

Structuring LNG Tolling Agreements: Negotiating Fee Structure and Payment, Lifting Terms, Liability, and Other Key Provisions

TUESDAY, MAY 16, 2017

1pm Eastern | 12pm Central | 11am Mountain | 10am Pacific

Today's faculty features:

Monica Hwang, Counsel, **King & Spalding**, Houston

Taylor Johnson, Assistant General Counsel, **Cheniere Energy**, Houston

Kathryn (Kathy) Marietta, Partner, **King & Spalding**, Houston

Matthew F. Salo, Senior Counsel, **Freeport LNG**, Houston

Audie Setters, CEO, **Lonestar LNG**, Houston

Nathan Will, Commercial Vice President, **Freeport LNG**, Houston

The audio portion of the conference may be accessed via the telephone or by using your computer's speakers. Please refer to the instructions emailed to registrants for additional information. If you have any questions, please contact **Customer Service at 1-800-926-7926 ext. 10.**

Tips for Optimal Quality

FOR LIVE EVENT ONLY

Sound Quality

If you are listening via your computer speakers, please note that the quality of your sound will vary depending on the speed and quality of your internet connection.

If the sound quality is not satisfactory, you may listen via the phone: dial **1-866-755-4350** and enter your PIN when prompted. Otherwise, please **send us a chat** or e-mail sound@straffordpub.com immediately so we can address the problem.

If you dialed in and have any difficulties during the call, press *0 for assistance.

Viewing Quality

To maximize your screen, press the F11 key on your keyboard. To exit full screen, press the F11 key again.

Continuing Education Credits

FOR LIVE EVENT ONLY

In order for us to process your continuing education credit, you must confirm your participation in this webinar by completing and submitting the Attendance Affirmation/Evaluation after the webinar.

A link to the Attendance Affirmation/Evaluation will be in the thank you email that you will receive immediately following the program.

For additional information about continuing education, call us at 1-800-926-7926 ext. 35.

Program Materials

FOR LIVE EVENT ONLY

If you have not printed the conference materials for this program, please complete the following steps:

- Click on the ^ symbol next to “Conference Materials” in the middle of the left-hand column on your screen.
- Click on the tab labeled “Handouts” that appears, and there you will see a PDF of the slides for today's program.
- Double click on the PDF and a separate page will open.
- Print the slides by clicking on the printer icon.

Structuring LNG Tolling Agreements



Webinar: May 16, 2017

Lawyers to the LNG Industry



Petroleum Economist recently named King & Spalding its Energy Advisory Firm of the Year: Legal.

“Exceptional expertise in LNG matters and frequently sought out to play a leading role on some of the largest mandates worldwide.”

—*Chambers Global*

This presentation and the matters discussed in it are not intended to be and should not be relied upon as legal advice.

Panel Overview:

Panel Members



Kathy Marietta

kmarietta@kslaw.com

Kathy Marietta is a partner in King & Spalding's Houston office and is a member of the Global Transactions Practice Group.

Prior to joining King & Spalding, Ms. Marietta was assistant general counsel of Apache Corporation, where her practice was international with a focus on major projects (including LNG projects).

Panel Members



Nathan Will

nwill@freportlng.com

Nathan Will is Vice President – Commercial at Freeport LNG, where he was instrumental in the development of one of the first U.S. LNG export projects.

Freeport LNG has won numerous awards, including Project Finance International's Deal of the Year-Americas.

Panel Members



Matt Salo

msalo@freeportlng.com

Matt Salo is Senior Counsel at Freeport LNG.

The Freeport LNG legal team was recently awarded the 2014 Leadership Award from Texas Lawyer magazine.

Panel Members



Audie Setters

asetters@lonestar-lng.com

Audie Setters is CEO of LoneStar LNG LLC, a private start-up with technology patents around Floating LNG (supply) and FSRU Power Vessel (market).

Audie Setters has 35 years of oil, gas and LNG experience, including various LNG commercial roles with Chevron and an outside advisor role on the Alaska LNG project.

Panel Members



Taylor Johnson

taylor.johnson@cheniere.com

Taylor Johnson joined (in April of this year) as Assistant General Counsel, Commercial Legal, of Cheniere, which developed the first LNG export project in the lower 48 to have achieve commercial operations.

Taylor Johnson has extensive LNG experience with Veresen (Jordan Cove) and BG.

Background

LNG Value Chain



**Upstream
Natural Gas
Exploration and
Production**



**Natural Gas
Processing and
Liquefaction**



**LNG
Shipping**



**LNG
Storage and
Regasification**



**Natural Gas
Marketing**



- Each link in the chain must fully perform its contractual obligations
- Failure of one link adversely affects other key links
- Contracts must set forth integrated responsibilities
- Long-term nature of relationships requires joint planning and flexibility

Attributes of LNG Value Chain



EXPLORATION & PRODUCTION

- Historically dominated by NOC / IOC partnerships in countries with stranded reserves far from major markets
- US markets have introduced new upstream dynamics
- Large gas reserves required (6 TCF or more per train)
- High capital costs (primarily equity)
- High risks / high ROI

LIQUEFACTION

- Historically dominated by NOC / IOC partnerships
- US markets have shifted this dynamic
- Several proprietary technologies available
- Specialized cryogenic expertise required
- High capital cost, typically project financed
- Long development cycle
- Typically earn “tolling facility” ROI

SHIPPING

- Specialized carriers –two basic designs
- Asian Shipyards dominate
- Specialized expertise; typically owned by shipping company and chartered to seller or buyer
- High capital cost, highly leveraged financing
- Low risk to shipowner but low ROI

REGASIFICATION & STORAGE

- Historically owned and operated by buyers (but trend is toward merchant terminals)
- Specialized cryogenic expertise required
- Capital cost low relative to upstream
- Typically project financed at low-risk “tolling facility” ROI
- Some siting and permitting challenges

Discussion Topics

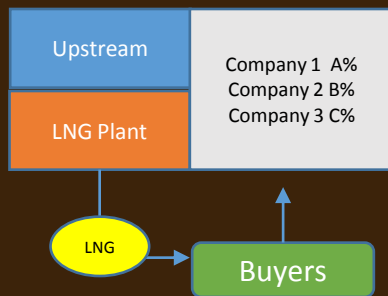
Topic 1

- Where did the industry start when it came to structures. And how it has evolved to today?

Three Major Variations on LNG Project Structures

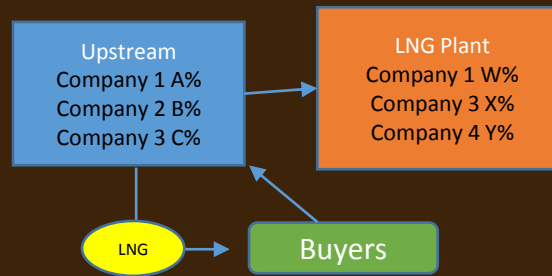
Integrated Structure

- Integrated Structure remits the full market value to the upstream, with the same shareholding throughout the value chain
- Upstream owns the LNG Plant and sells FOB or owns/charters ships
- Upstream and LNG Plant included in upstream tax regime



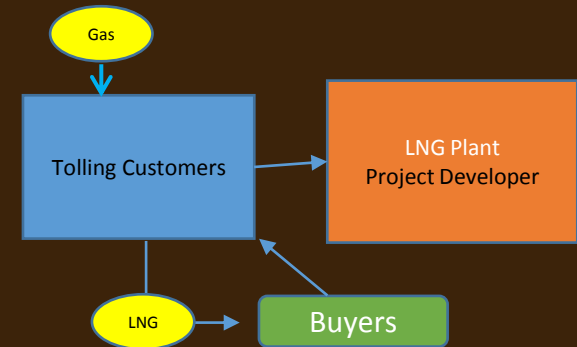
Tolling Structure (Non-US)

- LNG Plant provides a service for a fee – market value to the upstream less the fee
- LNG Plant is owned separately from upstream
- Gas and LNG remains the property of upstream until sold
- LNG Plant under separate tax regime from upstream



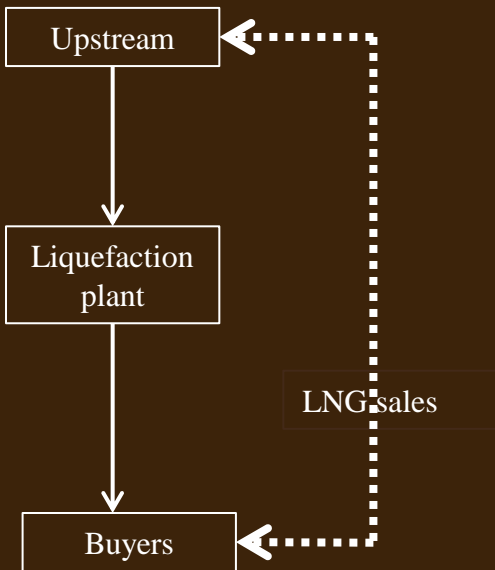
Tolling Structure (US)

- LNG Plant provides a service for a fee – negotiated rates
- LNG Plant is owned separately from upstream
- Tolling customer procures gas and sells LNG
- LNG Plant under separate tax regime from upstream

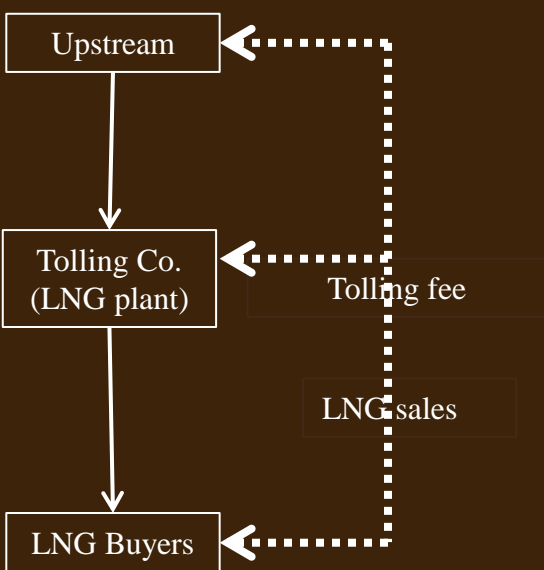


Contracts for Each Structure

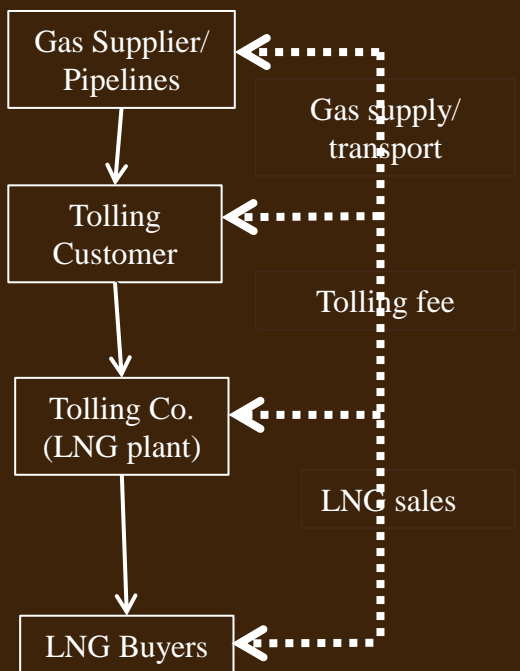
Integrated Structure



Tolling Structure (Non-US)



Tolling Structure (US)



Topic 2

- What are the benefits of a tolling structure (versus integrated model)?
 - Flexibility
 - Ownership/ participation in different parts of the LNG chain
 - Multiple upstream groups using one LNG plant
 - Expansions
 - Economic effects, including financing

Topic 3

- How is the U.S.'s pure, merchant third party tolling model different from non-US tolling model?
 - Different reasons to elect tolling
 - Different approach to fee structure
 - Profile of participants

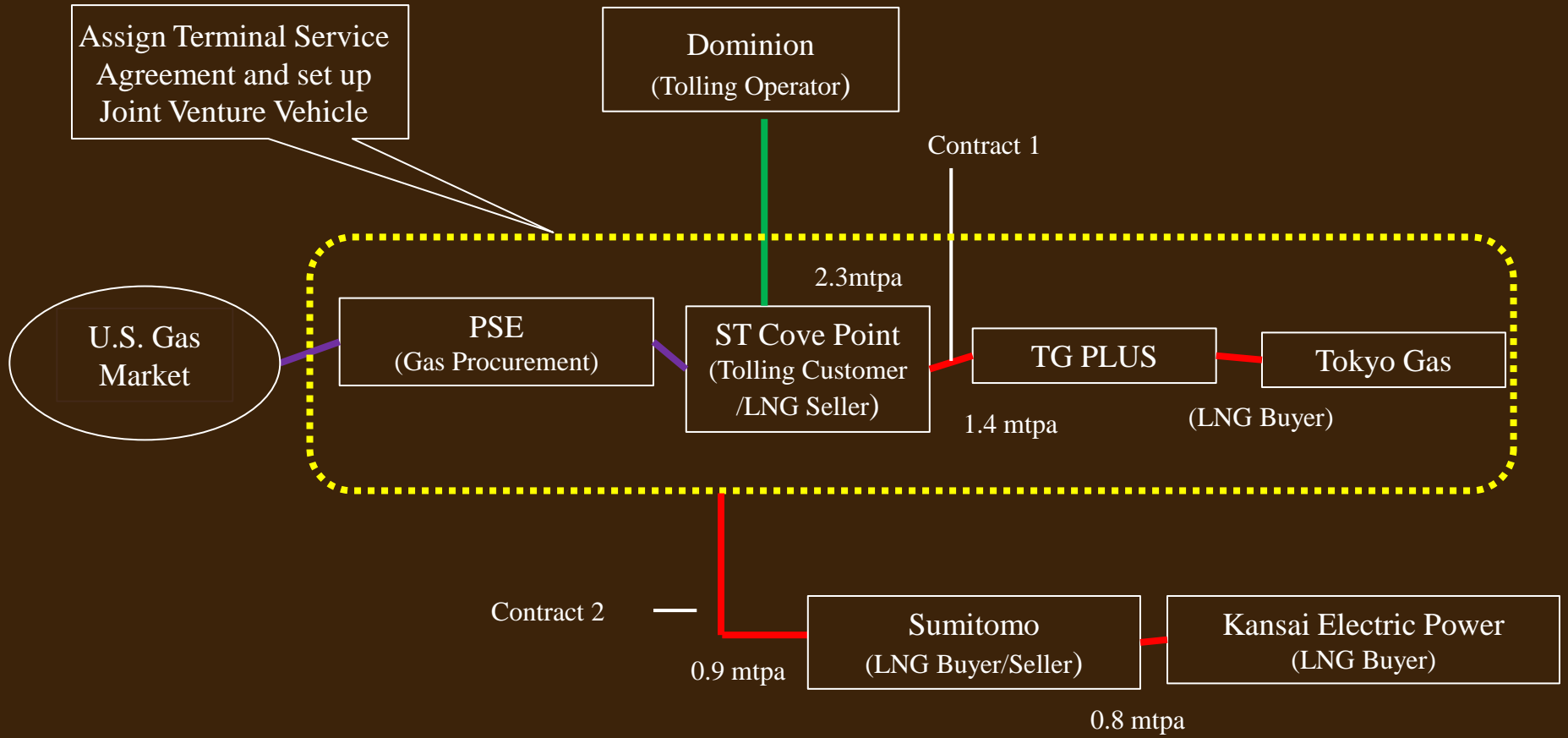
Topic 4

- What were the drivers on deciding one structure over the other?
 - Same factors as discussed in flexibility
 - Expansions
 - Ownership/ participation in different parts of the LNG chain
 - Multiple upstream groups using one LNG plant
 - Economics/ Financing

Cove Point LNG

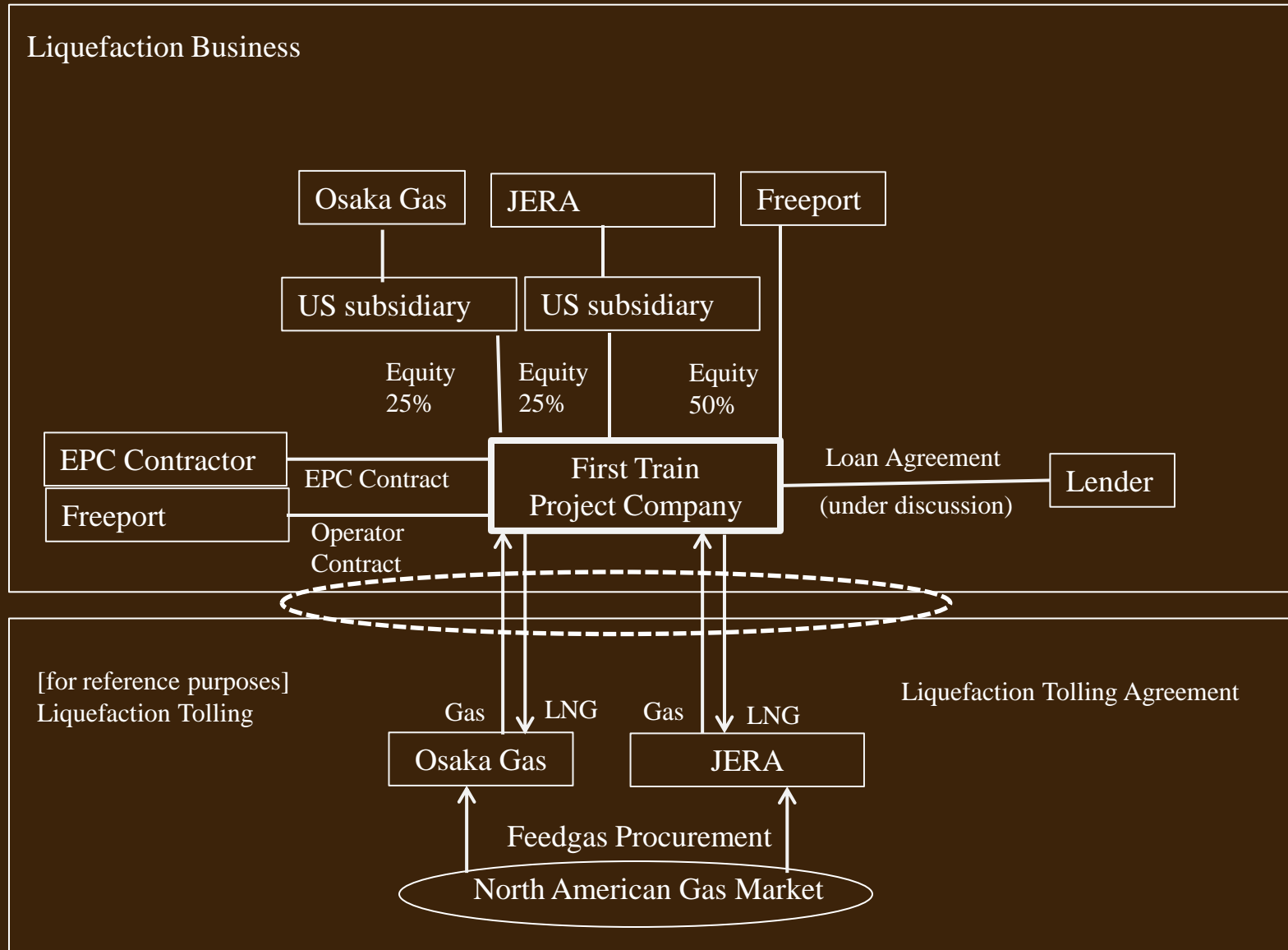
<Final Contract Structure tentatively, from Spring 2014>

- Tolling Contract
- Natural Gas Contract
- LNG Contract



<http://www.lngworldnews.com/sumitomo-tokyo-gas-form-cove-point-jv/>

Freeport LNG

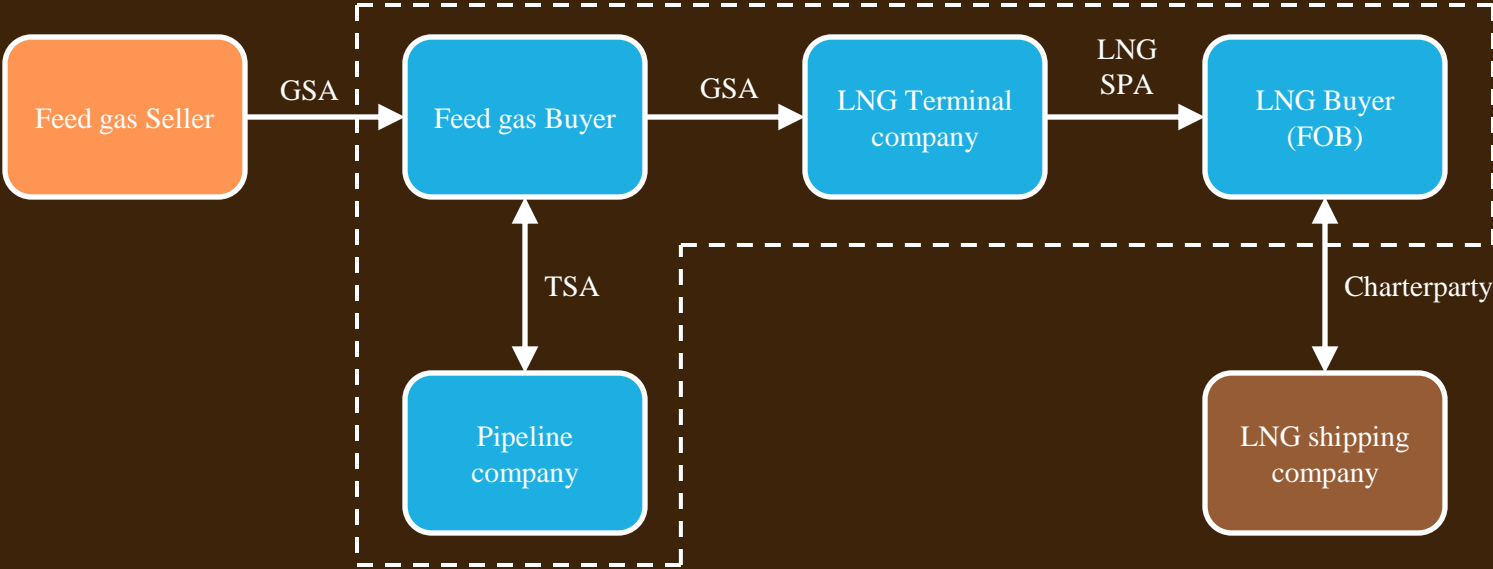


Based on: http://www.chuden.co.jp/english/corporate/ecor_releases/erel_pressreleases/3238906_18939.html

Topic 5

- Did all North American projects include tolling? What are the alternatives to the U.S. tolling model?
 - See Cheniere model

Current Cheniere Corporate Structure (Sales Model)



*Various Cheniere entities participate within the dashed line

Topic 6

- What are some of the considerations in deciding between a US tolling versus sales model?
 - Customer's preference for upstream equity/ participation
 - Risk vs. flexibility
 - Capital requirement
 - Upstream market dynamic

Topic 7

- Describe the complexities of the third party tolling structure.
 - Ensure entire LNG chain can be achieved
 - Scheduling/ ADP
 - Managing/ balancing gas receipts and LNG deliveries; potential lending and borrowing

Topic 8

- How has US- third party tolling model changed LNG market dynamics?
 - Buying optionality
 - Liquid, transparent gas pricing
 - No destination restriction

Topic 9

- What are the important components of establishing the fee structure and payment?
 - Non-U.S. LNG projects
 - Tax/Royalty
 - Return on capital
 - Gas transfer pricing
 - U.S. LNG projects
 - Revenue stream to support project financing
 - Variable costs such as OPEX and fuel usage/ retainage

Topic 10

- What are other key factors/ provisions to be considered?
 - Conditions to effectiveness
 - Windowing to start of services/ deliveries; appropriate delays
 - Commissioning/ turn-down
 - Liftings/ ADP/ Inventory Management

Topic 10 (continued)

- What are other key factors/ provisions to be considered?
 - Title and risk –US tolling versus US sales
 - Quality/ commingling
 - Allocation of permitting risk, including DOE export permit
 - Force majeure
 - Credit

Topic 11

- What do you see as new developments that may affect US LNG projects?
 - Politics – FERC/DOE uncertainty
 - New technology – floating, mid-scale, container, etc.
 - LNG bunkering
 - Deregulation/ opening of markets in China, Japan, Korea, etc.
 - Developments in LNG sales- destination flexibility, smaller volumes, shorter-term, etc.
 - US production costs/ technology

Additional Material

Crude Oil and LNG are Very Different

Crude Oil

- Large, flexible worldwide trading market
- Cargoes often sold short-term or cargo-by cargo to highest bidder using standard industry terms
- 2014 shipments – 40.1 million barrels / day
- Exporting Countries – 85 (approximate)
- Importing Countries – 86 (approximate)
- 2014 number of ships – 5,153

LNG

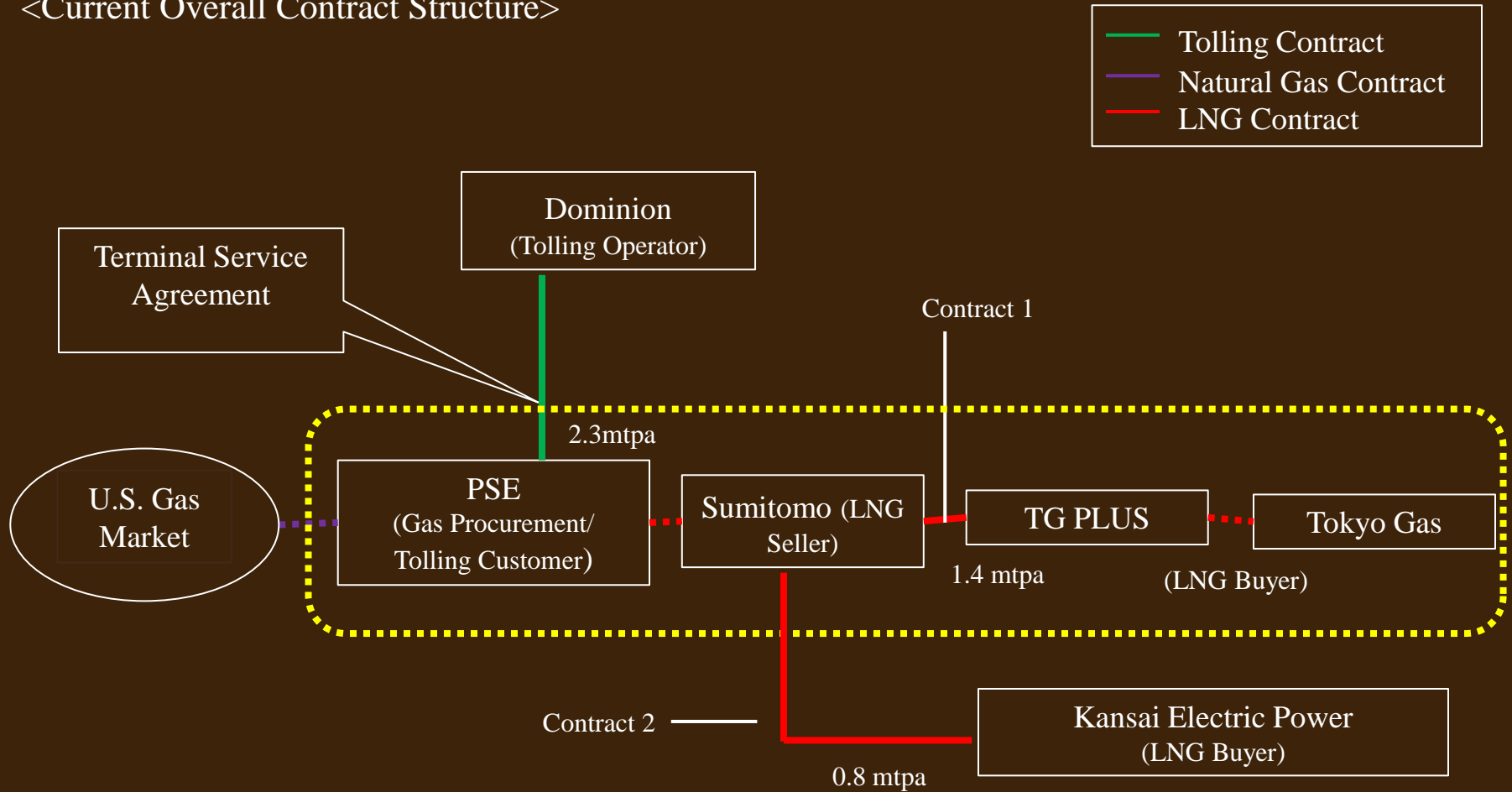
- Total shipments = 14% of crude oil shipments
- Most cargoes shipped under long term highly negotiated contracts
- 2014 shipments – 5.7 million barrels of oil equivalent per day (241.4 million metric tons / year)
- Exporting countries – 19
- Importing countries – 30
- Number of ships – 373+

LNG Trade Characteristics

- LNG is not a commodity business – however, a spot market is emerging
- “Baseload” sales of LNG are long term: 20-25 years
- Long term contracts are take-or-pay
- LNG projects are capital intensive
- New pricing environment due to commodity prices
- Fully dedicated shipping often required
- Project financing depends on players, creditworthy buyers, agreements and reliable LNG chain
- Demand uncertainty due to increasing supply options

Cove Point LNG

<Current Overall Contract Structure>



<http://www.lngworldnews.com/sumitomo-tokyo-gas-form-cove-point-jv/>

Project Structures (Examples)

Traditional LNG Projects

Merchant

Issue/Project	PNG LNG	AP LNG	Gorgon	Wheatstone	Sabine Pass
Status	Operating	Constr. (80%)	Constr. (90%)	Constr. (65%)	Constr. (75%)
FID	2009	2011	2009	2011	2012
First Gas	2014	2015	2015	2016	2016
Operator	XOM	JV Co.	Chevron	Chevron	Cheniere
Fiscal Structure	Concession	Mining Concession	Concession ⁽¹⁾	Concession ⁽¹⁾	No Concession (buying off the grid)
Commercial Structure	Integrated	Integrated Origin - Upst COP - Downst	Integrated (fully unitized)	Integrated (D/S reservoir)	Cheniere commits to build after buyers commit to capacity; No interest in supply
Marketing Structure	Joint Venture Marketing	Joint Venture Marketing	Equity Lifting	Joint Venture Marketing	Equity marketing to end users
Foundation Buyers	Sinopec, TEPCO, OG, CPC	Sinopec Kyushu	TG, Chubu and Osaka Gas (OG)	TEPCO, Kyushu	BG and Gas Natural
Buyer Equity (Total %)	<7%	25%	<5%	9.5%	No equity
Buyer Influence	Minimal post FID	Minimal post FID	Minimal post FID	Minimal post FID	No influence
Economics⁽²⁾: ROR (%)	16.2%	10.1%	10.6%	14.3%	10.5%
Breakeven (\$/mmbtu)	\$8.13	\$14.53	\$12.28	\$14.28	\$12.50

(1) Domestic gas reservation (approx. 20%)

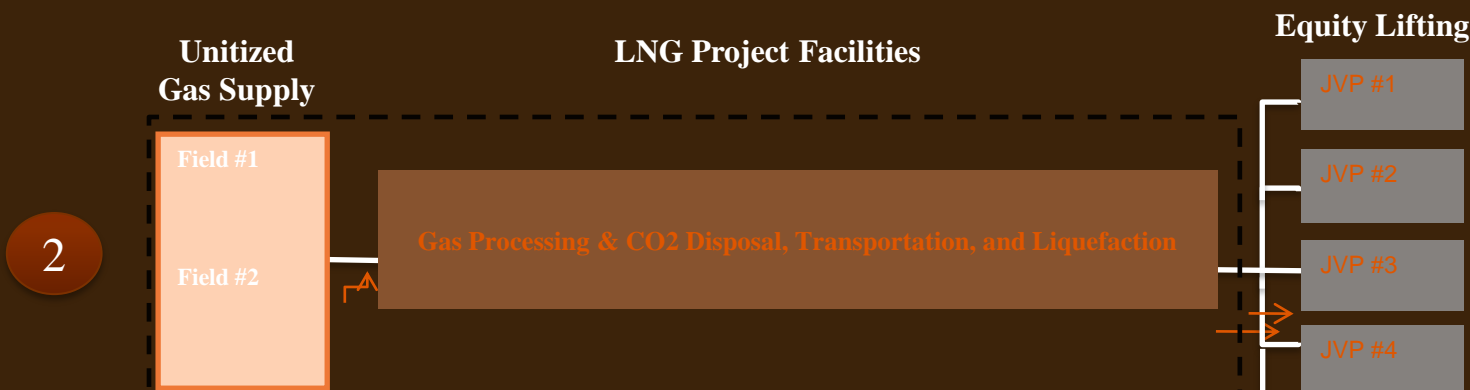
(2) Wood Mackenzie Assumptions

LNG Commercial Concepts



Integrated

- Traditional structure
- Common Ownership from resource to end user
- Commercially simple but rigid governance
- Eg. Northwest Shelf, Yemen LNG



Equity Lifting

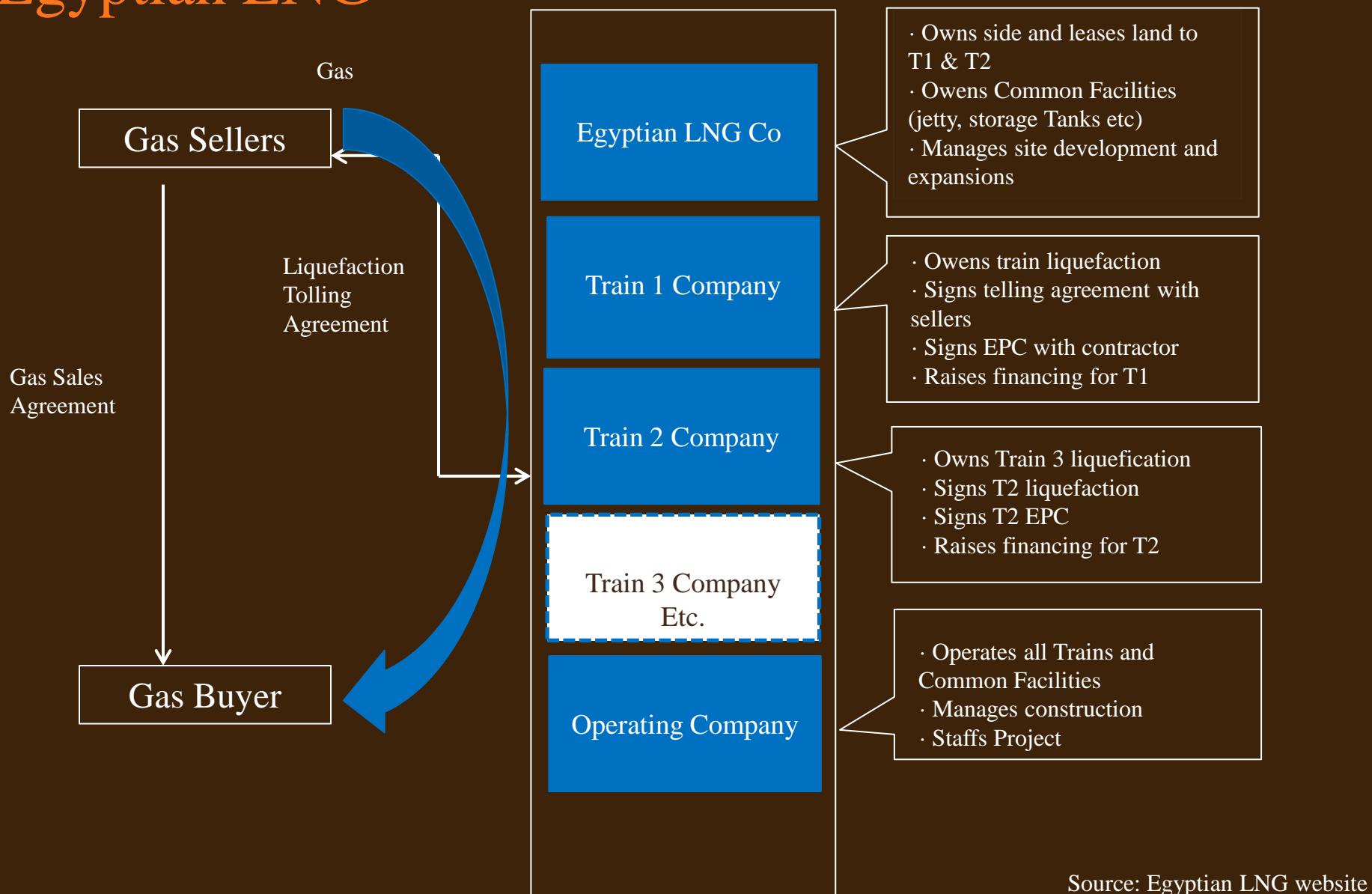
- Equity Lifting with unitization in the upstream
- Optimized Resource development
- Eg. Gorgon



Hub Concept

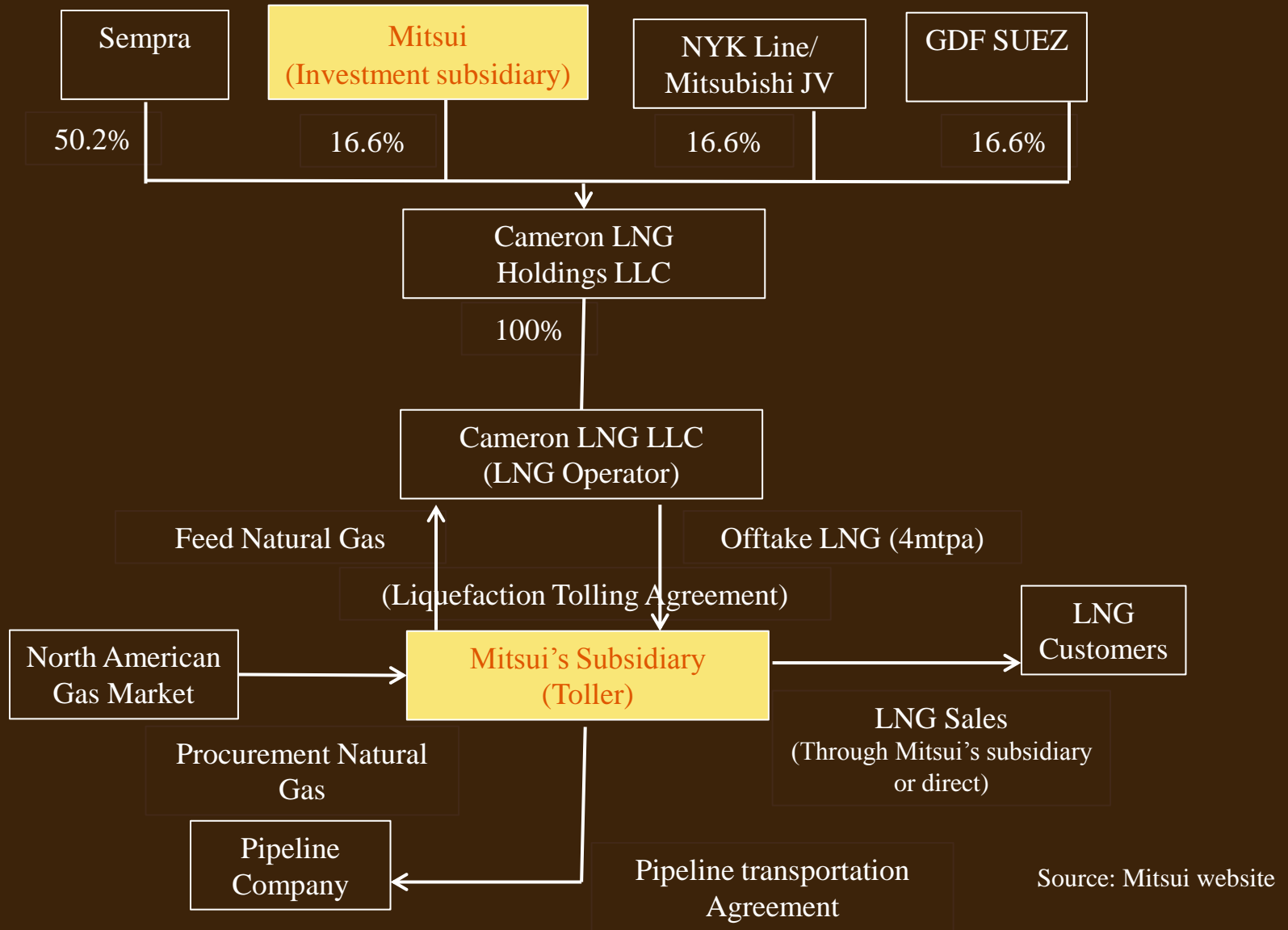
- Buyers take a pro-rata share of upstream reservoir risk
- Operational balancing
- Buyers contract LNG from each field pro-rata (3:1)
- Eg. Wheatstone LNG

Egyptian LNG



Source: Egyptian LNG website

Cameron LNG



Source: Mitsui website