Developments in Federal and State Law

Michael B. Gerrard
Editor

ENVIRONMENTAL LAW IN NEW YORK

ARNOLD & PORTER LLP

Volume 27, No. 10

October 2016

GREEN BONDS: DE-RISKING DEALS TO MAXIMIZE RETURNS

Phillip Ludvigsen, PhD, and Bernard T. Delaney, PhD, PE, BCEE

IN THIS ISSUE

Green Bonds: De-Risking Deals to Maximize Returns................ 163
Legal Developments... 171
- ENERGY 171
- HAZARDOUS SUBSTANCES.................................... 171
- INSURANCE.. 172
- LAND USE... 172
- OIL SPILLS & STORAGE... 173
- PESTICIDES 174
- SEQRA/NEPA 174
- SOLID WASTE 175
- TOXIC TORTS... 175

New York Newsnotes 176
Worth Reading... 178
Upcoming Events... 179

Introduction

Many scientists argue that the world's greatest environmental challenges are ahead of us, not behind. Even with the maturity of environmental laws pursuant to which billions of dollars of public and private resources have been spent on environmental compliance activities—such as the Clean Air Act; Clean Water Act; Resource Conservation and Recovery Act (RCRA); and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)—a much larger environmental challenge with even larger financial ramifications lies ahead. Climate change presents an unprecedented financial challenge, the magnitude of which may dwarf all prior environmental expenditures. In order to finance climate change mitigation, adaptation, and resiliency programs, innovative new sources of capital will be needed.

One such funding source is green bonds. This unique financial approach raises capital to fund environmental or "green" programs and projects, including those that address climate change. In spite of the altruistic benefits of green bond programs, green bonds are still subject to market forces and complexities. Along with the rewards in the financial markets come substantial risks. This article explores those risks and also addresses the role lawyers can play in helping to de-risk green bond deals for their clients.

Financial Implications of Climate Change

Ten of the hottest years on record have all occurred since 1998. Year 2015 beat out 2014 as the hottest on record, and 2016 is on pace to blow 2015 away as the hottest year in recorded history. The trend of record-breaking heat is quickly becoming a significant economic risk. According to the most recent annual report by the 2016 World Economic Forum for which 750 experts were surveyed, climate change is for the first time seen as the biggest potential threat to the global economy.[1]

While estimates of these potential costs vary wildly (with global estimates ranging from $1.5 to over $60 trillion annually),[2] there seems to be little doubt that financial markets will need to adjust to the risks and opportunities presented by climate change. Citi—one of the world's largest financial

[1] WORLD ECON. FORUM, *Part 1 - Global Risks 2016*, *in* GLOBAL RISKS REPORT 2016 (2016), http://reports.weforum.org/global-risks-2016/part-1-title-tba/.

[2] FRANK ACKERMAN & ELIZABETH A. STANTON, NATURAL RESOURCES DEFENSE COUNCIL, THE COST OF CLIMATE CHANGE: WHAT WE'LL PAY IF GLOBAL WARMING CONTINUES UNCHECKED (May 2008), https://www.nrdc.org/sites/default/files/cost.pdf; Gail Whiteman et al., *Climate Science: Vast Costs of Arctic Change*, 499 NATURE 401 (July 23, 2013).

institutions—perhaps summed it up best in their report *Energy Darwinism II*:

> If the scientists are correct, the potential liabilities of not acting [regarding climate change] are equally vast. The cumulative 'lost' [gross domestic product (GDP)] from the impacts of climate change could be significant, with a central case of 0.7%-2.5% of GDP to 2060, equating to $44 trillion on an undiscounted basis. If we derive a risk-adjusted return on the extra capital investment in following a low carbon path, and compare it to the avoided costs of climate change, we see returns at the low point of between 1% and 4%, rising to between 3% and 10% in later years.[3]

New York is addressing this carbon finance challenge in a number of ways. In a 2014 *Environmental Law in New York* article, Bret Salzer evaluated the premise of the New York State Green Bank.[4] The Green Bank offers a revenue-neutral platform for issuing a number of innovative environmental financial products. Among other potential products, the bank is looking to facilitate development of specialized environmental assets such as green bonds.

After taking a bit of a breather in 2015—with only 20% growth after doubling in 2014—the green bonds market is on pace to double again in 2016 to an estimated $80 billion issued and $158 billion outstanding.[5] China, which issued no green bonds in 2015, has surpassed the U.S. by issuing over $17 billion in the first six months of 2016.[6]

What Is a Green Bond?

A green bond is the same as a plain "vanilla" bond except there must be a resulting environmental benefit. At first look, bond funding of green projects, such as alternative energy, is well established. Are these green bonds? In bond market parlance, these bonds are called "unlabeled" green bonds. Most investors lack the resources to conduct due diligence to make sure unlabeled bonds are truly 100% green. So-called "responsible" or "impact" investors dislike finding out after the fact that some of their "green" investment went to non-green projects or assets.

Do these "green" investors carry so much weight they can actually create a separate market for green bonds? Signatories to the Principles of Responsible Investment represent over $60 trillion in managed assets and include the likes of BlackRock and Vanguard Group, as well as major pension and insurance funds.[7] These large institutional investors are creating a significant and growing demand for long-term investments that offer sustainable environmental and social benefits while offering competitive risk-adjusted returns. In other words, these investors are looking to "do well by doing good."

"Labeled" green bonds were created to provide additional transparency and, ideally, assurance to investors. The Green Bond Principles (GBPs) were created in 2014 by the International Capital Market Association and are the most widely accepted guidelines for developing green bonds. Under these principles, green projects are defined as projects or initiatives that will promote progress on environmental sustainability in line with the issuer's stated process for project evaluation and selection.

The GBPs recognize the following broad categories for potential funding:

- Renewable energy
- Energy efficiency
- Pollution prevention and control
- Sustainable management of living natural resources
- Terrestrial and aquatic biodiversity conservation
- Clean transportation
- Sustainable water management
- Climate change adaptation
- Eco-efficient products, production technologies, and processes

These categories include a variety of projects that offer potential environmental benefits, spanning the subjective spectrum from "deep green" to "light green," to perhaps no additional environmental benefit at all. Due to the lack of standardized criteria, the market has settled on promoting transparency around the following four pillars of the GBPs:

- Use of proceeds
- Project selection
- Management of proceeds
- Reporting/assurance

[3] CITI, ENERGY DARWINISM II: WHY A LOW CARBON FUTURE DOESN'T HAVE TO COST THE EARTH (CITI GPS: GLOBAL PERSPECTIVES & SOLUTIONS), at 8 (Aug. 2015), http://citi.us/1JGDGyT.

[4] Bret R. Salzer, *New York Green Bank: Crown Jewel of the New York Energy Plan?*, ENVTL. L. IN N.Y. (Sept. 2014).

[5] Jessica Shankleman, *Green Bond Market Will Grow to $158 Billion in 2016, HSBC Says,* BLOOMBERG (Jan. 26, 2016), http://www.bloomberg.com/news/articles/2016-01-26/green-bond-market-will-grow-to-158-billion-in-2016-hsbc-says.

[6] Hamza Ali, *China issues $6bn of green bonds in one week*, ENVTL. FINANCE (July, 26 2016), https://www.environmental-finance.com/content/news/china-issues-6bn-of-green-bond-in-one-week.html.

[7] The Principles of Responsible Investment are supported by the PRI, an organization that works to understand and implement the use of environmental, social, and governance (ESG) factors in investment decision-making. *See About the PRI*, PRI, https://www.unpri.org/about (last visited Aug. 11, 2016).

The GBPs, assuming they are fully followed, should provide investors valuable information to help them decide which bonds are "green" and which are not. In addition, bonds that meet these requirements and help communities advance toward a low-carbon economy are eligible for certification under the Climate Bonds Initiative's certification program. A Climate Bond is a type of green bond designed to address various aspects of climate change. In addition, certified Climate Bonds must be third-party verified as meeting the requirements of the Climate Bonds Standard 2.0. Details can be found at the Climate Bonds Initiative's website.[8]

An Example of a New York Green Bond

New York's Metropolitan Transportation Authority (MTA) issued its first certified Climate Bond earlier this year. Funds were used to refinance existing electrified rail assets that comply with the Climate Bonds Standard's Low Carbon Transport criteria. Because of strong investor demand, the offering was expanded from $500 million to $782 million, making it one of the largest muni-green bonds issued in the U.S. While most green bonds are initially sold primarily to institutional investors, the MTA has also sold this offering to the public, even running multimedia advertising.

The question remains: *Why would a large entity like New York MTA issue a certified Climate Bond?*

Rewards of Going "Green"

Non-Financial Rewards

What makes green bond investments unique is that both financial and non-financial rewards must be considered. Typical non-financial rewards include:

Reputation Benefits. Quality labeled green bonds have received favorable press coverage—especially if the bond is a first for a given jurisdiction or industry. For bond underwriters and lawyers, green bonds offer an opportunity to grow their reputation as a high-value service provider. For some buyers, certified Climate Bonds that have been third-party verified offer a simple way to confidently buy a complex fixed asset while differentiating themselves from competitors.

Environmental Attributes. Investors should understand that there may be economic value to the environmental attributes they helped finance. For example, the value related to natural resources (e.g., air, soil, water, biodiversity, etc.) is referred to as "natural capital"; similarly, green bonds could fund carbon reductions, resulting in additional financial yields to issuers or investors from the sale of carbon credits.

First Mover Advantage. As the labeled green bond market grows, the opportunity lies with "first movers" to capitalize on market share and customer loyalty. Organizations that start early have more time than competitors to accumulate and master knowledge in issuing, implementing, and verifying green bonds. In general, gradual market evolution and innovation provides first movers the best conditions for long-term dominance.

Although these non-financial rewards are nice to have, they may not be enough to justify a "bottom-line" business case for green bonds.

Economic Upside

A recent study by Barclays Research concluded:

> Investors are currently paying a premium to acquire green bonds, at least in the secondary market. Our model finds an approximately 20 basis points difference between the spread of green bonds and comparable issues, which we see as partly attributable to opportunistic pricing based on strong demand from environmentally focused funds.[9]

This study used regression analysis between a conventional bond index and a green bond index in secondary (re-sale) markets. The statistically modeled spread actually started with no pricing advantage in March 2015, and grew rapidly over the next six months. The rate of positive growth was estimated to be about 3 basis points a month. A basis point is 1/100th of a percent, which doesn't sound like much. To put this in perspective, however, 20 basis points on a $1 billion green bond is a $2 million premium. Typical bond underwriting fees are between 15 and 35 basis points, depending on the size of the offering, the term, and other factors.

This strong demand in the secondary markets is good news for investors who have had liquidity concerns. Recent transactions seem to point to a growing demand in primary markets, with Brazil, China, and India issuing inaugural green bonds in the past few months. On the supply side, there are currently a limited number of investment-quality green bond offerings that fully commit to all four pillars of the GBPs (use of proceeds, project eligibility, management of proceeds, and reporting with third-party assurance). This has allowed issuers to be very selective, selling only to investors who are signatories to the GBPs or to the Global Investor Statement on Climate Change.[10]

[8] Climate Bonds Initiative, http://www.climatebonds.net (last visited Aug. 8, 2016).

[9] Ryan Preclaw & Anthony Bakshi, Barclays Credit Research, The Cost of Being Green (Sept. 18, 2015), https://www.environmental-finance.com/assets/files/US_Credit_Focus_The_Cost_of_Being_Green.pdf.

[10] Hamza Ali, *Schneider Electric issues €200m green bond*, Envtl. Finance (Nov. 9, 2015), https://www.environmental-finance.com/content/news/schneider-electric-issues-200m-green-bond.html. The Global Investor Statement on Climate Change has been signed by more than 400 investors and is available at http://investorsonclimatechange.org/wp-content/uploads/2015/12/11DecemberGISCC.pdf.

Although anecdotal, there are a growing number of examples of pricing premiums paid in the primary markets. A presentation by Dentons law firm indicated that observers of the Vornado Real Estate green bond deal saw a pricing advantage of 10 to 15 bps.[11] For their most recent green bond offering, DC Water said it enjoyed a lower cost of capital of "2 to 6 basis points."[12] HSBC recently saw significant enhanced interest in its first green bond because the "deal was green." Since the initial offering, the bond closed at an additional 7 bps premium.[13]

The Australia-based FlexiGroup has recently issued green asset-backed securities or notes used to refinance a portfolio of residential rooftop solar installations. This green debt was Climate Bond-certified and closed 5 bps lower than non-green notes backed by the same pool of consumer receivables—basically an "apples to apples" comparison. This substantiated premium of 5 bps is within the range of anecdotal reports of observed pricing premiums for other green bonds such as Vornado Real Estate green bonds (2015; 10–15 bps), DC Water (2015; 2–6 bps), and HSBC (2016; 7 bps).

In a recent article in *Global Capital*, an ABN Amro banker stated that for green bonds "[t]here is now an undeniable pricing advantage, and that is because the demand for further supply is extremely high."[14] According to Marily Ceci, who heads JP Morgan's Green Bond Underwriting, "The larger your investor pool, the more players there are competing for your bond, which over time leads to a pricing advantage. It s just supply and demand basics."[15]

Let's do the math for the MTA green bond. The initial size of MTA's offering was $500 million, but due to strong retail investor demand, the offering was increased to $782.5 million. Assuming a 5 bps pricing premium, the lower cost of capital was approximately $391,000. An MTA representative was quoted in *Bond Buyer* newsletter as stating that "the only additional cost for green bonds would be in the $25,000 to $35,000 range for a verifier."[16] To be fair, additional transaction costs are necessary for bond lawyers and environmental personnel to gather and prepare required documentation, as well as to coordinate with lead underwriters. Regardless, the large net financial savings and risk reductions coupled with improved public relations make for a strong business case.

This sounds like a good deal for green bond issuers, but what about bond buyers? Regrettably, some green bond buyers have stated that paying a premium for a bond just because it is green would not be aligned with their fiduciary responsibilities.[17] Many fixed-asset managers have argued that using environmental or other social and governance (ESG) criteria limits investment diversification. For managers that take this position, any practice that impinges on maximizing returns could call into question their fiduciary responsibility. This line of thought, however, has been effectively countered using various legal theories.[18] A recent Principles for Responsible Investment (PRI) report, *Fiduciary Duty in the 21st Century*, concludes that ESG factors must be considered alongside other factors, such as diversification, to meet asset owners' and managers' fiduciary duty.[19] For signatories of the PRI, who represent about one-third of the world's investment capital, this debate is effectively over. In fact, it could be argued that institutional investors have a fiduciary duty to their beneficiaries (the ultimate asset owners) to fairly value the environmental attributes and long-term risk reduction associated with green bonds.

The U.S. Department of Labor recently issued guidance that supports consideration of ESG-based investments by pension fiduciaries. This new guidance acknowledges that ESG factors may have a direct relationship to the economic and financial value of an investment. If they do, these factors are "*more than just tiebreakers, but rather are proper components of the fiduciary's analysis of the economic and financial merits of competing investment choices*."[20]

---

[11] Bill Gilliland, Dentons Canada, Green Bonds – Deal Survey, at 38 (Feb. 2015), http://www.slideshare.net/DentonsGlobal/green-bonds-presentation-45130976.

[12] News Release, DC Water, DC Water Issues $350 Million in Bonds for Capital Projects (Oct. 6, 2015), https://www.dcwater.com/site_archive/news/press_release739.cfm.

[13] Hamza Ali, *Are investors beginning to pay up for green bonds?,* ENVTL. FINANCE (Feb. 26, 2016), https://www.environmental-finance.com/content/analysis/are-investors-beginning-to-pay-up-for-green-bonds.html.

[14] Tyler Davies, *ABN reveals 'undeniable' pricing difference for green*, GLOBALCAPITAL (May 26, 2016), http://www.globalcapital.com/article/xyt5074gstfg/abn-reveals-undeniable-pricing-difference-for-green.

[15] Hamza Ali, Show me the green money!, Envtl. Finance (Aug. 22, 2016), https://www.environmental-finance.com/content/analysis/show-me-the-green-money.html.

[16] Paul Burton, *N.Y. MTA Pursues Green Bonds*, BOND BUYER (Dec., 14, 2015), http://www.bondbuyer.com/news/regionalnews/ny-mta-pursues-green-bonds-1091797-1.html.

[17] Manuel Lewin, *What's the Real Impact of Green Bonds?*, ENVTL. FINANCE (Nov. 25, 2015), https://www.environmental-finance.com/content/analysis/whats-the-real-impact-of-green-bonds.html.

[18] Kazutaka Kuroda, *SFM Board Member Keith Johnson on UK Law Commission Fiduciary Duty Consultation*, NETWORK FOR SUSTAINABLE FINANCIAL MARKETS (Jan., 23, 2014, 7:27 PM), http://www.sustainablefinancialmarkets.net/2014/01/23/sfm-board-member-keith-johnson-on-uk-law-commission-fiduciary-duty-consultation/; Jay Youngdahl, *The Time Has Come for a Sustainable Theory of Fiduciary Duty in Investment*, 29 HOFSTRA LAB. & EMP. L.J. 115 (2011); Benjamin J. Richardson, *Do the Fiduciary Duties of Pension Funds Hinder Socially Responsible Investment?,* 22 BANKING & FIN. L. REV. 146 (2007).

[19] UNITED NATIONS GLOBAL COMPACT ET AL., FIDUCIARY DUTY IN THE 21ST CENTURY (2015), http://www.unepfi.org/fileadmin/documents/fiduciary_duty_21st_century.pdf.

[20] News Release, U.S. Dept. of Labor, New guidance on economically targeted investments in retirement plans from US Labor Department (Oct. 22, 2015) (emphasis added), https://www.dol.gov/opa/media/press/ebsa/EBSA20152045.htm.

Potential Risks Related to Green Bonds

Investors hate uncertainty that may unexpectedly affect their returns. All legitimate investments—including green bonds—contain some level of risk. Bond investors typically assess a variety of risks including market conditions, credit ratings, inflation, liquidity, economic and sector trends, taxes, political considerations, and so on. By understanding the unique risks facing green bonds, green bond lawyers can minimize them while maximizing the value of the investment offering.

Greenwashing

Perhaps the most recognized risk related to green bonds is "greenwashing," which is defined as a superficial or insincere display of concern for the environment shown by an organization.[21] In other words, the issuer labels a bond as green when there is no verifiable environmental benefit. In reality, one investor's idea of a "dark green" investment is another's "light green," "vanilla," or even "brown." This leads to an "I know it when I see it" attitude. Investors must have access to relevant and reliable (i.e., verified) information to assess the level of "greenness."

The most common form of greenwashing is when environmental claims are made without verified supporting evidence. There have been many examples of well-meaning companies touting consumer products as environmentally friendly, biodegradable, or good-for-the-environment, only to have their reputations damaged by a lack of supporting evidence. In large part, corporate equity valuations are based on intangibles such as corporate branding and customer perceptions. Thus, greenwashing can have a material impact.

In the area of green bonds, critics argue that the funded projects may not produce a net environmental benefit. Although there may be some green attributes, the overall environmental benefit could be zero or even negative. For example, financing a university parking garage may also encourage gasoline consumption; a large hydroelectric dam project in South America may produce more greenhouse gases than it reduces, while potentially dislocating indigenous populations. From a risk perspective, it is incumbent on the issuers and underwriters to provide sufficient and reliable environmental impact information to allow an informed decision. If there is a failure to provide such information, responsible investors must risk-adjust their anticipated non-financial returns due to the increased uncertainty.

Regulatory Risks

To help provide investors with some additional insight into the overall "greenness" of a green bond, it is common for issuers to hire a second-party consultant to provide a review or "opinion." The hired consultants (typically an academic or research organization) review documents, interview management, and generate a report as to the overall quality of proposed financing. Problems can arise when this type of second-party review and consultation is presented as an "independent" professional opinion.

First, when issuing a professional opinion it is expected—if not required, in many jurisdictions—to identify the professional affiliation or professional standard being followed. Internally developed guidelines should not be considered a professional standard.

Second, it is common to see an "independent second-party opinion" published by the same organization that helped develop the green bond framework, including the project selection criteria. In some cases, the same second-party opinion provider rates or scores a green bond framework they helped develop and claims this is an "independent" opinion. Reviewing your own organization's work is not exactly an "arms-length" relationship.

As another example, a very large U.S. environmental engineering and consulting firm provided a second opinion to one of its clients in an area in which they previously provided extensive consulting services. Sean Kidney, Executive Director of the Climate Bonds Initiative, referred to such a relationship as "so not strictly independent."[22]

Third and finally, if "second-party opinions" were truly independent they would be called "third-party" opinions.

In the area of green bonds there is a self-described "Expert Network for Second Opinions" that "operates independently from that [financial] community to ensure the unbiased nature and high quality of Second Opinions."[23] Are these "expert opinions" being rendered in line with financial regulatory guidelines for independence in the preparation of expert reports? The Australian Securities and Investment Commission Regulatory Guide 111 states: "We will consider regulatory action if we consider that there are material issues with the content of the report (e.g. as to the adequacy and the completeness of the expert's analysis) or if we have concerns about the independence of an expert."[24] In the U.S., the Trust Indenture Act of 1939 speaks to the role of certificates (or opinions) of fair value when describing secured bonds. The certificate or opinion must be made by an independent engineer, appraiser, or other expert. Since 1939, new legislation, such as the Dodd-Frank Wall Street Reform and Consumer Protection Act, has addressed what it means to be truly independent, including verifiable procedures and controls that are publicly available and periodically reviewed.

It is also common to see second-party opinions that conclude that a green bond was issued "in line with the Green Bond Principles." While it is reasonable for an investor to conclude

[21] *Greenwash*, DICTIONARY.COM, http://dictionary.reference.com/browse/greenwash (last visited Aug. 8, 2016).

[22] Sean Kidney, *US Green muni trio*, CBI BLOG (Dec. 9, 2014), https://www.climatebonds.net/2014/12/us-green-muni-trio-connecticut-60m-17yr-florida's-east-central-87m-20yr-spokane-wa-181m-20yr.

[23] *Expert Network for Second Opinions (ENSO)*, STOCKHOLM ENV'T INST., http://www.sei-international.org/projects?prid=2156 (last visited Aug. 8, 2016).

[24] AUSTRALIAN SECURITIES & INVESTMENT COMM'N, REGULATORY GUIDE 111, CONTENT OF EXPERT REPORTS (Mar. 2011), http://download.asic.gov.au/media/1240152/rg111-30032011.pdf.

that such a green bond addressed all four pillars of the GBPs, many times the "second opinion" expert reviewer only assesses one pillar: Project Assessment and Selection. Unless it is made perfectly clear to the reader why the other three pillars were not addressed and the potential impact of the focus on one pillar, such second-opinion reports run the risk of being considered incomplete or even misleading. Imagine a lead bond counsel offering an opinion over the status of a tax-exempt bond without addressing all applicable tax law and rulings.

Although independence and completeness concerns can lead to regulatory risks, it is the lack of evidence to support green claims (i.e., greenwashing) that has led to past regulatory actions. The Coca Cola "plant bottle" ruling under the Danish Marketing Practices Act demonstrates this point. The company could not produce sufficient proof that its new bottle was actually "greener" than any other soda bottle. In the U.S., Section 5 of the Federal Trade Commission Act provides legislative authority to regulate deceptive acts and practices related to commercial activities. This includes misrepresentation, either directly or indirectly by implication, regarding delivery of environmental benefits. These types of regulations are directed at consumer products and not financial products sold to professional investors. Although green bonds are typically sold to institutional investors and asset managers, the markets to which they are targeted seem to be shifting to include more individual investors.

For better or worse, the interest in selling green bonds to the public is quickly increasing.[25] As previously mentioned, the New York MTA Certified Climate Bond was aggressively sold to the public. This type of retail participation will likely attract additional attention from securities regulators.

Legal Risks

In the U.S., there are more than 25 years of legal precedent referring to environmental costs or damages as Environmental Impairment Liabilities (EILs). For example, a company that has been ordered to clean up a toxic waste site must account for such future costs as an Environmental Impairment Liability. Conversely, an environmental benefit or positive net impact can be considered an asset. For example, an avoided environmental impairment (such as verified greenhouse gas emissions reductions) can result in valuable carbon credits. Because these financial instruments can be monetized, they are accounted for as a financial asset valued at a representative market price.

Therefore, just as the courts have defined environmental liabilities, it is possible to explicitly define the value of anticipated environmental benefits. Likewise, it is possible to explicitly define the damage or penalty related to environmental non-performance in a Bond Purchase Agreement and related documents. It is a common practice for responsible investors who finance carbon offset or other "green" projects to include recourse for financial and environmental non-performance. Investors have legal recourse if the project developer fails (or is late) to deliver the anticipated environmental benefit (i.e., carbon credits). These penalties can be in cash or be quantified using an equivalent environmental benefit, such as carbon credits purchased from a different project. Unlike activities that produce carbon credits that can be monetized, green bond offerings rarely quantify the financial value of their green attributes. Nonetheless, it can be argued that an implied environmental benefit has potential financial value.

Environmental Non-Performance Risks Lawsuits

Assuming the bond prospectus is silent or vague on the subject of environmental non-performance or green default, is there potential liability for failing to deliver an anticipated or "labeled" environmental benefit? In the early 1980s, property insurers and reinsurers doing business in the U.S. found that they were potentially responsible for billions of dollars of EIL claims. Early property insurance policy language was silent as to environmental impairments. However, the policy was "labeled" as "comprehensive" and thus, it was argued, set an expectation of robust coverage benefits. As the potential environmental cleanup costs grew for the "responsible" parties who bought comprehensive property insurance, juries began awarding large sums of money to the insured for the implied coverage benefit. Because these insurance policies failed to clearly define "comprehensive" or follow emerging industry standards to clearly define and exclude pollution, environmental coverage benefits were awarded.

There are similarities between the early property insurance and current green bond markets. It was common for property insurance underwriters and brokers to highlight the broad meaning of "comprehensive" to reach a broader market of new buyers. At the time, there were no standardized insurance forms (i.e., contracts) that clearly defined pollution and related environmental coverage benefits. However, there were emerging Environmental Impairment Liability Guidelines that addressed how basic insurance underwriting principles applied to this new market. Unfortunately, a number of issuers of property insurance were slow to incorporate these guidelines and emerging standards into their insurance purchase agreements.

Property insurers argued that their policies never mentioned, nor did they underwrite, potential environmental coverage benefits. In general, property insurers were unsuccessful in limiting their coverage, which resulted in extremely large losses. Even after "pollution" was excluded from many property insurance policies, it was found (mainly in jury trials) that insurers were still responsible for coverage because the word "pollution" was not well defined. After 300 years of operation, these unanticipated environmental losses almost put an end to the world's most famous reinsurance company, Lloyd's of London.

Perhaps the buyers of "labeled" green bonds also have a reasonable expectation that an environmental benefit will be delivered— even if the purchase agreement is silent on such an attribute. If so,

[25] *Green Bonds Capture Retail Interest*, BOND BUYER (Sept. 25, 2014) (interview with Brian Wynne, Morgan Stanley), http://www.bondbuyer.com/video/green-bonds-capture-retail-interest-1066464-1.html.

there may be liabilities for non-performance (i.e., green default). There are approaches to quantifying such potential damages. Input/output economic modeling is commonly used to quantify environmental impacts. Another example includes assigning a market price (mark-to-market) on avoided greenhouse gas reductions. These same approaches could be used to quantify monetary damages related to environmental non-performance or green default. In fact, the Seventh Circuit Court of Appeals in a unanimous decision recently rejected an industry-backed lawsuit that asserted such carbon accounting was "irredeemably flawed" in the context of setting federal efficiency standards for commercial refrigeration equipment.[26] The court concluded instead that putting a price on carbon costs "was neither arbitrary nor capricious." According to the Institute for Policy Integrity at New York University School of Law, this was the first time a court has considered the legality of such carbon accounting and related pricing.[27]

Green Labeling Followed by Legal Un-Labeling

The definitions and operational principles described in a green bond offering document may not create any obligation. In fact, the obligation to implement a defined "green bond" in line with any "green" principles may be explicitly excluded. Given that provisions regarding project selection, tracking of proceeds, and reporting and verification may not be binding, investors must assess the likelihood and severity of this potential non-performance.

In June 2015, the East Bay Municipal Utility District issued a $74 million tranche (Series B) labeled as "green bonds." The offering document presented the following criteria for selecting eligible projects:

> The District has designated the Series 2015B Bonds as "Green Bonds" to allow investors to invest directly in bonds that finance environmentally beneficial projects. The District considers projects that are designed to meet one or more of the following criteria to be "green" projects: (i) maintain water quality; (ii) improve water use efficiency, including conservation through reduced water loss; (iii) improve biodiversity and ecosystem quality; (iv) protect against flooding; (v) reduce pollution; (vi) improve resilience (adaptation) to climate change; (vii) reduce the combustion of fossil fuels; (viii) reduce greenhouse gas emission; (ix) implement "reduce, reuse, recycle" practices in preference to raw materials; or (x) adhere to sustainable purchasing guidelines.[28]

The "official statement and remarketing memorandum" goes on to describe these categories as well as provide an overview of the financial tracking of proceeds and reporting mechanisms. To the issuer's credit, the green bond appears to follow form as presented in the GBPs and is based on management-approved guidance for issuing green bonds. However, later in the offering document it states:

> The terms "Green Bonds" and "green project" are neither defined in nor related to provisions in the Indenture. The use of such terms herein is for identification purposes only and is not intended to provide or imply that an owner of the Series 2015B Bonds is entitled to any additional security other than as provided in the Indenture. The purpose of labeling the Series 201B Bonds as "Green Bonds" is, as noted, to allow owners of the Series 2015B Bonds to invest directly in bonds that will finance environmentally beneficial projects. The District assumes no obligation to ensure that these projects comply with the principles of green projects as such principles may hereafter evolve.

Herein lies the potential for uncertainty. This "green bond" presents criteria for green project selection as well as descriptions of the use and management of proceeds and reporting. In essence, it addresses the four pillars of the GBPs. However, the terms "green bond" and "green project" are neither defined in nor related to provisions in the indenture. Such exclusions may not be acceptable to an investor who expects some level of obligation, albeit voluntarily assumed. Without some level of obligation to implement a legally defined "green bond" with defined eligible "green projects," should the issuer and underwriters claim the bond is "green"?

Reasonable Standard of Care

The purpose of the Securities Act of 1933 is to provide full and fair disclosure of the character of securities sold to the public. If a green bond issuer's or underwriter's provision of misleading or insufficient information could be considered material to the investment decisions of reasonable investors, the door may be open to potential litigation. Without widely accepted guidelines and standards, however, it is difficult to judge whether there has been an extreme departure from a reasonable standard of care.

Along these lines, the green bond market has the GBPs as well as the Climate Bonds Standard certification. Both are starting to have a major impact on defining good practice and possibly a reasonable standard of care. Assuming that a judge—or more likely a jury—finds a green bond issuer liable for an extreme departure from a reasonable standard of care, what level of financial compensation could be assessed? The answer would likely

[26] Zero Zone, Inc. v. U.S. Dept. of Energy, 2016 U.S. App. LEXIS 14541 (7th Cir. Aug. 8, 2016).

[27] *See* Timothy Cama, *Court backs Obama's climate change accounting*, The Hill (Aug. 9, 2016), http://thehill.com/policy/energy-environment/290859-court-backs-obamas-climate-change-accounting.

[28] East Bay Municipal Utility District, Water System Revenue Bonds, Series 2015 B Green Bonds, June 1, 2015, https://www.ebmud.com/index.php/download_file/force/2810/789/?OS_Series_2015_B_Green_Bonds__2015C.pdf.

depend on the potential value (tangible and intangible) of the environmental benefit that was reasonably expected plus any punitive damages.

Green Fraud Lawsuits

Although related to greenwashing, green fraud entails deliberate misrepresentation for unfair financial advantage. One of the largest green fraud cases currently involves Volkswagen AG cheating on U.S. air pollution tests for their "clean" diesel cars.[29] Not only is the company looking at up to $18 billion in potential fines, several of its executives could face criminal charges. The potential consumer lawsuits could involve billions more in punitive damages. Although not labeled "green," in May 2015 Volkswagen issued its largest U.S. dollar denominated bond sale to date ($3.5 billion). A rival auto manufacturer, Toyota, has issued two large green bonds to date. It is conceivable that Volkswagen would consider issuing a similar green bond to fund consumer financing of its "clean" diesel line of vehicles.

The day after the scandal broke, Volkswagen's stock price dropped 23%. It is unclear if the recent green fraud litigation will impact Volkswagen's ability to repay bond investors. It is clear, however, that environmental non-performance (deliberate or otherwise) can have an impact on companies and pose material risks to investors.

In the area of municipal bond fraud, the U.S. Securities and Exchange Commission (SEC) has increased its enforcement activity, pursuing charges against several small and large municipalities.[30] Because fines are typically passed on to the taxpayer, the SEC is looking to take action against municipal officials for financial penalties in addition to action against bond underwriters and attorneys. The growth in municipal green bonds has been significant over the last 18 months. The lesson for municipal officials is to provide investors with accurate and up-to-date financial and, in the case of green bonds, non-financial information.

How to De-Risk Green Bond Investments

Whether representing the issuer, underwriter, or buyer, lawyers play very important roles throughout the bond market. The following are some simple and practical actions lawyers should keep in mind when dealing with green bonds:

Address the Green Bond Principles. To the extent possible, any labeled green bond should address all four pillars of the GBPs. This is extremely important when the issuer or underwriter makes assertions regarding alignment with the GBPs. If there are related climate benefits, certification to the Climate Bonds Standard should seriously be considered.

Use Clear and Consistent Definitions. Some offering documents describe in detail the labeled green bond but then go on to state that the terms "green bond" and "green project" are explicitly not defined. This could cause significant problems with investors and regulators. Lawyers representing green bonds investors should insist that terms such as "green bond" and "green project" be clearly defined pursuant the Green Bond Principles or Climate Bonds Standard. To the extent possible, the expected environmental benefits and related disclosures should be carefully described by the issuer. In addition, who owns any resulting environmental attributes (e.g., carbon offsets) should be made clear.

Do Not Refer to Second-Party Reviews (Opinions) as Independent. Although using this terminology is popular in Europe, it can lead to significant problems with U.S. securities regulators. If second-party reviews were truly independent they would be called third-party! Lawyers for the bond issuer should describe second-party reviews as objective but not independent. With that said, any published review findings should be summary in nature. This limits the possibility of sensitive or confidential information being disclosed.

Highlight Truly Independent Third-Party Assurance. Third-party attestation or verification is the highest level of assurance offered to bond buyers and regulators. It is a mandatory requirement for Climate Bonds certification and should be highlighted in the offering documents. Third-party assurance could also offer bond issuers, underwriters, and their lawyers some protection against claims of negligence by demonstrating reasonable care.

Be Aware of Evolving Standard Practices. It is important to understand the latest expectations for issuing and implementing a green bond. This awareness lays the foundation for following a reasonable standard of care. Seeking out articles such as this one is a good start.

Conclusion

According to the American College of Bond Counsel, lawyers can play many roles including disclosure counsel, underwriter's counsel, special tax counsel, trustee's counsel, issuer's counsel, conduit borrower's counsel, or counsel to the provider of a credit facility or hedge facility. Environmental lawyers may be teaming with their bond counsel colleagues to provide perspective on the risk and requirements related to the fast-growing area of green bonds. As the market for green bonds expands and evolves, understanding the characteristics of these financial instruments—including the obligations they do (and do not) impose—will allow lawyers to provide good counsel regarding green bonds' benefits and risks.

[29] Jeff Plungis, *VW 'Clean Diesel' Scheme Exposed as Criminal Charges Weighed*, BLOOMBERG (Sept. 18, 2015), http://www.bloomberg.com/news/articles/2015-09-19/vw-clean-diesel-scheme-exposed-as-u-s-weighs-criminal-charges.

[30] PAUL F. BOHN, THE SEC CRACKDOWN ON MUNICIPAL BOND FRAUD & THE INCREASED RISK FOR MUNICIPAL OFFICIALS (Jan. 2015), http://www.fb-firm.com/Firm-Articles/The-SEC-Crackdown-on-Municipal-Bond-Fraud-and-The-Increased-Risk-for-Municipal-Officials.pdf.

Phillip Ludvigsen, PhD, pludvigsen@firstenvironment.com, is an expert in climate change and carbon consulting services, including environmental financing approaches such as green bonds, development of greenhouse gas emission reports, assessment of carbon accounting systems/controls, reducing emission baselines, and verification of carbon inventories and offsets. He sits on the Climate Bonds Standards assurance work group, has assisted in the development of the Climate Bonds Standard 2.0, and is the co-author for the development of the Climate Bonds Initiative's Readiness Assessment Protocol.

Bernard T. Delaney, PhD, PE, BCEE, tod@firstenvironment.com, possesses more than 39 years of diverse experience on a range of environmental concerns, from greenhouse gas management and air quality assistance to litigation support and expert testimony. He has maintained active involvement in the international discussions of standards regarding greenhouse gas verification, life-cycle analysis, carbon footprinting, and environmental management. In addition, he continues to serve as the elected chair of the International Organization of Standardization's (ISO's) Climate Change Coordination Committee, tasked with synthesizing existing adaptation and mitigation best practices and developing consistent international standards.

LEGAL DEVELOPMENTS

ENERGY

State Supreme Court Vacated PSC Order That Imposed "Impossible" Timeframe for New Energy Service Company Requirements

The Supreme Court, Albany County, vacated provisions of a New York State Public Service Commission (PSC) order that restricted energy service companies (ESCOs) from enrolling new mass market customers or renewing expiring agreements with mass market customers unless contracts guaranteed savings for the customers compared to what they would have paid as full-service utility customers or provided at least 30% renewable electricity. ESCOs sell electricity and gas service to business and residential customers. The PSC said the order was based on the "unworkability of the market" and on consumer complaints regarding unfair business practices. The order's requirements became effective 10 days after issuance of the PSC order, but a few days after the effective date the Supreme Court issued a temporary restraining order staying implementation. In its decision/order vacating the provisions, the Supreme Court rejected claims by petitioners that the PSC lacked jurisdiction over retail rates charged by ESCOs but found that the order should be vacated because the petitioners had been denied their due process rights. The court said that the petitioners were not afforded sufficient notice of what the order would require. The court also said that the order was irrational, arbitrary, and capricious both because it bore "little rational relationship" to earlier proceedings and reports considered by the PSC, and also because of the "unduly burdensome" and "impossible" timeframe for implementation. *National Energy Marketers Association v. New York State Public Service Commission*, 2016 N.Y. Misc. LEXIS 2739 (Sup. Ct. Albany County July 22, 2016).

HAZARDOUS SUBSTANCES

Federal Court Allowed Removal Cost Recovery Claims to Proceed but Dismissed Claims for Remedial Costs

In a current owner's action seeking response costs from a former owner under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and state law for polychlorinated biphenyl (PCB) contamination at a West Virginia site, the federal court for the Northern District of New York dismissed claims for remedial costs but ruled that the former owner was liable for past and future removal costs. Current owner MPM Silicones, LLC (MPM) acquired the site in 2003. Defendant Union Carbide Corporation (Union Carbide) operated at the site from approximately 1955 to 1993. The court ruled that MPM was time-barred from recovering remedial costs because corrective actions pursuant to the Resource Conservation and Recovery Act in the 1990s had triggered CERCLA's six-year statute of limitations for remedial action costs. The court rejected MPM's argument that the actions of another party before MPM acquired the site could not trigger the statute of limitations for its cost recovery action. The court also found that tolling of the limitations period was not warranted because MPM "failed to present evidence showing that it has pursued its rights diligently." The court ruled that Union Carbide was liable for past and future removal costs at the site. The court found that MPM had established that at least of some of its sampling costs qualified as "necessary" and rejected the argument that none of MPM's costs were compliant with the National Contingency Plan (NCP). The court said that Union Carbide's liability would extend to future costs at a landfill that Union Carbide had argued was not part of the same CERCLA "facility." With respect to Union Carbide's contribution counterclaim, the court found that MPM had failed to raise a triable issue of fact regarding its eligibility for CERCLA's innocent landowner defense but that MPM had raised an issue of fact regarding whether it had acted with "due care" so as to qualify for the CERCLA's bona fide prospective purchaser defense. The court ruled that MPM's strict liability and negligence claims were time-barred but allowed a restitution claim to proceed. *MPM Silicones, LLC v. Union Carbide Corp.*, 2016 U.S. Dist. LEXIS 98535 (N.D.N.Y. July 7, 2016). [*Editor's Note:* This action was previously covered in the June 2013 issue of *Environmental Law in New York*.]

Federal Court Denied Request to Exclude Expert Opinion on Compliance with National Contingency Plan

In a separate decision in MPM's cost recovery action against Union Carbide, the federal district court for the Northern District