

I.23-03-008 Workshop: Gas Utility and Independent Storage Provider Preparations for Winter 2023-24

October 26, 2023



California Public
Utilities Commission

Workshop Logistics

- Workshop agenda was distributed to the service list. Today's presentations will also be shared with the service list.
- To dial in:
 - Toll free: 1-855-282-6330
 - Access code: 2481 723 7220#
 - Password: 42796757#
- There will be two panel discussions today, followed by Q&A after each panel.
 - To ask a question, you may enter your question in the chat box, which will then be read aloud during Q&A, or you may use the "Raise Hand" feature to verbally ask your question. When called upon, please unmute yourself to speak.
 - If you are using your phone for audio and have a question for a panelist, you must use the chat to type your question. Identify your phone number in the chat and request to be unmuted.
- Opportunity for general comments at the end of the workshop.
 - To make a comment during the general comment portion of the workshop, follow the instructions above.
- ***This workshop is being recorded***

Panel One: Current Market Conditions, Winter Outlook, and Customer Communications

- **Panelists:**

- **Ray Sasaki**, Director of Gas Acquisition, SoCalGas and SDG&E
- **Jennifer Walker**, VP of Customer Services, SoCalGas
- **Dana Golan**, VP of Customer Services, SDG&E
- **Pete Koszalka**, Director of Core Gas Supply, PG&E
- **Kristi Wilkins**, Senior Director, Solutions Markets & Advertising, PG&E
- **Steve Williams**, Director, Resource Planning and Analysis, Southwest Gas
- **Sean Corbett**, Manager, Corporate Relations, Southwest Gas
- **Mark Pocta**, Program Manager, Cal Advocates



GAS PRICES OIL WORKSHOP PANEL 1

Ray Sasaki

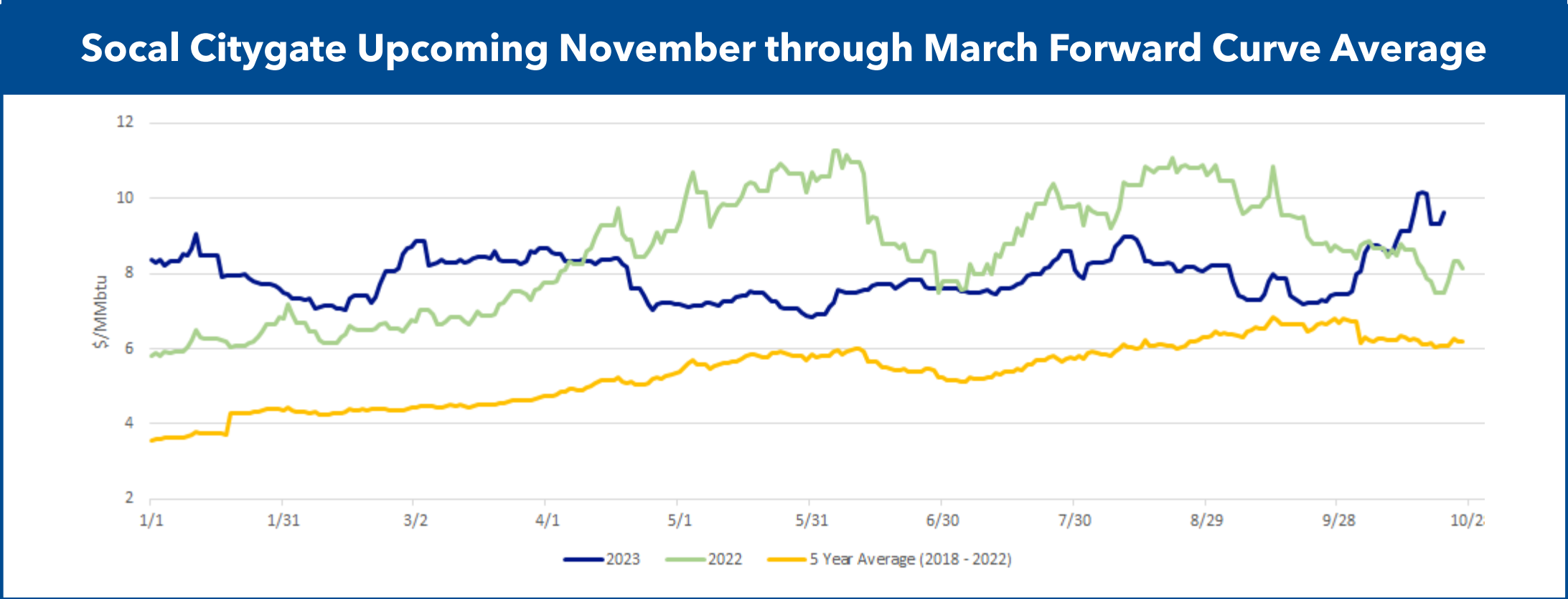
Director of Gas Acquisition

October 26, 2023



Winter Outlook

Supply/demand fundamentals should indicate lower prices for the upcoming winter; however, forward prices continue to be elevated



Source: Intercontinental Exchange (ICE)



Current Market Conditions

Global

Lower LNG prices translates to less impact on Henry Hub

Uncertainty with geo-political climate

National

Higher production

Higher storage levels

High gas demand for power generation

Western Region

Pipeline outages mostly resolved (for example EPNG L2000)

Higher storage levels (Pacific Region)

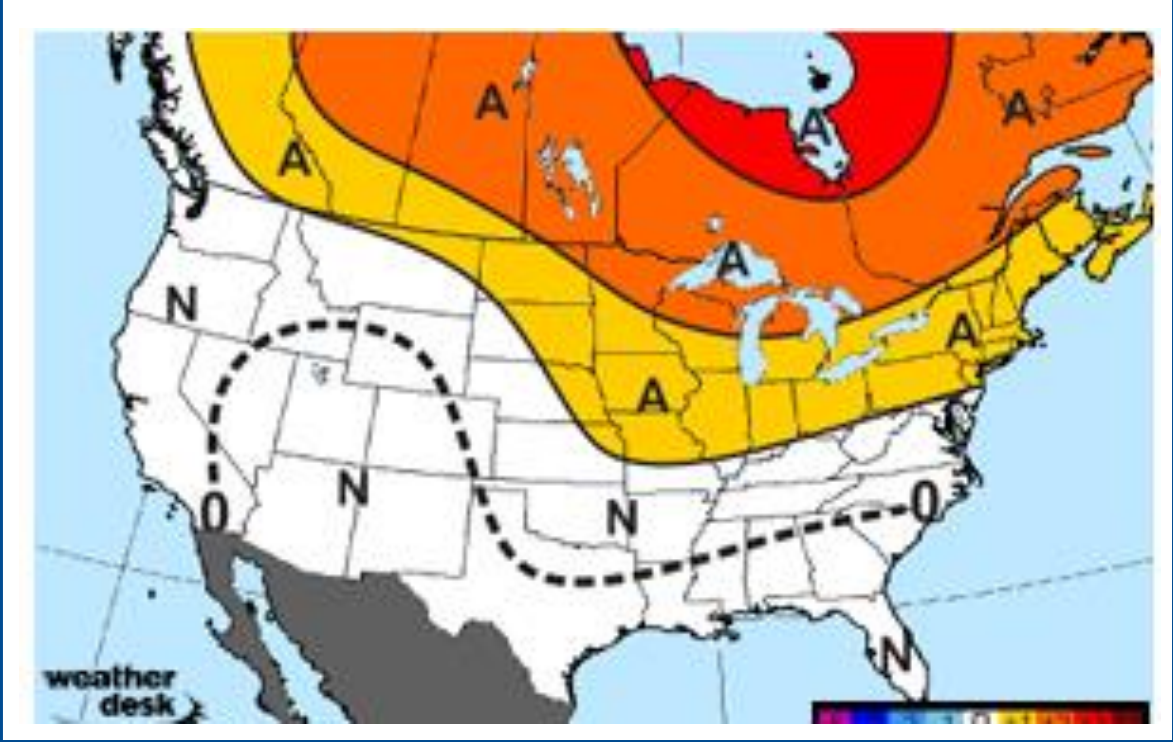
El Niño outlook - Pacific based cold events (as opposed to Arctic based)

High gas demand for power generation

APPENDIX

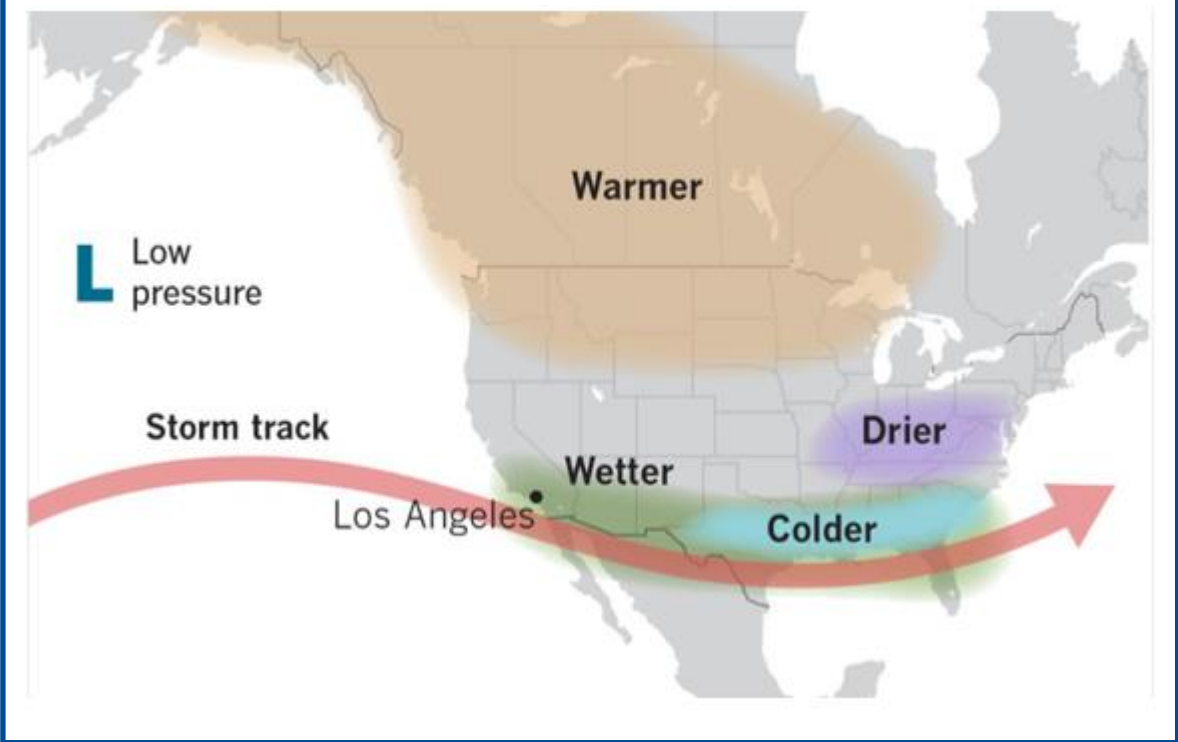
Winter Weather Forecast - El Niño Influences

Winter Outlook December 1 - February 29



Source: Maxar

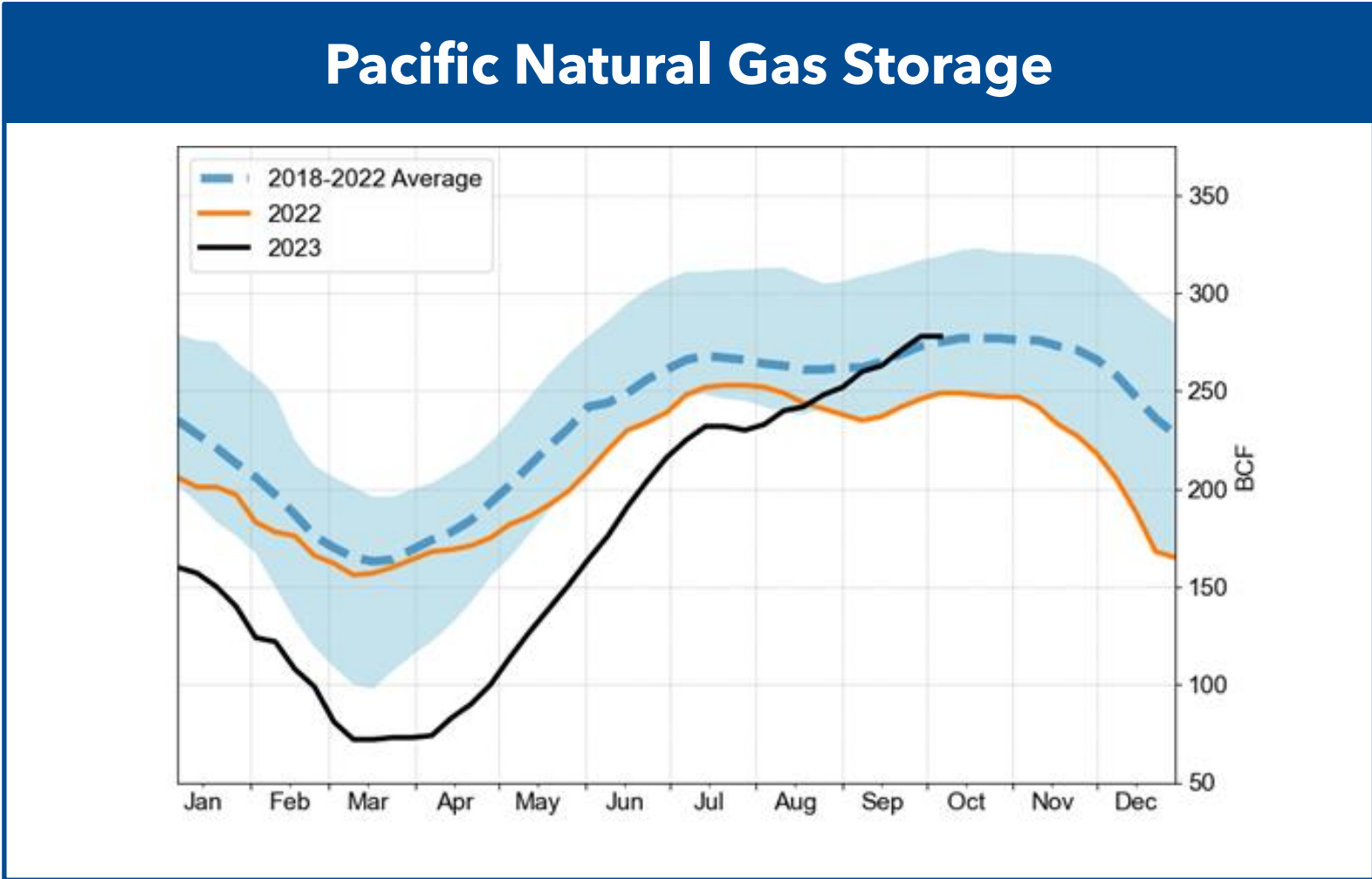
Typical El Niño Winter



Source: LA Times



Storage Levels in the West

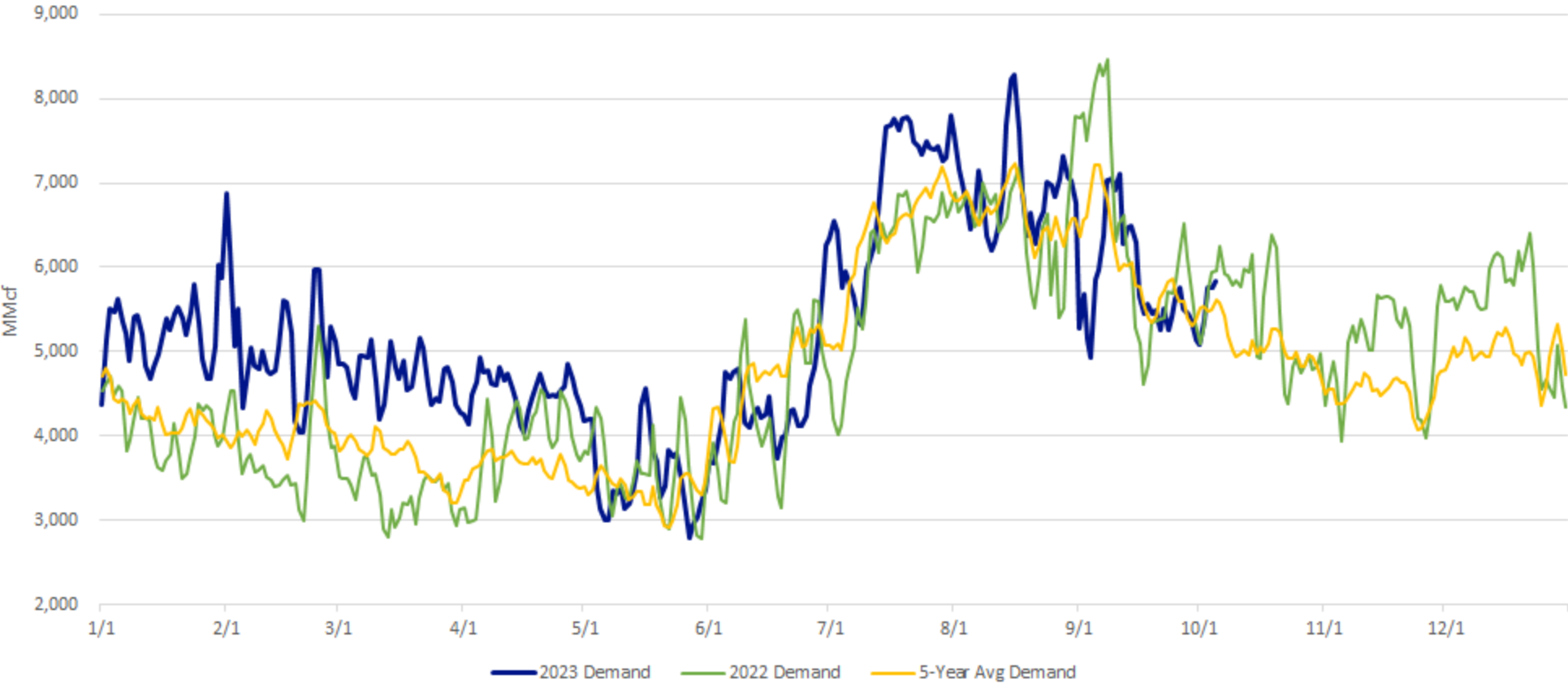


Source: Energy Information Administration (EIA)



Demand in the West

West & Rockies Gas Demand for Power Generation



Source: S&P Global Commodity Insights (SPGCI)





GAS PRICES OIL WORKSHOP PANEL 1

Jennifer Walker
VP of Customer Services

October 26, 2023



SoCalGas Customer Communications: Lessons Learned

A qualitative research study was conducted in April 2023 and identified the following key findings:

- 1 The 'Manage Higher Bills' webpage information was found useful; however, customers were still surprised by natural gas price increases.
- 2 There is interest in payment options and a desire for learning practical tips on how to save money on bills, along with strategies for managing increases in natural gas prices.
- 3 Customers prefer receiving information via email in advance to plan for changes and value more information on natural gas prices and additional resources for managing higher costs.

SoCalGas Customer Communications Plans for 2023-2024



Increase Winter Preparedness Communication

Continue early communications (as early as September 2023) and have additional promotional messaging on Energy savings tools and tips, Customer Assistance Programs, and Billing support options



Continue with Enhanced Communications

SoCalGas will also continue to leverage its owned channels, including emails, digital, website, bill communications, bill inserts, social media, Interactive Voice Response (IVR), and stakeholder engagement/outreach to bring awareness of our customer assistance programs



Implement a New Natural Gas Price Notice

Provides customers with an opportunity to opt-in for a monthly text communication if the monthly cost of natural gas reaches a level that could cause a monthly bill increase of 20% or more on the average customer's bills, for a given month, during the upcoming winter season



Gas Prices Oil Workshop
Panel 1 – Dana Golan, VP of Customer Services

October 26, 2023

SDG&E Customer Communications: Lessons Learned

Building on last winter's robust, timely communications plan across all major communication channels, SDG&E intends to follow a similar strategy this year.

1 Transparency and Support

- “No surprises” approach; communicate early and often.
- Broad, multi-channel customer education campaign.
- Inform customers about market volatility, provide tips and resources for saving, and direct to assistance programs.

2 Flexibility

- Maintain ability to quickly pivot strategy and tactics.
- Extend reach through adaptable tactics.

3 Preparation

- Plan contingency campaigns for different scenarios.
- Equip external-facing teams with resources to respond to questions and provide support.



SDG&E Customer Communications Plans for 2023-2024

Our goal this year remains the same – engage customers and provide tools, resources and assistance



Stay prepared for quick launch of multi-channel gas campaign

In addition to typical robust seasonal communications providing transparency, driving awareness and offering resources



Leverage a variety of flexible tactics

Allows us to quickly adapt and update messaging if market conditions change



Tailor messaging to target audiences

Continued education on gas markets and pricing tailored to customers, community stakeholders, and media



Expand text message opt-ins for bill related alerts/notifications

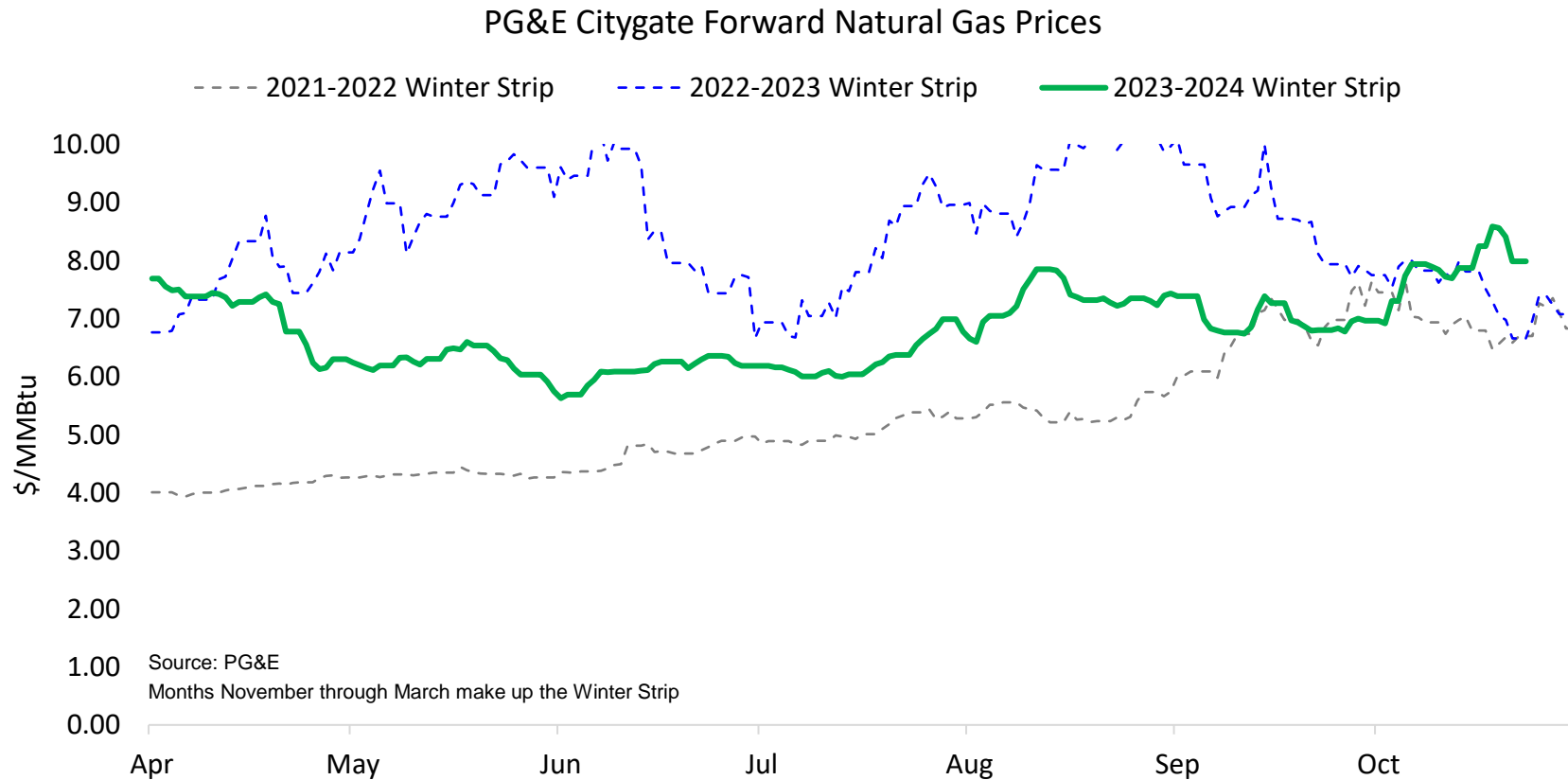
Proactively engage customers ahead of seasonal bills and any significant gas or electric pricing increases

Panel 1
Workshop on Gas Utility Preparations
for Winter 2023-24 (I.23-03-008)

October 26, 2023

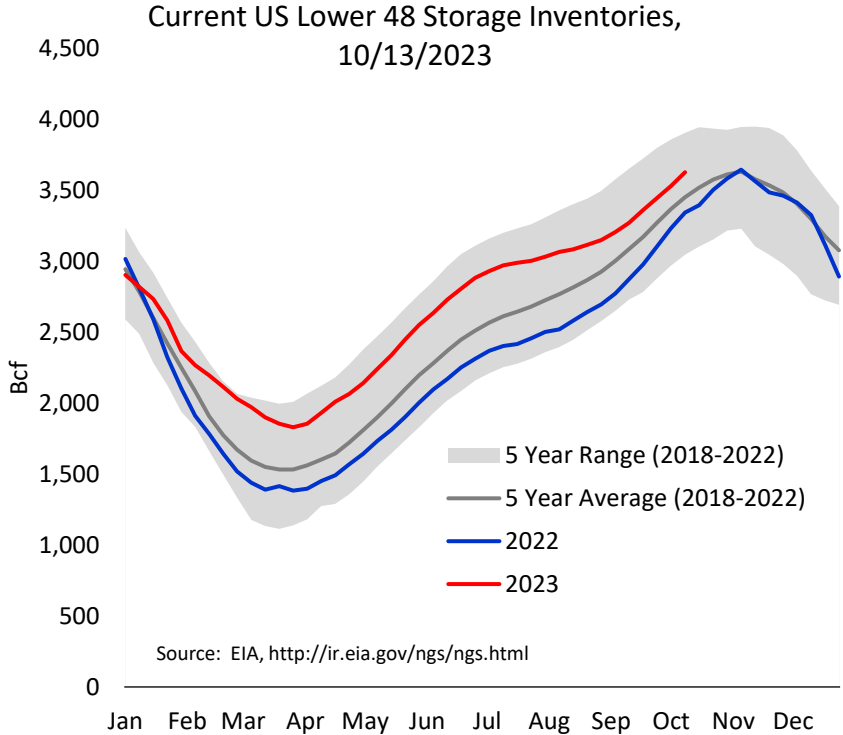
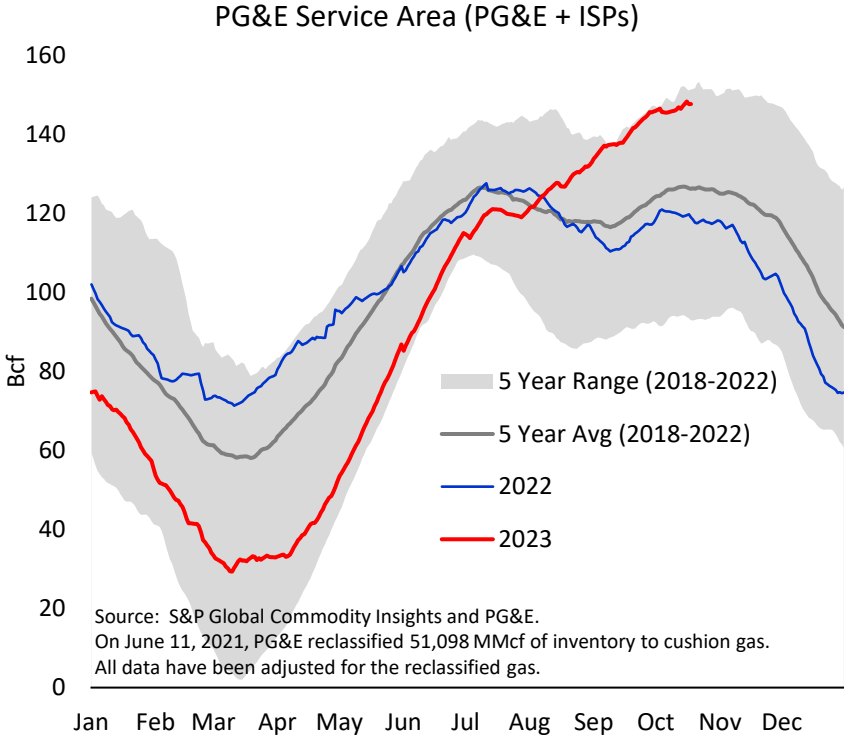
Winter PG&E Citygate Forward Prices

The current PG&E Citygate forward price outlook for this winter is about \$1.30/MMBtu higher than last winter.



Gas Storage Inventories

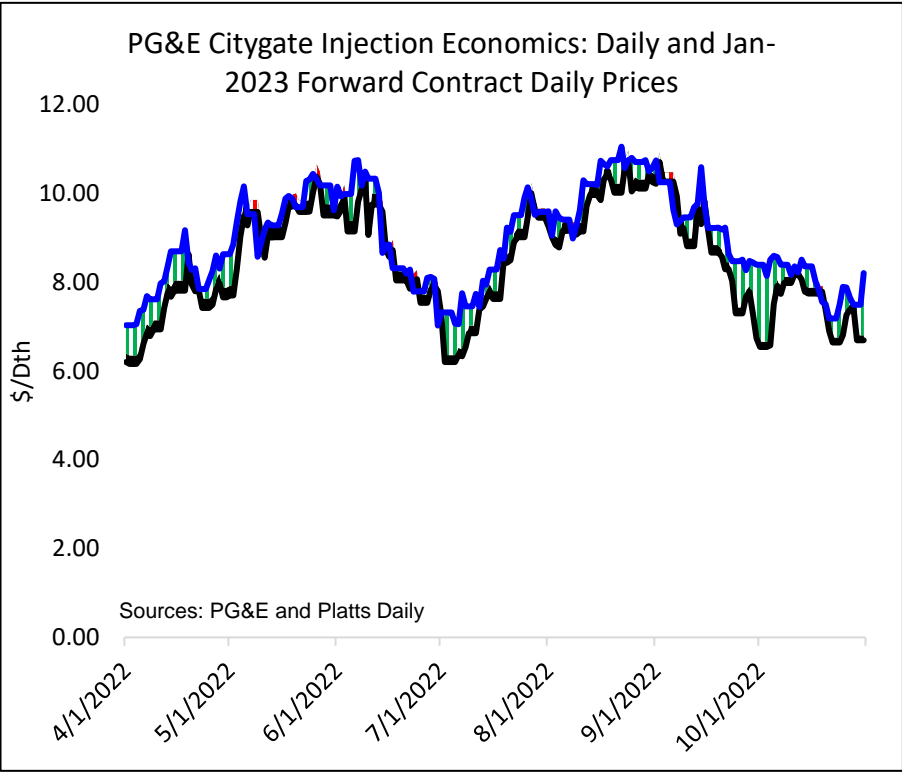
Gas storage inventories enter winter at a surplus compared to the five-year average benchmark and to last winter at this time.



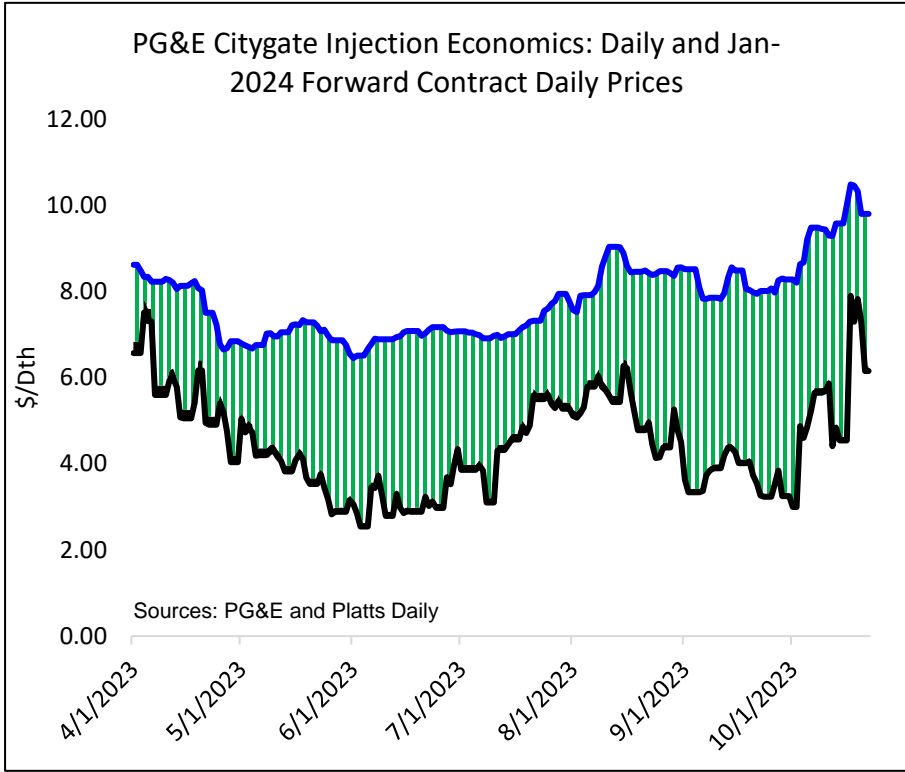
Gas Storage Economics

Injections into storage has been supported by the gas price spread between daily and forward prices since the injection season began.

Winter 2022-2023 Gas Storage Economics



Winter 2023-2024 Gas Storage Economics

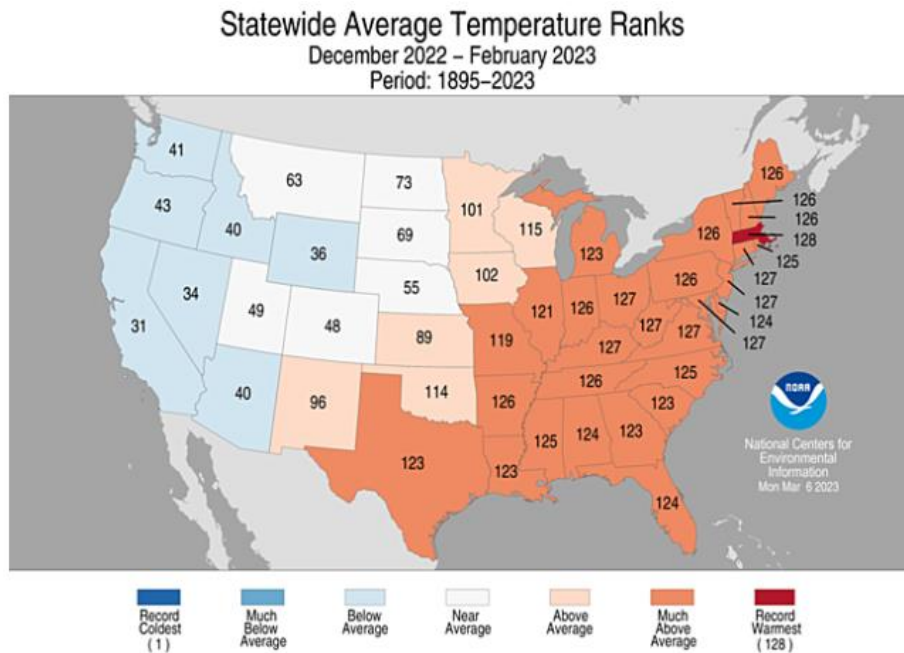


- Variable & Carrying Costs
- Negative Spread
- Positive Spread
- Daily Price
- Jan-2024 Forward Price

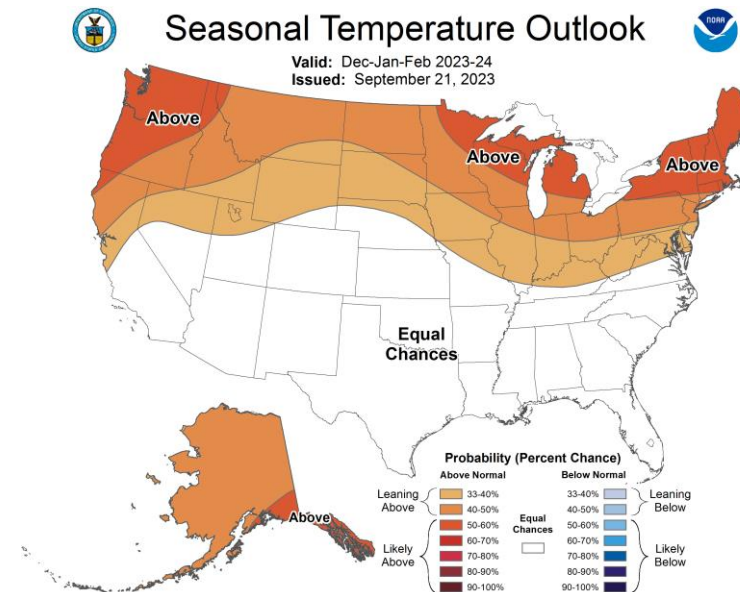
Assumptions:
 1.5% fuel, \$0.01/Dth injection cost, and 2 year swap interest rate for carrying costs.

Winter Weather Forecast

- The western U.S. experienced colder than normal temperatures during peak* winter 2022-2023.
- The outlook for peak* winter 2023-2024 shows moderate temperatures.



Source: National Oceanic and Atmospheric Administration, National Centers for Environmental Information, [https://www.ncei.noaa.gov/access/monitoring/us-maps/?maps\[\]=statewidetavgrank--3--202302](https://www.ncei.noaa.gov/access/monitoring/us-maps/?maps[]=statewidetavgrank--3--202302)

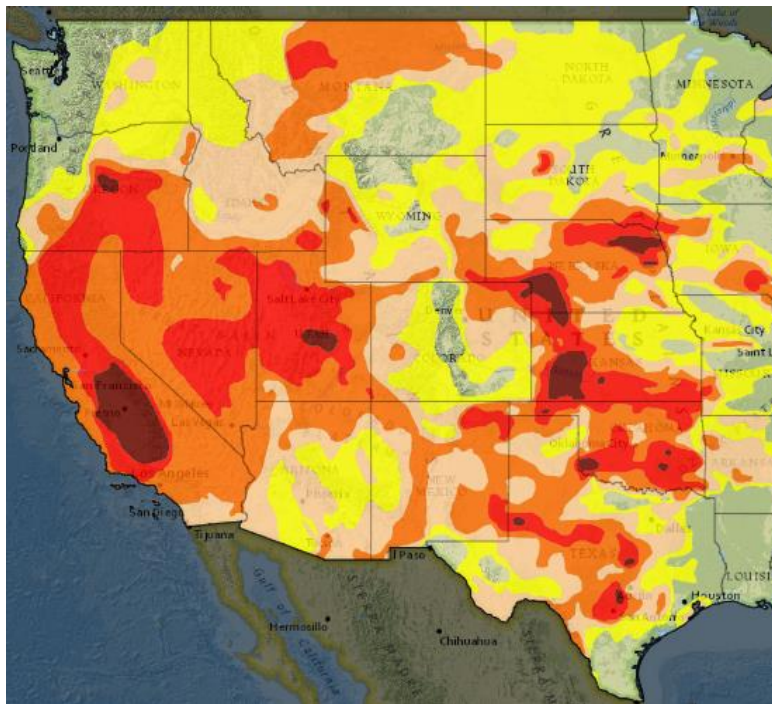


Source: National Oceanic and Atmospheric Administration, National Weather Service, Climate Prediction Center, https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead03/off03_temp.gif

Hydroelectric Conditions Impacting Electric Generation Gas Demand

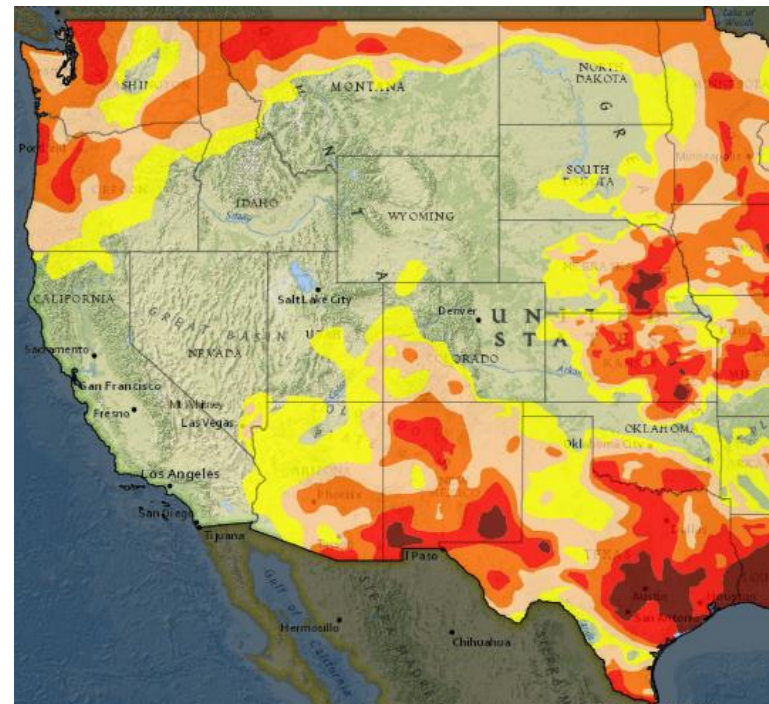
The western U.S. drought has improved since last September, indicating better water conditions for hydroelectric generation and lowering power generation gas demand expectations.

Drought Conditions 09/13/22

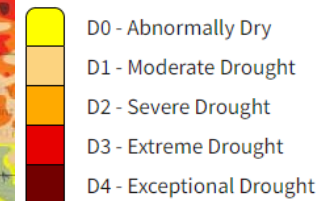


Source: National Oceanic and Atmospheric Administration, National Integrated Drought Information System, <https://www.drought.gov/historical-information?dataset=0&selectedDateUSDM=20220913>

Drought Conditions 09/26/23



U.S. Drought Monitor Category



Source: National Oceanic and Atmospheric Administration, National Integrated Drought Information System, <https://www.drought.gov/historical-information?dataset=0&selectedDateUSDM=20230926>

Methods of Communication

- Email
- Bill Forecast Alerts
- Outbound calls
- Home Energy Reports
- Pge.com homepage alerts
- Earned media
- Social media
- Community-based organizations
- On hold messages
- IVR options

PG&E Currents

News and Insights from Pacific Gas and Electric Company

As National and Global Events Cause the Cost of Natural Gas to Increase, PG&E Takes Steps to Reduce Impacts and Offers Ways for Customers to Save on Their Energy Bills

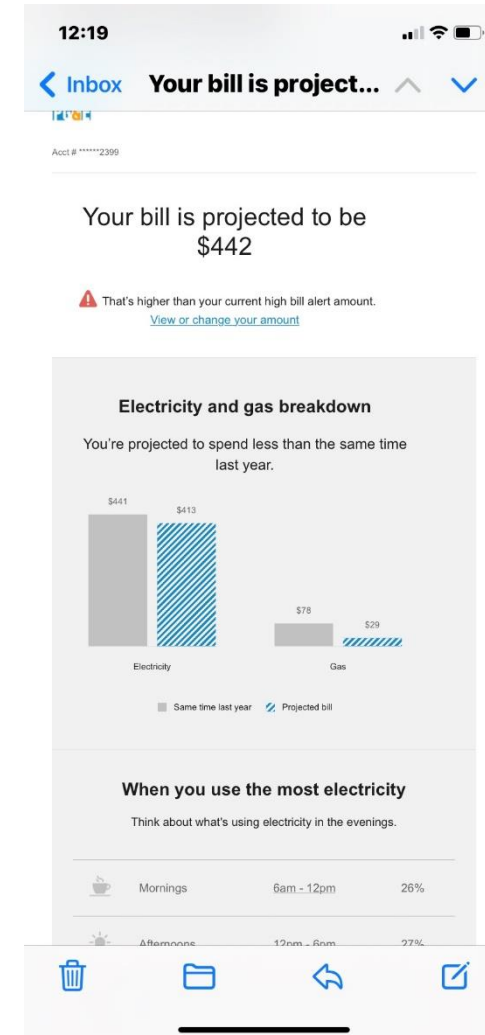
Winter is Almost Here: Act Now to Prepare and Save Energy this Season

Winter chills mean the heating system and water heaters in your home may need to work harder, which ultimately impacts pocketbooks. And, this year, the commodity price of natural gas is rising across the nation and around the world, which will affect all of us. PG&E passes through the commodity cost of natural gas to our customers with no markup.

“We use various strategies throughout the year to secure favorable pricing for the natural gas we purchase for our customers, in addition to offering a variety of programs to help customers manage energy costs. As we continue to attempt to alleviate the price swings, we encourage our customers to take extra steps now that will help them get ready and save all winter

Lessons Learned, Optimizations

- Use single-source of truth for quickly changing information
- Add gas price increase notification to Bill Forecast Alert
- Enhance coordination with Community-based organizations
- New pge.com design enables greater visibility (above the fold) for critical messages
- Improving multi-cultural outreach expertise, i.e., Budget Billing campaign





SOUTHWEST GAS

I.23-03-008 Workshop on Gas Utility and Independent Storage Provider Preparations for Winter 2023-2024

October 26, 2023



Service Territory

- Northern California
 - North Lake Tahoe and Truckee
 - South Lake Tahoe
- Southern California Service Territory
 - Barstow
 - Big Bear
 - Victorville area
 - Victorville
 - Apple Valley
 - Hesperia
 - Other small communities surrounding Victorville



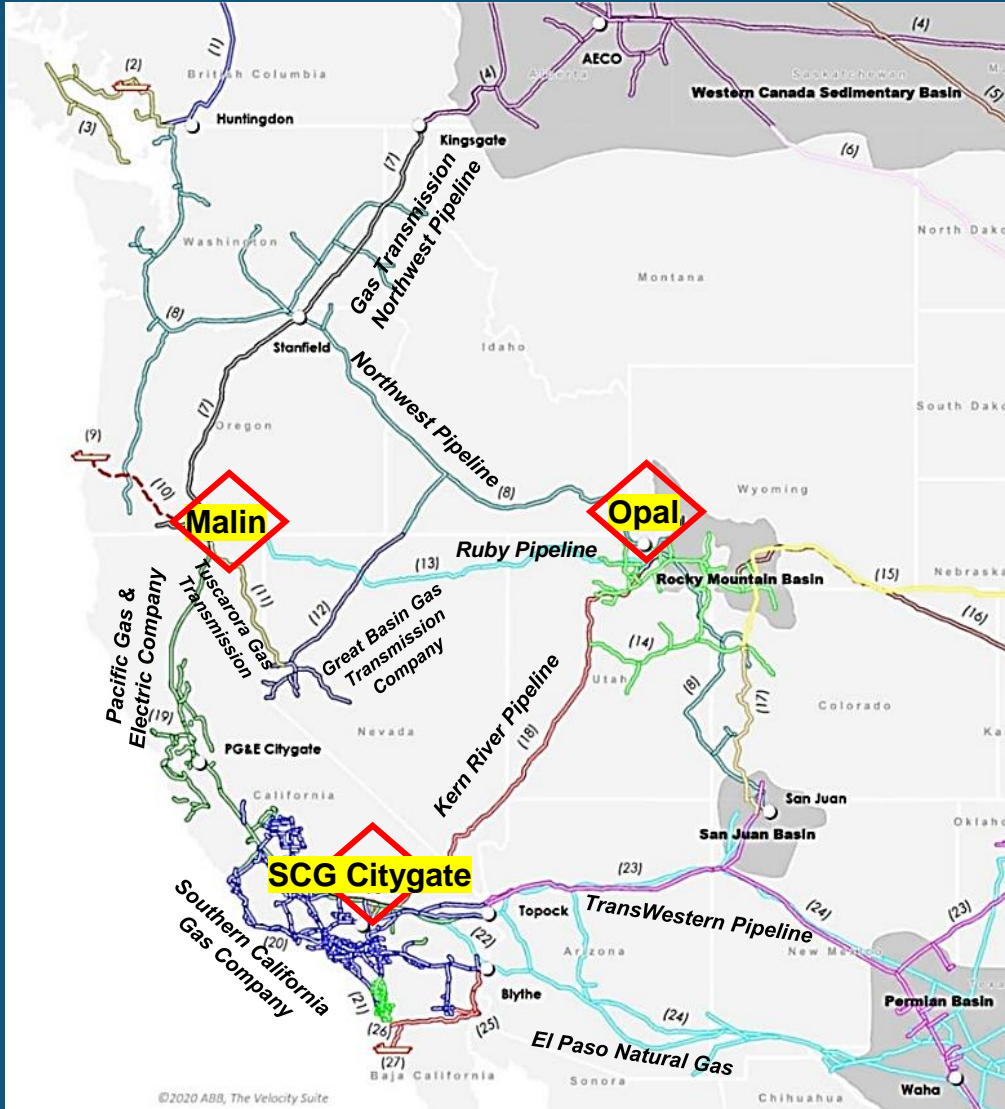
Natural Gas Market Fundamentals

Steve Williams, P.E.

Director/Resource Planning & Analysis



Market Supply Points and Storage



Northern California:

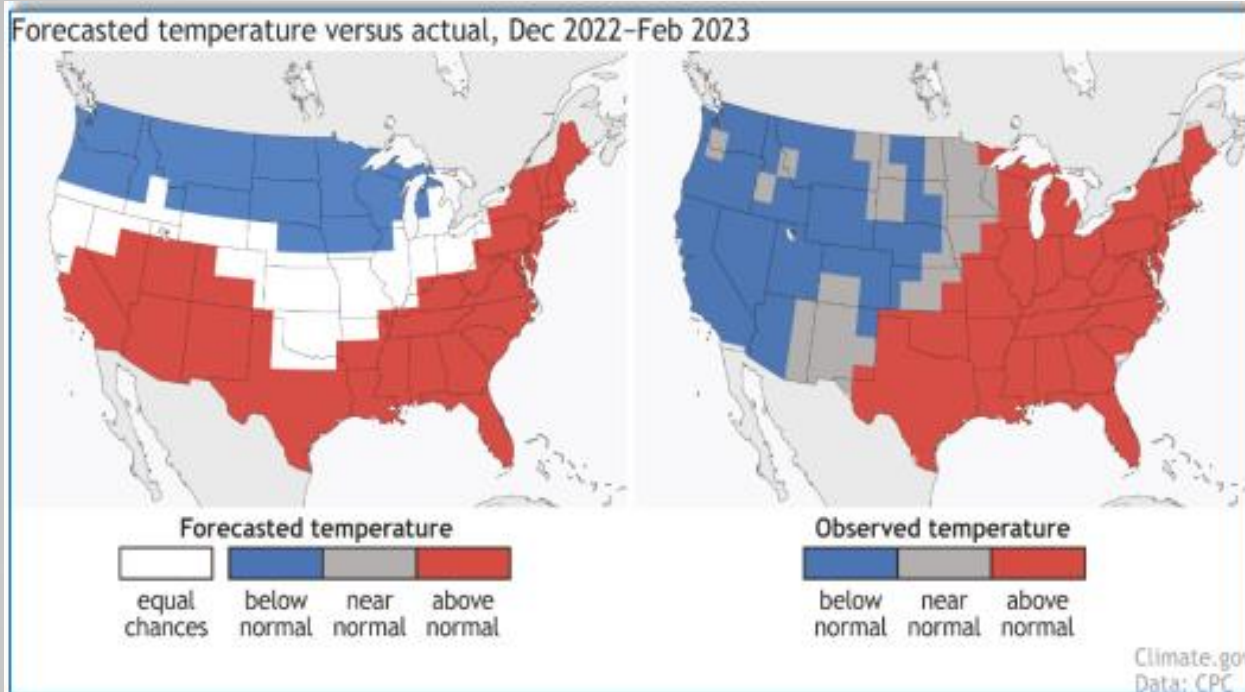
- Market supply points
 - Opal
 - Malin
- Storage
 - Great Basin Gas Transmission Company

Southern California:

- Market supply points
 - Opal
 - SoCalGas City Gate
- Storage
 - Southern California Gas Company

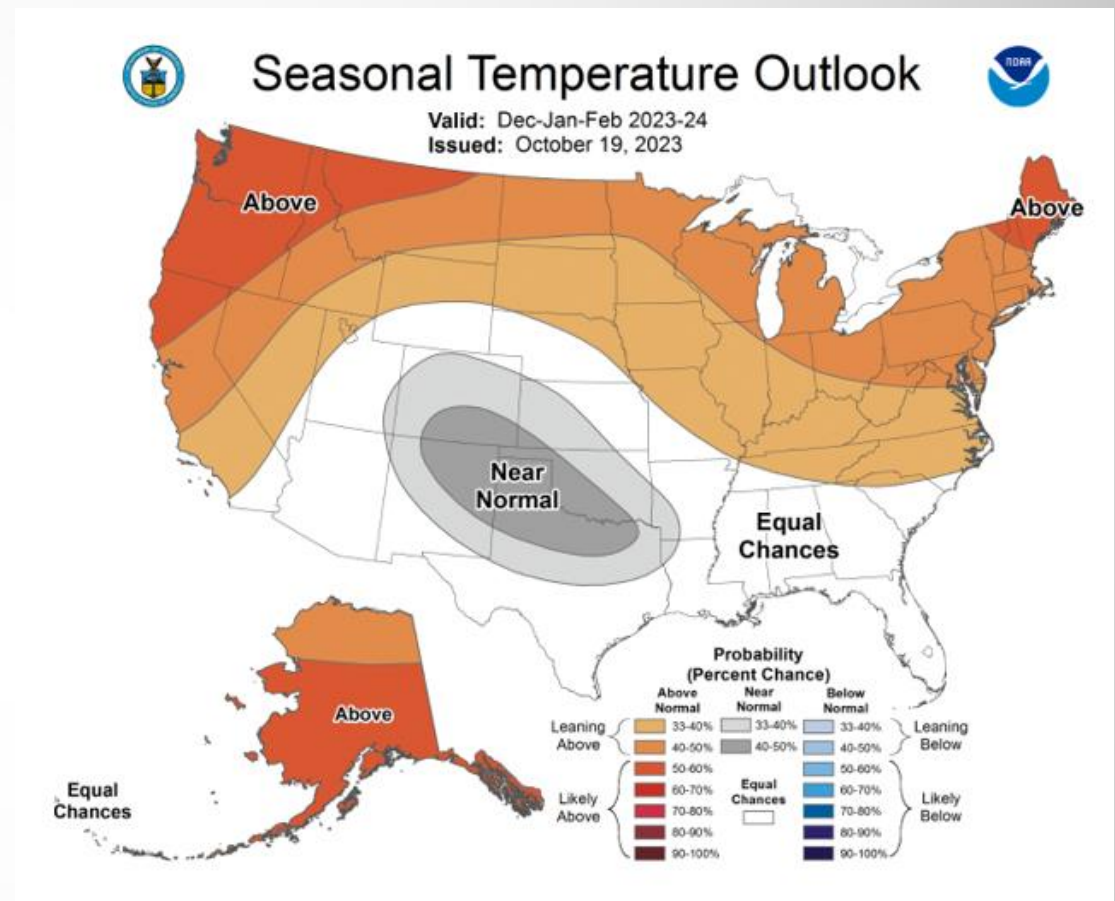
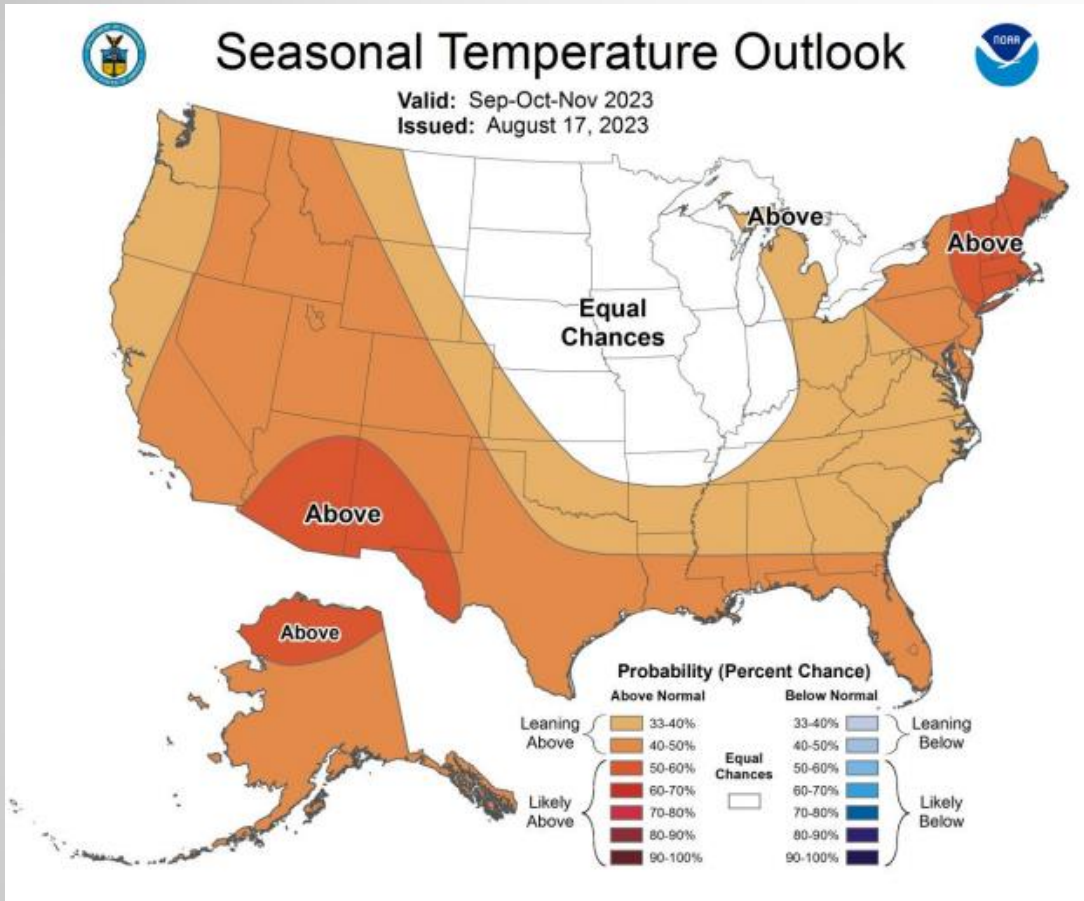
Source: 2022 California Gas Report, page 16
https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf

2022-2023 California and Pacific Region Winter Weather



Source: <https://origin-east01-drupal-climate.woc.noaa.gov/media/15144>

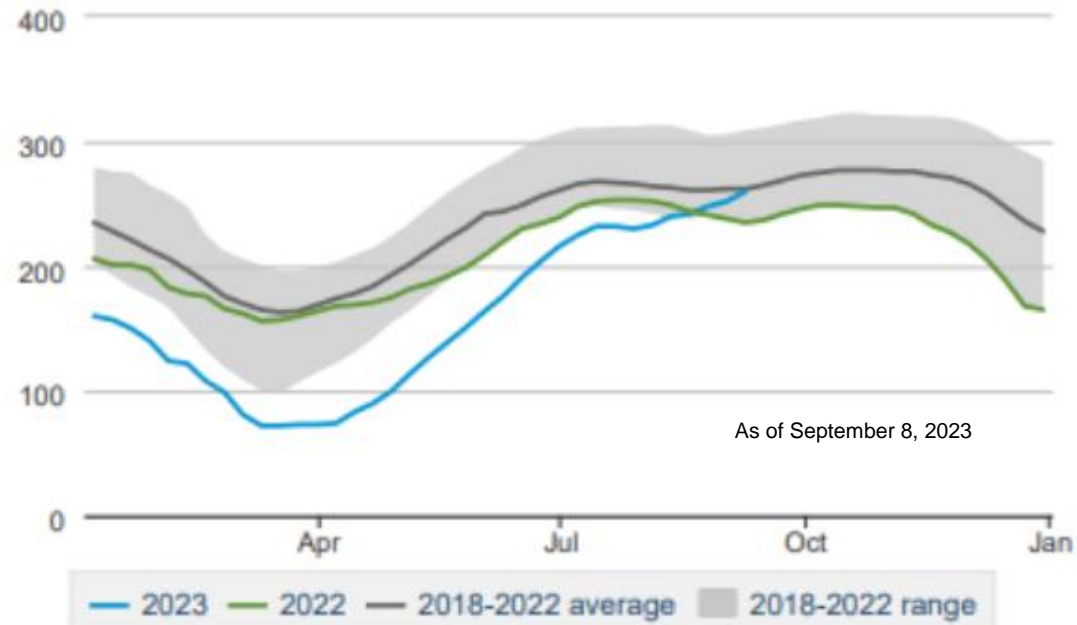
- NOAA weather forecast for December 2022 through February 2023
 - Above normal temperatures for most western states
 - Only northern states were forecasted to have below normal temperatures
- Actual December 2022 through February 2023 weather
 - ≈ Half of the lower 48 experienced colder than normal temperatures
 - California experienced approximately 24% more HDDs than a typical normal weather year
 - Pacific region experienced 18% more HDDs than a typical normal weather year



Source: NOAA, National Weather Service Prediction Center,
https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=3

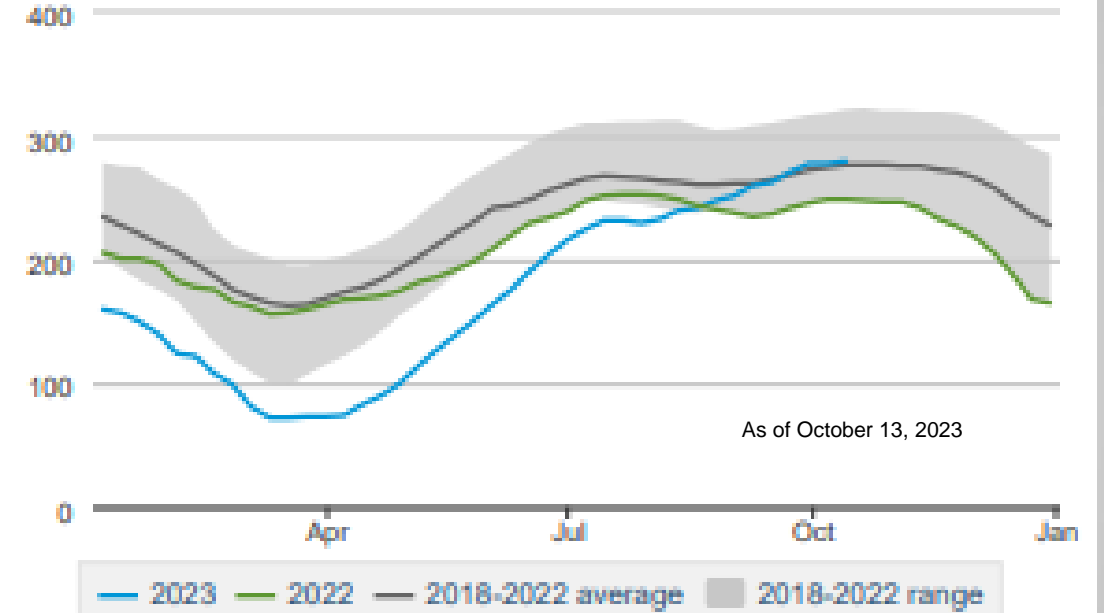
Pacific region weekly working gas in underground storage

billion cubic feet

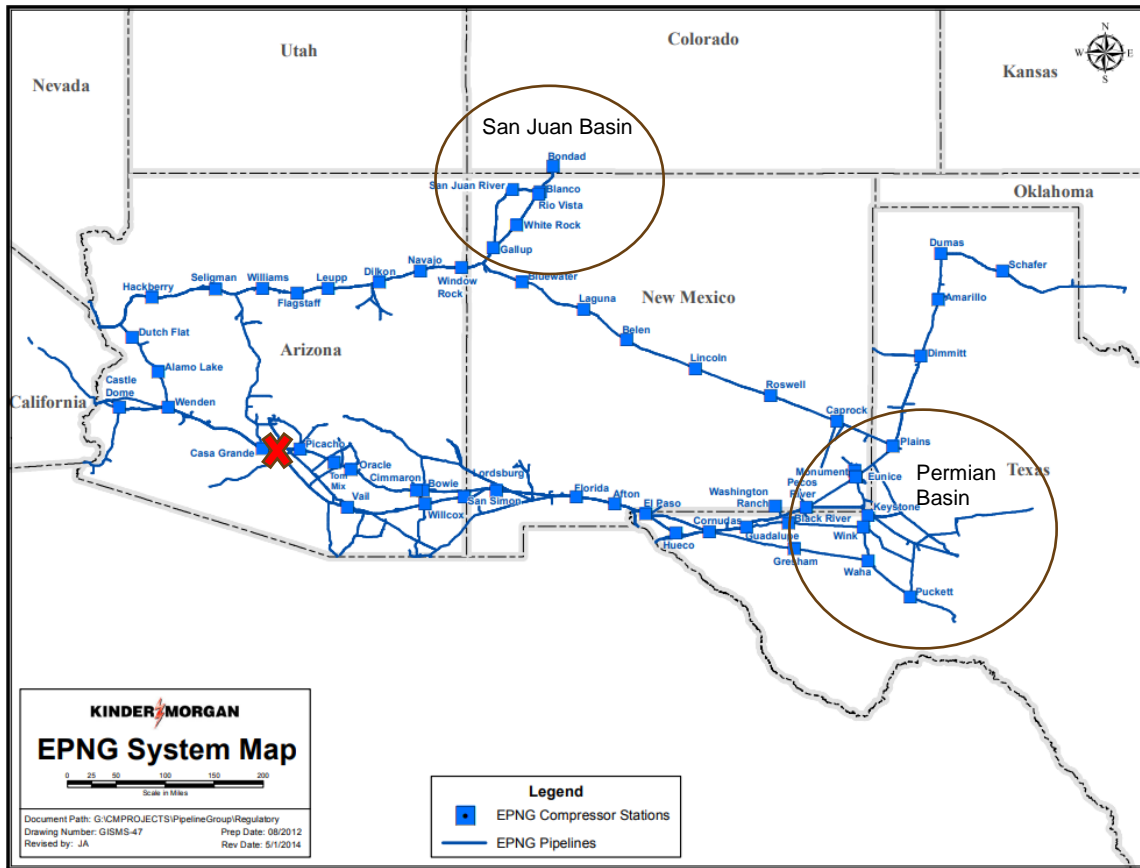


Pacific region weekly working gas in underground storage

billion cubic feet



Source: <https://www.eia.gov/naturalgas/storage/dashboard/>

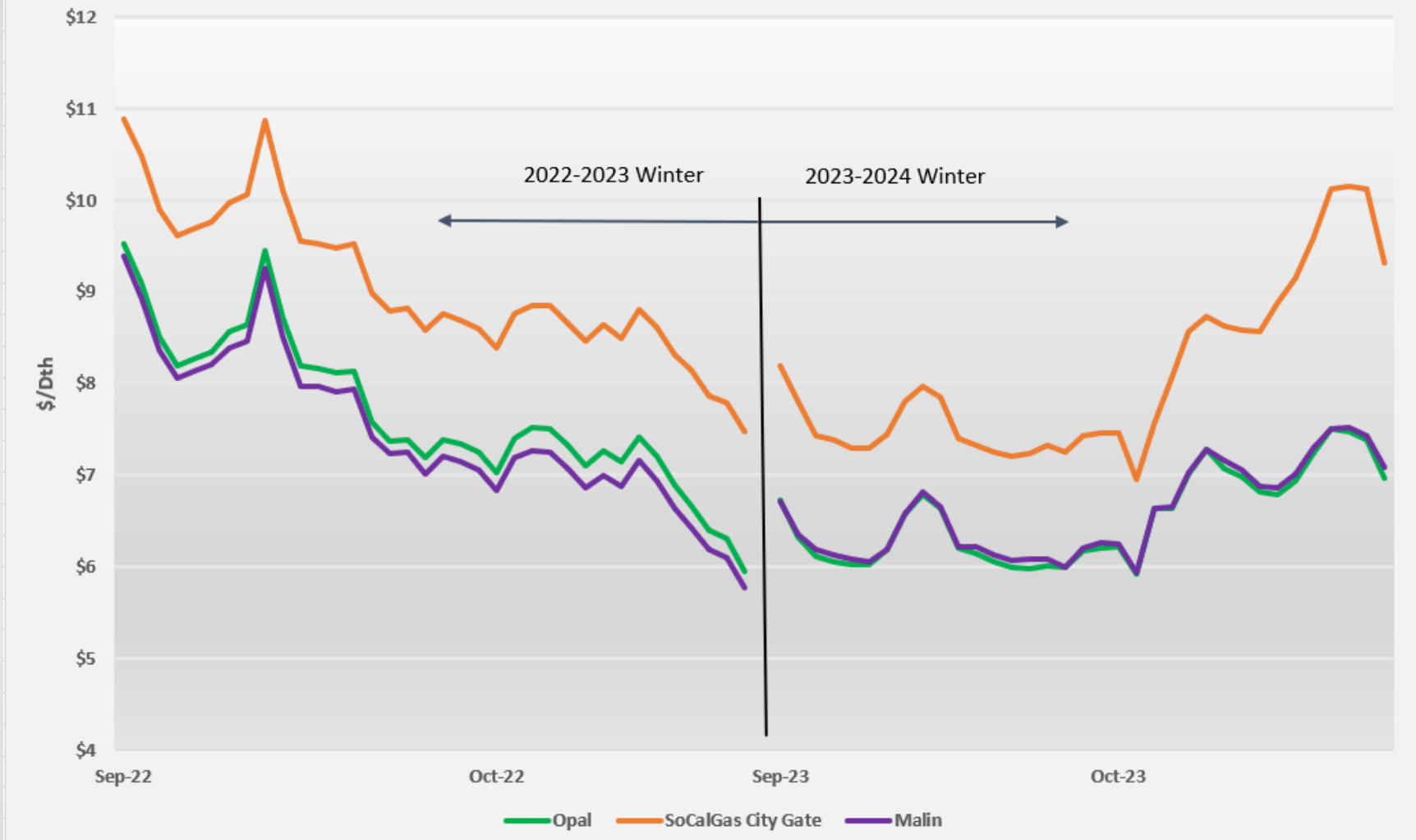


- El Paso Line 2000 outage
 - Began August 2021
 - Reduced supply by more the 0.5 Bcf/day
 - Service was restored in mid-February 2023

- Upcoming winter
 - Southwest Gas is not aware of any long-term interstate pipeline service interruptions

Source: <https://pipeline2.kindermorgan.com/default.aspx?code=EPNG>

November through March First of the Month Average Forward Prices



Source: Natural Gas Intelligence Forward Look



SOUTHWEST GAS

Annual Winter Communications

Sean Corbett
Manager, Corporate Communications



Winter Communications Approach



Southwest Gas provides customers during the cooler months helpful information on weatherization, conservation tips, and safety information.



This winter (2023/2024), Southwest Gas is enhancing the winter outreach program to make it easier for customers to learn more about their energy bill.

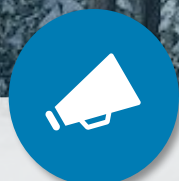
Communication Mix

Southwest Gas uses a strategic mix of owned, earned and paid communication channels to reach customers.



Owned

Messages distributed on Company-owned channels, such as the website, social media platforms, on-bill messaging etc.



Earned

Third-party distributed/amplified messages typically generated by media outreach and organic social media



Paid

Purchased media ensuring message delivery to the intended audience, used primarily to generate brand awareness

Communications Funnel



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Enhanced Messaging Triggers

Several factors can trigger elevated communication efforts to customers



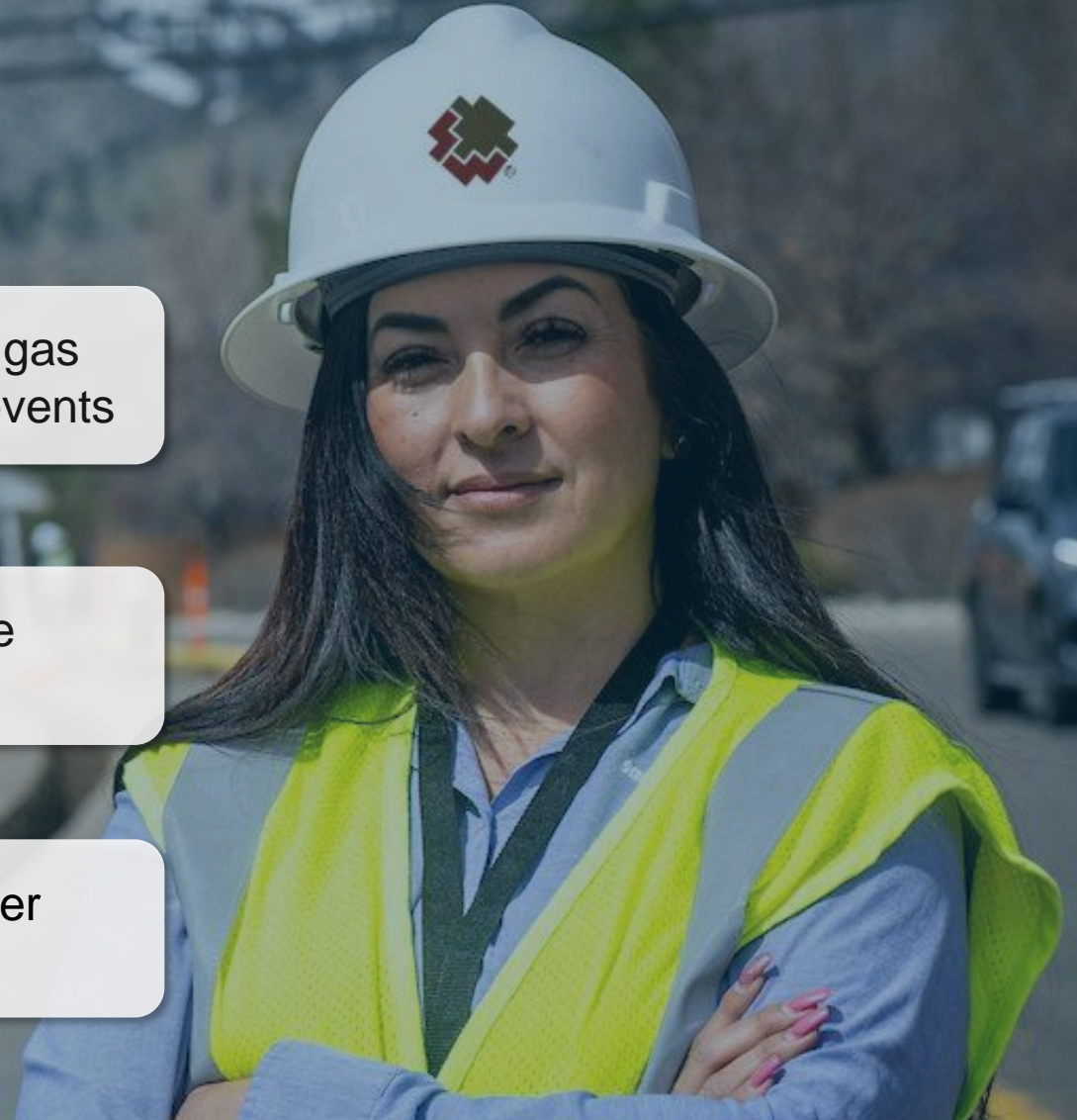
Rapid short-term increases in the cost of natural gas as a commodity due to national or international events



Natural gas supply shortages in other parts of the country due to increased demand

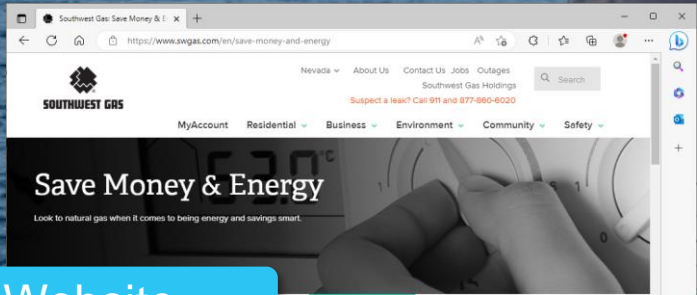
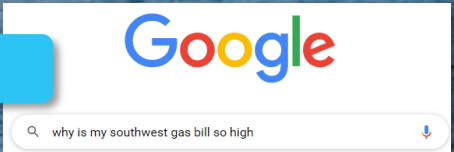


Extreme cold weather/other non-seasonal weather events which may drive increased use



Sample Communications

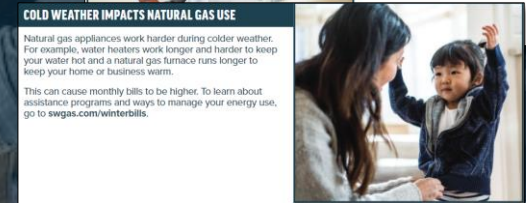
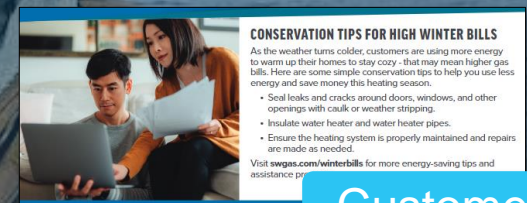
Online



Website

Why is my natural gas bill higher?

Customer Bills



CONSERVE ENERGY AND SAVE

Tools & programs to help this winter season.

GET STARTED

HIGHER GAS BILLS?

Check out these helpful tools & programs.

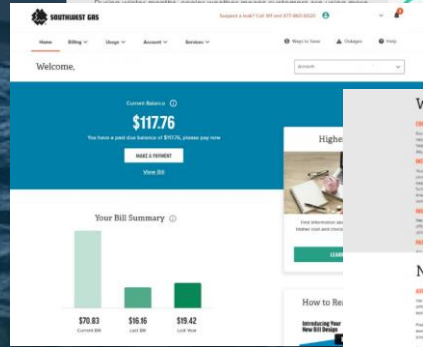
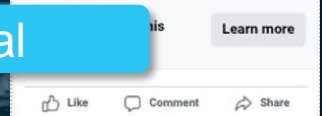
LEARN MORE

Southwest Gas Corporation
Sponsored

Temperatures may be dropping but you can save money and energy during the cooler months with energy saving tips and tools to help conserve. Assistance programs are also available to help lower your energy bill at swgas.com/savemoney.



Social



Why is my natural gas bill higher?

UNDERSTAND WHY

SWEGAS DOES NOT PROFIT FROM THE COST OF NATURAL GAS

NEED ASSISTANCE?

Enhanced & Centralized Billing Web Content



The “Understanding Your Bill” landing page will be the customer’s place for all energy bill information including dedicated content to address higher bills.



How to Read Your Bill



Assistance Programs



Save Money & Energy



Ways to Pay



Equal Payment



Rebates

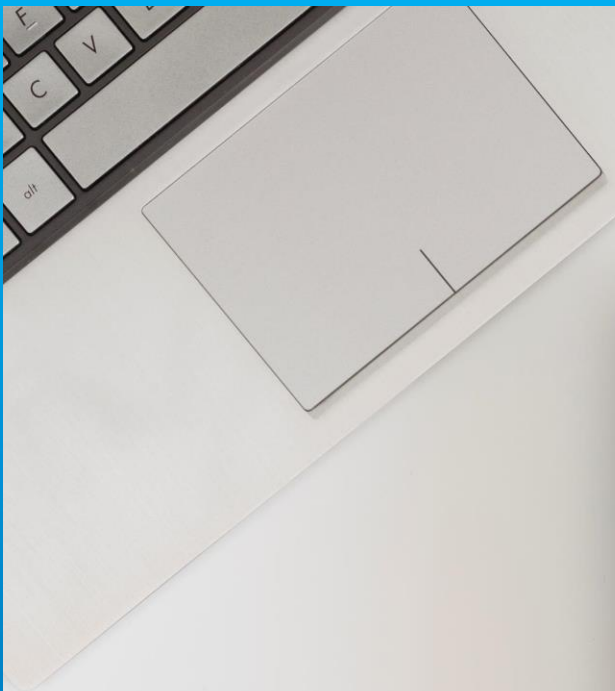
Mark Pocta

Cal Advocates

Questions?



RELAX
REFRESH
RECHARGE



Panel Two: Storage Readiness and Enhanced Communications Regarding Inventory Levels

- **Panelists:**

- **Rodger Schwecke**, SVP & Chief Infrastructure Officer, SoCalGas and SDG&E
- **Lucy Redmond**, Director, Gas Facilities and Storage Engineering, PG&E
- **Alfred Musgrove**, Director, Gas Control, PG&E
- **Jason Dubchak**, Vice President, General Counsel, and Corporate Secretary for Rockpoint Gas Services, Wild Goose Gas Storage and Lodi Gas Storage
- **Dave Marchese**, CEO, Caliche Development Partners, Central Valley Gas Storage



GAS PRICES OIL WORKSHOP PANEL 2

Rodger Schwecke
SVP & Chief Infrastructure Officer

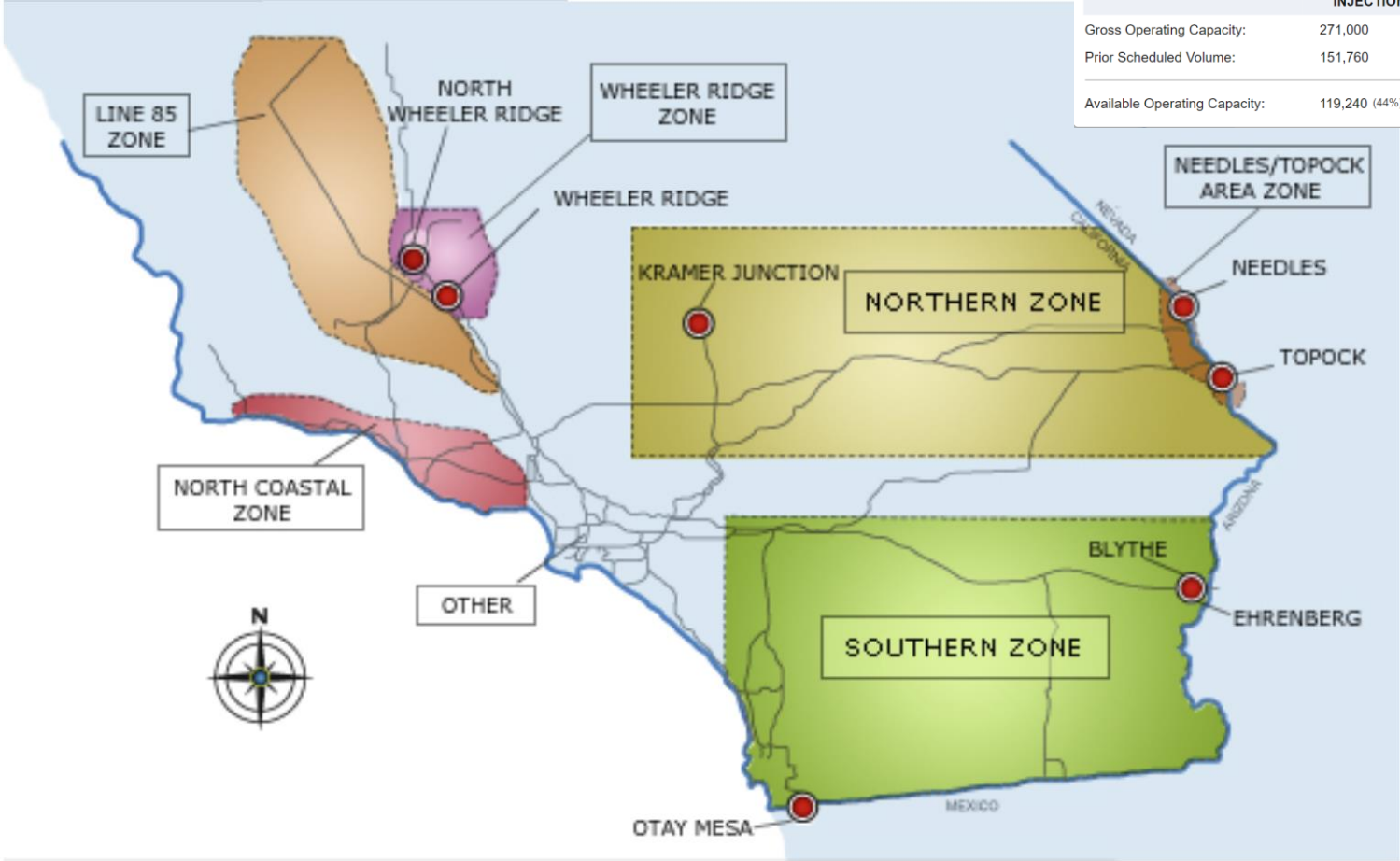
October 26, 2023



SoCalGas System Overview

End of the Western U.S. Natural Gas Pipeline System

- >95% of natural gas used in Southern California is produced outside of the state
- Southern California is the end-point of western gas flow
- Natural gas storage protects against shortages and allows regional energy reliability



STORAGE

Intraday 1 - Oct 19, 2023 (in DTH)

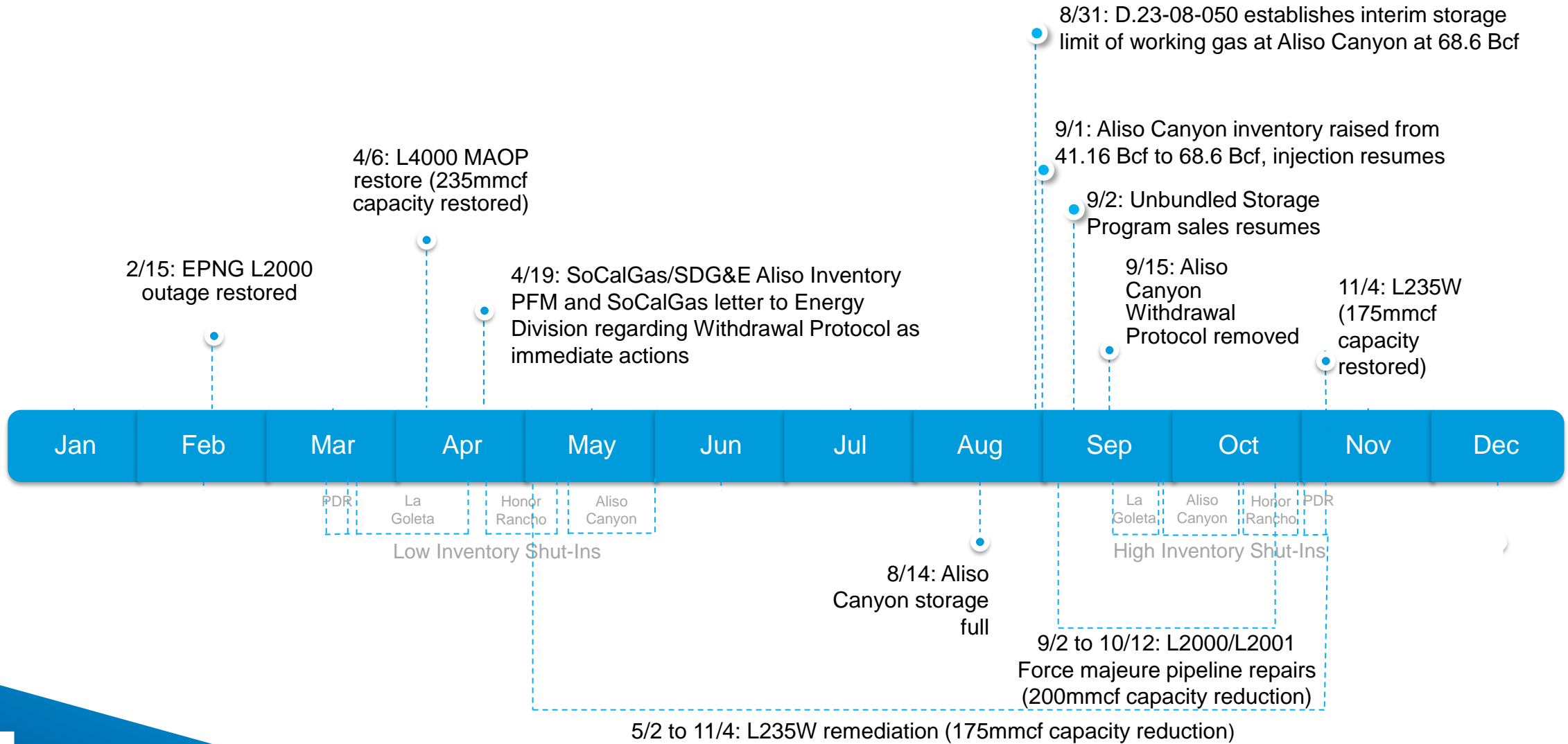
	INJECTION	WITHDRAWAL
Gross Operating Capacity:	271,000	1,265,000
Prior Scheduled Volume:	151,760	0
Available Operating Capacity:	119,240 (44%)	1,265,000 (100%)



SoCalGas ENVOY®

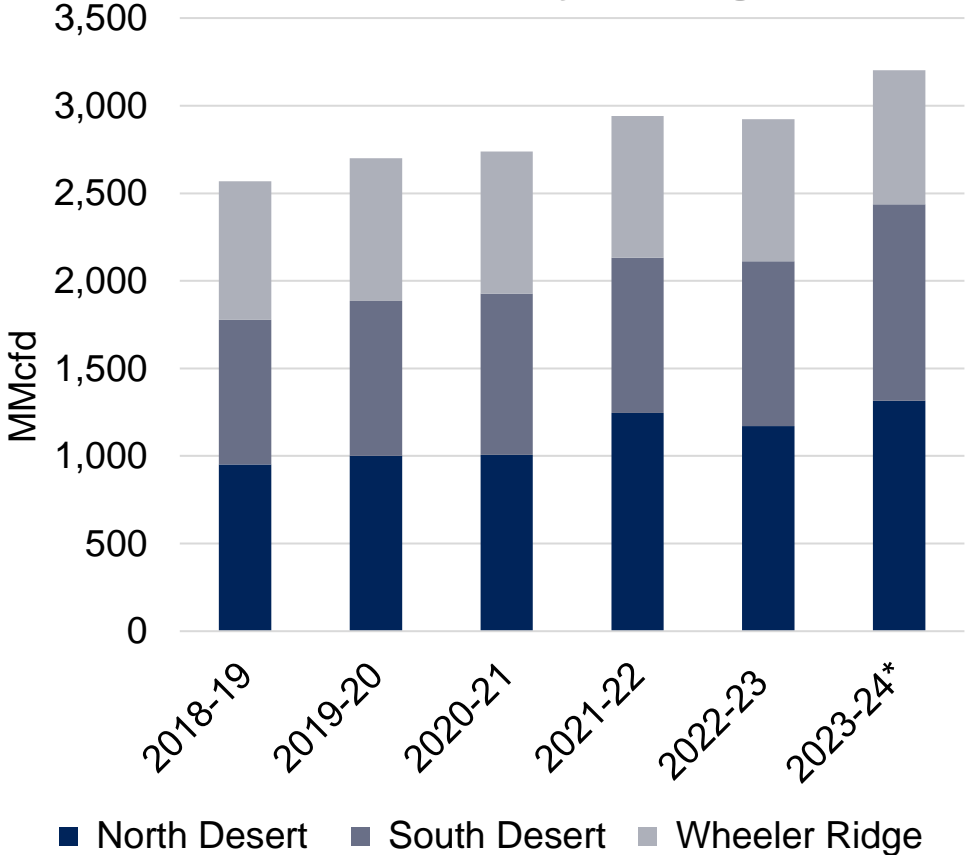
- » Forecast system sendout, available receipt point and storage capacity, confirmed nominations, and scheduled capacity information for each system receipt point, for each scheduling cycle
- » Daily storage levels and capacities
- » Historic storage inventory levels covering past weather and market events since January 2001
- » Planned maintenance activities and capacity impact
- » Posting of Unbundled Storage Service contract information

2023 Timeline - Significant Events

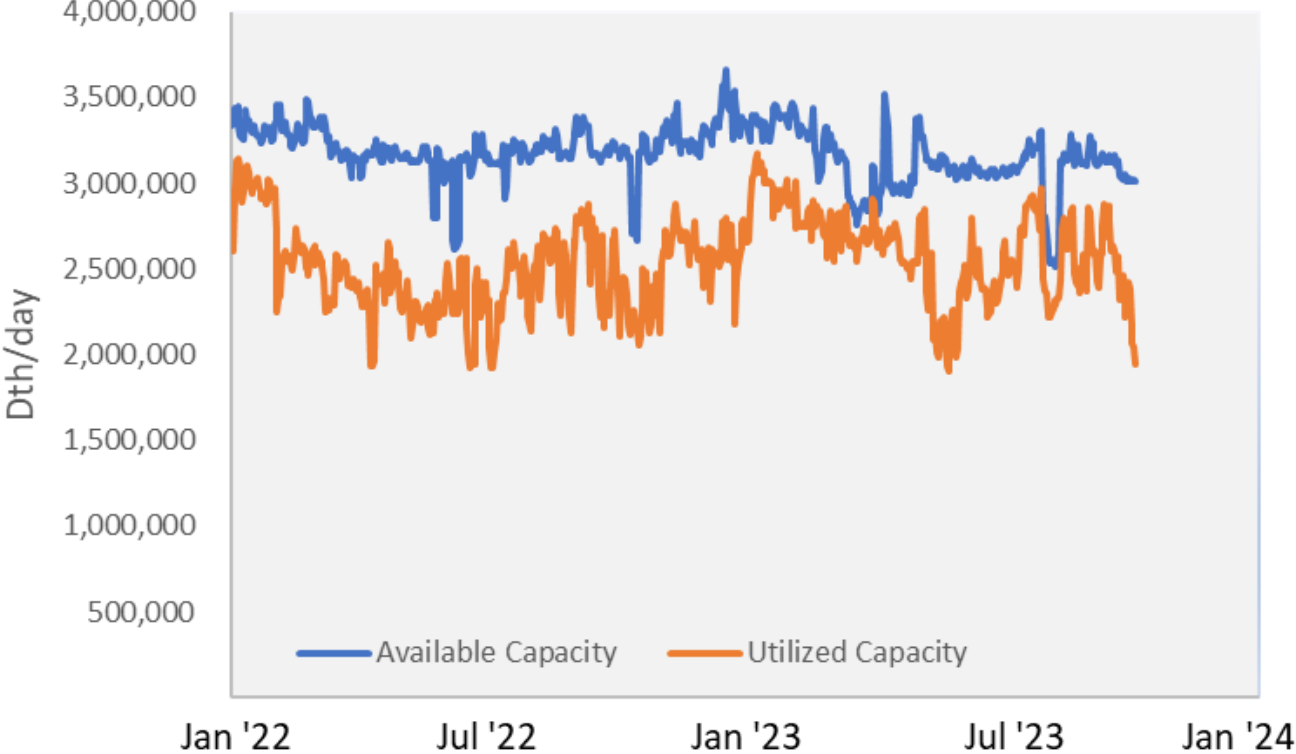


SoCalGas Pipeline Capacity Utilization 2023

Pipeline Interconnect Capacity – Winter (Daily Average)



SoCalGas Total Receipt Point Capacity Utilization

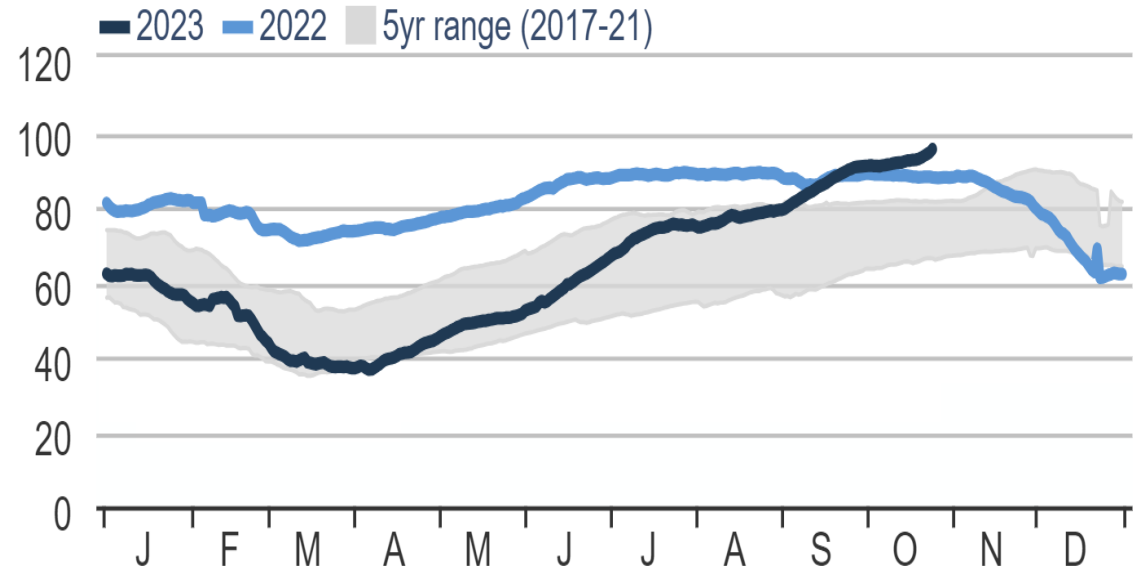


*This information is based on the SoCalGas Maintenance Schedule as of 10/24/2023 and is subject to change.

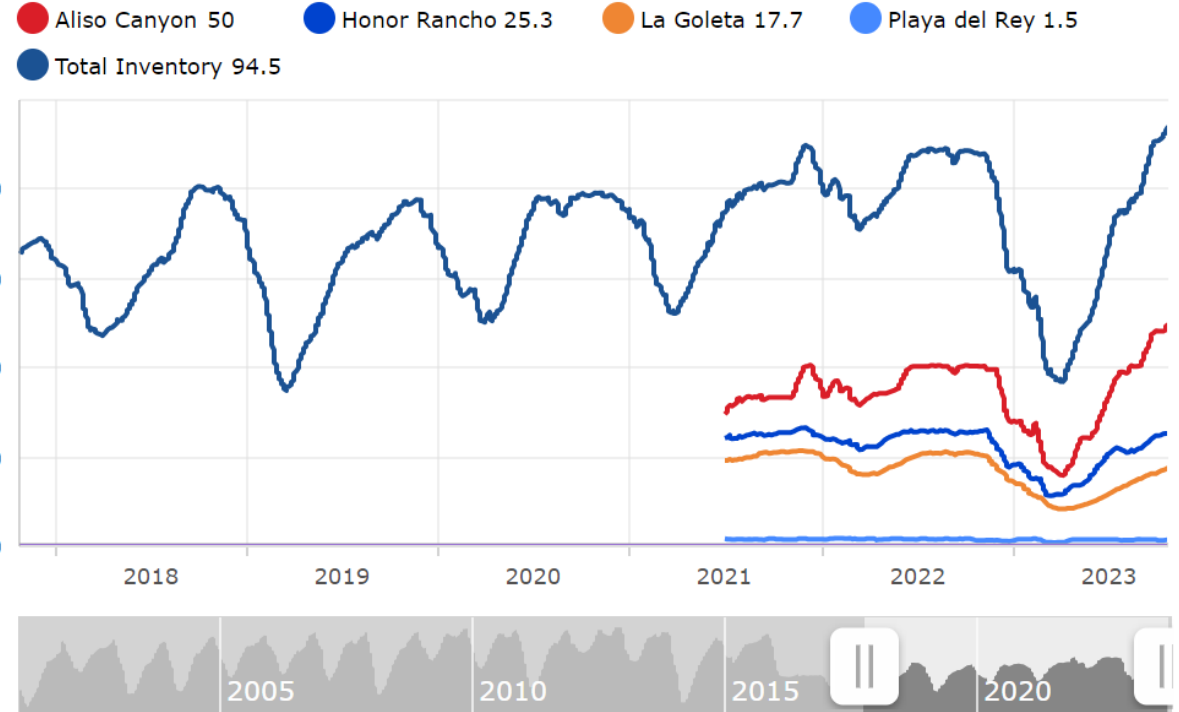


SoCalGas Storage Inventory Comparison

Daily natural gas inventory (billion cubic feet)



Source: EIA Southern California Daily Energy Report [U.S. Energy Information Administration - EIA - Independent Statistics and Analysis](#)

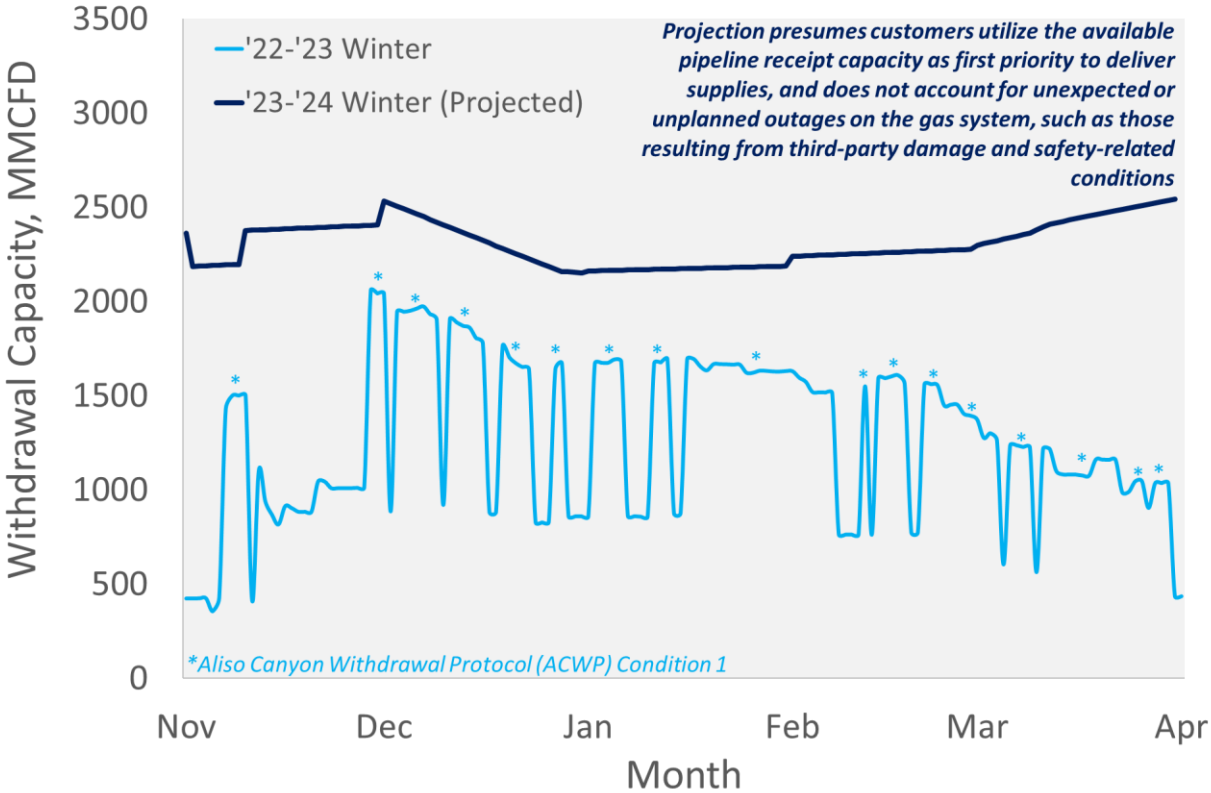


Source: [SoCalGas ENVOY \(socalgas-envoy.com\)](#)

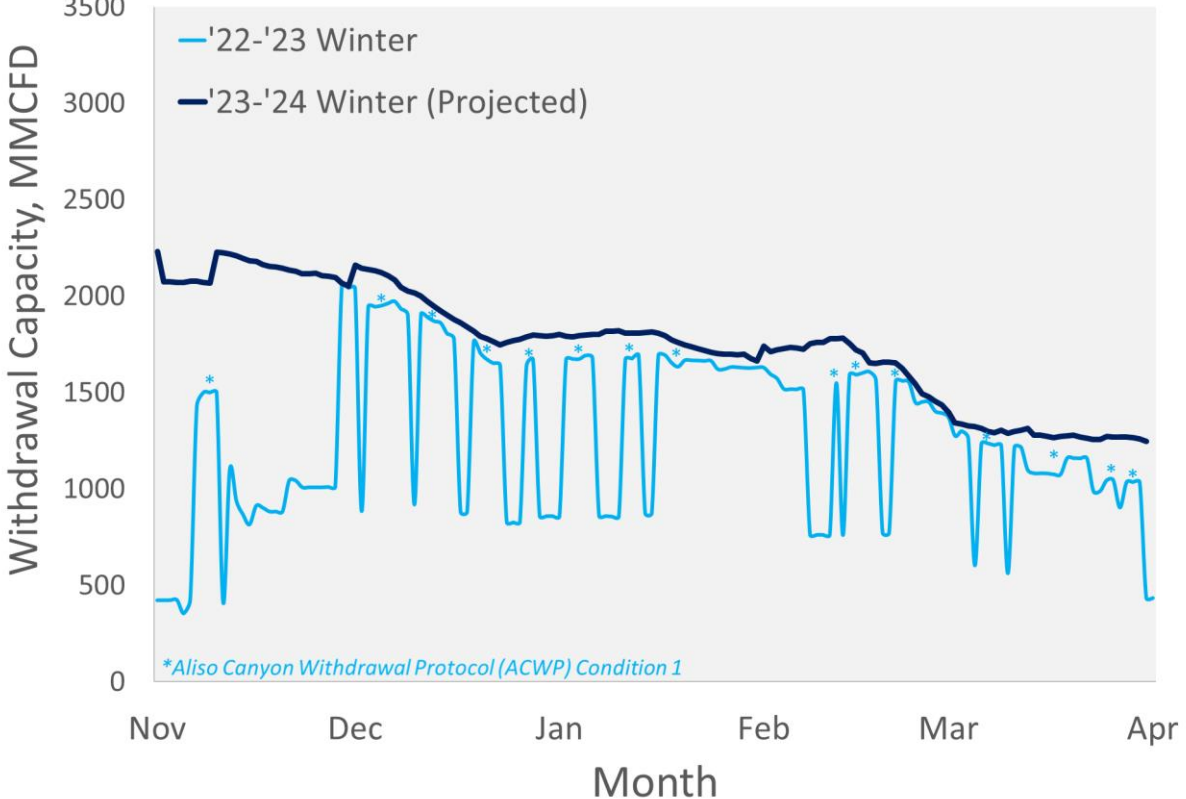


SoCalGas Storage Capacities Prior/Upcoming Winter

SoCalGas 2023-2024 Storage Withdrawal Capacity Projection
(Assuming Prioritized Pipeline Capacity Use)



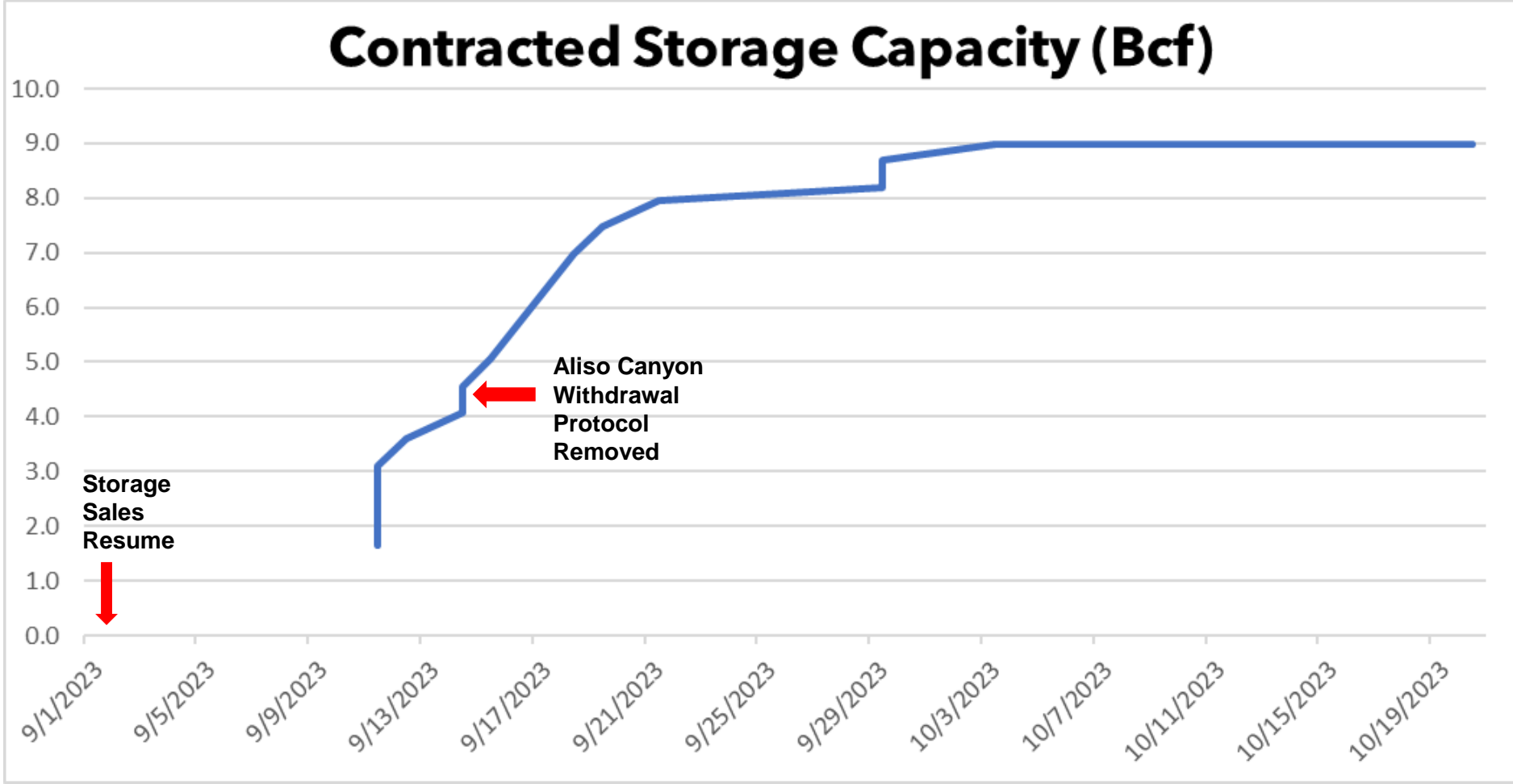
SoCalGas 2023-2024 Storage Withdrawal Capacity Projection
(Assuming 2022-2023 Inventory Volumes)



Unbundled Storage Program

- » 27 Bcf of storage capacity is allocated to the Unbundled Storage Program
 - Any credit worthy customer can contract for storage capacity service under Rate Schedule G-TBS and for park and loan service under Rate Schedule G-PAL
 - Storage inventory capacity is firm, but injection and withdrawal capacity are interruptible
- » A "Resumption of Storage Sales" notice was posted on Envoy on September 1, 2023 stating availability of unbundled storage services starting September 2, 2023
- » As of October 20, 2023 approximately 9 Bcf of storage capacity has been contracted for:
 - Storage capacity contracts are posted on Envoy with transaction date, counterparty name, inventory capacity, term and price for the past 30 days
 - Park and loan positions are posted on Envoy weekly

Unbundled Storage Program



2022-23 Winter Compared to 2023-24 Outlook



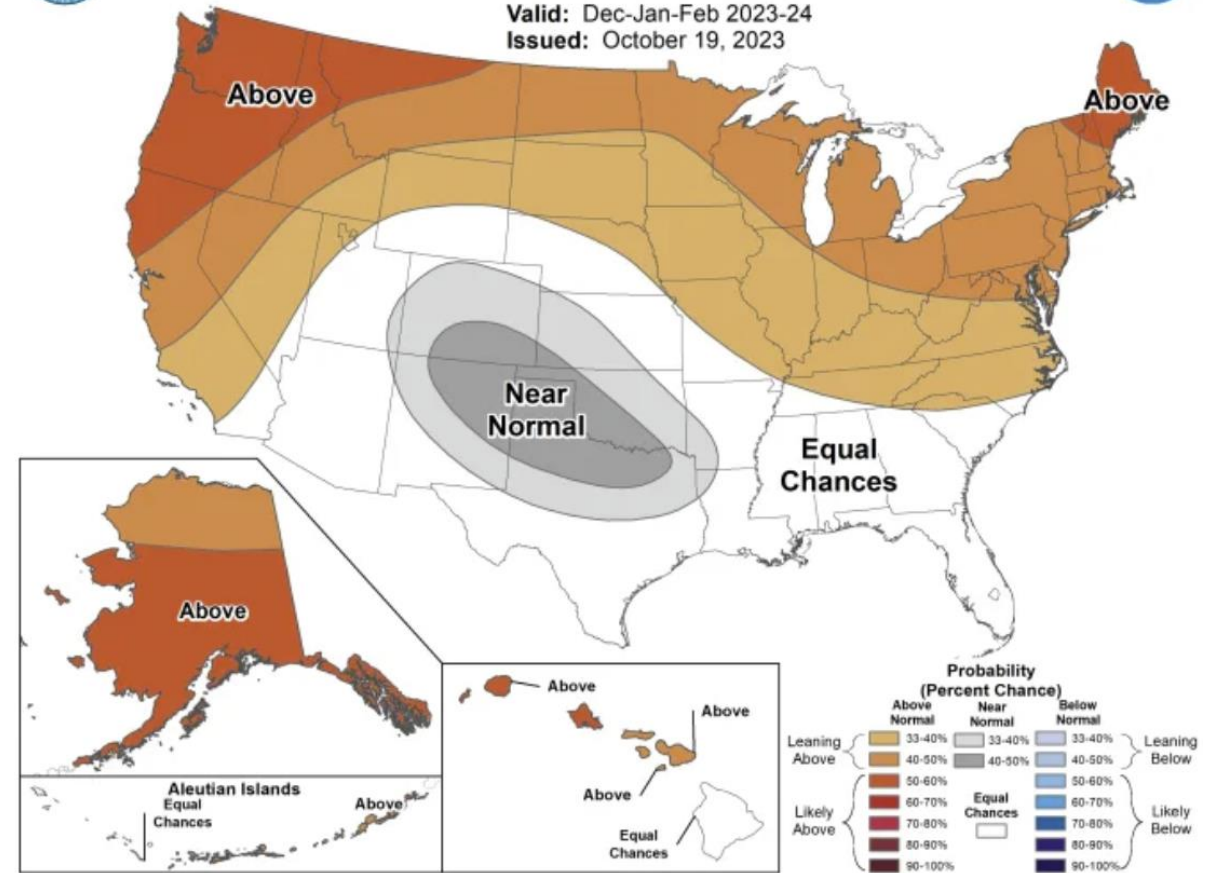
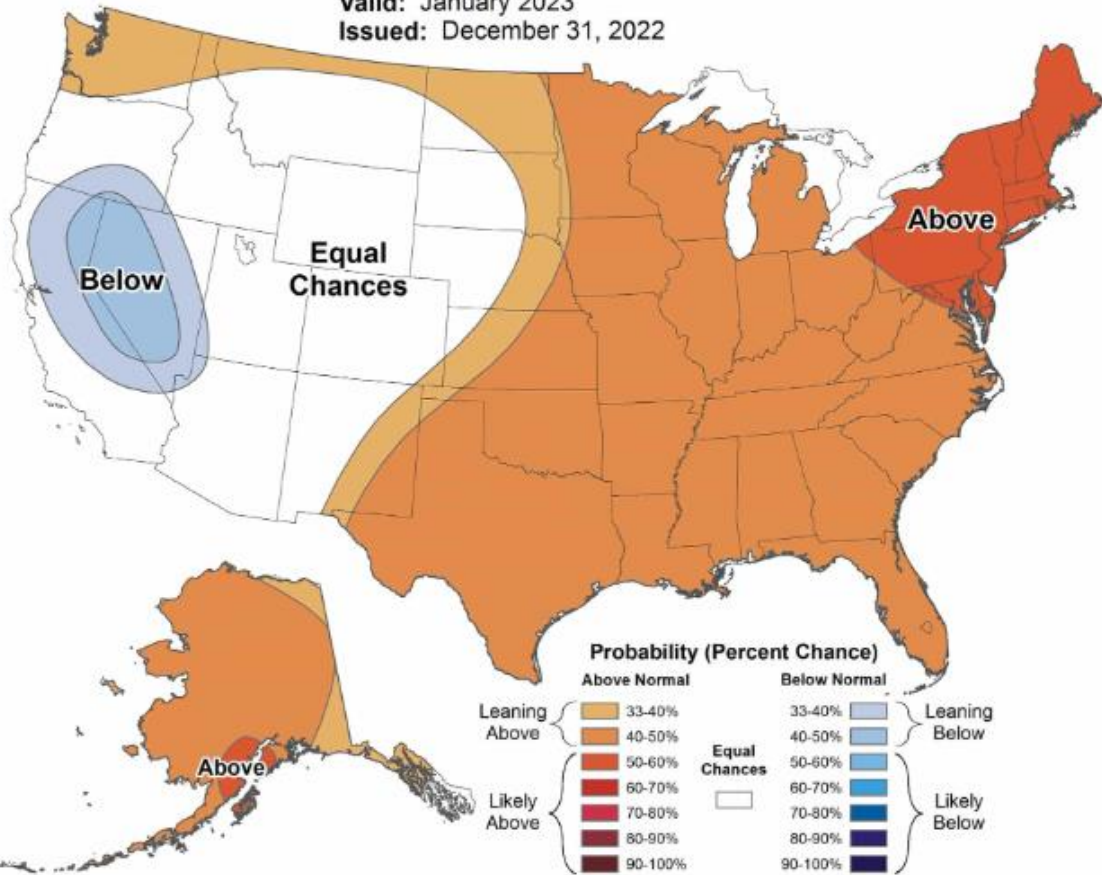
Monthly Temperature Outlook

Valid: January 2023
 Issued: December 31, 2022



Seasonal Temperature Outlook

Valid: Dec-Jan-Feb 2023-24
 Issued: October 19, 2023



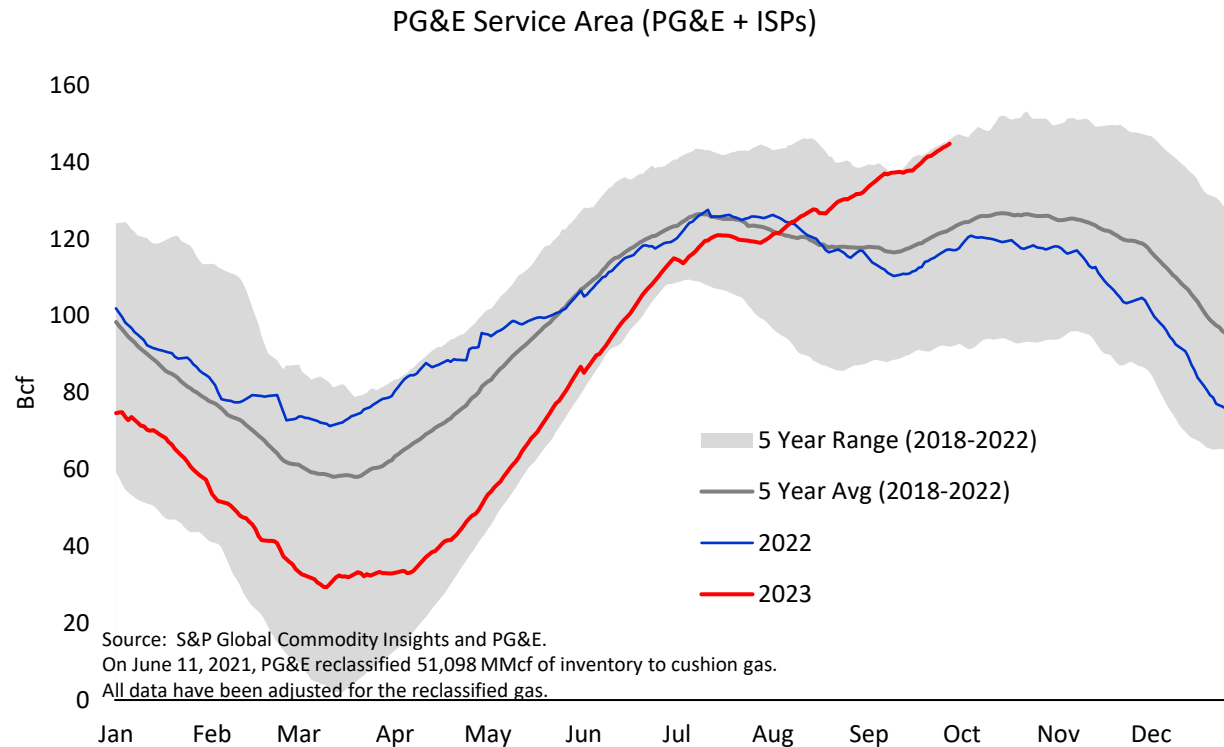
"The 2023-2024 U.S. Winter Outlook map for temperature shows the greatest chances for warmer-than-average conditions are in the northern tier of the continental United States."

Panel 2
Workshop on Gas Utility Preparations
for Winter 2023-24 (I.23-03-008)

October 26, 2023

Northern California storage in excellent position going into winter

Current gas storage levels are at the maximum of the five-year range.



PG&E Firm Gas Storage Obligations



Three Firm Service Components provided by PG&E:

- **Core Firm Services – 5 Bcf**
 - Core customers obligated to fill at 80% by Dec 1
- **Inventory Management – 5 Bcf**
 - Used daily to manage pipeline inventory
 - Inventory level dependent on suppliers' under and over deliveries
- **Reserve Capacity – 1 Bcf**
 - Used to mitigate supply disruptions
- Total Firm Winter Withdrawal Obligation 857 MMcf/d

Traditional Non-Core firm storage and a portion of Core firm storage services are provided by the Independent Storage Suppliers (ISP)

PG&E's Public Online Tool — Pipe Ranger

The screenshot displays the PG&E Pipe Ranger website. At the top, there is a search bar with a 'Go' button and a 'Log in' link. The main navigation menu includes 'About CGT', 'Products', 'Tools & Services', 'Operating Data' (highlighted in orange), and 'Reference/Library'. A left sidebar contains links for 'Current Pipeline Status', 'Forecasts', 'Historical Archives' (with a right-pointing arrow), and 'Gas Quality/Heating Values'. The main content area is titled 'Operating Data | Historical Archives' and contains the text: 'History can provide important lessons. Here's the place to track past periods' information.' Below this text is a list of links: 'Daily Demand by Customer Class', 'Monthly End-Use Demands by Customer Class Summary', 'Storage Activity', 'Recent Storage Activity', 'Supply & Demand', 'Recent Supply & Demand', and 'OFO/EFO Archive'. At the bottom of the page, there are links for 'PRIVACY', 'site map', 'contact', 'home', 'pge.com', and 'Do Not Sell My Personal Information'. A footer note states: '*PG&E* refers to Pacific Gas and Electric Company, a subsidiary of PG&E Corporation. © 2015 Pacific Gas and Electric Company. All rights reserved.'

- Provides daily injection and withdrawal activities for ISPs and PG&E
- Including PG&E's total working gas inventory and imbalance gas in storage
- Also a comprehensive archive of historical data

Wild Goose Storage, LLC and Lodi Gas Storage L.L.C. October 26 Winter 2023-24 Preparations Workshop



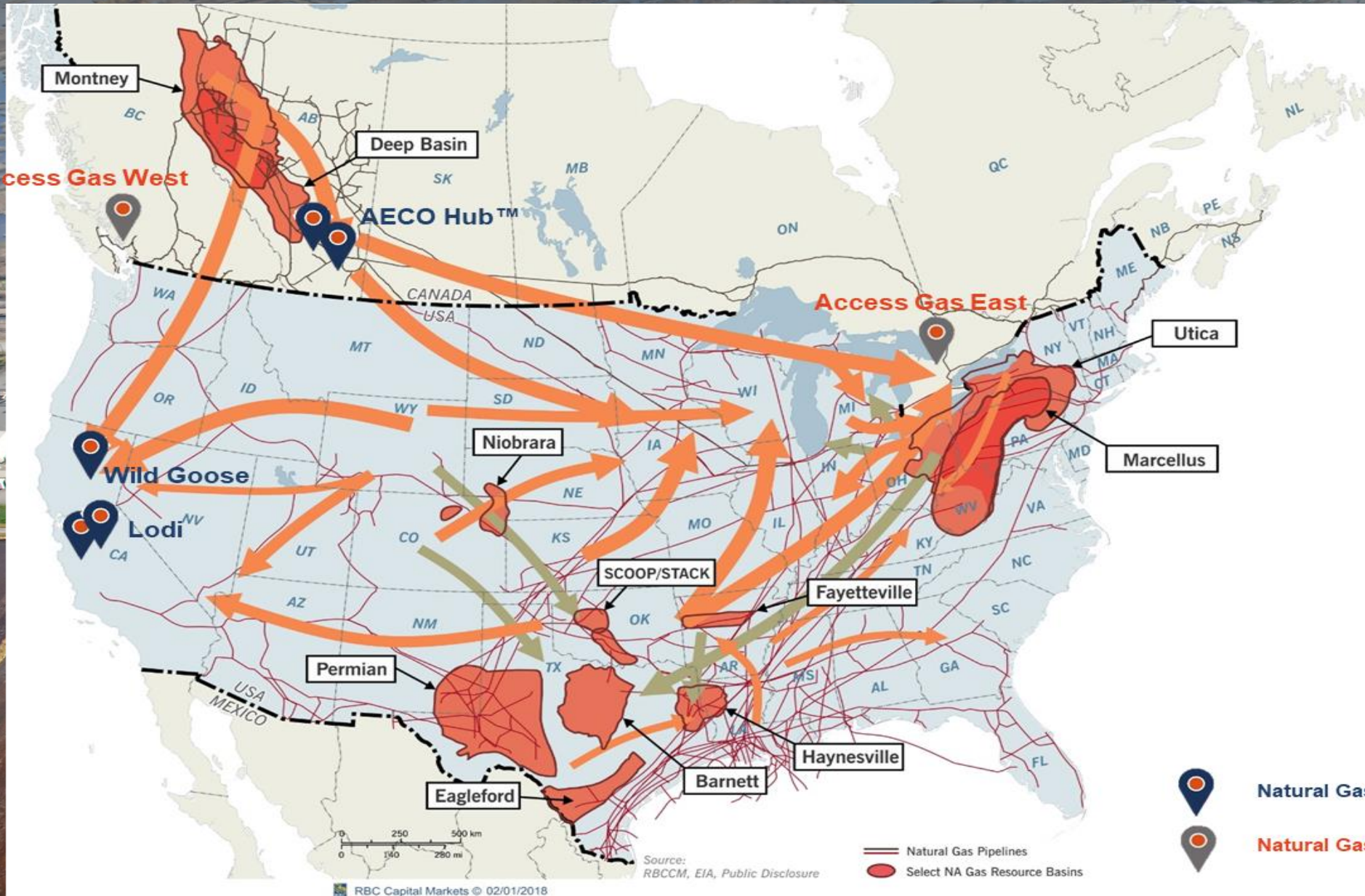
Wild Goose Gas Storage Facility, California



Lodi Gas Storage Facility, California



Rockpoint Connectivity



ility, California

Natural Gas Storage Facility

Natural Gas Management Services

Facility & Business Highlights

Strategic Assets that are Key Links in Natural Gas Value Chain

- Critical infrastructure strategically located and diversified throughout key North American hubs
- One of the largest independent owner and operator of purpose-built natural gas storage facilities in North America with over 260 Bcf of working gas capacity and ability to deliver 5 Bcf/d
- Positioned to participate in changing regional supply dynamics
- Extremely long-lived assets with well established maintenance and capital programs, providing significant barriers to entry

Diverse and Credit-Worthy Customer Base

- Diverse portfolio of contracts for storage services with utilities, marketers, producers, banks and financial institutions
- >90% of customers are investment grade, provide us with another form of financial assurance or are governmental entities

Low Risk Business Model

- Highly contracted business utilizes own proprietary inventory to ensure operational flexibility
- Stringent risk management policies in place requiring all forward sales be matched to financial hedges to secure a spread; no speculative positions

Highly Supportive Financial Sponsor

- Natural gas storage businesses acquired by our sponsor, Brookfield, between 2014 and 2016 with nearly \$1 billion invested in the business
 - Brookfield provides a backstopping \$100 million subordinated unsecured revolver
 - Over \$850 billion, 200,000 operating employees operating in 30 countries across five continents for 100+ years as owner / operators.
-

Jason Dubchak

Vice President, General Counsel (Legal & Regulatory)

Jason is our Vice President, General Counsel (Legal & Regulatory). He has served in this role since 2007. Prior to assuming this role, Jason was Associate General Counsel and was continuously with the natural gas storage business of Niska Gas Storage Partners, EnCana Corporation and its predecessor, Alberta Energy Company Ltd., since 2001. In addition to his legal and regulatory roles at Rockpoint, he also heads the Human Resources Department and is responsible for our corporate insurance program. Before joining the natural gas storage business, he practiced corporate, M&A and securities law at McCarthy Tétrault LLP and Osler, Hoskin & Harcourt LLP. He has a Bachelor of Arts (Honors) from the University of Calgary and a Bachelor of Laws from the University of Alberta.

Rockpoint Key Discussion Points

- ✓ Market-based rates / no captive ratepayers
- ✓ Provide EIA and all transactions monthly (mid-month) – firm and short term (annual summary for WG only and Lodi Quarterly for short term)
- ✓ Not appropriate to provide further information for at risk storage services
- ✓ Would distort market – volatility and / or business disruption
- ✓ PG&E could contract further in planning
- ✓ Have restrictions between Wild Goose and Lodi



CALICHE DEVELOPMENT PARTNERS

GAS UTILITY AND INDEPENDENT STORAGE PROVIDER
PREPARATIONS FOR WINTER 2023-24 WORKSHOP

October 26, 2023

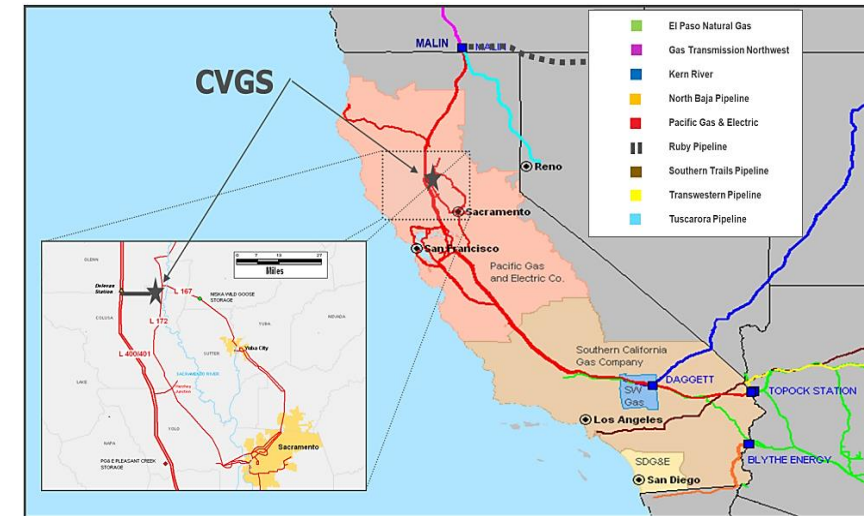
Central Valley Gas Storage Overview

- 11 Bcf underground natural gas storage facility within the Princeton Gas Field
- Approximately ~15 miles of natural gas pipeline from storage station to PG&E Line 400/401
- Primarily serving utility and marketing customers Connected directly to PG&E Line 400/401
- Facility has been designed to meet California Star program to meet extremely low methane emissions

Central Valley Gas Storage Facility Statistics

Total Capacity (Bcf)	12
Working Capacity (Bcf)	11
Recoverable Base Gas (Bcf)	1.4
Injection (Observation) Wells	9 (5)
Max Daily Injection Capacity (MMcf/d)	300
Max Daily Withdrawal Capacity (MMcf/d)	300
Header Pipeline Miles	~15
Compression Horsepower	10,650

Central Valley Gas Storage and Nearby Pipelines



Central Valley Gas Storage Facilities

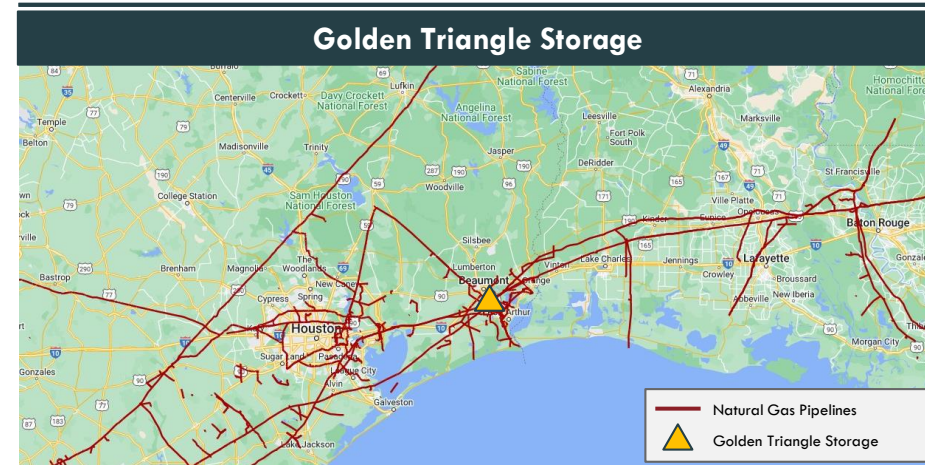


Caliche develops and operates underground gas storage facilities and carbon sequestration projects in the U.S. Gulf Coast and California

Golden Triangle Storage

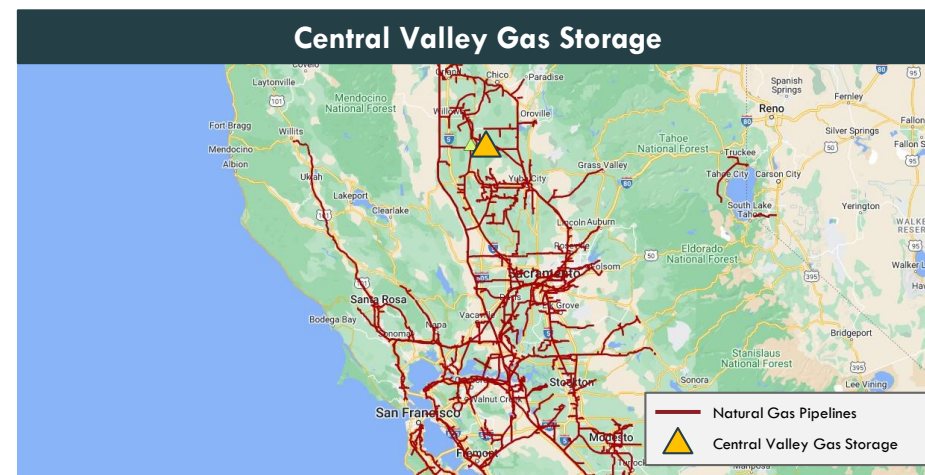
- 14 Bcf working capacity salt cavern facility located in Beaumont, TX
- Serves LNG, utilities, marketing customers in the U.S. Gulf Coast storing natural and industrial gases
- Developing CO₂ transportation and sequestration project on acreage located in the Beaumont area
- No recordable incidents and 99.99% facility uptime since Caliche's ownership

Caliche Natural Gas Storage Facility Locations



Central Valley Gas Storage

- 11 Bcf depleted reservoir storage facility located in Princeton, CA in highly rural / agricultural location
- Serves utility and marketing customers, with direct connection to PG&E mainline transmission pipeline (PG&E 400/401)
- Outstanding safety and compliance record to date, recognized for low methane emissions



Caliche Management Team



Dave Marchese, CEO

- 24 years of industry experience, including both operational and financial roles
- Debt and equity financing of oil, NGL, and gas salt cavern storage during ten years at Haddington Ventures
- Board participant directing development, construction and operations of multiple salt cavern hydrocarbon storage companies



David Saindon, CFO

- 30+ years of financial and industry experience, ~15 years of underground storage
- CFO roles include Calabrian Corporation, Prometheus Energy Group, Bobcat Gas Storage, Lodi Gas Storage
- Private Equity sponsors include: Energy Spectrum, Arlight, SK Capital, Shell Technology Ventures, Haddington Ventures, and GE Capital



Michael Brown, CCO

- 30 years of comprehensive natural gas trading and marketing experience
- Director of Business Development at Spire
- Head of North American natural gas origination at Engie
- Various other natural gas trading and marketing roles



Sam Wallace, VP Commercial

- Leads Caliche's commercial and business development initiatives
- Over 15 years of experience in energy and financial services industry
- Previously spent time as a gas trader and held various commercial roles at DCP Midstream where he led multiple natural gas pipeline projects from concept to FID



Darrell Hall, VP Operations

- Leads Caliche's operations, engineering and projects
- More than 32 years of leadership experience in the midstream sector
- Oversaw the construction and management of Caliche's Coastal Caverns storage facility in Beaumont, TX

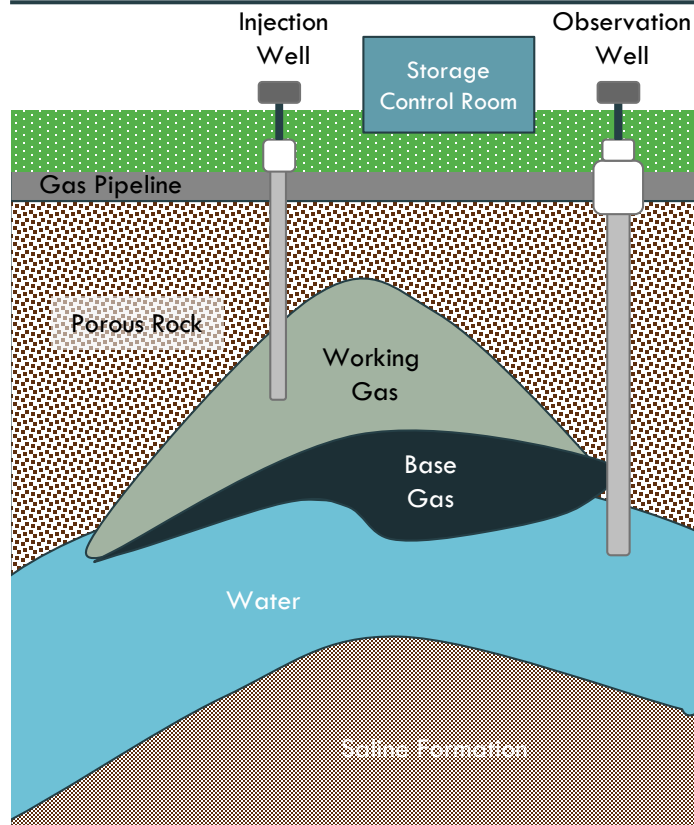
Presenting Executive



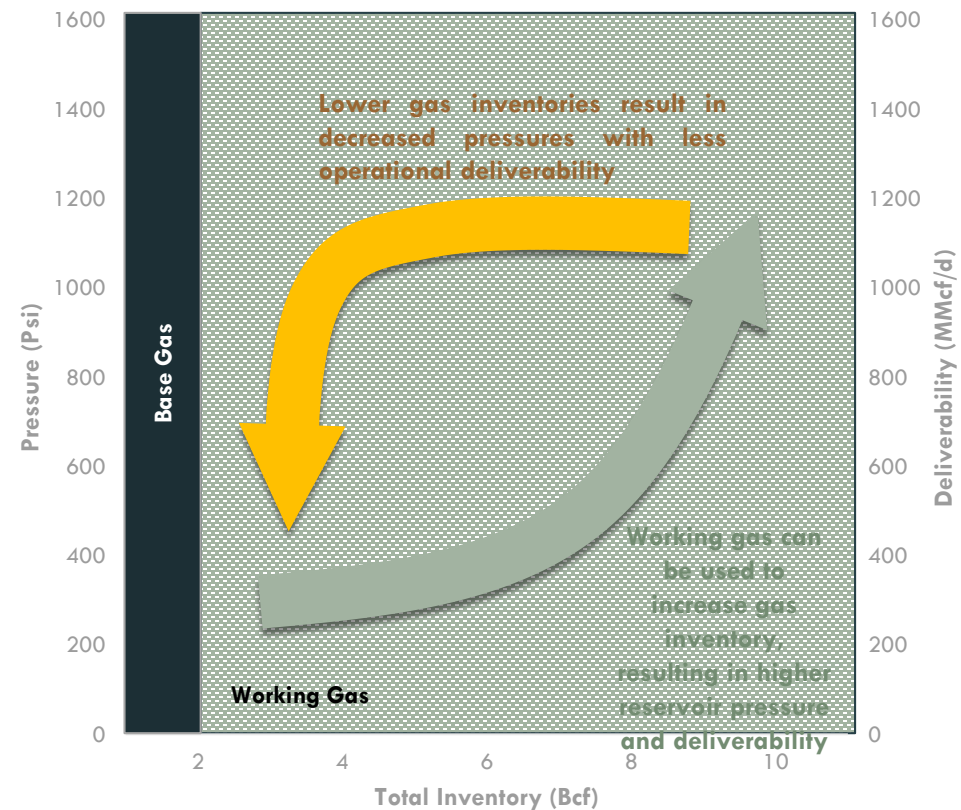
Working Gas, Inventory and Deliverability

- Depleted reservoir storage contains “base gas”, which is required to remain in the formation to meet minimum reservoir pressure required for withdrawal
- Working gas is customer gas that can be fully injected and withdrawn at facility limits related to pressure
- Periods of low working gas inventory cause decreased reservoir pressure and as a result, lower deliverability

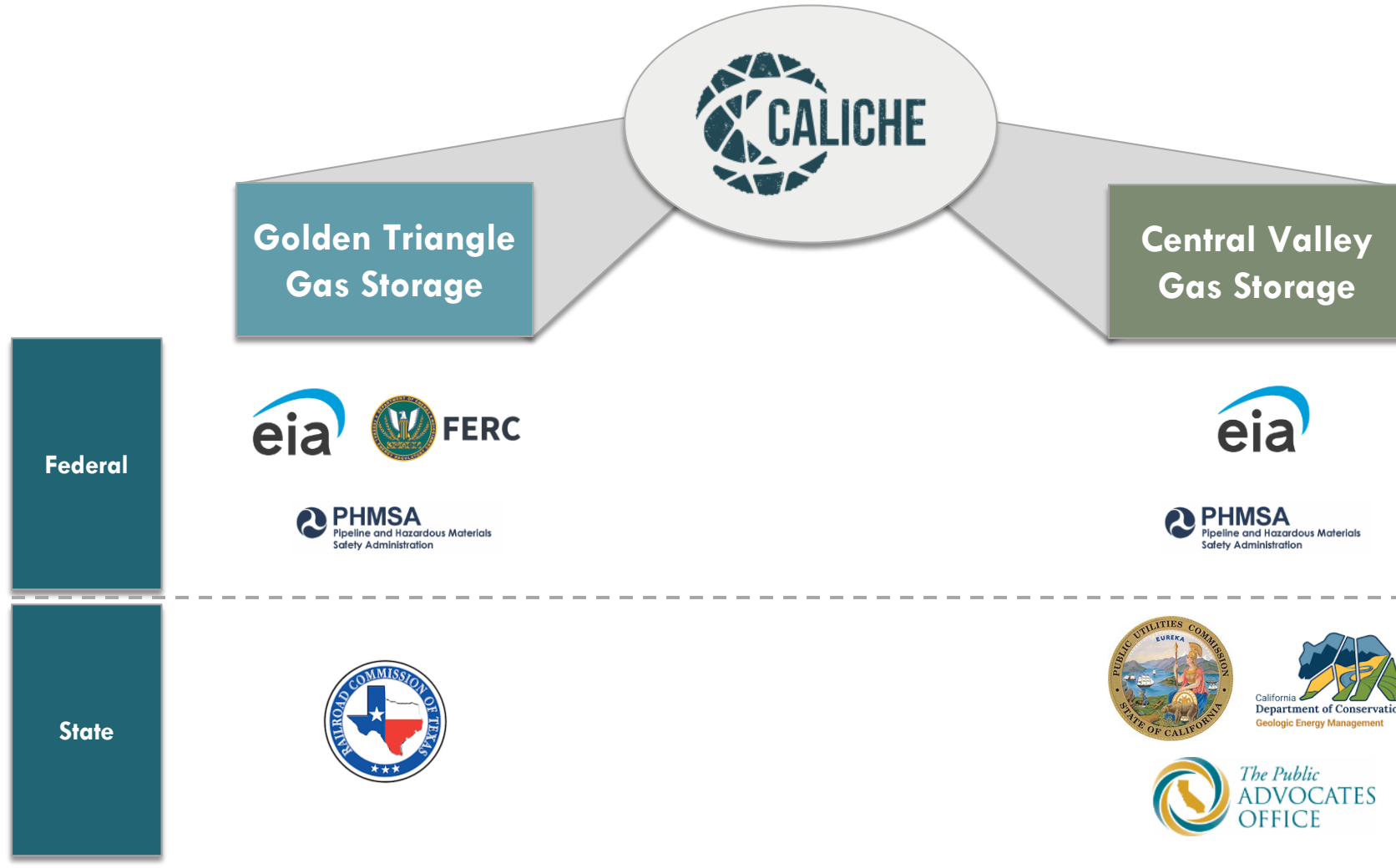
Illustrative Depleted Reservoir Gas Storage Layout



Illustrative Relationship Between Total Inventory and Deliverability



Caliche Public Reporting Summary





Central Valley Gas Storage Public Reporting



When	Agency	Report/Activity Name	Data/Notes
Monthly	CalGEM	Form OG110 - Monthly Production	Gross gas produced and number of days produced/month
Monthly	CalGEM	Form OG110B - Monthly Injection	Gas injected and number of days of injection/month
Annually	CalGEM	Annual Review meeting with CalGEM (typically November)	Annual Project Review meeting with CalGEM in accordance with CVGS' Gas Storage Permit
Bi-Annual	CPUC	Bi-Annual Withdrawal and Injection Curves and Wells in and Out of Service	Cushion and working gas inventory, injection and withdrawal wells that are in-service or out-of-service with current capacities and projected scheduled remedial work
Bi-Weekly	CPUC	Short-term Transactions	For transactions to be completed within one year or less (short-term transactions), copies of all service agreements within 30 days after commencement of the short-term service
Quarterly	CPUC	Quarterly Summary Filings	Short-Term Transaction Filings are followed with quarterly transaction summaries. The quarterly summaries list the customer, the transaction period, the type of service, the rate, the applicable volume, whether there is an affiliate relationship between CVGS and the customer, and the total charge to the customer
As They Occur	CPUC	Long-term Transactions	For transactions that will not be completed within one year (long-term transactions), a copy of each service agreement within 30 days after commencement of the long-term service
Semi-Annually	CPUC	Semi-Annual Affiliate Transaction Report	April 30 and October 31, the identity of all affiliates in California or Western North America that produce natural gas or provide natural gas storage, transportation or distribution services and all affiliates that generate electricity, or provide electric transmission or distribution services
Annually	CPUC	Annual Capacity Report to the Energy Division	Annual Report due 3rd week of December including withdrawal and injection capacity. CVGS generally includes a paragraph describing well conversion efforts to comply with the Rule since the last report
Annually	PAO	Annual Public Advocates Office Report	(1) the capacity of the facility (total inventory, injection and withdrawal rights), (2) average monthly storage inventory, injections and withdrawals based on numbers reported to the EIA, (3) weekly information as reported to the EIA, (4) annual safety reports submitted to the USDOT and (5) aggregate firm storage capacity under contract and aggregate interruptible storage capacity sold (monthly)
Weekly	EIA	EIA-912	working gas, bas gas, total facility gas
Monthly	EIA	EIA-191	working gas, base gas, total gas in storage, injections, withdrawals
Annually	EIA	EIA-176	§ Natural Gas Supply - withdrawals, receipts, total supply § Natural Gas Disposition – compressor use, injections, to pipelines, total disposition
Annually	PHMSA	Underground Storage Report	§ Working Gas Capacity, Base Gas Capacity, Total Gas Capacity § Metered Volumes Withdrawn, Metered Volumes Injected

Golden Triangle Storage Public Reporting



When	Agency	Report/Activity Name	Data/Notes
Monthly	RRC	Form G-3 Monthly Gas Storage Data Sheet	§ Maximum Storage Capacity § Minimum Pad Volume § Maximum Injection Rate/Day § Maximum Withdrawal Rate/Day
Annually	RRC	Form H-10H Annual Well Monitoring Report Underground Storage in Salt Formations	§ Total Cavern Capacity § Maximum Volume of Gas Stored During Year § Net Volume Injected or Withdrawn
Annually	FERC	Partial Refilling and Storage Capacity Increase Report (Rewatering)	New working gas and pad gas capacities based on any dewatering activities
Annually	FERC	Form 549B -- Peak Day Capacity Report Under Section 284.13	Estimated storage capacity and maximum daily delivery capability of its storage facilities
Semi-Annually	FERC	Semi-Annual Storage Report Pursuant to Engineering Conditions 4 and 8 (October 1 - March 31 and April 1 - September 30)	§ Daily volume of natural gas injected and withdrawn § Inventory of natural gas for each cavern at the end of each reporting period § Maximum daily injection and withdrawal rates experienced for the entire storage field during the reporting period § Results of any tests performed to determine the actual size, configuration, or dimensions of the storage caverns
Weekly	EIA	EIA-912	working gas, base gas, total facility gas
Monthly	EIA	EIA-191	working gas, base gas, total gas in storage, injections, withdrawals
Annually	EIA	EIA-176	§ Natural Gas Supply - withdrawals, receipts, total supply § Natural Gas Disposition – compressor use, injections, to pipelines, total disposition
Annually	PHMSA	Underground Storage Report	§ Working Gas Capacity, Base Gas Capacity, Total Gas Capacity § Metered Volumes Withdrawn, Metered Volumes Injected

Questions?



General Comment

- To make a comment, use the “Raise Hand” feature. When called upon, please unmute yourself to speak.
 - If you are using your phone for audio and would like to make a comment, you must use the chat to alert us that you have dialed in, identify your phone number, and request to be unmuted.

Closing Remarks

- A workshop report summarizing today's discussions will be issued and shared with the I.23-03-008 service list within ~40 days. Parties will have an opportunity to provide comments on the workshop report, including correcting inaccurate statements or identifying informational gaps.
- A second workshop will be held Q1 2024. The following topics may be included: 1) jurisdictional landscape of the natural gas industry; and 2) long term solutions to mitigate price spikes and gas and electric bill impacts.