



ANNUAL COST RECOVERY MECHANISM SHIPPER MEETING

Northwest Pipeline LLC

January 29, 2025

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Agenda

1. M&ERP 2023 Eligible Facilities - *Completed*
Turbine Upgrades:
 - Pegram #1 & Lava #1
2. M&ERP 2024 Eligible Facilities – *Completed*
Turbine Upgrades:
 - Pleasant View #1 & #2 and Meacham #1 & #2Horsepower Replacements:
 - Green River Compressor Station
 - Sumas Compressor Station
3. M&ERP 2025 Eligible Facilities
Turbine Upgrades:
 - Cisco #1 & #2, Muddy Creek #2, and Pegram #2Horsepower Replacement:
 - Soda Springs Compressor Station
4. M&ERP 2026 Eligible Facilities
Turbine Upgrades:
 - Buhl #1 and McMinnville #1Horsepower Replacement:
 - Pocatello Compressor Station
5. M&ERP 2027 Upcoming Eligible Facilities
6. Anticipated Outages
7. Illustrative CRM Surcharge

2023 - Pegram #1 & Lava #1 – [Idaho] Turbine Upgrades

Project Scope:

Exchange conventional combustion gas turbine engines with low emission SoLoNOx gas turbines (142 ppm NOx to 25 ppm NOx), convert the compressor wet seal system to a dry gas seal system, install seal gas recovery and process vent recovery equipment, and replace gas pneumatic starter(s) with electric start motors. Upgrade the existing single phase electric utility service to 3-phase power and install standby generator.

Original Estimated Capital Expenditures:

- Pegram #1: \$3.89 MM (+15% Limit = \$4.47 MM)
- Lava #1: \$3.96 MM (+15% Limit = \$4.55 MM)

Updated Estimate at Completion (EAC):

- Pegram #1: \$9.04 MM
- Lava #1: \$9.69 MM

Included in Surcharge Effective on April 1, 2025

Anticipated Emissions Reductions:

- NOx Emissions
 - Pegram #1: ~86% (26.5 tons/yr)
 - Lava #1: ~71% (20.6 tons/yr)
- Methane (CH₄) Emissions
 - Pegram #1: ~64% (9.9 tons/yr)
 - Lava #1: ~87% (76.7 tons/yr)

Status:

- Projects have been placed into service.

Lava Compressor Station Unit #1



2024 - Pleasant View #1 & #2 [Colorado] and Meacham #1 & #2 [Oregon] Turbine Upgrades

Project Scope:

Exchange conventional combustion gas turbine engines (Units #1 and #2 at both facilities) with low emission SoLoNOx gas turbines, convert compressor wet seal systems to dry gas seals systems, install seal gas recovery and process vent recovery equipment, and replace gas pneumatic devices that can be converted to electric or air.

Original Estimated Capital Expenditures:

- Pleasant View #1 & #2: \$7.33 MM (+15% Limit = \$8.43 MM)
- Meacham #1 & #2: \$7.33 MM (+15% Limit = \$8.43 MM)

Updated Estimate at Completion (EAC):

- Pleasant View #1 & #2: \$8.94 MM
- Meacham #1 & #2: \$10.73 MM

Included in Surcharge Effective on April 1, 2025

Anticipated Emissions Reductions:

- NOx emissions
 - Pleasant View #1 & #2: ~85% (40.6 tons/yr)
 - Meacham #1 & #2: ~79% (33.8 tons/yr)
- Methane (CH₄) emissions
 - Pleasant View #1 & #2: ~65% (19.8 tons/yr)
 - Meacham #1 & #2: ~64% (19.8 tons/yr)

Status:

- Projects have been placed into service.

Pleasant View Compressor Station



2024 - Green River [Wyoming]

Compressor Station Horsepower Replacement

Project Scope:

Replacement of the existing Cooper GMWC-6 (Units 1-4) reciprocating engines, and the Centaur 50 HS T6120S (Unit 5) Solar Turbine with the installation of one (1) Solar Taurus 60 Turbine and one (1) Solar Centaur 50 Turbine, both with SoLoNOx low-emission technology and controls.

Original Estimated Capital Expenditures:

- Green River: \$57.99 MM (+15% Limit = \$66.69 MM)

Updated Estimate at Completion (EAC):

- Green River: \$81.10 MM

Included in Surcharge Effective April 1, 2025

Anticipated Efficiencies:

- **Operations & Maintenance Costs:** -\$342,080 per year
- **Anticipated Emissions Reductions:**
 - NOx emissions: ~98% (479.0 tons/yr)
 - Methane (CH₄) emissions: ~94% (189.7 tons/yr)

Status:

- Project has been placed into service.



2024 - Sumas [Washington]

Compressor Station Horsepower Replacement

Project Scope:

Replacement of the existing Ingersoll - Rand KVS (Units 1-4), Clark TCV-12 (Units 5-6) with the installation of one (1) Solar Mars 100 turbine with SoLoNOx low-emission technology and controls.

Original Estimated Capital Expenditures:

- Sumas: \$63.48 MM (+15% Limit = \$73.00 MM)

Updated Estimate at Completion (EAC):

- Sumas: \$59.85 MM

Included in Surcharge effective on April 1, 2025

Anticipated Efficiencies:

- **Operations & Maintenance Costs:** -\$363,349 per year
- **Anticipated Emissions Reductions:**
 - NOx emissions: ~77% (200.4 tons/yr)
 - Methane (CH4) emissions: ~91% (277.5 tons/yr)

Status:

- Project has been placed into service.



2025 – Muddy Creek #2 [Wyoming] and Pegram #2 [Idaho] Turbine Upgrades

Project Scope:

Exchange conventional combustion gas turbine engines with low emission SoLoNOx gas turbines, convert the existing compressor wet seal system to a dry gas seal system, install seal gas recovery equipment, replace gas pneumatic devices that can be converted to electric or air. Note: Muddy Creek will need to upgrade the existing single phase electric utility service to 3-phase.

Original Estimated Capital Expenditures:

- Muddy Creek #2: \$3.27 MM (+15% Limit = \$3.76 MM)
- Pegram #2: \$3.27 MM (+15% Limit = \$3.76 MM)

Updated Estimate at Completion (EAC):

- Muddy Creek #2: \$9.48 MM
- Pegram #2: \$4.40 MM

Timeline:

- **Construction Start:** June 2025 (Muddy);
July 2025 (Pegram)
- **In-Service Date:** October 31, 2025

Included in Surcharge Effective on April 1, 2026

Anticipated Emissions Reductions:

- NOx Emissions
 - Muddy Creek #2: ~79% (23.5 tons/yr)
 - Pegram #2: TBD
- Methane (CH₄) Emissions
 - Muddy Creek #2: ~64% (9.9 tons/yr)
 - Pegram #2: ~64% (9.9 tons/yr)

Muddy Creek Compressor Station



2025 - Cisco #1 & #2 [Utah] Turbine Upgrades

Project Scope:

Exchange conventional combustion gas turbine engines with low emission SoLoNOx gas turbines, convert the compressor wet seal system to a dry gas seal system, install seal gas recovery equipment, replace gas pneumatic devices that can be converted to electric or air.

Original Estimated Capital Expenditures:

- Cisco #1 & #2: \$6.84 MM (+15% Limit = \$7.87 MM)

Updated Estimate at Completion (EAC):

- Cisco #1 & #2: \$10.5 MM

Timeline:

- **Construction Start:** June 3, 2025
- **In-Service Date:** October 31, 2025

Included in Surcharge Effective on April 1, 2026

Anticipated Emissions Reductions:

- NOx Emissions: ~63% (11.7 tons/yr)
- Methane (CH₄) Emissions: ~65% (19.8 tons/yr)

Cisco Compressor Station



2025 - Soda Springs [Idaho]

Compressor Station Horsepower Replacement

Project Scope:

Replacement of the existing Clark TLA-6 (Units 1-3), Clark TCVA-6 (Unit 4) with the installation of one (1) Taurus 70 and one (1) Centaur 40 turbine both with SoLoNOx low-emission technology and controls.

Original Estimated Capital Expenditures:

- Soda Springs: \$65.20 MM (+15% Limit = \$74.98 MM)

Updated Estimate at Completion (EAC):

- Soda Springs: \$68.43 MM

Timeline:

- **Engineering Complete:** April 2024
- **Received 2.55(b) Advanced Notification:** June 2024
- **Received Air Permit:** July 2024
- **Construction Start:** November 2024
- **Target In-Service Date:** October 5, 2025

Included in Surcharge Effective April 1, 2026

Anticipated Efficiencies:

- **Operational & Maintenance Costs:** -\$148,769 per year
- **Anticipated Emission Reductions:**
 - NOx Emissions: ~99% (115.0 tons/yr)
 - Methane (CH₄) Emissions: ~95% (227.8 tons/yr)



2026 – Buhl #1 [Idaho] and McMinnville #1 [Oregon] Turbine Upgrades

Project Scope:

Exchange the conventional high hour turbine engines with SoLoNOx gas turbines, convert compressor wet seal systems to dry gas seals, install seal gas recovery and replace gas pneumatic devices that can be converted to electric or air.

Original Estimated Capital Expenditures:

- Buhl #1: \$3.43 MM (+15% Limit = \$3.94 MM)
- McMinnville #1: \$3.71 MM (+15% Limit = \$4.27 MM)

Updated Estimate at Completion (EAC):

- Buhl #1: \$3.43 MM
- McMinnville #1: \$3.71 MM

Timeline:

- **Construction Start:** June 2026 (Buhl),
July 2026 (McMinnville)
- **In-Service Date:** October 31, 2026

Included in Surcharge Effective on April 1, 2027

Anticipated Emissions Reductions:

- NOx Emissions
 - Buhl #1: ~68% (17.0 tons/yr)
 - McMinnville #1: ~78% (0.31 tons/yr)
- Methane (CH₄) Emissions
 - Buhl #1: ~10% (9.0 tons/yr)
 - McMinnville #1: ~59% (9.0 tons/yr)

Buhl Compressor Station



McMinnville Compressor Station



2026 – Pocatello [Idaho]

Compressor Station Horsepower Replacement

Project Scope:

Replacement of the existing Clark TLA-6 (Units 1-3), Clark TCVA-6 (Unit 4) with the installation of one Taurus 60 and one Centaur 50 turbine both with SoLoNOx low-emission technology and controls

Original Estimated Capital Expenditures:

- Pocatello: \$58.49 MM (+15% Limit = \$67.26 MM)

Updated Estimate at Completion (EAC):

- Pocatello: \$67.20 MM

Timeline:

- **File 2.55(b) Advanced Notification:** April 2025
- **Construction Start:** July 2025
- **Target In-Service Date:** October 31, 2026

Included in Surcharge Effective April 1, 2027

Anticipated Efficiencies:

- **Operational & Maintenance Costs:** - \$430,000 per year
- **Anticipated Emission Reductions:**
 - NOx Emissions: ~99% (388.0 tons/yr)
 - Methane (CH₄) Emissions: ~94% (209.0 tons/yr)



2027 - Kemmerer [Wyoming]

Compressor Station Horsepower Replacement

Project Scope:

Replacement of the existing Cooper GMWC-6 (Units 1-3), Cooper V6-250 (Unit 4) and Centaur 40S T-4702S mobile unit with the installation of one Taurus 60 and one Centaur 50 turbine both with SoLoNOx low-emission technology, controls, and seal gas recovery equipment.

Original Estimated Capital Expenditures:

- Kemmerer: \$49.41 MM (+15% Limit = \$56.82 MM)

Updated Estimate at Completion (EAC):

- Kemmerer: \$82.92 MM

Timeline:

- **Front End Development:** Began in Q1 2024
- **File FERC 7(c) Certificate Application:** March 6, 2025
- **Target In-Service:** October 31, 2027

Rolled into the new rates to be effective no later than April 1, 2028, as required by Northwest's Docket No. RP22-1155 Settlement Agreement



Anticipated Outages and Available Capacities* for 2025 Projects

Muddy Creek Compressor Station

July 8, 2025 – October 15, 2025

- Northbound Flow: J - 602, A - 492, 1st S - 492, 2nd S 603, O - 604
- Southbound flow: no impact

Pegram Compressor Station

July 24, 2025 – October 8, 2025

- Northbound flow: J – 600, A - 491, S – 491, S- 600, O - 600
- Southbound flow: no impact

Cisco Compressor Station

June 17, 2025 – October 31, 2025

- Northbound flow: J – 240, J – 216, A – 211, S – 210, O - 221
- Southbound flow: J – 284, J – 287, A – 286, S – 283, O - 282

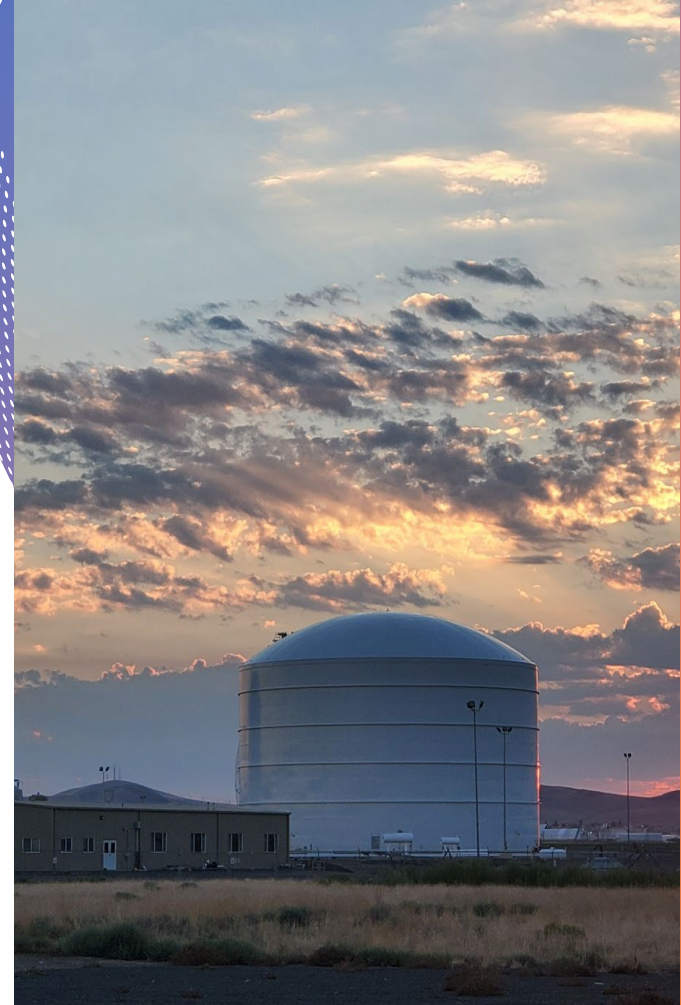
Soda Springs Compressor Station

August 15, 2025 – September 30, 2025

- Northbound flow: 491
- Southbound flow: no impact

*Capacities listed in 1,000 Dth/d

All updates to the anticipated outage schedule will be communicated via standard shipper communications and postings on Northwest's EBB (Informational Postings Site).



Illustrative Derivation of CRM Surcharge based on Updated Cost Estimates

NORTHWEST PIPELINE LLC					
Illustrative Derivation of CRM Surcharge Rate					
Modernization and Emissions Reduction Program					
Estimated Rate Base, Revenue Requirement and Rate Calculation					
Line No.	Surcharge Effective Date		2023 CapEx	1/ 2023-2024 CapEx Surcharge Estimate 4/1/2025	Description
	(A)		(B)	(C)	
			\$	\$	
1	Gas Plant In Service at 10/31/2024		9,000,000	162,718,631	Actual
2	Reserve for Depreciation at 10/31/2024		(206,250)	(206,250)	Actual
3	Net Plant at 10/31/2024		8,793,750	162,512,381	Line 1 minus Line 2
4	Deferred Income Taxes at 10/31/2024		(54,545)	(54,545)	Actual
5	Rate Base		8,739,205	162,457,836	Line 3 plus Line 4
6	Rate Base Multiplier (Pre-Tax Return & Ad Valorem Adder)	11.50%	1,005,009	18,682,651	Line 5 times Rate Base Multiplier
7	Depreciation Expense	2/	225,000	4,067,966	(Line 1 less retirement gross plant) times 2.5%
8	O&M Savings		0	(705,429)	Per Settlement
9	Total Revenue Requirement		1,230,009	22,045,188	Line 7 plus Line 8
10	Over/Under Recovered Revenue Requirement	3/	0	0	Actual
11	Total Revenue Requirement for Surcharge		1,230,009	22,045,188	Line 9 plus Line 10
12	Billing Determinants	4/		977,226,869	Prior Year Actual or Billing Determinant Floor
13	Estimated Cumulative Surcharge per dt/d			0.02256	Line 11 divided by Line 12
1/	CRM effective April 1, 2025 and will include facilities placed in-service by October 31, 2024.				
2/	Transmission depreciation rate of 2.5% will be utilized. When calculating depreciation expense, Gas Plant in Service will be adjusted to reflect the retirement of the horsepower replacement project's gross plant at the time of demolition.				
3/	The roll forward of over/under Recovered Revenue Requirement will be subject to the billing determinants floor.				
4/	Billing Determinants are based on actual billing determinants as of Oct 31, 2024, adjusted for discounts, for Rate Schedule TF-1 (Large) including Evergreen and Rate Schedule TF-2 and also includes billing determinants effective Nov 1, 2024 and April 1, 2025 to avoid over collection during the CRM effective period.				

THANK YOU!!

Appendix

Modernization & Emission Reduction Program (M&ERP)

Section 30 of the GT&C

- Northwest's Rate Case (Docket No. RP22-1155) effective January 1, 2023.
- M&ERP is designed to strengthen the safety, efficiency, reliability, and flexibility of Northwest's system while reducing Northwest's air emissions.
 - The program replaces 22 vintage 1956 natural gas reciprocating engines and upgrades 12 natural gas turbines with low-emissions technology.
- Cost Recovery Mechanism allows Northwest to recover capital investment for Eligible Facilities placed into service after January 1, 2023.
 - Applicable to Shippers under Rate Schedules TF-1 (Large Customers), TF-1 (25-year Evergreen Expansion) and TF-2 with base contracts that have a primary term of one year or more.
 - Total amount of capital investment for the 5-year program eligible for recovery is \$389.4 MM (\$338.65 MM plus 15%).
 - Section 30.3(e) of the GT&C provides Annual Eligible Capital Investment Limit for each year in the 5-year program.
 - Northwest is allowed to adjust the Eligible Facilities, subject to conditions:
 - Northwest can unilaterally remove any Eligible Facilities.
 - Northwest can substitute or add facilities as long as it fits within the objective of the program, as long as Northwest receives approval of 75% of the reservation billing determinants responsible for the costs.
 - Each year's Eligible Facilities placed in-service by October 31 will be included in the surcharge effective April 1 of the following year:

Surcharge Effective Date	Description
April 1, 2025	Surcharge will include Eligible Facilities placed in-service by October 31, 2024
April 1, 2026	Surcharge will include Eligible Facilities placed in-service by October 31, 2024 and October 31, 2025
April 1, 2027	Surcharge will include Eligible Facilities placed in-service by October 31, 2024; October 31, 2025; and October 31, 2026
2028	With a 5-year, 3-month comeback provision, there would be no surcharge this year because the 2027 Eligible Facilities will be included in the next rate case

Eligible Facilities

Appendix F-1 of NWP Settlement (RP22-1155)

Appendix F-1

Northwest Pipeline LLC
Modernization and Emissions Reduction Program (M&ERP)
Eligible Facilities Plan (EFP)
Scope and Cost Estimates (\$ MM)

Target In-Service: 10/31/2023	Target In-Service: 10/31/2024	Target In-Service: 10/31/2025	Target In-Service: 10/31/2026	Target In-Service: 10/31/2027
Turbine Exchange	Turbine Exchange	Turbine Exchange	Turbine Exchange	Turbine Exchange
Pegram #1 3.89	Pleasant View #1 & #2 7.33	Cisco #1 & #2 6.84	Buhl #1 3.43	None
Lava #1 3.96	Meacham #1 & #2 7.33	Muddy Creek #2 & Pegram #2 7.59	McMinnville #1 3.71	
<i>Subtotal</i> 7.85	<i>Subtotal</i> 14.66	<i>Subtotal</i> 14.43	<i>Subtotal</i> 7.13	<i>Subtotal</i> 0
Horsepower Replacement	Horsepower Replacement	Horsepower Replacement	Horsepower Replacement	Horsepower Replacement
None	Sumas 63.48	Soda Springs 65.20	Pocatello 58.49	Kemmerer 49.41
	Green River 57.99			
<i>Subtotal</i> 0	<i>Subtotal</i> 121.47	<i>Subtotal</i> 65.20	<i>Subtotal</i> 58.49	<i>Subtotal</i> 49.41
Annual Capital Expenditures 7.85	Annual Capital Expenditures 136.13	Annual Capital Expenditures 79.63	Annual Capital Expenditures 65.63	Annual Capital Expenditures 49.41
Annual Eligible Capital Investment Limit 9.00	Annual Eligible Capital Investment Limit 156.50	Annual Eligible Capital Investment Limit 91.60	Annual Eligible Capital Investment Limit 75.50	Annual Eligible Capital Investment Limit 56.80
				Total Cumulative Capital Expenditures 338.65
				Total Cumulative Eligible Capital Investment Limit 389.40

Illustrative Derivation of CRM Surcharge Rate

Appendix F-2 of NWP Settlement (RP22-1155)

Appendix F-2

NORTHWEST PIPELINE LLC Illustrative Derivation of CRM Surcharge Rate Modernization and Emissions Reduction Program

Estimated Rate Base, Revenue Requirement and Rate Calculation

Line No.	Description	Surcharge Effective Date	2023 CapEx	1/ 2023-2024 CapEx Surcharge Estimate 4/1/2025	2023-2025 CapEx Surcharge Estimate 4/1/2026	2023-2026 CapEx Surcharge Estimate 4/1/2027	2023-2027 CapEx 2/
	(A)		(B) \$	(C) \$	(D) \$	(E) \$	(F) \$
1	Gas Plant In Service at 10/31/20xx		7,847,600	143,976,000	223,607,200	289,238,800	338,648,800
2	Reserve for Depreciation at 10/31/20xx		(74,083)	(1,870,477)	(5,968,555)	(11,415,934)	(18,068,478)
3	Net Plant at 10/31/20xx		7,773,517	142,105,523	217,638,645	277,822,866	320,580,322
4	Deferred Income Taxes at 10/31/20xx		(76,391)	(1,457,723)	(4,694,519)	(8,928,577)	(13,701,265)
5	Rate Base		7,697,126	140,647,800	212,944,126	268,894,289	306,879,057
6	Rate Base Multiplier (Pre-Tax Return & Ad Valorem Adder)	11.50%	885,169	16,174,497	24,488,575	30,922,843	35,291,092
7	Depreciation Expense	3/	148,167	3,444,621	4,751,534	6,143,224	7,161,864
8	O&M Savings		0	(705,429)	(854,198)	(1,279,492)	(1,781,144)
9	Total Revenue Requirement		1,033,336	18,913,689	28,385,911	35,786,576	40,671,812
10	Over/Under Recovered Revenue Requirement	4/	0	0	0	0	0
11	Total Revenue Requirement for Surcharge		1,033,336	18,913,689	28,385,911	35,786,576	40,671,812
12	Billing Determinants	5/		917,816,031	917,816,031	917,816,031	
13	Estimated Cumulative Surcharge per dt/d			0.02061	0.03093	0.03899	
Actual Actual Line 1 minus Line 2 Actual Line 3 plus Line 4 Line 5 times Rate Base Multiplier (Line 1 less retirement gross plant) times 2.5% Per Settlement Line 7 plus Line 8 Actual Line 9 plus Line 10 Prior Year Actual or Billing Determinant Floor Line 11 divided by Line 12							
1/	First surcharge will begin April 1, 2025 and will include facilities placed in-service by October 31, 2024.						
2/	Facilities placed in-service by October 31, 2027 will be included in the base rates of the first post moratorium rate case.						
3/	Transmission depreciation rate of 2.5% will be utilized. When calculating depreciation expense, Gas Plant in Service will be adjusted to reflect the retirement of the horsepower replacement project's gross plant at the time of demolition.						
4/	The roll forward of over/under Recovered Revenue Requirement will be subject to the billing determinants floor.						
5/	Billing Determinants will be based on actual billing determinants, adjusted for discounts, for Rate Schedule TF-1 (Large) including Evergreen and Rate Schedule TF-2.						