

Keys To Carbon Neutral Oil And LNG Transactions: Part 2

By **Gabriel Procaccini and Kenneth Markowitz** (February 26, 2021)

In the dynamic world of oil and liquefied natural gas trading, carbon neutral transactions are a new type of product designed to make oil and LNG more environmentally competitive with renewable energy.

A carbon neutral oil or LNG transaction is effected through terms in the underlying transaction documents that govern the sourcing, purchase and retirement of carbon credits as offset units, or COUs.

The first part of this two-part article examined the incremental cost, allocation and documentation of COUs, the importance of carbon trading regulations, and the need for care in advertising and marketing carbon neutral oil and LNG products.

This installment considers the issues surrounding COU sourcing and quality assurance, and the processes by which the carbon footprint of transactions are measured.

COU Sourcing and Quality Assurance

The parties to a carbon neutral oil or LNG transaction generally will need to agree upon the source and quality of the COUs. As mentioned previously, in some cases, parties will elect to source COUs from a third party, such as a registry or exchange.

There are a number of organizations which operate registries where parties can acquire, transfer and/or retire COUs. Registries operated by nonprofit entities such as Verra and the Gold Standard are some of the more popular and reputable standard-setting organizations that operate registries.

Choosing the appropriate registry that will apply to the transaction is critical. Carbon offset projects come in a wide range of project types and levels of environmental integrity. These projects originate across the globe, often in remote locations. Therefore, utilizing highly reputable standard-setting organizations and registries is essential to support carbon neutrality claims.

Not every registry will offer projects that satisfy the specific attributes and cobenefits sought by the parties, or contain appropriate standards for the transaction. Standards organizations such as Verra continuously review applications for new methodologies under the verified carbon standard to accommodate for innovation. Moreover, sourcing COUs with questionable or potentially flawed standards can backfire and create negative publicity for the carbon neutral oil or LNG participants, and may subject the parties to punitive measures.



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For example, some voluntary carbon offset project developers in the 1990s used their own standards for measuring the amount of carbon emissions a project would counterbalance.[1] In a few instances, these standards turned out to be unreliable — e.g., issues in baseline modeling or double counting under multiple standards — which reflected poorly on the industry at the time.[2]

If the parties select a registry that possesses an insufficient supply of desired projects — e.g., biomass instead of solar, small-scale hydro instead of wind, etc. — in the jurisdictions most desired by the participants to the carbon neutral transaction, or lacks satisfactory project-specific validation and verification protocols, the parties may not realize their objectives fully in effecting a credible carbon neutral oil or LNG transaction.

Worse, carbon neutral oil or LNG transactions may become subject to enhanced scrutiny and criticism for not fully effecting the promised and promoted emissions offset if parties select projects that raise concerns regarding issues such as:

- Permanence — i.e., whether projects maintain GHG reductions or removals permanently, which involve specific requirements stretching over multiple decades and a comprehensive risk mitigation and compensation mechanisms, with a means to replace any credits lost;
- Leakage — i.e., where a project results in an increase in emissions outside of the project boundary; and/or
- Additionality — i.e., the question of whether projects genuinely yield emission abatement that would not otherwise occur.

For example, the voluntary carbon market seems to disfavor large-scale solar and wind projects as carbon offsets effecting carbon neutrality, as such projects suffer from such deficiencies in many cases.

In lieu of sourcing offsets from projects listed on a registry, the parties to a carbon neutral oil or LNG transaction might elect to source COUs from projects within a counterparty's portfolio, or from a counterparty's offset inventory, or work directly with a project developer.

Sourcing offsets from a counterparty's portfolio may provide cost savings and efficiency but would also favor the majors, financial institutions and traders who have accumulated an inventory of credits — or control a significant pipeline of offset unit generating projects — which can easily be pulled off the shelf for a transaction. Beginning in March, sourcing will also be available from [CME Group Inc.](#), as mentioned previously.

As exchange-traded futures, however, CME's Global Emissions Offsets or GEO, contracts will be standardized, and thus COUs acquired thereunder will not necessarily bestow the holder with the uplift that is associated with certain COUs generated from specifically identifiable projects with cobenefits — e.g., restoration of a carbon-rich ecosystem like a tropical forest, or cookstove projects in sub-Saharan African that provide cobenefits in addition to climate change benefits, such as health improvements, poverty reduction and ecosystem protection.

It is these unique project-specific features that parties to a carbon neutral transaction often value highly. Accordingly, it is not expected that the CME GEO contract will necessarily

diminish the demand for COUs sourced from registries, or in private — i.e., over-the-counter — markets.

Eligible Offsets

As mentioned earlier, there are a wide range of projects that generate, or have the potential to generate, COUs. Unless the parties to a carbon neutral oil or LNG transaction agree at signing to utilize specifically identifiable COUs from a counterparty's portfolio, the parties will need to agree upon acceptable attributes for projects that can be utilized in their specific carbon neutral transaction.

These attributes might include, among other things:

- Vintage;^[3]
- Project type — e.g., avoidance/reduction, such as avoided deforestation;
- Carbon dioxide removal through nature-based sequestration — e.g., reforestation;
- Carbon dioxide removal through technology-based removals — e.g., direct air carbon capture and storage;
- Applicable validation and verification standards;
- Cobenefits including impact on sustainable development goals or ESG goals;
- Location; and
- The applicable GHG emissions sought to be offset.

In certain transactions, parties may elect to limit COUs to the following types of projects:

- Projects under the United Nations' REDD+ framework, which aim to reduce emissions from deforestation and forest degradation, conserve existing forest carbon stocks, promote sustainable forest management and enhance of forest carbon stocks;
- Agriculture, forestry and other land use projects or equivalent nature-based solutions projects;
- Cookstove projects or other projects with a nexus to any UN Sustainable Development Goal cobenefits and/or biodiversity cobenefits; or
- Projects with specific attributes that help address social, political or legal pressures a party may be subject to in a foreign jurisdiction.

In yet other transactions, parties may wish to exclude credits generated from projects in certain jurisdictions — e.g., due to human rights abuses, COUs generated from projects in China or Zimbabwe could be deemed by some parties in some transactions to be ineligible.

Transaction-Specific Verification

Besides consideration of project-specific verification and validation matters, the parties to a carbon neutral oil or LNG transaction will need to agree on transaction-specific protocols.

In a carbon neutral oil or LNG transaction, transaction-specific verification generally means the process by which the actual carbon footprint of the transaction is measured — or, in lieu of using actual measurements due to difficulties in conducting actual measurements, a calculation methodology for deemed emissions is agreed upon by the parties.

Besides the calculation methodology, the parties generally will also need to agree upon the verification agent/carbon accountant who will be tasked with ensuring that the agreed-upon quantity of COUs actually compensate for the quantity of emissions attributable to the underlying oil or LNG transaction.

The parties will also need to prepare reports that document the actual or deemed GHG emissions released in the applicable portion of the oil or LNG value chain associated with the underlying oil or LNG transaction, in accordance with accepted carbon accounting methodologies.[4]

Specific attention should be given to ensuring that appropriate safeguards are in place to provide the carbon accountant with appropriate access rights and legal protections to gather the information, and inspect the assets, needed to measure emissions, to protect against potential errors and conflicts (e.g., potential conflicts of interest between the verification agent and the project developer, issues in baseline modeling, double counting, etc.), to address contingencies (e.g., in the case of LNG, in the event of a cargo diversion, the process by which the carbon accountant would adjust the applicable carbon footprint) and to ensure that the methodologies deployed by the carbon accountant are consistent with the parties' internal ESG and accounting policies and procedures.

Carbon Footprint and Methodologies

The parties to any carbon neutral oil or LNG transaction must clearly define the start and end point along the value chain for emissions measurement purposes, and decide whether to include indirect emissions.

This is an interesting analysis, because there is no universal approach that will apply to all transactions. For some LNG market participants, for example, one might expect to see attempts to measure emissions associated with the proverbial wellhead-to-burner-tip value chain, and all the transportation and other activities in between.

That would be the value chain which encapsulates all activities from gas production at a well to the ultimate consumption of that gas in a downstream market. In the case of LNG, this would include, among other activities, emissions associated with flaring, field gas use, compression, gathering, processing, fractionation, transportation, pipeline methane leakage, operations at a liquefaction terminal (including power), shipping, regasification, downstream pipeline activities and LNG by truck emissions.

But is that really the appropriate value chain? Some environmentalists argue that the traditional wellhead-to-burner-tip value chain is incomplete. In fact, some would argue participants should be measuring GHG emissions over a much longer value chain.

Such a value chain would involve not just wellhead-to-burner-tip activities but also GHG emissions attributable to the activities that occurred long before the applicable well was drilled. This includes preparatory activities applicable to the drilling of a well — for example,

GHG emissions associated with predrilling and preleasing activities would need to be measured and offset.

Other parties will invariably take a much narrower approach to measuring the carbon footprint — for example, in the case of LNG, limiting the value chain to GHG emissions attributable only to the liquefaction and lifting of a cargo of LNG.

Conclusion

Demand for carbon neutral oil and LNG transactions continues to accelerate, in alignment with geopolitical and investor pressures. These transactions, if well designed, will make oil and LNG more competitive environmentally with renewable energy in response to ESG pressures, climate change and the decarbonization megatrend.

Now is the time for oil and LNG market participants to consider the issues surrounding an effective carbon neutrality strategy for oil and LNG designed to help improve oil's and LNG's sustainability and competitiveness far into the future.

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[1] Taskforce on Scaling Voluntary Carbon Markets, Consultation Document 34 (November 2020) and Consultation Document 41 (January 2021).

[2] *Id.* at 16, 34.

[3] There are three key dates pertaining to each project that are relevant: project start, year of credit issuance and year the actual emission reduction took place. Taskforce on Scaling Voluntary Carbon Markets, Consultation Document 55, n. 50 (November 2020), Consultation Document 73, n. 78 (January 2021).

[4] To date, there are no generally accepted carbon accounting methodologies for carbon emissions as standards are developing at various rates and under different guidelines around the globe. However, significant transformation in carbon accounting is expected as new technologies (e.g., the block chain to minimize the risk of double-counting units) rapidly emerge to help industries refine and perfect appropriate science-based emissions measurement methodologies.