**EXHIBIT NO. \_\_\_(MBM-1T )
DOCKETS UE‑151871/UG-151872
PSE EQUIPMENT LEASING SERVICE
WITNESS:  MALCOLM B. MCCULLOCH**

**BEFORE THE**

**WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

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| **WASHINGTON UTILITIES AND****TRANSPORTATION COMMISSION,****Complainant,** **v.****PUGET SOUND ENERGY,****Respondent.** |  | **Dockets UE-151871** **UG-151872** |

**PREFILED DIRECT TESTIMONY OF**

**MALCOLM B. MCCULLOCH**

**ON BEHALF OF PUGET SOUND ENERGY**

**February 25, 2016**

**PUGET SOUND ENERGY**

**PREFILED DIRECT TESTIMONY OF
MALCOLM B. MCCULLOCH**

**CONTENTS**

[I. INTRODUCTION 1](#_Toc444153328)

[II. MARKET AND CUSTOMER INSIGHTS 2](#_Toc444153329)

[III. LEASE SOLUTIONS SERVICE AND TARIFF SCHEDULES 8](#_Toc444153340)

[IV. SERVICE PARTNERSHIPS 15](#_Toc444153347)

[V. EXPLANATION AND SUPPORT OF RATES AND RATE STRUCTURE 18](#_Toc444153351)

[VI. CONCLUSION 21](#_Toc444153352)

**PUGET SOUND ENERGY**

**PREFILED DIRECT TESTIMONY OF
MALCOLM B. MCCULLOCH**

1. INTRODUCTION

Q. Please state your name, business address, and position with Puget Sound Energy.

A. My name is Malcolm B. McCulloch. My business address is 10885 N.E. Fourth Street Bellevue, WA 98004. I am the Manager, Leasing for Puget Sound Energy (“PSE” or the “Company”).

Q. Have you prepared an exhibit describing your education, relevant employment experience, and other professional qualifications?

A. Yes, I have. It isExhibit No. \_\_\_(MBM-2).

Q. What are your duties as Manager, Leasing for PSE?

A. As Manager, Leasing, I am responsible for the management, coordination, profit and loss of all residential and commercial leased products and services. This includes coordination of all activities involved in leasing, including marketing, selling, purchasing, materials, billing, service and maintenance. Additionally, I am responsible for the development and deployment of the expanded Lease Solutions service options discussed in this testimony.

Q. Please summarize your testimony.

A. PSE’s Lease Solutions service provides a turn-key service that allows residential and commercial customers to lease new efficient-energy products from PSE. This service builds off the Company’s existing water heat rental service, which has been offered by PSE for over four decades, by implementing several key improvements to enhance both the scope of customer offerings and the long-term financial stability of the program.

Q. What is the purpose of your testimony?

A. My testimony will outline how PSE established market parameters and tested customer interest, describe the leasing service’s features, discuss how it differs from the existing rental service, detail how the Company will establish service partnerships to conduct activities at customers’ sites, and provide an explanation of the rates and rate structure of the program.

1. MARKET AND CUSTOMER INSIGHTS

**Q. How did PSE establish market parameters for PSE’s proposed Lease Solutions service?**

A. In order to establish a detaile percentd understanding of existing market conditions, an analysis was conducted to pinpoint the types of space heat and water heat equipment currently being used in the existing market. The Northwest Energy Efficiency Alliance’s (NEEA) 2012 Residential Building Stock Assessment, NEEA’s 2009 Commercial Building Stock Assessment, and PSE’s 2012 Fact book, were used as reference points for this exercise to ensure the data appropriately reflected customers within PSE’s service territory.

1. Space Heat Equipment

### The findings for space heat equipment indicated that 70 percent of PSE’s single-family residential customers use gas forced-air furnaces or air-source heat pumps to heat their homes; 71% of PSE customers use natural gas as their primary heat source. *See* Figure 1 in Exhibit No. \_\_\_\_ (MBM-3).

2. Water Heat Equipment

### As illustrated in Exhibit No. \_\_\_ (MBM-3), Figures No. 2 and 3, the water heat markets in both the residential and commercial sectors are largely dominated by tank-style water heaters. In Washington State, 97 percent of single-family residential water heat equipment is tank-style; 61 percent of PSE customers use natural gas to heat their water while 35 percent use electricity. In the commercial market, 80 percent of PSE customers also use self-contained water heaters, and the largest sector within that is tank-style; both natural gas (42 percent) and electricity (54 percent) are used for fuel.

Q. Is there a gap in these markets that Lease Solutions is designed to address for these products? Please elaborate on this gap.

A. A significant portion of the market is utilizing furnaces, heat pumps and water heaters that have far exceeded their useful life and this service will help either increase or accelerate the rate of replacement of such equipment.

Q. What does PSE mean by “useful life”?

A. “Useful life” was defined using the below industry useful life standards; taking a simple average of these standards results in a mean 15-year useful life.

|  |  |
| --- | --- |
| **Equipment**  | **Useful Life (Years)** |
| Residential Gas Furnace | 18[[1]](#footnote-1),[[2]](#footnote-2) |
| Residential Heat Pump  | 15[[3]](#footnote-3) |
| Commercial and Residential Tank-Style Water Heater | 12[[4]](#footnote-4) |

Q. How was this 15-year “useful life” standard used to define a gap in the market?

A. Using the above useful life average, an assessment of the Northwest Energy Efficiency Alliance’s 2012 Residential Building Stock data was conducted to determine what percentage of installed equipment was installed on or before 2000, which represents equipment that is 15 or more years old. As detailed in Mr. Teller’s testimony, this analysis revealed that approximately 40 percent of the products in service today have exceeded their useful lives.

**Q. Has PSE measured customer interest in PSE’s proposed Lease Solutions?**

A. Yes. PSE conducted customer surveys to determine specific customer preferences and interest with respect to leasing space heat and water heat equipment. Surveys were completed in partnership with PSE’s Customer Intelligence team, leveraging the existing residential customer panel, as well as with a third-party research consultant, Cocker Fennessy. As the Cocker Fennessy research survey is most recent and most specifically targeted to the product portfolio as currently filed, I describe their research methodology and survey findings below.

**Q. Please describe the Cocker Fennessy survey methodology?**

A. Cocker Fennessy conducted an online survey of PSE customers between January 30 and February 4, 2016. Eligible respondents lived in the PSE service area, were homeowners and were responsible for or informed about household decisions about major appliance purchases. *See* Exhibit No. \_\_\_ (MBM-4).

Q. What information was provided to customers taking the survey?

A. To determine potential participation in a lease offer, customers were informed that PSE is considering offering a new service where customers would pay an all-inclusive, fixed monthly fee to lease various types of energy equipment.  These monthly fees would cover the cost of the equipment, installation, permitting fees, and future maintenance and repair costs. Customers were further informed of the following lease components: No upfront cost, energy-efficient equipment, 24-hour customer service, ability to transfer the lease when you sell a home and the option to start a new lease when the term has ended. As an example, below is how customers were informed of the leasing program features for a residential natural gas furnace:

# NATURAL GAS FURNACE

|  |  |
| --- | --- |
| **PROPOSED LEASING PROGRAM CHARACTERISTICS** | **Natural Gas Furnace** |
| Estimated Monthly Fee | $60/month |
| Lease Term | 17 years |
| Maintenance | Every 2 years |

**Q. What were the key findings from this survey?**

A. There were five key findings from the survey, which are detailed below.

1. Customers expressed strong interest in the proposed leasing program.

* As shown in the table below, among all customers, 25 percent are interested in the water heater leasing program; 18 percent are interested in the natural gas furnace leasing program; and 13 percent are interested in the heat pump leasing program. In addition to those interested, there was a large share of customers that are neutral to the idea of leasing with 29 percent more in water heating, 22 percent more in natural gas furnaces, and 20 percent more in heat pumps. In total, 33-54 percent of customers are neutral to very interested in leasing.

|  |  |  |
| --- | --- | --- |
| **Lease Product** | **Interested** | **Neutral** |
| Residential Water Heater | 25% | 29% |
| Residential Gas Furnace | 18% | 22% |
| Residential Air Source Heat Pump | 13% | 20% |

* Interest is significantly higher among customers with older equipment that has reached the end of its useful life: 32 percent of those with a water heater that is 11 years or older are interested in leasing; 25 percent of those with a gas furnace that is 16 years or older are interested; and 16 percent of those with a 16 year or older heat pump are interested.

2. The presence of a leasing program would accelerate equipment acquisition.

* If a leasing program were available, 17 percent of customers surveyed say that they “probably” or “definitely” would replace their home heating or hot water equipment earlier than if they had to make purchase decisions and maintain the equipment themselves. Another 27 percent say they “possibly” would accelerate their purchase.

3. Customers strongly support key concepts of the leasing program.

* 87 percent of customers surveyed expressed interest in the 24-hour customer service and same-day repairs; 72 percent of customers surveyed reported that the program’s maintenance and repair would provide added peace-of-mind; and 70 percent say it is important to help people switch to technologically-advanced equipment to help people save money on their energy bills.

4. Access to smart technology is appealing.

* 39 percent of customers said that if their leased water heater was equipped with the appropriate technology, they would enroll in a demand response program in exchange for a monthly incentive.
* 38 percent of customers said that if their leased furnace or heat pump was equipped with a web-enabled thermostat, they would enroll in a demand response program in exchange for a monthly incentive.

5. PSE is trusted to deliver an equipment leasing program.

* 66 percent of surveyed customers say PSE is trusted and will provide customers with the information, equipment and services they need.

**Q. What did PSE learn from this survey?**

A. PSE learned that its customers view PSE as a trusted partner and that the Lease Solutions service can help meet customers’ critical needs when faced with the task of replacing and managing their existing energy equipment. Additionally, the survey shows that customers value solutions that have low upfront cost, provide piece of mind through inclusive maintenance and repair, and provide the ability to save on their energy bills. Customers expressed a considerable interest in Lease Solutions, validating that the product portfolio, inclusive services, lease terms, and estimated monthly costs would provide value to many customers and that there is a clear market demand for this service.

1. LEASE SOLUTIONS SERVICE AND TARIFF SCHEDULES

Q. Please briefly describe the equipment leasing service proposed by PSE.

A. The equipment leasing service is a turn-key, all-inclusive service where PSE will lease tank-style natural gas and electric water heaters, natural gas furnaces and electric air source heat pumps to customers. For one monthly lease payment, PSE will manage the installation of the equipment, provide ongoing maintenance, and perform any needed repairs or failed-equipment replacement throughout the lease term with no additional cost to the customer. The equipment leasing service removes barriers to the replacement of older, inefficient equipment by using a streamlined credit approval process, affordable access to energy-efficient and connected equipment options, and a simple product selection model. To deliver this service, as described below, PSE will rely on the expertise of service partners in the market to install and maintain the equipment according to the service’s parameters. Customers will have the convenience and peace of mind knowing that their heating and water heating equipment is efficient, dependable, and safe.

Q. Does PSE currently offer tariffs that authorize the rental of water heaters and other end use equipment?

A. Yes, PSE and a predecessor company, Washington Natural Gas, have offered rental of natural gas equipment since 1962. This includes Schedule 71 – Natural Gas Residential Water Heater Rental Service; Schedule 72 – Natural Gas Large Volume Water Heater Rental Service; and Schedule 74 – Natural Gas Conversion Burner Rental Service. PSE has approximately 35,000 customers that currently utilize this service. In 2000, these schedules were closed to new customers because at that time, PSE determined it was unable to cost-effectively provide these services to new residential and commercial customers under the existing program and rate structure.

**Q. Does PSE anticipate it can cost-effectively provide the Lease Solutions services that it proposes under Schedule 75?**

A. Yes, as discussed below, there are several significant differences between the Lease Solutions service PSE proposes to offer under Schedule 75 and the rental services offered in Schedules 71, 72 and 74.

Q. Describe the specific features of PSE’s proposed Lease Solutions and how it differs from PSE’s existing equipment rental program.

A. The Lease Solutions service differs from the existing rental tariff in several distinct categories. PSE has listened to input from various stakeholders and reviewed current market conditions. As a result, PSE has incorporated various components into the expanded lease service as outlined below.

1. Fixed-lease term.

The rental agreement for the existing rental program does not have a set end date while the Lease Solutions service will have specified lease terms for each product. With respect to the Lease Solutions service, at the end of the lease term, at the customer’s request and option (i) PSE will replace the equipment with identical or similar equipment, and the customer will enter into a new lease agreement for the new equipment at the then current monthly lease payment and lease term; or (ii) the customer can return the equipment to PSE, and permit PSE or its agents to enter the premises where the equipment is located for the purpose of removal. If the customer chooses replacement equipment, PSE will replace the leased equipment as soon as is commercially reasonable after PSE is notified by the customer. Prior to installation of the new equipment, PSE and the customer will execute a new equipment lease agreement containing the new lease terms.

2. Fixed-lease price.

The existing rental rate is not fixed, as the service does not have a distinctive term, therefore a customer’s rate may change over time. In contrast, the Lease Solution service rates are predicated on an all-inclusive fixed lease price that includes the equipment, installation, and operating and maintaining the equipment over the entire life of the lease. Lease rates can change over time for new customers entering into a new lease service but rates will not change for customers currently in a lease as the rates are fixed during the term.

3. Comprehensive maintenance and repairs.

Under the existing rental tariff, PSE gas service technicians provide all repair services for the program; however no scheduled preventive maintenance service is included. The Lease Solutions service is inclusive of both repair and preventive maintenance activities, which will be fulfilled by contracted service partners. If PSE cannot repair equipment, PSE will replace the equipment at no cost to the customer during the life of the lease term.

4. Broader product portfolio with energy-efficient equipment.

The existing rental service is restricted for all models of residential natural gas water heaters with energy factors less than .60. The existing rental service also includes commercial natural gas large volume water heaters. The Lease Solutions service includes a broader range of energy-efficient and connected equipment choices. Connected equipment options will allow the Company, when there is a Demand Response Conservation Program available to customers, to leverage these deployed connected assets to quickly dispatch load control and energy storage capabilities for those customers who choose to enroll. The initial Lease Solutions portfolio will offer:

* Residential natural gas and electric tank-style water heaters
* Residential natural gas furnaces
* Residential electric air source heat pumps
* Commercial natural gas and electric tank-style water heaters

5. Access to energy-efficient rebates.

The Lease Solutions service, through this broader product portfolio, will complement PSE’s Energy Efficiency (Conservation) Programs by promoting the installation of energy-efficient equipment and stimulating the replacement of inefficient equipment that has exceeded its useful life, beyond what PSE has been able to achieve through its Conservation Programs funded through Schedule 120. Since those choosing this service will be paying the incremental cost to access more efficient products, all eligible customers will have the benefit of applicable energy efficiency rebates, and the associated savings from these rebates will be accounted for under applicable approved Conservation Programs.  Through the Lease Solutions service, all eligible customers will benefit from automated rebate dispensation, as well as other energy-efficiency related services.

6. Lease Solutions is supported by only participating customers.

In May 2000, PSE requested that tariff schedules for its rental of natural gas equipment be closed to new customers, because at that time, the Company was unable to cost-effectively provide rental services to new residential and commercial customers under the existing program and rate structure. This structure did not provide for appropriate ring-fencing of the program financials, which resulted in unanticipated costs and revenue adjustments as a result of general rate case activities. By appropriately assessing all costs to this specific rate class under the Lease Solutions service, the Company can assure that those customers who also elect to use the expanded optional energy equipment lease service do not burden other customers.

Q. How is Lease Solutions an improvement to PSE’s existing rental programs?

A. Lease Solutions contains several important improvements to PSE’s existing rental programs:

* By providing a fixed-lease price for a specified lease term, the Lease Solutions service will provide customers with a clear understanding of the full costs of the service with which they can assess whether the optional service provides value and is appropriate for their needs.
* The inclusive scheduled maintenance by a certified technician provides customers the additional peace of mind in knowing that their leased equipment will perform to the manufacturers’ specification during the life of the lease and that they will not have to pay for any repairs. In the recent survey, 72 percent of customers stated this was important to them and provided clear value.
* Having more product options available through the Lease Solutions service will allow customers to choose the equipment that is right for their individual needs.
* The inclusion of energy-efficient and connected equipment will help customers save more energy and money. Both of these features may not have been affordable absent the lease option. In the recent survey, 70 percent of customers said it is important to help people switch to technologically-advanced equipment to help people save money on their energy bills. Customers who choose this option should have access to applicable energy-efficiency rebates, allowing them to benefit from the rider funding to which they contribute.
* Finally, the structure of the rates provides long-term assurance that the service will remain a viable platform, and that both participating and new customers will continue to receive the above-mentioned benefits.

Q. Will Lease Solutions incorporate demand response capabilities?

A. Yes. The Lease Solutions portfolio will also include connected equipment options, so that when there is a Demand Response Conservation Program available to customers, the service will have optional products for participation in the program.

1. SERVICE PARTNERSHIPS

**Q. How will PSE implement the Leasing Program?**

**A.** To effectively deliver a comprehensive lease service that will expand participation in the existing market, PSE will engage its valued service partners to facilitate the equipment distribution and in-home fulfillment tasks, including pre-installation site checks, permitting, installation, maintenance, and repair services. The service will ensure that the service partner who performs the initial site check will be the same service partner responsible for the equipment through installation, maintenance, and service. This promotes a greater sense of continuity from the customer’s perspective while simultaneously increasing the potential for repeat business for PSE’s service partners. If for some reason, the original contractor is unable to perform, PSE will place repair and maintenance work up for bid to all eligible PSE contractors.

**Q. Please describe the service partner models that will be utilized in support of this service.**

A. The Lease Solutions service will offer the flexibility for contracted service partners to source and manage the equipment, should that choice be preferred. Figures 1 through 5 on Exhibit No. \_\_\_\_ (MBM-5) illustrate the three service partner paths for which contractors may elect to contract with PSE, and the respective roles for contracted service partners under each of these paths. All paths are available to all service partners, and each service partner can determine through the procurement process whether to contract with PSE through one, two, or all three paths simultaneously.

PSE’s goal is to create a partnership agreement and contract with local service partners who are capable of providing services for its leasing customers. PSE will identify service partners that can provide a high level of service at a competitive price while addressing an innovative approach. In order to provide flexibility and convenience for the service partner and the customer, there will be three possible service paths as shown in Figure No. 2 on Exhibit No. \_\_\_\_ (MBM-5).

1. The PSE Path

This path is triggered when a customer contacts PSE and expresses interest in the leasing service. The PSE Path will be supported by a three-year or five-year contract with a service partner to provide site inspection, permitting, installation, maintenance/repair services as well as supporting parts, and removal services for approved water heater and/or HVAC products. PSE will manage the customer acquisition, lease financing and administration activities, and all equipment selection and procurement processes. All equipment will be made available to contracted service partners on a consignment basis through local contracted distribution partners. PSE will manage any necessary equipment warranty processes directly with those distribution partners.

2. The Hybrid Path

This path is also triggered when a customer contacts PSE and expresses interest in the leasing service. The Hybrid Path will be supported by a three-year or five-year contract with a service partner to supply equipment, provide site inspection, permitting, installation, maintenance/repair services as well as supporting parts, warranty management, and removal services for approved water heater and or HVAC products. PSE will manage the customer acquisition, lease financing and administration activities.

3. The Partner Path

This path is triggered when a customer contacts a Lease Solutions contracted service partner and expresses interest in the leasing service, or when a partner presents the Lease Solutions service option to an existing customer. The Partner Path will be supported by a three-year or five-year contract with a service partner to promote and manage customer acquisition, supply equipment, provide site inspection, permitting, installation, maintenance/repair services as well as supporting parts, warranty management, and removal services for approved water heater and or HVAC products. PSE will only manage the lease financing and administration activities in this path.

Q. What steps has PSE taken to identify service partners?

A. Requests for Qualifications (“RFQ”) were distributed to qualified service providers in both May 2015 and again in January 2016 after PSE expanded its service partner paths. PSE assessed proposals of prospective service partners and conducted a number of prospective partner interviews. Information gathered through this process was utilized to develop rates filed in support of this service. Selection criteria include a combination of product capabilities, territory coverage, past performance, and price.

Q. How will PSE collaborate with the service partners to ensure that the service is successful and provides mutual benefit?

A. PSE understands that the success of the Lease Solutions service is contingent on the flawless execution of the customer experience and believes that its service partners play a critical role in this process. PSE is committed to working with its partners to ensure the appropriate policies and processes are in place to support the success of the program and is committed to working collaboratively in the services’ deployment and ongoing implementation.

1. EXPLANATION AND SUPPORT OF RATES AND RATE STRUCTURE

Q. Can you explain how the monthly lease rates are calculated?

A. The monthly lease price charged to a customer is calculated based on discounted cash flow methodology. The rates are built on estimates of all costs borne by the Company in installing, operating and maintaining the equipment over the life of the lease term. These costs are totaled and discounted to today’s terms using the Company’s approved cost of capital in order to calculate the Company’s total revenue requirement in net-present value (“NPV”). This amount is then converted into a levelized monthly rate a customer must pay for the Company to earn its approved return for each specific leasing product. The levelized rate remains constant over the life of the lease and does not escalate or change.

**Q. Is PSE’s weighted cost of capital assessed to the capital costs or the entire bundled service?**

**A.** In calculating the return on rate base for the annual revenue requirement, PSE’s weighted cost of capital is assessed to the capital costs, which includes the leased equipment and installation costs. The weighted cost of capital is also used to discount the total revenue requirement into NPV terms in order to calculate the levelized monthly lease rate.

**Q. What specifications were provided to ascertain equipment costs?**

A. The RFQs required bidders to provide flat rates, excluding taxes, for specific types of equipment based on product size, input capacity, efficiency, system capabilities, and performance qualifications.

**Q. How did PSE gather costs for installation and maintenance services?**

A. The RFQs required bidders to provide flat rates, excluding taxes, for services based on detailed work specifications for a standard installation. Figure 1 in Exhibit No. \_\_\_\_ (MBM-6), details the specifications provided for residential gas furnace installation service.

Q. How did PSE determine what costs should be treated as supplemental expenditures for installation?

A. The RFQs detailed what service tasks were to be considered out of scope. Figure 2, in Exhibit No. \_\_\_\_ (MBM-6), details the excluded tasks provided for residential gas furnace installation service.

**Q. How did PSE use these costs inputs to inform the rates for each product?**

A.PSE used the individual bidder response inputs, as available for each of the three service partner paths, to establish average costs for each product and the associated services. Products were then bundled based on aligned characteristics and the average costs were then used in development of the rates filed on February 17, 2016..

**Q. Are these optional rates in addition to other service rates customers receive from PSE?**

A. Yes, the monthly lease price is in addition to the charges for natural gas and electric service billed in accordance with the rate schedule(s) on which the customer is served.

**Q. Does PSE intend to update the rates periodically?**

A.The rate inputs may be reviewed annually, or as deemed appropriate, to determine if certain rates require modification to ensure accurate monthly lease prices.

**Q. What type of input changes could result in re-calculated rates?**

A. Rate inputs that may change include, but are not limited to, equipment costs, installation costs, forecasted operation and maintenance costs, the Company’s approved return and other pricing inputs.

**Q. What happens if a rate needs to be modified?**

A.If a rate needs to be changed, then PSE will file an update to the tariff with the necessary supporting documentation for WUTC approval. Upon approval, the rate would then be assessed to only new customers, or customers renewing their lease for the service.

**Q. Will future rate changes affect customers who already participate in the lease services prior to the rate modification?**

A. No, those customers who already participate in the lease service will not see a change in their monthly lease rate if a modification is submitted to and approved by the WUTC. Only those new customers who choose the leasing service after the rate change would pay the new rate. Once a customer begins leasing equipment, the lease price is fixed for the term of the lease.

Q. Has the rate structure been designed to ensure that customers choosing the Lease Solutions service pay the full cost of the service?

A. Yes. PSE was deliberate in the design of the rates to ensure that those natural gas and/or electric customers who also elect to use the expanded optional energy equipment lease service, do not burden other customers. The prices in the tariff sheets filed on February 17, 2016, ensure that the Company recovers its expenses and its weighted average cost of capital approved by the WUTC effective upon the start date of the lease. Over time, the prices can be updated for new leases, as necessary to best reflect the current or expected costs of providing the service. This will also help ensure that the provision of this optional service will not unduly burden any non-participating customers.

1. CONCLUSION

Q. Does this conclude your prefiled direct testimony?

A. Yes.

1. Energy Star Furnace Calculator Assumptions tab http://www.energystar.gov/sites/default/uploads/buildings/old/files/Furnace\_Calculator.xls. [↑](#footnote-ref-1)
2. Washington State Office of Financial Management, [State Administrative & Accounting Manual (SAAM)](http://www.ofm.wa.gov/policy/default.asp), 30.50 Capital asset class codes and useful life schedule http://www.ofm.wa.gov/policy/30.50.htm. [↑](#footnote-ref-2)
3. Washington State Office of Financial Management, [State Administrative & Accounting Manual (SAAM)](http://www.ofm.wa.gov/policy/default.asp), 30.50 Capital asset class codes and useful life schedule http://www.ofm.wa.gov/policy/30.50.htm. [↑](#footnote-ref-3)
4. Air Conditioning, Heating, and Refrigeration Institute http://www.ahrinet.org/site/589/Homeowners/Save-Energy/Water-Heating-Products & Gas Tariff Increase Filing, under WUTC Docket No. UG-101644. [↑](#footnote-ref-4)