

# Can Energy Security and Climate Goals Coexist?

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# Baker Institute, Center for Energy Studies (CES)



- Founded by former U.S. Secretary of State James A. Baker III, Rice University's Baker Institute for Public Policy is recognized as one of the premier ***nonpartisan*** public policy think tanks in the country.
- ***Ranked 1<sup>st</sup> as the leading “think tank” for energy & resource policy*** out of over 8,000 public, private and academic think tanks worldwide for the third consecutive year



- ***LNG Roundtable***, bringing leading experts in for open and closed door meetings with LNG Roundtable members. Topics include
  - US-Europe Energy Cooperation in Response to Russian Gas Shortfall
  - Climate Border Adjustment Mechanisms: Impacts on Climate and Trade
  - 'Green LNG' – A Pathway for Natural Gas in an ESG Future?



# Baker Botts Attorneys' LNG Experience: Over 100 LNG Projects (And All Lower-Carbon Fuels)



# II. PRE-INVASION CLIMATE POLICIES

## Paris Agreement



Limit global warming to 1.5 C compared to pre-industrial levels



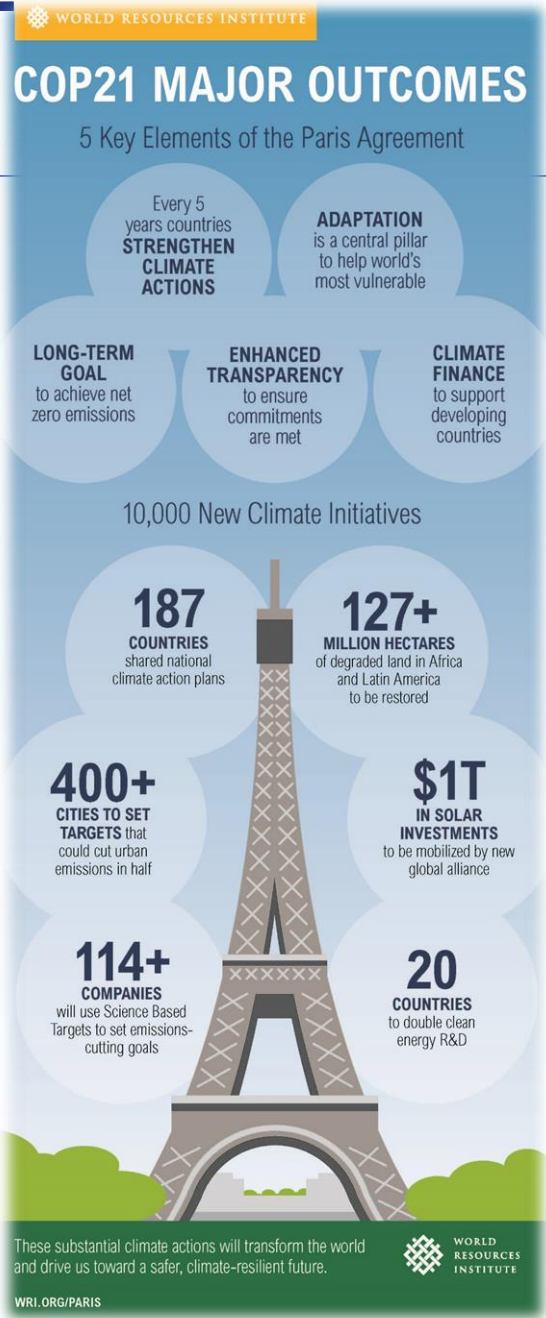
Universal climate agreement



Climate finance for developing countries



Net-zero carbon emission by 2050



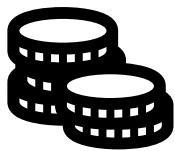
## COP 26



Global Methane Pledge to cut methane emissions by 30% by 2030



Global Deforestation Pledge to end deforestation by 2030



Adaptation Finance for least developed countries on climate resilience

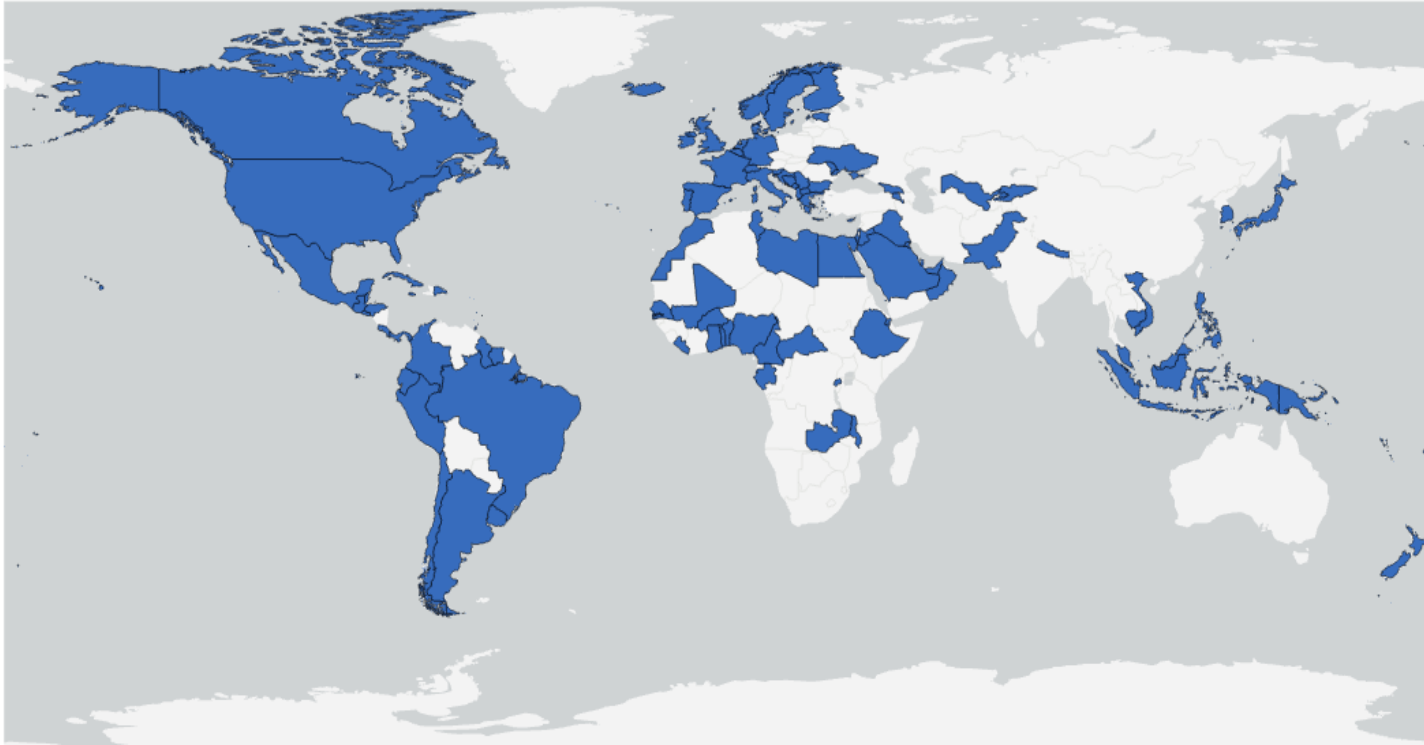


40+ countries pledged to phase out coal





# Global Methane Pledge



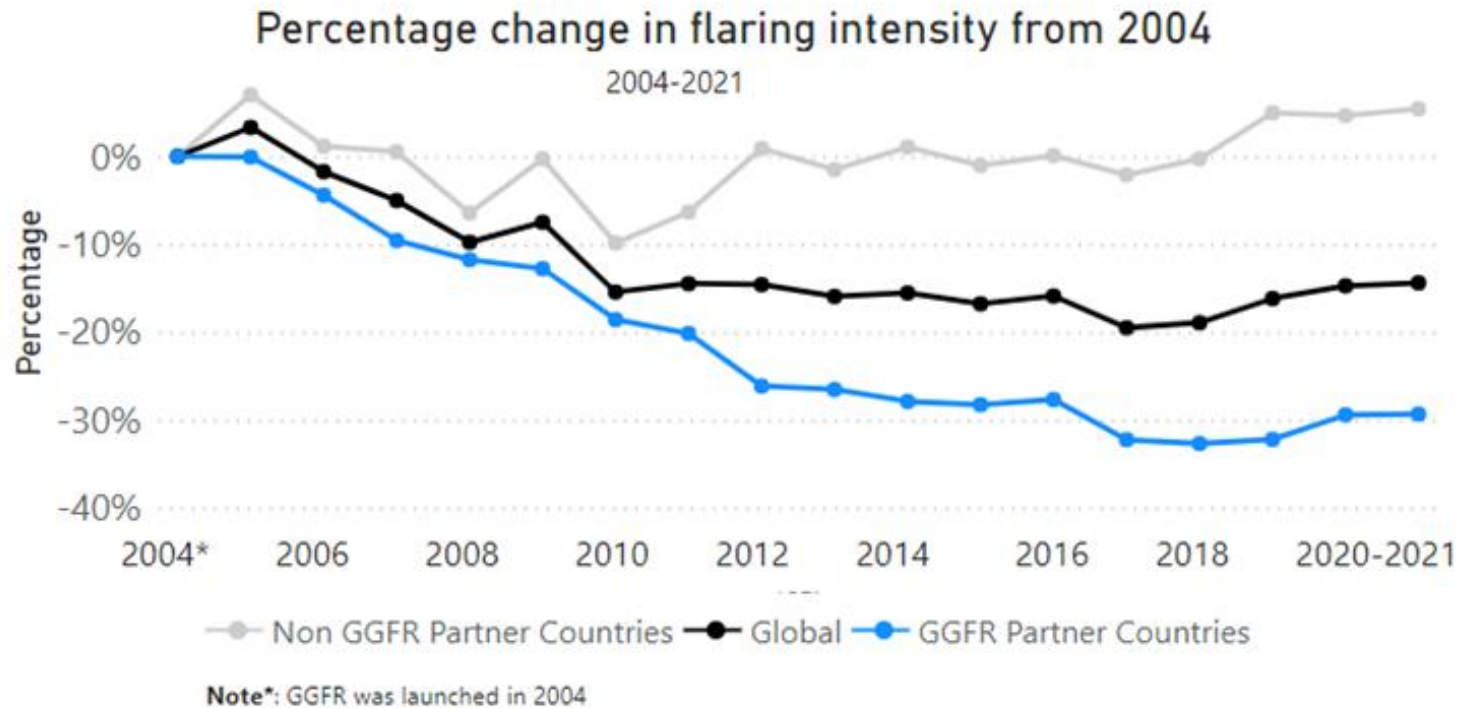
- **More than 100 countries participated**
- **Represents 2/3 of global economy**
- **Promised to reduce 30% of methane emission by 2030**

Data source: <https://www.globalmethanepledge.org/>  
GIS map done by author



## II. PRE-INVASION CLIMATE POLICIES

### World Bank Zero Routine Flaring by 2030 (ZRF)



World Bank launched ZRF in 2015 to commit governments and companies to end routine flaring by 2030

Global Gas Flaring Reduction Partnership (GGFR)  
Consists 17 governments, 13 organizations

Source: World Bank



## II. PRE-INVASION CLIMATE POLICIES

### Pledge to ban foreign financing of fossil fuels

**'Historic breakthrough': 20 countries say they will stop funding fossil fuel projects abroad**

By [Ivana Kottasová](#), Ingrid Formanek, [Angela Dewan](#) and [Rachel Ramirez](#), CNN

🕒 Updated 1426 GMT (2226 HKT) November 4, 2021

**U.K. Is First in G-20 to End All Overseas Oil and Gas Funding**

- Boris Johnson to make pledge at United Nations summit Saturday
- U.K. supported \$28 billion oil and gas exports since 2016

**COP26 opens the door to a managed decline of fossil fuels**

COP26 has marked a significant moment when countries have proposed to phase out fossil fuels for the first time.

**G7 countries to stop funding fossil fuel development overseas**

**Ministers from world's biggest economies reach agreement that could shift estimated \$33bn a year to clean energy sources**

Source: World Bank

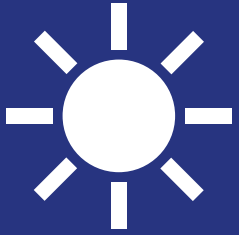




## II. PRE-INVASION CLIMATE POLICIES

### EU Carbon Taxonomy

Climate change mitigation



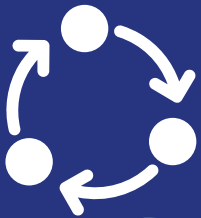
Sustainable and protection of water and marine resources



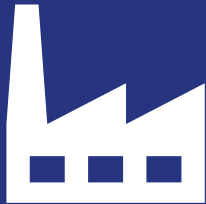
Climate change adaptation



Transition to a circular economy



Pollution prevention and control



Protection and restoration of biodiversity and ecosystems



## II. PRE-INVASION CLIMATE POLICIES

### Carbon Border Adjustment Mechanism

**EU carbon border tax will raise nearly €10bn annually**

Revenue raised by the green policy will be used to help repay €750bn in pandemic debt

**EU Eyes First-of-a-Kind Border Levy in Climate Fight**

- Power, aluminum and fertilizers to be subject to carbon levy
- Carbon border adjustment mechanism to be unveiled on July 14

**Europe Is Proposing a Border Carbon Tax. What Is It and How Will It Work?**

Supporters say it could pressure other countries to take stronger climate action. But this novel tool could be tricky to implement.

**EU proposes world's first carbon border tax for some imports**

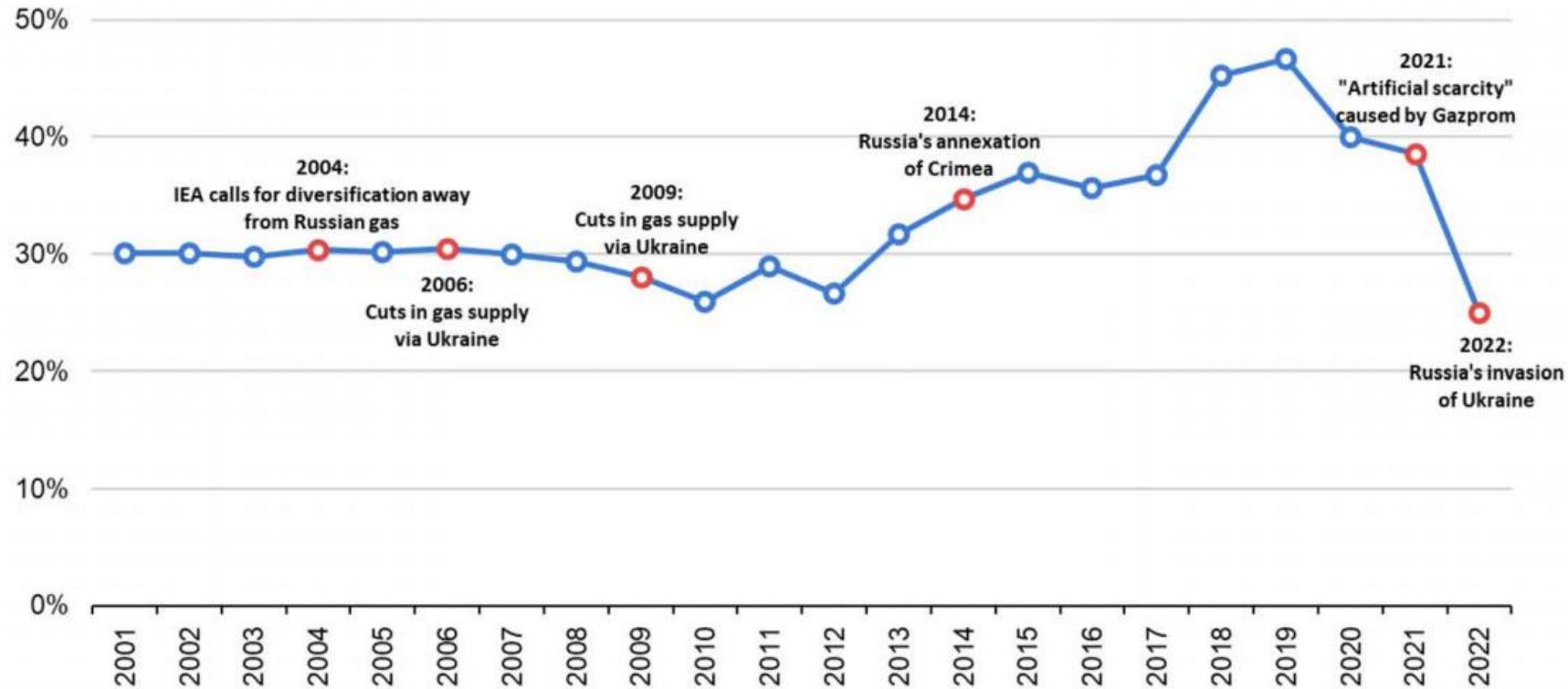


# III. ENERGY SUPPLY SHOCK

## EU's Reliance on Russian Gas

The European Union's reliance on Russian gas increased steadily over the last decade

Share of EU gas demand met by Russian supply, 2001-2022

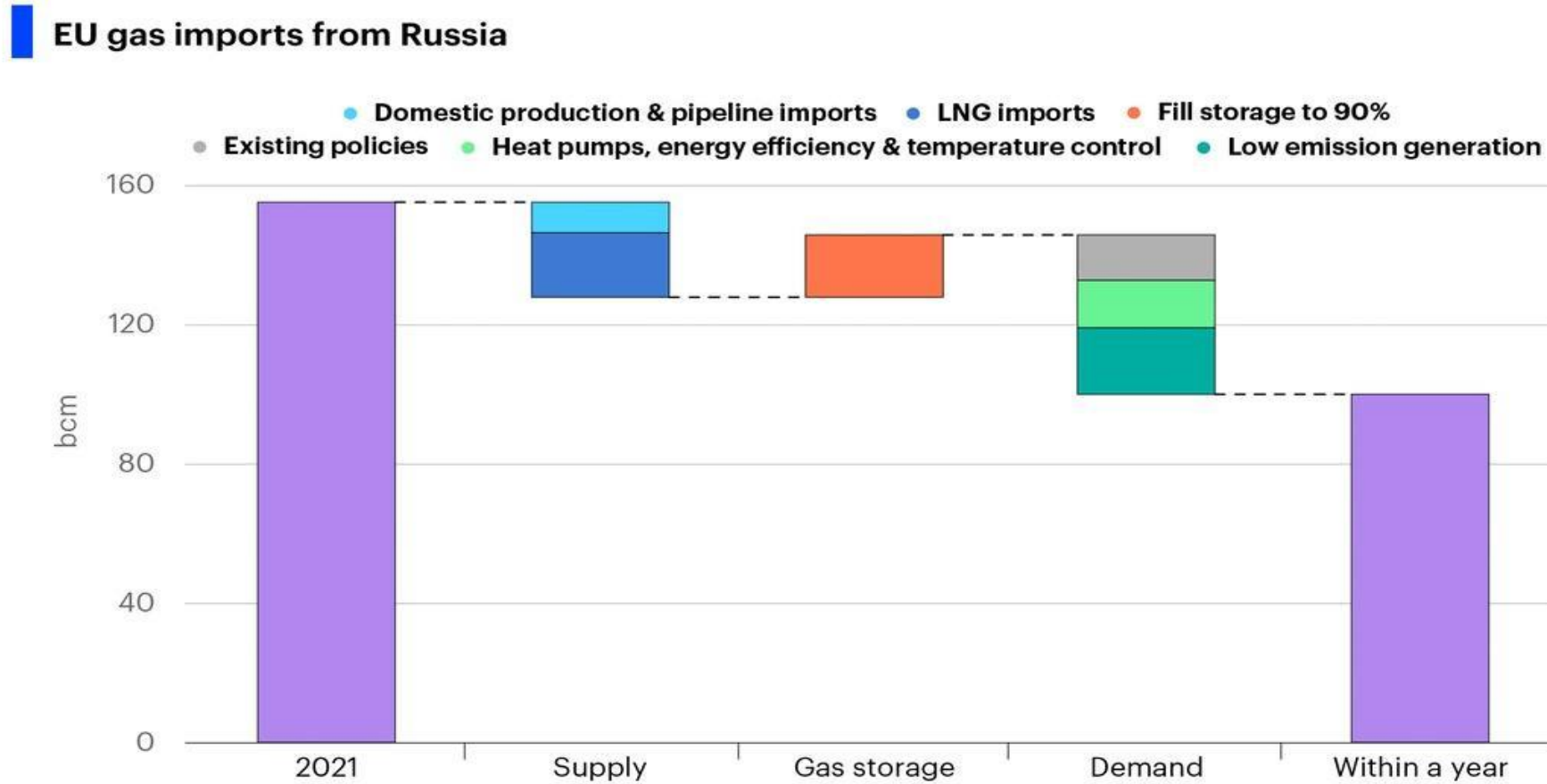


Source: IEA



# III.ENERGY SUPPLY SHOCK

## EU's 10 Point Plan to reduce 1/3 of Russian Gas by the End of 2022



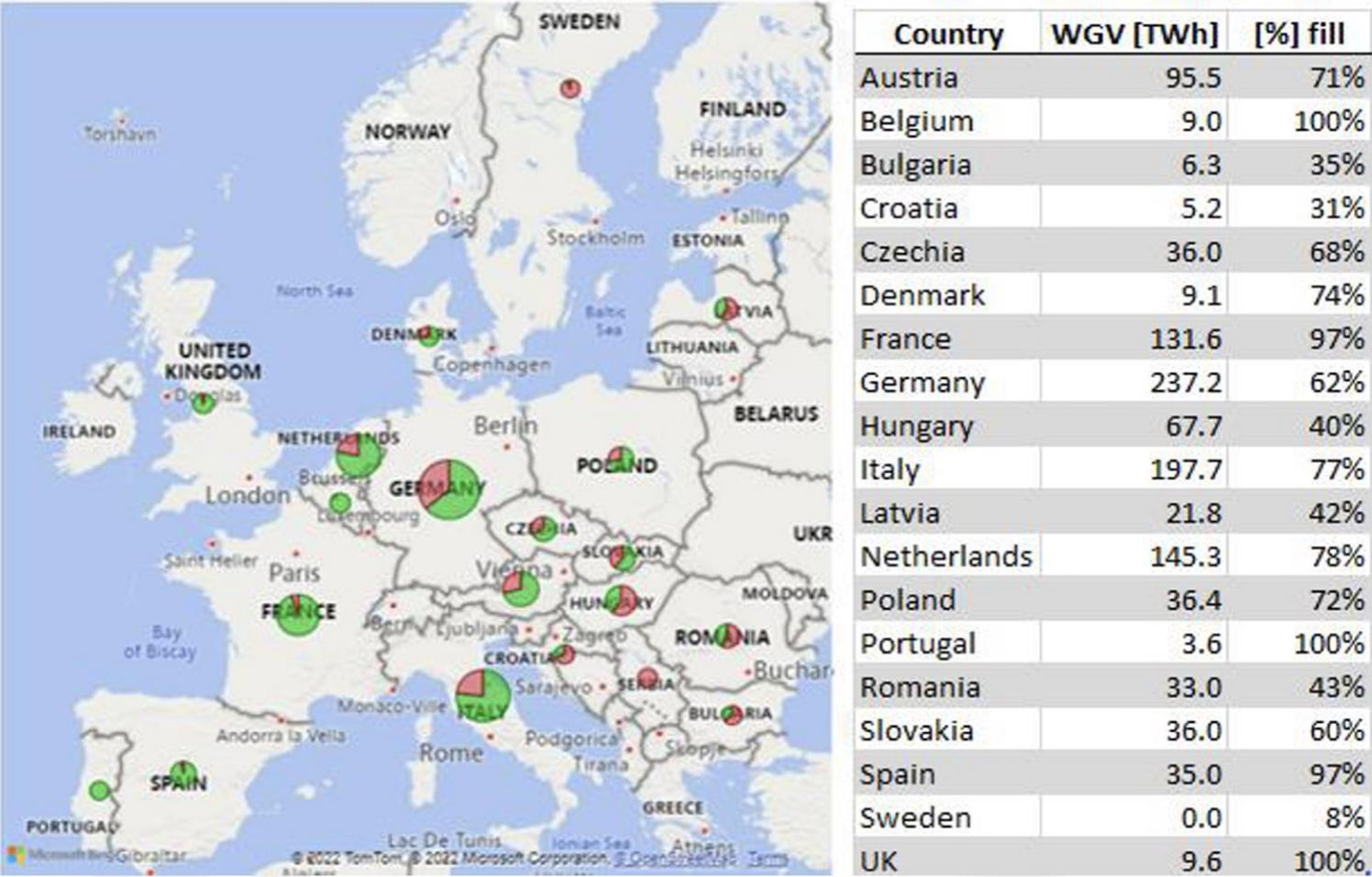
International  
Energy Agency



# III.ENERGY SUPPLY SHOCK

## EU Gas Storage Remains Limited as Winter 2023 Approaches

Figure 2 — Estimated Gas Storage Inventory Levels, October 1, 2022



Source [ENTSOG\[23\]](#)





# III. ENERGY SUPPLY SHOCK

## Other Events Heighten Europe's Energy Insecurity

### LOCAL NEWS

Brittany Taylor, Digital News Editor

Published: June 8, 2022 at 12:03 PM

Updated: June 8, 2022 at 6:56 PM

Tags: Texas, Local, Freeport, Surfside Beach

**Explosion shuts down Freeport LNG's liquefaction facility for next 3 weeks, officials say**

**Norway Mulls Curbing Electricity Exports to Avoid Shortages**

- State may propose rule to limit exports if hydro levels drop
- Government is under pressure to keep bills low for households

**EDF cuts output at nuclear power plants as French rivers get too warm**

### LNG INSIGHT

LNG | DAILY GPI | INFRASTRUCTURE | INTERNATIONAL | NGI ALL NEWS ACCESS

**Russia's Gazprom Plans 3-Day Halt of NS1 Natural Gas Flows to Europe**



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Overview

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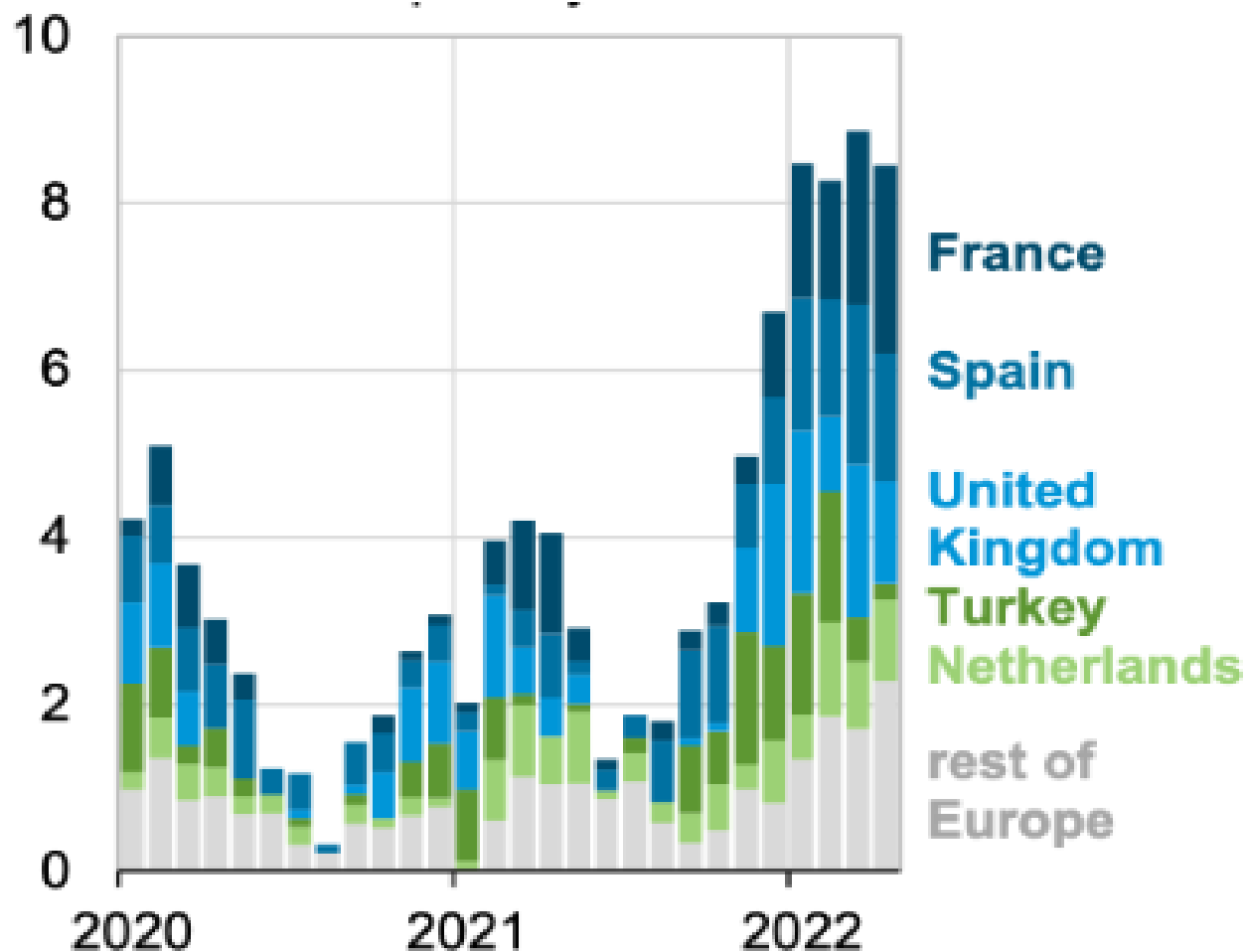
- **Use Greater Bargaining Power for GHG Accountability and Reduced Methane Emissions**
- **Encourage Investment in LNG and other Energy Infrastructure**
- **Flexibility is Key**
- **Focus on Carbon Outcomes rather than methods**



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Use New Bargaining Power to Demand GHG Accountability

Monthly U.S. liquefied natural gas exports by destination (Jan 2020-Apr 2022)



Source: U.S. Energy Information Administration (EIA), Natural Gas Monthly and EIA estimates for April 2022



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Example: Seller "Emission Tags" for LNG Cargoes

- Cheniere provides **LNG Cargo Emission Tags** (CE Tags) to aid buyers' environmental goals beginning in June 2022
- CE Tags show life-cycle GHGs from LNG loaded on each vessel
- Proprietary model developed by Cheniere, using input from the U.S. Department of Energy's National Energy Technology Laboratory
- Cheniere collaborates with natural gas midstream companies and leading academic institutions to implement quantification, monitoring, reporting and verification ("QMRV") of greenhouse gas ("GHG") emissions at natural gas gathering, processing, transmission, and storage systems specific to Cheniere's supply chain.



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Example: Buyer Requires Cargo GHG Statements

- In 2020 Singapore's Pavilion Energy issued a Request for Proposals (RFP) requiring bidders to describe their carbon mitigation efforts and to agree to submit a detailed emissions measurement for each cargo.
- Pavilion reportedly signed LNG a ten-year 1.8 mtpa purchase agreement with QatarEnergy and a six-year 0.5 mtpa agreement with Chevron
- Pavilion, QatarEnergy and Chevron Corp developed a method to calculate greenhouse gas emissions for LNG cargoes from wellhead-to-discharge terminal.

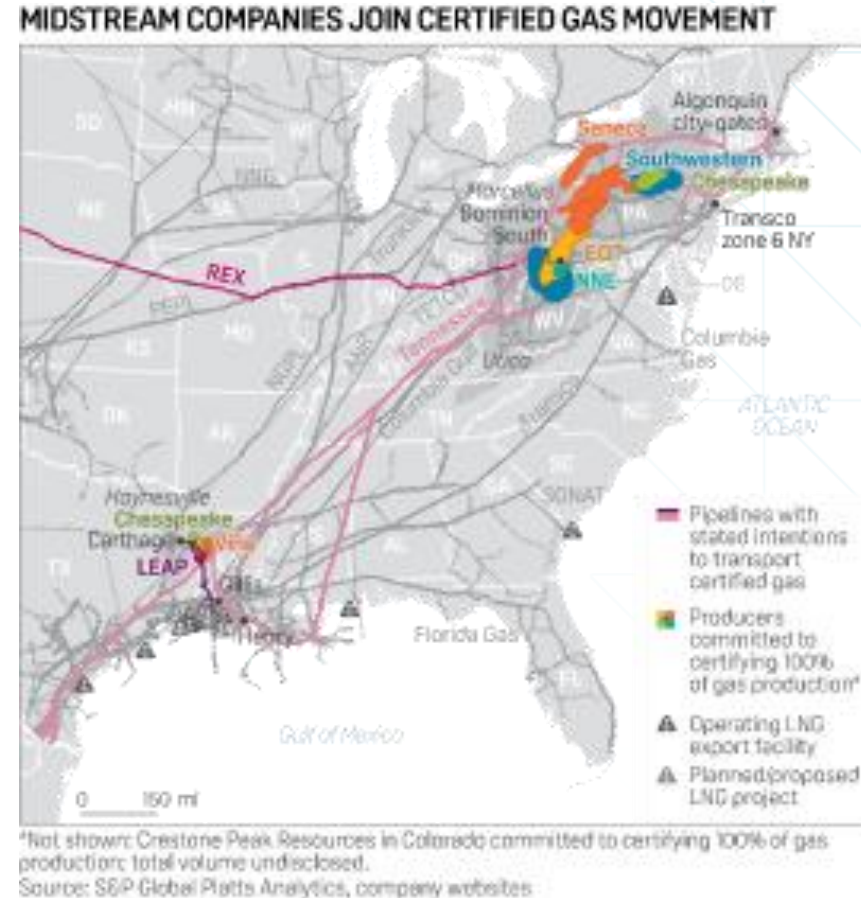




# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Example: US Gas Producers Seek ESG, Methane Certification

- In 2021, nearly two dozen US gas producers committed to external assessment of their emissions and ESG (environmental, social, and governance) standards
- ExxonMobil has approximately 200 million cubic feet per day of natural gas produced from its Permian Basin facilities at Poker Lake, New Mexico have been MiQ certified and received the top grade for methane emissions management.
- EQT Corp, the largest US gas producer, announced that is majority of the natural gas production had been certified under MiQ methane standard. MiQ is a global no-profit partnership launched in late 2020.

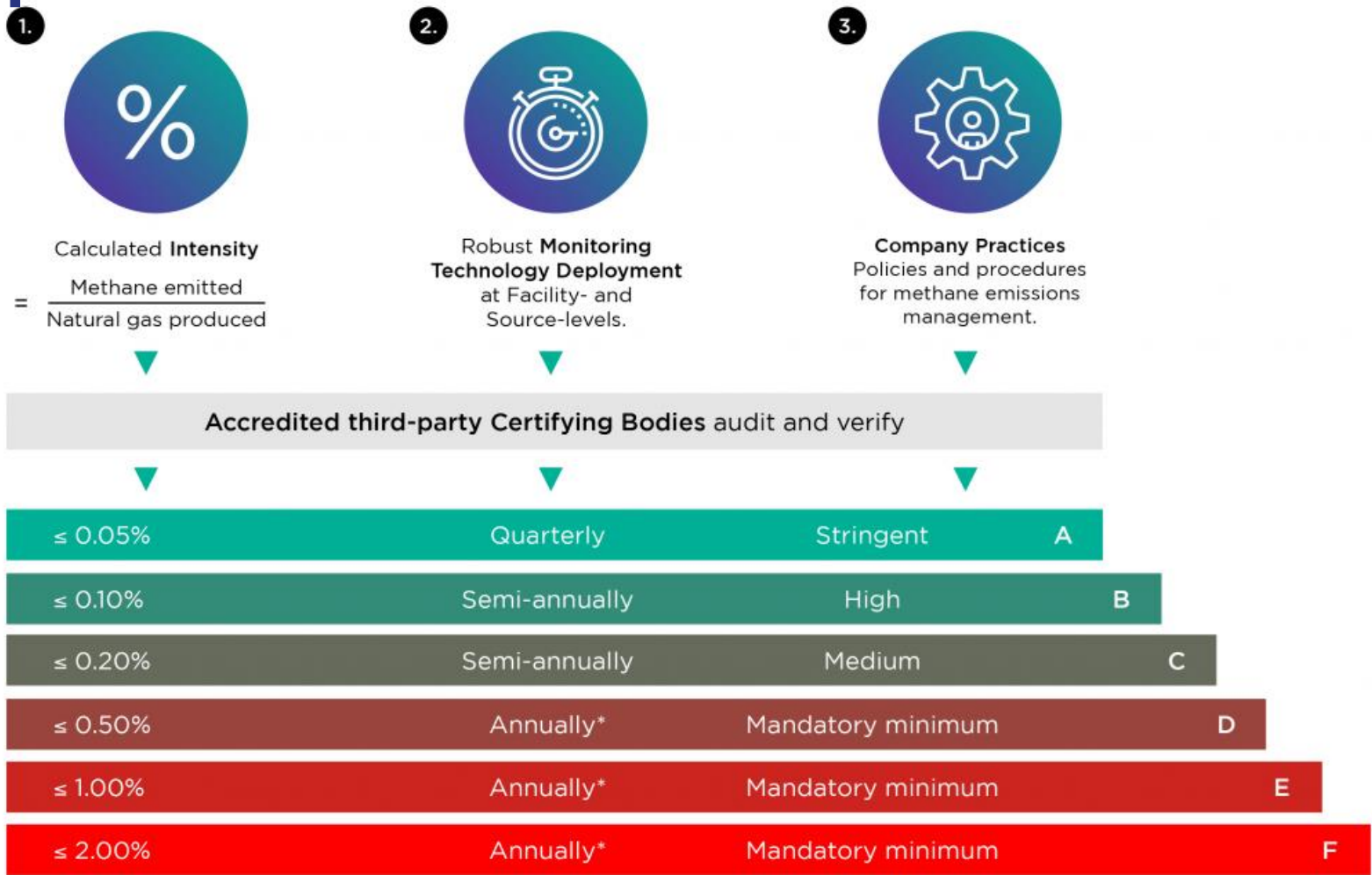


# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Accountability: Standards and Certification

### MiQ Certification

The MiQ Standard is an independent framework for assessing methane emissions and practices for oil and gas facilities. Independent highly qualified 3rd party auditors conduct the certification process, using the MiQ Standard, providing transparency on methane emissions



\*Source-level only



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Accountability: Standards & Certification

### OGMP 2.0

The Oil and Gas Methane Partnership (OGMP) was created as a voluntary initiative to help companies reduce methane emissions within oil and gas operations. The most recent form of the initiative, OGMP 2.0, includes five reporting levels, with the highest level requiring that emissions tracking and reports include site and source-level measurements. Jonah was the first US oil and gas producer to join OGMP.



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Accountability: Standards & Certification

### Equitable Origin: The EO100

#### Summary of EO100™ Principles & Objectives

<i>Principle 1:</i> Corporate Governance, Transparency & Business Ethics	<i>Principle 2:</i> Human Rights, Social Impacts & Community Development	<i>Principle 3:</i> Indigenous Peoples' Rights	<i>Principle 4:</i> Fair Labor & Working Conditions	<i>Principle 5:</i> Climate Change, Biodiversity & Environment
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# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Accountability: Standards & Certification

### GTI Veritas

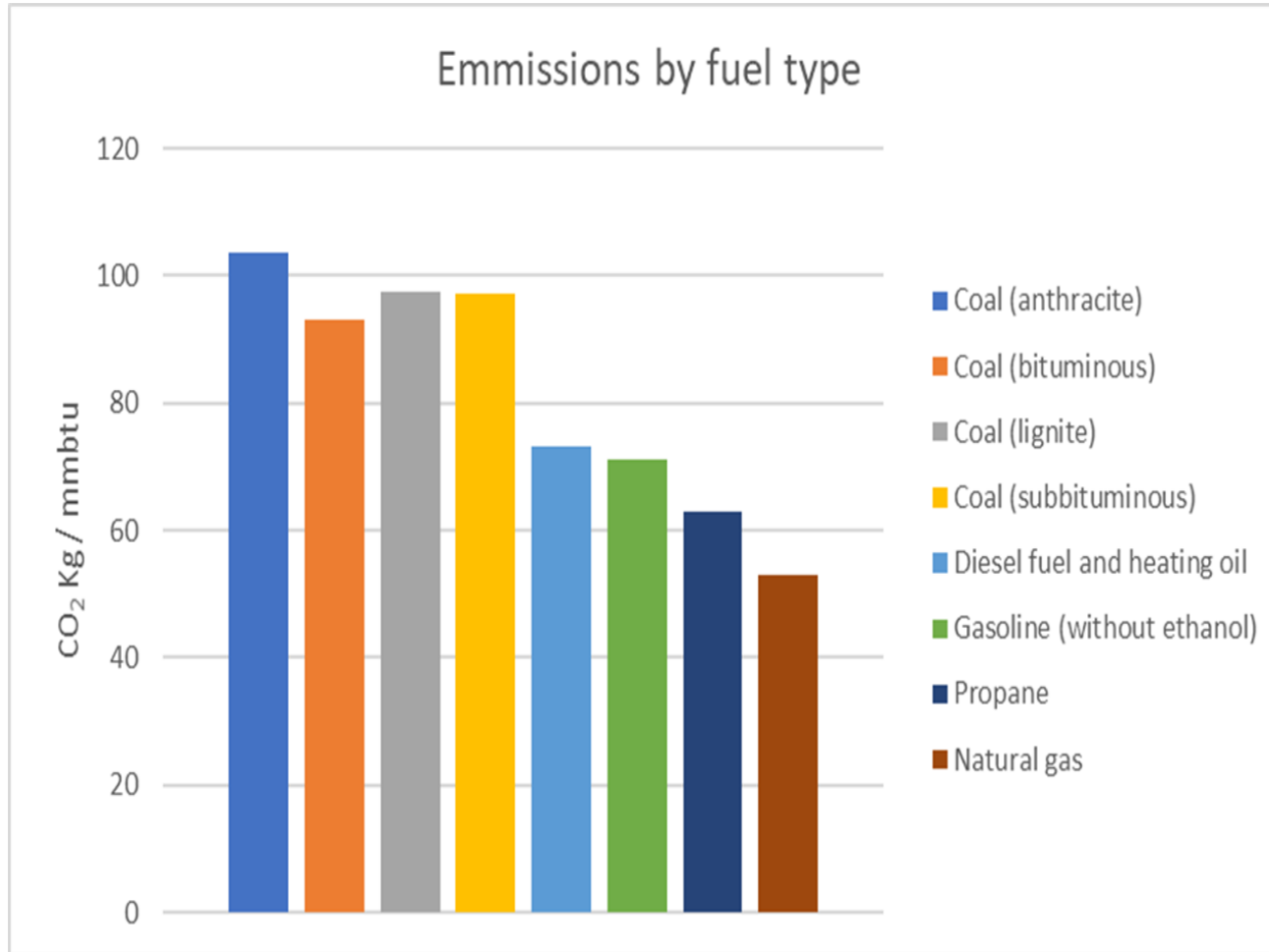
The [Gas Technology Institute](#) announced it is creating a [Differentiated Gas Initiative](#) called Veritas with the goal of a standardized approach for incorporating measurements into methane emissions inventories. GTI is creating protocols for measurement and reconciliation along the entire natural gas value chain, ensuring consistent, credible, and transparent verification of differentiated gas.





# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Encourage Investment in LNG, Natural Gas & Nuclear



Infrastructure allowing imports of more LNG from the US and elsewhere could help Europe with their methane emission goals.

Natural gas produces a third less CO<sub>2</sub> than oil and 50% less CO<sub>2</sub> than coal.

Nearly two dozen US gas producers committed to external assessment of their emissions and ESG (environmental, social, and governance) standards.

MiQ claims its standard and certification could reduce methane emission from natural gas by 80% in 5 years.



[Source: American Geosciences](#)

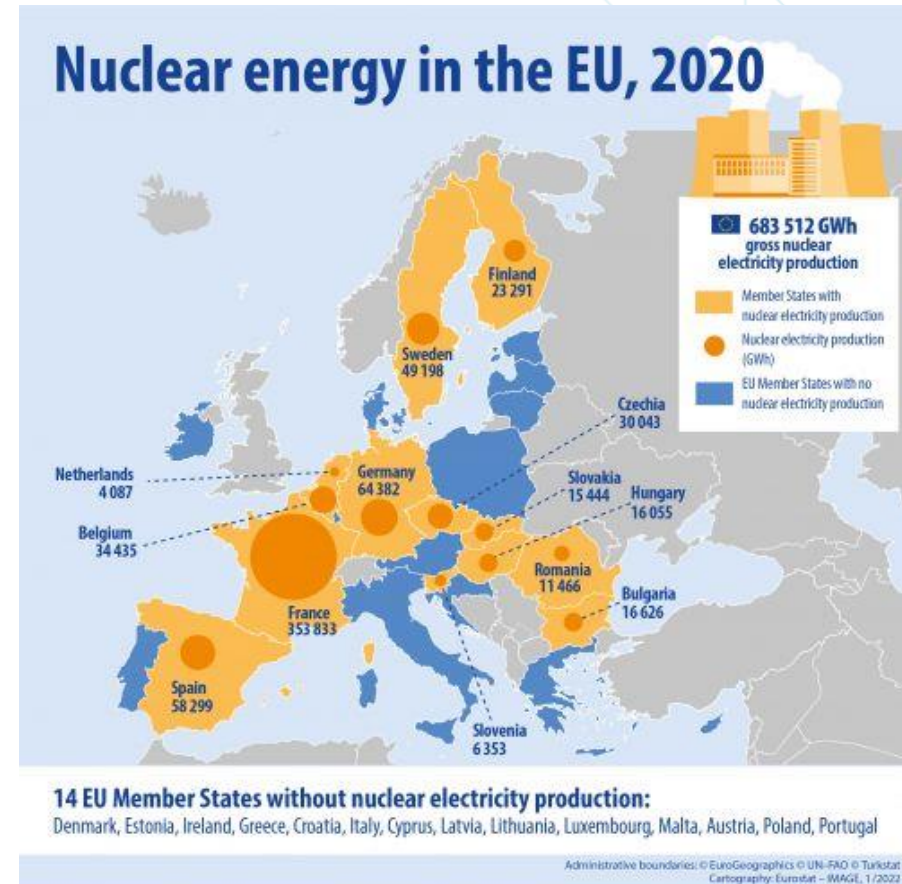
[Institute](#) (adapted by T.Hoesl) "CO<sub>2</sub> Kg emitted per million British thermal units (Btu)"

# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Encourage Investment in LNG, Natural Gas & Nuclear

### EU Carbon Taxonomy – Proposed Changes

- Allow mid-term (2035) natural gas and nuclear projects if meet low carbon goals
- Projects should include conversion to hydrogen or other lower carbon fuel
- New nuclear plants have to get construction permits before 2045 and they must be located in places with resources to dispose radioactive waste by 2050
- Mid-Term authorization works for state-owned companies; but commercial companies are likely to need certainty for at least 15-20 years in order to invest billions of Euros in LNG and other lower-carbon projects

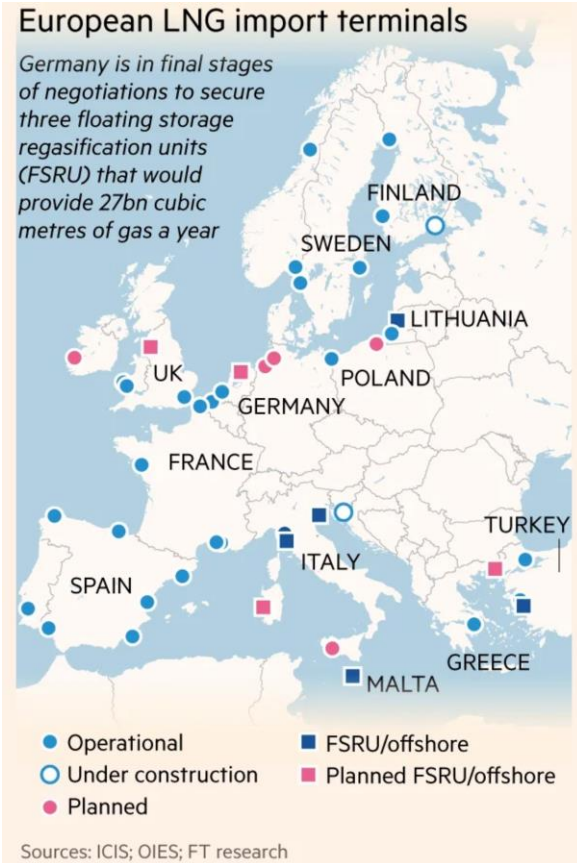


[ec.europa.eu/eurostat](https://ec.europa.eu/eurostat)



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## LNG FSRUs Offer Flexibility to Switch to Renewables When Ready



- Flexibility during times of high prices and readily available (deployable within 1-3 years)
- Offers an optionality to switch to renewable energies in short period of time
- Siting and permitting could be eased with new EU Carbon Taxonomy



# IV. HOW CAN ENERGY SECURITY & CLIMATE GOALS BE ACHIEVED?

## Carbon Border Adjustment Mechanism (CBAM)

- Starting January 2023, the EU proposes an import levy for non-EU producers on six commodities: aluminum, steel, iron, fertilizers, cement, electricity.
- Levies assessed if importer lacks a carbon emissions tax comparable to that in the EU.
- EU CBAM (BCA) is not yet in harmony with proposals in other nations, leading to conflicts in tariff systems.
- Because other countries may accomplish similar carbon reduction results through other methods (e.g., regulation), CBAM could add additional cost that excludes products from the European market even though they may be cleaner for the environment than products imported from other sources.
- Applying a CBAM to address the result rather than the means of achieving that result would likely benefit both the climate and the availability of key commodities to the market.





# V. CONCLUSIONS

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- **Climate and energy security goals do not necessarily have to be in conflict**
- **Use growing LNG purchasing power to demand greater accountability for carbon methane emission reductions**
- **Gas producers and LNG sellers in the US, and LNG buyers generally, are taking steps to become more transparent and reduce emissions**
- **Investment in flexible infrastructure that diversifies fuel sources while reducing overall carbon emissions benefits both security and the climate**
- **Focusing policy on outcomes – lower carbon and methane emissions, and energy security – rather than ideological means will yield better outcomes**





# Thank you

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