Cheniere Energy [NYSE: LNG]

Price Target: $100.74
Upside: 38%

Industrials & Energy

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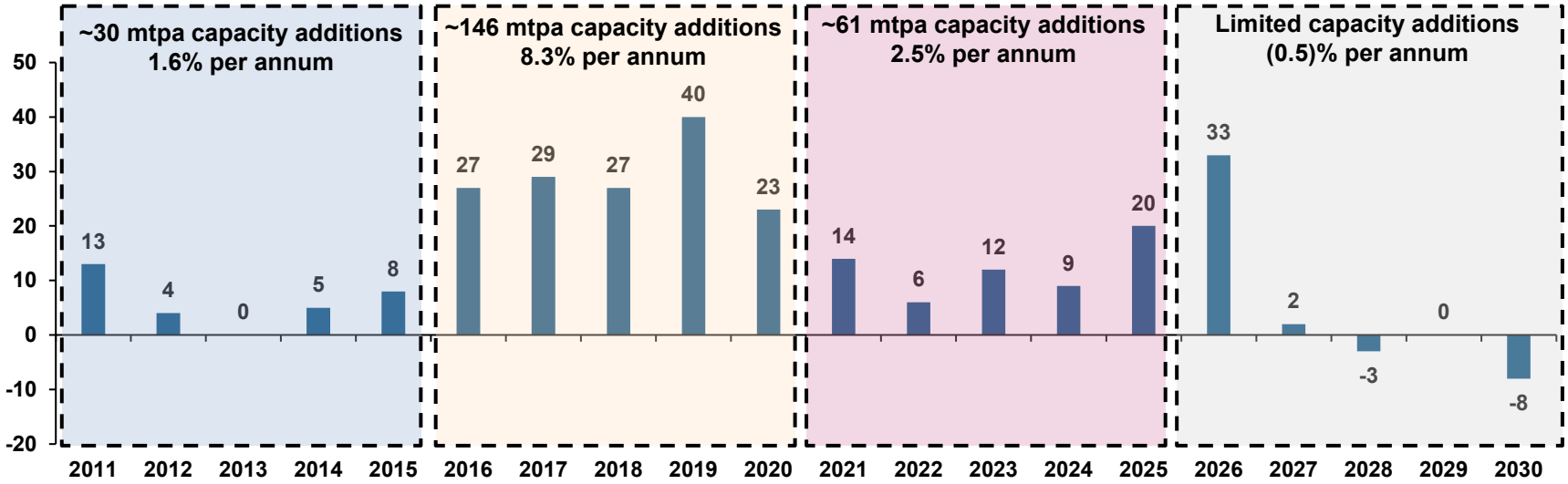
Table of Contents

Investment Narrative

Improving LNG market dynamics benefit Cheniere as it focuses on capital return

Global LNG market has absorbed ample supply additions in the last cycle

Global LNG liquefaction capacity additions (mtpa)



- Increasing demand for alternatives to coal in developing economies
- Benefits of LNG due to cost, transportation, and regasification capabilities already in existence
- China has the most potential for long-term LNG demand due to push to **reduce coal usage by 50%**
- The United States will **benefit from China returning to contract negotiations after the trade war and pandemic**, and Cheniere Energy is best positioned to benefit from this
- Cheniere Energy is also at a crucial inflection point in its business cycle, **transitioning from growth at all costs** to debt paydowns and returning capital to shareholders

(1) Wood Mackenzie Data

What is Liquefied Natural Gas (LNG)?

LNG is natural gas in liquid form that allows for transportation overseas

A costly and complicated process allows for gas to be converted into LNG

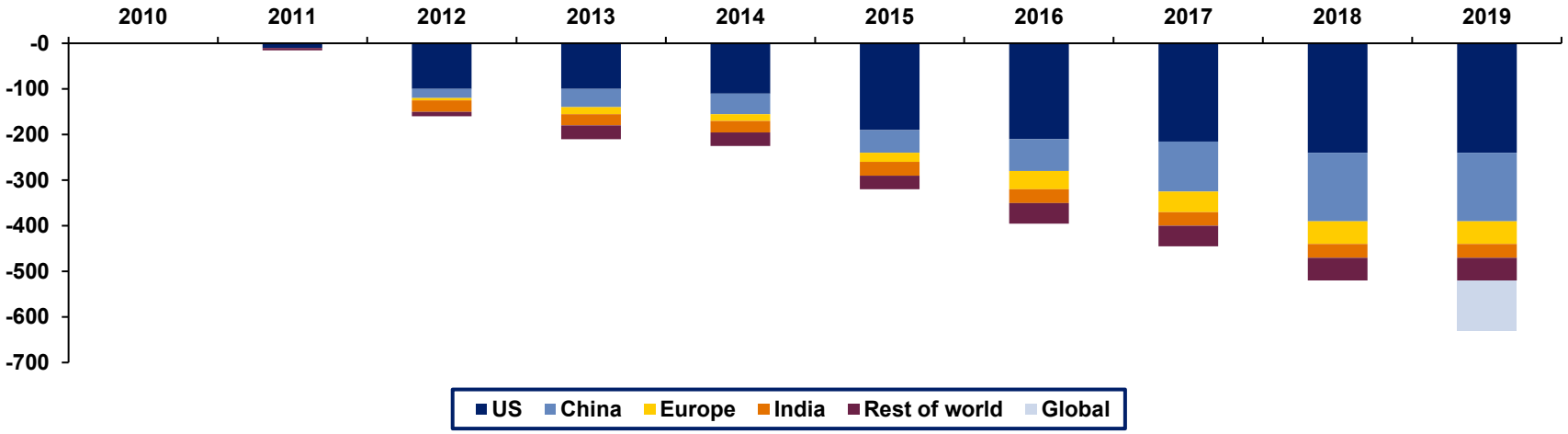
Natural Gas from the pipe is ~70º F

At a train, liquefaction lowers temp down to -260º F

LNG volume is 600x less than NG making it easier to transport

LNG is set to replace coal usage in developing countries seeking to reduce carbon output

Coal-to-Gas Switching CO2 Savings (CO2 MT)



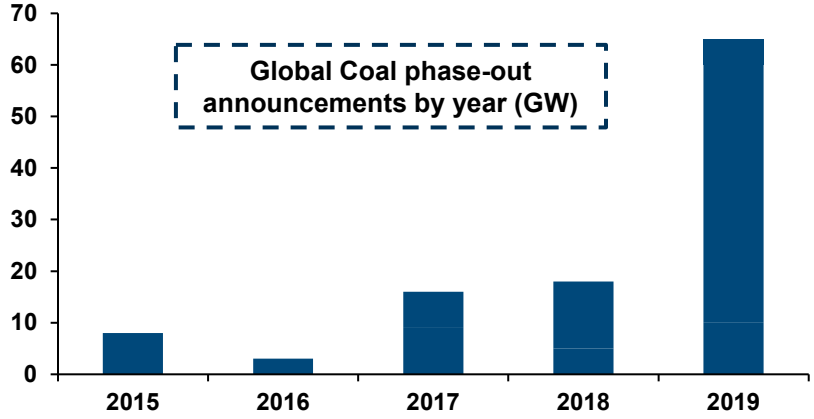
(1) Shell 2020 Global LNG Report

Liquified Natural Gas Investment Thesis

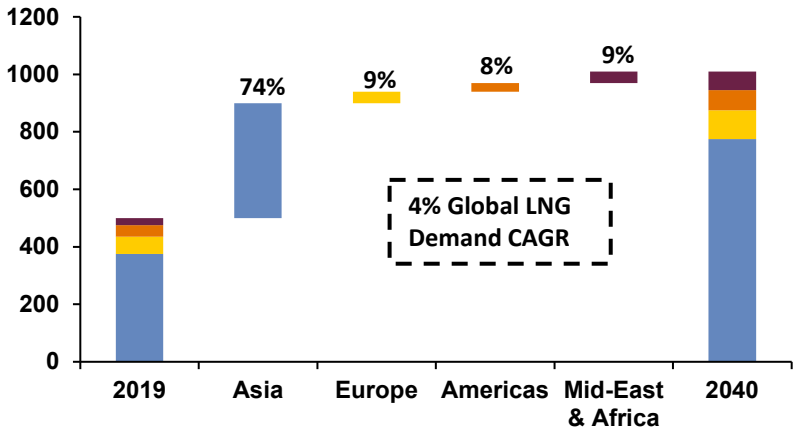
Global Liquefied Natural Gas Demand Is Set To Increase To Offset Coal

As foreign economies eliminate coal, demand for natural gas will increase significantly

The transition away from coal…

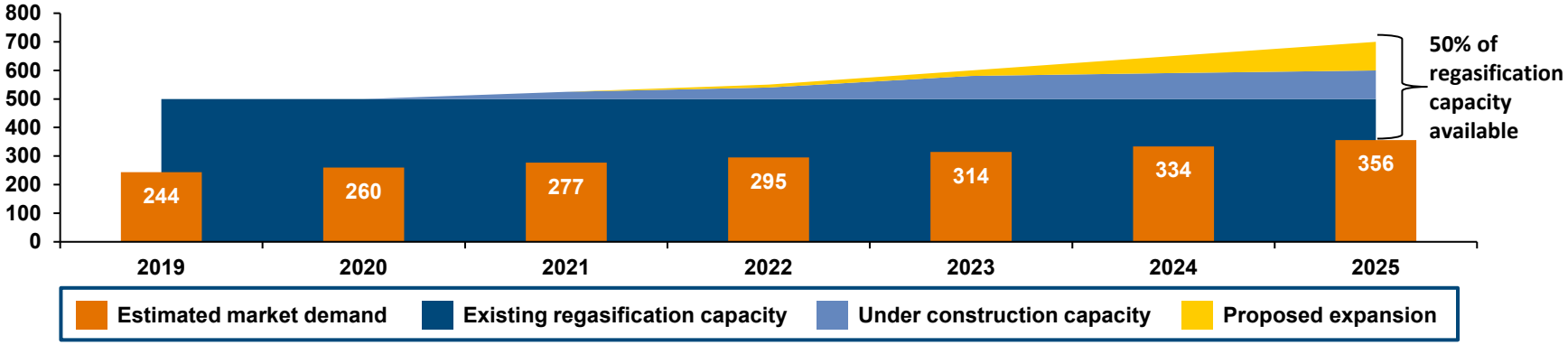


…will result in significant LNG demand growth.



Asia has ample regasification facilities to support an increasing number of LNG imports from other continents

Asian regasification facilities compared to market demand for LNG (mt)

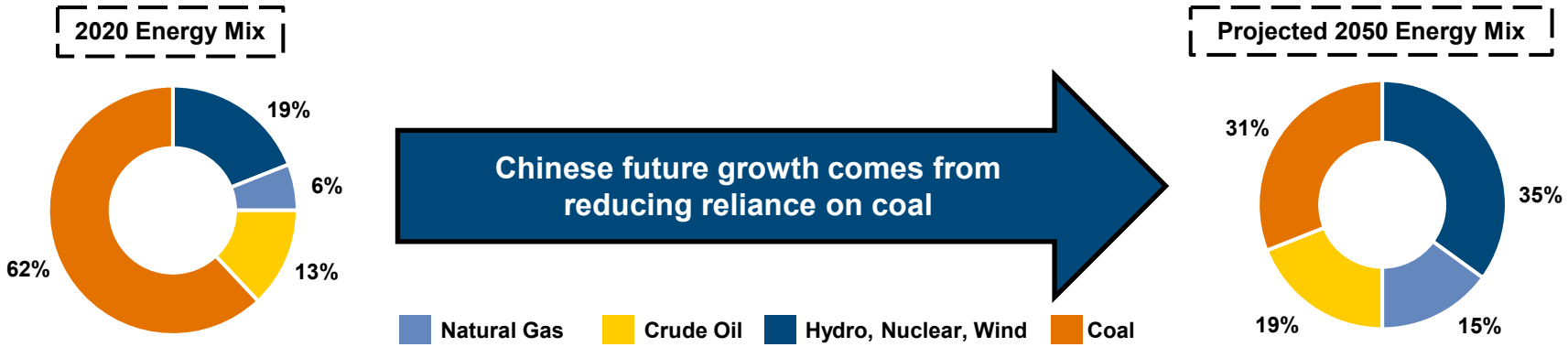


(1) Shell 2020 Global LNG Report (2) McKinsey (3) Wood Mackenzie Data

Chinese Demand For Natural Gas Is Set To Drastically Increase

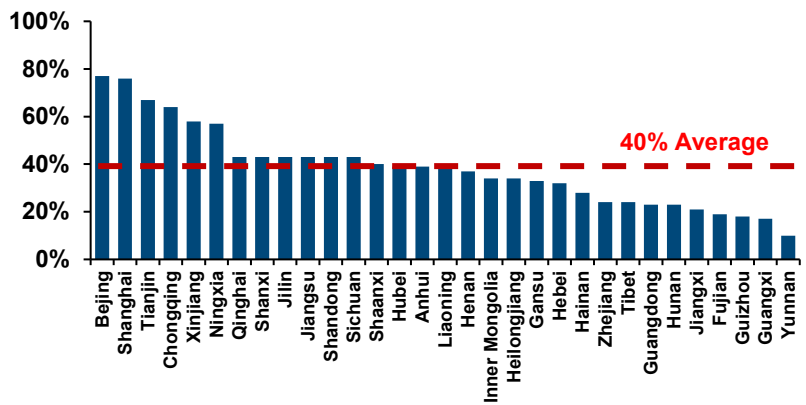
Half of all energy from coal will be replaced with natural gas and renewables by 2050

Chinese natural gas demand growth has been driven by government policy to reduce carbon emissions



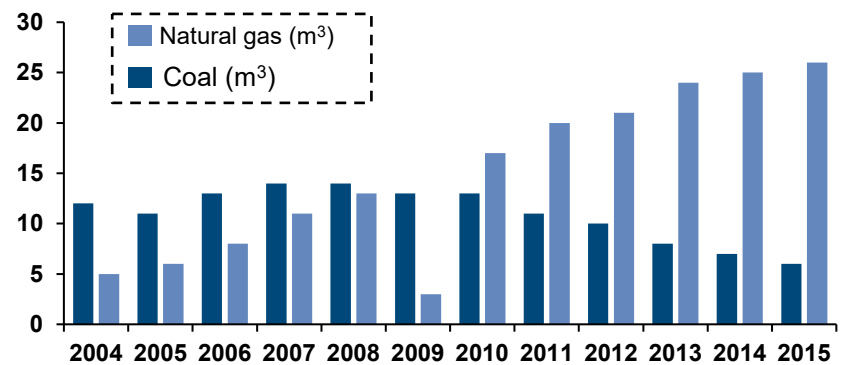
Residential segment to see highest growth potential

Natural gas penetration rate of urban residents



Households' switch from coal gas to natural gas

Coal and natural gas consumption by households



(1) 2016 UN Figures (2) 2050 CCP Data (3) Wood Mackenzie Data

China Will Be Forced To Rely On LNG Over Pipelines And E&P Projects

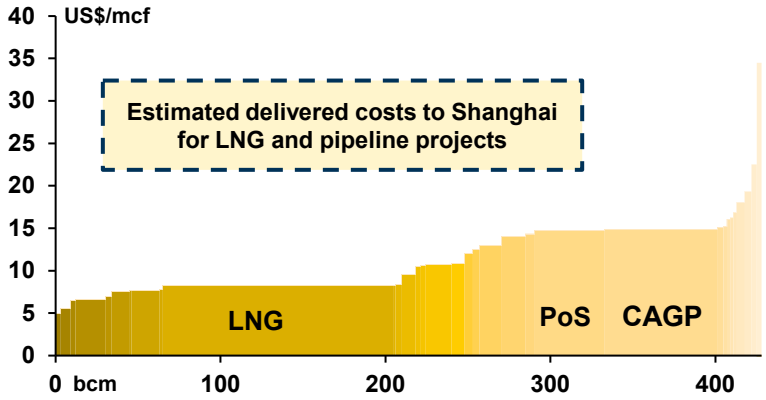
LNG has significant benefits over other means to produce gas

China domestic gas production future is limited

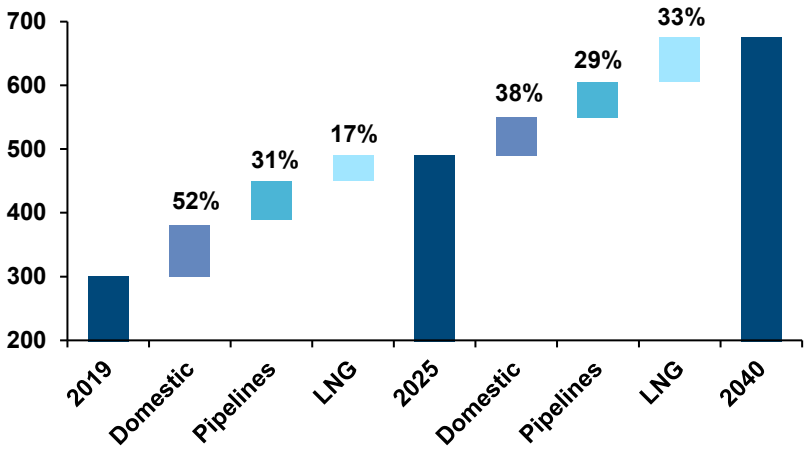
- BP joined Shell, Exxon, and ConocoPhillips to become the **latest O&G major to stop drilling shale gas in China in 2019**
- Difficulties include complex and deep revisor geology, low well productivity, and infrastructure constraints

> "For like-for-like exploration and development, **costs of shale gas in China are two to three times those in the US**."– *PetroChina*

LNG is cheaper than other means to procure gas

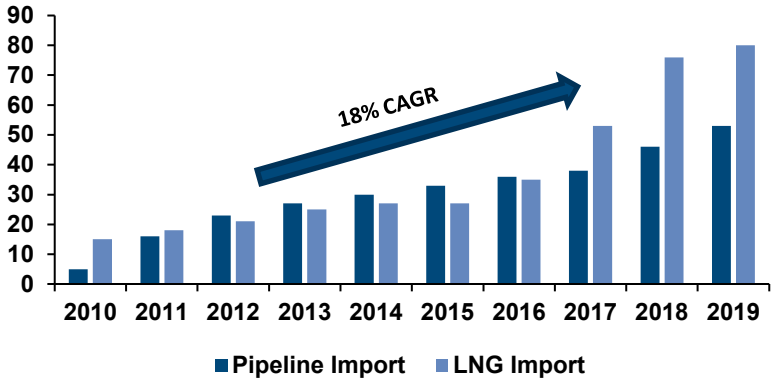


Future gas demand in China is mostly LNG imports



Reliance on LNG shipments over gas pipelines

China LNG and pipeline gas imports (bcm)



(1) Wood Mackenzie Data (2) JPM Estimates (3) Wood Mackenzie Data

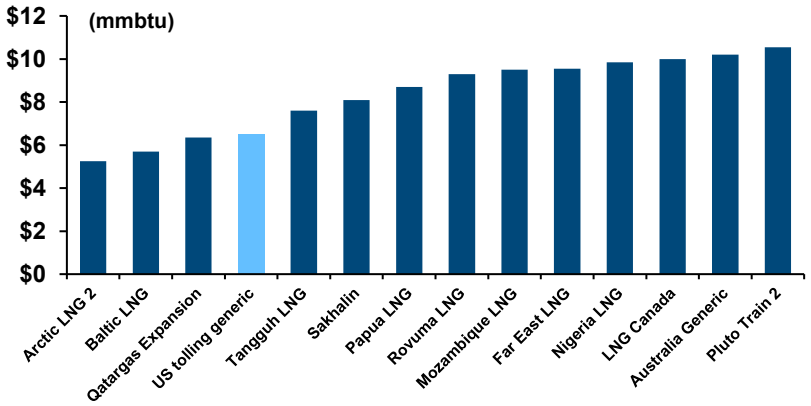
US LNG Industry Is Set Up To Capture Future Demand Growth

The US toll-treatment model for exporting LNG is superior to foreign models

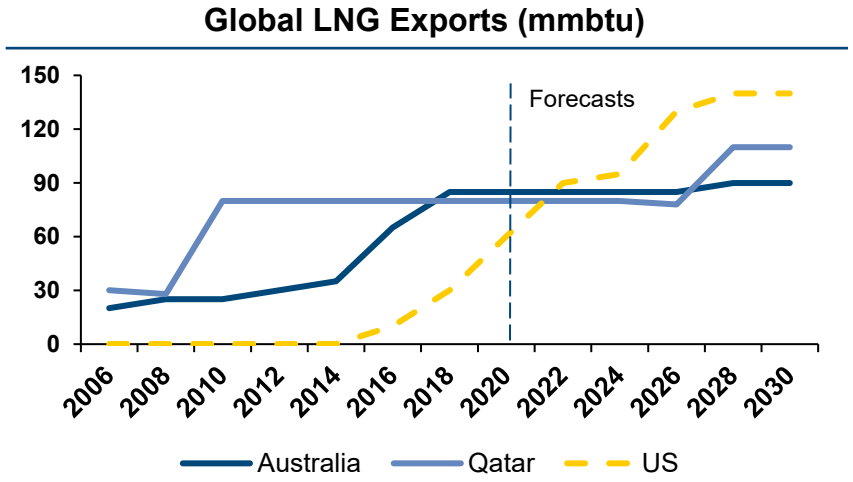
Benefits of the transition from LNG importer to exporter

1. **Abundance of domestic natural gas supply**
2. **Extensive domestic gas pipeline network**
3. **Existing import terminals converted to export terminals**
4. **US take-or-pay contract structure**

US has historically had low costs for deliveries



US will eventually become the largest LNG exporter

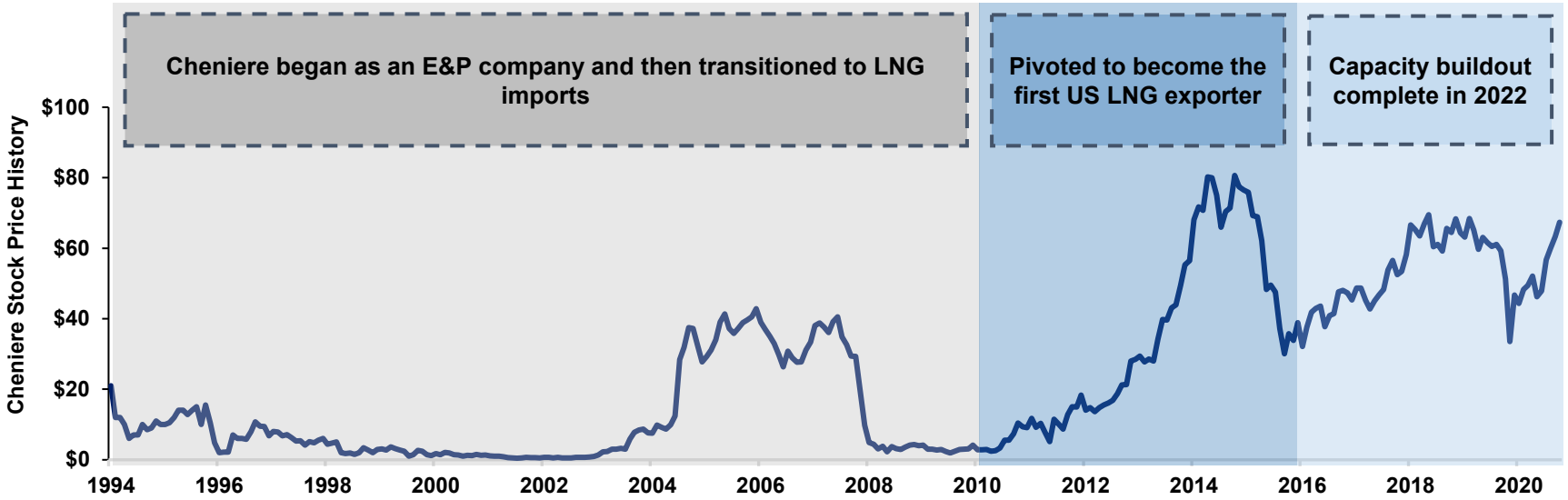


(1) JPM Estimates (2) Shell Data

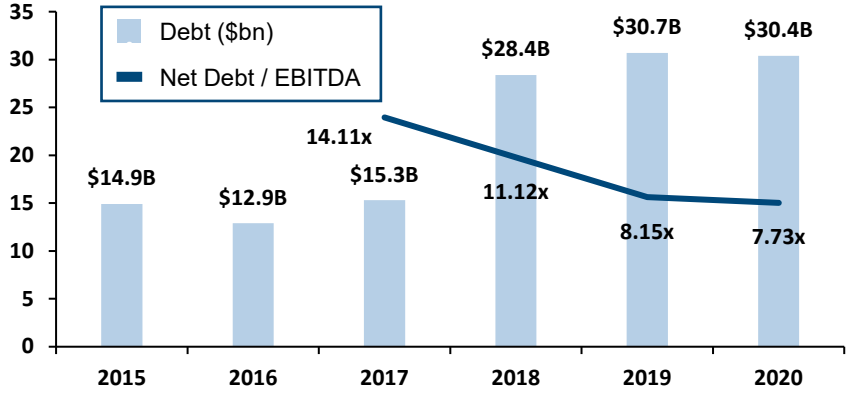
Cheniere Energy Investment Thesis

The Cheniere Story

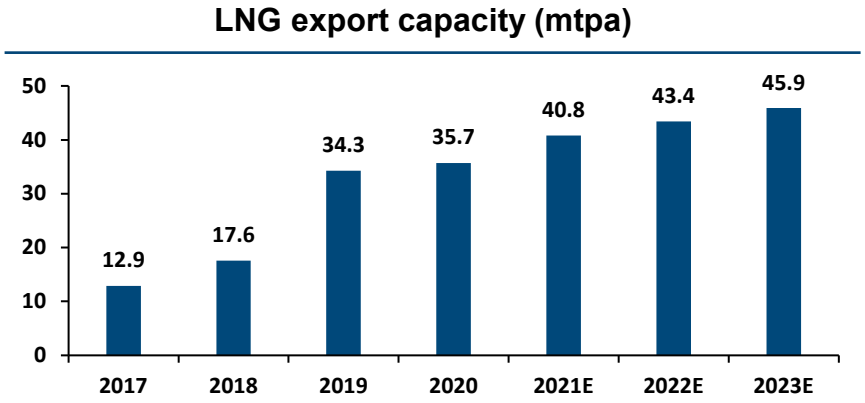
For the last two decades, Cheniere's story has been defined by the boom and bust of US shale



LNG industry requires significant capital outlay



Cheniere is nearing the end of its expansion phase

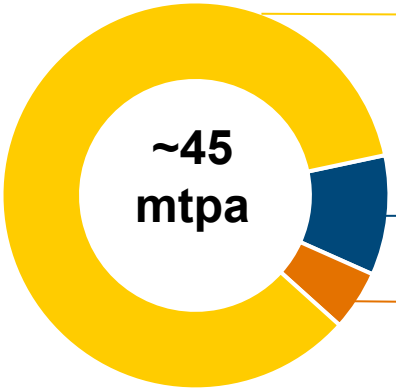


(1) Yahoo Finance

Introducing Cheniere

Guaranteed cash flows due to take-or-pay contracts provide strong cash flow visibility

Tolling model passes off majority of risk to fuel buyers



Long-term contracts (85%)

- Take-or-pay and 115% of Henry Hub contract structure

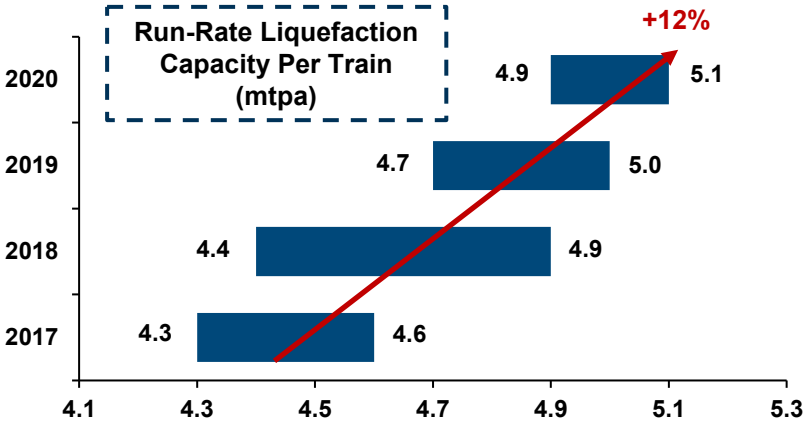
Spot market sales (10%)

- Aiming for the Marketing arm sells LNG on the short-term spot market

Soon to be long-term contracts (5%)

- Aiming for the highest contracted rate in the industry

Run-rate improvements create additional supply



Long-term partners believe in the future of LNG

Icahn Enterprises

- Ousted Cheniere CEO and Founder Charif Souki in 2015
- Owned 9% of Cheniere Energy as of 2020

Brookfield Infrastructure

- Purchased a 42% stake in Cheniere and its subsidiaries in 2020

Blackstone Energy

- First invested in Cheniere in 2012
- Sold majority stake to Brookfield Infrastructure and Blackstone Infrastructure Partners

Partners allow stability and ensure ample capital

(1) Cheniere Data

Cheniere Benefits From China Signing Long-term Contracts

Low capex combined with strong relationships with China helps Cheniere

US has significantly lower LNG Project CapEx

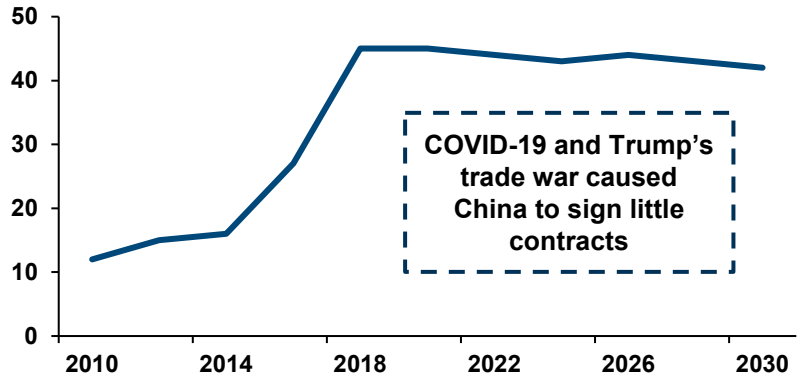
Overall LNG project CapEx averages (US$/t)

	Brownfield		Greenfield	
	Dry	Rich	Dry	Rich
FLNG	Not Possible		1,050	3,550
Australia	500	n/a	3,100	3,750
Arctic	n/a	n/a	2,000	1,650
USA	**850**	**n/a – shale**	**850**	**n/a – shale**
Other	200	500	1,050	1,000
Average	**505-0**	**500**	**1,500**	**2,150**

(1) Wood Mackenzie and Cheniere Data

China has delayed new contracts

LNG supplied to China through LT contracts (mtpa)



Cheniere has a strong relationship with China

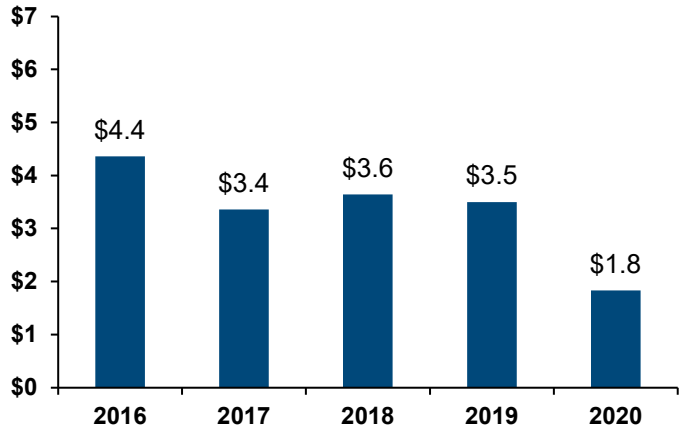
> Cheniere has the best origination office in Beijing of any of the LNG providers. **We were one of the only to sign a LT agreement with China in 2018.** Our relationship grows stronger. – *Jack Fusco, Cheniere CEO*

Why Now?

Cheniere's financial positioning is at an inflection point

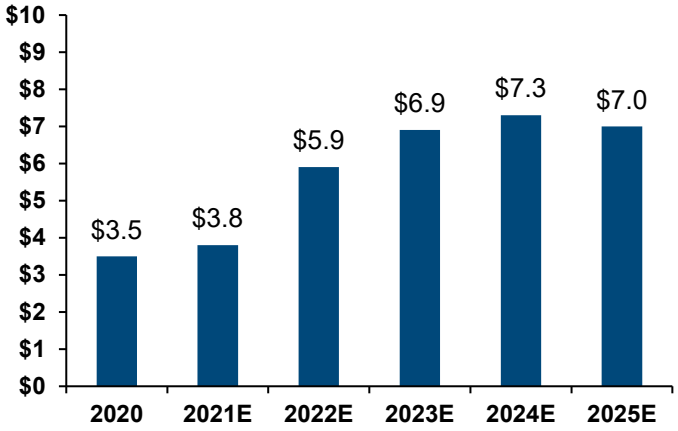
All liquefaction facilities are close to being done

Cheniere Capital Expenditures ($bn)



EBITDA expansion will allow for debt paydown

Cheniere EBITDA ($bn)



2020 Financial Snapshot	
Net Debt / EBITDA	7.73x
EBITDA	3,563
EBIT Margin	28%

2025E Financial Snapshot	
Net Debt / EBITDA	4.19x
EBITDA	7,006
EBIT Margin	30%

- One of the only energy companies in all of 2020 to receive an **upgrade to investment grade from Moody's**

Valuation

Valuation Overview

Model implies a 38% upside to the current market price

Levered FCF Model Assumptions Overview

- Assuming 51% revenue growth from 2020 to 2021 as more LT contracts are signed with Asian countries and there are no major cargo cancellations
- LNG prices remain conservative, with an average of $5 for LT sales and $4.50 for short-term spot sales.
- Terminal capacity utilization increases in 2021, then stabilizes in 2H 2022 as Sabine Pass Train 6 is completed
- Margins expand from 2019 numbers due to increased run-rate of liquefactions facilities

Overview		
Discount Rate		10.0%
Long-Term Growth Rate		2.5%
PV of Short-Term FCF	$	5,494
Terminal Value	$	22,300
(-) NCI	$	2,409
Implied Equity Value	$	25,385
Total Diluted Shares		252
Value Per Share	$	100.74
Last Price	$	73.22
P/V		0.73

Projected P/E Exit Multiple		
Terminal Equity Value	$	25,385
2025 Net Income	$	2,691.27
Implied Multiple		9.43x

Margins & Assumptions	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Revenue YoY Growth		*42.5%*	*21.8%*	*-3.8%*	*51.1%*	*15.7%*	*7.1%*	*3.6%*	*-0.4%*
OpEx % of Volumes Delivered	*66.5%*	*67.0%*	*64.7%*	*71.1%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*	*73.0%*
EBIT Margin	*24.8%*	*25.3%*	*24.3%*	*28.1%*	*19.5%*	*28.3%*	*29.9%*	*32.4%*	*29.3%*
CapEx (% of Revenue)	*59.9%*	*45.6%*	*31.4%*	*20.6%*	*17.0%*	*15.0%*	*15.0%*	*10.0%*	*10.0%*
D&A (% of CapEx)	*59.9%*	*45.6%*	*31.4%*	*50.7%*	*44.3%*	*50.0%*	*65.0%*	*80.0%*	*95.0%*
EBITDA YoY Growth		*41.5%*	*27.6%*	*12.9%*	*7.3%*	*53.3%*	*18.4%*	*5.7%*	*-4.4%*
Net Income YoY Growth		*111.6%*	*2.6%*	*-59.4%*	*116.6%*	*108.7%*	*20.8%*	*18.8%*	*-14.3%*

LNG Prices and Volumes Delivered Drive Cheniere's Future Revenue

Cheniere benefits from stable long-term contracted LNG prices and volumes

Model Assumed LNG Price

MMBtu	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Spot Price	$7.54	$8.91	$5.28	$3.18	$4.31	$4.50	$4.50	$4.75	$5.00
LT Contract	$6.06	$6.24	$5.82	$5.13	$4.69	$5.00	$5.00	$5.00	$5.00

Scenario 1 – More favorable LNG environment implies a P/V of 0.56 and $129 PT

MMBtu	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Spot Price	$7.54	$8.91	$5.28	$3.18	$4.31	$5.50	$5.00	$5.00	$5.00
LT Contract	$6.06	$6.24	$5.82	$5.13	$4.69	$5.50	$5.50	$5.50	$6.00

Scenario 2 – Less favorable LNG contracting implies a P/V of 1.42 and a $51 PT

MMBtu	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Spot Price	$7.54	$8.91	$5.28	$3.18	$4.31	$5.50	$4.50	$4.50	$4.50
LT Contract	$6.06	$6.24	$5.82	$5.13	$4.69	$5.00	$4.50	$4.50	$4.50

Conclusion

Cheniere Energy		
Value Per Share	$	100.74
Last Price		73.22
P/V		0.73

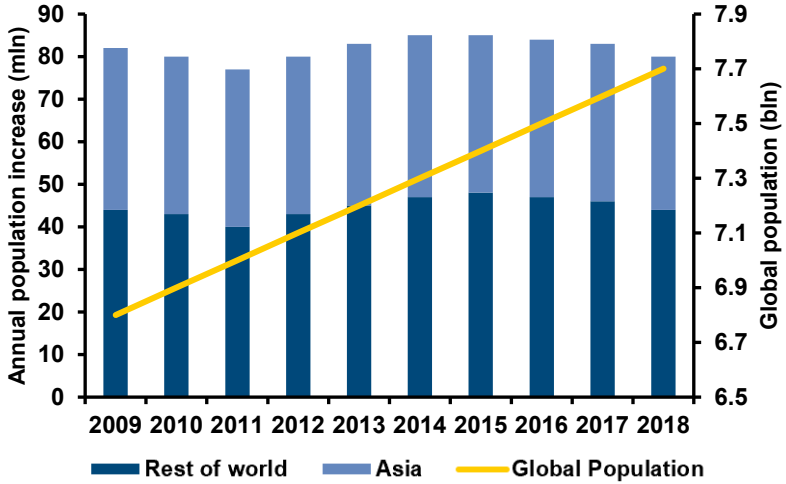
- Increasing demand for alternatives to coal in developing economies
- Benefits of LNG due to cost, transportation, and regasification capabilities already in existence
- China has the most potential for long-term LNG demand due to push to **reduce coal usage by 50%**
- The United States will **benefit from China returning to contract negotiations after the trade war and pandemic**, and Cheniere Energy is best positioned to benefit from this
- Cheniere Energy is also at a crucial inflection point in its business cycle, **transitioning from growth at all costs** to debt paydowns and returning capital to shareholders

Appendix

Future energy demand will stem from population growth in developing countries

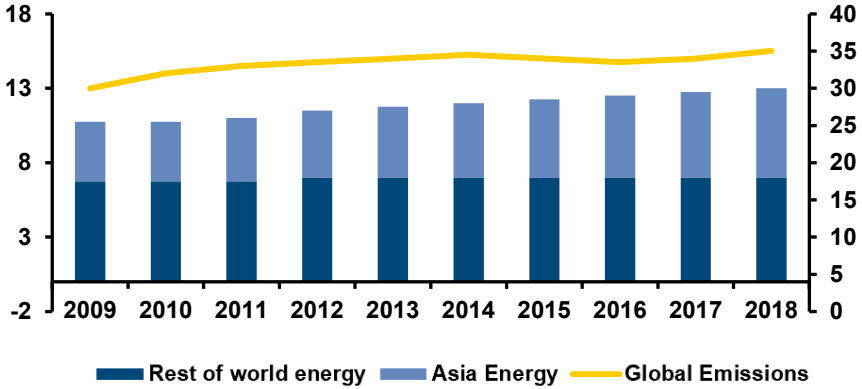
Rising living standards and an increased energy demand require lower-emission energy alternatives

Global population growth in developing countries…

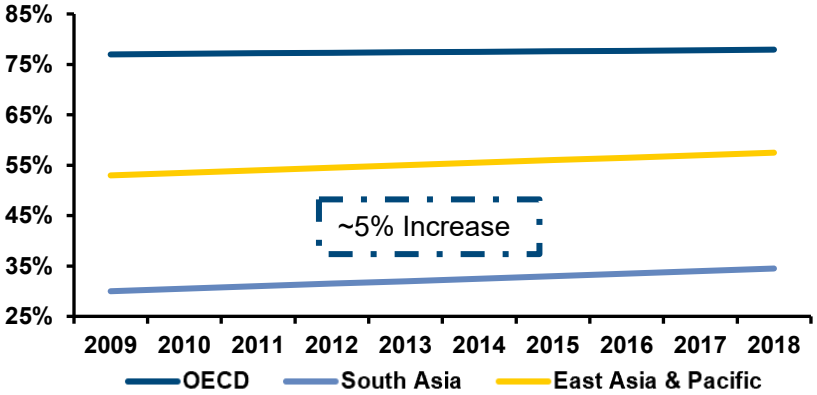


…has led to a drastic increase in carbon levels

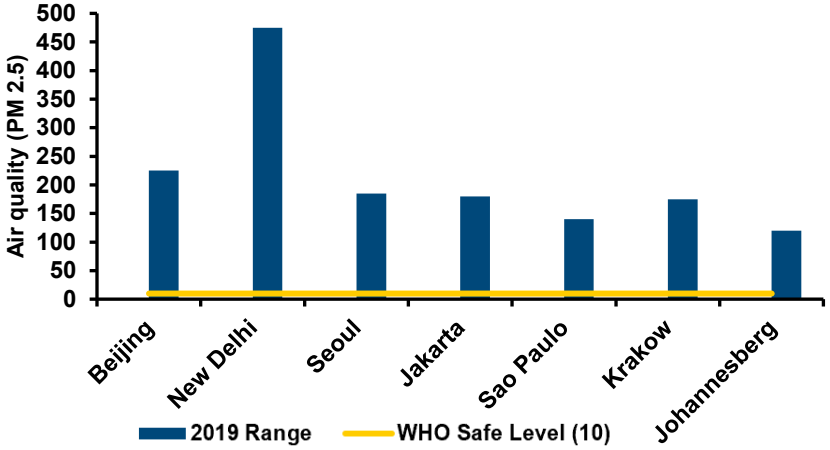
Energy consumption (mktoe) and CO_2 emissions (bt)



…which will only increase as the urbanization gap closes…

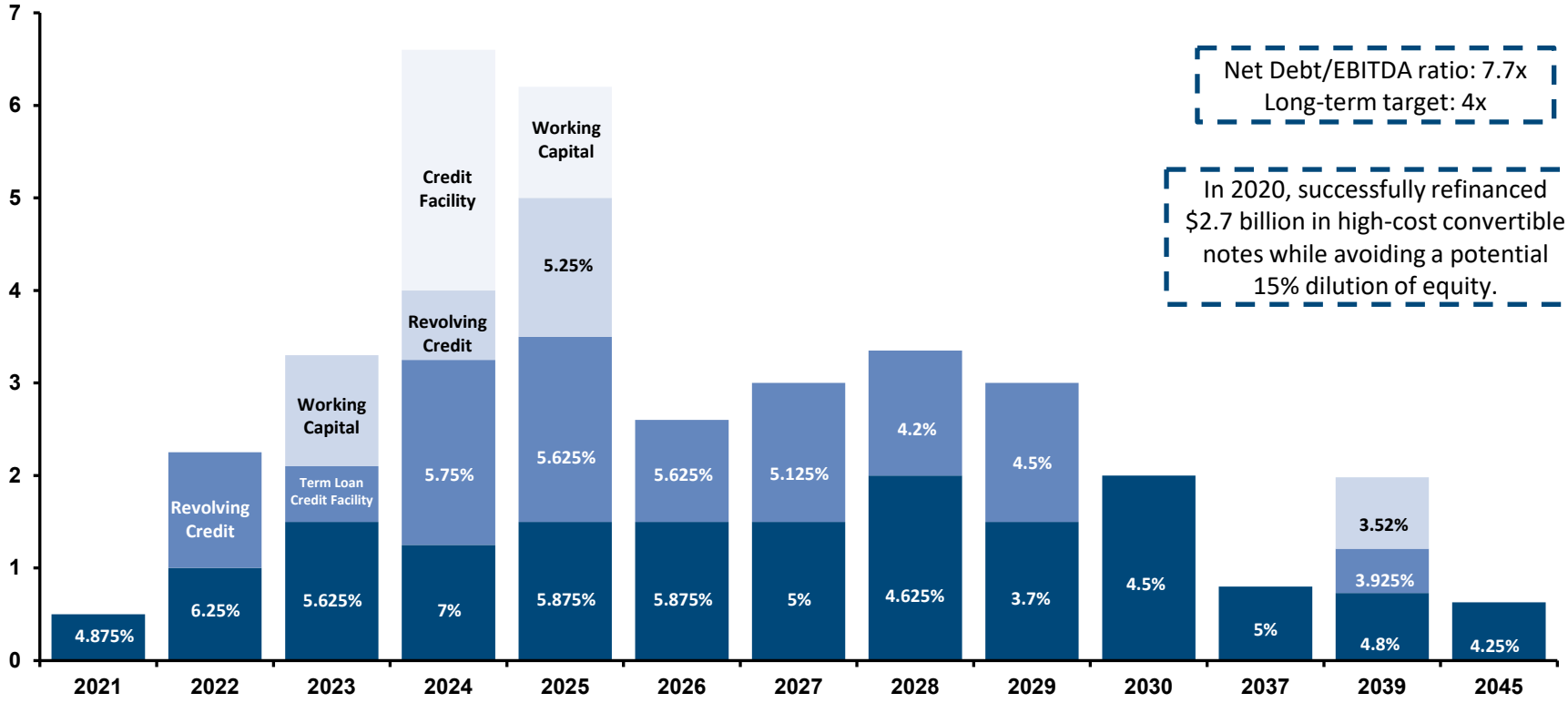


…will lead to a need to reduce carbon emissions.



(1) Shell LNG Outlook

Cheniere's Debt Schedule (USD, billions)



Net Debt/EBITDA ratio: 7.7x
Long-term target: 4x

In 2020, successfully refinanced $2.7 billion in high-cost convertible notes while avoiding a potential 15% dilution of equity.

Corpus Christi Holdings was **one of only a few** upgrades in the energy sector by Moody's from high-yield to investment grade (Baa3) in 2020.

Cheniere is opportunistically
- Issuing their lowest debt coupons ever
- Refinancing debt
- Migrating debt from operating to parent companies.

Cheniere has committed to achieving investment-grade credit across their holdings and plans to aggressively pay down near-term, high-cost debt.

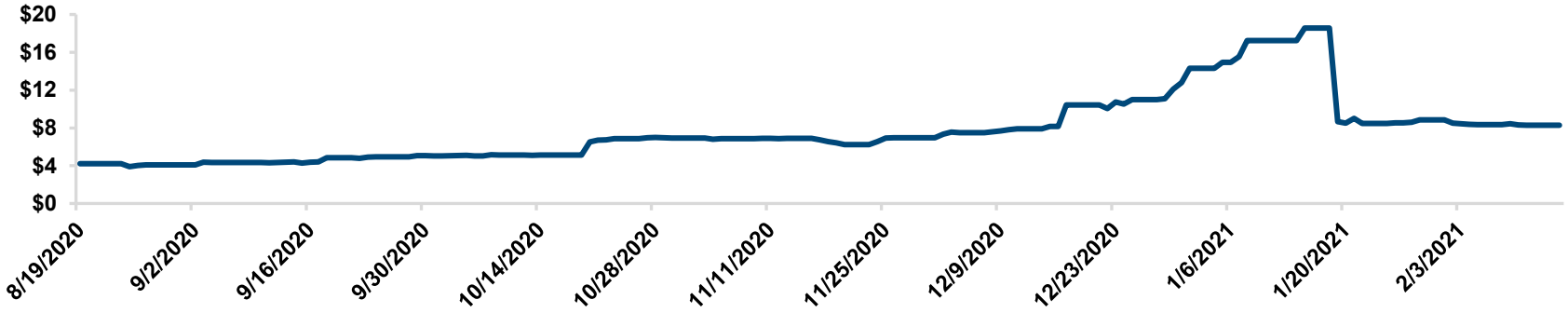
(1) Company Materials

Spot LNG Volatility Support Need for Long-Term Contracts

Recent volatility should force China to return to the long-term market

Asian LNG prices recently surged more than 1000% due to a cold spell

LNG JPM Spot Prices (mmBtu)



Recent volatility will reinforce the need to return to long-term contracts

Prior to 2021, China was buying LNG primarily on the spot market due to low and stable prices

No spot purchases were reported by Chinese end-users between December 2020 and mid-February 2021

Sudden spot surge highlighted the importance of long-term contracts for China

(1) Bloomberg (2) S&P Global Platts

Financial Analysis

Profitability	2016	2017	2018	2019	2020
ROIC	-1.2%	5.6%	7.0%	7.9%	7.2%
ROTA	-2.9%	-1.5%	1.6%	1.9%	-0.2%
Operating Margin	-2.3%	24.8%	25.3%	24.3%	28.1%
EBITDA Margin	11.2%	31.1%	31.0%	36.3%	41.5%
Profit Margin	-47.5%	-7.0%	5.9%	6.7%	-0.9%

Income Metrics ($millions)	2016	2017	2018	2019	2020
Revenue	1,283	5,601	7,987	9,730	9,358
Operating profit	(30)	1,388	2,024	2,361	2,631
EBITDA	144	1,744	2,473	3,530	3,886
Net Profit	(610)	(393)	471	648	(85)

Liquidity	2016	2017	2018	2019	2020
Net Debt/EBITDA	146.2	14.11	11.12	8.15	7.73
Current Ratio	2.08	2.69	2.43	2.25	1.44
Quick Ratio	1.02	0.86	0.87	1.56	1.01

	Ticker	Mkt Cap (USD, billions)	Current Ratio	Quick Ratio	Net Debt/EBITDA	ROIC	ROTA	EV/EBITDA	P/E	EBITDA Margin
CHENIERE ENERGY INC	LNG	18.58	1.44	1.01	7.69	6.66%	3.20%	12.77	26.33	41.81%
ENBRIDGE INC	ENB	71.42	0.53	0.31	5.76	4.41%	3.71%	14.16	20.86	30.35%
ENERGY TRANSFER OPERATING LP	ETP	25.04	1.02	0.66	7.66	3.47%	3.23%	-	-	22.68%
ENTERPRISE PRODUCTS PARTNERS	EPD	50	1.10	0.65	4.09	9.07%	7.85%	9.87	11.95	29.57%
KINDER MORGAN INC	KMI	35.53	0.63	0.49	9.08	1.04%	4.06%	12.12	17.71	48.88%
Mean		40.11	0.94	0.63	6.85	4.93%	4.41%	12.23	19.21	34.66%
Median		35.53	1.02	0.65	7.66	4.41%	3.71%	12.44	19.29	0.30%

Recently commissioned US LNG export projects

Plant	Location	Status	Size (Mtpa)		Start date	Liquefaction Cost US$/t	Import terminal Conversion
			Current	Additions			
Sabine Pass T1-6	Louisiana, US	Operational	25.0	5.0	2016/2022	550-844	Yes
Cove Point	Maryland, US	Operational	5.25	-	2018	710	Yes
Cameron	Louisiana, US	Operational	12.0	-	2019	733	Yes
Corpus Christi	Louisiana, US	Operational	10.0	-	2018/2021	1,044	Yes
Freeport	Texas, US	Operational	15.0	-	2019	799	Yes
Elba Island	Georgia, US	Operational	2.5	1.0	2019/2020	832	Yes

Historic US LNG Prices

Price of Liquefied U.S. Natural Gas Exports (Dollars per Thousand Cubic Feet)

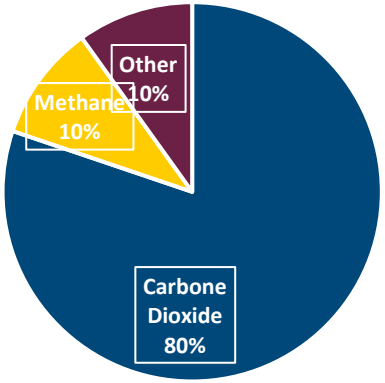
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997	4.25	4.29	4.22	4.06	3.98	4.22						
2001	4.69	4.74	4.71	4.26	4.23	4.29	4.28	4.30	4.40	4.41	4.30	4.30
2002	4.27	4.04	3.74	3.68	3.79	3.85	4.09	4.26	4.30	4.28	4.30	4.34
2003	4.43	4.44	4.30	4.44	4.62	4.76	4.67	4.43	4.40	4.40	4.45	4.51
2004	4.42	4.53	4.60	4.79	4.89	4.83	4.98	5.05	5.24	5.24	5.32	5.40
2005	5.27	5.40	5.26	5.19	5.38	5.49	5.89	6.08	5.97	6.24	6.40	6.68
2006	5.90	5.81	5.69	5.76	5.95	5.94	5.95	6.17	6.22	6.28	6.45	6.44
2007	6.08	5.91	5.85	5.86	5.65	5.73	5.87	6.06	6.14	9.34	6.33	6.28
2008	6.60	6.90	7.09	7.09	7.21	7.38	7.49	7.97	8.56	8.72	8.87	8.27
2009	7.54	6.00	6.42	7.33	7.20	7.65	8.00	8.36	10.20	10.97	10.69	9.18
2010	11.68	7.97	12.36	12.21	11.94	8.27	12.83	13.19	9.85	9.04	8.18	8.50
2011	8.20	9.71	10.28	8.25	8.62	11.60	12.72	11.60	12.76	12.54	15.29	12.83
2012	11.83	11.30	10.67	8.54	16.10	17.55	8.49	15.15	8.40	11.57	8.86	11.76
2013	10.11	10.85	10.02	11.36	12.84	13.38	12.89	13.25	13.53	13.09	13.45	12.69
2014	13.70	15.49	14.31	13.23	15.78	12.58	16.01	16.01	15.74	15.10	12.17	13.50
2015	17.39	12.87	11.10	10.53	7.53	7.82	8.10	7.91	7.17	6.53	16.67	15.95
2016	10.74	3.59	4.01	3.96	4.21	4.72	5.63	5.13	5.11	3.65	4.58	4.68
2017	6.44	5.99	4.47	5.16	4.80	4.61	4.26	3.88	3.88	4.02	4.47	4.74
2018	4.34	5.62	4.45	4.56	5.03	4.65	5.28	5.33	4.78	4.92	5.62	6.84
2019	5.89	5.06	4.84	4.70	4.39	4.57	5.29	5.13	5.28	5.31	5.84	5.55
2020	5.40	5.04	4.85	4.67	5.44	5.49	5.61	5.69	5.53	5.78	6.46	6.38

Policy Initiative Fueling Infrastructure Spend and LNG Demand Growth

Market	Policy	Infrastructure
China	Targets 15% gas in TPED by 2030 vs. 7.8% in 2019 Expects to double gas demand adding ~300 Bcm in a decade	45+ mtpa of regas capacity under construction (U/C) Regas capacity to ~165 mtpa by 2025. Plans to double gas pipeline network to 163,000km by 2025. 19.7 GW gas-fired power capacity U/C
South Korea	Targets 25% gas in TPED by 2040 vs. 16.3% in 2019 Targets to reduce coal capacity by 5.7 GW and nuke by 5.3 GW by 2034	Proposal to increase gas-fired capacity by 50% to 60.6 GW by 2034
Taiwan	Targets gas-fired capacity to 50% by 2025, compared to 33% in 2019	Plans 10+ GW of gas-fired power and required regas capacity by 2025
India	Targets 15% gas in TPED by 2030 from ~6% in 2019	Committed to $60B LNG terminals, pipelines and other LNG infrastructure. Aims to nearly double pipeline km by 2024
Vietnam	Next PDP expected to include 20+ LNG-to-power projects and eliminate ~ 15 GW of planned coal projects	Gov't plans for 7 LNG regas terminals by 2035. ~13 proposed projects from private developers
Thailand	Plans call for NG to be 53% of power by 2037, up from prior plans of 37%	~7.5 mtpa of regas capacity U/C, and 10+ mtpa under development
Europe	Pledged to retire over ~ 200 GW of coal and nukes by 2030; funding support for natural gas infrastructure projects	Plans for ~$130 billion of private & public funds into new gas-fired power plants, LNG import terminals, and gas import pipelines

Possible Regulations on Methane Emissions

Greenhouse Gases



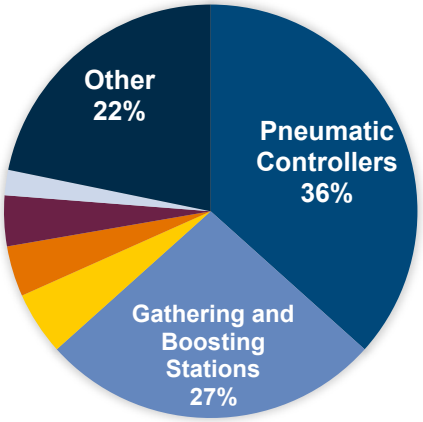
Methane

- Methane is the most potent green house gas, with 1k warming the planet 80 times more than a 1k of carbon dioxide
- Natural Gas and Petroleum accounts for 31%
- Natural Gas is targeted most for as emissions can be greatly reduced through updating equipment and closing leaks

Regulations

- Pneumatic controllers are gas-controlled pumps meaning they are slow to open and close
- New regulations will likely require pneumatic controllers to be updated to electric which open and close quickly, limiting leaks
- Requirements on frequent monitoring of equipment will likely mean companies must test for leaks and submit reports on emission performance with more frequency

Methane Emissions from Natural Gas production



Fracking on Federal Land

Biden intends to further regulate fracking, not ban it completely

- The current “ban” on federal lands is really a 60- day moratorium on the issuance of new leases while policy is re-evaluated by the new administration
- If it is extended the effects would not be felt for the next two years as current leases are still operational
- Output from onshore federal leases only accounts to 9% of US production

Fracking’s Contributions to US

- Increase in supply from US shale has triggered a ~50% drop in global oil and gas prices
- Natural gas accounts for 35% of all electricity
- US consumers save $200 billion a year with the current export model
- US is currently expected to account for 70% of global growth in oil supply and ~50% of new demands for natural gas

Biden Administration

Bidens Connection to LNG

- Campaign climate advisor, Ernest Moniz launched major LNG export campaign as Secretary of Energy for Obama
- Obama-era policies enabled 2017 deal for Cheniere to export billions of dollars of LNG to China
- Current official climate advisor Heather Zichal was a member of the board of directors for Cheniere
- Biden's former political director, Ankit Desai, was a lobbyist and VP at Cheniere
- Former Biden Adviser and campaign donor, Andrew Goldman is Co-Founder of Western LNG
- Goldman's co-founder was previously senior VP and CFO of Cheniere

Current Policy on Federal Leases

- The "ban" of fracking on public lands is just a moratorium on the issuance of new leases while policy is re-evaluated
- Output from onshore federal land only account for 9% of production
- If the ban is extended, the effects will not be felt for the next two years as pre-existing production is not being halted
- Biden has explicitly said he does not want a total ban on fracking as it is necessary for transitioning towards cleaner energy

Biden Incentives to allow for natural gas production

1. Biden has fully dedicated his administration to the Paris Climate Accords which is currently hyper-focused on China's emissions
2. The key to China meeting its emission goals is through a switch from Coal to Natural Gas, which is currently only possible through the importation of NG
3. Bidens clean energy plan necessitates a move towards natural gas to build up other forms of energy infrastructure such as wind powered