



GAS COMMITTEE

MONTHLY MEETING

OCTOBER 24, 2022

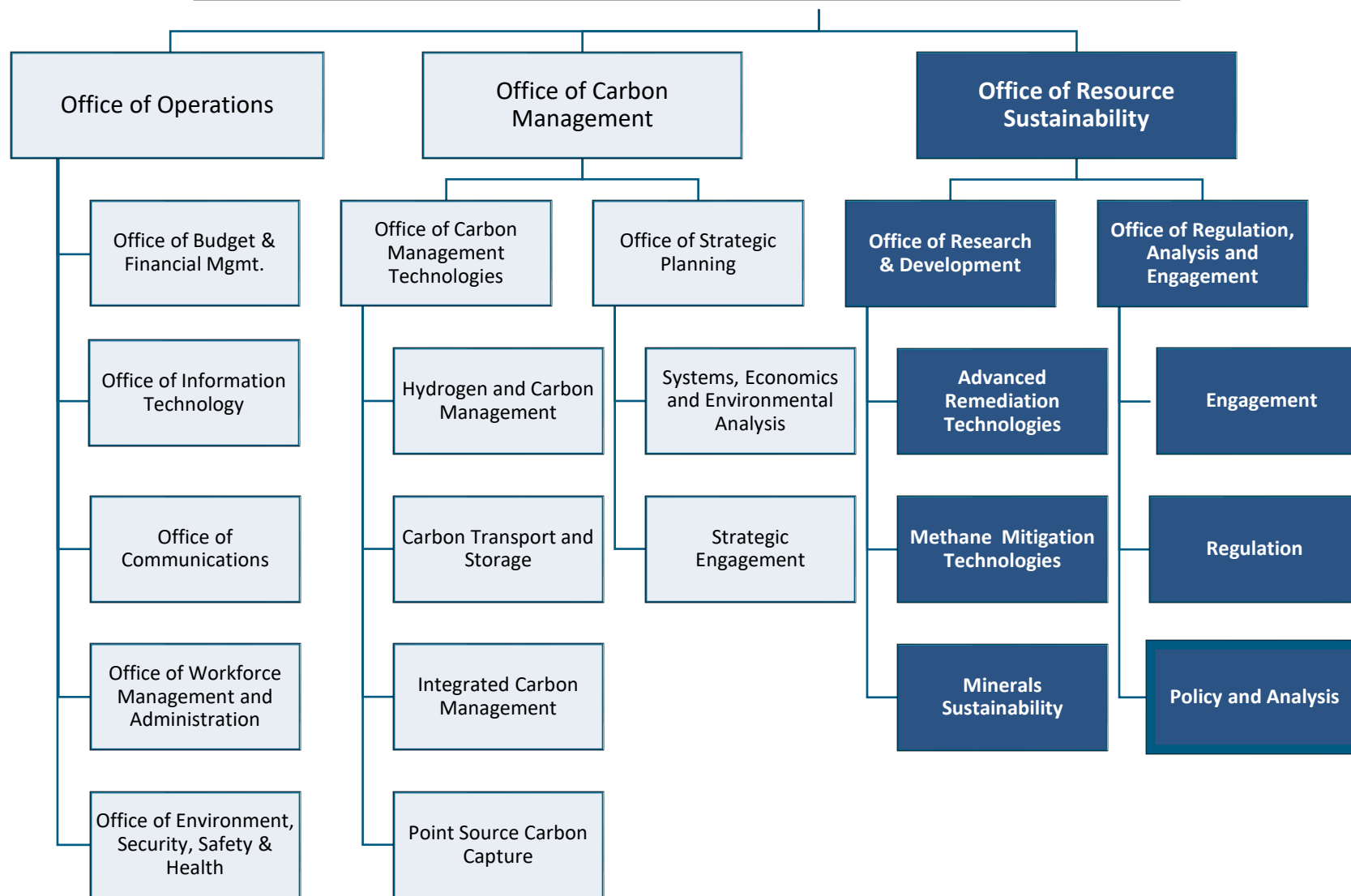
1:00 – 2:00 PM ET



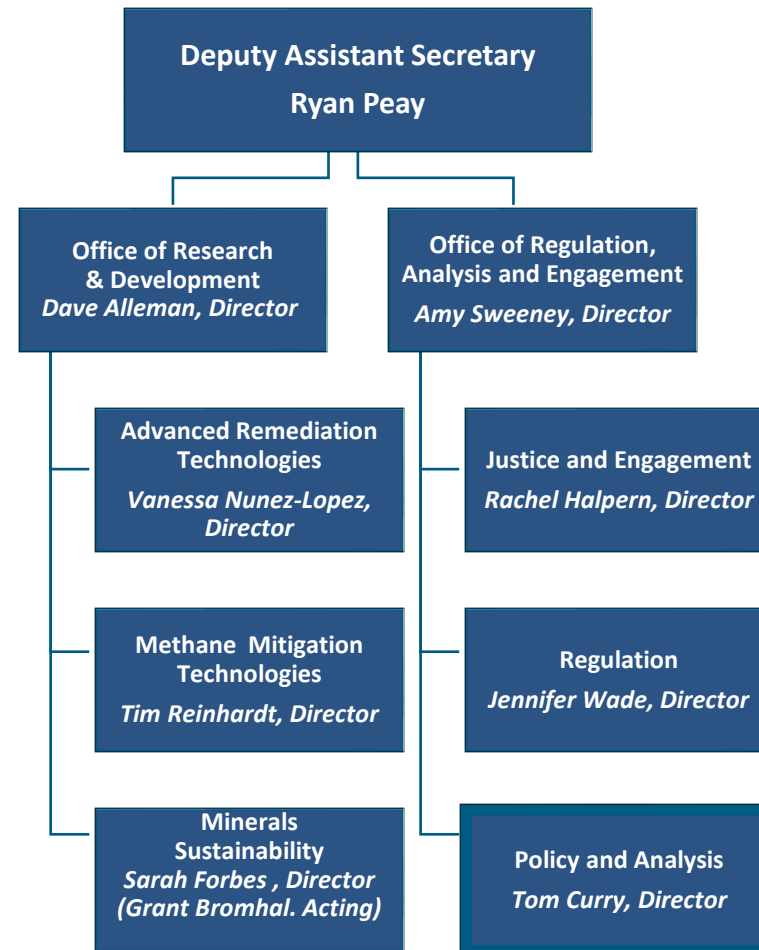
Agenda:

1. Welcome and speaker intros
Chairman D. Ethan Kimbrel
2. Presentation: FECM natural gas regulatory program
*Amy Sweeney, Director, Office of Regulation, Analysis, and Engagement
Office of Resource Sustainability – Fossil Energy and Carbon
Management, U.S. Department of Energy*
3. Q&A / Discussion
4. NARUC Annual Meeting updates
5. NARUC Winter Policy Summit poll and discussion
6. Next monthly call announcement, 11/7/22

Office of Fossil Energy and Carbon Management

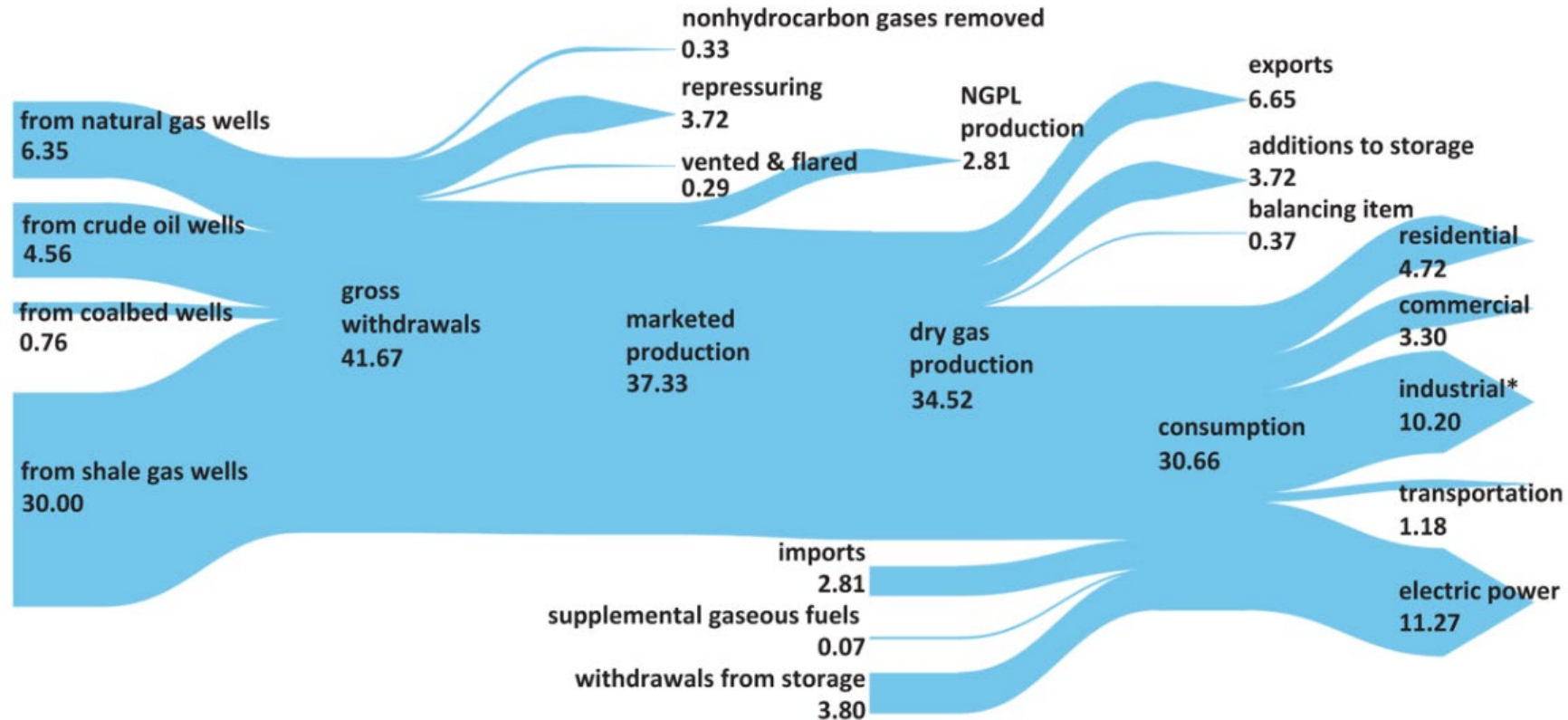


Office of Resource Sustainability



Approximately 18% of U.S. Natural Gas Supply is Exported Via Pipeline or as LNG

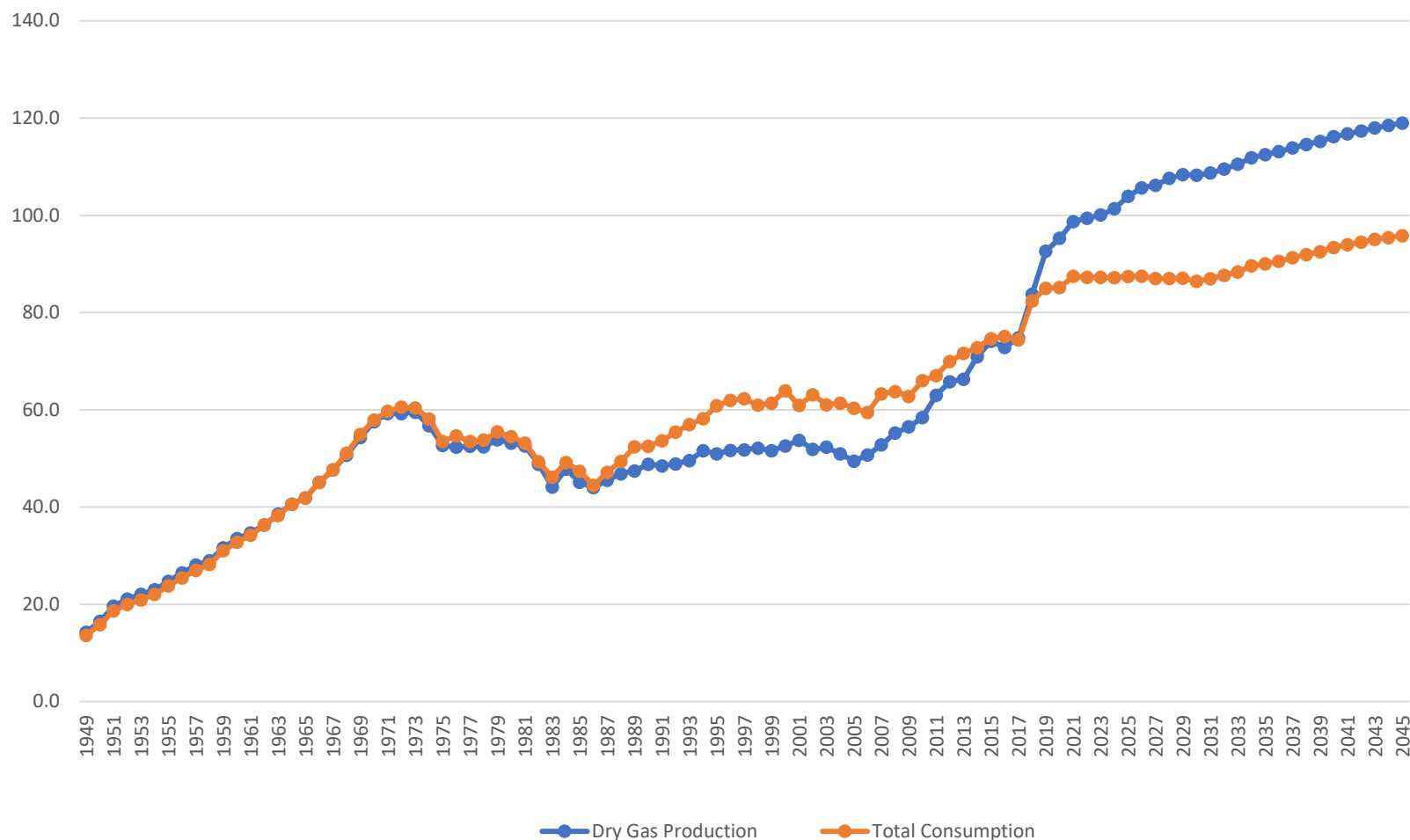
Natural Gas Flow in the United States, 2021
trillion cubic feet



* Industrial includes lease and plant fuel.

Natural Gas Production Continues to Exceed Consumption

Billion cubic feet per
day (Bcf/d)

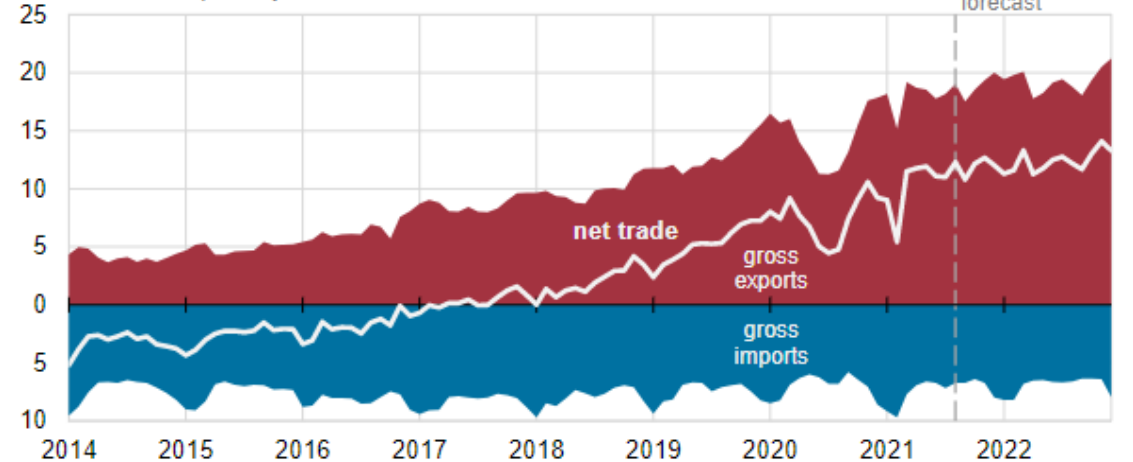


Source: U.S. Energy Information Administration

Majority of Applications to DOE/FECM for Pipeline Trade, but LNG Exports Have Grown and Expected to Continue

Monthly U.S. natural gas net trade (Jan 2014–Dec 2022)

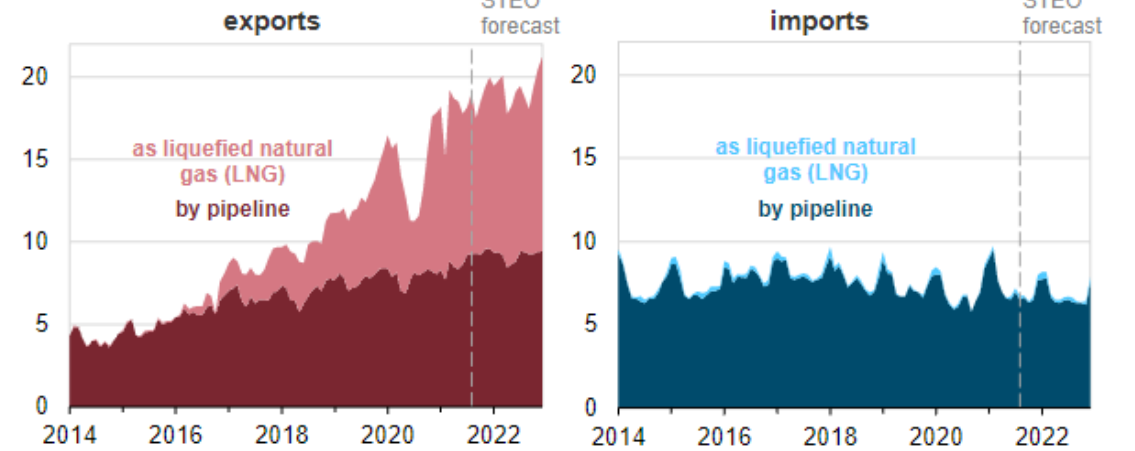
billion cubic feet per day



Source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO)

Monthly U.S. natural gas trade (Jan 2014–Dec 2022)

billion cubic feet per day



Source: U.S. Energy Information Administration, *Short-Term Energy Outlook* (STEO)

Section 3 of Natural Gas Act

“...no person shall export any natural gas from the United States to a foreign country... without first having secured an order of the [Secretary of Energy] authorizing it to do so.” - 15 U.S.C. § 717b(a)

Section 3(a)	
Exports to non-Free Trade Agreement Countries	Authorization must be granted unless after opportunity for hearing, proposed export found to not be consistent with the <u>public interest</u>
Section 3(c)	By law, deemed to be consistent with the public interest
Exports to Free Trade Agreement (FTA) Countries	Authorization must be <u>granted without modification or delay</u> 18 FTA countries: primarily in the Americas, plus Korea, Singapore, Australia, Bahrain, Jordan, Morocco and Oman

Federal Agencies with Authority over Natural Gas Exports

Department of Energy



- Authority over the trade of the natural gas as a commodity
- Cooperating agency on environmental reviews of facilities

Federal Energy Regulatory Commission



- Authority over the siting, construction, and operation of onshore LNG terminals
- Lead agency on environmental reviews of onshore facilities

Maritime Administration



- Authority over the siting, construction, and operation of deepwater offshore LNG terminals
- Co-lead agency on environmental reviews of offshore facilities with U.S. Coast Guard

Public Interest Determination Evaluation Criteria for Exports to Non-free Trade Agreement Countries

Criteria for Evaluating the Public Interest

- Domestic need for the natural gas proposed for export
- Adequacy of domestic natural gas supply
- U.S. energy security
- Impact on U.S. economy
- Other Considerations:
 - International considerations
 - Environmental considerations
 - Other issues raised by commenters and intervenors deemed relevant

Analysis Supporting Non-FTA Export Decisions

Macroeconomic

2012

- Studies by NERA and EIA looking at the effects of exports between 6 and 12 billion cubic feet per day

2015

- Studies by Oxford Economics/ Rice University and EIA looking at the effects of exports from 12 to 20 billion cubic feet per day

2018

- Study by NERA looking at unrestricted market-based export scenarios and their probabilities

Environmental

2014

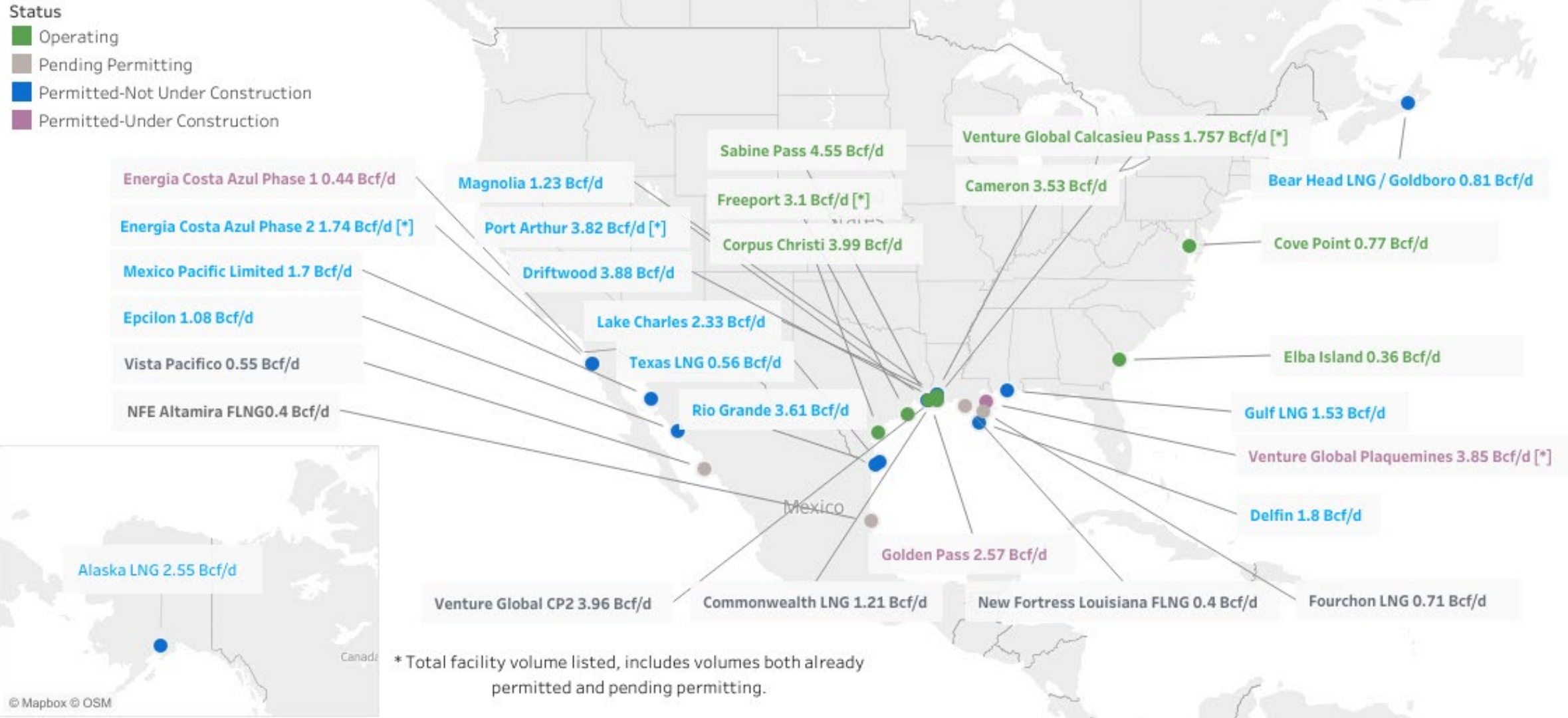
- Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States

- Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States

2019

- Update: Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States

North American LNG Export Facilities – September 2022

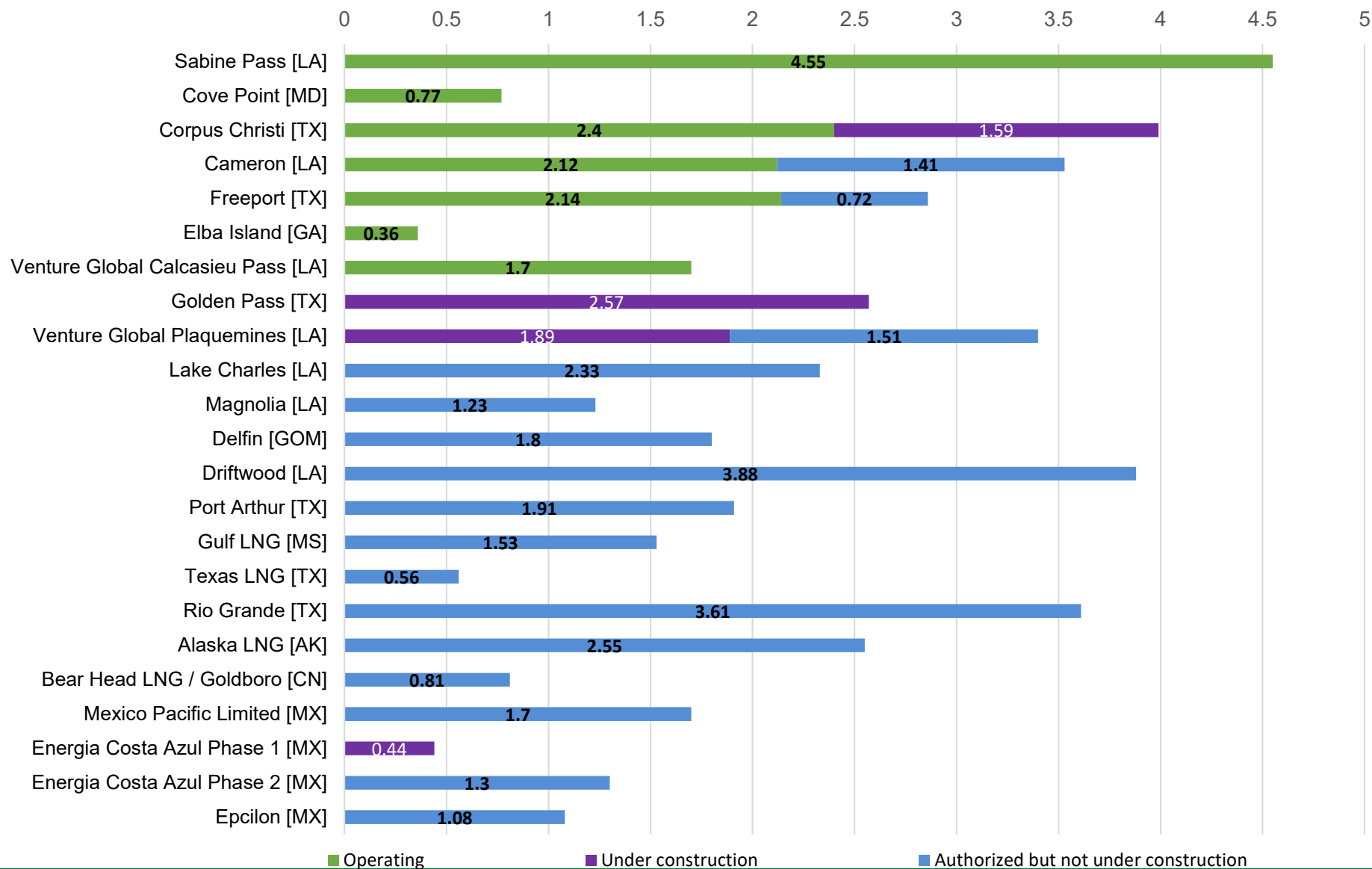


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LNG export Projects – PERMITTED – October 2022

billion cubic feet per day to Non-FTA Countries

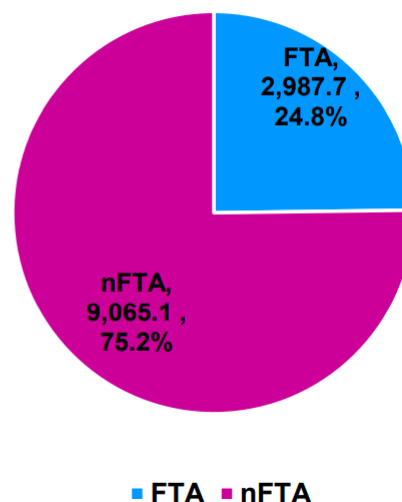


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U.S. LNG Exports 2/2016 Through 7/2022

	Volume (Bcf)	Percentage of Total Volume	Number of Countries
FTA	2,987.7	24.8%	9
nFTA	9,065.1	75.2%	33
Total LNG Exports	12,052.8	100.0%	42



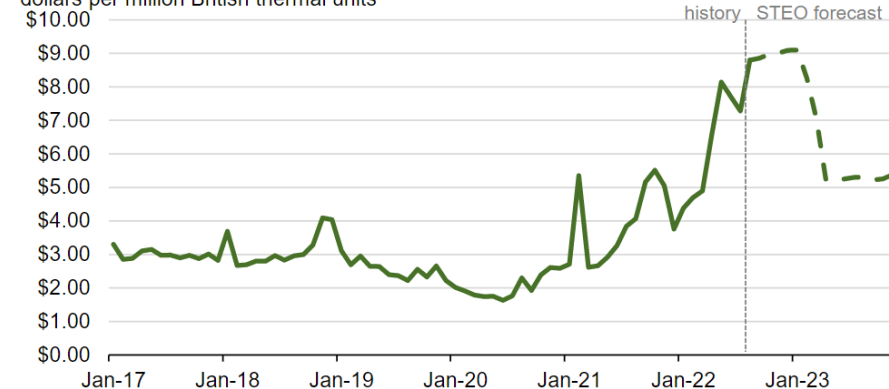
Region	Number of Countries Receiving Per Region	Volume Exported (Bcf)	Percentage Receipts of Total Volume Exported (%)	Number of Cargos*
East Asia and Pacific	8	4,133.5	34.3%	1197
Europe and Central Asia	13	4,698.4	39.0%	1458
Latin America and the Caribbean**	13	2,089.7	17.3%	744
Middle East and North Africa	5	359.9	3.0%	105
South Asia	3	771.4	6.4%	230
Sub-Saharan Africa	0	0.0	0.0%	0
Total LNG Exports	42	12,052.8	100.0%	3,734

Highlights from EIA's STEO and Winter Fuels Outlook

	U.S. average household expenditures Base Case (Oct–Mar total)		U.S. average household expenditures 10% Colder (Oct–Mar total)		U.S. average household expenditures 10% Warmer (Oct–Mar total)	
	winter 2022–23	Change from last winter	winter 2022–23	Change from last winter	winter 2022–23	Change from last winter
Natural Gas	\$931	+28%	\$1,096	+51%	\$862	+19%
Heating Oil	\$2,354	+27%	\$2,543	+37%	\$2,087	+12%
Electricity	\$1,359	+10%	\$1,482	+20%	\$1,337	+8%
Propane	\$1,668	+5%	\$2,157	+36%	\$1,396	-12%

U.S. monthly Henry Hub spot price (Jan 2017–Dec 2023)

dollars per million British thermal units



Data source: U.S. Energy Information Administration, [Short-Term Energy Outlook](#) (STEO), September 2022



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Questions?



Legend:

- Light Rare Earth Elements
- Heavy Rare Earth Elements
- Critical Rare Earth Elements
- Critical Minerals

H	He																	He					
Li	Be																	B	C	N	O	F	Ne
Mg																	Al	Si	P	S	Cl	Ar	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr						
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe						
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn						
Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og						
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu									
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr									

* Gas: K, Rn, Xe, Ne, Ar, Kr, He. ** Included with rare earth elements.



Annual Meeting, Nov. 13 – 16



1. Resilience in the Face of Critical Events (SS Gas, Sunday 11/13 1:30 – 2:30)
2. Investor Expectations and Natural Gas (SS Gas, Sunday 11/13 2:45 – 3:45)
3. Pipeline Safety (Sunday 11/13 1:30 – 5:00) – closed session on state coordination and pipeline safety
4. Business Meeting (Gas Committee, Monday 11/14 11:00 – 12:00)
5. Teamwork Makes the Dream Work: Learning about Gas Decarbonization Guiding Principles (Concurrent A2, Monday 11/14 3:15 – 4:15, moderator: Commissioner Cordova)
6. Scaling Up: Taking Innovations in Low-Carbon Natural Gas to the Next Level (Concurrent B3, Tuesday 11/15 9:30 – 10:30, moderator: Commissioner Hayden)
7. The Role for Natural Gas in America's Clean Energy Future (General Session, Tuesday 11/15 3:00 – 4:15, moderator: President Jagdmann)

Winter Policy Summit, Feb. 12 – 15



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Code: **2642 4199**

1. Exploring demand response for natural gas
2. Gas-electric coordination and market alignment
3. Gas supply projections, production, and infrastructure
4. Permitting and FERC/DOE/state processes for natural gas infrastructure
5. LNG and domestic gas markets
6. Rise of ESG and impact on utilities sector
7. How to measure, quantify, and reduce methane emissions
8. Hedging in today's volatile environment
9. Physical and cyber security for the grid
10. Future of hydrogen under the Inflation Reduction Act

UPCOMING EVENTS



Gas Committee Monthly Meeting

Monday, Nov. 7 1:00 – 2:00 pm ET

Speaker: Alex Kirschling, PE, Natural Gas Engineering Supervisor,
Wisconsin Public Service Commission

Renewable natural gas and its use in natural gas transmission and distribution pipelines; gas quality, pipeline safety and siting jurisdiction of RNG pipelines; and other considerations and lessons learned from operational projects.