Credit Research
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Energy and Pipelines

Sabine Pass Liquefaction (CQP): Too Big to Ignore

- On February 1, 2017, Sabine Pass Liquefaction's (CQP) $11.5bn of senior secured notes will enter the US Credit Index, making it one of the largest capital structures to cross over to investment grade in some time.
- While CQP's fee-based, contracted liquefied natural gas (LNG) export business is straightforward, the project's structure, indenture, and financing plan are relatively complex and somewhat unique for the high grade midstream sector. In short, bondholders are accepting a different set of risks in exchange for cash flow stability.
- Given that CQP will constitute 6.5% of the investment grade midstream category's market value and 0.2% of the US Credit Index, we think that most index-sensitive investors will need to own some of the bonds in order to avoid having a very large underweight to the credit.
- We provide an overview of CQP's technology (see appendix), asset base, construction plan, organizational structure, customer credit quality, credit ratings profile, and bond documentation. We also offer our opinion on relative value.
- In our view, fair value for CQP 2027s in the current market context is +190-210bp, with bonds presently at the tight end of the range. For investors seeking initial exposure to the Sabine Pass credit, we recommend buying the 2024s and 2025s, which we think are cheap versus the 2027s, while we think that existing holders should shorten from the 2027s into the 2024s/25s.

FIGURE 1
Sabine Pass Liquefaction Credit Bullets

Key Credit Positives	Key Credit Considerations
Long-term, capacity-based payments provide stable cash flow for 20-year terms	Significant asset and customer concentration, as well as construction risk until the remaining LNG trains come online
Tighter covenants than most investment grade midstream comps, as well as a security interest in the issuer's assets; an investment grade debt service coverage ratio (DSCR) is projected for the life of the bonds	Despite being a project finance entity, Sabine Pass is funded with bullet debt, which introduces refinancing risk; investment grade market may not be receptive given high debt/EBITDA metrics
CQP will represent 6.5% of the investment grade midstream index, which could make it a "must own" for index-sensitive accounts	There are $11.5bn of bonds (and we expect additional issuance) that need to transfer from high yield to investment grade, which could create a persistent source of supply

Source: Barclays Research

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SABINE PASS LIQUEFACTION LLC

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RELATIVE VALUE

Not Your Typical Midstream Company

In our view, Sabine Pass Liquefaction (SPL, issued under the CQP ticker) bonds present some challenges for investment grade accounts interested in comping the credit to other midstream issuers. First, although we consider Sabine Pass to be a project finance entity (albeit a large one), the existing financing structure is composed of bullet maturities that are more typical of diversified corporates, rather than the amortizing securities more often used for project borrowers. Per the indenture, at the time of refinancing its maturities, Sabine Pass Liquefaction will be required to certify that its total senior debt is capable of amortizing to a zero balance by the end of its long-term contracts, which we expect to result in the issuance of amortizing debt at Sabine Pass Liquefaction and/or new bullet debt up at the CQP intermediate holdco level. As a result, we think that SPL will take on more of a classic project finance funding profile and will naturally deleverage over time.

Second, SPL benefits from long-term contracts that lock in (through take-or-pay capacity payments) a significant portion of cash flow, which we expect to result in very low quarter-to-quarter and year-to-year EBITDA variability. In our opinion, this is a positive defensive characteristic compared with the more volatile cash flow streams for most of the other midstream sector constituents, but it also means that SPL has limited fundamental upside if the energy complex continues to recover, as issuers with greater commodity price exposure (direct and indirect) would expect to see more of an improvement in credit metrics. Of course, the opposite is also true, with SPL likely to outperform if the sector experiences broad fundamental weakness.

Third, reflecting the project nature of Sabine Pass Liquefaction, the bonds are secured in all of the project's assets, which contrasts with unsecured debt for the other investment grade midstream borrowers. In addition, the SPL bonds benefit from tighter covenant packages than many investment grade midstream bonds, although some of the more restrictive covenants fell away after Sabine Pass Liquefaction achieved investment grade ratings at two agencies. Offsetting these positive attributes is asset concentration (the LNG trains are located close to each other and represent nearly all of the asset value securing the bonds), customer concentration (six third-party customers across the first five LNG trains), and leverage that is very high on a debt/EBITDA basis. Although our expectation is that leverage will improve significantly as additional LNG trains come online, we think that many high grade investors accustomed to using debt/EBITDA as their primary parsing metric for relative value will find the project's current and pro forma leverage to be far higher than they are used to seeing in the investment grade space. For project finance borrowers, we tend to focus more closely on debt service coverage ratio (DSCR), but we think that this metric is less familiar to high grade midstream investors and could cause Sabine Pass Liquefaction bonds to trade at a discount.

Finally, the credit's size ($11.5bn par amount outstanding, with more issuance expected) implies that there is a lot of debt that needs to transfer from high yield investors to investment grade accounts. In our view, high grade portfolio managers may feel as if they have little choice but to own at least some SPL debt, as the credit will constitute 6.5% of the midstream sector's market value and roughly 20bp of the overall US Credit Index. However, with SPL bonds now trading well tight of the High Yield Index, we think that existing high yield holders could represent a persistent source of supply for the next several months, as the high grade account base may see limited upside in trading levels and could struggle to absorb all of the bonds that move from the high yield market. Moreover, given our expectation that SPL will issue more debt in 2017 to help fund its capital spending program, some investors may prefer to wait for new bonds.

Although there are project finance bonds that could be used as comps, they are relatively illiquid, and we think that most investors will consider relative value within the context of other investment grade midstream companies. At present, low-BBB midstream 10y bonds are quoted in a +160bp to +205bp range, with a number of credits clustered around +180bp. Given the choice between a comparably rated diversified midstream credit, albeit with greater cash flow volatility, and SPL, we think that most credit investors will prefer the diversified issuer, which should keep Sabine Pass bonds trading toward the wider end of that range.

As a comp, we think that Boardwalk (BWP) is relevant given its focus on natural gas, its exposure (through its single-largest expansion project) to the LNG market, and the contracted nature of its cash flows. Unlike SPL, Boardwalk faces a much nearer-term contract cliff (2018/19), but has a more diversified customer base and a strong parent company in Loews (L), which has been supportive of the credit in the past. BWP 2027s were recently quoted at +208/205bp.

With respect to single-asset peers, there are a handful of quoted pipeline opco bonds. Williams Partners (WPZ) 7.85% 2026s are issued out of the Transco entity, which benefits from significantly lower leverage (1.5x at year-end 2015), a more diversified customer base, and what we consider to be lower operating risk than Sabine Pass. Although the Transco 2026s have a high dollar price ($127) that likely acts as a constraint on trading levels, they were recently quoted at G+170bp, or just 20bp tight of CQP 2027s. In high yield, Rockies Express (ROCKIE) 2020s (Ba2/BB+), issued by a pipeline opco, were recently quoted at $106/107 (G+212/180bp; 3.4%), versus 3.2% for CQP 2021s. Outside of developed markets, Ras Laffan (RASGAS) is an LNG export facility in Qatar that has amortizing 5.838% 2027s (eight-year average life) that yield 3.9%, compared with 4.4% for CQP 2025s. However, even though RASGAS is an emerging markets credit, the company boasts net leverage of just 1.0x and benefits from Aa3/A/A+ ratings by virtue of Qatar’s 70% ownership in the company; as a result, we think that SPL bonds will continue to trade at a discount to RASGAS.

In our opinion, based on the aforementioned comps and in the context of the current market, **we think that fair value for CQP 2027s should range from +190bp to +210bp**; we recommend trading the 2027s when they fall outside of that range. On the CQP curve, there is steepness from 2021s through 2023s (roughly 35bp bid-to-bid), but the curve flattens significantly from the 2024s to the 2027s. In fact, the 2024s are inverted by 18bp bid-to-bid (G-spread) versus the 2027s, despite just a three-point premium. Although Sabine Pass’s LNG offtake contracts extend well past the 2027s, we think that the issuance needs of the project will keep some steepness in the curve, as we expect that earlier refinancings (done with greater tenor remaining on the off-take agreements) will be easier to market. **For investors seeking exposure to the Sabine Pass credit, we recommend buying the 2024s and 2025s, and we also recommend shortening from the 2027s into the 2024s/25s.**

FIGURE 2

Investment Grade Midstream Sector Composition by Market Value (%)

Rank	December 31, 2016		January 20, 2017	
1	KMI	17.6	KMI	16.4
2	EPD	12.3	ETP	11.2
3	ETP	11.2	EPD	11.0
4	WPZ	9.6	WPZ	9.0
5	TRPCN	8.5	TRPCN	7.6
6	PAA	5.6	CQP	6.5
7	OKS	3.3	PAA	5.3
8	SXL	3.1	OKS	3.1
9	EEP	2.8	SXL	2.9
10	MPLX	2.6	EEP	2.6

Source: Bloomberg Index Services Limited, Barclays Research

COMPANY SUMMARY

Sabine Pass Liquefaction Structure and Background

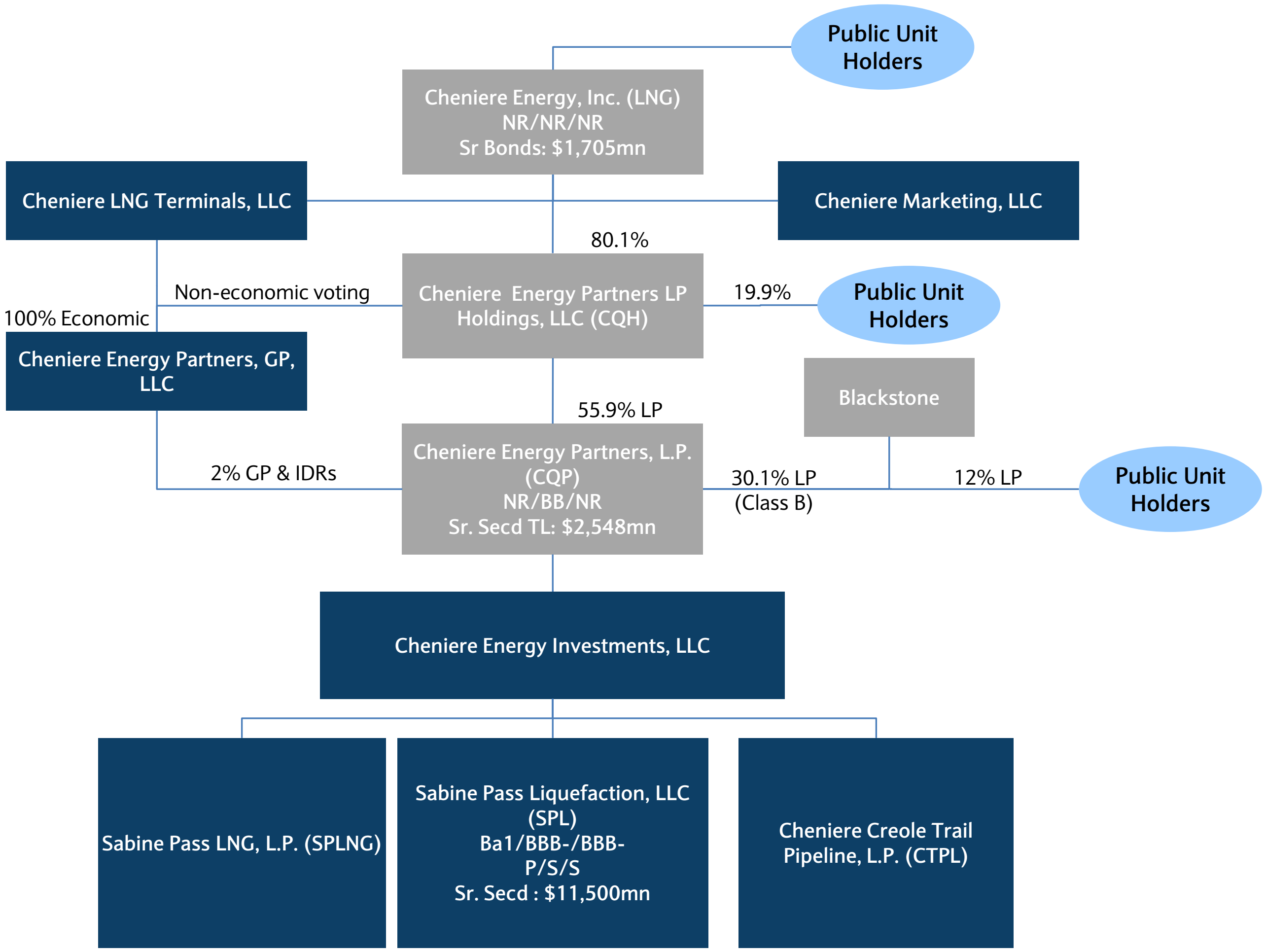
Cheniere Energy Partners LP (CQP) is a master limited partnership (MLP) formed in 2006 by Cheniere Energy Inc. (Cheniere) to own and operate the Sabine Pass regasification facility (SPLNG) located on the Sabine-Neches waterway in Texas. The partnership's original infrastructure was constructed to receive waterborne imports of liquefied natural gas (LNG), with vaporization capacity for up to 4.0 bcf/day, associated storage terminals of up to 16.9 bcfe, and two docks for vessels with capacity of 266,000 cubic meters. Following the discovery of significant shale natural gas reserves in the US market, which unlocked a large increase in domestic natural gas production capability, the company refocused its efforts and is in the process of constructing a natural gas liquefaction facility (Sabine Pass Liquefaction LLC, SPL) alongside its existing regasification infrastructure. Essentially, Cheniere embarked on a path to become an LNG exporter instead of an importer.

The new system is currently designed to have five LNG liquefaction trains, each expected to have production capacity of 4.5mtpa of LNG (225 bcf/year), and the entire liquefaction complex is budgeted at a total capital cost of $12.5-13.5bn, or $17.0-18.0bn after accounting for financing costs. Management has put forth a proposal for a sixth train, which has been fully permitted and is currently awaiting a final investment decision, which is predicated on securing commercial arrangements and an assessment of the partnership's ability to finance the construction. The project has an unleveraged estimated cost of $2.5bn. Finally, CQP controls, through its wholly owned subsidiary Cheniere Creole Trail Pipeline LP (CTPL), the 94-mile Creole Trail Pipeline, which is capable of transporting 1.5 bcf/day of natural gas to the Sabine Pass LNG facility to and from inland connections with major interstate pipelines.

CQP is owned by its general partner, Cheniere Energy Partners GP, which is in turn owned by Cheniere. In addition to its general partner ownership, Cheniere owns CQP's incentive distribution rights (Figure 3), which entitle the parent to a percentage of total distributions made to limited partnership unit holders. Moreover, through Cheniere's 80.1% ownership in Cheniere Energy Partners LP Holdings (CQH), which itself was solely designed to hold a limited partnership interest in CQP, the parent therefore also has both an indirect stake in CQP's LP units. Through its wholly owned subsidiary, Cheniere Energy Investments, CQP owns all of the interests in SPL, SPLNG and CTPL. Following recent refinancing activities (see *Financing and Capital Structure* below), SPL is the only entity within the complex with bonds outstanding.

Despite some residual cash flows related to legacy contracts on CQP's regasification operations at SPLNG, the new liquefaction trains will be the main contributors to the partnership's earnings on a go-forward basis and the primary support for the existing bonds outstanding. Figure 4 provides a summary of the facility's construction schedule, with Bechtel Oil, Gas and Chemicals, Inc (Bechtel), the designated contractor and engineer for all of SPL's trains. SPL announced that it had reached substantial completion of Trains 1 and 2 in 2016, well in advance of their guaranteed completion dates, while construction for Trains 3-5 is currently on time or expected to be completed before the respective guaranteed completion dates. The majority of the capacity under construction has been contracted with customers on a take-or-pay basis for an average of 20 years, with a pricing mechanism designed to provide SPL with ongoing cash flow stability and protection from variation in feedstock costs.

FIGURE 3
CQP Corporate Structure



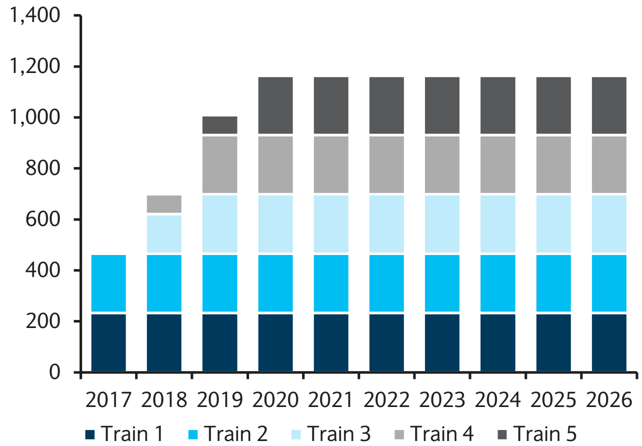
Source: Company reports, Barclays Research

FIGURE 4
Construction Schedule

	Train 1	Train 2	Train 3	Train 4	Train 5
Construction Start	Aug-12	Aug-12	Jun-13	Jul-13	Jun-15
Guaranteed Completion	Dec-16	Sep-17	Jun-17	Mar-18	Dec-19
Actual/Expected Completion	May-16	Sep-16	Apr-17	Aug-17	Aug-19
Percent Completion (%)	100	100	91.8	91.8	42.8
.					
Capital Cost ($bn)	2.1	2.1	1.9	1.9	3.0
Capacity (mtpa)	4.5	4.5	4.5	4.5	4.5
Capacity (mmcf/day)	592	592	592	592	592
.					
Cumulative Contracted Capacity	500	1,100	1,693	2,285	2,822
Train Capacity Online	592	1,184	1,775	2,367	2,959
Excess Capacity	92	84	82	82	137

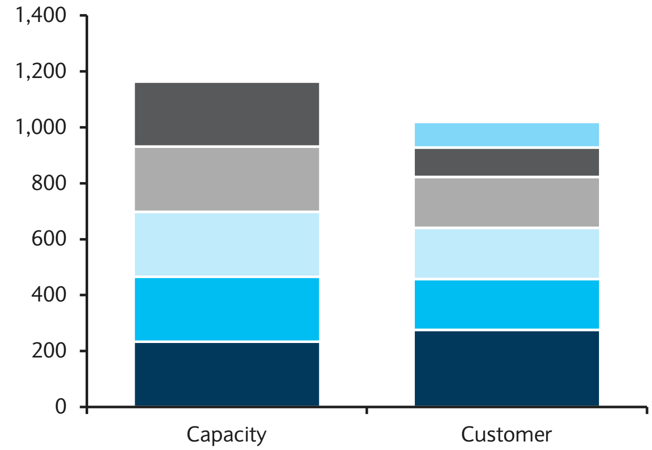
Note: Contracts do not have designated trains. Train costs are estimated based on total phase price according to EPC contracts. Source: Company reports, Barclays Research

FIGURE 5
SPL Liquefaction Ramp-up Schedule (bcf)



Source: Company reports, Barclays Research

FIGURE 6
Contracts by Customer versus Capacity by Train

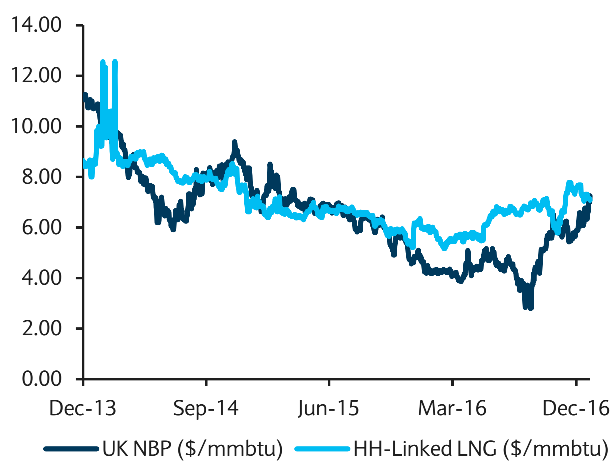


Source: Company reports, Barclays Research

LNG Market

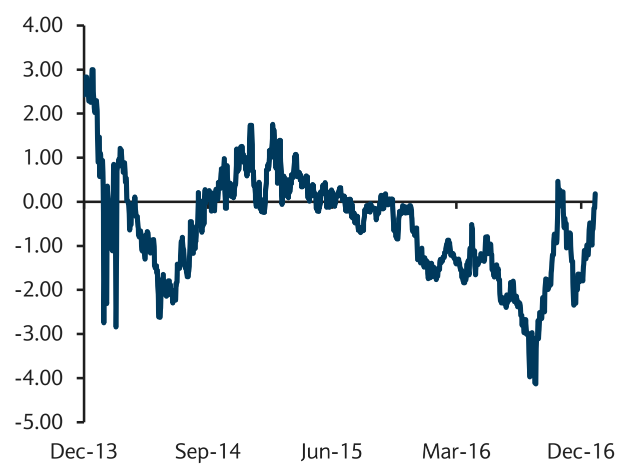
As discussed by Nick Potter in Barclays' commodities research group (*US LNG waiting in the wings*), final investment decisions (FIDs) on new LNG export capacity have fallen to the slowest pace since 1999, reflecting an impasse between LNG buyers and producers while the global LNG market is in surplus. Currently, 105 mt/y of global liquefaction capacity is under construction, or more than 40% of the total 2015 market (245 mt/year). Moreover, there is roughly 850 mt/year of proposed global LNG export capacity, of which only 10% has completed front-end engineering design (FEED) work. However, given that new LNG projects typically take four to five years to build, Nick thinks that after two years of limited FID activity, the global market could be on track for tighter conditions post-2020, which would benefit US LNG in light of its relative speed to market because of existing infrastructure and ability to tie into the US onshore gas grid. As shown in Figures 7-8, we estimate that the current spread between US Henry Hub-linked LNG and the UK's National Balancing Point (NBP) gas contract is close to parity, despite US dollar strength.

FIGURE 7
UK NBP and US LNG Prices Close to Parity



Note: Assumes Henry Hub * 115% + $3.00/mmbtu commodity charge + $0.45/mmbtu shipping. Source: Bloomberg, Barclays Research

FIGURE 8
Spread between UK NBP and US LNG (>0 Favors US LNG)



Note: In $/mmbtu. Assumes Henry Hub * 115% + $3.00/mmbtu commodity charge + $0.45/mmbtu shipping. Source: Bloomberg, Barclays Research

Commercial Contracts

Engineering, Procurement and Construction (EPC): SPL has entered lump-sum, turn-key contracts that outline the engineering, procurement, and construction of the facility in three stages and provide SPL with remedies in the event that Bechtel is unable to deliver a substantially completed project in accordance with the contract.

Ongoing Maintenance: General Electric (GE) is the manufacturer of several high-risk components, including the compressors and turbines. Service and maintenance contracts are in place with GE related to Trains 1-4 and provide for coverage of parts to be replaced every six years. A contract on Train 5 is also expected to be signed.

Sale and Purchase Agreement (SPA) of LNG: In terms of off-take agreements, SPL has contracted with third-party customers for the majority of its liquefaction capacity, commencing on a staggered timeline that coincides with the substantial commercial completion of each train. The trains themselves are not designated to a specific counterparty, however, although in many cases nearly all of the throughput of a given train will be consumed by individual customers. In terms of duration, all customers have agreed to 20-year contract periods, commencing from the delivery of their first LNG shipments. The customers do have the right to terminate their contracts in certain circumstances, mainly due to underperformance on the part of SPL, where, for instance, SPL fails to consistently deliver contracted volumes for an extended period. SPL would have the right to cancel the contract if a counterparty ceased to receive a guaranty from an affiliate that was determined to be a prerequisite to the contract.

The agreements include a fixed price component, by which customers will pay for all contracted volumes regardless of whether or not they are ultimately delivered. The purchasers are also required to pay a variable rate on volumes delivered equal to the natural gas spot price plus a 15% premium. The off-takers have the option to decline deliveries, in whole or in part, without penalty, and will be able to forgo the variable price component for any cargoes not delivered. While the fixed price component ensures the stability of cash flows for the life of the contract, it does not allow SPL to participate in any upside potential related to spot LNG prices. On the cost side, the SPA structure offers some protection from commodity prices, as feedstock purchases are offset by the variable price component. Should a customer elect not to receive a contracted shipment, SPL, as a result of its supply contracts, may still be obligated to purchase feedstock at market prices (as outlined below under *Natural Gas Supply*), which could expose the company to the difference between the contracted price and the spot price for natural gas. In addition, the pricing structure does not provide for protection against increases in maintenance or other service costs, other than for inflation escalators that take effect on a portion of the fixed contract price.

To the extent that LNG is produced in excess of the contracted level, SPL has agreed to offer those cargoes first to Cheniere Marketing at a set price equal to $3.00/mmbtu plus 115% of the natural gas spot price. Cheniere has no obligation to accept all of the volumes offered to it by SPL and, given advanced notice, can decline any and all cargoes without penalty. If SPL is unable to produce LNG in excess of that needed to satisfy its other existing SPAs, SPL would not be obligated to offer any volumes to Cheniere.

Terminal Use Agreement (TUA): Given the availability of SPLNG's regasification infrastructure, SPL was able to enter an agreement with its sister entity under which it obtained the right to use berthing, unloading, loading, regasification (2.0 bcf/day), and storage capacity (6.9 bcf) for an annual cost of $250mn. SPL's obligations ramp up over time as the first four trains are completed, with its current requirement being 50% following the start-up of Train 2 in 2016. The TUA contract has a 20-year term, in line with that of SPL's offtake SPAs, which commenced upon the substantial completion of Train 1. The contract was originally obtained by an assignment of rights from Cheniere Investments under its own TUA in 2012, and although we do not expect SPL to make use of the regasification capabilities, SPL will be a heavy user of the other aspects of the infrastructure available to it. From CQP's perspective, this arrangement has reduced capital expenditure requirements for SPL while contributing cash to SPLNG, which the subsidiary can use for maintenance of the facility or distribution to the partnership. CQP has guaranteed SPL's obligations under the TUA.

Natural Gas Supply: In our view, access to natural gas is one of the biggest risks faced by the issuer. In light of its position near the Gulf Coast, SPL is located near several natural gas-producing regions, as well as a number of high capacity, interstate pipelines. To mitigate the supply risk, SPL has entered term contracts (ranging from one to seven years) for a total of 2.2 tcf of natural gas feedstock. Contracted capacity covers roughly 50% of required daily load for Trains 1-4 with prices roughly in line with Henry Hub less a $0.10/mmbtu discount. Supply sources include CTPL (1.5 bcf/day), NGPL (0.5 bcf/day), and Transco (1.2 bcf/day), with SPL itself connecting with the Transco, Texas Eastern (TETCO), Texas Gas, ANR, and Columbia Gulf pipelines through two main stations. SPL has also secured firm pipeline transportation capacity for 4.2 bcf/day, or approximately 130% of total capacity for Trains 1-5.

Export Licenses: SPL has been issued several export licenses from the Department of Energy (DOE) ranging from 20- to 30-year terms to both FTA (free-trade agreement) and non-FTA countries. Currently, SPL has been approved for the export of 1.5 bcf/day of LNG, which exceeds the expected liquefaction capacity of the five-train project.

FIGURE 9

LNG Sale and Purchase Agreements

Off-taker	BG Gulf Coast LNG	Gas Natural Fenosa	Korea Gas Corporation	Gail (India) Limited	Total Gas & Power N.A.	Centrica
Parent Credit Rating	NR/A/A+	Baa2/BBB/BBB+	Aa2/AA-/AA-	Baa3/BBB-/BBB-	Aa3/A+/AA-	Baa1/BBB+/A-
Contract Start	Train 1	Train 2	Train 3	Train 4	Train 5	Train 5
Contract Duration	20 years	20 years	20 years	20 years	20 years	20 years
Contracted Quantity (mmcf/day)	785	500	500	500	287	250
Fixed Fee ($/mmbtu)	$2.25-3.00	$2.49	$3.00	$3.00	$3.00	$3.00
Annual Contracted Revenues ($mn)	723	454	548	548	314	274
Variable Cost	115% of Henry Hub	115% of Henry Hub	115% of Henry Hub	115% of Henry Hub	115% of Henry Hub	115% of Henry Hub
Fee During Force Majeure	24 months	24 months	N/A	N/A	N/A	N/A

Note: BGhas contracted for 500 mmcf/day of LNG under train one with an additional 100 mmcf/day, 93 mmcf/day, and 92 mmcf/day of LNG at the start of production at Trains 2, 3, and 4. Ratings reflect Moody's/S&P/Fitch at the parent level. Source: Company reports, Barclays Research

Customers

BG Gulf Coast LNG: BG Gulf Cost LNG is a subsidiary of BG Energy Holdings, which itself is a wholly owned subsidiary of Royal Dutch Shell Plc (RDSALN). BG is rated A and A+ by S&P and Fitch, respectively, while RDSALN is rated Aa2/A/AA-. Although fully controlled by its parent, BG's debt is not guaranteed by RDSALN, though financing for the broader group (including BG) is done at the parent level. RDSALN is a large and well-integrated energy company with a current market capitalization of $229bn. Through its upstream businesses, RDSALN explores for and produces hydrocarbons, but is also the largest global LNG producer and marketer.

Gas Natural Fenosa: Rated Baa2/BBB/BBB+, Gas Natural is a leading distributor of regulated natural gas and electricity throughout Spain and Latin America. The company generates roughly 60% of its earnings from regulated activities, with 50% of that amount generated from its operations in Spain, where it is the largest gas distribution operator, the third-largest electricity distributor, and the largest wholesale and retail supplier of natural gas.

The company also owns a fleet of LNG tankers with 1.0bn cubic meters (bcm) of capacity as of 2015, but the intention to expand to 1.8 bcm by 2018.

Korea Gas Corporation: Korea Gas Corporation, rated Aa2/AA-/AA-, is the only vertically integrated gas utility in South Korea and holds a monopoly position in the import, transmission, and wholesale selling of natural gas in the country. The government of Korea holds a 54.6% equity stake in the company both directly and indirectly through Korea Electric Power Corporation. The company owns and operates four domestic LNG terminals, and although the country has proposed opening up imports to the broader market, Korea Gas will continue to own the majority of the country's natural gas assets.

Gail Ltd.: The government of India currently maintains a 56% stake in GAIL. The company is rated Baa3/BBB-/BBB- and operates across a variety of businesses including petrochemicals, liquid hydrocarbons, and its core segment, natural gas transmission. The company also operates a near monopoly in gas transmission in India, but is facing increased competition due to deregulation that commenced in 2008. GAIL has expanded its purchases of natural gas in the open market as production from its own fields has declined in recent years.

Total SA: Total (Aa3/A+/AA-) is a globally integrated oil and gas company with a market capitalization of $125bn. The company is engaged in the production, refining, and retail of oil and gas, as well as operating a division focused on the production of base and specialty chemicals. The company is well diversified globally, with operations in more than 130 countries, but generates 25% of its revenues from France and roughly 48% from the rest of Europe. As of December 31, 2015, the company reported total proved reserves of 10.9bn boe and owned 20 refineries.

Centrica Plc: Centrica (Baa1/BBB+/A-) is a UK-based integrated energy company with a primary focus on the supply of electricity and natural gas, but also has operations in natural gas production and processing. The company generated $42.7bn in revenues during 2015 and has a current market capitalization of $15.6bn. Its largest market is in the UK, although Centrica also operates in the US, Norway, and the Netherlands.

Financing and Capital Structure

CQP has financed the majority of its capital needs at the opco level, with SPL the most significant issuing entity in the structure. Thus far, SPL has issued $11.5bn in bullet senior secured notes to fund the construction of the liquefaction facility. Cash proceeds are considered restricted under the partnership's credit agreement and are designated for the payment of EPCs and other costs associated with construction of Trains 1-5. In addition to its debt financing, SPL employed roughly $2.6bn in external equity capital from to fund Trains 1-4, through the issuance of CQP Class B and common units. In addition, management mentioned that it intends to use operating cash flows from Trains 1-3 to fund an additional $2.0-2.5bn in expenditures. We expect that some of these costs will initially be funded using SPL's revolving credit facility, before being paid down over time with free cash flow beginning in 2018.

All of SPL's outstanding debt and any borrowings under the credit facilities are pari passu and ranked senior secured with a first-lien security interest in the company's existing assets (does not currently include the contemplated Train 6). The senior bonds have bullet style maturities begin in 2021 and come due each consecutive year through 2027, which results in greater refinancing risk compared with an amortizing security. Longer term, management has mentioned its intention to refinance SPL's debt in an effort to spread out its maturity profile of outstanding bonds and to term out its revolving credit facility borrowings. We think that this is increasingly likely following SPL's upgrade to investment grade by Fitch and S&P and the resulting access to a lower cost bond market.

FIGURE 10

Liquidity Facilities ($mn)

Issuer	Description	Rank	Maturity	Capacity	Drawings	LOCs	Available
CQP	CTPL Tranche TL	Sr. Secured	Feb-20	450	450	0	0
	SPLNG Tranche TL	Sr. Secured	Feb-20	2,100	2,099	0	1
	DSR Facility	Sr. Secured	Feb-20	125	0	8	118
	Revolving Facility	Sr. Secured	Feb-20	115	0	0	115
SPL	Working Cap. Facility	Sr. Secured	Dec-20	1,200	99	337	764
	2015 Credit Facility	Sr. Secured	Dec-20	1,956	0	0	1,956

Note: As of September 30, 2016; pro forma for subsequent events. Source: Company reports, Barclays Research

FIGURE 11

Outstanding Bonds

Issuer	Rank	Coupon (%)	Maturity	Next Call Date	Currency	Outstanding Amount
SPL	Sr. Secured	5.625	2/1/2021	11/1/2020	USD	2,000
	Sr. Secured	6.250	3/15/2022	12/15/2021	USD	1,000
	Sr. Secured	5.625	4/15/2023	1/15/2023	USD	1,500
	Sr. Secured	5.750	5/15/2024	2/15/2024	USD	2,000
	Sr. Secured	5.625	3/1/2025	12/1/2024	USD	2,000
	Sr. Secured	5.875	6/30/2026		USD	1,500
	Sr. Secured	5.000	3/15/2027	9/15/2026	USD	1,500

Source: Company reports, Barclays Research

Financial Summary

In light of where SPL's outstanding bonds are held within CQP's structure, our financial estimates reflect only the liquefaction assets. For the purposes of a project-style financing, we think that the market will be more focused on the company's DSCR as opposed to more typical leverage ratios, at least in the early years. In our estimates in Figure 12, we assume that SPL realizes revenues from all possible sources, including fully utilizing its spare capacity to sell LNG cargoes to Cheniere Marketing, and that all remaining trains are brought online according to the current schedule. In this case, we think that SPL will achieve its minimum DSCR in all periods (according to the bond indenture, which excludes debt maturities) and maintain substantial coverage when the facility is fully ramped up. Importantly, we estimate that the project will generate positive free cash flow beginning in 2018 and cover roughly 105% of total principal due on a cumulative basis through 2027. Over the life of the contracts, assuming an average of 20 years, we estimate a DSCR of 1.8x. Finally, our estimates indicate that the company would be able to meet or exceed the requirements under its restricted payments covenant and allow distributions from SPL to begin to flow to the CQP level. Management has indicated, though, that cash flows from Trains 1-3 will first be used to finance the construction of Trains 4-5.

In our second scenario (Figure 13), we assume that SPL receives revenues only from its take-or-pay contracts. We note that some of the reduction in sales is offset by the ability to forgo the purchase of natural gas feedstock and plant fuel, although the company does recognize some additional deterioration given the loss of the 15% premium paid by customers over Henry Hub for volumes actually delivered. In this case, our LTM DSCR calculation for 2017 remains above the 1.0x curable minimum prescribed by the credit facility. Despite a fairly sharp drop in earnings potential, positive free cash flow generation would still be possible starting in 2018 assuming substantial completion of Trains 1-4. Over the life of existing contracts in this case, we estimate a DSCR of 1.4x, which we still consider to be consistent with investment grade.

FIGURE 12

SPL Financial Snapshot Assuming Full Capacity Utilization ($mn)

	2017	2018	2019	2020	2021
EBITDA	1,537	2,126	2,306	2,628	2,628
Interest Expense	700	700	700	700	708
CFO	837	1,426	1,606	1,927	1,920
Capital Expenditures	-2,000	-643	-643	-200	-200
Dividends	0	0	0	0	0
Free Cash Flow	-1,163	783	963	1,727	1,720
Debt	13,153	13,153	13,153	13,153	13,185
LTM DSCR (x)	2.2	3.0	3.3	3.8	3.7
NTM DSCR (x)	3.0	3.3	3.8	3.8	3.7
Debt/EBITDA (x)	8.6	6.2	5.7	5.0	5.0

Note: Price deck includes natural gas price of $3.00/mmbtu. DSCR does not include principal repayment on bullet maturities as debt service. Source: Company reports, Barclays Research

FIGURE 13

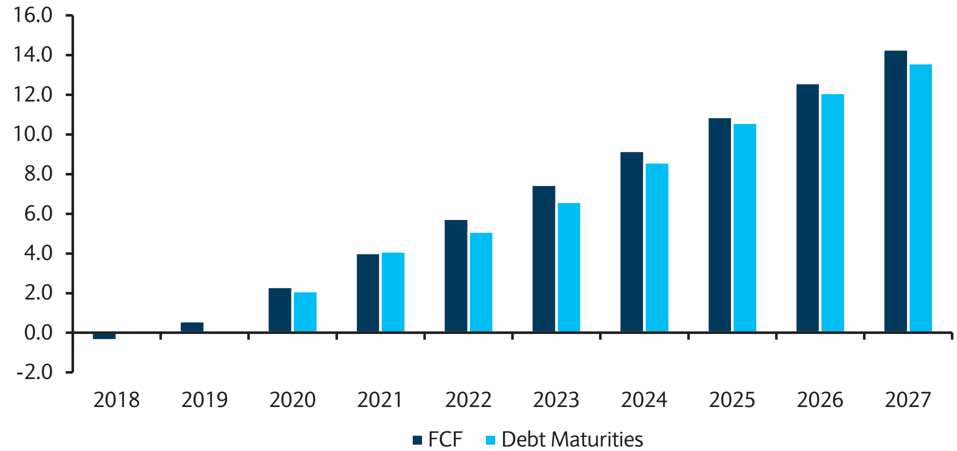
SPL Financial Snapshot Assuming Take-or-Pay Volumes Only ($mn)

	2017	2018	2019	2020	2021
EBITDA	1,108	1,599	1,722	1,928	1,928
Interest Expense	728	728	728	728	735
CFO	381	872	994	1,201	1,193
Capital Expenditures	-2,000	-643	-643	-200	-200
Dividends	0	0	0	0	0
Free Cash Flow	-1,619	229	351	1,001	993
Debt	13,609	13,609	13,609	13,609	13,641
LTM DSCR (x)	1.5	2.2	2.4	2.7	2.6
NTM DSCR (x)	2.2	2.4	2.7	2.7	2.6
Debt/EBITDA (x)	12.3	8.5	7.9	7.1	7.1

Note: Price deck includes natural gas price of $3.00/mmbtu. DSCR does not include principal repayment on bullet maturities as debt service. Source: Company reports, Barclays Research

FIGURE 14

Cumulative Free Cash Flow versus Cumulative Debt Maturities ($mn)



Note: Estimates assume the revolving credit facilities are refinanced at maturity. Source: Company reports, Barclays Research

Covenants

Following the company's credit rating upgrades from S&P and Fitch to investment grade status, several of the credit's pre-existing covenants are no longer in effect. S several requirements remain, however, as summarized below.

Secured Basket: All of SPL's and CQP's current outstanding debt is senior secured. In the case of SPL, liens are secured against substantially all of the entity's assets, as well as a pledge of all of the equity membership interests in SPL.

Restricted Cash and Payments: Cash proceeds received from the issuance of secured debt are required to be deposited with a trustee and must be used solely for investment in the liquefaction facility. The credit agreement and bond indenture restrict SPL's ability to make dividend payments. Following the completion of the second LNG train, SPL is required to maintain at least a 1.25x DSCR on a one-year projected and historical basis and ensure funding of a debt service reserve equal to six months of debt service before making any dividend payments.

Debt Service Reserve: Following the completion of Trains 1 and 2, SPL is required to fund a debt service reserve account with cash sufficient to cover the subsequent six months of interest payments on outstanding borrowings.

Minimum Debt Service Coverage Ratio (DSCR): Beginning with the first calendar quarter that will end at least three months following the completion of the fifth train, SPL will be required to maintain a DSCR of at least 1.15x. Should the DSCR fall below 1.15x but remain above 1.0x, SPL will have the opportunity to make up the difference by obtaining additional capital though either equity issuance or subordinated debt.

Mandatory Repayments: Under SPL's revolving credit facility, any funded loans will be required to be repaid in quarterly instalments starting on the earlier of June 30, 2020, and the end of the last full quarter following the completion of the liquefaction project, according to an 18-year amortization schedule with a balloon payment due upon the maturity of the credit facility. The maturity date is the earlier of December 31, 2020, or the second anniversary of the SPL project's completion date. The credit facility is permitted to be refinanced at any date without penalty.

Limitation on Indebtedness: Under its credit facility agreement, SPL is able to incur additional senior secured or unsecured debt provided that it is used to fund a portion of construction costs for the sixth planned train. After having accounted for the additional obligation, SPL's credit facility does not permit the debt-to-equity ratio to exceed 75/25. The entity is permitted specific carve-outs for working capital, letters of credit, or compliance with regulations so long as the debt pertains to the operations of the liquefaction project. In order to issue replacement debt for refinancing purposes, SPL's credit facility requires SPL's pro forma DSCR to be at least 2.0x including all cash flows and at least 1.75x including a narrower set of cash flows.

Under SPL's bond indenture, as a result of having received investment grade ratings from at least two agencies, SPL is able to incur additional debt to the extent that the debt of the company would still be rated investment grade by at least two agencies. Alternatively, SPL would also be permitted to incur additional debt if the company certifies that the pro forma total senior debt could be amortized to a zero balance by the termination date of the last-to-terminate SPA and that the DSCR (after only accounting for contracted cash flows) would be at least 1.5x for the period following the substantial completion date for any trains still under construction through the termination of the last-to-terminate SPA.

LNG Sales Contracts: The bond indenture also restricts the counterparties with whom SPL is able to enter into SPAs. Specifically, all new SPAs must be with customers that at the time of the agreement have at least one investment grade rating or are able to provide a guaranty from an affiliate with such ratings or have a parent entity with at least one investment grade rating. Moreover, either the counterparty or the affiliate/parent must have a tangible net worth of at least $15bn. SPL can also enter sales contracts with counterparties that lack an investment grade rating so long as the contract duration is longer than one year, but less than five years, and if the agreement is accompanied by a guaranty from a financial institution with at least a single-A rating from S&P or Moody's for a period of 60 days. Finally, SPL is prohibited from entering any sales contracts whose duration is one year or less or with counterparties that prepay their obligations in cash.

Rating Agencies

Moody's: On December 22, 2016, Moody's raised its rating on SPL to Ba1 with a positive outlook from Ba2. The agency believes that SPL's operations have investment grade characteristics driven by long-term contracts with strong counterparties and an expected strong financial profile, but these factors are currently offset by execution risks relating to the remaining construction and ongoing operations as an inexperienced owner of liquefaction operations. Moody's expects further improvement in SPL as construction progresses and would upgrade the rating with the successful completion of Trains 3-4 if SPL continues to demonstrate its ability to manage the project and provide greater clarity into its financial policies. The agency could downgrade the rating or revise the outlook to stable if the project experiences delays and/or cost overruns, encounters major operating disruptions, or does not generate the expected level of cash flows to fund the remaining construction costs. In terms of financial estimates, Moody's projects that funded debt will reach $13.5bn by 2019 and that SPL will have a DSCR of 1.5x, assuming annual repayment of debt.

S&P: On September 19, 2016, S&P raised its rating on SPL to BBB- with a stable outlook from BB+. The upgrade was the result of SPL's positive progress in the construction of its facility and, according to the agency's estimates, cash sources that now exceed funding requirements under its downside case. Under its base case, S&P would expect the DSCR to average 1.57x over the tenor of debt maturities. The agency has placed a cap on SPL's rating at BBB- during the construction phase, which reflects its view of GAIL as one of the project's counterparties. S&P noted that although unlikely, it would consider an upgrade of the rating over the next two years if there is an improvement in the construction phase analysis due to increased certainty in funding from the credit facility and pre-completion cash flows. A downgrade would be the result of an increase in construction costs or meaningfully lower pre-completion cash flow. Moreover, an adverse change in S&P's view of GAIL's creditworthiness could also lead to a negative rating change.

Fitch: On January 9, 2017, Fitch assigned SPL a BBB- rating with a stable outlook. The agency sees several of the cash flow risks mitigated by the nature of SPL's EPC and SPA contracts, which guarantee completion and take-or-pay type revenues, respectively. The agency projects SPL to have an average DSCR of 1.45x with a debt/EBITDA ratio of 7.1x in 2020, which includes the funding of Trains 1-5 with a total of $13.5bn in debt and assumes total project costs of $18.2bn. Fitch notes that SPL could improve its credit profile through the refinancing of bullet maturities with the use of fully amortizing debt, as well as lowering its operating costs as it becomes a more experienced owner of the liquefaction facilities. Alternatively, the agency could see SPL's profile negatively affected by deterioration in the creditworthiness of SPA off-takers or Bechtel as the contractor, additional debt issuance such that the average DSCR falls to below 1.30x, or an increase in operating expenses that could also weigh on financial metrics.

APPENDIX

Liquefaction Process

Liquefaction in its most basic form involves the cooling of a gas until it reaches its liquid state. In the case of natural gas (specifically methane), which is a vapor under standard atmospheric conditions, cryogenic cooling to -162C (-260F) is required to convert the compound to a liquid. In addition, at this temperature, the volume of natural gas is condensed by 1/600, revealing one of the main benefits of liquefaction. In this form, transportation methods other than pipelines become feasible, and although methane as a gas is flammable when coming into contact with the air in amounts of 5-15%, as a liquid, the presence of oxygen is insignificant, resulting in a much more stable material that cannot ignite, further increasing the safety of its transport.

The liquefaction process itself closely resembles that of standard refrigeration, which, given its broad global use, makes it a fairly straightforward operation, albeit with added complexities on an industrial scale. At the highest level, refrigerants, typically in the form of liquids, are used to absorb heat from another source, be it air, an organic compound, or in this case, natural gas. The heat transfer is typically facilitated through a metallic medium that has highly efficient heat absorption proprieties. The refrigerants themselves also require pressurizing and cooling as they evaporate following the heat transfer from the primary source, allowing one liquid to cool while the other heats up, which is regulated through compressors. The method chosen to solve most efficiently for this heat transfer is one of the primary determinants of a system's economics.

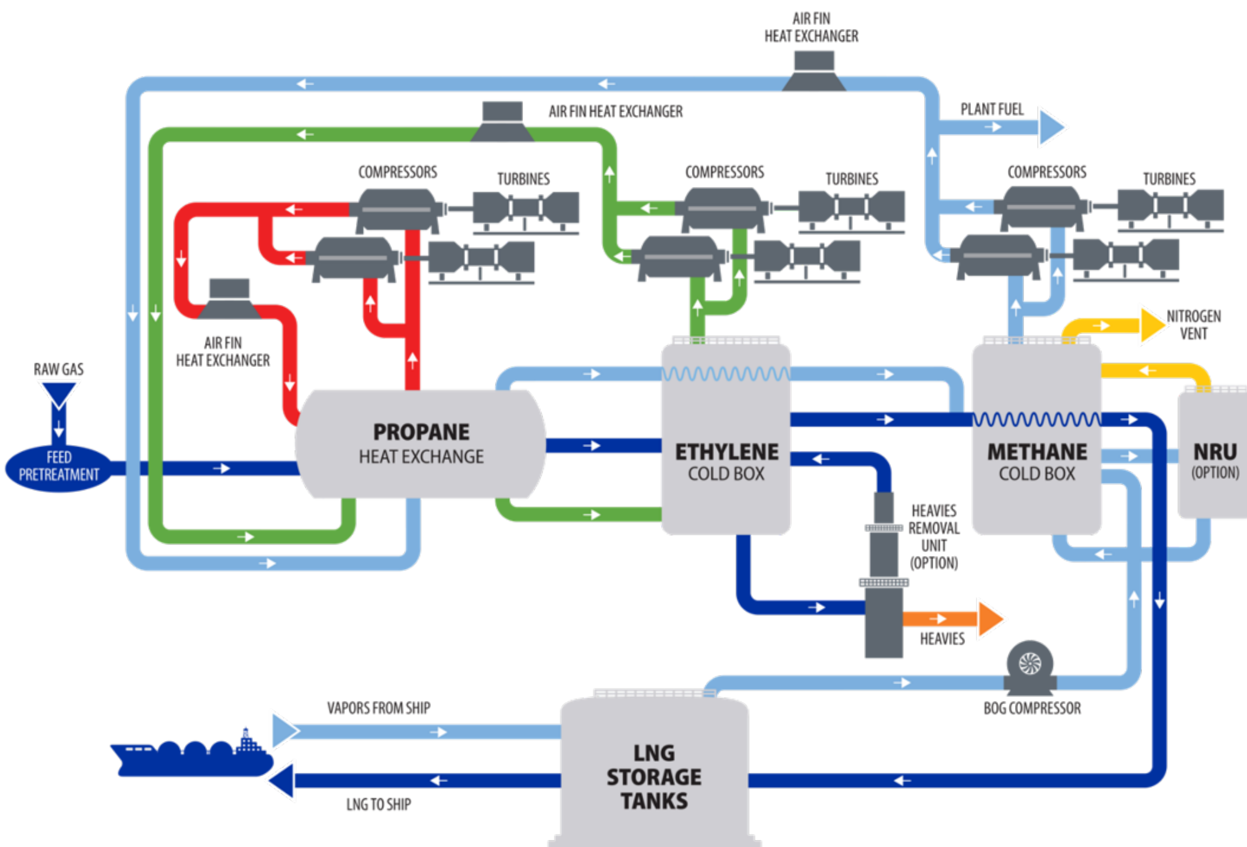
For its facility, CQP employed the ConocoPhillips Optimized Cascade Process (Cascade), a technique first used by ConocoPhillips at the LNG facility in Kenai, Alaska, in 1969 and currently licensed for use in 25 trains globally with capacity of 100 mtpa (277 mtpa of total capacity available or under construction globally in 2016). The benefits of the Cascade approach include the flexibility to run the plant across a wide range of throughput rates without material loss of efficiency, operational simplicity, and lower capital costs relative to mixed-refrigerant processes (eg, Air Products Chemicals Inc.). These are offset somewhat, however, by lower thermodynamic efficiencies compared with mixed systems that also benefit from greater train capacity, resulting in higher relative operating costs for the Cascade process. The Cascade system can be upgraded, however, through additional upfront capital costs in order to increase both efficiency and capacity at the expense of additional complexity.

The Optimized Cascade approach is a pure-component refrigeration process consisting of three separate cycles that provide cooling at progressively lower temperatures. Feed-gas initially undergoes a pre-treatment process whereby carbon dioxide, hydrogen sulphide, water, and other particulates and contaminants that inhibit freezing or do not meet the standards for the final product are removed. The heavier components that are removed may contain refrigerants, which can be introduced to the liquefaction process or otherwise further fractionated and sold. The treated gas passes through the propane heat exchange, where propane, condensed itself using high pressure cooling (air and/or water), is used to cool the methane to -30C. While the propane, now a vapor, restarts its own condensation cycle, the methane moves through two more similar cycles (cold boxes) in which ethylene and methane are used to cool the inlet gas to -100C and -163C, respectively. The selection of the refrigerants themselves corresponds to each of the compound's respective boiling points and the required cooling of the material to be liquefied. In this instance, propane (propylene), ethylene, and methane have boiling points of -42C, -104C, and -162F, respectively, and correspond to their cooling abilities. Similar to other systems, the Cascade process takes advantage of each refrigerant's cooling properties and, through the addition of a compressor at each stage, uses the cooled propane to cool the evaporated ethylene, with a similar approach taken for the evaporated methane.

Once liquefied, the methane is transferred to insulated storage tanks where it is held near boiling point until finally being loaded onto a designated vessel for export. Throughout the liquefaction and storage process, traces of LNG are inevitably lost to evaporation despite the insulation of the storage facilities or traces remaining on ships. The Optimized Cascade process is designed, however, to reintroduce those vapors to the liquefaction system, increasing its overall efficiency. The final step after transport is regasification at the off-takers' facilities. Regasification takes place progressively, as unmonitored reheating could result in rapid phase transition (cold explosion) in which a significant amount of energy is released, albeit without full combustion. LNG possesses significant cold energy that can be harnessed for other industrial processes as it moves from one form to the next, which can improve the economics of such facilities.

FIGURE 15

ConocoPhillips Liquefied Natural Gas Optimized Cascade Process



Source: ConocoPhillips

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Representative Bond: BWP 4.95 12/15/24 (USD 104.16, 23-Jan-2017)

RAS LAFFAN LIQUEFIED NATURAL GAS CO LTD II, Market Weight, CD/D/E/J/K/L/M/N
Representative Bond: RASGAS 5.298 09/30/20 (USD 105.03, 23-Jan-2017)

ROCKIES EXPRESS PIPELINE LLC, CD/D/E/J/K/L/M
Representative Bond: ROCKIE 6 01/15/19 (USD 106.00, 23-Jan-2017)

SABINE PASS LIQUEFACTION LLC, CD/J/K/N
CQP 5 03/15/27 (USD 105.25, 23-Jan-2017)
CQP 5 3/4 05/15/24 (USD 108.38, 23-Jan-2017)
CQP 5 5/8 03/01/25 (USD 108.13, 23-Jan-2017)

WILLIAMS PARTNERS LP, Market Weight, CD/CE/D/E/J/K/L/M
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For all issuers in South Africa, the credit rating system is based on the analyst's view of the expected total return over a six-month period of the issuer's rand-denominated fixed rate notes or floating rate notes (as applicable) relative to the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively.

Overweight (OW): The analyst expects the six-month total returns of the issuer's rand-denominated fixed rate notes or floating rate notes (as applicable) to exceed the six-month expected total returns the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively.
Market Weight (MW): The analyst expects the six-month total returns of the issuer's rand-denominated fixed rate notes or floating rate notes (as

applicable) to be in line with the six-month expected total returns the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively..

Underweight (UW): The analyst expects the six-month total returns of the issuer's rand-denominated fixed rate notes or floating rate notes (as applicable) to be below the six-month expected total returns the South African Credit Fixed Market Index (CFIX95) or the South African Credit Floating Market Index (CFL020), respectively..

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Where a recommendation is made at the issuer level, it does not apply to any sanctioned securities, where trading in such securities would be prohibited under applicable law, including sanctions laws and regulations.

*In EEMEA and Latin America (and in certain other limited instances in other regions), analysts may occasionally rate issuers that are not part of the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD High Grade Credit Index or Bloomberg Barclays EM USD Corporate and Quasi Sovereign Index. In such cases the rating will reflect the analyst's view of the expected excess return over a six-month period of the issuer's corporate debt securities relative to the expected excess return of the relevant sector, as specified on the report.

Distribution of ratings assigned by Barclays Corporate Credit Research at the issuer level:

22% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 67% of issuers with this rating category are investment banking clients of the Firm; 84% of the issuers with this rating have received financial services from the Firm.

51% have been assigned Market Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 67% of issuers with this rating category are investment banking clients of the Firm; 84% of the issuers with this rating have received financial services from the Firm.

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Explanation of the Barclays EM Sovereign Credit Issuer Rating System

Overweight (OW):

The analyst expects the three-month excess return of the country's index eligible bonds to exceed the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Market Weight (MW):

The analyst expects the three-month excess return of the country's index eligible bonds to be in line with the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Underweight (UW):

The analyst expects the three-month excess return of the country's index eligible bonds to be less than the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Rating Suspended (RS):

The rating has been suspended temporarily due to market events that make coverage impracticable or to comply with applicable regulations and/or firm policies in certain circumstances including where the Investment Bank of Barclays Bank PLC is acting in an advisory capacity.

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