above rate parity).

special contract rate be set with sensitivity to the rate impact for other customers. Tying the special contract rate to the embedded cost of service divorces the rate impact to other customers from the final revenue requirement resulting from this rate case. For example, if my testimony proposed a fixed number, such as the [redacted] floor recommended above, and the Commission approves Avista's rate request as filed, the difference between Avista's cost of service and special contract rate would be [redacted] rather than the intended [redacted]. My proposal ensures that other customers will not face a higher than intended rate impact should the Commission approve Avista's full requested rate increase.

My methodology also ensures that the special contract rate exceeds the floor of [redacted] established by my marginal cost study even in the scenario where the Commission awards no rate increase to Avista.

Q. [redacted]

A. [redacted]

[redacted] [14/]

Rate Impact

Q. HOW DOES YOUR PRICING AFFECT RATES OF OTHER CUSTOMERS?

A. Avista's requested revenue requirement is $575 million. The fixed cost reduction of [redacted] of Avista's requested revenue requirement.

Q. DO YOU PROPOSE A SPECIFIC RATE TREATMENT ASSOCIATED WITH THE SPECIAL CONTRACT?

A. I do not propose a specific rate treatment at this time. Rate treatment of the impacts of the special contract should be made within the broader context of a rate-spread and rate-design analysis, which I have not been asked to perform.

IV. DEMAND RESPONSE

Q. PLEASE DESCRIBE THE DEMAND RESPONSE COMPONENT OF THE SPECIAL CONTRACT.

A. The term sheet included as Exhibit KR-2 to Mr. Rasler's testimony includes a [redacted] demand response program. The program is designed to aid Avista's transition to carbon free generation. IEP will provide [redacted]

[14/] Rasler, Exh. KR-2C at 2.

[redacted] [15/] [redacted].

Q. HOW DOES THE DEMAND RESPONSE PROGRAM AID AVISTA'S TRANSITION TO CARBON FREE GENERATION?

A. Most new renewable resources are not dispatchable. For example, wind speed may be low during peak load hours. As a result, renewable resources are not responsive to Avista's energy needs. The preferred portfolio in Avista's IRP includes new gas generation in part due to the non-dispatchability of renewable resources.[16/] Avista's IRP also includes 25 MW of demand response in the same time frame as the new gas generation.[17/] This demand response can reduce the amount of new gas generation that Avista builds.

Q. IS DEMAND RESPONSE AVAILABLE TO AVISTA WITHOUT THE SPECIAL CONTRACT?

A. Avista will not be able to obtain demand response of the same nature without the special contract. Unlike new generation, demand response has limited procurement options. Demand response must be sourced from customers, and IEP is the only Avista customer large enough to provide more than 10 MW of demand response. This program is a unique opportunity for Avista to have a single point of contact for a large and reliable curtailment.

[15/] Avista 2021 Electric Integrated Resource Plan, at Page 1-1.
[16/] Id. at 11-6.
[17/] Id. at 11-9.

Q. HOW DOES THIS COMPARE WITH OTHER DEMAND RESPONSE RESOURCES AVAILABLE TO AVISTA?

A. Other examples of demand response programs in Avista's IRP include time of use rates, variable peak pricing, smart thermostats, and third-party contracts. The special contract demand response agreement is larger than the combined size of all other demand response programs Avista expects to acquire in Washington over the 20-year IRP planning horizon.[18/]

Q. CAN AVISTA RELY ON THESE OTHER DEMAND RESPONSE RESOURCES IN EVERY HOUR OF THE YEAR?

A. No. Time of use rates and variable peak pricing are not dispatchable and only affect demand in certain times of the day. Direct load control thermostats are only effective when thermal equipment is operating. Avista's other demand response programs are tailored to address peak load.

Q. ARE THERE SCENARIOS WHERE IEP'S DEMAND RESPONSE PROVIDES VALUE OUTSIDE OF PEAK LOAD HOURS?

A. Yes. IEP can provide load reduction in off-peak hours in the event of plant outages or, as occurred recently with Northwest Pipeline, gas supply outages.

Q. HOW WILL IEP REDUCE ITS LOAD IN RESPONSE TO A CURTAILMENT REQUEST?

A. As Mr. Rasler testifies, IEP's primary energy consumption comes from operating a Thermo-Mechanical Pulp ("TMP") machine. [redacted]

[redacted].[19/] [redacted]

[18/] Id.

[19/] IEP faces operational limitations that prevent committing in advance to curtailments longer than four hours. However, IEP may be able to curtail for longer than four hours depending on operations at the time a curtailment is requested.

[redacted]

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted][20/]

[redacted]

20/ Avista preferred resource strategy in the 2021 Electric IRP acquires capacity resources in advance of the 2027 capacity shortfall, including demand response and new generation. This suggests there are avoided capacity costs associated with the demand response program prior to 2027.

[redacted]

Q. [redacted]

A. [redacted]

Q. WHAT DOES AVISTA'S 2021 IRP INDICATE REGARDING AVOIDED COSTS?

A. Avista models demand response in its 2021 IRP. Each of the demand response products selected in the preferred resource strategy is reproduced below.

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

Additionally, Avista's IRP models include price, duration, and capacity credit assumptions for these resources. The assumptions used in Avista's models for demand response are excerpted in Table 11 below.[21/]

Table 11

	Peak Credit			Duration of Event	Energy Savings	Ancillary Services Potential	Price per kW		
	Winter	Summer	Events				2022	2027	2031
DLC Smart Thermostats - Cooling	0%	60%	12	3	32%	15.2	$ 159.31	$ 175.89	$ 186.65
DLC Smart Thermostats - Heating	60%	0%	12	3	-14%	2.7	$ 92.16	$ 101.75	$ 107.98
Third Party Contracts	60%	60%	8	4	100%	3.3	$ 96.15	$ 106.16	$ 112.66
Time-of-Use Opt-in	60%	60%	88	6	100%	0	$ 72.67	$ 80.23	$ 85.15
Time-of-Use Opt-out	60%	60%	88	6	100%	0	$ 83.29	$ 91.96	$ 97.59
Variable Peak Pricing Rates	60%	60%	20	4	0%	0	$ 32.64	$ 36.03	$ 38.24
Large C&I	60%	60%	20	4	0%	0	$ 50.00	$ 55.20	$ 58.58

The characteristics of the demand response options, including peak credit, number and duration of events, and prices provide insight into the demand response avoided costs. The avoided cost associated with the proposed Large C&I demand response program in 2027 is at least $55 per kW. However, $55 per kW represents a floor value for avoided cost. The more expensive demand response resources are not selected for Washington in 2027 under the preferred resource strategy. However, third party contracts are selected for Washington in 2027 under certain scenarios, such as the Baseline 1 scenario. This demonstrates that third party contracts are a marginally economic resource in 2027. Therefore, the avoided cost of the demand response program is arguably close to $106 in 2027.

The preferred resource strategy does select the more expensive demand response resources in 2031 and 2032. This indicates that avoided costs grow over time. The

[21/] See "DR" and "Resource Data" available at: https://myavista.com/-/media/myavista/content documents/about-us/our-company/irp-documents/emissions/2prism70gurobi120720irpbaseline1.xlsm (last accessed April 21, 2021).

Commission should use $106 as an average avoided cost measure for the duration of the post-commitment period because third party contracts are marginally economic in 2027 and are selected resources in 2032.

Q. [redacted]

A. [redacted]

Q. [redacted]

A. [redacted]

[redacted][22/][redacted]

[redacted]

22/ This benefit is calculated as the difference between the avoided cost estimate of $106 and the demand response payment [redacted]

Q. [redacted]

A. [redacted] The 25th ranked day is 200 MW lower than the highest ranked day. The second factor is that market prices may support curtailment even if Avista does not need to rely on the demand response program for capacity.

Confidential Figure 1

I anticipate that the majority of Avista's load curtailments will be to take advantage of economic energy trading opportunities rather than to meet capacity needs. Energy markets typically have a few days per year with unusually high market prices. However, there are typically many days per year where energy prices are above retail

rates. [redacted] per year allows Avista to capture economic value from outlying energy prices without over-burdening IEP with curtailment calls due to only marginal economic energy trading opportunities.

Q. IS IEP'S PARTICIPATION IN THE DEMAND RESPONSE PROGRAM RELATED TO THE REQUESTED BYPASS RATE?

A. Yes. As Mr. Rasler testifies, the demand response program is not costless to IEP; it involves a substantial interruption of and modification to IEP's operations. The bypass rate provided in the special contract helps to offset some of the costs of the demand response program. This means that there is a relationship between the bypass rate and the demand response rate. My proposed pricing for the bypass rate may need to be adjusted if the demand response payment is below [redacted].

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. IEP has proposed terms for a special contract that result in large and ongoing benefits for Avista ratepayers. IEP has a credible opportunity to bypass Avista and save a substantial amount of money. This bypass would increase Avista rates by approximately [redacted] The proposed special contract results in a much smaller rate increase of [redacted] Avista customers benefit by avoiding a large rate increase associated with IEP's bypass. In addition, Avista customers benefit by receiving access to a large and cost-effective demand response program. [redacted]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.