

2024-2025 IRP Technical Conference

Docket No. 24-057-04

March 19, 2024



**Dominion
Energy[®]**

2024-2025 IRP Schedule

February 15, 2024

- Review IRP Standards and Guidelines
- Review 2023 PSC Order regarding IRP
- Pricing Update/Under-collection
- Supply Sourcing – Volumes and Locations

April 23, 2024

- Heating Season Review (LNG)
- Gas Supply Hedging
- IRP Project Detail Discussion

July 8, 2024

- Final Presentation

March 19, 2024

- System Integrity
- Rural Expansion Update
- Transportation and Storage Planning
- Supply Modeling Update

May 1, 2024

- Long-Term Planning
- Wexpro Matters (Confidential)
- RFP Review (Confidential)

System Integrity

Richard Kiser

Integrity Management

Richard Kiser

- PIPES Act 2020
 - Gas Pipeline Leak Detection
 - Strengthen leak survey and patrolling requirements
 - Standards for advanced leak detection programs
 - Leak grading and repair criteria
 - Class Location
 - Updates to requirements for pipelines when the class location changes to a higher class.
 - Safety of Gas Distribution Pipelines
 - Update distribution integrity management programs (DIMP), emergency response plans, operations and maintenance manuals, and other safety practices.

Cost (\$ Thousands)	2024	2025	2026
Transmission Integrity Management Program	9,061	10,483	8,136
Distribution Integrity Management Program	1,325	1,235	1,085
Total Integrity Management	10,386	11,718	9,221

Integrity Management

Richard Kiser

Year	Transmission Miles Assessed	HCA Miles Assessed	Anomalies Repaired
2012	34.430	26.470	28
2013	93.391	50.367	27
2014	80.049	54.555	20
2015	15.903	11.040	2
2016	62.575	37.226	4
2017	49.555	12.935	8
2018	76.327	30.212	9
2019	111.383	25.571	3
2020*	188.832	54.624	8
2021	118.389	11.066	11
2022*	55.35	4.512	4
2023	81.11	8.803	17



Rural Expansion

Austin Summers

Customer Participation

- Residents are reacting positively from the service of DEU and Fugal in creating the most cost-effective installation of meters and risers

	Services Signed Up	Services Installed	Meters Installed
Eureka	326	326	251
Goshen/Elberta	341	314	175
Green River	344	278	58
Genola	Canvassed Last Week, Customers Showing Interest		

Spending Caps

- DNG revenue from most recent general rate case = \$481,158,558
- 2% of DNG = \$9,623,171
- 5% of DNG = \$24,057,928
- Used tracker model to add investment

	2% cap	5% cap
Total Net Investment	\$88,659,061	\$221,647,658
Less: Amount currently in rates	\$0	\$0
Replacement Infrastructure in Tracker	\$88,659,061	\$221,647,658
Less: Accumulated Depreciation	(\$1,140,747)	(\$2,851,867)
Accumulated Deferred Income Tax	(5,613,024)	(14,032,560)
Net Rate Base	\$81,905,291	\$204,763,232
Current Commission-Allowed Pre-Tax Rate of Return	8.46%	8.46%
Allowed Pre-Tax Return (Line 6 x Line 7)	\$6,929,188	\$17,322,969
Plus: Net Depreciation Expense	\$1,711,120	\$4,277,800
Net Taxes Other Than Income (1.2% x Line 6)	\$982,863	\$2,457,159
Total Revenue Requirement	\$9,623,171	\$24,057,928

Three Year Spending Cap

Feb 2022	Jan 2023	Feb 2024	Feb 2025	Jan 2026	Feb 2027	Feb 2028
	\$20.9M 2022 RETM					
			\$23.6M 2023 GRC			
			\$26.0M 2024 RETM			
				Future 2025 RETM for Genola		

Current Potential Expansion Projects List



Communities under current evaluation	Estimated Population	Gas Supply Type
Portage	289	High Pressure
Fairfield	161	High Pressure
Rush Valley	467	High Pressure
Miller	270	High Pressure
Lawrence	175	Intermediate High Pressure
Emery	288	High Pressure
Jensen	412	Intermediate High Pressure
Manilla	324	High Pressure
Howell	237	High Pressure
Sutherland	165	High Pressure
Laketown/Garden City	838	High Pressure

Moving Forward Through 2025

Activity	Timeframe
Community Interest Communications	2 nd Quarter 2024
Community outreach	2 nd Quarter 2024
Regulator approval request submittal	3 rd Quarter 2024
Project design, materials acquisition & construction	2025



Transportation and Storage Planning

Will Schwarzenbach

Gas Supply Strategy

Cost-Efficient



Reliable

**Firm Transportation
Capacity**

**Access to Diverse
Supply Points**

Storage Capacity

Hedging

Transportation Contracts



MountainWest Pipeline



Northwest Pipeline

Firm
Transportation

Contract #	Dth/day	End Date	Contract #	Dth/day	End Date	Contract #	Dth/day	End Date
2945 (All Year)	12,000	3/31/2027	20029 (All Year)	33,000	4/30/2028	144689	2,016	4/30/2025
2945 (Winter Only)	75,000	3/31/2027	20029 (Winter Only)	50,000	4/30/2028	144690	2,016	4/30/2025
241	798,902	6/30/2027	20039	1,885	6/30/2027	139525	2,295	4/30/2029
6136	100,000	6/30/2027	70791 (Nov-Mar)	27,000	3/31/2032	RCL – PA	25,000	10 Years
6546	8,542	6/30/2027	70792 (Nov & Mar)	6,000	3/31/2031			
2361	30,000	10/31/2027	70793 (Dec-Feb)	56,925	2/28/2031			

Firm
Peaking

241 A #19	170,000	2/14/2024	1692	28,752	2/28/2029
241 A #20	54,000	2/14/2024			

Ryckman Creek Loop Project
– Precedent Agreement

No-Notice
Transportation

Working on extension

987	203,542	6/30/2027
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#1692 Recontracted in 2024 –
extended term to include full
November and February

Contract to begin Dec 1, 2025
or Dec 1, 2026 depending on
project permitting.



Storage Contracts



MountainWest Pipeline

Spire Storage West

Firm
Storage

Contract #	Capacity Dth/day	Withdrawal Dth/day	End Date	Contract #	Capacity Dth/day	Withdrawal Dth/day	End Date
Clay Basin #997	3,727,500	31,063	3/31/2025	QUES02342S	2,000,000	22,000	3/31/2029
Clay Basin #988	3,727,500	31,063	4/30/2027				
Clay Basin #935	5,964,000	49,700	4/30/2029				

#935 Recontracted in Oct 2023

New contract beginning 4/1/2024

- 18,000 Dth/day injection
- Delivery into MWP

Peaking
Storage

Chalk Creek #984	321,000	37,450	8/31/2028
Leroy #985	886,996	79,540	8/31/2028
Coalville #986	720,372	67,635	8/31/2028

Contracts are combining for simplification – terms all remain the same

Long-Term Transportation Planning

Ruby Pipeline

Currently Over 1 Bcf of Unsubscribed Capacity

Mostly short-term contracts
 Current max rate = \$1.137 per Dth per day
 Potential for negotiated rates

Potential Interconnect with DEUWI

Access to Spire Storage West
 Purchase gas delivered
 System benefits

Rockies Express Pipeline (REX)

Access to Eastern Supplies

Potential lower prices
 Diversified supply resources
 Potential deliveries to White River Hub

Constraints Between REX and Existing Capacity

Recent MountainWest open season partially
 addressed (access to Kern River)



Shipper Name	Shipper ID	Ship Affil Ind	Rate Sched	Contract No.	Contract Effective Date	Contract Primary Term Expiration Date	Days Until Next Possible Contract Expiration	Neg Rate Ind	MDQ	MSQ	Foot-note
BP ENERGY COMPANY	625275755	N	FTS	959473	01/01/2024	01/31/2024	0	N	35000		
CASCADE NATURAL GAS CORP.	7942584	N	FTS	61036000	04/01/2012	04/30/2037	0	N	15000		O1
CASTLETON COMMODITIES MERCHANT TRADING L.P.	118638852	N	FTS	959570	01/01/2024	01/31/2024	0	N	10000		
CITADEL ENERGY MARKETING LLC	079663087	N	FTS	959445	12/01/2023	03/31/2024	0	N	110000		
CONOCOPHILLIPS COMPANY	001368265	N	FTS	959395	12/01/2023	03/31/2024	0	N	30000		
NEVADA GOLD MINES	117128893	N	FTS	219674	11/01/2022	09/30/2027	0	N	8500		
PACIFIC GAS AND ELECTRIC	126945927	N	FTS	61009000	07/28/2011	10/31/2026	0	Y	75000		
PACIFIC GAS AND ELECTRIC COMPANY (ON BEHALF OF ITS CORE GAS SUPPLY FUNCTION)	025301339	N	FTS	61014000	11/01/2011	10/31/2026	0	Y	150000		O1
PACIFIC GAS AND ELECTRIC COMPANY (ON BEHALF OF ITS CORE GAS SUPPLY FUNCTION)	025301339	N	FTS	219186	11/01/2023	10/31/2026	0	N	100000		
POWEREX CORP	253301949	N	FTS	959472	01/01/2024	01/31/2024	0	N	5000		
SOUTHWEST GAS COMPANY	006970917	N	FTS	959087	11/01/2023	03/31/2024	0	N	41204		O1
SOUTHWEST GAS COMPANY	006970917	N	FTS	959088	11/01/2023	03/31/2024	0	N	16968		O1

Long-Term Storage Planning



Spire Storage West

New Contract from 2023 Open Season

Facility expansion

Recent Open Season

Turned back capacity

Required delivery into Kern River (Painter Lateral) or Ruby Pipeline

We did not submit a bid

Future Ruby station could facilitate takeaway capacity from Spire facilities

Will continue to work with Spire and participate in future open seasons



Magnum Storage

Ongoing Discussions

Facility development

Pipeline facilities required



MountainWest Pipeline

Ongoing Discussions

Focus on potential expansion of existing aquifer facilities

Proposals in the past have focused on only deliverability expansion



Long-Term Storage Planning



Spire Storage Salt Plains

Not Currently Viable

Capacity constraints between Oklahoma and existing capacity



Jackson Prairie

No Available Capacity

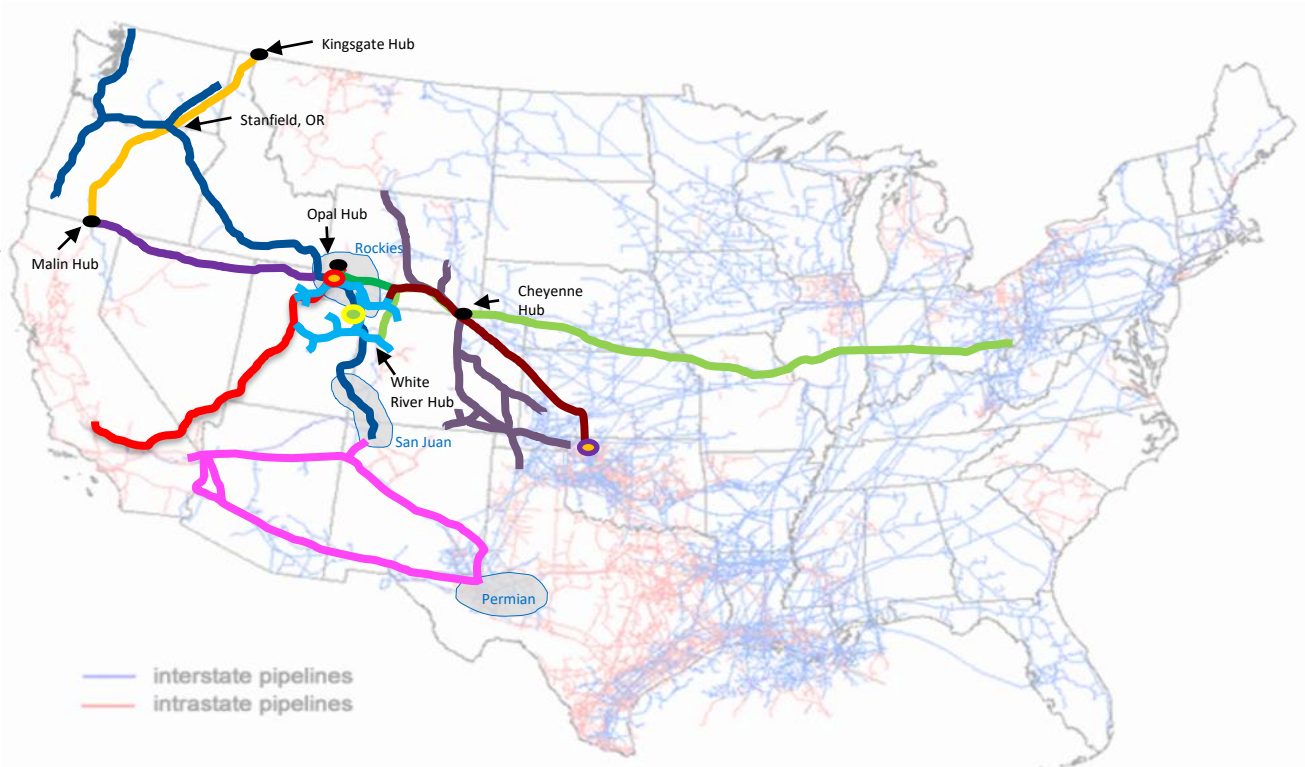
DEUWI Will Continue to Review All Viable Capacity Options

Will be prepared to respond to open seasons as they become available
Available capacity may come from new projects or turned back capacity

Western Pipelines and Storage

- Kern River Gas Transmission
- MountainWest Pipeline
- MountainWest Overthrust Pipeline
- Northwest Pipeline
- Rockies Express
- Colorado Interstate Gas Company
- Southern Star
- El Paso Natural Gas Company
- Ruby Pipeline
- Gas Transmission Northwest

- Clay Basin Storage
- Spire Storage West
- Spire Storage Salt Plains



Source: U.S. Energy Information Administration, *About U.S. Natural Gas Pipelines*

Supply Modeling

Brandy Robles

Supply Modeling Update – What is the model used for?

- RFP (Request for Proposal)
 - Monte Carlo analysis on pricing and weather aids in selecting the most economic supply packages
- IRP (Integrated Resource Plan)
 - Monte Carlo analysis to ensure that the system can meet demand well into the future
- Weekly operational planning
 - Update base case with current weather and pricing
 - Used to make weekly decisions regarding supply purchases and storage activity
- Analyzing opportunities for gas purchase offers and storage capacity

Supply Modeling Update (SENDOUT & Plexos)

SENDOUT

- Used prior to 2024 IRP year
- Contract is no longer active



Plexos

- Currently using for weekly operational modeling
- Will be used for 2024–2025 RFP and IRP



Change to Plexos (Energy Exemplar)

SENDOUT Issues

- Not been updated since 2014 and no updates are currently planned
- Technical support is difficult to receive and usually not helpful
- Software and storage issues
 - Inability to run longer time horizons for the Monte Carlo analysis
 - Monte Carlo simulations were extremely time intensive

Plexos Improvements

- Cloud Based which improves performance
- Enhanced cyber security
- Team of programmers and developers
- Improved Input capabilities
 - Better functionality for Wexpro production
 - Refined demand areas
- Plexos provides more detailed results

What does this new model do?...The same as the old one.

Inputs

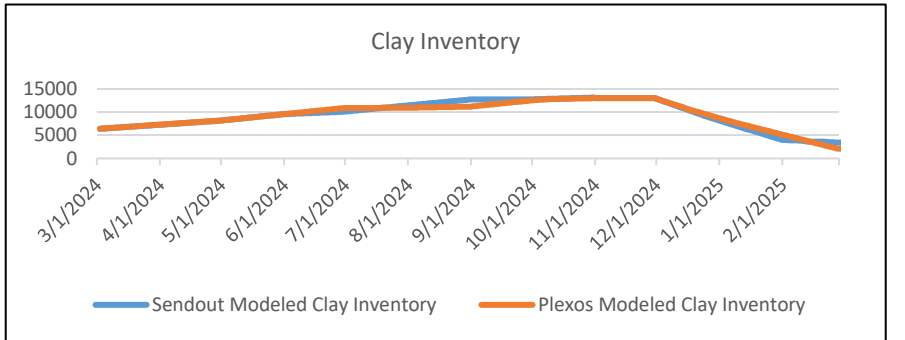
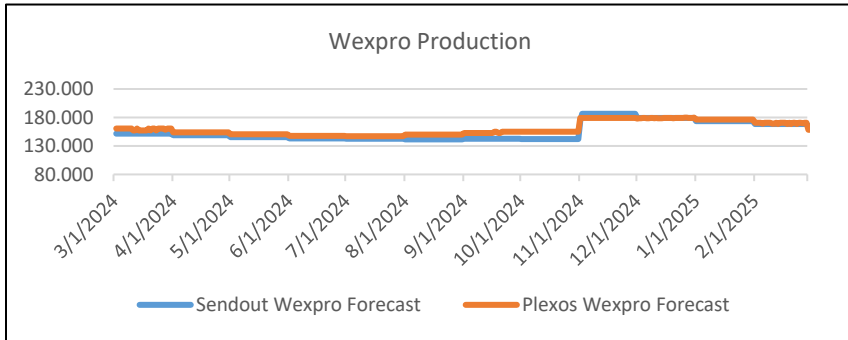
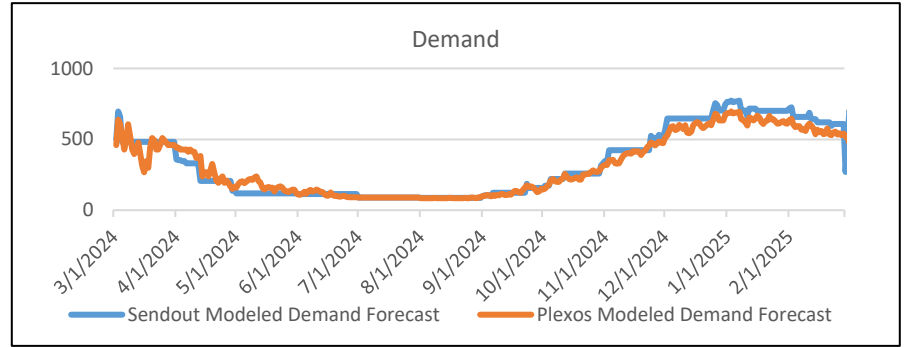
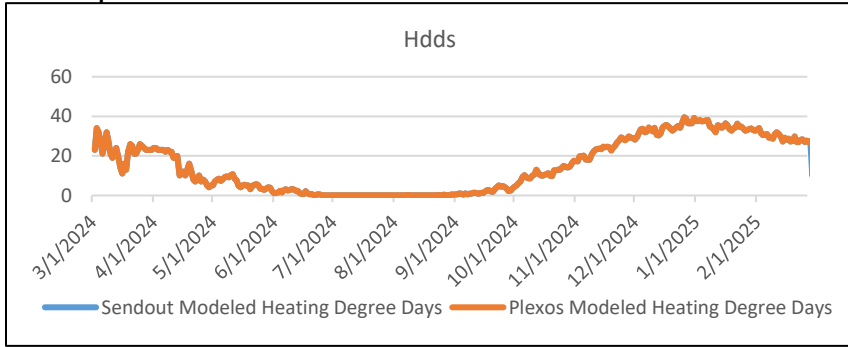
- Wexpro production (Gas Fields)
 - Expected production
 - Total reserves
 - Costs
- Pipeline transportation
 - Capacity paths
 - Costs
- Storage
 - Capacity
 - Inventory
 - Costs
- Supply contracts
- Weather, customer counts, heat and base load factors

Outputs

- Daily Demand
- How daily demand is met
 - Longer term purchase contracts
 - Spot gas purchases
 - Wexpro Supply
 - Storage
- Total system cost
- Supply shortages

Model Comparison - 03/01/2024

- The Plexos model was fine tuned to ensure comparable results. The following graphs are from our updated operational model that is based on the 2023-2024 IRP.



Model Comparison - IRP year cost

- The same normal base case was created in Plexos that was used in SENDOUT for the 2023 – 2024 IRP year and received similar results

	Plexos Total	Sendout Total	Difference
Total System Costs	\$424.7 million	\$428.6 million	Less than 1%
Wexpro Production	56.1 MMDth	56.5 MMDth	Less than 1%

Questions?