Intermountain Gas Company

IGRAC Invite and Meeting Materials

2025 – 2030

INTERMOUNTAIN®
GAS COMPANY
A Subsidiary of MDU Resources Group, Inc.

In the Community to Serve®

Exhibit No. 1

INTEGRATED RESOURCE PLAN
JULY 9, 2025
INTERMOUNTAIN GAS RESOURCE ADVISORY COMMITTEE (IGRAC)

AGENDA

- **Welcome & Introductions** – *Brian Robertson*
- **Safety Moment & Feedback Process** – *Brian Robertson*
- **IRP Recommendations** – *Brian Robertson*
- **System Overview –** *Brian Robertson*
- **Economic Forecast**– *Ryan Denton*
- **Residential & Commercial Customer Growth** – *Ryan Denton*
- **Design Heating Degree Days –** *Brian Robertson*
- **Industrial Customer Forecasts** – *Nicole Gyllenskog & Jon Whiting*
- **Load Demand Curves** – *Ryan Denton*
- **Questions/Discussion**

WELCOME

- Introductions
  - Name
  - Organization you are representing

BENEFITS OF AN IRP

- Blueprint to meet the Company's firm customer demands over a five-year forecast period based on various assumptions

- Provides frequent updates to the projected growth on the Company's system

- Considers all available resources to meet the needs of the Company's customers on a consistent and comparable basis

- Solicits input from Stakeholders during the modeling process

- Helps to ensure Intermountain Gas Company will continue to provide reliable energy service while minimizing costs

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- **Integrated Resource Plan Process**
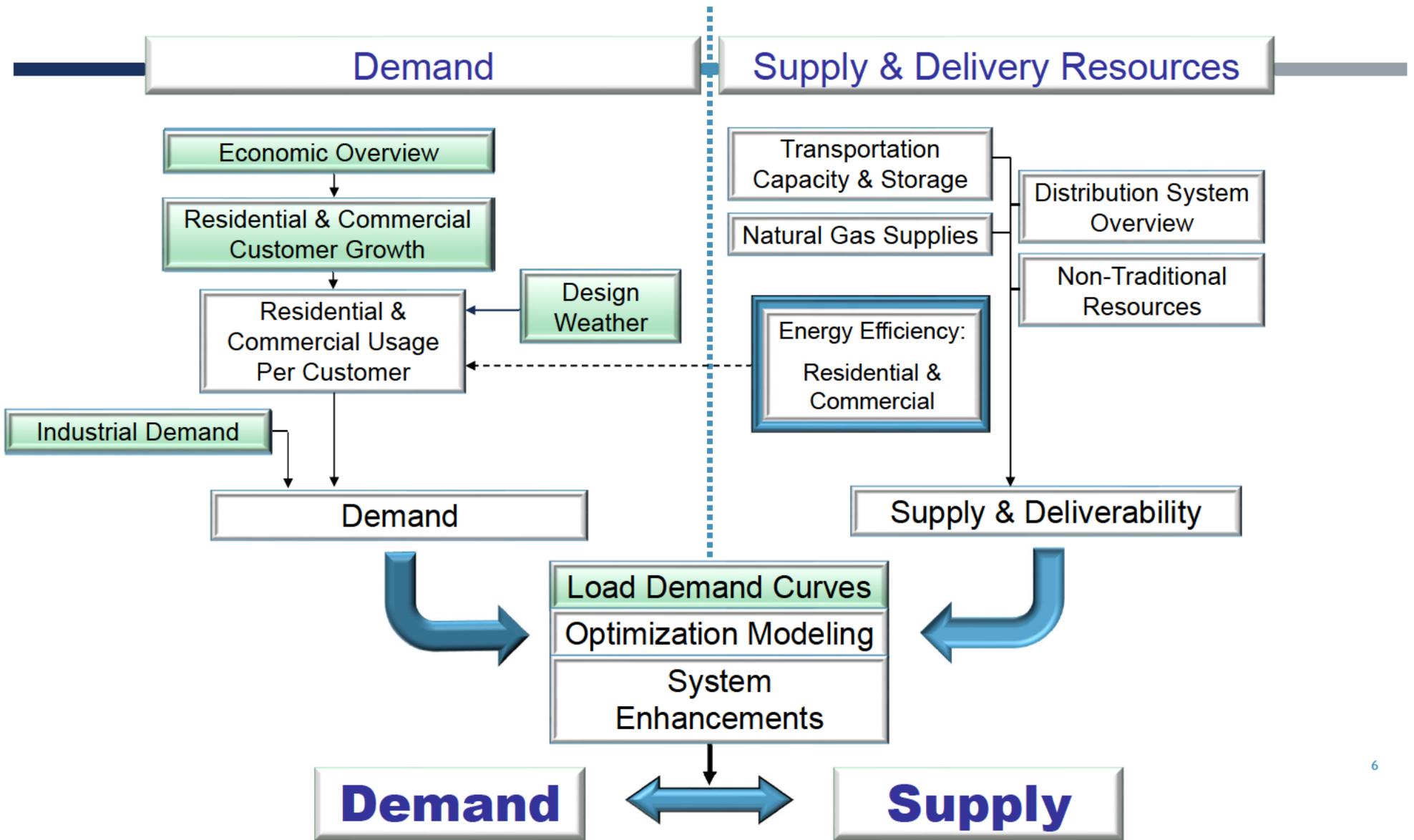
SAFETY MOMENT

Preventing Eyestrain

The National Safety Council provided several tips to take to avoid strained and tired eyes.

- Keep your screen at arm's length.
- Don't forget to blink.
- Take a break every 20 minutes by looking away at something at least 20-feet away for at least 20 seconds.
- Be mindful of lighting and glare.
- Make sure your screen isn't too bright.
- Adjust computer monitor properly.
- Increase your computer's type size.

https://www.nsc.org/Portals/0/Documents/Membership%20Site%20Document%20Library/2018-Materials/Digital%20Signage/prevent-eyestrain.pdf?ver=2019-06-17-1Z1635-500

https://www.nsc.org/LinkClick.aspx?fileticket=FYTZXV6bfDE%3d&portalid=0

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days
- Intermountain IRP Webpage: https://www.intgas.com/rates-services/rates-tariffs/integrated-resource-plan/

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2023 IRP ACKNOWLEDGEMENT AND IRP RECOMMENDATIONS

- Final Order No. 36249 – Commission Acknowledged Intermountain's 2023 IRP Filing

- Commission Recommendations for Intermountain's IRP Process:

  - Recommends the Company to work with Staff to implement IRP reporting that includes system enhancement information in future IRPs, within six months of a Commission order

  - Recommends the Company to work with Staff to develop reports to the Commission of capacity enhancement projects that include in-service dates and project costs, within six months of a Commission order

  - Establish the practice of authorizing the Company's DSM avoided costs as part of IRP filings and authorize the DSM avoided costs associated with this filing. ⁹
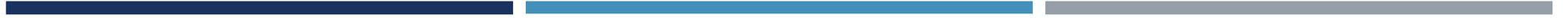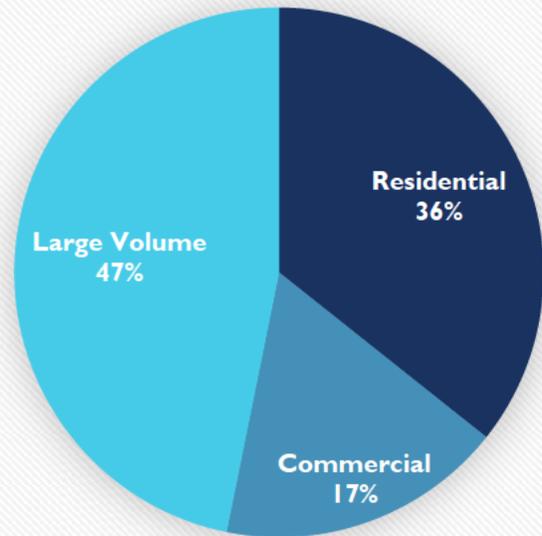
SYSTEM OVERVIEW

BRIAN ROBERTSON

SUPERVISOR, RESOURCE PLANNING
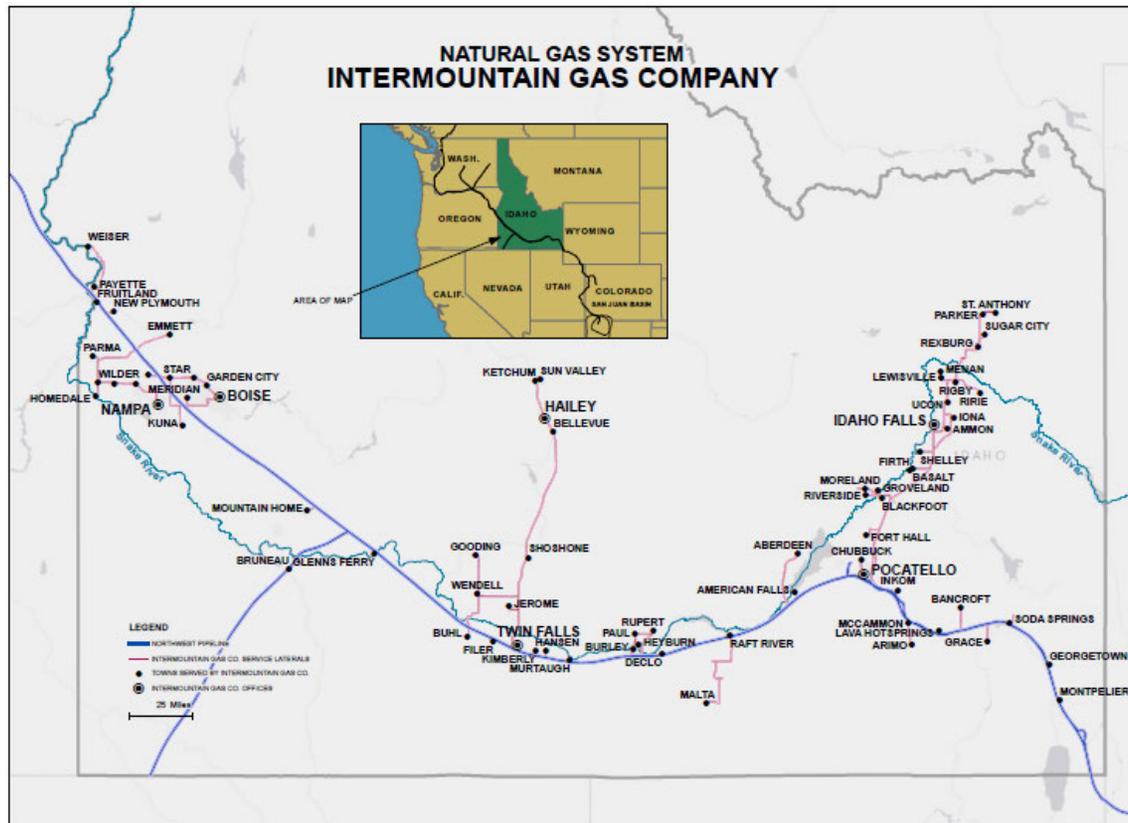
INTERMOUNTAIN GAS COMPANY

- Intermountain Gas Company is a natural gas local distribution company, founded in 1950 and served its first customer in 1956

- Provides service to 76 communities across southern Idaho

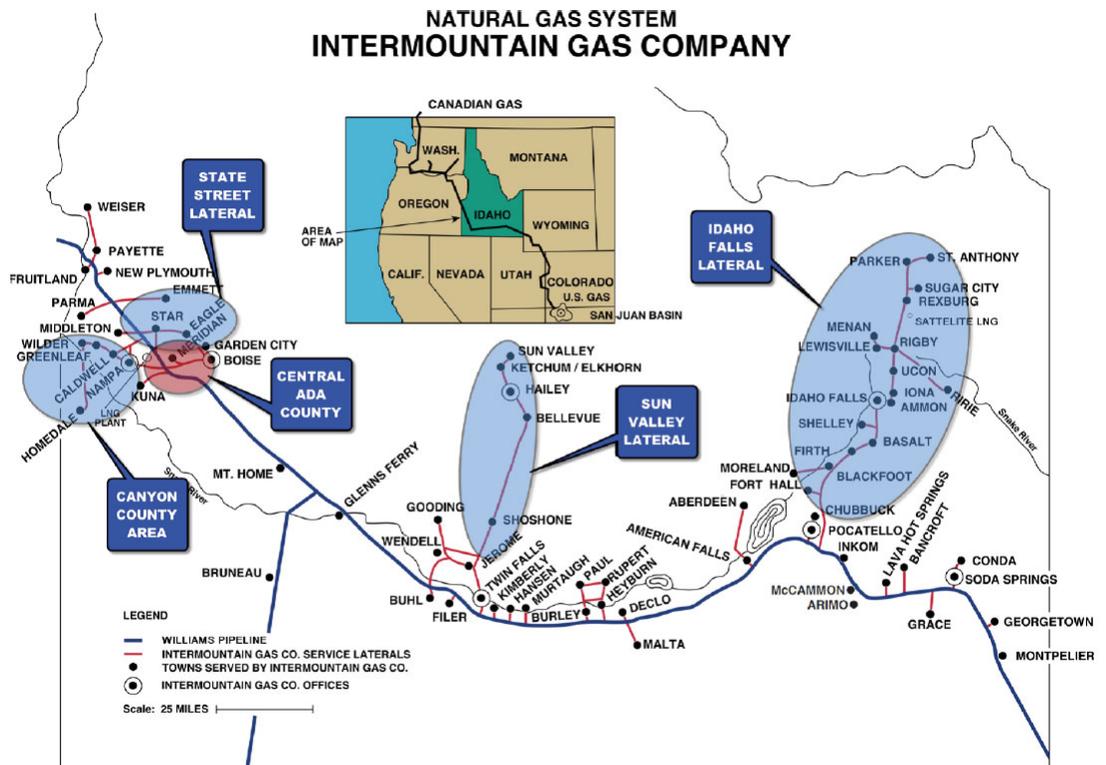- 433,400+ customers

THROUGHPUT BY CUSTOMER CLASS

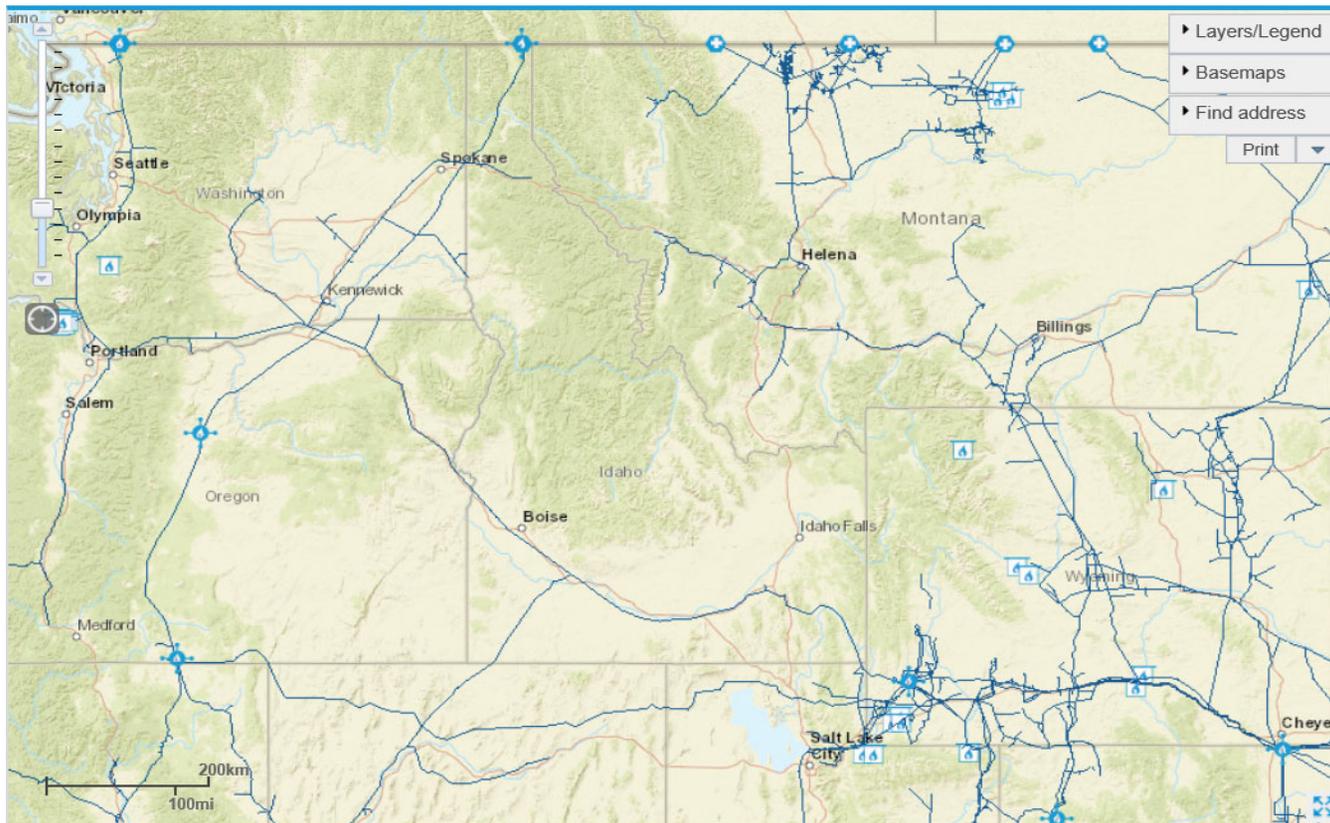# INTERMOUNTAIN GAS COMPANY DISTRIBUTION SYSTEM

AREAS OF INTEREST (AOI)

- Distribution System Segments:
  - Canyon County
  - Central Ada County Lateral
  - North of State Street Lateral
  - Sun Valley Lateral
  - Idaho Falls Lateral
  - All Other Customers

NATURAL GAS SYSTEM
INTERMOUNTAIN GAS COMPANY

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REGIONAL PIPELINES

ECONOMIC FORECAST

RYAN DENTON

WOODS & POOLE ECONOMICS, INC. Regional Projections

The methods used by Woods & Poole to generate the county projections proceed in four stages:

- First, forecasts to 2050 of total United States personal income, earnings by industry, employment by industry, population, household size, inflation, and other variables are made.

- Second, the country is divided into 179 Economic Areas (EAs) as defined by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). The EAs are aggregates of contiguous counties that attempt to measure cohesive economic regions in the United States.

- The third stage is to project population by age, sex, and race for each EA on the basis of projected net migration rates. For stages two and three, the U.S. projection is the control total for the EA projections.

- The fourth stage replicates stages two and three except that it is performed at the county level, using the EAs as the control total for the county projections.

Idaho Economic Forecast

For the State of Idaho and the Counties in Idaho

Future household growth, which is the key driver for future residential customer growth, is modeled as a function of total population (less those individuals in group quarters), and general economic conditions in the state.

In brief: good or improving economic conditions will speed up the rate of household growth, however worsening or declining economic conditions will slow the rate of household formation and the rate of household growth.
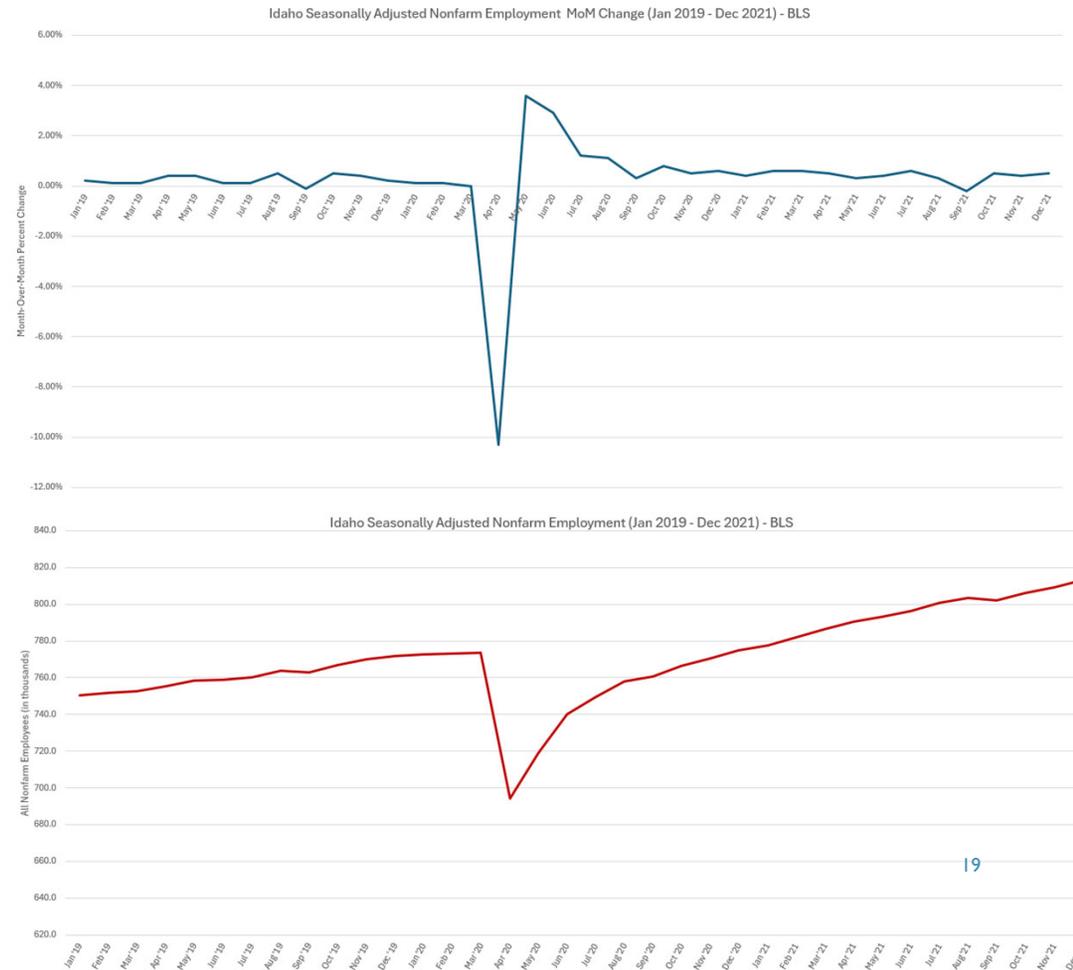
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Idaho Economic Forecast

COVID-19 Impact:

The height of COVIDs impact on the economy occurred primarily between March and May 2020. In April 2020 Idaho saw a seasonally adjusted nonfarm employment decline 10.3% MoM (a loss of 79,300 in nonfarm employment from the previous month).

Although there is a sharp recovery in the following month, with reversion to pre-pandemic levels, this recovery in MoM changes takes time to work itself through the levels of employment. Here we see residual effects in the following months/years, but we do see reversion back to the pre-pandemic trend rather quickly.

Idaho Seasonally Adjusted Nonfarm Employment MoM Change (Jan 2019 - Dec 2021) - BLS

Idaho Seasonally Adjusted Nonfarm Employment (Jan 2019 - Dec 2021) - BLS
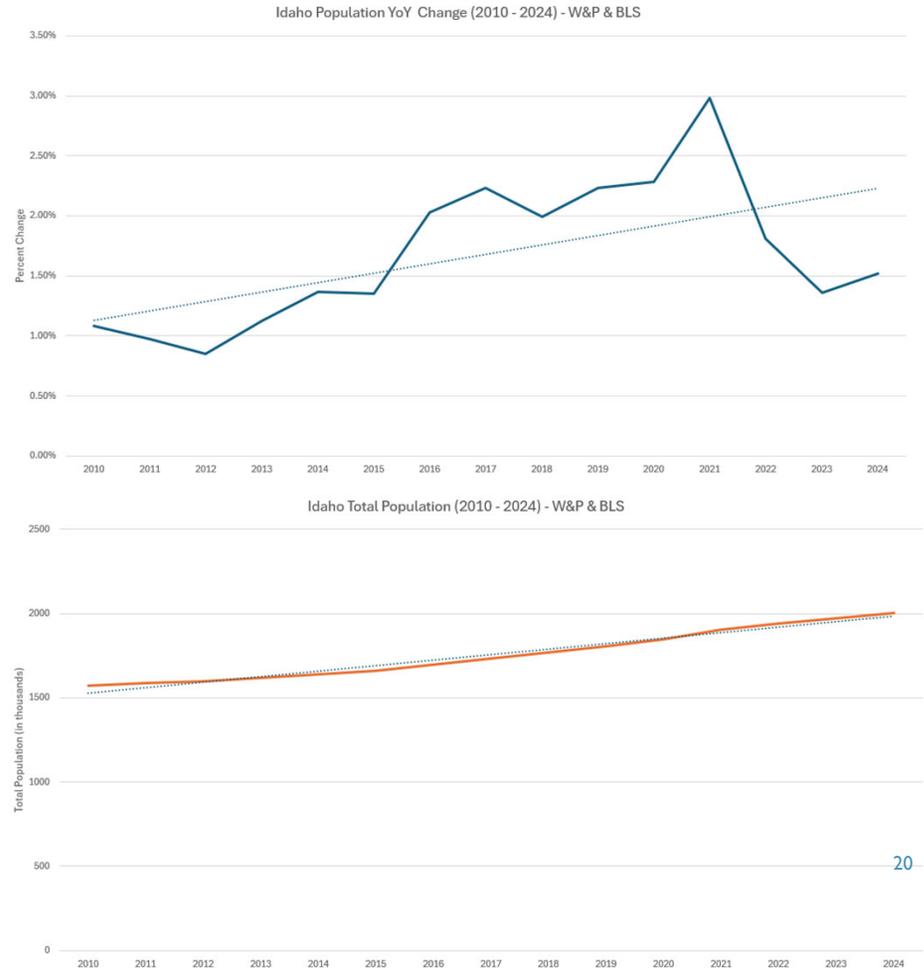
19

Idaho Economic Forecast

Population:

The growth in population has been a driving force in economic growth prior to the pandemic and continues today, though it has slowed down a bit since 2021. Population growth has brought new jobs to the state and help boost the economy.

Total population in Idaho has increased at a robust pace since 2013. From 2019 to 2021 Idaho saw the highest YoY percentage change in population in the nation, with the average YoY change being about 2.37%. This is an increase in the population of around 97,470 over these three years.

This rapid increase in population was driven mainly by domestic migration from more expensive and densely populated states like Oregon, Washington, and California.

INTERMOUNTAIN GAS COMPANY
INTEGRATED RESOURCE PLAN

Idaho Population YoY Change (2010 - 2024) - W&P & BLS

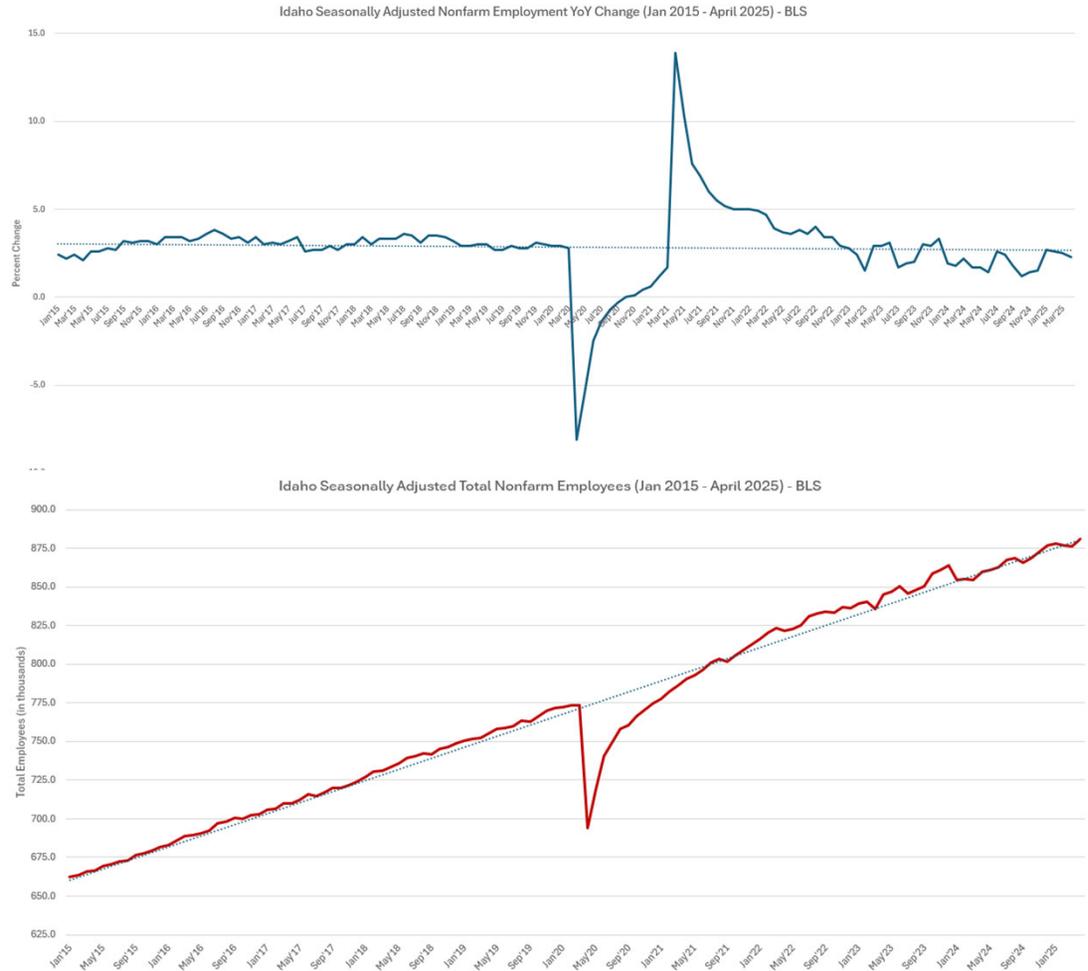Idaho Total Population (2010 - 2024) - W&P & BLS

20

Idaho Economic Forecast

Employment:

The top graph shows the total nonfarm employment YoY changes for each month from January 2015 to April 2025. The bottom graph shows total nonfarm employment over that same period.

There appears to be a slowing down largely due to a normalization of the labor market after an abnormally fast post-pandemic growing period. Other factors include slowing wage growth, slowing population growth, falling working-age to retirees ratio, and broader economic conditions. But still strong growth.

Idaho Seasonally Adjusted Nonfarm Employment YoY Change (Jan 2015 - April 2025) - BLS

Idaho Seasonally Adjusted Total Nonfarm Employees (Jan 2015 - April 2025) - BLS
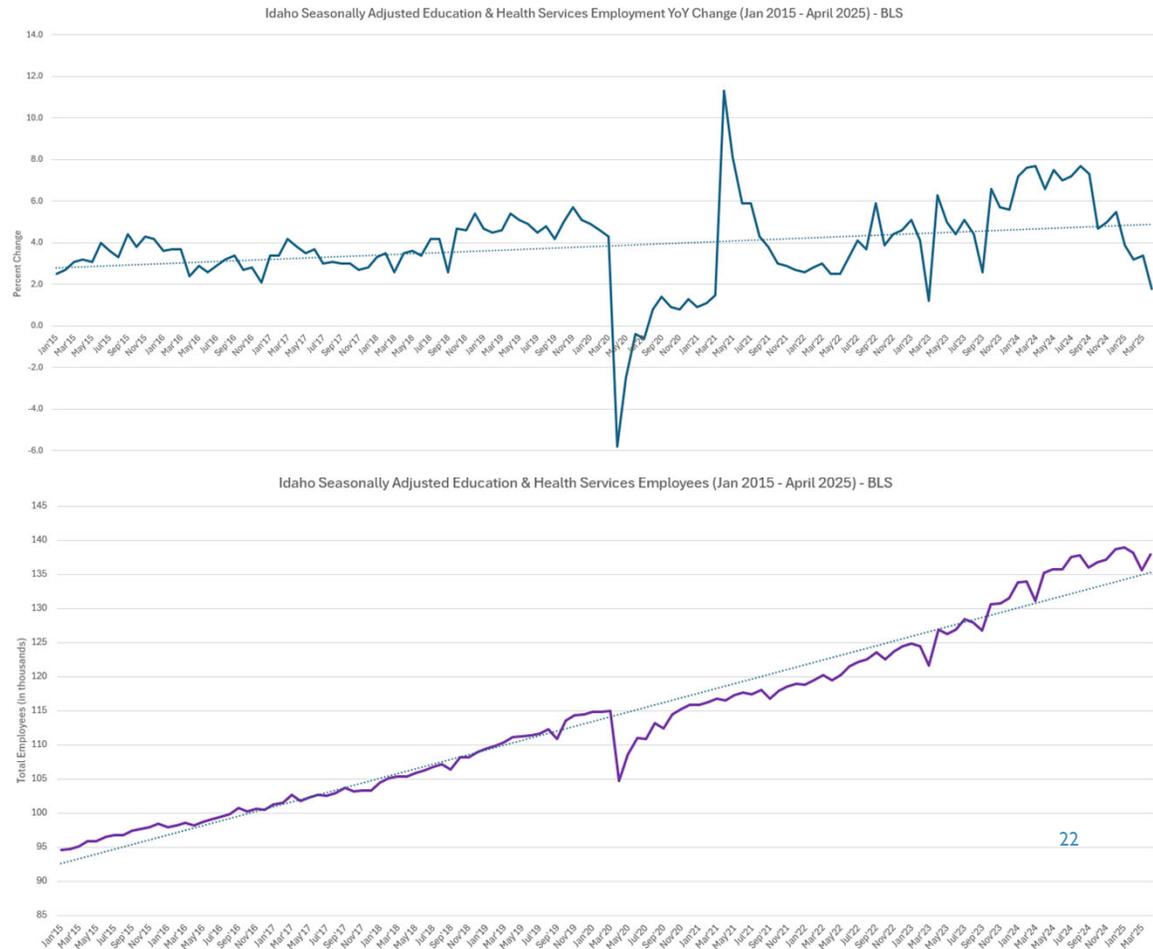
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Idaho Economic Forecast

Employment:

The top graph shows the education and health services employment YoY changes for each month from January 2015 to April 2025. In 2025 thus far we've seen a YoY change of 3.9% in January, 3.2% in February, 3.4% in March, and 1.8% in April (though April is subject to revision).

The bottom shows this same sector but the actual levels of employment over that same period.

Idaho Seasonally Adjusted Education & Health Services Employment YoY Change (Jan 2015 - April 2025) - BLS

Idaho Seasonally Adjusted Education & Health Services Employees (Jan 2015 - April 2025) - BLS
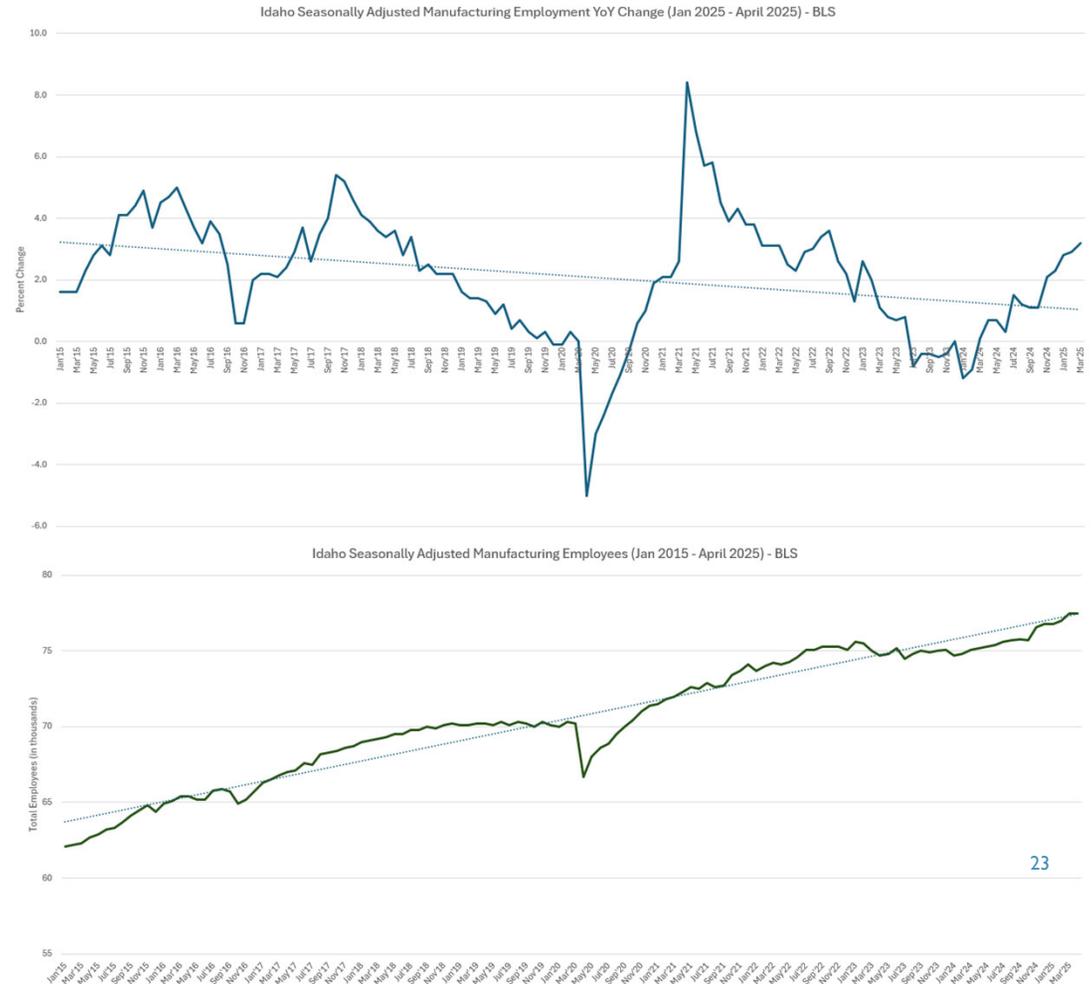
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Idaho Economic Forecast

Employment:

The top graph shows the YoY percent change in manufacturing employment from January 2015 to April 2025. In 2025 thus far we've seen a YoY change of 2.8% in January, 2.9% in February, 3.2% in March, and 3.6% in April (again, April is subject to revision).

The bottom shows this same sector but the actual levels of employment over that same period.

Overall Idaho is showing a lot of population and employment growth strength.

Idaho Seasonally Adjusted Manufacturing Employment YoY Change (Jan 2025 - April 2025) - BLS

Idaho Seasonally Adjusted Manufacturing Employees (Jan 2015 - April 2025) - BLS

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The Economic Forecast

In the 2025 – 2030 Forecast Period Idaho's Economy is currently expected to experience:

An average YoY population growth of 1.05%, with the State's population reaching around 2,114,477 in 2030.

An average YoY increase in total employment of about 15,642, adding around 93,870 jobs.

Ada and Canyon counties are projected to attain a total combined population of about 868,976 in 2030.

Idaho Projected YoY Percent Change in Total Employment (2025 - 2030) - W&P

Idaho Projected YoY Increase in Total Employment (2025 - 2030) - W&P
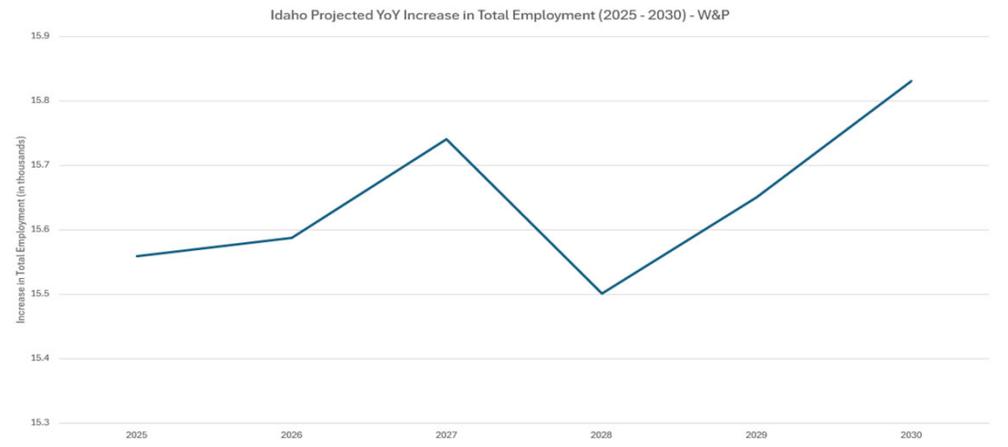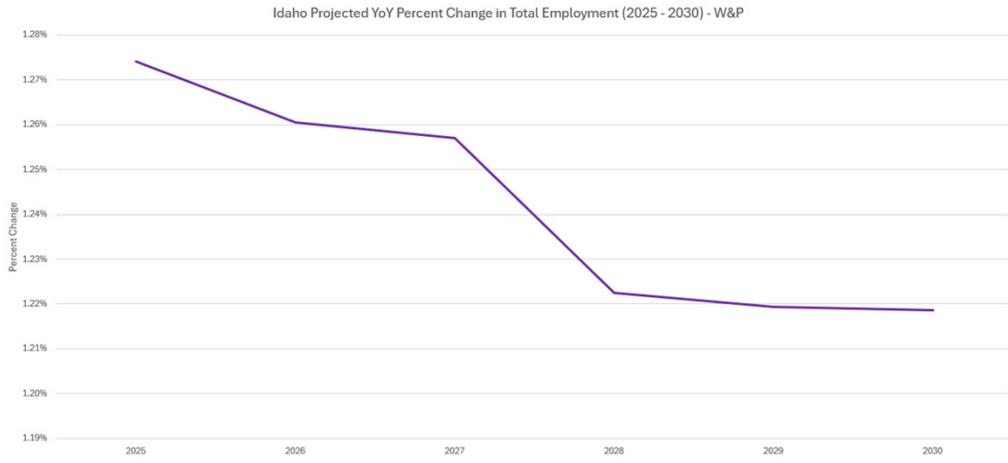
The Economic Forecast

Nonfarm employment in Idaho is expected to increase on average 1.27% YoY over the 2025 to 2030 forecast period, which is around a 93,179 total increase.

Some specific sector projections:

Farm employment is projected to increase on average 0.28% YoY over the forecast period, which is an increase of around 691.

Sector	Avg YoY %-Change	Total Increase (2025 – 2030)
Farm	0.28%	691
Manufacturing	0.34%	1,676
Construction	0.16%	882

Manufacturing employment is projected to increase on average 0.34% YoY over the forecast period, which is an increase of around 1,676.

Construction employment is projected to increase on average 0.16% YoY over the forecast period, which is an increase of around 882.

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The Economic Forecast

Combined, the transportation & warehousing, wholesale trade, retail trade, and utilities sectors are expected to see an average YoY percent growth of 0.66% over the 2025 to 2030 forecast period, an increase of around 8,766 in employment.

Combined, the finance & insurance and real estate & rental & lease sectors are expected to see an average YoY percent growth of 1.52%, an increase of around 12,873 in employment.

You can see the individual projections in the table.

Sector	Avg YoY %-Change	Total Increase (2025 – 2030)
Transportation	1.01%	3,230
Wholesale Trade	0.46%	1,104
Retail Trade	0.53%	3,964
Utilities	2.08%	468
Finance & Insurance	0.93%	3,338
Real Estate & Rental & Lease	1.95%	9,535

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The Economic Forecast

The service industries in Idaho are projected to see the most growth.

Combined, the professional & technical services, education, health care & social assistance, state & local government, accommodation & food services, and other services employment are expected to see an average YoY percent growth of 1.85%, an increase of around 57,298 over the 2025 to 2030 forecast period.

This growth in the services industries represents 61.49% of the total increase in nonfarm employees over this period.

You can see the individual projections in the table.

| Sector	Avg YoY %-Change	Total Increase (2025 – 2030)
Professional & Technical Services	1.67%	8,416
Education Services	2.88%	5,154
Health Care & Social Assistance	2.65%	21,776
State & Local Government	1.02%	7,252
Accommodation & Food Services	1.81%	9,664
Other Services (Excluding Public Admin)	1.41%	5,036

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The Economic Forecast

QUESTIONS ?

RESIDENTIAL & COMMERCIAL CUSTOMER GROWTH

RYAN DENTON

RESOURCE PLANNING ECONOMIST I

Intermountain Gas Co.
Areas of Interest (AOI)
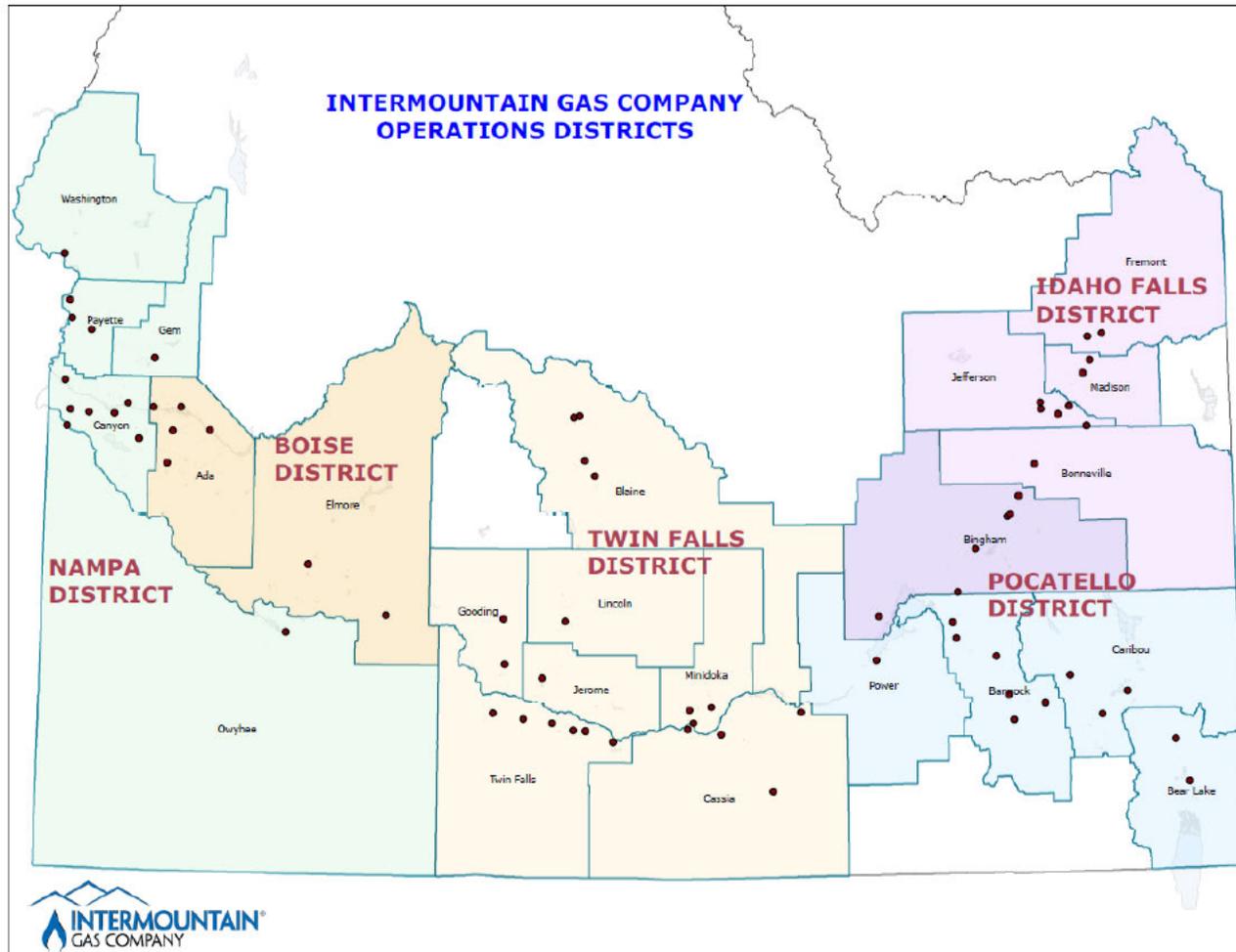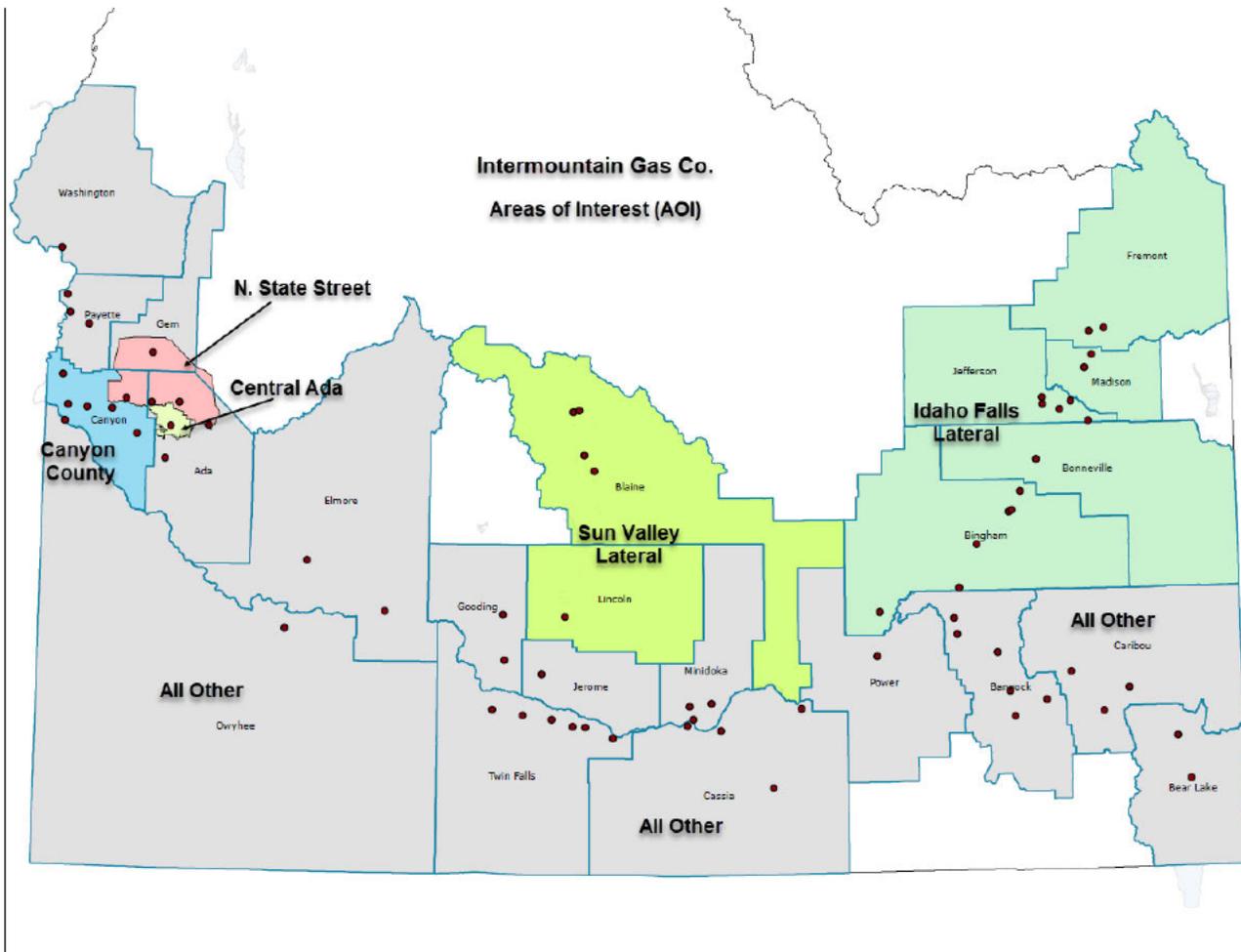
AOI
GROWTH
RATE

Base Case, High Growth, Low Growth

The Base Case Economic Forecast assumes a normal amount of economic fluctuation and normal business cycle. It is the "best estimate" of future economic activity in Idaho and its counties.

The Low Growth Scenario assumes a period of slower economic growth, with fewer employment opportunities, leading to a slower rate of population growth in the state and a slower rate of household growth.

The High Growth Scenario assumes a more rapidly growing economy, such as what happened in the 1990s and what we have seen more recently.

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CUSTOMER COUNT: FORECAST INPUTS

We use total number of households and total employment data provided by Woods & Poole.

Households are defined as occupied housing units. A housing unit is a house, an apartment, a group of rooms, or a single room occupied as separate living quarters.

The employment data include wage and salary workers, self-employed workers, private household employees, and miscellaneous workers. Historical employment data, 1969-2022, are from the U.S. Department of Commerce, Bureau of Economic Analysis.

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CUSTOMER COUNT: MODEL SELECTION

- AICc: Corrected Akaike Information Criterion
  - Model Fit
- SMAPE: Symmetric Mean Absolute Percentage Error
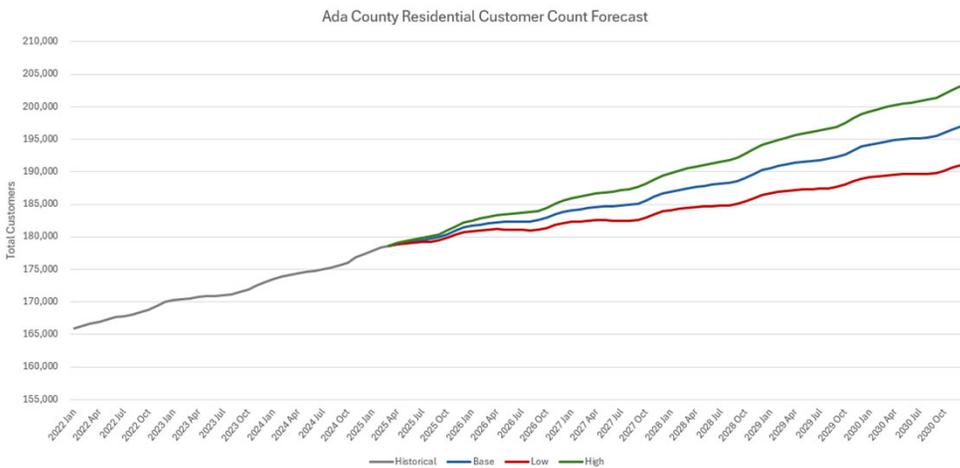 - Model Accuracy
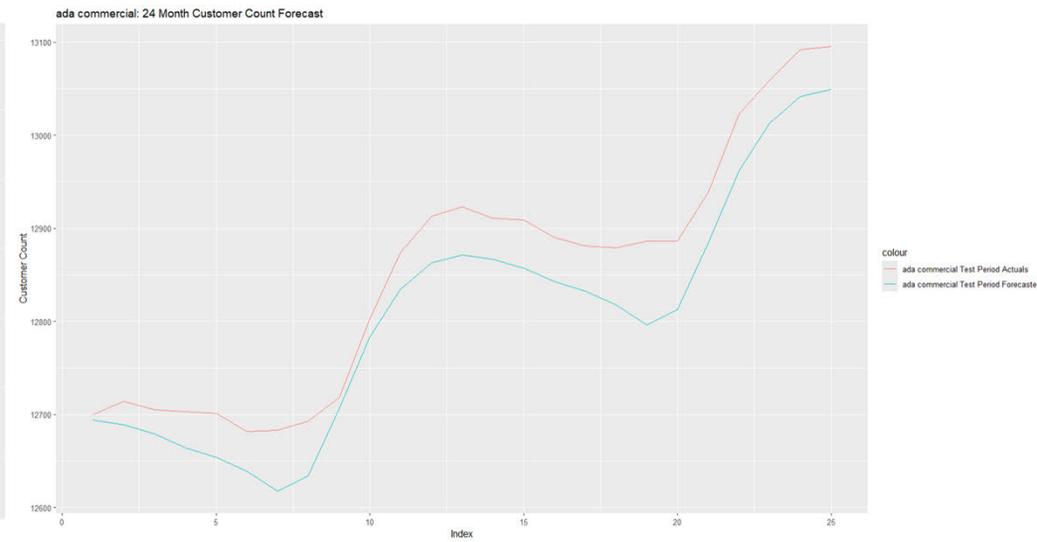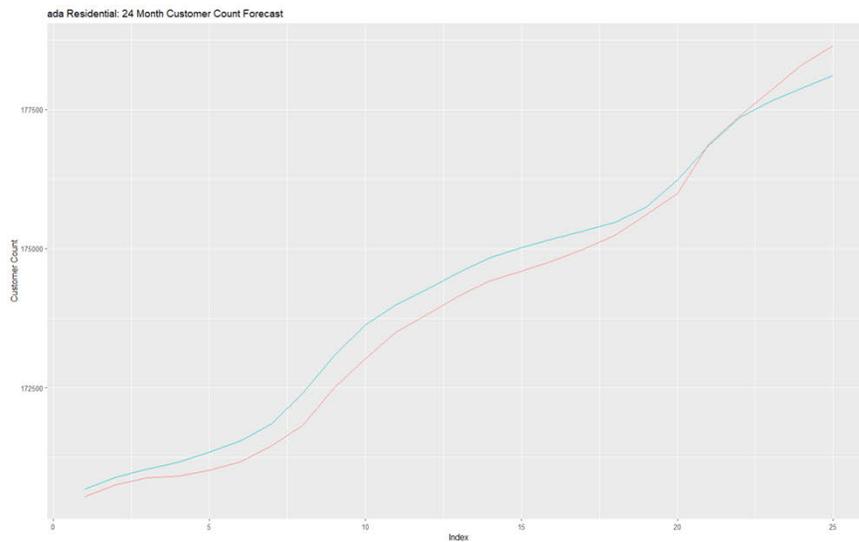
CUSTOMER COUNT: FORECASTING COMPONENTS

- Customers = $\beta_0 + \beta_1 HH + \beta_2 Emp + Trend() + Fourier(period = "year", K) + ARIMA(p,d,q)(PDQ)$

- Where:

  - HH: Number of Households;

  - Emp: Employment,

  - Trend(): Deterministic trend component,

  - Fourier(period = "year", K): Captures seasonality using K harmonics,

  - ARIMA(p,d,q)(PDQ): p = nonseasonal autoregressive terms, d = nonseasonal differencing, q = nonseasonal moving average terms. P = seasonal autoregressive terms, D = seasonal differencing, Q = seasonal moving average terms.

Monthly Data with Increasing Trend and Seasonal Components

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ADA COUNTY CUSTOMER FORECAST
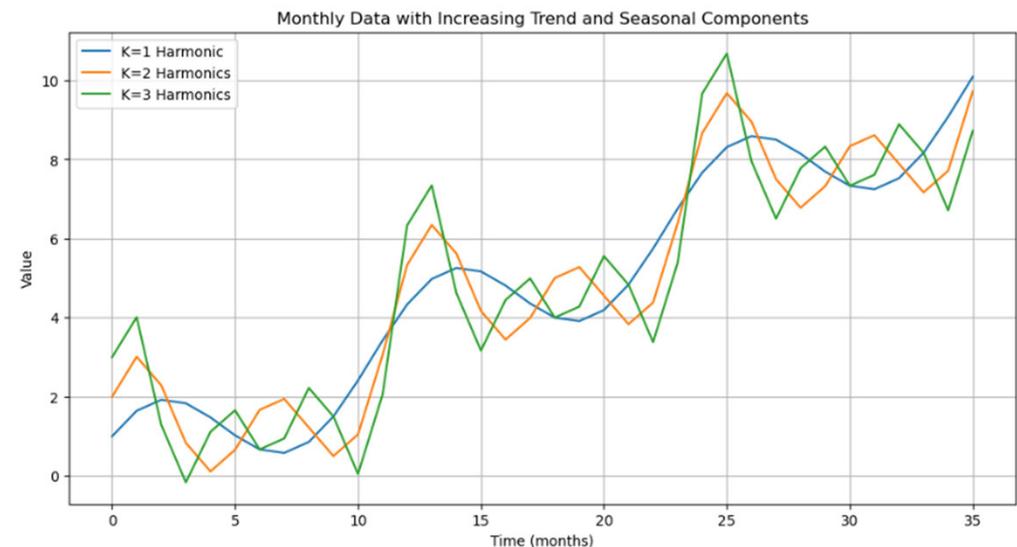
Ada County Residential Customer Count Forecast

Average YoY growth: 1.7%

Total growth: 10.3%, 18,393 customers

Ada County Commercial Customer Count Forecast
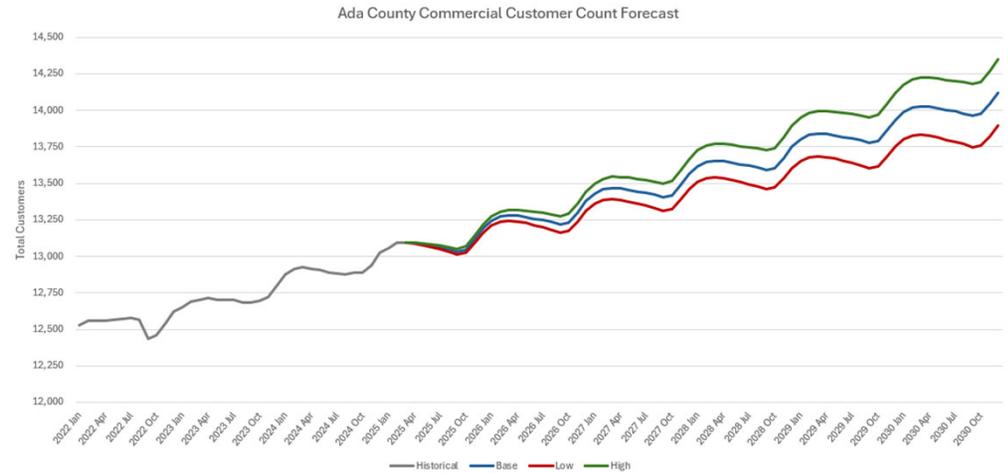
Average YoY growth: 1.3%

Total growth: 7.8%, 1,026 customers

BEAR LAKE COUNTY CUSTOMER FORECAST

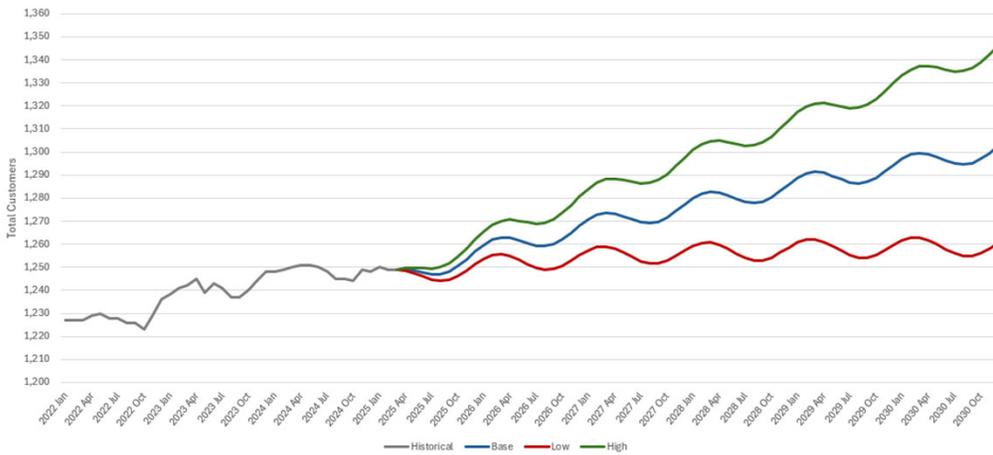Bear Lake County Residential Customer Count Forecast

Bear Lake County Commercial Customer Count Forecast

Average YoY growth: 0.7%

Total growth: 4.3%, 54 customers
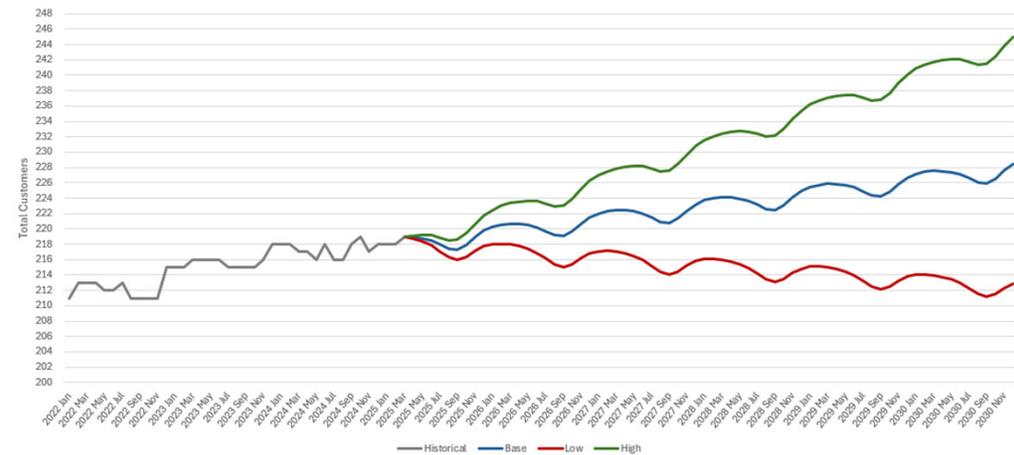
Average YoY growth: 0.7%

Total growth: 4.3%, 9 customers

FORECASTING GROWTH-AREAS OF INTEREST (AOI)

Intermountain Gas Co.

Areas of Interest (AOI)

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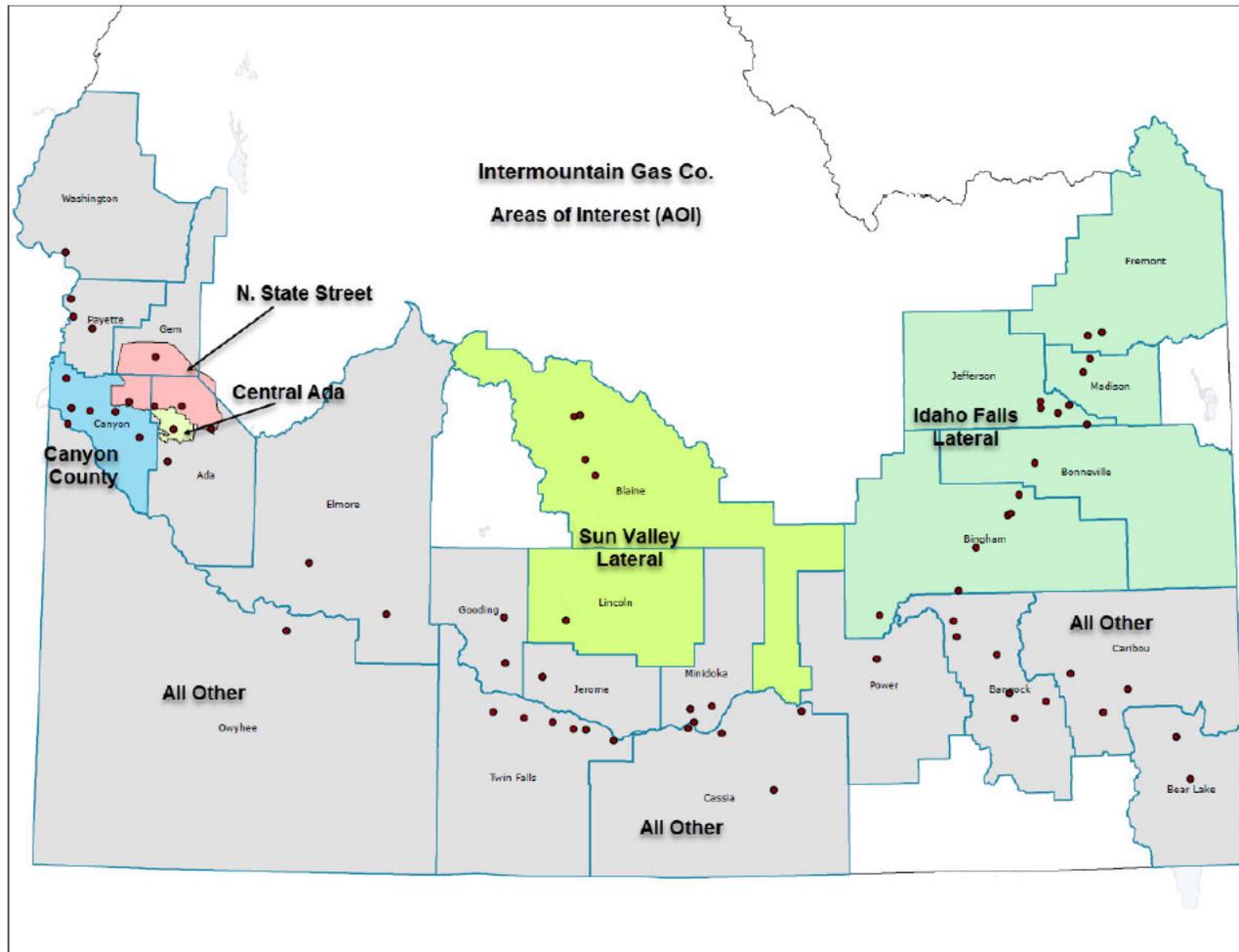
CANYON COUNTY CUSTOMER FORECAST

Canyon County Residential Customer Count Forecast

Canyon County Commercial Customer Count Forecast
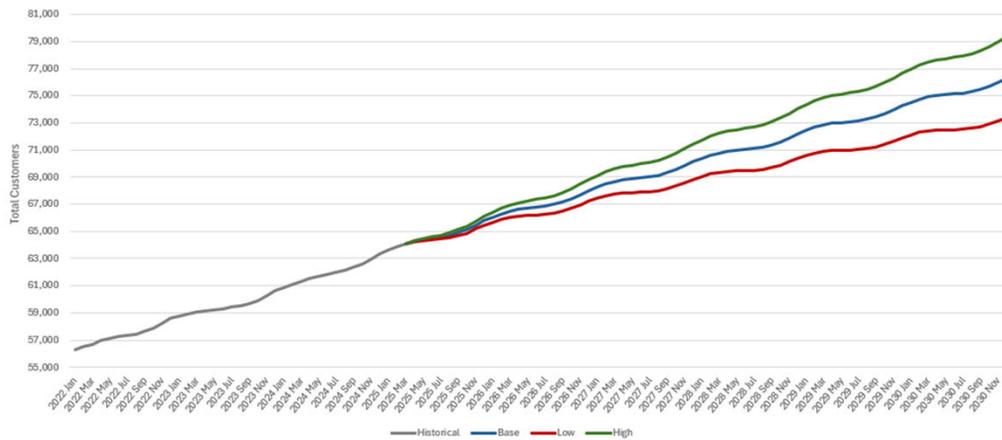
Average YoY growth: 3.1%

Total growth: 19%, 12,201 customers
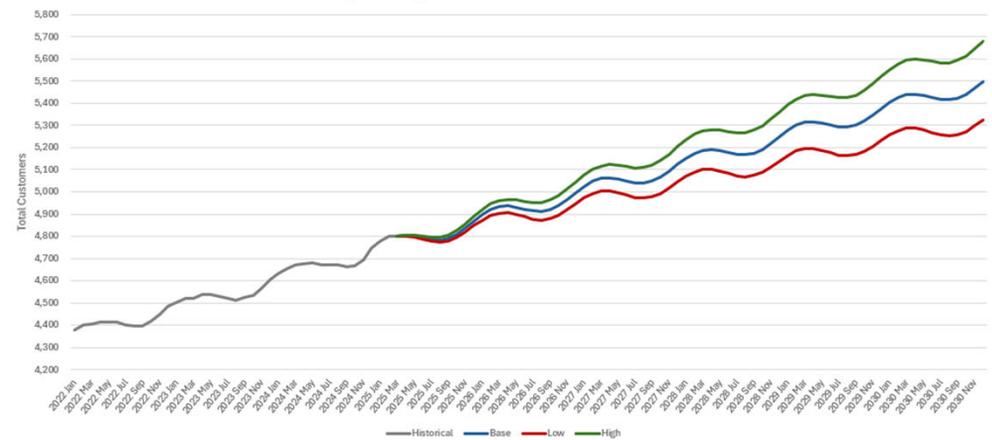
Average YoY growth: 2.4%

Total growth: 14.5%, 696 customers

SUN VALLEY LATERAL CUSTOMER FORECAST

Sun Valley Lateral Residential Customer Count Forecast

Sun Valley Lateral Commercial Customer Count Forecast
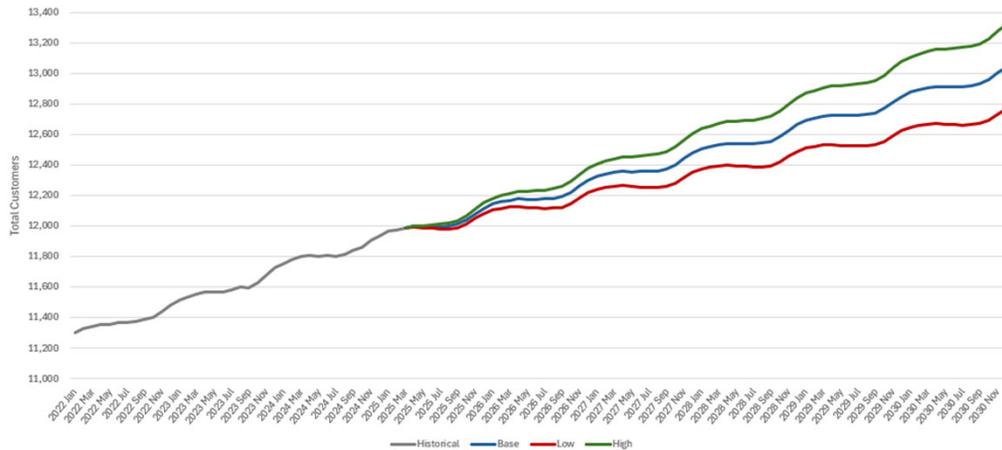
Average YoY growth: 1.5%

Total growth: 8.8%, 1,050 customers
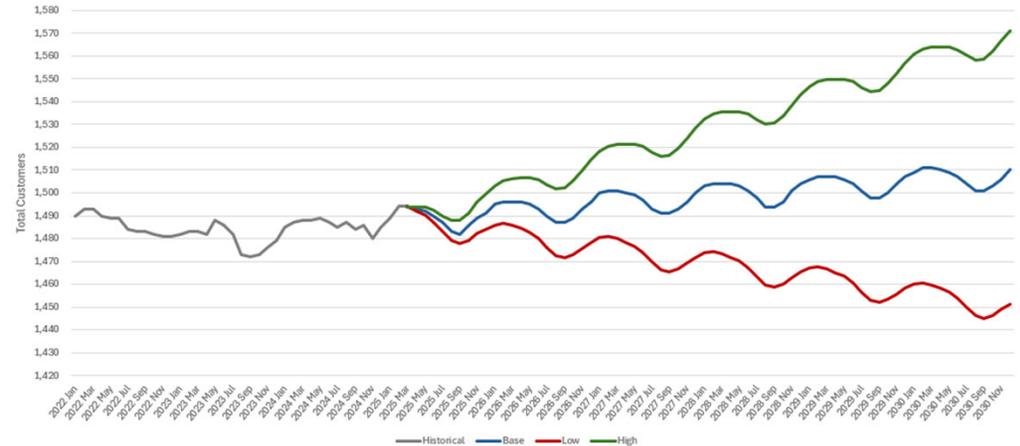
Average YoY growth: 0.2%

Total growth: 1.1%, 16 customers

IDAHO FALLS LATERAL CUSTOMER FORECAST

Idaho Falls Lateral Residential Customer Count Forecast

Idaho Falls Lateral Commercial Customer Count Forecast
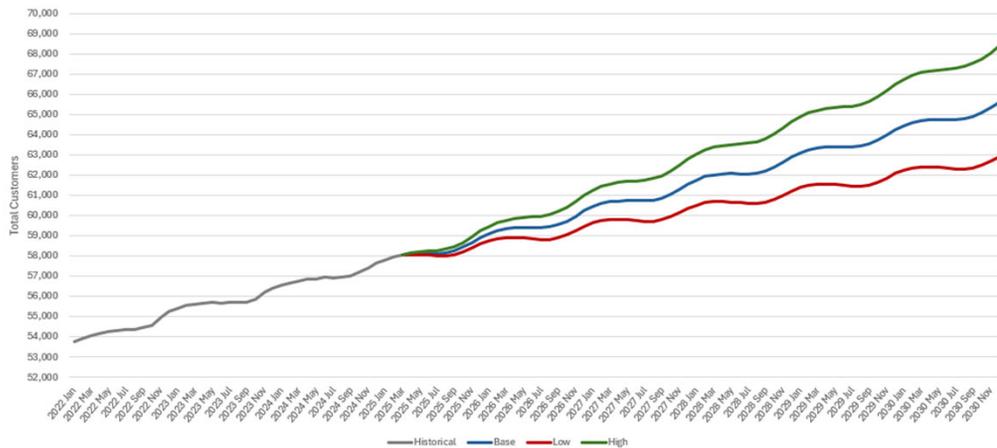
Average YoY growth: 2.2%

Total growth: 13%, 7,527 customers
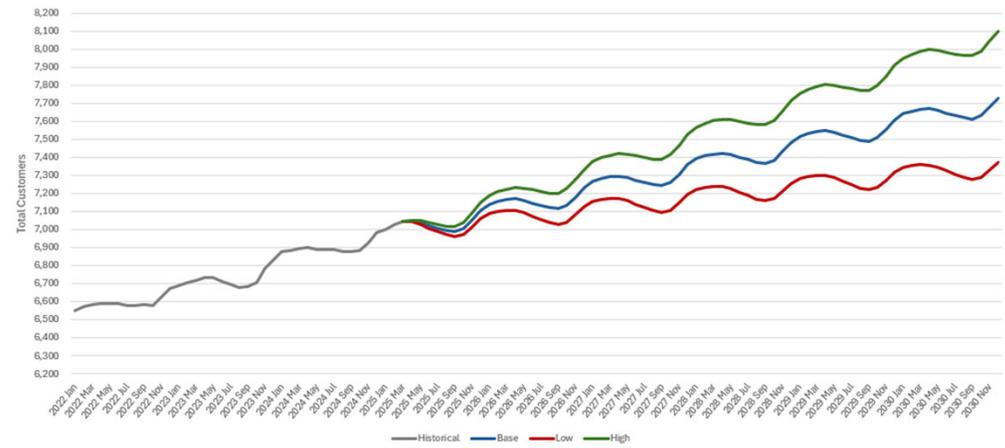
Average YoY growth: 1.6%

Total growth: 9.7%, 684 customers

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NORTH OF STATE STREET CUSTOMER FORECAST

North of State Street Residential Customer Count Forecast

North of State Street Commercial Customer Count Forecast
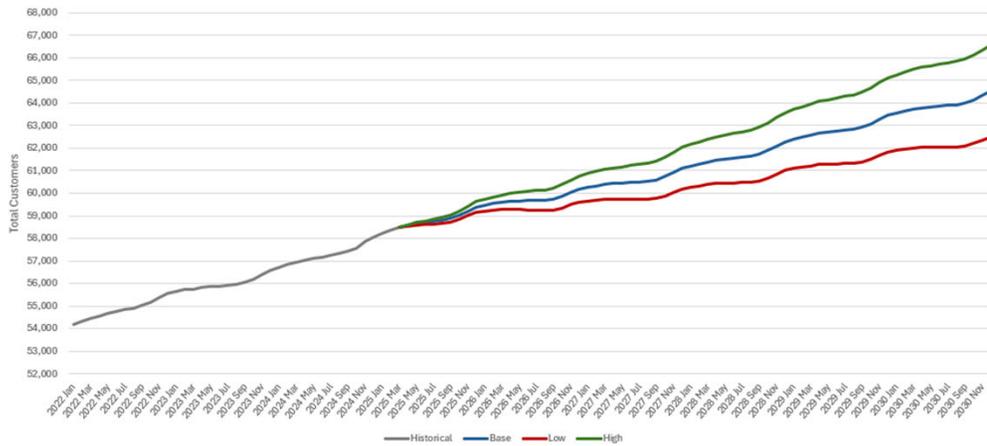
Average YoY growth: 1.7%

Total growth: 10.3%, 6,032 customers
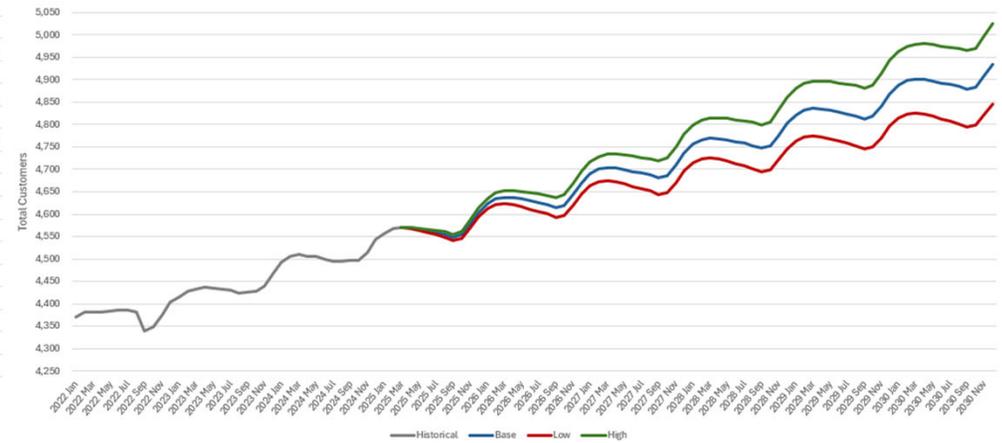
Average YoY growth: 1.4%

Total growth: 8%, 364 customers

CENTRAL ADA CUSTOMER FORECAST

Central Ada Residential Customer Count Forecast

Central Ada Commercial Customer Count Forecast
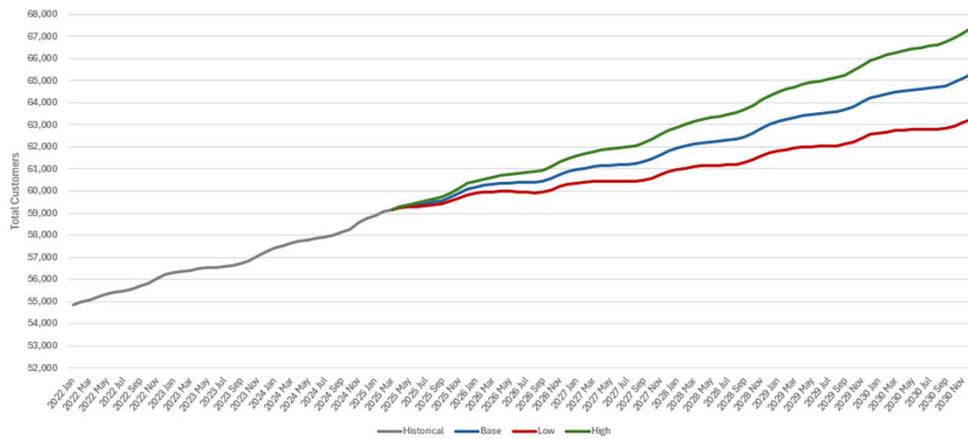
Average YoY growth: 1.7%

Total growth: 10.3%, 6,104 customers
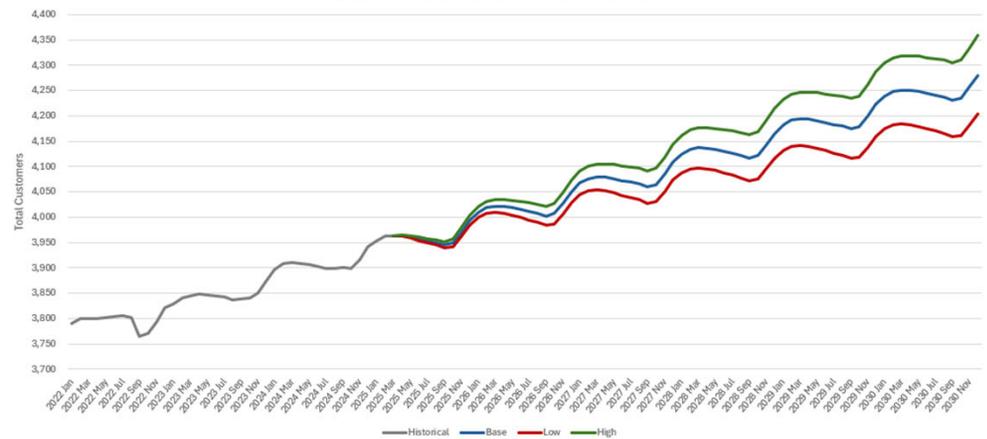
Average YoY growth: 1.4%

Total growth: 8%, 316 customers

TOTAL SYSTEM CUSTOMER FORECAST

Total Residential Customers Forecast

Total Commercial Customers Forecast
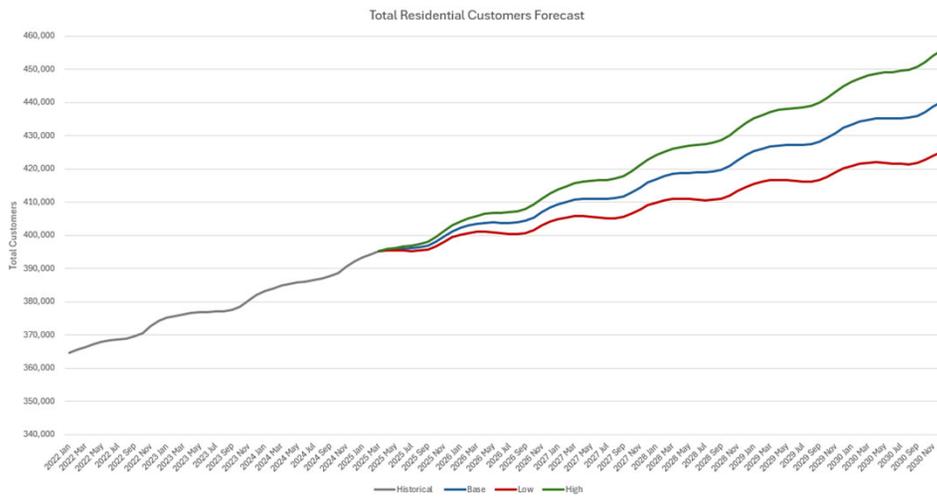
Average YoY growth: 1.9%

Total growth: 11.2%, 44,474 customers
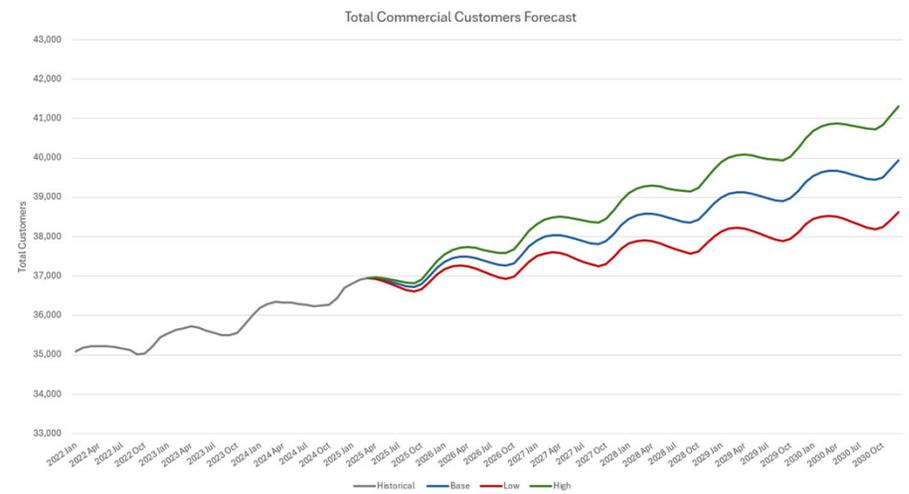
Average YoY growth: 1.4%

Total growth: 8%, 2,985 customers

QUESTIONS?

10 MINUTE BREAK

HEATING DEGREE DAYS & DESIGN WEATHER

BRIAN ROBERSTON

MANAGER, SUPPLY RESOURCE PLANNING

WEATHER

- Weather is a Key Residential & Commercial Demand Driver

- Heating Degree Days are Used to Capture Weather Effects

- Two Primary Weather Scenarios are Used in the IRP:

    - Normal HDD

    - Design HDD

HEATING DEGREE DAY (HDD)

- What is a Heating Degree Day?

- Industry-Wide Standard Measuring Degrees Below a Set Base Temperature

- Base of 65 Degrees is Most Common

  March 2nd, 2023 - Boise Example:

  Daily High: 39 Degrees °F

  Daily Low: 23 Degrees °F

  Mean: 31 Degrees °F

  65 Degrees – 31 Degrees = 34 HDD

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NORMAL HEATING DEGREE DAYS

- Benchmark for the IRP

- Used for Routine Planning and Represent the Typical or "Normal" Weather Expected on a Given Day

- 30-Year Rolling Average of Daily Mean Temperatures

- Normal for the IRP is the 30-Years Ended December 2024

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NORMAL HEATING DEGREE DAYS
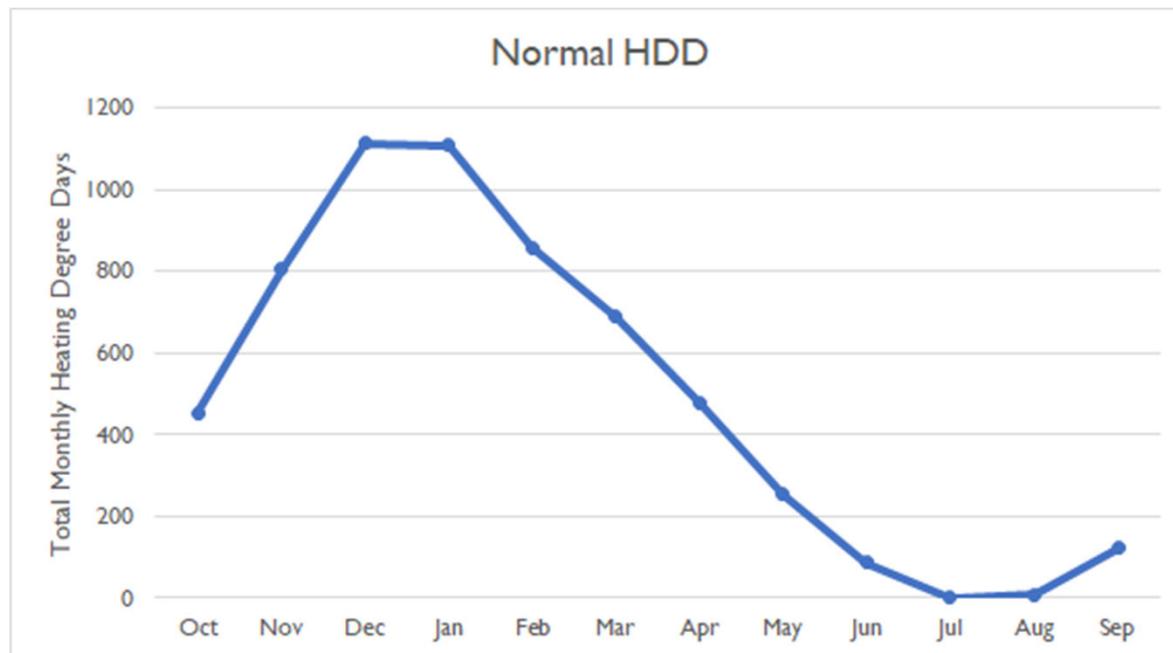
DESIGN DEGREE DAYS

- Design Degree Days Model the Coldest Temperatures that Could Feasibly Occur on Intermountain's System

- Created by Modeling Design Peak Day, then Modeling the Surrounding Week, Month, and Year

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DESIGN PEAK DAY

- Design Peak Day is the Absolute Coldest Day Planned for in the Design Year

- Engaged Idaho State Climatologist, Dr. Russell Qualls, to Conduct a Peak Day Study

- Study Produced a Range of Peak Days for Various Probability Assumptions

- 50-Year Peak-Day Event was Selected (78 HDD)

- Peak Day is Modeled to Occur on Jan 15th of the Design Year

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PEAK 5-DAY DESIGN

- The Days Surrounding the Peak Day are Modeled After the Coldest Recorded Consecutive 5-Days in a 50 Year Period.

- Peak Day is Assumed to be the Second Day in the 5-Day Period.

Five Day Weather Forecast

Day 1	**Peak Day**	Day 3	Day 4	Day 5
Snow	Snow	Snow	Snow	Sunny
-11° F	**-13° F**	**-12° F**	**-9° F**	**-6° F**
December 21st, 1990 Actual	50-Year Peak Day Event	December 23rd, 1990 Actual	December 24th, 1990 Actual	December 25th, 1990 Actual

PEAK 5-DAY DESIGN

55

PEAK MONTH DESIGN

- The Days Surrounding the Peak 5-Day Period are Modeled After the Coldest Calendar Month in the last 50 Years

- The Current Peak Month is December 1985

- This Month Forms the Basis for January Design Weather

Peak Month HDDs

Legend:
- Design Year Adjustment
- December 1985 Actual

X-axis: Day of Month
Y-axis: Heating Degree Days

56
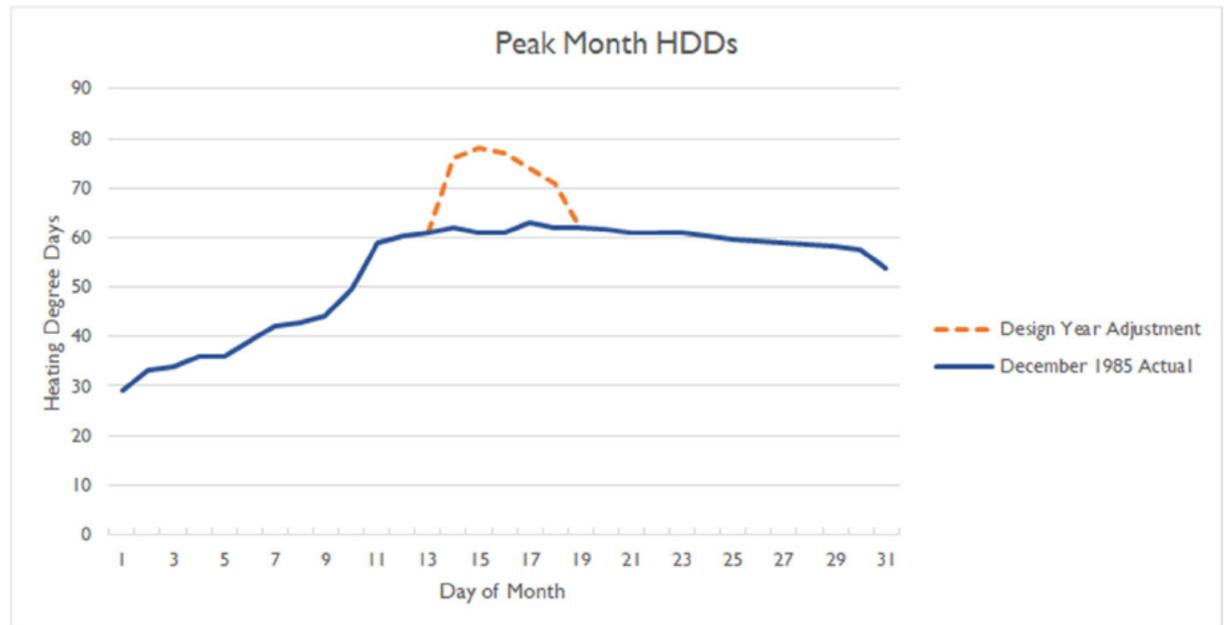
DESIGNING THE REST OF THE YEAR

- The Rest of the Year is Modeled After the Coldest Heating Year in a 50 Year Record

- Oct 1984 – Sep 1985 Continues to be the Coldest

- This Period Also Included the Coldest Critical Three Month Heating Period (Dec-Feb)

Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep

57
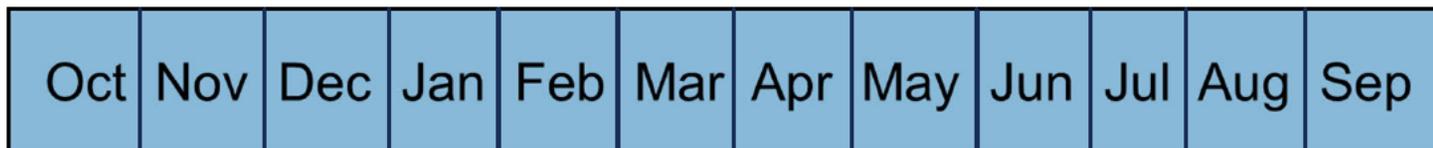
DEGREE DAY GRAPH
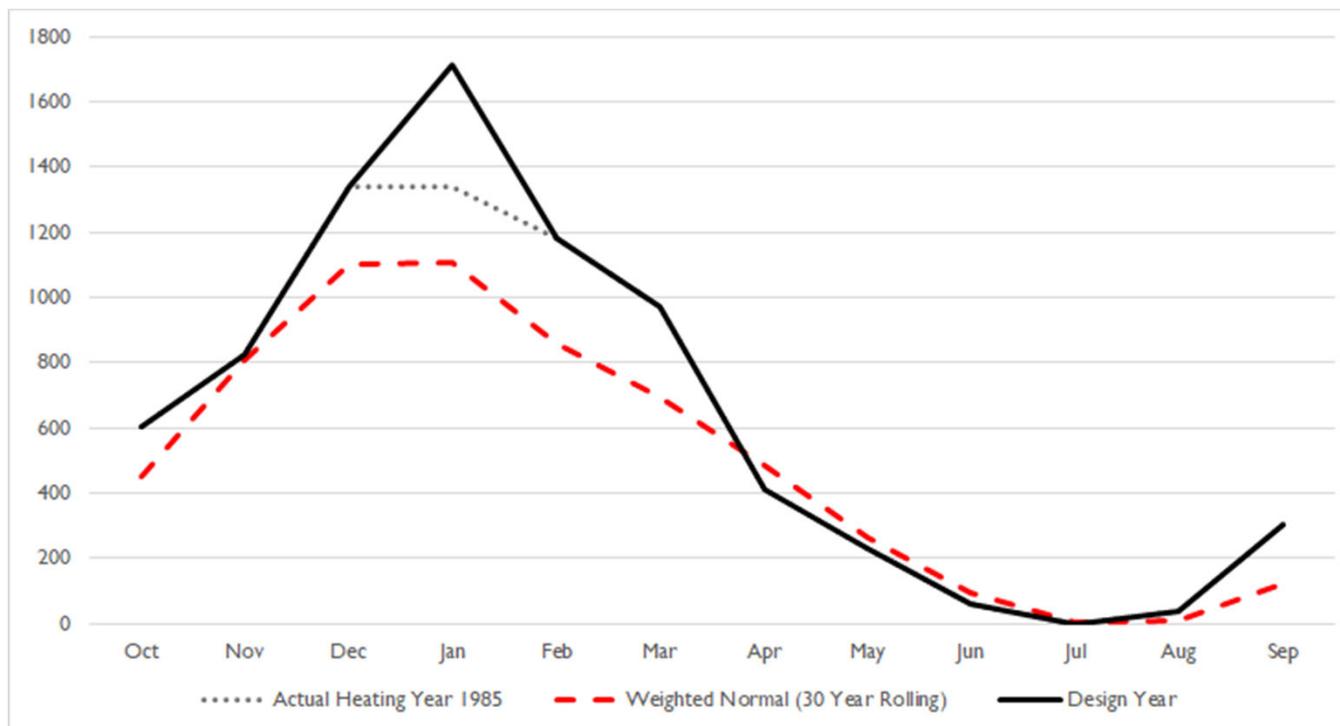
AOI DEGREE DAYS

- Intermountain's service area is climatologically diverse

- Idaho Falls or Sun Valley vs. Boise

- Intermountain has developed unique Degree Days for each AOI

- Methods used to calculate AOI Degree Days mirror the Total Company approach

AOI DEGREE DAYS

Weather Stations West to East:

- KBOI
- KEUL
- KTWF
- KSUN
- KPIH
- KIDA
- KRXE
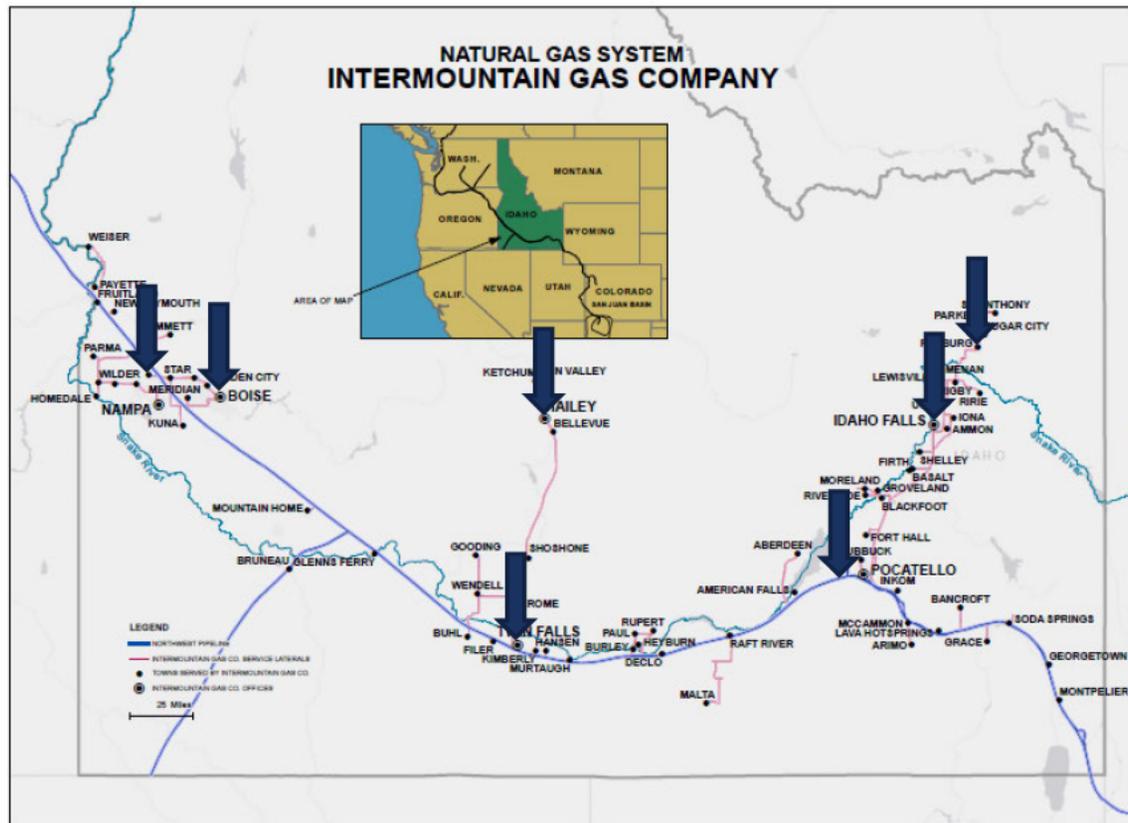
QUESTIONS?

2025 IRP
LARGE VOLUME CUSTOMER FORECAST

JON WHITING & NICOLE GYLLENSKOG

MANAGERS, INDUSTRIAL SERVICES

WHAT IS A LARGE VOLUME CUSTOMER?

- 152 largest customers; approximately 49% of 2024 sales
- Mix of "Industrial" and "Commercial" types
- As a group exhibit fairly high load factor
- Provide thousands of Idaho jobs; huge impact on economy

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Annualized Large Volume Therm Sales

Intermountain Gas Company - Annual Therm Sales
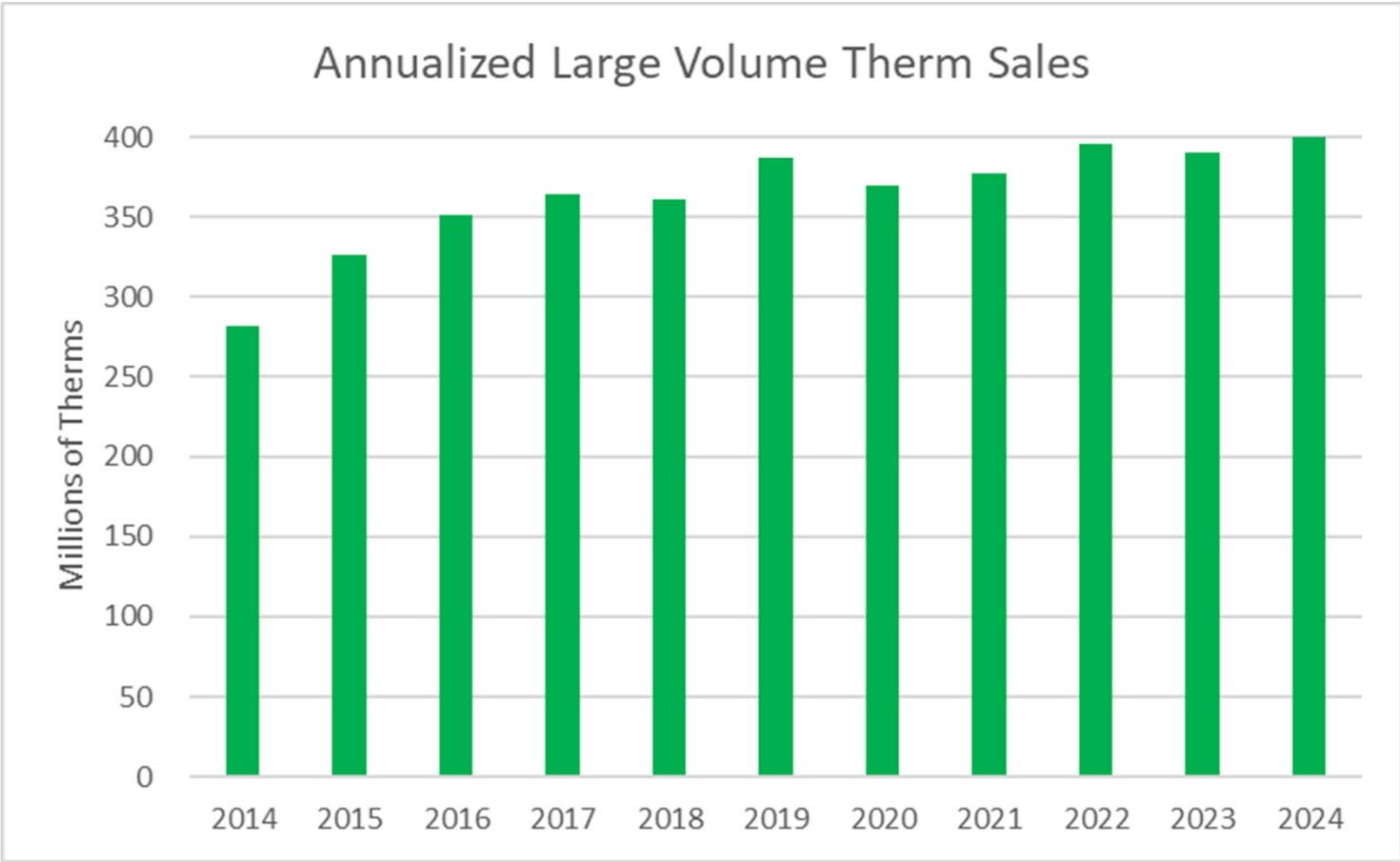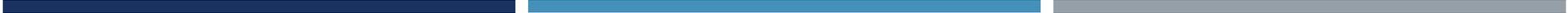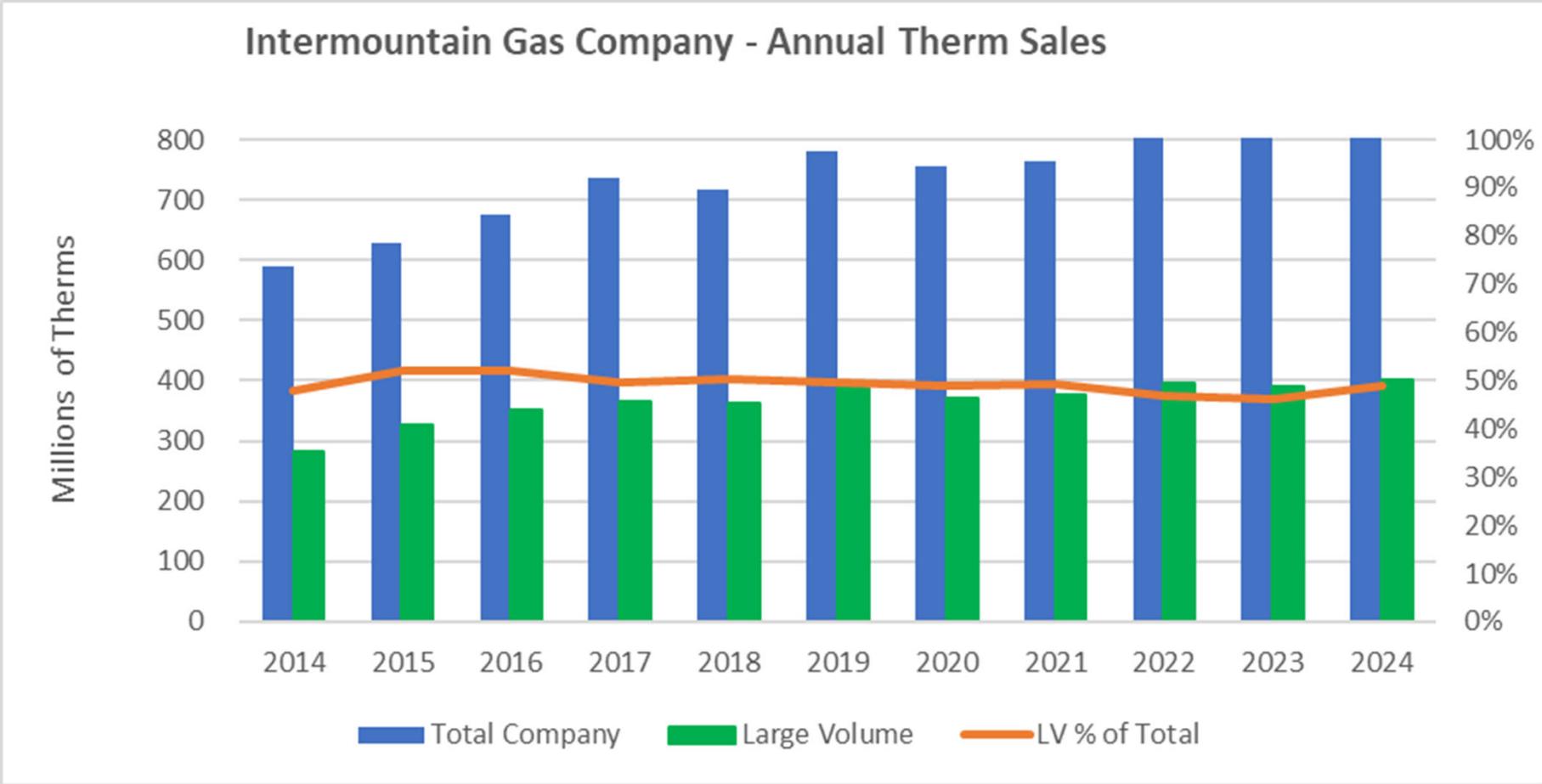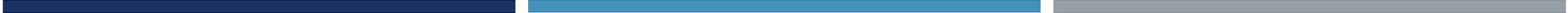
REQUIREMENTS OF A LARGE VOLUME CUSTOMER

- Minimum 200,000 Therms per contract-year requirement

- Must elect 1 of 3 tariffs:

    - LV-1 bundled sales

    - T-3 interruptible transportation or T-4 firm transportation

- Minimum one-year contract; the contract sets the term and Maximum Daily Firm Quantity (MDFQ) for firm peak day use

- Contracts are site specific; can combine meters on contiguous property

CLASSIFICATION OF CURRENT 152 LV CUSTOMERS

		Percent of Total		
By Rate Class:		**# of**	**% of**	**Therms**
❖ LV-1 Sales –		37	24%	4%
❖ T-3 Interruptible Transport –		9	6%	9%
❖ T-4 Firm Transport –		106	70%	87%
❖ Total –		152	100%	100%

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SEGMENTATION OF 152 LARGE VOLUME CUSTOMERS

- By Market "Segment"

	#	%	Therms%
❖ Potato Processors –	18	12%	28%
❖ Other Food Processors –	17	11%	32%
❖ Meat & Dairy –	24	16%	14%
❖ Ag & Feed –	8	5%	1%
❖ Chemical/Fertilizer –	3	2%	8%
❖ Manufacturing –	33	22%	6%
❖ Institutional –	33	22%	6%
❖ Other –	16	11%	5%
❖ Total –	152	100%	100%

68

LOCATION OF 152 LARGE VOLUME CUSTOMERS

- By AOI:

	#	%	Therms%
❖ IFL –	27	18%	17%
❖ SVL –	4	3%	1%
❖ Central Ada –	2	1%	1%
❖ State Street –	4	3%	1%
❖ Canyon County –	20	13%	15%
❖ All Other –	95	62%	65%
❖ Total –	152	100%	100%

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OVERVIEW OF FORECAST TECHNIQUE

- Most not as weather sensitive as the Core Market

- Small population (not as many customers)

- Not as homogenous as Core (size, weather sensitivity)

- Don't use statistics/regression techniques

- Use an "adjusted" historical usage approach

- Forecast both Therm use and CD (MDFQ/MDQ)

70

APPLICATION OF FORECAST TECHNIQUE

- Adjusted historical data with customer information and other data (e.g. EDO's) to develop three forecasts

  - Base Case

  - High Growth

  - Low Growth

- Assumed growth by specific customers

- Used recent trends to validate results

BASE CASE SCENARIO ASSUMPTIONS

- Starts with historical actuals
- Adjust for customer information and trends
- Natural gas prices competitive with other energy sources
- Economy dealing with inflation and supply chain issues
- Includes 5 new customers
- Mix of segments; All T-4. 3 are "All Other" and 2 are in Canyon.
- Compounded annual growth rate of 1.9%

72

IRP Large Volume **Base Case** Forecast by Segment (Therms)
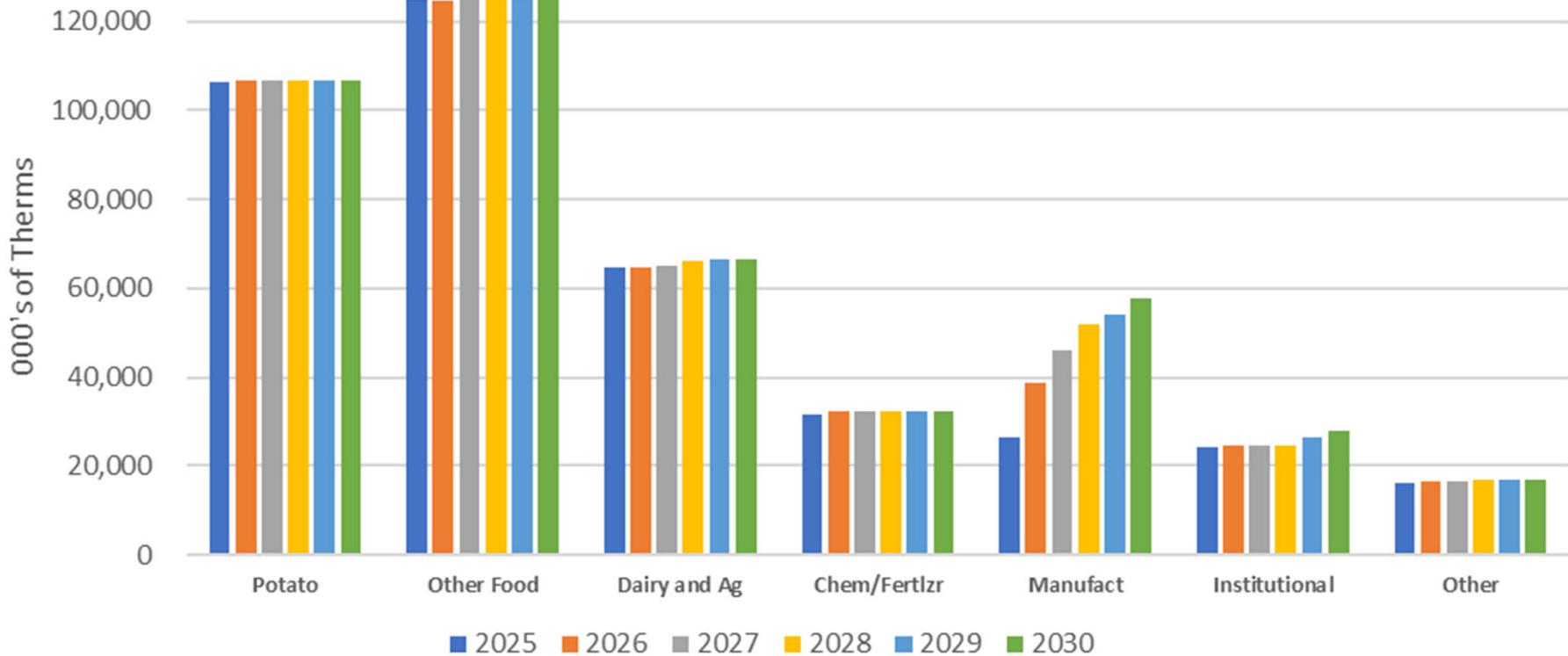
HIGH GROWTH SCENARIO ASSUMPTIONS

- Starts with Base Case Forecast

- Natural gas prices remain comparatively low

- Economy comes out of the inflation with continued growth

- Assumes 10 new customers totaling 7.2 million Therms by 2030

- Additions mostly T-4 (9); 3 Meat & Dairy and 7 various segments; most growth in All Other

- Compounded annual growth rate of 2.2%

74

IRP Large Volume **High Growth** Forecast by Segment (Therms)
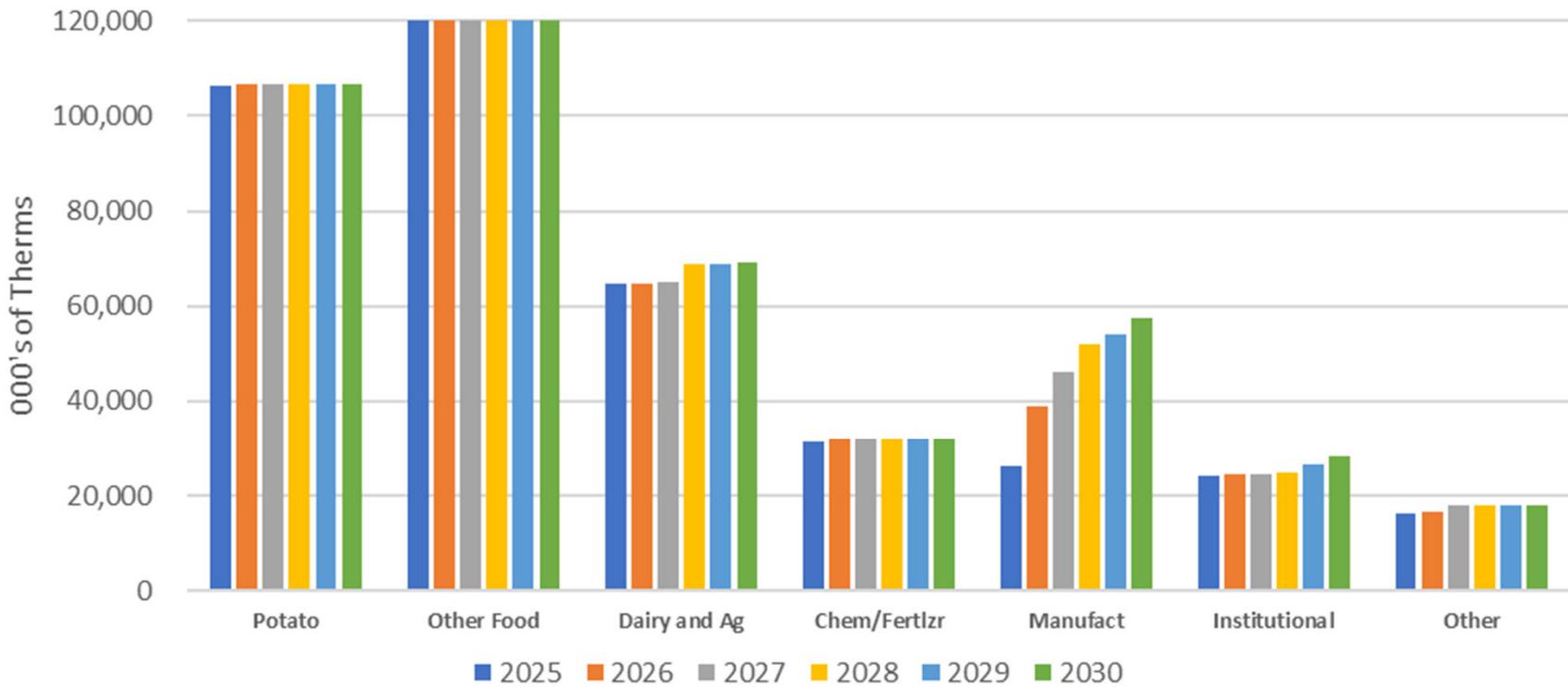
LOW GROWTH SCENARIO ASSUMPTIONS

- Starts with Base Case Forecast

- Assume gas prices are less competitive

- Economy slows; recession or inflation causes slowing in growth

- Removed any customer having difficulty staying above the 200,000 Therm annual minimum

- Two new T-4 customers; 1 in Canyon, & 1 in the "Other," segment

- Compounded annual growth rate of 1.1%

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IRP Large Volume **Low Growth** Forecast by Segment (Therms)
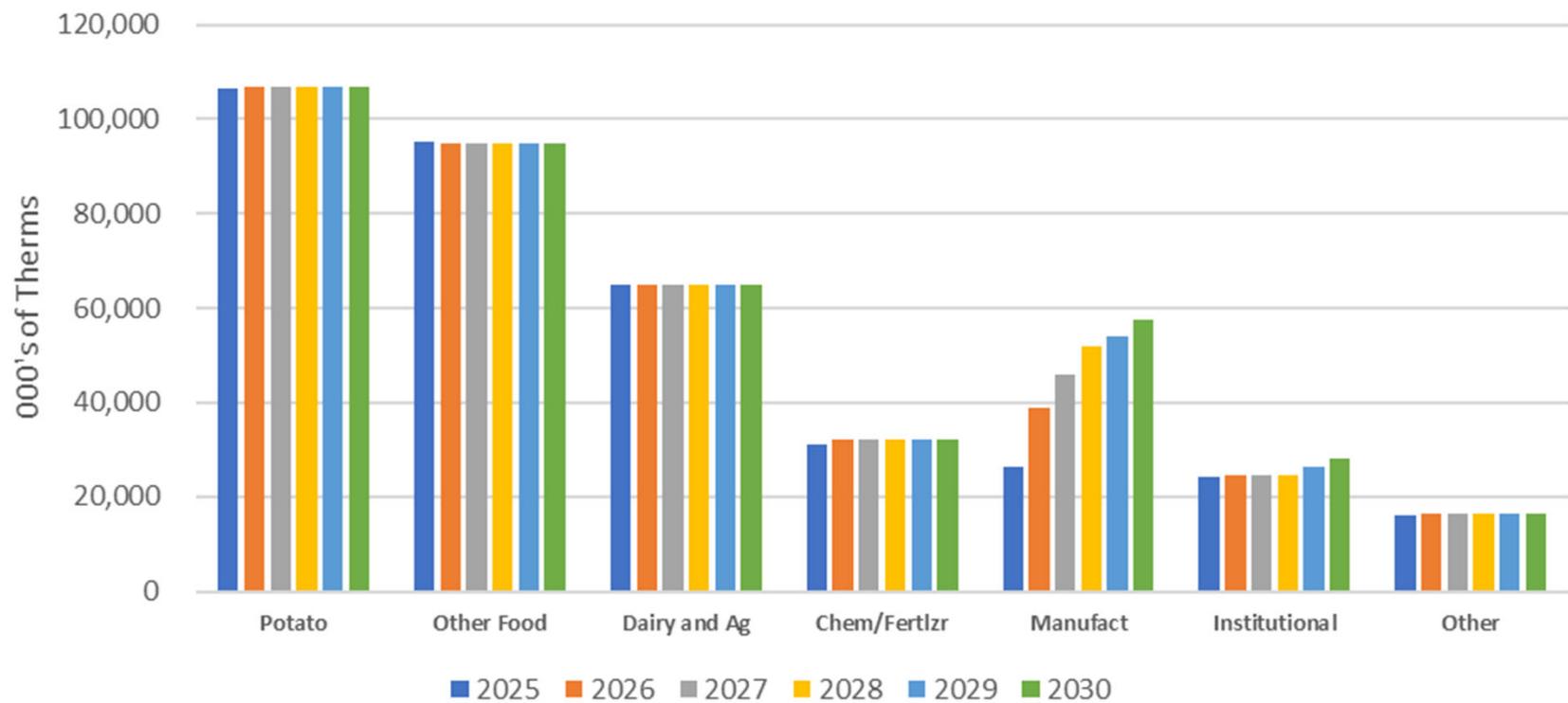
IRP Large Volume Annual Therms
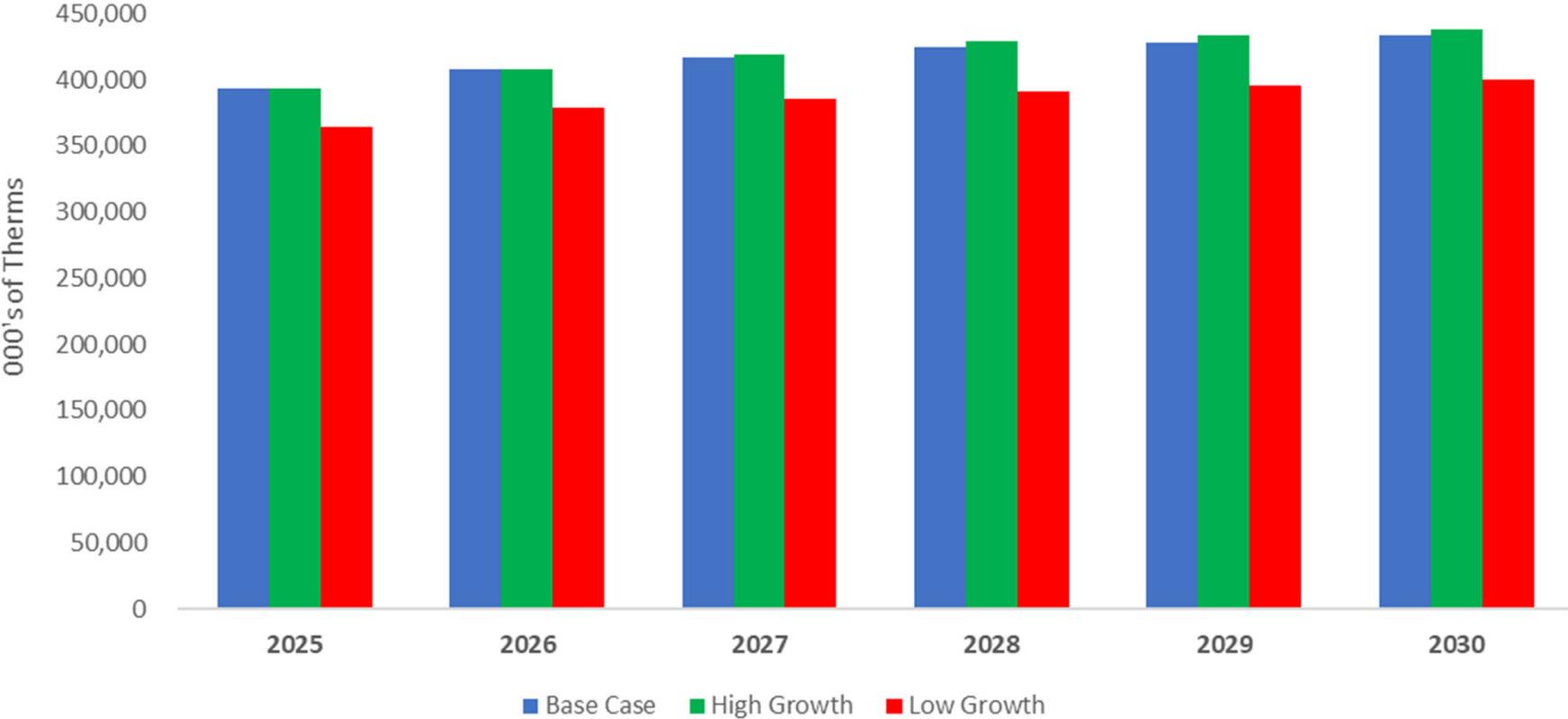
IRP Total Large Volume Annual Therms
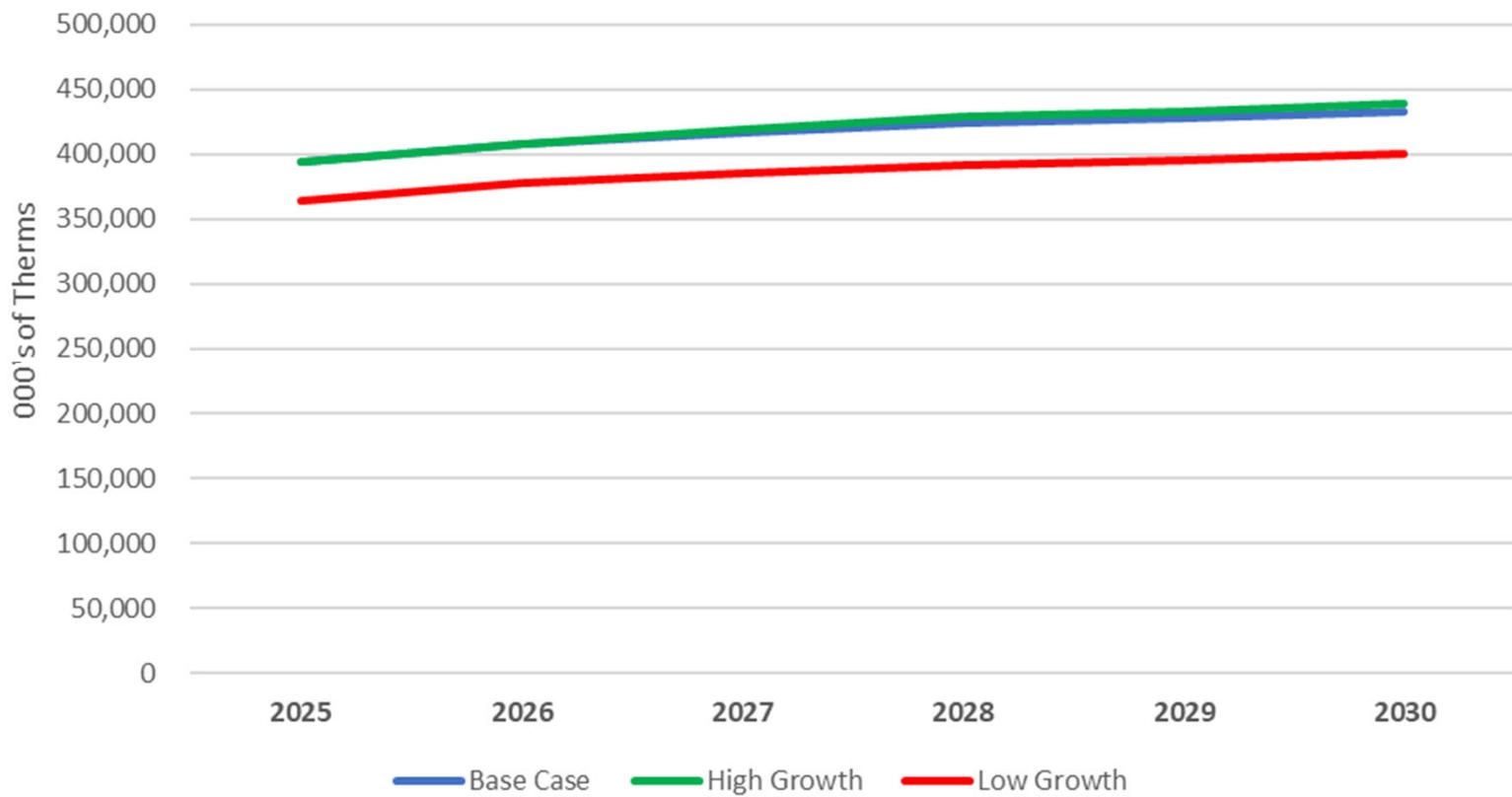
OPTIMIZATION MODELING - MDFQ VS THERM FORECAST

- Use MDFQ not therm forecast in optimization model
- Contract includes Maximum Daily Firm Quantity (MDFQ)
- Intermountain provides MDFQ 365 day/year; gas supply
- MDFQ trends therm projections
- Only firm customers in design peak; no interruptible
- Includes new customer additions
- Compounded annual growth rate of 1.5%

Base Case MDFQ by Segment
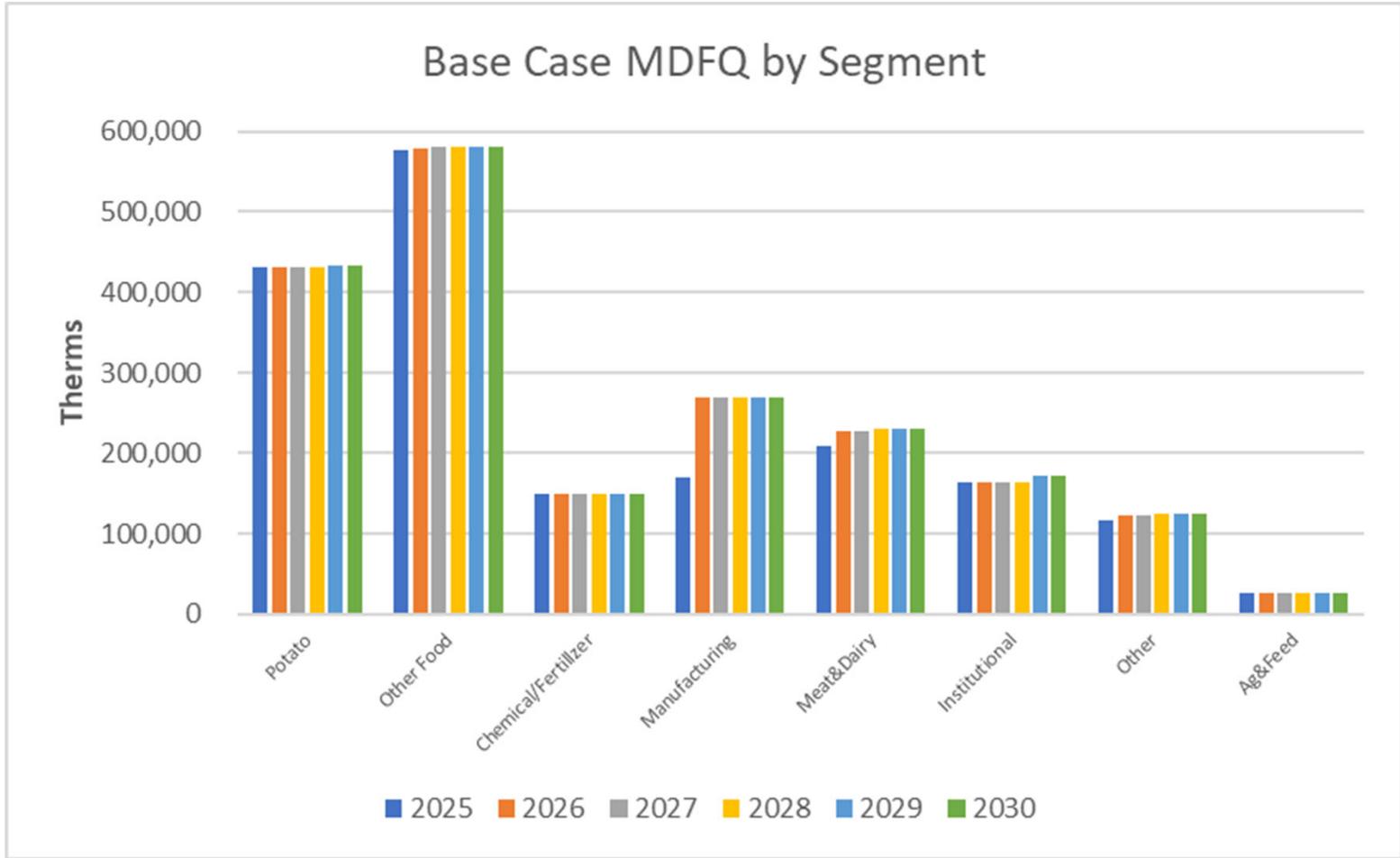
QUESTIONS?

LOAD DEMAND CURVES

- Incorporates several inputs
  - Res & Com Customer Forecast, Normal and Design Weather, Use Per Customer, Demand Side Management, and Large Volume Forecast.
  - LDC = (Customer Forecast * HDD * User Per Customer) – DSM + LV Forecast
- Load Demand Curve Utilization
  - Identifies potential upstream pipeline and distribution system constraints
  - Resource Optimization
  - Storage Management
- Remedies for any constraints will be identified later
- Note: Load Demand Curves for upstream pipeline modeling will differ from distribution system modeling

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Total Company
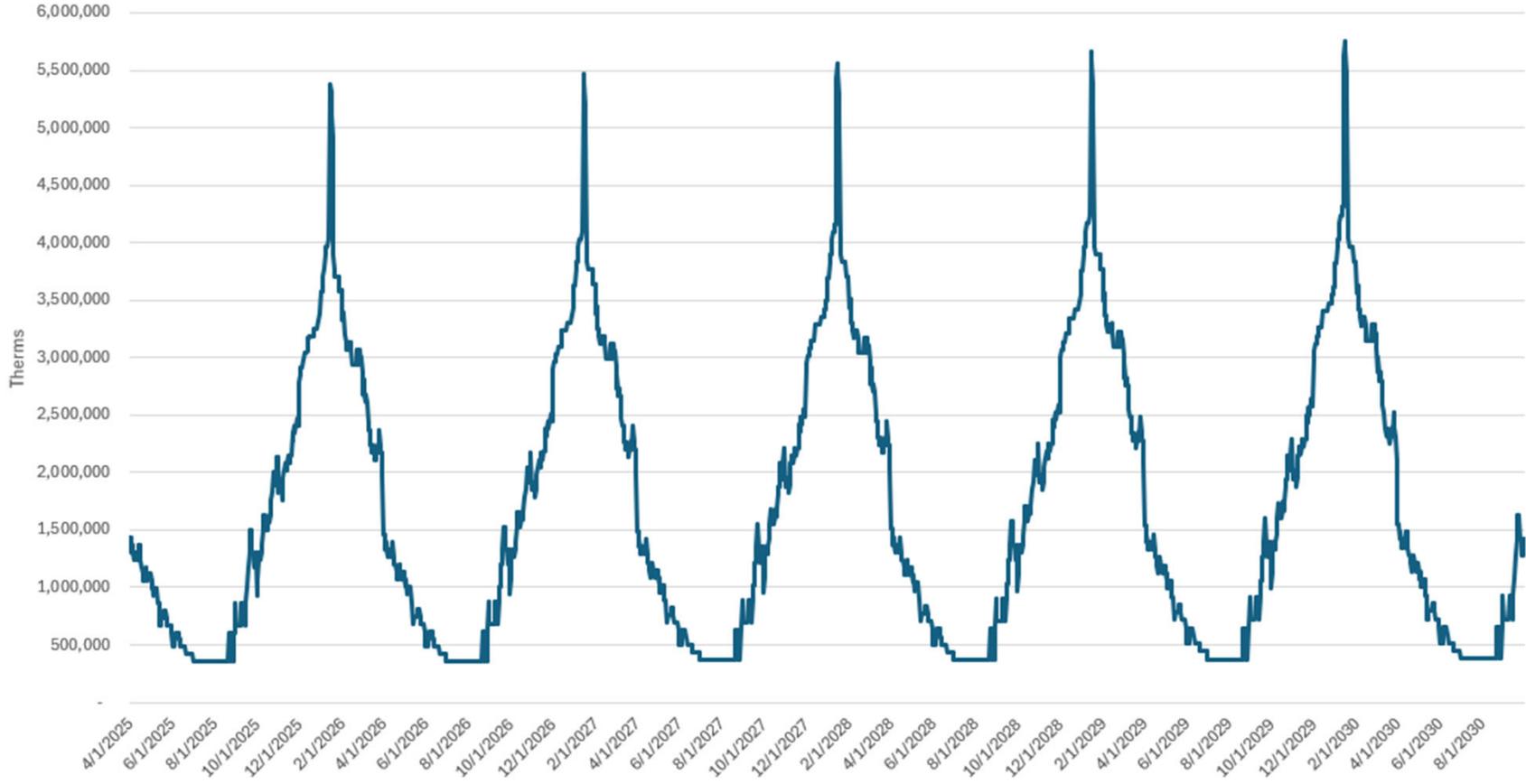
AREAS OF INTEREST

- Idaho Falls Lateral

- Sun Valley Lateral

- Canyon County Lateral

- North of State Street Lateral

- Central Ada County

Idaho Falls Lateral
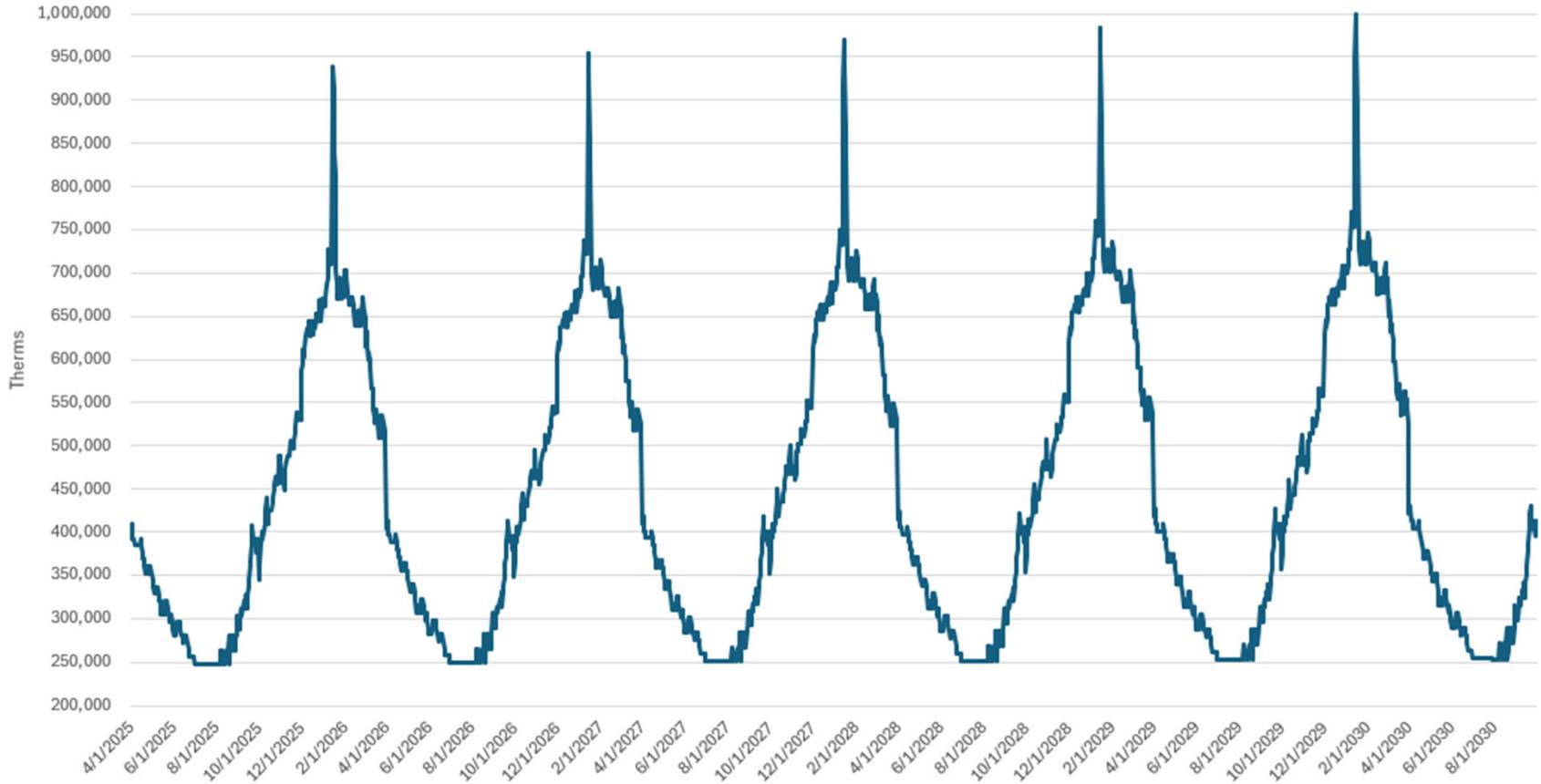
Sun Valley Lateral

Canyon County Lateral

88
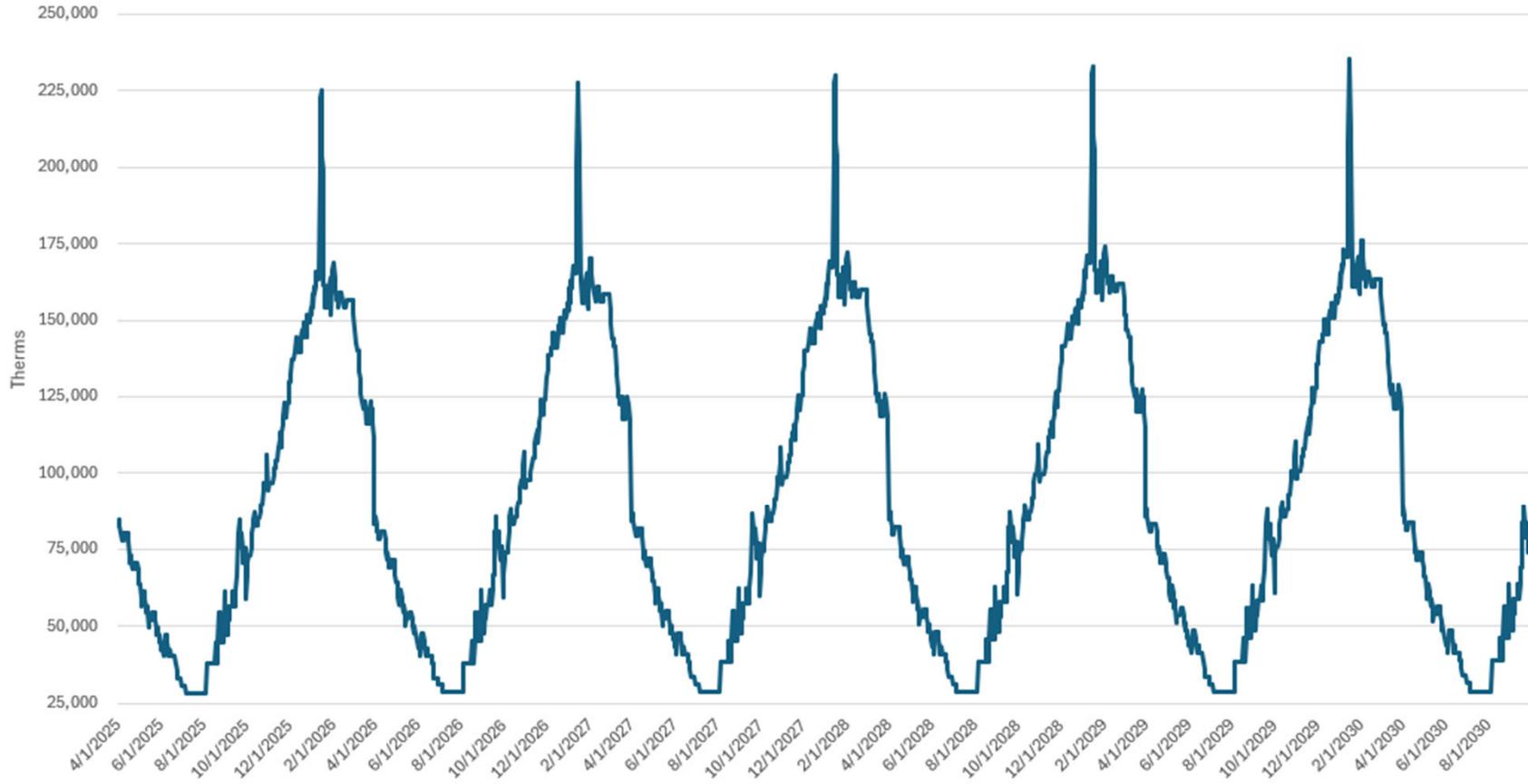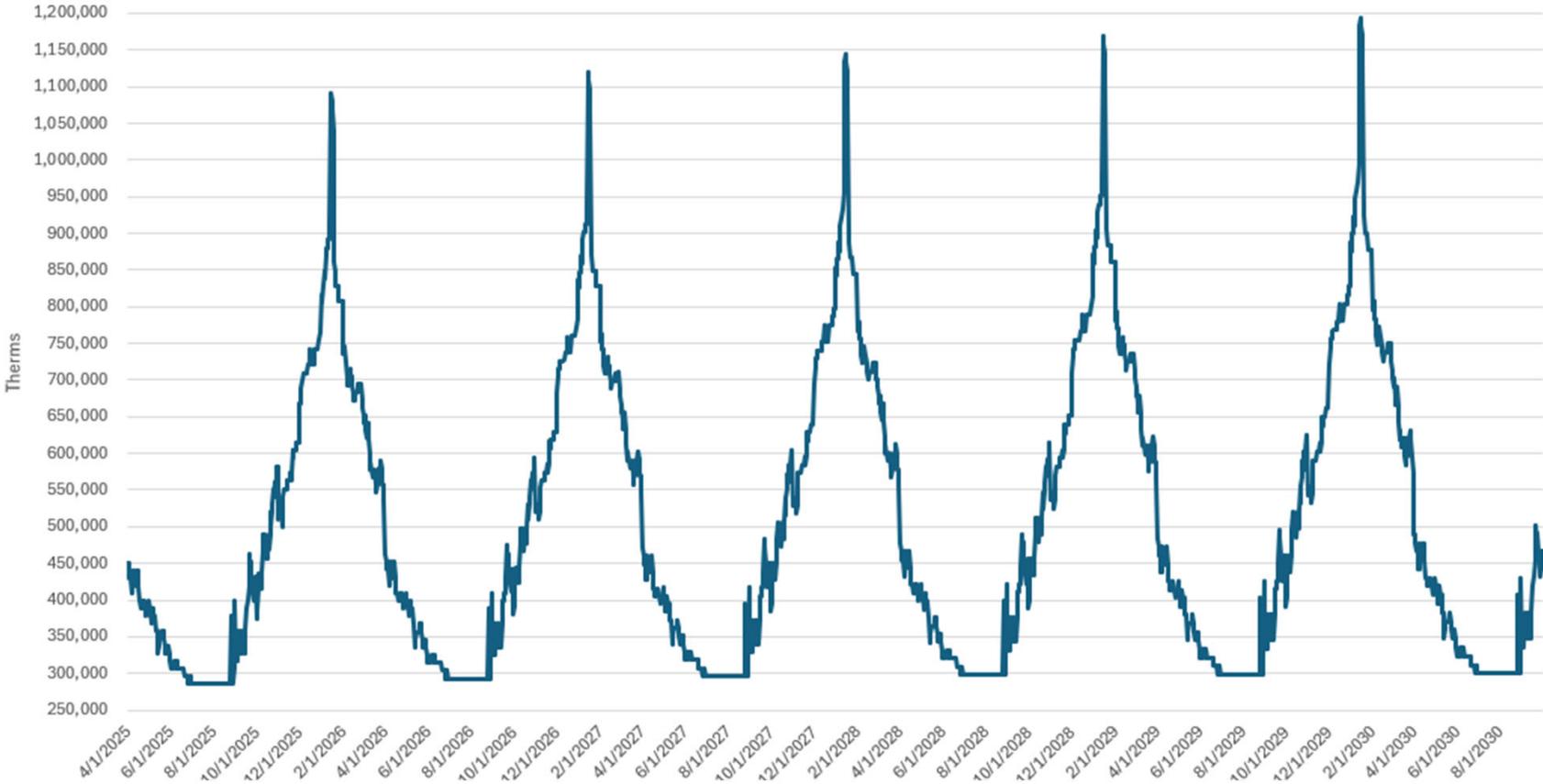
North of State Street Lateral
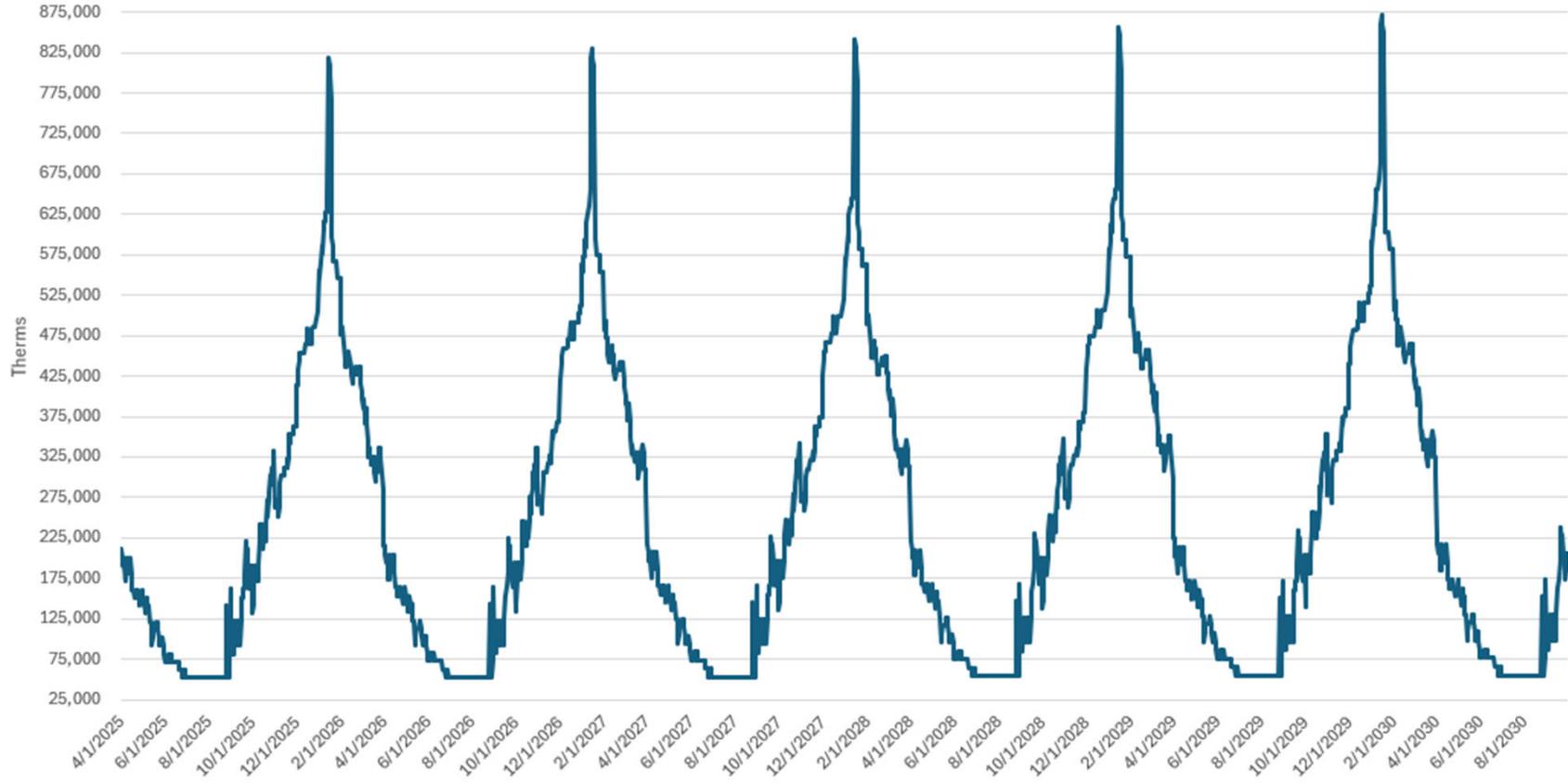
Central Ada County
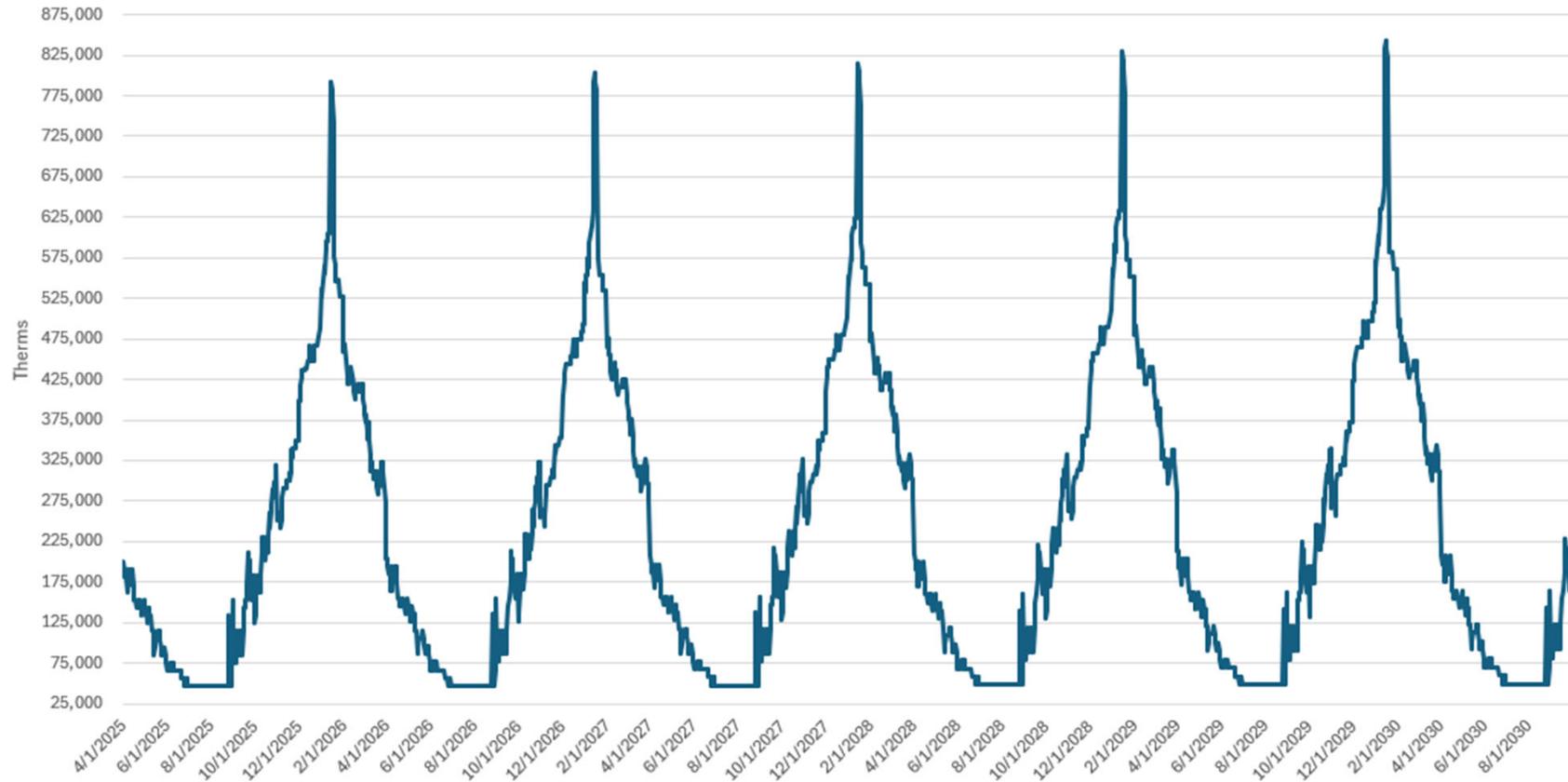
QUESTIONS?

ADDITIONAL MEETINGS

- **Wednesday, August 13, 2025 via Microsoft Teams**
  - Usage Per Customer
  - Energy Efficiency
  - Supply Side Resources
  - Distribution System Modeling

- **Wednesday, September 17, 2025 via Microsoft Teams**
  - Potential Capacity Enhancements
  - Resource Optimization
  - Planning Results

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

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IGRAC #1

Date & time:	7/9/2025, 9:00 AM to 11:00 PM MT
Location:	Microsoft Teams Meeting
Presenters:	Brian Robertson, Ryan Denton, Jon Whiting
In attendance:	Adam Bohrer, Bailey Steeves, Brian Robertson, Bruce Folsom, Chris Robbins, Darcy Neigum, Eric Wood, Jason Talford, Jon Whiting, Kathleen Campbell, Kristen Nieskens, Mark Sellers-Vaughn, Nicole Gyllenskog, Rebecca Wildman, Ryan Denton, Sean Keithly, Seungjae Lee, Teresa McKnight, Vicki Stephens, Zachary Sowards

Introduction

Brian Robertson, Supervisor of Resource Planning, opened the meeting by welcoming and thanking stakeholders for participating in Intermountain's IRP Process. Brian then proceeded with introductions, the agenda, a safety moment, and a reminder of the stakeholder engagement goals.

Presentation #1 – 2023 IRP Acknowledgement and IRP Recommendations (Brian Robertson)

- Recommendations
  - Company work with Staff to implement IRP reporting that includes system enhancement information
  - File that information within six months of a Commission order
  - Establish the practice of authorizing the Company's DSM avoided costs as part of IRP filings and authorize the DSM avoided costs associated with this filing

  Comment: Jason Talford noted, for the third recommendation bullet point, that the Commissions findings in the order didn't direct for that to happen.

Presentation #2 – System Overview (Brian Robertson)

- Large Volume 47% Residential 34% Commercial 17%
- Areas of Interest
  - Canyon County
  - Central Ada County Lateral
  - North of State Street Lateral
  - Sun Valley Lateral
  - Idaho Falls Lateral

- All Other Customers

Presentation #3 – Economic Forecast (Ryan Denton)

- Stated the Company is utilizing Woods & Poole data for economic forecasts
- April 2020 saw a 10.3% decline due to pandemic
- Idaho's population increased 2.37% Year-over-year from 2021 to 2023
- Nonfarm employment is slowing down after an abnormally fast post-pandemic growing period
- Overall, Idaho is showing a lot of population and employment growth strength

Presentation #4 – Residential & Commercial Growth (Ryan Denton)

- Forecast inputs
  - Woods and Poole population and employment
  - Historical customer count
  - Intermountain performs Base, Low, and High forecasts
- ARIMA model with Fourier term

Question: "Why is household and employment used as explanatory variables over population and income?"

Answer: "Household and employment are direct impacts to residential and commercial customer counts, respectively. Population and Income are more of an indirect impact. For example, population could increase, however, if the number of people per household is also increasing, we may not see a similar rate of increase in customer counts." – Ryan Denton and Brian Robertson

Presentation #5 – Heating Degree Days & Design Weather (Brian Robertson)

- Heating Degree Day based off 65 degrees
- 30-day rolling average of daily mean temperatures
- Design Degree Days model coldest temperature from Design Peak Day
- Peak Day modeled to occur Jan 15

Presentation #6 – Large Volume Customer Forecast (Jon Whiting)

- 152 large volume customers make up 49% of sales
- Minimum of 200,000 therms per contract year to be LVC
- Start with historic trends and add customer trends
- Forecasts broken out by classifications, segmentations, and location
- Intermountain performs Base, Low, and High forecasts

Presentation #7 – Load Demand Curves (Ryan Denton)

- Load Demand Curve = (Customer Forecast * HDD *Use Per Customer) – DSM + LV Forecast
- Preliminary Load Demand Curves for Total System and AOIs were provided

The Meeting was Adjourned – IGRAC #2 will be held on August 13, 2025 @ 9 AM MT
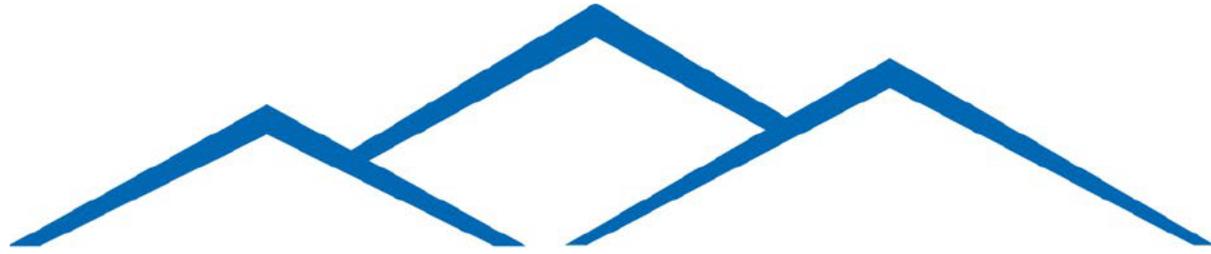
INTERMOUNTAIN GAS COMPANY

A Subsidiary of MDU Resources Group, Inc.

INTEGRATED RESOURCE PLAN

AUGUST 13, 2025

INTERMOUNTAIN GAS RESOURCE ADVISORY COMMITTEE (IGRAC)

WELCOME

- Introductions

- Feedback Process

- Agenda

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days
- IRP Webpage: https://www.intgas.com/rates-services/rates-tariffs/integrated-resource-plan/

3

AGENDA

- **Welcome & Introductions** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Safety Moment** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Distribution System Modeling** – Kathleen Campbell, Zachary Sowards (*Senior Engineer*)

- **Avoided Cost Methodology –** Zachary Harris (*Mgr Regulatory Affairs II*)

- **Energy Efficiency** – Kathy Wold (*Manager, Energy Efficiency*)

- **Supply Resources and Transportation & Storage Resources**
  – *Eric Wood (Manager, Gas Supply)*

- **Questions/Discussion**

SAFETY MOMENT

Places prone to sunburn

● Strongly burns ● Medium burns ● Slightly burns
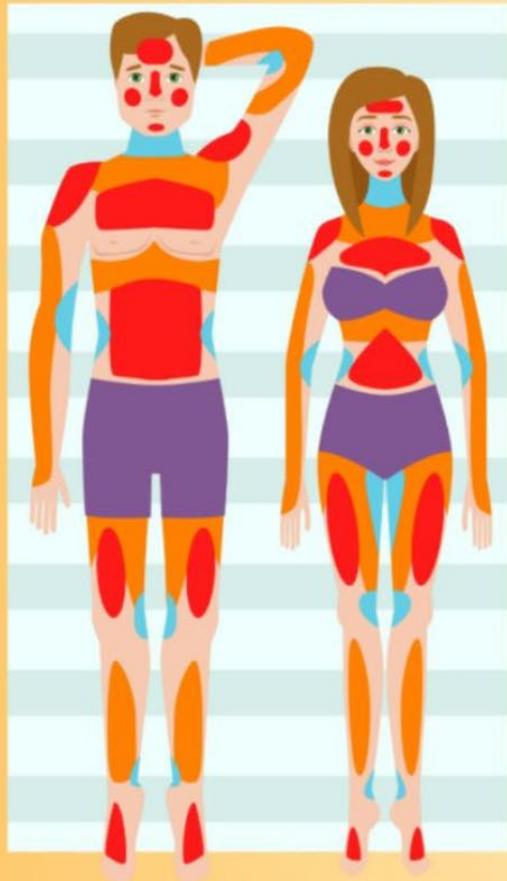
PROTECTION FROM THE SUN & HEAT

- **Wear a Hat and Sunglasses** – Besides skin damage the sun can damage your eyes; wear sunglasses with 100% UV protection.

- **Water –** Drinking water keeps your body hydrated in warm weather.

- **Sunscreen –** Use sunscreen with SPF 15 or higher. The higher the SPF, the better protection. Put it on every inch of exposed skin.

- **Time of Day –** The UV rays of the sun are strongest between 10am and 4pm. Try to limit sun exposure during this time of day; even on cloudy and cooler days.

- **Shade –** The simplest and an effective means of staying out of the sun is seeking shadows or shade.

Some people think about sun protection only when they spend a day at the lake, beach, or pool. Remember, sun exposure adds up day after day and every time you are in the sun.

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AREAS OF INTEREST (AOI)

- Distribution System Segments:
  - Canyon County
  - Central Ada County Lateral
  - "North of State Street" Lateral
  - Sun Valley Lateral
  - Idaho Falls Lateral
  - All Other Customers

NATURAL GAS SYSTEM
INTERMOUNTAIN GAS COMPANY

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DISTRIBUTION SYSTEM PLANNING

KATHLEEN CAMPBELL, PE – SENIOR ENGINEER

ZACHARY SOWARDS – SENIOR ENGINEER

IDAHO

AUGUST 13TH, 2025

SYSTEM DYNAMICS:

■ Piping:

- Diameter – ½" to 16"

- Material – Polyethylene and Steel

- Operating Pressure – 60 psi to 850 psi

- Idaho – approx. 7,471 miles of distribution & 284 miles of transmission

SYSTEM DYNAMIC'S CONT.

■ Facilities:

- Regulator stations – Over 600

- Other equipment such as LNG, gas quality, odorizer and compressors
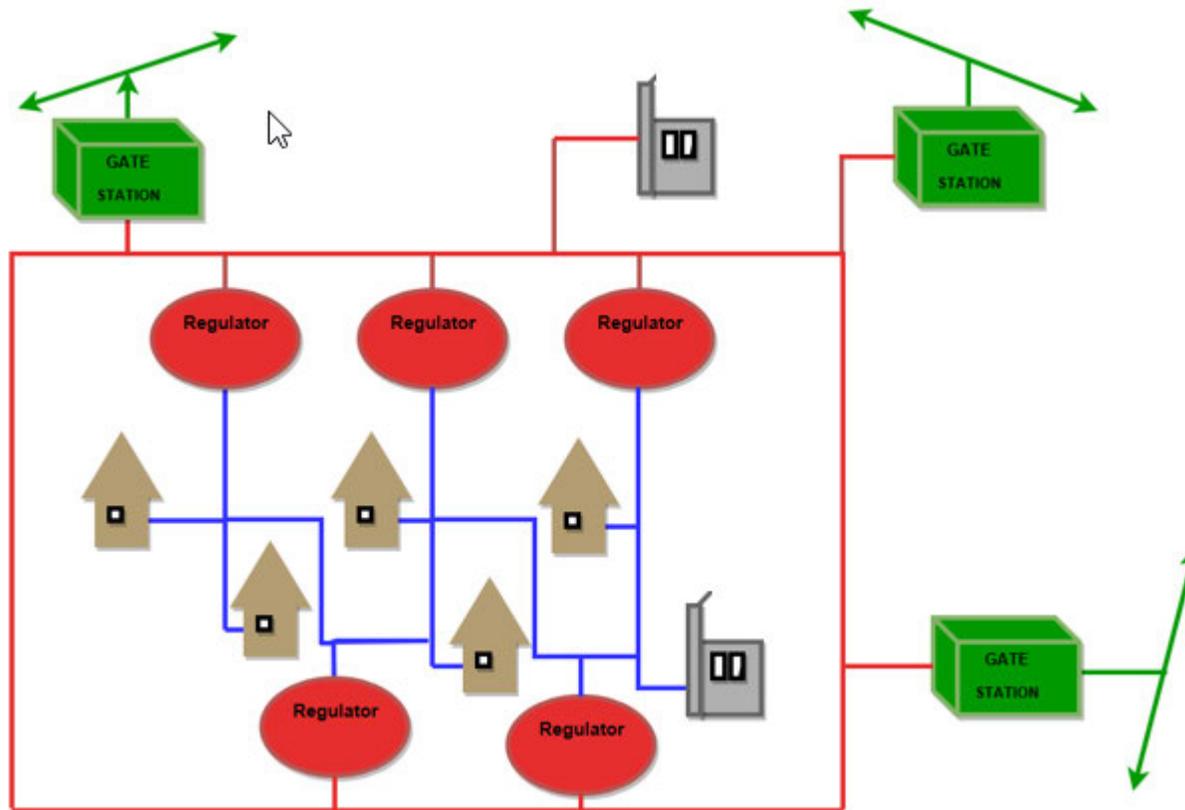
SYNERGI GAS MODELING

- To evaluate our systems for growth and potential future deficits we use our gas modeling software, Synergi Gas

- Distributed and supported by DNV

- Models incorporates:

  - Total customer loads

  - Existing pipe and system configurations

- Hydraulic modeling software that allows us to predict flows and pressures on our system based on gas demands predicted during a peak weather event.

- Models are updated every three years and maintained between rebuilds

SYNERGI MODEL EXAMPLE

109
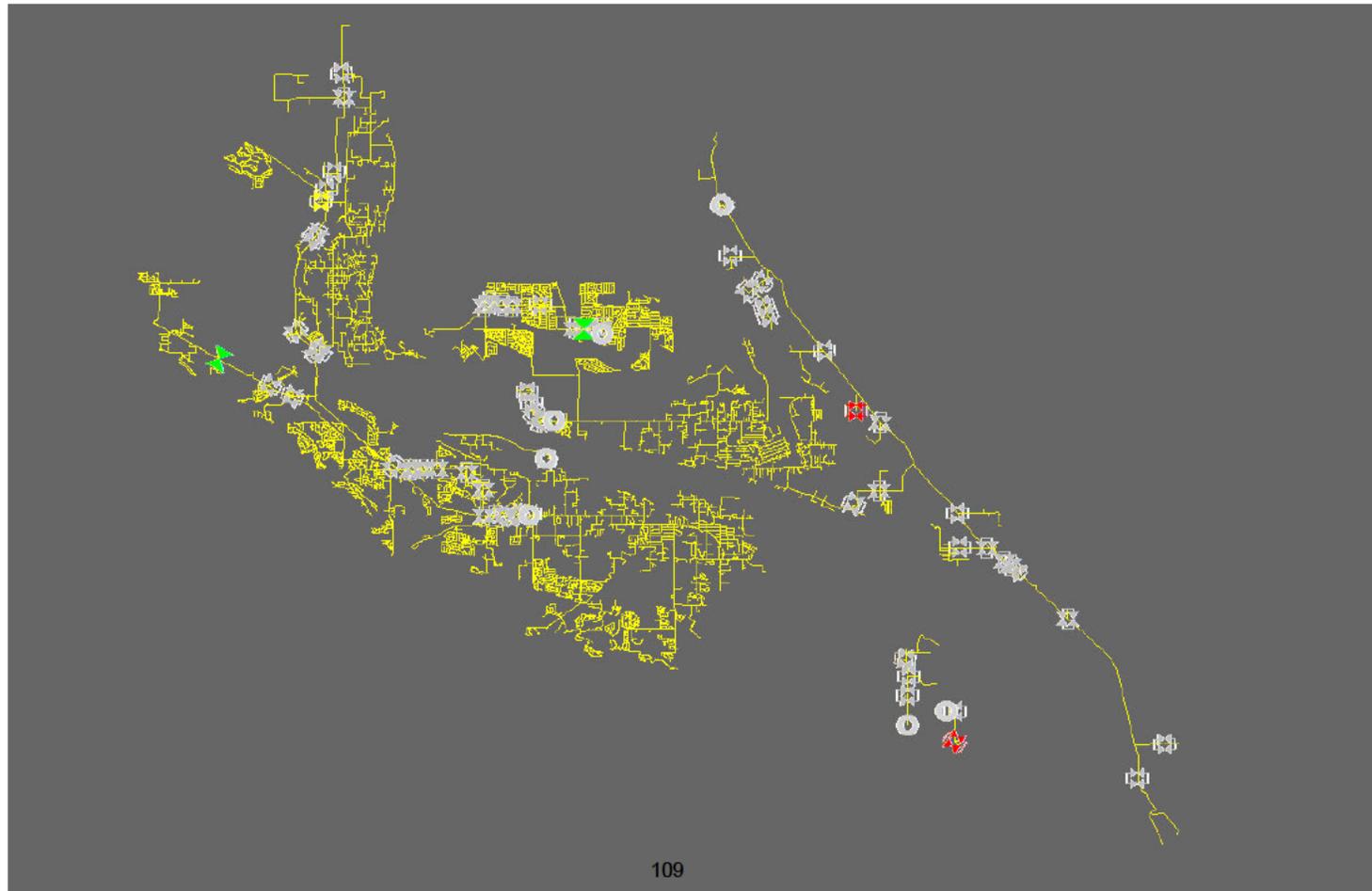
MODEL BUILDING PROCESS

- Synergi models are completely rebuilt every three years and maintained/updated between rebuilds

- When models are rebuilt

  - We export current GIS data to build spatial model

  - We export 5 years of CC&B billing data to CMM to create an updated demands file

  - We validation and calibrate each district model to a recent low-pressure event using existing data (ERXs/pressure charts/SCADA/metertek/LV usage)

  - We create a design day model based on the updated heating degree day determined by gas supply (determined by trending historical weather events)

- IGC models were rebuilt in early of 2025

DATA GATHERING

- CC&B (Customer Billing Data)

DATA GATHERING

- SCADA Data

- Real time and historical flow characteristics at specific locations in the system

DATA GATHERING

Town	HDD	Avg Daily Temperature (°F)
Boise	75	-10
Nampa	68	-3
Pocatello	82	-17
Idaho Falls	88	-23
Twin Falls	77	-12
Ketchum	82	-17

- Peak Heating Degree Day (HDD) modeled by IGC based on historical weather data

Peak HDD = 65 – Average Daily Temp

113
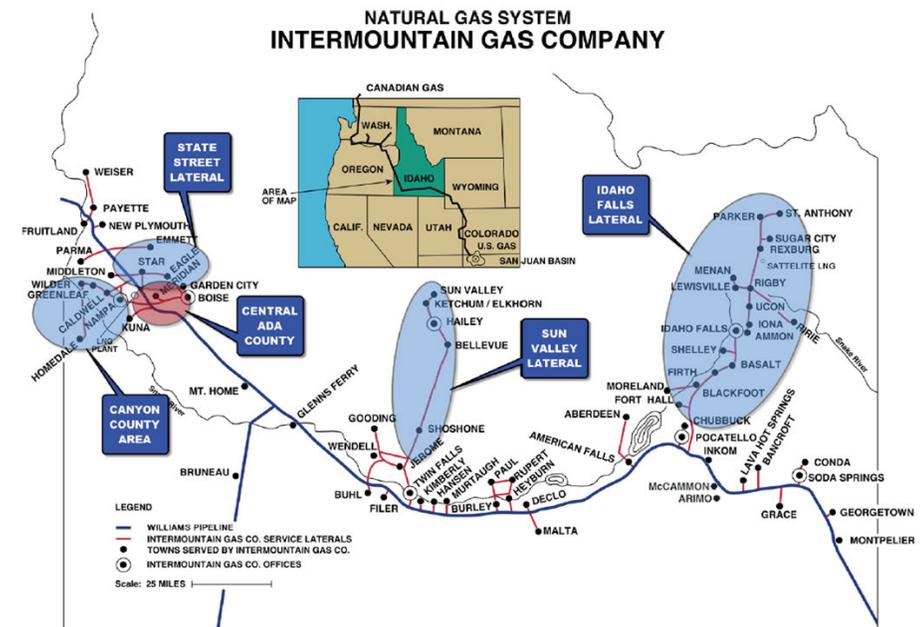
CUSTOMER MANAGEMENT MODULE (CMM)
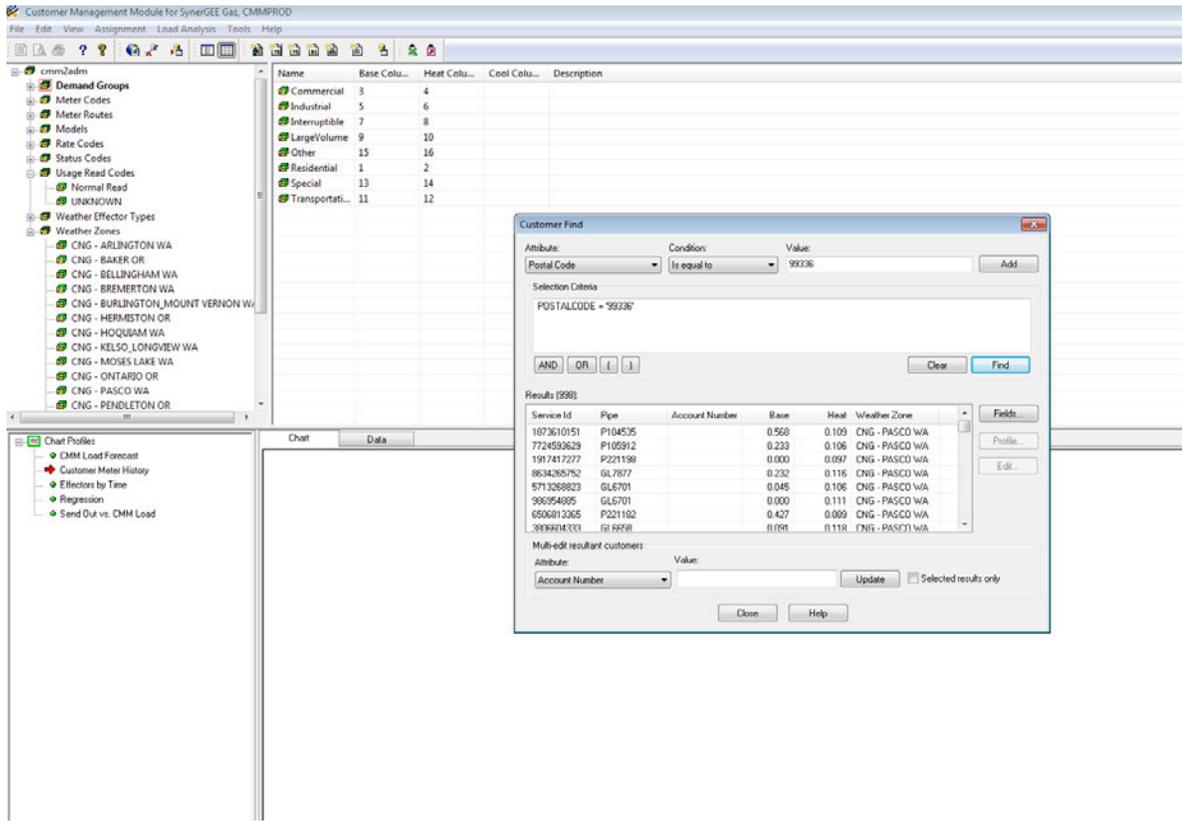
- Brings CC&B customer data into Synergi as demands file

- Demand file applies load spatially in the model.

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CALIBRATED VS PEAK DEGREE DAY

LOAD VS TEMPERATURE
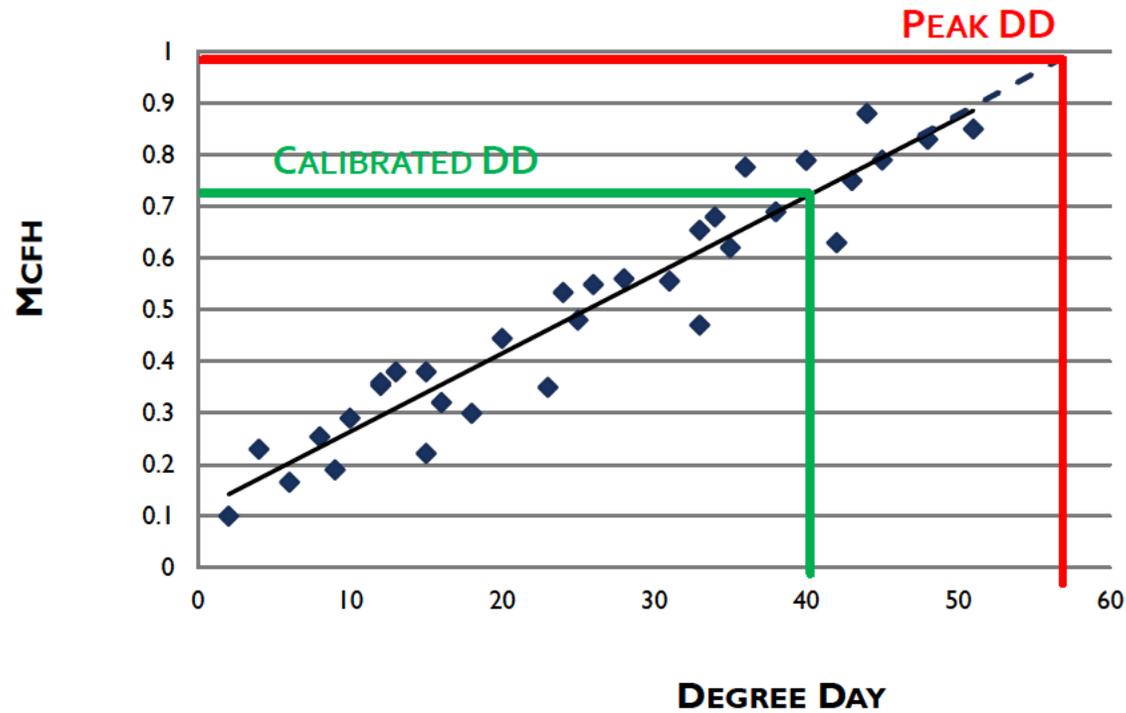
$y = 0.0152x + 0.1118$

HEAT   BASE

40 DD = 0.72 MCFH

58 DD = 0.99 MCFH

IDENTIFICATION OF SYSTEM DEFICITS/CONSTRAINTS

SYNERGI MODELING CAPABILITIES:

- Review Large Volume Customer requests

- Model RNG

- Supports design/sizing of pipe and pipeline components (regulator stations, compressors)

- Future planning

- Model IRP predicted growth

- Identify deficiencies

- Determine system reliability

- Optimize distribution enhancement options

- Cold Weather Action Plans and Modeling Curtailments/Interruptible Customers

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WHAT IS A CAPACITY DEFICIT?

- A deficit is defined as a critical system that is at or limiting capacity.

- Critical system examples include:

  - Pipeline bottlenecks

  - Minimum inlet pressure to a regulator station or HP system

  - Minimum inlet pressure to compressor (suction)

  - Component limiting capacity

DISTRIBUTION SYSTEM MODELING PROCESS TO ENSURE WE CAN MEET IRP GROWTH PREDICTIONS

- As part of the IRP process, we complete a comprehensive review of all of our distribution system models every two years to ensure that we can maintain reliable service to our customers during peak low temperature events.

- With our capital budget cycle, we also complete system reviews on an annual basis.

- If a deficit is predicted the system is evaluated and a reinforcement/enhancement is proposed and selected based on alternative analysis considerations and placed into the capital budget based on timing needs of the predicted deficit.

DISTRIBUTION ENHANCEMENT/REINFORCEMENT OPTIONS TO ADDRESS DEFICITS

ENHANCEMENT OPTIONS

- Pipeline:
  - Replacements
  - Reinforcements
  - Loops & Back feeds
  - Pressure Increases
  - Uprates
- Facility Upgrades
- Additional Regulator Stations feeding the distribution system
- New Strategically placed Gate Stations
- Compressor Stations

DISTRIBUTION ENHANCEMENT EXAMPLE

- Theoretical low-pressure scenario

Facilities Color By
Pressure (Primary Only) (psig)
- Not Applicable (7)
- < 10.00 (301)
- 10.00 - 15.00 (518)
- 15.00 - 25.00 (548)
- 25.00 - 40.00 (627)
- 40.00 - 60.00 (67)
- > 60.00 (16)
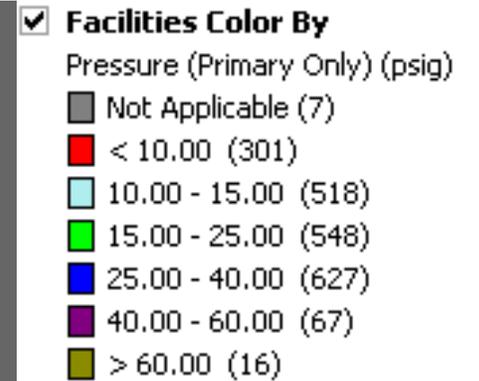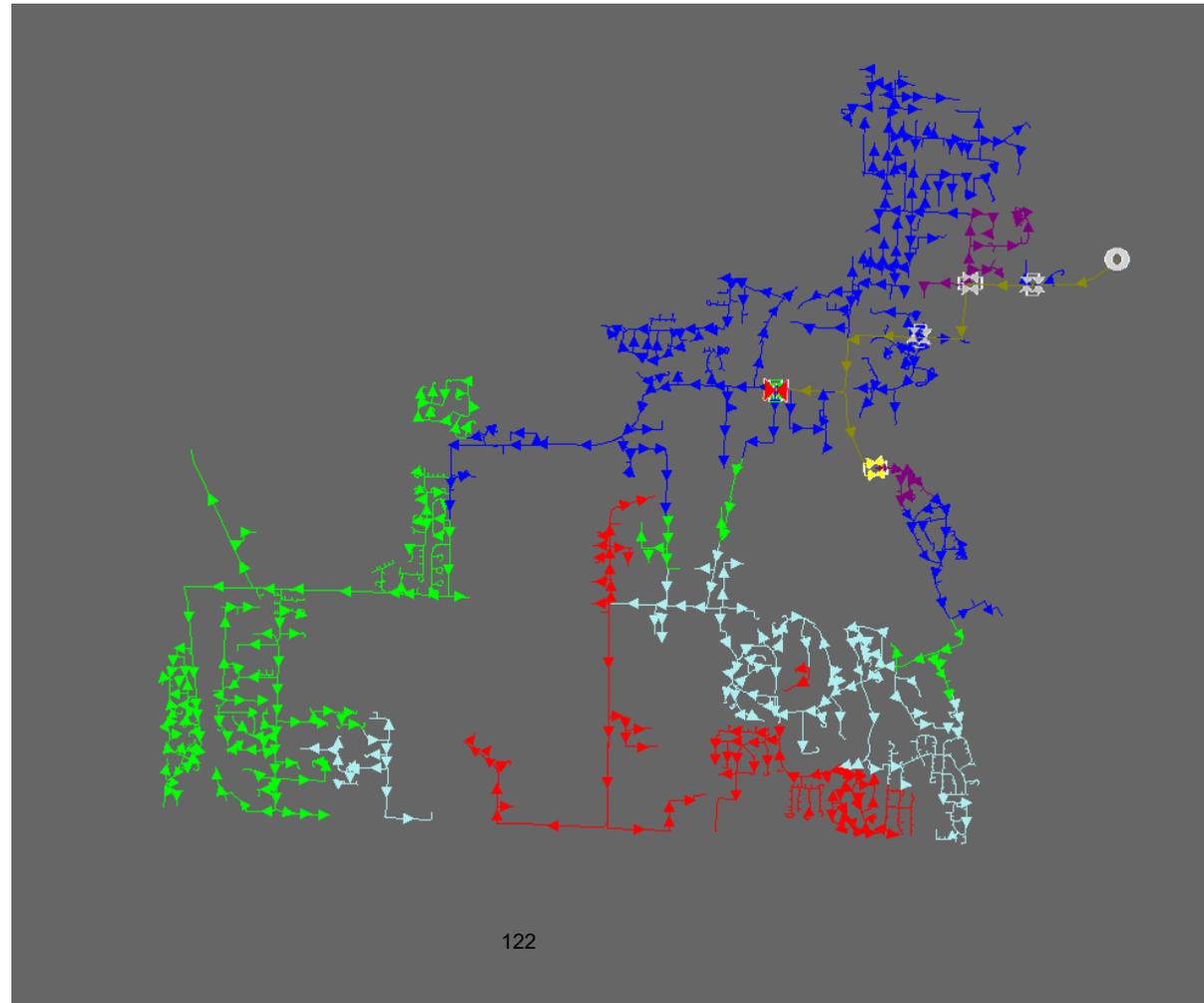
DISTRIBUTION ENHANCEMENT OPTIONS

- Low pressure scenario
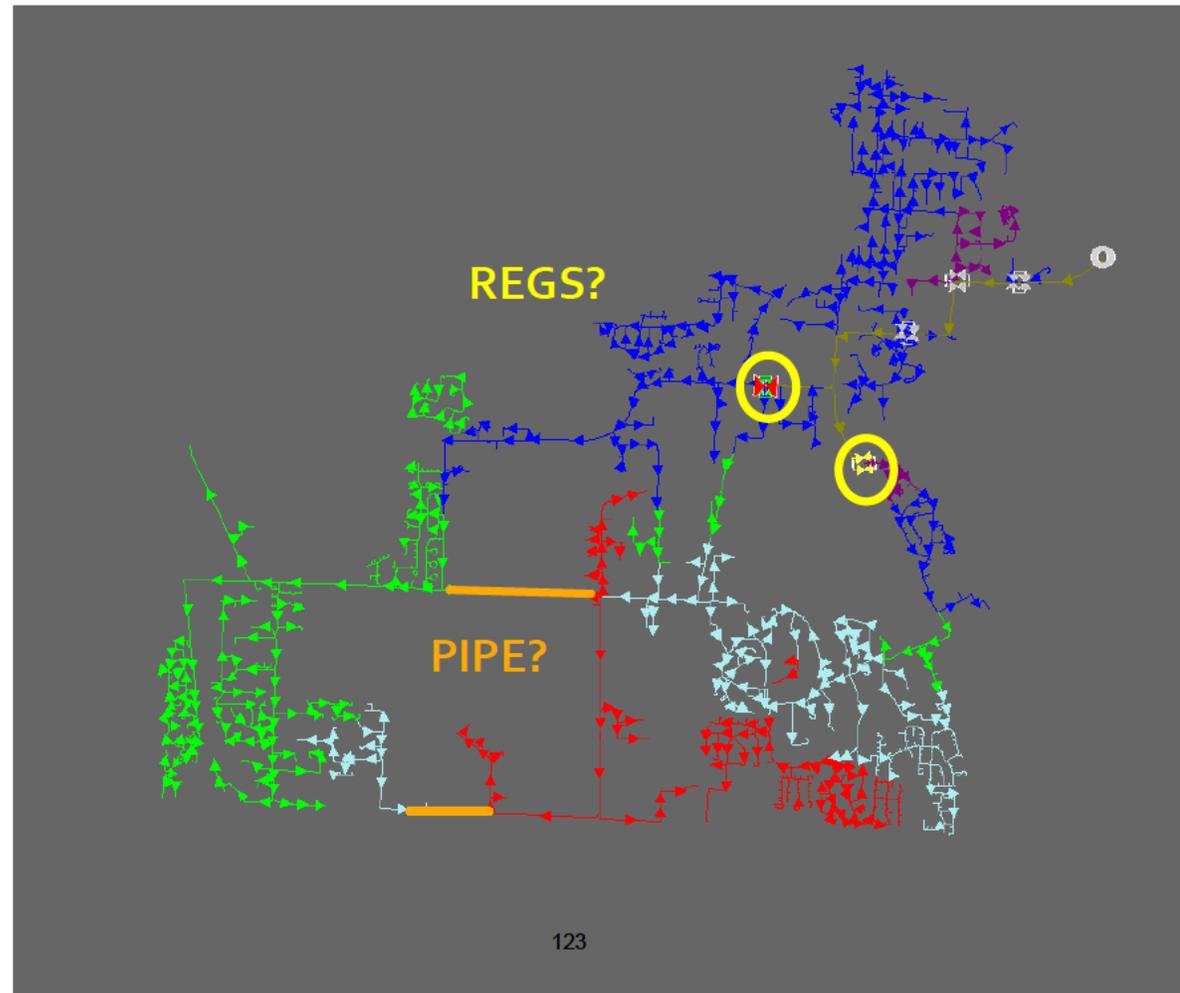
Facilities Color By
Pressure (Primary Only) (psig)
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- 10.00 - 15.00 (518)
- 15.00 - 25.00 (548)
- 25.00 - 40.00 (627)
- 40.00 - 60.00 (67)
- > 60.00 (16)

REGS?

PIPE?

- Compressor station infeasible
- Other Solutions?

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DISTRIBUTION ENHANCEMENT OPTIONS

- Reinforcement option #1

DISTRIBUTION ENHANCEMENT OPTIONS

- Reinforcement option #2
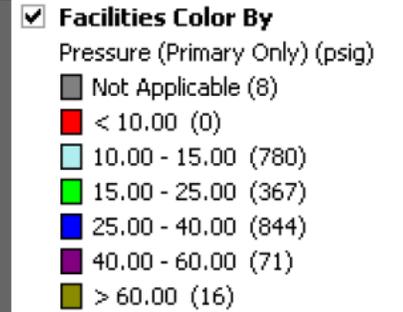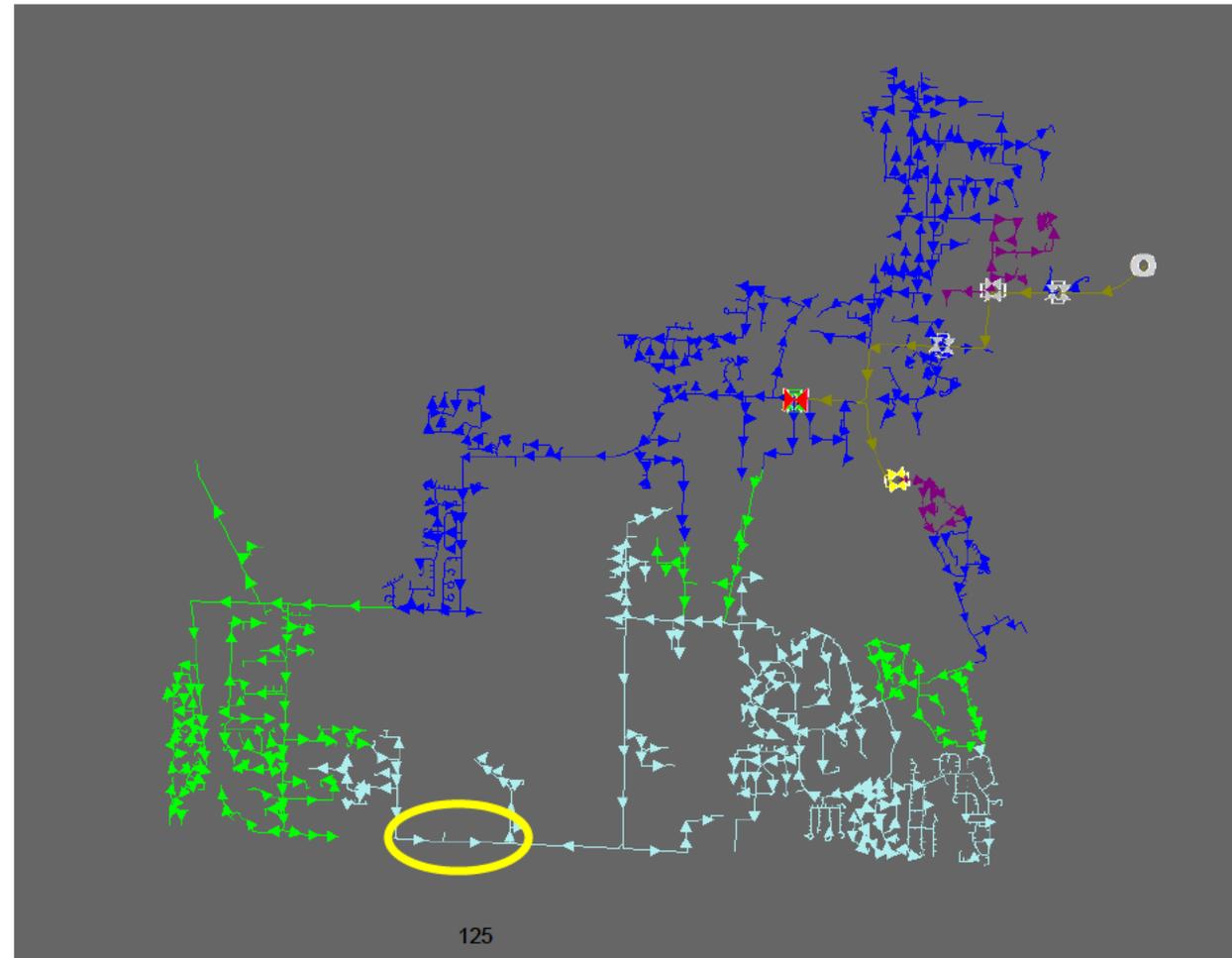
ENHANCEMENTS CONSIDERATIONS

- Scope

- Cost

- Capacity Increase

- Timing

- System Benefits

- Alternative Analysis

- Feasibility

ENHANCEMENT REVIEW AND SELECTION PROCESS TO CAPITAL BUDGET

ENHANCEMENT SELECTION GUIDELINES:

- Shortest segment of pipe that addresses deficiency

- Segment of pipe with the most favorable construction conditions

- Segment of pipe that minimizes environmental concerns and impacts to the community

- Segment of pipe that provides opportunity to add additional customers

- Total construction cost including restoration

ENHANCEMENT SELECTION PROCESS:

IRP Growth Data

Design Day
Models

District Info:
-City Developments
-New Housing Plats

System Limitation
Computer Model Pressure
Concerns

BENEFIT

FEASABILITY

COST

ID Potential Projects and
Enhancement Types
(Individually)

BENEFIT

FEASABILITY

COST

Rank Projects Based
On Priority

Schedule Into Budget

Info & Data

Project & Schedules

33

129
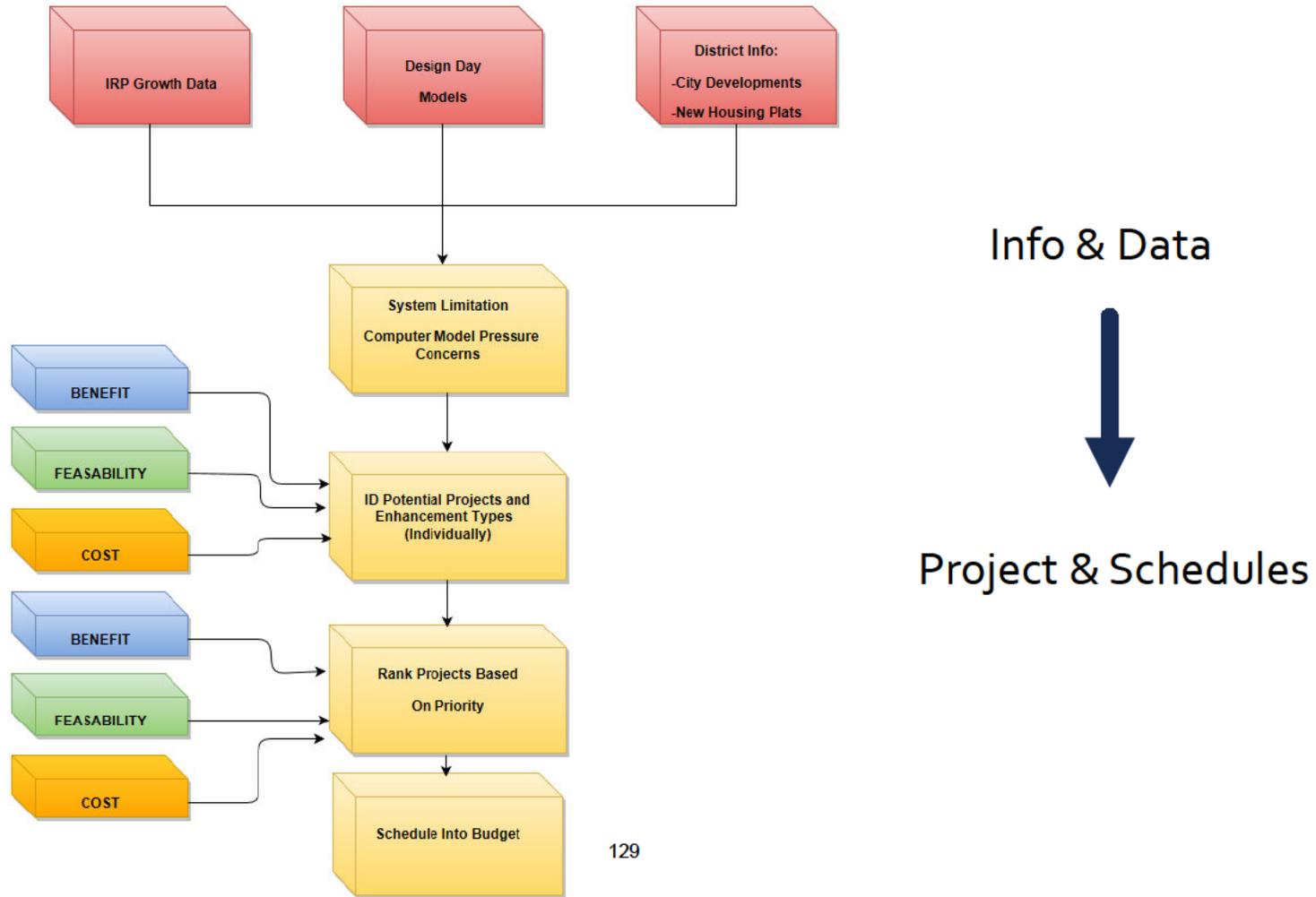
ITERATIVE PROCESS OF IRP

2025 IRP 2026 2027 2028 2029 2030

2027 IRP 2028 2029 2030 2031 2032

2029 IRP 2030 2031 2032 2033 2034

34
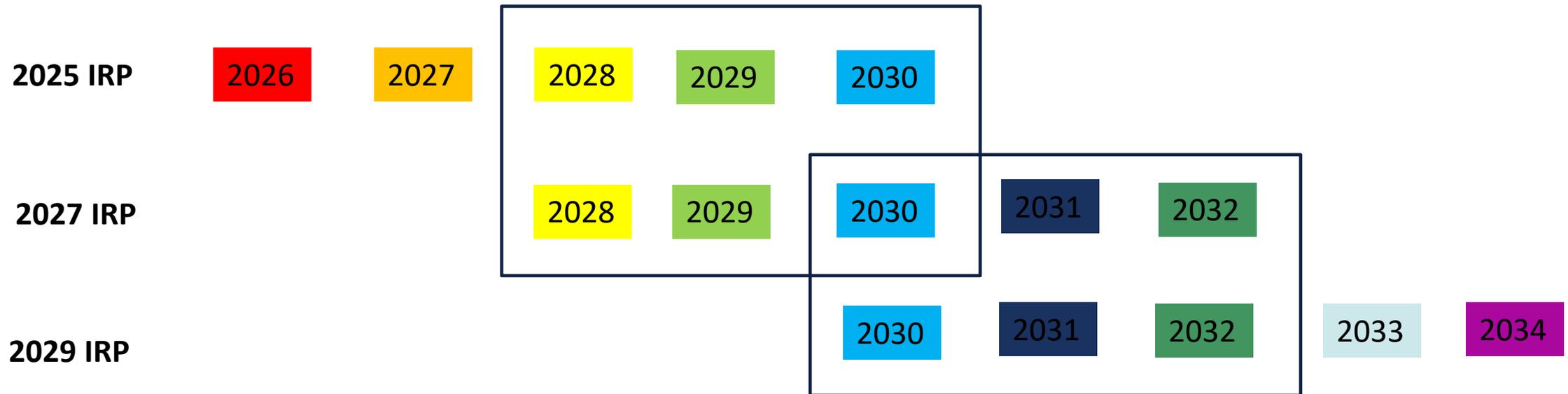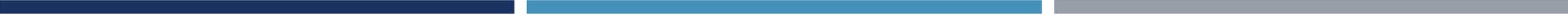
QUESTIONS?

AVOIDED COST METHODOLOGY

ZACHARY HARRIS

MGR REGULATORY AFFAIRS II

A BRIEF HISTORY

- INT-G-19-04, Order No. 34536 directed the Company to review its avoided cost calculations.

- In early 2020, Intermountain invited interested members of the Energy Efficiency Stakeholder Committee (EESC) to join an Avoided Cost Subcommittee.

  - Met three times between February and June 2020

  - The Subcommittee came to an understanding on the general Avoided Cost methodology

  - Avoided cost subcommittee met in March of 2022

  - Could not agree on distribution cost (still set at 0)

- In Order No. 35663 Commission approves the Company's proposals to streamline avoided cost updates by including them in IRP filings, discontinue their inclusion in DSM prudency filings, and align program planning and cost-effectiveness testing with the most recent IRP and applicable avoided costs.

AVOIDED COST OVERVIEW

"A Penny Saved is a Penny Earned."

- The *Avoided Cost* is used to put a dollar value to energy savings.

- This allows utilities to spot opportunities where energy efficiency is more cost effective than a supply-side option.

NATURAL GAS SUPPLY CHAIN

Gas Field	Processing	Transmission	Gateway	Distribution
Oil and gas wells Gas wells Coal seams	Gas processing to specification Odorisation Compression Metering		Pressure reduction and regulation Flow metering	Residential Commercial

Production → Transmission → Distribution

Commodity Costs — **Transportation Costs** — **Distribution Costs**

EMO

39
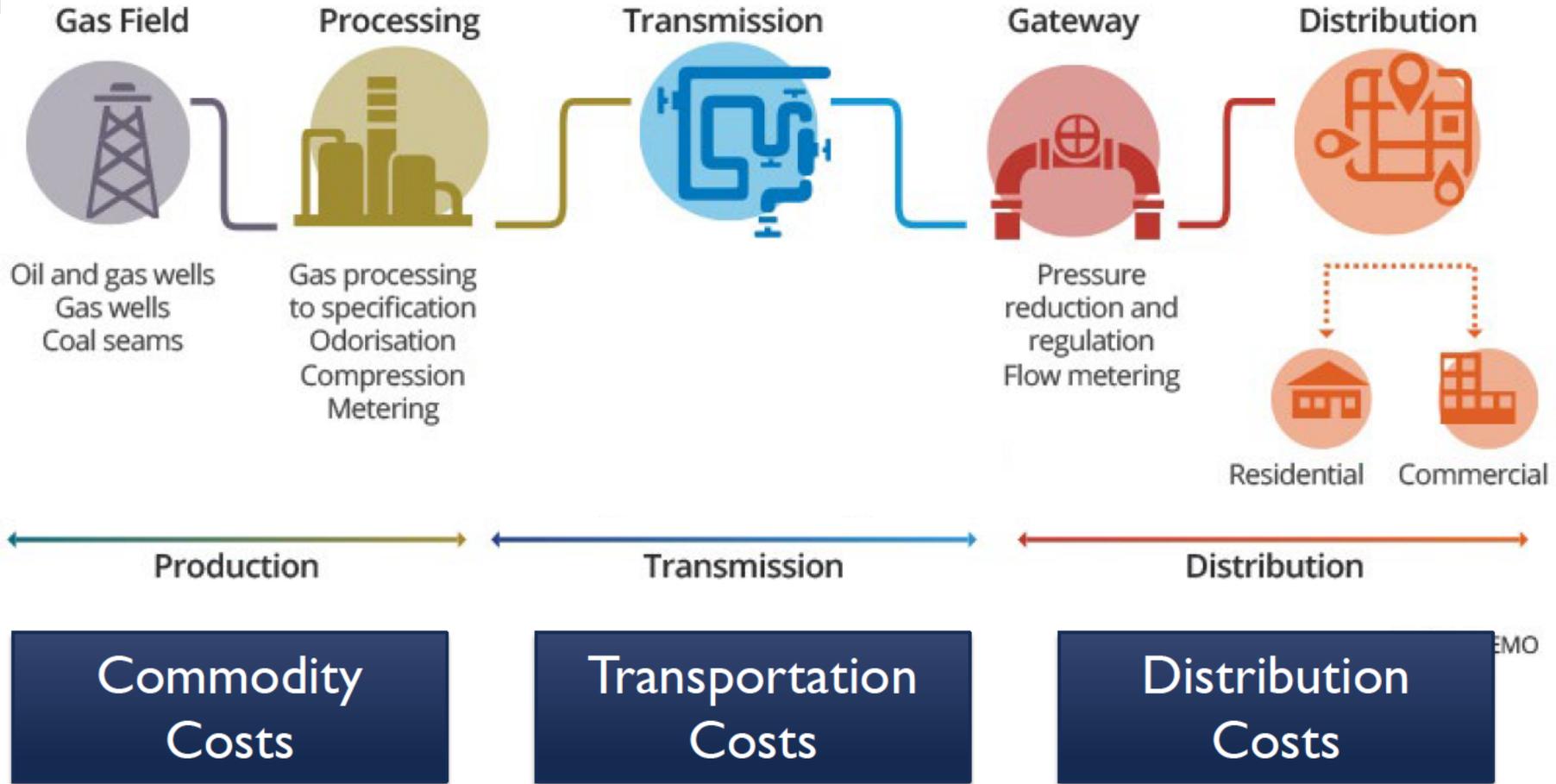
FORMULA

$$AC_{Nominal} = CC + TC + VDC$$

- $AC_{Nominal}$ = Nominal Avoided Cost Per Therm
- CC = Commodity Cost
- TC = Transportation Cost
- VDC = Variable Distribution Cost

COMMODITY COST CALCULATION

- The price of a molecule of gas depends on the basin, the time of year, and even the day of the week.

- Calculation starts with internal 30-year price forecasts for three primary basins.

  - Basins prices are weighted based on company Day Gas purchase data.

  - Normal Heating Degree Days (HDD65) are used to shape monthly prices.

TRANSPORTATION COST CALCULATION

- Includes the cost of reserving additional capacity on the Northwest Pipeline.

  - Based on costs & volumes listed in latest tariffs for RS and GS-1 customers.

- Also contains variable costs associated with transporting gas to city gate.

DISTRIBUTION COST CALCULATION

- Energy efficiency can lead to delaying or even avoiding costly pipeline capacity expansions.

- Large expansions occur irregularly, making it difficult to quantify this type of saving.

- Currently, the calculation contains a placeholder value of $0.00 for this cost component.

- As part of this IRP Process, Intermountain will work with stakeholders to try to develop a distribution system cost.

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2025 IRP UPDATES

- Updated Basin price forecast.

- Updated HDD Shaping to use 2024 Normal weather.

- Added new year of Day Gas purchase data.

- Updated transportation cost with latest PGA tariff.

- Inflation Rate updated from 3.15% to 3.99 %.

Levelized Avoided Cost by Year Discounted 2024$		
Year	Updated Cost	Previous Cost
2025	$0.58	$1.05
2026	$0.67	$0.99
2027	$0.69	$0.93
2028	$0.70	$0.89
2029	$0.70	$0.85
2030	$0.69	$0.82
2031	$0.69	$0.80
2032	$0.69	$0.78
2033	$0.69	$0.77
2034	$0.69	$0.76

44
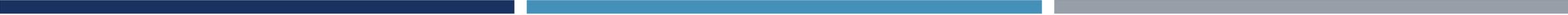
QUESTIONS?

Energy Efficiency

KATHY WOLD

MANAGER, ENERGY EFFICIENCY

Energy Efficiency

Demand Side Management (DSM) refers to resources acquired through the reduction of natural gas consumption due to increases in efficiency of energy use.

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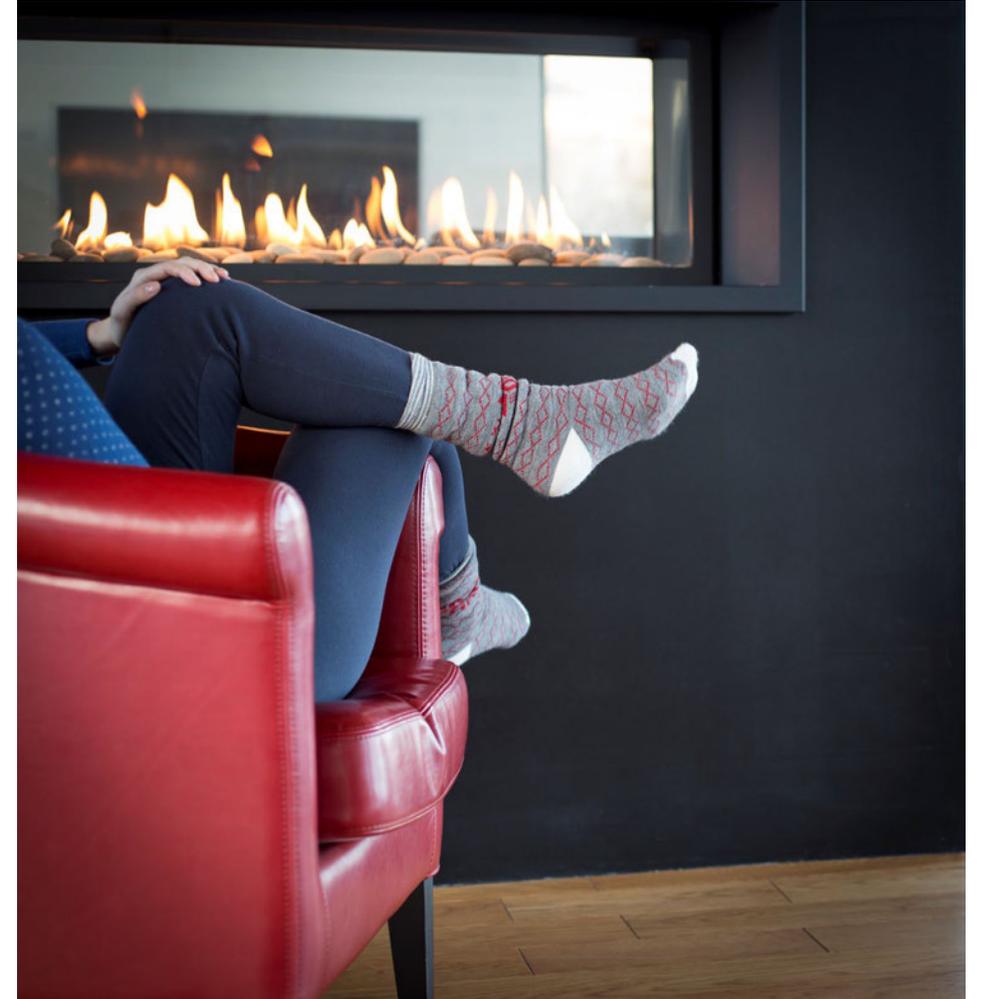
Rebate	Minimum Efficiency	Incentive Amount
Combination Boiler for Space and Water Heat	95% AFUE	$800
Furnace	95% AFUE	$350
Boiler	95% AFUE	$800
Storage Water Heater	.68 UEF	$115
Tankless Water Heater Tier I	.91 UEF	$325
Tankless Water Heater Tier II	.87 UEF	$300
Smart Thermostat Use the ENERGY STAR Smart Thermostat Finder.	ENERGY STAR® Certified	$100

www.intgas.com/saveenergy

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WHOLE HOME TIER I – $900

- HERS rated
- Air sealing at or below 3 ACH at 50 Pa
- Ceiling insulation at or above R-49
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft2 CFA
- Furnace efficiency at or above 97% AFUE

WHOLE HOME TIER II – $700

- HERS rated
- Air sealing at or below 4 ACH at 50 Pa
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft2 CFA
- Furnace efficiency at or above 95% AFUE

www.intgas.com/saveenergy

INTERMOUNTAIN GAS COMPANY

Energy Efficiency

WHOLE HOME TIER I – $900

- HERS rated
- Air sealing at or below 3 ACH at 50 Pa
- Ceiling insulation at or above R-49
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft2 CFA
- Furnace efficiency at or above 97% AFUE

WHOLE HOME TIER II – $700

- HERS rated
- Air sealing at or below 4 ACH at 50 Pa
- Ducts and air handler located inside conditioned space or duct leakage to outside of less than 4 CFM25/100 ft2 CFA
- Furnace efficiency at or above 95% AFUE

NEW OPTION: Stack the savings and stack the cash in your pocket! Layer water heating and/or smart thermostat rebates on top of the Whole Home Tier I or Tier II rebate.

Example 1:

Whole Home Tier I	$900
Tier I Tankless Water Heater	$325
Smart Thermostat	$100
Total Potential Rebate	**$1,325**

Example 2:

Whole Home Tier II	$700
Smart Thermostat	$100
Total Potential Rebate	**$800**

www.intgas.com/saveenergy

HEATING INCENTIVES

Eligible Appliance	Efficiency Rating	Rebate
Condensing Unit Heater	90% AFUE or Greater Efficiency	$1,500
Boiler Reset Control	N/A	$350
High-Efficiency Condensing Boiler	90% or Greater Thermal Efficiency and ≥300 kBTUh	$4.50/kBTUh

KITCHEN EQUIPMENT INCENTIVES

Eligible Appliance	Efficiency Rating	Rebate
Fryer	ENERGY STAR® Certified	$800
Steamer	ENERGY STAR® Certified (≥38% cooking eff/≤2,038 BTU/hr/pan Idle Rate)	$1,100
Griddle	ENERGY STAR® Certified (≥38% cooking eff/≤2,650 BTU/hr/pan Idle Rate)	$200

ENERGY STAR® Commercial Food Service Product Finder

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WHAT IS A CONSERVATION POTENTIAL ASSESSMENT (CPA)?

- Definition: A study estimating achievable energy savings through efficiency measures.

- Scope: Residential and Commercial

- Types of potential: Technical, Economic, Achievable.

WHY WE DO IT

- Strategic planning and regulatory compliance.

- Supports Integrated Resource Planning (IRP).

- Inform IGC's EE goals, portfolio planning, and budget setting, and identify new energy saving opportunities.

WHO CARES?

- Resource Planning Team – reduction of natural gas consumption due to increases in energy efficiency are a resource.

- Energy Efficiency – Conservation Potential Assessment identifies cost-effective energy saving potential

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WHO CONDUCTS THE CPA?

GUIDEHOUSE TEAM

Jon Starr
Professional Director
Guidehouse

Neil Podkowsky
Project Manager
Guidehouse

Brian Chang
Measure Lead
Guidehouse

Raniel Chan
Modeling Lead
Guidehouse

2025 CPA UPDATE

CONSERVATION POTENTIAL ASSESSMENT 2025

- Guidehouse conducted comprehensive study for the 2023 IRP

- IGC did not have any program changes from the last study to this one

- Guidehouse updated model inputs for 2025 study, rather than run another full-scale study

WHAT WAS UPDATED IN THE MODEL?

- Global Input forecasts (market characterization) using new data from IGC:

    - Building Stock and Sales

    - Retail Rates

    - Avoided Costs

    - Inflation Rate

    - Discount Rate

- Measure Inputs (savings, costs, and lifetimes) as applicable using IGC Technical Reference Manual (TRM)

- Other Updates:

    - Extended the forecast period by two years

    - Shifted the starting year for adoption of Behavioral measures by two years, so the adoption trajectory now begins in 2025 instead of 2023.

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WHAT WAS UPDATED IN THE MODEL?

- Building Stock and Sales: **Compared to the 2023 CPA, forecasted building stock is generally slightly higher for commercial and modestly lower for residential**

WHAT WAS UPDATED IN THE MODEL?

- Retail Rates: **Compared to the 2023 CPA, rates are lower for 2024-2025 but higher in 2026 and beyond**

WHAT WAS UPDATED IN THE MODEL?

- Avoided Costs: **Compared to the 2023 CPA, avoided costs are lower in 2025 but higher in 2026 and beyond**

WHAT WAS UPDATED IN THE MODEL?

- Inflation Rate: **Now 3.99%, previously 3.15%**

- Discount Rate: **Now 2.68%, previously 3.51%**

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WHAT WAS UPDATED IN THE MODEL?

- Updated Measure Inputs (savings, costs, and lifetimes) as applicable using IGC TRM v1.0. **27 out of the 120 measures were updated.**

WHAT WAS UPDATED IN THE MODEL?

- Other Updates:

  - Extended the forecast period by two years: **it now goes out to 2046 instead of 2044**.

  - Shifted the starting year for adoption of Behavioral measures by two years: **adoption trajectory now begins in 2025 instead of 2023.**
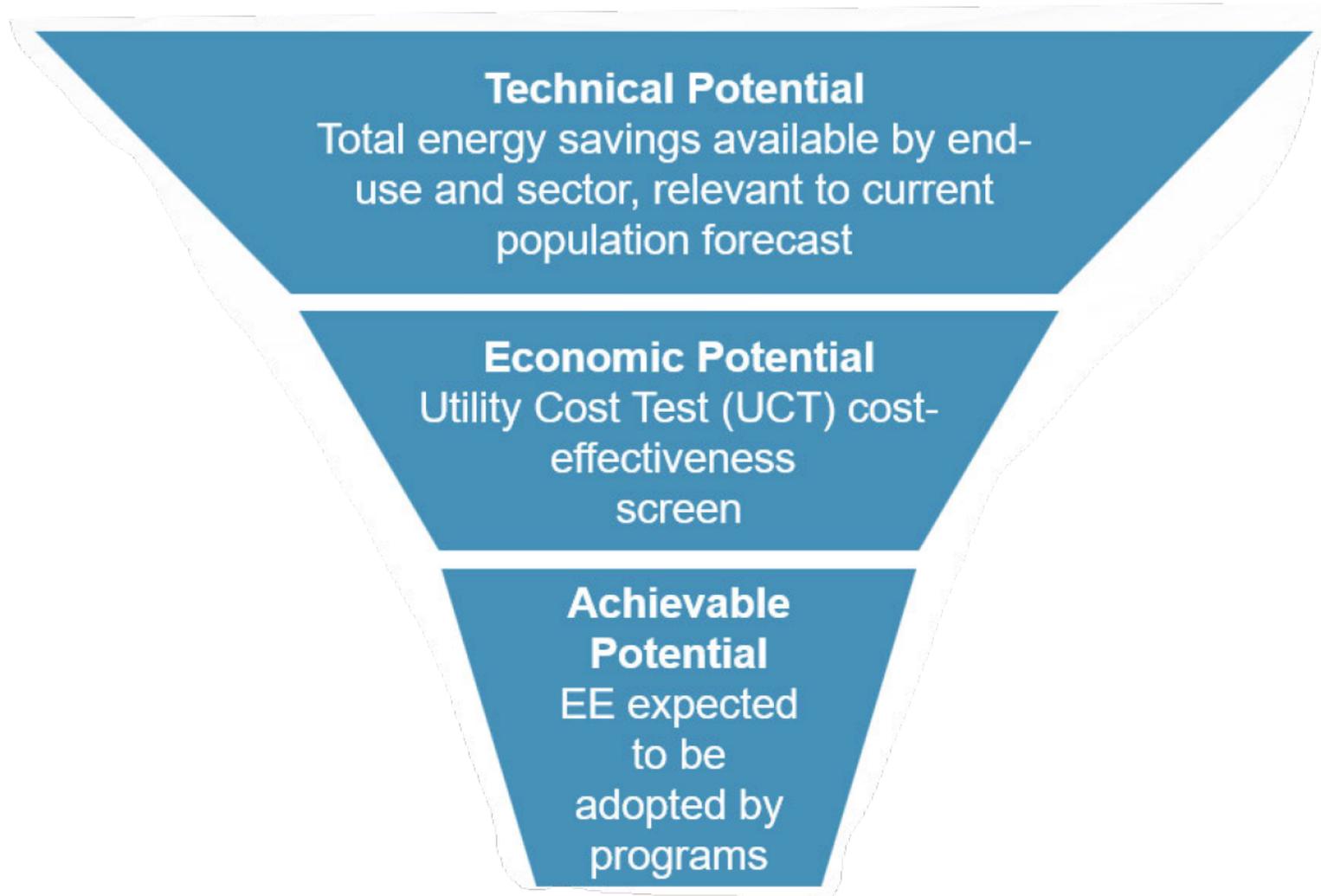
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Technical Potential
Total energy savings available by end-use and sector, relevant to current population forecast

Economic Potential
Utility Cost Test (UCT) cost-effectiveness screen

Achievable Potential
EE expected to be adopted by programs

TYPES OF POTENTIAL

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TOTAL GAS ENERGY POTENTIAL BY POTENTIAL TYPE (MM THERMS/YEAR)

162
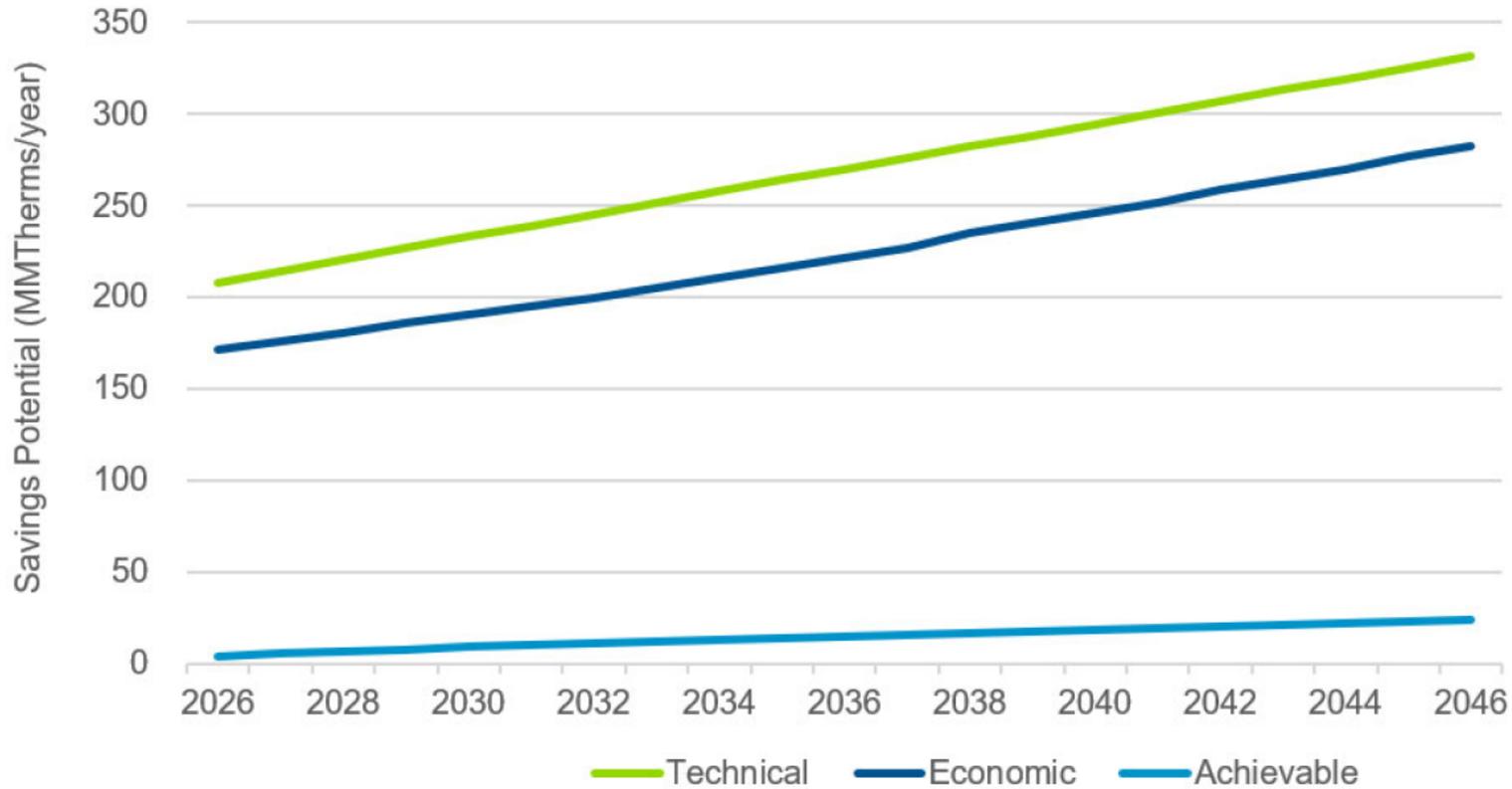
ACHIEVABLE POTENTIAL FOR REBATE PROGRAMS

- The EE savings that could be expected in response to specific levels of program incentives and assumptions about existing policies, market influences, and barriers.

- Estimated by:

  - Calculating the market share, or penetration of measures based on customer awareness of the measure and customer willingness to adopt the measure

  - Willingness is determined by comparing payback time associated with efficient measure against competing measures

  - Calibrating forecast using historic program data

Technical Potential
Total energy savings available by end-use and sector, relevant to current population forecast

Economic Potential
Cost-effectiveness Screen

Achievable Potential
EE expected to be adopted by programs

67

TOTAL GAS ENERGY POTENTIAL BY POTENTIAL TYPE (MM THERMS/YEAR)

164
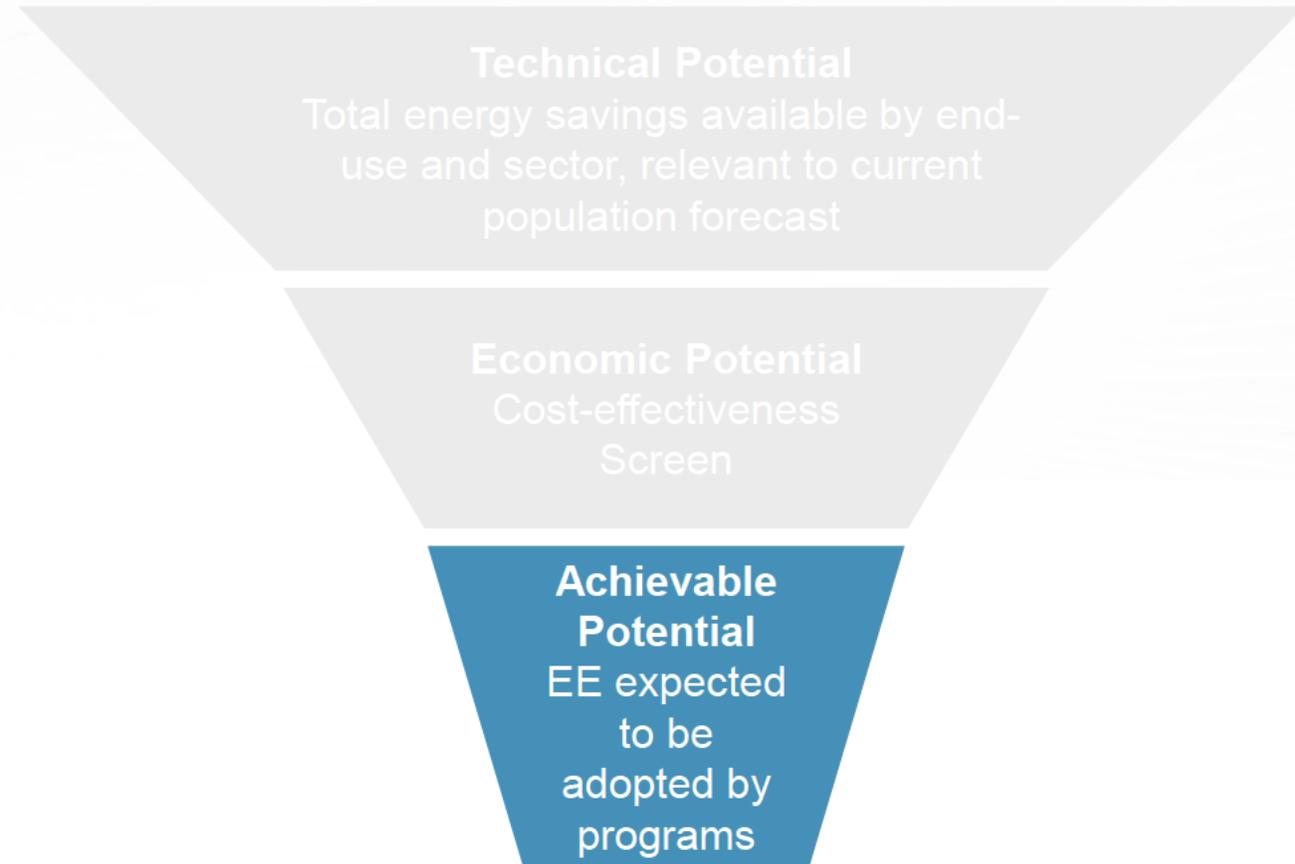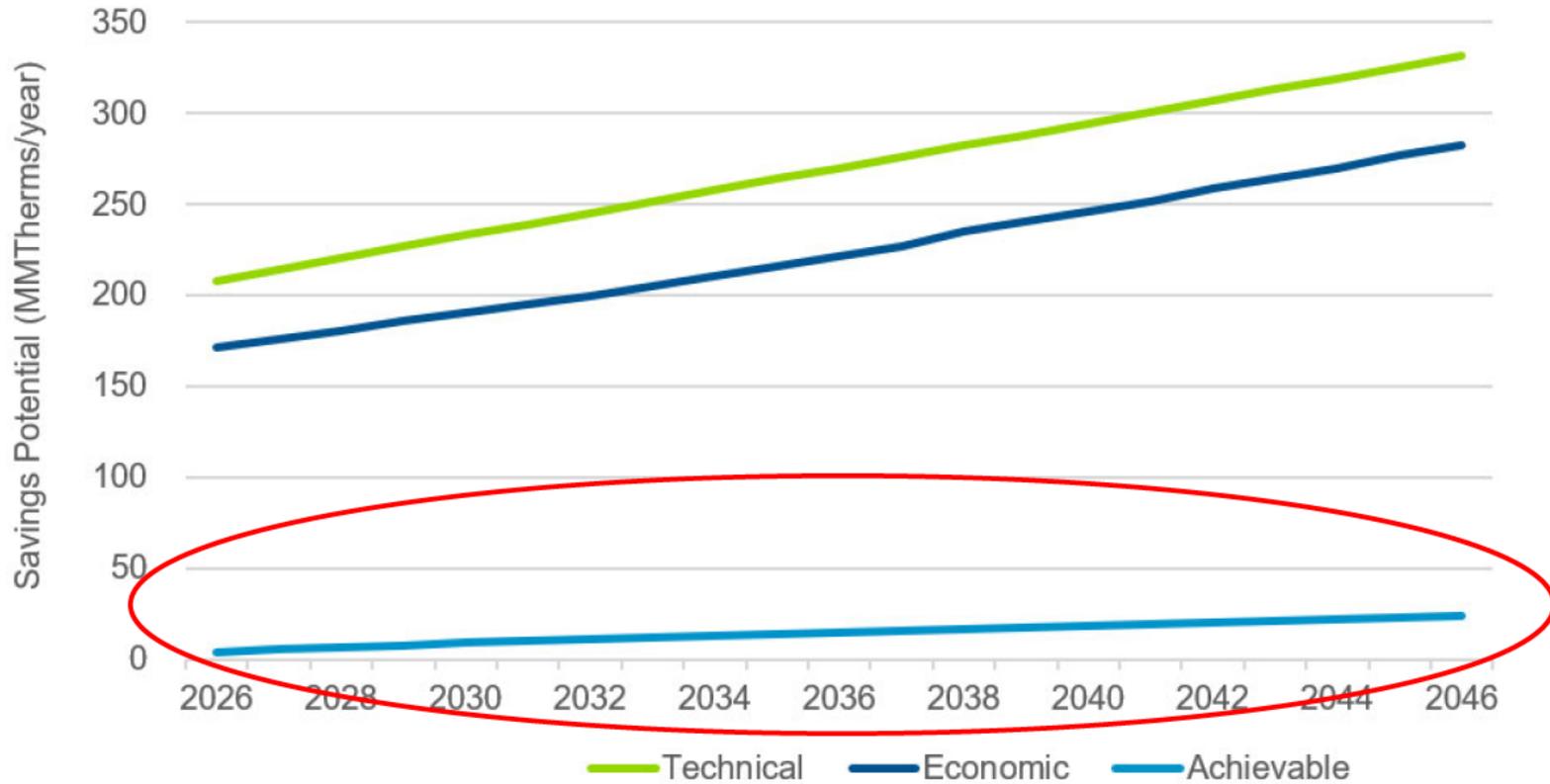
SCENARIOS

Business as Usual (BAU): This scenario does not represent an intentionally defined change to the model; it does reflect an assumption that future program budgets will be closely correlated with IGC's historic EE program spending.

Unconstrained Historical Budget: This scenario reflects a ramp up of customer adoption of natural gas energy efficiency over a 10-year period from the start of the EE program (through 2029), driven by increased IGC program activity without constraining program spending to historic levels. Incentive levels are consistent with Business as Usual Scenario.

Medium Adoption: This scenario increases the adoption parameters compared to the unconstrained historical budget scenario and increases model parameter values relating to customer awareness and willingness to adopt energy efficient technologies. Incentive levels are consistent with Business as Usual Scenario.

High Incentive, High Adoption: this scenario reflects the savings possible by increasing the incentives from 50% of measure incremental cost to 65% of incremental cost and further increasing the customer awareness and willingness to adopt energy efficiency measures to the highest values based on Guidehouse's experience and rules of thumb.

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Gas Results - Residential, All Scenarios
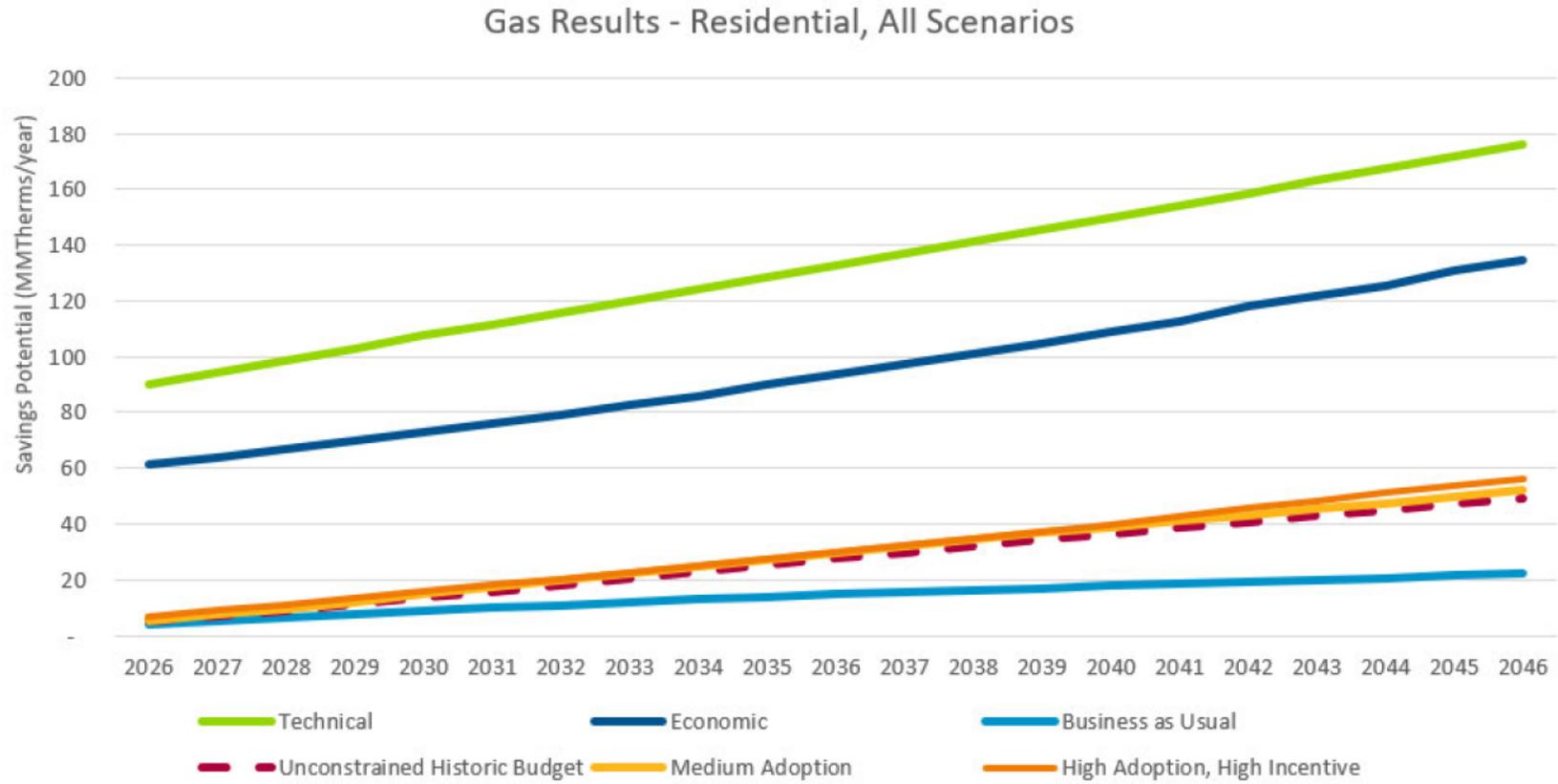
ALL SCENARIOS: RESIDENTIAL

166

Gas Results - Commercial, All Scenarios
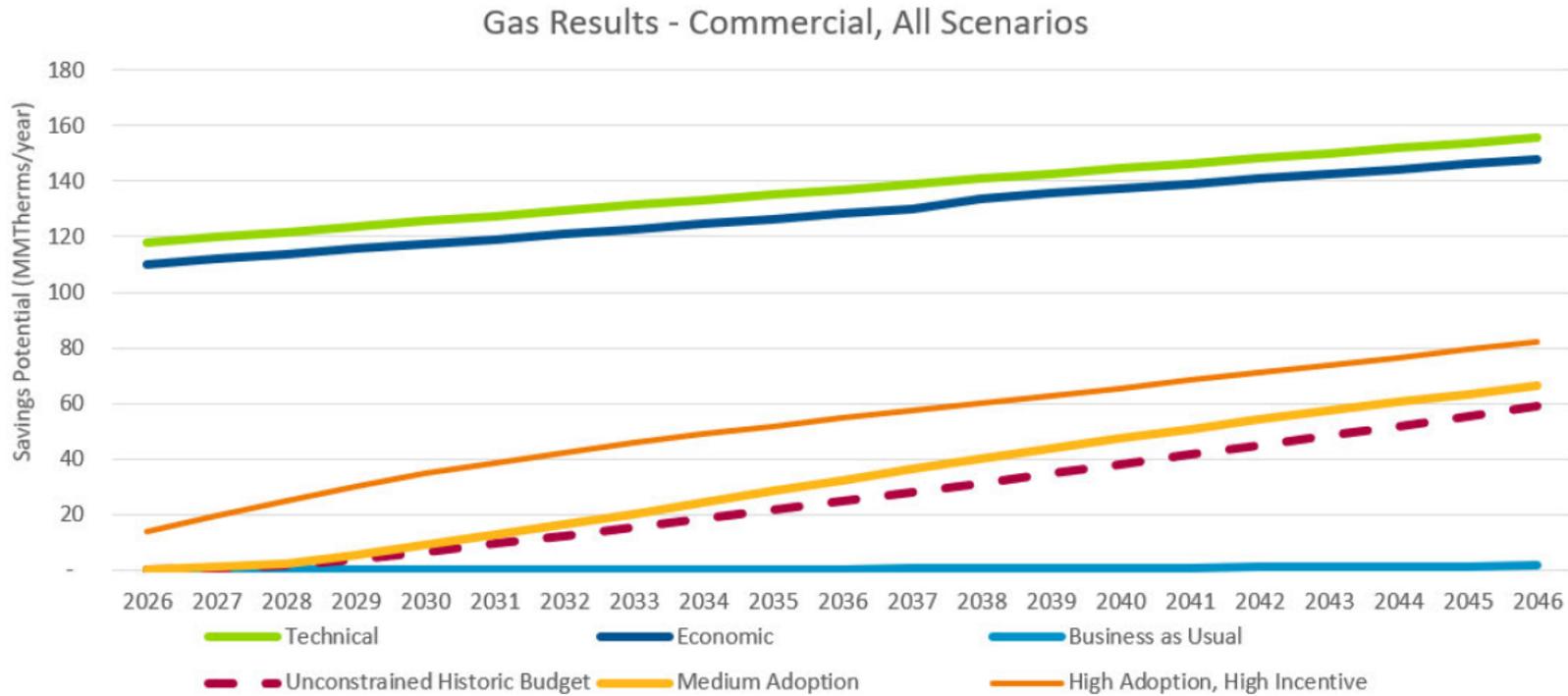
ALL SCENARIOS: COMMERCIAL
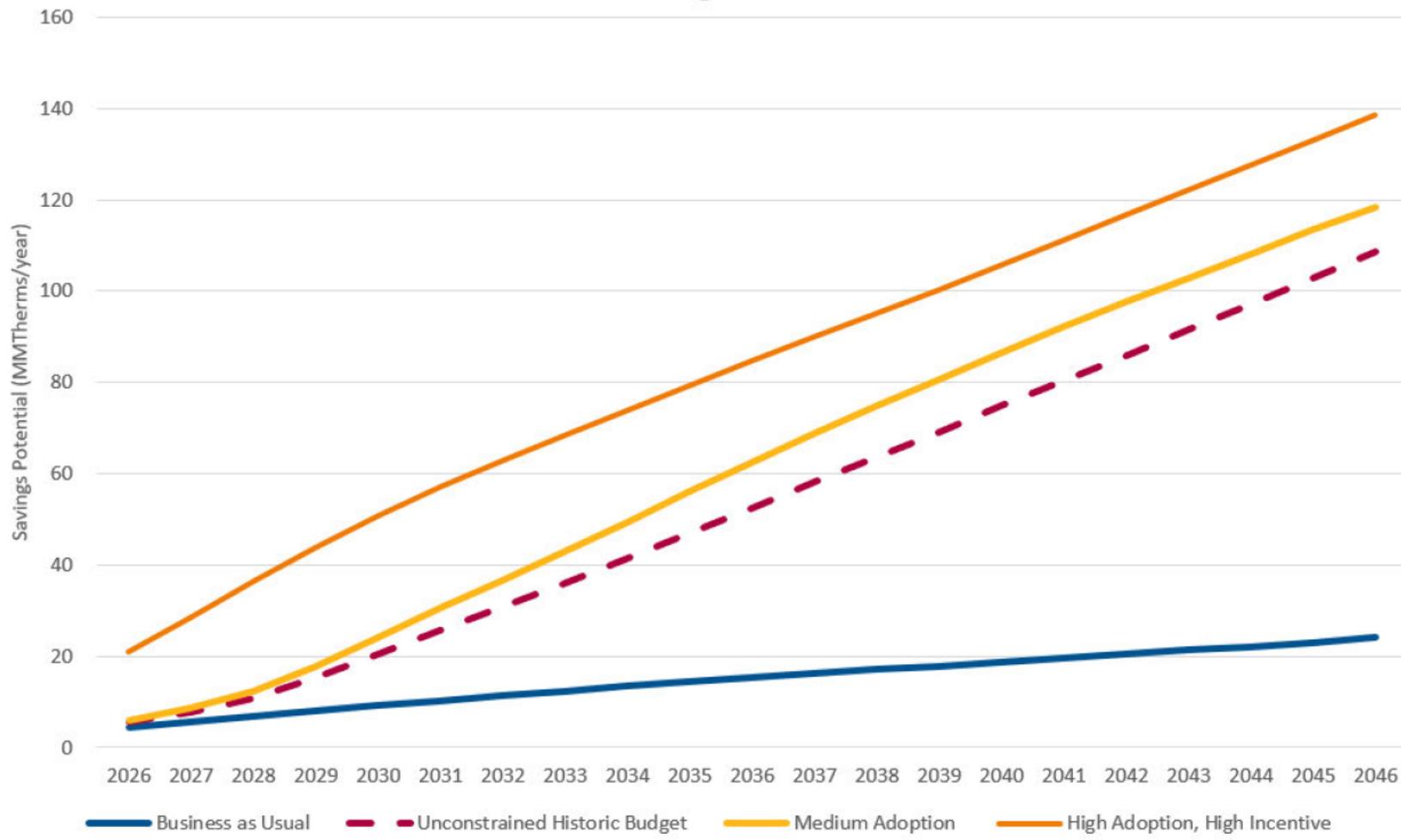
ACHIEVABLE POTENTIAL FOR ALL SCENARIOS

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COMPARISON OF 2023 AND 2025 STUDY ACHIEVABLE POTENTIAL, ANNUAL NET GAS SAVINGS
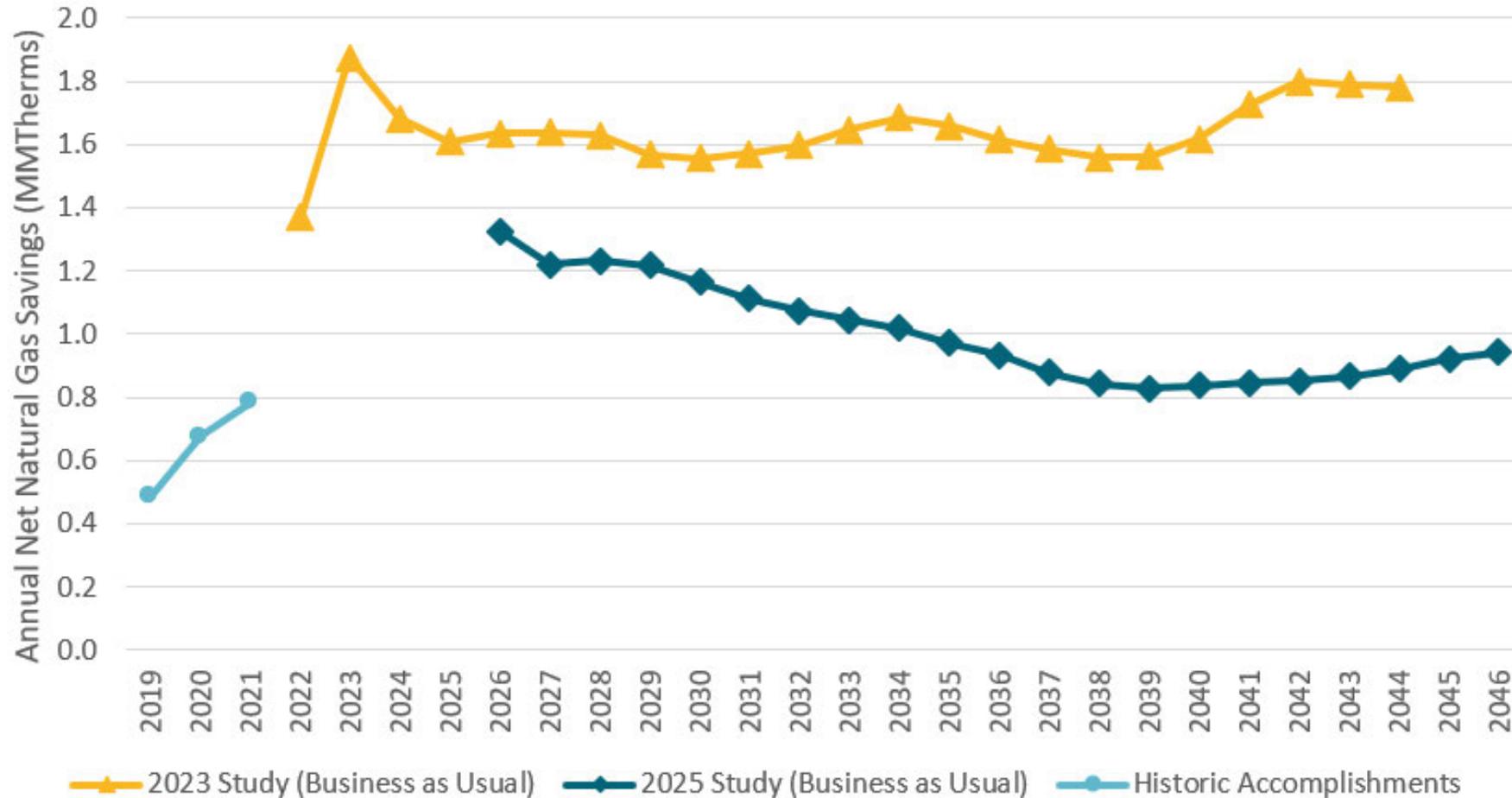
BIG PICTURE TAKE-AWAYS

- The combined effect of the global input updates was to generally **increase Benefit-Cost ratios (UCT)** compared to the 2023 CPA, driven primarily by higher avoided costs in later years, combined with a lower discount rate (the future is more important).

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BIG PICTURE TAKE-AWAYS

For "Business as Usual" scenario, achievable potential results are overall lower than the 2023 CPA, and the difference grow over time.

Incremental Achievable Potential (therms/yr)

BAU (Scen 1)		2024	2025	2026	2027	2028	2029	2030	2035	2040
2023 CPA	Total	1,681,489	1,609,817	1,636,834	1,639,515	1,629,649	1,569,179	1,555,721	1,658,211	1,616,968
2025 CPA	Total	1,435,954	1,563,629	1,325,611	1,219,682	1,232,025	1,217,600	1,164,390	973,022	836,745
	Change	-15%	-3%	-19%	-26%	-24%	-22%	-25%	-41%	-48%
2023 CPA	Residential	1,656,777	1,582,970	1,607,031	1,606,593	1,593,441	1,529,423	1,511,952	1,587,032	1,497,466
2025 CPA	Residential	1,420,173	1,537,652	1,297,384	1,188,569	1,198,097	1,180,763	1,124,447	910,776	733,919
	Change	-14%	-3%	-19%	-26%	-25%	-23%	-26%	-43%	-51%
2023 CPA	Commercial	24,712	26,848	29,804	32,921	36,208	39,756	43,769	71,179	119,502
2025 CPA	Commercial	15,781	25,977	28,227	31,113	33,928	36,837	39,943	62,246	102,826
	Change	-36%	-3%	-5%	-5%	-6%	-7%	-9%	-13%	-14%

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BIC PICTURE TAKE-AWAYS

The measure competition group with the highest potential by far is Residential Furnaces, which contains three measures: Furnace 95 AFUE, Furnace 97 AFUE, and Gas Heat Pump (Space Heating).

- These together account for 1.2 million therms of the achievable potential for year 2024 (this was 1.4 million therms in the 2023 CPA).

- The key change with the 2025 CPA is that savings (and costs) for the 95 AFUE and 97 AFUE furnaces were reduced by approximately 75% per the IGC TRM. Additionally, the Gas Heat Pump measure (which has much higher savings) is cost-effective in more cases than previously, but the increase in savings for Gas Heat Pumps is not quite enough to offset the reduction from the Furnace measures.

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BIG PICTURE TAKE-AWAYS

- In other scenarios, for example "Unconstrained" (Scenario 2), **long-term potential is higher overall** versus the 2023 CPA. This is driven by an increase in Commercial sector potential, is the result of more measure instances being modeled as cost-effective.

Incremental Achievable Potential (therms/yr)

Unconstrained (Scen 2)		2024	2025	2026	2027	2028	2029	2030	2035	2040
2023 CPA	Total	1,831,708	1,844,290	2,035,668	2,308,830	2,714,656	3,338,038	3,869,440	4,567,530	4,863,836
2025 CPA	Total	1,707,709	1,895,482	1,884,112	2,205,254	2,988,603	4,582,124	5,129,087	5,507,711	5,605,450
	Change	-7%	3%	-7%	-4%	10%	37%	33%	21%	15%
2023 CPA	Residential	1,770,217	1,758,697	1,896,150	2,062,150	2,255,438	2,417,756	2,647,520	3,002,944	3,054,105
2025 CPA	Residential	1,632,166	1,777,571	1,681,739	1,781,715	2,022,127	2,250,872	2,370,881	2,346,401	2,193,605
	Change	-8%	1%	-11%	-14%	-10%	-7%	-10%	-22%	-28%
2023 CPA	Commercial	61,491	85,593	139,518	246,681	459,218	920,282	1,221,921	1,564,586	1,809,730
2025 CPA	Commercial	75,543	117,911	202,373	423,539	966,475	2,331,252	2,758,206	3,161,310	3,411,845
	Change	23%	38%	45%	72%	110%	153%	126%	102%	89%

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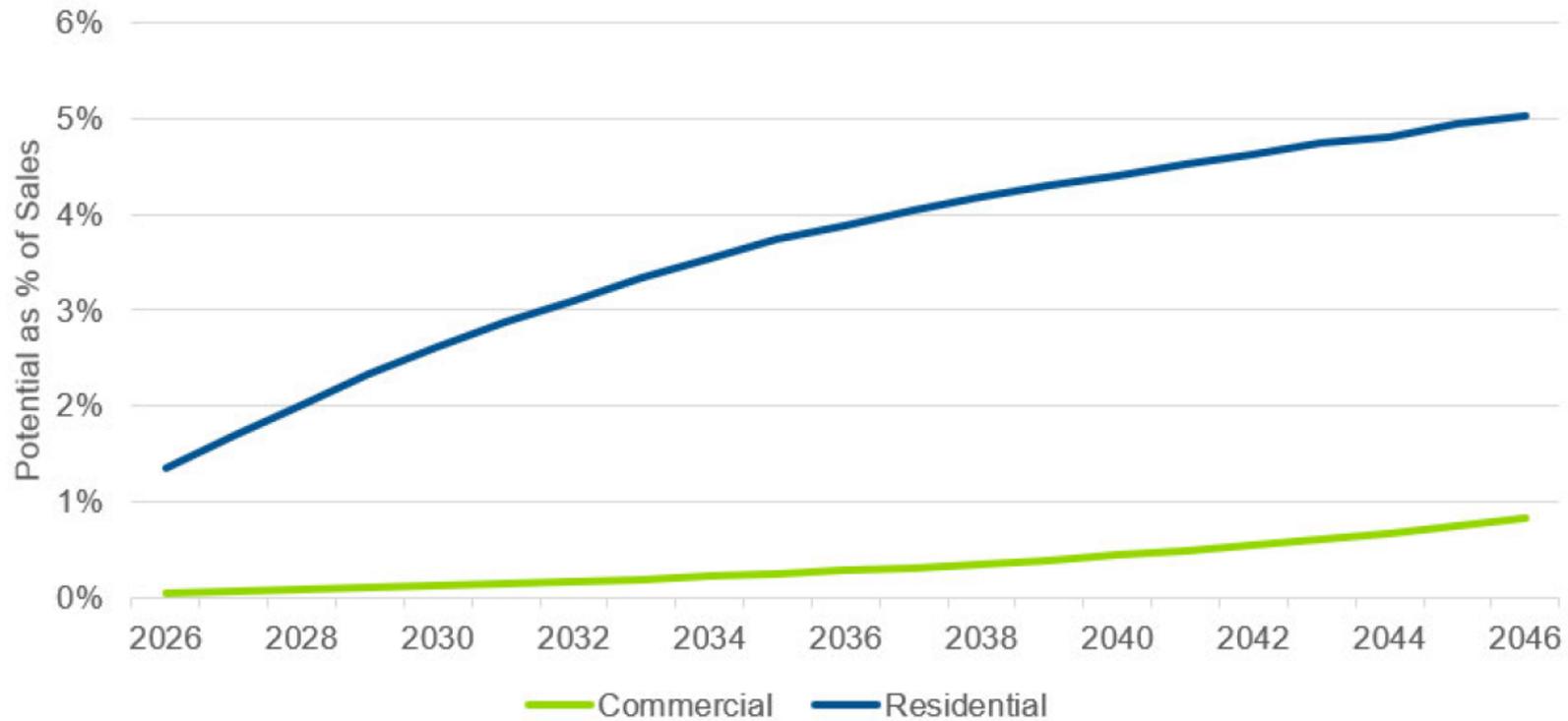
ACHIEVABLE POTENTIAL BY SECTOR AS A PERCENT OF TOTAL SALES

BIG PICTURE, IT'S STILL PRETTY SMALL.

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WHAT'S NEXT?

- IRP team to apply study results to resource planning.

- IGC has filed an update to the Residential offering, that is still an open case.

- Proposing changes to the Commercial Program offering.

BREAK

SUPPLY & DELIVERY RESOURCES

ERIC WOOD

MANAGER, GAS SUPPLY

GAS SUPPLY PLANNING

- What's the goal? To meet the energy needs and expectations of our customers:

  ➢ Reliability (365 days per year)

  ➢ Security (delivery on the coldest day)

  ➢ Competitive and stable prices through a mix is fixed priced hedges

  ➢ Efficiently meet future growth

  ➢ Frequently evaluate the portfolio

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NATURAL GAS SUPPLIES

What are Traditional Supply Resources?

- Natural gas supply; the molecules or "commodity"

- Interstate pipeline capacity

- Storage facility capacity

- Energy Efficiency

What are Non-Traditional Supply Resources?

- Renewable Natural Gas

- Hydrogen

NATURAL GAS SUPPLIES

Where Does "Our" Gas Come From?

- Canadian gas supply (~90%)
  - British Columbia
  - Alberta
- Rockies' gas supply (~10%)
  - Wyoming, Colorado, Utah etc.
- Access to supply somewhat dependent upon available transport capacity

- North American gas plays
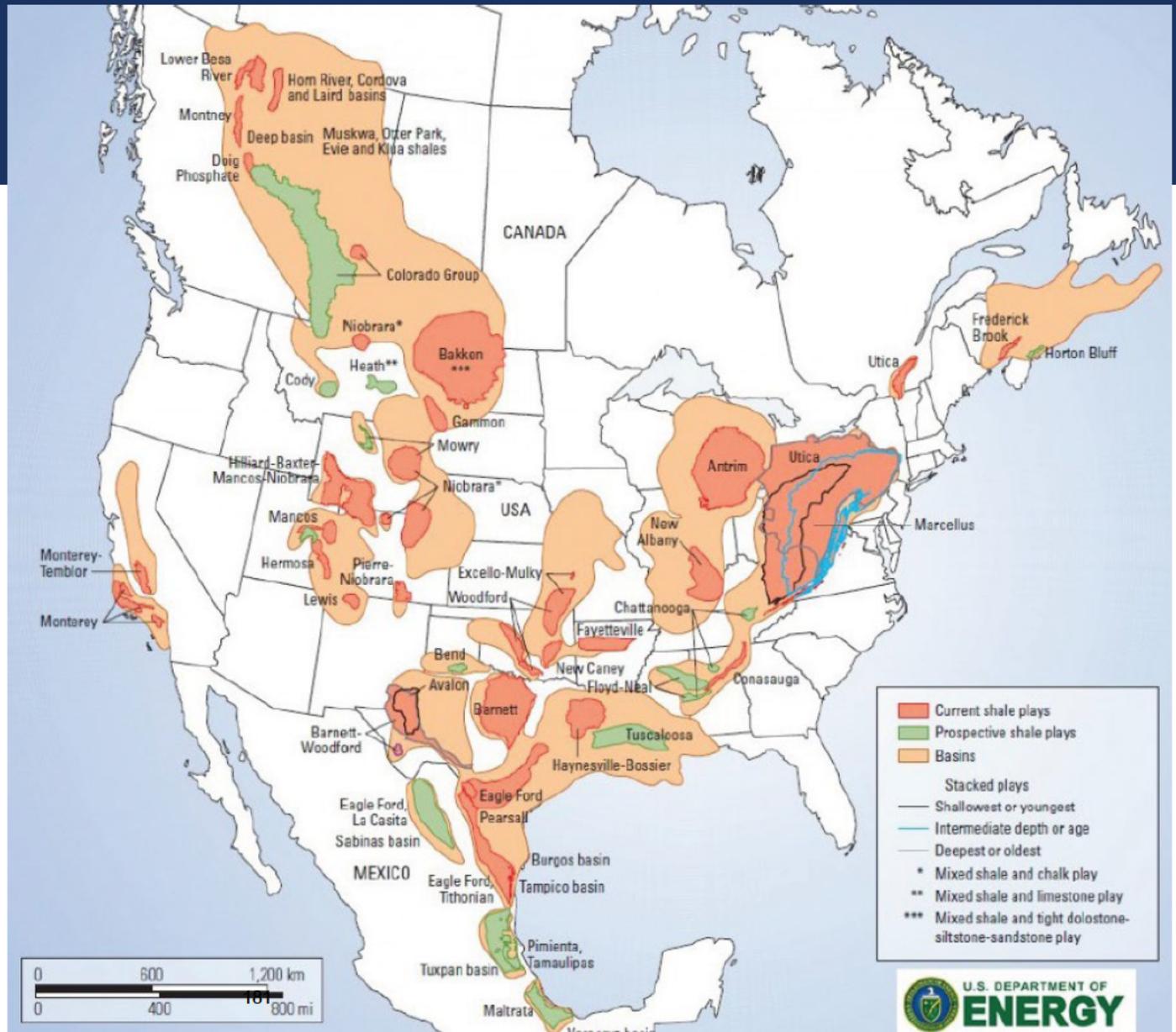
NATURAL GAS SUPPLIES

Gas Supply Forecast - Observations

- Robust increase in shale gas production

- Mature basins (WCSB, gulf on & offshore)

- Today: ample supply vs demand

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NATURAL GAS PRODUCTION BY PLAY 2008-2025

Monthly U.S. dry shale natural gas production by formation
billion cubic feet per day

Legend: Permian, Haynesville, Marcellus, Utica, Eagle Ford, Bakken, Barnett, Niobrara-Codell, Fayetteville, Mississippian, Woodford, Rest of U.S.
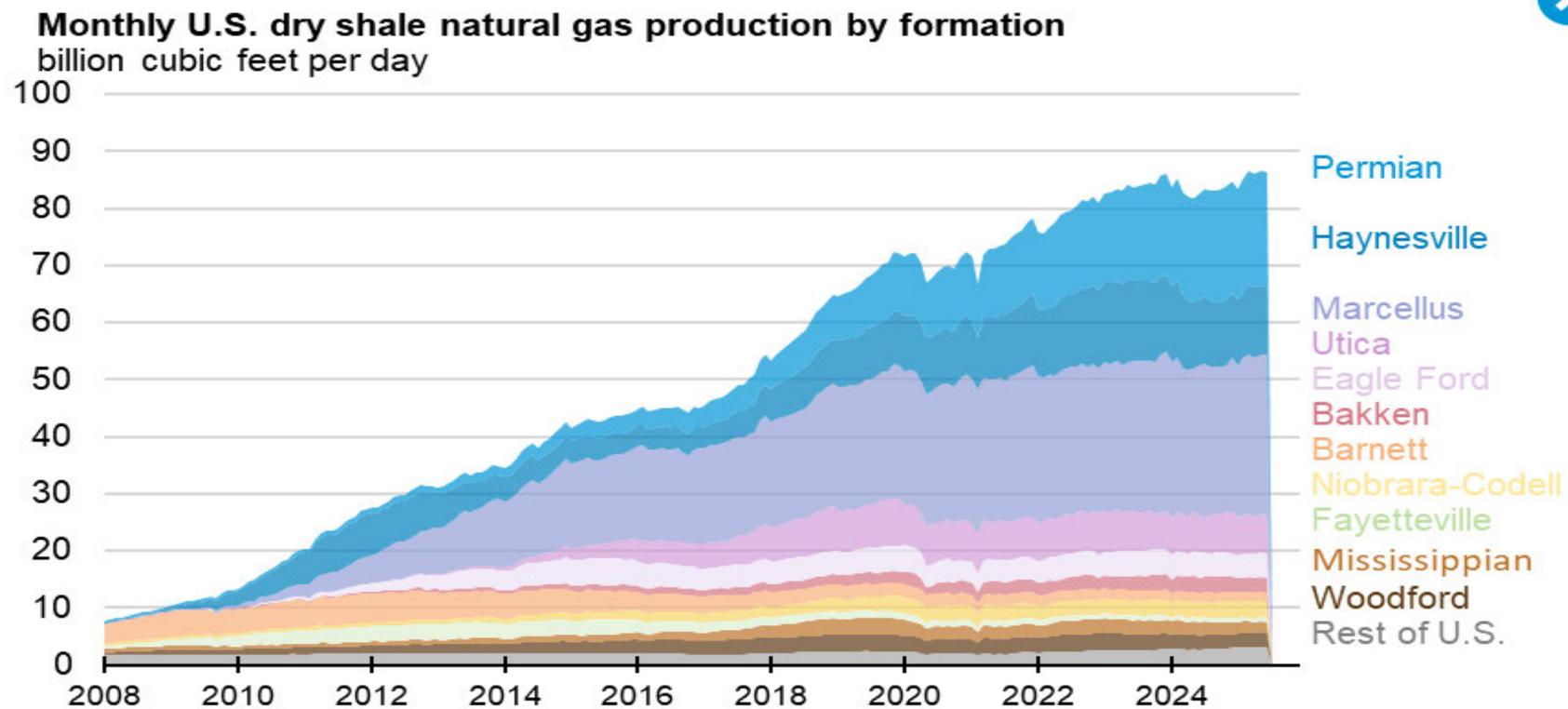
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, July 2025

Source: EIA

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U.S. NATURAL GAS CONSUMPTION BY SECTOR

Table 4.3 Natural Gas Consumption by Sector

Billion Cubic Feet

- Natural Gas Consumed by the Residential Sector
- Natural Gas Consumed by the Commercial Sector
- Natural Gas Consumed by the Industrial Sector, Total
- Natural Gas Consumed by the Transportation Sector, Total
- Natural Gas Consumed by the Electric Power Sector

Data source: U.S. Energy Information Administration

Source: EIA AEO2025
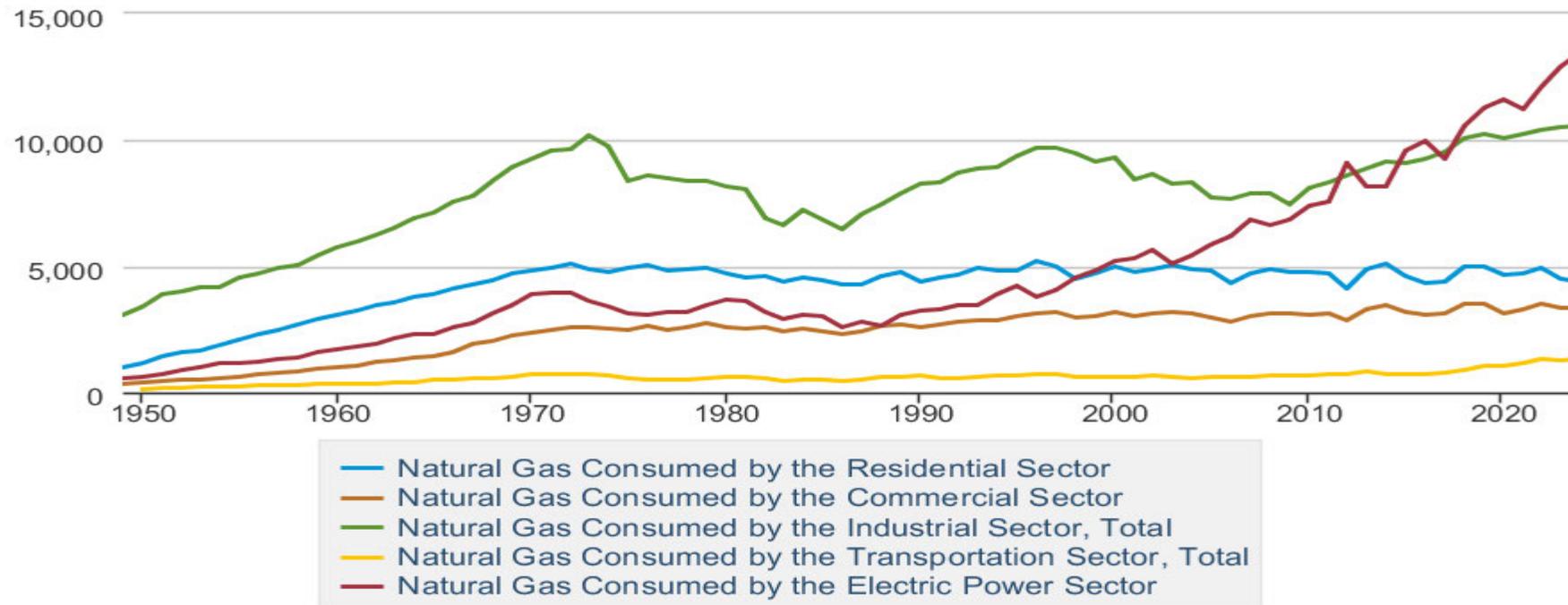
NATURAL GAS SUPPLIES

Gas Supply - Pricing

- Natural gas is a commodity and market is liquid

- Price follows supply and demand fundamentals

- Price history & forecast

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RECENT HISTORIC GAS PRICES

Pacific Northwest Historic Index Pricing

Winter 22/23 Pipeline Constraints/Low Storage

Enbridge Pipeline Rupture

SUMAS   ROCKIES   AECO (US$)

186

90
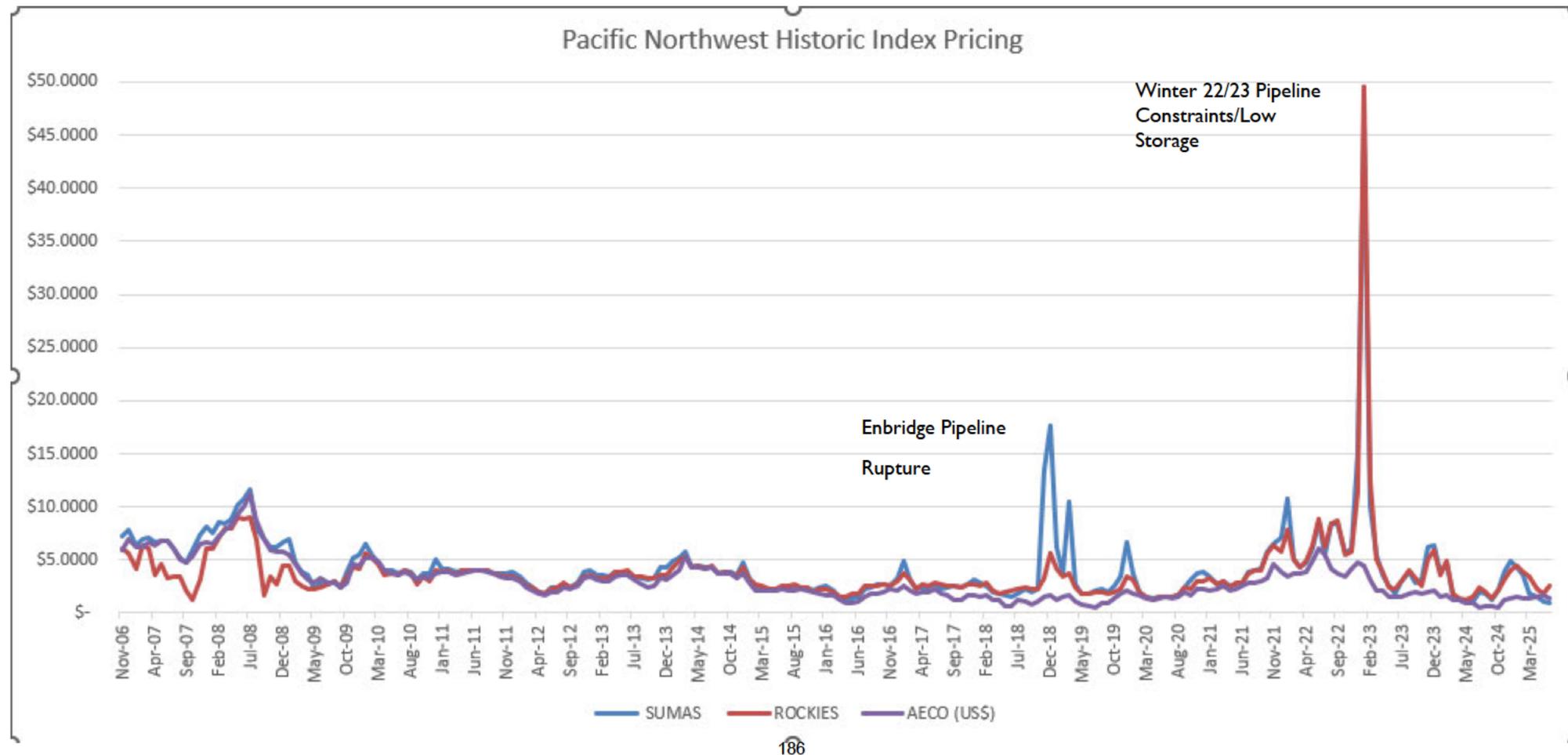
NATURAL GAS PRICE FORECAST

Intermountain's IRP Price Forecast

- Intermountain's long-term planning price forecast is based on a blend of current market pricing along with long-term fundamental price forecasts.
  - The fundamental forecasts include sources such as Wood Mackenzie, EIA, the Northwest Power and Conservation Council (NWPCC), Bentek and the Financial Forecast Center's long-term price forecasts.
  - Used weighted prices from the sources based on historical performance, beginning in year two of the forecast.
  - While not a guarantee of where the market will ultimately finish, Henry Hub NYMEX is 100% of the forecast for the first year as it is the most current information that provides some direction as to future market prices.
- Intermountain is gathering Renewable Natural Gas information and plans to model RNG as a potential resource in the upstream optimization process.

INTERMOUNTAIN'S IRP PRICE FORECAST

IGC Natural Gas Price Forecast (as of 5-7-2025)
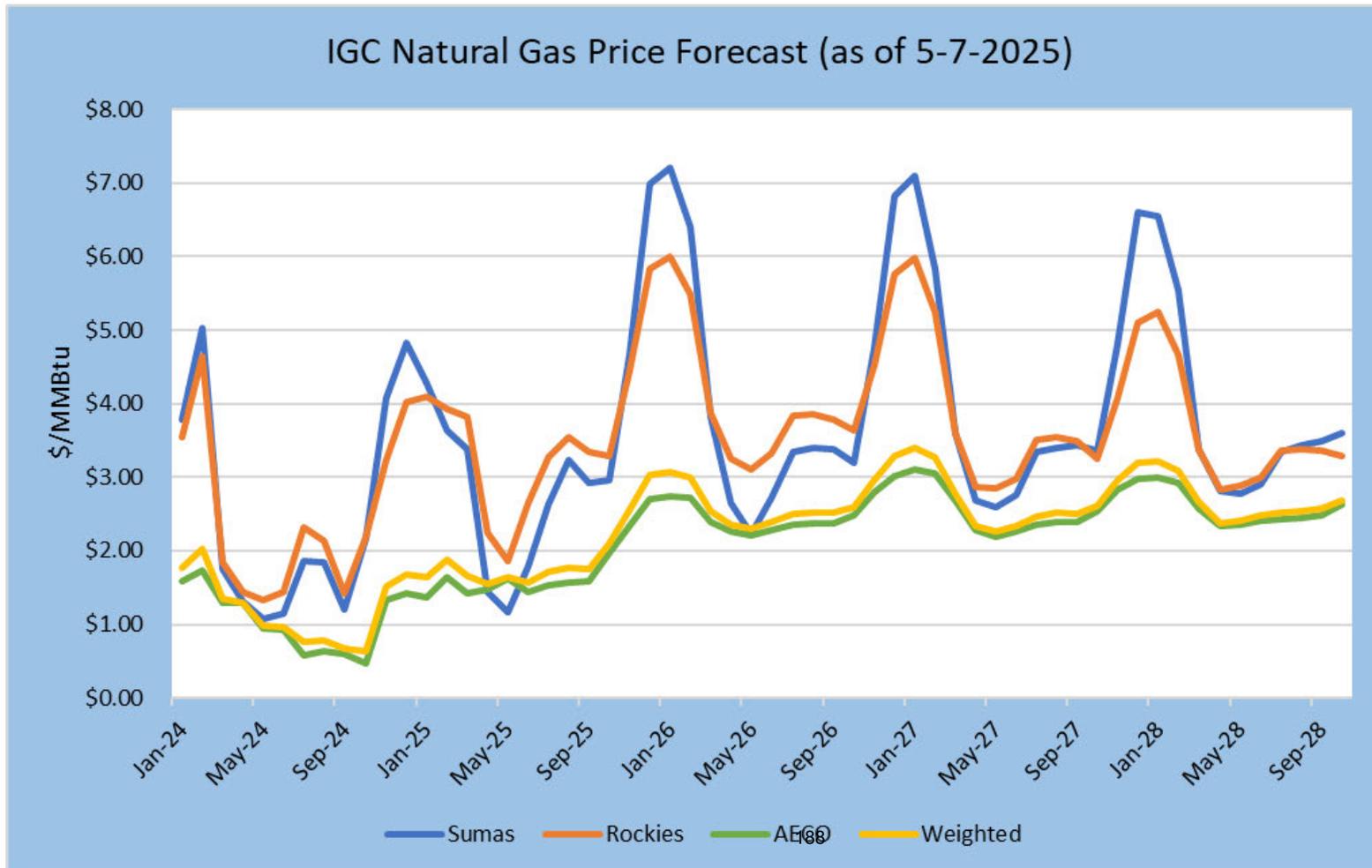
Preliminary Weights:
Sumas – 10%
Rockies – 10%
AECO – 80%

INTERMOUNTAIN GAS COMPANY
2025-30 INTEGRATED RESOURCE PLAN

INTERSTATE TRANSPORTATION AND STORAGE RESOURCES

INTERSTATE TRANSPORTATION AND STORAGE RESOURCES

- Intermountain holds firm, long-term contracts for interstate capacity on four (4) pipelines - two U.S. and two Canadian

- All gas directly delivered to Intermountain comes through the Williams Northwest system

- Firm capacity on Northwest is determined at both receipt and delivery points

INTERSTATE TRANSPORTATION AND STORAGE RESOURCES

Interstate Transportation Capacity – cont.

- Delivery to Intermountain Service Territory
    - Firm Capacity Held Directly by Intermountain
    - City Gate Delivery Direct from Suppliers

- Capacity Segmentation

- Capacity Release and Mitigation for Intermountain

- Market forces drive new capacity projects

NORTHWEST PIPELINE, GTN, NOVA AND FOOTHILLS

CAPACITY RESOURCES

Northwest Daily Maximum Transportation Capacity (MMBtu)

	2025	2026	2027	2028	2029	2030	2031
Stanfield	224,565	224,565	224,565	224,565	224,565	224,565	224,565
Rockies	59,328	59,328	59,328	59,328	59,328	59,328	59,328
Citygate	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total Capacity	293,893	293,893	293,893	293,893	293,893	293,893	293,893
Storage Withdrawals with Bundled Capacity	155,175	155,175	155,175	155,175	155,175	155,175	155,175
JP TF-2 Capacity	30,337	30,337	30,337	30,337	30,337	30,337	30,337
Nampa and Rexburg	35,500	35,500	35,500	35,500	35,500	35,500	35,500
Maximum Deliverability	514,905	514,905	514,905	514,905	514,905	514,905	514,905

97

STORAGE RESOURCES

- ## What is storage?

  - ➢ Natural or man-made structures where natural gas can be injected and stored for later retrieval

  - ➢ Gas is normally injected during periods of lower demand and lower prices

  - ➢ Gas is usually withdrawn during periods of higher demand and higher prices

STORAGE RESOURCES

- Why do we need storage?
  - Demand curve is *not* linear
  - Annual supply curve somewhat linear
  - Transport capacity is very linear
  - Not feasible to meet peak demand with only interstate capacity and must-take gas purchases alone
  - Storage enhances winter/peak delivery capability and minimizes costs by balancing flat supply with seasonal demands

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Example Load Duration Curve
With Only Storage and Gas Supply
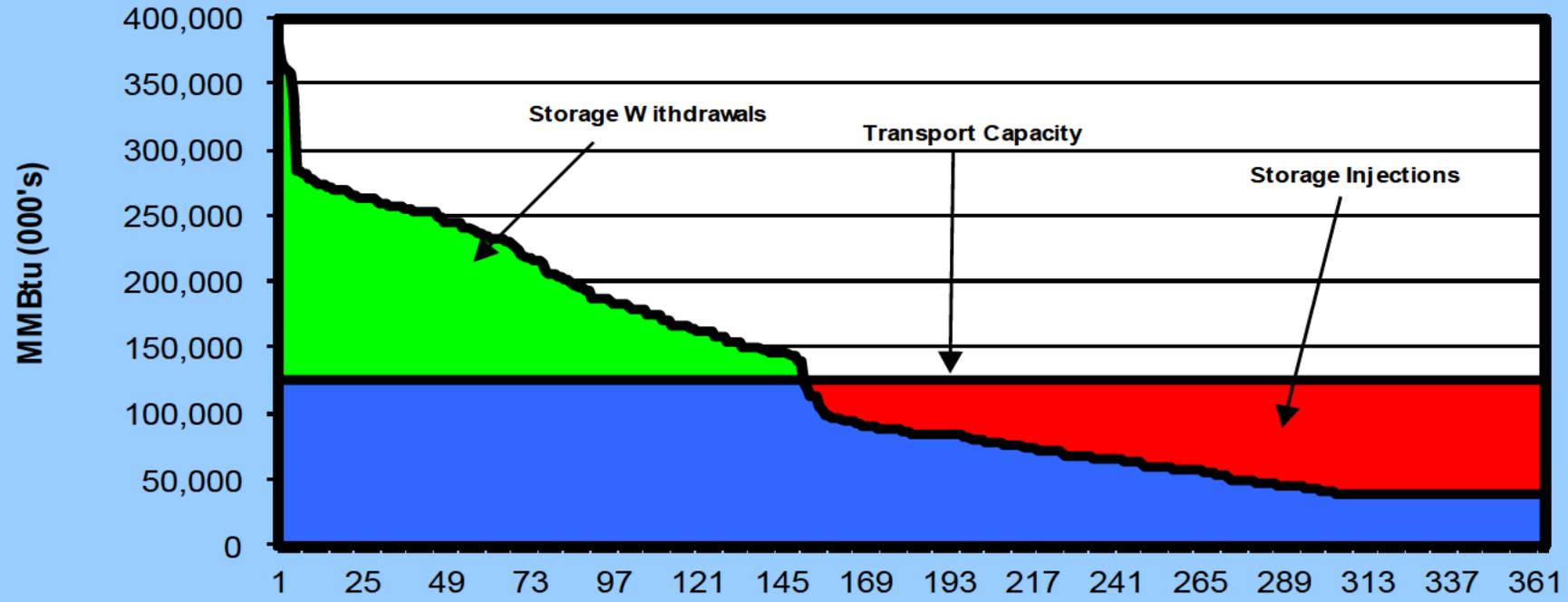
STORAGE RESOURCES

- Uses
  - "Needle" peaking
  - Winter baseload
  - Day-to-day load balancing
  - Natural gas price hedge
  - System integrity/emergency issues
- Types
  - Liquefied Storage (LNG)
  - Underground

STORAGE RESOURCES

Liquefied Storage Characteristics

- Natural gas is liquefied @ minus 260° F

- Liquid occupies 1/600 volume of vapor

- Nearly pure methane, non-corrosive, non-toxic and yes, SAFE

- High regasification/withdrawal capability

- Ideal for needle peaking, system balancing and system integrity issues

STORAGE RESOURCES

Liquefied Storage Characteristics

- Liquefaction is slow which limits ability to cycle inventory

- Liquefaction is energy intensive → high cycling and inventory cost

- Generally stored in above-ground tanks

- No methane is released into the atmosphere

PLYMOUTH LNG FACILITY

STORAGE RESOURCES

Underground Storage Characteristics

- Gas is injected under pressure into developed salt domes, depleted well structures, underground aquifers or other porous geological formations

- Maximum daily withdrawal less than liquid storage; operating capability is dependent upon inventory level and pressure

- Injections comparatively faster and cycling costs are lower than liquid storage; multiple inventory cycles can enhance cost effectiveness

STORAGE RESOURCES

Location & Type of Storage used by Intermountain

- Nampa, ID LNG – liquid (Intermountain)

- Plymouth, WA LNG – (Northwest Pipeline)

- Rexburg, ID Satellite LNG (Intermountain)

- Jackson Prairie - underground aquifer in western WA (Northwest Pipeline)

- Clay Basin - underground depleted well reservoir in NE Utah (Questar Pipeline)

STORAGE RESOURCES - LOCATIONS
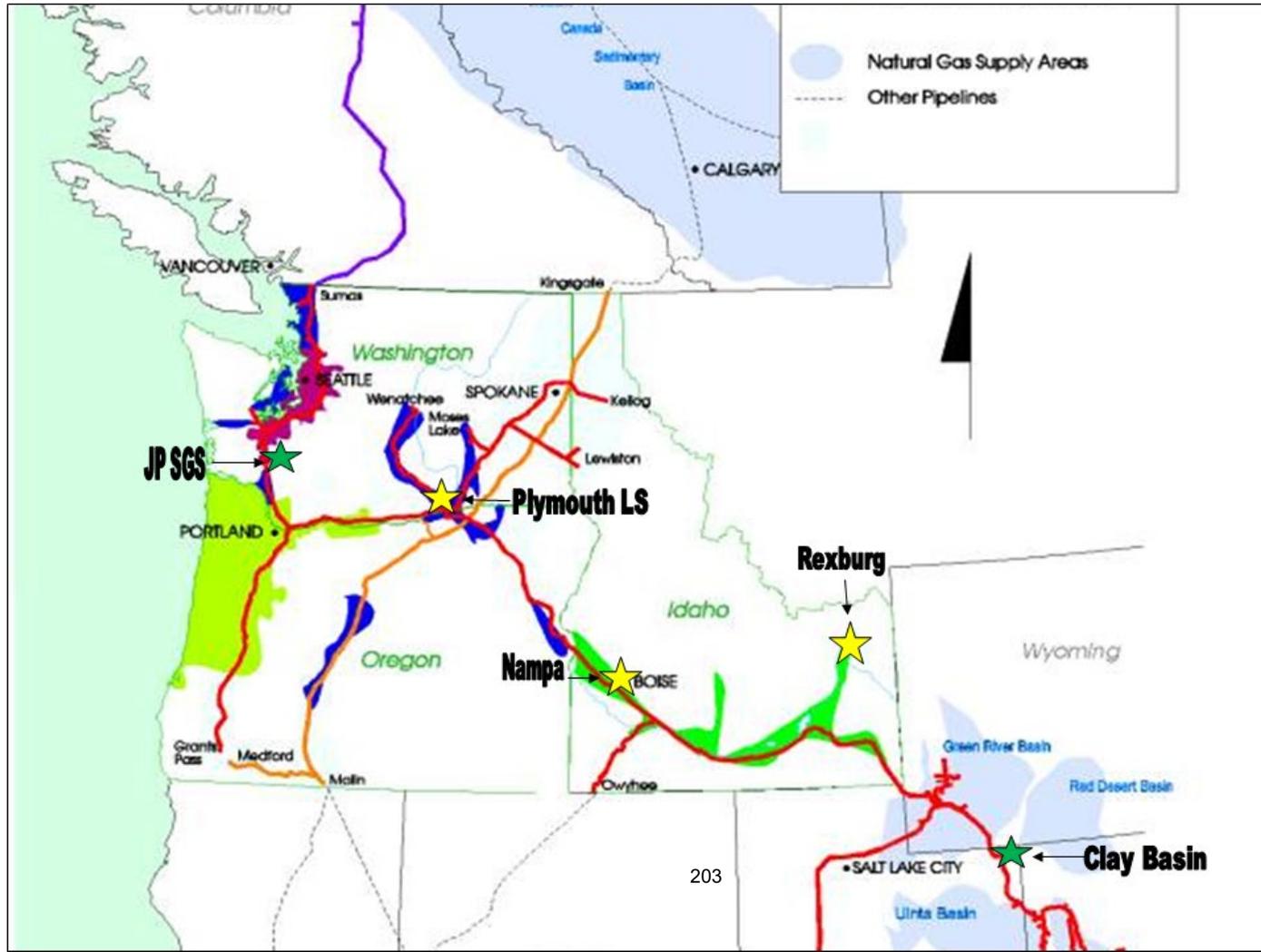
Intermountain's 2023/24 Storage Statistics (MMBtu)

Facility	Seasonal Capacity	% of Nov-Mar	Daily Withdrawal		Daily Injection		Redelivery Capacity
			Maximum	% of Peak	Max Vol	# of Days	
Nampa	600,000	1%	60,000	16%	3,500	166	*None*
Plymouth*	1,475,135	4%	155,175	43%	12,500	213	TF-2
Jackson Prairie	1,092,099	3%	30,337	8%	30,337	36	TF-2
Clay Basin	8,413,500	20%	70,114	19%	70,114	120	TF-1
Grand Total	11,580,734	28%	315,626	86%	116,451		

108

204

Sample LDC with Efficient Mix of All Supply Resources
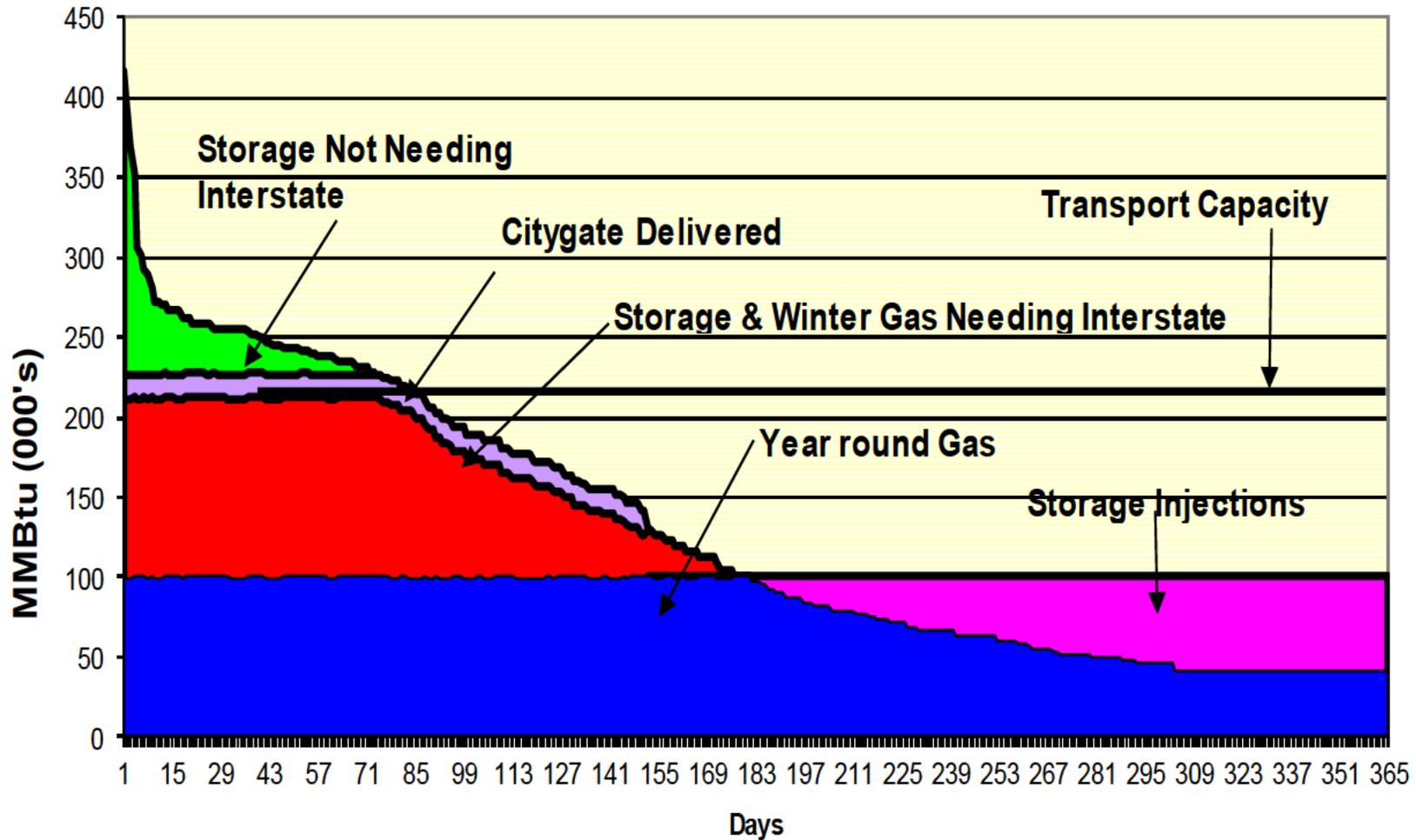
QUESTIONS?

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

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THIRD MEETING

September 17, 2025, 9:00 a.m. - Noon

- Potential Capacity Enhancements

- Resource Optimization

- Planning Results

- Remaining IRP Process

IGRAC #2

INTEGRATED RESOURCE PLAN
AUGUST 13, 2025
INTERMOUNTAIN GAS RESOURCE ADVISORY COMMITTEE (IGRAC)

Date & time: 8/13/2025, 9:00 AM to 11:00 PM MT

Location: Microsoft Teams Meeting

Presenters: Kathleen Campbell, Kathy Wold, Brian Robertson, Eric Wood

In attendance: Bailey Steeves, Brian Robertson, Chris Robbins, Eric Wood, Jason Talford, Jenny DeBoer, Kathleen Campbell, Kathy Wold, Mark Sellers-Vaughn, Matthew Hunter, Michael Parvinen, Rebecca Wildman, Ryan Denton, Seungjae Lee, Vicki Stephens, Zachary Harris, Zachary Sowards

Introduction

Brian Robertson, Manager of Supply Resource Planning, opened the meeting by welcoming and thanking stakeholders for participating in Intermountain's IRP Process. Brian then proceeded with introductions, the agenda, a safety moment, and a reminder of the stakeholder engagement goals.

Presentation #1 – Distribution System Modeling (Kathleen Campbell)

- System Dynamics of Piping and Facilities
- Synergi Gas is the model Intermountain uses to evaluate predicted flows and pressures during peak weather events
- Discussed the process of building out the models
  - Rebuilt every 3 years, most recently in early 2025
- Customer Management Module (CMM) uses Customer Care & Billing and weather data to build regression models.
- Kathleen then covered the capabilities of the Synergi model once the models are built out
  - Review large volume customer requests, future planning based on IRP growth, and determining system reliability to name a few
- Described enhancement options
  - Pipeline, facility upgrades, additional regulator station, new citygate station, additional compressor stations
- Discussed enhancement considerations and selection guide

Presentation #2 – Avoided Cost Methodology (Brian Robertson)

- Brian gave a brief update to the history of the avoided cost model

- Explained that the avoided cost is the cost to serve a dth of gas, which will be evaluated to determine if there is an energy efficiency program that could replace that dth of gas at a lower cost.
- Provided the formula and explained the inputs to the cost
  - Commodity Cost, Transportation Cost
  - Distribution Costs, although $0 for now

Presentation #3 – Energy Efficiency (Kathy Wold)

- Kathy provided insights to current rebates and incentives
- Explained what the Conservation Potential Assessment and its importance
- Discussed the updates to the conservation potential and changes from the 2023 IRP
  - Main updates included building stock and sales, retail rates, avoided cost, inflation rate, and discount rate

Question: "What is the reason for the decline in the discount rate?"
Answer: Brian stated that "Intermountain will have to get back to you on this." After further digging, the reason is that the discount rate is impacted by the change in the inflation rate.

There was dialogue between the CPA and how Energy Efficiency is modeled in the IRP. Ultimately, Intermountain would require investing time to incorporate some modeling that's never been done, so implementing it into this IRP may be difficult. IGC has reached out to Staff to discuss this further.

- Kathy discussed technical, economic, and achievable potential
- Intermountain has four scenarios, the base business as usual, unconstrained historical budget, medium adoption, and high incentive, high adoption. Kathy provided the projections for each scenario.
- Finally, Kathy provided the big picture take-aways from all the updates for the 2025 IRP

Presentation #4 – Supply Resources and Transportation & Storage Resources (Eric Wood)

- Eric provided a background of gas supplies around North America
- Discussed historical pricing, what can impact those prices, and provided a price forecast for the IRP
- Eric then shared the Company's current transportation and storage resources to serve customers

Question: "Has the pipeline ever run out of gas?"
Answer: "Not over a large area but in certain instances, some small areas of pipe can be constrained for different reasons." – Eric Wood

The Meeting was Adjourned – IGRAC #3 will be held on September 17, 2025 @ 9 AM MT

INTEGRATED RESOURCE PLAN
SEPTEMBER 17, 2025
INTERMOUNTAIN GAS RESOURCE ADVISORY COMMITTEE (IGRAC)

WELCOME

- Introductions

- Feedback Process

- Agenda

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

AGENDA

- **Welcome & Introductions** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Safety Moment** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Load Demand Curves –** *Ryan Denton (Resource Planning Economist)*

- **Potential Capacity Enhancements** – Kathleen Campbell *(Senior Engineer)*

- **Resource Optimization –** Brian Robertson (*Manager, Supply Resource Planning*)

- **Questions/Discussion**

SAFETY MOMENT

BRIAN ROBERTSON

MANAGER, SUPPLY RESOURCE PLANNING

Lighting-How to Protect Yourself

If you hear thunder and see lightning, seek shelter right away; indoors when possible.
Listed below are several tips on staying safe before, during, and after a storm:

BEFORE THE STORM

➢ If planning any outdoor activities; check weather forecasts and alerts.
   • Cancel or postpone if bad weather seems likely.

➢ Make a lightning safety plan that includes where to seek shelter and the safest route to get there.

➢ Unplug electrical items to avoid power surges.

➢ Bring family pets indoors or put them into a fully enclosed building.

DURING THE STORM

➢ Avoid seeking shelter in sheds, picnic shelters, covered porches, tents or under trees.
   • Wait out the storm in a substantial building or hard-topped vehicle with windows rolled up.

➢ Avoid high ground, open spaces, and trees.

➢ Stay away from metal objects; they do not attract lightning, but conducts it.

➢ Keep clear of doors and windows.

➢ Plumbing can conduct electricity; wait until the storm passes to shower or bathe.

➢ If fishing, return to shore and seek a safe shelter as soon as possible.

AFTER THE STORM

➢ Charges of lightning can linger in the clouds; stay indoors for at least 30 minutes after the last sound of thunder.

Article Reference: Druley, Kevin. "Protect yourself from lightning." *Family Safety & Health* Fall 2019. Print.

LOAD DEMAND CURVES

RYAN DENTON

RESOURCE PLANNING ECONOMIST

LOAD DEMAND CURVE KEY VARIABLES

- Customer usage per degree day.

- Low, base and high growth core market customer count projections.

- 'Design weather' conditions.

- Demand-side management (DSM).

- Maximum daily flow quantity (MDFQ) for large volume customers.

PEAK SEASON CORE MARKET LOAD DEMAND CURVE METHODOLOGY

Usage per Customer per Degree Day ✕ Customer Count ✕ HDD ➡ Residential & Commercial Total Daily Usage

Residential & Commercial Total Daily Usage

– Demand-Side Management

+ Large Volume MDFQ

Total Daily Usage

LOAD DEMAND CURVE

- Load demand curve: A forecast of daily gas demand using weather normal, 'design temperatures', customer counts, and forecasted usage per customer.

- Designed to measure demand to compare to distribution capacity at our 5 areas of interest (AOI).

- To measure total company demand for upstream capacity decisions.

- Based on current resources or resources scheduled to be available during the IRP period.

- Remedies for any constraints will be identified later.

- Storage management.

2025 Load Demand Curve
Design Base Case
Total Company
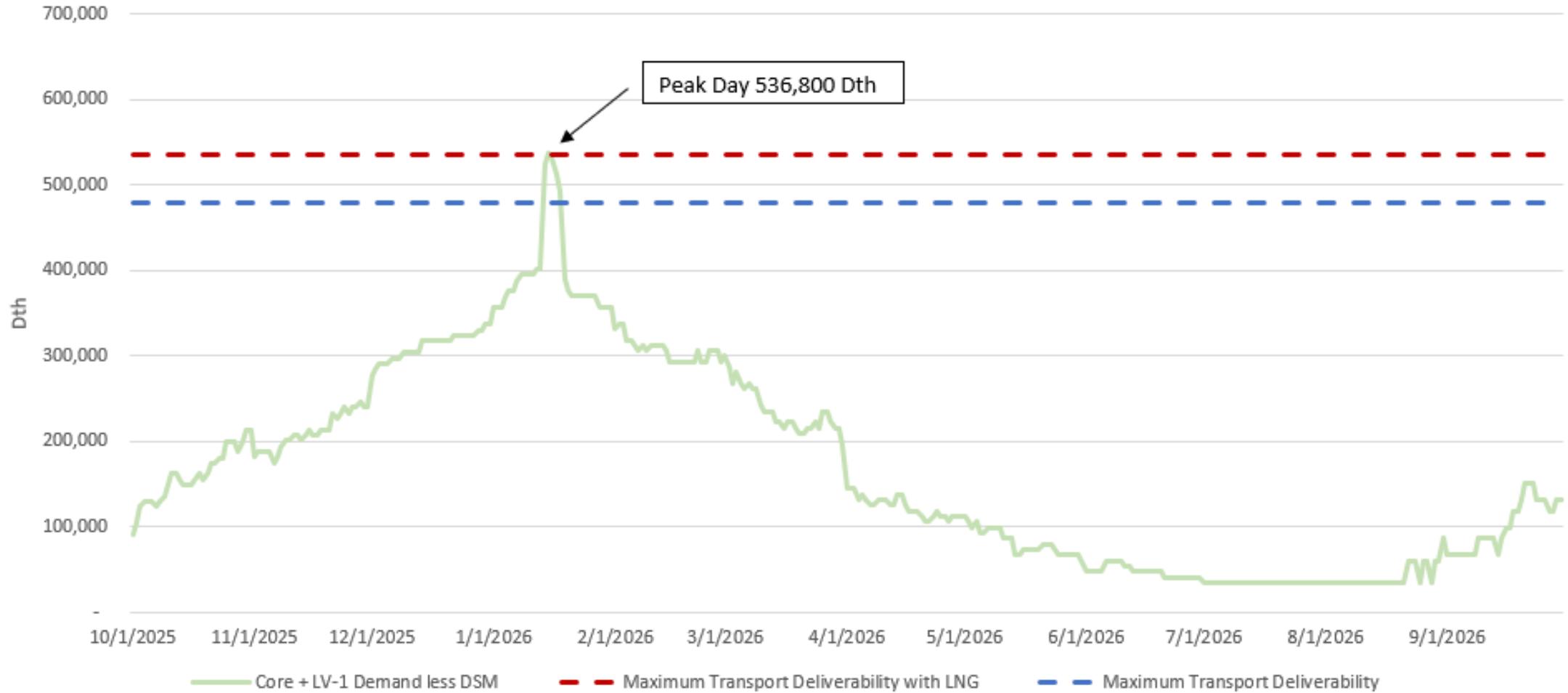
Peak Day 536,800 Dth

Legend: Core + LV-1 Demand less DSM — Maximum Transport Deliverability with LNG — Maximum Transport Deliverability

2030 Load Demand Curve
Design Base Case
Total Company

Peak Day 582,518 Dth

Core + LV-1 Demand less DSM — Maximum Transport Deliverability with LNG — Maximum Transport Deliverability
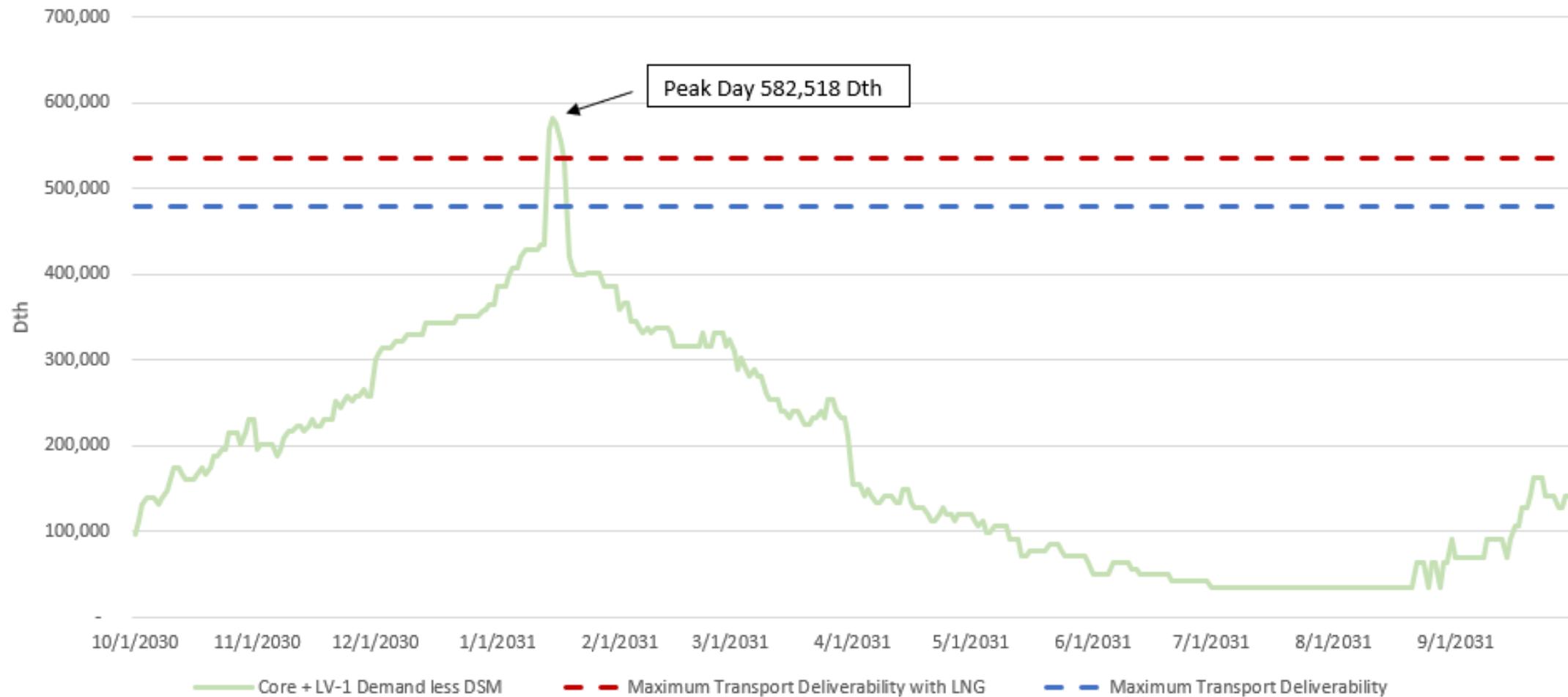
- Idaho Falls Lateral

- Sun Valley Lateral

- Canyon County Lateral

- State Street Lateral

- Central Ada County

2025 Load Demand Curve
Design Base Case
Idaho Falls Lateral
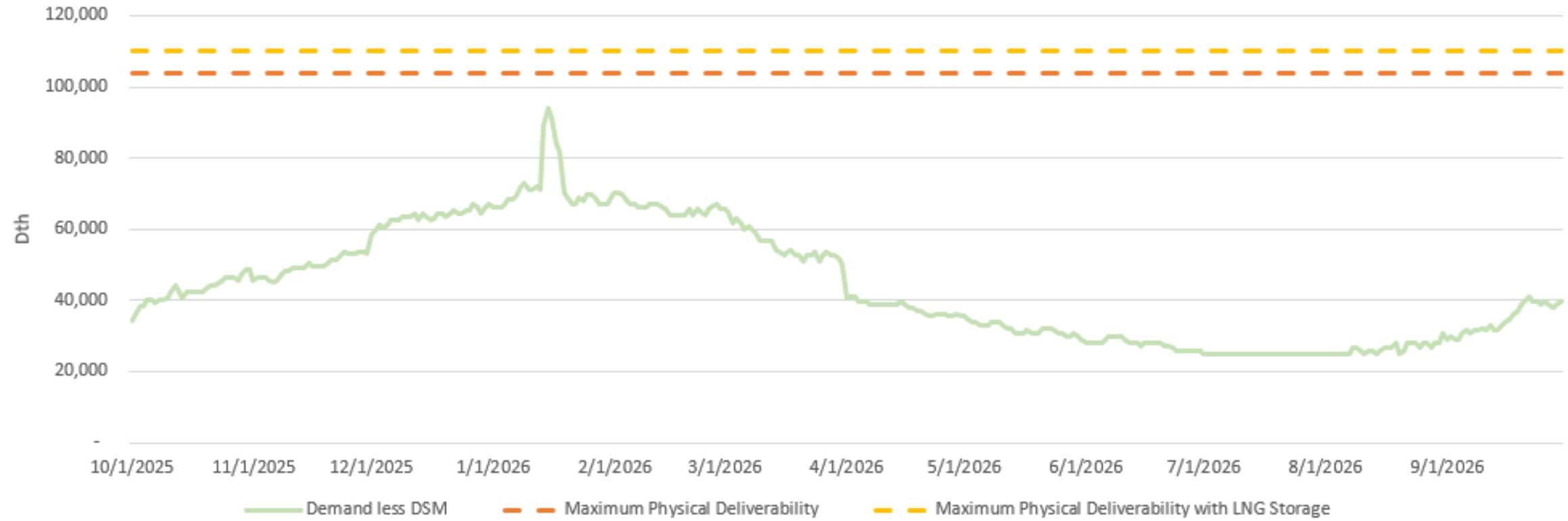
2030 Load Demand Curve
Design Base Case
Idaho Falls Lateral
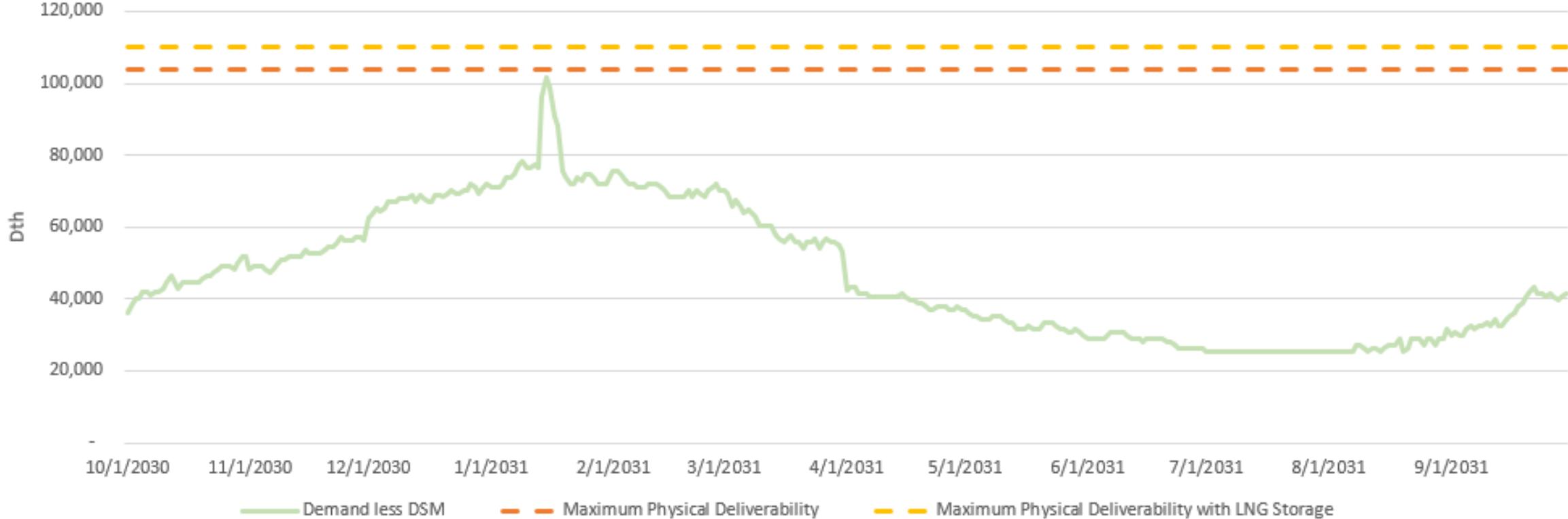
2025 Load Demand Curve
Design Base Case
Sun Valley Lateral
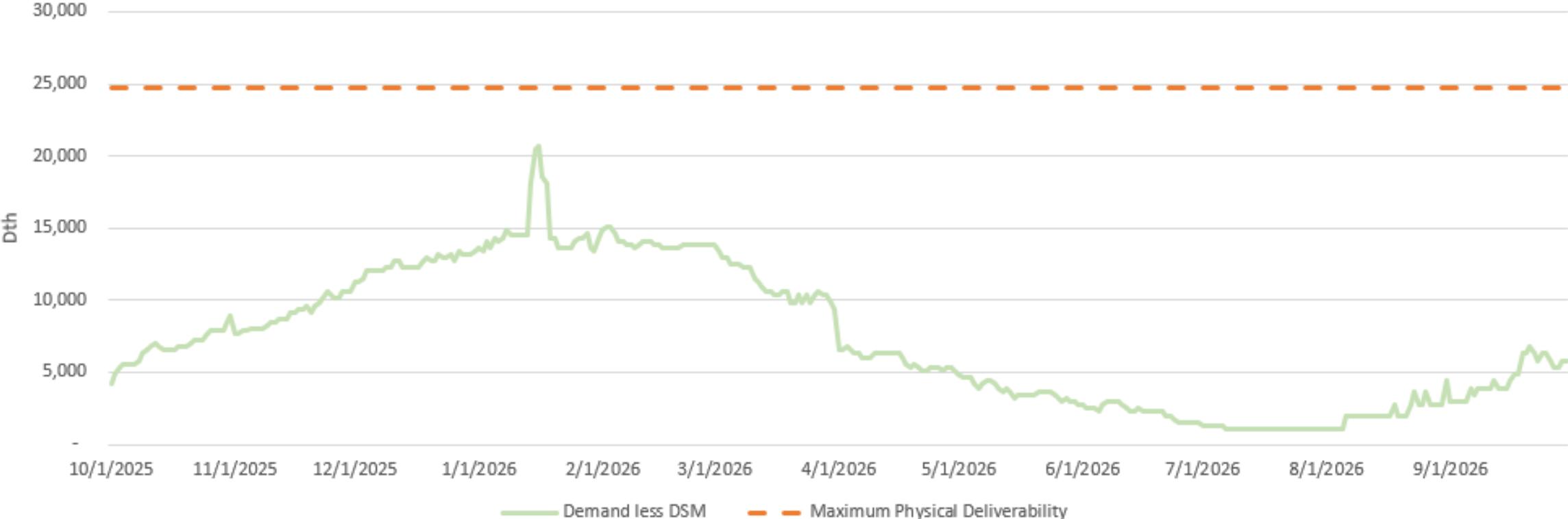
2030 Load Demand Curve
Design Base Case
Sun Valley Lateral
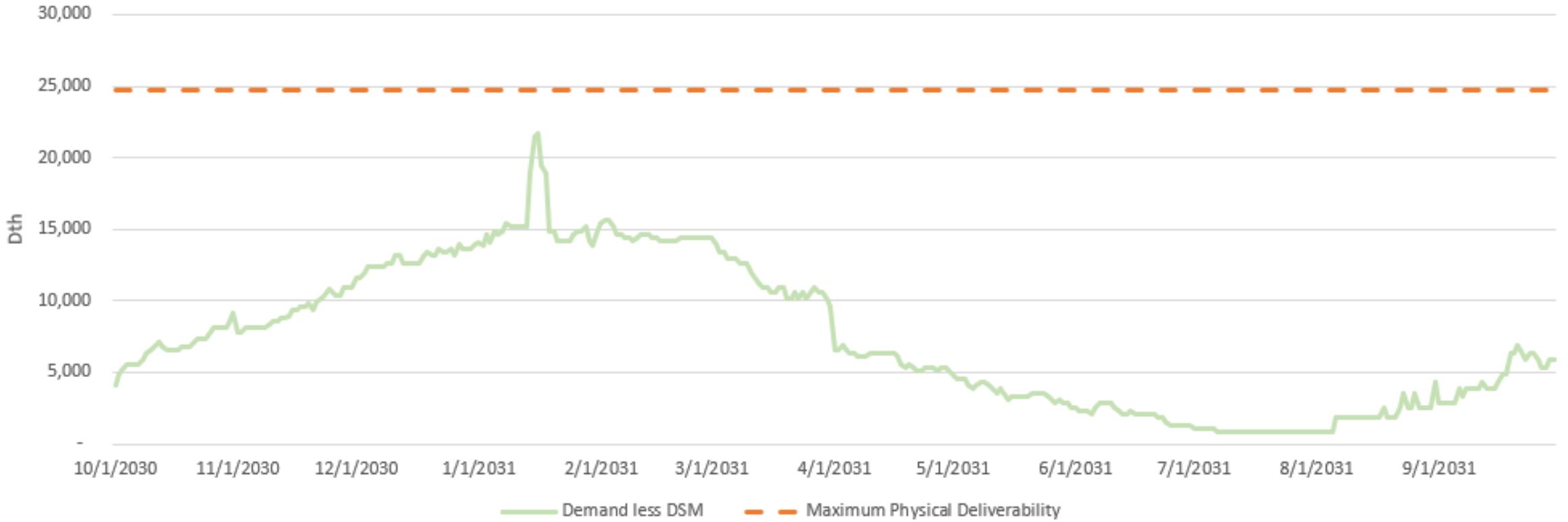
2025 Load Demand Curve
Design Base Case
Canyon County Lateral
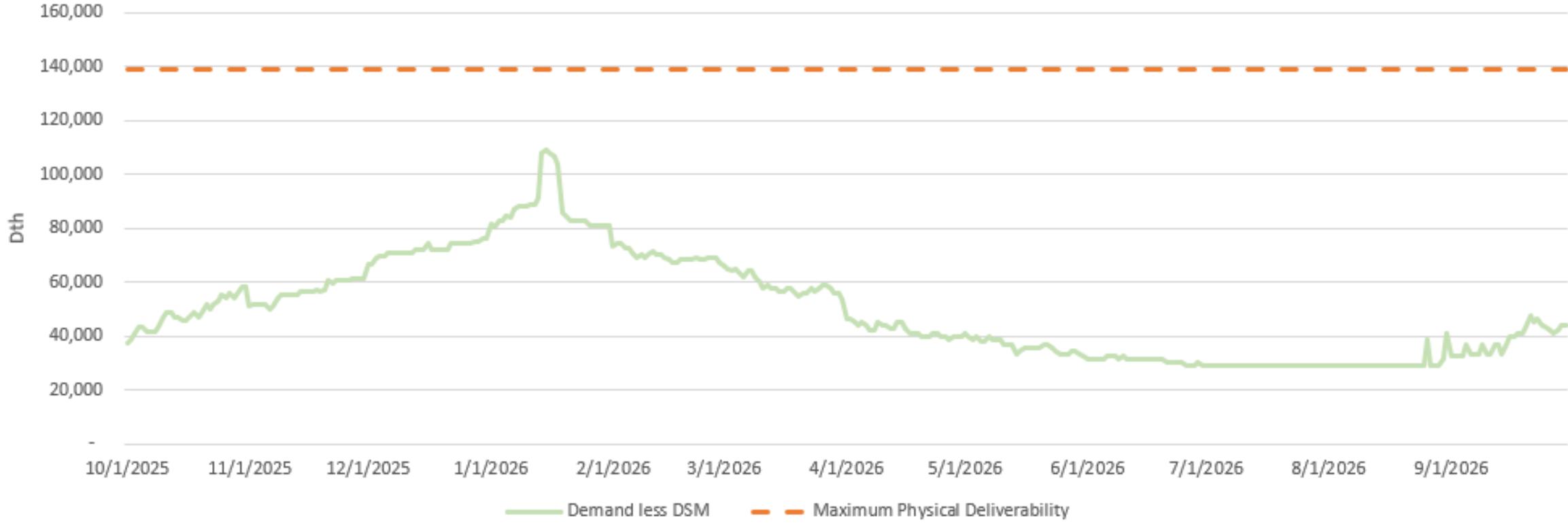
2030 Load Demand Curve
Design Base Case
Canyon County Lateral

2025 Load Demand Curve
Design Base Case
State Street Lateral
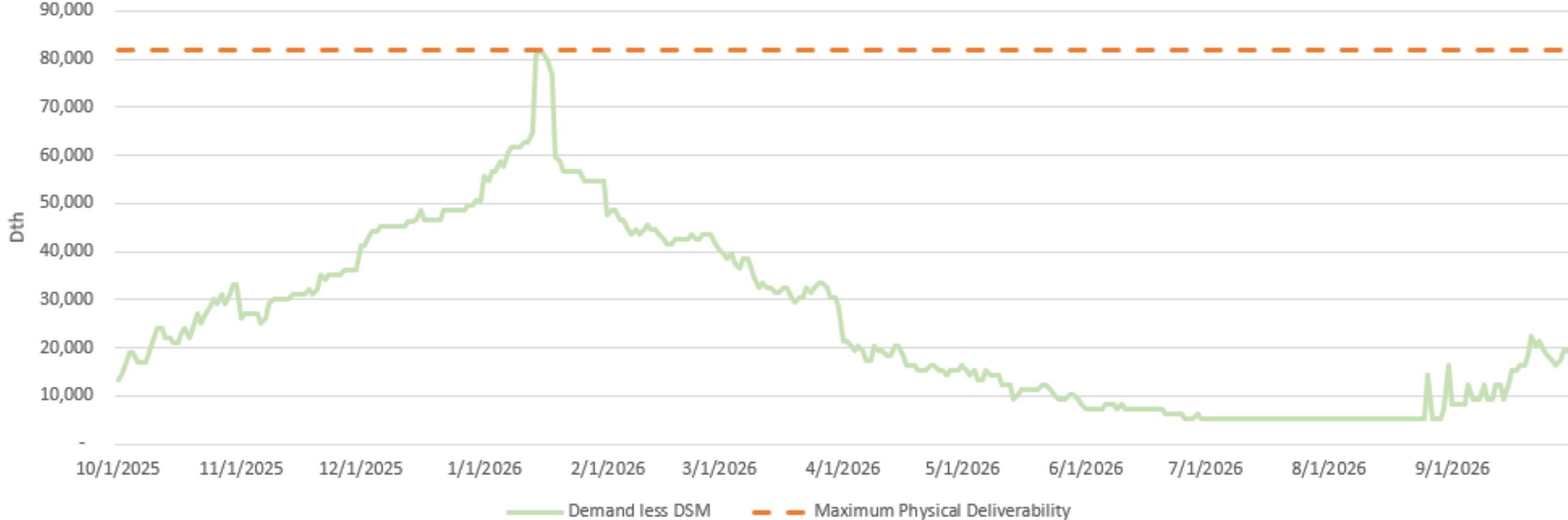
2030 Load Demand Curve
Design Base Case
State Street Lateral
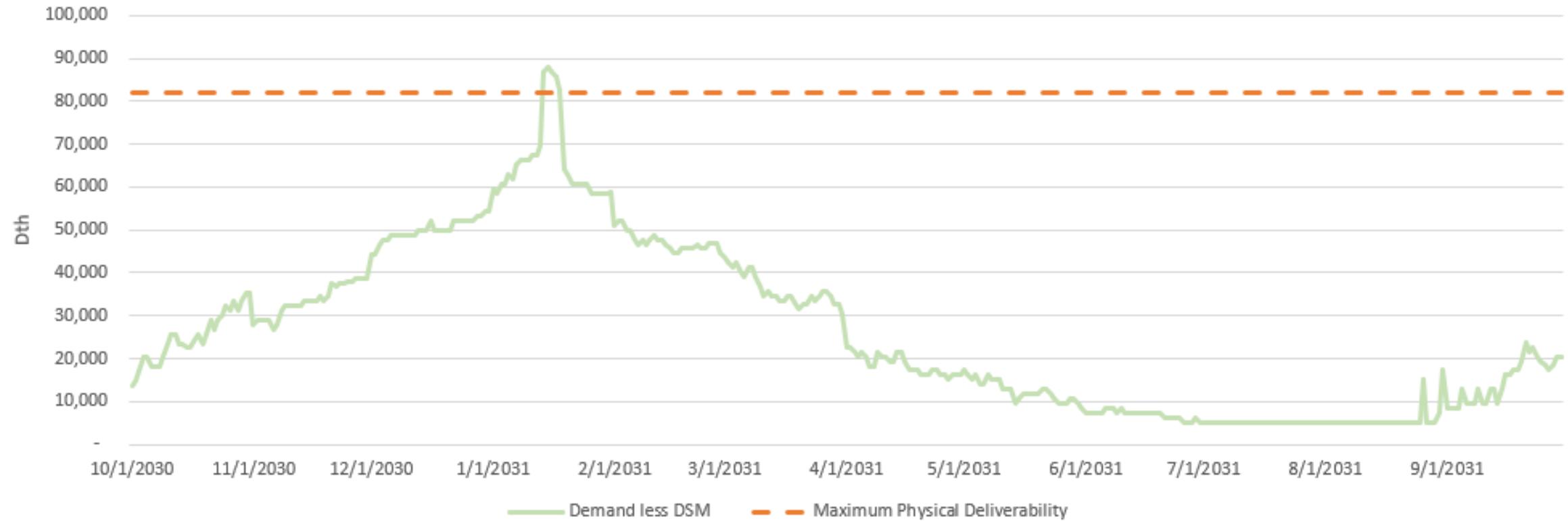
2025 Load Demand Curve
Design Base Case
Central Ada Lateral
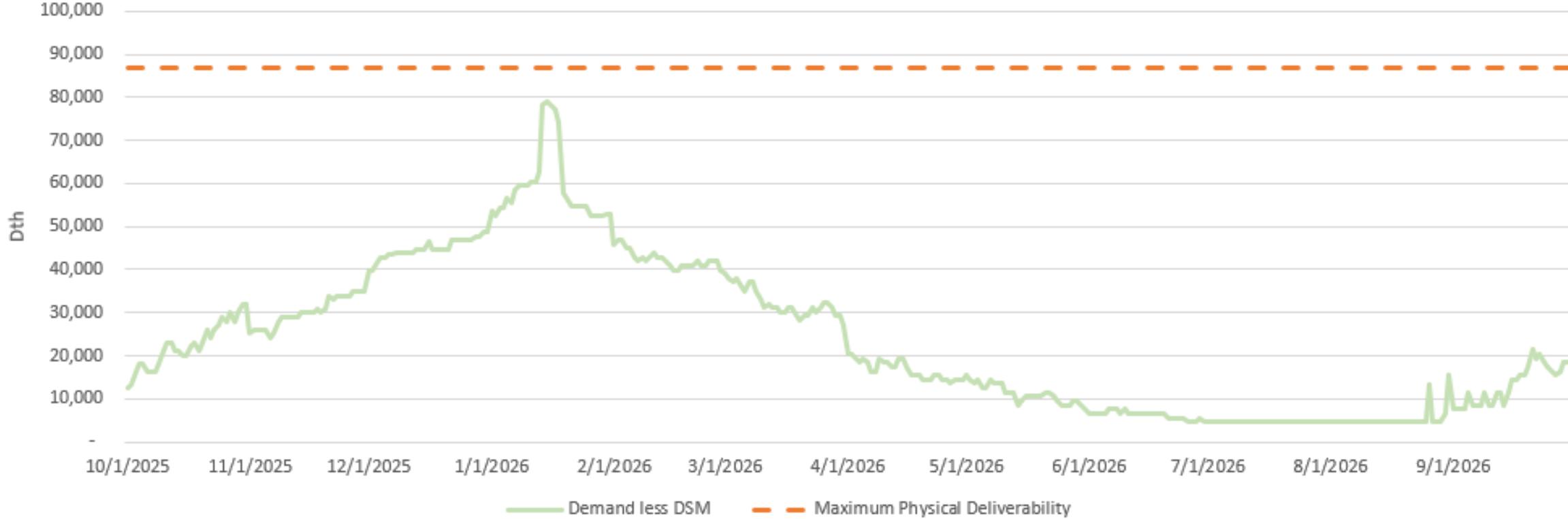
2030 Load Demand Curve
Design Base Case
Central Ada Lateral
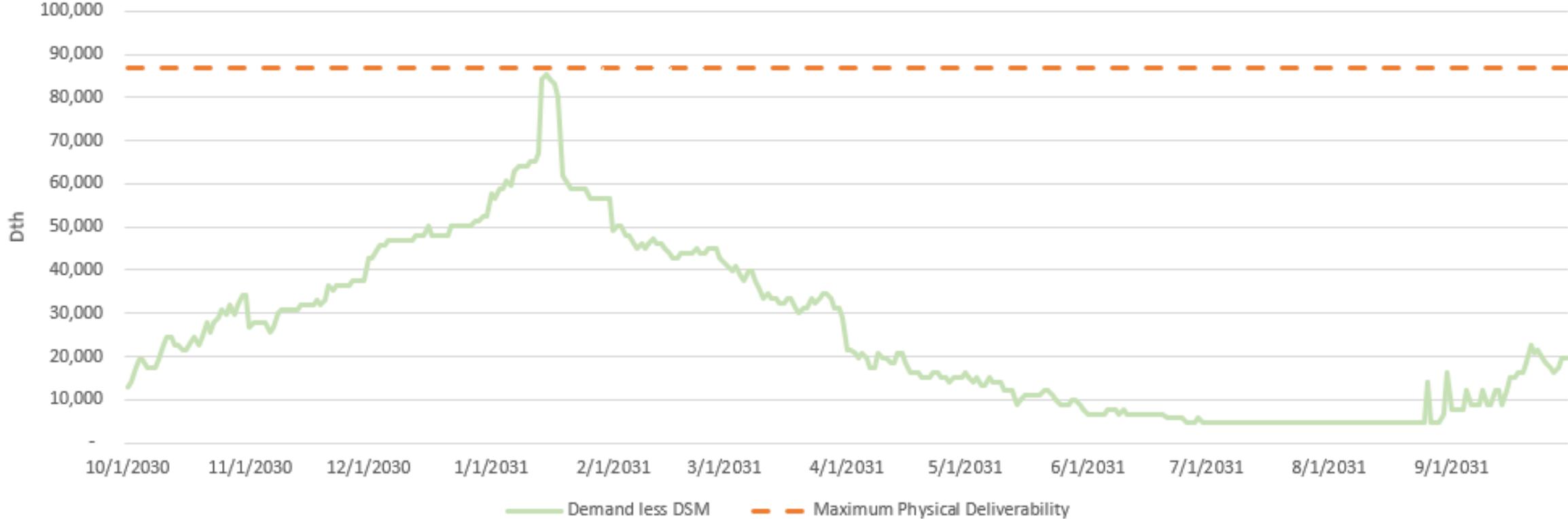
QUESTIONS?

DISTRIBUTION SYSTEM ENHANCEMENTS

KATHLEEN CAMPBELL, P.E. - SENIOR ENGINEER - ENGINEERING SERVICES
ZACHARY SOWARDS - SENIOR ENGINEER– ENGINEERING SERVICES

IGRAC #2 COVERED:

- System dynamics

- Synergi model process

- Identification of system deficits/constraints

- Distribution enhancement/reinforcement options to address deficit

- Enhancement considerations and selection process into 5-year budget

THIS PRESENTATION WILL COVER:

- Project needs to support core growth for each AOI

- Alternative Analysis to resolve deficit (if it has not already been covered in a previous IRP)

- Timing, Cost and capacity gained for each project/alternative.

AREAS OF INTEREST (AOI)

- Distribution System Segments:
  - Canyon County
  - Central Ada County Lateral
  - "North of State Street" Lateral
  - Sun Valley Lateral
  - Idaho Falls Lateral
  - All Other Customers

NATURAL GAS SYSTEM
INTERMOUNTAIN GAS COMPANY
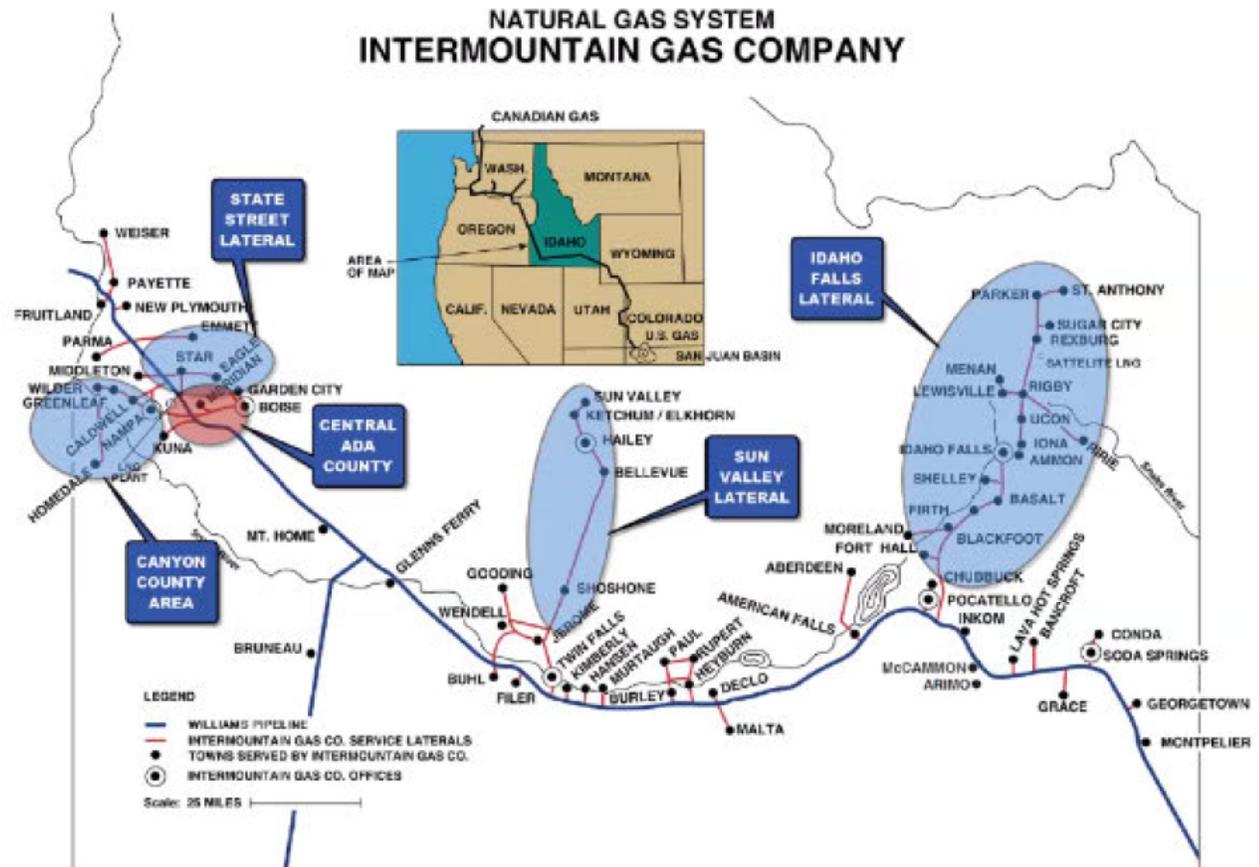
OTHER AOI

- Reinforcements required to meet 2030 growth predictions

  - Caldwell Reinforcement – Chinden (HWY 20) from to Prescott Lane to Middleton Road

    - 2027

  - New Plymouth Gate Upgrade

    - 2027

CANYON COUNTY AOI

- No reinforcements required to meet 2030 IRP growth predictions

- AOI Update

    - Ustick Phase 3 was completed in December 2024.

STATE STREET LATERAL AOI

- Requires reinforcements by 2026 & 2027 to meet IRP growth predictions

- AOI Capacity Limiter: 12-inch HP bottleneck on State Street and 4 in HP bottleneck on Linder Rd & State Penn (Boise #2) Gate Capacity

- Alternatives considered for 12-inch HP & 4- HP bottleneck were discussed in 2021 IRP

- State Street Phase II Uprate was selected in 2021 IRP and is budgeted for 2026

- State Penn Gate Upgrade is budgeted for 2026 Design and 2027 Construction

STATE STREET AOI - BOTTLENECK

STATE STREET PHASE II UPRATE
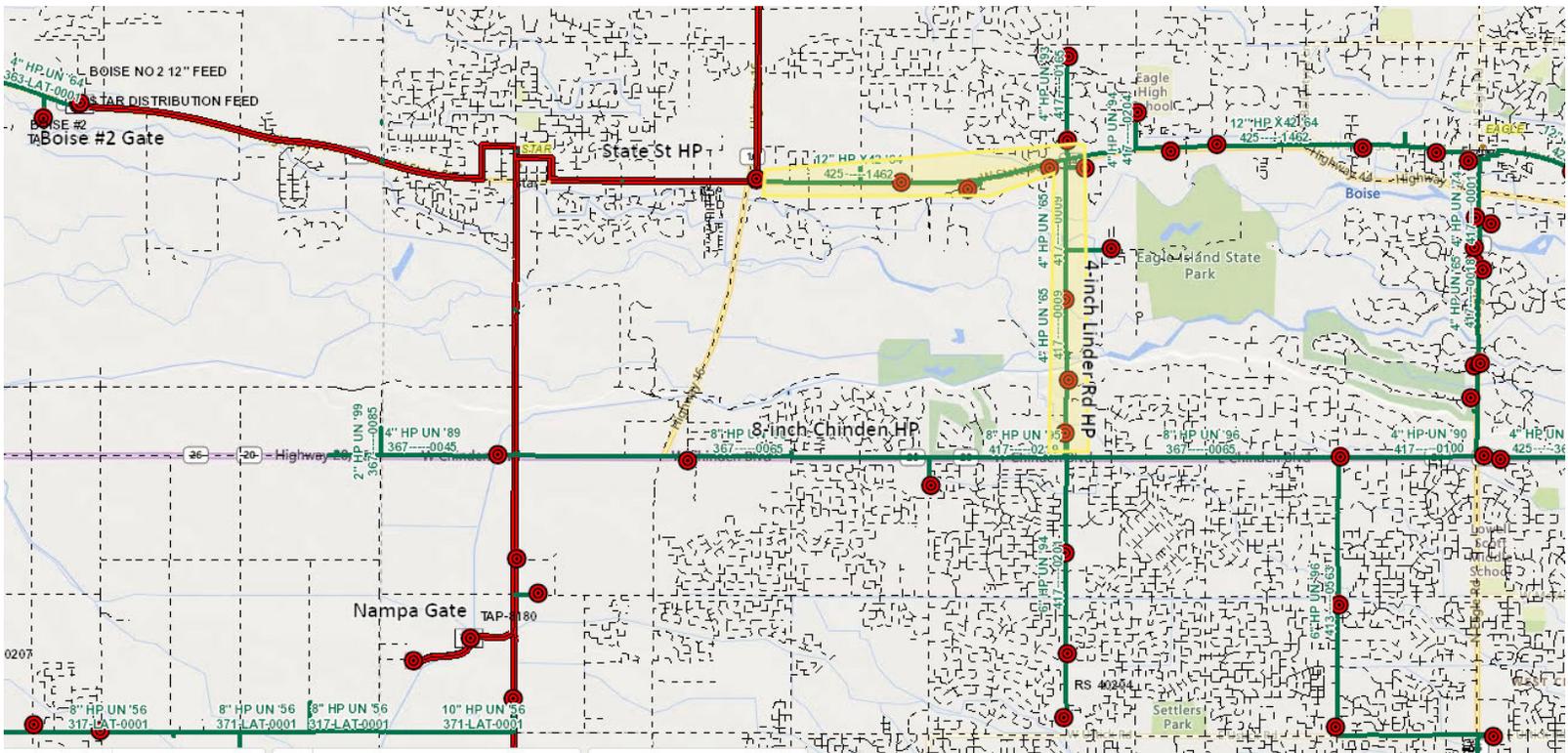
CENTRAL ADA COUNTY AOI

- No reinforcements required to meet 2030 IRP growth predictions

- AOI Update

    - 12-inch South Boise Loop was completed in 2023

SUN VALLEY LATERAL AOI

- No reinforcements required to meet 2030 IRP growth predictions

- AOI Update
  - Shoshone Compressor was completed in 2023

IDAHO FALLS LATERAL (IFL) - AOI

- Requires reinforcements by 2030 to meet IRP growth predictions.

- AOI Capacity Limiter: Suction line pressure to the Wapello Compressor

- Wapello Compressor Station expected to be operational in 2026

IDAHO FALLS - AOI
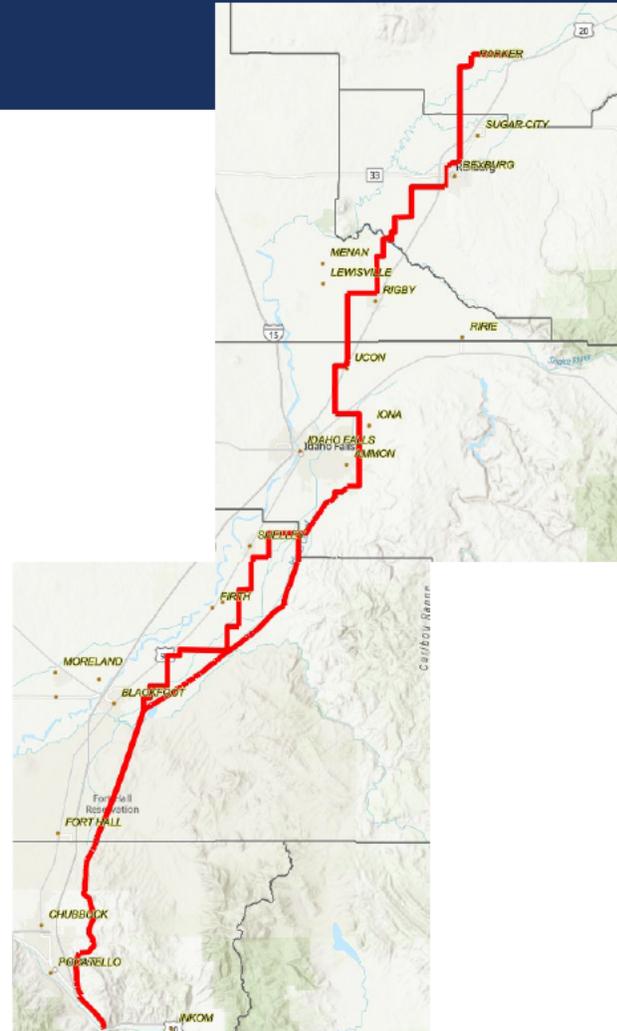
WAPELLO COMPRESSOR STATION – 2026
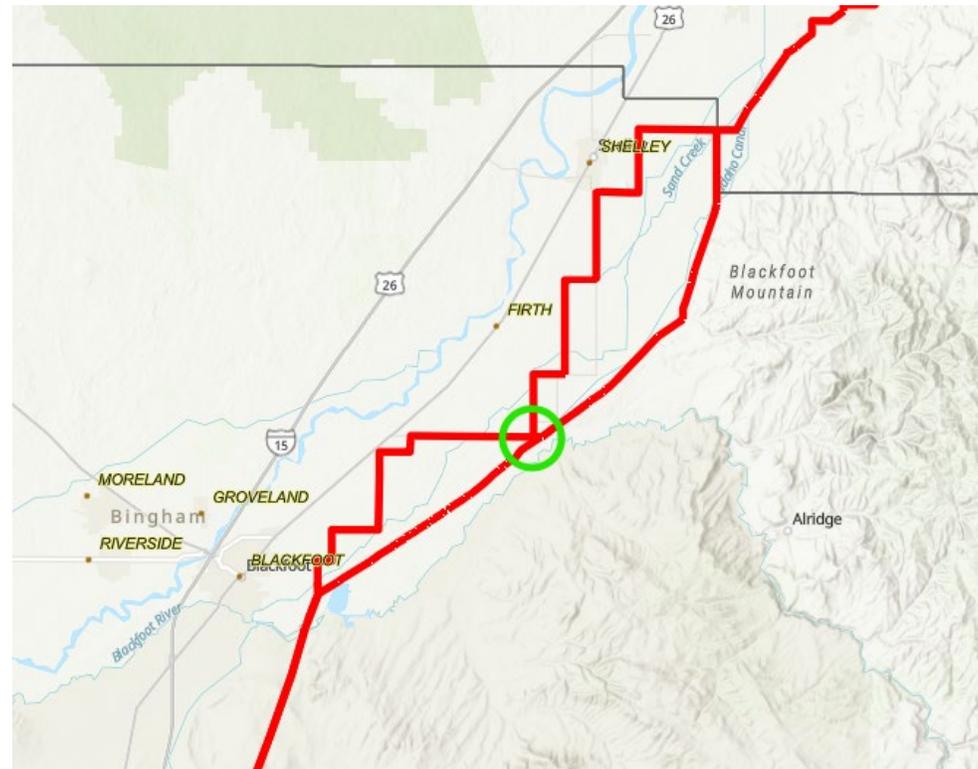
IDAHO FALLS – COMPRESSOR SUCTION PIPELINE 2030
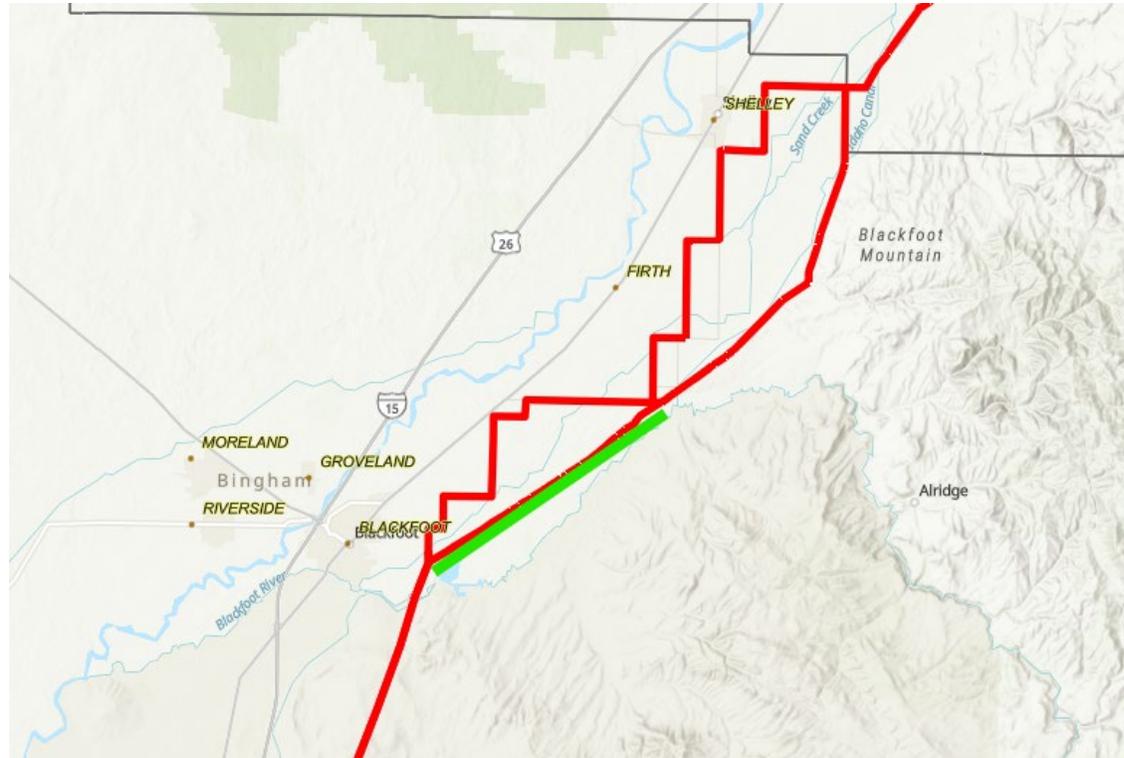
AOI CAPACITY SUMMARY AND TIMING NEEDS:

Year	Ada County AOI Capacity (th/day)	Ada CountyAOI Reinforcement Required	State Street Lateral AOI Capacity (th/day)	State Street Lateral AOI Reinforcement Required	Canyon County AOI Capacity (th/day)	Canyon County AOI Reinforcement Required	Sun Valley Lateral AOI Capacity (th/day)	Sun Valley AOI Reinforcement Required	Idaho Falls Lateral AOI Capacity (th/day)	Idaho Falls AOI Reinforcement Required
2026	870,000	None	950,000	State Street Uprate	1,390,000	None	247,500	None	1,037,000	IFL Compressor Station
2027	870,000	None	950,000	State Penn Gate Upgrade	1,390,000	None	247,500	None	1,037,000	None
2028	870,000	None	950,000	None	1,390,000	None	247,500	None	1,037,000	None
2029	870,000	None	950,000	None	1,390,000	None	247,500	None	1,037,000	None
2030	870,000	None	950,000	None	1,390,000	None	247,500	None	1,122,000	IFL Compressor Suction Project

QUESTIONS?

IRP OPTIMIZATION MODEL

Draft Design Base Results

BRIAN ROBERTSON; MANAGER, SUPPLY RESOURCE PLANNING
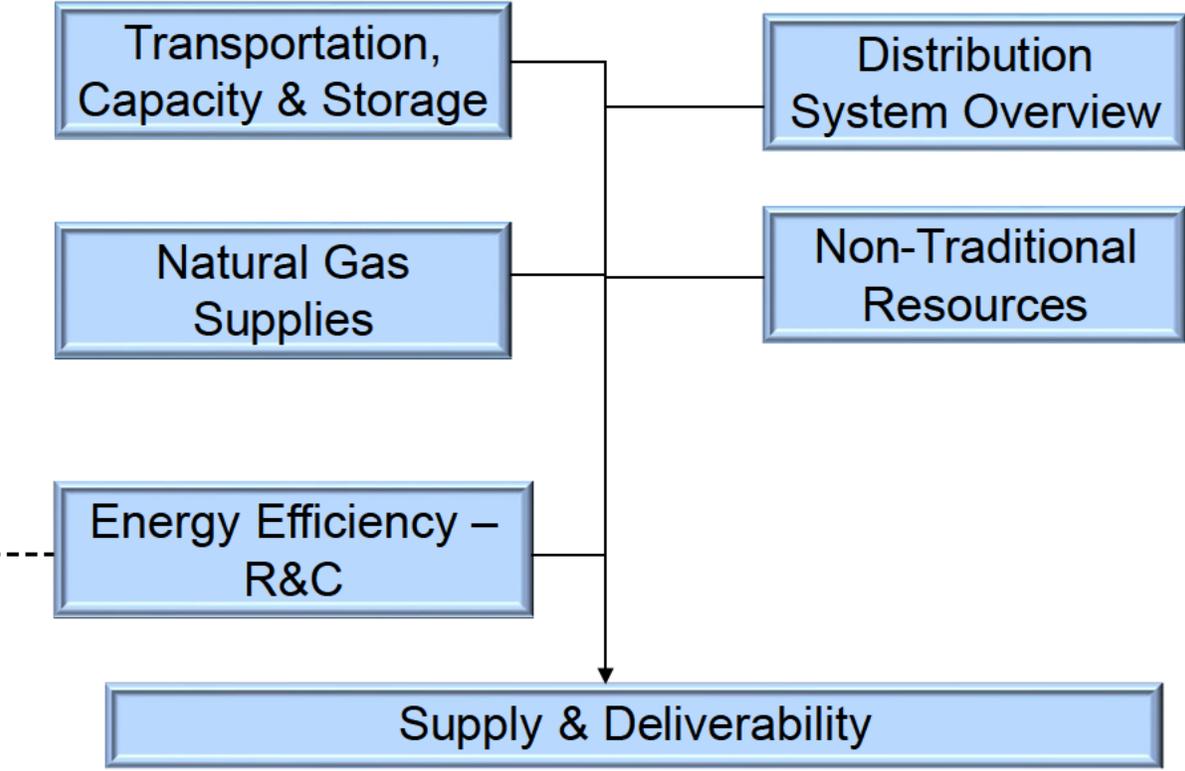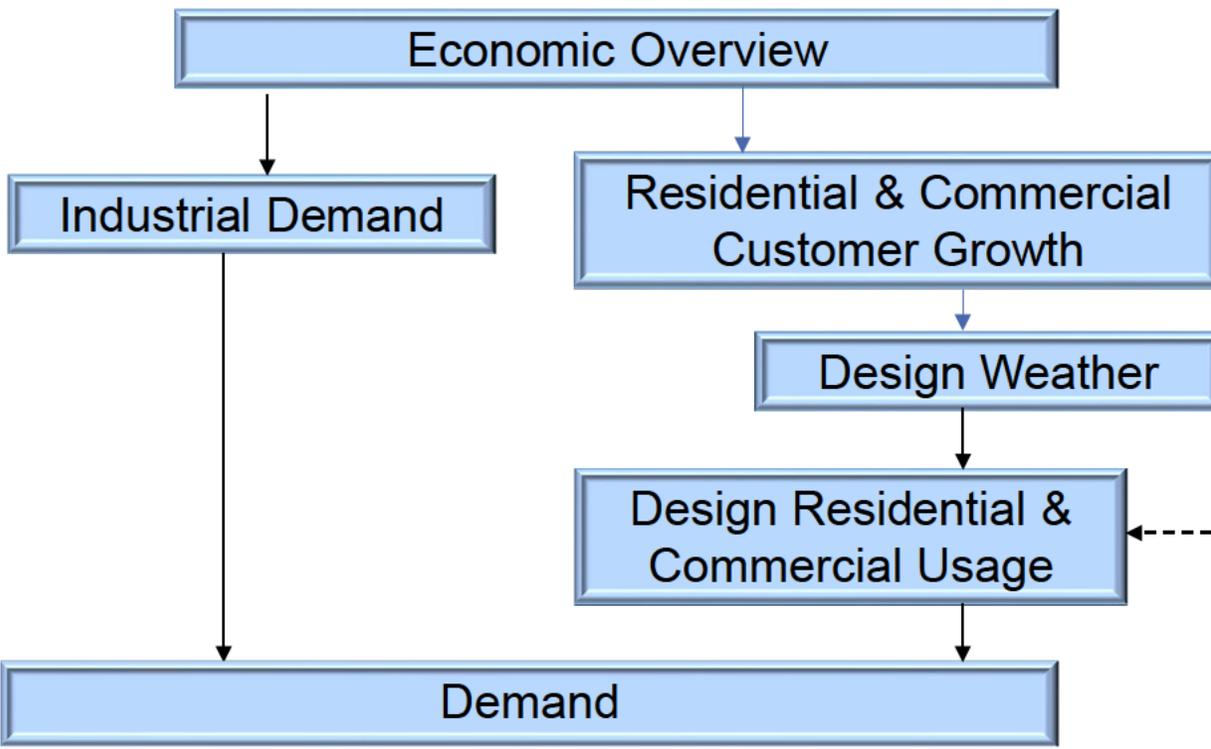
IRP OPTIMIZATION MODELING

- **IGC IRP Model "Integrates"/Coordinates all the main functional elements of IGC operation:**

  - Gas Demand/Load, how much & where is gas consumed, "Load Duration Curve" (LDC) by area of interest.

  - Gas Supply, from where, how much, and what price is gas supplied to meet demand (LDC).

  - Gas Transport, how does gas move from supply to demand area given pipeline size and prices.

  - Demand Side Management (DSM), cost effective energy efficiency is used to reduce demand

  - Local Gas Distribution, local lateral sizing is explicitly modeled to meet demand & ensure reliability

  - The IRP model utilizes PLEXOS®, a linear optimization model, to determine the least cost manner to have loads served by supply, transport, DSM & laterals.

  All results presented here are draft subject to further IGC review.

WHAT IS OPTIMIZATION?

- Utilizes a *standard* mathematical technique called "linear programming" …to optimize over all possible combinations.

- The model knows the exact load and price for every day of the planning period based on the analyst's input and can therefore minimize costs in a way that would not be possible in the real world.

- Therefore, it is important to recognize that linear programming analysis provides helpful but not perfect information to guide decisions.

- Selects from a mix of resources over planning horizon to meet forecasted loads.

MODEL ELEMENTS

- Functional components:
    - Demand forecast (Area's of Interest)
    - Traditional supply resources
        - Existing and potential gas supplies by basin
        - Storage resources
        - Transportation capacity resources
    - Price forecast
    - Non-traditional supply e.g., new distribution capacity, RNG, DSM etc.
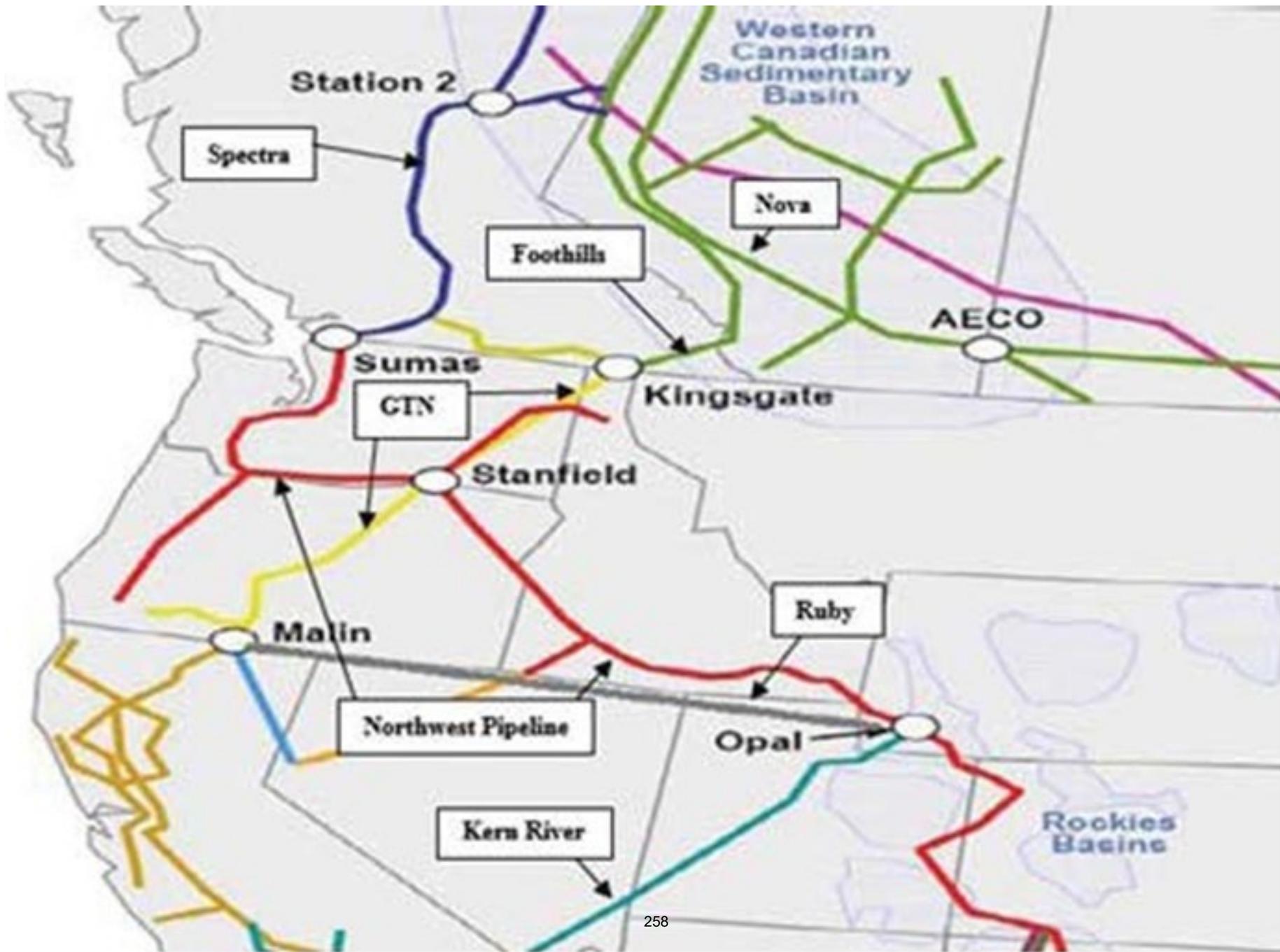
MODEL STRUCTURE

Transport, Storage, Supply, & Demand Areas to Idaho (IGC))
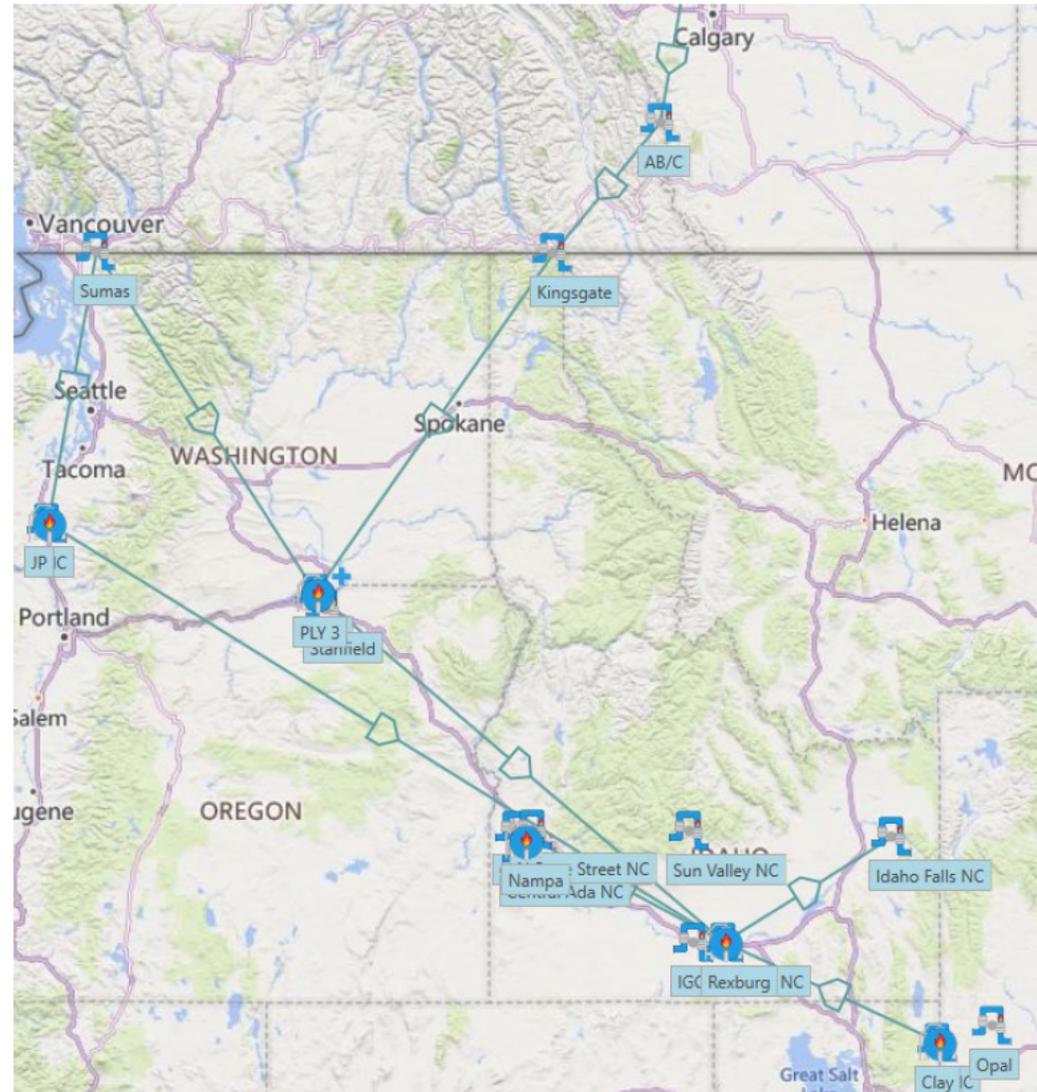
MODEL STRUCTURE

Transport

- Transportation contracts are the means of how Intermountain gets the gas from the supplier to the end user.
- Transportation has an MDQ, a Reservation Charge (D1 rate), a Flow Charge (transportation rate), and a fuel loss percentage.
- A maximum delivery quantity (MDQ) which is the maximum amount of gas Intermountain can move on the pipeline on a single day.
- A D1 rate which is the reservation rate to have the ability to move the MDQ amount on the pipeline.
- A transportation rate which is the rate per dekatherm that is actually moved on the pipeline.
- The fuel loss percentage is the statutory percent of gas based on the tariff from the pipeline that is lost and unaccounted for from the point of where the gas was purchased to the citygate.
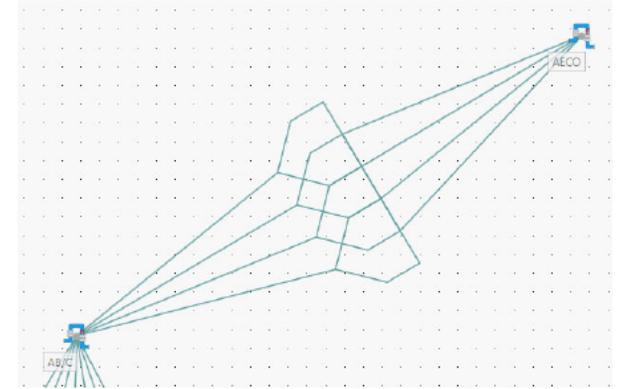
MODEL STRUCTURE

Storage

- Intermountain has storage at 5 locations: Jackson Prairie (JP), Plymouth (Ply), Clay Basin, Nampa, and Rexburg.
- Storage injections targets are set at 35% by the end of June, 80% by the end of August, and 100% by the end of September to emulate cycling storage for non-needle peaking storage.
- Intermountain can withdrawal approximately 30,377 dth per day from JP, 155,175 dth per day from Plymouth, and 70,144 dth per day from Clay Basin for a total of approximately 255,626 dth per day of off-system storage.
- Intermountain can withdrawal approximately 50,000 dth per day from Nampa and 5,500 dth per day from Rexburg for a total of approximately 55,500 dth per day of on-system storage.
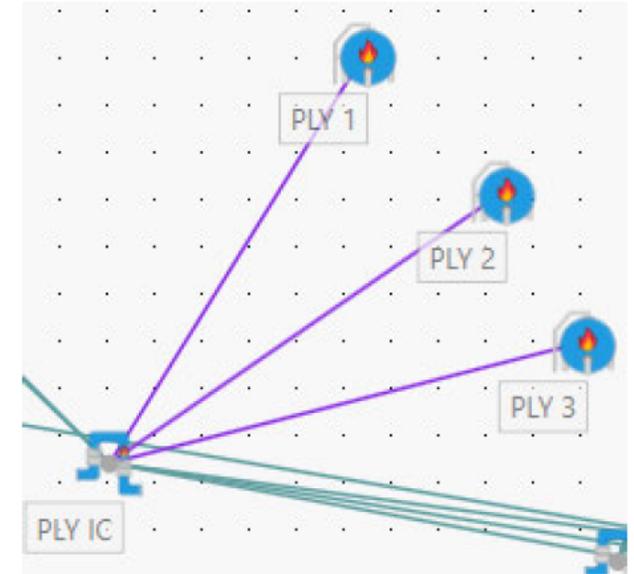
MODEL STRUCTURE

Supply

- Intermountain can purchase gas at three markets; AECO, SUMAS, and OPAL.
- At each market Intermountain can purchase gas at different locations along the pipeline.
- For each year, Intermountain uses Base, Winter base, Summer and Winter day gas, and Peak day incremental supplies as inputs.
- Over the planning horizon, the contracts are renewed in November and April.
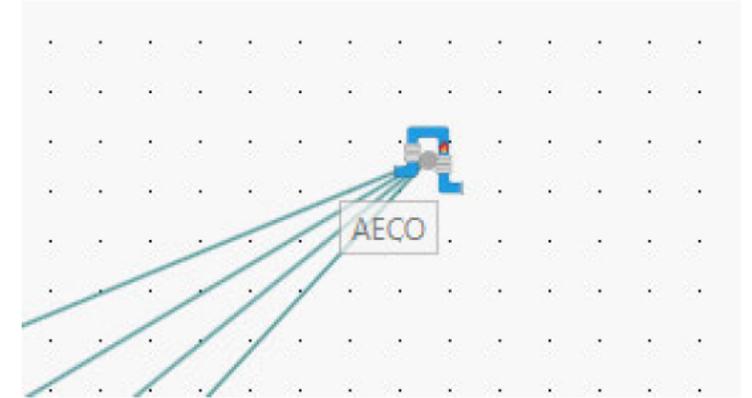
MODEL STRUCTURE

Supply

Total Supply
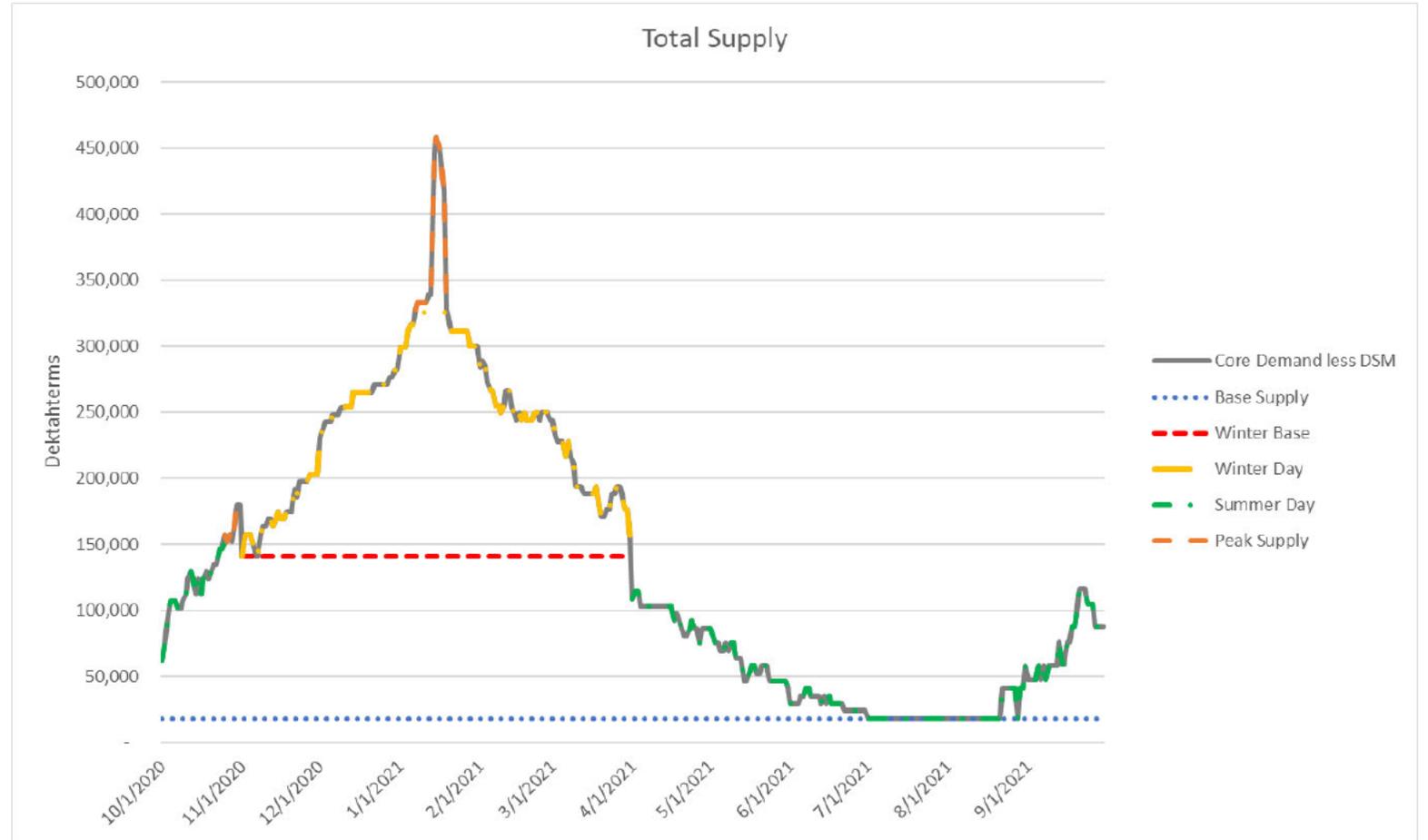
MODEL STRUCTURE

Demand Area

- Demand is forecasted at the five areas of interest, as well as all other customers.
- Demand is determined by the load demand curves.
- Each area of interest has DSM, which decrements demand at the avoided cost price.

Lateral Capacity Summary By Year, Weather: Design, Growth: Normal

2025 Base Year (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Existing Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	86,121	90,400	95%	18,900	109,300	79%
SUN VALLEY	19,994	20,000	100%	4,750	24,750	81%
CANYON COUNTY	101,399	103,200	98%	35,800	139,000	73%
STATE STREET	75,346	82,000	92%	-	82,000	92%
CENTRAL ADA	72,996	74,500	98%	12,500	87,000	84%
ALL OTHER	276,942					

2026 Year 2 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	86,555	109,300	79%	-	109,300	79%
SUN VALLEY	20,247	24,750	82%	-	24,750	82%
CANYON COUNTY	104,221	139,000	75%	-	139,000	75%
STATE STREET	76,853	82,000	94%	-	82,000	94%
CENTRAL ADA	74,489	87,000	86%	-	87,000	86%
ALL OTHER	280,541					

2027 Year 3 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	88,310	109,300	81%	-	109,300	81%
SUN VALLEY	20,497	24,750	83%	-	24,750	83%
CANYON COUNTY	107,241	139,000	77%	-	139,000	77%
STATE STREET	78,362	82,000	96%	-	82,000	96%
CENTRAL ADA	75,984	87,000	87%	-	87,000	87%
ALL OTHER	283,670					

DRAFT MODEL RESULTS - LATERALS

2028 Year 4 (Dth)						
Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	89,942	109,300	82%	-	109,300	82%
SUN VALLEY	20,740	24,750	84%	-	24,750	84%
CANYON COUNTY	110,237	139,000	79%	-	139,000	79%
STATE STREET	79,870	82,000	97%	-	82,000	97%
CENTRAL ADA	77,478	87,000	89%	-	87,000	89%
ALL OTHER	287,240					

2029 Year 5 (Dth)						
Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	91,611	109,300	84%	-	109,300	84%
SUN VALLEY	20,984	24,750	85%	-	24,750	85%
CANYON COUNTY	113,068	139,000	81%	-	139,000	81%
STATE STREET	81,379	82,000	99%	-	82,000	99%
CENTRAL ADA	78,974	87,000	91%	-	87,000	91%
ALL OTHER	291,026					

2030 Year 6 (Dth)						
Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	93,230	109,300	85%	-	109,300	85%
SUN VALLEY	21,224	24,750	86%	-	24,750	86%
CANYON COUNTY	115,926	139,000	83%	-	139,000	83%
STATE STREET	82,892	82,000	101%	-	82,000	101%
CENTRAL ADA	80,473	87,000	92%	-	87,000	92%
ALL OTHER	294,269					

DRAFT MODEL RESULTS - LATERALS

DISTRIBUTION SYSTEM SHORTFALL SOLVES AND RECENT UPGRADES

- ADA County – Bend 12-inch S Boise Loop

- State Street – State Street Uprate and State Penn Gate Upgrade

- Canyon County – 12-inch Ustick Phase III

- Sun Valley Lateral – Shoshone Compressor Station and Suction line pressure to the Wapello Compressor

- Idaho Falls – IFL Compressor Station

TRANSPORTATION SHORTFALL SOLVES

- Contract Renewals

- Rockies Connector

- Alternative Transportation Uptake

- Renewable Natural Gas

- Others?

Lateral Capacity Summary By Year, Weather: Design, Growth: Normal

2025 Base Year (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Existing Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	86,121	90,400	95%	18,900	109,300	79%
SUN VALLEY	19,994	20,000	100%	4,750	24,750	81%
CANYON COUNTY	101,399	103,200	98%	35,800	139,000	73%
STATE STREET	75,346	82,000	92%	-	82,000	92%
CENTRAL ADA	72,996	74,500	98%	12,500	87,000	84%
ALL OTHER	276,942					

2026 Year 2 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	86,555	109,300	79%	-	109,300	79%
SUN VALLEY	20,247	24,750	82%	-	24,750	82%
CANYON COUNTY	104,221	139,000	75%	-	139,000	75%
STATE STREET	76,853	82,000	94%	-	82,000	94%
CENTRAL ADA	74,489	87,000	86%	-	87,000	86%
ALL OTHER	280,541					

2027 Year 3 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	88,310	109,300	81%	-	109,300	81%
SUN VALLEY	20,497	24,750	83%	-	24,750	83%
CANYON COUNTY	107,241	139,000	77%	-	139,000	77%
STATE STREET	78,362	82,000	96%	13,000	95,000	82%
CENTRAL ADA	75,984	87,000	87%	-	87,000	87%
ALL OTHER	283,670					

DRAFT MODEL RESULTS - LATERALS

DRAFT MODEL RESULTS - LATERALS

2028 | Year 4 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	89,942	109,300	82%	-	109,300	82%
SUN VALLEY	20,740	24,750	84%	-	24,750	84%
CANYON COUNTY	110,237	139,000	79%	-	139,000	79%
STATE STREET	79,870	95,000	84%	-	95,000	84%
CENTRAL ADA	77,478	87,000	89%	-	87,000	89%
ALL OTHER	287,240					

2029 | Year 5 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	91,611	109,300	84%	-	109,300	84%
SUN VALLEY	20,984	24,750	85%	-	24,750	85%
CANYON COUNTY	113,068	139,000	81%	-	139,000	81%
STATE STREET	81,379	95,000	86%	-	95,000	86%
CENTRAL ADA	78,974	87,000	91%	-	87,000	91%
ALL OTHER	291,026					

2030 | Year 6 (Dth)

Area of Interest	Total Peak Day	Existing Capacity	% of Capacity	Planned Capacity Upgrade	Existing + Upgrade Capacity	% of Existing + Upgrade Capacity
IDAHO FALLS	93,230	109,300	85%	2,900	112,200	83%
SUN VALLEY	21,224	24,750	86%	-	24,750	86%
CANYON COUNTY	115,926	139,000	83%	-	139,000	83%
STATE STREET	82,892	95,000	87%	-	95,000	87%
CENTRAL ADA	80,473	87,000	92%	-	87,000	92%
ALL OTHER	294,269					

DRAFT MODEL RESULT GENERAL SUPPLY BALANCE SUMMARY

Supply Area	10/1/2025	11/1/2025	12/1/2025	1/1/2026	2/1/2026	3/1/2026	4/1/2026	5/1/2026	6/1/2026	7/1/2026	8/1/2026	9/1/2026
AECO	5,020,377	6,065,968	7,147,872	7,147,872	6,456,143	6,761,047	3,341,270	2,457,540	1,285,824	1,096,245	1,299,113	2,957,778
Rockies	306,475	331,189	498,059	615,107	375,951	432,228	1,195,720	2,297,534	631,189	218,811	250,288	631,189
Sumas	-	-	-	450	-	92,605	300,000	2,335,719	300,000	-	-	-
All Other	2,737	2,649	2,737	2,737	2,472	2,737	2,649	2,737	2,649	2,737	2,737	2,649
Canyon County	2,031	1,965	2,031	2,031	1,834	2,031	1,965	2,031	1,965	2,031	2,031	1,965
Central Ada	2,373	2,296	2,373	2,373	2,143	2,373	2,296	2,373	2,296	2,373	2,373	2,296
Idaho Falls	1,541	1,491	1,541	1,541	1,392	1,541	1,491	1,541	1,491	1,541	1,541	1,491
State Street	2,345	2,270	2,345	2,345	2,118	2,345	2,270	2,345	2,270	2,345	2,345	2,270
Sun Valley	232	224	232	232	209	232	224	232	224	232	232	224
Storage	-	7,541	2,110,606	4,702,679	1,848,802	123,489	-	-	-	-	-	-

DRAFT MODEL RESULT GENERAL SUPPLY BALANCE SUMMARY

Supply Area	10/1/2030	11/1/2030	12/1/2030	1/1/2031	2/1/2031	3/1/2031	4/1/2031	5/1/2031	6/1/2031	7/1/2031	8/1/2031	9/1/2031
AECO	4,881,307	5,331,070	6,792,507	7,147,872	6,456,143	6,331,960	3,624,443	1,614,240	1,313,353	1,117,970	1,341,912	2,110,613
Rockies	1,352,297	1,337,862	1,386,590	1,535,949	1,252,404	1,464,858	1,641,862	1,386,590	1,341,862	1,263,051	1,294,619	1,341,862
Sumas	108,590	105,087	108,590	108,590	98,081	108,590	405,087	418,590	405,087	418,590	418,590	405,087
All Other	14,112	13,657	14,112	14,112	12,746	14,112	13,657	14,112	13,657	14,112	14,112	13,657
Canyon County	8,750	8,468	8,750	8,750	7,903	8,750	8,468	8,750	8,468	8,750	8,750	8,468
Central Ada	12,236	11,841	12,236	12,236	11,052	12,236	11,841	12,236	11,841	12,236	12,236	11,841
Idaho Falls	12,328	11,930	12,328	12,328	11,135	12,328	11,930	12,328	11,930	12,328	12,328	11,930
State Street	12,094	11,704	12,094	12,094	10,923	12,094	11,704	12,094	11,704	12,094	12,094	11,704
Sun Valley	2,682	2,595	2,682	2,682	2,422	2,682	2,595	2,682	2,595	2,682	2,682	2,595
Storage	-	135,684	2,270,407	4,714,616	1,582,433	89,975	-	-	-	-	-	-

DRAFT MODEL RESULT GENERAL SUPPLY BALANCE SUMMARY
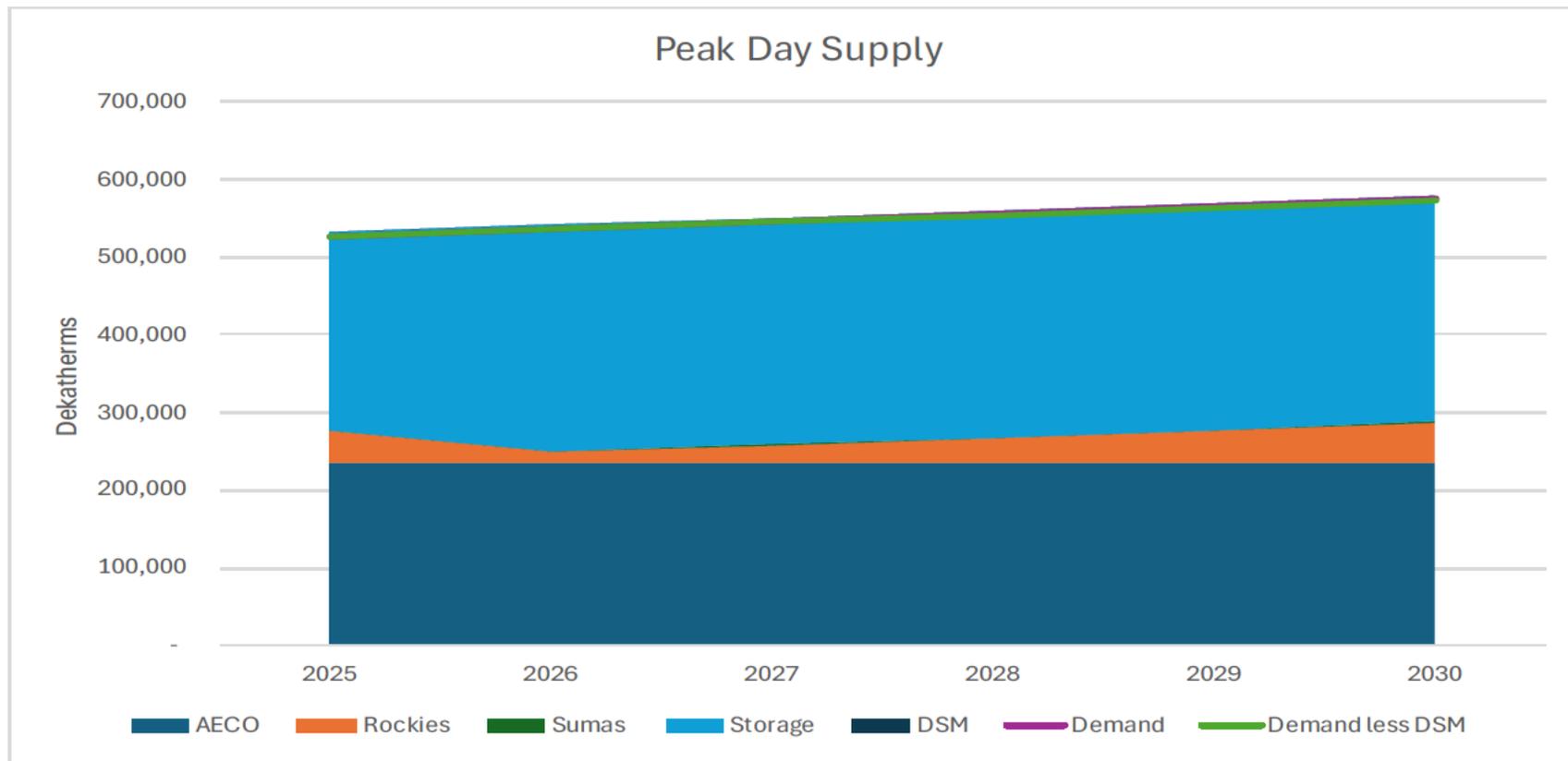
Peak Day Supply

Legend: AECO, Rockies, Sumas, Storage, DSM, Demand, Demand less DSM

CAPACITY RESOURCES

Northwest Daily Maximum Transportation Capacity (MMBtu)

	2025	2026	2027	2028	2029	2030
Stanfield	224,565	224,565	224,565	224,565	224,565	224,565
Rockies	59,328	59,328	59,328	59,328	59,328	59,328
Citygate	10,000	10,000	10,000	10,000	10,000	10,000
Total Capacity	293,893	293,893	293,893	293,893	293,893	293,893
Storage Withdrawals with Bundled Capacity	155,175	155,175	155,175	155,175	155,175	155,175
JP TF-2 Capacity	30,337	30,337	30,337	30,337	30,337	30,337
Nampa and Rexburg	55,500	55,500	55,500	55,500	55,500	55,500
Maximum Deliverability	534,905	534,905	534,905	534,905	534,905	534,905

- Intermountain has segmented capacity from Sumas to IGC at Stanfield. Intermountain owns Stanfield to IGC.
- Intermountain recently added Stanfield Capacity via the GTN Xpress project.
- Intermountain is actively participating in a Rockies expansion to meet peak day shortfalls.
- On-System Storage is 55,000 dth/day.

SUMMARY

- Employs Utility Standard Practice Method To Optimize System

- Models DSM & Storage

- Handles storage withdrawal and injection across seasons

- Provides a check on need for lateral expansion.

- Provides a check on transport and supply capacity

QUESTIONS?

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

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IGRAC #3

Date & time:	9/17/2025, 9:00 AM to 11:00 PM MT
Location:	Microsoft Teams Meeting
Presenters:	Ryan Denton, Kathleen Campbell, Zachary Sowards, Brian Robertson
In attendance:	Bailey Steeves, Brian Robertson, Bruce Folsom, Chris Robbins, Darcy Neigum, Eric Wood, Jenny De Boer, Kathleen Campbell, Kimberly Loskot, Kristen Nieskens, Mark Sellers-Vaughn, Matt Hunter, Michael Parvinen, Rebecca Wildman, Russ Nishikawa, Ryan Denton, Seungjae Lee, Vicki Stephens, Zachary Sowards

Introduction

Brian Robertson, Manager of Supply Resource Planning, opened the meeting by welcoming and thanking stakeholders for participating in Intermountain's IRP Process. Brian then proceeded with introductions, the agenda, a safety moment, and a reminder of the stakeholder engagement goals.

Presentation #1 – Load Demand Curves (Ryan Denton)

- Ryan shared the key variables, and the methodology of how the load demand curves are calculated.
- Ryan described the reasons why load demand curves are important; mainly understanding capacity needs and storage management.
- Ryan then shared the load demand curves first and final year of the planning horizon, describing the growth and any potential shortfalls for Intermountain's total system as well as each area of interest (AOI).

> **Question**: "What kind of sensitivity modeling is there around key variables"
> **Answer**: Brian stated that Intermountain does a high and low growth as well as sensitivity modeling around 4 demand side management scenarios.

Presentation #2 – Distribution System Enhancements (Kathleen Campbell and Zachary Sowards)

- Kathleen and Zachary provided project needs for each AOI, describing timing, costs, and capacity gained for each project;
  - In 2027, Intermountain anticipates a Caldwell reinforcement and a New Plymouth gate upgrade to ensure 2030 growth projections are met.

- Canyon County, Central Ada, and Sun Valley showed no reinforcement needs as the recent upgrades from previous IRPs meet 2030 growth expectations.
- State Street and Idaho Falls AOIs anticipate upgrades to meet 2030 growth expectations.

Question: "Is there a target year for designing the distribution line?"
Answer: Kathleen responded that there are multiple factors that go into distribution system projects. There are limitations to which projects can be done but the target is to ensure there is enough capacity in the five year IRP planning horizon. It also depends on the type of project, for example, a compressor generally wants to be built to serve for ten to twenty years of growth.

Presentation #3 – IRP Optimization Model (Brian Robertson)

- Brian described the IRP Optimization Model (Plexos) and how it integrates all the elements of an IRP such as load demand curves, supply, transport, storage, demand side management, and distribution system modeling.
  - Transportation includes the maximum daily quantity, reservation charge, flow charge, and a fuel loss percentage rate.
  - As for storage, Intermountain has 30,377 dth per day from JP, 155,175 dth per day from Plymouth, and 70,144 dth per day from Clay Basin for a total of approximately 255,626 dth per day of off-system storage. Intermountain can also withdrawal 50,000 dth per day from Nampa and 5,500 dth per day from Rexburg.
  - Brian described how supply was modeled in a way that emulates real world supply purchasing.
  - Load Demand Curves are loaded into Plexos into demand areas.
- Brian reshared draft model results of the capacity shortfalls at each AOI and summarized recent and future upgrades.
- High level information on upstream transportation shortfall solutions was discussed.
- Brian then shared supply and storage annual and peak day preliminary results.

Question: "How does capacity needs of other states impact Intermountain?"
Answer: Brian stated that Intermountain has firm capacity rights on upstream pipelines, which means the pipelines are obligated to provide Intermountain that service.

The Meeting was Adjourned – Intermountain is focusing on the IRP narrative and aims to have a draft circulated by the end of October

INTEGRATED RESOURCE PLAN

DECEMBER 3, 2025

INTERMOUNTAIN GAS RESOURCE ADVISORY COMMITTEE (IGRAC)

WELCOME

- Introductions

- Feedback Process

- Agenda

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

AGENDA

- **Welcome & Introductions** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Safety Moment** – Brian Robertson (*Manager, Supply Resource Planning*)

- **Upstream Capacity Needs –** Brian Robertson (*Manager, Supply Resource Planning*)

- **Questions/Discussion**

SAFETY MOMENT

BRIAN ROBERTSON

MANAGER, SUPPLY RESOURCE PLANNING

Be Ready! Winter Weather

Weatherproof your home to protect against the cold.

Install a smoke detector and carbon monoxide detector in your home.

Make sure the batteries are working!

Have your chimney or flue inspected every year.

Insulate walls and attic.

Caulk and weather-strip doors and windows.

Check out more tips on winter weather indoor safety.

Never leave lit candles or other flames unattended.

Bring your pets indoors as temperatures drop!

Prepare yourself for exposure to winter weather.

Dress warmly and limit exposure to the cold to prevent frostbite.

Avoid getting wet to prevent hypothermia.

If power lines are down, call your local utility and emergency services

If power lines fall on your car, warn people not to touch the car or power lines.

Make sure your car is ready for winter travel.

Make a winter emergency kit to keep in your car.

Check antifreeze level and have radiator system serviced.

Replace worn tires and check tire air pressure.

Keep gas tank full to avoid ice in tank and fuel lines.

www.cdc.gov/phpr/infographics.htm

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UPSTREAM CAPACITY NEEDS

BRIAN ROBERTSON

MANAGER SUPPLY RESOURCE PLANNING

2025 Load Demand Curve
Design Base Case
Total Company

Peak Day 536,800 Dth

Core + LV-1 Demand less DSM — Maximum Transport Deliverability with LNG — Maximum Transport Deliverability

2030 Load Demand Curve
Design Base Case
Total Company

Peak Day 582,518 Dth
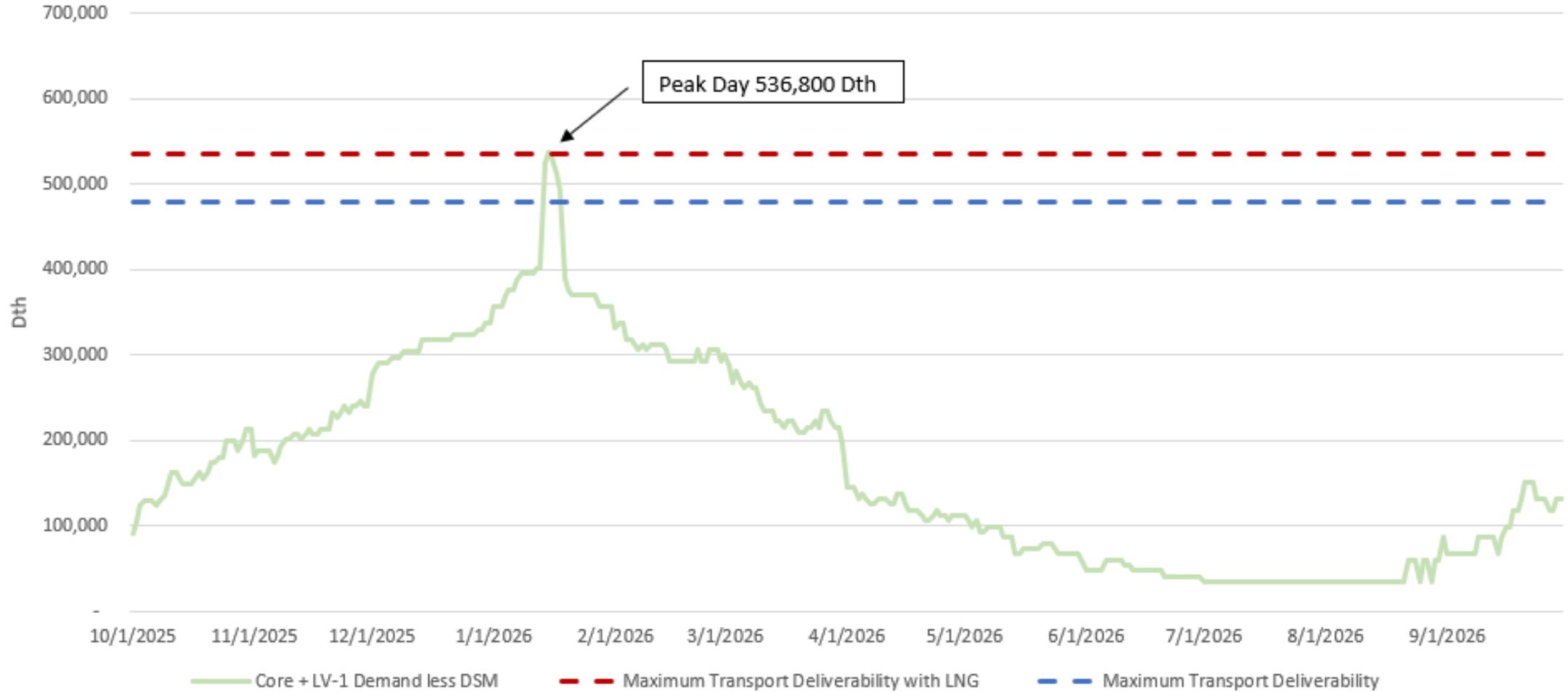
Core + LV-1 Demand less DSM — Maximum Transport Deliverability with LNG — Maximum Transport Deliverability
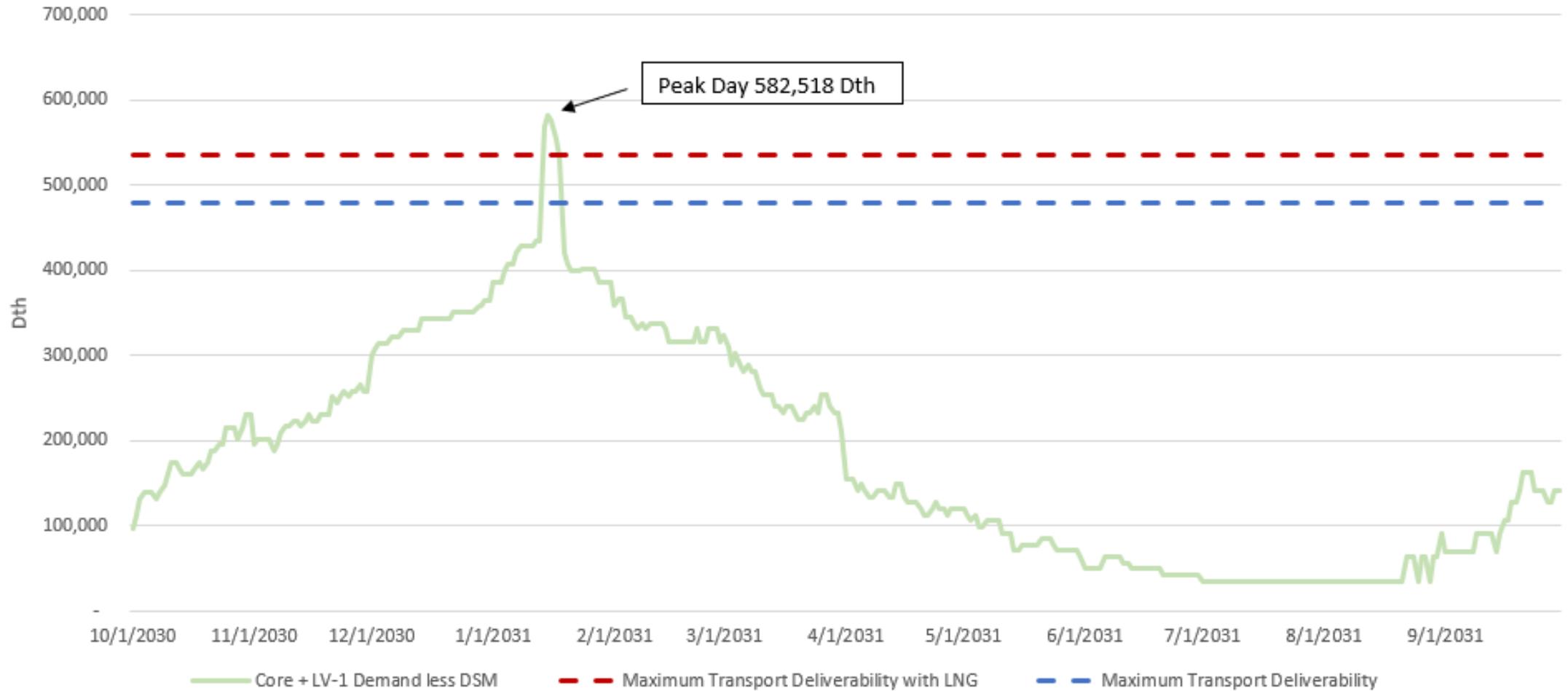
RESOURCE CAPABILITIES
(VOLUMES IN DTHS/D)

	2025	2026	2027	2028	2029	2030	2031
Stanfield	224,565	224,565	224,565	224,565	224,565	224,565	224,565
Rockies	59,328	59,328	59,328	59,328	59,328	59,328	59,328
Citygate	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total Capacity	293,893	293,893	293,893	293,893	293,893	293,893	293,893
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Nampa and Rexburg	55,500	55,500	55,500	55,500	55,500	55,500	55,500
Maximum Deliverability	534,905	534,905	534,905	534,905	534,905	534,905	534,905

Peak Day Load (Dths) Compared to Current Maximum Deliverability of Resources
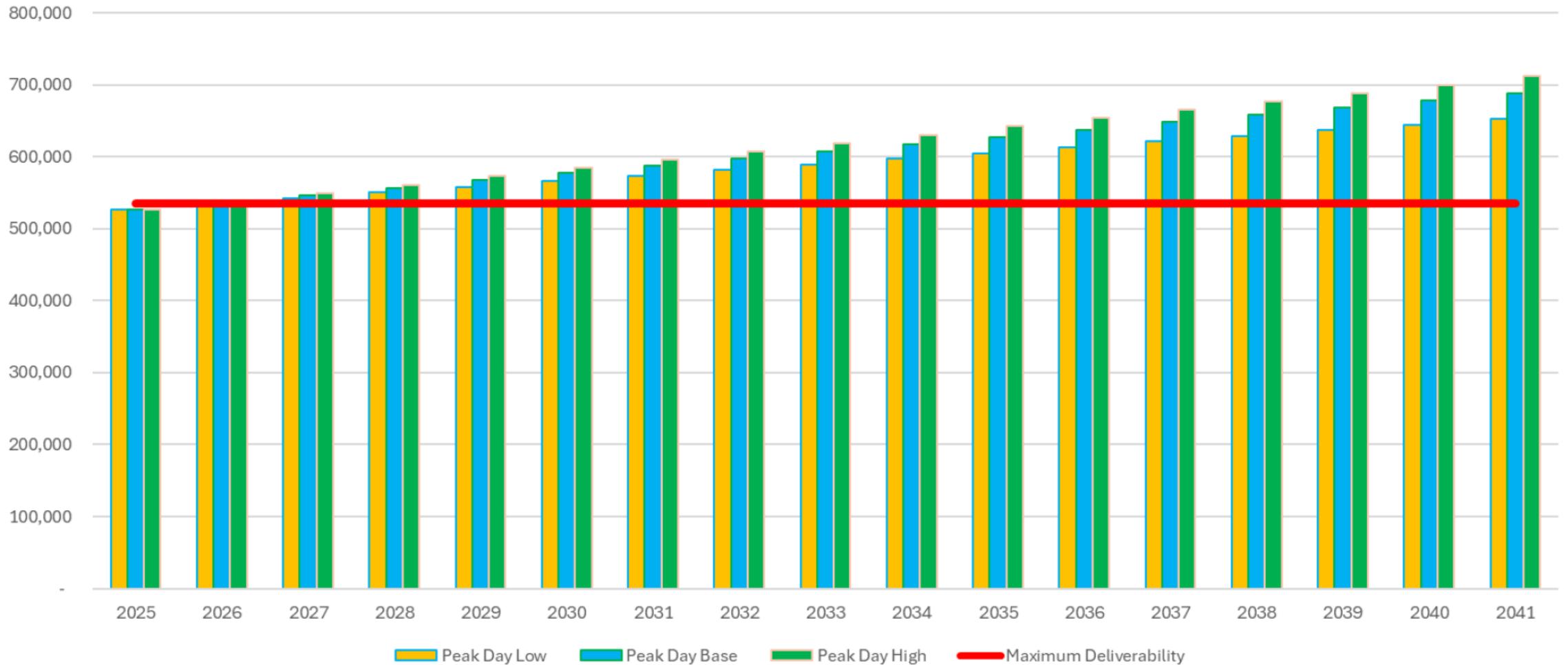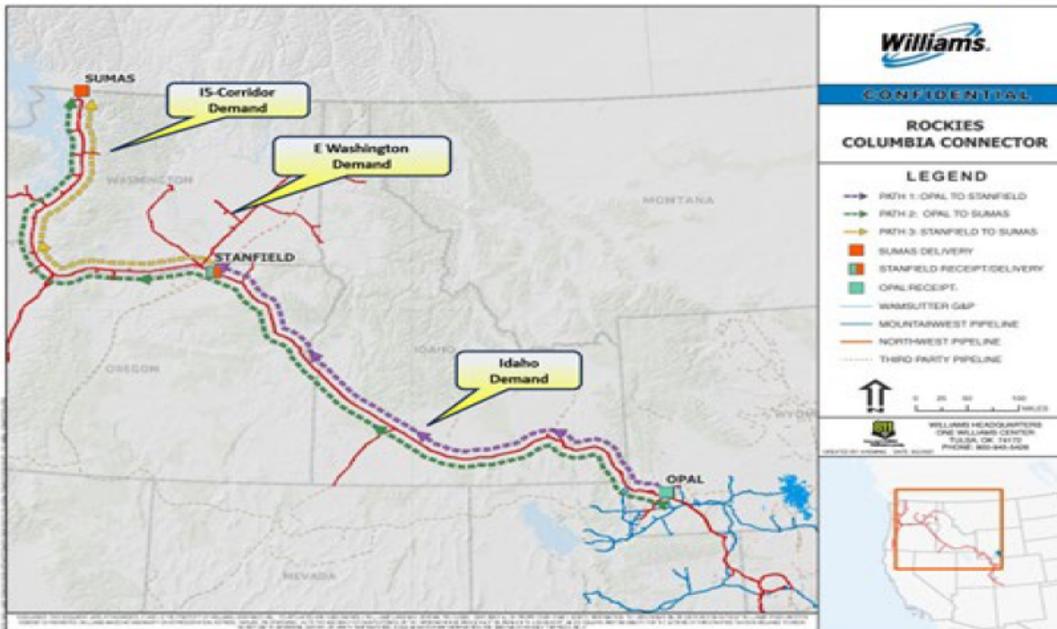
OPTIONS AND ALTERNATIVES

- Upstream options

    - Supply

    - Storage

    - Transportation

- Downstream options

    - LNG

    - DSM

    - Electrification

- Others?

Rockies Columbia Connector (Proposed)

Project Overview:
- Integrated expansion of NWP mainline to provide firm incremental transportation from the Rockies Opal area and Stanfield, OR with delivers to Idaho and points along the I-5 corridor

Project Benefits:
- Supports growth in region
- Access to Rockies supply
- Executable – Brownfield project – No showstoppers
- Enhances energy resiliency and reliability during peak demand periods
- Addresses a ~300 MMcf/d supply shortfall due to Woodfibre LNG in 2027
- Esimated CO_2 emissions reductions up to 43,000 tons/year from NWP operations

Project Status:
- Non-Binding Open Season closed August 6, 2025 (Open Season offered up to 650 MMcf/d)
- Negotiating Precedent Agreements – Q4 2025
- Finalizing scope based on Open Season / commitments

NYSE: WMB | www.williams.com

LNG PEAK-SHAVING FACILITIES

Utility	Facility	IRP / Planning Link	Regulatory Filing	Reported Project Cost	Storage Capacity
Puget Sound Energy (WA)	Tacoma LNG	PSE Gas IRP	WA UTC docket UG-230393	~$489 million capital cost (end of 2022)	~9.6 million dth
Pacific NorthWest LNG (BC, canceled)	Lelu Island LNG Export Project	NA (Petronas)	BC EAO, CEAA 2012	Planned $11.4–18 billion investment	~18–20M Dth annually
NW Natural (OR/WA)	Peak-shaving LNG	NW Natural IRP	OPUC docket UG 456	undisclosed	Capacity in PHMSA/permit filings
FortisBC (BC)	Tilbury LNG	BCUC Tilbury LNG CPCN	BCUC Order G-62-23	~$1.14 billion	~25.4 million dth

FOOTNOTES

- PSE Tacoma LNG: december12023.pdf, PSE LNG FEIS Cover Pages.pdf

- Lelu Island LNG: Pacific NorthWest LNG Project, British Columbia - Offshore Technology

- Northwest Natural: lc79has155146.pdf

- FortisBC Tilbury LNG: BCUC Approves FortisBC's Tilbury Liquefied Natural Gas

ESTIMATED RATE IMPACT TO RESIDENTIAL CUSTOMERS

The table below reflects the estimated rate impact in 2030 to residential customers based on Rockies Columbia Connector capacity acquired. It's important to keep in mind by the time you get out to 2030, the impact of the expansion will be less because of customer growth will increase the billing determinants.

	100,000 Dths/d
Estimated Annual Revenue Impact of RCC Reservation Charge	$60,225,000
Percentage Increase	20.8%

QUESTIONS?

FEEDBACK SUBMISSIONS

- IRP.Comments@intgas.com
- Please provide comments and feedback within 10 days

IGRAC #4

INTERMOUNTAIN® GAS COMPANY
A Subsidiary of MDU Resources Group, Inc.

Date & time:	12/3/2025, 9:00 AM to 9:35 PM MT
Location:	Microsoft Teams Meeting
Presenters:	Brian Robertson
In attendance:	Bailey Steeves, Brian Robertson, Bruce Folsom, Chris Robbins, Eric Wood, Jenny De Boer, Kathleen Campbell, Kristen Nieskens, Michael Brutocao, Michael Parvinen, Ryan Denton, Seungjae Lee, Vicki Stephens, Zachary Sowards

Introduction

Brian Robertson, Manager of Supply Resource Planning, opened the meeting by welcoming and thanking stakeholders for participating in Intermountain's IRP Process. Brian then proceeded with introductions, the agenda, a safety moment, and a reminder of the stakeholder engagement goals.

Presentation #1 – Upstream Capacity Needs (Brian Robertson)

- Brian shared charts on Intermountain's current usage under a peak event compared to the Company's current capacity to serve customers. He also shared the maximum capacity compared to the low, base, and high growth forecasts. This showed a need for more capacity to meet customers' needs under a peak event.
- Brian described the options to meet this capacity need, sharing that the two most viable options are upstream transportation and LNG.
- Brian shared the Rockies Connector Expansion and the benefits of this type of project.
- Brian shared regional LNG projects, showing the costs of these projects, and describing the benefits of an LNG project.
- Ultimately, Intermountain plans to move forward with the Rockies Connector Expansion while continuing to investigate LNG for future consideration in the case Idaho growth continues to expand.
- Brian then shared estimated impacts to customer rates for this type of project.

The Meeting was Adjourned – Intermountain is focusing on the IRP narrative and aims to have a final filed by the week of December 15.