Exh. PCD-5
Docket UG-240008
Witness: Patrick C. Darras

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. CASCADE NATURAL GAS CORPORATION, Respondent.	DOCKET UG-240008

CASCADE NATURAL GAS CORPORATION

FOURTH EXHIBIT TO THE
DIRECT TESTIMONY OF PATRICK C. DARRAS

March 29, 2024

PROVISIONAL ADDITIONS TO PLANT IN SERVICE

2024 – 2025 Minor Projects

SPECIFIC PROJECTS

Funding Project	Description	FERC Account No.	WA 2024 Cascade Plant Additions	WA 2024 Estimated In-Service Date	WA 2025 Cascade Plant Additions	WA 2025 Estimated In-Service Date
FP-324301	Pur Completion Machine Mt Vern CS	394.1	$2,639	3/14/2024	$0	
FP-324315	Pur 12in Shell Cutter Mt Vernon CS	394.1	$10,555	6/15/2024	$0	
FP-324480	Pur 2 Custom Pallets Mt Vernon CS	394.1	$8,293	6/15/2024	$0	
FP-324820	MAOP;4' ST;ARLI;5,610'	376.2	$76,796	2/28/2024	$0	
FP-324824	C/M;R-198(R-66) ARL	378	$53,709	3/30/2024	$0	
FP-323731	Fredonia CS Scrubber Replacement	377	$147,143	9/30/2024	$0	
FP-323795	Fredonia CS Flame / PLC spare parts	377	$18,882	2/28/2024	$0	
FP-324495	Fredonia CS Storage Shed	377	$18,174	6/15/2024	$0	
FP-324502	Fredonia CS Update facility Lights	377	$21,809	6/15/2024	$0	
FP-324704	Fredonia CS Security Install	377	$30,290	8/15/2024	$0	
FP-325057	Fredonia CS New Relief 1910K	377	$15,145	3/15/2024	$0	
FP-324239	Purch Electric Grease Gun Mt Vernon	394.1	$1,506	1/30/2024	$0	
FP-324273	Purch Electric Grease Gun Longview	394.1	$1,506	1/30/2024	$0	
FP-324274	Purch Electric Grease Gun Kennewick	394.1	$1,506	1/30/2024	$0	
FP-319104	MAOP; 2" HP; ELMA (RHD)	376.2	$0		$543,633	11/30/2025
FP-319107	MAOP; R-TBD; ELMA (RHD)	378	$0		$377,211	10/30/2025
FP-324619	UG - LIGHTHOUSE DIMP SOFTWARE-CNGC	303	$0		$345,851	12/1/2025
FP-324624	UG - LIGHTHOUSE TIMP SOFTWARE-CNGC	303	$0		$221,968	12/1/2025
FP-324823	Bellingham 1 TBS RTU Replacement	379	$4,025	2/27/2024	$0	
FP-324827	Sumas TBS RTU Replacement	379	$3,930	3/27/2024	$0	
FP-324828	Bend TBS RTU Replacement	379	$4,025	4/27/2024	$0	
FP-324829	Hermiston TBS RTU Replacement	379	$4,025	5/27/2024	$0	
FP-324830	Stanwood TBS RTU replacment	379	$4,025	6/27/2024	$0	
FP-324831	Mt Vernon TBS RTU replacement	379	$4,025	7/27/2024	$0	
FP-324832	Nyssa TBS RTU Replacement	379	$4,025	8/27/2024	$0	
FP-324833	Othello TBS RTU Replacement.	379	$4,025	9/27/2024	$0	
FP-324834	Redmond TBS RTU Replacement	379	$4,025	10/27/2024	$0	
FP-324835	Shelton TBS RTU replacement	379	$4,025	2/27/2024	$0	
FP-324836	South Bend TBS RTU Replacement	379	$4,025	3/27/2024	$0	
FP-325160	RTU Replacement Kalama TBS	379	$4,583	2/27/2024	$0	
FP-325161	Kelso RTU replacement	379	$4,583	2/27/2024	$0	
FP-325162	Selah TBS RTU Replacement	379	$4,592	2/27/2024	$0	
FP-325163	R-38 Longview RTU Replacement	379	$4,583	2/27/2024	$0	
FP-323636	RP-SHEL R-17 (R-84) MAIN	376.2	$63,627	8/30/2024	$0	
FP-323730	RP-SHEL R-17 (R-84)	378	$206,332	10/31/2024	$0	
FP-324475	Pur Elec Fume Extractor Mt Ver CS	394.1	$15,079	6/15/2024	$0	
FP-324778	CONST SVCS - TOOL SHED & REMODEL	390.1	$155,214	10/31/2024	$0	
FP-324804	UPGRADE MODEL 5 PROVER - YAKIMA	394.1	$30,129	3/1/2024	$0	
FP-324806	MODEL 5 PROVER UPGRADE - BELLINGHAM	394.1	$30,129	3/1/2024	$0	

FP-322165	MAOP; R-096 (R-001) YAKIMA	378	$103,523	4/30/2024	$0	
FP-322173	MAOP; R-097 YAKIMA	378	$200,465	4/30/2024	$0	
FP-302369	Gas Cathodic Protection - WA	376.1	$602,782	12/31/2028	$576,860	12/31/2028
FP-316032	C/M RPL; 2/3" HP; SUNNYSIDE; 8,612'	376.2	$427,000	11/14/2023	$0	
FP-316429	RF; 8" HP; ABER; 12,500' BASICH BLV	376.2	$750,000	7/31/2023	$0	
FP-318197	Gas SCADA Equipment-CNG	397.2	$52,022	12/31/2028	$0	
FP-319021	RP-Ferndale-V-retire V-43 8"	376.1	$0		$57,633	10/31/2025
FP-319027	RP-Topp-TM-Canal Crossings	367.1	$533,956	8/30/2024	$0	
FP-320006	C/M RPL; 3" HP; BURLINGTON; 410'	376.2	$930,868	4/30/2024	$0	
FP-320114	R-21 Replacement - Castle Rock	378	$240,690	11/30/2024	$0	
FP-322143	RL; 6" HP; MTVE; 100'	376.2	$340,437	10/30/2024	$0	
FP-322144	Instl Main Gibralter Rd Anacortes	376.3	$377,277	9/1/2024	$0	
FP-322504	RP-4" HP MN-PASCO-160'	376.2	$212,142	8/30/2024	$0	
FP-322752	UG - Verve Metretek Software CNGC	303	$0		$52,427	6/1/2025
FP-322765	RP; R-099 (R-054); SUNNYSIDE	378	$0		$249,532	8/30/2025
FP-323166	RP Bremerton R-023	378	$67,326	6/15/2024	$0	
FP-323595	RF; 4" PE; 10,000'; Lynden	376.3	$343,875	9/1/2024	$0	
FP-323823	RP; R-81 WHEE; RPL (R-53 & R-54)	378	$55,851	2/28/2024	$0	
FP-323909	Yakima Enclose Canopy CS Fab	390.1	$37,696	3/15/2024	$0	
FP-324005	RP; 4" PE & 6" STL; ANAC; 1200'	376.2	$306,878	6/1/2024	$0	
FP-324007	RF; 2" PE; OAKH; 2000'	376.3	$0		$175,206	7/15/2025
FP-324021	FRL; R-195 (R-170) ANAC	378	$292,793	6/15/2024	$0	
FP-324150	Bremerton Replace R-36	378	$0		$187,404	11/15/2025
FP-324276	Replace Vacuum Pump Yak MS	394.1	$9,800	2/27/2024	$0	
FP-324281	Add HEPA Vacuum at the CNG meter sh	394.1	$3,770	2/27/2024	$0	
FP-324556	CNGC-Picarro Leak Survey Equipment	394.1	$904,714	4/30/2024	$0	
FP-324581	RF-OAKH-4"PE-1000'	376.3	$343,626	6/15/2024	$0	
FP-324799	FRL-MTV-HWY 9-6" HP-400FT	376.2	$512,719	2/23/2024	$0	
FP-324988	Inst Reinf main for R99, Yakima	376.1	$754,872	3/5/2024	$0	
FP-324995	C/M; R-199(R-7) MTVE;	378	$98,908	3/15/2024	$0	
FP-325037	RP; 8" PE CLINTON; HDD 400'	376.3	$122,656	11/1/2024	$0	
Total Specific	**Provisional Additions to Plant In-Service 2024-2025 --- Minor Projects**		**$9,597,630**		**$2,787,727**	

1. 45SW Mueller Gear (FP 324301, 324315 & 324480)

Q. Please describe the 45 SW Mueller Gear (FP 324301, FP 324315 & FP 324480) project?

A. The three separate projects all pertain to having a full set of 4SW Mueller gear in Western Washington. FP 324301 is for a 4SW completion machine needed to have a full set of gear in this size. Over the past several years, Cascade has acquired 4SW Mueller tapping and

stopping gear for Western Washington, and this is the last item to have a full set. The FP 324315 project is a 12" shell cutter, so the Company has a spare cutter. And the FP 324480 project is to purchase pallets to store and move the 4SW Mueller gear purchased in 2023. With these steel pallets, the gear can be secured, stored, and made readily maneuverable for loading and unloading on tap truck.

Q. What are the estimated costs for these projects?

A. The estimated costs for these projects are as follows:

- FP-324301: $2,638.75 (2024)
- FP-324315: $10,554.99 (2024)
- FP-324480: $8,239.21 (2024)

2. <u>Arlington Regulator Station R-198 (R-066) Project (FP-324820, FP-324824)</u>

Q. Please describe the Arlington Regulator Station R-198 (R-066) project.

A. The Arlington Regulator Station R-198 (R-066) project includes the replacement of an existing regulator station and inlet main that was installed in 1981. The installation of the regulator station also allows for the retirement of approximately 5,610 feet of 4" pipe, installed in 1961, which was replaced in 2020. The inlet main to the regulator station and 5,610 feet of 4" pipe were identified in Cascade's Maximum Allowable Operating Pressure ("MAOP") Determination and Validation Plan, in accordance with Docket PG-150120, as lacking sufficient documentation to validate the pipeline segments MAOP. Replacement was chosen as the best option to address the missing documentation and to validate the pipeline segments MAOP.

Q. What are the estimated costs for this project?

A. The total capital investment for the Arlington Regulator Station R-198 (R-066) project is $130,504.74 in 2024.

3. Fredonia Compressor Upgrades (FP-324495, 324502, 324704, 323731 323795, & 325057)

Q. Please describe the Fredonia Compressor Upgrade (FP-324495, 324502, 324704, 323731 323795, & 325057) project.

A. This project comprises six enhancements relating to the Fredonia compressor station. The first Fredonia compressor station upgrade was to add needed storage to keep spare parts and equipment onsite and out of the elements. The spare parts cannot get wet, and they must be stored onsite to be used for repairs as needed. Currently, the Company's storage ability does not allow for the inside storage of necessary equipment. This is a safety hazard and will shorten the useful life of the items if left outside. The second compressor upgrade was to update old lighting, which was a safety recommendation from the Company's insurance company due to dim lighting in work areas. The installation of higher lumen lights are required to fulfill this recommendation and to remedy the safety issue. The third upgrade is related to an increase of recent unauthorized access and trespassing incidents experienced on the property. The current security cameras provide minimal coverage and were not adequate to monitor the trespassing incidents. Additional cameras will provide enhanced security to the site and will complement the security from the landowner to address current security concerns. Fourth, the existing compressor inlet scrubbers are

failing to contain liquids and debris and are being replaced to keep the compressor in good condition and safe working order. The fifth upgrade is for programmable logic controller ("PLC") spare parts and a flame arrestor for flaring for operational activities. Last, the new relief valve for the Fredonia compressor station is required as a spare safety related component, and the relief valves will be integrated into Maximo, which is Cascade's asset monitoring system. Currently, Cascade has one spare relief that rotates between the two active relief valves required for safe operation. In preparation for Maximo integration, this rotating structure required for testing is not easily tracked within the program. Purchasing an additional relief valve will provide 100% redundancy for the safety components and will allow Maximo to track the four assets individually.

Q. What are the estimated costs for this project?

A. The total capital investment is estimated at $251,443 in 2024.

4. <u>Grease Guns (FP 324239, 324273, 324274)</u>

Q. Please describe the Grease Guns (FP-324239, FP-324273, & FP-324274) projects.

A. The Grease Guns projects are the purchase of electric grease guns for areas that have large valves. These guns will increase efficiency and ergonomics.

Q. What are the estimated costs for the Grease Guns projects?

A. The total capital investment is a combined $4,519.35 in 2024.

5. <u>2-inch Elma (RHD) HP Regulator Station Project (FP-319104, FP-319107)</u>

Q. Please describe the 2-inch Elma (RHD) HP Regulator Station project (FP-319104, FP-319107).

A. The 2-inch Elma (RHD) HP Regulator Station project includes the installation of a new regulator station and inlet line to be able to downrate 1,307 feet of the 2-inch Elma (RHD) HP Line. The segment of the 2-inch Elma (RHD) HP Line being downrated was installed in 1978. The pipeline segment (Work Order #'s: 25775) was identified in Cascade's MAOP Determination and Validation Plan, in accordance with Docket PG-150120, as lacking sufficient documentation to validate the pipeline segments MAOP. Downrating was chosen as the best option to address the missing documentation and to validate this pipeline segment's MAOP.

Q. What are the estimated costs this project?

A. The total capital investment for the 2-inch Elma (RHD) HP Regulator Station project is $920,844.50 in 2025.

6. Lighthouse DIMP and TIMP Software Project (FP-324619, FP-324624)

Q. Please describe the Lighthouse DIMP and TIMP Software Project (FP-324619, FP-324624).

A. Cascade plans to invest in probabilistic risk modeling for the Distribution Integrity Management Program ("DIMP") and Transmission Integrity Management Program ("TIMP"). Specifically, Cascade has identified a probabilistic risk modeling software provided by JANA called "Lighthouse," which is an integrated and predictive platform for managing risk and integrity. The projected cost is for implementation and license fee for the software.

Q. What are the estimated costs for this software project?

A. The total capital investment for the Lighthouse DIMP and TIMP Software Project is $567,819.47 in 2025.

7. Replacement Remote Terminal Unit ("RTU")

Q. Please describe the Replacement RTU's project (FP-324823, FP-324828, FP-324829, FP-325160, FP-325161, FP-324831, FP-324823, FP-324833, FP-324834, FP-325162, FP-324835, FP-324836, FP-324830, FP-324827, FP-325163).

A. These projects are the purchase of replacement RTU's that meet new U.S. Department of Homeland Security mandates for IT security. An RTU is a microprocessor-controlled electronic device that interfaces objects in the physical world to a distributed control system or SCADA (supervisory control and data acquisition) system by transmitting telemetry data to a master system, and by using messages from the master supervisory system to control connected objects.

Q. What are the estimated costs for the Replacement RTU's projects?

A. The total capital investment for this project is a combined $62,519.43 in 2024.

8. Shelton R-17 Replacement (FP-323636 & 323730)

Q. Please describe the Shelton R-17 Replacement project (FP-323636 & 323730).

A. The Shelton R-17 Replacement project is intended to retire an existing regulator station that was identified with a non-hazardous leak. The replacement station will utilize an updated design and new components and will be verified safe and with no leaks.

Q. What are the estimated costs for the project?

A. The total capital investment for this project is estimated at $269,959 in 2024.

9. <u>Mount Vernon Office and Fab Shop Improvements (FP324778 & FP324475)</u>

Q. Please describe the Mount Vernon Office and Fab Shop Improvements project (FP 324778 & FP 324475).

A. The first Mount Vernon Office and Fab Shop Improvement funding project is to expand the existing Mount Vernon shop and build more office spaces. As Cascade's Washington construction services group has grown, acquired additional Mueller equipment, and taken on fabrication needs for the west field operations groups, space has become constrained. This project adds on to the back of the existing shop for storage and remodels the office to create more functional work space. The second part of this project (FP 324475) is a fume extractor for the Mt Vernon Fab Shop. This is a wall mount unit to help conserve much needed space inside the Fab Shop while bringing it up to standards.

Q. What are the estimated costs for these projects?

A. The total capital investment for these projects in 2024 are:

- FP-324778: $155,213.87 (2024)
- FP-324475: $15,078.56 (2024)

10. <u>Transfer Provers Upgrade (FP-324804, FP-324806)</u>

Q. Please describe the Transfer Provers Upgrade projects (FP-324804 & FP-324806).

A. The Transfer Prover projects are upgrades to the newest model of transfer provers, Model V, in Bellingham and Yakima. The current model transfer provers are at the end of their lives and need to be upgraded to ensure manufacturer support and parts availability.

Q. What are the estimated costs for these projects?

A. The total capital investment for these projects is a combined $60,258 in 2024.

11. <u>Yakima Regulator Station R-096 and R-097 Projects (FP-322165, FP-322173)</u>

Q. Please describe the Yakima Regulator Station R-096 and R-097 projects (FP-322165 & FP-322173).

A. This project entails installation of new regulator stations, which are required as a part of the 8-inch Yakima HP Replacement Project (FP-316046), which was described in the prefiled direct testimony of Patrick C. Darras, Exh. PCD-1T.

Q. What are the estimated costs for these projects?

A. The total capital investment for the Yakima Regulator Station R-096 and R-097 projects is $303,987.41 in 2024.

12. <u>Gas Cathodic Protection Project (FP-302369)</u>

Q. Please describe the Gas Cathodic Protection project (FP-302369).

A. The Gas Cathodic Protection project provides corrosion control to the Company's buried steel natural gas pipe from the effects of external corrosion. This includes the installation of corrosion control protection devices, which include rectifiers, galvanic groundbeds, impressed current groundbeds, AC/DC mitigation, and test stations. Cascade is mandated by the Pipeline and Hazardous Materials Safety Administration (PHMSA) to provide cathodic protection for its steel natural gas pipelines. The Company's Corrosion Control

department is responsible for the monitoring and annual testing of our corrosion control systems.

Q. What are the estimated costs for this project?

A. The total capital investment for the Gas Cathodic Protection project is $602,782.14 for 2024 and $576,860.29 for 2025.

13. 2-inch and 3-inch Sunnyside HP Restoration Project (FP-316032)

Q. Please describe the 2-inch and 3-inch Sunnyside HP Restoration project (FP-316032).

A. The 2-inch and 3-inch Sunnyside HP Restoration project is to cover restoration costs following replacement of 4,494 feet of 3-inch diameter and 4,018 feet of 2-inch diameter steel high-pressure main that feed the distribution system in Sunnyside, Washington. The pipeline replacement project—which addressed MAOP issues—is discussed more fully in the prefiled direct testimony of Patrick C. Darras, Exh. PCD-1T.

Q. What are the estimated costs for this project?

A. Estimated remaining project costs for final restoration are estimated to be $427,000 in 2024.

14. 8-inch HP Reinforcement Basich Blvd (FP-316429)

Q. Please describe the 8-inch HP Reinforcement Basich Blvd project (FP-316429).

A. This project is to cover final asphalt restoration following installation of high-pressure reinforcement on Basich Boulevard in Aberdeen, Washington. The reinforcement project is discussed in the prefiled direct testimony of Patrick C. Darras, Exh. PCD-1T. The City of Aberdeen required a one year wait period for final asphalt restoration. These 2024 provisional costs represent the completion of this project.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $750,000 in 2024..

15. <u>SCADA Equipment (FP-318197)</u>

Q. Please describe the Gas SCADA Equipment project (FP-318197).

A. The Gas SCADA Equipment project includes funding to replace the Gas SCADA workstations used in the control room by Cascade's Gas Control unit to monitor the SCADA environment as well as install a new firewall to expand redundancy and failover capabilities. This project also includes funding to replace end-of-life encryption equipment used in the field to encrypt the network traffic in transit between the field equipment and the head end SCADA system.

Q. What are the estimated costs the project?

A. The total capital investment for Gas SCADA Equipment is $52,022.18 in 2024.

16. <u>Metretek Software (FP-322752)</u>

Q. Please describe the Verve Metretek Software project (FP-322752).

A. The Verve Metretek Software project is to procure Verve ADI licensing, which allow the existing Verve installation to poll the field devices used in the Metretek/PowerSpring

environment. Verve is an OT security platform used for hardware/software asset inventory and for performing passive vulnerability assessments against the field devices.

Q. What are the estimated costs for the project?

A. The total capital investment for Verve Metretek Software is $52,427.32 in 2025.

17. <u>Ferndale V-43 Retire (FP-319021)</u>

Q. Please describe the Ferndale V-43 Retire project (FP-319021).

A. The Ferndale V-43 Retire project will retire valve-43 in Ferndale located near Blaine Road on the 8-inch Kickerville Transmission Line. This valve used to serve as the inlet feed to one of Cherry Point Refineries' meter sets, but this meter set is now capped off and no longer in use. The valve requires maintenance and Cascade would like to see this retired so that it no longer needs to be maintained, as maintenance and inspection requires permission to enter the Cherry Point Refinery.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $57,633 in 2025.

18. <u>Toppenish 6" HP Replacement project (FP-319027)</u>

Q. Please describe the Toppenish 6" HP Replacement project (FP-319027).

A. The Toppenish 6" HP Replacement project will replace a 6-inch steel high pressure line that currently hangs on a canal structure along Fraley Road in Toppenish, Washington. A horizontal directional drilling bore will replace approximately 500 feet of 6-inch steel main

to eliminate issues with having this pipeline above ground, including additional inspections, exposure to atmospheric corrosion, risk of damage due to failure of the supports, differential movement of unlike materials during freeze thaw events, and the potential of vehicular damage.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $533,956 in 2024.

19. 3-inch Burlington HP Replacement Project (FP-320006)

Q. Please describe the 3-inch Burlington HP Replacement project (FP-320006).

A. The 3-inch Burlington HP Replacement project includes the replacement of approximately 420 feet of 3-inch diameter steel high-pressure main that feed the distribution system in Burlington, Washington. Existing pipeline segments are being replaced with 4-inch diameter steel high-pressure main. This segment was identified in Cascade's MAOP Determination and Validation Plan, in accordance with Docket PG-150120, as lacking sufficient documentation to validate the pipeline segments MAOP. Replacement was chosen as the best option to address the missing documentation and to validate the pipeline segments MAOP, based on the age of the pipeline segment. The project enables Cascade to continue to safely operate the pipeline segment at its current MAOP, to replace pipeline segments installed pre-1970 with higher integrity management risk, and to continue to serve future customers in the area.

Q. What are the estimated costs for the project?

A. The total capital investment for 3-inch Burlington HP replacement project is $930,867.85 in 2024.

20. Castle Rock R-21 Replacement (FP-320114)

Q. Please describe the Castle Rock R-21 Replacement project (FP-320114).

A. The Castle Rock R-21 Replacement project will replace a regulator station which has experienced ground settling and raises concerns with unknown pipe stresses due to the external forces applied to the pipe during the ground settling. R-21 is a single feed into the town of Castle Rock, Washington and the station is located just east of the town. The updated station will be constructed in the same location with geotechnical data confirming that the ground settlement has subsided. This replacement will eliminate stress concerns associated with the ground settlement at the current station and outlet piping area. The station will continue to support core customers and future growth fed through the Castle Rock single fed system.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $240,690 in 2024.

21. Mount Vernon 6" HP Relocate (FP-322143)

Q. Please describe the Mount Vernon 6” HP Relocate project (FP-322143).

A. The Mount Vernon 6” HP Replacement project will install 100 feet of 6-inch high pressure steel pipe on a bridge on Knapp Road in Mt. Vernon, Washington. This replacement will

correct a compliance deviation because the existing pipe is not resting on the bridge pipe supports correctly. This raises an integrity concern since it could put additional stresses on the pipe, cause metal to metal corrosion concerns, and will prevent Cascade from being able to properly inspect and maintain the pipe coating. The replacement will consist of a bore beneath the creek.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $340,437 in 2024.

22. <u>Anacortes Main Install Gibralter (FP-322144)</u>

Q. Please describe the Anacortes Main Install Gibralter project (FP-322144).

A. The Anacortes Main Install Gilbralter reinforcement project will install 2,700 feet of 4-inch plastic pipe on Gibralter Road in south Anacortes, Washington. This reinforcement will support growth core in south Anacortes and will boost design day pressures which have fallen below design day criteria due to core growth.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $377,277 in 2024.

23. <u>Pasco 4” HP Replacement (FP-322504)</u>

Q. Please describe the Pasco 4” HP Replacement project (FP-322504).

A. The Pasco 4" HP Replacement project is to replace a 2" diameter high-pressure inlet pipe to a regulator station in west Pasco, Washington. The inlet pipe currently is undersized and under capacity, resulting in a significant pressure drop and high gas velocity. This project will replace the 2" inlet pipe with a 4" diameter pipeline.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $212,141 in 2024.

24. <u>Sunnyside R-99 Replacement (FP- 322765)</u>

Q. Please describe the Sunnyside R-99 Replacement project (FP-322765).

A. The Sunnyside R-99 Replacement project will install a new standard regulator station at 349 S McLean in Sunnyside, Washington. This replacement will correct operational and maintenance issues with the current regulator station.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $249,531 in 2025.

25. <u>Sunnyslope R-23 Replacement (FP-323166)</u>

Q. Please describe the Sunnyside R-23 Replacement project (FP-323166).

A. This project replaces a regulatory station (R-23) in Sunnyside, Washington. This project was originally budgeted to add a line heater to R-23 to combat heavy icing of the components. Larger commercial loads have been added in this area, increasing flow

considerably, and additional load is scheduled to come online in the coming years. Upon inspection of the station, it was determined several components were showing signs of accelerated corrosion due to the regular icing that is taking place. Thus, it was determined that replacement was likely the better alternative to prevent any issues going forward. Replacement also allows Cascade to add inlet and outlet valves to this station increasing system safety.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $67,326 in 2024.

26. <u>Lynden 4" PE Reinforcement (FP-323595)</u>

Q. Please describe the Lynden 4" PE Reinforcement project (FP-323595).

A. The Lynden 4" PE Reinforcement project will install approximately 10,000 feet of 4-inch plastic pipe on Sunrise Road & Birch Bay-Lynden Road in Lynden, Washington. This reinforcement will boost design day pressure in southwest Lynden, which have fallen below design day criteria due to core growth and some commercial/industrial growth to the north of the low pressure area. By introducing an additional feed into the town, this will support expected core and commercial growth to the area. This project will tie into an existing regulator station (R-155) and a 4-inch plastic pipeline that was installed in 2022 for growth.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $343,875 in 2024.

27. Wheeler Regulator Station R-81 Project (FP-323823)

Q. Please describe the Wheeler Regulator Station R-81 project (FP-323823).

A. The Wheeler Regulator Station R-81 is for installation of a new regulator station, which was required in connection with Cascade's 2-inch and 4-inch Wheeler HP Replacement project (FP-316018) discussed in my prefiled direct testimony, Exh. PCD-1T. The pipe segment was identified in Cascade's MAOP Determination and Validation Plan, in accordance with Docket PG-150120, as lacking sufficient documentation to validate the pipeline segments MAOP.

Q. What are the estimated costs for the Wheeler Regulator Station R-81 project?

A. The total capital investment for the Wheeler Regulator Station R-81 project is $55,851.40 in 2024.

28. Yakima Enclose Canopy (FP-323909)

Q. Please describe the Yakima Enclose Canopy project (FP-323909).

A. The Yakima Enclose Canopy Project enhances the use and security of an existing structure that was part of the main Yakima district building. The existing roof and wall will be enclosed to create a large sheltered and secure storage area for large tapping equipment and other construction tools. A large roll-up door will allow a forklift to enter and safely place equipment indoors, free from weather or tampering. This will be an unheated space that can be used dynamically for storage of completed fabrications and tapping gear and equipment.

Q. What are the estimated costs for this project?

A. The total capital investment for this project is $37,696.40 in 2024.

29. <u>Anacortes 4" PE & 6" HP Replacement (FP-324005)</u>

Q. Please describe the Anacortes 4” PE & 6” HP Replacement project (FP-324005).

A. The Anacortes 4” PE & 6” HP Replacement project will install approximately 600 feet of 4-inch plastic pipe and 600 feet of 6-inch steel pipe in north Anacortes, Washington. This replacement is needed due to the forced relocation of a regulator station (FP-324021, discussed below) due to a developer purchasing land and the city evacuating the right of way.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $306,877 in 2024.

30. <u>Oak Harbor 2" PE Reinforcement (FP-324007)</u>

Q. Please describe the Oak Harbor 2” PE Reinforcement project (FP-324007).

A. The Oak Harbor 2” PE Reinforcement project will install 2,000 feet of 2-inch plastic pipe on S Oak Harbor Street in Oak Harbor, Washington. This reinforcement will support core growth in Oak Harbor and will boost design day pressures, which have fallen below design day criteria due to core growth in the area.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $175,206 in 2025

31. Anacortes R-170 Relocate (FP-324021)

Q. Please describe the Anacortes R-170 Relocate project (FP-324021).

A. The Anacortes R-170 Relocate project is a forced relocation of regulator station, R-170, in north Anacortes, Washington. Relocation of R-170 is required due to a developer purchasing land and the city evacuating the right of way. FP-324005 (discussed above) will be used to install the inlet and outlet main for the station's new location.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $292,793 in 2024.

32. Bremerton R-36 Replacement (FP-324150)

Q. Please describe the Bremerton R-36 Replacement project (FP-324150).

A. Regulator station, R-36, in Bremerton, Washington currently has inlet piping above ground, leftover from a former regulator station, R-013. This project replaces regulator station R-36, which will clean up this area, remove any unnecessary components, decrease Cascade's overall footprint, and add inlet and outlet valves for this new station, enhancing safety and functionality for our system.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $187,404 in 2025.

33. Replace Vacuum Pump (FP-324276)

Q. Please describe the Replace Vacuum Pump project (FP-324276).

A. This project is to replace a 50-year-old vacuum pump used to test meters in Cascade's Yakima meter shop. The old vacuum pump was at end-of-life for support and parts availability.

Q. What are the estimated costs for this project?

A. The total capital investment for this project is $9,800.42 in 2024.

34. <u>Add HEPA Vacuum (FP-324281)</u>

Q. Please describe the Add HEPA Vacuum project (FP-324281).

A. This project is to add a HEPA vacuum to the rotary and turbine meter testing room that did not currently have one. The HEPA vacuum is needed to provide a safe way to clean up cadmium in the meters shop.

Q. What are the estimated costs for this project?

A. The total capital investment for this project is $3,769.64 in 2024.

35. <u>Picarro Leak Survey Equipment (FP-324556)</u>

Q. Please describe the Picarro – advanced mobile leak detection system project (FP-324556).

A. The Picarro – advanced mobile leak detection system project is an advanced mobile leak detection system. The system is a car with methane sensors on it to detect methane in the air. It is a more sensitive type of system to enhance Cascade's leak survey capabilities and emissions surveys of our natural gas infrastructure.

Q. What are the estimated costs for the project?

A. The total capital investment for this project is $904,713.61 in 2024.

36. <u>Oak Harbor 4" PE Reinforcement (FP-324581)</u>

Q. Please describe the Oak Harbor 4" PE Reinforcement project (FP-324581).

A. This reinforcement project will install 1,000 feet of 4-inch plastic on Ault Field Road in Oak Harbor, Washington. This reinforcement will support core growth in Oak Harbor and will boost design day pressures, which have fallen below design day criteria due to core growth in the area.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $343,625 in 2024.

37. Mount Vernon 6" HP HWY 9 Relocate (FP-324799)

Q. Please describe the Mount Vernon 6" HP HWY 9 Relocate project (FP-324799).

A. This project is due to a forced relocation and installation of approximately 200 feet of 6-inch steel pipe at Nookachamps Creek and HWY 9 in Mt. Vernon, Washington. This forced relocation is needed due to the installation of a culvert.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $512,719 in 2024.

38. Yakima 6" HP R-99 Reinforcement (FP-324988)

Q. Please describe the Yakima 6" HP R-99 Reinforcement project (FP-324988).

A. This project is to run additional approximately 1,530 feet of 6" high-pressure main to the secured location of new regulator station R-99 and also includes approximately 2,400 feet

of 4" plastic main at the outlet of R-99 to tie back into the distribution system. The regulator station site was acquired further north than originally anticipated, and this project is required for the Yakima high pressure improvements that have been installed over the last couple of years to address pressure deficits on the west side of Yakima to support core growth.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $754,871 in 2024.

39. <u>Mount Vernon Regulator Station R-007 Project (FP-324995)</u>

Q. Please describe the Mount Vernon Regulator Station R-007 project.

A. The Mount Vernon Regulator Station R-007 project includes the replacement of an existing regulator station and inlet main that was installed in 1962. The inlet main to the regulator station was identified in Cascade's MAOP Determination and Validation Plan, in accordance with Docket PG-150120, as lacking sufficient documentation to validate the pipeline segments MAOP. Replacement was chosen as the best option to address the missing documentation and to validate the pipeline segments MAOP.

Q. What are the estimated costs for the Mount Vernon Regulator Station R-007 project?

A. The total capital investment for the Mount Vernon Regulator Station R-007 project is $98,907.73 in 2024.

40. <u>Clinton 8" PE Reinforcement/Replacement (FP-325037)</u>

Q. Please describe the Clinton 8" PE Reinforcement/Replacement project (FP-325037).

A. This project will replace approximately 400 feet of 8-inch plastic pipe under the Mill Creek Irrigation Project on Clinton Street in northern Walla Walla, Washington. The segment was retired in 2023 because it was not inspectable and will be replaced in 2024 with a horizontal directional drill bore in the same location. The 8-inch line is a critical trunk line that moves gas from the tap to the northeast part of Walla Walla.

Q. What are the estimated costs for the project?

A. The total capital investment is estimated at $122,656 in 2024.

PROGRAMMATIC PROJECTS

Funding Project	Description	FERC Account No.	2024 Plant Additions	2024 Estimated In-Service Date	2025 Plant Additions	2025 Estimated In-Service Date
FP-320223	Indust Reg Stations-Growth-CNGC WA	385	$63,609	12/31/2030	$63,488	12/31/2030
FP-320224	Indust Reg Stations-Replace-CNGC WA	385	$60,677	12/31/2030	$60,561	12/31/2030
FP-101194	Dist Reg Station Growth Washington	378	$242,320	12/31/2028	$725,580	12/31/2028
FP-101196	Dist Reg Station Replace Washington	378	$156,450	12/31/2028	$483,255	12/31/2028
FP-317744	Tools & Minor Work Equip CNG WA	394.1	$163,539	12/31/2028	$142,508	12/31/2028
FP-318092	HPSS Replacements CNG WA	376.3	$109,044	12/31/2028	$241,860	12/31/2028
FP-323236	RPL MN - SHORTED CASING - WA	376.1	$344,835	12/31/2028	$515,149	12/31/2028
FP-323926	Repl Mueller Equip CS WA	394.1	$102,941	12/31/2028	$103,177	12/31/2028
Total Programmatic	**Provisional Additions to Plant In-Service 2024-2025 --- Minor Projects**		**$1,588,141**		**$2,302,151**	

1. Industrial Regulator Station – Meter Sets (FP-320223 & FP-320224)

Q. Please describe the Industrial Regulator Station – Meter Sets programmatic projects (FP-320223 & FP-320224).

A. These programmatic projects cover standard industrial regulator station costs for very large meter sets that need individual work orders assigned. These meter sizes would include 10" and larger meters.

Q. What are the estimated costs for this programmatic project?

A. The total capital investment for this programmatic project is a combined $124,285.63 in 2024 and $124,049.75 is 2025.

2. Distribution Regulator Station (Growth) (FP-101194)

Q. Please describe the Distribution Regulator Station (Growth) programmatic project (FP-101194).

A. This programmatic project is to provide funding for new regulator stations needed to address growth that is not known, planned or scheduled at the time of budgeting. Growth regulator stations are required to increase capacity and maintain system reliability 1) for new residential developments, 2) in growth areas (residential or commercial) outside of developments or 3) for a station upgrade due to increased demand.

Q. What are the estimated costs for this programmatic project?

A. The 2024 and 2025 capital budget includes $242,320 and $725,580, respectively.

3. Distribution Regulator Station (Replacement) (FP-101196)

Q. Please describe the Distribution Regulator Station (Replacement) programmatic project (FP-101196).

A. This programmatic project is to provide necessary funding to replace existing regulator stations that are not known, planned or scheduled at the time of budgeting. Replacement is required when regulator stations: 1) become damaged, 2) are so obsolete that they cannot be maintained due to outdated materials/fittings, 3) require relocation due to traffic hazards, property owners, state/federal agencies, hazardous areas, etc. or 4) are subject to a change in flow or capacity resulting from a change in system flow or dynamics.

Q. **What are the estimated costs for this programmatic project?**

A. The 2024 and 2025 capital budget includes $156,450 and $483,255, respectively.

4. <u>High Pressure Service Set (HPSS) Replacements (FP-318092)</u>

Q. Please describe the High Pressure Services Set Replacements programmatic project (FP-318092).

A. This programmatic project will provide funding to remove, rather than replace, high pressure service sets ("HPSS") that are located in high traffic or potentially hazardous locations. This will provide the necessary funding for field operations personnel to review their respective districts to identify the HPSS in potentially hazardous locations and remove the HPSS's by: 1) reducing the operating pressure of a high pressure pipeline down to distribution pressure (< 60 psig) and abandoning/removing the HPSS and re-connecting

the service line to the existing steel pipe or 2) installing new plastic pipe (generally 2" or 4" pipe) and tying over the service lines to the new plastic pipe.

Q. What are the estimated costs for this programmatic project?

A. The 2024 and 2025 capital budget includes $109,044 and $241,860, respectively.

5. <u>Tools and Minor Work Equipment (FP-317744)</u>

Q. Please describe the Tools and Minor Work Equipment programmatic project (FP 317744).

A. This is a programmatic project to provide annual funding project for the purchase of capital tools by the construction services department. Tools purchased on this FP include replacement equipment for equipment that breaks or becomes obsolete, and purchase of new equipment that is needed to meet operational requirements or safety requirements. These are items that are not easy to predict and are usually necessary to purchase quickly for safe system operation. Examples include replacement of locators or combustible gas indicators that break or become obsolete. Unexpected purchase of shop equipment, such as welding machines or instrumentation that fail or are unrepairable, are also included. Spending varies from year to year due to the unknown nature of the failed equipment.

Q. What are the estimated costs for this programmatic project?

A. The total capital investment budgeted for this programmatic project in 2024 is $163,539 and is $142,508 in 2025.

6. <u>Shorted Casing Replacement Project (FP-323236)</u>

Q. Please describe the Shorted Casing replacement programmatic project (FP-323236).

A. The Shorted Casing replacement programmatic project identifies and replaces shorted casings. A steel carrier installed inside a steel casing is required to be electrically isolated from the steel casing. To determine if a steel carrier is electrically isolated from a steel casing, each casing is tested annually, per Company procedure, to determine if the casing is shorted or electrically isolated. If a casing is determined to be shorted, it must be mitigated or replace before it's status can be resolved as not shorted. Mitigation methods are a short-term remedial action as the metal-to-metal contact may reoccur. Therefore, the options outlined in the shorted casing replacement or shorted casing abandonment/removal are the preferred methods to minimize the threat of a shorted casing. Eliminating shorted casings reduces ongoing O&M maintenance costs associated with casings.

Q. What are the estimated costs for the Shorted Casing replacement programmatic project?

A. The total capital investment for this programmatic project is $344,834.96 for 2024 and $515,149.42 for 2025.

7. <u>Replace Mueller Equipment (FP-323926)</u>

Q. Please describe the Replace Mueller Equipment programmatic project (FP 323926).

A. This programmatic project provides annual funding for the purchase of capital tools by the construction services department. Specifically, tools purchased on this FP include replacement of Mueller equipment that breaks or becomes obsolete, and purchase of new Mueller equipment that is needed to meet operational requirements or safety

requirements. These are items that are not easy to predict and are usually necessary to purchase quickly for safe system operation. Examples include replacement of shell cutters and drive motors that break or become obsolete. Spending varies from year to year due to the unknown nature of the failed equipment.

Q. What are the estimated costs for this programmatic project?

A. The total capital investment budgeted for this programmatic project in 2024 is $102,941 and is $103,177 in 2025.