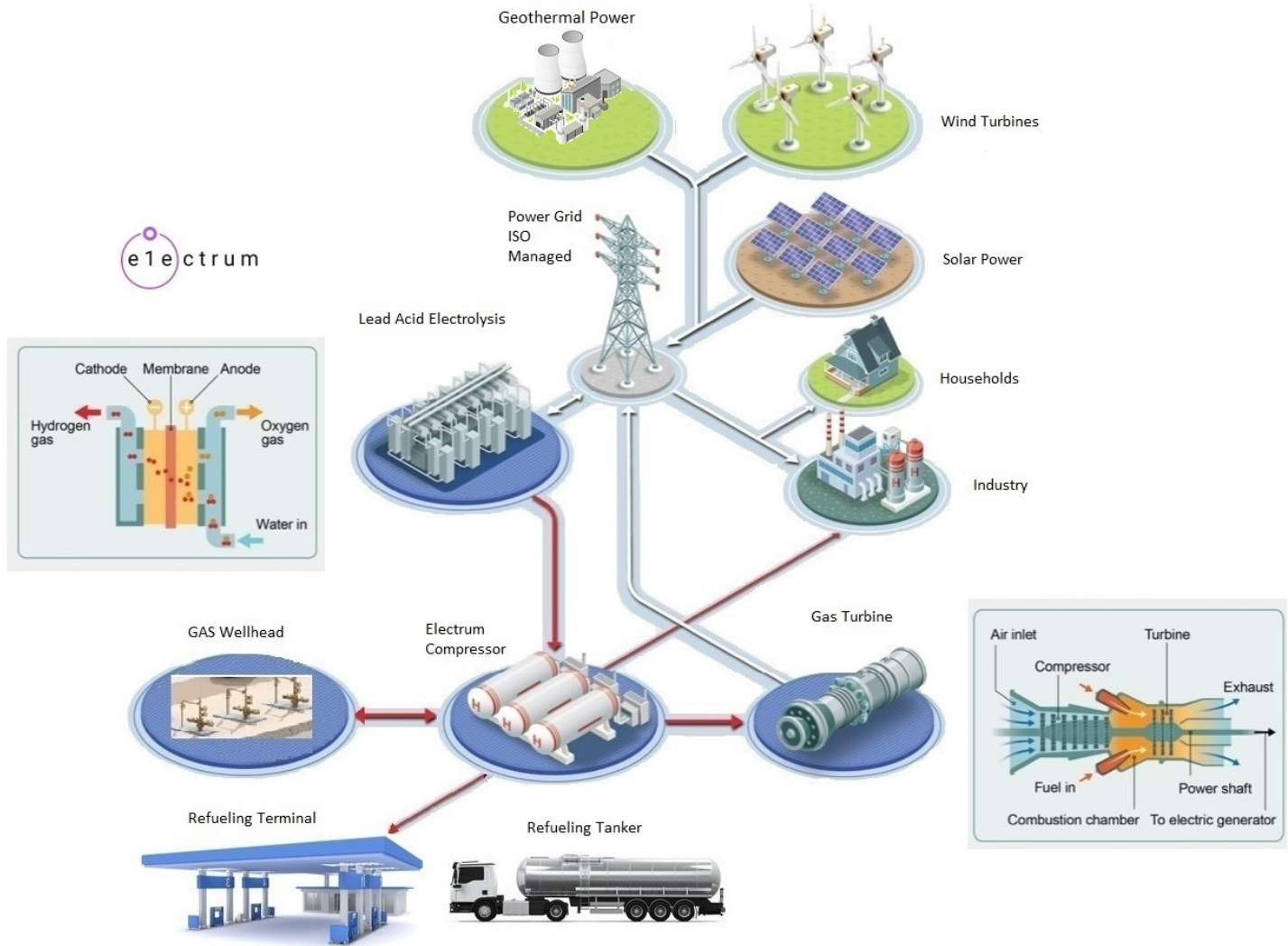


<https://electrumpower.tech>



Notice

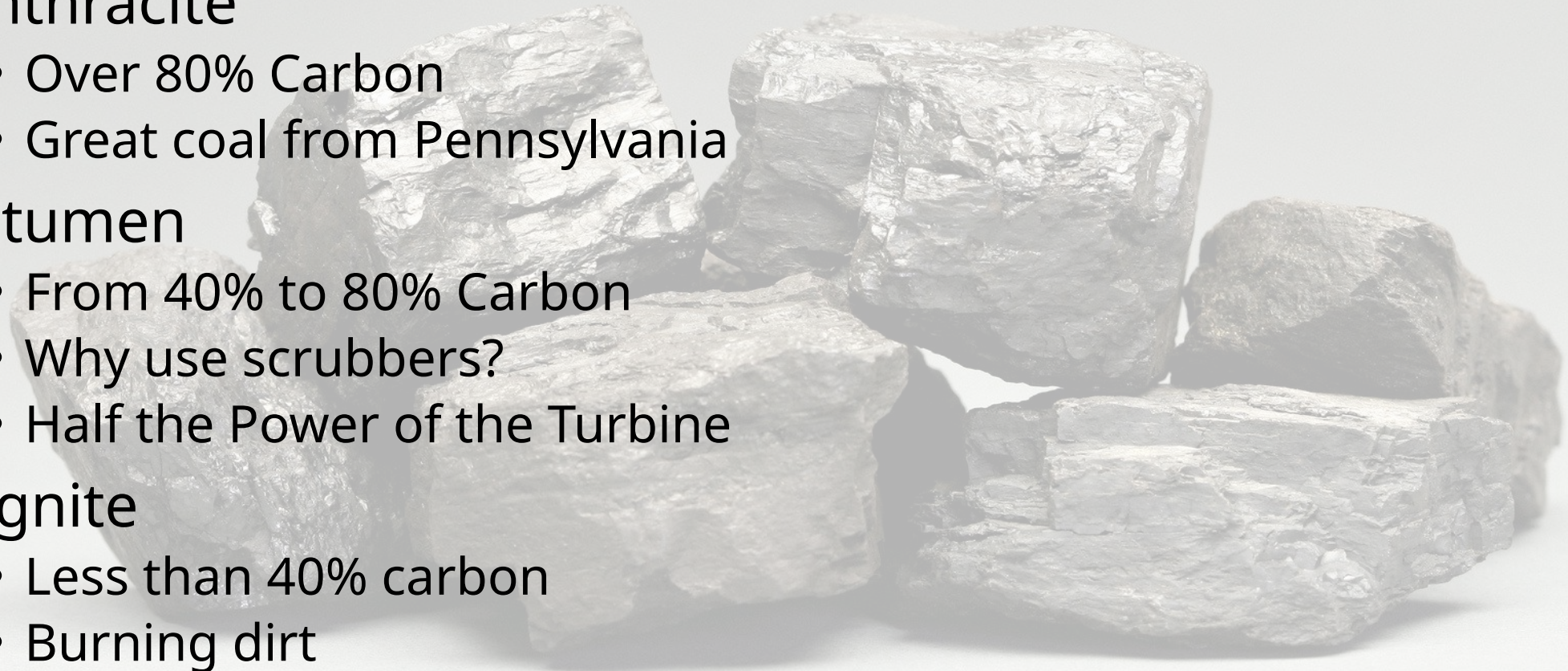
- The Opinions expressed by the participants on this show are their own. All statements and opinions expressed are based upon information considered reliable although it should not be relied upon as such. Any statements or opinions are subject to change without notice. Information presented is for educational purposes only.



Let's review what has been going on with Energy in the U.S.

Coal Fired Power Plants

- Anthracite
 - Over 80% Carbon
 - Great coal from Pennsylvania
- Bitumen
 - From 40% to 80% Carbon
 - Why use scrubbers?
 - Half the Power of the Turbine
- Lignite
 - Less than 40% carbon
 - Burning dirt



Why convert to Combined Cycle?

<https://oilprice.com/Energy/General/The-US-Is-Running-Out-Of-Coal.html>

OILPRICE.com
The No. 1 Source for Oil & Energy News

HOME OIL PRICES OIL FUTURES RIG COUNT ENERGY ALTERNATIVE ENERGY VIDEO BREAKING NEWS PREMIUM ARTICLES COMMUNITY MY ACCOUNT GET EXCLUSIVE INTEL

All Prices	OPEC Blends	Canadian Blends	U.S. Blends				
WTI CRUDE	70.16	+1.54	+2.24%	LOUISIANA LIGHT	72.07	+0.12	+0.17%
BRENT CRUDE	73.87	+1.34	+1.85%	BONNY LIGHT	78.62	-2.30	-2.84%
MURBAN CRUDE	76.85	+2.24	+3.00%	OPEC BASKET	74.87	-1.06	-1.40%
NATURAL GAS	3.932	-0.027	-0.68%	MARS US	73.22	-1.16	-1.56%
Click Here for 150+ Global Oil Prices				GASOLINE	1.994	+0.045	+2.29%

1D 1M 3M 1Y ALL CHARTS

Discussion Headlines

- 3 minutes e-car sales collapse
- 6 minutes America Is Exceptional in Its Political Divide
- 11 minutes Perovskites, a 'dirt cheap' alternative to silicon, just got a lot more efficient
- 20147 days

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PREMIUM CONTENT

Geopolitical Tensions and Supply Disruptions Lift Oil Prices

Chinese Teapot Refineries Are Going Belly Up

Iran Threatens Direct

The U.S. Is Running Out Of Coal

By [Editorial Dept](#) - Oct 29, 2021, 2:00 PM CDT



Braess Paradox

https://oilprice.com/Energy/General/Blackouts-Are-Becoming-the-NormCan-the-US-Power-Grid-Be-Saved.html

OILPRICE.com
The No. 1 Source for Oil & Energy News

HOME OIL PRICES OIL FUTURES RIG COUNT ENERGY ALTERNATIVE ENERGY VIDEO BREAKING NEWS PREMIUM ARTICLES COMMUNITY MY A

All Prices	OPEC Blends	Canadian Blends	U.S. Blends				
WTI CRUDE	68.08	+0.90	+1.34%	LOUISIANA LIGHT	71.40	+1.13	+1.61%
BRENT CRUDE	71.49	+0.91	+1.29%	BONNY LIGHT	78.62	-2.30	-2.84%
MURBAN CRUDE	72.60	+0.95	+1.33%	OPEC BASKET	72.55	+0.41	+0.57%
NATURAL GAS	4.077	-0.027	-0.66%	MARS US	73.22	-1.16	-1.56%
Click Here for 150+ Global Oil Prices				GASOLINE	2.182	+0.033	+1.54%

1D 1M 3M 1Y ALL CHARTS

Alex Kimani

ALEX KIMANI
Alex Kimani is a veteran finance writer, investor, engineer and researcher for Safehaven.com.
More Info

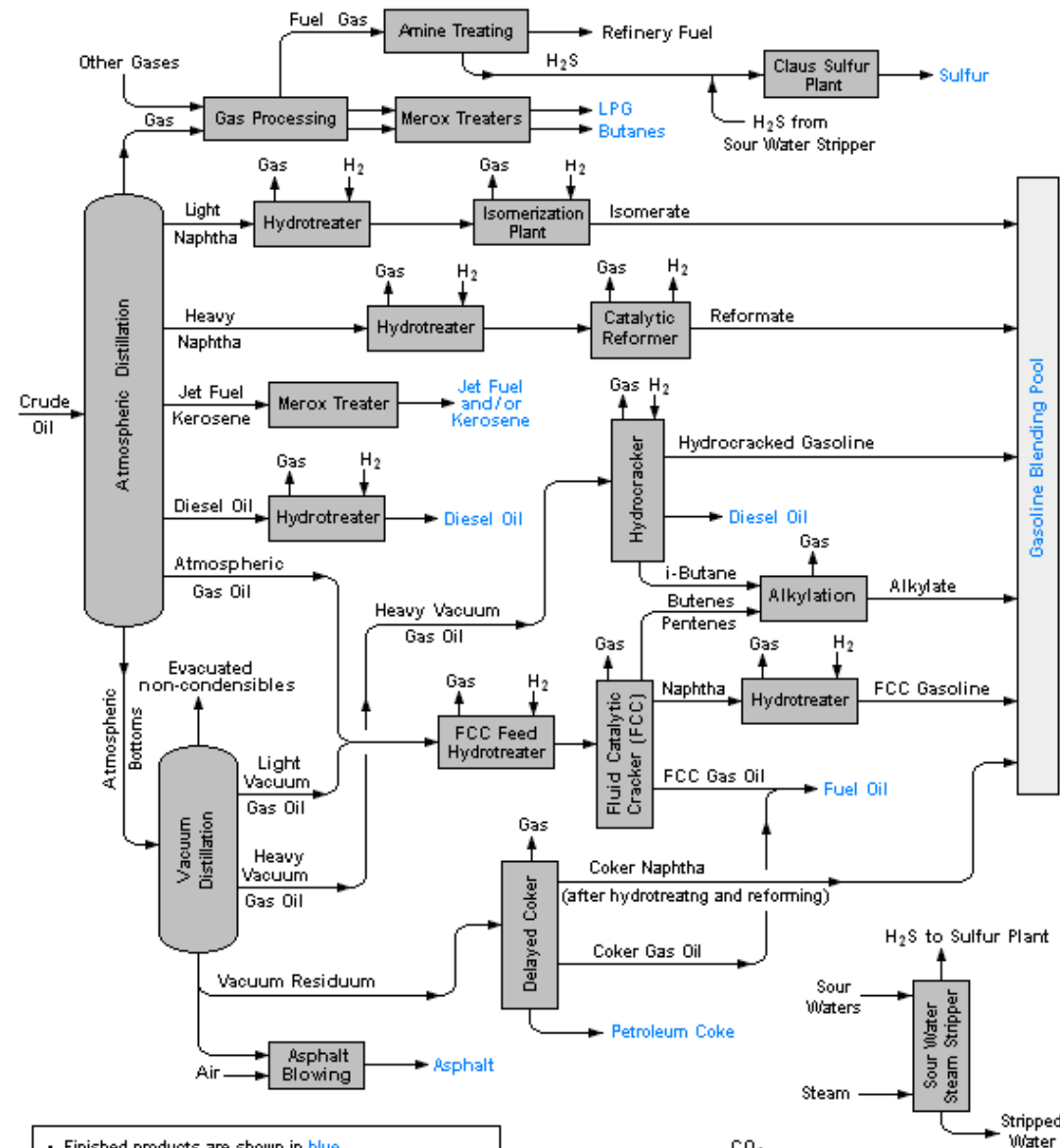
Blackouts Are Becoming the Norm –Can the U.S. Power Grid Be Saved?

By [Alex Kimani](#) - Feb 20, 2025, 6:00 PM CST

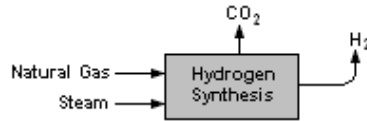
- ▶ Aging grids and extreme weather are straining U.S. power reliability, with natural gas plants proving especially vulnerable during crises.
- ▶ Upgrading the grid carries a multi-trillion dollar price tag.
- ▶ FERC has approved the first major U.S. transmission upgrade in over a decade, aiming to speed up grid modernization and improve reliability.



Whiting Oil Refinery



- Finished products are shown in blue
- Sour waters are derived from various distillation tower reflux drums in the refinery
- The "other gases" entering the gas processing unit includes all the gas streams from the various process units



Hydrogen Storage at the Refinery



U.S. Natural Gas System

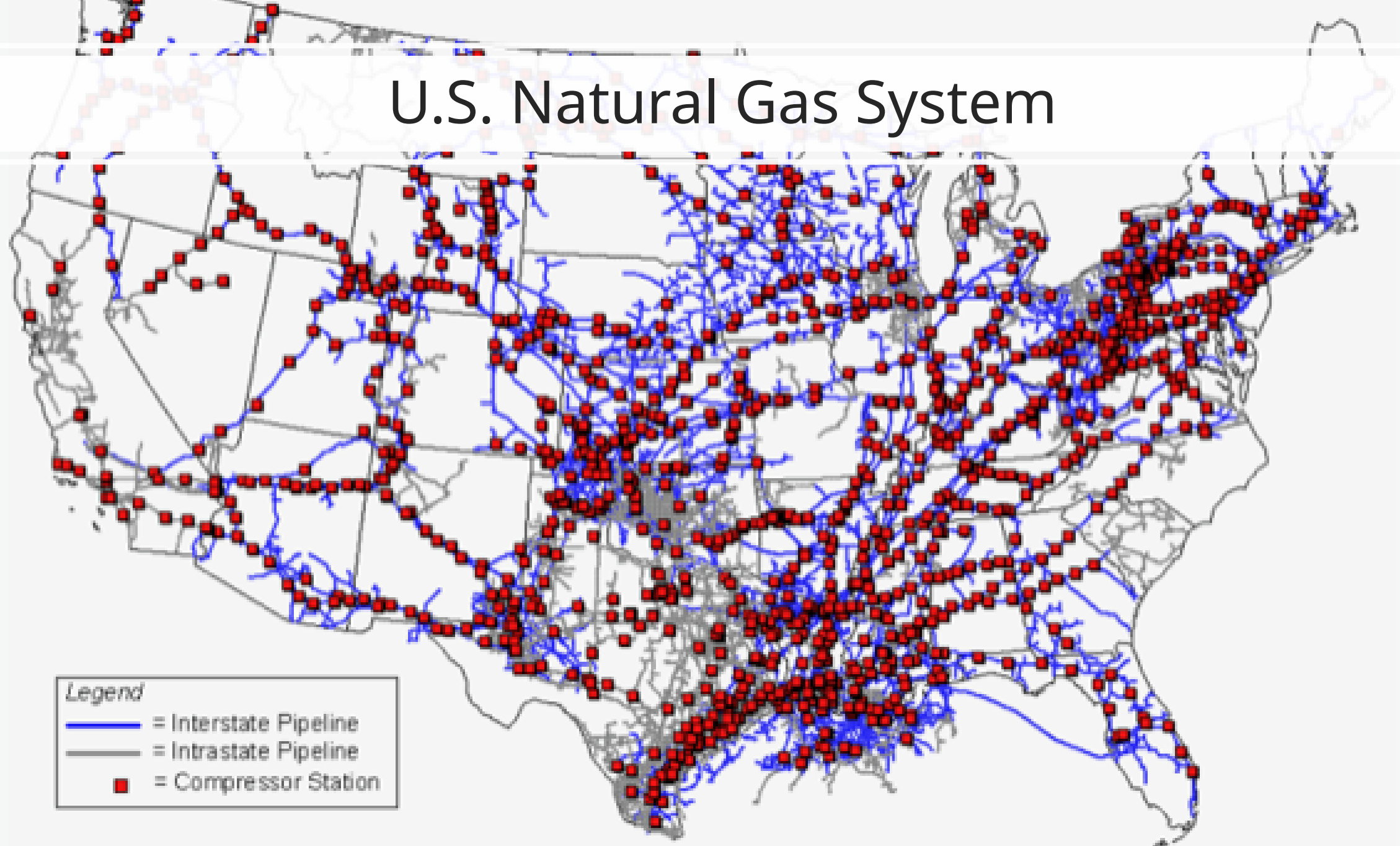
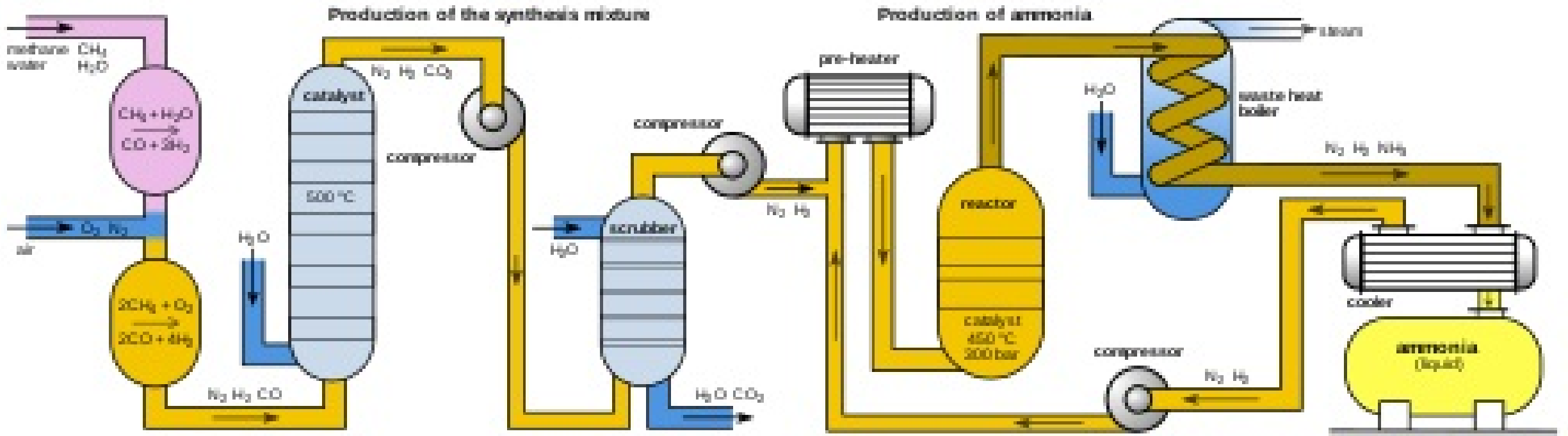


Figure 7. U.S. natural gas pipeline compressor stations illustration (2008) (EIA 2012).





Haber Bach Ammonia process



[Home](#) → [Media Centre](#) → [Latest News](#) → IMO2020 fuel oil sulphur limit - cleaner air, healthier planet

Reduced limit on sulphur in marine fuel oil implemented smoothly through 2020.

On 1 January 2020, new reduced limits on sulphur in fuel oil brought about a 70% cut in total sulphur oxide emissions from shipping, ushering in a new era of cleaner air in ports and coastal areas by using less polluting fuels.

One year on, indications are that the transition has been extremely smooth, a testament to the preparations of all stakeholders prior to the new rules entering into force.

The upper limit of the sulphur content of ships' fuel oil was reduced to 0.5% (from 3.5% previously) - under the so-called "IMO 2020" regulation prescribed in the MARPOL Convention. This significantly reduces the amount of sulphur oxide emanating from ships.



The reduction in the upper limit of the sulphur content of ships' fuel oil was to 0.5% (from 3.5% previously) has significantly reduced air pollution from ships.

U.S. distillate stocks

million barrels

190

5-yr Range Weekly

160

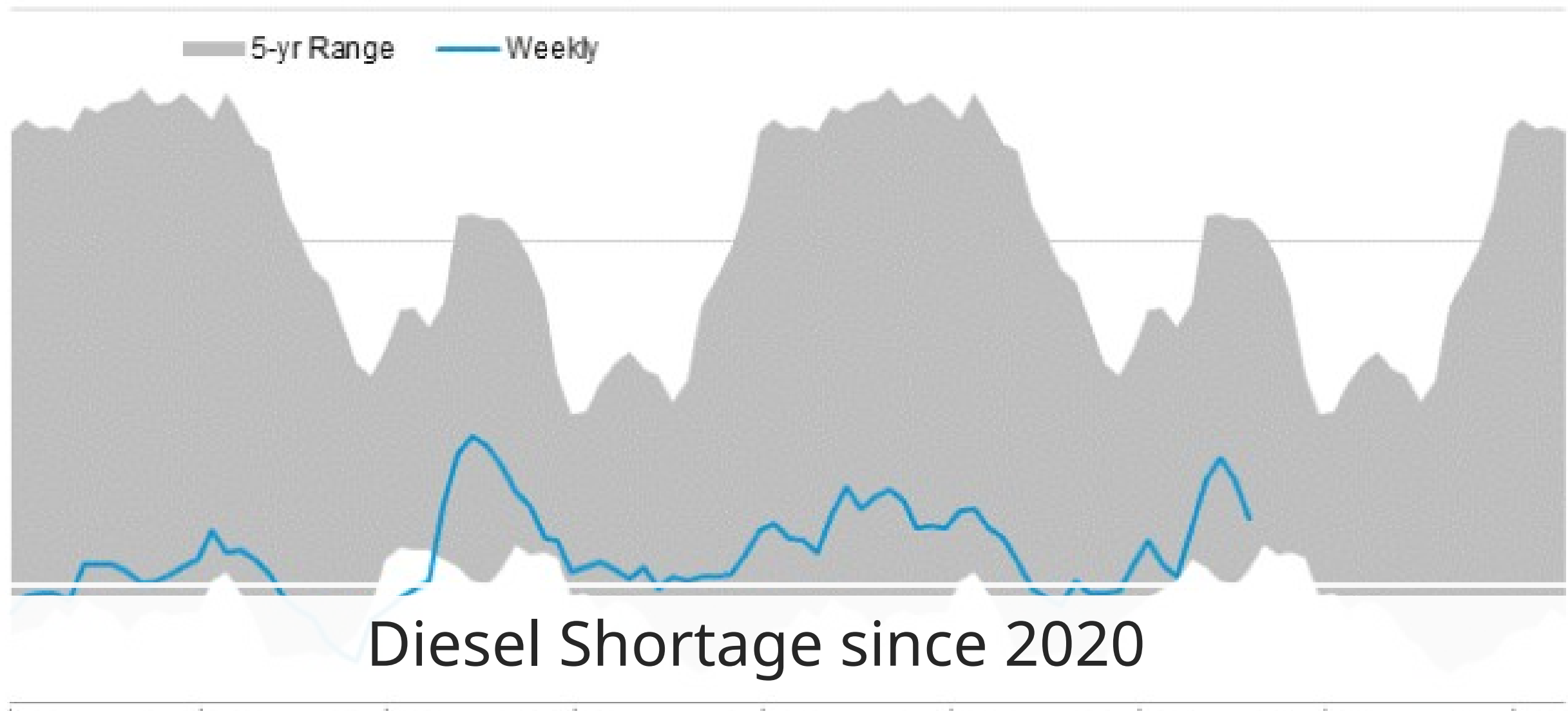
130

100

Jun-23 Sep-23 Dec-23 Mar-24 Jun-24 Sep-24 Dec-24 Mar-25 Jun-25

data source: U.S. Energy Information Administration

Diesel Shortage since 2020





Gasoline Economy





UPDATE #2 ON STENA IMMACULATE INCIDENT IN THE NORTH SEA

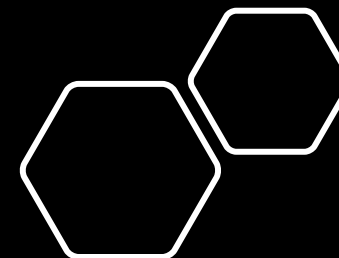
Monday, March 10, 2025 - At approximately 10 a.m. UTC/5 a.m. EDT on March 10, 2025, while stationary and anchored off the North Sea coast near Hull, United Kingdom, the Crowley-managed tanker Stena Immaculate was struck on its port side by the container ship Solong. As a result, at least one cargo tank containing Jet-A1 fuel was ruptured.

Crowley is working closely with response agencies including the HM Coastguard to secure the vessel in a restricted safety area and initiate spill containment response. All 23 Crowley mariners that were on board are safe and accounted for with no reported injuries at this time.

"As with all our operations, Crowley's priority is to protect the safety of mariners, and the environment. We greatly appreciate the quick actions and support of the U.K. authorities, rescue workers and others to today's incident and remain committed to working with them on the continued response efforts," said Cal Hayden, vice president, Crowley global ship management.

The Stena Immaculate is managed by Crowley through a joint venture with owner Stena Bulk USA. In 2023, the tanker was selected by the U.S. Maritime Administration (MARAD) to serve in its Tanker Security Program. While under charter on this voyage for the Military Sealift Command, the tanker was anchored while it awaited berth availability at the Port of Killingholme, where it was due to make a standard delivery of fuel as part of a routine service under this program when it was struck.

At this stage, it is unclear what volume of fuel may have been released as a result of the incident. At the time it was struck, the 183-meter (596-foot) Stena Immaculate was carrying 220,000 barrels of jet fuel in 16 segregated cargo tanks. Crowley is supporting the relevant authorities in the UK who are investigating the incident and will defer to them for any further questions on potential cause.





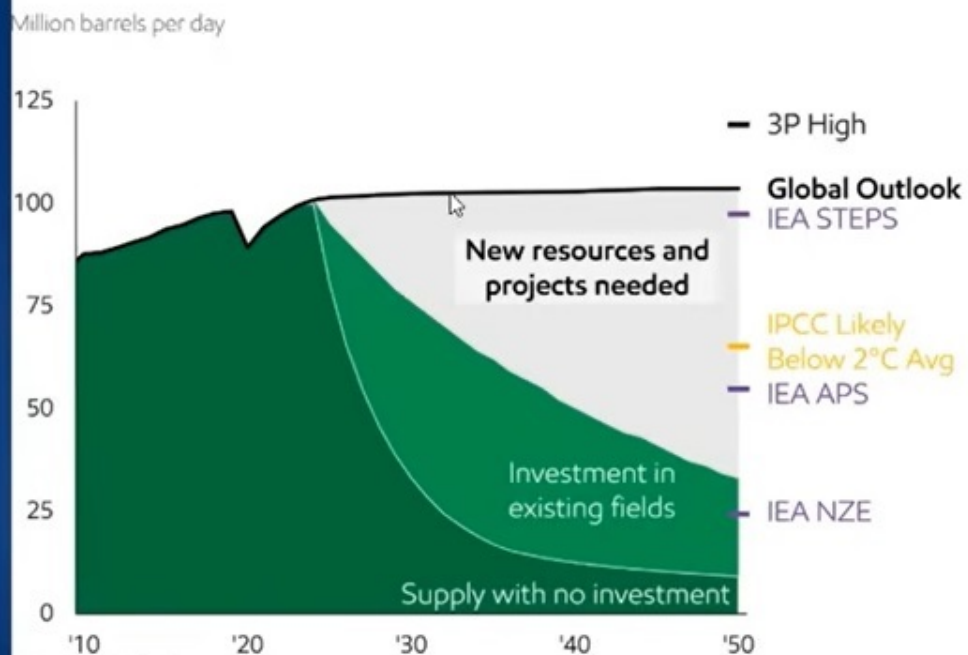


U.S. Oil & Gas Industries Future Plans.



ExxonMobil's Global Energy Outlook

Global oil projected supply and demand



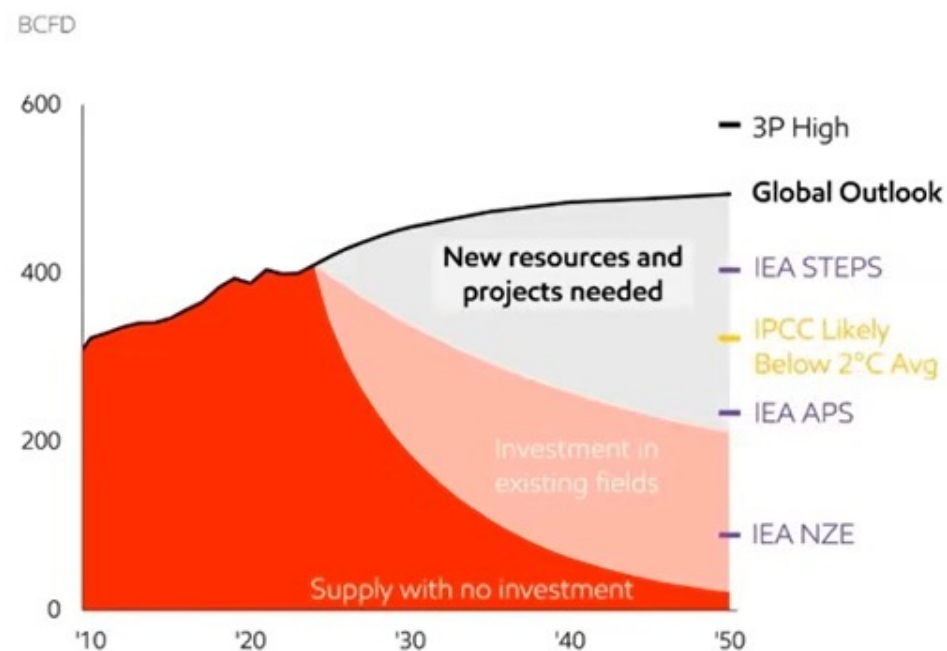
Oil excludes biofuels.

IPCC AR6 Scenarios Database hosted by International Institute for Applied Systems Analysis (IIASA) release 1.0 average of 306 IPCC C3: "Likely Below 2°C" scenarios.

IEA scenarios from '23 World Energy Outlook; 3rd Party high 2023 OPEC World Oil Outlook 2045: Laissez-Faire case (see reference list).

Decline rates based on 10-yr CAGR.

Natural gas projected supply and demand



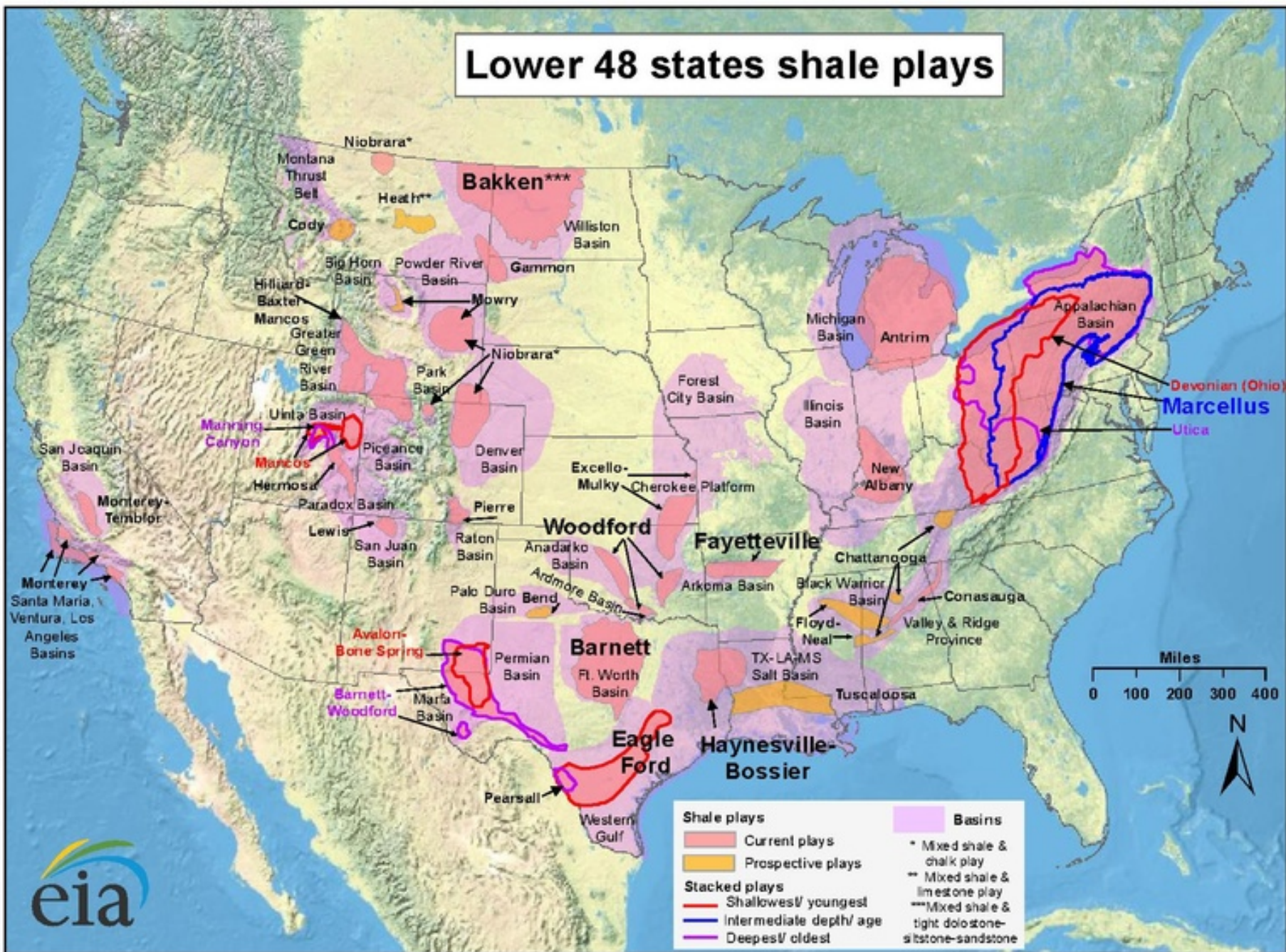
Excludes flaring.

IPCC AR6 Scenarios Database hosted by International Institute for Applied Systems Analysis (IIASA) release 1.0 average of 306 IPCC C3: "Likely Below 2°C" scenarios.

IEA scenarios from '23 World Energy Outlook; 3rd Party high 2023 OPEC World Oil Outlook 2045: Laissez-Faire case (see reference list).

Decline rates based on 10-yr CAGR.

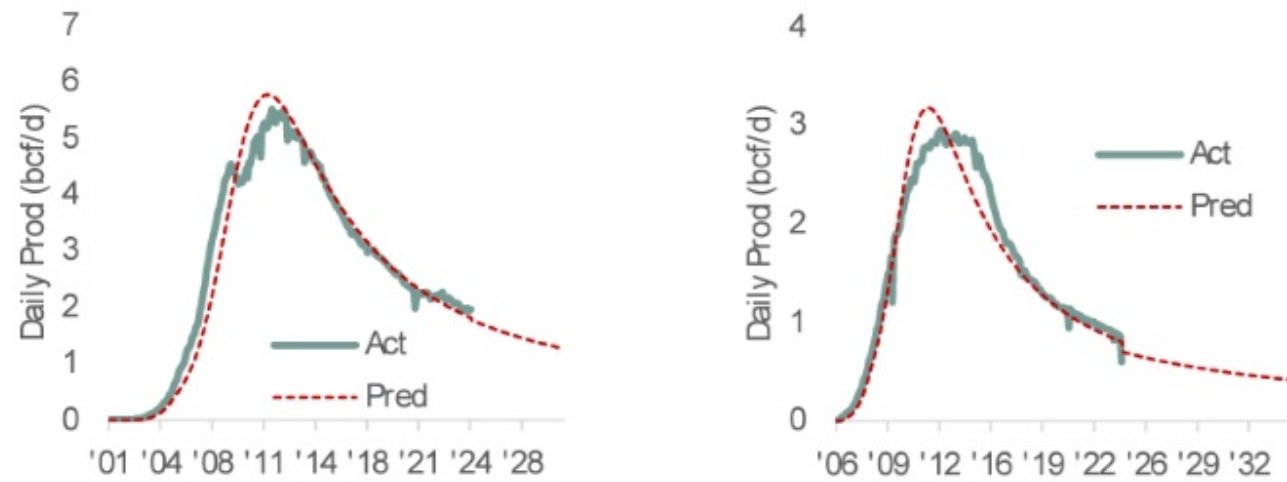
Lower 48 states shale plays



Source: Energy Information Administration based on data from various published studies. Updated: May 9, 2011

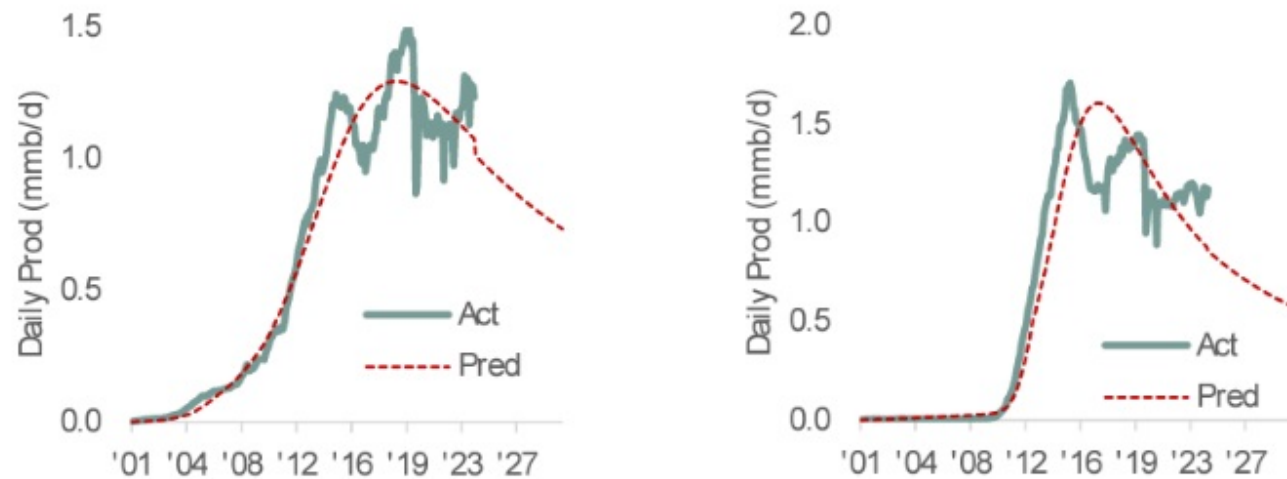


FIGURE 10a Barnett and Fayetteville Logrithmic Hubbert Curve



Source:NoviLabs and G&R.

FIGURE 10b Bakken and Eagle FordLogrithmic Hubbert Curve



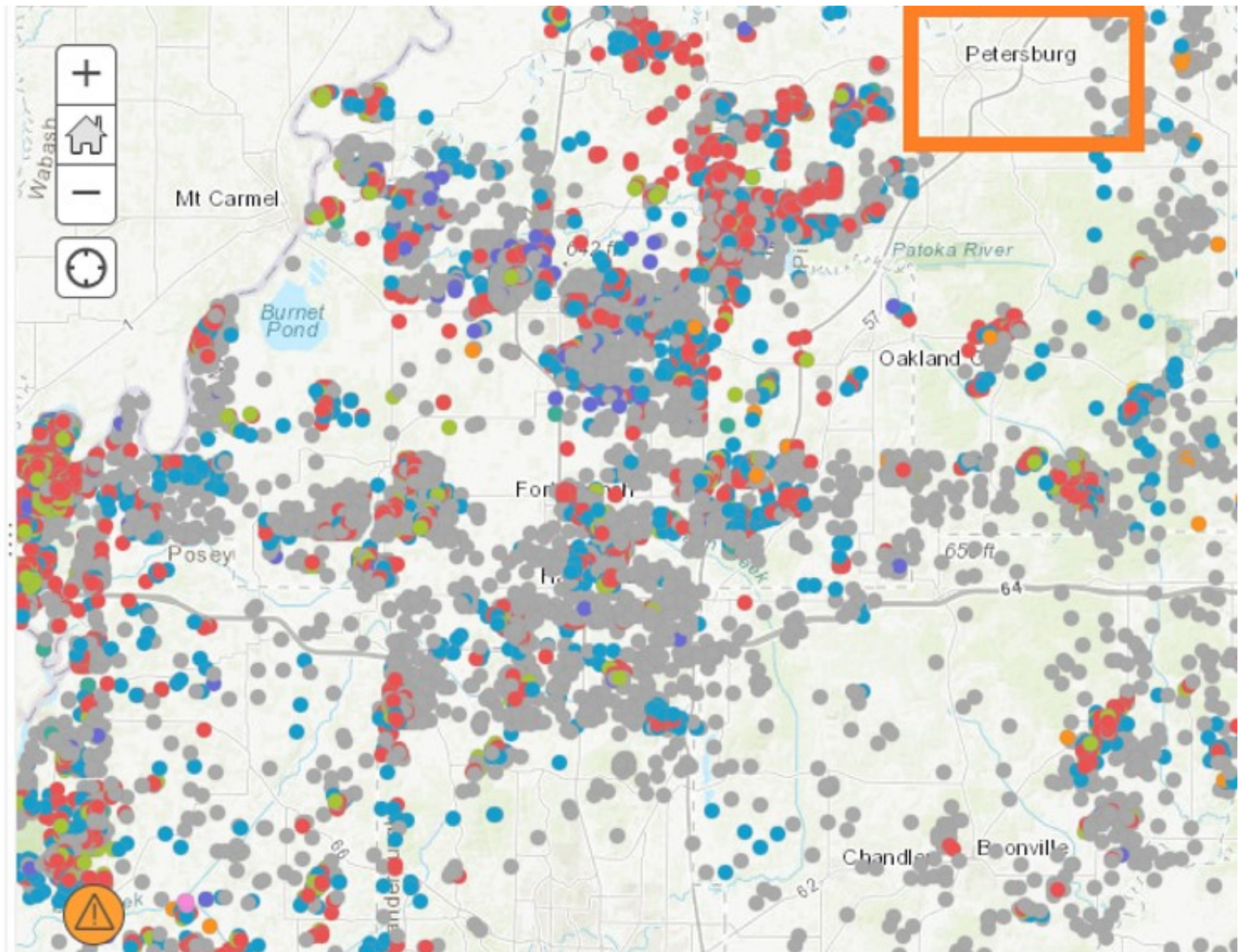
Source:NoviLabs and G&R.

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Legend

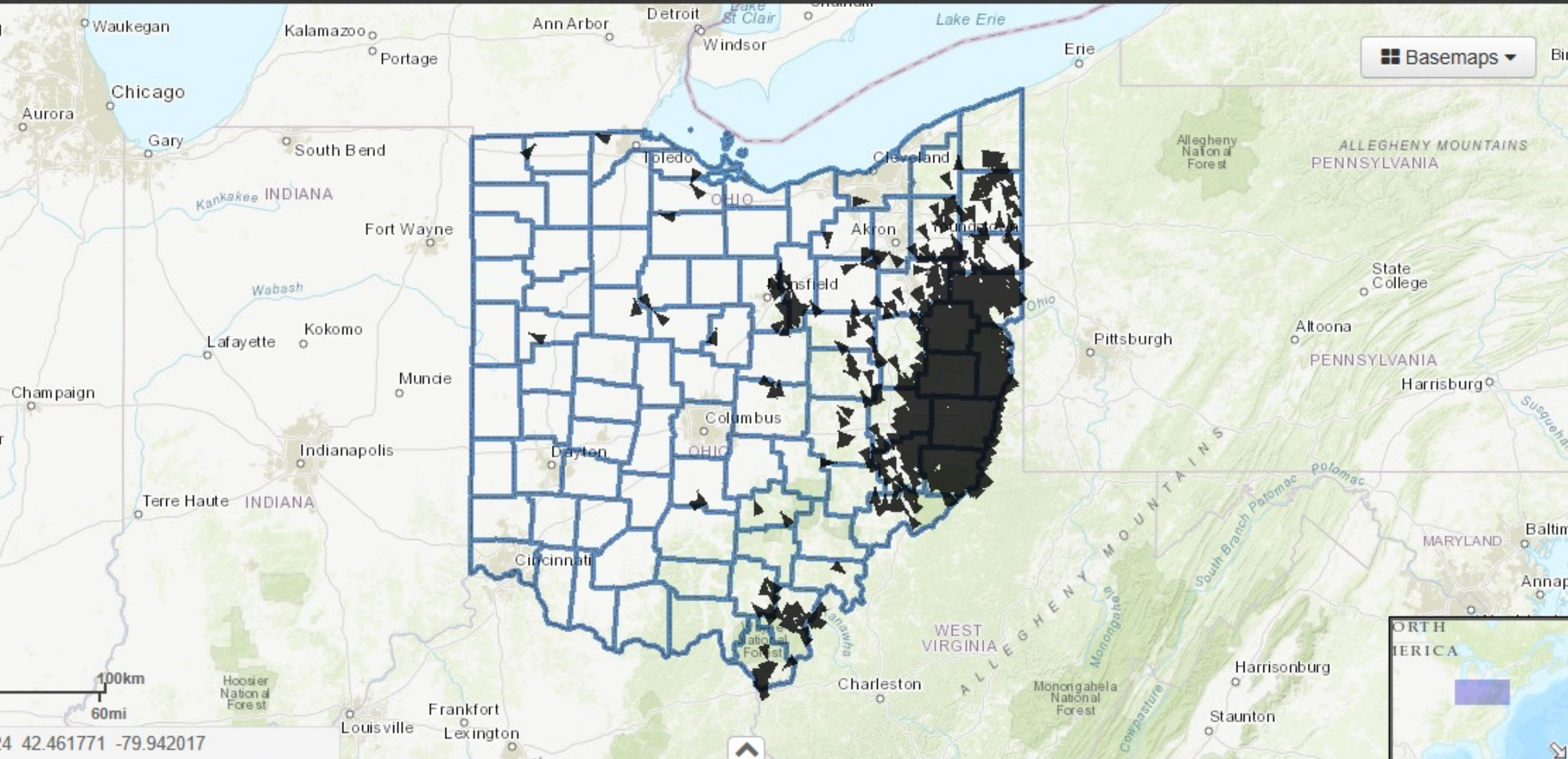
IN DNR Oil and Gas Wells : All Records - Oil and gas wells

- Oil
- Dry Hole
- Enhanced Recovery
- Non-Commercial Gas
- Gas
- Fluid Storage Facility
- Gas Storage/ Observation
- Non-commercial gas
- Saltwater Disposal
- Unknown
- Other

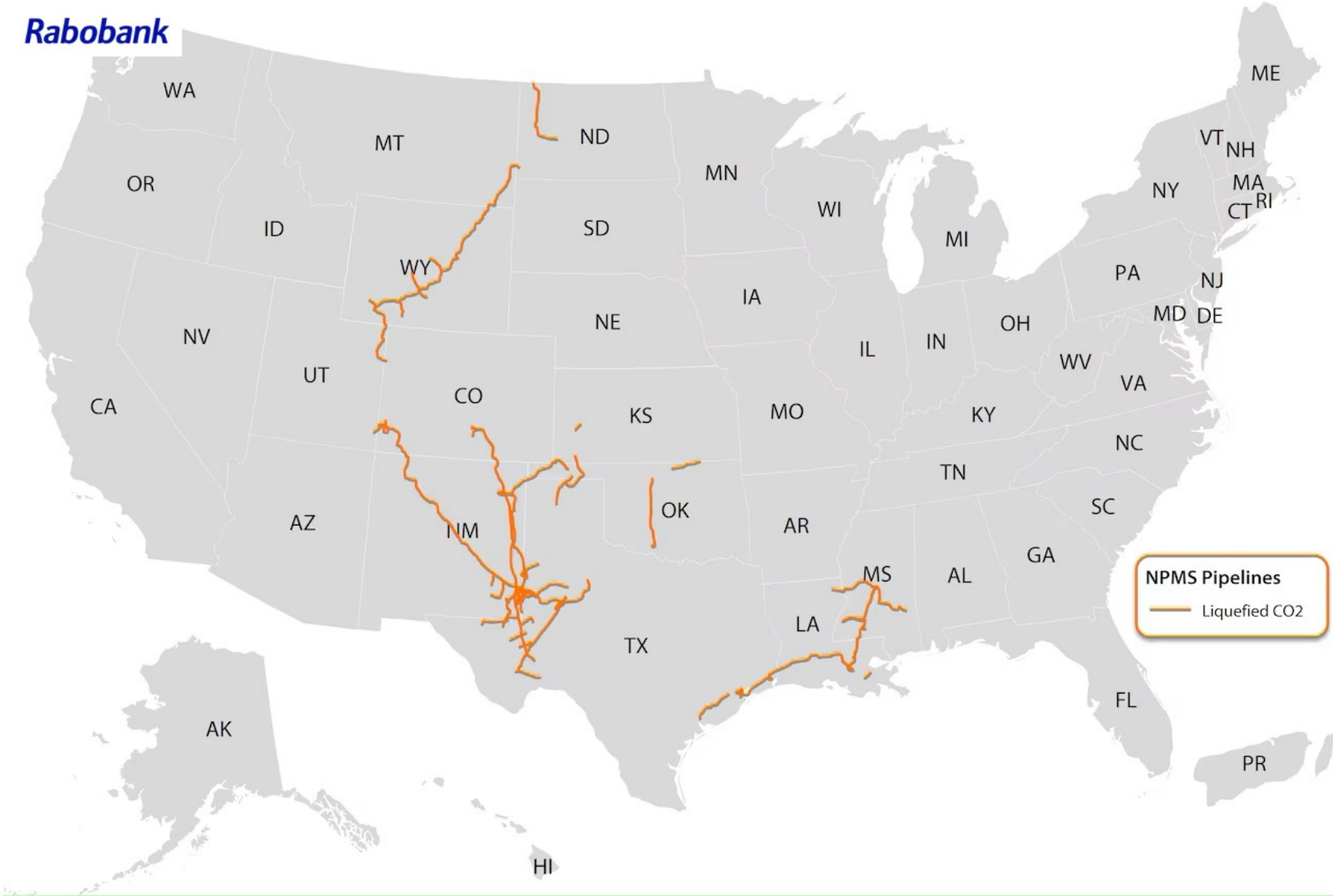


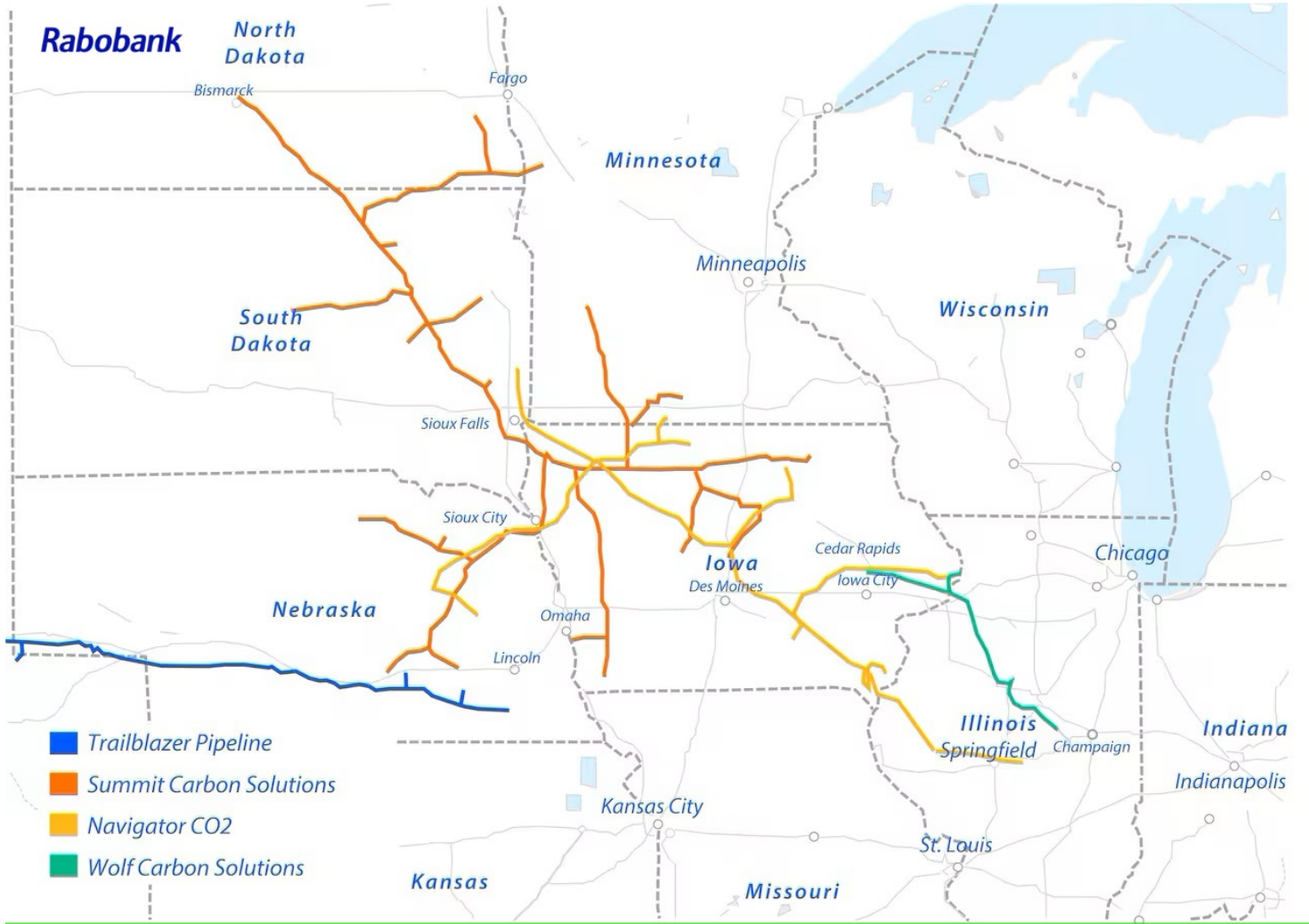
Ohio Oil & Gas Wells

ODNR - Division of Oil & Gas



Rabobank

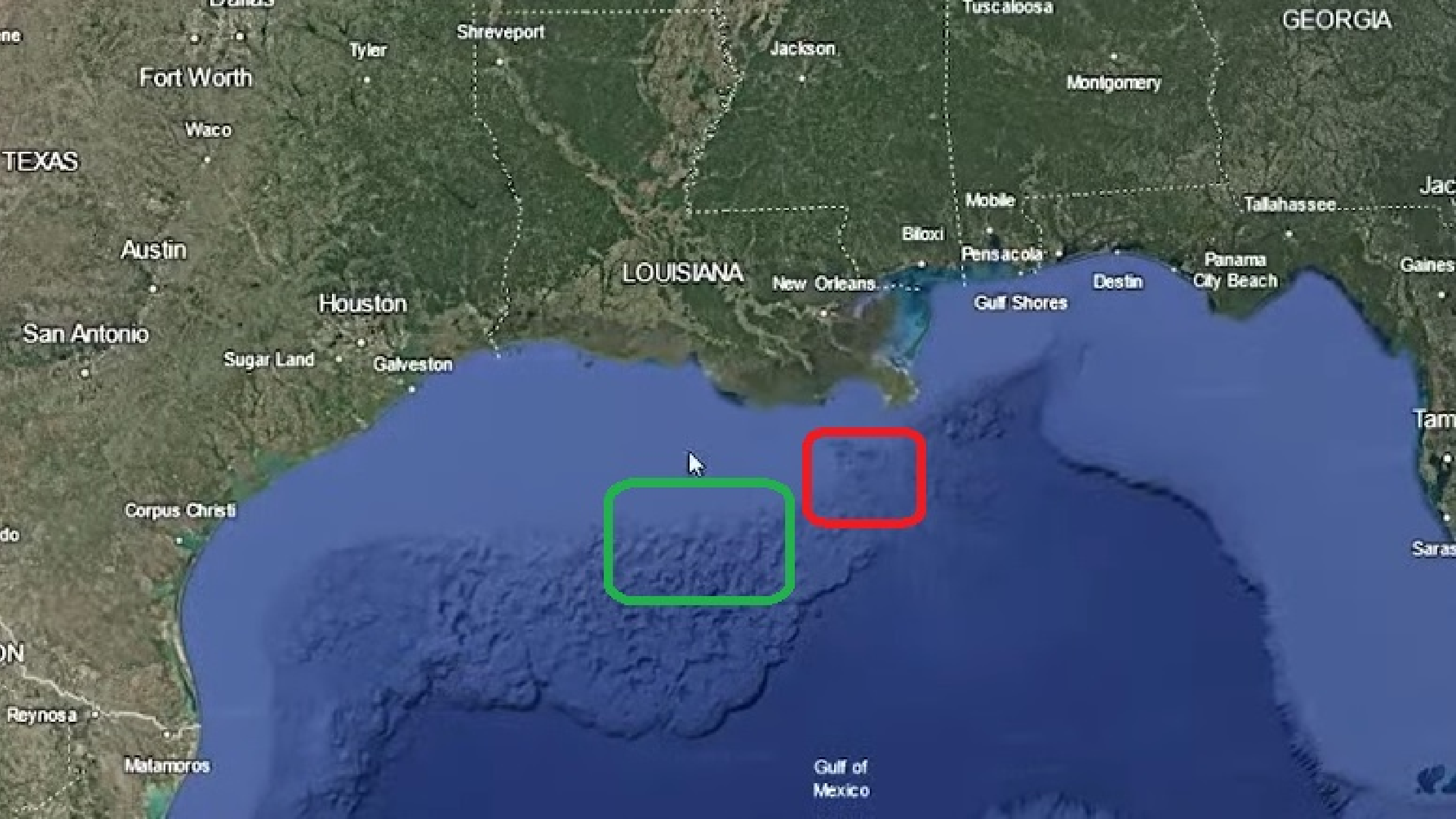




Rabobank



<i>Developer</i>	<i>Pipeline name</i>	<i>Miles</i>	<i>Capacity MTPA</i>	<i>Status</i>	<i>States</i>	<i>Sequestration state</i>	<i>In-service year</i>
Summit Carbon Solutions	Summit Carbon Solutions pipeline	2000	12	Delayed	IA, MN, ND, NE, SD	ND	2026
Navigator CO2 Ventures	Heartland Greenway	1300	15	Canceled	IA, IL, MN, NE, SD	IL	n/a
Wolf Carbon Solutions/ ADM	Mt. Simon Hub project	260	12	Delayed	IA, IL	IL	2026
Tallgrass Energy	Trailblazer	392	10	Open season concluded	NE, WY	WY/NE	2025



TEXAS

GEORGIA

LOUISIANA

Gulf of Mexico

Fort Worth

Tyler

Shreveport

Jackson

Montgomery

Waco

Mobile

Tallahassee

Austin

Biloxi

New Orleans

Destin

Panama City Beach

San Antonio

Houston

Gulf Shores

Sugar Land

Galveston

Corpus Christi

Sarasota

do

ON

Reynosa

Malamoros

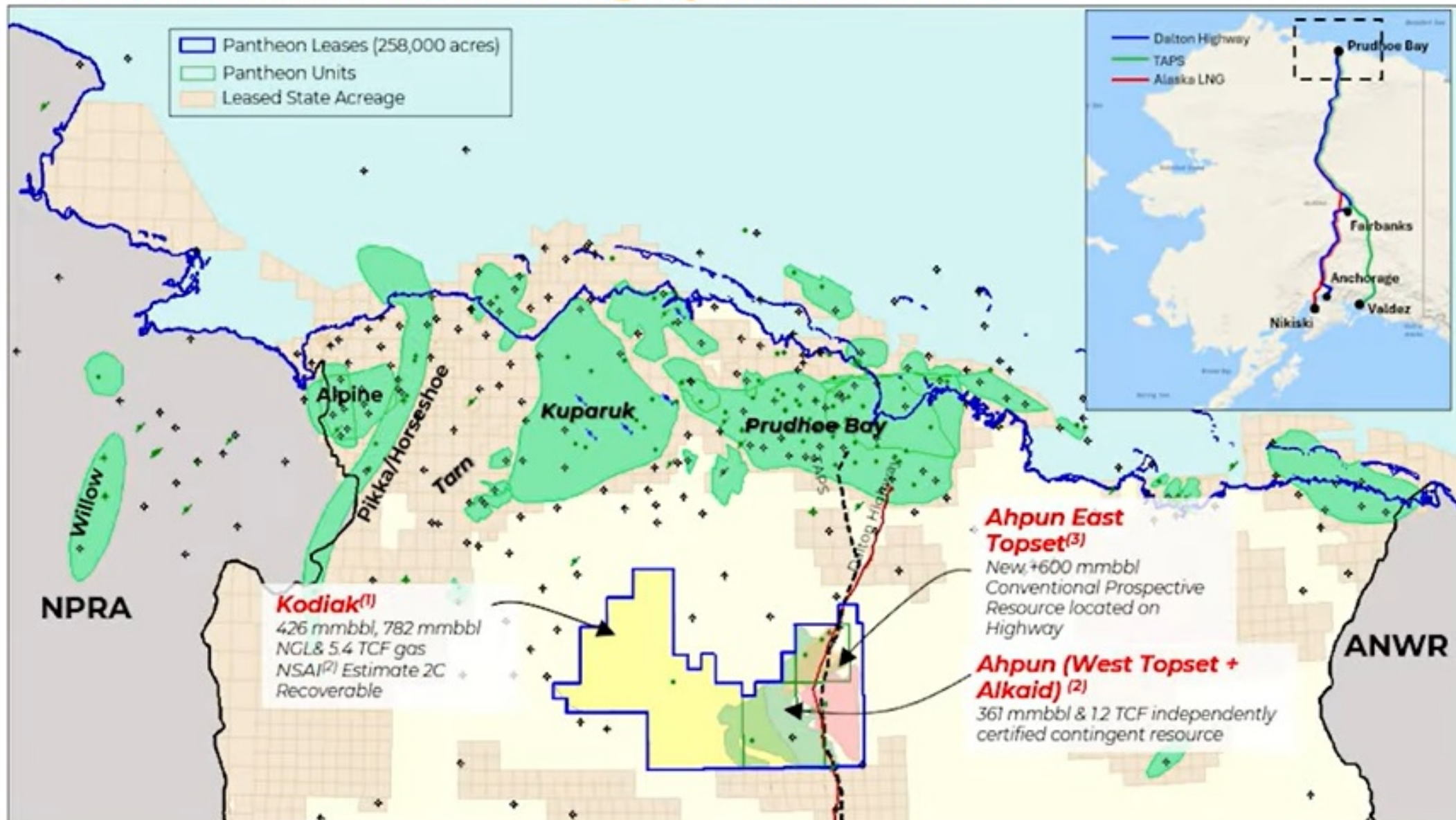
Tam

Gaines

Jac

A World Class Resource

Benefits from Location & Legacy Infrastructure



- (1) Independently certified Contingent Resources – by NSAI⁽¹⁾ (9 April 2024).
- (2) Independently certified Contingent Resources – by LKA⁽²⁾ (1 May 2024) and CG&A⁽²⁾ (10 June 2024).
- (3) Company estimate – refer RNS dated 12 August 2024.

Questions

<https://www.bloomberg.com/news/newletters/2025-03-13/specter-of-peak-oil-production-looms-once-again>

Specter of Peak Oil Production Looms Once Again

The topic has featured prominently at this week's CERAWEEK conference in Houston.



Pumpjacks outside Midland, Texas. *Photographer: Jordan Vonderhaar/Bloomberg*

By [David Wethe](#)

March 13, 2025 at 8:29 AM EDT

Bloomberg