

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET UE-240006

EXH. DRH-5

DAVID R. HOWELL

REPRESENTING AVISTA CORPORATION

Proforma Capital Additions for 07.2023 - 12.2023 and 2024 - 2026 by Plant Category
Howell

WA GRC Plant Category	Project #	Business Case	07.2023-12.2023 TTP (System)	2024 TTP (System)	2025 TTP (System)	2026 TTP (System)	Exh. DRH-5 Page #
Large or Distinct Projects	1	Wildfire Resiliency Plan	\$ 13,977,203	\$ 33,749,996	\$ 35,249,997	\$ 35,249,997	2
Large or Distinct Projects Total			\$ 13,977,203	\$ 33,749,996	\$ 35,249,997	\$ 35,249,997	
Grand Total			\$ 13,977,203	\$ 33,749,996	\$ 35,249,997	\$ 35,249,997	

1 Includes system proforma capital for the period July 1, 2023 through December 31, 2023.
2 Totals exclude Idaho and Oregon direct business cases from revenue requirement in this case.

Wildfire Resiliency (rev. December 2023)

EXECUTIVE SUMMARY

The threat of wildfires poses a significant risk to utilities across the western United States. In June of 2020, Avista published its first “**Wildfire Resiliency Plan**” which detailed twenty-eight actions to mitigate the risk of wildfire. The Plan includes upgrades to infrastructure aimed at reducing spark-ignition events and protecting critical infrastructure from the threat of wildfires. As of December of 2023, the current 10-year Capital Cost Forecast stands at \$310,862,000. Total program expenditures (CAPx and OPx) are estimated at \$433,466,000.

All values below include past and future capital costs from 2020 to 2029.

System & Transmission

- Situational awareness tools (technology) \$(1,923,000)
- Transmission Inspection Capital Maintenance (\$1,486,000)
- Steel Conversion of Transmission Lines (\$37,137,000)

Electric Distribution

- Fire Safe Mode Automation (35,367,000)
- Wood Pole Management Make-Ready for Grid Hardening (\$23,747,000)
- Enhanced Distribution Grid Hardening (\$210,519,000)

Wildfire Resiliency (Capital Plan Forecast 2020-2029) \$310,862,000

The initial June 2020 estimate of \$268,965,000 was revised upward to \$310,862,000 as of December 1, 2023. The most significant change to cost is the addition of an enhanced grid hardening scope in 2026, which includes undergrounding of overhead electric facilities in high fire risk zones, and Wood Pole Management (make-ready) costs that were not originally forecast as part of Wildfire Resiliency as this program was folded into the Wildfire Resiliency Plan. Additional enhanced grid hardening (undergrounding of overhead electric facilities) in high fire risk zones are being considered beyond 2026 that may impact the Wildfire Resiliency Plan budget in future years.

Wildfire Resiliency Plan Development

The threat of wildfire has grown steadily across the western U.S. and reflects the combination of climate uncertainty producing hotter and drier summers combined with increasing housing development near forested areas where fires are part of the recurring natural cycle. In 2018, Avista executive management requested that a holistic strategy be delivered to better understand the financial risk of wildfires and what safeguards might be established to mitigate the risk. After 18 months of development by the Wildfire Steering Committee, Avista’s initial Wildfire Resiliency Plan was published in June 2020. The Wildfire Plan is publicly available on Avista’s public-facing website and has been shared with state regulators, other stakeholders, and peer utilities. Since June 2020, Avista has invested nearly \$76 million dollars in capital upgrades to T&D (Transmission & Distribution) facilities (2020-2023) and expects that investment to grow by \$33 million dollars in 2024. These investments are part of an overall strategy to mitigate the financial risk that is estimated between \$490 million to \$4.7 billion dollars over a 10-year time horizon. The 2022 financial risk report was compiled by subject matter experts across the company including legal, risk management, electric operations, engineering, asset maintenance, and asset management groups.

Wildfire Resiliency (rev. December 2023)

The Wildfire Plan has been the subject of two Washington General Rate Cases and two General Rate Cases in Idaho. Hundreds of requests for information have been provided by the Company along with testimony and direct consultation with Commissioners, Commission Staff, and Public Counsel. In addition, the Avista Board of Directors receives bi-annual status updates describing Wildfire Plan tactics, goals, progress, and course corrections. In 2022, a community outreach plan was developed which included meetings with emergency management agencies and first responders as well as engagement with over 36,000 customers living in high-fire threat areas. In 2023 this effort was expanded to include all 16 counties containing elevated fire risk zones, over 90,000 residential customers, and 640 public safety partners and key community leaders. Also in 2022, Avista declared Elevated Fire Safety Mode (FSM) on two separate occasions when fire threat conditions became critical during high wind and low humidity events. In 2023 we elevated FSM on four days during wildfire season.

Recently, Avista submitted a concept grant proposal as part of the DOE's Grid Resiliency and Innovation Program (GRIP) to convert 175 miles of overhead distribution lines to underground cable systems where customers are experiencing high outage rates combined with high fire threat in areas defined as 'overburdened and underserved'. Current capital resource levels are not sufficient to complete upgrades to all 2,746 miles of distribution lines located in high-fire threat areas, leaving nearly 700 miles remaining untreated by the end of 2029. Of those 700 miles, 175 miles have been identified as having both high fire risk and poor electric reliability. Unfortunately, Avista was not chosen in the first round for this grant. As of December of 2023, Avista is participating in the second round of the GRIP grant funding process as an attempt to secure additional federal funds for our programs.

Avista remains committed to mitigating the risk of wildfires while maintaining a balance between costs, risk, and affordability. And lastly, to ensure that our process is transparent to both regulators and customers and that we are open to feedback and inquiry.

VERSION HISTORY

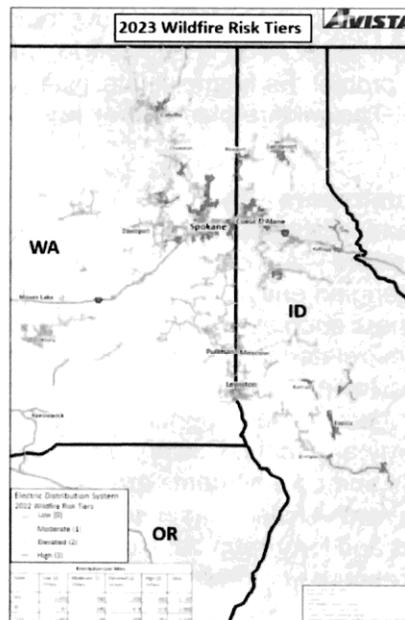
Version	Author	Description	Date	Notes
0	David James	Initial Submission to Capital Planning	April 1, 2020	Initial submission
1	David James	Refresh using the 2020 BC narrative template	July 29, 2020	No revision to capital requirements
2	David James	Revised Submission for 2023-2027 Capital Budget Cycle	September 1, 2022	Capital Forecast was \$268,965,000 is now \$290,091,000
3	Matt Ugaldea	Revised per updated BC template	December 1st, 2023	2020-2029 Capital Forecast is \$310,862,000
<i>BCRT</i>	<i>Katie Snyder</i>	<i>Has been reviewed by BCRT and meets necessary requirements</i>	04/14/2023	

Wildfire Resiliency (rev. December 2023)

GENERAL INFORMATION

YEAR	PLANNED SPEND AMOUNT (\$)	PLANNED TRANSFER TO PLANT (\$)
2024	33,750,000	33,750,000
2025	35,250,000	35,250,000
2026	60,250,000	60,250,000
2027	35,250,000	35,250,000
2028	35,250,000	35,250,000
2029	35,250,000	35,250,000

Project Life Span	10 years 2020-2029
Requesting Organization/Department	Electric Operations
Business Case Owner	Vern Malensky, Director of Electric Engineering
Business Case Sponsor	Josh DiLuciano, VP of Energy Deliver
Sponsor Organization/Department	Electric Operations (A50)
Phase	Execution
Category	Program
Driver	Customer Service Quality & Reliability



Wildfire Resiliency (rev. December 2023)

1. BUSINESS PROBLEM

1.1 What is the current or potential problem that is being addressed?

The risk of wildfires is increasing throughout the western United States. Data from the U.S. Forest Service indicates a 300% increase in the number of wildfires since 1970. Data specific to wildfires in Washington and Idaho fires suggest that the financial impact of fire has increased by 400 to 500% over the last several decades. Though the overall percentage of powerline-involved wildfires remains relatively low (about 3% based on current Washington Department of Natural Resources statistics), catastrophic wildfire is differentiated from other natural disasters in that cause and origin investigations may lead to claims for fire suppression costs, property damage, timber loss, and personal injury. In 2022, a group of subject matter experts examined the probability of large wildfires and their impact on Avista customers. The 10-year financial risk liability is estimated between \$490 million and 4.7 billion dollars.

1.2 Discuss the major drivers of the business case and the benefits to the customer?

Wildfire does not align with traditional utility growth, maintenance, or capacity-related business drivers. Unlike most asset replacement programs, Wildfire Resiliency is a risk-based, not a condition-based program. Therefore, it is best aligned with Customer Service Quality & Reliability and is designed to mitigate financial risk.

1.3 Identify why this work is needed now and what risks there are if not approved or is deferred

– Avista published both a 2020, 2022 and 2023 Wildfire Resiliency Plan and has committed to the execution of this Plan at the highest levels of the Company including the Board of Directors. Wildfire represents is a Tier-1 Level Enterprise risk.

1.4 Discuss how the proposed investment, whether project or program, aligns with the strategic vision, goals, objectives, and mission statement of the organization

– At the heart of the Wildfire Plan is the commitment to protecting customers. Wildfire represents an increasing risk to human lives and property and mitigating that risk goes well beyond utility wildfire plans. It is forged in a partnership between people, communities, government, and business. Avista is the steward of stakeholder assets and in addition to providing safe, and reliable energy we are duty bound to protect the financial interests of both the Company and the communities that we serve. The wildfire plan addresses this through four strategic focus areas:

1. Customers – by reducing the number of utility-involved wildfires we serve the best interests and help protect the safety and wellbeing of our customers.

2. People – Avista 1st responders must be well trained and equipped to work in challenging environments including active wildfire scenes. In addition, our critical partners such as fire first responders should be trained in awareness of safety issues related to working around power equipment.

3. Perform- Avista's 10-year Wildfire Plan is a risk-based strategy that has been peer reviewed and benchmarked with other NW utilities including NorthWestern Energy and Idaho Power. Avista program managers are ensuring that strategic goals and commitments are being honored.

4. Invent – Avista has developed sophisticated computer modeling to monitor the short and long-term risks of wildfire. These risk models help to guide and direct the resource commitments and operating strategies to mitigate wildfires.

Wildfire Resiliency (rev. December 2023)

1.5 Supplemental Information

Several supporting documents are available for your review upon request:

- 2023 Wildfire Resiliency Plan
- 2023 Wildland Urban Interface Risk Map
- 2022 Wildfire Resiliency Risk Report
- 2021 Year-End Wildfire Resiliency Report
- 2020 Avista Wildfire Resiliency Plan
- 2020 Wildfire Resiliency Cost Plan
- 2020 Wildfire Risk Assessment
- 2019 Wildfire Plan Charter

In June 2019, a series of risk workshops were convened to identify potential defensive strategies. These workshops were facilitated by the Business Process Improvement Team with support from Senior Risk Manager Bob Brandkamp, and Senior Asset Management Analyst Jeff Smith. Over the course of 6 workshops, 160 mitigation strategies were identified with 60 strategies analyzed in detail and ultimately, 28 strategies were adopted into the Wildfire Plan. In addition to internal processes, Avista participated in several utility forums sponsored by the Western Energy Institute including the Wildfire Planning & Mitigation Workshop. In general, the approach to fire mitigation is consistent throughout the utility sector and is categorized into four functional groups:

- **Enhanced Grid Hardening** – Targeted investments in T&D infrastructure to reduce spark-ignition events and to make the grid more resilient to the impact of wildfires.
- **Enhanced Vegetation Management** – Avista is committing additional resources to inspect and remove risk/hazard trees on the distribution system where data indicates that fall-in outage risk is 5 times higher than the risk of grow-ins. This commitment is paired with remote sensing capabilities and detailed data collection including Transmission LiDAR and Distribution satellite imaging to provide high-quality, actionable vegetation health and encroachment data.
- **Situational Awareness** – To automate Avista's 20-year Dry Land Mode system (rebranded in 2023 as Fire Safety Mode) to align system protection settings with short-term fire risk.
- **Emergency Response & Operations** – To plan, prepare, and train for large-scale wildfire events so that employee safety is balanced with service restoration and that Avista maintains strong partnerships with emergency first responders before, during, and after an event.

Wildfire Resiliency (rev. December 2023)

2.1 Please summarize the proposed solution and how it helps to solve the business problem identified above.

The following scope elements are outlined in the Company's 2023 Wildfire Resiliency Plan. They are reprinted below. Only capital projects are shown.

Wildfire Category	Project ID	Project Scope (2020-2029)	Resource (2020-2029)
Grid Hardening	Distribution Grid Hardening	2,746 miles. Includes accelerated wood pole management inspections.	\$210.5M
	Transmission Steel Pole	About 600 steel pole installations per year in critical fire threat areas; about 100 of these under the Wildfire budget.	\$37.1M
	Transmission Inspection	Aerial Inspection to identify fire ignition issues and maintenance repairs.	\$1.5M
Situational Awareness	Automated Distribution Circuit Reclosers	52 midline circuit reclosers installed to automate DLM function.	\$7.3M
	Fire Mode Ready Communications	139 compatible circuit reclosers automated for DLM function.	Embedded cost
	Automated Substation Circuit Reclosers	57 substation circuit reclosers automated for DLM function.	\$28M

2.2 Describe and provide reference to CIRR/IRR analyses, relevant studies, documentation, metrics, data, analysis, risk reduction, or other information that was considered when preparing this business case (i.e., samples of savings, benefits or risk avoidance estimates; description of how benefits to customers are being measured; metrics such as comparison of cost (\$) to benefit (value), or evidence of spend amount to anticipated return).

Wildfire Resiliency is a risk-based plan. Inherent and mitigated risks were assessed in three categories:

- **Financial** – The costs to replace T&D infrastructure associated with wildfire events and the response to third-party claims for fire suppression costs and financial damages.
- **Customer** - The cost impact to customers including the costs of electric service disruption.
- **Safety** – The costs associated with worker injuries and public safety.

Wildfire Resiliency (rev. December 2023)

The following table is reprinted from the May 2022 Wildfire Resiliency Risk Report. In this report, several fire and storm-related events were assessed including potential direct and indirect costs. Fire events related to transmission were analyzed separately from distribution. In general, the risk associated with transmission is damage to infrastructure from wildfires while the risk associated with distribution is the sourcing of fires and the subsequent impact on people and property.

Scenario	Description	Min Optimistic	Max Pessimistic
Transmission – general wildfire	Wildfire impact on transmission line. Transmission lines are impacted approximately 3 to 5 times annually.	\$12.0M WF	\$84.4M SME
Transmission – tree fall	Trees that fall into powerlines create a fire ignition situation.	\$36.2M WF	\$757.0M SME
Transmission – all other sources	Though transmission lines incur 50 times fewer faults than do distribution lines, contact with transmission lines (animal, lightning, phase contact) can release significant energy and create fire ignition probability.	\$12.9M WF	\$323.9M SME
Distribution – nominal weather	Many distribution line faults occur during nominal weather conditions (low winds, seasonal temperatures) and though fire can be sourced in these situations, rarely do these fires grow and spread.	\$2.9M SME	\$270.9M SME
Distribution - 40 mph wind event	Distribution line faults that occur during high wind events may result in rapid fire spread.	\$1.8M SME	\$156.7M SME
Distribution - 60 mph wind event	The Labor Day 2020 and 1991 Firestorm events stand out as the most damaging storm events in recent Avista history. In both events, tree contacts with powerlines sourced significant fire activity	\$423.7M SME	\$3,113.5M WF
Totals		\$489.5M	\$4,706.4M

The risk costs shown in the table include cost avoidance for both capital assets and financial risk associated with both nominal and large-scale wildfire events. The internal rate of return is the ratio of these risk costs to the total resource investments from 2020 through 2029.

IRR Optimistic Outcomes: $\$489.5/\$410 = 1.2x$ risk: cost over 10 years

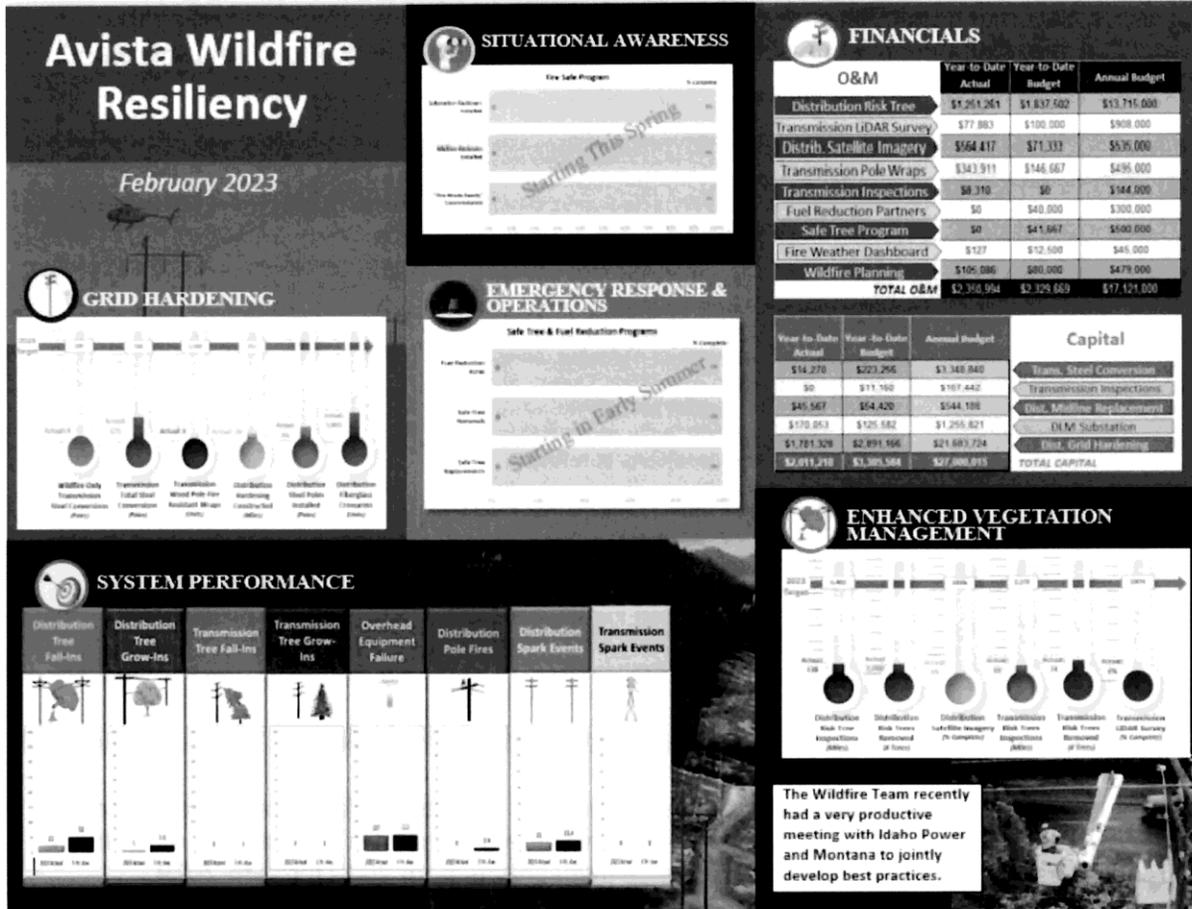
IRR Pessimistic Outcomes: $\$4,706/\$410 = 11x$ risk: cost over 10 years

These risk costs include both direct (hard dollar) and indirect (soft dollar) costs and are dominated by the risk of a low-probability, high-impact event. During the workshops, an event magnitude similar to the 1991 Firestorm was assumed.

Metrics associated with the wildfire are gathered and published on a monthly basis. These monthly reports date back to June 2020 when the Wildfire Plan was formally accepted, and work began to stand up the various programs. The following is an example of monthly reporting which indicates costs, project performance, as well as key metrics such as spark-ignition events, distribution pole fires, and the fall-in and grow-in rates associated with vegetation outages.

Wildfire Resiliency (rev. December 2023)

The February 2023 Wildfire 1-pager is attached to illustrate the key performance metrics that are reported to team members, employee stakeholders, and executive managers.



Wildfire Resiliency (rev. December 2023)

2.3 SUMMARIZE IN THE TABLE, AND DESCRIBE BELOW THE DIRECT OFFSETS¹ OR SAVINGS (CAPITAL AND O&M) THAT RESULT FROM UNDERTAKING THIS INVESTMENT

The Company recognizes a potential for costs savings and cost shifts from operating and maintenance expense towards capital investment. Furthermore, one of the objectives of this plan is to reduce the number of equipment failures and tree-related outages and by doing so, avoid emergency response and customer outage costs. However, the overall impact of cost savings and cost shifts will not be well understood until the plan is fully operational and longer-term performance data can be obtained and analyzed.

At this time, there are no direct offset savings regarding the investment of capital or expense dollars to currently report. It is assumed that in the future, the investments made now will result in offsets in Avista's Vegetation Management, Grid Hardening and Electric Operations departments. However, no direct offsets have been realized as of 2023. The operation of the Wildfire Expense balancing account approved in the Company's Washington and Idaho jurisdictions for O&M costs will be net of cost savings, thereby capturing over time any embedded cost savings.

2.4 IN THE TABLE, AND DESCRIBE BELOW THE INDIRECT OFFSETS (CAPITAL AND O&M) THAT RESULT FROM UNDERTAKING THIS INVESTMENT

Indirect cost offsets due to wildfire mitigation efforts are staggering when compared with direct cost offsets. However, the concept of estimating offsetting costs from an event that didn't occur becomes complicated. The question of how many fires the investment prevents becomes rhetorical and can never truly be answered. In 2022, Avista looked at the physical damage to our facilities, the estimated drop in our stock prices and the impact to our customers to determine what a theoretical cost of a utility-involved fire might be. Several groups of subject matter experts were convened and used a rubric to determine what cost impacts would be avoided if fire was prevented due to our protection and mitigation techniques. The subject matter expert teams included the Wildfire Team (WF) who developed a set of optimistic (best case) and pessimistic (worst case) outcomes. Concurrently the subject matter experts (SME) group, which included employees from electric operations, engineering, and risk management completed the same exercise. The table below represents that work. The variability in the estimate demonstrates how difficult proving a negative can be. Regardless, Avista has estimated indirect cost offsets could be between \$530 Million and \$3.7 Billion dollars over the life of the 10-year plan.

Risk Cost	WF Optimistic	WF Pessimistic	SME Optimistic	SME Pessimistic
Indirect Costs to Avista	\$55.8M	\$1,695.2M	\$36.4M	\$645.6M
Costs (impact to AVA shareholders)	\$41.6M	\$638.3M	\$77.0M	\$911.3M
Impact To Customers (ICE)	\$432.8M	\$1,356.7M	\$436.3M	\$818.8M
Totals	\$530.2M	\$3690.2M	\$549.7M	\$2,375.7M

Wildfire Resiliency (rev. December 2023)

2.5 Describe in detail the alternatives, including the proposed cost for each alternative, that were considered, and why those alternatives did not provide the same benefit as the chosen solution. Include those additional risks to Avista that may occur if an alternative is selected.

Historically, Avista has had a number of Asset Maintenance programs that addressed the risk of wildfire impacts on our system including existing vegetation management and grid hardening programs. Avista responded the growing risk of wildfire by establishing a wildfire resiliency program that built on these historical Asset Maintenance programs specifically addressing wildfire risk. Based on environmental factors and known recent historical wildfire impacts, it was determined prudent to enhance our previously establish mitigative measures and to increase the focus of programs in high fire threat areas.

During the Spring of 2019, Avista conducted a series of Business Process Improvement (BPI)-led workshops to identify potential mitigative measures along with the costs and risk costs associated with those actions. Over 160 individual tactics were identified which were then narrowed to 60 viable options. A year-long evaluation and advocacy process ultimately produced the June 2020 Wildfire Resiliency Report which identified 28 individual activities to support the Wildfire Plan. In 2023, the Wildfire Plan was updated and the number of projects and processes was reduced by consolidating activities down to a list of 16. Many of the elements such as grid hardening and automated protection systems capitalized on existing programs such as grid modernization and Avista's history of setting reclosers to non-reclose mode during fire season. But other elements were new, such as work to develop the Fire Weather Dashboard, the WUI risk model, creating fuel reduction partnerships with state agencies, and the Customer Choice Right Tree, Right Place (Safe Tree) program. The 2023 Wildfire Plan represents the Company's commitment to mitigating spark-ignition events and is supported by the Wildfire Steering Committee, the Wildfire Executive Committee, and the Avista Board of Directors. The current WF Plan calls for the investment of nearly \$433 million dollars (CapX and OPx) over the 10-year period between 2020 and 2029.

2.6 Identify any metrics that can be used to monitor or demonstrate how the investment delivered on remedying the identified problem (i.e., how will success be measured).

The 2023 Wildfire Plan describes the goal of reducing the number of spark-ignition events (fire likely) through a series of investments. Metrics associated with this risk reduction are reflected in the table below:

¹ Direct offsets are defined as those hard cost savings Avista customers will gain due to the work under this business case. Such savings could include reductions in labor, reduced maintenance due to new equipment, or other.

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Outage Issue	2018	2019	2020	2021	2022	5 Yr. Average
Overhead Equipment Failure	654	651	590	612	745	650
Pole Fire	77	68	65	154	50	83
Spark Event	125	99	147	109	107	117
Trees Fall Into Lines	315	399	375	353	375	363
Trees Grow Into Lines	97	94	69	81	59	80

These metrics are measured monthly..

2.7 Please provide the timeline of when this work is scheduled to commence and complete if known.

The Wildfire program was initially expected to complete all capital upgrades by the end of 2029, but it is anticipated that wildfire-related programs will extend beyond that timeframe.

2.8 Please identify and describe the Steering Committee/governance team that is responsible for the initial and ongoing approval and oversight of the business case, and how oversight will occur.

A Wildfire Steering Committee was established in 2019 and has provided direct input (work product) and guidance during the evaluation, plan formation, and execution phases of the Plan. Current members include:

David Howell, Ops Dir	Bruce Howard, Env Dir	Jillian Caires, Legal
Melanie Rose, RBM	Annie Gannon, Corp Com	Bob Brandkamp, Risk
Marie Tyrie, Corp Com	Liz Andrews, Rates	Heather Webster, Asset Mnt
Matt Ugaldea, Wildfire	Vern Malensky, Eng. Dir	

In addition to the Wildfire Steering Committee, an Executive level group meets monthly to discuss Plan strategies and emerging issues. Members of that group include:

Heather Rosentrater, Sr VP & COO	Josh DiLuciano, VP of Energy Delivery
Latisha Hill, VP of Economic Vitality	Kevin Christie, SR VP External Affairs
Greg Hesler, SR VP & General Counsel	Vern Malensky, Dir. Electric Engineering

Wildfire Resiliency (rev. December 2023)

3. APPROVAL AND AUTHORIZATION

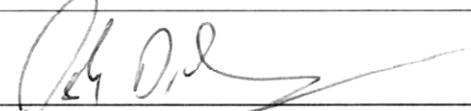
The undersigned acknowledge they have reviewed the Wildfire Resiliency Business Case and agree with the approach it presents. Significant changes to this will be coordinated with and approved by the undersigned or their designated representatives.

Signature:  Date: 12/4/23

Print Name: Vern Malensky

Title: Director of Electric Engineering

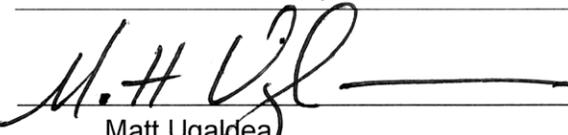
Role: Business Case Owner

Signature:  Date: 12/5/23

Print Name: Josh DiLuciano

Title: Vice President of Energy Delivery

Role: Business Case Sponsor

Signature:  Date: 12/4/23

Print Name: Matt Ugaldea

Title: Wildfire Resiliency Manager

Role: Steering/Advisory Committee Review