The Future of Global LNG Trading

By Kirk Kinnear, Principal, GPD Systems, LLC

LNG Trading at the Crossroads

For many decades LNG traded almost exclusively under long-term bilateral agreements forged between various natural gas exporters and importers. The length of these deals, referred to in the industry as sales and purchase agreements (SPAs), averaged more than 15 years in duration. Delivery destinations were often fixed and the majority of price clauses contained crude oil-linked formulas called “cocktails”. Negotiating each of these contracts was a cumbersome and time consuming process.

In recent years, the global pivot from coal to cleaner burning natural gas for power generation and other uses has accelerated. This demand surge has been led by customers in Asia, a region beyond the reach of many producing country pipelines. Increasingly, LNG transported on ocean-going vessels, has been relied on to supply these markets. As the worldwide natural gas market evolves, new players are being attracted to the space with business plans not predicated on the long-term contract model.

Today roughly one-third of international LNG trade is transacted in either the short-term (four years or less) or spot (prompt) market. To meet changing needs and to make the global value chain more efficient, customers and governments are pushing to add increased destination flexibility, ocean freight optimization and offshore title transfer option clauses to both new and existing LNG contracts. As short-term transactions become more prevalent, the industry is searching for a “neutral” trading contract with standard terms and conditions which both buyers and sellers see as "fair". Several organizations have responded to the challenge by offering master sales and purchase agreement (MSA) proposals. Despite these efforts, and to the frustration of many, an industry-wide consensus for contract standardization remains elusive. That is about to change.

Introducing the GPD Contract for Global LNG Trade

Thirty years ago the global crude oil market experienced a similar challenge. The solution the oil industry agreed upon was the Brent crude oil physical-forward contract, which offered common terms all parties buying and selling cargos in the over-the-counter (OTC) market could use. This new contract quickly became an industry standard, successfully bridging the gap between long-term, spot, and futures markets.

With a few modifications, the "Brent template" can be applied to solve the price transparency and trading liquidity problems currently confronting the global LNG marketplace. Today, LNG trading volume is a tiny fraction of daily global gas production, while Brent trading liquidity and open interest paint quite a different picture. The daily volume in exchange-traded Brent futures and options alone exceed Brent North Sea and total global oil production by ratios of approximately 700:1 and 7:1 respectively. The highly-leveraged Brent numbers are even more impressive when OTC physical and swap trades are added to the numbers.

For LNG to reach its full potential, with trading to production ratios eventually approaching Brent-type levels, the industry must first adopt a set of standard contract terms and conditions for futures, spot and physical-forward transactions. Common terms are essential so a single cargo can trade many times over along a supply chain without transactions being subject to legal or operational basis risk.

The standardized physical-forward contract proposal presented here, the Guaranteed Physical Delivery (GPD) Agreement for the Sale of LNG on One Full Month Terms, is similar to the successful Brent forward contract with one important exception. Unlike cash-settled Brent futures, which are closed out financially at contract expiry, the new GPD LNG futures contract uses patented[1] systems and methods to provide a seamless link between the futures and same-month physical-forward contract. This feature assures futures/physical price convergence and provides buyers and sellers with a guaranteed source or outlet to satisfy their physical LNG requirements.

Under the GPD contract terms "Cargo-Size"[2] as it relates to futures, is defined as "325 lots, each lot consisting of 10,000 MMBtu", and for physical-forwards as "3,250,000 MMBtu of natural gas +/-2% buyer's operational tolerance". For enhanced trading liquidity and price discovery, physical-forward partial cargo transactions in increments of 250,000 MMBtu will be recognized by price reporting agencies (PRAs) in their daily assessment calculations. These partial-cargo positions will be cash-settled (unless the same buyer and seller trade enough same-month partials to reach a net "Cargo-Size" position, in which case the obligation is settled by physical delivery).

The proposed GPD Agreement for the Sale of LNG on One Full Month Terms and the Guaranteed Physical Delivery LNG Futures Contract together provide the industry a transparent and liquid global natural gas benchmark. The key to seamlessly linking these markets is the GPD position matching patent which enables the clearinghouse to settle all post-expiry cargo-size futures positions by physical delivery, as futures delivery obligations become physical-forward contracts.

Additionally, the GPD solution provides a mechanism to efficiently manage price risk during the time period between futures contract expiry and cargo loading. If the physical-forward cash LNG trades concluded under the GPD Agreement for the Sale of LNG on One Full Month Terms are not booked-out by the respective counterparties, the positions become Dated LNG cargos one month before the first day of the seller's three-day loading window. More information regarding the important role Dated LNG cargos play in the spot market will be provided later.

To better understand how this organized LNG marketplace will generate meaningful benchmark prices, the following illustration is provided. A natural gas producer or processor with a cargo-size physical "long" position at any of the GPD-approved LNG loading terminals in June 2019 decides to sell the cargo (contracts may also be concluded between other commercials including traders and merchants). The sale can be made as a June physical-forward in the OTC cash market, or by

accumulating and holding through expiry a 325 lot short position in the June futures contract, which expires on the second-to-last business day of the month, two months prior to delivery.

In early April 2019, the operators of GPD-approved loading terminals release their respective June loading programs to customers and to news agencies. Physical-forward “longs” at the terminal are assigned a cargo number and a three-day loading window. These parties may choose to load the cargo for their own account, or they can pass the loading window on to a company to whom they have made a previous sale in the designated delivery month. Market participants with cargo-size futures “shorts” must either own an offsetting physical long position to satisfy their sales obligation, or cover their short futures position by purchasing a same-month physical LNG cargo.

When a buyer is passed a cargo with dates attached prior to 5PM London-time on a business day one full month prior to the first day of the attached three-day loading window, they can choose to keep it, or pass it along. If passed it creates a chain. When a cargo has loading dates too prompt to pass into month ahead chains, it is referred to as being a “spot” or “dated” LNG cargo.

Bilateral physical-forward trades using the GPD standardized terms can occur at any time during the period the futures contract is listed, but historically activity in this market occurs within four months of the contract becoming prompt. Physical-forward buyers are required to post an Irrevocable Documentary Letter of Credit as specified in Appendix A of the GPD contract, unless the seller provides open-line credit to the counterparty. By contrast, contract months in the futures market are typically listed 10 years prior out forward, with the exchange clearinghouse providing payment and performance guarantees.

This month ahead advance notice requirement gives buyers ample time to charter an acceptable vessel for loading. If the cargo nomination is passed, the buyer receiving the nomination must accept the cargo offered. Once the one full month-ahead nominating deadline has passed, the cargo turns physical.

Dated LNG: Linking Forward and Prompt Markets

The price of Dated LNG is generated by the assessments published by PRAs or from “bid/offer” indications or trades concluded on electronic bulletin boards during a specific daily pricing window. This financially-settled instrument is particularly important because it enables market participants to hedge their pricing basis risk between the time the GPD Agreement for the Sale of LNG on One Full Month Terms and the Guaranteed Physical Delivery LNG Futures Contract settles and the assigned three-day window during the delivery month when the cargo actually loads.

Since the physical seller (forward “long” or futures “short”) has the option to declare at which of the approved basket of loading terminals delivery will occur, Dated LNG assessments often reflect prices at terminals with access to the lowest cost LNG. Physical sellers may also swap loading windows within a specific terminal or with physical “longs” with positions at other approved terminals to optimize delivery economics. Physical “shorts” may likewise swap loading windows to minimize ocean freight.

The LNG industry may from time to time approve and publish amendments to the general terms of a contract to reflect pricing adjustments for quality or incremental loading costs relating to one or more of the terminals, which may factor into the actual Dated LNG price published by PRAs.

Furthermore, the Dated LNG price is often used by producers, consumers and taxing authorities as a measure of the value for spot LNG at specific loading terminals or more broadly as a regional or global pricing benchmark.

The Broader LNG Derivatives Market

A series of financial-based contracts are also available which enable market participants to successfully manage short-term and long-term LNG supply and pricing risks. For near-term price exposure, cash-settled instruments which allow market participants to manage exposure to the Dated LNG price for a specific week, or set of weeks as far as 12 weeks out, include:

1) Contracts for Differences (CFD) swaps, reflecting the published differential between the assessments made by PRAs for a specific full-month LNG price and the Dated LNG price.

2) Dated to Front Line (DFL) swaps, reflecting the differential between the LNG futures settlement price and the published assessment made by PRAs for the Dated LNG price.

3) Futures "Minute Markers" reflecting exchange traded prices at a specific intraday time period.

Why GPD?

The seamlessly-linked GPD physical-forward and physical-delivery LNG futures contracts in tandem create a single natural gas pricing benchmark for the global marketplace. Since GPD delivery takes place as the product passes the flange of the vessel at load port, all basis risk associated with variable inland transportation and liquefaction costs are eliminated from the benchmark calculation, The contract is structured so the only benchmark price basis risk is ocean freight (the transportation differential between the approved loading terminal chosen by the seller and the buyer's chosen discharge port). This transport link in the LNG value chain component can be efficiently hedged using freight futures contracts.

For LNG commerce to reach its full growth potential, the industry must adopt a single set of standard contract terms and conditions for short-term transactions. The North Sea Brent cargo forward market for crude oil, which has traded successfully for thirty years, is a solid template to start with and serves as the inspiration for the GPD Agreement for the Sale of LNG on One Full Month Terms.

The proposed standardized GPD futures, forward and spot contracts are designed implicitly to improve LNG price transparency and trading liquidity, while providing an array of new risk management and project financing tools. The LNG benchmark price will be available in real time and determined by the actions of market participants, not by crude-linked formulas, financially-settled swaps or delayed price assessments by third parties.

To kick start the process, the proposed GPD terms shall be reviewed, modified and approved by an industry working group made up of significant stakeholders. Once this task is accomplished, trading in the standardized futures and forward contracts will commence promptly as it will be required any contract-approved load port must be fully operational.

The future of global LNG trading is bright, and the GPD standardized contract provides the catalyst needed to lead the world's fastest growing commodity on a path towards Brent-like trading volumes. There is no need to "reinvent the wheel". The contract model which has served the crude oil industry so well over the years is actually the key to the future of global LNG commerce. The time to act is now!

[1] US Patent No. 7676406

[2] Actual cargo-size volume and buyer's operational tolerance at load port may change to reflect industry consensus

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