



# Competitive Advantages of American LNG

## *LNG Commercial Contracting Models*

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# Information Regarding Forward-Looking Statements



This presentation contains statements that are not historical fact and constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by words such as “believes,” “expects,” “anticipates,” “plans,” “estimates,” “projects,” “forecasts,” “contemplates,” “assumes,” “depends,” “should,” “could,” “would,” “will,” “confident,” “may,” “can,” “potential,” “possible,” “proposed,” “target,” “pursue,” “outlook,” “maintain,” or similar expressions or when we discuss our guidance, strategy, plans, goals, vision, mission, opportunities, projections, initiatives, objectives or intentions. Forward-looking statements are not guarantees of performance. They involve risks, uncertainties and assumptions. Future results may differ materially from those expressed in the forward-looking statements.

Factors, among others, that could cause our actual results and future actions to differ materially from those described in any forward-looking statements include risks and uncertainties relating to: the greater degree and prevalence of wildfires in California in recent years and the risk that we may be found liable for damages regardless of fault, such as where inverse condemnation applies, and risk that we may not be able to recover any such costs in rates from customers in California; actions and the timing of actions, including decisions, new regulations and issuances of authorizations by the California Public Utilities Commission, U.S. Department of Energy, California Department of Conservation’s Division of Oil, Gas, and Geothermal Resources, Los Angeles County Department of Public Health, U.S. Environmental Protection Agency, Federal Energy Regulatory Commission, Pipeline and Hazardous Materials Safety Administration, Public Utility Commission of Texas, states, cities and counties, and other regulatory and governmental bodies in the U.S. and other countries in which we operate; the success of business development efforts, construction projects, major acquisitions, divestitures and internal structural changes, including risks in (i) obtaining or maintaining authorizations; (ii) completing construction projects on schedule and budget; (iii) obtaining the consent of partners; (iv) counterparties’ ability to fulfill contractual commitments; (v) winning competitively bid infrastructure projects; (vi) disruption caused by the announcement of contemplated acquisitions and/or divestitures or internal structural changes; (vii) the ability to complete contemplated acquisitions and/or divestitures; and (viii) the ability to realize anticipated benefits from any of these efforts once completed; the resolution of civil and criminal litigation and regulatory investigations and proceedings; actions by credit rating agencies to downgrade our credit ratings or those of our subsidiaries or to place those ratings on negative outlook and our ability to borrow at favorable interest rates; deviations from regulatory precedent or practice that result in a reallocation of benefits or burdens among shareholders and ratepayers; denial of approvals of proposed settlements; delays in, or denial of, regulatory agency authorizations to recover costs in rates from customers or regulatory agency approval for projects required to enhance safety and reliability; and moves to reduce or eliminate reliance on natural gas; the availability of electric power and natural gas and natural gas storage capacity, including disruptions caused by failures in the transmission grid, limitations on the withdrawal or injection of natural gas from or into storage facilities, and equipment failures; risks posed by actions of third parties who control the operations of our investments; weather conditions, natural disasters, accidents, equipment failures, computer system outages, explosions, terrorist attacks and other events that disrupt our operations, damage our facilities and systems, cause the release of harmful materials, cause fires and subject us to third-party liability for property damage or personal injuries, fines and penalties, some of which may not be covered by insurance (including costs in excess of applicable policy limits), may be disputed by insurers or may otherwise not be recoverable through regulatory mechanisms or may impact our ability to obtain satisfactory levels of affordable insurance; cybersecurity threats to the energy grid, storage and pipeline infrastructure, the information and systems used to operate our businesses and the confidentiality of our proprietary information and the personal information of our customers and employees; actions of activist shareholders, which could impact the market price of our securities and disrupt our operations as a result of, among other things, requiring significant time by management and our board of directors; changes in capital markets, energy markets and economic conditions, including the availability of credit; and volatility in currency exchange, interest and inflation rates and commodity prices and our ability to effectively hedge the risk of such volatility; the impact of federal or state tax reform and our ability to mitigate adverse impacts; changes in foreign and domestic trade policies and laws, including border tariffs and revisions to or replacement of international trade agreements, such as the North American Free Trade Agreement or the United States-Mexico-Canada Agreement (subject to congressional approval), that may increase our costs or impair our ability to resolve trade disputes; expropriation of assets by foreign governments and title and other property disputes; the impact at San Diego Gas & Electric Company on competitive customer rates and reliability of electric transmission and distribution systems due to the growth in distributed and local power generation and from possible departing retail load resulting from customers transferring to Direct Access and Community Choice Aggregation or other forms of distributed and local power generation and the potential risk of nonrecovery for stranded assets and contractual obligations; Oncor Electric Delivery Company LLC’s (Oncor) ability to eliminate or reduce its quarterly dividends due to regulatory capital requirements and other regulatory and governance commitments, including the determination by a majority of Oncor’s independent directors or a minority member director to retain such amounts to meet future requirements; and other uncertainties, some of which may be difficult to predict and are beyond our control.

These risks and uncertainties are further discussed in the reports that Sempra Energy has filed with the U.S. Securities and Exchange Commission (SEC). These reports are available through the EDGAR system free-of charge on the SEC’s website, [www.sec.gov](http://www.sec.gov), and on the company’s website at [www.sempra.com](http://www.sempra.com). Investors should not rely unduly on any forward-looking statements. These forward-looking statements speak only as of May 7, 2019, and the company undertakes no obligation to update or revise these forecasts or projections or other forward-looking statements, whether as a result of new information, future events or otherwise.

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# Leading Position in North America



**150+ Years**

*Experience in gas supply,  
transmission and distribution*

**BBB+**

*Investment Grade Credit Rating<sup>(1)</sup>*

**~US\$61 Billion**

*Total Assets*

**~43 Million**

*Customers Served<sup>(2)</sup>*

**20,000**

*Employees*

## U.S. Gas & Electric Utilities



- Largest utility holding company serving ~10% of U.S.



- 100,000 km of gas pipelines and 137 bcf of gas storage



- One of the largest buyers of natural gas in the U.S.

## North American Infrastructure

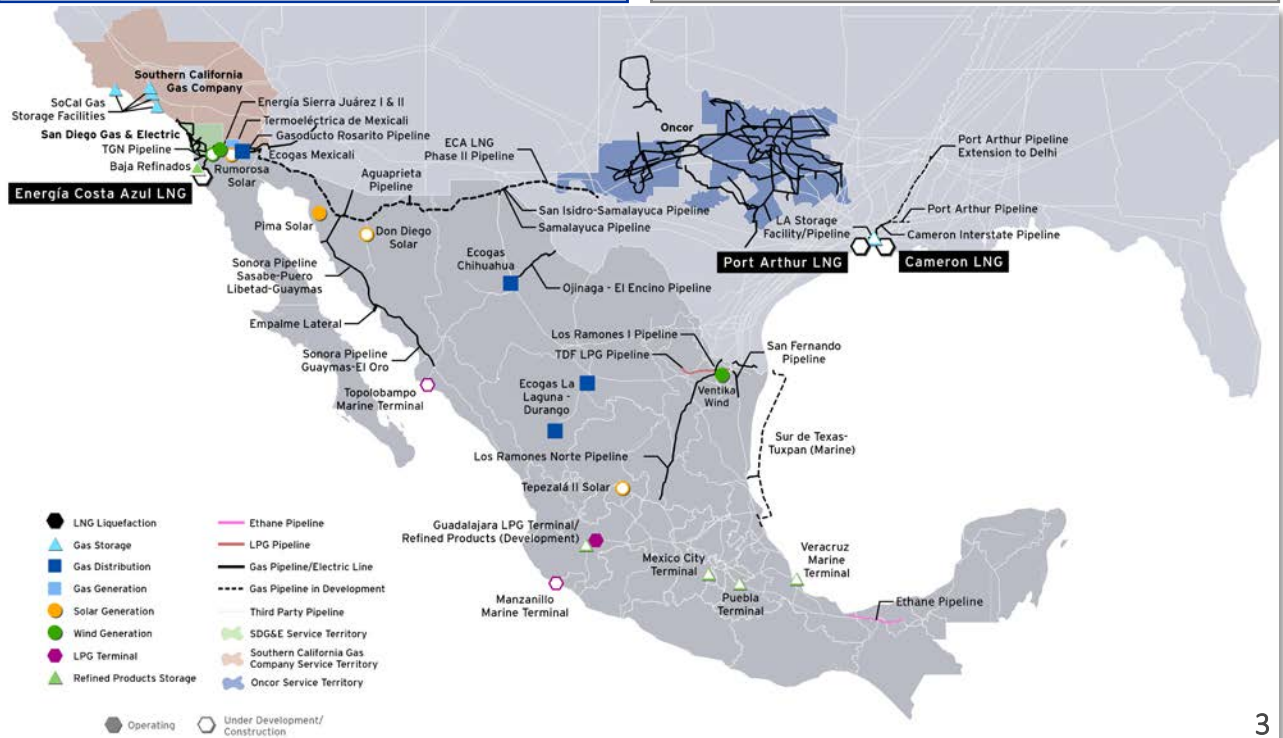


- 18 mtpa of LNG regas operated over 10+ years

- 45 mtpa of liquefaction under construction & development



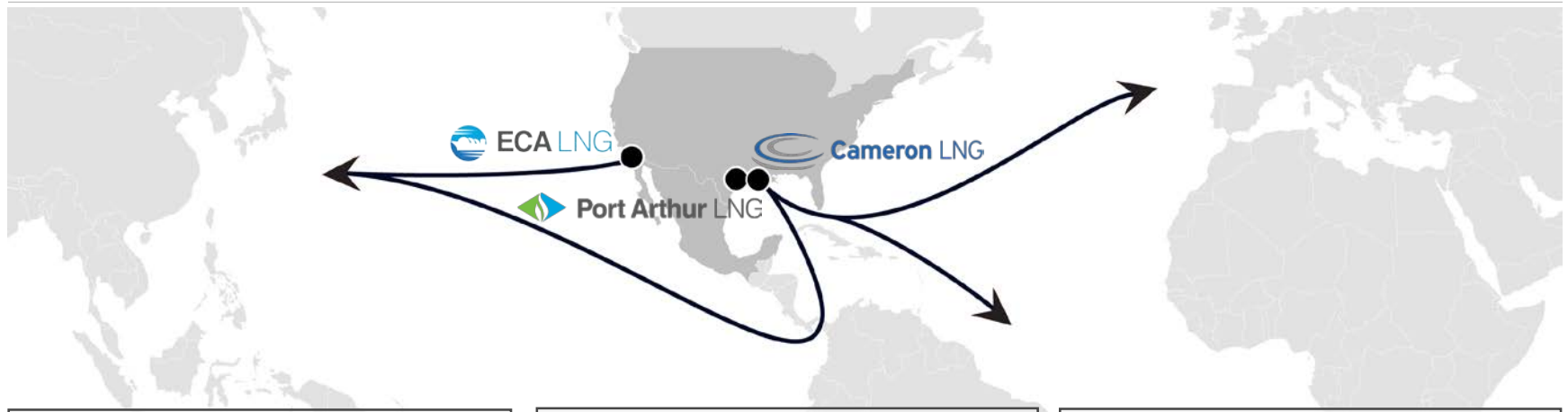
- Largest private energy company in Mexico with 20+ years of operations



(1) S&P rating. Moody's rating is Baa1.

(2) Customers served in 2018.

# Reliable LNG Supply to the Global Market






**ECA LNG Phase 1 | 3 mtpa**

- Train 1 under development
- HOAs with  **TOTAL**  **MITSUI&CO.**  **TOKYO GAS**
- FID: 2019
- First LNG: 2023

**Port Arthur LNG Phase 1 | 11 mtpa**

- Trains 1/2 under development
- SPA with  **PGNiG** for 2 mtpa
- FID: 1Q 2020
- First LNG: 2024

**Cameron LNG Phase 1 | 12 mtpa**

- Trains 1/2/3 under construction
- Capacity subscribed by  **TOTAL** (33%),  Mitsubishi Corporation (33%) and  **MITSUI&CO.** (33%)
- FID: August 2014
- First LNG: 2Q 2019

**ECA LNG Phase 2 | 12 mtpa**

- Trains 2/3 under development

**Port Arthur LNG Phases 2-4 | 33 mtpa**

- Trains 3 – 8 under development

**Cameron LNG Phase 2 | 8 mtpa**

- Trains 4/5 under development



# Port Arthur LNG – World Class Site up to 44 mtpa

## Phase 1: 2 trains for 11 mtpa

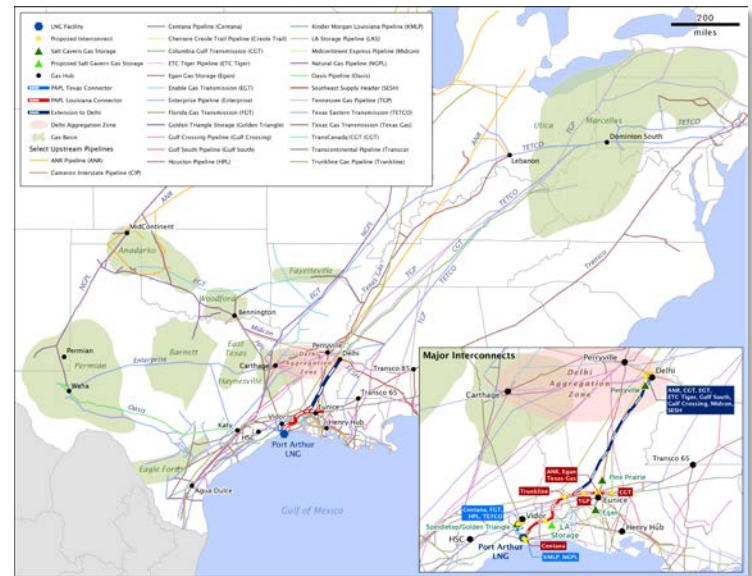
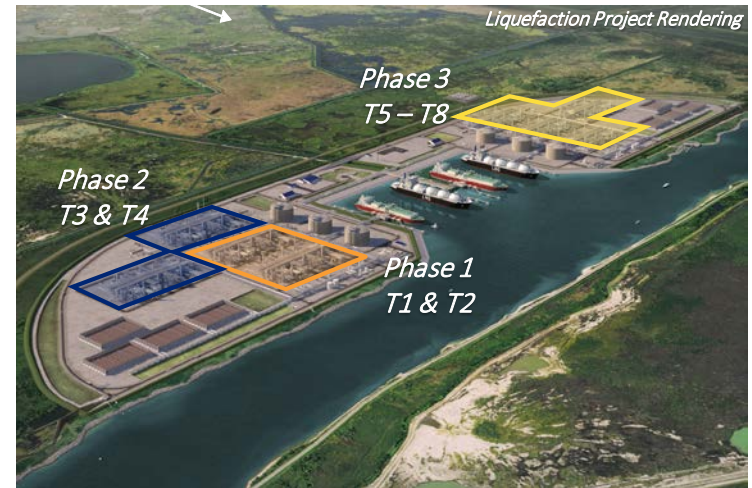
- Flexible LNG sales via FOB and DES LNG SPAs
- Timeline:
  - DOE FTA<sup>(1)</sup> Authorization – Mar 2015 & Nov 2018
  - Bechtel selected as EPC Contractor – June 2018
  - LNG SPA with **PGNiG** for 2 mtpa – Dec 2018
  - FERC Order<sup>(2)</sup> – April 2019
  - DOE NFTA Authorization<sup>(1)</sup> – May 2019
  - EPC Contract – 3Q 2019
  - FID – 1Q 2020
  - First LNG – 2024

## Phase 2 Expansion

- 2 train expansion for 11 mtpa

## Phase 3 Expansion

- 2 to 4 train expansion for up to 22 mtpa






(1) DOE FTA & non-FTA: U.S. Department of Energy, Free-trade Agreement (FTA) and Non Free-trade Agreement (NFTA) authorizations.

(2) U.S. Federal Energy Regulatory Commission (FERC) authorization for siting, constructing and operating an LNG facility and associated gas supply pipelines.











# Experienced Partner in LNG Industry

Sempra has leading industry experience related to forming joint ventures, project development and commercial activities for LNG purchases & sales with many established players in the LNG industry

<p><b>Liquefaction Development</b></p>	
<p><b>LNG Regasification</b></p>	
<p><b>LNG Marketing</b></p>	

# Commercial Contracting Models in the U.S.

- **Tolling** – sale of liquefaction capacity to a “tolling customer”
- **SPA** – sale of LNG on FOB<sup>(1)</sup> or DES<sup>(2)</sup> basis to an “LNG buyer”
- **Equity** – owner of upstream gas reserves/liquefaction facility; lift equity LNG

					VENTURE GLOBAL LNG			
PARENT COMPANY	<i>Credit Rating (S&amp;P)</i>	BBB+	BB	BBB	N.R.	N.R.	BBB-	N.R.
	<i>Total Assets (US\$ billions)</i>	US\$63	US\$32	~US\$15	< ~US\$1	US\$0.3	US\$79	US\$0.2
LIQUEFACTION PROJECT	<i>Project Name</i>	 Port Arthur LNG	Sabine Pass		Calcasieu Pass	 DRIFTWOOD LNG	 LAKE CHARLES LNG An ENERGY TRANSFER Company	Rio Grande LNG
	<i>Size (mtpa)</i>	11	23	18	10	11	15	10
	<i>Expansions</i>	<u>33</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>16</u>	<u>--</u>	<u>17</u>
	<i>Total</i>	44	28	23	20	27	15	27
	<i>Liquefaction Technology</i>	Air Products C3MR	COP Optimized Cascade	Air Products C3MR	GE Small Scale	Chart IPSMR	Air Products C3MR	Air Products C3MR
COMMERCIAL STRUCTURE	<i>Project Model</i>	SPA	SPA	Tolling	SPA	Equity	Tolling	SPA

(1) Free-on-Board (FOB), delivered to the LNG buyer at the liquefaction project onto the LNG buyer’s ship.

(2) Delivered-ex-Ship (DES), delivered at the downstream regasification terminal to the LNG buyer and offloaded into a regasification terminal.

# Commercial Contracting Models in the U.S. (cont'd)



- **Tolling** – requires Toller to have active presence in U.S. to purchase/manage gas supply
- **SPA** – liquefaction project manages upstream gas supplies purchased from E&P companies
- **Equity** – venture is both an E&P company and liquefaction project owner/operator

		Tolling	SPA	Equity
	<i>Primary Commercial Structure</i>	Capacity	LNG Sale	Lifting of LNG
	<i>Primary Commercial Agreement</i>	Liquefaction Tolling Capacity Agreement	LNG Sale and Purchase Agreement	Joint Venture and Equity Lifting Agreement
E&P Reserves	<i>Upstream E&amp;P Reserves</i>	N/A	N/A	<i>Owned by Project</i>
Gas Supply	<i>Feed Gas Supply Purchases</i>	<i>Toller</i>	Project	<i>Produced by Project</i>
	<i>Pipeline Transportation &amp; Gas Storage Capacity Management</i>	<i>Toller</i>	Project	Project
Liquefaction	<i>Liquefaction Facility Operations</i>	Project	Project	Project
LNG	<i>LNG Offtake</i>	<i>Tollers Lift LNG Produced by Project</i>	<i>Project Sells LNG to LNG Buyers</i>	<i>Equity Owners Lift Equity LNG on Pro Rata Basis</i>