2023 Electric Integrated Resource Plan

Appendix F – Inputs and Results

AVISTA

Appendix F Content

The Company makes data input files and results in native format, models, and other various content used for its Integrated Resource Planning process available to stakeholders. Non-confidential, non-proprietary IRP content can also be found at [Integrated Resource Planning (myavista.com)](https://myavista.com). In a manner to further increase transparency and provide clarity for stakeholders, the following table provides context on data files, models and other content included in Appendix F.

File Name	Folder	File Type	Description of Content
Supply Side Resource Options 5.5.2023	Market Modeling Inputs and Results	Excel	Supply side resource option assumptions for cost, size, availability.
Avista DR Potential Inputs Levelized Cost	Market Modeling Inputs and Results	Excel	Winter and summer peak energy DR program impacts and levelized cost.
Load Forecast for 2023 Progress Report_Update	Market Modeling Inputs and Results	Excel	Energy forecast, peak forecast, retail sales, load split percentages, PHEV and customer rooftop solar.
Market Modeling Results	Market Modeling Inputs and Results	Excel	Market modeling results to include stochastic off-peak/on-peak/flat Mid-C prices, stochastic greenhouse gas, hourly Mid-C prices, stochastic historical regional resource dispatch, deterministic hourly Mid-C prices, deterministic monthly Mid-C prices scenarios, deterministic annual greenhouse gas emissions and deterministic regional resource dispatch.
Natural Gas Expected Price Forecast - Final	Market Modeling Inputs and Results	Excel	Monthly natural gas price forecast used for the IRP, both stochastic and deterministic, as well as basin percentage spreads.
Social Cost of Carbon	Market Modeling Inputs and Results	Excel	Social cost of carbon in 2007 and 2022 dollars, nominal and levelized.
PRiSM Results_031323	PRiSM Model Files	Excel	Scenario list, summary data, sensitivity summary, sensitivity data, summary resources PRS, existing resources, annual summary by scenario, summary table of PVRR ($ Mill) by state and select years, cost vs risk by scenario, clean goal, GHG emissions, avoided costs for SR/EE.

PRiSM Model Guide	PRiSM Model Files	Word	User guide for the PRiSM models.
01_PRiSM_8.0_Expected Case_030223_PRS	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Preferred resource strategy, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
02_PRiSM_8.0_Expected Case_030223_Alternative Lowest Reasonable Cost	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Alternative lowest reasonable cost, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
03_PRiSM_8.0_Expected Case_030223_Basline	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. baseline, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization

			model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
04_PRiSM_8.0_Expected Case_030223_No Additions	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. No additions, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
05_PRiSM_8.0_Expected Case_030223_NoCETA-NCIF-SCGHG-NG	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. No CETA/NCIF/SCGDG/NG, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
06_PRiSM_8.0_Expected Case_030223_WRAP_PRM	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. WRAP PRM, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and

			system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
07_PRiSM_8.0_Expected Case_030223_WRAP_PRM_No _QCC_Changes	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. WRAP PRM/No QCC changes, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
08_PRiSM_8.0_Expected Case_030223_VERStoWA	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. VER + storage WA, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.

09_PRiSM_8.0_Expected Case_030223_LowEconGrowth	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Low economic growth, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
10_PRiSM_8.0_Expected Case_030223_HighEconGrowth	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. High economic growth, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
11_PRiSM_8.0_Expected Case_030223_HighEVGrowth	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. High EV growth, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value,

			non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
12_PRiSM_8.0_Expected Case_030223_WA All electric gas scenario	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. WA all electric gas, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
13_PRiSM_8.0_Expected Case_030223_WA Electrificatio_NG_Backup	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. WA electrification with NG backup, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
14_PRiSM_8.0_Expected Case_030223_Combined_Electrification	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Combined electrification, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results,

			transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
14_PRiSM_8.0_Expected Case_030223_Combined_Electrification_with_Dist_Costs	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Combined electrification with distribution costs, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
15_PRiSM_8.0_Expected Case_030223_Clean_Portfolio	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Clean portfolio, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.

16_PRiSM_8.0_Expected Case_030223_Social Cost included for Idaho	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Social cost included for Idaho, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
17_PRiSM_8.0_Expected Case_030223_MaxCustomerBe nefit	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Max customer benefit, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
01_PRiSM_8.0_Expected Deterministic Case_030223_PRS	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. PRS, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy

			impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
01_PRiSM_8.0_High Gas Price Case _030223_PRS	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. High gas price case - PRS, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
01_PRiSM_8.0_Low Gas Price Case _030223_PRS	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Low gas price case - PRS, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
01_PRiSM_8.0_National CO2 Price Case _030223_Least Cost	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. National CO2 – least cost, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results,

			transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
01_PRiSM_8.0_National CO2 Price Case _030223_PRS	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. National CO2 – PRS, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
03_PRiSM_8.0_Expected Deterministic Case _030223_NoCETA-NCIF_SCGHG	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Expected case - no CETA/NCIF/SCGHG, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.

03_PRiSM_8.0_High Gas Price Case _030223_NoCETA-NCIF_SCGHG	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. High gas price - no CETA/NCIF/SCGHG, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
03_PRiSM_8.0_Low Gas Price Case _030223_NoCETA-NCIF_SCGHG	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Low gas price - no CETA/NCIF/SCGHG, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
03_PRiSM_8.0_National CO2 Price Case _030223_NoCETA-NCIF_SCGHG	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. National CO2 price - no CETA/NCIF/SCGHG, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission

			annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
15_PRiSM_8.0_Expected Deterministic Case _030223_Clean_Portfolio	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Expected case – clean portfolio, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
15_PRiSM_8.0_High Gas Price Case _030223_Clean_Portfolio	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. High gas price – clean portfolio, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
15_PRiSM_8.0_Low Gas Price Case _030223_Clean_Portfolio	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. Low gas price – clean portfolio, deterministic scenario. Includes a summary of resource selected,

			position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
15_PRiSM_8.0_National CO2 Price Case _030223_Clean_Portfolio	PRiSM Model Files	Excel	PRiSM model - must have Gurobi license to run. National CO2 price – clean portfolio, deterministic scenario. Includes a summary of resource selected, position summary, clean goal progress, loads & resources by state and system, demand response, resource data, energy efficiency selected, Aurora resource results, transmission annual revenue requirement from amortization model, annual cost of resource options, resources (MWh), hydro & contracts market value, non-energy impacts, general assumptions, emissions, conservation load value ($/MW), new CapEx and energy burden.
Final Avista Electric Measure List	Energy Efficiency	Excel	List of residential, commercial and industrial energy efficiency measures along with an introduction includes instructions, notes and sources.
Avista 2022 Electric CPA – Summary and IRP Inputs v3	Energy Efficiency	Excel	Achievable technical potential energy savings, winter peak savings, summary peak savings inputs used in IRP.
2030 330 MW Summary Results	Market Reliance Analysis	Excel	Monthly results by hour of market reliance analysis.
2030 1,000 MW Summary Results	Market Reliance Analysis	Excel	Monthly results by hour of market reliance analysis.
2045 330 MW Summary Results	Market Reliance Analysis	Excel	Monthly results by hour of market reliance analysis.

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2045 1,000 MW Summary Results	Market Reliance Analysis	Excel	Monthly results by hour of market reliance analysis.