



2023 Customer Meeting

West Region Gas Pipelines

May 3-4, 2023

The Broadmoor, Colorado Springs CO

b. Forrest
2013



Delivering Energy to Improve Lives

Welcome & Opening Remarks

Will Brown

VICE PRESIDENT-COMMERCIAL • WEST REGION GAS PIPELINES

Meeting Agenda

Wednesday, May 3rd, 2023



- Welcome & Opening Remarks – Will Brown
- Macro Presentation – George Wayne
- Regulatory Update – Dave Dewey
- Break
- Colorado Oil and Gas: Where Do We Go From Here? – Dan Haley
- Business Development – Will Brown
- Logistics – Tim Dorpinghaus

Cautionary Language

Regarding Forward-Looking Statements



This presentation contains forward-looking statements. These forward-looking statements are identified as any statement that does not relate strictly to historical or current facts. In particular, statements, express or implied, concerning future actions, conditions or events, future operating results or the ability to generate revenues, income or cash flow or to make distributions or pay dividends are forward-looking statements. Forward-looking statements are not guarantees of performance. They involve risks, uncertainties and assumptions. Future actions, conditions or events and future results of operations of Kinder Morgan Energy Partners, L.P., Kinder Morgan Management, LLC, El Paso Pipeline Partners, L.P., and Kinder Morgan, Inc. may differ materially from those expressed in these forward-looking statements. Many of the factors that will determine these results are beyond Kinder Morgan's ability to control or predict. These statements are necessarily based upon various assumptions involving judgments with respect to the future, including, among others, the ability to achieve synergies and revenue growth; national, international, regional and local economic, competitive and regulatory conditions and developments; technological developments; capital and credit markets conditions; inflation rates; interest rates; the political and economic stability of oil producing nations; energy markets; weather conditions; environmental conditions; business and regulatory or legal decisions; the pace of deregulation of retail natural gas and electricity and certain agricultural products; the timing and success of business development efforts; terrorism; and other uncertainties. There is no assurance that any of the actions, events or results of the forward-looking statements will occur, or if any of them do, what impact they will have on our results of operations or financial condition. Because of these uncertainties, you are cautioned not to put undue reliance on any forward-looking statement.

Leader in North American Energy Infrastructure



Kinder Morgan Assets

Energy infrastructure, especially natural gas pipelines & storage, has a decades-long time horizon moving and storing the energy of today and tomorrow

Largest natural gas transmission network

- ~70,000 miles of natural gas pipelines move ~40% of U.S. natural gas production
- Own interest in 700 bcf of working storage capacity, ~15% of U.S. natural gas storage

Largest independent transporter of refined products

- Transport ~1.7 mmbbl^(a) of refined products to West and East Coast demand markets
- ~10,000 miles of refined products and crude pipelines

Largest independent terminal operator

- 140 terminals & 16 Jones Act vessels
- Significant provider of refined products storage along the Houston Ship Channel, near the world's most complex refining center

Largest CO₂ transport capacity of ~1.5 bcfd

- ~1,500 miles of CO₂ pipelines
- Produce CO₂ and transport to the Permian where it is used for enhanced oil recovery

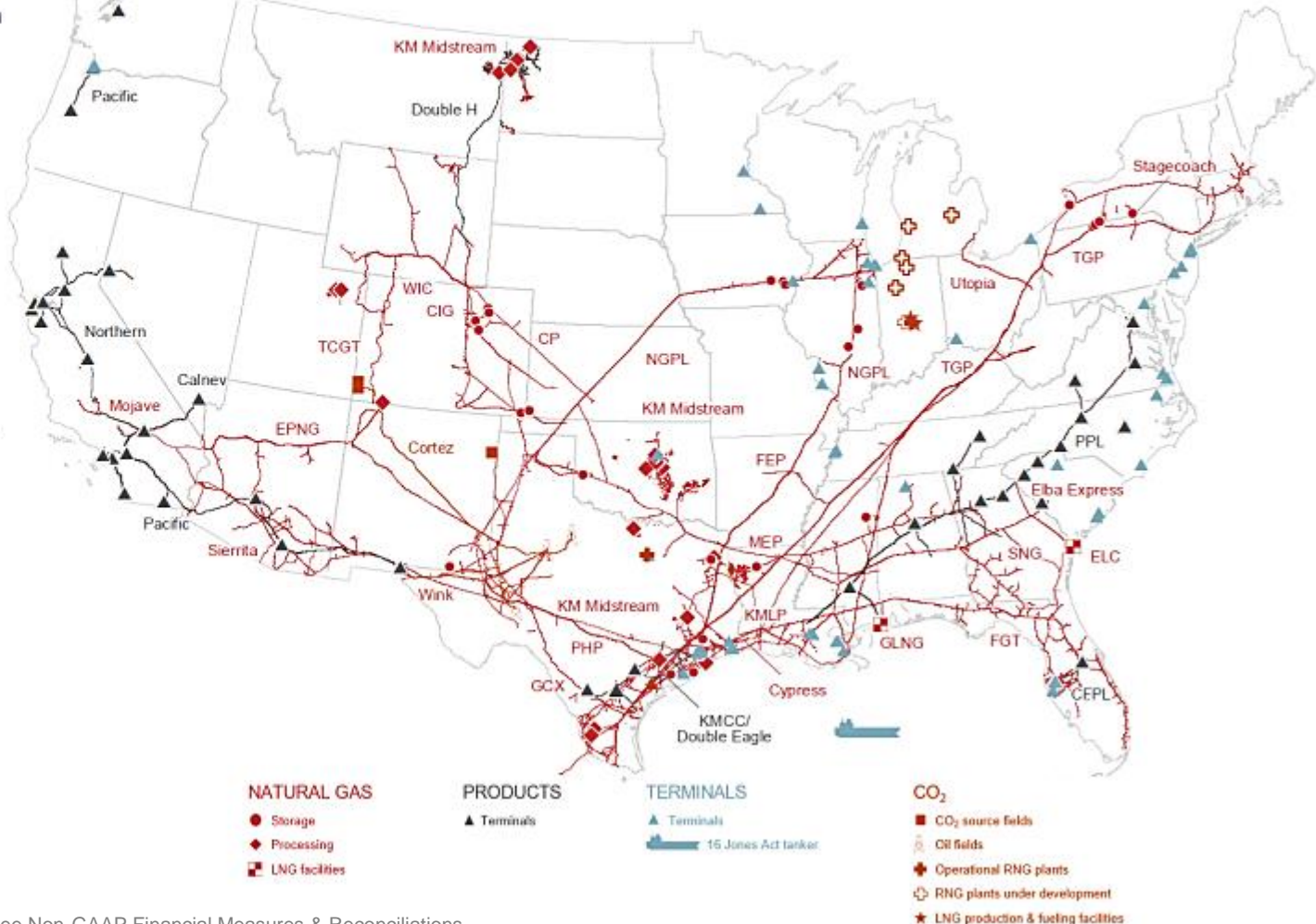
Growing Energy Transition Portfolio

- Up to 7.0 bcf^(a) of RNG production capacity by early 2024

Business Mix



Delivering energy to improve lives & create a better world



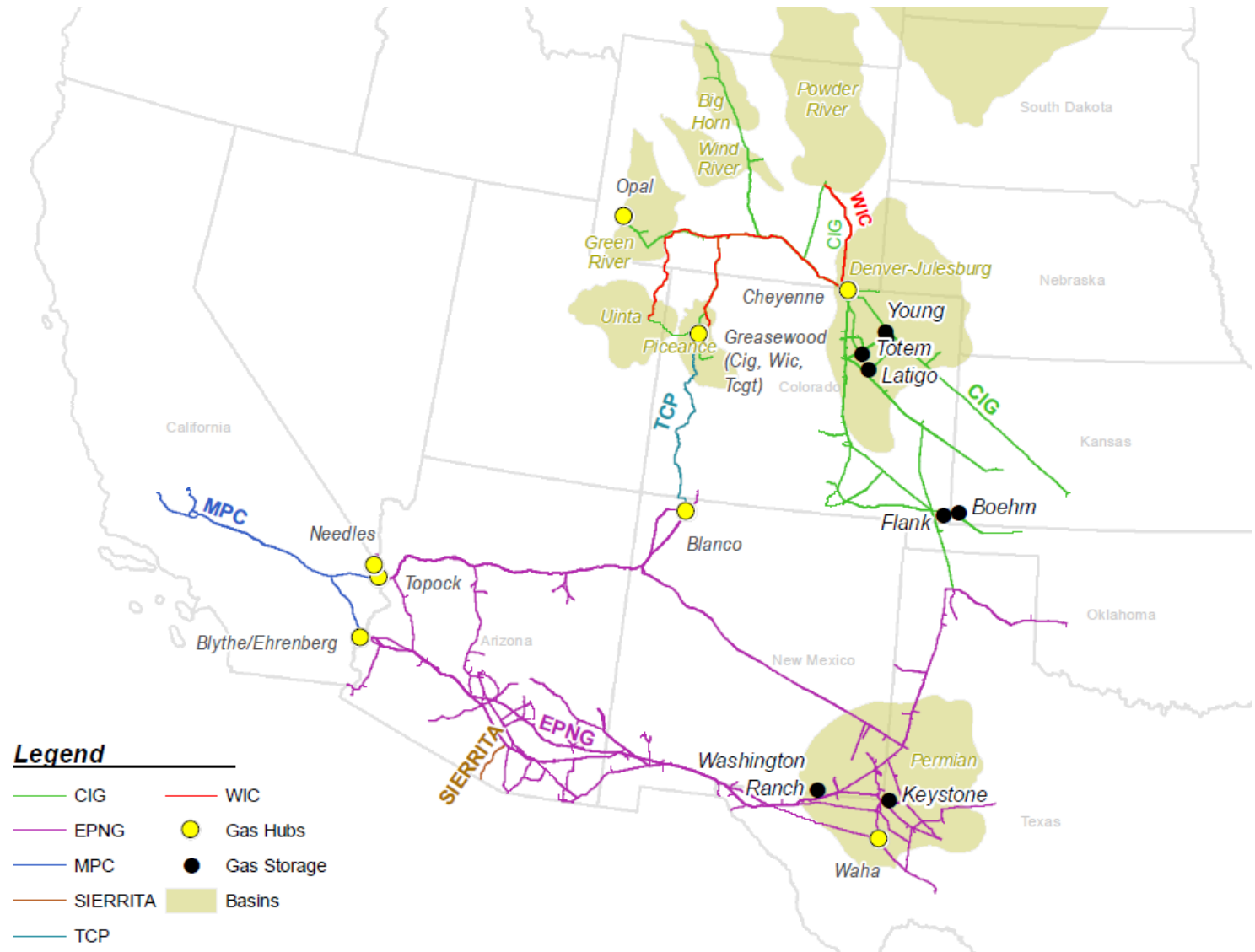
- Note: Volumes per 2023 budget. Business mix based on 2023 budgeted Adjusted Segment EBDA. See Non-GAAP Financial Measures & Reconciliations.
 - a) Annual capacity at KM share.

Kinder Morgan West Region

Kinder Morgan Assets



- Supply Access: Access to all Western basins with diverse geology and hydrocarbon mix;
- Storage Demand: Significant storage capacity with superior connectivity
- Power Demand: Renewable energy growth promotes gas-fired power backstop
- Mexico Exports: Leading connectivity for incremental supply to Mexico





Delivering Energy to Improve Lives

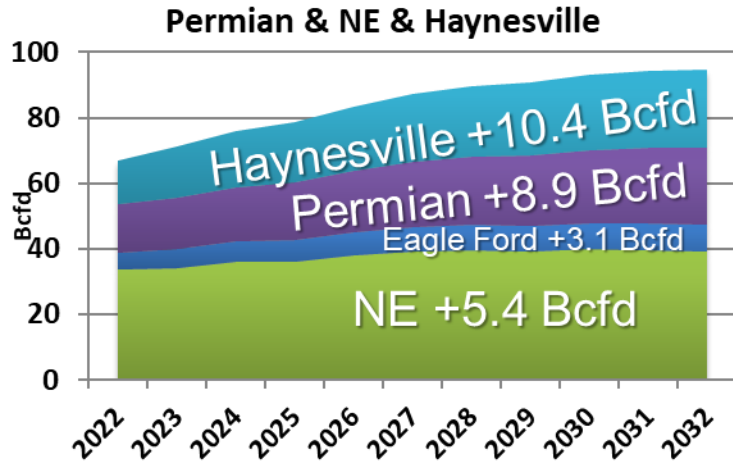
Macroeconomic Overview

George Wayne

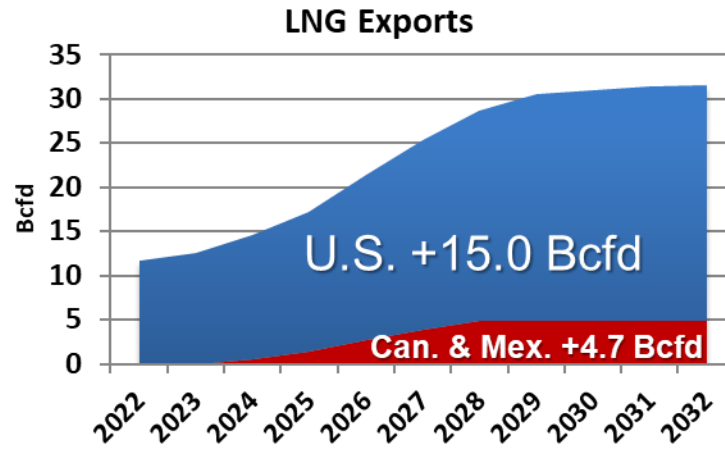
VICE PRESIDENT OF MARKET SERVICES – KM PIPELINES



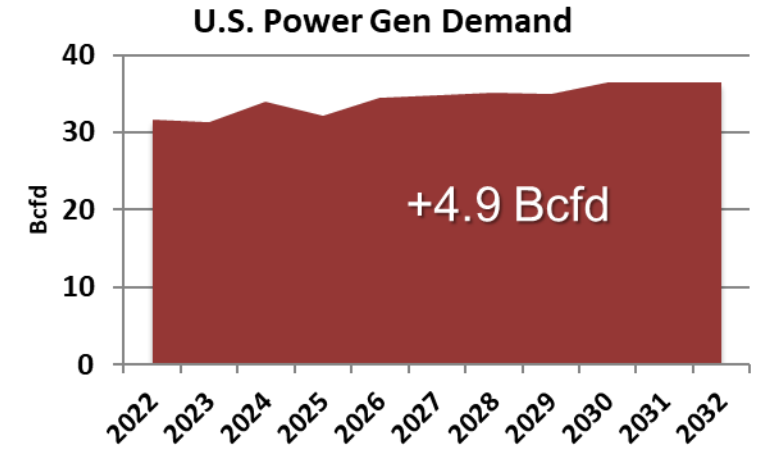
Key Trends



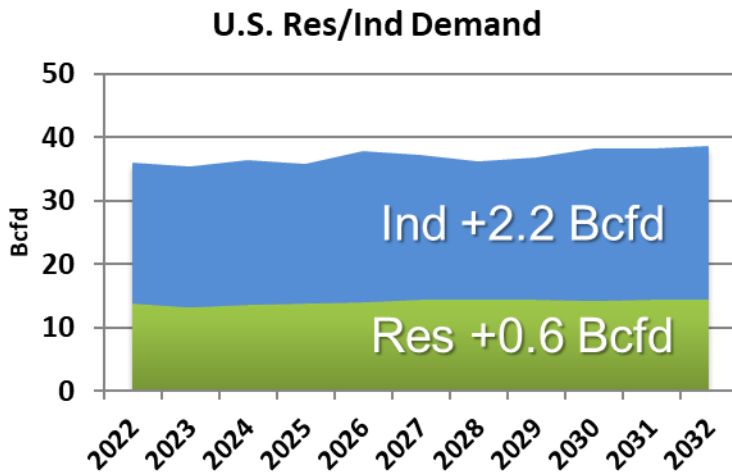
Continued supply increases



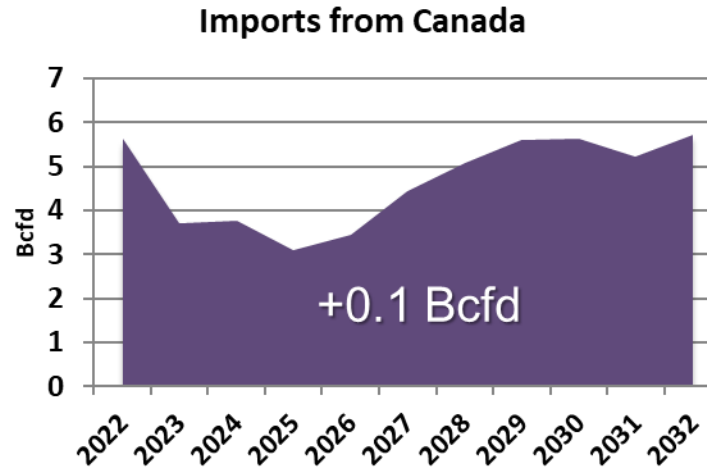
North America is a net exporter



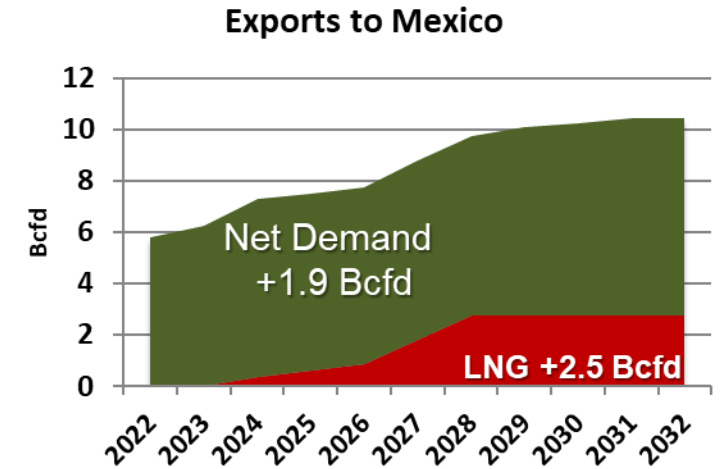
More Gas-fired generation



Residential & Industrial growth



Flat Canadian Exports to U.S.



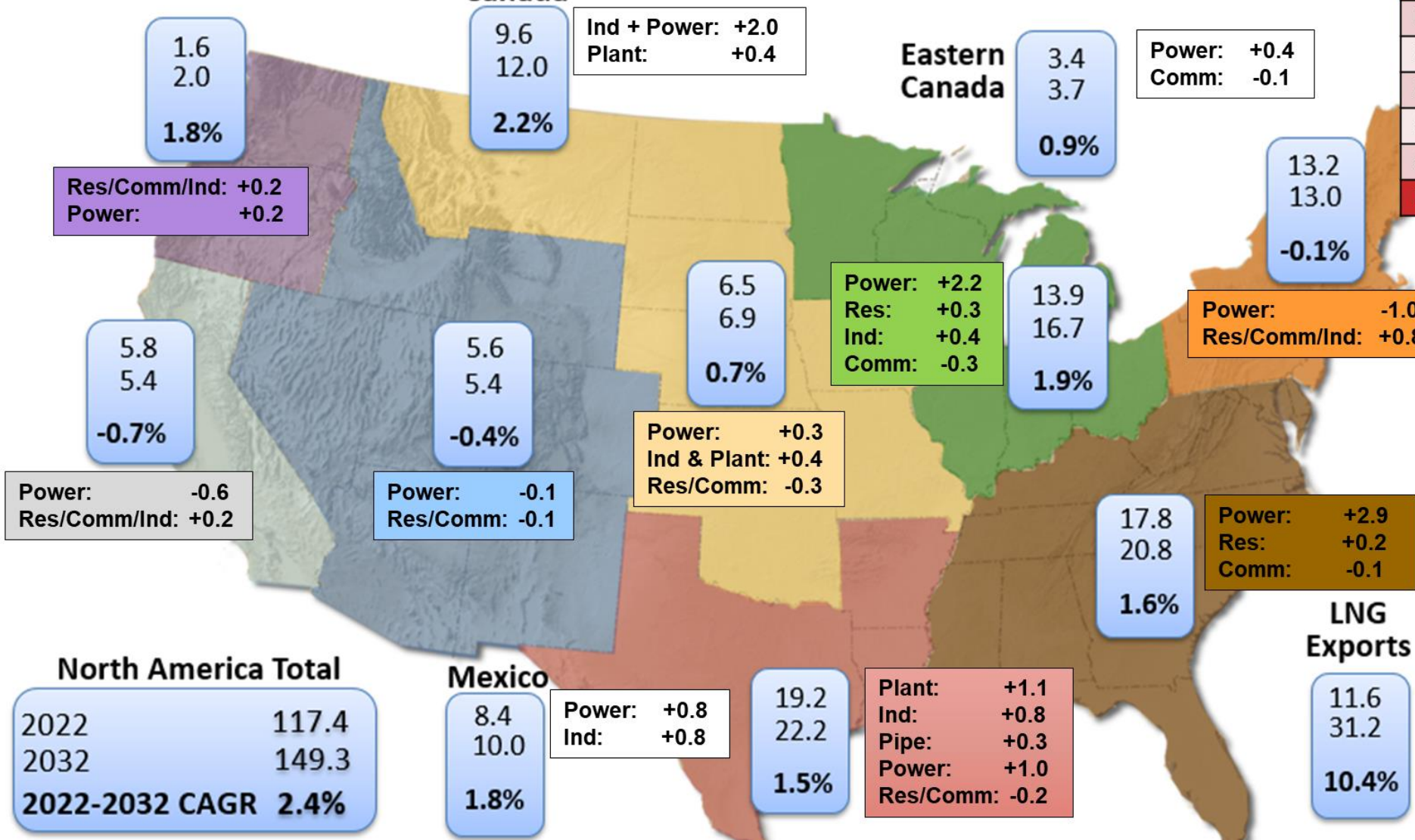
More U.S. Exports to Mexico

Gas Demand

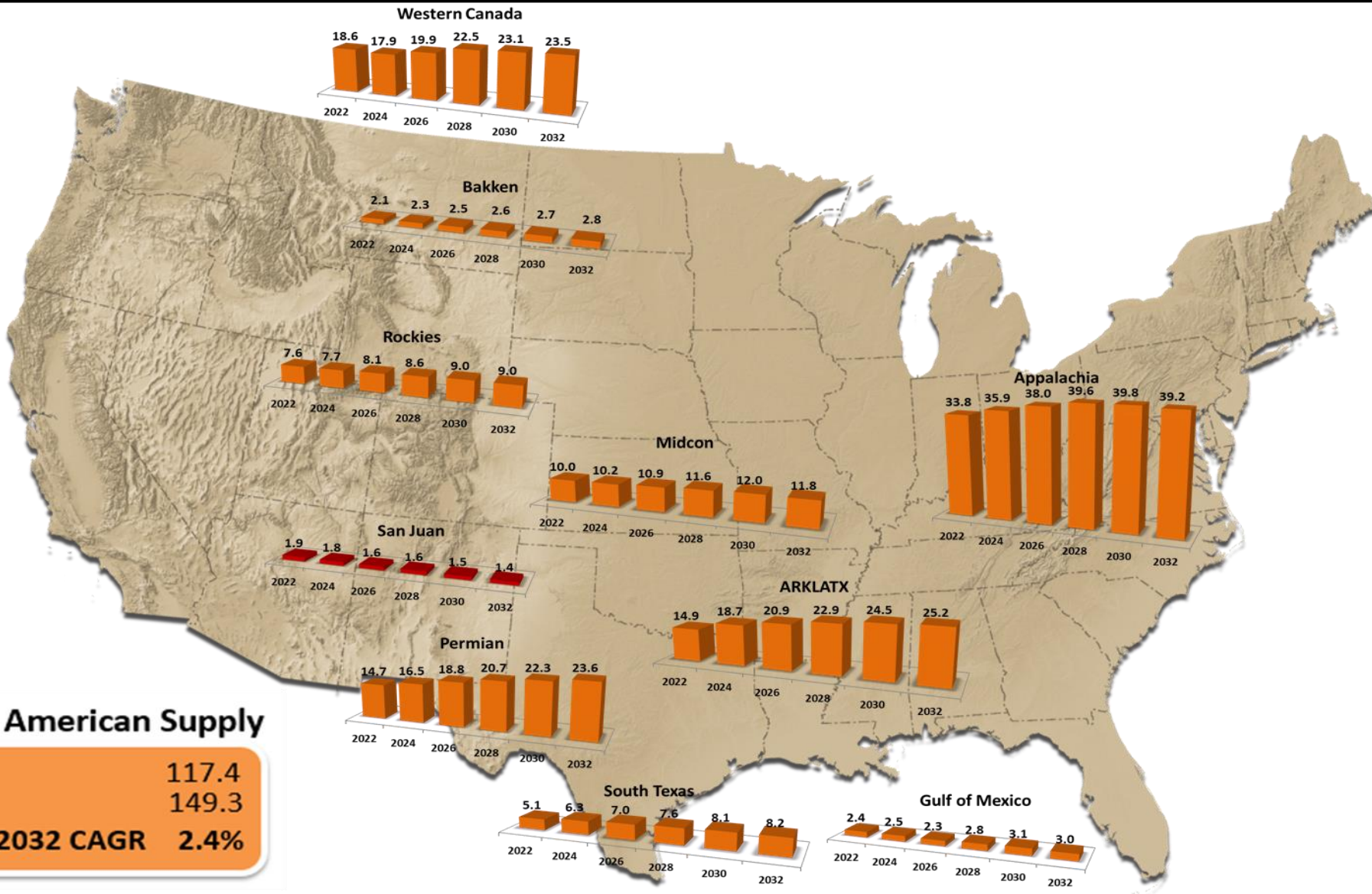
Including Exports



Western Canada 2022-2032 Volumes in Bcf/d



North American Demand	149.3
U.S. Exports to Mexico	10.3
Mexico LNG Exports	-2.5
Mexico Demand	-10.0
Canada Demand	-15.7
Canada LNG Exports	-2.1
U.S. Demand (2032)	129.3



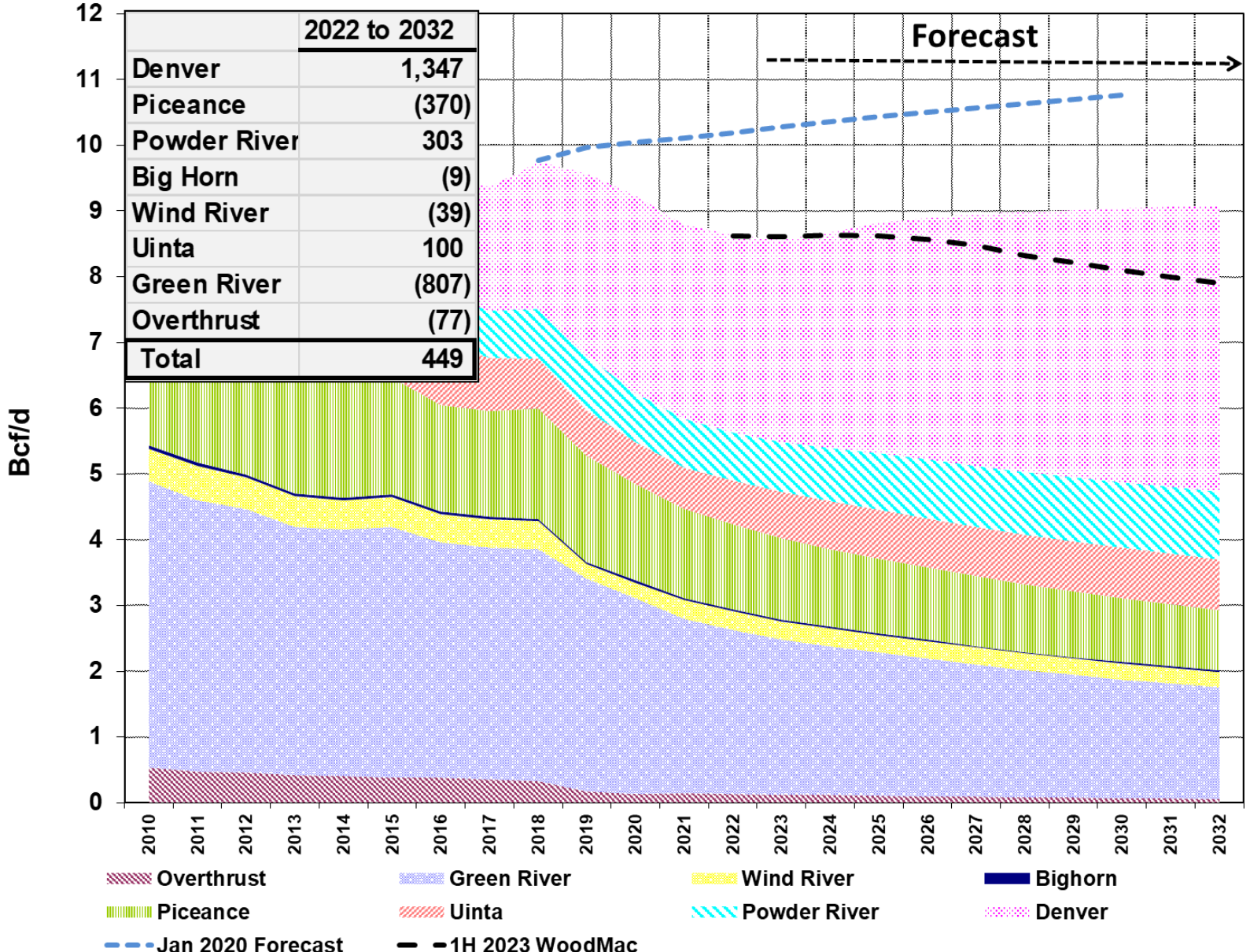
North American Supply

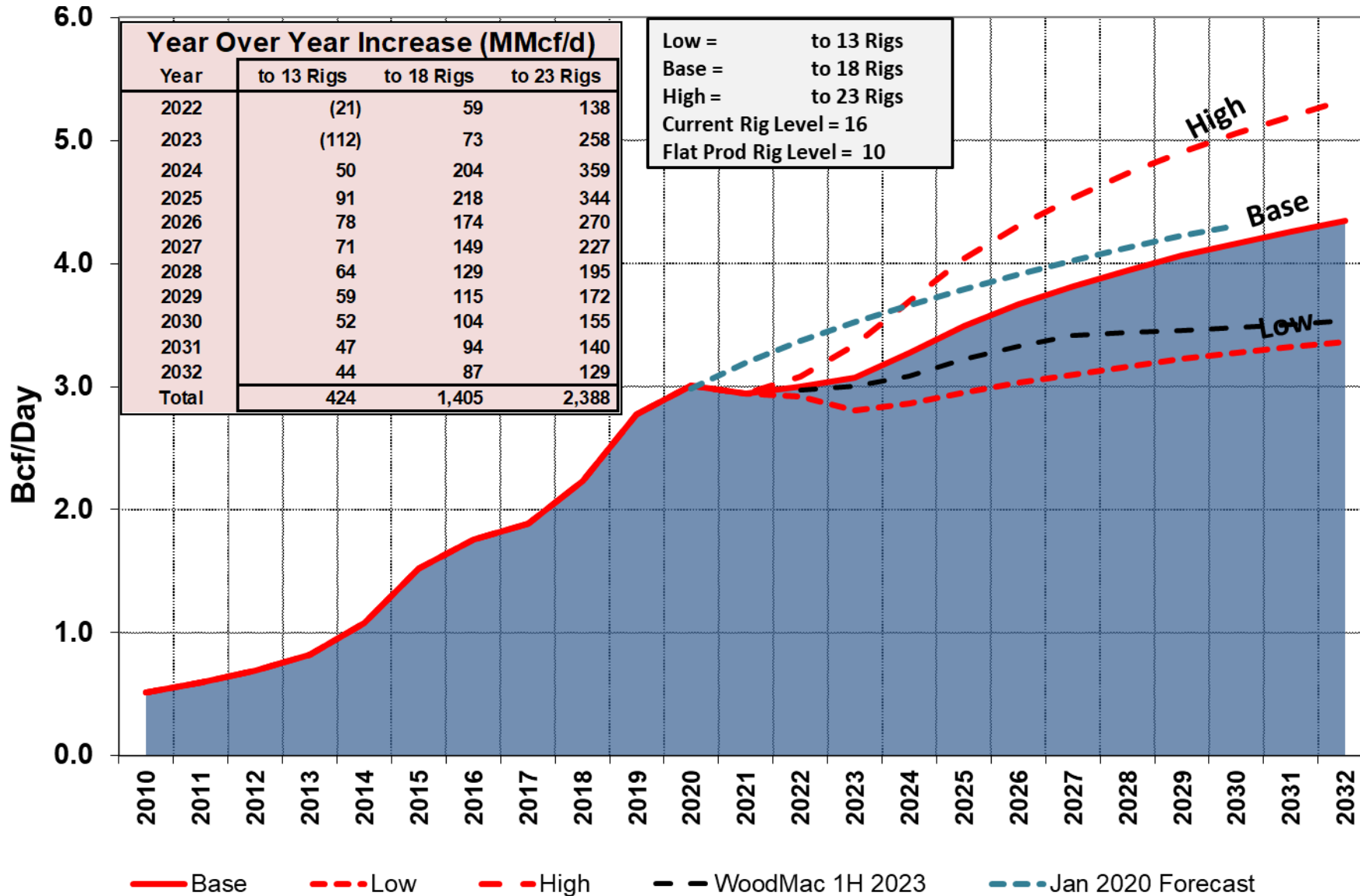
2022	117.4
2032	149.3
2022-2032 CAGR	2.4%

Key Western Supply Update

Rockies Update

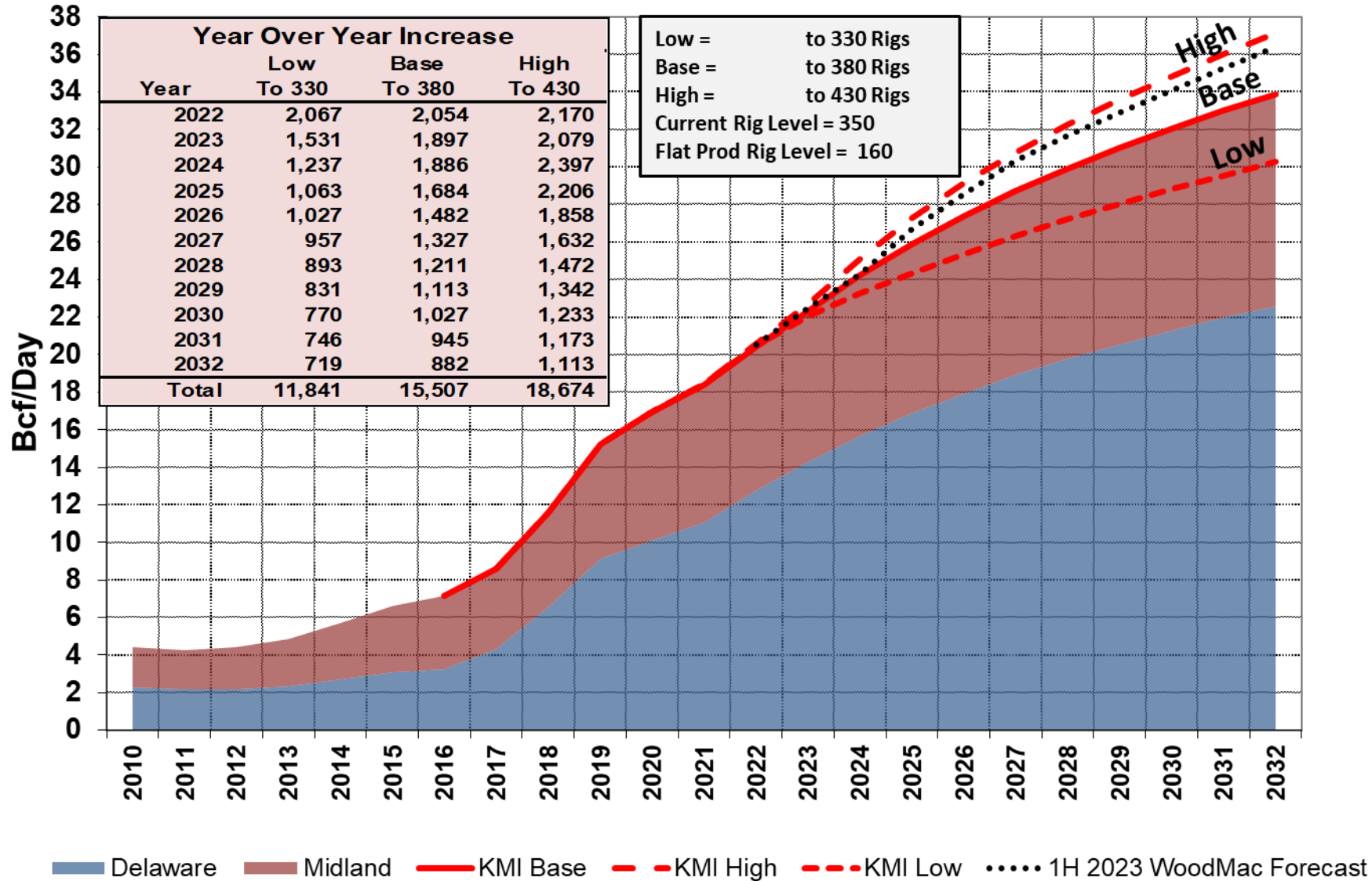
Wellhead Gas





Permian Basin

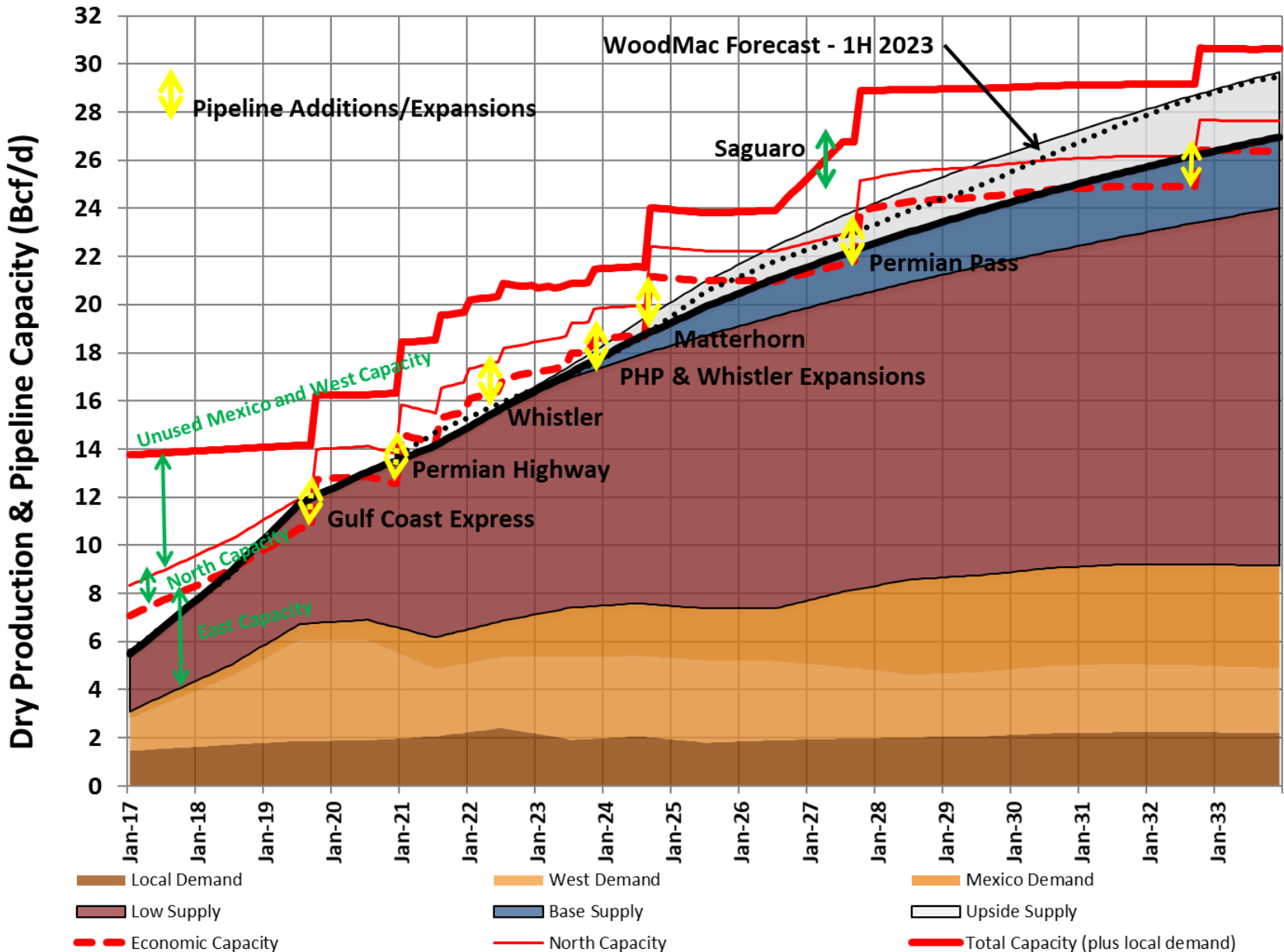
Wellhead Gas



Permian Basin Infrastructure Forecast – Model Additions



Q1 2023 Base Case



LNG & Mexico Export Outlook

LNG Export Trends

World Liquefaction Capacity Outlook

BCFD	2024	2025	2026	2027	2028	2029	2030
Global LNG Demand	58.9	64.5	71.4	75.7	78.5	80.5	82.6
Existing Capacity	71.2	71.2	71.2	71.2	71.2	71.2	71.2
Underutilized Capacity	(8.8)	(9.4)	(10.1)	(11.6)	(11.8)	(12.6)	(13.6)
Capacity Additions Under Construction or FID							
North America (1)	4.7	8.1	9.5	11.4	11.4	11.4	11.4
Russia	0.9	1.8	2.7	3.5	3.5	3.5	3.5
Africa, South Asia		1.1	2.9	2.9	2.9	2.9	2.9
Qatar		2.2	4.4	4.4	4.4	4.4	4.4
Australia				0.7	0.7	0.7	0.7
Total Capacity	68.0	75.1	80.7	82.5	82.4	81.5	80.6
Total Required Capacity	65.5	71.7	79.4	84.1	87.4	89.5	91.7
Capacity (Surplus)/Deficit	(2.5)	(3.4)	(1.3)	1.6	5.0	8.0	11.1

Capacity Additions Under Development

North America (2)			0.3	3.9	7.3	8.1	8.1
Russia				2.6	2.6	2.6	2.6
Qatar					4.4	4.4	4.4
Australia					1.4	1.4	1.4
Africa, South Asia				0.3	3.5	3.5	4.9
Total Capacity	0.0	0.0	0.3	6.7	19.2	20.0	21.3

- World Liquefaction Capacity deficit in '30 of 11.1 Bcfd (was 12.4 Bcfd in 3Q QBR)

- 21.3 Bcfd (8.1 Bcfd N. America) of potential projects competing for capacity deficit 11.1 Bcfd in '30
- 14.9 Bcfd with Medium / High probability

- Russian capacity; 3.5 Bcfd under construction and 2.6 Bcfd under development will have a delayed in-service or a low probability of moving forward due to sanctions, partner exits and fewer Russia friendly market opportunities

- Qatar progressing; recent ENI, ConocoPhillips, Exxon partnerships and long term offtake deal with Sinopec

North American Projects 19.5 Bcfd				
(1) Under Const. / FID	11.4	(2) Under Development	8.1	Probability
New Fortress MX	0.3	Rio Grande	1.7	75+%
Plaq. (T 1-12)	1.9	Wood Fibre	0.3	75%
Plaq. (T13-18)	0.9	MPL (Sonora)	1.9	50+%
New Fortress U.S.	0.2	Delfin	0.4	50%
Golden Pass	2.5	Lake Charles	1.5	50%
LNG Canada	1.9	VG CP2 Phase 1	1.5	50%
Costa Azul	0.4	Cameron	0.8	50%
CCL Stage 3	1.4			
Port Arthur	1.9			

Mexico Developments

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Mexican Gas Production	2,523.8	2,507.0	2,511.4	2,538.8	2,576.9	2,559.8	2,481.9	2,380.9	2,325.9	2,317.9
US Imports	6,658.6	7,514.7	7,718.9	8,044.0	9,045.6	9,814.0	10,162.0	10,270.7	10,454.8	10,480.6
- CA	578.7	671.6	911.4	1,128.2	1,098.8	1,060.2	1,068.0	1,021.9	1,030.8	1,027.9
- AZ	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
- WTX	2,018.7	2,187.5	2,152.8	2,206.1	3,120.4	3,991.6	4,017.9	4,127.2	4,182.5	4,254.8
- STX	3,891.2	4,485.6	4,484.7	4,539.7	4,656.4	4,592.1	4,906.1	4,951.6	5,071.4	5,028.0
LNG Sendout	23.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Supply	9,205.4	10,028.7	10,237.4	10,589.7	11,629.5	12,380.7	12,650.9	12,658.6	12,787.7	12,805.5
Power	4,852.4	5,311.8	5,222.6	5,263.0	5,303.8	5,279.1	5,315.3	5,317.0	5,356.2	5,341.1
Industrial	2,241.0	2,410.8	2,485.8	2,560.6	2,616.9	2,627.5	2,913.9	2,960.9	3,061.0	3,111.9
PEMEX Consumption	1,799.2	1,760.0	1,732.4	1,767.3	1,756.7	1,760.6	1,702.3	1,660.0	1,645.6	1,628.6
ResComm/Other	202.9	213.1	213.7	215.9	219.2	220.4	226.4	227.7	231.9	230.8
Total Consumption	9,095.4	9,695.7	9,654.4	9,806.7	9,896.5	9,887.7	10,157.9	10,165.6	10,294.7	10,312.5
FID Reached (ECA I)	-	-	250.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0
High Probability FID (MPL I, FLNG)	55.0	333.0	333.0	333.0	1,283.0	2,043.0	2,043.0	2,043.0	2,043.0	2,043.0
Total Base Case Demand	9,150.4	10,028.7	10,237.4	10,589.7	11,629.5	12,380.7	12,650.9	12,658.6	12,787.7	12,805.5
High Likelihood (Oaxaca)	-	-	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Medium Likelihood (Vista Pacifico)	-	-	-	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Low Likelihood (MPL II, ECA II, Amigo)	-	-	-	-	-	2,900.0	2,900.0	4,500.0	4,500.0	4,500.0
Total Potential LNG Upside	-	-	400.0	900.0	900.0	3,800.0	3,800.0	5,400.0	5,400.0	5,400.0

The timing of potential pipeline expansions out of the Permian may influence MPL and other MX LNG projects reaching FID.

AMLO is supportive of LNG export projects as feedgas has the opportunity to use CFE's underutilized capacity

Similar to US, not all potential LNG projects are expected to move forward.

Questions?

Thank you.



Delivering Energy to Improve Lives

Regulatory Update

Dave Dewey
VICE PRESIDENT OF REGULATORY AFFAIRS



The Federal Energy Regulatory Commission

The Commissioners



Commissioner
Christie



Commissioner
Clements



Commissioner
Danly



Chairman
Phillips



FERC Outreach

- We invest significant time and effort with our regulators
- We focus on being solutions oriented
- Good regulatory relationships enable us to provide increased value to our customers

The Challenge

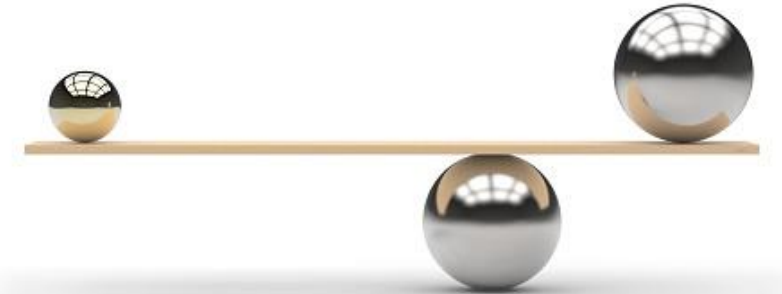
- Energy policy is currently very polarized
- Four-member commissions have historically been bad for the industry ... still the case today?
 - Political pressures (national and international)
 - Polarizing issues
- There is a path forward

Possible nominees for fifth FERC Commissioner

- Judy Chang – Former Undersecretary of Energy & Climate Solutions / Massachusetts Executive Office of Energy & Environmental Affairs
- Matthew Christiansen – Current FERC General Counsel
- Rick Kessler – Senior Democratic adviser for the House Energy and Commerce Committee

The Rules of the Game

- September 1999 – FERC issues certificate policy statement to provide the industry certainty
 - Works flawlessly for almost two decades
- February 2018 – FERC decides it wants to revisit its certificate policy statement
- February 2022 - Updated Certificate Policy Statement and Interim GHG Policy Statement
 - New policy statement is essentially a balancing test with a heightened emphasis on (1) **need**, (2) analyzing **adverse effects**, and (3) **environmental justice**
 - Project sponsors are responsible for avoiding direct and indirect impacts to the greatest extent possible
- March 2022 – Converted the new policy statements to drafts
- Certificate Proceeding Environmental Reviews
 - In January, FERC issued notices for four infrastructure projects eliminating the requirement to file Environmental Impact Statements (EISs)
 - Departure from presumption in Interim GHG Policy Statement that EISs are required for projects generating 100,000 metric tons/year of CO₂
 - Too soon to draw any definitive conclusions as to how this may be incorporated into final policy statements



What Does This Mean for Me?

- We can navigate the process
- Collaboration is essential
- Timing is critical

Roundtable on Environmental Justice and Equity in Infrastructure Permitting

- On March 29, 2023, the FERC held a Commissioner-led roundtable to discuss environmental justice and equity in its jurisdictional infrastructure permitting processes
 - Panel 1: Priorities for Advancing Environmental Justice and Equity in Infrastructure Permitting
 - Panel 2: From the Front-Line: Impacted Communities and their Everyday Challenges
 - Panel 3: Identifying, Avoiding, and Addressing Environmental Justice Impacts
 - Kinder Morgan participated on Panel 3
- Some calls to block pipeline infrastructure solely on the basis of environmental justice
- Chairman Phillips encouraged all the feedback but cautioned that FERC has to act within the law and said a lot what was raised is “nonjurisdictional.”
 - *“We have to approve things that are brought to us and fit within that law” and FERC’s precedents, he said. “That is a part of the job of FERC whether you like it or not.”*



Responsible Infrastructure Development Is Imperative

- The industry has always been a good neighbor
- There are opportunities for us to be even better

Lower Energy Costs Act

- On March 30, 2023, the House of Representatives approved by a bipartisan vote H.R. 1, the Lower Energy Costs Act → First major legislative initiative in the 118th Congress
- Possesses the ability to improve federal permitting processes for interstate natural gas pipelines, as well as other energy infrastructure projects.
- Clarifies the scope of an agency's National Environmental Policy Act (NEPA) analyses on proposed projects and its focus on feasible alternatives
- Strengthens the FERC's primary permitting role on natural gas infrastructure
- Recognizes the export of natural gas as being in the public interest
- Unlikely to pass in the Senate

Good Neighbor Rule

- Environmental Protection Agency (EPA) rule promulgated on March 15, 2023
 - Aimed at significantly reducing smog-forming nitrogen oxide pollution from power plants and other industrial facilities in 23 states
 - Also includes natural gas pipeline compressor stations
 - Standards will apply beginning in the 2026 ozone season, coinciding with the August 3, 2027, attainment date for serious nonattainment areas



Questions?

Thank you.



15 min Break

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2013

Colorado: Where Do We Go From Here?

Colorado Oil & Gas Association

Dan Haley

President and CEO

[@ColoradoOilGas](#) | [@danhaleyCO](#)

COLORADO
OIL & GAS
ASSOCIATION

Three Chords and the Truth

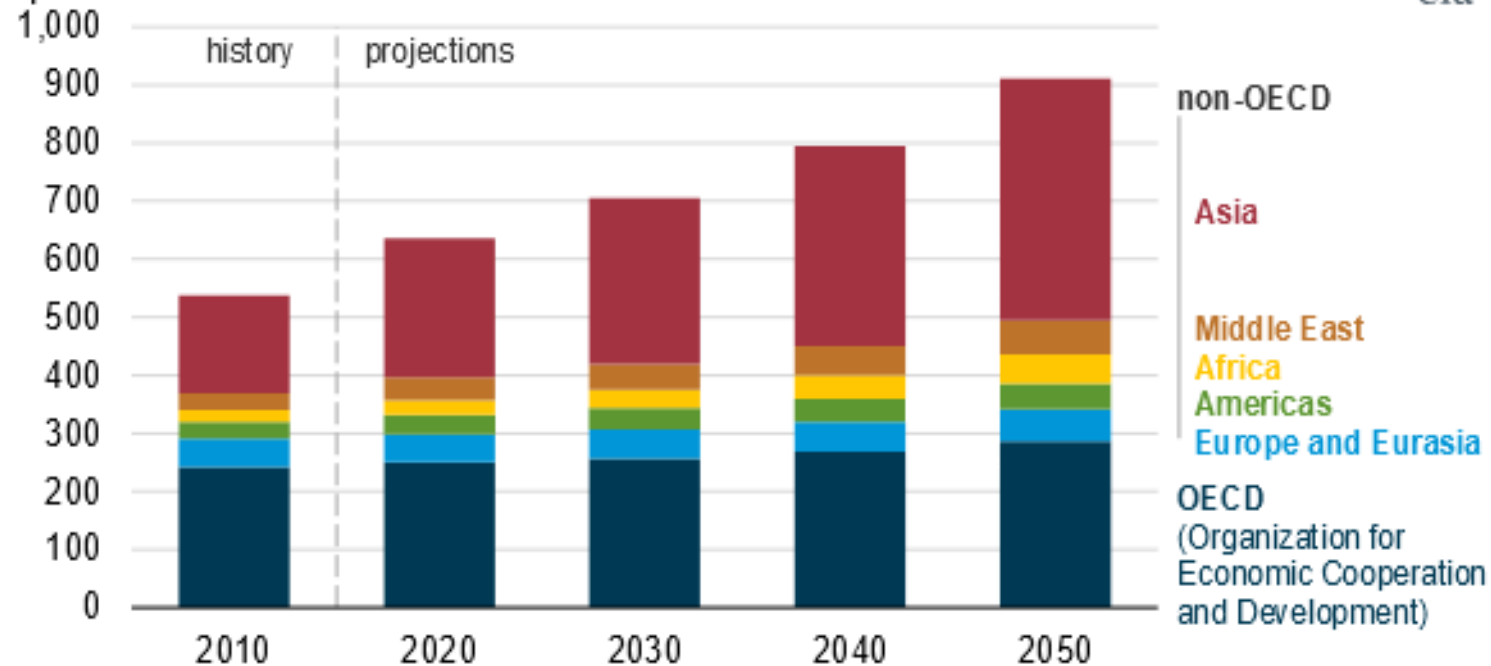
- The world needs more energy
- All forms of energy have trade-offs
- Colorado is caught in the political crosshairs.



The World Needs Energy

EIA projects nearly 50% increase in world energy usage by 2050, led by growth in Asia

Global primary energy consumption by region (2010-2050)
quadrillion British thermal units



Source: U.S. Energy Information Administration, *International Energy Outlook 2019* Reference case

Demand for Oil and Gas Going Up

SHALE DAILY

MARKETS | E&P | ENERGY TRANSITION | NGI ALL NEWS ACCESS

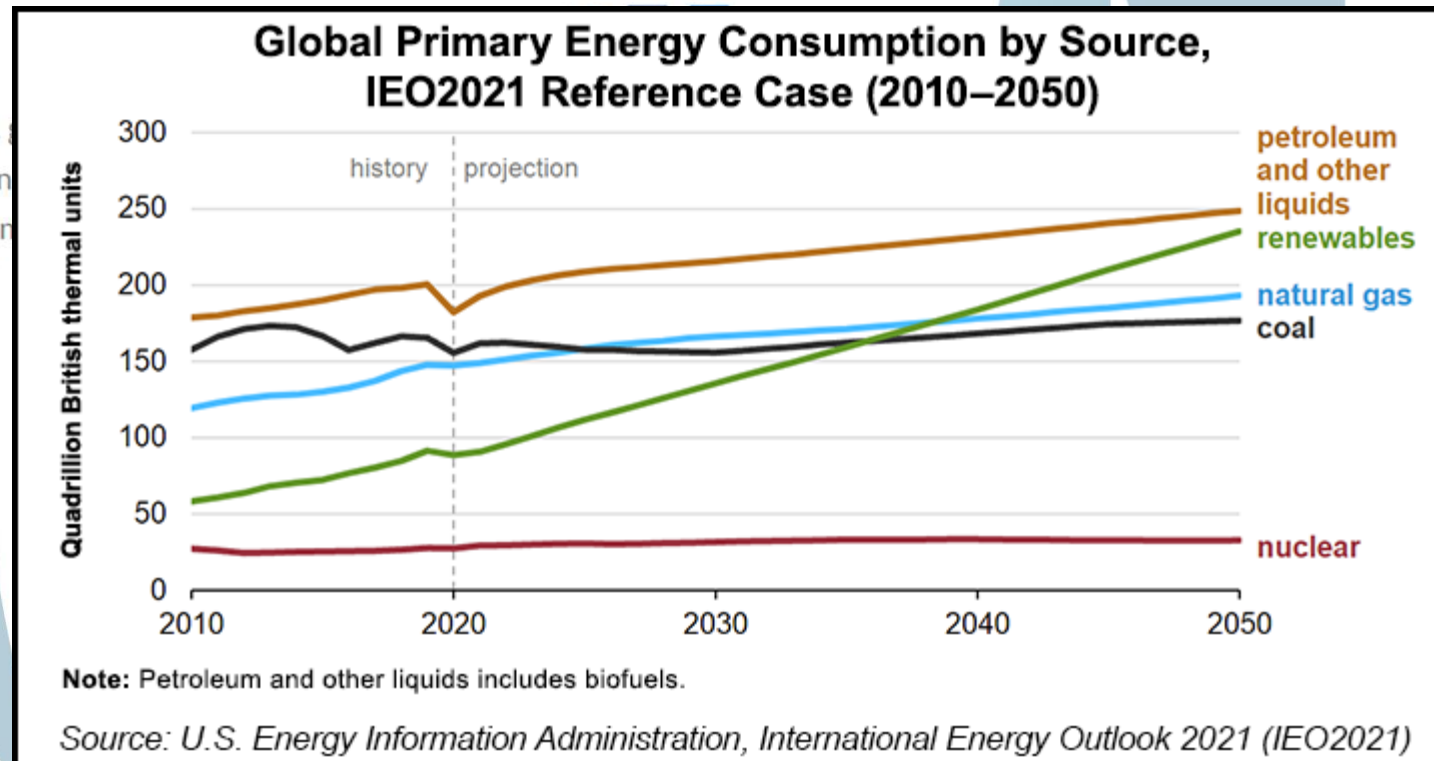
World Energy Demand, Including Oil and Gas, Rising to 2050, EIA Says



BY JEREMIAH SHELOR

October 7, 2021

Under current policies, oil and natural gas demand is projected to rise amid rising global energy consumption. The chart below shows demand to the latest long-term projections from 2010 to 2050.

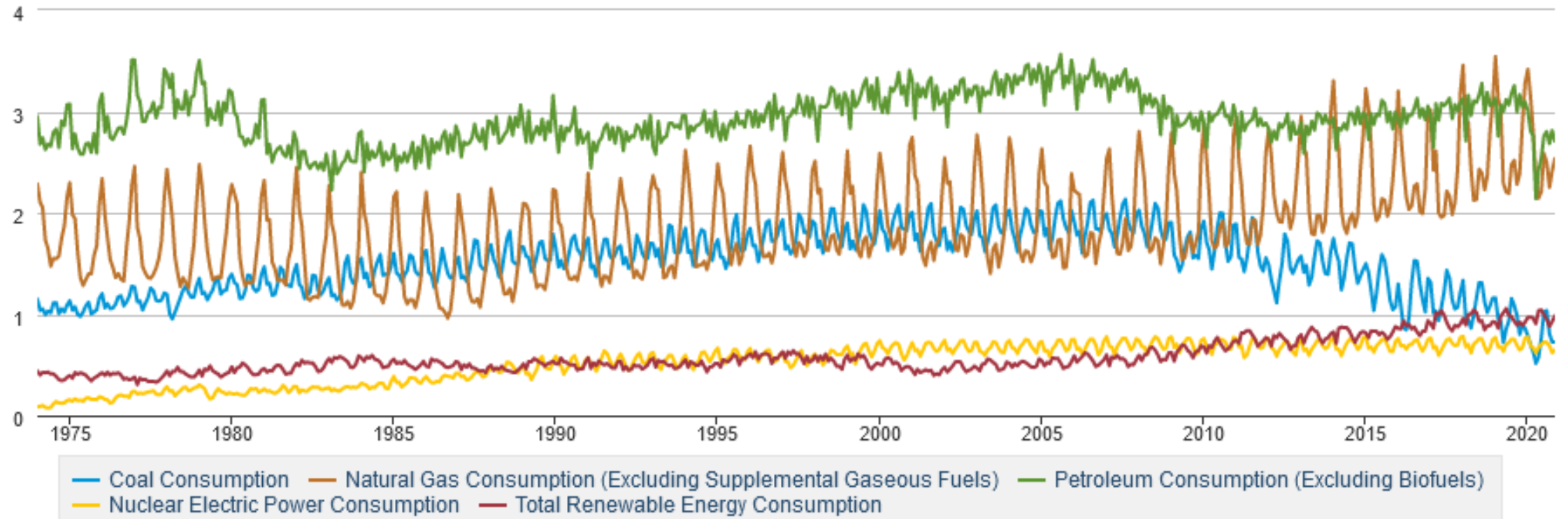


Where We Get Our Energy

Table 1.3 Primary Energy Consumption by Source

[↓ DOWNLOAD](#)

Quadrillion Btu

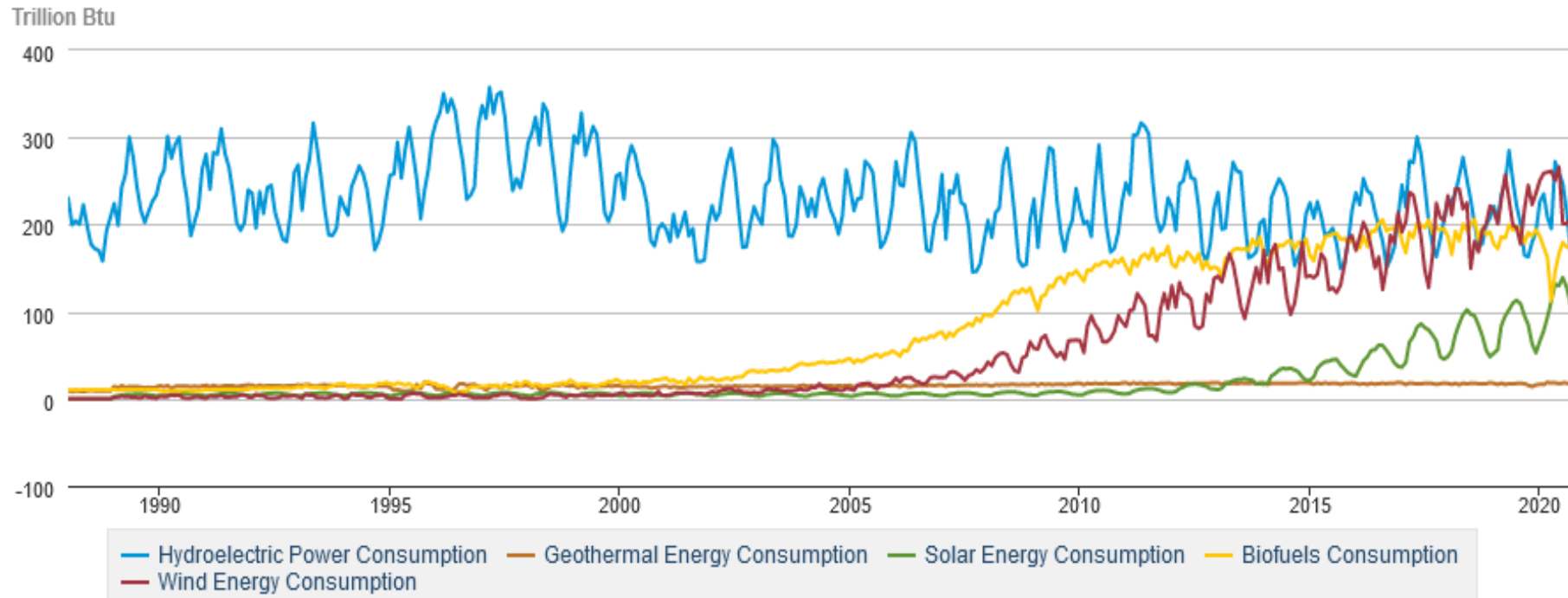


Source: U.S. Energy Information Administration

Where We Get Our Renewable Energy

Table 10.1 Renewable Energy Production and Consumption by Source

[DOWNLOAD](#)



Data source: U.S. Energy Information Administration

The Energy Transition

- **At its current pace, the energy transition will be completed in ...**
 - **Mid 2600s**
 - **“It is failing because energy is hard, and 3 billion people living in energy poverty are desperate for reliable and scalable energy sources. Meanwhile, 1 billion energy-rich people are resistant to diminishing their standard of living with higher cost and an increasingly unreliable energy diet.” – Chris Wright, CEO of Liberty Energy**
- **“There is no energy transition. We have never had an energy transition from one fuel to another. We have always added better fuels and expand total supply. Those who are expecting an energy transition are on a wild goose chase, it will be never materialize.” – Dr. John Constable, Renewable Energy Foundation Director**

All Forms of Energy Have Trade Offs

- 100% shift to renewables is not realistic, according to a coalition of 21 leading energy researchers.
- Renewables require new infrastructure, expanded grid capacity and robust transmission methods.
- Renewables can only shoulder part of our energy demand





The Mission

“This is going to be a bar fight. This is a street fight. This is a back-alley fight. And you’ve got to fight it any way you can, any tool you can use. Whether it’s bans on drilling, whether it’s local regulations, whether it’s severance taxes, you have got to put up as many obstacles, you have to make it as difficult as possible to develop.”

- Josh Joswick, Earthworks (2010), Former La Plata County Commissioner

Colorado's Oil & Gas Industry Today

- 5th largest oil producer in U.S.
- 7th largest natural gas producer
- Well-regulated
- High tech, innovative
- Responsible, safe
- Stuck in political crosshairs
- Rig Count: 19
 - March 2020: 20
 - April 2019: 30
 - June 2014: 77



What Happened?

Political and Demographic Shifts

Ten years ago:

- Colorado's demographics were changing
 - Evenly divided electorate turning increasingly blue
 - Nearly 800,000 new voters since 2013
- Population was growing
 - Influx of out of state residents, unfamiliar with oil and natural gas
 - 7 of top 10 fastest growing communities on top of historic plays
- Oil and natural gas production was growing
- Activist movement gained strength and went unanswered
 - Gasland premieres in 2010
- Industry was caught flat-footed

What Happened to Colorado?

- Unfavorable Political Environment
 - Since 2019: One-party control at state level
 - Governor, State Senate, State House, AG, SOS, Treasurer, CU Board of Regents, Two US Senators, Congressional Delegation (5 Ds, 3 Rs)
 - Activists or activist-backed candidates winning local races, tipping commissions and councils
 - Demographics shifting, favoring UAF voters
 - November 2014 – 3 million voters (Cory Gardner wins US Senate seat, Rs reclaim state Senate)
 - 1 million UAF (35%); 899,296 D (31%); 955,884 R (33%)
 - May 2021 – 3.8 million voters
 - 1.6 million UAF (42%); 1.1 million D (29%); 1 million R (26%)
 - Since January 1, UAF gained 71,345 votes; Ds have lost 474; Rs have lost 22,093
 - March 2023 – 3.83 million voters
 - 1.78 million UAF (46%); 1.1 million D (27.5%); 932,624 R (24%)
 - State has added 57,000 voters since January 2021; Republicans have lost 78,820; Ds 69,983
 - Federal government targeting industry
 - Potential ballot initiatives in 2024

Issues Facing Industry In Colorado

- Aggressive/Overzealous Regulatory Environment
 - State regulatory agencies have completed multiple rulemakings with more to come
 - Added at least \$500 M/annually to cost of doing business in Colorado
 - New professional COGCC approved rules without fully understanding issues
 - Looking for things to do to justify their full-time jobs
 - Permitting remains an issue
 - AQCC is pushing aggressive, costly agenda
 - Greenhouse Gas Roadmap
 - Reducing statewide greenhouse gas pollution 26% by 2025, 50% by 2030, and 90% by 2050 from 2005 levels.

More than 30 Rulemakings in Ten Years

- 2010 - Clean Air Clean Jobs
- 2011 - Hydraulic Fracturing Fluid Disclosure
- 2012 - Groundwater Monitoring and Baseline Sampling
- 2013 - Setbacks
- 2013 - Spill Reporting
- 2013 - Wildlife Mapping
- 2014 - Leak Detection and Repair
- 2014 - Enforcement and Penalties
- 2018 - Setbacks from Schools
- 2019-20 - SB-181
- Flowlines
- Wellbore Integrity
- Location Assessment
- Cumulative Impacts
- Air Monitoring & Inventory
- Mission Change and more...
- 2021-22 SB-181 & HB 1261
 - Financial Assurance
 - Permitting Fees
 - GHG Rulemaking
- 2023
 - 5 Air Rulemakings
 - High Priority Habitat
 - Worker Certification

The Path Forward: Technology

- Lean in to the environment
- We need to be cleaner, better safer
- Creates efficiencies
- Engineered solutions to nagging issues
- Increases safety
- Helps the environment



The Path Forward: Technology

Noise complaints

- Quiet “frac” fleets
- Electric rigs/pumping engines (also eliminate source emissions)

Surface use

- Horizontal drilling
- Walking rigs

Data Analytics



Emissions/Climate Change

- Closed-loop systems
- Tankless production
- Ending routine venting/flaring
- Fenceline air monitoring, LDAR, drones
- Pipelines
- Solar use
- Electric rigs
- Low-bleed/no-bleed pneumatic controllers

Developing Our Resources Cleaner and Better

- The Colorado Molecule
 - State rules and technological advances have led to:
 - Decreased emissions
 - Reduced leaks
 - Limited venting and flaring
 - Less disturbed land
 - From 2011 to 2017, Colorado's oil and natural gas industry saw a nearly 50 percent reduction in emissions, with models out to 2023 projecting further decreases, particularly in the nonattainment area.
 - The United States saw the largest decline in energy-related CO2 emissions in 2019 on a per country basis, according to International Energy Agency.

Developing Our Resources Cleaner and Better

- The Colorado Molecule
 - Ambient methane concentrations from oil and gas have gone down 50 percent from 2013-2019
 - Ethane concentrations went down 65 percent from 2013-2019
 - Total Volatile Organic Compounds are down 57 percent from 2011 to 2020 along Front Range



The Way Forward

Build Your Coalition Now

Find partners who care about your state and economy

- Business organizations
- Labor unions
- Advocacy groups
- Community leaders/influencers
- Authentic grassroots support



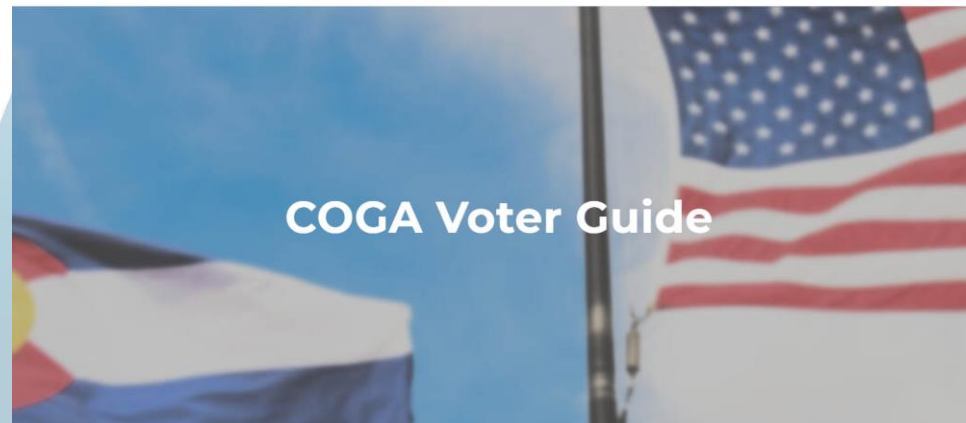
The Way Forward

Build Political Alliances

- Energy is Non-Partisan
 - Find Democrats and Republicans
- Strengthen Relationships Now
- Inform Industry Employees
 - COGA Voter Guide
 - Newsletters



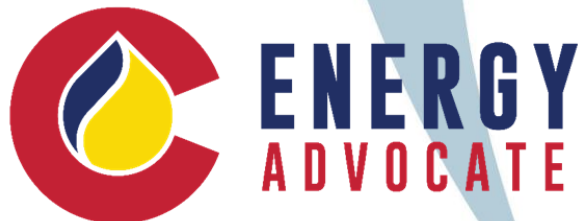
Members Programs & Events Policy Resources Media COGA



The Way Forward

Employee Engagement

- Show up
- Be seen, be heard
- Change the narrative
- Talk about shared values
- Humanize and personalize the industry
- Build databases



COGA LEAD

COGA LEAD is a program dedicated to increasing our outreach to state and local elected officials, including:

- New Legislator Reception – Congratulating and welcoming incoming legislators;
- Day at the Capitol – COGA members visit with Colorado state legislators to strengthen relationships;
- Education & Site Tours – Specifically designed to provide elected officials and staff with latest information, studies, site tours, and news about the oil and gas industry;
- Legislative Seminars – As needed educational seminars hosted during the legislative session for legislators.



The Way Forward

Identify Your Values

- Philanthropy
- Volunteer hours
- Environmental benefits
- Report shared statewide

“

COMMUNITY
IMPACT
REPORT



This report showcases the overwhelming commitment of COGA's members and their employees to Colorado, and the profound impact of their work in our own backyard.

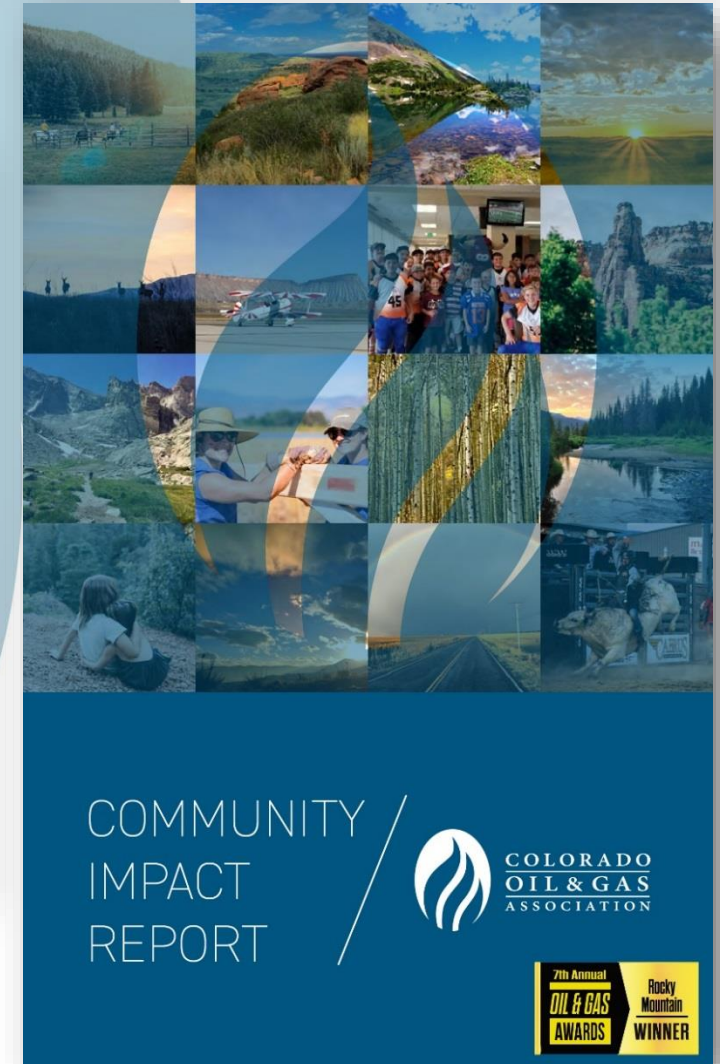


Dan Haley
President & CEO, COGA
@danhaleyCO

”

\$17,611,365.17

62 COGA member companies provided their nonprofit donation totals for 2018

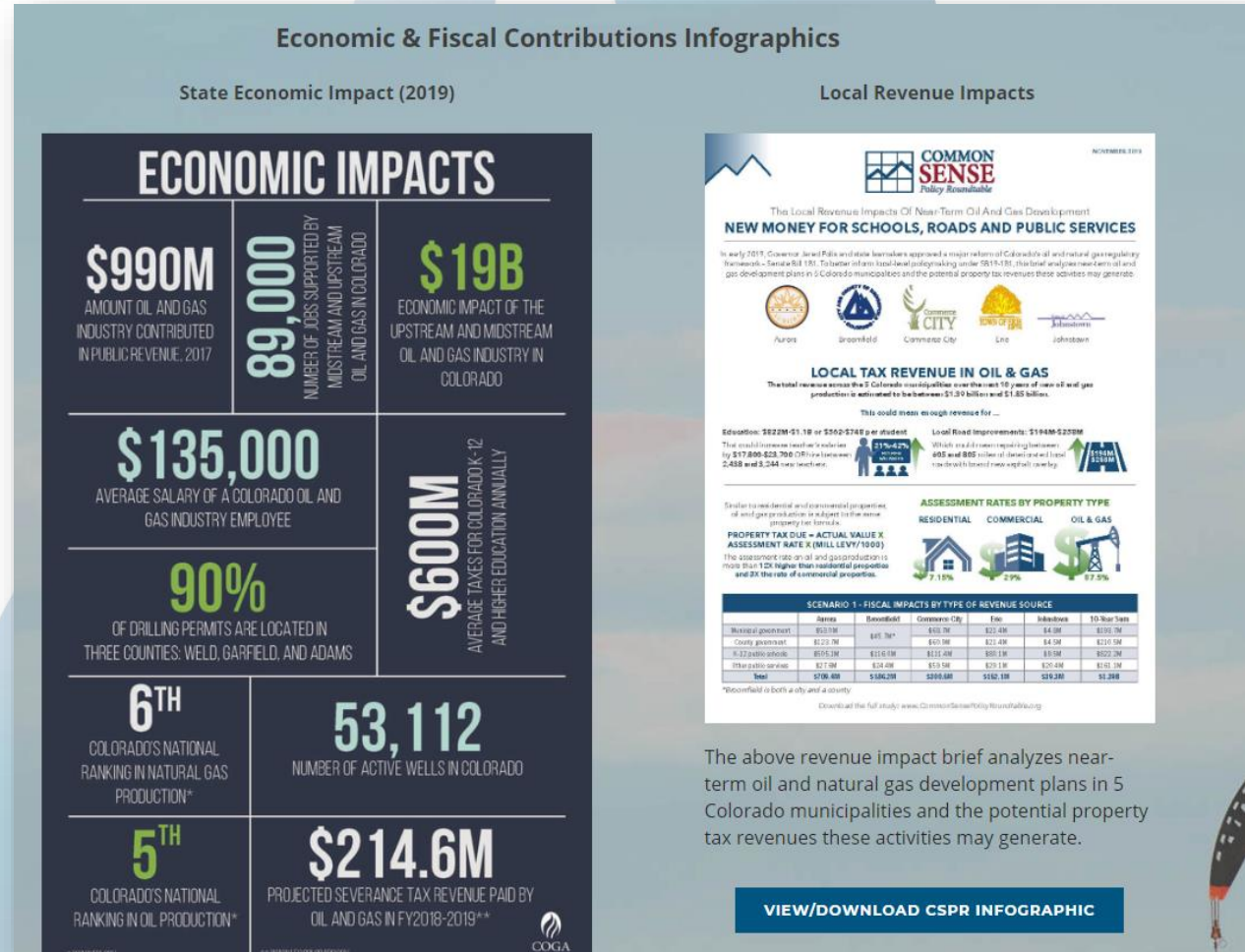


COLORADO
OIL & GAS
ASSOCIATION

The Way Forward

Share Your Impact

- Third-party studies
- County by county data
- Safety numbers
- Positive environmental impacts



The Way Forward

Share Your Impact

- Fact Sheets
- Studies
- Online Tools

REGULATORY OVERVIEW

COLORADO'S OIL & GAS INDUSTRY



COGA | Colorado's Oil and Gas Regulatory Overview

The State of Colorado is a national leader in its commitment to fostering safe and responsible development of Colorado's oil and gas resources. Colorado has implemented precedent setting regulations from baseline groundwater testing and monitoring and pipeline safety to air regulations targeting methane leak detection and repair. This is a summary of significant legislative and regulatory efforts affecting Colorado's oil and gas industry.

Wellbore Integrity

A foundational element of COGCC regulations are those surrounding wellbore integrity (Series 300). These rules apply to the design and construction parameters for oil and natural gas wells and prevent the pollution of groundwater. They require ongoing monitoring, testing and reporting, and give the COGCC inspection authority throughout the life of a well to ensure that wellbore integrity is maintained.

Wells are constructed with multiple layers of steel casing and cement. COGCC rules require the following specifications for each well¹:

- In the water-bearing and hydrocarbon zones, the casing is cemented into place, and cement fills the void space between each layer of casing.
- At least two layers of steel casing and cement are in place from the ground surface to the lowest point of the freshwater aquifer.
- In the hydrocarbon formation, several thousand feet below the aquifer in most cases, there is at least one layer of steel and cement, and the hydrocarbons move through the inner-most casing to the surface.

COGCC Engineering staff conducts pre-construction and post-construction wellbore reviews on every single well permitted in Colorado, and integrity testing is conducted during a well's productive life to ensure the continued strength of the steel casing and cement layers. Any that are found lacking or no longer capable of production are required to be abandoned and plugged.²

2011-Hydraulic Fracturing Disclosure Rulemaking

On December 13, 2011, Colorado regulators unanimously passed a Hydraulic Fracturing Disclosure Rule that requires comprehensive public disclosure of the chemicals used in hydraulic fracturing treatments. The rule represents a balanced compromise between industry and environmental groups, providing transparency while protecting proprietary information.

¹ <https://colorado.state.gov/documents/showDocument.do?ID=SUMMARY%20and%20Final%20Summary%20and%20Final%20Summary%20and%20Final%20Summary>
² <https://colorado.state.gov/documents/showDocument.do?ID=SUMMARY%20and%20Final%20Summary%20and%20Final%20Summary%20and%20Final%20Summary>

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2018 – Flowline Rulemaking

As part of the state's response to the Firestone tragedy, on February 13, 2018, the COGCC unanimously approved dozens of new rules pertaining to flowlines and other types of piping systems, with other regulations increasing transparency in safety and gas leak reporting.

State regulations require operators to lock and mark any flowlines not in use or abandoned. All lines must continue to undergo integrity testing under the same standards as active lines until abandonment. Operators are also now required to become Tier 1 participants in the 811 call-before-you-dig system, which establishes a centralized home for all data on flowline locations.


These additional requirements give local communities, builders, and property owners the information they need to feel confident in the location and integrity of underground flowlines. The COGCC also set strict guidelines for flowline installation, design, registration, and management.

The 20-plus pages of new regulations detail some of the following requirements¹:

- Operators must register off-location flowlines within 30 days of being placed into service. Flowlines built prior to May 1, 2018, must be registered by Oct. 31, 2018.
- Within 30 days of installation or discovery of a domestic tap connected to the operator's flowline, the operator must register it with the COGCC.
- At least 10 days before beginning construction of a crude oil transfer line or produced water transfer system, the operator must register it with the COGCC.
- Upon request from a local government, the commission will provide location data of all flowlines, for the sole purpose of assisting local governments with emergency management and planning. This information will be kept confidential and will not be subject to the Colorado Open Records Act.
- A crude transfer line built after May 1, 2018 must be inspected by a third-party inspector before being placed into service.
- Operators must maintain flow lines; fix them when leaks are discovered, and all that are not actively used must have isolation valves locked and tagged out.
- Lines must undergo integrity testing before being placed into service; new lines must adhere to industry standards.
- Every operator must become a Tier One member of the Utility Notification Center of Colorado and participate in Colorado's One Call notification system.
- Operators must identify all lines that are not in service for more than a year.
- Operators must perform annual maintenance of isolation valves.
- Isolation valves must be installed on all flowlines or crude transfer lines after May 1, 2018, and along the line, the suction end of a pump station, where they meet a breakout tank, or at any other point where such a line crosses a public water supply or reservoir storing water for human consumption.
- Flowlines and crude oil transfer lines must be retrofitted with isolation valves along the line, identified above. On-location manifold, peripheral and process piping must be tested by pressure testing of lines, or smart pigging every three years.
- Operators must lock and mark any abandoned lines and risers associated with the lines.

¹ <https://colorado.state.gov/documents/showDocument.do?ID=SUMMARY%20and%20Final%20Summary%20and%20Final%20Summary%20and%20Final%20Summary>

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COGA FACT SHEET

Regulatory Overview

Fourteen Rulemakings in Eight Years

The State of Colorado is a national leader in its commitment to fostering safe and responsible development of Colorado's oil and gas resources. Over the past 8 years Colorado has implemented precedent-setting regulations from baseline groundwater testing and monitoring to air regulations targeting methane leak detection and repair. This regulatory timeline provides summary information on significant legislative and regulatory efforts affecting Colorado's oil and natural gas industry from 2011 to 2018.

2011	Hydraulic Fracturing Disclosure Rulemaking Requires comprehensive public disclosure of the chemicals used in hydraulic fracturing treatments.
2013	Baseline Water Quality Sampling Rulemaking Rigorous mandatory groundwater sampling and monitoring rules.
	Setback Rulemaking Created a uniform 500-foot statewide setback, applicable in both rural and urban areas and a 1,000-foot setback from high occupancy buildings such as schools, nursing homes and hospitals.
	Wildlife Map Update Rulemaking Keeping maps updated provides state regulators with information to ensure that sensitive species are appropriately accounted for during exploration.
	Spills and Releases Rulemaking Tightened spill reporting requirements to broaden the definition of what needs to be reported and requires that spills are reported within 24 hours to landowners and local governments.
2014	Air Emissions from Oil and Gas Colorado's Air Quality Control Commission passed new precedent-setting rules targeting air emissions from the oil and natural gas industry.
2015	Complaint Rulemaking COGCC implements a streamlined process for the public to submit complaints. The new online portal makes the agency's methods for receiving, processing, addressing, closing and communicating complaints more effective and transparent. It includes guidance for making a complaint, what a complainant can expect and the rights of the complainant.
	Flood Lessons Learned Rulemaking The state updated its regulations to require remote shut-in capabilities and secondary containment areas around tanks. Additional reporting of equipment and wells in existing floodplains also was required.
	Enforcement and Penalty Rulemaking Fines were increased from \$1,000 to \$15,000 for each violation and eliminated the \$10,000 overall cap for violations.

Updated: 10.17.2018
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House Bill 1294/Senate Bill 201

- Assess and activate allies
 - One pagers/Support/Opposition
 - Webinars
 - Action items
 - Don't fight alone!
- Engage workforce, supporters
 - Energy Advocate Email
 - Take Action page
- Mobilize
 - Patch through calls
 - Op-eds/LTEs
 - Radio/digital/TV
- Traditional Media Outreach
- SB 201 killed; HB1294 amended



Lessons Learned

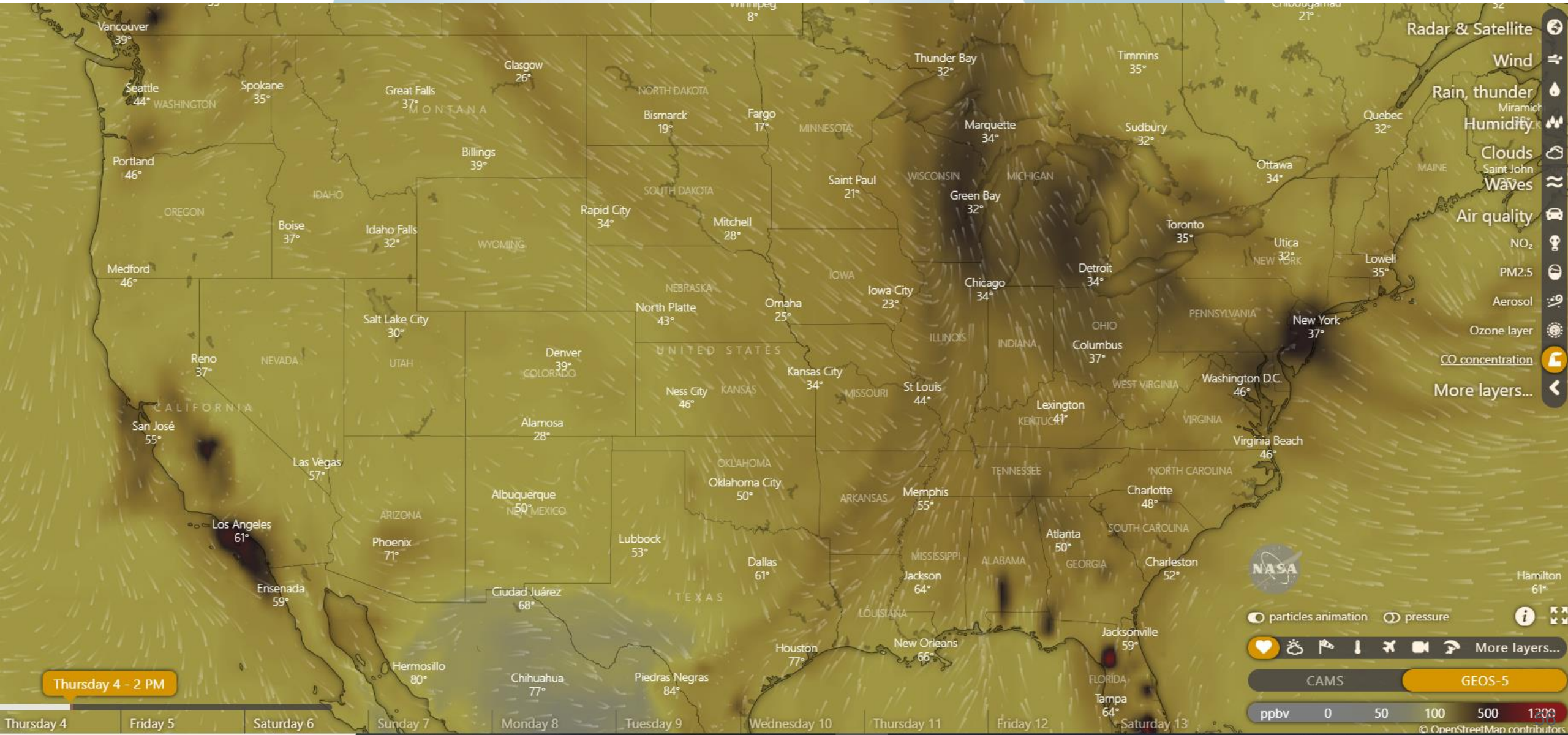
- Don't get caught flat-footed
 - Fight complacency
- Engage your employees
- De-politicize energy
- Build relationships
 - Both sides of the aisle
 - Regulatory
 - Community
- Identify your influencers
- Be in the trust business
- Support those who support you
- Build coalitions now
- Build your outreach strategy
- Take action



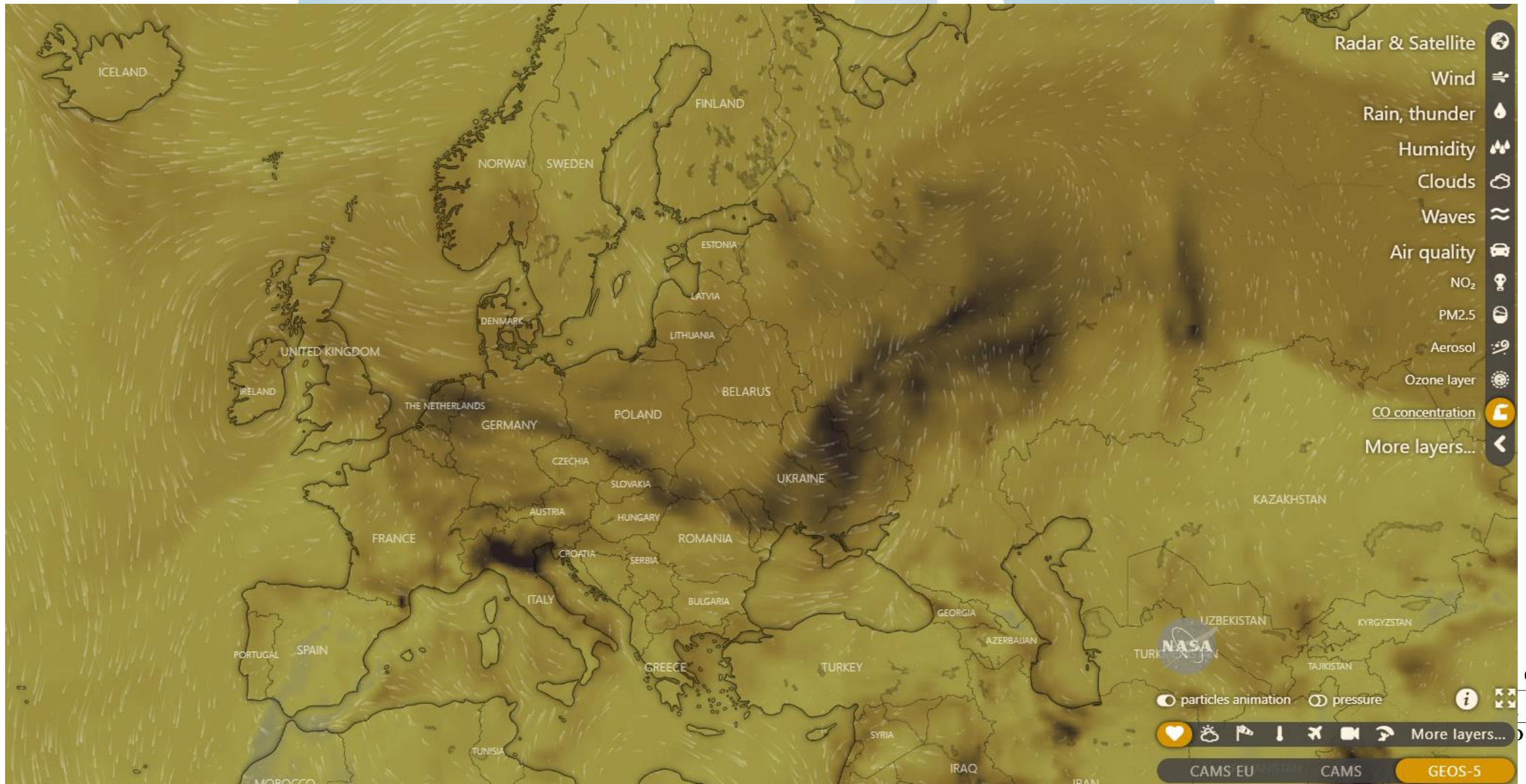
What We Know

- The world needs energy
 - 1 billion people do not have access to reliable energy
 - Colorado can help supply clean energy molecules
- All forms of energy have trade-offs
 - Batteries, land use
- Oil and natural gas will continue to play a role in that mix
 - Energy transitions are slow
 - O&G provided 63% of U.S. energy in 1980; 64% in 2017; 62% in 2040
 - Natural gas is part of the climate solution
 - Let's be examples for the world

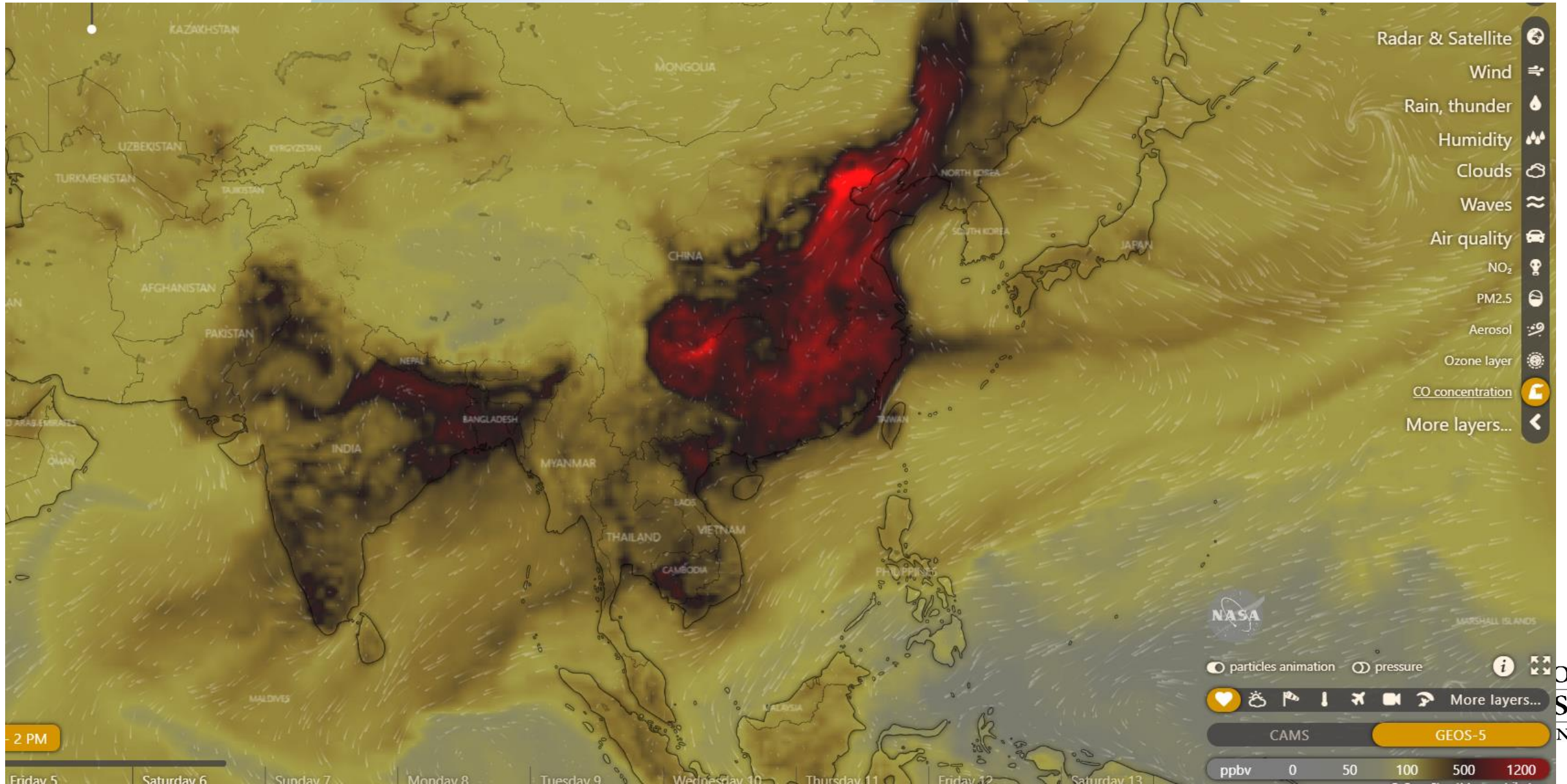
Broader Impacts and Challenges



Broader Impacts and Challenges



Broader Impacts and Challenges



Why This Matters



Questions?

www.coga.org

dan.haley@coga.org
@ColoradoOilGas



Delivering Energy to Improve Lives

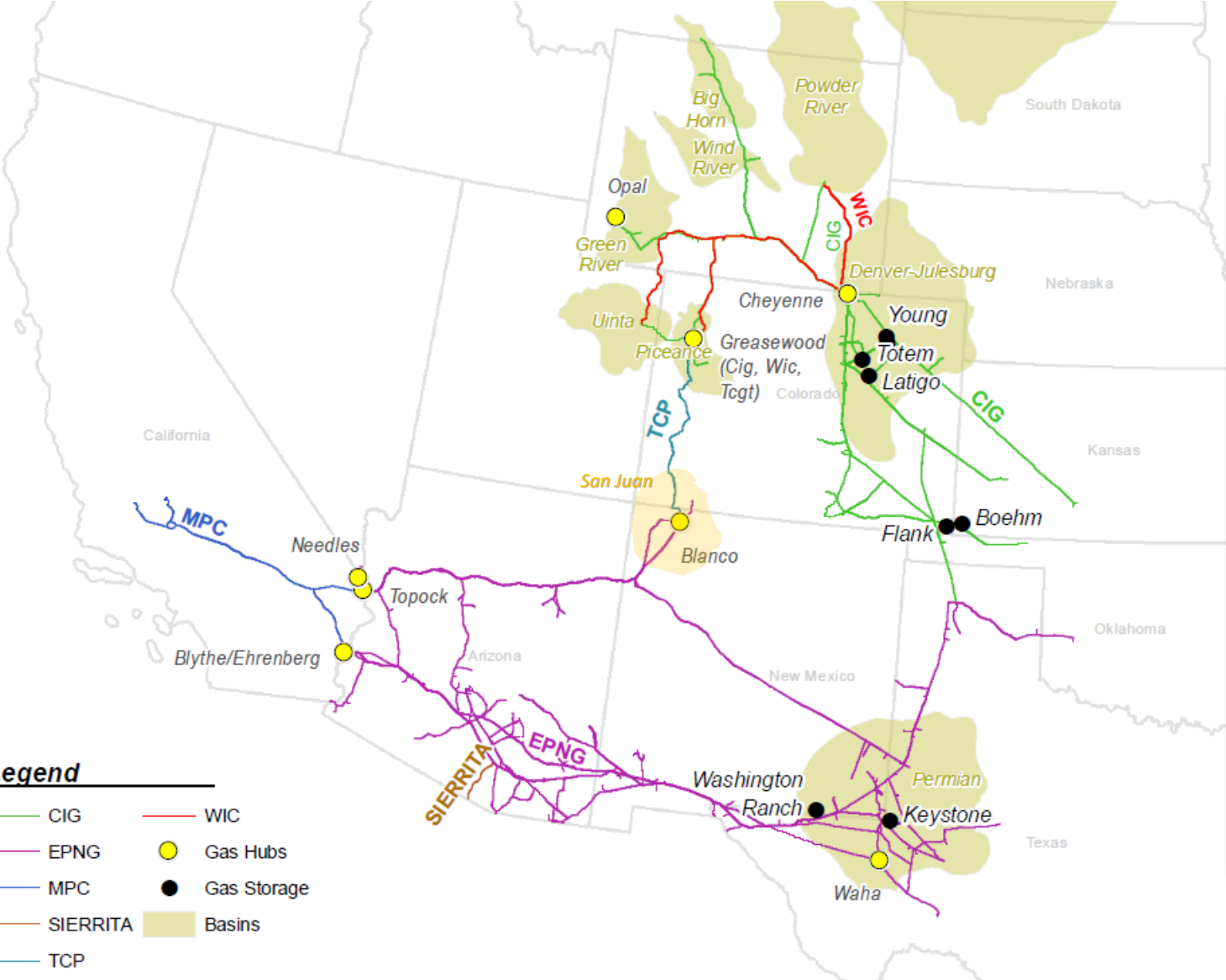
Business Development Updates

Will Brown

VICE PRESIDENT-COMMERCIAL • WEST REGION GAS PIPELINES

Kinder Morgan West Region

Market Summary



- Legend**
- CIG
 - WIC
 - EPNG
 - MPC
 - SIERRITA
 - TCP
 - Gas Hubs
 - Gas Storage
 - Basins

- **Key Developments**
 - Continued Renewable Penetration, Coal Retirements
 - West Coast LNG (ECA, MPL, Amigo)
 - Incremental Mexico (Baja) New Power Plants
 - Incremental Arizona Power Demand
 - 4.2 BCF/d Permian Expansions
 - Aliso Canyon MSQ Increase
 - Rockies Production Declines
 - Bakken to Cheyenne (Via Med Bow)
 - Incremental CO Front Range Growth
 - Trailblazer Conversion (2024?)
 - TransColorado/WIC Piceance Lateral Bi-Directional
 - Cheyenne Plains East Export (Weather/Storage Refill)

- **Summary**
 - Price Volatility - Tight Market, Maintenance, Weather
 - West Bound Transport Corridors
 - Storage/Deliverability

CO Front Range

- **Overview/Description:**
 - Population/industrial growth along the Colorado Front Range is driving increased demand for
 - Natural Gas Infrastructure for LDCs
 - Dispatchable Natural Gas Electric Generation
- **Potential Projects:**
 - Access to DJ, Midcontinent, and Anadarko Basins for increased capacity into the Front Range
 - Project Scope(s) depend on customer interest
 - Potential air/gas blending capability
- **Next Steps:**
 - Customer Interest
 - Rate Development
 - Open Season



Bakken (WBI) to Cheyenne

Overview/ Description:

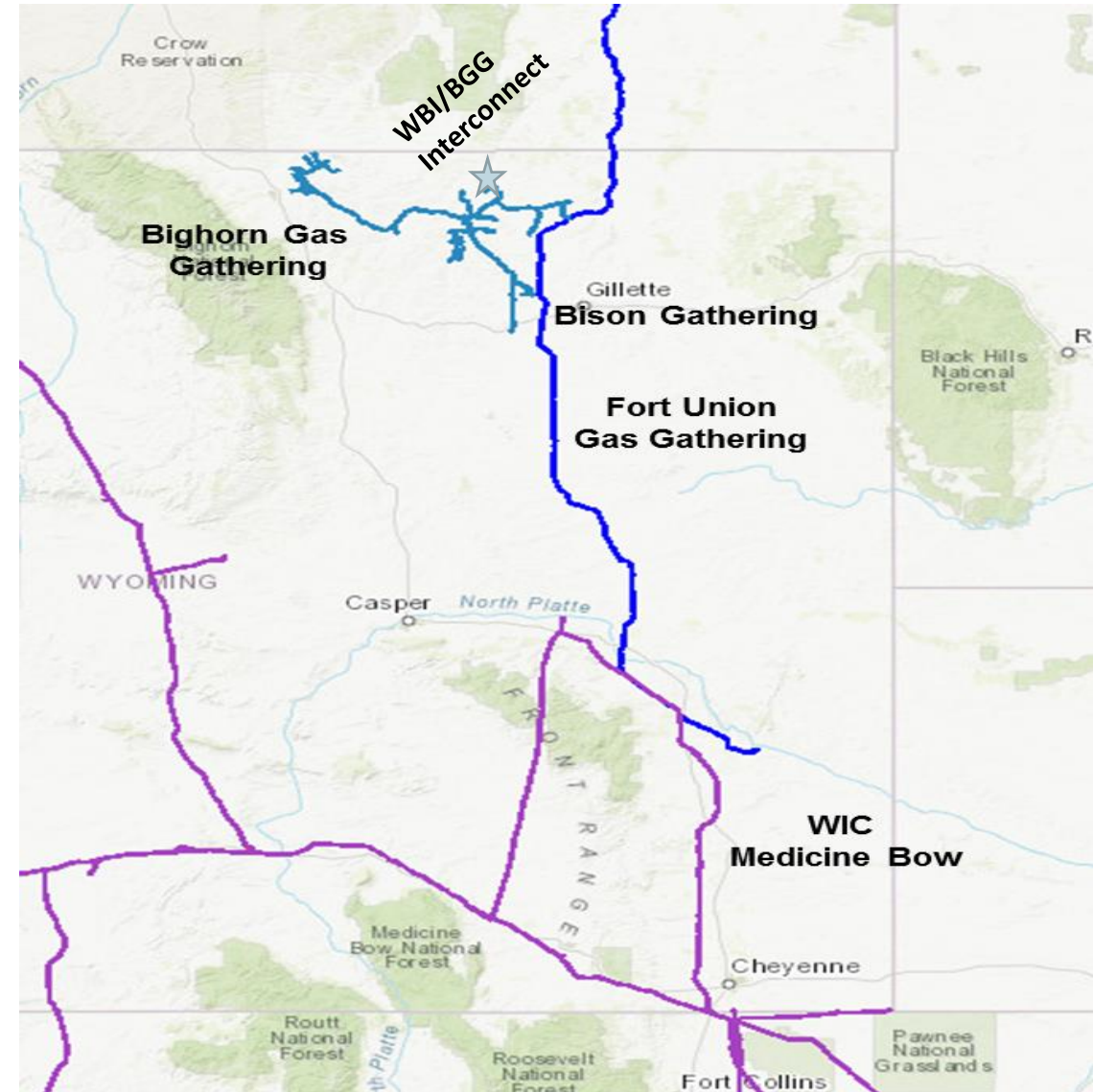
- Project to create a firm path from the Bakken to Cheyenne Hub using Fort Union Gas Gathering (FUGG), Bighorn Gas Gathering (BGG) leased capacity and existing WIC Medicine Bow (WIC MB) capacity.

Project Timeline:

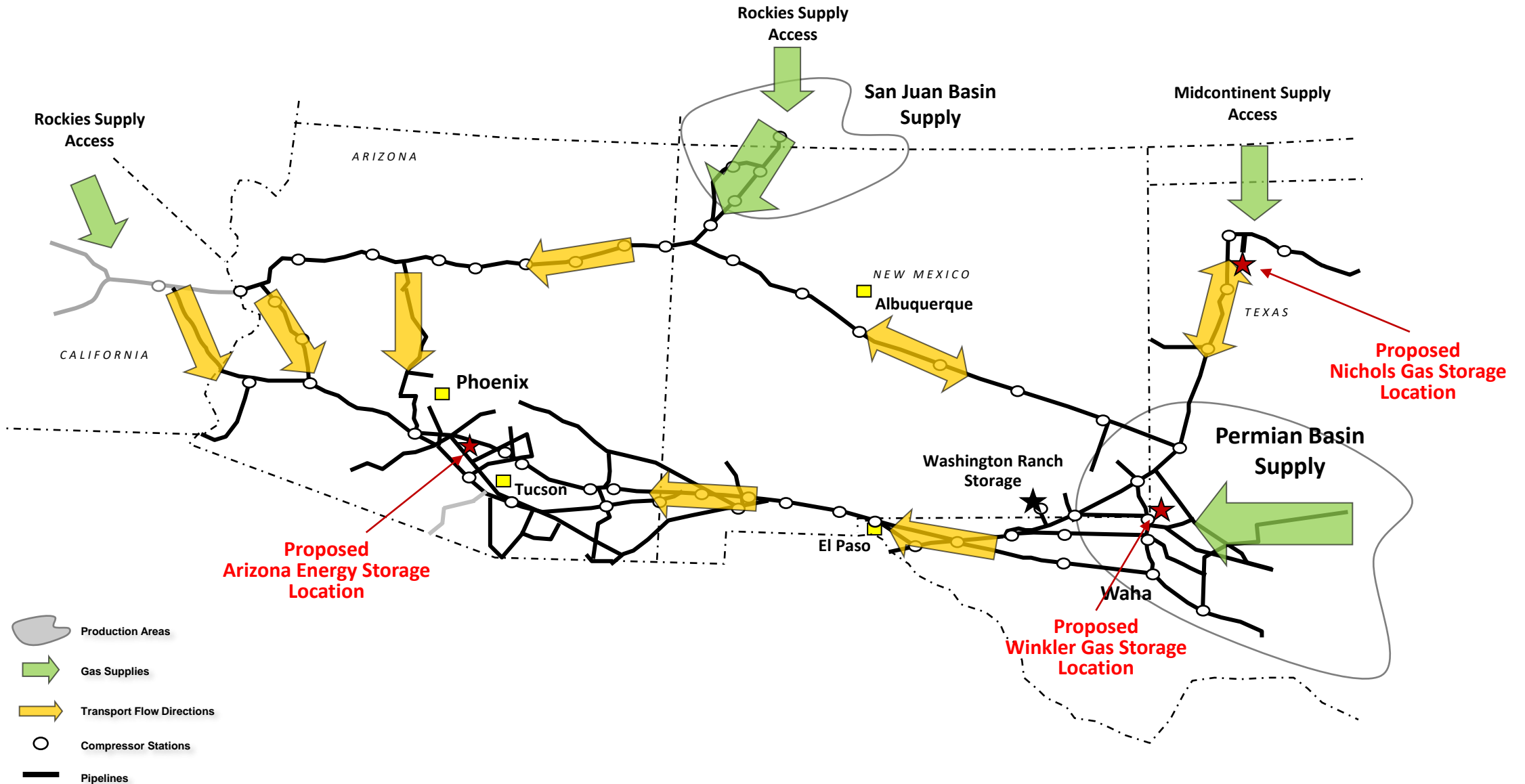
- Open Season closed - May 23, 2022
- WBI Energy Transmission, Inc. (“WBI”) FERC approval for new BGG Interconnect – February 27, 2023
- Filing for lease approved by FERC – March 9, 2023
- Estimated In-Service - Q3 2023

Commercial Terms:

- MDQ = 92,000 Dth/d
- Full amount of leased capacity
- Term = 10 years, 1 month
- Receipt = New WBI/BGG Interconnect
- WBI Grassland South Expansion Project
- Delivery = WIC Thunder Chief (Cheyenne Hub)

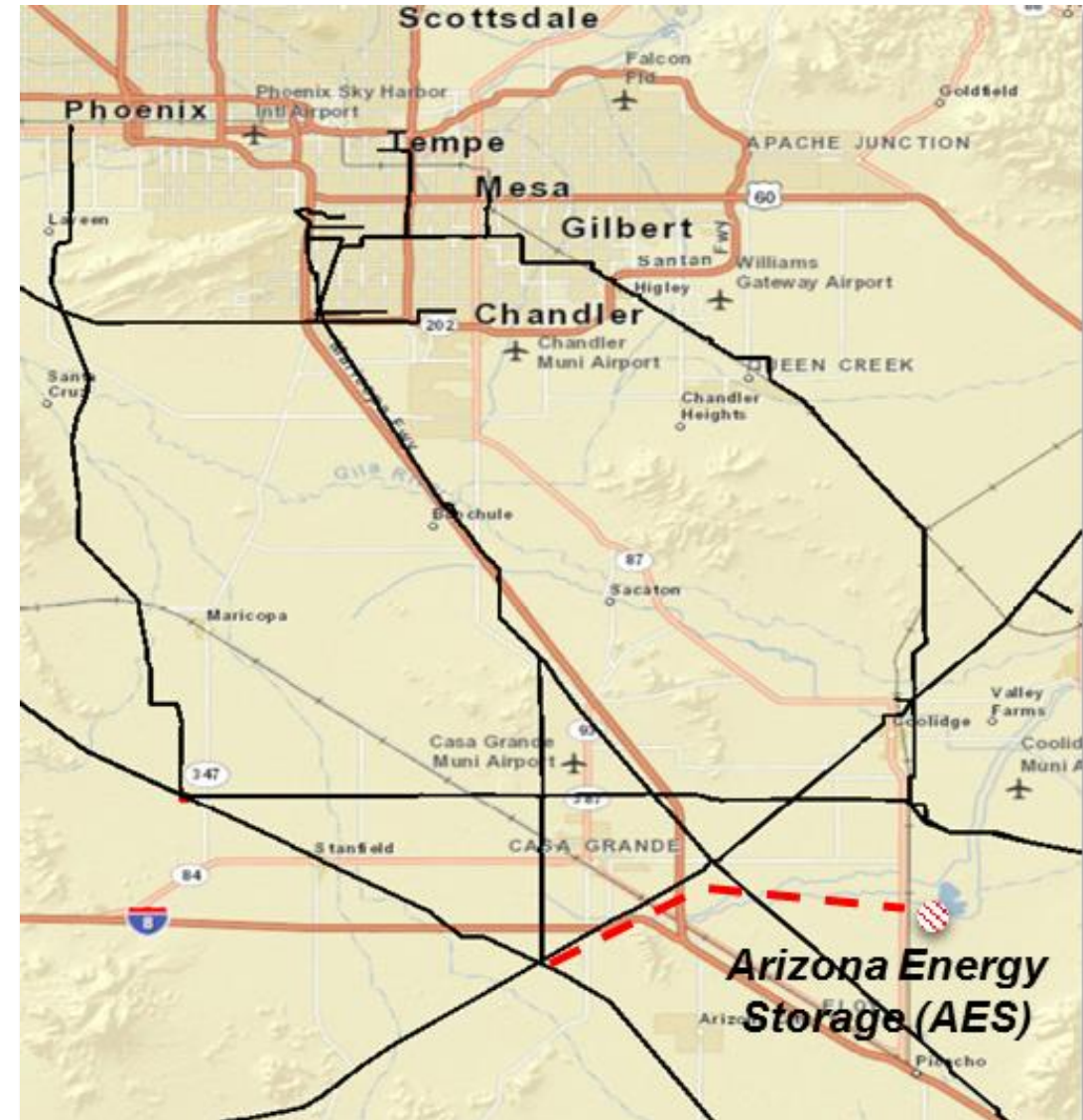


Proposed EPNG Storage Projects



Arizona Energy Storage

- **New Bedded Salt Storage (4 salt caverns) in Eloy, Az**
 - Hydrogen Ready Caverns
 - MSQ = 4 Bcf (1 Bcf each)
 - MDWQ = 400 MMcf/d (100 ea)
 - MDIQ = 183 MMcf/d (45.75 each)
 - Lower Picacho salt bed 3,800' to 4,500' below ground surface
 - Total base gas requirement estimated at to 3.3 Bcf
 - Staged installation of caverns and electric compression for injections (Each cavern requires 18 months of development)
- **Incremental capacity to EPNG delivery locations**
 - New 16.6 miles 24" lateral from AES to EPNG's 1100 (26"), 1103 (30"), and 2168 (20") transmission lines at Rivers Transfer Station
 - New no-notice service offering from AES to multiple EPNG delivery locations within Arizona and other potential future locations
- **Development Plan**
 - Refresh Scope and Estimate
 - Optimizing Water Consumption and Disposal
 - Key Stakeholder Meetings
 - Shippers
 - ACC Commissioners
 - Requesting Shipper Feedback on Service Levels/Locations/Timing
- **Next Steps**
 - Rate Development
 - Open Season



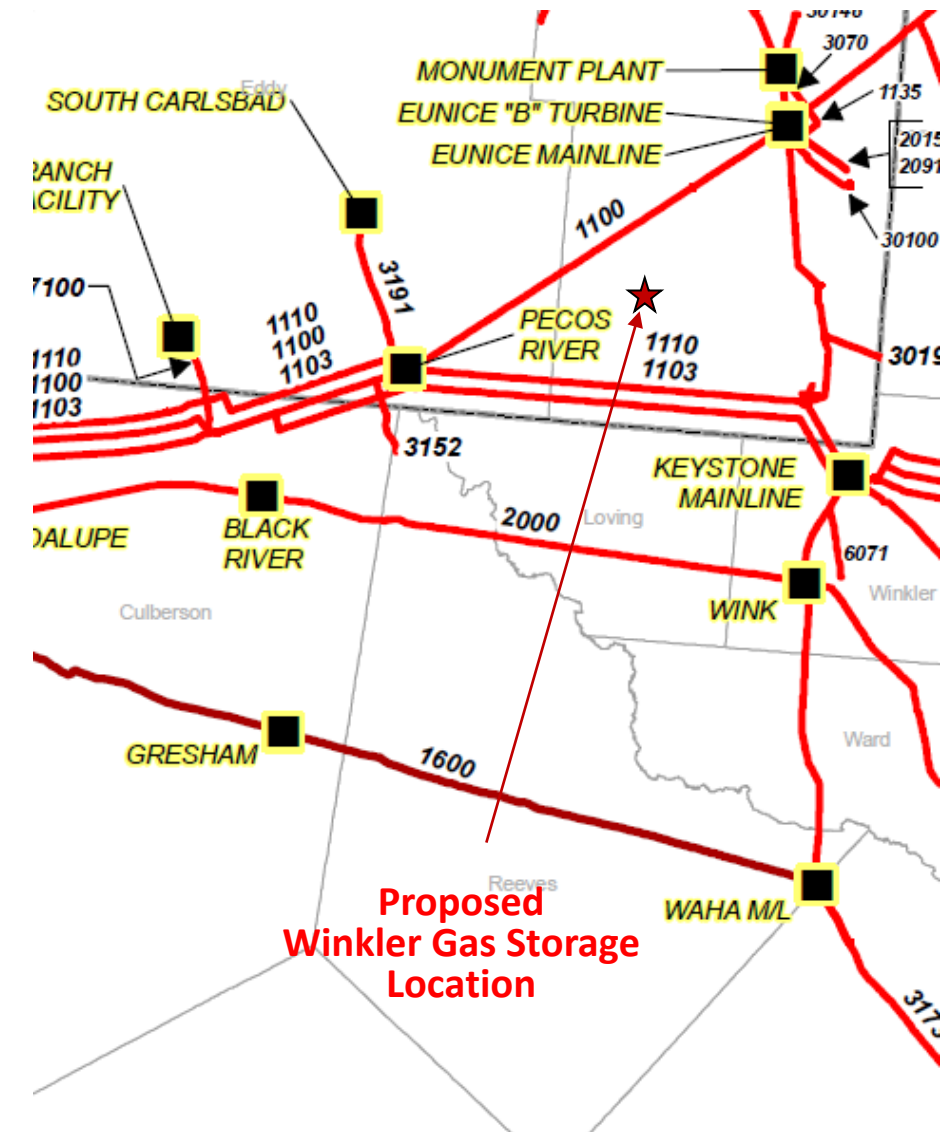
Winkler Gas Storage

■ New Bedded Salt Storage in Winkler County, Texas

- Proposal to initially develop 3 salt caverns
- MSQ = 2.85 Bcf [0.95 Bcf working capacity per cavern]
 - MDWQ = 240 MMcf/d [80 MMcf/d per cavern]
 - MDIQ = 120 MMcf/d [40 MMcf/d per cavern]
 - Proposed caverns in the same formation as the existing Keystone Storage Field (Total base gas estimated at to 1.05 Bcf)
 - Staged installation of caverns and compression for injections (Each cavern requires 18 months of development)
- WGS would connect to EPNG System
 - Connection via a new 3.9 miles 20" lateral from WGS surface facility to EPNG's 3006 (16"), 3028 (20"), and 3082 (20") lines east of existing Keystone Compressor Station

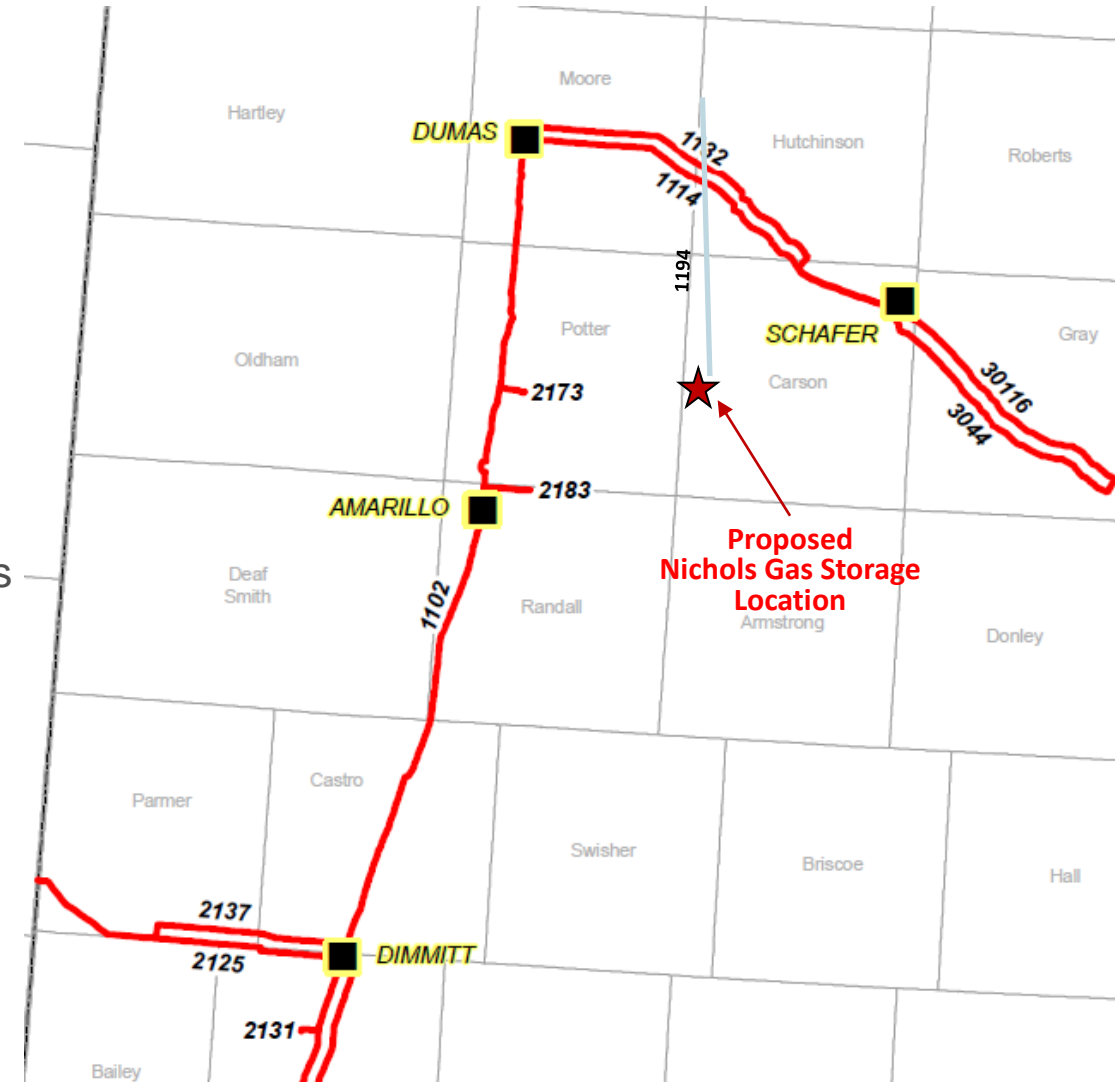
■ Next Steps

- Expression of Interest
- Development Plan
 - Refresh Scope/Estimate
 - Determine Takeaway Options



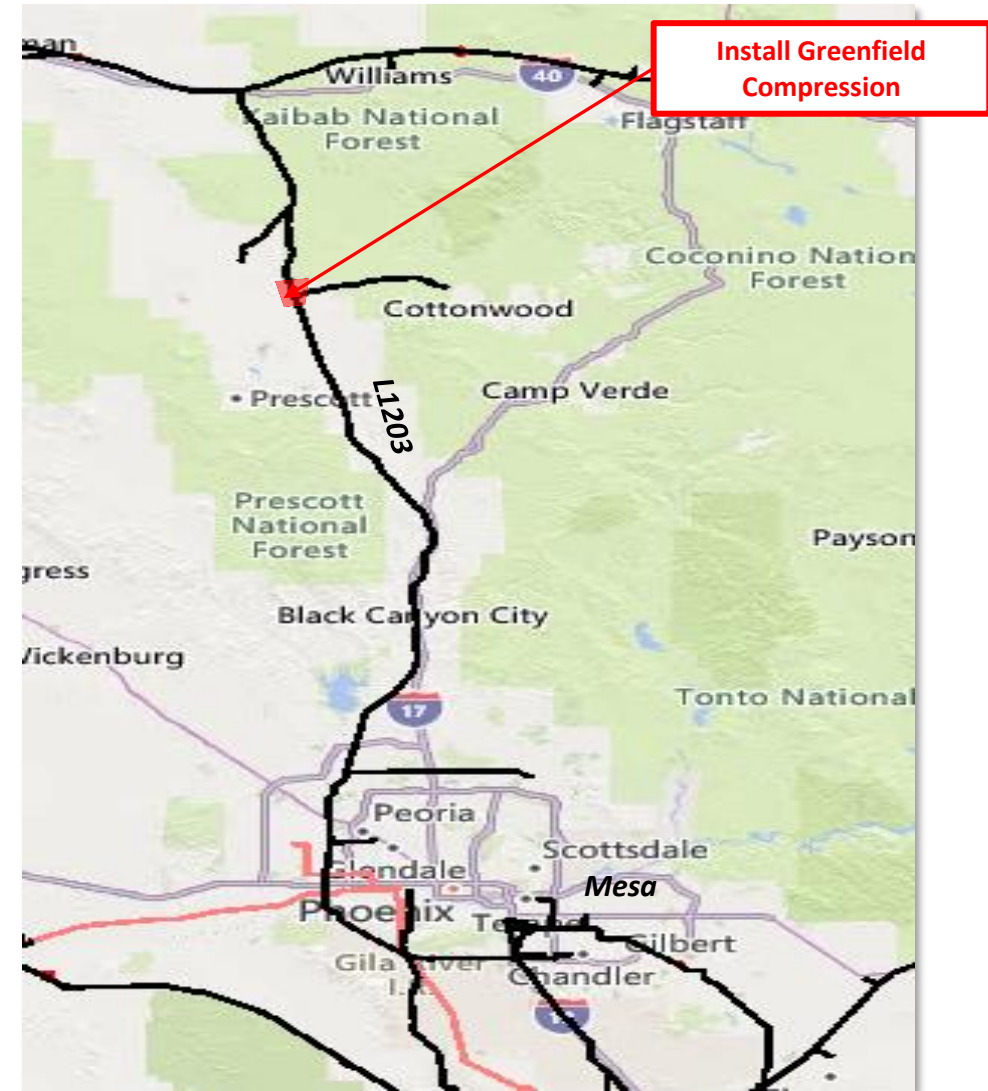
Nichols Gas Storage

- **New Bedded Salt Storage in Potter County, Texas**
 - Proposal to initially develop 3 salt caverns
 - MSQ = 1.72 Bcf [0.43 Bcf working capacity per cavern]
 - MDWQ = 200 - 300 MMcf/d [50 - 75 MMcf/d each]
 - MDIQ = 100 - 200 MMcf/d [25 - 50 MMcf/d each]
 - Reservoir created in Lower Clear Fork Salt
 - Test performed in early 1990s on existing well drilled within the formation
 - Total base gas estimated at to 1.20 Bcf
 - Staged installation of caverns and compression for injections (Each cavern requires 18 months of development)
 - NGS could connect to EPNG System via EPNG's 1102 (24") or EPNG 1194 (12") lines
 - Connection would be dependent on shipper demand
- **Next Steps**
 - Expression of Interest
 - Development Plan
 - Refresh Scope/Estimate
 - Determine Takeaway Options

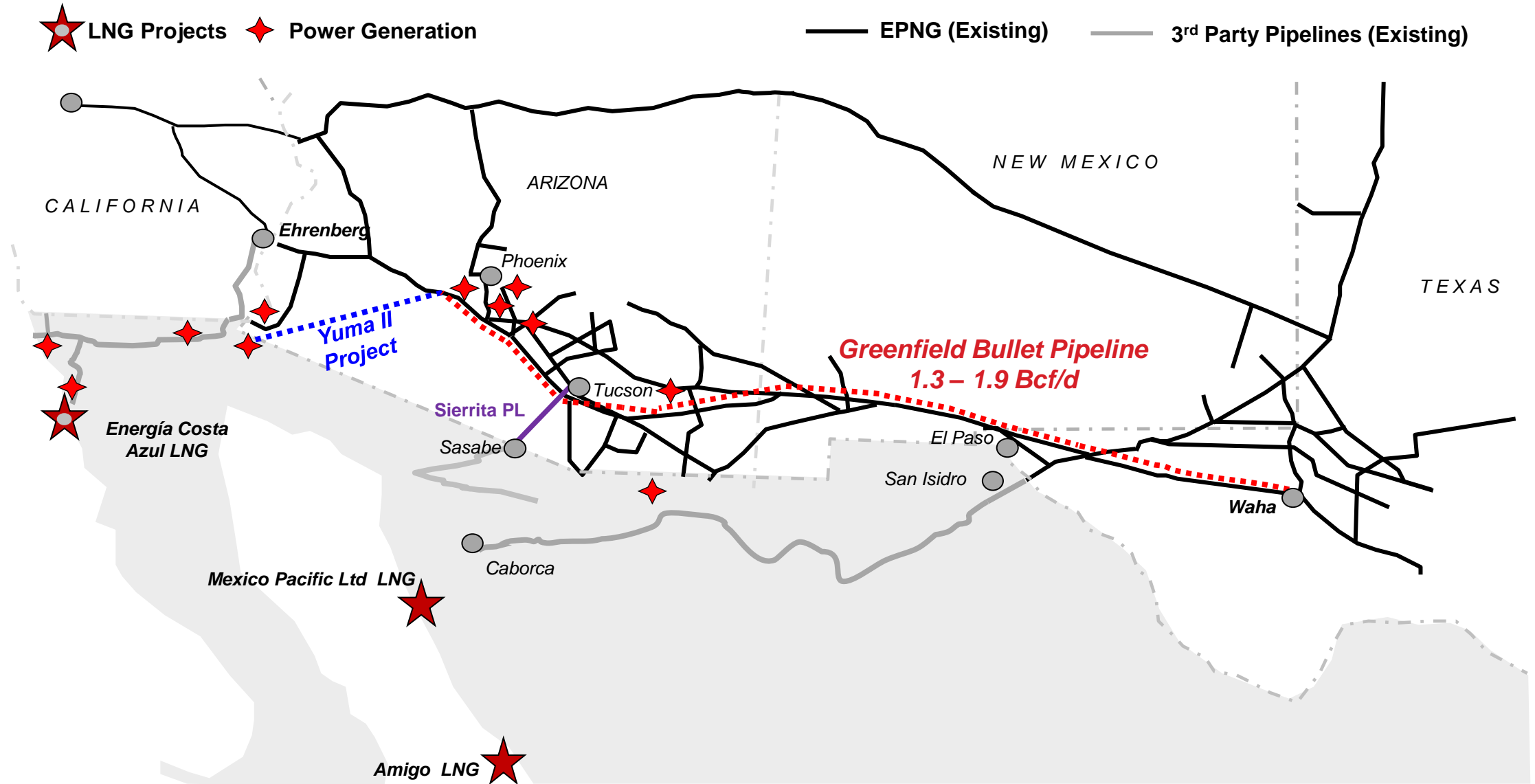


Maricopa Expansion

- **Overview/ Description:**
 - Increased capacity to the Phoenix, AZ area due to incremental natural gas fired generation
- **Facilities / In-Service:**
 - Target in-service June 2025
 - New greenfield reciprocating compressor on Line 1203 in Yavapai County, AZ
- **Commercial Terms (Customers / Volume / Capacity / Rates):**
 - New FT1 Contract with a Negotiated Reservation Rate
 - MDQ = 50.517 MDth (annual average)
 - Minimum Term = 20 years
- **Regulatory / Permitting:**
 - Would seek Prior Notice filing
 - No known air permitting issues
- **Strategic Considerations:**
 - Electric utilities adding more peaker generation in the DSW
- **Status/Next Steps:**
 - Refresh Estimate based on shipper interest
 - Conduct Open Season



Desert Southwest and West Coast Mexico Growth



Questions?

Thank you.



Delivering Energy to Improve Lives

Logistics

Tim Dorpinghaus

DIRECTOR-COMMERCIAL • WEST REGION GAS PIPELINES

Agenda for the Day

Wednesday, May 3rd, 2023



- 11:30 am **Registration**
Donald Ross Room
(upper level, Golf Clubhouse)
- Noon **Lunch**
Donald Ross Room
- 2:00 pm **Business Meeting**
Robert Trent Jones Room
- 6:00 pm **Reception**
Mountain View Terrace
- 7:00 pm **Dinner**
Mountain View Terrace



Agenda for the Day

Thursday, May 4th, 2023

6:30 – 8:00 am

Breakfast

Robert Trent Jones Room

8:15 am

Activities

Broadmoor West

Tour departs 8:30

Jeep Tour

John Driscoll; 719-510-4655

Mountain Biking

Ken Ulrich; 719-651-3183

Zip Line at Seven Falls

Robin Janes; 719-482-5280

Seven Falls Hike

Dan Tygret; 719-235-6076

8:30 – 9:40 am

Golf

Tee Times

Golf Cart Area

Randy Barton, 719-331-1061



Check-out time is 12:00 noon. You may arrange to store your luggage at the front desk until your departure. The golf pro shop will hold your golf clubs.

Thank you for your Business!