MEMORANDUM

To: [redacted]

CC: Alisa Petersen, Rocky Mountain Institute
Lacey Shaver, World Resources Institute

From: Amy Turner, Senior Fellow, Cities Climate Law Initiative, Sabin Center for Climate Change Law at Columbia Law School

Date: March 30, 2020

Re: Legal Research Regarding the Authority of the City of Columbus to Enter Into a Virtual Power Purchase Agreement ("vPPA")

You have asked me to provide my independent views, based on academic legal research, relating to the ability of U.S. municipalities such as Columbus to enter into virtual power purchase agreements ("vPPAs"). This memorandum summarizes our current knowledge about virtual power purchase agreements and highlights key considerations for Columbus and other municipalities in determining whether or not to pursue a vPPA to scale up renewable energy in the municipality. As we discussed, this memorandum shares independent, academic legal research, which will eventually inform an academic paper and other work for the Cities Climate Law Initiative. Neither the Sabin Center nor I personally are in an attorney-client relationship with the City of Columbus, and nothing in this memorandum may be taken to constitute legal advice.

A. What is a vPPA?; Comparison to Physical Power Purchase Agreements

A vPPA (sometimes called a "financial power purchase agreement") is a purely financial transaction that allows a purchaser to obtain the environmental attributes inherent to renewable electricity, usually commodified as renewable energy credits (RECs), without taking delivery of the underlying energy. Under the terms of a vPPA, a renewable electricity producer and a purchaser agree to a fixed price per unit of energy. If the actual price at which the electricity producer is able to sell the power into its local market is lower than the agreed price, the purchaser pays the producer the difference. If the actual price is higher than the agreed price, the producer pays the purchaser the difference. Such a contract is referred to as a "contract for differences."[1] The purchaser must still procure electricity in its local market.

Many large companies and other entities use vPPAs as a means of procuring renewable power for their operations; in some cases, these companies set 100 percent renewable energy targets

[1] Rachit Kansal, *Introduction to the Virtual Power Purchase Agreement*, Rocky Mountain Institute (Nov. 2018), *available at* https://rmi.org/wp-content/uploads/2018/12/rmi-brc-intro-vppa.pdf.

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that cannot be met without contracting arrangements such as vPPAs. Moreover, vPPAs have particular benefits as compared to physical power purchase agreements ("PPAs"). First they do not require the purchaser to take delivery of the energy, which would require a FERC-licensed power marketer to facilitate such delivery.[2] (This could be outsourced to a third-party licensed power marketer.) Second, a vPPA allows the purchaser to buy renewable power from distant markets, which is helpful where sufficient renewable energy capacity is not available in the local market or where local renewable generation is not able to provide additionality.[3] Third, in markets that do not allow for retail choice, power purchasers in the market are not able to choose among generation sources. A vPPA allows the purchaser to procure its actual power from the local market while acquiring the RECs associated with renewable power from elsewhere.

VPPAs represent a promising way in which U.S. municipalities might fulfill their commitments to procure renewable power. However, while vPPAs have become common among corporate power purchasers, we are not aware of any U.S. municipality entering into a vPPA to date. Because these contracts are common in the private sectors, corporate purchasers have developed best practices for complying with the legal and accounting requirements relating to derivatives (vPPAs are, as described below, likely classified as derivatives). These questions are less well-considered as they apply to municipalities. The remainder of this memorandum seeks to fill this gap in knowledge by distilling some of the legal questions that are raised by vPPAs as compared to physical PPAs and other types of contracts. It will highlight some of the key considerations that our independent analysis identifies for Columbus and other municipalities to consider in determining whether to enter a vPPA.

B. Legal Considerations Relating to Derivatives and Restrictions on Investments

1. *Dodd-Frank and Derivatives Accounting*

In considering a vPPA, Columbus will first need to assess its authority to enter into derivative financial transactions and its ability to comply with derivatives requirements. A derivative "includes any transaction that is a contract, agreement, swap, warrant, note, or option that is based, in whole or in part, on the value of… one or more commodities, securities, currencies, interest or other rates, indices, or other assets."[4] In essence, it is an investment that is valued by reference to an underlying asset or other instrument, not by a direct investment in such asset or

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[2] 18 C.F.R. § 35, Subpart H.

[3] Additionality refers to a PPA or vPPA having "the direct effect of adding new renewable energy generation to the grid; *i.e., without the organization's involvement (via the PPA) the clean energy project would not have happened.*" Urban Grid Soar, *Achieving Sustainability Goals Through Additionality* (Mar. 6, 2019) (italics in original), available at https://www.urbangridsolar.com/achieving-sustainability-goals-through-additionality/. While municipalities set their own goals with respect to renewable energy generation, and therefore with respect to additionality, many see bringing on new renewable generation that would not be online otherwise as key to demonstrating leadership on climate. Unbundled RECs generally cannot be used to demonstrate additionality because they come from a variety of sources and because there is an oversupply in the market. *Id.* VPPAs often are able to demonstrate additionality, though this may not be the case if the project would go online without the vPPA in effect.

[4] 12 U.S.C. § 84(b)(3).

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instrument. Because a vPPA is valued by reference to electricity prices in the seller's market and there is no underlying physical delivery of the electricity, a vPPA is considered a fixed-for-floating swap, a type of derivative regulated by the Commodity Futures Trading Commission ("CFTC").

This section reflects the current understanding with respect to *private* (corporate) purchasers under vPPA contracts. Additional consultation with a financial professional or attorney expert in municipal or public entity accounting considerations will be necessary to fully assess the potential for Columbus to enter into a vPPA. In particular, private corporations often follow Financial Accounting Standards Board ("FASB") accounting standards, and much of the below analysis relates to entities that use FASB. In contrast, municipalities and other public entities generally follow Governmental Accounting Standards Board ("GASB") accounting standards. Therefore, it would be prudent for any municipality to seek guidance from a GASB professional on any differences in Dodd-Frank or derivatives accounting requirements for municipalities as compared to the analysis for private corporations below.

a. *Dodd-Frank*

The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank")[5] was passed in 2010 in response to the global economic recession, with the stated goal of "improving accountability and transparency in the financial system" As such, it aimed to rein in the financial risks inherent to certain types of financial transactions, including "swaps." A swap is defined under the U.S. Commodity Exchange Act[6] to include, among other things, "any agreement, contract, or transaction… that provides for any purchase, sale, payment, or delivery (other than a dividend on an equity security) that is dependent on the occurrence, nonoccurrence, or the extent of the occurrence of an event or contingency associated with a potential financial, economic, or commercial consequence."[7] VPPAs are considered to be swaps because the "primary means of settlement of the parties' obligations is [not] through the physical delivery of the underlying commodity,"[8] meaning there is no delivery of the renewable energy.

Dodd-Frank sets five main requirements for parties entering into swaps: (1) clearing[9] (the process by which a registered "clearing organization" helps facilitate the settlement of the swap and the transfer of risks and obligations under the swap);[10] (2) margin[11] (essentially collateral or a

[5] 111th Congress Public Law 203.
[6] 7 U.S.C. § 1 et.
[7] 7 U.S.C. § 1a(47).
[8] Steven Mickelsen, *Dodd-Frank Compliance for Corporate VPPA Buyers*, Futures & Derivatives Law Report, Thomson Reuters (Apr. 2016), *available at* https://3degreesinc.com/wp-content/uploads/2016/05/GLFDLR4_Article-1.pdf.
[9] 17 C.F.R. § 50.2.
[10] See the online CFTC *Futures Glossary* for more. Last accessed Mar. 23, 2020, *available at* https://cftc.gov/ConsumerProtection/EducationCenter/CFTCGlossary/index.htm.
[11] 17 C.F.R. § 23.150(b).

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performance bond)[12]; (3) recordkeeping;[13] (4) reporting;[14] and (5) registration.[15] Of these requirements, the parties to vPPAs are generally exempt from the clearing, margin and registration requirements. With respect to clearing requirements, vPPAs "are not included on the list of swaps which are required to be cleared."[16] A 2016 CFTC rule exempts non-financial entities "using the swap to hedge commercial risk" from requirements to post margin.[17] And registration requirements are limited to holders of "substantial positions" of swap exposure, which "are [currently] measured in the billions of dollars," [18] likely exempting any swap exposure the City of Columbus or another municipality would take on under a possible vPPA.

These exemptions leave the reporting and recordkeeping requirements. While both parties to a swap are responsible for complying with the reporting obligations, the parties to a vPPA may and often do contract for the seller to take responsibility for this requirement.[19] As the first reporting must take place "as soon as technologically practicable after execution," practitioners recommend preparing the required Dodd-Frank forms so they are ready at the time of vPPA execution.[20] A vPPA purchaser, including a municipality such as Columbus, will need to comply with recordkeeping requirements, which are extensive and require that records be maintained for as long as five to fifteen years following the end of the swap arrangement (i.e., the termination or expiration of the vPPA).[21] Practitioners generally recommend retaining all physical and electronic records associated with the vPPA transaction indefinitely.[22]

b. *Derivatives Accounting*

In addition to triggering requirements under Dodd-Frank, vPPAs *may* also trigger requirements to use derivatives accounting (publicly available literature on this point refers to requirements under FASB accounting). Derivatives accounting is typically seen as burdensome and municipalities may not wish to enter into a transaction that requires a form of accounting different than what they usually use. GASB accounting rules may also have specific requirements relating to derivatives and a financial professional expert in GASB accounting should be consulted for guidance on any such requirements. Per the energy advisory firm Opportune LLP, a vPPA "may or may not meet the definition of a derivative depending on whether the agreement includes volumetric guarantees or default provisions that indicate a minimum volume. A VPPA will not

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[12] CFTC *Futures Glossary*, supra note 9.
[13] 17 C.F.R. § 45.2.
[14] 17 C.F.R. § 45.
[15] 7 U.S.C. § 1a(33)(A)(i).
[16] Mickelsen, supra note 8.
[17] 17 C.F.R. § 23.150(b) and 7 U.S.C. § 2(h)(7)(A). Steven Mickelsen, 3Degrees general counsel, notes that "[e]ven without a regulatory obligation to do so, due to the credit risk associated with long-term contracts, VPPA counterparties may elect to request collateral from their counterparties to guarantee their respective obligations." See Mickelsen, supra note 8.
[18] Mickelsen, supra note 8.
[19] *Id*.
[20] *Id*.
[21] 17 C.F.R. § 45.2.
[22] Mickelsen, supra note 8.

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qualify for the normal purchases normal sales (NPNS) scope exception[23] as these contracts do not result in physical delivery."[24] In particular, certain provisions in vPPAs can trigger derivatives accounting requirements, including "the creation of a minimum, guaranteed, or 'notional' amount of production (e.g., a certain number of MWhs per year) from the renewable energy project."[25]

While a GASB accounting expert should be consulted for more specific guidance on derivatives accounting, practitioners note that:

> The default accounting for a derivative is to record the fair value of the derivative on the balance sheet at each reporting date. Changes in fair value of the derivative are recognized in earnings as the changes occur… Determining the fair value of these contracts is challenging, and the change in fair value is a significant source of earnings volatility. Many stakeholders require the election of hedge accounting for offtake agreements that meet the definition of a derivative and do not qualify for the NPNS scope exception in an effort to dampen or remove the earnings volatility caused by periodic changes in fair value.[26]

It may be the case that "there is now enough precedent in the industry [for corporate vPPA purchasers] that the big four accounting firms now routinely opine on these tricky accounting issues,"[27] but these accounting questions do not yet appear to be settled for public entity purchasers, at least in the publicly available literature. Therefore, as indicated throughout this memorandum, the guidance of a GASB accountant would be instructive here.

As noted above, this analysis of the Dodd-Frank and derivatives accounting requirements is generally accepted by practitioners as the appropriate one for *private* (corporate) vPPA purchasers. I am not aware of any U.S. municipalities that have entered into vPPAs. Therefore, as a next step (and as a complement to this independent legal analysis), I would recommend speaking with a financial professional expert in GASB accounting. The differences in requirements for municipalities under GASB accounting and for private corporations under FASB accounting may be instructive in determining whether Columbus or another city could, or would want to, enter into a vPPA.

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[23] This is an exception to FASB's derivatives and hedging accounting standards. More information is available here: https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176166264424&acceptedDisclaimer=true.
[24] Shane Randolph and Matt Smith, *Derivative and Dodd-Frank Considerations for Wind Farm Owners*, Opportune LLP, JDSupra (Jan. 29, 2019), *available at* https://www.jdsupra.com/legalnews/derivative-dodd-frank-considerations-18900/.
[25] Rob Collier, *4 Questions to Ask Before Choosing a Physical or Virtual Power Purchase Agreement*, LevelTen Energy, *available at* https://leveltenenergy.com/blog/energy-procurement/physical-power-purchase-agreement-or-virtual-ppa/. This blog post further recommends that "buyers should ask for a guaranteed percentage of time the project is available, which avoids derivative accounting because it cannot be translated to a MWh guarantee." A qualified accountant should be consulted on this point.
[26] Randolph and Smith, supra note 24.
[27] Collier, supra note 25.

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2. *State Law Restrictions on Investments*

In addition to Dodd-Frank and accounting requirements that could be triggered by entering into a vPPA, Ohio state law and local law impose specific limitations on the investments Columbus can make with its funds. In particular, Chapter 325 of the Columbus Code of Ordinances specifies the following "permissible investments" for "moneys in the treasury of the city":

(A) "Bonds, notes, or other obligations of the United States government or its agencies for which the faith of the United States is pledged for the payment of principal and interest thereon…
(B) "Bonds, notes, debentures, or other obligations issued by [certain listed] federal government-sponsored enterprises…;
(C) "The Ohio State Treasurer's Asset Reserve Funds pursuant to Ohio R.C. 135.45;
(D) "Bonds or other obligations of the city of Columbus, Ohio;
(E) "Obligations of the state of Ohio or any municipal corporation, village, county, township or other political subdivision of the state of Ohio, as to which there is no default of principal or interest and which have been approved as to their validity by nationally recognized bond counsel;
(F) Re-purchase agreements which are collateralized with legally authorized securities as defined in Section 325.010 of Columbus City Codes and held in third-party safekeeping designated by the city treasurer and in the name of the city of Columbus; and
(G) Others as provided for in Ohio R.C. 135.14 for interim deposits."

Ohio R.C. 135.14 contains a similarly enumerated, though not identical, list of investments eligible for interim funds. Notably, the section specifies that:

> Nothing in the classifications of eligible obligations set forth in [this section] shall be construed to authorize any investment in a derivative, and no treasurer or governing board shall invest in a derivative. For purposes of this division, "derivative" means a financial instrument or contract or obligation whose value or return is based upon or linked to another asset or index, or both, separate from the financial instrument, contract, or obligation itself. Any security, obligation, trust account, or other instrument that is created from an issue of the United States treasury or is created from an obligation of a federal agency or instrumentality or is created from both is considered a derivative instrument.

Ch. 325 of the Columbus Code of Ordinances and Ohio R.C. 135.14 does not necessarily foreclose the possibility of Columbus' entering into a vPPA. Rather, it indicates that if the vPPA is viewed as an investment, it may receive scrutiny that it does not fall into the enumerated categories of "permissible investments." There may be ways to structure a vPPA in ways that (a) limit risk and (b) appear more like a transaction to buy and sell the environmental attributes associated with renewable power (i.e, RECs) than an investment in securities or hedging transaction. The City's attorneys and accountants, along with other experts as necessary, should consider carefully how

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to structure any vPPA or similar arrangement. An attorney expert in structuring both physical PPAs and vPPAs would likely be able to provide guidance on agreement structure.

C. Conclusion

Further study of the accounting and legal issues relating to vPPAs is merited, and a vPPA may be a viable option for the City of Columbus if the issues raised herein can be addressed through careful structuring of any vPPA agreement and through appropriate accounting. It is important to note that I am not expert in structuring vPPAs, physical PPAs or derivative transactions. An attorney with significant experience in these matters should be consulted to advise on any vPPA that Columbus enters into. The renewable power purchasing market is developing rapidly, and there may be novel ways to structure a vPPA or similar arrangements that limits energy pricing exposure but that still does not require physical delivery of the energy. If the City of Columbus is interested in pursuing a vPPA, I would recommend conferring not only with legal and accounting experts in this space, but also with market experts (PPA brokers or others) who may be able to advise as to new vPPA developments that could alleviate some of the considerations described in this memorandum.

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