THE PLACE OF MUNICIPAL GREEN BONDS IN LOW-CARBON FINANCIAL MARKETS[1]

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I. INTRODUCTION

If you have not yet been requested to comment on the use of green bonds for financing a particular project of your client, it is likely that sometime soon, you will be. The purpose of this paper, then, is to offer a definition of green bonds that will be useful for local-government attorneys in responding to such queries, and also to provide a few general suggestions as to what may be considered to be uniquely material to any green bond offering documents. This paper begins with a look at the role that green bonds serve within the developing low-carbon financial markets established in response to certain climate-related goals as articulated in the Paris Agreement on climate. Following the discussion of green bonds from this perspective, it is suggested that the value of using green bonds for the local government issuer is that green bonds can further the positive effects of the environmentally-friendly project that is funded by the bonds in way that typical bonds cannot.

Green bond investors are motivated by the potential environmental benefits of the funded projects as well as by the purely economic aspects of the bond transaction. As such, an issuer should carefully consider whether there is any special or unique information that may be material, for disclosure purposes, to a green bond offering document that would not be material to a typical offering. This paper concludes by suggesting that there may be a trend towards the inclusion of information laid out in what are known as the Green Bond Principles and in the Climate Bonds Initiative standards in green bond offering documents.

There is much that can be said about the developing green bond market and about the unique disclosure issues that relate to green bonds. This paper is intended as an introduction to these topics and covers them only in a general manner. I hope that the references provided herein, if not

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the content of this paper, are useful for anyone who wishes to learn more about green bonds and climate-related finance.

II. Green Bonds' Place in Low-Carbon Financial Markets

The Paris Agreement approved in 2015 demonstrated a global commitment to keeping the world on a path in which anthropogenic global warming will remain below 2°C from pre-industrial levels (A course by which global warming is kept below 2°C is commonly referred to as a "2°C pathway." That shorthand is adopted in this paper.) Recognizing the need to rapidly expand investment in low-carbon and climate resilient projects and technologies, an investor group representing $11.2 trillion in managed assets, at the conclusion of the COP 21 where the Paris Agreement was negotiated, pledged to "work, through bodies like the Climate Bonds Initiative, with governments, development institutions, industry, cities, commercial banks, NGOs and others, to grow a large and robust market that makes a real contribution to addressing climate change."[3] As discussed in the following sections, therefore, green bonds are properly viewed as an integral part of the mobilization of finance to achieving a 2° pathway.

A. Emergence of a Climate-Aligned Bond Market

In agreeing to the Paris Agreement of 2015, virtually every nation committed for the first time to taking significant efforts to substantially limit anthropogenic global warming caused by the emission of greenhouse gasses and to establish mechanisms for assisting developing nations in their efforts in the global undertaking. The goals of the nations in joining the Agreement are stated in Article 2 as:

> a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
>
> (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production;
>
> (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.[4]

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[3] INVESTORS REPRESENTING US$11.2 TRILLION, THE PARIS GREEN BONDS STATEMENT (2015).
[4] Conference of the Parties, Adoption of the Paris Agreement, Dec. 12, 2015, U.N. Doc. FCCC/CP/2015/L.9/Rev/1 Art. 2 (Dec. 12, 2015).

Achieving a 2°C pathway will require an estimated global investment of $93 trillion by the year 2035.[5] Although investment in low-carbon, climate resilient, technologies is increasing, the general consensus is that new low-carbon financial markets will need to be developed with governmental assistance to get the scale of investment required to achieve a low-carbon emissions future.[6]

The first green bond designated as such was issued in 2007 by the European Investment Bank to finance renewable energy and energy efficiency projects.[7] Total annual green bond issuances fluctuated between $419 million and $9.96 billion in the years between 2007 and 2013.[8] The Green bond market began a period of rapid growth in 2014 when the International Finance Corporation issued the first $1 billion green bond and the International Capital Market Association ("ICMA") published the Green Bond Principles ("GBP").[9]

The GBP establish the fundamental expectations of the market for what green bond proceeds may be used for, and for how the issuer will communicate to the market its overall approach to addressing climate change, how the proceeds will be managed, and how the benefits of the funded project will be reported. The ICMA describes the role of the GBP within the burgeoning green bond market as follows:

> The Green Bond Principles (GBP) are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond. The GBP are intended for broad use by the market: they provide issuers guidance on the key components involved in launching a credible Green Bond; they aid investors by ensuring availability of information necessary to evaluate the environmental impact of their Green Bond investments; and they assist underwriters by moving the market towards standard disclosures which will facilitate transactions.[10]

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[5] NEW CLIMATE ECONOMY, BETTER GROWTH, BETTER CLIMATE, p. 16 (2010).

[6] *See*, OECD/BLOOMBERG PHILANTHROPIES, GREEN BONDS, MOBILISING THE DEBT MARKETS FOR A LOW-CARBON TRANSITION (2015).

[7] INTERNATIONAL FINANCE CORPORATION, EM COMPASS, Note 25 (Dec. 2016), https://www.ifc.org/wps/wcm/connect/99854086-d728-42ba-a969-53d2fb889b89/EMCompass+Note+25+Green+Bonds+FINAL+12-5.pdf?MOD=AJPERES

[8] THE EUROPEAN INVESTMENT BANK, GREEN BOND MARKET DEVELOPMENT AND EIB, https://www.eib.org/attachments/green-bond-market-development-and-eib.pdf, accessed April, 8, 2019

[9] *Id.*

[10] INTERNATIONAL CAPITAL MARKET ASSOCIATION, GREEN BOND PRINCIPLES, VOLUNTARY PROCESS GUIDELINES FOR ISSUING GREEN BONDS (JUNE 2018).

The four GBP are stated as requirements relating to the issuer's description of the project and of the use of proceeds to the market through the offering documents. The GBP can be summarized as:

1. ***Use of Proceeds***- 100% of proceeds must be used for "green projects". Green projects are those which "contribute to environmental objectives such as: climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control"[11]

2. ***Process for project evaluation and selection***. – The issuer must be prepared to disclose how the project fits into the green projects category and how it fits into the issuer's overarching objectives for sustainable and environmentally friendly development.

3. ***Management of Proceeds***- The issuer must place proceeds into a segregated subaccount, must account for all investment proceeds, and must be able to demonstrate that all proceeds have been used for the green project.

4. ***Reporting***- Issuers shall keep readily available, up-to-date information (at least annually) on the application of funds, project development, and impacts of the funding.

The GBP then, go beyond stating a definition for green bonds in that they set out the expectations of the market participants with regard to the climate impact of the funded project, how the project fits into the issuer's overall approach to addressing climate change, and how these factors will be communicated to the market.[12]

Because the green bond market trades largely on the investors' expectations that their investments will be contributing to a net positive climate impact, it is commonly accepted that issuer representations as to the environmental benefits of the funded project should be verified by an independent third-party with relevant environmental expertise. To that end, the Climate Bonds Initiative, a non-profit entity organized to support the mobilization of capital for addressing climate change, developed technical standards for determining whether a funded project will result in a net positive environmental benefit, and as such, should be considered "green." The standards are specific to different project types such as transportation, water, and energy efficiency. As with the

[11] *Id.*

[12] Because the level of disclosure typically expected in a transaction that follows the GBP in full is relatively high, green bond transactions feature a level of issuer-buyer communication that is unique as compared to typical municipal bonds. This fact appears to be appreciated by the investment community. *See, e.g.*, Kate Allen, *Disclosure is a Lure for Green Bond Investors*, Financial Times, January 29, 2019.

GBP, the stated purpose of the standards is to aid in the development of a market for climate-focused investment:

> Confidence in the green credentials of green bonds is essential to a sustainable market.
>
> Transparency to the underlying asset is important in allowing investor due diligence. Credible, science-based, widely-supported guidelines about what should and should not be considered a qualifying investment helps investors make informed decisions about the environmental credentials of a bond.
>
> The Climate Bonds Standard provides clear, sector-specific eligibility criteria for assets and projects that can be used for Climate Bonds and Green Bonds.

The Climate Bonds Initiative has also developed a third-party certification to demonstrate that green bonds meet the standards relevant to the project type. A certification is provided when a third-party verifier has provided a statement verifying that the project meets the Climate Bonds International Standard.

In addition to the GBP and Climate Bonds Initiative certifications, there are several other efforts underway which may contribute significantly to the development of the green bond market to the scale required to adequately address climate change. One of these efforts, the Build America Mutual Greenstar program, is discussed below in a subsequent section of this paper. Two other notable contributions are the concurrent developments of green bond standards by the European Union and by the International Organization for Standardization ("ISO"). The European Union Technical Expert Group on Sustainable Finance, on March 6, 2019, issued for comment a Draft Green Bond Standard.[13] It is expected that such a standard, once issued, would provide the market with a level of consistency that would encourage greater investment. At the same time, the ISO is developing a green bond standard, ISO 14030, that is intended to unify the various standards for green bonds and to establish a universal basis for recognizing green bonds to give the market "credibility and uniformity."[14] Moreover, the ISO predicts that Standard 14030 will encourage greater levels of investment in green bonds by providing investors assurance as to the environmental benefits of the funded project.

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[13] GREEN BOND STANDARD SUBGROUP, REPORT OF THE TECHNICAL EXPERT GROUP (TEG) SUBGROUP ON GREEN BOND STANDARD, PROPOSAL FOR AN EU GREEN BOND STANDARD, INTERIM REPORT (2019).

[14] RICK GOULD, INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, THE SECRET TO UNLOCKING GREEN FINANCE (2018), https://www.iso.org/news/ref2287.html (last accessed March 24, 2019).

B. From Paris, France to Hometown, U.S.A.

In joining the Paris Agreement in 2015, the U.S. committed to reducing its greenhouse gas emissions to a level 26-28% lower than 2005 rates by 2035, and to contribute up to $3 billion in aid to help poorer countries address climate change.[15] Two years after the U.S. had joined the agreement, the President, at a press conference held on May 31, 2017, announced that the U.S. would remove itself from the Paris Agreement in 2020. The President cited as reasons for the withdrawal a belief that the agreement unduly infringed on the nation's sovereignty and would put the U.S. economy at a significant disadvantage in terms of global economic competition.[16]

Many U.S. mayors, on the other hand, in response to the announced withdrawal, expressed a belief that the undertaking of the achievement of the Paris Agreement goals could prove beneficial for their communities.[17] The U.S Conference of Mayors, for example, at its 2017 annual convention, adopted a resolution titled "Supporting a Cities-Driven Plan to Reverse Climate Change."[18] That resolution makes several direct references to the 2015 Paris Agreement adopted by the United Nations Framework Convention on Climate Change, including this:

> . . .
>
> WHEREAS, although cities cannot formally "join" the Paris Agreement it is increasingly important for Mayors to commit to doing their part on climate action via aggressive policies and programs that reduce our environmental footprint while promoting a 21st century economy,
>
> NOW, THEREFORE, BE IT RESOLVED, that The United States Conference of Mayors calls upon the Trump Administration and Congress to support the fight against climate change by fully committing themselves to the Paris Climate Accord, the Clean Power Plan, the Clean Energy Incentive Program, and other efforts that will provide cities the tools they need to combat climate change. . .

Weeks prior to the adoption of this resolution, a group called "Climate Mayors," released a statement in support of the Paris Climate Agreement goals that was originally signed by 61 U.S.

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[15] Michael D. Shear, *Trump Will Withdraw U.S. From Paris Climate Agreement*, N.Y. Times (June 1, 2017).

[16] Demetri Sevastopulo, *Trump Takes U.S. Out of Paris Climate Deal*, Financial Times (June 2, 2017). Under the terms of the Paris Agreement, the soonest that the U.S. can withdraw will be November 2020.

[17] see, Lizette Alvarez, *Mayors, Sidestepping Trump, Vow to Fill Void on Climate Change*, N.Y. Times (June 26, 2017)

[18] U.S. Conf. of Mayors, *Supporting a Cities-Driven Plan to Reverse Climate Change*, (2017), https://www.usmayors.org/the-conference/resolutions/?category=a0F6100000BKCs6EAH&meeting=85th%20Annual%20Meeting.

mayors, and which to date has been signed by 407 mayors including six mayors from Texas municipalities.[19] The statement is brief enough to include here in full:

> The President's denial of global warming is getting a cold reception from America's cities.
>
> As 407 US Mayors representing 70 million Americans, we will adopt, honor, and uphold the commitments to the goals enshrined in the Paris Agreement. We will intensify efforts to meet each of our cities' current climate goals, push for new action to meet the 1.5 degrees Celsius target, and work together to create a 21st century clean energy economy.
>
> We will continue to lead. We are increasing investments in renewable energy and energy efficiency. We will buy and create more demand for electric cars and trucks. We will increase our efforts to cut greenhouse gas emissions, create a clean energy economy, and stand for environmental justice. And if the President wants to break the promises made to our allies enshrined in the historic Paris Agreement, we'll build and strengthen relationships around the world to protect the planet from devastating climate risks.[20]

The U.S. Conference of Mayors and the Climate Mayors, by their resolution and statement, have pledged to lead their respective municipalities in achieving three goals: the reduction of green-house gas emissions to limit the increase in the global average temperature to "well below" 2°C; increasing resilience to the adverse effects of climate change; and creating of pathways for finance to contribute to the first two goals.

That the elected officials of municipalities would be taking clear stances in support of the goals of the Paris Agreement perhaps is understandable considering that the adverse effects of global climate change are first experienced at the local level. The Alliance for a Sustainable Future, which is a joint-effort of the U.S. Conference of Mayors and the Center for Climate and Energy Solutions, reported that 95% of the 119 cities it surveyed in 2018 have experienced at least one climate change-related impact, with most experiencing more.[21] The most common reported impacts are heavy rain and inland flooding, heat waves, and droughts.[22] Moreover, many U.S. mayors believe that the recent increases they have seen in extreme weather events are directly related to increases in greenhouse gasses, a view which is supported by the federal government's

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[19] The Texas cities that have signed on are: Austin, Dallas, Houston, San Antonio, San Marcos, and Smithville. *See,* Climate Mayors, *Statement from the Climate Mayors in Response to President Trump's Withdrawal from the Paris Climate Agreement* (2017) http://climatemayors.org/actions/paris-climate-agreement/ .
[20] *Id*.
[21] Alliance for a Sustainable Future, *Mayors Leading the Way on Climate Change*, (2018). The Texas cities that participated in the 2018 survey are: Arlington, Austin, Dallas, Houston, and Plano.
[22] *Id*. At p. 5.

studies on climate change.[23] The resolution and the statement then are expressions of an intent to act on that understanding of the connection between anthropogenic greenhouse gasses and extreme weather events in support the goals of the Paris Agreement.

C. The Possible Benefits of Green Bonds

The preceding discussion of the Paris Agreement and the decisions of mayors to indicate support for the agreement is intended to explain the role of green bonds, as they are defined below, within larger policy movements. Moreover, the possible benefits of green bonds are easier to perceive with an understanding of why investors and governmental entities are working to establish a climate-aligned market for securities and how green bonds fit into that market. The International Capital Market Association defines green bonds generally as "[a]ny type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects ..."[24] Under this definition, which is stated in the GBP , Green Projects are projects that "contribute to environmental objectives such as: climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control."[25] As such, typical municipal projects that would qualify as eligible for green bond funding include those that relate to energy efficiency, water and wastewater management, and climate change adaptation.[26]

For bond buyers, the issuer's use of a green-bond designation is helpful for two purposes. First, it assists the buyer in identifying bonds that will allow it to align its portfolio with its own environmental commitments, if it is a single investor, or with the commitments of its subscribers, if it is an institutional buyer. Also, the green designation assists the buyer in diversifying its portfolio to include investments that are sensitive to the impacts of climate change.[27]

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[23] *See, e.g.*, NOAA National Centers for Environmental Information, State Summaries, Texas, (2018) https://statesummaries.ncics.org/chapter/tx/.
[24] INTERNATIONAL CAPITAL MARKET ASSOCIATION, THE GREEN BOND PRINCIPLES: VOLUNTARY PROCESS GUIDELINES FOR ISSUING GREEN BONDS, (rev. 2018). *Available at https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/.*
[25] *Id.*
[26] *Id.*
[27] For an influential analysis on the effects of climate change on portfolio management *see*, MERCER, INVESTING IN A TIME OF CLIMATE CHANGE (2015).

Designating a bond as green furthers further three concrete objectives for the issuer. First, it demonstrates to the general public, as well as to the market, the issuer's environmental commitments. Secondly, it signifies that the developer is an active participant in the ongoing discussion about how local governments can address climate change to improve the lives of their constituents locally while also potentially serving as a model for other local governments. Additionally, designating an offering of bonds as green potentially attracts a broader range of potential buyers to the immediate sale as well as future sales.

The perspective of the constituent is also relevant to a full discussion of the definition of green bonds.[28] At a time when local government constituents are impacted by climate-change related impacts on public infrastructure and public health, a green bond designation signals to the public the local government's environmental commitments and indicates that a portion of their tax dollars are being used to directly address climate change impacts.

D. Why an Issuer Would Choose to Issue Green Bonds

A common question posed by issuers about green bonds is whether green bonds result in comparatively lower borrowing costs. There are studies that develop conceptual models from which to identify and analyze any discernible pricing differential, and quite a few of these studies suggest that issuers of green bonds do realize a savings, a so-called "greenium," in terms of borrowing costs.[29] In support of these findings, there are studies that indicate that when it comes to so-called "socially responsible" investment decisions, such as the purchase of green bonds, financial motives play less of a role than for conventional investments. Which is to say that certain

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[28] Given the increasing public awareness of the impacts of climate change on society, it is not unreasonable to conclude that there would be public interest in the use of green bonds. Apart from the political aspects, municipal projects and their carbon-creating or carbon-reducing effects do impact society. This idea is expressed, for example, in the notion of the "social cost of carbon," or "SCC," which is "an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but not limited to) changes to… human health, property damages from increased flood risk, and the value of ecosystem services due to climate change." John C. Dernbach and Robert Altenburg, *Evolution of U.S. Climate Policy*, in AMERICAN BAR ASSOCIATION *Global Climate Change and U.S. Law* (2nd 2014), quoting, INTERAGENCY WORKING GROUP ON SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS UNDER EXECUTIVE ORDER 12866 (2010). The federal government regularly determines SCC values in its mandated cost-benefit analyses for significant regulatory actions.

[29] *See*, e.g., Candace C. Partridge, Francesca Romana Medda, *Green Premium in the Primary and Secondary US Municipal Bond Markets*, QASER Laboratory, University College London, August 22, 2018 at 16 (showing a small borrowing cost savings for U.S. municipal green bonds compared to typical municipal bonds,); *see also*, Zerbib, Olivier David, *Is There a Green Bond Premium? The Yield Differential between Green and Conventional Bonds* (December 25, 2016) at 5 https://ssrn.com/abstract=2889690 , published in the Journal of Banking and Finance, Vol. 98 (p. 39-60), 2019, as "*The effect of pro-environmental preferences on bond prices: Evidence from green bonds.*"

investors sometimes "are willing to forgo financial performance in order to invest in accordance with their social preferences."[30]

The academic reviews of green bond pricing are significant because they tend to draw on a broad range of data that is not available to any single financial advisor or underwriter and, as such, the authors of these studies are well-situated to comment on developments within the market as a whole. That said, from my conversations with underwriters who have participated in green bond transactions, there does not appear at this point to be any significant borrowing cost savings associated with the issuance of green bonds.

Moreover, issuers appear to select green bonds for reasons unrelated to borrowing cost savings. To understand what these reasons might be, it is important to acknowledge the obvious point that the use of green bonds is entirely dependent on the project. Green bonds can be used whenever the project will have measurable net environmental benefits. After the local government ("local government" hereafter "LG") commits itself to the project, green bonds are selected as the financing method because the LG wants to add to the positive effects of the project by promoting the LG's tangible commitment to playing a part in achieving a 2° pathway.[31] In other words, the value of green bonds for the LG-issuer most likely consists in the promotion and amplification of the benefits of the project, rather than in direct borrowing cost savings.

III. GREEN BOND OFFERING DOCUMENTS

A. Materiality

As noted, the green bond market is distinguishable from the market for typical municipal bonds in several key ways. The differences stem from the place of green bonds within a larger development of a low-carbon economy (LCE). In the LCE, securities such as green bonds trade on factors additional to basic economic considerations of profit and loss. The green bond investor certainly wants to gain a profitable return, but the motivations for purchasing green bonds also include

[30] *See,* e.g. Riedl, Arno M. and Smeets, Paul, *Why Do Investors Hold Socially Responsible Mutual Funds?* 4 Journal of Finance (Forthcoming).

[31] An example of such promotion that may be valuable to a local government would be the ability to join the ranks of entities listed on the United Nation's Global Climate Action website that are taking concrete steps to address climate change, *see,* http://climateaction.unfccc.int/views/stakeholder-details.html?id=2782.

environmental commitments and an active awareness of the significance of climate change to portfolio management.

As suggested in the preceding discussion of the GBP, a climate-oriented securities market, because of the issuers' interest in promoting its green projects and the investors' interest in investing in environmentally beneficial projects, will require well-defined and widely-accepted mechanisms for communicating the expectations of buyers and issuers with respect to the funded projects. The GBP show what the framework of such a communication model might look like, and the CBI certification and the anticipated EU and ISO standards should contribute significantly to any formalized version of such a framework.

For the local government bond issuer, a key question that arises with respect to the GBP when preparing the green bond offering documents is whether the GBP might contribute to the issuer's disclosure obligations. Put in terms of U.S. securities law, do, or will, the currently existing green bond standards as articulated in the GBP affect what is considered "material" information for investors?

Section 17(a) of the Securities Act and Section 10(b) of the Exchange Act prohibit the issuer from making an untrue statement of a material fact or from making any untrue statement about a material fact in connection with an offering of a municipal security, such as a green bond. A fact is considered material if "there is a substantial likelihood that a reasonable investor would consider it important to an investment decision."[32]

B. Local Examples

To get a sense as to what the buy-side of the may be considering as material to a green bond transaction, it is useful to survey the official statements used in prior sales. And, keeping with the idea that the impacts of climate change are local to a significant degree, we will first consider green bond issuances from the state of Texas.

To date, four public entities in Texas have designated issuances as green bonds: Mission Economic Development Corporation; Fort Bend Independent School District (two issues); the University of

[32] *In re* County of Orange, Cal., SEC Rel. Nos. 33-7260, p. 32 (Jan. 24, 1996). (Adopting definition of materiality stated by Supreme Court in *TSC Industries, Inc. v. Northway, Inc.*,426 U.S. 438, 449 (1976) and adopted in *Basic v. Levinson*, 485 U.S. 224, 231-32 (1988)).

Texas System; and the Shertz-Seguin Local Government Corporation. The earliest of these are the new money (i.e., proceeds were used for a new project, not to refund a prior bond issue) green bonds issued by the Mission Economic Development Corporation on December 1, 2015 in the amount of $48,000,000. The bonds are not certified as green by any third-party but are designated by the issuer as green based on the findings of its engineer that the project, which is for the construction of facilities that will extract marketable materials from the briny discharge of a desalinization plant and the return of potable water to the local water system, will result in a net-positive environmental impact.[33] The Mission Economic Development Corporation states that the purpose for designating the bonds as green is to allow investors to more ably identify environmentally beneficial projects.[34]

The Fort Bend Independent School District bonds are refunding (i.e., proceeds were used to refund bonds, not to fund a new project) green bonds in the amount of $47,505,000 and $45,000,000 issued April 1, 2017 and September 1, 2017 respectively. The bonds are not certified as green by any third-party. However, for both issues, the projects funded with the refunded obligations are LEED certified buildings. Because the LEED designation indicates that the projects are environmentally friendly, the District relied on that LEED designation to demonstrate the greenness of the projects to the market.[35] Notably, in the official statement for both issues, the District explains the purpose for designating the bonds as green in a way that neatly approximates the stated goals of the U.S. Conference of Mayors' resolution:

> The Board has designated the Series 2017C Bonds as "Green Bonds" in order to allow investors to invest directly in bonds issued for certain projects that have been identified by the District as promoting environmental sustainability.[36]

This statement also aligns with the previously cited statement made by the international group of investors at the close of COP 21 which set as a global goal the creation of a strong financial market

[33] $48,000,000 Mission Economic Development Corporation Water Supply Revenue Bonds (Enviro Water Minerals Project) Series 2015 (Green Bonds), at 28.
[34] *Id.*
[35] *Fort Bend Independent School District $47,505,000 Unlimited Tax Revenue Refunding Bonds, Series 2017A (Green Bonds), Official Statement*, at 10, https://emma.msrb.org/ES1024931-ES801721-ES1203063.pdf; *Fort Bend Independent School District $45,000,000 Variable Rate Unlimited Tax Revenue Refunding Bonds, Series 2017C (Green Bonds), Official Statement*, at 12, https://emma.msrb.org/ES1024931-ES801721-ES1203063.pdf.
[36] *Id.* at 10 (2010A) and 12 (2010C).

that addresses the need for a low-carbon future, in a way that makes that goal directly relevant to local projects. [37]

The University of Texas bonds, which are dated January 1, 2016, are new money bonds issued in the amount of $206,040,000.[38] As with the Fort Bend ISD bonds, the bonds are not certified as green by a third-party, but the Board of Regents designated the bonds as green based on the use of proceeds to construct LEED certified buildings.[39] The official statement for the University of Texas Bonds also states that the bonds are designated as green to promote the alignment of finance with climate-related goals.[40]

The Shertz-Seguin LGC bonds are a $19,045,000 issue of refunding bonds dated November 15, 2018. The refunded proceeds were used to acquire water rights and to develop water infrastructure for delivering potable water to the Local Government Corporation's constituents.[41] These bonds are certified as green through the Build America Mutual "Greenstar Program," which was introduced in 2018. Build America Mutual ("BAM") states that the purpose of the Greenstar Program, which evaluates and certifies bonds as meeting green bond criteria, is to "help close the gap between the significant number of municipal bonds that fund projects that are eligible to be financed with green bonds and the relatively few that are currently being labeled as such."[42] Local government issuers who are BAM clients are eligible to receive a Greenstar rating at no additional cost to the issuer if they demonstrate to BAM that the issuer and the funded project meet the GBP.[43] The Shertz-Seguin bonds received the Greenstar rating in part then because the proceeds were used to refund a bond that was used for a purpose that aligned with the Sustainable Water and Wastewater Management category under the "Use of Funds" element of the Green Bond Principles." [44]

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[37] INVESTORS REPRESENTING US$11.2 TRILLION, THE PARIS GREEN BONDS STATEMENT (2015).
[38] *$206,040,000 Board of Regents of the University of Texas System Revenue Financing System Bonds Series 2016B (Green Bonds), Official Statement*, https://emma.msrb.org/ES1024931-ES801721-ES1203063.pdf.
[39] *Id.* at 2.
[40] *Id.*
[41] *Shertz/Seguin Local Government Corporation $19,045,000 Contract Revenue Bonds, New Series 2018, Official Statement*, 19-23, https://emma.msrb.org/ER1166171-ER911674-ER1312151.pdf (last accessed March 20, 2019).
[42] https://buildamerica.com/greenstar-faq.
[43] *Id.*
[44] *Shertz/Seguin Local Government Corporation $19,045,000 Contract Revenue Bonds, New Series 2018, Official Statement*, at 17.

As indicated in the discussion below of the offering statements of two of the largest U.S. municipal green bond issuers, the use of the GBP as a baseline reference for the market's expectations as regards what is material to a green bond investment decision, such as the manner in which the GBP are incorporated into the BAM Greenstar evaluation, may very well become regarded as "material" for every green bond transaction in the near future.

C. **Trend Towards Full Scope of GBP**

What is considered "material" for the purposes of disclosure rules can change over time,[45] and presently we may be experiencing such a shift whereby the GBP come to serve as the recognized baseline for materiality as it relates to the sale of green bonds. That such a change may be underway is suggested not only by the way in which the GBP are incorporated into the BAM Greenstar rating, but also by considering the offering documents used in recent bond sales by the New York Metropolitan Transit Authority (the "Authority") and the City of Los Angeles. The Authority and Los Angeles are two of the leading municipal green bond issuers nationally, with the Authority issuing nine green bonds having a combined par amount of 5.267 billion and the City of Los Angeles issuing six green bonds having a total combined par amount of $960 million, during the 2013-2018 period.[46]

In the official statement for its Series 2019A Transportation Revenue Green Bonds the Authority represents that the bonds have been certified by the Climate Bonds Standards Board as Climate Bonds Certified under the Climate Bonds-Low Carbon Transport Standard.[47] In referencing its certified status then, the Authority is representing that the funded project, and the related bonds, will comply with the Low Carbon Transport Standard of the Climate Bond Initiative as pertain to

[45] As evidenced by the SEC's 2010 publication of guidance on the disclosure of climate-related information in the offerings of public companies, the idea that climate-related information might become to be considered material for municipal offerings of all types is not far-fetched. SEC Release Nos. 33-9106; 34-61469; FR-82 (2010).
[46] S&P GLOBAL, 2019 U.S. MUNICIPAL GREEN BOND & RESILIENCY OUTLOOK: WILL THE SELF-LABELED MARKET REBOUND? March 14, 2019, https://www.spratings.com/documents/20184/5781227/S%26P+Global+Ratings+2018+Minucipal+Green+Bonds+an+dResiliency+Report/8c3c4f13-d0ef-8be2-dc4c-3677ab50518a.
[47] *$454,150,000 Metropolitan Transportation Authority Transportation Revenue Green Bonds Series 2019A (Climate Bonds Certified),* 4, https://emma.msrb.org/ES1238506-ES967677-ES1368614.pdf.

"international standards for climate integrity, management of proceeds and transparency."[48] Moreover, the Authority represents that it has "established appropriate internal processes and controls prior to issuance of [the bonds], and that these internal processes and controls are sufficient to enable conformance with the Certification Process after the [bonds] have been issued and bond proceeds are being expended."[49] As such, the Authority clearly treats adherence to the GBP, as they are incorporated into the Climate Bond Initiative's certification, as a material fact for investors.

The City of Los Angeles, in October 2018, issued a series of green bonds to fund a range of wastewater capital improvements including: "wastewater system facilities . . . collection and pumping facilities which reduce sewage spills, water recycling projects and air quality projects that support the construction and operation of the City's wastewater system facilities."[50] These bonds are not third-party certified. The City does however discuss the green bond designation within the framework of the GBP by addressing expressly the four principals, i.e., use of proceeds, process for evaluation and selection, management of proceeds, and reporting.[51] The effectiveness of the project, in terms of meeting environmentally beneficial goals, is assured by reference to the various permits and regulations that apply to the City's wastewater system.[52] Moreover, the City represents in the offering document that the funded projects will be "green" by virtue of the fact that they will allow the City to meet the various applicable permitting requirements to which is subject.

We can see from the offering statements of two of the leading green bond issuers is that the information specified in the GBP are treated as material information. To the extent that the future of green bond disclosure will be driven by the leading issuers, it may be well to assume that the GBP will eventually become considered material to green bond issuances within the low carbon financial market.

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[48] *Id.*
[49] *Id.*
[50] *$219,790,000 City of Los Angeles Wastewater System Subordinate Revenue Bonds, Series 2018-A (Green Bonds),* 5, https://emma.msrb.org/EP996982-EP772996-EP1174766.pdf .
[51] *Id.* At pp. 5-6.
[52] *Id.* At pp. 5-6, 59-64. Notably, the discussion within the official statement titled "Regulatory Requirements Affecting Operation of the System," is similar to what would be expected under a private entity offering under Items 101,103,503(c), and 303 of Regulation S-K. *See,* SEC Release Nos. 33-9106; 34-61469; FR-82.

IV. SUMMARY

The Paris Agreement on climate highlights the need for a substantial increase in the levels of finance dedicated to funding low-carbon and climate-resilient projects and technologies. In response to this need, investors, governmental agencies, and financial services providers are working to establish a stable green bonds market that can facilitate a significant portion of the estimated $93 trillion in investments that is needed to achieve a 2° pathway. As indicated by the resolution of the U.S. Conference of Mayors, cities are poised to take a leading role in the transition to a low-carbon economy by committing to the development of environmentally friendly projects and to the promotion of those projects in the green bonds market. The green bond market is growing and it appears that there is room for the SEC to prescribe guidelines for the drafting of green bond disclosure documents. Whether it is the SEC or market actors who eventually come to establish the market standards, it is likely that such standards will build on the groundwork laid by the International Capital Market Association and Climate Bond Initiative. More specifically, LG's intending to issue green bonds would do well by looking to the GBP and the technical standards set out by the Climate Bond Initiative as establishing what sorts of information might be considered material to their green bond offering documents.