

# Update on LNG Exports

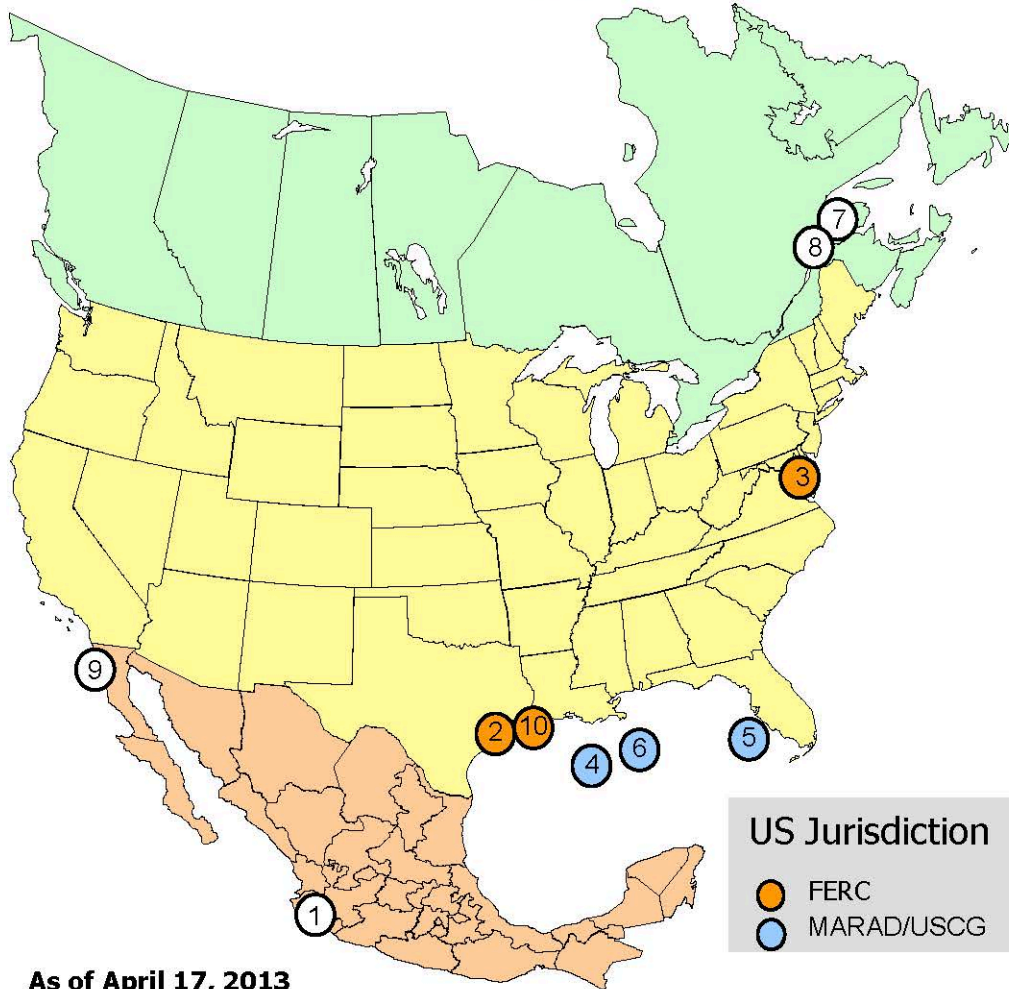
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**May 1, 2013**



# North American LNG Import /Export Terminals

*Approved*



**US Jurisdiction**

- FERC
- MARAD/USCG

As of April 17, 2013

\* Expansion of an existing facility

## Import Terminal

### APPROVED - UNDER CONSTRUCTION

#### Mexico

1. **Manzanillo, MX:** 0.5 Bcfd (KMS GNL de Manzanillo)

### APPROVED - NOT UNDER CONSTRUCTION

#### U.S. - FERC

2. **Freeport, TX:** 2.5 Bcfd (Cheniere/Freeport LNG Dev. - Expansion)\*

3. **Baltimore, MD:** 1.5 Bcfd (AES Corporation – AES Sparrows Point)

#### U.S. - MARAD/Coast Guard

4. **Gulf of Mexico:** 1.0 Bcfd (Main Pass McMoRan Exp.)

5. **Offshore Florida:** 1.2 Bcfd (Hoëgh LNG - Port Dolphin Energy)

6. **Gulf of Mexico:** 1.4 Bcfd (TORP Technology-Bienville LNG)

#### Canada

7. **Rivière-du- Loup, QC:** 0.5 Bcfd (Cacouna Energy - TransCanada/PetroCanada)

8. **Quebec City, QC :** 0.5 Bcfd (Project Rabaska - Enbridge/Gaz Met/Gaz de France)

#### Mexico

9. **Baja California, MX :** 1.5 Bcfd (Sempra - Energia Costa Azul - Expansion)

## Export Terminal

### APPROVED - UNDER CONSTRUCTION

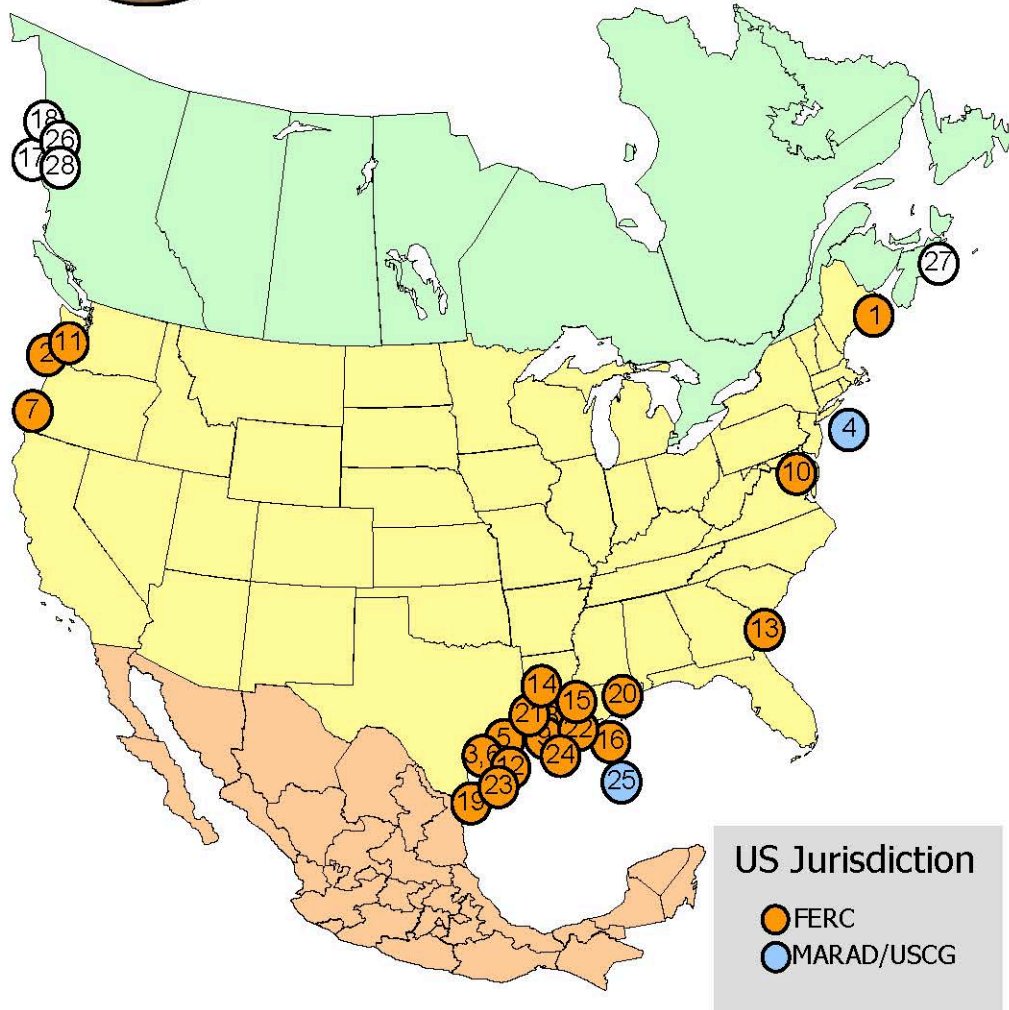
#### U.S. - FERC

10. **Sabine, LA:** 2.6 Bcfd (Cheniere/Sabine Pass LNG)



# North American LNG Import/Export Terminals

## *Proposed/Potential*



### Import Terminal

#### PROPOSED TO FERC

1. **Robbinston, ME:** 0.5 Bcfd (Kestrel Energy - Downeast LNG)
2. **Astoria, OR:** 1.5 Bcfd (Oregon LNG)
3. **Corpus Christi, TX:** 0.4 Bcfd (Cheniere – Corpus Christi LNG)

#### POTENTIAL U.S. SITES IDENTIFIED BY PROJECT SPONSORS

4. **Offshore New York:** 0.4 Bcfd (Liberty Natural Gas)

### Export Terminal

#### PROPOSED TO FERC

5. **Freeport, TX:** 1.8 Bcfd (Freeport LNG Dev/Freeport LNG Expansion/FLNG Liquefaction)\*
6. **Corpus Christi, TX:** 2.1 Bcfd (Cheniere – Corpus Christi LNG)\*
7. **Coos Bay, OR:** 0.9 Bcfd (Jordan Cove Energy Project)
8. **Lake Charles, LA:** 2.4 Bcfd (Southern Union - Trunkline LNG)
9. **Hackberry, LA:** 1.7 Bcfd (Sempra – Cameron LNG)\*
10. **Cove Point, MD:** 0.82 Bcfd (Dominion – Cove Point LNG)\*
11. **Astoria, OR:** 1.30 Bcfd (Oregon LNG)
12. **Lavaca Bay, TX:** 1.38 Bcfd (Excelerate Liquefaction)
13. **Elba Island, GA:** 0.35 Bcfd (Southern LNG Company)
14. **Sabine Pass, LA:** 1.3 Bcfd (Sabine Pass Liquefaction)
15. **Lake Charles, LA:** 1.07 Bcfd (Magnolia LNG)
16. **Plaquemines Parish, LA:** 1.07 Bcfd (CE FLNG)

#### PROPOSED CANADIAN SITES IDENTIFIED BY PROJECT SPONSORS

17. **Kitimat, BC:** 0.7 Bcfd (Apache Canada Ltd.)
18. **Douglas Island, BC:** 0.25 Bcfd (BC LNG Export Cooperative)

#### POTENTIAL U.S. SITES IDENTIFIED BY PROJECT SPONSORS

19. **Brownsville, TX:** 2.8 Bcfd (Gulf Coast LNG Export)
20. **Pascagoula, MS:** 1.5 Bcfd (Gulf LNG Liquefaction)
21. **Sabine Pass, TX:** 2.6 Bcfd (ExxonMobil – Golden Pass)
22. **Cameron Parish, LA:** 0.16 Bcfd (Waller LNG Services)
23. **Ingleside, TX:** 1.09 Bcfd (Pangea LNG (North America))
24. **Cameron Parish, LA:** 0.20 Bcfd (Gasfin Development)

#### U.S. – MARAD/COAST GUARD

25. **Gulf of Mexico:** 3.22 Bcfd (Main Pass - Freeport-McMoRan)

#### POTENTIAL CANADIAN SITES IDENTIFIED BY PROJECT SPONSORS

26. **Prince Rupert Island, BC:** 1.0 Bcfd (Shell Canada)
27. **Goldboro, NS:** 0.67 Bcfd (Pieridae Energy Canada)
28. **Kitimat, BC:** 2.0 Bcfd (LNG Canada)

As of April 17, 2013

*Office of Energy Projects*

# Natural Gas Export Applications

(Updated April 24, 2013)

No.	Name	Export Destination	Location	Size of Exports	Date Filed	Date Approved
1	Sabine Pass LNG Terminal	FTA	Sabine, LA	803 bcf/year, 30 years	08/11/10	09/07/10
	Sabine Pass LNG Terminal	NFTA	Sabine, LA	803 bcf/year, 30 years	10/12/10	05/20/11
2	Lake Charles Exports, LLC	FTA	Lake Charles, LA	730 bcf/year, 25 years	05/06/11	07/22/11
	Lake Charles Exports, LLC	NFTA	Lake Charles, LA	730 bcf/year, 25 years	05/06/11	Pending
3	Carib Energy LLC	FTA	Southeast Atlantic, FL, Gulf Coast	10.95 bcf/year, 25 years	06/06/11	07/27/11
	Carib Energy LLC	NFTA	Southeastern U.S., Gulf Coast	3.65 bcf/year, 25 years	10/20/11	Pending
4	Jordan Cove Energy Project	FTA	Coos Bay, OR	438 bcf/year, 30 years	09/22/11	12/07/11
	Jordan Cove Energy Project	NFTA	Coos Bay, OR	292 bcf/year, 25 years	03/23/12	Pending
5	Cameron LNG LLC (Sempra)	FTA	Cameron, LA	620.50 bcf/year, 20 years	11/10/11	01/17/12
	Cameron LNG LLC (Sempra)	NFTA	Cameron, LA	620.50 bcf/year, 20 years	12/21/11	Pending
6	Dominion Cove Point, LP	FTA	Calvert County, MD	365 bcf/year, 25 years	09/01/11	10/07/11
	Dominion Cove Point, LP	NFTA	Calvert County, MD	365 bcf/year, 25 years	10/03/11	Pending
7	Freeport LNG, LLC	FTA	Freeport, TX	511 bcf/year, 25 years	12/17/10	02/10/11
	Freeport LNG, LLC	NFTA	Freeport, TX	511 bcf/year, 25 years	12/17/10	Pending
8	Freeport LNG, LLC	FTA	Freeport, TX	511 bcf/year, 25 years	01/12/12	02/10/12
	Freeport LNG, LLC	NFTA	Freeport, TX	511 bcf/year, 25 years	12/19/11	Pending
9	Gulf Coast LNG Export, LLC	FTA	Brownsville, TX	1022 bcf/year, 25 years	01/10/12	10/16/12
	Gulf Coast LNG Export, LLC	NFTA	Brownsville, TX	1022 bcf/year, 25 years	01/10/12	Pending
10	Gulf LNG Liquefaction Co.	FTA	Pascagoula, MS	547.50 bcf/year, 25 years	05/02/12	06/15/12
	Gulf LNG Liquefaction Co.	NFTA	Pascagoula, MS	547.50 bcf/year, 20 years	08/31/12	Pending
11	LNG Development Co.	FTA	Warrenton, OR	456.25 bcf/year, 30 years	05/03/12	05/31/12
	LNG Development Co.	NFTA	Warrenton, OR	456.25 bcf/year, 25 years	07/16/12	Pending



# Natural Gas Export Applications Cont'd.

(Updated April 24, 2013)

No.	Name	Export Destination	Location	Size of Exports	Date Filed	Date Approved
12	SB Power Solution	FTA	Atlantic Coast	25.55 bcf/year, 25 years	05/07/12	06/15/12
13	Southern LNG Company	FTA	Savannah, GA	182.50 bcf/year, 25 years	05/15/12	06/15/12
	Southern LNG Company	NFTA	Savannah, GA	182.50 bcf/year, 20 years	08/31/12	Pending
14	Excelerate Liquefaction	FTA	Calhoun County, TX	503.70 bcf/year, 20 years	05/25/12	08/09/12
	Excelerate Liquefaction	NFTA	Calhoun County, TX	503.70 bcf/year, 20 years	10/05/12	Pending
15	Golden Pass Products, LLC	FTA	Sabine Pass, TX	949 bcf/year, 25 years	08/17/12	09/27/12
	Golden Pass Products, LLC	NFTA	Sabine Pass, TX	949 bcf/year, 25 years	10/25/12	Pending
16	Cheniere Marketing, LLC	FTA	Corpus Christi, TX	766.50 bcf/year, 25 years	08/31/12	10/16/12
	Cheniere Marketing, LLC	NFTA	Corpus Christi, TX	766.50 bcf/year, 22 years	08/31/12	Pending
17	Main Pass Energy Hub, LLC	FTA	16 miles offshore of LA	1,175.30 bcf/year, 30 years	09/11/12	01/04/13
18	CE FLNG, LLC	FTA	Plaquemines Parish, LA	390.55 bcf/year, 30 years	09/12/12	11/21/12
	CE FLNG, LLC	NFTA	Plaquemines Parish, LA	390.55 bcf/year, 30 years	09/12/12	Pending
19	Waller LNG Services, LLC	FTA	Cameron, LA	58.40 bcf/year, 25 years	10/12/12	12/20/12
20	Pangea LNG	FTA	Ingleside, TX	397.85 bcf/year, 25 years	11/29/12	01/30/13
	Pangea LNG	NFTA	Ingleside, TX	397.85 bcf/year, 25 years	12/19/12	Pending
21	Magnolia LNG, LLC	FTA	Lake Charles, LA	197.10 bcf/year, 25 years	12/18/12	02/27/13
22	Trunkline LNG Export	FTA	Lake Charles, LA	Combine w/ Lake Charles	01/10/13	03/07/13
	Trunkline LNG Export	NFTA	Lake Charles, LA	Combine w/ Lake Charles	01/10/13	Pending
23	Gasfin Development	FTA	Cameron Parish, LA	73 bcf/year, 25 years	01/11/13	03/07/13
24	Freeport-McMoRan	FTA	16 miles offshore of LA	Combine w/ Main Pass	02/22/13	Pending
	Freeport-McMoRan	NFTA	16 miles offshore of LA	1,175.30 bcf/year, 30 years	02/22/13	Pending

# Natural Gas Export Applications Cont'd.

(Updated April 24, 2013)

No.	Name	Export Destination	Location	Size of Exports	Date Filed	Date Approved
25	Sabine Pass LNG Terminal	FTA	Sabine, LA	102.20 bcf/year, 20 years	02/27/13	Pending
	Sabine Pass LNG Terminal	NFTA	Sabine, LA	102.20 bcf/year, 20 years	02/27/13	Pending
26	Sabine Pass LNG Terminal	FTA	Sabine, LA	87.60 bcf/year, 20 years	04/02/13	Pending
	Sabine Pass LNG Terminal	NFTA	Sabine, LA	87.60 bcf/year, 20 years	04/02/13	Pending

**TOTAL = 10,924 Bcf/year (29.93 bcf/day or 10.924 Tcf/year)**

▪ **U.S. natural gas consumption in 2012 was 23.3 Tcf**

▪ **10.924 Tcf is 46.8% of 2012 demand**

# LNG Export Applications

Company	Export Start	Capacity (Mcf/d)
<b><i>Tier 1 (Most Economical Export Applications)</i></b>		
Sabine Pass	2016	2,192
Freeport	2017	2,795
Excelerate	2017	1,370
Dominion	2017	1,014
Cameron	2018	1,699
Golden Pass	2020	2,603
<b><i>Tier 2 (Second Most Economical Export Applications)</i></b>		
Main Pass	2017	3,232
Lake Charles	2018	2,000
Gulf LNG	2020	1,506

Source: AT Kearney

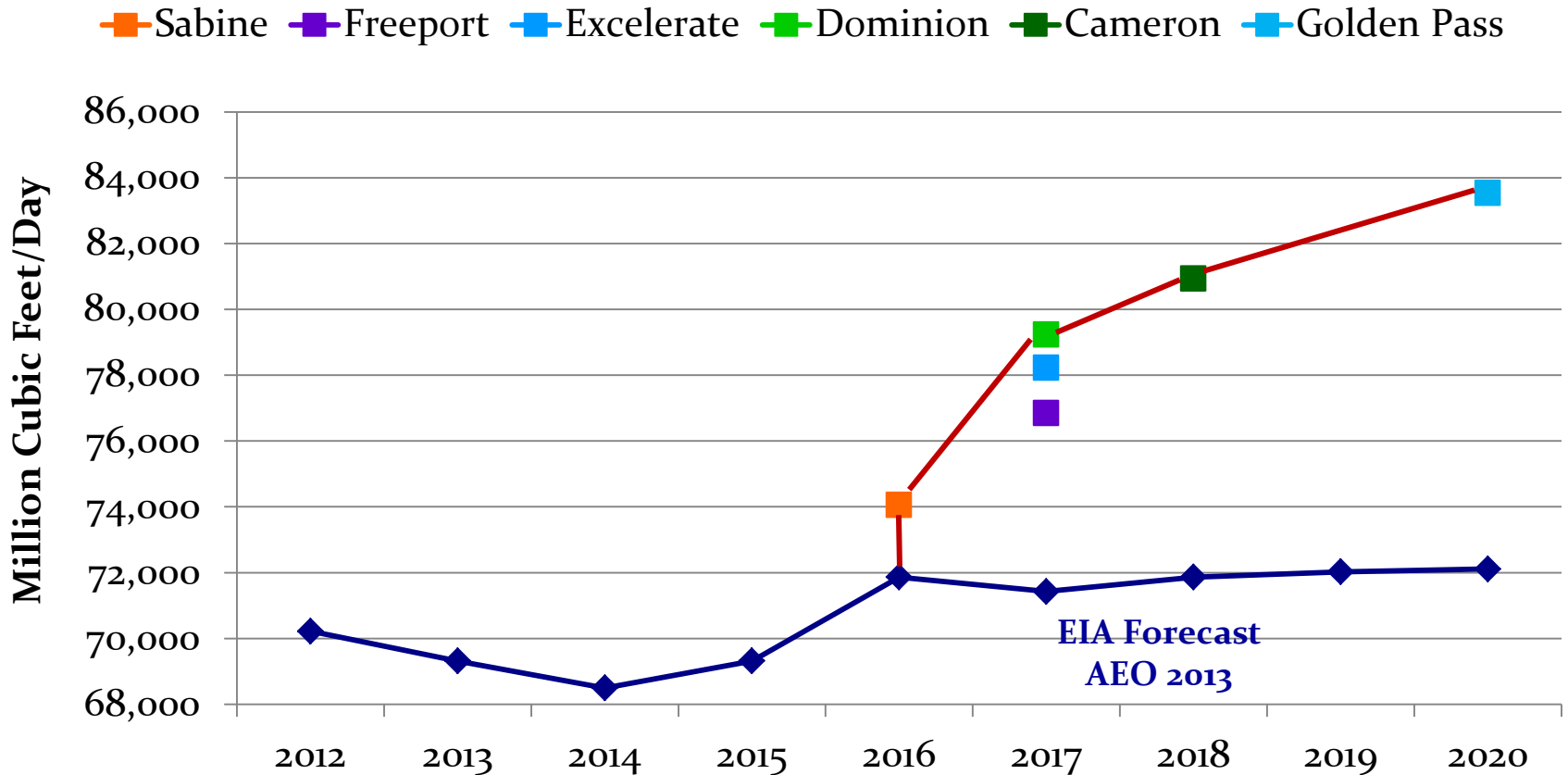
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# TIER 1 (MOST ECONOMICAL EXPORT APPLICATIONS)



# U.S. Natural Gas Demand with Tier 1 (Most Economical Export Applications)

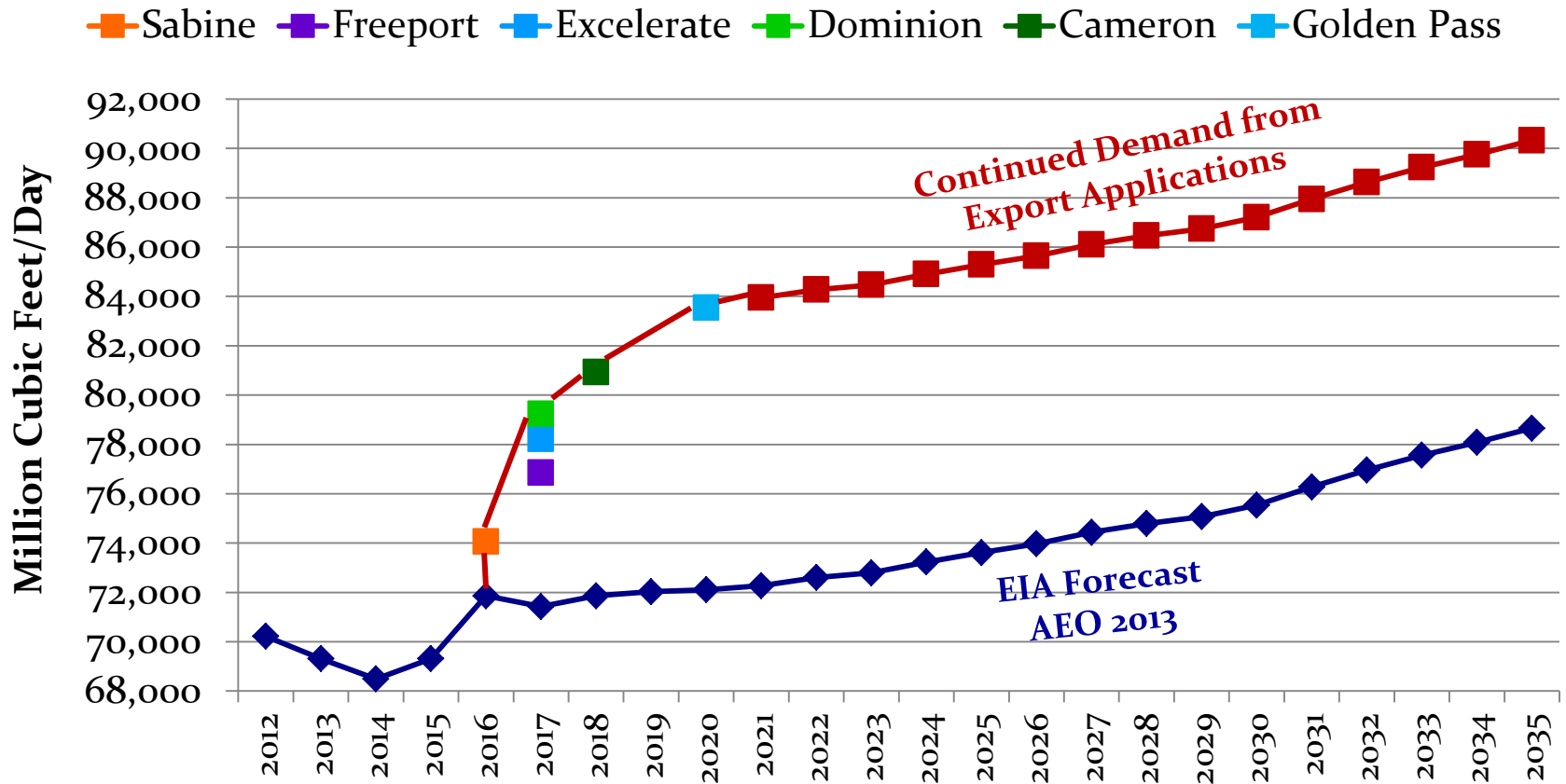
*(In 2020, 15.8% Increase from EIA Forecast)*



Source: EIA, AT Kearney

# U.S. Natural Gas Demand with Tier 1 (Most Economical Export Applications)

(In 2035, 14.8% Increase from EIA Forecast)



Source: EIA, AT Kearney

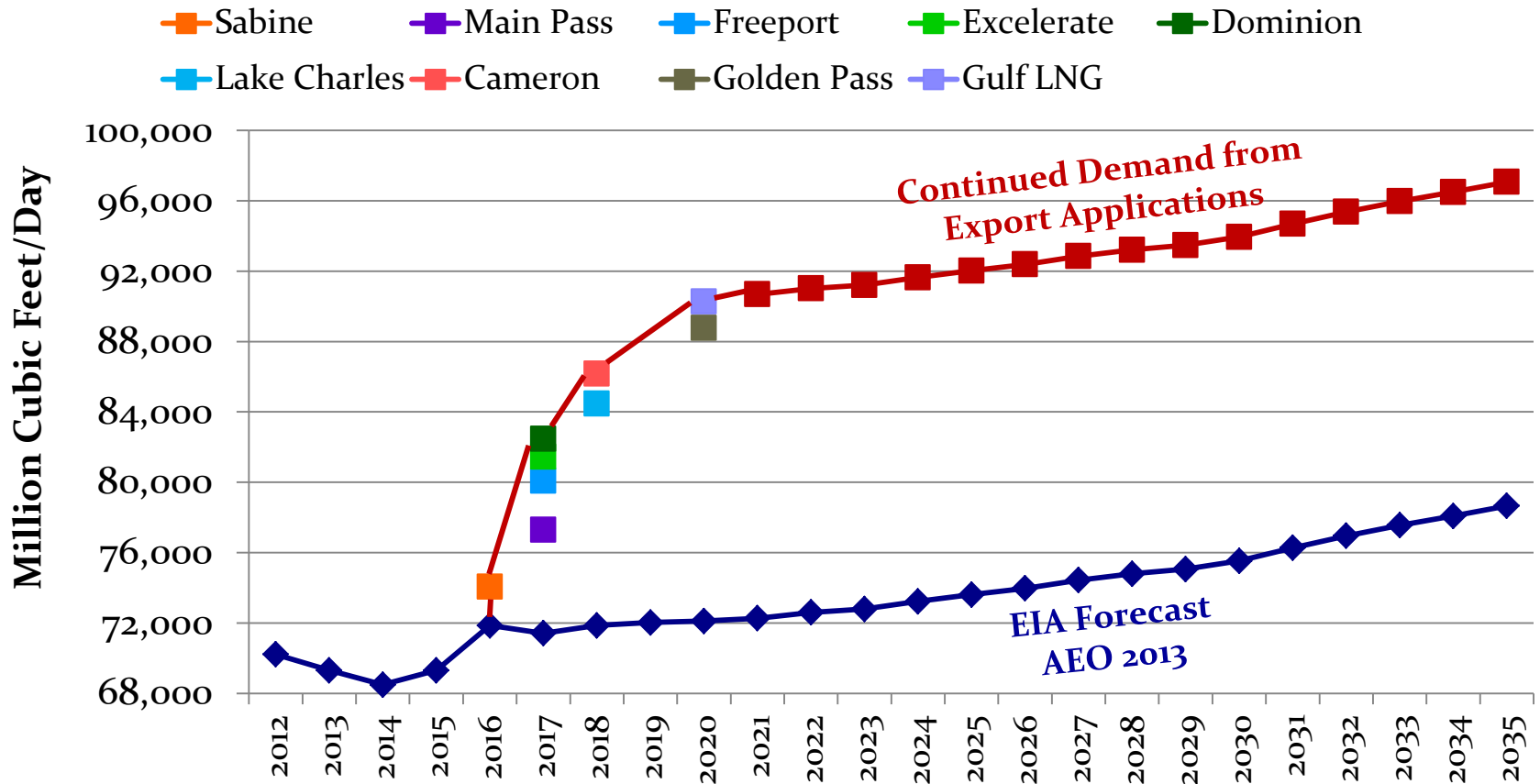


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# TIER 2 (SECOND MOST ECONOMICAL EXPORT APPLICATIONS)

# U.S. Natural Gas Demand with Tier 1 & Tier 2 Export Applications

(In 2035, 23.4% Increase from EIA Forecast)



Source: EIA, AT Kearney