GREEN ECONOMY LAW

Carbon Offsets

A practical guide for Canadian businesses

Green Economy Law Professional Corporation is a boutique Toronto-based corporate, commercial, and environmental law firm specializing in work with green businesses and non-profits. The firm also works with clients in the health and psychedelic sectors, as well as parties seeking services pertaining to housing.

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Date of Publication: February 2022

What Are Carbon Offsets?

A carbon offset is a form of credit representing greenhouse gas (GHG) emission avoidance, reduction, or sequestration (*i.e.,* removal from the atmosphere).[1] Offsets can be bought and sold by individuals, corporations, or governments with the goal of *offsetting* emissions released into the atmosphere elsewhere.

Carbon Offset Practices

- **Regenerative Agriculture**: Farmers can utilize certain farming practices (*e.g.,* use of cover crops, diverse crop rotations, no or reduced till) to increase soil fertility and improve its ability to sequester carbon. Farmers can then sell offsets reflecting the extent to which the soil sequesters additional carbon when measured against a baseline expectation.[2]

- **Forest Conservation, Afforestation, and Reforestation**: Conservation refers to preventing deforestation, afforestation to converting non-forest land to forest, and reforestation to planting trees to increase tree density of existing forests.

  Conservation offsets are the most controversial of the three as they reflect emission reductions achieved by preservation of a forest that *would* have been cut down but is instead storing and sequestering carbon. This, of course, creates a perverse incentive for parties to gain control of forest land and hold it hostage for offsets with the threat of harvest.[3]

  Afforestation and reforestation offsets are somewhat less controversial because they reflect the emissions sequestered by new trees planted and grown. Nonetheless, as with all forest-related offsets, their permanence may come into question on account of the risk that such trees will be felled, burned, or otherwise destroyed in the future, in which case their carbon storage and sequestration utility is merely temporary.[4]

- **Landfill Methane Management and Recovery**: Organic waste decomposition in landfills produces methane, a GHG with 25 times the potency of carbon dioxide. Various practices,

including landfill waste diversion and methane flaring, can reduce landfill methane emissions.[5] Waste methane can also be converted to energy through processes like incineration or anaerobic digestion,[6] thereby standing in for use of natural gas or other GHGs and reducing overall emissions. To the extent such practices reduce emissions against a baseline expectation, the reductions can be sold as offsets.[7]

- **Direct Air Capture (DAC)**: Involves technology used to remove carbon from the atmosphere and sequester or repurpose it. Offsets can be sold reflecting the amount of carbon DAC removes.

  Though DAC technology is nascent and there are questions about its ability to scale and meaningfully contribute to international decarbonization efforts, numerous companies, including Microsoft and United Airlines, are making large DAC investments.[8] The Musk Foundation is also currently offering a $100 million prize for any team that can demonstrate a "working [carbon removal] solution at a scale of at least 1000 tonnes removed per year; model their costs at a scale of 1 million tonnes per year; and show a pathway to achieving a scale of gigatonnes per year in future."[9]

- **Avoidance and Reduction**: To the extent baseline emissions can be reduced or avoided by other means, including through use of renewable energy or energy efficiency technologies, those reductions could, at least theoretically, be sold as offsets.[10]

Government and Business Interest

Several high-profile individuals from the worlds of government and industry, including former Bank of Canada governor Mark Carney and Microsoft co-founder Bill Gates, have voiced support for the use of offsets to financialize the reduction of GHG emissions, especially with respect to difficult-to-decarbonize industries such as steel production and air travel.[11] Their support is founded upon the economic logic of offsets, which can be analogized to the economic logic of international trade.

In trade, if it is more economic (*i.e.,* cost effective) for Party A to buy apples from Party B than it is for Party A to grow its own apples, Party A should buy apples from Party B. With respect to offsets, if it is more economic for Party A to reduce or sequester emissions on account of its circumstances, whereas it is more difficult and costly for Party B to do so, then to the extent Party B intends or is required to reduce emissions, Party B should pay Party A to reduce emissions on its behalf. Party A can profit by the sale and Party B lowers its associated costs through the purchase. The overall emission reduction is the same. This is a win-win-win scenario.

Faced with the challenge of imposing strenuous emission-reduction regulation upon recalcitrant industries, governments have embraced the use of offsets as a means of easing the burden of decarbonization. For example, Norway, whose economy is highly dependent on fossil fuels, is offsetting its economy's carbon intensive sectors through the UN's Clean Development Mechanism by helping countries such as South Africa and Brazil switch to cleaner fuel sources.[12]

Even inherent in the net-zero by 2050 pledges made by numerous countries (including Canada) is the implication that offsets will likely be employed as a means of emission reduction,[13] since the "net" part of "net zero" implies that to the extent a country cannot prevent new emissions, those emissions will have to be offset.

Numerous businesses likewise appreciate, and are making use of, the 'out' that offsets provide as a means of either reducing emissions or assuaging consumer climate concerns and guilt.[14] Airlines like Air Canada, for example, have been offering customers the option of offsetting flight emissions for years,[15] and in 2020, American airline JetBlue became the first US airline to voluntarily offset all CO2 emissions from domestic flights.[16] E-commerce businesses like Etsy, Shopify, and Stripe all proudly tout efforts to offset emissions driven by online purchases (namely shipping-related emissions).[17]

Accordingly, demand for offsets is only expected to grow over the next several decades, particularly following international agreement on framework offset market rules at COP26.[18] Bloomberg estimates current offset demand at 127 million tons of carbon, with supply at 250

million tons. By 2050, that "demand could reach at least 3.4 billion tons and even exceed 5 billion tons, while supply could reach 6.8 billion tons."[19]

Carbon Offsets Criticism

Most offsets are currently exchanged in voluntary markets (described in greater detail below) lacking strong oversight and regulation. This has led to the highly publicized failure of numerous offsets initiatives to meaningfully reduce emissions per expectation.[20] As a result, environmental organizations often criticize carbon offsets as a form of "greenwashing", whereby companies project a false facade of environmental responsibility while failing to take effective climate action.[21]

Furthermore, offsets are difficult to regulate for a variety of reasons. For an offset to be effective it must reduce emissions that would not have been reduced otherwise (*i.e.,* it must be "additional").[22] To prove emissions would not have been otherwise reduced requires meticulous accounting and a high degree of operational transparency.[23] Effective carbon offsets must also *permanently* reduce carbon emissions. For example, a reforestation project will not permanently reduce emissions if the forest is soon after logged or burnt down.[24] And lastly, "leakage" is another concern, whereby carbon emission reductions in one area are cancelled out by a resulting increase of emissions elsewhere.[25]

Voluntary vs. Compliance Markets

Offset markets are commonly described as either being voluntary or compliance-based.

The voluntary market is largely unregulated and comprised of parties allegedly reducing emissions of their own volition. Though there is often purported independent third-party verification involved with the sale of voluntary market offsets, verification efforts have thus far failed to instill broad confidence in the voluntary offset market.[26] To address this problem, the Taskforce for Scaling Voluntary Carbon Markets' (TSVCM) advisory board, chaired by Mark Carney, recommends introducing a new, independent voluntary markets governance body.[27]

The TSVCM's mission is to create high-integrity carbon credits to be traded in "robust, transparent and liquid markets."[28] To aid in this goal, the TSVCM hopes to develop "Core Carbon Principles" (CCPs) to serve as threshold standards for high-integrity carbon credits. The intended future governance body will be mandated with implementing, hosting, and curating CCPs by evaluating which standards and methodology types may issue CCP-labelled credits.

Compliance markets are regulated by national or subnational governments, or inter-governmental organizations such as the United Nations. Canada, for example, has several compliance-based offset markets related to federal and provincial obligations under the *Greenhouse Gas Pollution Pricing Act* (GGPPA). Quebec, British Columbia, and Alberta manage and regulate offset markets related to their provincial emission pricing programs,[29] and the Canadian federal government is currently in the process of drafting offset regulations applicable with respect to its Output-Based Pricing System (OBPS).[30]

Canadian Offset Regulation

In March 2021, Environment and Climate Change Canada (ECCC) released draft offset protocol regulations regarding the use of offsets under the OBPS. Initial offset protocol categories include advanced refrigeration systems, landfill methane management, forest management, and "enhanced soil organic carbon" (*i.e.,* regenerative agriculture).[31]

Under the GGPPA, to the extent a Canadian province or territory lacks its own compliant emission pricing program, the federal government's backstop program will apply in the applicable jurisdiction.[32] The backstop program consists of two components: the fuel charge and the OBPS. The fuel charge is a direct levy applied to fuels based on their respective GHG emission profile. The OBPS is a cap and trade-style emission trading system that applies to large industrial emitters (*i.e.,* facilities emitting 50,000 tonnes of GHG per year, though facilities emitting 10,000 tonnes or more can opt-in voluntarily).[33]

Under the proposed offset regulations, ECCC will allow and regulate offset exchanges in the context of OBPS compliance. Participants may register GHG emission reduction projects, and

ECCC will issue one credit for each tonne of GHG removed by an offset project. Credits will then be sold to OBPS participants, who may apply offsets against their emissions as permitted.[34]

The regulations would also establish an "environmental integrity account" where a fixed percentage of all OBPS offset credits would be deposited.[35] Integrity account credits would serve as a form of insurance for the system's environmental integrity, standing in for offsets in cases where project offsets either fail to materialize or are revealed to be false, and project proponents fail to supply replacement offsets.

Projects will be subject to periodic regulatory reporting verified by accredited third parties, with reports potentially subject to further review by ECCC.[36]

International Offset Regulation

In Article 6 of the 2015 Paris Agreement, the United Nations agreed to establish a regulated global carbon market.[37] However, UN member states failed to reach agreement on framework market rules until the recent COP26 held in Glasgow, Scotland. The framework rules will allow countries to partially meet their respective emission targets by buying offsets representing emission reductions accomplished by other parties.[38]

Previous negotiations regarding framework rules failed due to disagreement over a tax on market transactions. Developing nations pushed for the tax, with proceeds intended to fund their climate adaptation efforts. In the agreed-upon framework, bilateral nation-to-nation transactions will not be subject to such taxation, but a centralized system for issuing offsets will see 5% of transaction proceeds deposited in a fund to assist developing nations' adaptation efforts. Furthermore, 2% of all program offsets will be "cancelled" with respect to internal accounting, with the aim of increasing overall emissions reduction.[39]

The framework rules also attempt to tackle the issue of double counting, where both the country selling offsets and the country buying them claim the emission reduction. Under the framework, the country that generates a credit will decide whether to sell it to other nations or count it towards

its own climate target. If the credit is sold, the seller will add an emission unit to its national tally and the buyer will deduct one, ensuring that the emissions reduction is counted only once.[40]

Are Offsets Securities?

Investing in carbon credits, and offsets accepted as carbon market credits, has now become 'a thing'.[41] And yes, there is an ETF.[42] This necessarily raises the question: will offset investments be regulated as securities? Though the proverbial devil is in the details, under Canada's provincial securities laws, offset investments will likely qualify as investments in a commodity rather than securities.

The logic of investing in carbon credits is that as carbon prices in regulated cap-and-trade markets rise over time, the value of acceptable carbon credits should likewise rise.[43] Those who purchase and hold credits can potentially sell them for higher profit over time.

Unlike most other industrialized nations, Canada does not have a federal securities law or agency. The Supreme Court of Canada established that securities law is primarily within provinces' constitutional jurisdiction, rather than the federal government's.[44] Each province and territory regulates securities by means of its own securities law, though jurisdictions often work together through the Canadian Securities Administrators (CSA) to streamline regulation across Canada. Nonetheless, the CSA is not technically a lawmaking body. As such, because Ontario is home to Canada's largest securities market,[45] its securities law and the Ontario Securities Commission (OSC) often establish Canada's *de-facto* national securities law.

The definition of a security per s. 1 of Ontario's *Securities Act* is quite expansive and applies to various forms of equity and debt.[46] To avoid discussing each category of security listed in s. 1 to determine whether it applies, it may make sense to simply consider whether offset investments fall under the definition of an "investment contract" subject to regulation under the *Act*. As recent considerations of cryptocurrency classification demonstrate, depending on what's being evaluated, "investment contracts" can sometimes effectively serve as a residual securities definition category.[47]

In *Pacific Coast Coin Exchange v. Ontario Securities Commission* (1978), one of Canada's definitive securities law cases, the Supreme Court of Canada applied a slightly modified American "*Howey* test" to determine whether a particular offering constituted an investment contract subject to Ontario's *Act*. The test establishes four elements necessary for an offering to qualify:

- there must be an investment of money;
- in a "common enterprise";
- with an expectation of profit;
- created largely through the efforts of persons other than the investor.[48]

Offset credits would not generally qualify as securities under this test. The investment would be in the offset itself, not a common enterprise (*e.g.,* a company), and the expectation of profit would be largely attributable to the rising price of carbon or market value of the offset, rather than the *efforts* of others. Accordingly, the second and fourth elements of the test would not be satisfied. However, as the circumstances of offset transactions and investments diversify and grow increasingly complex, it appears likely that certain offset investments, or agreements pertaining to offset investments, will qualify as securities.

Purchasing Carbon Offsets

Carbon offsets can be purchased in a variety of ways, including through brokers or online retailers.[49] Typically, large businesses buy offsets through a broker, while small businesses and individuals buy them from various online retailers.[50] Organizations like the David Suzuki Foundation and Pembina Institute recommend that prospective customers ensure offsets they intend to purchase meet rigorous independent third-party standards, such as the Clean Development Mechanism (CDM) or the Gold Standard.[51]

Carbon Offset Services

Is your business or organization looking to buy, sell, work with, or simply learn more about carbon offsets? Green Economy Law Professional Corporation can help ensure all your legal bases are covered. **For more information regarding legal services, please contact the firm at 647-725-4308 or via email at info@greeneconomylaw.com.**

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[5] *See Methane Capture*, CARBON OFFSET GUIDE (*accessible at* https://www.offsetguide.org/avoiding-low-quality-offsets/vetting-offset-projects/methane-capture/).
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[12] Umair Irfan, *Can You Really Negate Your Carbon Emissions? Carbon Offsets, Explained*, VOX (February 27, 2020).
[13] *See Net Zero Scorecard*, ENERGY & CLIMATE INTELLIGENCE UNIT (*accessible at* https://eciu.net/netzerotracker).
[14] *See* Chloe Zilliac, *Can "Flight Guilt" Take Off in the United States*, SIERRA (August 3, 2019).
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[16] *JetBlue is the First U.S. Airline to Commit to and Achieve Carbon Neutrality for All Domestic Flying*, JETBLUE (August 13, 2020) (*accessible at* http://mediaroom.jetblue.com/investor-relations/press-releases/2020/08-13-2020-152953291).
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[20] Nick Davies, *The Inconvenient Truth About the Carbon Offset Industry*, THE GUARDIAN (June 16, 2007); *see also* Frances Schwartzkopff, *Crazy Carbon Offsets Market Prompts Calls for Regulation*, BLOOMBERG GREEN (January 6, 2022) ("Compensate, a Finnish non-profit that manages a portfolio of carbon-credit projects, last year reviewed more than 100 certified by leading organizations. It found just 10% met its criteria on ensuring that projects didn't inflate carbon savings, weren't already planned and other factors including human rights.").
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[32] *See* Greenhouse Gas Pollution Pricing Act (S.C. 2018, c. 12, s. 186).
[33] *Pricing carbon pollution from industry*, CANADA (last updated February 12, 2021) (*accessible at* https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/industry/pricing-carbon-pollution.html).
[34] It is reasonable to expect that OBPS participants will only be able to apply offsets to cover a limited percentage of their respective compliance obligations, as is the case under Quebec's offset regulations, which only permit 8% of emission reduction compliance obligations to be satisfied with offsets. *See* QUEBEC, *supra* note 29.
[35] *Supra* note 30.
[36] *Id*.
[37] Jake Spring and Kate Abnett, *U.N. Climate Summit Reaches Carbon Markets Deal*, REUTERS (November 13, 2021).
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[39] *Id*.; *see also* Simon Evans and Josh Gabbatiss, *In-depth Q&A: How 'Article 6' carbon markets could 'make or break' the Paris Agreement*, CARBONBRIEF (November 29, 2019).
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