Golar LNG

Cheaper and cleaner

Golar LNG – leading the transition to LNG fuelled energy

Morgan Stanley Energy & Clean Tech Symposium
December 2019

Forward Looking Statements

This press release contains forward-looking statements as defined in the Securities Exchange Act of 1934, as amended and which reflect management's current expectations, estimates and projections about its operations. All statements, other than statements of historical facts, that address activities and events that should, could or may occur in the future are forward-looking statements. Words such as "may," "could," "should," "would," "expect," "plan," "anticipate," "intend," "believe," "estimate," "propose," "potential," "continue," or the negative of these terms and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and other factors, some of which are beyond our control and are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this press release. Unless legally required, Golar undertakes no obligation to update publicly any forward-looking statements whether as a result of new information, future events or otherwise.

Among the important factors that could cause actual results to differ materially from those in the forward-looking statements are: our inability and that of our counterparty to meet our respective obligations under the Lease and Operate agreement entered into in connection with the BP Greater Tortue / Ahmeyim Project ("Gimi GTA Project"); changes in our ability to retrofit vessels as FSRUs or FLNGs and in our ability to obtain financing for such conversions on acceptable terms or at all; changes in our ability to obtain additional financing on acceptable terms or at all; our inability to complete the Tri-Fuel Diesel Electric ("TFDE") shipping spin off; Golar Power's ability to successfully commission the Sergipe power station project and related FSRU contract and to execute its downstream LNG distribution plans; changes in our relationship with our affiliates, Golar Partners, Golar Power or Avenir and the sustainability of any distributions they pay to us; failure of our contract counterparties, including our joint venture co-owners, to comply with their agreements with us or other key project stakeholders; challenges by authorities to the tax benefits we previously obtained under certain of our leasing agreements; changes in liquefied natural gas ("LNG"), carrier, floating storage and regasification unit, ("FSRU"), or floating liquefaction natural gas vessel ("FLNG"), or small-scale LNG market trends, including charter rates, vessel values or technological advancements; our ability to close potential future sales of additional equity interests in our vessels, including the Hilli Episeyo, on a timely basis or at all and our ability to contract the full utilization of the Hilli Episeyo or other vessels and the benefits that may to accrue to us as the result of any such modifications; changes in the supply of or demand for LNG carriers, FSRUs, FLNGs or small-scale LNG infrastructure; a material decline or prolonged weakness in rates for LNG carriers, FSRUs, FLNGs or small-scale LNG infrastructure; changes in the performance of the pool in which certain of our vessels operate and the performance of our joint ventures; changes in trading patterns that affect the opportunities for the profitable operation of LNG carriers, FSRUs, FLNGs or small-scale LNG infrastructure; changes in the supply of or demand for LNG or LNG carried by sea; changes in commodity prices; changes in the supply of or demand for natural gas generally or in particular regions; changes in our relationships with our counterparties, including our major chartering parties; a decline or continuing weakness in the global financial markets; changes in general domestic and international political conditions, particularly where we operate; changes in the availability of vessels for purchase and the time it takes to construct new vessels; failures of shipyards to comply with delivery schedules or performance specifications on a timely basis o r at all; our ability to integrate and realize the benefits of acquisitions; changes in our ability to sell vessels to Golar Partners or Golar Power; changes to rules and regulations applicable to LNG carriers, FSRUs, FLNGs or other parts of the LNG supply chain; our inability to achieve successful utilization of our expanded fleet or inability to expand beyond the carriage of LNG and provision of FSRUs, FLNGs, and small-scale LNG infrastructure particularly through our innovative FLNG strategy and our joint ventures; actions taken by regulatory authorities that may prohibit the access of LNG carriers, FSRUs, FLNGs or small-scale LNG vessels to various ports; increases in costs, including, among other things, wages, insurance, provisions, repairs and maintenance; and other factors listed from time to time in registration statements, reports or other materials that we have filed with or furnished to the Securities and Exchange Commission, or the Commission, including our most recent annual report on Form 20-F.

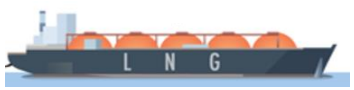
As a result, you are cautioned not to rely on any forward-looking statements. Actual results may differ materially from those expressed or implied by such forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise unless required by law.

Golar Group: Asset overview

Profitable, sustainable growth through the delivery of cleaner and cheaper energy

Market position

Market leader | **Top 5** | **Top 3** | **Unique position**



Exploration & Drilling

Reservoir

Production & Liquefaction

Shipping

Regasification

Downstream

FLNG

FLNG Hilli Episeyo[1]

Golar Gimi
Under construction

Golar Gandria
Conversion candidate

LNG Carriers

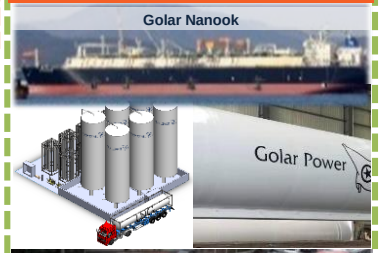
FSRU

Power generation

Sergipe power plant[3]

Downstream

Golar Nanook



GMLP

GLNG

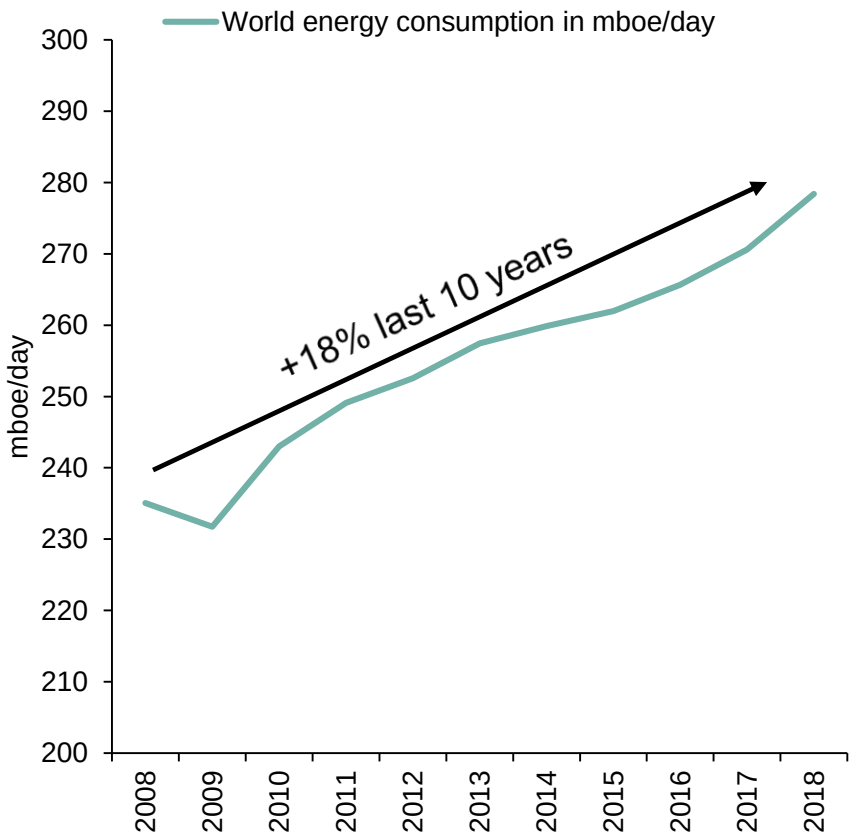
Golar Power[2]

LNG infrastructure from upstream to downstream, confusing?

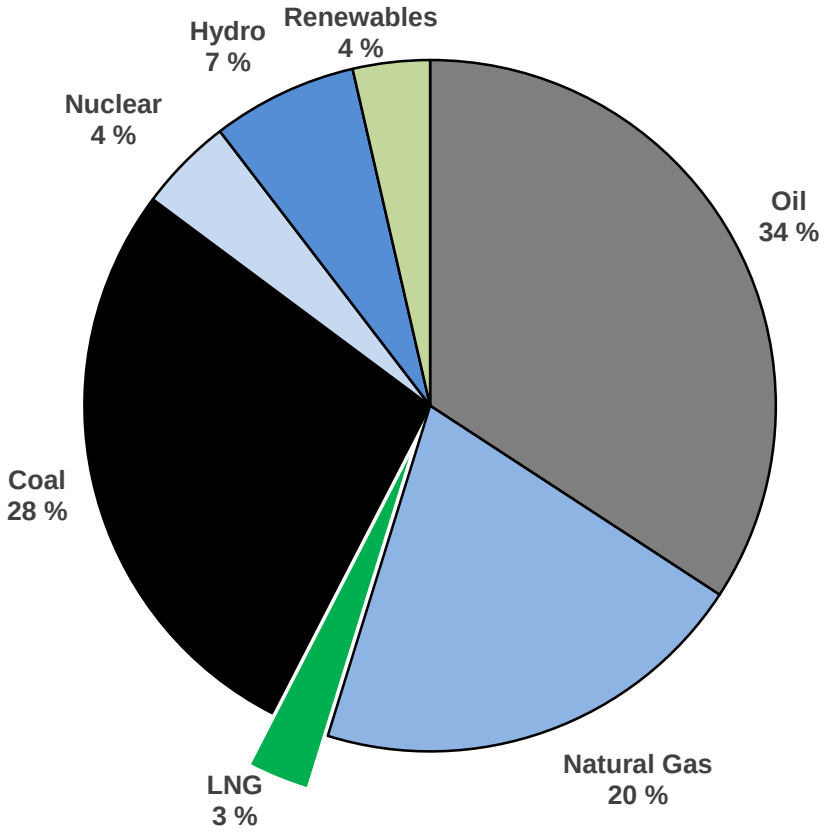
1) GMLP currently has 50% interest in Hilli T1 and T2, which represents the current contracted capacity of the Hilli Episeyo, which has a total of 4 trains
2) Golar Power is a 50/50 JV between Golar LNG Limited and Stonepeak Infrastructure
3) Sergipe is a 50/50 JV between Golar Power and EBRASIL Energia Ltda, one of the largest independent power producers in Brazil

The world's energy balance = 278m boe/day

Global energy demand of 278m boe/day



Global energy demand by source

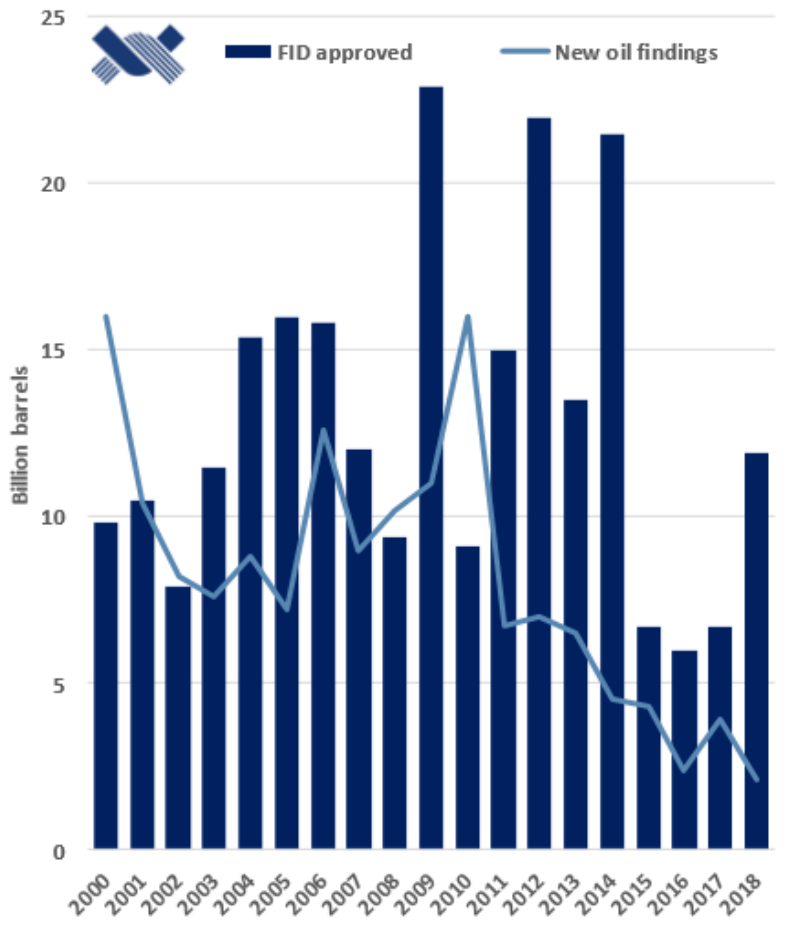


"Gas will supply the largest share of energy demand growth, supplying over 40% of additional demand by 2035" - Shell's LNG Outlook 2019

 Source: BP Statistical Review 2018, Shell LNG Outlook 2019

The hard consequence of focusing too much on non-hydrocarbons

Oil finding & FID activity, by year.



Known 2019-2024 upstream start-ups							
Location	**Total additions**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
U.S. (non-shale)	0,480	0,030	0,175	0,175	0,100	-	-
Canada	0,280	0,050	0,040	-	0,075	0,115	-
Mexico	0,600	0,450	-	-	0,150	-	-
Norway	1,175	0,470	0,035	0,260	0,410	-	-
UK	0,120	0,055	0,020	0,045	-	-	-
Denmark	0,025	-	-	-	0,025	-	-
Italy	0,050	0,050	-	-	-	-	-
Oman	0,050	-	-	0,050	-	-	-
Qatar	0,100	-	-	-	-	-	0,100
Australia	0,080	0,040	0,040	-	-	-	-
Russia	1,110	1,070	-	0,040	-	-	-
Azerbaijan	0,035	-	0,035	-	-	-	-
Kazakhstan	0,260	-	-	-	0,260	-	-
China	0,130	0,040	-	0,090	-	-	-
India	0,020	-	-	0,020	-	-	-
Brazil	1,810	0,600	0,150	0,610	0,260	0,190	-
Guyana	0,520	-	0,120	-	0,220	0,180	-
Kenya	0,050	-	-	-	-	0,050	-
Senegal	0,100	-	-	-	-	0,100	-
Uganda	0,060	-	-	-	0,060	-	-
Non-OPEC total	**7,055**	**2,855**	**0,615**	**1,290**	**1,560**	**0,635**	**0,100**
Angola	0,110	-	0,055	0,055	-	-	-
Kuwait	0,270	0,270	-	-	-	-	-
Nigeria	0,470	0,200	-	-	-	0,270	-
Saudi Arabia	1,150	0,300	0,850	-	-	-	-
UAE	1,000	1,000	-	-	-	-	-
Iran (NGL/condensates)	0,000	-	-	-	-	-	-
OPEC total	**3,000**	**1,770**	**0,905**	**0,055**	**0,000**	**0,270**	**0,000**
Sum	**10,055**	**4,625**	**1,520**	**1,345**	**1,560**	**0,905**	**0,100**
U.S. Shale production	6,880	1,590	1,290	1,000	1,000	1,000	1,000
World supply growth	**16,935**	**6,215**	**2,810**	**2,345**	**2,560**	**1,905**	**1,100**
Excluding OPEC	**7,055**	**4,445**	**1,905**	**2,290**	**2,560**	**1,635**	**1,100**
Depletion	18,000	3,000	3,000	3,000	3,000	3,000	3,000
Consumption growth	6,600	1,000	1,200	1,300	1,200	0,900	1,000
Production needed	**24,600**	**4,000**	**4,200**	**4,300**	**4,200**	**3,900**	**4,000**
Balance	**-7,665**	**2,215**	**-1,390**	**-1,955**	**-1,640**	**-1,995**	**-2,900**

Net ~5m/bbl shortage next 3 years vs. OPEC spare capacity of ~2.2m/bbl

Source: Fearnleys, IEA

LNG: Cleaner and cheaper

Cleaner

Pounds emission per bn BTU of Energy Input

Emissions	LNG	Oil	Coal
CO2	117 000	164 000	208 000
NOx	92	442	457
SOx	1	1 122	2 591
Particulates	7	84	2 744
Mercury	-	0,007	0,016

Cheaper

LNG price FOB US
= USD 24/boe, or
= USD 4/mmbtu

Fuel spread:
USD 37/boe
USD 6/mmbtu

Brent oil price
= USD 61/boe, or
= USD 10/mmbtu

LNG price FOB US
= USD 24/boe, or
= USD 4/mmbtu

Fuel spread:
USD 128/boe
USD 22/mmbtu

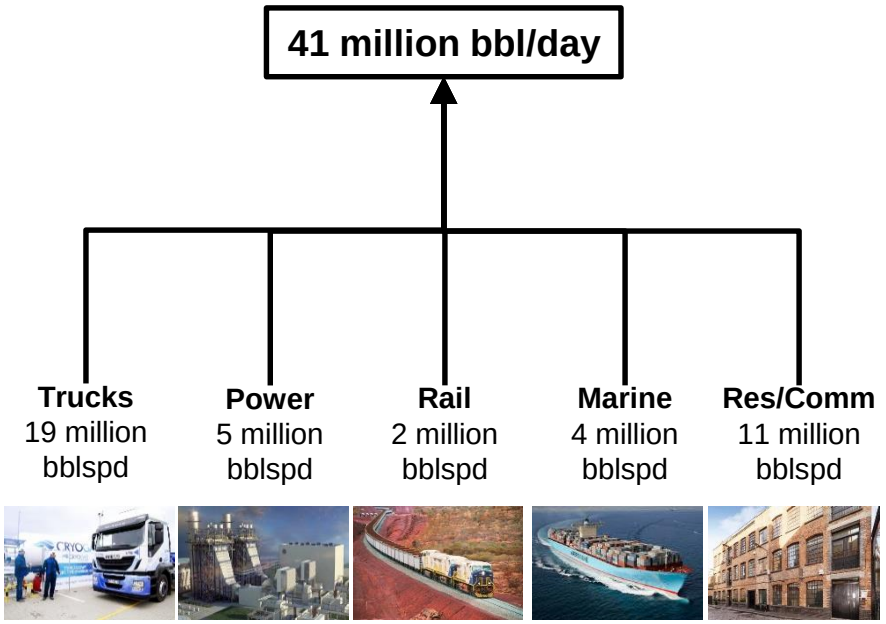
Diesel price, Manaos, Brazil
= USD 152/boe, or
= USD 26/mmbtu

- **LNG is 30-44% cleaner than oil and coal on CO2 emissions and 80-100% cleaner on other key emission metrics**
- **Oil is 10x larger and coal is 7x larger energy sources compared to LNG**

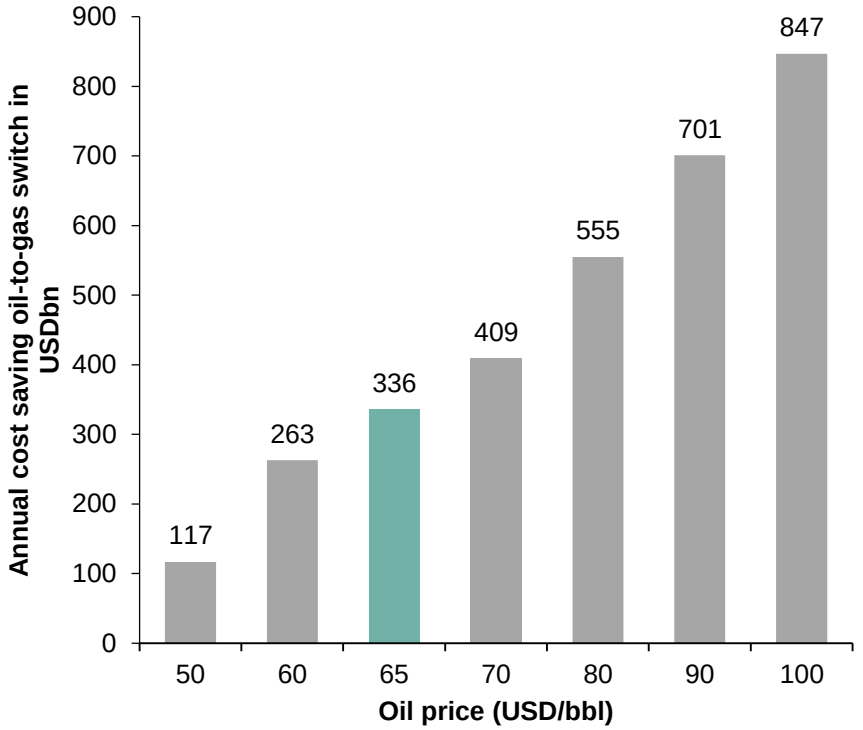
 Source: EIA

The potential oil to LNG fuel switch = An environmental friendly multi billion dollar opportunity

Oil-to-gas switch potential

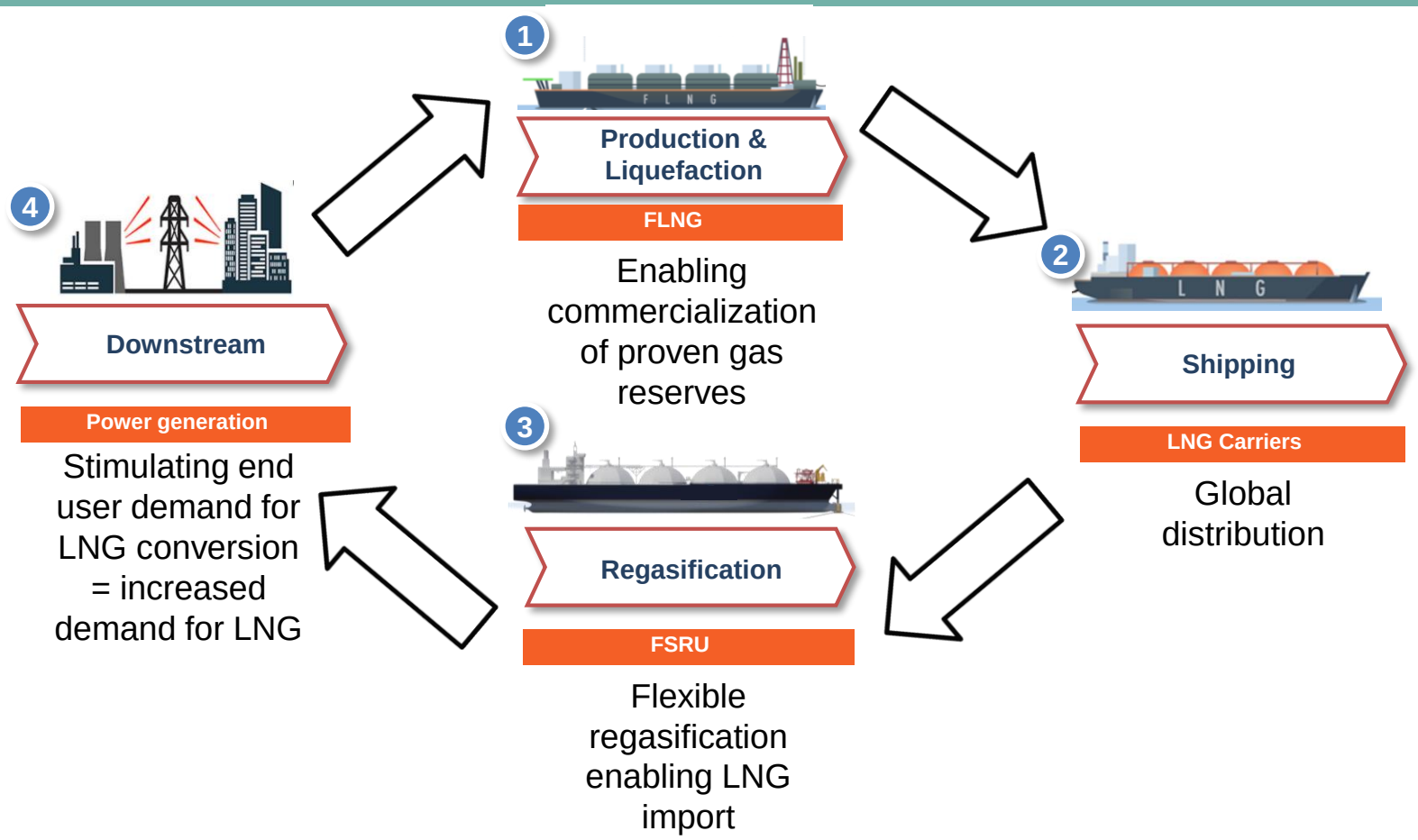


Annual cost saving vs. oil price (USDbn)



- **LNG / Natural Gas can replace ~40 million barrels of oil per day**
- **Oil-to-gas switch potential of USD ~336bn on current oil price**

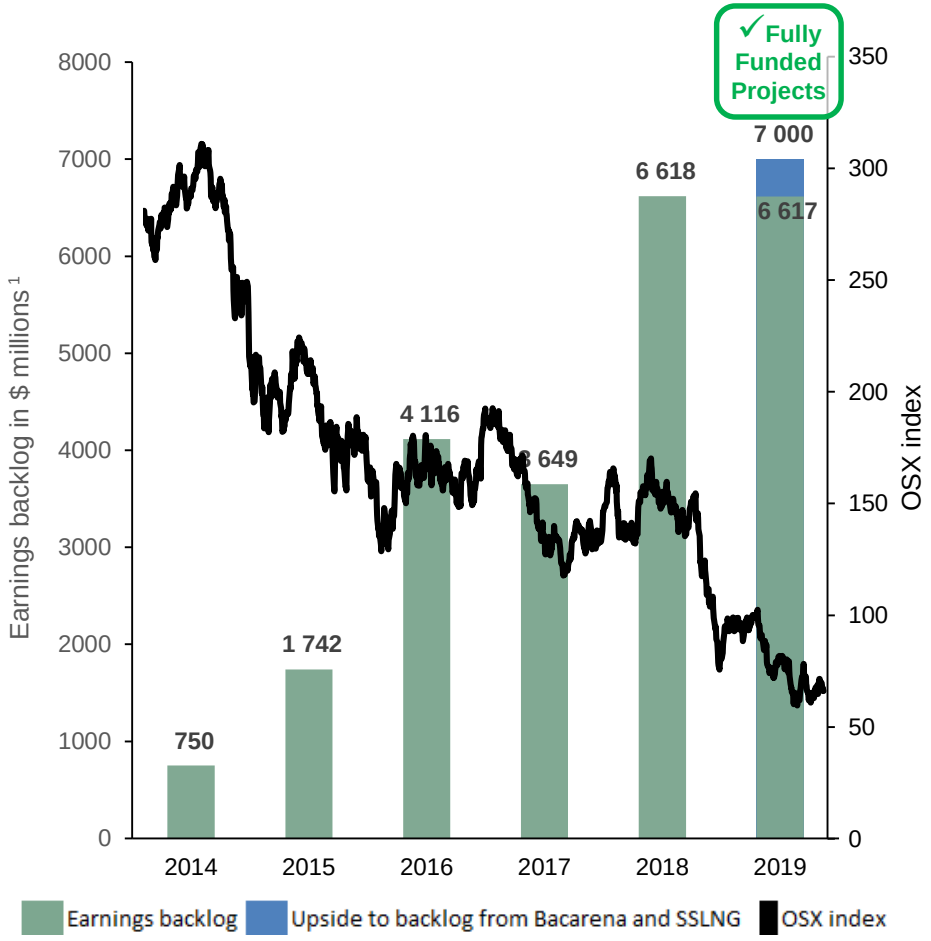
The Golar business model

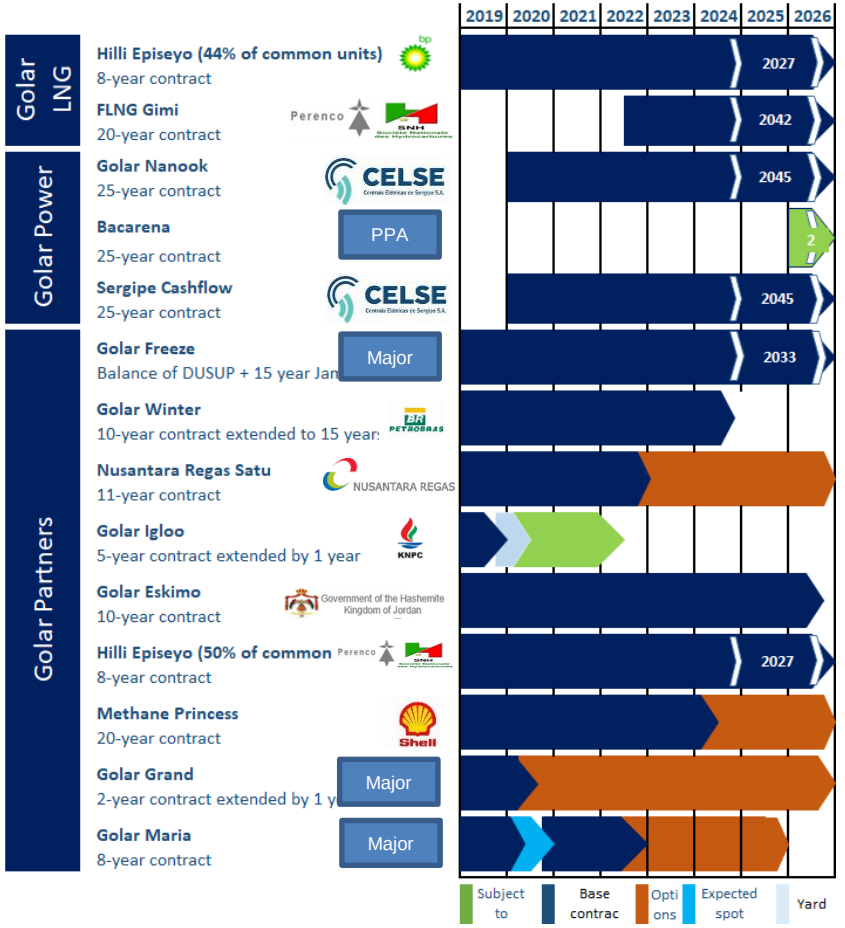


Enabling development of cheap gas reserves 1, global distribution 2 and stimulating end-user demand for cheaper and cleaner energy 3 & 4

Monetizing through long-term contracted cash flows to solid counterparts

Does the model work?





Golar LNG has grown contracted earnings backlog to USD 7bn last 5 years, at the same time as the OSX is down 76%

Golar's USD 7bn with avg. EV/EBITDA multiple of 6.3x vs. USD 1.3bn mkt cap

(1) Contract Earnings Backlog is a Non GAAP measure see the Appendix attached for a definition.
(2) Upside for Bacarena and SSLNG includes a $2 spread from ~100 committed downstream customers who have signed LOIs for SSLNG with Golar Power

LNG trucking: Creating end user LNG demand whilst saving the environment one truck / 6,000 trees at the time

- 1 truck converting from diesel to LNG will save ~35 tons of CO2 per year = to the CO2 uptake from 14 hectares of trees or ~6,000 trees
- Converting 1,100x trucks from diesel to LNG is the equivalent of 62 square km of trees = area of Manhattan or 6.4 million trees
- Converting all of Brazil's 2.8m trucks from diesel to LNG is the equivalent of planting trees on an area of ~155,000 square kilometers or 16.4 billion trees (~5% of total trees in the Amazon)
  - 100x the size of London
  - 1.7x the size of Portugal
  - Similar to the size of Florida

Diesel to LNG switch is an economic ESG initiative of global scale

Brazil: From Diesel crisis to cheaper and cleaner LNG trucking

From diesel crisis…

…to cheaper and cleaner LNG trucking

The LNG downstream infrastructure rolling out

I. Sergipe FSRU terminal

II. Avenir small scale LNG

III. ISO container distribution

IV. Fuel stations

V. LNG trucking

- Downstream LNG distribution value chain rolling out with existing infrastructure:
  - I. Source gas from the Sergipe FSRU terminal
  - II. Distribution to strategic locations with the use of Avenir LNG small scale LNG vessels
  - III. Fuel ISO storage containers on land feeding IV. Fuel stations
  - V. Fuel LNG trucks and other end users of LNG

Appendix

Non-GAAP Measures

Contract Earnings Backlog: Contract earnings backlog represents Golar's share of contracted fee income for executed contracts less forecasted operating expenses for these contracts. In calculating forecasted operating expenditure, management has assumed that where there is an Operating Services Agreement the amount receivable under the services agreement will cover the associated operating costs. For contracts, which do not have a separate Operating Services Agreement management has made an assumption about operating costs based on the current run rate. The only material application of this methodology was to the Hilli Earnings backlog where we assumed operating costs of approximately $120kpd. For consolidated subsidiaries where we do not own 100% of the share capital, management has only included our proportionate share of contract earnings. The material application of this assumption was to Gimi (70% ownership) and Hilli (44.5% of the Common Unit entitlement). No contracted fee income is included for the remaining T3 or full T4 capacity or for the Hilli oil derivative. For "Upside For Bacerna and SSLNG" we have estimated contracted fee income less forecasted operating expenses based on LOIs signed with customers and assuming a $2 spread. For equity accounted investments (the Partnership and Golar Power) we have included our proportionate share of their contract earnings backlog under the same assumptions that we have applied to our consolidated subsidiaries. In the future when our contract earnings backlog actualises, we will show our share of their earnings net of interest and tax in one line in the Income Statement "Equity in net earnings/(losses) of affiliates".