

GLOBAL MIDSTREAM UPDATE



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Gulf Energy Information

Pipeline &
Gas Journal

Global ENERGY
INFRASTRUCTURE

Global ENERGY
INFRASTRUCTURE
MAPPING

Gulf Energy Information overview



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Gulf Energy Information (Gulf) empowers employees to deliver premium technical and business content, as well as market intelligence solutions, to the global energy and infrastructure industries through trusted engagement.

For more than 100 years, Gulf's quality content and commitment to audience needs has led our company to become the most trusted resource in B2B media for the industries we serve. Our market-leading brands – Petroleum Economist, World Oil, Pipeline & Gas Journal, Hydrocarbon Processing, Gas Processing & LNG, H2Tech, Hydrogen Economist, Carbon Economist and Underground Infrastructure – serve their markets with real-time content through digital media and in-person/virtual events. Gulf also provides market intelligence solutions to the global energy industry through Global Energy Infrastructure and the Construction Boxscore Database.

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Pipeline &
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Pipeline & Gas Journal and Global Energy Infrastructure overview

Pipeline & Gas Journal

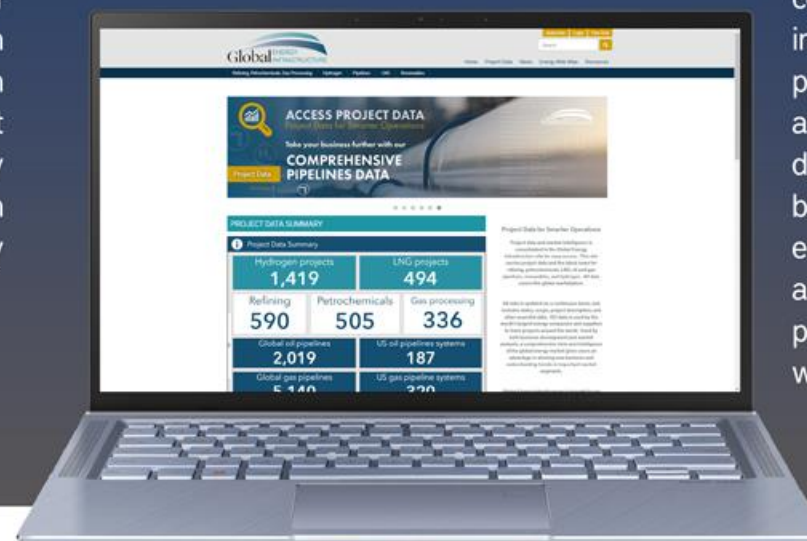
Since 1859, Pipeline & Gas Journal is the essential resource for technology and trends in the midstream industry; written and edited to be of service to those involved in moving, marketing and managing hydrocarbons from the wellhead to the ultimate consumer. Properly built, maintained and operated pipelines are

the safest, most efficient method of transporting energy. Our intention is to assist our subscribers in performing their jobs to the utmost of their abilities and knowledge by providing information required in the day-to-day operation of energy pipelines.



Project data and market intelligence is consolidated in the Global Energy Infrastructure (GEI) site for easy access. This site carries project data and the latest news for refining, petrochemicals, LNG, oil and gas pipelines, renewables, and hydrogen. All data covers the global marketplace. All data is updated on a

continuous basis, and includes status, scope, project description, and other essential data. GEI data is used by the world's largest energy companies and suppliers to track projects around the world.



Key International reports

International construction outlook

- Owner/Operator editorial contacts plus filings to FERC in the U.S.
- National Energy Board in Canada
- Research of various governmental entities
- Company websites, annual reports, press releases and social media
- P&GJ's annual Top 500 Pipeline Reports of the U.S. and Europe
- Global Energy Infrastructure database



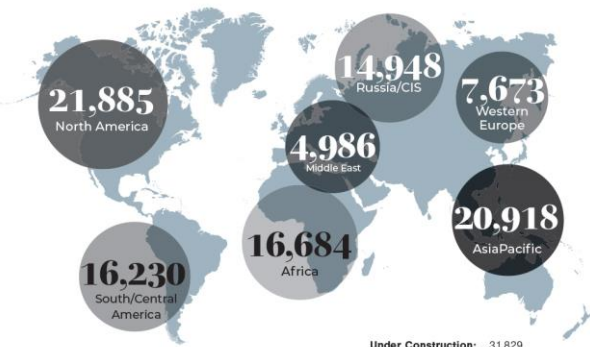
Global Pipeline Construction Outlook 2022:

Amid Some Positive Indicators, New Projects Limited

Oil and natural gas prices climbed higher in 2021, prompting increased drilling and production among mostly independent producers in some regions, but a host of political and COVID-related economic concerns kept markets on edge and highly reactive for much of the year. While an improved upstream outlook had positive implications for the midstream sector, global pipeline construction remained comparatively sluggish as project developers maintained a cautious approach, with capital spending aimed primarily at projects already underway. A consensus among industry analysts calls for oil and gas prices to remain rela-

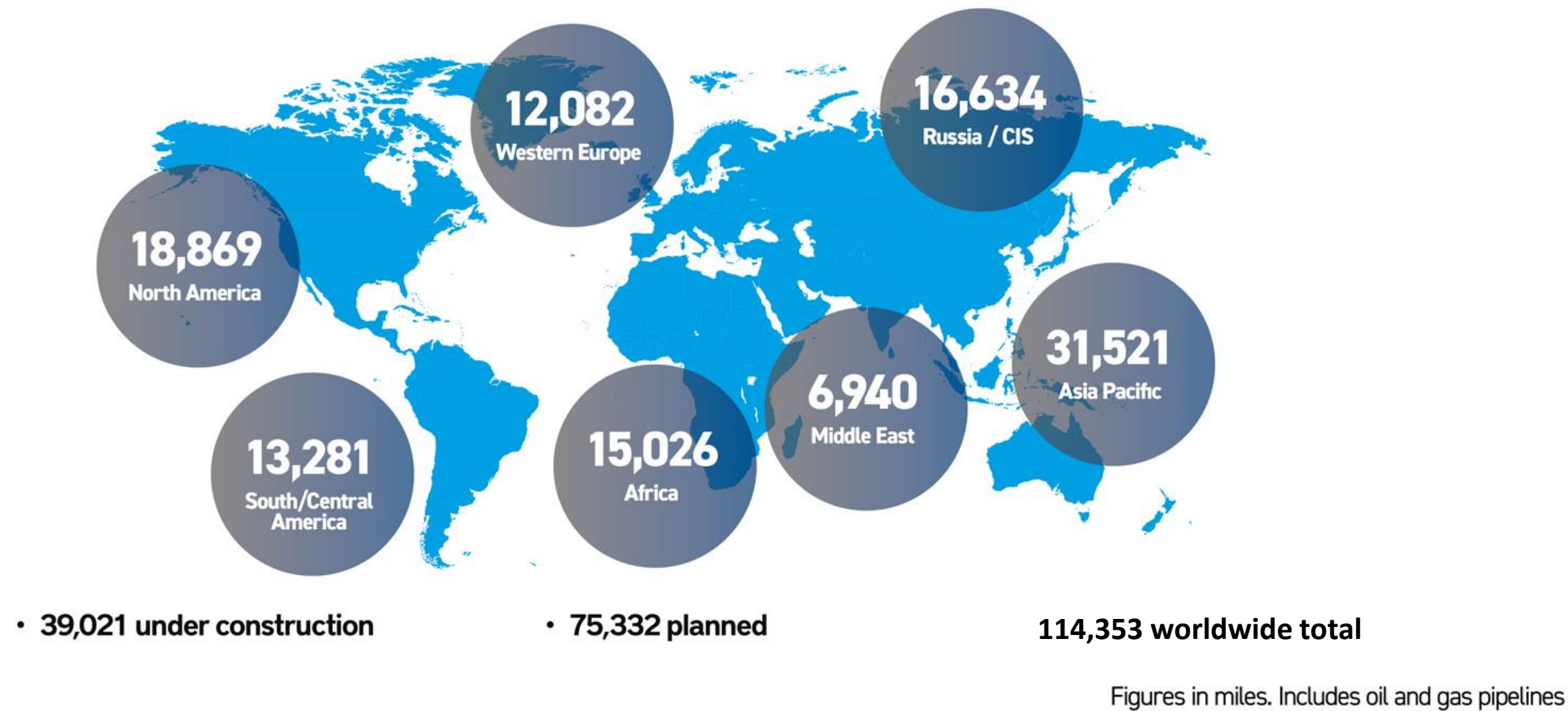
tively strong and continue to drive strong upstream cash flows in 2022. But midstream benefits are expected to remain limited as many producers focus on shoring up their balance sheets and increasing shareholder returns. These trends were reflected in *Pipeline & Gas Journal's* annual analysis of pipeline construction activity, which found 103,324 miles of pipelines either planned or under construction worldwide at the start of 2022. Of those, 71,495 miles represent projects in the engineering and design phase, and 31,829 miles are in various stages of construction. The figures reveal an 8.8% decline in

total mileage compared with the 113,305 miles of pipelines that were planned or under construction in our 2021 survey. Total mileage was either flat or down in every region, compared with the year-earlier survey, with the North America and Asia-Pacific regions posting the largest declines – though for varying reasons. Total pipeline mileage under construction across seven global regions at the start of 2022 includes: North America, 21,885 (-13.4%); South America, 16,230 (-1.0%); Western Europe/EU, 7,673 (-8.8%); Africa, 16,684 (-1.0%); Asia-Pacific/Australia, 20,918 (-13.6%); Middle East, 4,986 (-4.3%); Russia/CIS, 14,948 (-5.9%).



Under Construction: 31,829
Planned: 71,495
Total Miles: 103,324

International pipeline construction



Regional pipeline construction - Western Europe



• 4,312 under construction

• 7,770 planned

• 12,082 total

Figures in miles. Includes oil and gas pipelines

Europe

Hydrogen pipelines

Legend

Hydrogen

Hydrogen Pipeline

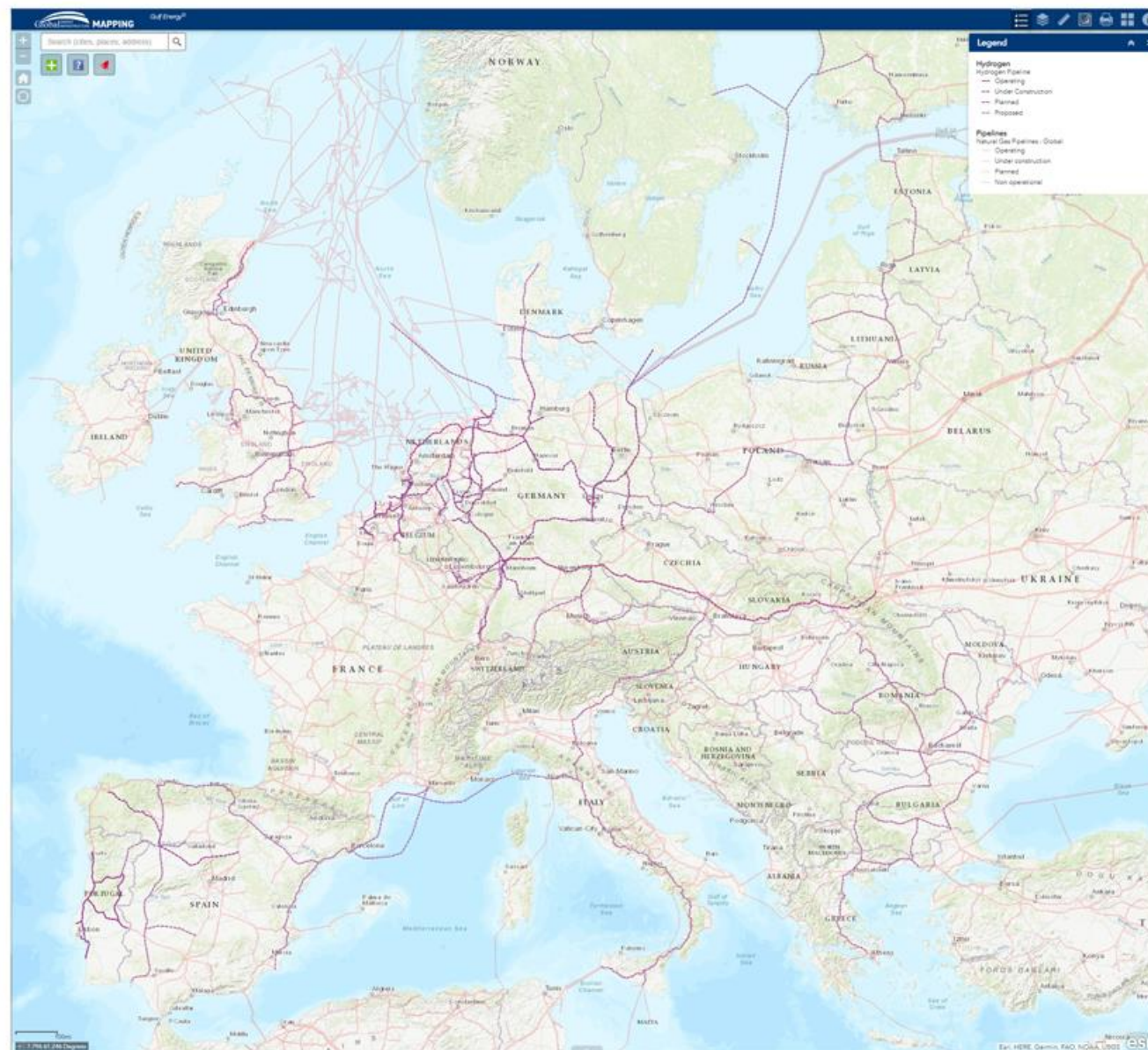
- Operating
- - - Under Construction
- - - Planned
- - - Proposed

Pipelines

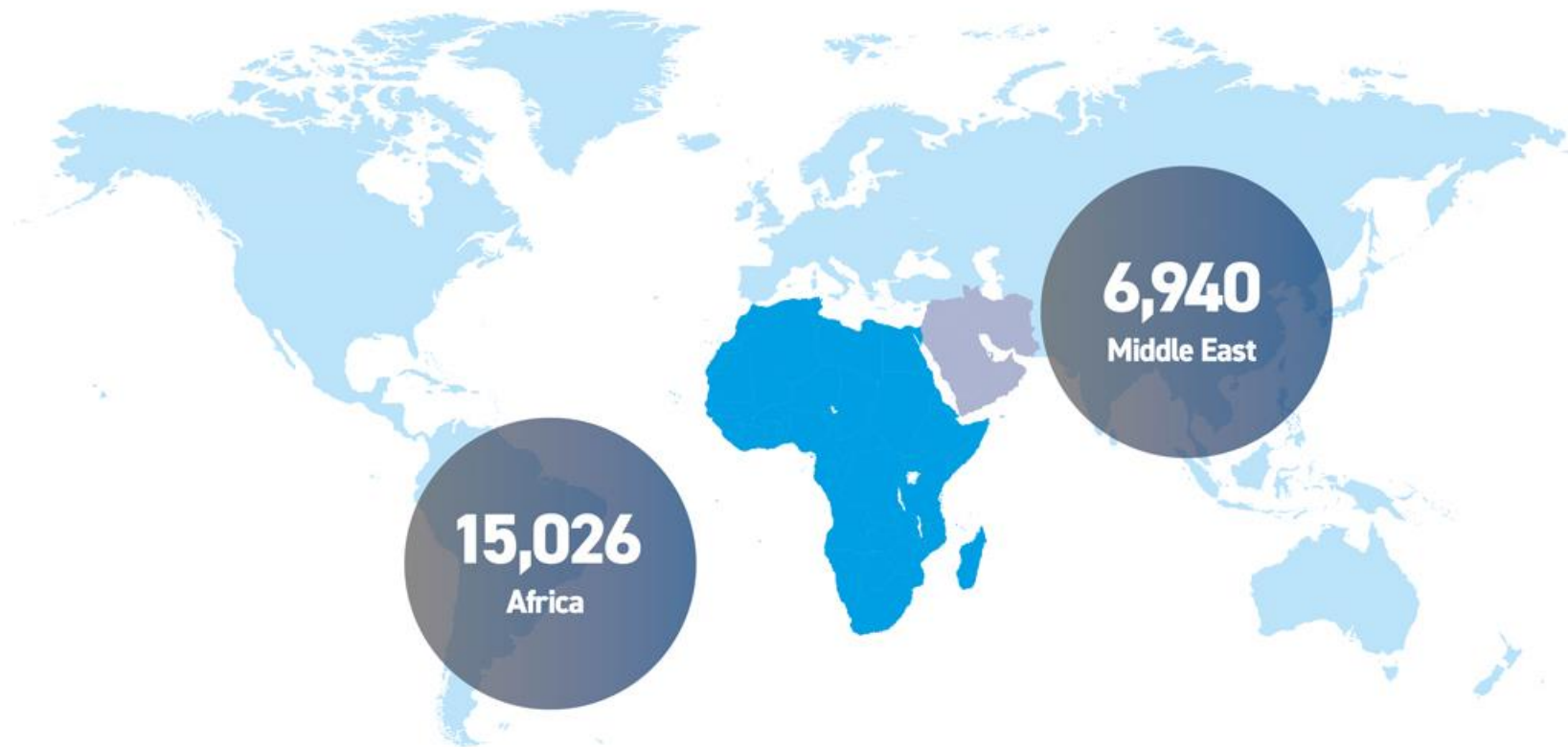
Natural Gas Pipelines - Global

- Operating
- - - Under construction
- - - Planned
- - - Non operational

Map from Global Energy Infrastructure's



Regional pipeline construction - Africa and Middle East



- Africa
- Middle East

- 2,774 under construction
- 1,226 under construction

- 12,252 planned
- 5,714 planned

- 15,026 total
- 6,940 total

Figures in miles. Includes oil and gas pipelines

Regional pipeline construction - Russia & CIS



• 5,722 under construction

• 10,912 planned

• 16,684 total

Figures in miles. Includes oil and gas pipelines

Asia Pacific | Russian Federation Power of Siberia



* SKV GTS
Sakhalin - Khabarovsk -
Vladivostok gas transmission
system

Map from Global Energy Infrastructure's



Regional pipeline construction - Asia Pacific

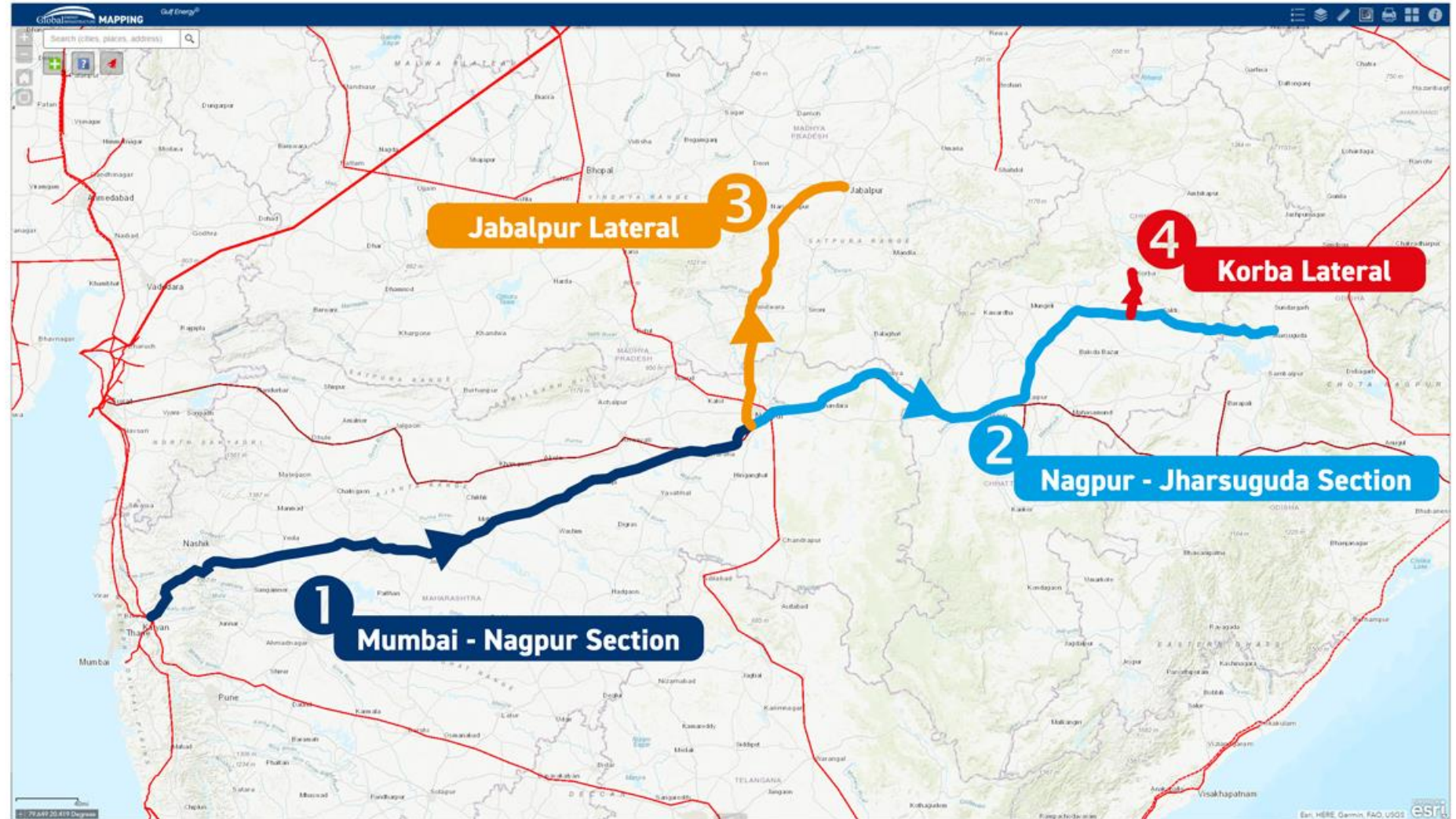


• 12,010 under construction

• 19,511 planned

• 31,521 total

Figures in miles. Includes oil and gas pipelines



Map from Global Energy Infrastructure's



Regional pipeline construction - South / Central America



• 4,429 under construction

• 8,852 planned

• 13,281 total

Figures in miles. Includes oil and gas pipelines

Central & South America | Argentina Nestor Kirchner, Gasducto Norte & Reversion del Norte



Map from Global Energy Infrastructure's



Regional pipeline construction - North America



• 8,548 under construction

• 10,321 planned

• 18,869 total

Figures in miles. Includes oil and gas pipelines

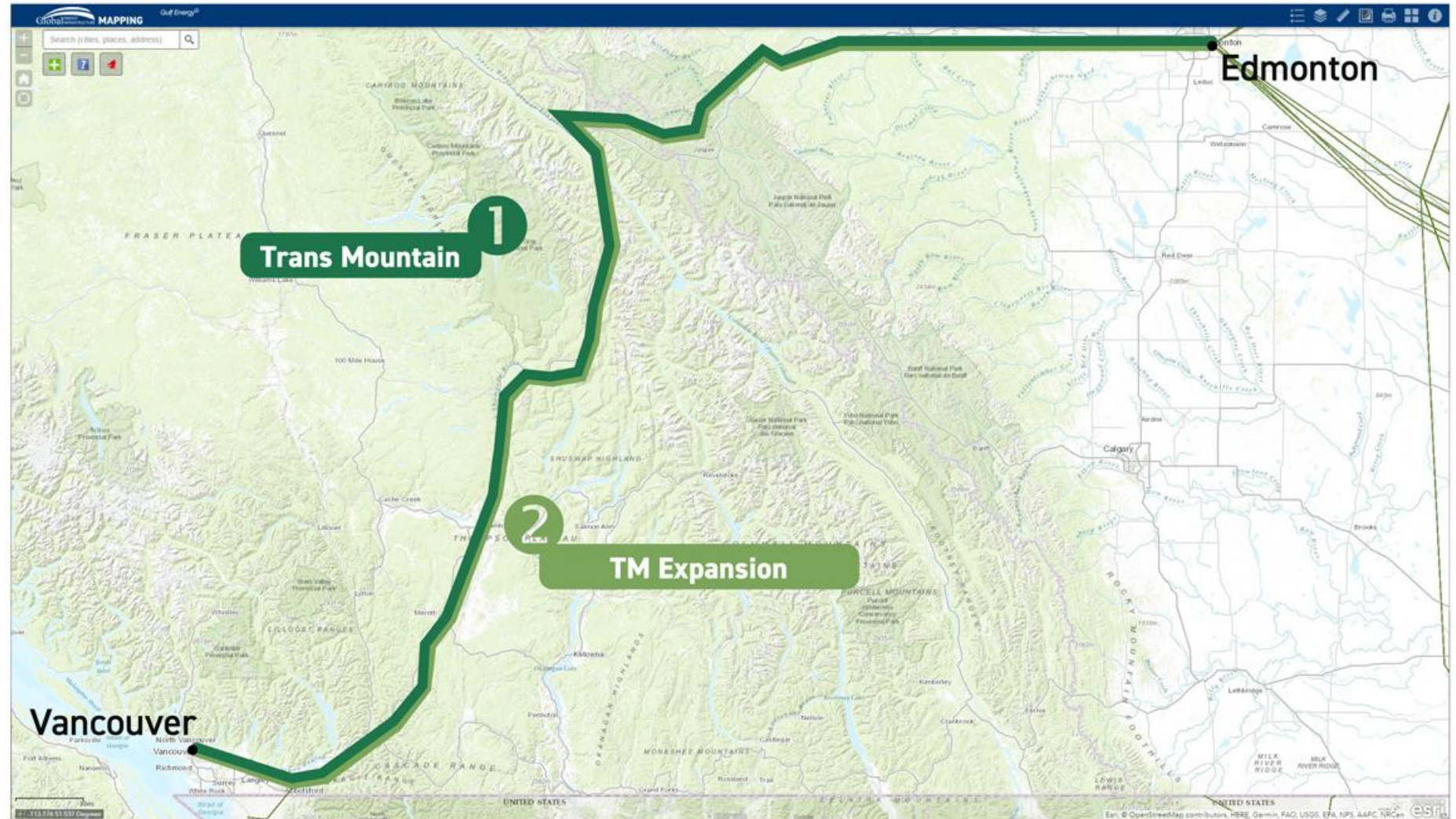
North America | Canada Coastal GasLink



Map from Global Energy Infrastructure's



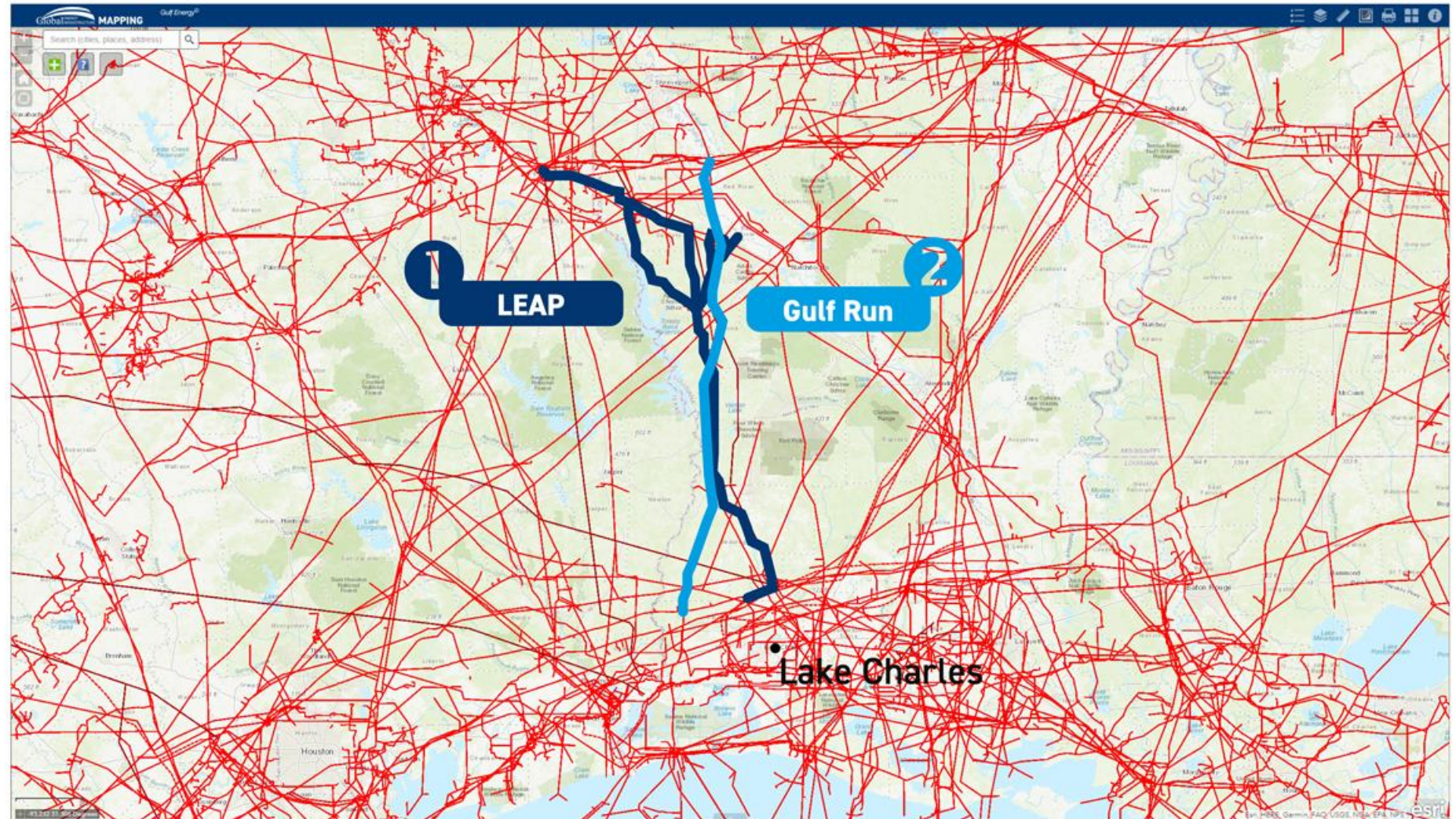
North America | Canada Trans Mountain Pipeline



Map from Global Energy Infrastructure's



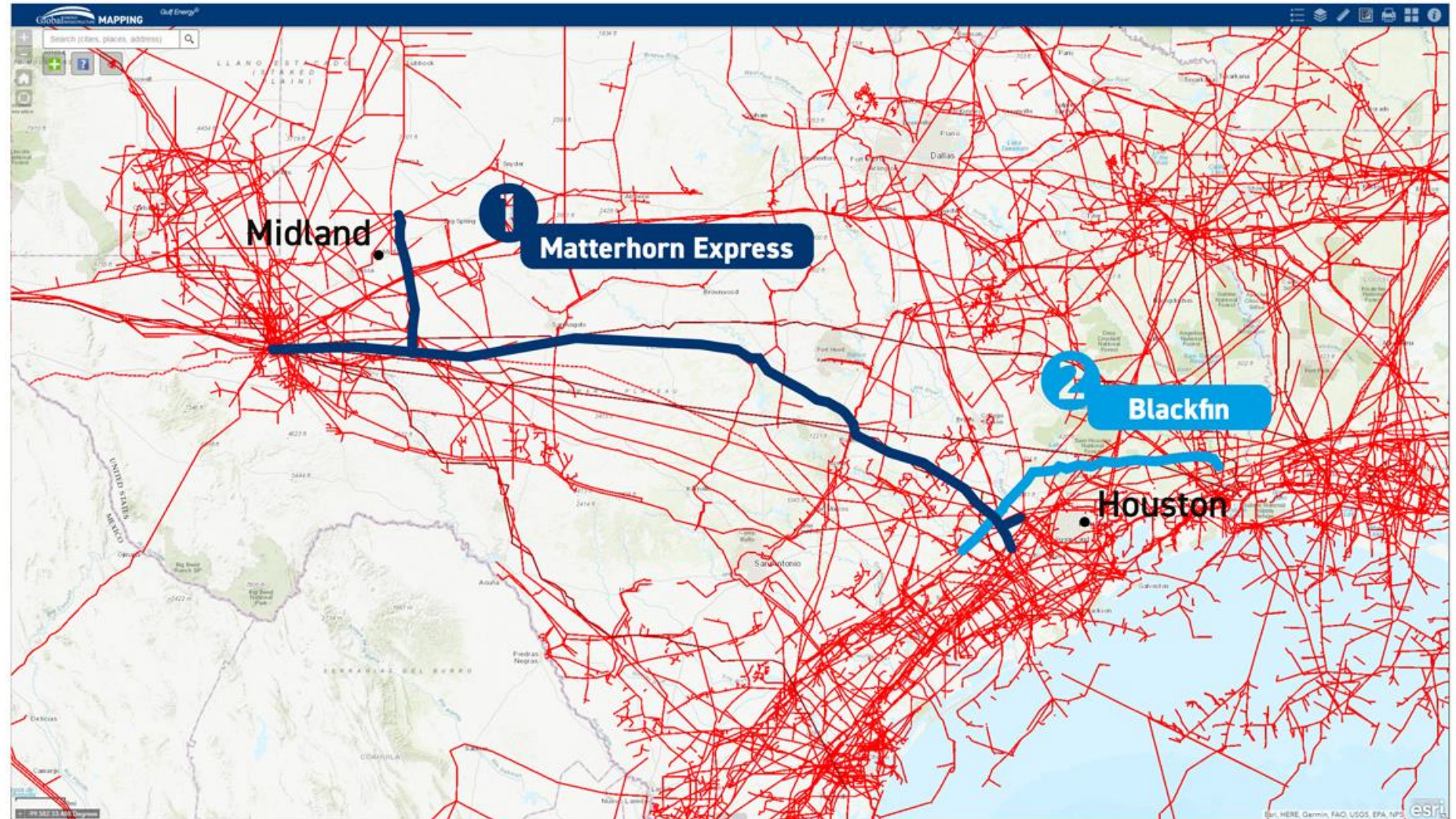
North America | United States Haynesville



Map from Global Energy Infrastructure's



North America | United States Permian



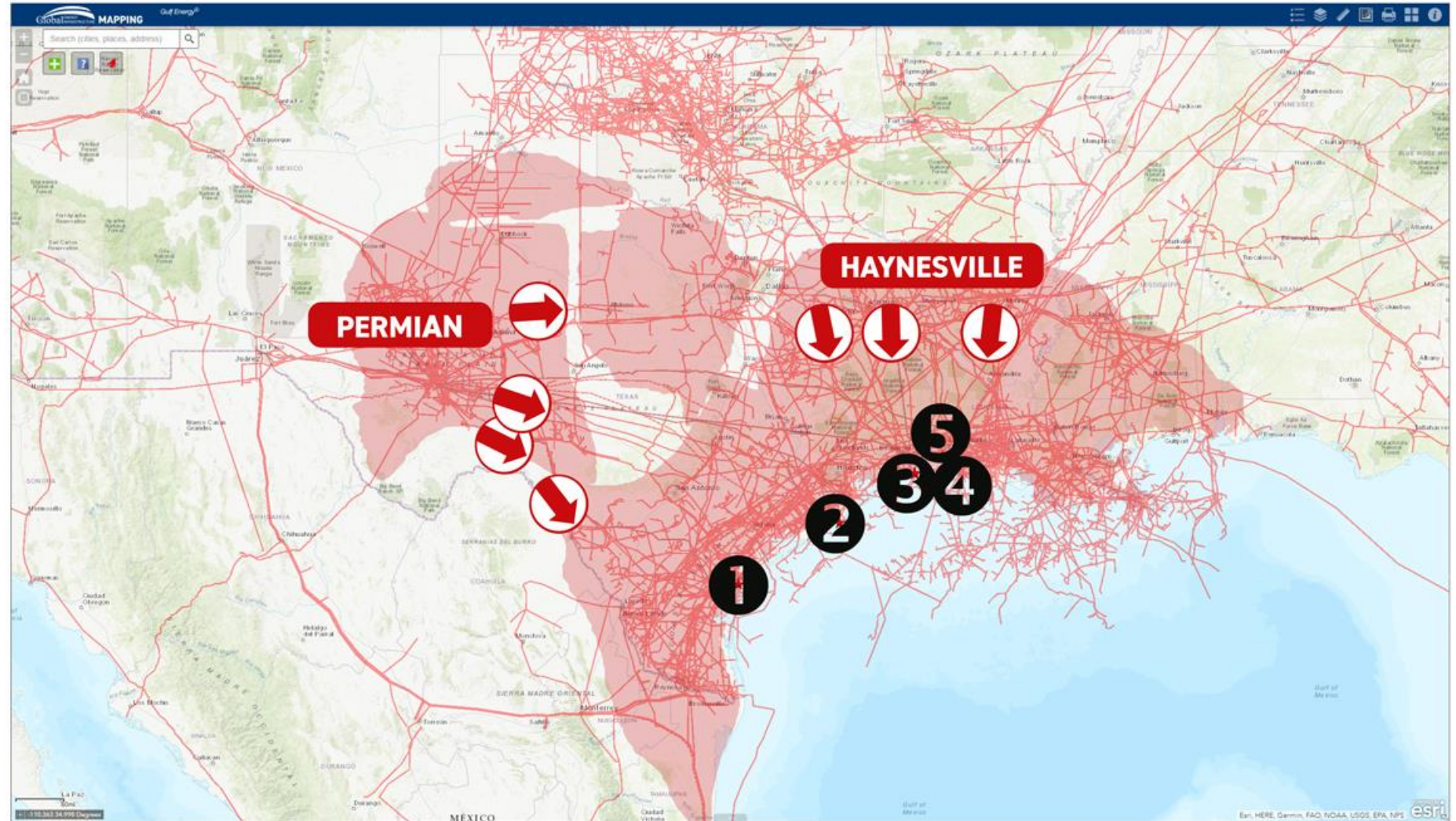
Map from Global Energy Infrastructure's



North America | United States Gulf Coast LNG facilities

- 1 Corpus Christi
- 2 Freeport
- 3 Sabine Pass
- 4 Calcasieu Pass
- 5 Lake Charles

Map from Global Energy Infrastructure's



North America | Mexico

West Coast gas supply for LNG exports

- 1 Energia Costa Azul (ECA LNG)
- 2 Saguaro LNG (Mexico Pacific)
- 3 Amigo LNG
- 4 Vista Pacifico LNG



Map from Global Energy Infrastructure's



Summary

- LNG is driving pipeline construction globally, particularly in the United States and Canada.
- Hydrogen pipelines are a growing area for pipeline development.
- Gas pipeline development remains a big market, especially in emerging markets like India.

Q&A



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THANK YOU



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