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Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549
email: rule-comments@sec.gov

Re: S7-10-22/RIN 3235-AM87: Securities and Exchange Commission, Proposed Rule, The Enhancement and Standardization of Climate-Related Disclosures for Investors ("Proposed Rule")

Ladies and Gentlemen:

The Proposed Rule gives significant business advantage to companies in parts of the U.S. supplied by low emission power at the expense of companies in parts of the U.S. supplied by high emission power, including by preventing the use of market instruments traditionally used by companies to reduce emissions they cannot otherwise control. This would further divide the U.S. The SEC's Scope 3 scheme explictly pressures every registrant to acquire and disclose emissions information from its suppliers and customers. The SEC suggests companies should stop doing business with companies with high Scope 1 and 2 emissions: "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers ... ."[1] This explicitly instructs registrants to move their operations, and to pressure their suppliers and customers to move their operations, out of states with high GHG emission electricity, such as Wyoming, North Dakota, and West Virginia, and into states with low GHG emissions electricity, such as New York, Oregon, and California. The Proposed Rule excludes and inhibits use of the market instruments that could lower emissions without relocating: RECs allow companies to use renewable electricity without being in a state with low emission power supply, and offsets allow companies to offset emissions that are otherwise not within their power to reduce, yet the Proposed Rule seeks to inhibit use of RECs and offsets.

The SEC proposes to work at cross-purposes to its stated goal of protecting the system from climate change, by directly hobbling the energy and environmental laws and regulations of the U.S. and the states that are directed at protecting the environment. Most U.S. states have laws, typically called renewable portfolio standards, that require a minimum percentage of retail customer electricity be served with renewable resources. Some states also have laws and regulations that limit greenhouse gas emissions. Some states also have power source disclosure

[1] Proposed Rule p. 372.

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laws and regulations that require serving utilities to tell customers the sources and emissions associated with their consumed electricity. These are the laws, and the regulators, protecting the environment.[2] Yet the SEC proposes to countermand key elements of these very programs. For example, the SEC proposes contradictory reporting requirements, and to inhibit compliance use of RECs and offsets in the programs that use these instruments.

The SEC proposes to make several major changes to U.S. securities laws through regulation. Perhaps most consequential is the SEC's new theory that registrant disclosures are not just for the benefit of the SEC or the registrant's investors, but also for the benefit of all investors in all companies: "[W]e understand **investors** often employ diversified strategies, and therefore **do not necessarily consider risk and return of a particular security in isolation but also in terms of the security's effect on the portfolio as a whole**, which requires comparable data across registrants."[3] "... climate-related risks and their financial impact could negatively affect the economy as a whole and create systemic risk for the financial system. SEC-reporting companies and their investors are an essential component of this system."[4] "Separate disclosure of climate-related risks could help to provide investors with information to help them more effectively evaluate their **portfolio risk**."[5] It is a departure from law and existing regulation to require registrants to make disclosures to enable people to evaluate holding securities not issued by the registrant.[6] As a columnist noted: "it is a novel and surprising concession, asking a company to disclose stuff because it is useful to its shareholders *as universal shareholders*, not (just) because it is relevant to the company's own business."[7] The SEC proposes to require registrant reporting not as part of a regulatory system that protects investors from registrants, but to protect the financial system as a whole from climate change. The SEC proposes further specific requirements that are logically consistent with its new theory, but equally beyond its statutory authority, for example requiring registrants to develop and provide CO_2 emissions pricing signals.

The SEC further contemplates "financed emissions" rules. Rules requiring entities to report the emissions of those to whom they lend or invest money incentivize directing loans and investments to those with lower emissions instead of those with higher emissions, even if the borrower can't control those emissions. This would direct municipal bond investment to small cities in New York, which use lower emissions power for infrastructure construction, and away from small cities in West Virginia, which use higher emissions power.[8] The contemplated rules

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[2] See Database of State Incentives for Renewables & Efficiency at https://www.dsireusa.org/.
[3] Proposed Rule, p. 9.
[4] Proposed Rule, pp. 10-11.
[5] Proposed Rule, p. 134.
[6] E.g., of existing laws, Securities Exchange Act §13(a)- "... to insure fair dealing in ***the*** security. ... "
[7] Matt Levine, *The SEC Will Regulate Climate*, Bloomberg (Mar. 22, 2022), avail. at https://www.bloomberg.com/opinion/articles/2022-03-22/the-sec-will-regulate-climate. See also comments in this docket of Davis Polk Wardwell LLP, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf ("We are not aware of a prior mandate to disclose information that is concededly irrelevant to an investment in a particular company's securities on the basis that some investors would like comparable data across all companies in their portfolio."), and American Securities Association, Jun. 13, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131037-300856.pdf.
[8] See comments submitted in this docket by West Virginia House of Delegates, Delegate Riley Keaton, "Efforts like the climate-related disclosure rule, put bluntly, are efforts to starve the economy of communities like mine." Mar. 22, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20120909-273016.pdf.

would require every government borrower, no matter how small, to perform the required climate disclosures, which the SEC acknowledges is expensive. This would increase the cost of debt issuance and maintenance for the U.S. and every U.S. city, housing authority, and road improvement district. This in turn would increase the taxes needed to pay these increased costs. It also effectively amends existing regulations without the notice required under the Administrative Procedure Act.

The Proposed Rule would achieve the opposite of its stated intent. It would dramatically neuter and curtail voluntary corporate climate commitments and strip corporate climate reporting of meaningful information about climate risks. The SEC states that it is currently the law that ESG reporting[9] is subject to securities laws liability.[10] This alone chills registrant ESG reporting and climate commitments.[11] But the SEC proposes to combine this with its new theory that liability for noncompliance is not just to investors, but to all participants in the U.S. financial system. The SEC also proposes to move ESG reporting away from where it generally currently resides, with individuals at registrants specializing in environmental reporting, to accountants and lawyers. Even more counterproductive for meaningful ESG reporting, the SEC very specifically prescribes how registrants should develop climate-related disclosures. All this will ultimately lead to standardized, risk-averse, and vague, rather than bold, quantitative, or useful, disclosures. The result will discourage climate and ESG commitments, and strip ESG reporting of useful information to turn it into a standardized pap. Four major accounting firms means there will be four brands of uninformative, risk-averse climate disclosure texts and numbers.

I hope the following responses to a handful of the SEC's 753 discrete questions and dozens of requests for further comments will be helpful.

I. Responses to Requests for Comments

> Q 7, 1st q: "Should we permit a registrant to provide certain of the proposed climate-related disclosures in Commission filings other than the annual report or registration statement?"

The SEC says in footnote 49 of the Proposed Rule:

> We note that the liability provisions of Section 10(b) and Rule 10b-5 of the Exchange Act can apply to statements made in filings with the SEC or elsewhere, such as in sustainability reports or on company websites. See, e.g., SEC v. Stinson, No. 10-3130, 2011 U.S. Dist. LEXIS 65723, 2011 WL 2462038, at 12 (E.D. Pa. June 20, 2011) (finding defendants liable under Section 10(b) when they communicated material misstatements and omissions in direct solicitations via e-mail, a webinar, and various web sites). As such, registrants should scrutinize and ensure the accuracy of such statements whether or not filed with the Commission. ...[12]

[9] "The term "ESG" refers to environmental, social, and governance matters, of which climate-related disclosures is a part." Proposed Rule, p. 24 fn.54.
[10] Proposed Rule, p. 23 fn. 49.
[11] See, e.g. comments submitted in this docket by the Governor of Utah, p. 3, Apr. 19, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20127656-288869.pdf.
[12] Proposed Rule, p. 23, fn. 49.

The SEC says in footnote 842 of the Proposed Rule:

> By proposing to treat the proposed required climate-related disclosures as "filed," we are therefore subjecting them to potential liability under Exchange Act Section 18, except for disclosures made on Form 6-K. The proposed filed climate-related disclosures would also be subject to potential Section 11 liability if included in or incorporated by reference into a Securities Act registration statement. See Section II.C.4 (discussions within).[13]

In light of footnote 49, the use of the word "permit" in Q7 1st q seems misleading. Footnote 49 says that the SEC already can "find" that ESG reports "are" securities disclosures provided outside of the registrant's annual report. The SEC posits in its 2022 Examination Priorities[14] that it can pursue people and companies for "greenwashing."

Footnote 49 seems to mean that ESG reporting has already changed bragging about being a good corporate citizen into potential securities laws liability Footnote 842[15] seems to mean that the Proposed Rule affirms this. Either way, the SEC will discourage registrant aspirational green goals by turning them into just one more thing to be sued over.

Registrants that are subject to state and federal renewable energy and climate change laws and regulations also would have to worry about their compliance filings becoming (or currently being) a source of securities laws liability. The SEC states that utility registrant state renewable portfolio standard attainments are reportable under the Proposed Rule.[16] Some of the SEC's disclosure requirements are shorter than those under the state and EPA regulations.[17] The states and EPA went through rulemakings to set those deadlines. The SEC, which is not an environmental regulator or acting under any statute under which those deadlines were set, should not overrule the EPA and the states.

The SEC's new theory of whose benefit the registrant disclosures are for - "portfolio" investors who do not invest in the registrant - perhaps means that a registrant's required environmental filings and until-now voluntary ESG disclosures would become a source of securities laws liability to those who never intended to invest in the registrant. Liability risks will metastasize through supply chains as suppliers to registrants begin to understand Scope 3

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[13] Proposed Rule, p. 351, fn. 842.

[14] SEC Division of Examinations, 2022 Examination Priorities, pp. 12-13, avail. at https://www.sec.gov/files/2022-exam-priorities.pdf. See also, SEC, *Risk Alert: The Division of Examinations' Review of ESG Investing* (Apr. 9, 2021), avail. at http://www.sec.gov/files/esg-risk-alert.pdf.

[15] As well as, e.g., Proposed Rule p. 155: "... it can be used to evaluate the progress in meeting net-zero commitments ..."

[16] "An electric utilities company might disclose an increase in the amount of electricity generated from less carbon-intensive sources, such as wind turbines, nuclear, hydroelectric, or solar power to meet current or likely regulatory constraints." Proposed Rule, p. 79.

[17] "... energy companies that emit GHGs above a specific threshold must report their annual scope 1 and 2 emissions to [EPA] within the first three months of the following year. But under the SEC's proposal, many energy companies would have to report their scope 1 and 2 emissions, and potentially scope 3 emissions, within 60 or 75 days of the end of their fiscal year ... ." Keith Goldberg, *Energy Cos. Will Bear Brunt Of SEC's Climate Disclosure Rule*, Law360 (Mar. 23, 2022), avail. at https://www.law360.com/articles/1476380/energy-cos-will-bear-brunt-of-sec-s-climate-disclosure-rule.

reporting risks and fret over their potential liability to registrants who might not even be their direct customers. The result will be more ESG reporting, because it is mandatory, but that ESG reporting will be stripped of useful information in order to avoid liability.

The U.S. already has state and federal laws and enforcement mechanisms against "greenwashing." FTC enforcement actions under its regulations[18] include million dollar fines, injunctions, consent decrees,[19] and reputational damage. Most states have "little FTC Acts"[20] and other laws that provide remedies against "greenwashing," all of which are currently being used.[21] There is no vacuum requiring help from the SEC.[22]

Therefore, the SEC should temper its zeal for enforcement against ESG reporting and the undefined but defined "greenwashing,"[23] wait for voluntary participation in such reporting to develop more robust, objective, and widely adopted standards, trust in the abilities and motives of the state and federal regulators and existing civil remedies against corporate statements about environmental attainment, and not turn ESG reporting, environmental compliance filings, and climate commitments into securities fraud risks. The SEC should rather allocate its limited resources into protecting investors from being defrauded by issuers of the securities in which they invest.[24]

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[18] FTC, *Final Rule, Guides for the Use of Environmental Marketing Claims*, 77 Fed. Reg. 62122 (Oct. 11, 2012) , 16 C.F.R. §260.15; FTC Division of Enforcement Staff Letter dated Feb. 2, 2015, avail. at http://www ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf.

[19] Example enforcement actions are posted by the FTC at http://www.ftc.gov/news-events/media-resources/truth-advertising/green-guides. See, e.g., Linda Goldstein and Randal Shaheen, *The Difficult Art Of Advertising Carbon Reductions*, Law360 (Sept. 23, 2021), avail. at https://www.law360.com/articles/1423089/the-difficult-art-of-advertising-carbon-reductions. The FTC separately has non-preemptive enforcement authority over false or misleading statements in connection with the sale of wholesale crude oil and gasoline. 16 C.F.R. §317; FTC, *Final Rule, Prohibitions on Market Manipulation*, 74 Fed. Reg. 40686 (Aug. 12, 2009).

[20] See Carolyn L. Carter, *Consumer Protection in the States: A 50-State Report on Unfair and Deceptive Acts and Practices Statutes* (Feb. 2009), avail. at http://www nclc.org/images/pdf/udap/report_50_states.pdf. According to all 50 state attorneys general, these laws apply to green claims in the same manner as the FTC regulations. *National Association of Attorneys General: Environmental Marketing Guidelines for Electricity*, avail. at http://www naag.org/issues/pdf/Green_Marketing_guidelines.pdf and https://www.epa.gov/sites/production/files/2018-05/documents/naag_0100.pdf.

[21] E.g., Morgan Conlet, *Tribe Accuses Seattle Of 'Greenwashing' Hydro Dams' Impact*, Law360 (Sept. 20, 2021), avail. at https://www.law360.com/articles/1423234/tribe-accuses-seattle-of-greenwashing-hydro-dams-impact; Nick Dolejsi and Kyle Espinola, *Why Climate Plaintiffs Are Filing Securities, Consumer Suits*, Law360 (Mar. 15, 2022), avail. at https://www.law360.com/articles/1472903/print?section=california; Joyce Hanson, *Red Lobster Looks To Drown Customer's Greenwashing Suit*, Law360 (Feb. 9, 2022), avail. at https://www.law360.com/articles/1462944/red-lobster-looks-to-drown-customer-s-greenwashing-suit; Laura Brett, *Ad Rulings Offer Tips For Cos. To Avoid 'Greenwashing'*, Law360 (Nov. 29, 2021), avail. at https://www.law360.com/articles/1443218/ad-rulings-offer-tips-for-cos-to-avoid-greenwashing-.

[22] See comments of the Secretary of State of Missouri submitted in this docket, p. 1, Jun. 8, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130705-299575.pdf.

[23] Proposed Rule, p.351 fn. 844: "A review of several academic papers reveal that there is no universally accepted definition of 'greenwashing.' Though the term 'greenwashing' is often used in industry discussions regarding ESG, the Commission does not define 'greenwashing' in this proposal, rules, or form amendments. Greenwashing is typically described as the set of activities conducted by firms or funds to falsely convey to investors that their investment products or practices are aligned with environmental or other ESG principles."

[24] E.g., S. Hrg. 111-388, Hearing, *Oversight of the Securities and Exchange Commission's Failure to Identify the Bernard L. Madoff Ponzi Scheme and How to Improve SEC Performance* (Sept. 9, 2010), avail. at

Please also see the answer to question 132 below.

> Q 8, 5th q: "Should we define long-term as 10-20 years, 20-30 years, or 30-50 years?"

No. Additionally, requirements of "long-term" disclosures of "10-20 years, 20-30 years, or 30-50 years" should be consistent with what, if any, other long-term business plans registrants are currently required to disclose, which is not likely to include speculations on entering or exiting a business line in 50 years.[25]

> Q 17, 3rd q: "Are there any upstream or downstream activities included in the proposed definition of value chain that we should exclude or revise?"

Yes, exclude Scope 3 emissions for the reasons set forth in the answers to questions 98, 105 and 115. "Financed emissions" should be excluded for the reasons set forth in the response to question 132. Emissions attributable to employee commuting and other activities of employees should be excluded for the reasons set forth in the answers to questions 100 and 182 below.

> Q 24, 1st q: "If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the role that the offsets or RECs play in its overall strategy to reduce its net carbon emissions, as proposed?"

No. The SEC should not require any disclosures concerning carbon offsets or RECs that are not material to the registrant.[26] Offset and REC usages is extremely unlikely to be material to any registrant that is not primarily a REC or offset merchant.

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https://www.gpo.gov/fdsys/pkg/CHRG-111shrg55785/pdf/CHRG-111shrg55785.pdf; SEC, Office of Investigations, *Investigation of Failure of the SEC to Uncover Bernard Madoff's Ponzi Scheme*, Report No. OIG-509 (Aug. 31, 2009), avail. at https://www.sec.gov/files/oig-509.pdf; SEC, Office of Inspector General, Case OIG-533, *Investigation of the Failure of the SEC's Los Angeles Regional Office to Uncover Fraud in Westridge Capital Management Notwithstanding Investment Adviser Examination Conducted in 2005 and Inappropriate Conduct on the Part of Senior Los Angeles Official* (Oct. 26, 2010), avail. at https://www.sec.gov/about/offices/oig/reports/investigations/2010/oig-533.pdf; SEC, Office of Inspector General, Report of Investigation, Case No. OIG-526, *Investigation of the SEC's Response to Concerns Regarding Robert Allen Stanford's Alleged Ponzi Scheme* (Mar. 31, 2010), avail. at https://www.sec.gov/about/offices/oig/reports/investigations/2010/oig-526.pdf; US Postal Service, *Securities and Exchange Commission Office of Inspector General- Allegations of Misconduct, Report of Investigation*, case 12UIHQ0063GC37SI (2012). See also Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States p. xviii (Jan. 2011), avail. at https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf ("We conclude widespread failures in financial regulation and supervision proved devastating to the stability of the nation's financial markets. The sentries were not at their posts ... we do not accept the view that regulators lacked the power to protect the financial system. They had ample power in many arenas and they chose not to use it. To give just three examples: the Securities and Exchange Commission could have required more capital and halted risky practices at the big investment banks. It did not.").

[25] See also comments in this docket of Davis Polk Wardwell LLP, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

[26] See comments in this docket of Davis Polk Wardwell LLP, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

According to the SEC, "The concept of materiality has been described as 'the cornerstone' of the disclosure system established by the federal securities laws."[27] But here, the SEC is proposing to implement anti-REC and anti-offset rules even if the REC and offset purchases aren't material to the registrant and irrespective of whether the RECs or offsets are being used under or for compliance with a state or federal program. In proposing to deviate from its own "cornerstone" in order to administratively burden immaterial use of RECs and offsets, the SEC betrays a strong and unjustified prejudice against RECs and offsets. This prejudice likely comes from being inadequately informed. That the SEC is inadequately informed about RECs and offsets comes through very clearly in the Proposed Rule. For example, the SEC says:

> "Understanding the role that carbon offsets or RECs play in a registrant's climate-related business strategy can help investors gain useful information about the registrant's strategy, including the potential risks and financial impacts. A registrant that relies on carbon offsets or RECs to meet its goals might incur lower expenses in the short term but could expect to continue to incur the expense of purchasing offsets or RECs over the long term. It also could bear the risk of increased costs of offsets or RECs if increased demand for offsets or RECs creates scarcity and higher costs to acquire them over time. Alternatively, the value of an offset may decrease substantially and suddenly if, for example, the offset represents protected forest land that burns in a wildfire and no longer represents a reduction in GHG emissions. In that case, the registrant may need to write off the offset and purchase a replacement. In other cases, increased demand for, or scarcity of, offsets and RECs may benefit a registrant that produces or generates offsets or RECs to the extent their prices increase. Accordingly, under the proposed rules, a registrant that purchases offsets or RECs to meet its goals as it makes the transition to lower carbon products would need to reflect this additional set of short and long-term costs and risks in its Item 1502 disclosure, including the risk that the availability or value of offsets or RECs might be curtailed by regulation or changes in the market."[28]

The first sentence is only accurate if the use of RECs or offsets is material to the registrant, which it is very unlikely to be. With respect to the second sentence, the evidence developed by the federal government is compelling that renewable energy contracts decline in cost over time.[29] Additionally, if in the "long term," or short term, RECs or offsets become too expensive as a mitigation strategy, the registrant can simply change strategies, as it can do with

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[27] SEC, Concept Release, *Business and Financial Disclosure Required by Regulation S-K*, 81 Fed. Reg. 23916 at 23924 (Apr. 22, 2016). This is also directly cited in the comments of nineteen U.S. Senators submitted in this docket, at p. 1, Apr. 5, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131192-301362.pdf. See especially the excellent analysis by Davis Polk Wardwell LLP submitted in this docket, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf. Cf. Proposed Rule p. 69 fn. 209.

[28] Proposed Rule, pp. 83-84.

[29] E.g., U.S. Dept. of Energy, National Renewable Energy Laboratories (NREL), *Declining Renewable Costs Drive Focus on Energy Storage* (Jan. 2, 2020), avail. at ; NREL, *Documenting a Decade of Cost Declines for PV Systems* (Feb. 21, 2021), avail. at https://www.nrel.gov/news/program/2021/documenting-a-decade-of-cost-declines-for-pv-systems html; NREL, *New Reports From NREL Document Continuing PV and PV-Plus-Storage Cost Declines* (Nov. 12, 2021), avail. at https://www nrel.gov/news/program/2021/new-reports-from-nrel-document-continuing-pv-and-pv-plus-storage-cost-declines html.

any other supply strategy for any aspect of its business.[30] The fourth and fifth sentences are incorrect, as offsets have buffer pools that are drawn upon in the case of wildfire.[31] The sixth sentence is meaningless given the inaccuracies of its premises in the preceding sentences. The SEC relied on inaccurate information, and this sadly hobbles all aspects of the Proposed Rule as they relate to RECs and offsets.

With its perhaps inadvertent attempt to defeat or control existing and future state and federal environmental and climate change mitigation, the SEC effectively increases its jurisdiction, adding itself to the Federal Energy Regulatory Commission ("FERC"), the Environmental Protection Agency ("EPA"), the Department of Agriculture ("USDA"), and the states as a regulator of renewable energy supply and climate change mitigation, to the EPA, FERC, USDA, the Federal Trade Commission ("FTC"), and the states as a regulator of environmental commodities, to the FTC and the states as a regulator of environmental claims, to the Commodity Futures Trading Commission ("CFTC") and the states as a regulator of transactions in environmental commodities, and to the EPA and the states as a regulator of retail electric service customer power source disclosure. There has been no legislation so increasing the SEC's jurisdiction.

California's AB32 program, and Washington's cap and invest program, both allow regulated entities to use either allowances or offsets. The SEC is proposing to denigrate use of offsets. Many states have rules concerning the role of RECs in power source (i.e., customer Scope 2) disclosures. The utilities subject to those rules report as required, which reports will differ from what the SEC proposes. Different reporting would result in confusion and delegitimization of both sets of reports. The SEC's misinformation, and proposed mandatory reporting of immaterial information concerning RECs, would inhibit the lawful purposes of the federal and state programs that allow or otherwise advance the use of RECs and offsets.

The SEC's proposed safe harbor for non-material non-disclosures of Scope 3 should be expanded to disclosures concerning disclosures of RECs and offsets that are not material to the registrant, especially if the RECs and offsets are offsetting Scope 3 emissions. If Scope 3 emission disclosures are safe harbored, then strategies to mitigate Scope 3 emissions should also be safe harbored. Registrants shouldn't be required to provide "long-term", i.e. in the SEC's own words in Q8, "10-20 years, 20-30 years, or 30-50 years" disclosures about RECs and offsets if they are not material to its business, just like a business that uses computers wouldn't be expected to predict the price, or even availability, of computers or silicon chips in 50 years. A compelled registrant statement concerning the availability or prices of RECs or offsets in 50 years, or even in three years, would not provide useful information about the registrant's securities.

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[30] See also Proposed Rule p. 359: "The required disclosure around the role that carbon offsets or RECs play in the registrant's climate-related business strategy could help investors better understand that strategy, including how resilient it is to changes in costs or the availability or value of offsets or RECs over the short, medium and long-term." As noted, the SEC's statement is meaningless, because the registrant can simply change a bad strategy, and, further, it is not appropriate to require registrants to provide information about non-material purchases so that investors who do not even own stock in the registrant can evaluate what it means for their portfolios.

[31] Climate Trust, *California ARB buffer mitigates current wildfire risk to forest carbon projects*, avail. at https://climatetrust.org/california-arb-buffer-mitigates-current-wildfire-risk-to-forest-carbon-projects/.

The SEC's anti-offset agenda is at cross-purposes to existing programs and legislation. For example, the Food, Conservation, and Energy Act of 2008 directed the USDA to facilitate the participation of American farmers, ranchers, and forest landowners in environmental markets encouraging environmental commodities.[32] Additionally, the Growing Climate Solutions Act of 2021, which passed the Senate in a thunderously bipartisan 92-8 vote,[33] encourages farmers and ranchers to participate in and supply carbon offset markets.[34] Congress passed this law after hearing the same opposition to offsets[35] that now seems to persuade the SEC. Comments in a related SEC docket[36] explain how a related SEC ESG proposed rule would be deleterious to domestic food security, increasing the cost of food, and jeopardizing the solvency of the farmers who create it. A further example of negative impact on farmers is the SEC's proposal here to directly target a USDA program created by Congress to compensate farmers, through offsets, for their contributions to combatting climate change by their agricultural practices. The SEC should not substitute its own judgment on offset use for Congress's. As noted by one commenter in this docket, "the Commission should distinguish comments by activist interest groups from comments that address the interests of investors and other market participants."[37]

> Q 24, 2nd q: "Should the proposed definitions of carbon offsets and RECs be clarified or expanded in any way?"
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> Proposed 229.1500(a) definition of Carbon offset is "Carbon offsets represents an emissions reduction or removal of greenhouse gases ("GHG") in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions."
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> Proposed 229.1500(n) definition of REC is "Renewable energy credit or certificate ("REC") means a credit or certificate representing each megawatt-hour (1 MWh or 1,000 kilowatt-hours) of renewable electricity generated and delivered to a power grid."

No, the SEC should not seek to define offsets or RECs.

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[32] USDA, *About the Office of Environmental Markets*, avail. at https://www.usda.gov/oce/energy-and-environment/markets/about.

[33] Politico, *In rare bipartisan move, Senate approves bill to help farmers profit on climate action* (Jun. 24, 2021), avail. at https://www.politico.com/news/2021/06/24/senate-farmers-carbon-agriculture-496029.

[34] See Prof. David Aiken, *The Growing Climate Solutions Act of 2021* (Aug. 11, 2011), avail. at https://agecon.unl.edu/cornhusker-economics/2021/8-11%20DA.pdf; Purdue University, Agricultural Economics, *Understanding the Growing Climate Solutions Act* (Feb. 2, 2022), avail. at https://ag.purdue.edu/commercialag/home/paer-article/understanding-the-growing-climate-solutions-act/; National Agriculture Law Center, *Senate Advances Carbon Market Bill* (Apr. 22, 2021) avail. at https://nationalaglawcenter.org/senate-advances-carbon-market-bill/.

[35] E.g., Friends of the Earth, Greenpeace USA, The Corner House, et al., *Oppose Carbon Offset Scams Like the Growing Climate Solutions Act* (Apr. 14, 2021), avail. at https://www foodandwaterwatch.org/wp-content/uploads/2021/04/Oppose-GCSA-2021_Final-2.pdf. In its rulemaking implementing the California Cap and Trade program, the California Air Resources Board rejected as factually inaccurate the objections to offsets made by Friends of the Earth. CARB, California's Cap-and-Trade Program, *Final Statement of Reasons*, pp. 1404-05 (Oct. 2011).

[36] Steven W. Troxler, Commissioner of the North Carolina Department of Agriculture and Consumer Services, Jun. 8, 2022, File No. S7-17-22, avail. at https://www.sec.gov/comments/s7-17-22/s71722-20130569-299456.pdf.

[37] Cleary Gottlieb Steen & Hamilton LLP, p. 4, Jun. 16, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131684-302079.pdf.

With respect to its proposed definition of offsets, the SEC uses words not used in other definitions of offsets, such as "traced," rather than words that are commonly used, such as "monitored, measured, and verified." See, for example, the elaborate definitional apparatus for offsets in the California cap and trade program, not one sentence of which uses the word "traced" in the sense used by the SEC.[38] The SEC's proposed definition is an outlier that would not help the duly tasked federal regulators, the USDA and EPA.

The EPA has stated in rulemakings that, "The legal basis for RECs is established by state statutes and administrative rules."[39] Many state and federal regulators have defined offsets and RECs for their particular compliance programs. Offsets come in many varieties (see Attachment 3). The SEC's proposed definitions are deficient in ways the SEC, which is not an energy or environmental regulator, shows in the Proposed Rule that it does not even understand. Even in the text of its Proposed Rule, in eschewing both RECs and offsets, the SEC refers to an "energy credit" as an "offset emissions" expense.[40] The SEC's proposed REC definition would exclude behind the meter and rooftop solar RECs, even though an applicable federal regulator, the FTC, clearly includes rooftop solar within its meaning of RECs.[41] The SEC seems confused about the role of RECs in Scope 2 reporting.[42] The SEC has set a quantity for RECs of a megawatt-hour, while some programs, like Nevada's Portfolio Energy Credits, measure in KWh.[43] In contrast,

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[38] 17 CCR §§ 95801-96022. The California definition of offset is: ""'ARB Offset Credit" means a tradable compliance instrument issued by ARB that represents a GHG reduction or GHG removal enhancement of one metric ton of CO2e. The GHG reduction or GHG removal enhancement must be real, additional, quantifiable, permanent, verifiable, and enforceable. ARB offset credits may only be issued for GHG emission reductions or GHG removal enhancements that occur during a "Reporting Period," as defined in this section."

[39] EPA, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule*, 80 Fed. Reg. 64662 at 64806 (Oct. 23, 2015).

[40] Proposed Rule §270.14-02(f). Perhaps the SEC meant "REC" rather than "energy credit." RECs and offsets are different instruments.

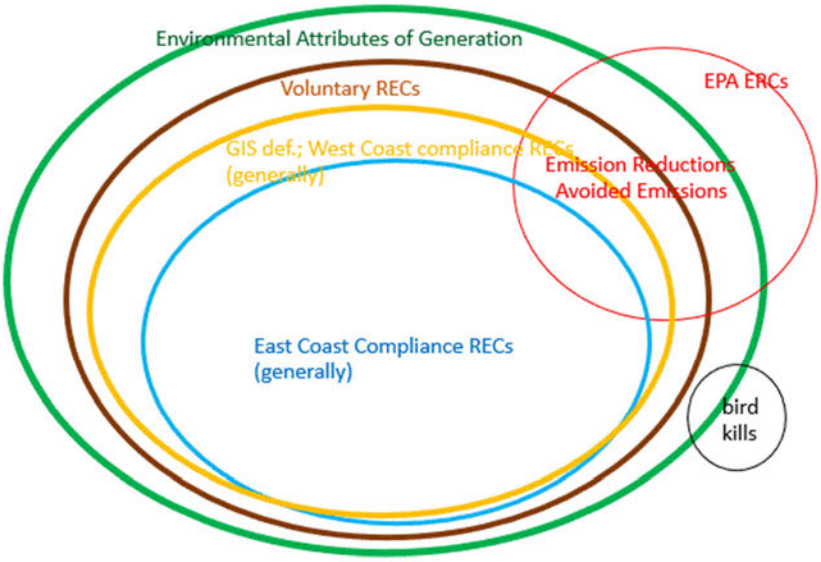
[41] See, e.g., FTC, *Guides for the Use of Environmental Marketing Claims; Final Rule*, 77 Fed. Reg. 62122 at 62131 col. 3: "Example 5: A toy manufacturer places solar panels on the roof of its plant to generate power, and advertises that its plant is '100% solar-powered.' The manufacturer, however, sells renewable energy certificates based on the renewable attributes of all the power it generates. Even if the manufacturer uses the electricity generated by the solar panels, it has, by selling renewable energy certificates, transferred the right to characterize that electricity as renewable. The manufacturer's claim is therefore deceptive."

[42] See, e.g., Proposed Rule, p. 204: "There are two common methods for calculating Scope 2 emissions for purchased electricity: the market-based method and the location-based method. Pursuant to the market-based method, a registrant would calculate its Scope 2 emissions based on emission factors and other data provided by the generator of electricity from which the registrant has contracted to purchase the electricity and which are included in the contractual instruments. Pursuant to the location-based method, a registrant would calculate its Scope 2 emissions based on average energy generation emission factors for grids located in defined geographic locations, including local, subnational, or national boundaries. A registrant could use either of these methods, both methods, a combination, or another method as long as it identifies the method used and its source." It's not clear what the "contractual instruments" by which a utility customer purchases power; this is typically pursuant to what is known as a "tariff." An electric utility delivers energy to customers, it may or may not have "generated"; in most of the country the utility delivering the energy will have purchased it at wholesale in organized electricity markets regulated by FERC and not generated it. Further, Scope 2 emissions are not just grid averages but account for RECs. Some utility customers participate in green customer choice programs.

[43] State of Nevada Public Utilities Commission, *PEC Trading Program*, https://puc.nv.gov/Renewable_Energy/RPS/PEC_Trading_Program/.

the SEC expresses CO_2e as a "unit,"[44] as opposed to metric tonnes, the common measurement.

RECs are not a uniform instrument. A "REC" can mean one or more of a number of different agglomerations of the characteristics of the underlying electricity and its displacement of generation from other sources. The graphic below illustrates that in different contexts, greater or fewer environmental attributes of the generation might be included in the definition of a REC.



The large green circle is the universe of what could be called attributes of renewable generation- from the characteristics of the generation, to avoided emissions, to all, positive or negative, environmental characteristics. State and federal programs typically have their own definitions of RECs. East coast state regulatory definitions of the attributes included are generally narrower than what is included in west coast states.[45] There are many systems that

[44] Proposed 229.1500(d) Carbon dioxide equivalent ("CO2e") means the common unit of measurement to indicate the global warming potential ("GWP") of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide ("CO2").

[45] E.g., from the California Public Utilities Commission in its *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028: "Green Attributes" means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, and its avoided emission of pollutants. Green Attributes include but are not limited to Renewable Energy Credits, as well as: (1) any avoided emission of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere;[1][1 Avoided emissions may or may not have any value for GHG compliance purposes. Although avoided emissions are included in the list of Green Attributes, this inclusion does not create any right to use those avoided emissions to comply with any GHG regulatory program.] (3) the reporting rights to these avoided emissions, such as Green Tag Reporting Rights. Green Tag Reporting Rights are the right of a Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's

track and certificate renewable energy generation; these are called Generation Information Systems (GIS), and their definitions vary. Contracting parties write their own, potentially further expansive definitions of RECs. Under its Clean Power Plan, the EPA provided interpretations of the Clean Air Act and proposed a new environmental commodity that bit some of the attributes out of the RECs. I attach an article[46] that provides further information concerning the definitional, property, and other characteristics of RECs.

State renewable energy and climate programs need and use robust definitions of RECs and offsets in order to obtain high quality compliance. The SEC has proposed weak and incorrect definitions in order to advance the agenda of those disparaging their use. Many commenters that now ask the SEC to disparage use of offsets and RECs in state and federal environmental programs were heard during the applicable state and federal legislative and administrative processes in promulgating the laws and regulations for those programs. A non-energy, non-environmental federal regulator that has not been granted the authority to do so by Congress should not administratively overturn those laws and regulations.[47] Farmers and ranchers are to develop offsets under the Growing Climate Solutions Act of 2021, under regulations to be promulgated by the USDA, not by the SEC.

The current SEC Chairman was previously Chairman of another federal regulator, the CFTC, when it sought to regulate RECs and offsets as swaps under the Dodd-Frank Act,[48] so one

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discretion, and include without limitation those Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on a MWh basis and one Green Tag represents the Green Attributes associated with one (1) MWh of Energy. Green Attributes do not include (i) any energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project and other financial incentives in the form of credits, reductions, or allowances associated with the project that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or "tipping fees" that may be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits. If the Project is a biomass or biogas facility and Seller receives any tradable Green Attributes based on the greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, it shall provide Buyer with sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from the Project. CPUC, *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028 App. B (Aug. 21, 2008).

[46] Jeremy Weinstein, *What Are Renewable Energy Certificates?*, 41 Futures and Derivatives Law Report (Jan. 2021), avail. at http://bit.ly/WeinsteinRECsArticle.

[47] Note Appendix to comments submitted by "Twenty-Two professors of Law and Finance" submitted in this docket, which tabulates how the "Proposal's citations skew heavily toward organizations that are prominent environmentalists, not prominent investors" and that "of the seven investors the Proposal relies upon most, four are non-U.S. entities, organized in Canada, England, France, and Scotland." p. 3, fn. 8, April 25, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20126528-287180.pdf.

[48] The CFTC under Chairman Gensler sought to regulate new environmental markets in credits for renewable energy and Carbon. After a bill that would have established a Carbon market under CFTC jurisdiction (H.R. 2454, the American Clean Energy and Security Act of 2009 (Waxman-Markey) Title III, Subtitles D and E) failed to pass, the CFTC made advances on environmental markets in CFTC, *Notice of Intent ..., To Undertake a Determination Whether the Carbon Financial Instrument Contract Offered for Trading on the Chicago Climate Exchange, Inc., Performs a Significant Price Discovery Function*,, 74 Fed. Reg. 42052 (Aug. 20, 2009); CFTC, *Order Finding That the Carbon Financial Instrument Contract Offered for Trading ... Does Not Perform a Significant Price Discovery*

can understand the SEC's new interest, now that it is under this same individual, in seeking redress for having been thwarted earlier. However, the SEC should not be the keeper of a federal definition of RECs or offsets. It should not try to replace its judgment for the judgment of other state and federal regulators informed by those agencies' 25 years of experience in the area. The SEC should not work at cross-purposes to other programs that are constructively seeking to implement use of renewable energy and mitigate climate change. An SEC definition will sow confusion and weaken state and federal compliance programs unnecessarily, with unnecessary costs to registrants, environmental harm and without any benefit.

If the SEC needs definitions, the only safe approach for the environment that the actually lawfully tasked regulators are seeking to protect would be the following:

Carbon offset means an offset, reduction or removal of greenhouse gases as defined by an applicable law, regulation, program, protocol, regulator or registry.

REC means a certificate, credit or other indicia of ownership relating to renewable energy as defined by an applicable law, regulation, program, regulator or registry.

> Q 24, 3rd q: "Are there specific considerations about the use of carbon offsets or RECs that we should require to be disclosed in a registrant's discussion regarding how climate-related factors have impacted its strategy, business model, and outlook?"

No. Please see answers immediately above.

> Q 26, 1st q: "Should we require registrants to disclose information about an internal carbon price if they maintain one, as proposed?"

No. Please see answer to Q 29.

> Q 29, 1st q: "Should we require all registrants to disclose an internal carbon price and prescribe a methodology for determining that price?" and
> Q 29, 4th q: "Would a different metric better elicit disclosure that would monetize

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Function, 75 Fed. Reg. 23686 (April 28, 2010). The Dodd-Frank Act included many provisions rooted in Waxman-Markey, but did not give the CFTC "swaps" jurisdiction over Carbon or other environmental markets; rather Section 750 of the Dodd-Frank Act merely established a study group, although that did not hinder the CFTC from proposing to regulate environmental commodities, for example by changing the definition of "physical" in the sense of a "physically settling a commodity" to mean corporeal, reasoning that the word "physical" was used to mean something corporeal in a different handicapped persons access regulation. CFTC, *Notice of Proposed Rulemaking, Adaptation of Regulations to Incorporate Swaps,* 76 Fed. Reg. 33066 at 33069 (Jun 7, 2011). These attempts would have brought under CFTC regulation as swaps all intangible property along with RECs and offsets, including intellectual property and hunting licenses. Had it regulated RECs as swaps subject to mandatory clearing with resulting massive collateral posting requirements, as it proposed, the CFTC would have killed off renewable energy in the US. Fortunately, EPA staff and others pressed this point and the CFTC backed off. CFTC & SEC, *Joint Final Rule; Interpretations; Request for Comment on an Interpretation, Further Definition of "Swap," ...*, 77 Fed. Reg. 48208 at 48233-35 (Aug. 13, 2012); CFTC, *Final Rule, Adaptation of Regulations to Incorporate Swaps*, 77 Fed. Reg. 66288 at 66293-94 (Nov. 2, 2012). Likewise, the SEC's zeal in the Proposed Rule to combat "greenwashing," might result in rules that kill off meaningful ESG and climate reporting.

emissions?"

No to both. The SEC has no legal authority to prescribe rules that "monetize emissions" and shouldn't be compelling registrant disclosures to set a price of Carbon for the benefit of the financial system. Registrants are to disclose material information about the registrant for the benefit of investors in the registrant, not material or immaterial information for the benefit of any and all investors in anything and everything.

Further, a registrant's internal calculation of the cost of Carbon to it, especially if developed by spending money, should be proprietary to that registrant, and not a common property to be used by "investors," especially in the SEC's larger senses of investors not just in the registrant but in "portfolios" and "the financial system." Registrants should not be compelled to spend their own money to develop a pricing signal for the benefit those who are not even considering investing in the registrant, just so the system as a whole can "monetize emissions." To the contrary, most state laws treat emission calculation data (as opposed to the data of actual emissions emitted) as highly proprietary and confidential information; even California's public record act protects them as confidential.[49] The federal energy regulator, FERC, has a stated policy concerning Carbon pricing in organized wholesale electricity markets.[50] Offset pricing is complicated and highly variable based on many factors (see Attachment 3). There are privately owned offset price reporting services from which interested parties can purchase all the data they need to "monetize emissions."[51] Coupled with the SEC's new expansions to securities law liability, the Proposed Rule would create liability for registrants that "negligently" price carbon, even to those with no intent to invest in the registrant.

If the federal government wants to create a public pricing signal for the price of Carbon, it can, as California has done, pass a law limiting Carbon emissions with an allowance allocation and auction and cap and trade mechanism. This would lead to prices at which those allowances trade. There is no other commodity that the SEC requires all registrants to publicly price for the benefit of all "investors", irrespective of whether these "investors" are investing in the registrant, and irrespective of whether that commodity is material to the registrant. As noted by a commenter in this docket, the requirement is "gratuitously prescriptive."[52]

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[49] California Air Resource Board (CARB) website guidance on confidentiality of material submitted to CARB references California Public Records Act (Gov't Code §6254.7) and states: "[A]ir pollution emission data are always public records, even if the data comes within the definition of trade secrets. On the other hand, the information used to calculate air pollution emissions may be withheld from the public if the information is a trade secret." https://www.arb.ca.gov/regact/confid htm. Gov't Code § 6254.7(e) says: "Notwithstanding any other provision of law, all air pollution emission data, including those emission data which constitute trade secrets as defined in subdivision (d), are public records. Data used to calculate emission data are not emission data for the purposes of this subdivision and data which constitute trade secrets and which are used to calculate emission data are not public records."

[50] FERC, *Notice of Policy Statement, Carbon Pricing in Organized Wholesale Electricity Markets*, 86 Fed. Reg. 24714 (Apr. 23, 2021).

[51] E.g., the non-profit Ecosystem Marketplace, avail. at https://data.ecosystemmarketplace.com/; California Carbon.info, avail. at https://www.californiacarbon.info/.

[52] Cleary Gottlieb Steen & Hamilton LLP, p. 4 & 13, Jun. 16, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131684-302079.pdf. See also analysis by Davis Polk Wardwell LLP submitted in this docket, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

> Q 30, 6th q: "Should we require a registrant providing scenario analysis disclosure to include the scenarios considered (e.g., an increase of global temperature of no greater than 3 º, 2 º, or 1.5 ºC above pre-industrial levels), the parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant's business strategy under each scenario, as proposed?"

Please see answer to Q43.

> Q 43, 1st q: "... should we require a registrant to disclose ... as proposed: How the registrant determines the relative significance of climate-related risks compared to other risks?"

No. The SEC proposes that "the registrant would be required to disclose, as applicable: How it determines the relative significance of climate-related risks compared to other risks ... ."[53] This seems to be mandating company management to think about climate change, one coming disaster, in preference to all other coming or potential disasters over the long term. The Proposed Rule requires registrants to think about climate change and use their resources to educate themselves and all participants in the financial system about climate change. Registrants should be allowed to continue to determine for themselves which of the many potential long-term change scenarios are most material to the success of the registrant.[54] Mandatory Section 12(g) reporting probably does require registrants to speculate on how future risks from artificial intelligence, collapse of the dollar as a reserve currency, or rising crime could be material to their businesses, but registrants should not be compelled to have their mind made up for them that one particular long-term risk deserves the most resources for speculation.[55]

The SEC remains intellectually honest throughout the Proposed Rule in following its new theory that registrant disclosures are for the benefit of all participants in the financial system. However, registrant disclosures are for the benefit of investors in the registrant,[56] not for the benefit of all participants in the financial system, which participants include the registrant's competitors, whom a registrant should not be compelled to assist.[57]

Understanding the risks from climate change, which include policy, legislation, politics, and climate change itself is incredibly complicated and specialized. See, for example, the long list of risks to be considered in the excerpts from the Perihelion Insurance Report attached as

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[53] Proposed Rule, p. 107, first bullet.
[54] Cf. Proposed Rule p. 69 fn. 211.
[55] See comments submitted in this docket by the West Virginia State Auditor, and the Mississippi Secretary of State at p. 3, Jun. 14, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131306-301475.pdf; Montana Commissioner of Securities and Insurance at p. 2, Jun. 3, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130375-298294.pdf; and State of Iowa Insurance Commissioner at p. 2, Jun. 13, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131107-301160.pdf.
[56] E.g., Securities Exchange Act §13(a)- "... to insure fair dealing in ***the*** security. ... "
[57] See comments in this docket of Davis Polk Wardwell LLP, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

Attachment 2.[58] Companies focus on running their own businesses, and on the risks that they identify as threatening their businesses. The ones that do it well survive. The ones that don't, do not. The ones that do it well should not have to educate their competitors.

> Q 44, 3rd q: "... should we require a registrant to disclose ... as proposed: How it determines to mitigate a high priority risk?"

No. The SEC has prescribed incredibly detailed requirements for registrants, in an area unfamiliar to many registrants, to talk about risks to which most registrants are not exposed beyond the shared existential doom of anthropogenic warming. Registrants will have to rely on external third party advisors. The more prescriptive and in depth the mandated analysis into areas in which the companies are not familiar, the less useful will be the reported information. The SEC will get formulaic answers written to avoid liability rather than to provide useful information.[59]

> Q 60, 1st q: "Would the impact from climate-related events and transition activities yield decision-useful information for investors?"

The SEC says "for investors" rather than "investors in the registrant." Registrants should only be required to provide information material for investors in the registrant.[60]

> Q 69, 1st q: "Should we require a registrant to disclose changes to the cost of capital resulting from the climate-related events?"

No. This is not a risk that can be "disclosed," it is only a risk that can be guessed at. The SEC should not require all registrants to hire economists to explain the effects of climate change on long-term interest rates. There are academic papers available to interested "investors,"[61] the SEC should not require all registrants to write and disclose more.

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[58] Parhelion Underwriting Ltd. and Standard & Poor's, *Can Capital Markets Bridge the Climate Change Financing Gap?* avail. at https://www.environmental-finance.com/assets/files/Parhelion_Climate_Financing_Risk_Mapping_Report_2010.pdf; see also Bob Buhr, *What is Climate Risk? A Field Guide for Investors, Lenders, and Regulators* Imperial College Business School Centre for Climate Finance & Investment (Feb. 2022), avail. at https://www.imperial.ac.uk/business-school/faculty-research/research-centres/centre-climate-finance-investment/research/what-climate-risk-field-guide-investors-lenders-and-regulators/.

[59] "Compliance with the U.S. Securities and Exchange Commission's proposed new rules requiring corporate disclosures of activities and risks associated with climate change will be performative. These rules will fail at their primary purpose: giving investors or stakeholders actionable information. Destined to be audited, analyzed and wordsmithed by teams of accountants and lawyers, the disclosures will likely lack qualitative insights and perspective from company leadership." Nir Kossovsky and Denise Williamee, *SEC's Climate Rules Promote Compliance, Not Real Change*, Law360 (Apr. 27, 2022), avail. at https://steelcityre.com/wp-content/uploads/2022/04/Law360-SECs-Climate-Rules-Promote-Compliance-Not-Real-Change.pdf.

[60] See comments in this docket of Davis Polk Wardwell LLP, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

[61] E.g., Sveriges Riksbank, Emma Bylund and Magnus Jonsson, *How does climate change affect the long-run real interest rate?*, Economic Commentaries, (Nov. 26, 2020), avail. at https://www.riksbank.se/globalassets/media/rapporter/ekonomiska-kommentarer/engelska/2020/how-does-climate-change-affect-the-long-run-real-interest-rate.pdf.

> Q 88, 2nd q: For example, should a "consolidated climate statement" be created in addition to the consolidated balance sheets, statements of comprehensive income, cash flows, and other traditional financial statements?

No. The SEC notes low penetration of standards, uniform or not, for GHG reporting.[62] And the standards are far from uniform.[63] Mandating disclosures before frameworks have fully matured and broadly standardized will push companies not toward the "best" framework, but to the easiest and cheapest[64] that output the lowest GHG. GHG reporting is new. It is not dollars and cents reporting to accounting standards that have been around for five thousand years.[65] Some concepts in Scope 3 reporting are the opposite of traditional accounting; e.g., capital goods have Scope 3 emissions determined for the year of acquisition and are not amortized.[66] The standards for GHG reporting do not have the exactitude, history, foundation, immutability,[67] or, absent continuous emissions monitoring on smokestacks or direct application of stoichiometry for Scope 1, accuracy, to make them "accounting standards."[68] The SEC is building a highly prescriptive superstructure on quicksand.

> Q 98, 1st q: "Should we require a registrant to disclose its Scope 3 emissions for the fiscal year if material, as proposed?"

The SEC's scheme for Scope 3 is highly problematic. Every registrant will have to acquire and disclose information from third parties and make public data and business plans that are proprietary, for the benefit of investors in companies and assets other than the registrant.

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[62] "Among the firms reviewed, 41 firms (51%) provided some form of voluntary sustainability disclosure on their websites. Further, only nine of those 41 firms indicated the reporting standards with which they aligned their reporting, with the majority of the nine companies not following any one set of standards completely. Additionally, six firms followed the GRI, while three firms stated that they follow both the TCFD and SASB." Proposed Rule, p. 328 fn. 776.

[63] See, e.g., analysis on some aspects of Scope 2 reporting under the dozens of available standards in Center for Resource Solutions, *Recognition of Standard Delivery Renewable Energy in Different Programs and Standards* (Mar. 15, 2021), avail. at https://resource-solutions.org/document/03152102/.

[64] E.g., "I do think in a future state there will be a TurboTax for climate reporting for small businesses. Like, that will happen," said a member of the SEC's small business capital formation committee. Law360, *SEC Committee Mulls 'TurboTax-Like' Fix For Climate Reports* (May 6, 2022), avail. at https://www.lw.com/mediaCoverage/SEC-mulls-fix-for-climate-reports.

[65] Richard Mattessich, *Recent insights into Mesopotamian accounting of the 3rd millennium B.C. -- Successor to token accounting*, 25 Accounting Historians Journal (Jun. 1998), avail. at https://core.ac.uk/download/pdf/288025155.pdf; Tim Harford, *How the world's first accountants counted on cuneiform*, BBC World Service, 50 Things That Made the Modern Economy (June 12, 2017), avail. at https://www.bbc.com/news/business-39870485.

[66] and therefore "emissions from capital goods may fluctuate significantly from year to year." Scope 3 Guidance Box 5.4 p. 39.

[67] GWP changes for all GHGs other than CO_2 in each UN climate assessment plan. See, e.g., Greenhouse Gas Protocol, *Global Warming Potential Values*, avail. at https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf; EFTC, *Selecting and Using GWPs for refrigerants* (Sept. 2021), avail. at https://www.fluorocarbons.org/wp-content/uploads/2020/08/2021-10-08-Learn-About_Selecting-and-Using-GWP-values-for-Refrigerants.pdf. GWP is presented by the EPA as ranges, for example the EPA says 28 to 36 for methane and 265 to 295 for nitrous oxide. EPA, *Understanding Global Warming Potentials*, avail. at https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why.

[68] Contra Proposed Rule, p. 118, fn. 316.

Scope 3 emissions are based on other companies' often private Scope 1 and 2 data, and in the Proposed Rule,[69] in the context of getting that data, the SEC suggests companies should stop doing business with companies with high Scope 1 and 2 emissions. The SEC conflates the privacy of data with what the data shows. The SEC suggests "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers ... ."[70] These instructions from the SEC go far beyond the SEC's legal authority. The SEC is also proposing that registrants discriminate against small business customers and vendors who lack the resources to measure and disclose their Scope 3 emissions.[71] Registrants and their customers and suppliers will feel pressure to drive down their Scope 3 emissions by firing employees who have long commutes because they can only afford housing in areas further outlying major metropolitan areas. At the same time, the SEC is proposing restrictions on use of the RECs and offsets that companies use to lower emissions without relocating to areas with lower emission power supply, thus forcing on companies relocation of operations as an emissions reduction solution. All this also is beyond the SEC's statutory authority.[72]

Scope 3 GHG emissions do not disclose the entire risk profile of the "transition" to a low carbon economy.[73] Rare earth mineral sourcing for electrification may have monstrous environmental and security impacts.[74] Scope 3 disclosures will provide an incomplete picture, and yet be so huge, duplicative, shifting (see answer to questions 88, 98, and 105), incomplete, and overlapping as to lose meaning as a metric.

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[69] "Although a registrant may not own or control the operational activities in its value chain that produce Scope 3 emissions, it nevertheless may influence those activities, for example, by working with its suppliers and downstream distributors to take steps to reduce those entities' Scopes 1 and 2 emissions (and thus help reduce the registrant's Scope 3 emissions) and any attendant risks. As such, a registrant may be able to mitigate the challenges of collecting the data required for Scope 3 disclosure." Proposed Rule, p. 169.

[70] Proposed Rule p. 372.

[71] As noted by the National Association of Egg Farmers in their comments in this docket, "If an egg farmer is not able to provide the necessary data and information required by the SEC registrant who now must disclose their Scope 3 emissions, this registrant could be forced to look elsewhere to purchase its raw inputs from an entity that has that information. This search for supply could push small and medium-sized farmers out of business." May 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-291221 htm. Overstock.com noted on p. 3 of its comments filed in this docket, "The Commission must realize that it is not just a matter of additional compliance costs for the public company to bear in providing these disclosures. It is also a matter of unanticipated effects the public company may be powerless to prevent, as in the instance of being cut off from vital suppliers. The Commission must not presume that publicly traded companies simply have the money or the leverage to obtain disclosure information and cooperation when suppliers have other outlets." May 13, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20128721-294396.pdf.

[72] See analysis by Davis Polk Wardwell LLP submitted in this docket, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

[73] See, e.g., Earthworks, *Responsible minerals sourcing for renewable energy* (Apr. 17, 2019), avail. at https://earthworks.org/publications/responsible-minerals-sourcing-for-renewable-energy/.

[74] E.g., Dept. of Energy, Critical Minerals and Materials, U.S. Department of Energy's Strategy to Support Domestic Critical Mineral and Material Supply Chains (FY 2021–FY 2031), avail. at https://www.energy.gov/sites/prod/files/2021/01/f82/DOE%20Critical%20Minerals%20and%20Materials%20Strategy_0.pdf; Isabeau van Halm, *Concerns for mineral supply chain amid booming EV sales*, Mining Technology (Feb. 10, 2022), avail. at https://www.mining-technology.com/analysis/concerns-for-mineral-supply-chain-amid-booming-ev-sales/; International Energy Agency, The Role of Critical World Energy Outlook Special Report Minerals in Clean Energy Transitions, World Energy Outlook Special Report, Mar. 2022, avail. at https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions.

Q 100, 1st q: "Should Scope 3 emissions disclosure be voluntary?"

Yes. Mandatory Scope 3 reporting may lead to perverse outcomes as noted in the answers to questions 7, 98, 115, 132, and 182. The SEC's Scope 3 scheme explictly pressures every registrant to acquire and disclose emissions information from its suppliers and customers. The SEC suggests companies should stop doing business with companies with high Scope 1 and 2 emissions: "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers ... ."[75] By these instructions, the SEC is proposing to explicitly pressure registrants to move their business, and pressure their suppliers and customers to move, out of states with high GHG emission intensity electricity such as Wyoming, North Dakota, and West Virginia, into states with low GHG emissions intensity electricity, such as New York, Oregon, and California.[76] At the same time, the SEC is proposing restrictions on use of the RECs and offsets that companies use to lower emissions without relocating to areas with lower emission power supply, thus forcing on companies relocation of operations as an emissions reduction solution. This is a divisive policy,[77] and promulgating it is outside of the SEC's statutory authority.[78] It therefore should not be mandatory.

> Q 101, 1st q: "Should we require a registrant to exclude any use of purchased or generated offsets when disclosing its Scope 1, Scope 2, and Scope 3 emissions, as proposed?"
> Q 101, 2nd q: "Should we require a registrant to disclose both a total amount with, and a total amount without, the use of offsets for each scope of emissions?"

No to both. The SEC suggests companies should stop doing business with companies with high Scope 1 and 2 emissions: "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers ... ."[79] By these instructions, the SEC is proposing to explicitly pressure registrants to move their business, and pressure their suppliers and customers to move, out of states with high GHG emission intensity electricity such as Wyoming, North Dakota, and West Virginia, into states with low GHG emissions intensity electricity, such as New York, Oregon, and California.[80] At the same time,

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[75] Proposed Rule p. 372. Matt Levine notes in his Bloomberg column: "Is the SEC here telling large public companies "you have to pressure your private suppliers to stop emitting so much carbon"? No; that is again beyond its authority. It is just saying, look, you do what you want, but if you *don't* pressure your suppliers to reduce their emissions, you're gonna have a heck of a hard time reporting your Scope 3 emissions. The disclosure regime effectively deputizes public companies to be climate enforcers: If their suppliers don't start measuring and reducing their emissions, the companies won't be able to do the required disclosure." Matt Levine, *The SEC Will Regulate Climate*, Bloomberg, March 22, 2022, avail. at https://www.bloomberg.com/opinion/articles/2022-03-22/the-sec-will-regulate-climate.

[76] de Chalendara, Taggart, & Benson, *Tracking emissions in the US electricity system,* Proceedings of the National Academy of Sciences (Dec. 2019), avail. at https://www.pnas.org/cgi/doi/10.1073/pnas.1912950116.

[77] The SEC even cites an academic study acknowledging the profound divisiveness of the issues involved, at Proposed Rule pp. 336-37, fn. 802, Bernstein, Billings, Gustafson & Lewis, *Partisan Residential Sorting on Climate Change Risk*, National Bureau of Economic Research (Nov. 2021), avail. at https://www nber.org/papers/w27989.

[78] See analysis by Davis Polk Wardwell LLP submitted in this docket, Jun. 9, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20130934-300028.pdf.

[79] Proposed Rule p. 372.

[80] As noted by the Governors of North Dakota, Wyoming, and 14 other states on p. 2 of their comment letter filed in this docket, "The proposed rule will harm businesses and investors in our states … .", May 31, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20129962-296336.pdf.

the SEC is proposing restrictions on use of the RECs and offsets that companies use to lower emissions without relocating to areas with lower emission power supply, thus forcing on companies relocation of operations as an emissions reduction solution. This is a divisive policy, and promulgating it is outside of the SEC's statutory authority.

The voluntary offset market has long gravitated toward robust structures.[81] Carbon offsets that are validated pursuant to good rules, such as the California protocols or other recognized protocols are completely valid. Key elements for validity can be assessed by the marketplace.[82] Offsets are present, and belong, in U.S. climate policy and programs, including California's AB32.[83] California's AB32 program, after notice and comment periods that heard the same NGOs now opposing offsets before the SEC, allows either allowances or offsets. The SEC now proposes to overturn California's regulations by denigrating use of its program's offsets. The SEC has no legal authority, or technical expertise, to determine that offsets don't work. Please also see answers to questions 24, 29, 101, 105, 115, 133, and 173.

> Q 105, 1st q: "Should we require the calculation of a registrant's Scope 1, Scope 2, and/or Scope 3 emissions to be as of its fiscal year end, as proposed?"

No. REC and offset vintage periods under state and federal energy and environmental compliance programs could vary from a registrant's fiscal year, especially if not a calendar year. RECs can be used for RPS compliance by energy companies and the SEC's reporting periods differ from utility rate recovery periods and banking periods that permit RECs acquired in one calendar year to be used in future calendar years.[84] California's RPS compliance period is a three year period. Additionally, a registrant's Scope 2 emissions change if the serving utility sells the RECs from the renewable energy,[85] which a registrant might not know about by its fiscal year end.

> Q 106, 4th q: "For purposes of our disclosure requirement, should we exclude or prohibit the use of any of the proposed specified data sources when calculating Scope 3 emissions and, if so, which ones?"

Yes. The SEC should prohibit use of data in breach of confidentiality agreements. Disclosure required by law is often an exception to confidentiality in NDAs. A registrant's need

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[81] See the excellent studies tracking voluntary carbon markets each year for the past 15 years, available from the non-profit Ecosystem Marketplace, avail. at https://www.ecosystemmarketplace.com/. See also, e.g., Talitha Haller and Gabriel Thoumi, *Financial Accounting for Forestry Carbon Offsets* (2009) avail. at https://www.ecosystemmarketplace.com/wp-content/uploads/archive/documents/Doc_65.pdf.

[82] E.g., the failure of the Chicago climate exchange when was shown publicly that their offset contracts lacked the key element of additionality which is essential for carbon offsets. CFTC, *Notice of Intent ... To Undertake a Determination Whether the Carbon Financial Instrument Contract Offered for Trading on the Chicago Climate Exchange, Inc., Performs a Significant Price Discovery Function*, 74 Fed. Reg. 42052 (Aug. 20, 2009). CFTC, *Order Finding That the Carbon Financial Instrument Contract Offered for Trading ... Does Not Perform a Significant Price Discovery Function*, 75 Fed. Reg. 23686 (April 28, 2010) (citing comment letter I wrote).

[83] 17 CCR §95970 et seq.

[84] E.g., North Carolina Utilities Commission R8-67(d).

[85] According to the EPA, "Electricity cannot be considered renewable without a REC to substantiate its renewableness." EPA Green Power Partnership, *Offsets and RECs: What's the Difference* (Feb. 2018), avail. at https://www.epa.gov/sites/production/files/2018-03/documents/gpp_guide_recs_offsets.pdf.

for the Scope 3 data in reporting generally would not be a mandatory disclosure required by law, especially if Scope 3 reporting is voluntary.

> Q115 2nd q: "Should we require a registrant to use a particular methodology for determining its GHG emission metrics?"

For the reasons set forth in my responses to questions 24, 98, 100, 101, 105, 132, and 173, registrants should be allowed to use methodologies that allow full use of RECs and offsets. The Proposed Rule explictly pressures every registrant to acquire and disclose emissions information from its suppliers and customers. The SEC suggests companies should stop doing business with companies with high Scope 1 and 2 emissions: "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers ... ."[86] By these instructions, the SEC is proposing to explicitly pressure registrants to move their business operations, and pressure their suppliers and customers to move their business operations, out of states with high GHG emission intensity electricity such as Wyoming, North Dakota, and West Virginia, into states with low GHG emissions intensity electricity, such as New York, Oregon, and California. Unbundled RECs allow a company to sell the Scope 2 emissions signature of energy in its part of the country to another company in another part of the country for its use. If Scope 2 and Scope 3 reporting are required, the only way to mitigate relocating out of high-GHG emission electricity states as a way to reduce the numbers is through the use of RECs and offsets, because the only way for companies in states with higher emission intensity to reduce their Scope 2 emissions without having to relocate is by using unbundled RECs and offsets. To the extent it inhibits in any way the unfettered ability for a registrant or its supplier or customer to use and receive the full Scope 2 emissions accounting benefit of unbundled RECs and offsets, the Proposed Rule directly pressures industry to relocate out of states with higher emission factors into states with lower emission factors.

Also please note the comments of the Center for Resource Solutions submitted in this docket.

> Q 125, 5th q: "Should we permit a domestic registrant to report any such material difference [in GHG emissions date] in a Form 8-K if such form is filed (rather than furnished) with the Commission? Should any such reasonable estimate be subject to conditions to help ensure accuracy and comparability?"

Contemplating climate data reports on Form 8-Ks seems contrary to climate science, which tells of gradual and inexorable changes to the climate over many years, rather than between calendar quarters. "Form 8-K is the 'current report' companies must file with the SEC to announce major events that shareholders should know about."[87] The SEC could help by stating whether, for example, it expects an aluminum company to file an 8-K if (i) a smelter's local nuclear power plant shuts down and its Scope 2 zero emission energy is replaced with a fossil-fuel intensive system mix; or (ii) it shuts down a smelter that is immaterial to earnings but had high emissions.

[86] Proposed Rule p. 372.
[87] SEC, *Fast Answer: Form 8-K*, avail. at https://www.sec.gov/fast-answers/answersform8khtm html.

> Q 129, 1st q: "When determining the materiality of its Scope 3 emissions, or when disclosing those emissions, should a registrant be required to include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing, in addition to emissions from activities in its value chain, as proposed?"

Yes, to avoid incentivizing outsourcing as a way for a registrant to avoid having to include GHG emissions.

> Q 131, 1st q: "Should we permit a registrant to present its Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions, as proposed?"

Yes. GHG emissions measured by anything other than continuous emissions monitors on smokestacks or direct application of stoichiometry are not quantifiable like dollars and cents in bank accounts. They are especially less so in corporate supply chains that run through third parties. Given the need to rely on third party data, the uncertainty and likely unavailability of Scope 3 emissions data as acknowledged by the SEC,[88] the relative uncertainty of the metrics, and shifting global warming potential (GWP) values, Scope 3 emissions can only be expressed as a range. The EPA presents GWP in ranges, for example 28 to 36 for methane and 265 to 295 for nitrous oxide.[89] GWP changes for all GHGs other than CO_2 in each UN climate assessment report.[90] Additionally, third party data used in Scope 3 reporting might be wrong for reasons that are completely outside the registrant's control, such as innocent or intentional[91] misreporting by a company in the supply chain.

> Q132, 2nd q: "For example, should we require a registrant in the financial industry to follow PCAF's Global GHG Accounting & Reporting Standard for the Financial Industry when calculating its financed emissions within the "Investments" category of Scope 3 emissions?"

No. "Financed emissions"[92] rules, requiring entities to report the emissions of those to

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[88] e.g., Proposed Rule, p. 218 fn. 543; see also text at Proposed Rule, p. 223 fn. 559.

[89] EPA, *Understanding Global Warming Potentials*, avail. at https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why.

[90] See, e.g., Greenhouse Gas Protocol, *Global Warming Potential Values*, avail. at https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf; EFTC, *Selecting and Using GWPs for refrigerants* (Sept. 2021), avail. at https://www fluorocarbons.org/wp-content/uploads/2020/08/2021-10-08-Learn-About_Selecting-and-Using-GWP-values-for-Refrigerants.pdf.

[91] E.g., Clark Mindock, *Schnitzer Steel To Pay $3.25M Over Refrigerant Emissions*, Law360 (Apr. 22, 2022), avail. at https://www.law360.com/articles/1486303/schnitzer-steel-to-pay-3-25m-over-refrigerant-emissions.

[92] "Financed emissions, which can be one component of Scope 3 emissions for certain financial institutions, can be described as the emissions generated by companies in which a financial institution invests or to which it otherwise has exposure." Proposed Rule, p. 399. "See, e.g., letters from ... Sens. Schatz and Whitehouse (recommending requiring Scope 3 disclosure for financed emissions)." Proposed Rule, p. 164 fn. 423. Downstream activities from which Scope 3 emissions might result include: ... Investments by a registrant.[464] [464] ... The "investments" category would capture what are commonly referred to as "financed emissions." Proposed Rule, pp. 179-180. "A financial registrant's Scope 3 emissions disclosures would likely include the emissions from companies that the registrant

whom they lend money, incentivize lending to those with lower emissions instead of lending to those with higher emissions. The SEC suggests companies should stop doing business with entities with high Scope 1 and 2 emissions: "Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers,"[93] and in the case of "financed emissions," borrowers. By these instructions, the SEC proposes to pressure registrants not to invest in companies or municipalities that would increase their Scope 3 emissions. At the same time, the SEC is proposing restrictions on use of the RECs and offsets that cities use to lower emissions from a power supply over which they have no control. All this would mean, for example, that a small city in New York, which uses lower emissions power for infrastructure construction, would have an easier time attracting capital than a small city in West Virginia, which uses higher emissions power for infrastructure construction.

The SEC's proposed "financed emissions" rule effectively requires issuers of debt to disclose their emissions; otherwise the issuer won't be able to sell its bonds. Under "financed emissions" rules, every government borrower, no matter how small, would have to perform expensive climate disclosures in order to attract capital. This would increase the cost of debt issuance and maintenance for every county, city, housing authority, road improvement district, and other agency, and thus increase the tax burden to pay these increased costs. State agencies and municipalities in higher emission intensity parts of the country, like the small city in West Virginia, or that that fail to provide the very extensive and expensive disclosures, will see their debt become less desirable, and will have to offer higher interest rates in order to attract investors.[94] These will increase costs for essential municipal infrastructure and services, and those costs will be felt directly by their taxpayers.

However, the SEC does not have the power to require these disclosures.[95] According to

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provides debt or equity financing to ('financed emissions')." Proposed Rule, p. 206. "A key principle is that the GHG emissions from a client's activities financed by loans or investments attributable to the reporting financial institution should be allocated to that institution based on its proportional share of lending or investment in the borrower or investee through the application of an 'attribution factor.'" Proposed Rule, p. 205, fn. 528.

[93] Proposed Rule p. 372. Matt Levine notes in his Bloomberg column: "Is the SEC here telling large public companies "you have to pressure your private suppliers to stop emitting so much carbon"? No; that is again beyond its authority. It is just saying, look, you do what you want, but if you *don't* pressure your suppliers to reduce their emissions, you're gonna have a heck of a hard time reporting your Scope 3 emissions. The disclosure regime effectively deputizes public companies to be climate enforcers: If their suppliers don't start measuring and reducing their emissions, the companies won't be able to do the required disclosure." Matt Levine, *The SEC Will Regulate Climate*, Bloomberg, March 22, 2022, avail. at https://www.bloomberg.com/opinion/articles/2022-03-22/the-sec-will-regulate-climate.

[94] "One can imagine that some climate-conscious investors might not purchase a company's debt if the investors do not approve of the firms that the target investment company contracts with. That is, in a but-for world where all investors would be able to know the extent of a company's Scope 3 emissions, some investors might decide not to invest in the company in the first place. Such a reduction in demand for the company's debt could lead to higher interest rates on the company's debt in the but-for world. If a company's interest rate on its — for the sake of this example, its one and only — debt issuance is 3%, the interest rate on the debt instrument might be higher — say, 4% in the but-for world had the company disclosed the extent of their Scope 3 emissions. In this case, the company's lower interest rate on its debt relative to what it would have paid in a but-for world constitutes a direct benefit to the company, as the company would have a lower debt expense than it would have incurred in the but-for world." Mark Kaplan, *Economic Analysis May Play Larger Role In SEC Enforcement*, Law360 (Jan. 4, 2022).

[95] See generally, SEC, Report on the Municipal Securities Market, pp. 27-38 (Jul. 31, 2012), avail. at https://www.sec.gov/files/munireport073112.pdf. E.g., "Except with respect to securities fraud, the [SEC] authority

the SEC, "Federal laws prohibit the Commission from requiring a municipal issuer to file any application, document, or report with the Commission before the sale of the issuer's securities."[96] As noted by a former SEC Chairman, "Congress intentionally chose not to create a federal regulatory registration regime governing municipal issuers. Statutory provisions known as the Tower Amendment expressly limit the SEC's and the MSRB's authority to require municipal issuers to file any document with the SEC or MSRB prior to any sale of municipal securities by the issuer. Therefore, the Commission's investor protection efforts in this market have focused primarily on the regulation of broker-dealers and municipal advisors, Commission interpretations, enforcement of the antifraud provisions of the federal securities laws, and oversight of the MSRB."[97]

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over the disclosure practices of municipal issuers is significantly constrained under existing laws." Id., p. 2. "the Commission generally lacks authority to prescribe the accounting standards that municipal issuers must use." Id., p. 71. "The following are possible legislative approaches that could provide the Commission authority to establish improved disclosures and practices in the municipal securities market. Authorize the Commission to require that municipal issuers prepare and disseminate official statements and disclosure during the outstanding term of the securities, including timeframes, frequency for such dissemination and minimum disclosure requirements, including financial statements and other financial and operating information, and provide tools to enforce such requirements. This legislative approach would provide the Commission authority to establish disclosure requirements and principles, timeframes and frequency of dissemination of municipal securities offerings and continuing disclosures." Id. at p. 134. "Authorize the Commission to establish the form and content of financial statements for municipal issuers who issue municipal securities, including the authority to recognize the standards of a designated private-sector body as generally accepted for purposes of the federal securities laws, and provide the Commission with attendant authority over such private-sector body. This legislative approach would provide explicit authority to the Commission to establish the form and content of financial statements used in municipal securities offerings and establish standards and designate a private-sector body as the GAAP standard setter for municipal issuer financial statements. As the Report notes, the Commission currently does not have authority to establish the form and content of financial statements of municipal securities issuers that are used in connection with primary offerings of municipal securities or provided on an ongoing basis in connection with outstanding municipal securities. Moreover, the Commission does not have direct authority over the standard setter for those financial statements." Id. at p. 136. See also SEC, Statement of the Commission Regarding Disclosure Obligations of Municipal Issuers and Others, 59 Fed. Reg. 12748 at 12749 (Mar. 17, 1994).

[96] SEC, Investor Bulletin: The Municipal Securities Market, Feb. 1, 2018, avail. at https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_munibondsmarket (entre quote is bold-faced in original). "In the absence of a statutory scheme for municipal securities registration and on-going reporting requirements, the Commission's investor protection efforts in the municipal securities market have been accomplished through the antifraud provisions of the federal securities laws and regulation of broker-dealers and municipal securities dealers, including through Exchange Act Rule 15c2-12 ("Rule 15c2-12"), which facilitates annual and event-based disclosures for the benefit of municipal investors." SEC, Statement of the Chairman of the SEC and the Director of Office of Municipal Securities, May 4, 2020, fn. 11, avail. at https://www.sec.gov/news/public-statement/statement-clayton-olsen-2020-05-04. "The Tower Amendment … also plays a critical role in denying investors accurate and timely disclosures, by limiting federal regulatory authority over issuers of municipal securities. … the Commission indirectly regulates municipal securities offerings through its Rule 15c2-12, which requires underwriters of municipal securities offerings to obtain issuers' disclosures for the securities they intend to sell and provide them to purchasers. … I recognize that the statutory changes described above [seeking repeal of the Tower Amendment] are unlikely to occur in the current political climate. Accordingly, the Commission must explore other ways to address the pressing issues surrounding disclosure by municipal issuers. One way the Commission could have an immediate and significant impact would be to revisit Rule 15c2-12." Commissioner Luis A. Aguilar, Statement on Making the Municipal Securities Market More Transparent, Liquid, and Fair, Feb. 13, 2015, avail. at https://www.sec.gov/news/statement/making-municipal-securities-market-more-transparent-liquid-fair.html.

[97] Chairman Jay Clayton, Remarks at the SEC's Municipal Securities Conference, Dec. 6, 2018, avail. at https://www.sec.gov/news/public-statement/statement-clayton-120618.

The SEC does have oversight of municipal issuers under Sections 10(b) and 17, i.e., antifraud. So the SEC claims in the Proposed Rule that there is issuer Section 10(b) liability for climate disclosures.[98] A "financed emissions" rule would force municipalities to disclose if they want to raise money, and according to the Proposed Rule, the municipalities' disclosures would be subject to SEC oversight under Section 10(b). The SEC is seeking to force disclosures, not directly but by seeking to deprive of capital any who do not make the disclosures, and then claim to regulate the disclosures for fraud. This is a mandatory disclosure, and it oversteps the limits on the SEC's authority under the Tower Amendment.

Requiring government issuers make disclosures in order to attract capital by a "financed emissions" rule amends SEC Rule 15c2-12.[99] The Administrative Procedure Act defines "rule making" as "agency process for … amending … a rule;"[100] and requires notice of proposed rule making to be published in the Federal Register,[101] and the SEC provided no notice that it was amending Rule 15c2-12, The Proposed Rule does not mention Rule 15c2-12. The SEC has not provided the requisite notice and comment period required under the Administrative Procedure Act for that and other rules it is amending in order to implement a "financed emissions" rule.

Separately, the methodologies for calculating "financed emissions" are not clear.[102] Those on whom the SEC relies are confused; for example the SEC says, "frameworks like the PCAF to measure financed emissions would allow financial institutions to compute proxies for the emissions of their clients in a systematic and comparable manner even in the absence of actual emissions data."[103] The framework is wrong if it makes that claim, since it is not possible

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[98] Proposed Rule, p. 23, fn. 49. See also answer to question 7 above.

[99] Specifically 17 C.F.R. §240.15c2-12(b)(5) and (d)(3). The SEC has previously acknowledged this, e.g., "The Commission could consider amendments to Exchange Act Rule 15c2-12, including … mandate more specific types of disclosures in municipal securities official statements and ongoing disclosures, including event disclosures relating to issuance of new debt (whether or not subject to Rule 15c2-12 and whether or not arising as a result of a municipal securities issuance), primary offering disclosures relating to risks of the municipal securities, and disclosures about underlying obligors … ." SEC, Report on the Municipal Securities Market, p. 140 (Jul. 31, 2012), avail. at https://www.sec.gov/files/munireport073112.pdf. See also Municipal Securities Rulemaking Board, Education Center, SEC Rule 15c2-12: Continuing Disclosure (2019), avail. at http://www msrb.org/msrb1/pdfs/SECRule15c2-12.pdf. when promulgating its most recent amendments to Rule 15c1-12, the SEC stated that it considered, and rejected, voluntary disclosure as "unrealistic" and lacking in "timeliness and informativeness." SEC, Amendments to Municipal Securities Disclosure, Final Rule, 83 Fed. Reg. 44700 at 44740 (Aug. 31, 2018).

[100] 5 §U.S.C. 551(5).

[101] 5 §U.S.C. 553(b).

[102] As noted in the Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission, Mitigating Climate Risk in the U.S. Financial System, "In addition, design issues specific to financed emissions raise challenges, particularly around allocating emissions to the wide range of financial activities. Financed emissions from owning 1 percent of a company might include 1 percent of that company's emissions; a portfolio can rapidly double count if aggregate financed emissions include each underlying company's own Scope 3 upstream and downstream emissions. The calculation becomes significantly more complex with other activities, such as when a financial institution serves as a counterparty or is one of multiple underwriters of a financing. There is no agreed standard for financed emissions and little consistency or comparability to date, but a wide range of methodologies are being developed. Existing estimation methods present significant challenges and regulators should encourage the market to develop a more consistent way of measuring and reporting Scope 3 emissions across sectors where they are material and relevant." Report, p. 62 (Sept. 2020), avail. at https://www.cftc.gov/PressRoom/PressReleases/8234-20.

[103] Proposed Rule, p. 422-23.

to meaningfully compute emissions in the absence of actual emissions data. More critically, Task Force on Climate-Related Financial Disclosures ("TCFD"), cited extensively by the SEC, has no methodology for the measurement of sovereign, i.e., U.S., debt.[104]

It is not the function of the SEC to create disincentives for the purchase and holding of federal, state, or municipal government debt. A bad alternative to no "financed emissions" rule would be to exclude government debt from a "financed emissions" rule, or treat it as zero emission, which would drive investment money into government debt and away from private debt, which again is not the role of the SEC.

The Commissioner of the North Carolina Department of Agriculture and Consumer Services[105] explains how SEC another proposed "financed emission" regulation of ESG reporting would be deleterious to domestic food security, by increasing the cost of food, and jeopardizing the solvency of the farmers who create it. The SEC's "financed emission" proposal would contribute to the harm noted by the North Carolina Commissioner, in a manner that is also nationally divisive. Lower income people, who spend proportionately more on food, would be disproportionately harmed by food scarcity and food production cost-cutting created by SEC regulation.

> Q 133, 2nd q: "Is the scope of the proposed [Scope 3] safe harbor clear and appropriate?"

No. The SEC's proposed safe harbor for non-material non-disclosures of Scope 3 should be expanded to disclosures concerning of RECs and offsets that are not material to the registrant, especially if the RECs and offsets are offsetting Scope 3 emissions. If Scope 3 emission disclosures are safe harbored, then strategies to mitigate Scope 3 emissions should also be safe harbored. See also answers to questions 24, 29, 101, 115, and 173.

> Q 141: "Under prevailing attestation standards, "limited assurance" and "reasonable assurance" are defined terms that we believe are generally understood in the marketplace, both by those seeking and those engaged to provide such assurance. As a result, we have not proposed definitions of those terms. Should we define "limited assurance" and "reasonable assurance" and, if so, how should we define them?"

Yes, please define them. It is not clear what those terms mean in this context, nor how

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[104] Portfolio Alignment Team, *Measuring Portfolio Alignment: Technical Considerations*, pp. 42, 57 (2021) avail. at https://www.tcfdhub.org/wp-content/uploads/2021/10/PAT_Measuring_Portfolio_Alignment_Technical_Considerations.pdf. Perhaps the "financed emissions of the US" would be calculated by dividing the U.S. national GHG inventory by national debt, multiplied by the dollar amount of the Treasuries on hand. As the EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks, avail. at https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks, shows 5.2 billion metric tons net CO_2e, and the national debt is $30.5 trillion, this methodology would yield 170.5 tonnes of "financed emissions" for every million dollars in Treasury instruments held.

[105] Steven W. Troxler, Commissioner, Jun. 8, 2022, File No. S7-17-22, avail. at https://www.sec.gov/comments/s7-17-22/s71722-20130569-299456.pdf. See also comments in this docket of the New York Farm Bureau, pp. 3-4, Jun.16, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131707-302122.pdf.

they relate to the standard GHG terms of "measured," "monitored", and "verified."

> Q 143(ii)(d,) 1st q: "What are the costs and benefits of employing registered public accounting firms to perform audits of GHG emissions disclosure and related attestation of internal controls?"
> Q 143(ii)(d), 6th q: "What are the costs and benefits of such approach?"

Costs would include liability for mistakes by CPAs who hitherto have not been in the business of understanding, much less auditing, GHG emissions. Auditors are not set up to audit all aspects of a company's equipment usage, including type and age, and this information can lead to discovering very material emissions. For example, an EPA report found 3,407 pounds of SF6 leakage across a few companies from old circuit breakers,[106] and since SF6 has a GWP of 23,500,[107] this represented more than 40,000 t CO_2e in Scope 1 emissions, about double the Scope 2 emissions from 100,000 MWh/yr in manufacturing operations from typical grid electricity.

Costs would also include costs to registrants of business operation interruptions, safety and injury risks, and compromising of confidential information and trade secrets, resulting from requiring third party accountants unfamiliar with client operations to crawl over their operations and offices, to assess and measure GHG effects and leakage from operations to air conditioners.

> Q 154, 1st q: "Should we require the attestation engagement and related attestation report to be provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment, as proposed?"

Yes to the no cost part, if such attestation reports are required.

> Q 161, 1st q: "Should we require the registrant to disclose whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, the identity of the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body, as proposed?"

It would be helpful if the SEC would advise which existing licensing or accrediting bodies meet SEC standards under the Proposed Rule.

> Q 164, 4th q: "Should we specify parameters or include guidance on when the services provided by a third-party would be considered "assurance" or "verification" and thus require disclosure pursuant to the proposed rules?"

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[106] Blackman, Averyt & Taylor, *SF6 Leak Rates from High Voltage Circuit Breakers - U.S. EPA Investigates Potential Greenhouse Gas Emissions Source*, avail. at https://www.epa.gov/sites/default/files/2016-02/documents/leakrates_circuitbreakers.pdf.

[107] Greenhouse Gas Protocol, *Global Warming Potential Values*, avail. at https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf.

It would be helpful if the SEC could explain the difference between an "assurance" and a "verification."

> Q166, 3rd q: "Is it clear what 'any oversight inspection program' would include?"

No.

> Q173, 1st q: "If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, the nature and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs, as proposed?" and
> Q173, 2nd q: "Are there other items of information about carbon offsets or RECs that we should specifically require to be disclosed when a registrant describes its targets or goals and the related use of offsets or RECs?"

No to both. Please see answers to questions 24, 29, 101, 115, and 133.

Registrants should be allowed full use of RECs and offsets. Some registrants are in states with high GHG emission intensity electricity, such as Wyoming, North Dakota, and West Virginia, and some are in states with low GHG emissions intensity electricity, such as New York, Oregon, and California. Unbundled RECs allow a company to sell the Scope 2 emissions signature of energy from one part of the country to another company in another part of the country. The only way for companies in states with higher emission intensity to reduce their Scope 2 emissions without having to relocate is by using unbundled RECs and offsets. To the extent it inhibits in any way the unfettered ability for a registrant or its supplier or customer to use and receive the full Scope 2 emissions accounting benefit of unbundled RECs and offsets, the Proposed Rule directly pressures industry to relocate out of states with higher emission factors into states with lower emission factors.

Additionally, any disclosure requirement should be limited to information that is material to investors in the registrant. Buyers and sellers engaging in private transactions should be entitled to keep the terms of their transactions, including pricing, confidential. The SEC is not authorized by Congress to use the disclosure apparatus to force public disclosures of immaterial private contract terms in order to provide REC and offset pricing signals.

> Q173, 3rd q: "Are there proposed items of information that we should exclude from the required disclosure about offsets and RECs?"

Yes. Anything that is not material to the registrant. Registrants are not required to disclose the brands of machine tools or cleaning solvents that they buy if those disclosures are not material to the registrant. A registrant not buying good cleaning solvents may have employees get sick; perhaps registrants not buying "good" offsets or RECs won't meet their climate goals. In each of these cases it is for the registrant's management to decide if brands

purchased will achieve the company's objectives and to change brands if they don't. See also answers to questions 24, 29, 101, 115, and 133.

> Q182, 1st q: "The proposed rules would not apply to asset-backed issuers. The Commission and staff are continuing to evaluate climate-related disclosures with respect to asset-backed securities. Should we require asset-backed issuers to provide some or all of the disclosures under proposed Subpart 1500 of Regulation S-K?"

No. Doing so would result in disproportionate and negative impacts on low-income communities. ABS securitizations are essential for making home mortgages and car loans available to Americans. The people who have to commute furthest to work by car typically are the poorest.[108] Cars sold to people in low-income communities who have to commute farther to get to the city would lead to higher Scope 3 emissions for the ABS.[109] An ABS would be motivated to exclude such loans, because such loans would increase the ABS's "financed emissions"[110] that the SEC contemplates requiring registrant financial institutions, and potentially corporate treasury departments, to disclose,[111] and therefore makes the ABS less desirable. ABS's including loans to low-income car buyers who have to commute further burdened by a Carbon cost would sell for less, thus increasing the interest rates for loans for low-income car owners. This would also apply to home mortgage ABS, which would be incentivized by a Carbon cost to exclude mortgages to Americans living in poorer areas with older energy generation supply, without electric vehicle charging infrastructure. Residents of low-income areas would become disadvantaged from being able to obtain home and car finance.

Regulations that require measurements of environmental effects, the implementation of which would disproportionately harm low income populations, would be inconsistent with the

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[108] Anzhelika Antipova, *Analysis of Commuting Distances of Low-Income Workers in Memphis Metropolitan Area, TN* (Feb. 7, 2020), avail. at https://www mdpi.com/2071-1050/12/3/1209/pdf; U.S. Dept. of Transportation, Bureau of Transportation Statistics, *Commuting Expenses: Disparity for the Working Poor*, avail. at https://www.bts.gov/archive/publications/special_reports_and_issue_briefs/issue_briefs/number_01/entire; CBS News, *How long commutes worsen inequality* (Mar. 27, 2015), avail. at https://www.cbsnews.com/news/how-long-commutes-worsen-inequality/; The Seattle Times, *Low pay and long, pricey commute often go hand in hand* (Aug. 31, 2015), avail. at https://www.seattletimes.com/business/economy/low-pay-long-pricey-commute-often-go-hand-in-hand/.

[109] It would also lead to higher Scope 3 emissions for car company registrants that sell cars to low-income people.

[110] Downstream activities from which Scope 3 emissions might result include: ... Investments by a registrant.[464] [464] ... The "investments" category would capture what are commonly referred to as "financed emissions." Proposed Rule, pp. 179-180. "A financial registrant's Scope 3 emissions disclosures would likely include the emissions from companies that the registrant provides debt or equity financing to ('financed emissions')." Proposed Rule, p. 206. "A key principle is that the GHG emissions from a client's activities financed by loans or investments attributable to the reporting financial institution should be allocated to that institution based on its proportional share of lending or investment in the borrower or investee through the application of an 'attribution factor.'" Proposed Rule, p. 205, fn. 528.

[111] "Financed emissions, which can be one component of Scope 3 emissions for certain financial institutions, can be described as the emissions generated by companies in which a financial institution invests or to which it otherwise has exposure." Proposed Rule, p. 399. "See, e.g., letters from ... Sens. Schatz and Whitehouse (recommending requiring Scope 3 disclosure for financed emissions)." Proposed Rule, p. 164 fn. 423.

SEC's obligations under Executive Order 12898.[112] It would also divide the country economically. Areas of the country with higher emission power such as Wyoming, North Dakota, and West Virginia, would have additions to housing costs, because of the discounting of conforming mortgage securitizations, not suffered by areas with lower GHG intensity, such as New York, Oregon, and California,[113] further fracturing an already divided polity.

Separately, adding friction to ABS issuance by requiring mandatory GHG measurements would add costs to and delay these critical instruments for American car and home finance. ABS issuances are already highly regulated and markets for ABS will not benefit from further politicization of existing regulation.[114]

> Q 201: Are there other phase-ins or exemptions regarding any or all of the proposed rules that we should provide?

The phase-in period is just a cloak for SEC having no idea how the Proposed Rule is going to work or be implemented by registrants. Regulators should figure out how the regulated will perform requirements before imposing them.[115] ESG and GHG reporting should be allowed to play out further in the voluntary space in order for the better development of more commonly adopted standards.

II. Comments on the Text of the Proposed Rule

Here are a few comments on the SEC's Proposed Rule regulatory text that correlate to a fraction of the above responses to requests for comments, and noting some further issues with the Proposed Rule.

> §210.14-01(c)(2): *When calculating the metrics in this Article ..., a registrant must: ... apply the same accounting principles that it is required to apply in preparation of the rest of its consolidated financial statements included in the filing.*

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[112] "To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States … ." Executive Order 12898 of Feb. 11, 1994, §1-101.

[113] de Chalendara, Taggart, & Benson, *Tracking emissions in the US electricity system,* Proceedings of the National Academy of Sciences (Dec. 2019), avail. at https://www.pnas.org/cgi/doi/10.1073/pnas.1912950116.

[114] See, e.g., Comments of Jeremy D. Weinstein and Geoffrey F. Heffernan on SEC Chairman's Statement on Asset-Level Disclosure Requirements for Residential Mortgage-Backed Securities (Dec. 17, 2019), avail. at https://www.sec.gov/comments/rmbs/cll8-6587839-201849.pdf; Comments of Jeremy D. Weinstein on RIN 3064-AF09: Federal Deposit Insurance Corporation, Notice of Proposed Rulemaking, Securitization Safe Harbor Rule, 84 Fed. Reg. 43732, avail. at http://www fdic.gov/resources/regulations/federal-register-publications/2019/2019-securitization-safe-harbor-rule-3064-af09-c-001.pdf (Sept. 20, 2019).

[115] As noted by the Footwear Distributors and Retailers in comments filed in this docket, "The law of unintended consequences from rushed policy is in full effect here: increased workloads, reporting, and costs from rulemaking, without clear guidance and adequate adoption times, will directly harm actual real-life sustainability efforts companies are making toward carbon reduction, environmentally preferred practices, and eco-material transformations." p. 3. Jun. 15, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20131329-301511.pdf.

This would be impossible for any registrant. See answer to question 88.

> §210.14-02(c)(4): *Disclose the impact of severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise on any relevant line items in the registrant's consolidated financial statements during the fiscal years presented ... Changes to total expected insured losses due to flooding or wildfire patterns.*

It is not clear what the "patterns" at the end means. Insured losses would be due to actual flooding and actual wildfire, not "patterns" thereof.

> §210.14-02(f): *Disclose separately the aggregate amount of expenditure expensed and the aggregate amount of capitalized costs incurred during the fiscal years presented to reduce GHG emissions or otherwise mitigate exposure to transition risks. For example, a registrant may be required to disclose the amount of expense or capitalized costs, as applicable, related to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, offset emissions (purchase of energy credits), or improve other resource efficiency.*

This disclosure should only be required if actually material to the actual registrant, for the reasons set forth in responses to questions 29 and 43. The regulatory text has further problems as noted in my response to question 24.

> §229.1500(a): *Carbon offsets represents an emissions reduction or removal of greenhouse gases ("GHG") in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions.*

This should be deleted, or replaced with "Carbon offset means an offset, reduction or removal of greenhouse gases as defined by an applicable law, regulation, program, protocol, regulator or registry", for the reasons set forth in my response to question 24.

> §229.1500(g): *Greenhouse gases ("GHG") means carbon dioxide (CO2), methane ("CH4"), nitrous oxide ("N2O"), nitrogen trifluoride ("NF3"), hydrofluorocarbons ("HFCs"), perfluorocarbons ("PFCs"), and sulfur hexafluoride ("SF6").*

Why are all the gases other than CO2 in quotes?

> §229.1500(n): *Renewable energy credit or certificate ("REC") means a credit or certificate representing each megawatt-hour (1 MWh or 1,000 kilowatt-hours) of renewable electricity generated and delivered to a power grid.*

This should be deleted, or replaced with "REC means a certificate, credit or other indicia of ownership relating to renewable energy as defined by an applicable law, regulation, program, regulator or registry", for the reasons set forth in the response to question 24.

§229.1502(e): (1) If a registrant maintains an internal carbon price, disclose: (i) The price in units of the registrant's reporting currency per metric ton of CO2e; (ii) The total price, including how the total price is estimated to change over time, if applicable; ... (2) Describe how the registrant uses any internal carbon price ... to evaluate and manage climate-related risks. (3) If a registrant uses more than one internal carbon price, it must provide the disclosures required by this section for each internal carbon price, and disclose its reasons for using different prices.

This should be deleted to the reasons set forth in the answer to question 29.

§229.1503(a)(1): *When describing any processes for identifying and assessing climate-related risks, disclose, as applicable, how the registrant: (i) Determines the relative significance of climate-related risks compared to other risks; (ii) Considers existing or likely regulatory requirements or policies, such as GHG emissions limits, when identifying climate-related risks; (iii) Considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks; and (iv) Determines the materiality of climate-related risks, including how it assesses the potential scope and impact of an identified climate-related risk, such as the risks identified in response to § 229.1502.*

This should be deleted for the reasons set forth in my response to question 43.

§229.1503(a)(2): *When describing any processes for managing climate-related risks, disclose, as applicable, how the registrant: (i) Decides whether to mitigate, accept, or adapt to a particular risk; (ii) Prioritizes whether to address climate-related risks; and (iii) Determines how to mitigate any high priority risks.*

This should be deleted for the reasons set forth in my response to question 44.

§229.1503(b): *Disclose whether and how any processes described in response to paragraph (a) of this section are integrated into the registrant's overall risk management system or processes. If a separate board or management committee is responsible for assessing and managing climate-related risks, a registrant should disclose how that committee interacts with the registrant's board or management committee governing risks.*

This should be deleted in conjunction with the deletion of §§229.1503(a)(1) and (2).

§229.1503(c)(2)(ii)(C): *... discuss ... Changing demands or preferences of consumers, investors, employees, and business counterparties.*

A company's successful response to consumer tastes and demands, and ability to keep employees, is how a company survives in the free enterprise system. Registrant disclosures are public; once made, anyone can read them. In the free enterprise system, companies are not required to educate their competitors on how to beat them, but that is what the SEC proposes to

require registrants to do. This is beyond the SEC's statutory authority. It is also not apparent how this proposed rule is about climate change or the risks presented to investors thereby.

> §229.1504(a)(2): *When disclosing a registrant's Scopes 1, 2, and 3 emissions, exclude the impact of any purchased or generated offsets.*

This should be deleted for the reasons set forth in my response to questions 24, 101, 115, and 173.

> §229.1504(c): *Scope 3 emissions ...*

This should be deleted for the reasons set forth in my response to questions 98 and 100.

> §229.1506(d): *If carbon offsets or RECs have been used as part of a registrant's plan to achieve climate-related targets or goals, disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs.*

This should be deleted for the reasons set forth in my response to questions 24, 29, 101, 105, 115, and 173.

III. Conclusion.

The Proposed Rule's extremism on so many levels on highly politicized issues, from climate change to the power of administrative agencies, makes it a target for a complete about face as extreme in the other direction with a change in Administration.[116] If the SEC would like to see any of its proposals concerning the long-term issue of climate change survive in the long term, tempering this extremism, and, even better, building consensus through the legislative process,[117] will lower the risk of regulatory whiplash.

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[116] E.g., the rule completely prohibiting climate change considerations in lending promulgated by the Office of the Comptroller of the Currency in the previous administration. OCC, Docket ID OCC–2020–0042, RIN 1557–AF05, *Fair Access to Financial Services*, 85 Fed. Reg. 75261 (Nov. 25, 2020) (my comment letter is at https://www.regulations.gov/comment/OCC-2020-0042-3496); the rule became final (https://web.archive.org/web/20210114133722/https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-8.html) but was not published in the Federal Register. See also the complete flip flop of the Dept. of Labor on plan fiduciary considerations of ESG factors, from prohibition under the Trump Administration to encouragement under the Biden Administration. See William Pollak, *Despite DOL Proposed Rule, ESG Investing Faces Barriers*, Law360 (Dec. 14, 2021), avail. at https://www.law360.com/articles/1447811/despite-dol-proposed-rule-esg-investing-faces-barriers. See also, e.g., *10 Companies Allegedly Boycotting Fossil Fuels Have Not Responded to Texas Comptroller's Inquiry*, The Texan (May 23, 2022), avail. at https://thetexan.news/12-companies-allegedly-boycotting-fossil-fuels-have-not-responded-to-texas-comptrollers-inquiry/.

[117] See comments submitted in this docket by the Governor of Utah, pp. 3-4, Apr. 19, 2022, avail. at https://www.sec.gov/comments/s7-10-22/s71022-20127656-288869.pdf ("If policy changes are necessary to mitigate the risk and harm of climate change, such changes are best made through the legislative process that drives consensus. Agency rules, more so than codified statutes, are subject to changes by subsequent administrations and may be subject to selective or lax enforcement. Because the proposed requirements are driven by current political

These comments are solely my own and are not necessarily the opinions of any client I represent or industry group in which I participate.

Yours truly,

Jeremy D. Weinstein

pressures and not a part of consensus legislation, they are unlikely to survive the next Republican administration. Enacting rules that are likely to be short-lived will lead to massive uncertainty for businesses and investors as they navigate an expensive and lengthy set of new regulations and ultimately result in wasted time, effort, and resources.").

ATTACHMENT 1

WHAT ARE RENEWABLE ENERGY CERTIFICATES?

Jeremy Weinstein, *What Are Renewable Energy Certificates?*, 41 Futures and Derivatives Law Report 1 (Jan. 2021).

REPORT

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WHAT ARE RENEWABLE ENERGY CERTIFICATES?

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and website http://jweinsteinlaw.com. *I gratefully acknowledge the review, comments, recommendations, critiques, and encouragement of Christopher Berendt, Dickson Chin, Liz Ferrell, Geoff Heffernan, Stacey Kusters, Michael Loenen, Ginger Price, Bobby Singh, and Chris York. I especially thank Todd Jones of Center for Resource Solutions for his substantial contribution to the second half of this article. I take sole responsibility for all content.*

INTRODUCTION

Generating energy with renewable resources, instead of using fossil fuel resources or otherwise, is a behavior. That behavior, and the resulting renewable energy, have "attributes." These are "environmental attributes" of renewable energy generation. Some or all of these environmental attributes can be bundled together through contract, law or regulation into an environmental commodity commonly called a Renewable Energy Certificate (REC).[1]

RECs are not monolithically uniform. Different states and regions of the U.S., and private contracts, differ as to the environmental attributes included in a REC. Environmental attributes fall in overlapping subsets, and each subset has some elements that are set in stone, and some elements that get debated. One subset is the right to make claims about the renewable energy, including to have caused it to have been brought to the electric grid. Another subset is the renewable energy nature of the fuel used for renewable resource generation, such as zero emissions solar or wind, or biomethane rendered a net zero emissions fuel by application of a quantity of carbon offsets. Another is the zero emission signature of the generated renewable energy itself, which includes reporting it as such to regulators. Yet another is the avoidance of fossil fuel generation through use of renewable energy generation, which includes questions of by whom and by how much. Different strands within each subset occur at different points along a long chain stretching from contractual commitment to generate through covenants following regulatory or voluntary reporting long after generation.

RECs can be certificated, and transferred separately from the associated energy, using an electronic system that tracks the quantity of net renewable generation.

That electronic tracking system is commonly called a "generation information system" (GIS).[2] Each GIS has operating rules that establish, in a definition of "Certificate," which of the environmental attributes of the renewable energy and the behavior of generating the renewable energy are represented by the Certificate. The certification of the "environmental attributes" embodied in the definition of "Certificate" in the applicable GIS can be transferred in the GIS between a buyer's and a seller's GIS accounts.

The environmental attributes are also transferred by contract, and if a GIS is not available, usually also by a paper certificate called an "attestation." RECs are more than a GIS Certificate or paper attestation. Some states have laws and regulations that define RECs, that say which attributes are included in RECs, and provide whether and which GIS Certificates can be used for compliance programs. RECs transferred with the underlying energy are generally called "bundled RECs." RECs sold separately from the underlying energy are generally called "unbundled RECs." When a REC is unbundled and sold separately, the associated energy then becomes undifferentiated "null" or "brown," i.e., not "green" or "renewable" energy.[3]

Unbundled RECs provide a way for those who want the "renewableness" of energy from a renewable resource, but cannot directly connect to the renewable resource, to buy it. For example, the New York Power Authority used RECs to bring renewable energy to the Freedom Tower.[4] REC transactions can be in voluntary markets (for example, companies that want to demonstrate a commitment to the environment) and in compliance markets (for example, utilities that must comply with a legal requirement to use a minimum amount of renewable energy, commonly known as a renewable portfolio standard (RPS)).

Parties trading RECs must grapple with multiple and overlapping federal, state, and contract legal structures that can make a REC far more than a simple and fungible compliance instrument, tradable as the GIS Certificate. The GIS Certificate is a final output of a process at the tracking system that takes place after renewable energy generation. RECs are defined by statutes, regulations, contracts, voluntary standards, and GISs, as containing varying collections of the overlapping subsets of environmental attributes noted above, The GIS Certificate and its transfer are not the entirety, but merely components, of a RECs sale and purchase transaction.

Understanding the legal nature of RECs is critical for existing and future state and federal renewable energy and greenhouse gas regulation, as well as for parties transacting in RECs. RECs exist and are defined by multiple state and federal laws and regulations, GISs, and in contracts through which companies buy and sell RECs as property. Future legislation and regulation should be mindful of these structures and avoid disrupting them, as doing so would interfere with achievement of shared policy goals, as well as with private property rights. For example, as will be discussed in depth below, under the Clean Power Plan, the Environmental Protection Agency (EPA) recognized that its "Emission Reduction Credits" could lead to conflicts among different state REC definitions, with private contracts, and with other federal regulations of RECs, and left the conflicts unresolved. Separately, the recently tabled CLEAN Future Act[5] contemplated tradeable "clean energy credits"

under a baseline-and-credit framework that did not seem to account for RECs or the rights of private parties under existing REC contracts.

REC CONTRACTING

REC transactions are not as simple as transferring title to a GIS Certificate and moving it between accounts on a GIS. REC trading agreements are often highly customized, and industry-sponsored form trading agreements, while popular, do not have the marketplace permeation of many other industry standard forms for their respective commodities. However, even when not applied in their entirety, standard forms that make available transaction tools for REC market participants generally help make REC markets more useful and liquid.

This article is prompted by an International Swaps and Derivatives Association (ISDA) initiative to develop REC trading documentation as a supplement to the ISDA/EEI[6] U.S. North American Power Annex. The ISDA initiative is being admirably piloted by my friend and colleague Dickson Chin of Jones Day, and I have every confidence that he will guide the initiative to an excellent work product. Other industry groups have published form REC trading agreements. These include the Edison Electric Institute's RECs Annex to its Master Agreement,[7] the Environmental Markets Association/American Bar Association/American Council on Renewable Energy ad hoc working group's Master Agreement,[8] and the WSPP Agreement Schedule R.[9] The North American Energy Standards Board is developing a form of master trading agreement for non-GIS Certificate RECs.[10] The Edison Electric Institute is also developing a REC spot trading agreement,[11] and is indirectly coordinating with ISDA's initiative.

A full understanding of the legal nature of RECs is crucial to creating and using a useful industry standard REC trading document. As ISDA documentation forms are generally readily accepted by the marketplace, understanding the legal nature of RECs will help those seeking to use standardized REC trading documentation. A standard form does not by itself teach everything one should know about a REC and trading it. Contracting parties and policymakers exploring market-based solutions to promote renewable energy and combat climate change[12] will benefit from understanding the robust, highly developed network of definitions, statutes, regulations, and tracking system infrastructure that is already in place.

WHAT ARE RECS?

RECs are environmental commodities, and are very different from other fungible commodities, such as gold or wheat. RECs package up some or all of the "attributes" of renewable energy and the behavior of generating renewable energy, through GIS operating rule "Certificate" definitions, contract language, and statutes and regulations.

FEDERAL DEFINITIONS AND REGULATION

Federal regulators recognize property rights in RECs, and RECs as personal property. According to the principal federal energy regulator, the Federal Energy Regulatory Commission (FERC), RECs are "products" (not "services") that are "delivered" (not "performed") when sold,[13] and are property that is owned, traded, and sold.[14] FERC determined that unbundled RECs are outside its jurisdiction, and bundled RECs are

within its jurisdiction.[15] Other U.S. government departments define RECs as property. The Department of Justice prosecuted theft of RECs as part of a scheme to defraud to obtain money and property,[16] and a Department of Defense adjudication ruled that RECs are personal property.[17]

According to the principal federal environmental regulator, the EPA

> RECs are used to demonstrate compliance with state [renewable energy] targets, such as state RPS, and also to substantiate claims stemming from [renewable energy] use. RECs are tradable instruments that are associated with the generation of one megawatt-hour of [renewable energy] and represent certain information or characteristics of the generation, called attributes. RECs may be traded and transferred regardless of the actual energy flow. The legal basis for RECs is established by state statutes and administrative rules.[18]

and

> A renewable energy certificate, or REC (pronounced: rek), is a market-based instrument that **represents the property rights to the environmental, social and other non-power attributes of renewable electricity generation**. RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.[19]

and

> A renewable energy certificate - REC (pronounced: rek) is a tradeable, market-based instrument that represents the legal property rights to the "renewable-ness"—or non-power (i.e., environmental) attributes—of renewable electricity generation. A REC is created for every megawatt- hour (MWh) of electricity generated and delivered to the grid from a renewable energy resource. Electricity cannot be considered renewable without a REC to substantiate its renewableness.[20]

The key word in each of these definitions is "attribute." Webster's Encyclopedic Unabridged Dictionary of the English Language defines "attribute" as:

> **at•trib•ute** (*v.* ?#153; trib yōōt; *n.* a tr?#153; byōōt), v., **-ut•ed, -ut•ing,** *n.*—*v.t.* 1. to regard as resulting from; consider as caused by (usually fol. By to): *She attributed his bad temper to ill health.* 2. to consider as belonging, as a quality or characteristic: *He attributed intelligence to his colleagues.* 3. to consider as made by, esp. with strong evidence but in the absence of conclusive proof: *To attribute a painting to an artist.* 4. To regard as produced by or originating in or with; credit; assign*: To attribute a work to a particular period; to attribute a discovery to a particular country. -n.* 5. something attributed as belonging; a quality, character, characteristic, or property: *Sensitivity is one of his attributes. . . . .*[21]

Merriam-Webster Dictionary online defines "attribute" as meaning, when a noun, "1: a quality, character, or characteristic ascribed to someone or something / *has leadership attributes*; 2: an object closely associated with or belonging to a specific person, thing, or office / *a scepter is the attribute of power*, especially: such an object used for identification in painting or sculpture; 3 *grammar:* a word ascribing a quality, esp. adjective," and as a transitive verb: "1: to explain (something) by indicating a cause / *He attributed his success to hard work*; 2a: to regard as a characteristic of a person or thing / *should not attribute adult reasoning to children*; b: to reckon as made or originated in an indicated fashion / *attributed the invention to a Russian*; c: classify, designate."[22]

Black's Law Dictionary defines "attribute" as "A quality or feature, usu[ally] one considered to be good or useful."[23] Renewable energy and the behavior of generating renewable energy have

"attributes," some or all of which are commodified into property and transferred via RECs.

According to the principal federal commodities regulator, the Commodity Futures Trading Commission (CFTC), environmental commodities, including RECs, are "non-financial commodities."[24] The CFTC found that environmental commodities as intangible commodities that are capable of physical delivery and that "can be consumed"[25] qualify as nonfinancial commodities, and that straightforward sales of environmental commodities settled by transfer, such as RECs transferred using a GIS, are not swaps, but rather excluded forward contracts.[26] Physically settled environmental commodities, including RECs, are subject to CFTC antifraud and antimanipulation rules.[27] State renewable energy compliance programs often require "permanent retirement" of RECs used for compliance on a GIS,[28] and that retirement "consumes" the REC and prevents it from being used again in another context or in a different program. **Claims** of protecting the environment through promoting the social benefit of generating the renewable energy, such as a press release by a company stating that it is buying renewable energy from the Acme Wind Farm II to provide power its data center, also "consume" RECs.[29]

As claims, RECs are also federally regulated by the principal federal truth in advertising regulator, the Federal Trade Commission (FTC).[30] According to the FTC:

> Some generators who cannot sell all of their renewable energy at a sufficient premium in their "home" market, therefore, may find it advantageous to split their output into two products: The electricity itself and certificates (RECs) representing the renewable attributes of that electricity. Under this second approach, generators sell their electricity at market prices applicable to conventionally-produced power. Generators then charge for the electricity's renewable attribute separately by selling certificates to individuals and business purchasers across the country who use them to characterize the conventional electricity they buy as renewable. **The certificate represents a property right in the technological and environmental attributes of renewable energy.** The precise nature of the attributes represented by a REC, however, continues to be a matter of discussion. Generally, one REC represents the right to describe one megawatt of electricity as "renewable." Currently, there is no uniform or mandatory definition of a REC. The REC market, therefore, helps renewable energy generators by significantly expanding the number of potential renewable energy purchasers, possibly avoiding transmission costs associated with traditional contracts, and helping to ameliorate supply and demand problems associated with the intermittent operation of some renewable energy facilities (e.g., solar power facilities).[31]

The FTC regulations for making environmental claims, called the "Green Guides," and further guidance, are explored below.

CONTRACT AND GIS DEFINITIONS

GIS definitions can also be viewed to some extent as contract definitions,[32] as parties contract to buy and sell GIS Certificates. The definition of "Certificate," the serial numbered instrument that is transferred from a seller's GIS account to a buyer's GIS account as part of the purchase of REC, is in a GIS's operating rules. Often this definition includes "all" attributes- for example in the Western Renewable Energy Generation Information System (WREGIS),[33] the Midwest Renewable Energy Tracking System (M-RETS),[34]

the North American Renewables Registry (NAR),[35] and the PJM Generation Attribute Tracking System (PJM GATS).[36] Sometimes it does not, for example the North Carolina Renewable Energy Tracking System (NC-RETS)[37] and the Nevada Tracks Renewable Energy Credits (NVTREC).[38]

GISs are the predominant infrastructure in the U.S. for transactions in compliance market RECs. Certificates are not created in GISs by simply tracking energy from a meter at the renewable resource. One megawatt-hour of output meter measurement from the resource alone does not translate directly into a one megawatt-hour Certificate. The GIS must account for, and deduct, the station service energy that flowed into the renewable resource from the grid in order to enable the renewable resource to generate its electric energy.[39] The renewable resource cannot be given credit for renewable generation that is greater than its net output,[40] so GISs typically require a complicated reporting and upload process by a third party or internal function that the GIS accepts as having functional separation from the merchant function of the generator.[41]

Domestic and foreign regulators are studying the use of blockchain in connection with renewable energy transactions.[42] The Public Utilities Commission of Nevada has pending a docket on the use of blockchain for transactions in "portfolio energy credits," which are one kilowatt-hour RECs.[43] Green Mountain Energy is also experimenting with blockchain-enabled voluntary transactions in solar net-metered RECs.[44] Those who would link REC trading to blockchain-like features face the challenge of the way GISs create Certificates.

Parties often by contract set forth their own definitions of the RECs they are buying and selling, which if well drafted should be a superset of the GIS Certificate definition. Parties often use further contract language for environmental and transactional integrity. Broad GIS and regulatory definitions of the attributes included in a REC could be read to include negative environmental attributes, and in such cases contractual REC definition should be written to carve out adverse wildlife impacts, such as bird kills by wind farms, and other sources of environmental liability.

STATE DEFINITIONS

In the vacuum of federal leadership, many states over the past twenty years legislated programs requiring electric utilities to procure a minimum proportion of retail energy from renewable resources.[45] Such a program is commonly known as a renewable portfolio standard (RPS). RECs are often permitted to be used for RPS compliance and accounting.[46] There are now 43 U.S. states, districts and territories with mandatory or voluntary renewable energy targets or RPSs,[47] even though there is no national program. How RECs can separate from and recombine with energy, and the attributes included in RECs, varies across programs. There are also voluntary RECs markets and RECs purchase programs,[48] and non-profit organizations (known in the environmental sector as "NGOs," for Non-Governmental Organizations), such as Center for Resource Solutions (CRS), that independently certify RECs for voluntary trading.

The Second Circuit Court of Appeals noted, '' 'RECs are inventions of state property law whereby the renewable energy attributes are 'unbundled' from the energy itself and sold separately.' . . . . As such, different states define

RECs differently, focusing on various attributes which they deem to be especially relevant."[49] This patchwork of programs and practices includes diversity in the meaning of "Certificate" across GISs, between state definitions of a REC or equivalent instrument, between those definitions and the definitions used in the GIS Certificate accepted for compliance,[50] differences between law and regulation within the same state, and differences between regulations for different programs within the same state. Certificates created in one GIS generally are limited on movement into another GIS.[51] Therefore, RECs may not lend themselves easily to cross-program, and even cross-GIS, fungibility. However, despite state and regional differences in definitions and regionalization of compliance RECs, there is sufficient uniformity in the understanding of RECs, as well as national standards, to support a robust national voluntary market.[52]

A good example of a state with an inclusive "all attributes" definition in its statutory and regulatory RPS definitions, with limited, specific carve-outs, that is nevertheless in seeming conflict with implementation of its other energy and climate programs, as well as with programs of neighboring states, is California. California's statutory definition of a REC for its RPS is:

> (1) "Renewable energy credit" means a certificate of proof associated with the generation of electricity from an eligible renewable energy resource, issued through [WREGIS], that one unit of electricity was generated and delivered by an eligible renewable energy resource.
>
> (2) "Renewable energy credit" **includes all renewable and environmental attributes associated with the production of electricity** from the eligible renewable energy resource, except for an emissions reduction credit issued pursuant to Section 40709 of the Health and Safety Code and any credits or payments associated with the reduction of solid waste and treatment benefits created by the utilization of biomass or biogas fuels.[53]

Debate among stakeholders that included the interaction of RPS RECs with potential future GHG claims led the CPUC to issue a decision on the "Definition and Attributes" of RECs.[54] This California regulatory definition of a REC for its RPS program is:

> "Green Attributes" means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, and its avoided emission of pollutants. Green Attributes include but are not limited to Renewable Energy Credits, as well as: (1) any avoided emission of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere;1[1 Avoided emissions may or may not have any value for GHG compliance purposes. Although avoided emissions are included in the list of Green Attributes, this inclusion does not create any right to use those avoided emissions to comply with any GHG regulatory program.] (3) the reporting rights to these avoided emissions, such as Green Tag Reporting Rights. Green Tag Reporting Rights are the right of a

> Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's discretion, and include without limitation those Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on a MWh basis and one Green Tag represents the Green Attributes associated with one (1) MWh of Energy. Green Attributes do not include (i) any energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project and other financial incentives in the form of credits, reductions, or allowances associated with the project that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or "tipping fees" that may be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits. If the Project is a biomass or biogas facility and Seller receives any tradable Green Attributes based on the greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, it shall provide Buyer with sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from the Project.[55]

In most Western state RPSs, RECs are evidenced by Certificates issued by WREGIS. For California RPS compliance, the WREGIS Certificate must be owned or bought, and retired.[56] The issuance and exchange of these Certificates is in accordance with the WREGIS Operating Rules.[57] Since California paid for WREGIS startup,[58] California regulators had significant influence in the development of WREGIS and its rules. WREGIS's definition of a REC is:

> WREGIS tracks the **renewable and environmental attributes** associated with renewable energy . . . . The Renewable and Environmental Attributes are unbundled from the megawatt-hour (MWh) of renewable energy or determined equivalent produced and recorded onto a WREGIS Certificate. One WREGIS Certificate is created for each MWh or determined equivalent of renewable energy produced, and each WREGIS Certificate is assigned a unique serial number. WREGIS Certificates can be used by electricity suppliers and other energy market participants to comply with relevant state/provincial policies, regulatory programs and to support voluntary "green" electricity markets. . . .[59] . . . **A WREGIS Certificate (also called a Renewable Energy Credit (REC)) represents all Renewable and Environmental Attributes** from MWh of electricity generation from a renewable energy Generating Unit registered with WREGIS or a Certificate imported from a Compatible Tracking System and converted to a WREGIS Certificate. . . .. Disaggregation of Certificates is not currently allowed within WREGIS.[60] **Renewable and Environmental Attributes [means]: Any and all credits, benefits, emissions reductions, offsets, and allowances-howsoever titled**-attributable to the generation from the Generating Unit, and its avoided emission of pollutants. Renewable and Environmental Attributes do not include (i) any energy, capacity, reliability, or other power attributes from the Generating Unit; (ii) production tax credits associated with the construction or operation of the Generating Unit and other financial incentives in the form of credits, reductions, or allowances associated with the Generating Unit that are applicable to a state, provincial, or federal income taxation obligation; (iii) fuel-related subsidies or "tipping fees" that may be paid to the seller to accept certain fuels, or local subsidies received by the generator for

> the destruction of particular pre-existing pollutants or the promotion of local environmental benefits; or (iv) emission reduction credits encumbered or used by the Generating Unit for compliance with local, state, provincial, or federal operating and/or air quality permits.[61] A Certificate created and tracked within WREGIS will represent **all** of the Renewable and Environmental Attributes from a MWh of renewable generation. **WREGIS Certificates are "Whole Certificates."**[62] WREGIS is not designed to separately track any greenhouse gas or other emissions-related attributes.[63]

CLAIMS

As shown above, law and regulation, as well as contracts that refer to GIS Certificates, include some or all "attributes" in a REC. The REC can be destroyed by improper assertions of ownership or making of claims on those attributes. FTC and other regulation and market best practices focus on such claims and their impact on RECs.

FTC "GREEN GUIDES"

The FTC most recently updated its "Green Guides" in 2012,[64] pursuant to its authority under Section 5 of the Federal Trade Commission Act[65] to prohibit "deceptive acts or practices." The Green Guides provide that certain public statements concerning RECs would be "deceptive." Although the word "guide" is in the name, these are regulations that the FTC enforces with fines; Green Guide enforcement actions include million dollar fines, injunctions, and consent decrees.[66] Although the FTC Act does not give a private right of action, many states have consumer protection statutes known as "little FTC Acts," and some of those have private rights of action.[67]

The FTC Green Guides tend to focus on how claims would be interpreted by, and be deceptive to, consumers, and therefore are not written from the viewpoint of wholesale energy market participants. Nevertheless, they can be easily translated to wholesale energy and REC markets. The Green Guides provide:

> Renewable energy claims. (a) It is deceptive to misrepresent, directly or by implication, that a product . . . is made with renewable energy or that a service uses renewable energy. A marketer should not make unqualified renewable energy claims, directly or by implication, if fossil fuel, or electricity derived from fossil fuel, is used . . . to power any part of the advertised service, unless the marketer has matched such non-renewable energy use with renewable energy certificates. . . .
>
> **(d) If a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy.**
>
> Example 1: A marketer advertises its clothing line as "made with wind power." The marketer buys wind energy for 50% of the energy it uses to make the clothing in its line. The marketer's claim is deceptive because reasonable consumers likely interpret the claim to mean that the power was composed entirely of renewable energy. If the marketer stated, "We purchase wind energy for half of our manufacturing facilities," the claim would not be deceptive.
>
> Example 5: A toy manufacturer places solar panels on the roof of its plant to generate power, and advertises that its plant is "100% solar-powered." The manufacturer, however, sells **renewable energy certificates based on the renewable attributes** of all the power it generates. **Even if the manufacturer uses the electricity generated by the solar panels, it has, by selling renewable energy certificates, transferred the right to characterize that electricity as**

> **renewable.** The manufacturer's claim is therefore deceptive. It would also be deceptive for this manufacturer to advertise that it "hosts" a renewable power facility because reasonable consumers likely interpret this claim to mean that the manufacturer uses renewable energy. It would not be deceptive, however, for the manufacturer to advertise, "We generate renewable energy, but sell all of it to others."[68]

For example, it would be deceptive for a company **to imply** it used renewable energy, by calling it "green" or "wind" energy in a press release or saying it used renewable energy from a named renewable energy resource, if the company did not also own the RECs from that renewable resource, unless the press release also accurately set this out. It would therefore be deceptive for a utility buying bundled energy and RECs from Acme Wind Farm II that was also actively selling off the RECs to state its annual report that it was buying the energy from Acme Wind Farm II unless the utility also stated that it was selling the RECs to third parties. It would also be deceptive to list Acme Wind Farm II as part of its "wind energy portfolio" without explicit qualification.

The FTC provided more explicit guidance with a Division of Enforcement staff letter.[69] At the time, Vermont allowed "wind" energy to be counted for its renewable energy "SPEED" program even if the complying utility has otherwise sold the RECs from that energy. The staff letter warns the utility to exercise caution concerning its public communications:

> Given the unusual nature of RECs, the operation of the renewable energy market relies heavily on the expectation of all market participants that these certificates have not been counted or claimed twice *(i.e.,* double counted). Such double-counting can occur, for instance, through multiple sales of the same REC or through renewable energy claims made by a company that already sold the RECs for its renewable generation. Therefore, any statement by the company that might lead consumers of that electricity to infer that the energy was produced cleanly risks double counting. Such double counting, in turn, not only risks deceiving consumers but also threatens the integrity of the entire REC market. **By selling RECs, a company has transferred its right to characterize its electricity as renewable.** Accordingly, the FTC's Green Guides advise that, if "a marketer generates renewable electricity but sells renewable energy certificates for all of that electricity, it would be deceptive for the marketer to represent, directly or by implication, that it uses renewable energy." *See* 16 C.F.R. § 260.15(d).

However, the Guides do not suggest a prohibition against all communications related to a company's renewable generating facilities where RECs are involved. For instance, they provide an example of a marketer that generates renewable energy, but sells RECs based on 100% of this renewable energy. In this scenario, the Guides advise that the marketer may state, "We generate renewable energy, but sell all of it to others." *See* 16 C.F.R. § 260.15, Example 5. As the Commission noted in its Statement of Basis and Purpose for the Green Guides, this statement represents one, but not the only, way such marketers may non-deceptively communicate a renewable energy generation claim when they have sold the renewable attributes of all their energy. **The essential part of this advice is that any generation claim made in this context should be accompanied by a clear disclosure about the REC sales from the facility.** In addressing these issues in the Green Guides, the Commission did not provide specific guidance on the content of REC-related claims made by power producers who generate renewable energy as a substantial portion of their business. However, it did warn that power providers that sell null electricity to their customers, but sell RECs based on that electricity to another party, should keep in mind

that their customers may mistakenly believe the electricity they purchase is renewable, when legally it is not. Accordingly, it advised such generators to exercise caution and qualify claims about their generation by disclosing that their electricity is not renewable.

Therefore, a utility should avoid unqualified or poorly qualified representations that state or imply that its customers will receive renewable electricity from its renewable facilities when, in fact, the utility has sold or will sell RECs from those projects elsewhere. We recognize that public utilities can face particular challenges with regard to these issues. Utilities that construct and operate renewable facilities must communicate with regulatory entities and ratepayers about the details of these projects during siting, construction, and operation. In addition, utility customers in many states do not choose among competing retail suppliers. In these locations, state regulatory decisions largely determine customers' electricity supplier, their conditions of service, and the prices they pay, raising questions about the materiality of utility representations to those customers' purchasing decisions.

Despite these considerations, even those utilities that construct and operate renewable facilities in states with no retail competition should exercise care in their communications about those projects. The special conditions applicable to utilities do not diminish the need for clear communications about renewable facilities and RECs. Although utilities must communicate with the public and regulators about facility construction and operation, they can do so while avoiding misimpressions by adequately qualifying all of their communications. Similarly, although customers in such service areas do not shop for retail electricity, we cannot rule out the possibility that renewable energy statements from their utility company are material to them.

For instance, customers may use such information to change the amount of power they consume from the utility, install on-site generation, or switch fuel types (e.g., from electricity to natural gas). Finally, we realize that, in some cases, utility officials may not know whether RECs will be sold for the project at the time it is constructed. However, if the utility subsequently sells RECs from the facility, it carries a particular burden to inform their customers that they are no longer receiving renewable electricity.[70]

NATIONAL ASSOCIATION OF ATTORNEYS GENERAL

A key legal milestone for RECs was the publication of the National Association of Attorneys General: Environmental Marketing Guidelines for Electricity (NAAG Guidelines)[71] in 1999. The NAAG Guidelines define RECs as "**the right to claim the attributes of the electricity**"[72] that can be "sold separately from the power itself."[73] The NAAG Guidelines parse through then-existing FTC regulations to apply them to environmental claims. The NAAG Guidelines evidence that marketing claims that would be deceptive under the FTC Green Guides also would be deceptive under state laws. The NAAG Guidelines also evidence that even in states without RPSs or regulatory definitions of RECs, RECs include commodifications of environmental claims.

As commodifications of the "attributes" of renewable energy and the behavior[74] of generating renewable energy, RECs transfer to the buyer the right to claim that it is engaging in the benefit of bringing renewable energy to the electric grid. RECs convey the social positive, the good deed, the reason why you should like me instead of my competitor. An analogy[75] of this commodification is an agoraphobe who wants to do the good deed of helping a blind man cross the street, but can't do so herself because she can't leave her house. She instead pays a boy scout to do so, by

an agreement under which the agoraphobe can claim that she, rather than the boy scout, helped the blind man. The agreement commoditizes the good deed, and sells it from the boy scout to the agoraphobe. The boy scout would be in breach of the agreement if he put on Instagram a picture of himself helping the blind man cross the street, because he would have claimed that good deed for himself, thus destroying the agoraphobe's ability to claim she had done it. The situation is the same with RECs and environmental attributes. If a REC or environmental attribute seller claims to have done the good deed itself, that seller has taken the good deed and retired it by claiming it -"consumed" it- for the seller's own benefit to the derogation of the buyer's rights as a purchaser of the REC.

CENTER FOR RESOURCE SOLUTIONS

Center for Resource Solutions (CRS) administers the Green-e[76] renewable energy certification program and is highly influential with regulators and the RECs market. CRS is especially concerned with double counting and double claiming. It publishes papers[77] and writes to regulators.[78] According to one utility, "Green-e Energy is the nation's leading independent certification and verification program for renewable energy. . . . A Green Tag without Green-e certification or the ability to become Green-e certified loses value in the market."[79] State commission orders further illustrate the high standing of CRS standards with regulators.[80] The FTC agrees with CRS's point of view on double claiming in the Green Guides, although CRS was unable to persuade EPA in connection with Emission Reduction Credits (ERCs) in the Clean Power Plan.[81]

CRS views its standards as essential to protecting the integrity of the RECs markets, and has delineated three species of prohibited double counting: "double sale," which is the sale of the same REC to two different people; "double use," which is the use of the same REC for two different purposes; and "double claiming," which is two or more parties claiming the benefits of the same megawatt hour of renewable generation.[82] The Green-e Framework for Renewable Energy Certification provides: "making a claim (e.g., stating 'we buy wind power') is one example of a 'use' that results in retirement."[83] CRS gives an example of what it views as an impermissible utility claim when RECs have been sold:

> A utility is selling the RECs from its wind farm to a REC marketer. The utility wants to advertise its commitment to the environment and launches an ad campaign with language about green power and pictures of the wind farm. The utility also says that it has invested in renewable energy. In this example, the customers (and potential customers) of the utility are under the false impression that they are purchasing renewable energy for their homes or businesses. In fact, the claims for all of the renewable attributes of that power were transferred to the marketer with the RECs. To avoid double-counting and false advertising, the utility must not advertise that they supply green power. If the utility discusses the generation of renewable energy it must also disclose that it is selling off the RECs from the renewable facility and that the wind power is not part of the system mix provided to utility customers.[84]

DOUBLE CLAIM LANDMINES

Retirement claims that destroy a REC bought by one company from another company can be made by a complete stranger to that REC sale contract. A wind turbine manufacturer's claim to have provided the renewable energy that was cre-

ated through the wind farm's use of its turbines arguably retired the RECs that were resold by the buyer of the RECs from that wind farm.[85] RECs meant for the Green-e program were found by CRS to have been retired when a utility buying the energy from a wind farm, but not the RECs, posted pictures of the wind farm on its website.[86] An example of a REC retirement through a compliance claim by another regulated party that was not a compliance claim of the REC itself or of the energy, was when California Energy Commission (CEC) staff said a utility's California compliance RECs were to be disqualified because the Air Force reported acquisition of the landfill gas (the Air Force did not mention the RECs) used to generate the energy under EPACT 2005 retired the REC, CEC staff noting that avoided emissions of GHG are included in the CPUC's definition of a REC.[87] This was not a marketing claim but rather a compliance claim by another regulated party, under a completely different jurisdiction, that was not a claim on either the REC or the energy.

Public statements that energy that was generated by a renewable resource that has been unbundled from the REC is "renewable," "green," "carbon free," "zero carbon," "wind," or "solar" generally consume or retire that REC by claiming it. Even if not explicitly claiming to be buying the renewable energy, stating that one is buying from the "Acme Wind Farm II" when one is buying the energy but not the RECs from Acme Wind Farm II can constitute a claim on the RECs that retire or consume them. Careless public statements that are claims retiring RECs present regulatory and civil liability risks.

Some areas of debate around specific policies are explored below. In general, any voluntary or compliance program that regulates or reports renewable energy generation or environmental attributes delivered to load, customers, or a specific geographic area, or associated with retail sales, consumption, or use, affects and may "consume" RECs, depending on which of the environmental attributes are contained in that REC by statute, regulation, GIS, or contract. RECs might be used as accounting, tracking or compliance instruments in voluntary or mandatory renewable energy sales, power source and emissions disclosures to customers, RPSs, net zero GHG electricity programs, GHG reporting or regulation, and clean fuels or transportation programs. Renewable energy or climate change programs that do not use RECs, but rather use an alternative compliance instrument to count power without RECs as renewable or having a zero emission signature, may be causing double counting or violating a REC owner's property rights.

"FUTURE" ENVIRONMENTAL ATTRIBUTES

Ownership of RECs transfers in slow motion, from the commitment to generate, to generation, through generation data upload to, and certification in, a GIS, through transfer of the GIS Certificate. REC ownership can be destroyed before or after GIS transfer through improper claims. CFTC guidance and precedent demonstrate that a transfer of ownership in a commodity can complete over time. This is revealed in the CFTC's interpretation[88] of what "actual delivery" means in the context of certain transactions in retail commodities, including tangible commodities, like metals, or intangible ones like RECs or bitcoin, where ownership, possession, control, title, and the timing of the transfer of any of these (which need not be simultaneous, and

could conceivably be moments, days or even weeks apart),[89] and the physical location of the commodity purchased or sold, are among the factors that the CFTC indicates that it may consider in determining whether or not a commodity was actually delivered.

RECs can be strangled in the cradle by claims that retire the RECs before the RECs could even have been created. RECs can also be destroyed after GIS transfer by an improper claim made by the seller or a third party. In a sparsely papered transaction taking place after the renewable energy has been generated and the environmental attributes certificated in the GIS, the transfer of the GIS certificate may be the only step in the transfer of environmental attribute ownership.[90] In a well-papered transaction taking place before the renewable energy is generated, such as a long-term power purchase agreement, the transfer of the certificate or attestation may be a last physical step[91] in a continuing process of transfer[92] of environmental attribute ownership that started with the promise to generate and sell the renewable energy, and includes the post-GIS transfer obligation to not make a destructive claim.[93]

The ability to use a REC for compliance with an RPS is a characteristic of the REC as a commodity; it is not the entirety of the commodity itself. Perhaps a specific REC can be used to comply with an existing RPS, and perhaps it could also be used to comply with a future RPS. To analogize, a certain grade of cement has characteristics that could meet a current building code, and those same characteristics might meet a future, as yet unwritten, building code. RECs differ from cement in that building codes are a condition for use, while RPS compliance is an expected benefit from use. If a REC could be used to comply with an RPS yet to be written, as a commodity, that REC includes the expectations of the future benefit of so using that REC. The owner of a REC owns some or all of the attributes of the renewable energy and the behavior of generating that renewable energy, those attributes that enable compliance with an existing RPS could be the same as those attributes that allow compliance with a future RPS. The purchaser of a REC is buying the right to use the attributes that are embodied by law, regulation, or GIS definition in the REC for whatever purpose the owner of those attributes may choose to put them. The purchaser owns the right to use the attributes for a benefit the purchaser expects from the possibility of use to comply with an expected RPS that does not currently exist. Present transferability of future benefits expected to come from future laws, the "assignment of expectancies" property rights inherent in RECs, will vary among the states whose laws govern the contract or RECs in question.

A working group convened at the inception of WREGIS[94] concluded that under California law this expectancy is assignable, as in California even the possibility of a benefit is assignable.[95] Further, at least under California law, a secured creditor can probably successfully take and perfect its security interest in the assignment of expectancies stick in the bundle of legal rights in a REC.[96]

If a new federal or state RPS creates a new instrument for compliance that is attributable to generation of renewable energy, a seller under a long-term renewable resource sale contract dated before the new RPS may claim that such new instrument was not transferred, and rather belongs to the seller. A buyer will likely assert that

having bought the renewable generation, including the "attributes" of renewable energy transferred by the contract, the ability of that renewable energy generation to comply with that new RPS is among the purchased "attributes," and also that any separate sale by seller may lead to a destructive claim on the RECs. This debate has occurred before with respect to RECs, and the buyers have, for the most part, won.

Early in the history of RECs, "qualifying facilities," or "QFs," the beneficiaries of a mandatory energy purchase program under Public Utility Regulatory Policies Act of 1978 (PURPA), claimed that the RECs that were created by the renewable energy purchased by the utilities were not part of the renewable energy sold to the utilities. FERC ruled that PURPA did not transfer the RECs and whether the utility purchased the RECs as part of its PURPA contract was a matter of state contract law.[97] Different state utility commissions promulgated different rules on whether the PURPA contract transferred the RECs,[98] and courts found that the utilities did indeed purchase the RECs along with the renewable energy, even if statutes defining RECs post-dated the PURPA contracts.[99] Because PURPA requires utilities to purchase energy from a facility that is renewable, many are of the view that the mandatory purchase obligation on account of the "renewable-ness" to some extent consumes the RECs, making QF RECs less appetizing for third party transfer; for example, California's RPS limits use of market-traded QF RECs for RPS compliance.[100]

CUSTOMER CHOICE PROGRAMS

RECs enable utility retail customers who cannot directly interconnect to renewable energy resources to use renewable energy. RECs enable delivered and consumed electricity to be characterized as having renewable energy environmental attributes. Retail electric utilities have long offered such customer choice programs to customers.[101] These programs typically match customer energy usage with the utility's purchase and retirement of RECs. One of the earliest and most respected and successful customer choice programs is PacifiCorp's Blue Sky renewable energy program, which gives its customers the option to purchase "Blue Sky blocks"; PacifiCorp retires RECs to match customer consumption.[102] These programs provide important and valued benefits to customers.[103]

RECS, "ZERO CARBON" AND OFFSETS

Reduced GHG emissions are often promoted as a benefit of renewable energy and RECs, especially in customer choice programs,[104] and also in state compliance programs.[105] California has committed to zero-Carbon energy use by 2045.[106] The nation's largest electric utility by number of customers, Duke Energy, has committed to be net zero-Carbon by 2050.[107] Engaging in the behavior of generating energy from renewable energy resources instead of from fossil fuel resources also displaces the fossil fuel generation and reduces emissions of GHG on the grid, by "avoiding" the fossil fuel GHG emissions.

Areas of policy debate concerning present and future mandatory and voluntary state and federal caps on GHG emissions and RPSs as they relate to RECs include where the "avoidance" takes place, who owns the avoidance, the quantity of the avoidance, whether saying "my energy has no Carbon" is a claim on an attribute of a REC

that retires the REC, and whether using zero Carbon energy offsets other Carbon emissions. For example, EPA interprets the Clean Air Act to provide that avoided emissions belong to the utility identified to be buying the renewable energy instead of generating with a coal plant, irrespective of RECs.[108]

Regulators of different Western states, and even within the same Western state, have argued over the consequences upon a REC of renewable energy and GHG compliance and claims. Though the highly inclusive California definition of a REC specifically includes avoided emissions,[109] the California Public Utilities Commission (CPUC) concluded that "this definition does not create any right to use those avoided emissions to comply with any GHG regulatory program."[110] The CPUC stated prior to AB32 that "once a GHG cap is imposed, RPS-eligible generation subject to a cap never avoids emissions. The 'avoided emissions' will continue to be included in the REC, but the avoided emissions value will be zero; the balancing GHG emissions value of the null power will therefore also be zero."[111]

CRS's position is that GHG emissions are an attribute of generating renewable electricity and are not physically delivered to electric load, and that in general, RECs include both the direct GHG emissions attribute and the "avoided grid emissions" associated with renewable electricity generation.[112] According to CRS:

> Generating electricity can both directly emit an amount of GHGs and cause a net change to GHG emissions from other sources on the grid as generation is displaced (or avoided). We call these the two [GHG] "attributes" of electricity generation: 1. The direct emissions associated with generation; and 2. The avoided grid emissions due to generation. Emissions are attributes of generation because they occur at the point of generation, rather than at the point of distribution or consumption, and they characterize the manner of electricity production, along with fuel type, location, and other attributes.[113] In general, REC owners can claim: 1. To be consuming electricity with the direct emissions (or emissions factor or profile) of the renewable generator of the REC (e.g. zero for wind and solar), and 2. That the generation of their electricity avoids emissions on the grid [unless it is located in a capped region and allowances have not been retired on its behalf[114]]. These claims are the same regardless of whether the RECs were delivered and consumed through an RPS or the voluntary market.[115]

As set forth above, RECs are often defined to include "all environmental attributes" of electricity generation, and CRS reports that there are no states that exclude the direct GHG emissions associated with generation from the attributes included and conveyed in RECs.[116] CRS's position is that without the direct GHG emissions (e.g. zero emissions) attribute included in the REC, RPS programs would not be able to deliver carbon benefits, which in many states is an explicit purpose of the RPS.[117]

A relic from earlier days of REC development, the ABA/EMA/ACORE RECs Master Agreement, provided a mechanism to break out the GHG benefit attributes from the other attributes of a REC.[118] The form was published in 2007 after a two-year effort, and thereafter the market and regulation developed in a direction that for the most part keeps "all" environmental attributes in RECs. For example, in addition to the state and federal definitions of RECs containing "all" attributes set forth above, most GISs do not allow RECs to have their various environmental attri-

butes disaggregated and separately transacted; WREGIS dead-ends disaggregated RECs into what it calls a Reserve Subaccount, from which the RECs may not be transferred or resurrected, including for compliance retirement.[119] Future policy could develop in a way that gives the ABA/EMA/ACORE contract mechanism new relevance. But any such policy developments must be mindful that disaggregation by either fiat or contract is at variance with the prevailing regulatory and contract structure of RECs and REC markets.

CRS's position is that disaggregating the direct GHG emissions or emissions rate from other generation attributes included in the REC would create discrepancies between the fuel type and emissions of purchases that would be factually inconsistent and inescapably confusing—for example, RPS customers could report using wind power but not the emissions intensity of wind power.

CRS's position is that while accounting of emissions from electricity generation delivered to load (customers, sales) affects RECs, "source-based" policies or accounting of emissions from electricity generation that regulate or measure what is generated in a particular place (rather than what is delivered to or consumed by that place), do not: "the difference between production and consumption permits both the renewable energy generator and the REC consumer to claim production and use, respectively, of generation."[120] CRS's position is that for the same reason, that direct GHG emissions attributes and claims in RECs are not affected by caps on emissions from the power sector:

> Broadly speaking, production-based GHG Regulation does not affect the direct emissions of renewable energy generation [. . .]. It will not affect the claims of REC owners to the direct emissions attribute or Scope 2 GHG accounting by REC purchasers due to the distinction between production and consumption claims.[121]

Notwithstanding CRS's position, disaggregation of some GHG attributes from RECs has been occurring on a de facto basis in some programs. These GHG attributes can include the attributes of avoiding GHG emissions, and the attribute of reportable or claimable as possessing zero direct GHG emissions.

Separate from avoidance and zero emission reporting as REC attributes is the concept of a GHG "offset," which is generally not defined as, and is hard to see as being part of, a REC in the first place. The "avoided" emissions included in RECs are different from "offset" emissions, and RECs are different from offsets.[122] According to EPA:

> An offset project is "a specific activity or set of activities intended to reduce GHG emissions, increase the storage of carbon, or enhance GHG removals from the atmosphere." The project must be deemed additional; the resulting emissions reductions must be real, permanent, and verified; and credits (i.e., offsets) issued for verified emissions reductions must be enforceable. The offset may be used to address direct and indirect emissions associated with an organization's operations (e.g., emissions from a boiler used to heat your organization's office building). The reduction in GHG emissions from one place can be used to "offset" the emissions taking place somewhere else. Offsets can be purchased by an organization to address its scope 1, 2, and 3 emissions. Offsets can be used in addition to an organization taking actions within its own operational boundary to lower emissions. Offsets are often used for meeting voluntary commitments to lower GHG emissions where it is not feasible

> to lower an organization's direct or indirect emissions.[123]

There are active markets in Carbon offsets, although not as active as they might have been with better policy choices. Recently Mark Carney, the former Governor of the Bank of England, convened a Taskforce to see what could be done to improve offset markets.[124] There will not be room for improving offset markets via RECs, since RECs are not offsets. CRS explains:

> Avoided emissions claims made by REC owners are not equivalent to carbon offset claims. First, avoided grid emissions are not equivalent to absolute reductions on the grid or global reductions. They are only a calculation of the emissions displaced by the renewable generation. Avoided grid GHG emissions cannot be used to adjust a consumer's carbon footprint or for Scope 2 emissions calculations. Second, avoided grid emissions associated with the renewable generation are not necessarily caused by the renewable energy/REC purchase or purchaser. Rather, the generation used by the purchaser results in avoided emissions. In public statements, avoided grid emissions should always be associated with the renewable energy generation itself or the supply for the renewable energy product, rather than the purchaser's action.
>
> In general, RECs should not be confused with carbon offsets. They are different instruments that convey different claims, and they are accounted for differently in a consumer's GHG emissions inventory or footprint. Whereas RECs represent a MWh of renewable energy generation, carbon offsets represent an amount of GHG emissions reduction in tons of CO_2e.[125] REC purchasers effectively contractually fuel switch from a certain mix of electricity generation to renewable generation, and can therefore both reduce the portion of their carbon footprint associated with purchased electricity (Scope 2) and claim that their generation has some emissions effect on the grid. A carbon offset is a standalone, global emissions reduction beyond a baseline level of emissions from a project activity that would not have occurred but for the carbon offset market. Carbon offsets can be used to address any scope of emissions as a net adjustment to the gross consumer GHG inventory. Likewise, purchasing carbon offsets, which do not include non-GHG generation attributes, is not equivalent to purchasing renewable energy instruments or certificates, and carbon offsets cannot be used to make renewable energy consumption or zero-emissions electricity usage claims.[126]

Other NGOs also object to the sale of RECs as carbon offsets,[127] and criticize organizations selling RECs as offsets.[128] The Green-e Climate Standard, a standard for retail carbon offsets, prohibits the sale of a GHG emission reduction product derived from renewable energy if a REC or the electricity associated with the REC is used for any compliance purpose.[129] Again, CRS explains:

> Though they are different instruments and projects must meet different criteria to generate each of them, a REC and a carbon offset cannot both be generated or issued for the same MWh of renewable energy generation since the avoided emissions attribute of renewable energy is included in both of them. An individual MWh can either be used and claimed as a REC or used to generate a carbon offset. Where carbon offsets are issued to renewable energy generators that meet carbon offset criteria, the RECs associated with those MWh must be retired to substantiate the creation of offsets in order to avoid disaggregation of the attributes included in a REC. Though RECs do not deliver offset claims, avoided emissions are included in a REC so that voluntary renewable energy sales and RPS programs can deliver these benefits and so that they are not sold off separately, for example in a carbon offset.[130]

Not using RECs as offsets should be distin-

guished from RECs that are associated with a fuel creation and generation process that creates both RECs and offsets. One can separately offset Carbon through fuel creation, such as by capture of methane from landfills or agricultural waste that creates Carbon offsets through a process that is monitored, measured, and verified pursuant to a Carbon offset protocol,[131] and then combust that captured methane, and transfer a portion of the Carbon offsets to the transferee of the REC sufficient to cause the combustion of the captured methane to have net zero emissions.[132] The global warming potential over 100 years of captured methane is 28 times greater than that of CO_2,[133] far more than enough to offset the global warming potential of the avoided fossil fuel generation.

Such a transfer of Carbon offsets to the REC purchaser is explicitly required by the California RPS with respect to biomethane combustion: "If the Project is a biomass or biogas facility and Seller receives any tradable Green Attributes based on the greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, it shall provide Buyer with sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from the Project."[134] In the case of electricity generation from biogas (which is also known as biomethane) that was captured from landfill or livestock methane, the offsets and RECs are associated with different activities: offsets for the capture of the methane, and RECs for the generation of electricity from that methane.[135] Likewise, the carbon benefit included in each commodity is associated with a different set of reductions, or reductions from different carbon pools—one with the reduction of methane emissions, and the other with the reductions that occur on the grid as a result of biogas electricity production.

California also has statutory Carbon offset claims regulation in its RPS:

> A retail seller, local publicly owned electric utility, or an intermediary party to a biomethane procurement contract shall not make a marketing, regulatory, or retail claim that asserts that a biomethane procurement contract to which that entity was a party resulted, or will result, in greenhouse gas reductions related to the destruction of methane if the capture and destruction is required by law. If the capture and destruction of the biomethane is not required by law, a retail seller, local publicly owned electric utility, or an intermediary party to a biomethane procurement contract shall not make a marketing, regulatory, or retail claim that asserts that a biomethane procurement contract to which that entity was a party resulted, or will result, in greenhouse gas reductions related to the destruction of methane, unless the environmental attributes associated with the capture and destruction of the biomethane pursuant to that contract are transferred to the retail seller or publicly owned electric utility that purchased that biomethane and retired on behalf of the retail customers consuming the electricity associated with the use of that biomethane, or unless the biomethane procurement contract prohibits the source of biomethane from separately marketing the environmental attributes associated with the capture and destruction of the biomethane sold pursuant to that contract. These attributes shall be retired and may not be resold.[136]

ADDITIONALITY

The FTC had initially considered, and ultimately rejected, requiring "additionality" in connection with Carbon offset and REC claims in its Green Guides revisions.[137] Broadly speaking, "additionality" is a concept of causing a benefit that is additional to what would have occurred under business as usual,[138] and there are many types of additionality that could be applicable to

contracting for RECs from new renewable resources.[139] An environmental benefit required by a regulator is not additional, since it would have happened anyway. Concepts of additionality leaked into renewable resource markets from their original home in Kyoto Protocol flexible mechanism debates,[140] adding to RECs a signifier as an addition to sales price that rewards development. Additionality came after, and did not drive the development of, RECs, and is not a requirement for the creation of RECs or to claim use or delivery of renewable energy through RECs.[141] Nevertheless, additionality is now a present concept in voluntary renewable energy procurement. A technology company contracting for a new renewable resource facility for its data center in a jurisdiction that does not mandate use of that full quantity of renewable energy may assert additionality in connection with its RECs claims.[142]

REGULATORS DEBATE RECS AND "ZERO CARBON"

California Air Resources Board (CARB) AB32 cap-and-trade program reporting regulations require an importer of energy into California from a specified renewable energy generating unit to report to CARB an emissions factor of zero for the imported energy, as well as the disposition of, without being required to retire,[143] the RECs from that resource, if there are any RECs from that resource that are eligible under the California RPS. Imported electricity is "electricity generated outside the state of California and delivered to serve load located inside the state of California."[144] The electricity is counted as a zero emissions import for CARB's purposes, and CARB does not require retirement of the REC, and is in fact indifferent as to how the REC is used.[145] California has a very broad and detailed definition of a REC that specifically references GHG emissions,[146] and yet under California regulation, a zero-emission delivery to California reported to CARB is not a claim that requires a retirement. The California Energy Commission (CEC) concluded that reporting energy as zero-emitting does not preclude the use of the associated REC for RPS compliance.[147] Therefore, for energy from CEC-certified renewable energy facilities, the importer reports a direct delivery of a zero-emission electricity import pursuant to California's mandatory reporting rule and cap-and-trade program.[148] but, as far as California is concerned, the RECs may be used for compliance with California's or any other state's RPS. While California may determine that the same renewable energy may be reported as a zero-emission electricity import and also used for compliance with California's RPS, the RECs may also potentially be used outside of California, for example in another state's RPS. Other states may consider the RECs "consumed" by California's use of the zero emission (direct GHG emissions) attribute for the report of electricity delivered to serve California load pursuant to California's AB32 program.

The Western "Energy Imbalance Market," or EIM, is a regional voluntary real-time wholesale power market in the West that allows generators outside of California to sell energy into the California Independent System Operator (CAISO). A firestorm was touched off among Western state regulators by a since-withdrawn April 19, 2017, WREGIS memo that took a position opposite CARB's, by alleging that "WREGIS account holders bidding energy into the EIM should be prepared to retire the RECs associated with that energy. The RECs have been split and are no lon-

ger complete RECs as defined by the WREGIS Operating Rules. These RECs should be retired under the timeline outlined by the applicable state program or as defined by the CAISO." Why WREGIS distinguished imports into EIM from other non-EIM imports into California remains obscure.

The WREGIS memo precipitated regulators in Western states considering the effect of reporting zero Carbon emissions for renewable energy upon associated RECs, especially in relation to EIM, in a June 2017 Oregon Department of Energy (ODOE) request[149] for comments[150] and an August 2017 WREGIS EIM task force meeting.[151] The outcomes were described by commenters[152] at a CAISO September 2017 regional forum. CARB, the CPUC, and CEC jointly explained:[153]

> California's Cap-and-Trade Program does not require that RECs be retired for specified source imports for compliance with the Program, nor does it consider that the assignment of a zero emission factor constitutes avoided emissions or a claim on a REC. Through the reporting of actual emissions of imported electricity from renewable electricity resources, the Cap-and-Trade Program recognizes that zero-emission electricity was brought into California to serve California load. Electricity imported via EIM is electricity from a specified source and is reported as such to CARB.

ODOE withdrew, subject to further process, its initial position that imports of specified renewable resource energy into California claimed the associated or formerly associated RECs, and WREGIS withdrew its by-then infamous memo that an EIM import from a renewable energy resource required retirement of the associated REC. Potential reasons included recognition of those state programs that required reporting zero Carbon emissions for energy notwithstanding separation from RECs, as well as the arguments set forth in comments of the CEC[154] and others.[155] CRS[156] disagreed with the outcome, just as it disagrees with CARB rules not requiring REC retirement in connection with an import of the associated energy.[157]

These issues were again raised by California's Independent Emissions Market Advisory Committee (IEMAC),[158] the EIM Regional Issues Forum (RIF),[159] and Washington's Clean Energy Transformation Act (CETA) Carbon and Electricity Markets Workgroup (MWG).[160] The eligibility of RECs associated with reported California renewable resource energy imports remains under discussion in Washington State under CETA; in Oregon under RPS and the Clean Fuels Program;[161] in Arizona under its proposed new Clean Energy Standard; in Colorado under implementation of SB19-096, HB19-1261, and SB19-236; and in potentially other Western states. California's IEMAC explains:

> At the heart of this issue lie potential inconsistencies in how policymakers in California and across the west implement climate change policies designed to reduce the carbon intensity of electricity generation. California tracks tons of GHGs in order to assess compliance with its cap-and-trade program. Under RPS, renewable energy producers generate electrical energy (MWh) and RECs (one REC per MWh). In contrast with the cap-and-trade program, RPS compliance is measured in terms of RECs. If a neighboring state associates a REC with a low- or zero-carbon resource when California also counts the low- or zero-carbon resource with the associated energy delivery, there is the potential to "count" (albeit using different metrics) the same low- or zero-emissions attribute twice.[162]

Separate from RPS and GHG programs in

many states are "power content labelling" or "power source disclosures" that communicate claims with respect to resource type and Carbon emissions. These programs typically require retail energy suppliers to provide disclosures concerning the sources, and sometimes the associated GHG emissions intensity, of electricity serving retail load. These programs set forth rules on whether the buyer needs the RECs in order to disclose as renewable the energy use, which procurement transactions, such as unbundled RECs and what are called "firmed-and-shaped renewable procurements," count, and how to account for RECs in GHG emissions intensity. The CEC rulemaking for the Power Source Disclosure Program under AB 1110[163] ultimately required that RECs must be owned and not sold, though not necessarily retired, by regulated retail electricity suppliers both to report an eligible renewable fuel type and to assign the GHG emissions intensity of an eligible renewable generator: "Electricity purchases from an eligible renewable generator without the associated RECs shall be classified as unspecified power."[164] But the CEC otherwise aligned emissions reporting in the power content label with CARB GHG reporting requirements[165] by not allowing unbundled RECs to be included in GHG intensity calculations[166] and assigning positive GHG emissions to the energy provided in "firmed and shaped" renewable energy transactions.[167] In response to comments that the renewable energy percentage on the power content label should be consistent with the RPS, the CEC responded that "procurements made to satisfy RPS requirements do not necessarily reflect the sources of electricity associated with retail load in California," and further that the "PSD program is not RPS, and cannot fully harmonize with RPS without contradicting provisions of the enabling statutes."[168]

EPA CLEAN POWER PLAN SEAMS WITH STATE RPSS AND FTC GREEN GUIDES

The Obama Administration EPA's now-repealed Clean Power Plan (CPP)[169] is discussed here in depth because the CPP may be a touch point for an incoming Biden Administration and also because the CPP rulemakings provide EPA's interpretation under the Clean Air Act of avoided emissions attributes. Parts of the CPP presented potential conflicts with the existing legal and contract infrastructure of RECs and REC markets as discussed above, and such conflicts should be avoided because they may lead to results that are contrary to the shared goal of promoting renewable energy and combating climate change and that interfere with existing contract rights.

The CPP provided for a new environmental compliance commodity called Emission Reduction Credits (ERCs).[170] EPA described ERCs as CPP compliance instruments and RECs as RPS compliance instruments and said that both could come from the same megawatt-hour of qualifying renewable energy and be used separately in each respective program.[171] ERCs were "discrete tradable commodities"[172] and according to EPA, "trading does nothing more than commoditize compliance."[173] ERCs did not appear to measure avoided emissions in avoided tonnes of CO_2e, but rather avoided generation measured in megawatt-hours.[174] EPA proposed that an "ERC does not constitute a property right,"[175] which is typical for allowance or government issued permit trading programs, since the government does not want to be at risk of a Fifth Amendment taking claim if it reduces overall budgeted allowances.[176] EPA provided a number of not necessarily consistent descriptions of ERCs: "the

environmental attributes here [are] CO_2 emissions,"[177] "investments in pollution control measures,"[178] "represent[] an investment in surplus emission rate reductions,"[179] and "invest[ment] in incremental [renewable energy] generation."[180]

EPA threw up its hands when it came to fully describing RECs.[181] Although EPA recognized the voluntary use of RECs,[182] and referred to private contract tangentially,[183] EPA seemed to miss both that all voluntary and many mandatory REC measures arise from GIS and contractual definitions of RECs, and that RECs are often created by contract; in fact, Colorado regulation defines a REC as a "contractual right."[184]

After noting that RPSs "are policy instruments that states may choose to implement for a number of reasons not related to CO_2 emission reductions,"[185] EPA pointed to the extreme variability of state RPS program REC definitions to explain why RECs fail as a CO_2 reduction policy instrument: "differences across RPS policies in eligible resources, crediting mechanisms, deliverability requirements, alternative compliance payments, and other policy elements made the regional averaging of state level RPS requirements challenging."[186]

And EPA clearly understood that state definitions of RECs presented issues in effecting fully separate uses of RECs and ERCs (the CPP required states to write state implementation plans):

> An ERC may be issued based on the same data and verification requirements used by existing REC and EEC [sic] tracking systems for issuance of RECs and EECs [sic]. EPA notes that the definitions of other instruments, such as RECs, differ (as established under state statute, regulations, and PUC orders) and that requirements under state regulatory programs that use such instruments, such as state RPS, also differ. As a result, states may want to assess, when developing their state plan, how such existing instruments may interact with ERCs. For example, a state may want to assess how issuance of ERCs pursuant to a state plan may interact with compliance with a state RPS by entities affected under relevant state RPS regulations or PUC orders. The interaction of other instruments and ERCs may also impact existing or future arrangements in the private marketplace. Actions taken by states, separate from the design of their state plan, could address a number of these potential interactions. For example, **state RPS regulations that specify a REC for a MWh of RE [renewable energy] generation, and the attributes related to that MWh, may or may not explicitly or implicitly recognize that the holder of the REC is also entitled to the issuance of an ERC for a MWh of electricity generation from the eligible RE resource. This could impact existing and future RE power purchase agreements or REC purchase agreements.** Such interactions among existing instruments and ERCs could also impact how marketing claims are made in the voluntary RE market. How a state might choose to address these potential interactions will depend on a number of factors, including the utility regulatory structure in the state, existing statutory and regulatory requirements for state RPS, and existing RE power purchase agreements and REC contracts.[187]

EPA explicitly stated that state regulators formulating rate based state implementation plans needed to address RPS rules and private contracts concerning the content of a REC, while at the same time clearly implying that it is EPA's preferred view that the "reductions"—in generation, which are the CPP-relevant reductions, as well as, apparently, the "emission reductions"—are not in the RECs. CRS had a different interpretation, that the ERC determined the location

and use of avoided grid emissions from renewable energy for CPP compliance without disaggregating the attribute from the REC or affecting the claim of the REC owner that their generation avoids emissions:

> An EGU that owns an ERC is able to report a reduced emissions rate as if that EGU had produced an extra MWh of emissions-free power. Since ERCs are transacted between RE generators and affected EGUs, it may be logical to think of the ERC as transferring the emissions rate of the RE generator to the EGU: the EGU that owns an ERC is able to report a reduced emissions rate as if the generation that actually occurs at the RE plant had occurred at that EGU, with an emissions factor of zero. But since ERCs are not only generated by activities that generate power, but rather by activities that avoid generation at affected generating units—including zero-emitting power generation, and also energy efficiency, transmission and distribution measures, demand-side management, etc.—we know that ERCs do not convey the emissions factor of zero-emitting generation. [. . .] RE generation [. . .] (like other ERC-qualifying measures) avoids emissions in the region where it is located by displacing (or, in the case of energy efficiency, avoiding the need for) generation at nearby emitting generators [. . .]. However, in order to report that avoided generation and emissions reductions for CPP compliance in a rate-based state, the nearby emitting generator [. . .] would need the corresponding ERC to adjust its rate. Instead, the ERC has been transferred to an out-of-state affected EGU [. . .], which is able to use the ERC to adjust its rate for CPP compliance.
>
> [. . .] In other words, an ERC owner is effectively reporting that the avoided emissions caused by that MWh of RE occurred at their EGU for the purposes of compliance. The REC owner may still be able to claim that their RE generation avoids these emissions, which simply get used for compliance by ERC owner. In this case, the REC claim is to avoided emissions as a benefit of RE consumption ("I use/deliver RE generation that avoids X emissions"). The ERC claim is a compliance claim to the avoided emissions for reporting generation ("the X avoided emissions from that RE generation occurred on my behalf for CPP compliance"). Both can be made simultaneously [. . .]. This is true because the CPP does not allocate or deliver RE or its attributes to specific customers for consumption claims.[188]

EPA's view on the reductions was presaged in the CPP proposed rules,[189] in which EPA explained how reductions achieved through the purchase of renewable energy are, under the Clean Air Act, reductions by the otherwise emitting source that is reducing its emissions by displacing its generation[190] and belong, without reference to RECs or any other environmental commodity, to the utility purchasing the substitute generation, or at least to the state achieving utility reductions through its plan.[191] These "reductions" include pollutants beyond GHG.[192]

EPA encouraged use of the existing REC measurement and compliance infrastructure for CPP ERC compliance, which confirmed EPA's preference for two uses—state RPS and CPP ERC—for the same megawatt-hour of qualifying renewable generation.[193] WREGIS and other GISs at the time discussed whether GISs had a role in ERCs. But EPA understood that states might not want unfettered use of a megawatt-hour of qualifying renewable generation for an ERC, perhaps especially if there is an associated use of RPS compliance RECs.[194] EPA also seemed to have in mind that renewable generation could create an environmental commodity that was neither a REC nor an ERC.[195]

Despite EPA's stated preferences and interpretation of the Clean Air Act, a rate-based CPP state

implementation plan seeking to assign both ERCs and RECs to the same megawatt-hour of renewable generation would have presented contract and regulation seams issues for many states and other regulations.[196] Despite the strong arguments that could be presented in favor of a regulated utility not consuming RECs through use of ERCs, regulated entities in states with inclusive RECs definitions would likely not have been free from the risks presented by these and other seams without regulatory or legislative, changes to the RPS. EPA may have ignored the issue of contract definitions of RECs because there was not much that EPA or a state implementation plan could have done about it, but this did not make the potential for destruction of private party contract rights any less real. A state probably cannot constitutionally reallocate between parties the contract rights to those environmental attributes included in the REC that allowed use of, or retirement by, a megawatt-hour for CPP compliance or the attributes of an ERC.[197]

EPA recognized that its proposed CPP presented significant double counting issues due to the potential overlap between state RPS programs.[198] EPA's statement that "interactions among existing instruments and ERCs could also impact how marketing claims are made in the voluntary RE market"[199] was an unhelpful understatement; states do not entirely regulate those marketing claims; the FTC also has jurisdiction.[200] Realistically, the FTC might have revised its regulations to accord with EPA's views, although there would have been uncertainty before that process, and state truth in advertising law amendments, got underway and were resolved, presenting problems for those wishing to observe regulations and defend against private contract litigation in the interim. This also makes very clear that an electric utility in receipt of the "avoidance" environmental attribute through purchase of renewable energy by virtue of the EPA's interpretation of the Clean Air Act probably remains in need of the RECs themselves in order to comply with other applicable federal regulation, notably the FTC Green Guides.

CONCLUSION

Full knowledge[201] of how RECs are property, that this property includes rights in overlapping subsets of environmental attributes relating to claims, fuel source, emissions signature, and avoided emissions, that this property is protected pursuant to and defined according to federal and state law and regulation, GISs, voluntary standards, and private contracts, that aspects of this property come into existence and can be extinguished at varying points of a long creation and property right transfer chain, is essential for anyone wishing to transact in RECs.

Throughout the arduous path in the development of RECs that is merely hinted at above, parties to agreements have had to address the next visible stage of policy development. RECs can be seen as a means to the end of providing society the benefits obtained by increased use of renewable energy resources. Policies to achieve such ends may shift in focus to zero emissions, or to federal laws replacing state laws. Even if such programs do not avail themselves of the rich legal structure that RECs can provide, such programs will need to address the existing rights of private parties and existing laws and regulations in a deep REC commodity and legal infrastructure. Contracting parties should be thinking about, seeking to understand, and preparing agreements that address the rights of par-

ties in RECs as they could be affected by all the possible disharmonies from existing and potential future programs.

ENDNOTES:

[1]RECs also are, and have been, called "green tags," "renewable energy credits," "green attributes," "tradeable renewable energy credits," "alternative energy credits," among many other names.

[2]GISs include the Electric Reliability Council of Texas (ERCOT), Michigan Renewable Energy Certification System (MIRECS), Midwest Renewable Energy Tracking System (M-RETS), North American Renewables Registry (NAR), New England Power Pool Generation Information System (NEPOOL GIS), North Carolina Renewable Energy Tracking System (NC-RETS), New York Generation Attribute Tracking System (NYGATS), PJM Generation Attribute Tracking System (PJM GATS), and Western Generation Information System (WREGIS). See also Info on tracking systems: https://apx.com/renewable-registries-and-generation-attribute-tracking-systems/.

[3]See, e.g., FTC Division of Enforcement Staff Letter dated Feb. 2, 2015, p. 3, avail. at http://www.ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf.

[4]New York Power Authority, *New York Power Authority Wind Power Agreements to Serve Government Customers in New York City* (Dec. 8, 2006), avail. at https://web.archive.org/web/20090114041557/http://www.nypa.gov/press/2006/061208b.htm. The NYPA negotiating team was thrilled by a lively visual encounter with renewable energy, the *Mission Impossible III* (2006) helicopter chase scene (through the San Gorgonio Pass Wind Farm outside of Palm Springs, California).

[5]House Committee on Environmental & Commerce, "The CLEAN Future Act," p. 3 (Jan 8, 2020), avail. at https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/CLEAN%20Future%20Act%20Memo.pdf; *E&C Leaders Release Framework Of The Clean Future Act, A Bold New Plan To Achieve A 100 Percent Clean Economy By 2050*, avail. at https://energycommerce.house.gov/newsroom/press-releases/ec-leaders-release-framework-of-the-clean-future-act-a-bold-new-plan-to.

[6]The U.S. Power Annex was jointly developed by ISDA and the EEI Contract Drafting Committee in 2003, an effort in which I participated, and is the EEI Master Power Purchase & Sale Agreement unchanged but for fitting into the ISDA framework, and appending a now long out of date *Mobile-Sierra* waiver. ISDA, *ISDA and EEI Announce North American Power Annex to ISDA Master Agreement* (August 7, 2003) avail. at https://web.archive.org/web/20031203014235/https://www.isda.org/press/press080703.html.

[7]Renewable Energy Certificates Annex to the EEI Master Power Purchase & Sale Agreement, Version 1.0 (Nov. 14, 2010), avail. at https://www.eei.org/resourcesandmedia/Master%20Contract/EEI%20RECs%20Annex%20v1.pdf. I co-chaired the subcommittee that drafted the EEI RECs Annex.

[8]Master Renewable Energy Certificate Purchase & Sale Agreement (v.1.0, 2007), avail. at https://emahq.org/sites/default/files/ABA%20EMA%20ACORE%20Master%20RECs%20Agreement%20v1.0.doc; discussed at length in Jeremy Weinstein, *The New ABA/EMA/ACORE Master Renewable Energy Certificate Trading Agreement*, chapter 10 *in* Energy and Environmental Trading: U.S. Law and Taxation (Andrea S. Kramer and Peter C. Fusaro eds., Cameron May 2008); see also Jeremy Weinstein, *On the Path to Renewable Energy Certificates Derivatives*, Fut. & Derivs. L.Rep. (Apr. 2007); Jeremy Weinstein, *The ABA/EMA/ACORE Master Renewable Energy Certificate Trading Agreement*, Bloomberg L.Rep.: Sustainable Energy, vol. 2 no. 9, p. 11 (Sept. 2009); Jeremy Weinstein, *Contracting for a Unified Renewable Energy Certificates Market*, Environmental Finance (Nov. 2006); Jeremy Weinstein and Dan Chartier, *Standardizing Renewable Energy Certificates Contracting*, Environmental Finance (May 2005). I co-chaired the working group that wrote the

agreement.

[9]WSPP Agreement, WSPP, Inc., First Revised Rate Schedule FERC No. 6, avail. at https://www.wspp.org/pages/documents/07_28_20_current_effective_agreement.pdf; see also *WSPP, Inc.* 139 FERC ¶ 61,061 (2012). I actively participated in the WSPP Contract Subcommittee drafting of Schedule R.

[10]E.g., NAESB, *Renewable Energy Certificate (RECs) Update* (Oct. 19, 2020), avail. at https://www.naesb.org/pdf4/update102120w1.docx.

[11]I am co-chair of that drafting subcommittee.

[12]Likely future federal initiatives are catalogued in Select Committee on the Climate Crisis, Majority Staff Report, *Solving the Climate Crisis: The Congressional Action Plan for a Clean Energy Economy and a Healthy, Resilient, and Just America Majority Staff Report* (Jun. 2020), avail. at https://climatecrisis.house.gov/report.

[13]FERC, *WSPP, Inc.*, *Order Conditionally Accepting Schedule R*, 139 FERC ¶ 61,061, para. 5 (2012).

[14]*American Ref-Fuel*, 105 FERC ¶ 61,004, para. 23 (2003): "States, in creating RECs, have the power to determine who owns the REC in the initial instance, and how they may be sold or traded . . . ."

[15]FERC, *WSPP, Inc.*, 139 FERC ¶ 61,061, para. 18 (2012).

[16]*U.S. v. Oluwaseyi Adeyemi*, No. 19 CR 383, Plea Agreement p. 2 (N.D.Ill. 2020); see Lauraann Wood, Law360, *Trader Admits Shifting Energy Credits To His Own Company* (Feb. 25, 2020) avail. at https://www.law360.com/articles/1247168/trader-admits-shifting-energy-credits-to-his-own-company.

[17]*Appeal of Honeywell, Inc.*, Armed Services Board of Contract Appeals (ASBCA) No. 57779, avail. at https://www.asbca.mil/Decisions/2013/57779%20Honeywell%20International,%20Inc.%208.7.13%20PUBLISHED.pdf ("We agree . . . that SRECs are personal property, given their exclusive nature and transferability. . . . New Jersey case law is consistent with that conclusion, characterizing SRECs as commodities subject to ownership. *Ownership of Renewable Energy Certificates,* 913 A.2d [825] at 827 [(NJ. Super. Ct. App. Div. 2007)]."). State utility and tax regulators have also characterized RECs as property. E.g. Oregon Public Utility Commission Orders 07-083 (Mar. 5, 2007); 10-022 (Jan. 26, 2010). See also Todd Jones, et al., *The Legal Basis of Renewable Energy Certificates*, Center for Resource Solutions (2015), avail. at https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf.

[18]EPA, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule*, 80 Fed. Reg. 64662 at 64806 (Oct. 23, 2015).

[19]EPA Green Power Partnership, *Renewable Energy Certificates (RECs): What is a REC?*, avail. at https://www.epa.gov/greenpower/renewable-energy-certificates-recs.

[20]EPA Green Power Partnership, *Offsets and RECs: What's the Difference* (Feb. 2018), avail. at https://www.epa.gov/sites/production/files/2018-03/documents/gpp_guide_recs_offsets.pdf.

[21]Webster's Encyclopedic Unabridged Dictionary of the English Language, p. 96 (1994).

[22] https://www.merriam-webster.com/dictionary/attribute.

[23]Black's Law Dictionary (11th ed. 2019).

[24]CFTC & SEC, *Joint Final Rule; Interpretations; Request for Comment on an Interpretation, Further Definition of "Swap,"* . . ., 77 Fed. Reg. 48208 at 48233-35 (Aug. 13, 2012) (citing, among others, comment letters I co-wrote); CFTC, *Final Rule, Adaptation of Regulations to Incorporate Swaps*, 77 Fed. Reg. 66288 at 66293-94 (Nov. 2, 2012) (citing, among others, comment letter I co-wrote). See also Jeremy Weinstein, *Renewable Energy and the Dodd-Frank Act*, Chapter 1 *in* Karen B. Wong, ed., The Renewable Energy Law Review (3rd ed. 2020); and Jeremy Weinstein, *CFTC Regulations of Trade Options*, Fut. and Derivs. L. Rep. (Nov. 2019). The CFTC's interpretation of its then-new term "nonfinancial commodity" used in the DFA

definition of swap in the forward contract exclusion at CEA § 1a(47)(B)(ii), means a commodity that can be physically delivered and that is an "exempt" commodity or an "agricultural" commodity. Unlike "excluded" commodities, which generally are financial, exempt and agricultural commodities generally are nonfinancial, e.g., natural gas, nuclear fuels, energy, coal, metals, and environmental products. 77 Fed. Reg. at 48232. The CFTC under Chairman Gensler initially sought to regulate new environmental markets in credits for renewable energy and Carbon. After a bill that would have established a Carbon market under CFTC jurisdiction (H.R. 2454, the American Clean Energy and Security Act of 2009 (Waxman-Markey) Title III, Subtitles D and E) failed to pass, the CFTC made moves to seek control of environmental markets, e.g., in CFTC, *Notice of Intent . . ., To Undertake a Determination Whether the Carbon Financial Instrument Contract Offered for Trading on the Chicago Climate Exchange, Inc., Performs a Significant Price Discovery Function*, 74 Fed. Reg. 42052 (Aug. 20, 2009). CFTC, *Order Finding That the Carbon Financial Instrument Contract Offered for Trading . . . Does Not Perform a Significant Price Discovery Function*, 75 Fed. Reg. 23686 (April 28, 2010) (citing comment letter I wrote). The Dodd-Frank Act included many provisions rooted in Waxman-Markey, but did not give the CFTC "swaps" jurisdiction over Carbon or other environmental markets; rather § 750 of the Dodd-Frank Act merely established a study group, although that did not hinder the CFTC. Had it regulated renewable energy credits as swaps subject to mandatory clearing with resulting massive collateral posting requirements, as it proposed, the CFTC would have killed off renewable energy in the US. CPUC and CEC staff, who should have sought to protect the California Renewables Portfolio Standard, declined to do so, despite being fully and repeatedly briefed. Fortunately, Environmental Protection Agency staff and others pressed this point and the CFTC backed off. 77 Fed. Reg. 48233-35 (citing, among others, comment letters I co-wrote); CFTC, *Final Rule, Adaptation of Regulations to Incorporate Swaps*, 77 Fed. Reg. 66288 at 66293-94 (Nov. 2, 2012) (citing, among others, comment letter I co-wrote). *See also* Jeremy Weinstein & Christopher Berendt, *The Nature of the Thing*, Environmental Finance, pp. 20-21 (Jun. 2011) (avail. at http://docsjweinsteinlaw.com/pdfs/EF0611_pp,20-21.pdf).

[25]77 Fed. Reg. at 48233 col. 1; CFTC Commissioner, then-General Counsel, Dan Berkovitz personal communication with the author at Carbon Forum North America, Washington, D.C. as co-panelists (Oct. 1, 2012).

[26]77 Fed. Reg. at 48233-35. Emissions allowances issued by EPA may also be excluded from the definition of "swap" as an obligation of the federal government, CEA § 1a(47)(B)(ix), although the CFTC has "declined to address" this view (citing comment letter I wrote). 77 Fed. Reg. at 48235.

[27]77 Fed. Reg. at 48234, n. 281; CEA § 6(c), § 9(a)(2); 17 C.F.R. §§ 180.1 and 180.2; 17 C.F.R. § 32.3(d).

[28]The California Energy Commission has a process that does permit moving retired RECs into retirement for a subsequent retirement period. CEC, *Renewables Portfolio Standard Eligibility Commission Guidebook* (9th ed.), p. 66-67 (Jan. 2017).

[29]There are many different circumstances and statements, by both consumers and providers, that may represent a claim on a REC. See Center for Resource Solutions. *Explanation of Green-e Energy Double-Claims Policy* Version 1, Published June 23, 2014. avail. at http://resource-solutions.org/wp-content/uploads/2015/07/Explanation-of-Green-e-Energy-Double-Claims-Policy.pdf.

[30]FTC, *Final Rule, Guides for the Use of Environmental Marketing Claims*, 77 Fed. Reg. 62122 at 62124 and 62131-32 (Oct. 11, 2012), 16 C.F.R. § 260.15.

[31]FTC, *Guides for the Use of Environmental Marketing Claims; Carbon Offsets and Renewable Energy Certificates; Public Workshop*, 72 Fed. Reg. 66094 at 66094, col. 2 (Nov. 27, 2007).

[32]CRS's view is that due to the shared electric transmission and distribution network, the "grid," use or delivery of renewable electricity can only

be determined contractually. The manner of production and associated benefits, or "attributes" of the generation, occur and can only be measured at the point of generation and are not delivered through the grid. They must be tracked separately from the energy in order to meet either compliance or voluntary consumer demand for renewable electricity or electricity with any of the individual attributes of renewable generation (e.g. greenhouse gas emissions profile). (personal communication from Todd Jones of CRS, Dec. 10, 2020).

[33]"Certificate: A WREGIS Certificate (also called a Renewable Energy Credit (REC)) represents all Renewable and Environmental Attributes of MWh of electricity generation from a renewable energy Generating Unit registered with WREGIS or a Certificate imported from a Compatible Tracking System and converted to a WREGIS Certificate. The WREGIS system will create exactly one Certificate per MWh of generation that occurs from a registered Generating Unit or that is imported from a Compatible Tracking System. Disaggregation of Certificates is not currently allowed within WREGIS." WREGIS Operating Rules, p. 9 (May 1, 2018).

"Renewable and Environmental Attributes: Any and all credits, benefits, emissions reductions, offsets, and allowances-howsoever titled-attributable to the generation from the Generating Unit, and its avoided emission of pollutants.3 Renewable and Environmental Attributes do not include (i) any energy, capacity, reliability, or other power attributes from the Generating Unit; (ii) production tax credits associated with the construction or operation of the Generating Unit and other financial incentives in the form of credits, reductions, or allowances associated with the Generating Unit that are applicable to a state, provincial, or federal income taxation obligation; (iii) fuel-related subsidies or 'tipping fees' that may be paid to the seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular pre-existing pollutants or the promotion of local environmental benefits; or (iv) emission reduction credits encumbered or used by the Generating Unit for compliance with local, state, provincial, or federal operating and/or air quality permits." WREGIS Operating Rules, p. 12 (May 1, 2018).

[34]"Certificate: The term 'Certificate,' as used in this document, refers to an M-RETS Certificate of generation, or M-RETS Certificate. An M-RETS Certificate represents all the attributes from one MWh of electricity generation from a renewable Generating Unit registered with M-RETS or a Certificate imported from a Compatible Tracking System (CTS) and converted to an M-RETS Certificate. M-RETS will create exactly one Certificate per MWh of generation that occurs from a registered Generating Unit or that is imported from a CTS. See also definition of 'Whole Certificate.' " M-RETS Operating Procedures, p. 41 (Jan. 1, 2020).

"Whole/ Whole Certificate: A 'Whole Certificate' is one where none of the renewable attributes have been separately sold, given, or otherwise transferred to another party by a deliberate act of the certificate owner. Renewable attributes shall include the environmental attributes that are defined as any and all Certificates, benefits, emissions reductions, offsets, and allowances, howsoever entitled, directly attributable to the generation from the Generating Unit(s). Renewable attributes do not include greenhouse gas avoidance Certificates based on the upstream capture of methane combined with the subsequent destruction of the methane. Individual states and provinces may create different definitions of renewable Certificates. M-RETS may consider revision of the definition of an M-RETS Certificate in the future if needed to better meet the needs of state and provincial programs. See also definition of 'Certificate.' " M-RETS Operating Procedures, p. 45 (Jan. 1, 2020).

[35]"Certificate: A REC or an EEC. The NAR Administrator may consider revision of the definition of a Certificate in the future if needed to better meet the needs of state and provincial programs. See also the definition of 'Whole Certificate.' " North American Renewables Registry Operating Procedures, p. iv (November 2018).

"Environmental Attributes: Any and all credits, benefits, emissions, reductions, offsets, and allowances, howsoever entitled, attributable to generation from an Asset or savings from an

Energy Efficiency Project and its displacement of conventional energy generation." North American Renewables Registry Operating Procedures, p. v (November 2018).

"Whole Certificate: A Whole Certificate is one where none of the Environmental Attributes have been separately sold, given, or otherwise transferred to another party by a deliberate act of the Certificate owner. See also definition of Certificate." North American Renewables Registry Operating Procedures, p. ix (November 2018).

[36]"Certificate(s): The term 'Certificate,' as used in this document, refers to a GATS electronic record of generation data representing all of the attributes from one MWh of electricity generation from a Generating Unit registered with the GATS tracking system or a Certificate imported from a Compatible Certificate Tracking System. Blocks of related Certificates may be grouped together to simplify Certificate transactions and for reporting purposes. The GATS will create exactly one Certificate per MWh of generation. Additionally, the GATS will create one Certificate for each MWh related to Certificates that are imported from a Compatible Certificate Tracking System based on the conversion rules established by the GATS Administrator. See also definition of 'Whole Certificate.' " PJM-GATS Operating Rules, p. 4 (Sept. 24, 2020).

"Attribute: A characteristic of a generator, such as location, vintage, emissions output, fuel, state RPS program eligibility, etc." PJM-GATS Operating Rules, p. 3 (Sept. 24, 2020).

"Whole Certificate: A 'Whole Certificate' is one where none of the renewable Attributes have been separately sold, given, or otherwise transferred to another party by a deliberate act of the Certificate owner. Renewable Attributes shall include the environmental Attributes which are defined as any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, directly Attributable to the generation from the Generating Unit(s). Individual states may create different definitions of renewable Certificates. The GATS Administrator may consider revision of the definition of a Certificate in the future if needed to better meet the needs of state programs." PJM-GATS Operating Rules, p. 11 (Sept. 24, 2020).

[37]To the extent used, the word "attribute" refers to information related to the characteristics of the Renewable Energy Facility, such as technology type, ownership and location. North Carolina Renewable Energy Tracking System (NC-RETS) Operating Procedures, p. ix (Jan. 11, 2011).

[38]The NVTREC User Manual (avail. at https://www.nvtrec.com/(S(g4gwa41kvbhm1cyrztclfrph))/Files/User_Manual.pdf) does not mention attributes or define "Certificate." NVTREC frequently asked questions avail. at https://www.nvtrec.com/(S(g4gwa41kvbhm1cyrztclfrph))/UI/Guest/FAQPage.aspx.

[39]See, e.g., the NVTREC graphic at https://www.nvtrec.com/(S(g4gwa41kvbhm1cyrztclfrph))/Files/Credit%20Certification%20Flowchart.pdf.

[40]E.g., WREGIS mandatory acknowledgment that RECs are not issued for station service avail. at https://www.wecc.org/Administrative/WREGIS%20Acknowledgement%20of%20Station%20Service%20Form.pdf

[41]E.g., WREGIS Operating Rules, p. 17 (May 1, 2018).

[42]E.g., German Energy Agency, Blockchain in the integrated energy transition Study findings (Feb. 2019), avail. at https://www.dena.de/fileadmin/user_upload/dena-Studie_Blockchain_Integrierte_Energiewende_EN.pdf.

[43]PUCN Docket 18-09008.

[44]Green Mountain Power, *Press Release: GMP Revolutionizes Renewable Power Sharing with Peer-to-Peer Energy Sales Platform* (Nov. 25, 2019), avail. at https://greenmountainpower.com/gmp-revolutionizes-renewable-power-sharing-with-peer-to-peer-energy-sales-platform-3/; Green Mountain Power, *Share with Vermont Green*, avail. at https://greenmountainpower.com/rebates-programs/helping-others/vermont-green/.

[45]*See* http://www.dsireusa.org for a national map.

[46]E.g., CPUC, D. 11-01-025, *Decision Re-*

solving Petitions for Modification of Decision 10-03-021 Authorizing Use of Renewable Energy Credits For Compliance with the California Renewables Portfolio Standard and Lifting Stay and Moratorium Imposed by Decision 10-05-018 (January 13, 2011).

[47]See National Conference of State Legislatures, *Renewable Portfolio Standards and Goals*, avail. at https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx; Database of State Incentives for Renewables & Efficiency, avail. at https://www.dsireusa.org; NREL, *Energy Analysis: Renewable Portfolio Standards*, avail. at https://www.nrel.gov/analysis/rps.html; Ari Peskoe and Kate Konschnik, *Minimizing Constitutional Risk: Crafting State Energy Policies that Can Withstand Constitutional Scrutiny* (Oct. 18, 2017), avail. at https://statepowerproject.files.wordpress.com/2017/10/harvard-epi-minimizing-constitutional-risk-10-18-2017.pdf; Ivan Gold and Nidhi Thakar, *A Survey of State Renewable Portfolio Standards: Square Pegs for Round Climate Change-Holes?*, 35 Wm. & Mary Envtl. L. & Pol'y Rev. 183 (2010), avail. at https://scholarship.law.wm.edu/wmelpr/vol35/iss1/5.

[48]See EPA, World Resources Institute, CRS, and NREL, *Guide to Purchasing Green Power* (Sept. 2018), avail. at https://www.epa.gov/sites/production/files/2016-01/documents/purchasing_guide_for_web.pdf; NREL *Energy Analysis: Voluntary Green Power Procurement*, avail. at https://www.nrel.gov/analysis/green-power.html.

[49]*Allco Finance Limited v. Klee*, 861 F.3d 82, 93 (2d Cir. 2017) citing *Wheelabrator Lisbon, Inc. v. Connecticut Dept. of Public Utility Control*, 531 F.3d 183, 186 (2d Cir. 2008) (per curiam).

[50]Jan Hamrin, *RECs Definitions and Tracking Mechanisms Used by State RPS Programs, Prepared for the State-Federal RPS Collaborative*, avail. at https://www.cesa.org/wp-content/uploads/RECs-Attribute-Definitions-Hamrin-June-2014.pdf.

[51]e.g., https://www.mrets.org/registries/. An illuminating graphic is avail. at https://apx.com/wp-content/uploads/2020/10/Artboard-1REGATS-800x786.png. Due to their cheapness and plentitude, Texas wind RECs are often called National RECs." As the software vendor APX has built most of the GIS systems, inter-GIS transfers could eventually be achievable once double counting risk is reliably addressed. See Steve Kaelble, Environmental Commodities for Dummies (Wiley Publishing 2008). See Environmental Trading Network of North America, Inter-Registry REC Transfers White Paper, (Aug. 25, 2009), avail. at https://resource-solutions.org/wp-content/uploads/2017/06/ETNNA-Inter-registry-Import-Export-final-8-25-09.pdf.

[52]See, e.g., 2020 Green-e Verification Report (2019 Data), avail. at https://resource-solutions.org/g2020/, and the National Renewable Energy Laboratory's Status and Trends in the Voluntary Market (2019 data) (Sept. 23, 2020), avail. at https://www.nrel.gov/docs/fy21osti/77915.pdf. With respect to voluntary national standards, see also, Todd Jones, et al., *The Legal Basis of Renewable Energy Certificates*, Center for Resource Solutions (2015) p. 7: ("Despite any differences between states and voluntary programs in terms of eligibility requirements, RECs are uniformly used as the primary means of tracking grid-connected renewable electricity generation and the ownership of, and rights to claim, all of its associated attributes"), avail. at https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf.

[53]Cal. Pub. Utils. Code § 399.12(h) (emphasis supplied).

[54]CPUC, *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028 (Aug. 21, 2008).

[55]CPUC, *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028 App. B (Aug. 21, 2008).

[56]Cal. Pub. Utils. Code § 399.(a)(7).

[57]Avail. at https://www.wecc.org/Corporate/WREGIS%20Operating%20Rules.pdf.

[58]Jeremy Weinstein, *A Western Renewables Marketplace*, Environmental Finance, p. 15 (Apr. 2004).

[59]WREGIS Operating Rules, p. 8 (May 1, 2018) (emphasis supplied).

[60]WREGIS Operating Rules, p. 9 (May 1, 2018) (emphasis supplied).

[61]WREGIS Operating Rules, p. 12 (May 1, 2018) (emphasis supplied).

[62]WREGIS Operating Rules, p. 40 (May 1, 2018) (emphasis supplied).

[63]WREGIS Operating Rules, p. 52 (May 1, 2018) (emphasis supplied).

[64]FTC, *Final Rule, Guides for the Use of Environmental Marketing Claims*, 77 Fed. Reg. 62122 (Oct. 11, 2012).

[65]15 U.S.C.A. § 45.

[66]Example enforcement actions are posted by the FTC at http://www.ftc.gov/news-events/media-resources/truth-advertising/green-guides.

[67]See Carolyn L. Carter, *Consumer Protection in the States: A 50-State Report on Unfair and Deceptive Acts and Practices Statutes* (Feb. 2009), avail. at http://www.nclc.org/images/pdf/udap/report_50_states.pdf.

[68]77 Fed. Reg. at 62131-32, 16 C.F.R. § 260.15.

[69]FTC Division of Enforcement Staff Letter dated Feb. 2, 2015, avail. at http://www.ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf.

[70]FTC, Division of Enforcement, Feb. 5, 2015, letter to Jeffrey Behm [attorney for Green Mountain Power Corporation], pp. 2-4 (emphasis supplied).

[71]avail. at http://www.naag.org/issues/pdf/Green_Marketing_guidelines.pdf and https://www.epa.gov/sites/production/files/2018-05/documents/naag_0100.pdf.

[72]NAAG Guidelines, p. 6 (emphasis supplied).

[73]NAAG Guidelines, p. 25.

[74]Todd Jones of Center for Resource Solutions takes a different position than I do with respect to the "behavior" component of RECs. As communicated to the author on Dec. 10, 2021, "RECs represent and enable trading of generation attributes to characterize and account for consumed and delivered renewable electricity, rather than to enable trading of attributes between generators. Generating renewable energy can be directly observed/measured and cannot be changed by selling or consuming a REC. RECs are not used to transfer the behavior of generating renewable energy to another generator. For example, a coal plant cannot purchase RECs to report that it is generating renewable energy instead of coal power (and in so doing, avoid regulation). RECs also do not transfer the behavior of the generator to the REC purchaser. The benefits of the behavior of the generator (generation attributes) get transferred to the REC owner and become the generation benefits of their electricity (consumption)."

[75]Todd Jones of Center for Resource Solutions disagrees that this analogy is entirely appropriate to describe RECs. As communicated to the author on Dec. 10, 2021, "The analogy here is actually more apt to describe carbon offsets (and even for that, it breaks down quickly). With offsets you are buying an action, an emissions reduction: 'I am reducing emissions.' In fact, you are paying someone else to reduce on your behalf. But in paying, you cause the emissions reduction to happen—the reducing activity must be additional, must not have occurred in a baseline scenario. So, the benefit conveyed in an offset is the right to say you've reduced emissions that cannot be claimed by the entity actually doing the reducing. This is not the same as RECs. With RECs, you are not buying an action, e.g. 'I am generating renewable energy.' With RECs you are buying the specified, renewable electricity generation itself, and the right to say that you are the exclusive owner, recipient, and consumer of that generation. The generator can still say that they are producing renewable energy. But only the REC owner can say that they are consuming it. If the recipient of the physical energy from the facility, an entity with a contract for physical energy from the facility without the REC, or any other consumer claims to be consuming that unit of renewable energy from that facility, or if the generator or the supplier claims/reports to be

delivering that same renewable energy to a different consumer, they would be 'in breach of the agreement' or 'destroying' the REC owner's claim that she had purchased/used that renewable energy. Additionality, or demonstration that the REC buyer caused the generation (or 'did the good deed') and benefits to occur, is not required for this claim."

[76]"Green-e" is a registered trademark of Center for Resource Solutions.

[77]E.g., CRS, *Explanation of Green-e Energy Double Claims Policy*, v. 1, June 23, 2014, avail. at http://resource-solutions.org/wp-content/uploads/2015/07/Explanation-of-Green-e-Energy-Double-Claims-Policy.pdf; CRS, *Guidelines for Renewable Energy Claims*, updated Feb. 26, 2015, avail. at http://resource-solutions.org/wp-content/uploads/2015/07/Guidelines-for-Renewable-Energy-Claims.pdf; CRS, *REC Best Practices in Public Claims*, v.1.1 Oct. 7, 2010, avail. at http://www.green-e.org/docs/energy/Best%20Practices%20in%20Public%20Claims.pdf.

[78]Dozens of CRS letters to regulators are avail. at https://resource-solutions.org/publications/.

[79]Idaho Power, Application to the Idaho Public Utilities Commission for an Order Authorizing the Retirement of its Green Tags, case IPC-E-08-024, para. 4 (2008). Long-term sellers should be aware of some nuances in the Green-e program. For example, resources must be less than 15 years old. There is a process to accept and approve PPAs that are longer than 15 years for use through the end of the contract term. But approval must happen within the first 12 months—late in the term will be too late. Another example is the Green-e program's requirement that certified renewable energy and RECs include all carbon benefits. So in GHG-capped states, the Green-e program requires that allowances must be surrendered along with RECs. This means that in California, sellers of Green-e certified renewable energy must use the Voluntary Renewable Energy Program (VREP), which freely allocates and retires allowances on behalf of voluntary renewable energy, or in another jurisdiction that becomes subject to a cap without a similar policy mechanism, and assuming the Green-e program's policy continues in that jurisdiction, (currently priced) $1 national wind RECs must come with about (currently priced) $6.00 worth of allowances.

[80]E.g., Georgia Public Service Commission, *Order Approving Clarification of Ownership of Renewable Energy Credits, In Re: Georgia Power Company's 2015 Large Scale Solar Offering and Georgia Power Company's Advanced Solar Initiative*, Docket nos. 34229 and 36325 (May 13, 2015), avail. at https://psc.ga.gov/search/facts-document/?documentId=158531.

[81]CRS comments sought to prevent states from using RECs for both rate-based EGU compliance under 111(d) and RPS compliance. p. 6 of CRS, Comments on the U.S. EPA's Clean Power Plan, Section 111(d) (Dec. 1, 2014), avail. at https://resource-solutions.org/wp-content/uploads/2015/07/CenterforResourceSolutions_Comments_DocketID_EPA-HQ-OAR-2013-0602_12-1-2014.pdf.

[82]E.g., CRS Comments on the Washington State Department of Commerce's Proposed Revisions to WAC 194-37-110, 194-37-120, and 194-37-210 Related to RPS Implementation Letter from CRS to the Washington Department of Commerce (Jan. 30, 2015), avail. at https://resource-solutions.org/wp-content/uploads/2015/07/CRS-comments-WA-1-15-Retirement.pdf: "Industry best practice and the Green-e Energy Code of Conduct and Customer Disclosure Requirements both consider that REC Retirement occurs when a Certificate is used. Certificate Retirement: Retirement occurs when a REC is used by the owner of the REC. Use of a REC may include, but is not limited to, (1) use of a REC by an end use customer, marketer, generator, or utilities to comply with a statutory or regulatory requirement, (2) a public claim associated with the purchase of a REC by an end use customer, or (3) the sale of or public claim on any component attributes of a REC for any purpose. Once a REC is retired, it may not be sold, donated, or transferred to any other party. No party other than the owner may make clams associated with retired RECs."

[83]CRS, *Green-e Framework for Renewable*

Energy Certification (July 7, 2017). p. 19 (avail at https://www.green-e.org/docs/energy/framework/Green-e%20Framework%20for%20Renewable%20Energy%20Certification.pdf).

[84]CRS, *Best Practices in Public Claims for Green Power Purchases and Sales* (Oct. 2010), avail. at http://www.green-e.org/docs/energy/Best%20Practices%20in%20Public%20Claims.pdf.

[85]A client matter.

[86]A client matter.

[87]CEC, *2007 Renewable Portfolio Standard Verification Draft Staff Report*, p. 22-24 (Apr. 2011) CEC-300-2011-002-SD.

[88]"Interpretation" as used here refers to four interpretations issued by the CFTC over a period of almost a decade: *Retail Commodity Transactions Involving Certain Digital Assets*, Final interpretive guidance, 85 Fed. Reg. 37734 (Jun. 24, 2020) (the "2020 Interpretation"); *Retail Commodity Transactions Involving Virtual Currency*, Proposed interpretation, 82 Fed. Reg. 60335 (Dec. 20, 2017) (the "2017 Proposed Guidance"); *Retail Commodity Transactions Under Commodity Exchange Act*, Interpretation, 78 Fed. Reg. 52426 (Aug. 23, 2013) (the "2013 Guidance"); *Retail Commodity Transactions Under Commodity Exchange Act*, Interpretation, 76 Fed. Reg. 77670 (Dec. 14, 2011). The CFTC's Interpretation doesn't really define when actual delivery occurs. Rather, it backs into the definition by identifying a threshold time limit (the statutory 28 days), groupings of certain factors, and example cases, where, if certain such factors are met before the time limit occurs, then actual delivery will have occurred. E.g., under the CFTC's Interpretation, actual delivery would occur under the following facts: a retail customer purchases precious metals on a margined basis, and within 28 days, takes physical delivery via a depository that is unaffiliated with the seller (and meets certain criteria), and title to the metals is transferred to the customer. *See* example 2 in the 2013 Guidance at 52428, col. 3. However, if the facts are modified such that the title document failed to identify the quality specifications of the metals, actual delivery would not have occurred, for the purposes of the CEA (even though there was evidence that the customer was the owner of the metals). *See* example 4 at *id.* The criteria for a depository are similar to that specified in the Model State Commodity Code (1985), and include a financial institution, a depository, the warrants or warehouse receipts of which are recognized for commodity delivery purposes on a designated contract market, or a U.S. (or U.S. agency)-licensed or regulated storage facility. *See id.* note 25 and accompanying text. The depository criteria were not met in the facts of *U.S. Commodity Futures Trading Commission v. Monex Credit Company*, 931 F.3d 966, Comm. Fut. L. Rep. (CCH) P 34538 (9th Cir. 2019), cert. denied, 141 S. Ct. 158, 207 L. Ed. 2d 1096 (2020), an enforcement action, where the Court agreed with the CFTC that actual delivery of precious metals to retail customers did not occur because "here, metals are in the broker's chosen depository, never exchange hands, and are subject to the broker's exclusive control, and customers have no substantial, non-contingent interests." *Id.* at 974. The Court finds that "customers have no contractual rights to the metal; Monex, not customers, has a relationship with depositories; Monex maintains total control over accounts and can liquidate at any time in its own discretion; and the entire transaction is merely a book entry. . . . [A] sham delivery. . . . '[A]ctual delivery' unambiguously requires the transfer of some degree of possession or control." *Id.* at 975. *Monex* is cited in the 2020 Interpretation, in part as authority to de-emphasize the factor of title, and focus on possession and control. "As recognized by existing judicial precedent, . . . evidence of possession and control is most significant, while title may, in fact, connote elements of each." 85 Fed. Reg. at 37737, col. 3 (footnote removed); see also, 85 Fed. Reg. 37735, col. 3; 85 Fed. Reg. 37742 col. 3. The CFTC has been consistent in not limiting itself to stated factors—citing its 2013 Guidance, it states that it will continue to "employ a functional approach and examine how the agreement, contract, or transaction is marketed, managed, and performed, instead of relying solely on language used by the parties in the agreement, contract, or transaction." *Id.* While the "actual delivery" analysis is not applicable to a futures contract, it is interesting to

see how a pre-Dodd-Frank Act press release describes a physical settlement of REC futures- it states that "the first-ever physical delivery of a Renewable Energy Certificate (REC) futures contract" was completed on Aug. 5, 2009, where "100 CCFE Jul-09 REC NJ contracts, representing 10,000 megawatt hours (MWh) of New Jersey Class 1 RECs, expired and were physically delivered through the PJM Generation Attribute Tracking System (GATS). Delivery is a three consecutive business day process coordinated by The Clearing Corporation." Element Markets, *Chicago Climate Futures Exchange Announces First Futures Delivery Of Renewable Energy Certificate* (Aug. 11, 2009), avail. at https://web.archive.org/web/20110710181600/http://www.elementmarkets.com/press_releases.html#20090811. Reporting described it as "[t]he actual delivery of the contracts consisted of shifting them in a virtual tracking system, but it was still a three-day process which involved registering the fulfillment of the contracts." Leora Falk, *Futures Exchange Logs First Delivery* Of Contracts for Renewable Energy Credits, BNA, Alternative Investment Law Report (Aug. 19, 2009).

[89]For example, with reference to the CFTC's 2020 Interpretation discussed in the preceding footnote, a customer purchases 10 bitcoins using leverage arranged by the seller, and one week after the transaction is entered into, five bitcoins are transferred from seller to customer, and there is a record on the public ledger of a transfer from the seller's blockchain address to the customer's blockchain address, over which the customer maintains sole possession and control. Because less than the entire quantity of bitcoins under the transaction were transferred, actual delivery has not occurred. Example 1 of the 2020 Interpretation explains that "the entire quantity of the purchased virtual currency . . . [must be] transferred." *See* 85 Fed. Reg. at 37743, col. 2. If two weeks later, the remaining bitcoins are transferred, then actual delivery occurred. If instead, the remaining bitcoins were not transferred until four weeks later (five weeks since the transaction), then, despite the customer being the owner of the bitcoins, actual delivery did not occur, for the purposes of the CEA, because some of the bitcoins were not transferred until 35 days after the transaction, which is greater than the statutory period of 28 days. The 2020 Interpretation is focused on virtual currency, 85 Fed. Reg. at 37734, col. 2, and its hypothetical examples supersede the examples in the 2013 Guidance, with respect to virtual currency. 85 Fed. Reg. at 37737, col. 2. It does state however, "[i]n regards to other digital assets that are commodities, but do not serve as a medium of exchange or otherwise fall within the scope of this interpretive guidance at the time of the transaction, the Commission would continue to refer to the 2013 Guidance . . . ." *Id.* (footnote omitted). Furthermore, the CFTC stated in its 2017 Proposed Guidance that "in interpreting the term actual delivery for the purposes of CEA section 2(c)(2)(D)(ii)(III)(aa), [it] will continue to follow the 2013 Guidance." 82 Fed. Reg. at 60339, col. 2.

[90]Even this seemingly straightforward step is capable of being disputed, e.g., *Colorado and Santa Fe Energy Co., LLC v. Nexant, Inc.*, Order Granting Motion to Dismiss with Leave to Amend, case 3-12-cv-0001-JSW doc. 34 (Sept. 25, 2012), not for citation (N.D. Cal.). I was the victorious defendant's expert witness.

[91]Since the transaction will usually include a promise not to destroy the RECs by making claims about the renewable energy that could retire the REC, starting with not making claims before the transfer, and including the promise not to make claim after the transfer, that obligation will continue after transfer, but as a negative it is not a "physical step" remaining to be taken to transfer ownership.

[92]Bankruptcy Code § 365 allows bankrupt companies to reject executory contracts; eventually case law may tell us the precise moment in this slow-motion transfer when a contract to transfer RECs is no longer executory.

[93]Although the nature of ownership of RECs as personal property may present more complications than what may be the case for a physical bar of gold or a bearer bond, they present far less complications than what may be the case for real property. Thomas Bergen and Paul Haskell,

Preface to Estates in Land and Future Interests (2d. ed. 1984).

[94]E.g., Draft Notes from Institutional Committee Meeting (Jan. 13, 2004), Horton Grand Hotel, San Diego.

[95]Cal. Civ. Code § 954 provides: "A thing in action, arising out of the violation of a right or out of an obligation, may be transferred by the owner." Civ. Code § 1458 says: "A right arising out of an obligation is the property of the person to whom it is due, and may be transferred as such." See *Belden v. Farmers' & Mechanics' Bank of Healdsburg*, 16 Cal. App. 452, 459, 118 P. 449 (3d Dist. 1911) (lessee's right to reimbursement from lessor "was a chose in action, or a right to recover money by a judicial proceeding" and hence assignable); *Grain v. Aldrich*, 38 Cal. 514, 520, 1869 WL 789 (1869)(consent of obligor not required for assignment of claim). Civ. Code § 1044 states: "Property of any kind may be transferred, except as otherwise provided by this Article." See *Johnston v. Twentieth Century-Fox Film Corp.*, 82 Cal. App. 2d 796, 813-14, 187 P.2d 474, 76 U.S.P.Q. 131 (2d Dist. 1947) ("Many items of property are assignable under [§]1044, which were not assignable at common law."). Only "a mere possibility, not coupled with an interest cannot be transferred." (Civ. Code § 1045; but see *Bridge v. Kedon*, 163 Cal. 493, 496, 126 P. 149 (1912) (even the mere possibility of a future inheritance is assignable notwithstanding § 1045); *Bibend v. Liverpool & London Fire & Life Ins. Co.*, 30 Cal. 78, 86, 1866 WL 694 (1866)(courts will enforce "assignments of trusts and possibilities of trusts, and contingent interests and expectancies, . . . as well as . . . 'things which have no present actual or potential existence, but rest in mere possibility . . . .' ")). California Courts will enforce assignment of all types of rights and property (*U.S. v. Stonehill*, 83 F.3d 1156, 1159-60, 96-1 U.S. Tax Cas. (CCH) P 50318, 77 A.F.T.R.2d 96-2212 (9th Cir. 1996) (lawsuit against California municipality for depressing value of property through illegal zoning procedures held assignable); *Hopkins v. Contra Costa County*, 106 Cal. 566, 572, 39 P. 933 (1895)(right to recover, from insolvent county road fund, costs of work on road running through owner's land held assignable)), even if the rights at issue call themselves unassignable. See *National Bank of Mills & Co. v. Herold*, 74 Cal. 603, 608, 16 P. 507 (1888) (rights to payment under non-negotiable California State Controller's warrant assignable); *Trubowitch v. Riverbank Canning Co.*, 30 Cal. 2d 335, 339, 182 P.2d 182 (1947)("It is established that a provision in a contract or a rule of law against assignment does not preclude the assignment of money due or to become due under the contract."); Civ. Code § 1459 (non-negotiable instruments transferred by endorsement). California law strongly favors assignments of rights (*Robert H. Jacobs, Inc. v. Westoaks Realtors, Inc.*, 159 Cal. App. 3d 637, 645, 205 Cal. Rptr. 620 (2d Dist. 1984)("California law evidences a policy in favor of the free transferability of all types of property."); *Collier v. Oelke*, 202 Cal. App. 2d 843, 845-47, 21 Cal. Rptr. 140 (4th Dist. 1962)(citing broad statutory language favoring assignments, holds easements in gross are assignable)).

[96]Cf. Grant Gilmore, Security Interests in Personal Property § 12.9 (1965). The "situs" of a "change in rights" is a subject of jurisprudential debate. Jerome Weinstein, *Problems in the Field of State Securities Regulation*, 3 B.C.L.Rev. 381, 410 n. 126 (1962), avail. at https://lawdigitalcommons.bc.edu/bclr/vol3/iss3/4/

[97]*American Ref-Fuel*, 105 FERC ¶ 61,004 (2003); *Windham Solar LLC and Allco Finance Limited*, 156 FERC ¶ 61,042 at para. 6 (2016).

[98]E.g., CPUC Decision, R. 06-02-012 and Order 9696; Ida. PUC, Case GNR E-11-03 Order 32697, p. 47; Ore. PUC, Order No. 05-1229; Utah PSC, Order in Docket No. 12-035-100; Wash. PUC, Docket No. 20000-250-EA-06; Wyo. PSC, Docket No. 20000-250-EA-06.

[99]In*Wheelabrator Lisbon, Inc. v. Connecticut Dept. of Public Utility Control*, 531 F.3d 183, 186 (2d Cir. 2008), the Second Circuit found that a state's determination that the utility purchaser on a long-term PPA was **not** federally pre-empted by PURPA and that *American Ref-Fuel*, 105 FERC ¶ 61,004 (2003) did not mean the RECs belong to the selling QF. The QF had demanded that the RECs, which came into existence in Con-

necticut statute after the QF PPA was executed, belonged to the selling QF rather than the purchasing utility, and the Connecticut Department of Public Utility Control assigned found that the RECs were transferred to the purchasing utility by the PPA. See also*In re Ownership of Renewable Energy Certificates (""RECs")*, 389 N.J. Super. 481, 913 A.2d 825, 828 (App. Div. 2007), ("The issue of initial ownership of Renewable Energy Certificates for existing contracts that did not anticipate their creation has arisen in at least nine other states. Each state has ruled as the BPU did here; namely, that as applied to existing contracts for the sale of power to utilities by renewable energy producers, the certificates are the property of the purchasing utility rather than the producer. Edward A. Holt et al., *Who Owns Renewable Energy Certificates? An Exploration of Policy Options and Practice,* at xiv [LBNL-59965] (Ernest Orlando Lawrence Berkeley National Laboratory 2006).").

[100]Cal. Pub. Utils. Code § 399.16(a)(6).

[101]See EPA, World Resources Institute, CRS, and NREL, *Guide to Purchasing Green Power*, p. 4-5 (Sept. 2018), avail. at https://www.epa.gov/sites/production/files/2016-01/documents/purchasing_guide_for_web.pdf. A list of programs is avail. at https://www.nrel.gov/analysis/assets/docs/utility-green-pricing-program-list.xlsx. NREL gives an annual program ranking at https://www.nrel.gov/analysis/green-power.html.

[102]Pacific Power's Blue Sky renewable energy program keeps delivering for customers (Nov. 9, 2020) ("Blue Sky allows customers to match their energy usage with the purchase of renewable energy credits (RECs)."), avail. at https://www.pacificpower.net/about/newsroom/news-releases/pp-blue-sky-program-keeps-delivering-for-customers.html.

[103]Individual retail customers are not generally in a position to issue press releases concerning their participation in a customer choice program, and a customer's porch light looks the same with or without customer choice program participation. These customer REC claims are not publicly made as external signifiers. Every commodity has a use value, exchange value, and a sign value. Jean Baudrillard, For a Critique of the Political Economy of the Sign, tr. by Charles Levin (Telos Press 1981). The use value of accurately telling the time is no greater in a $20 digital watch than in a $15,000 Cartier tank watch, but the sign value about its wearer to third parties is different. Utility customer choice programs deliver a commodity with no exchange value, no additional use value in terms of light and heat, and very limited sign value beyond potential stickers for program participants, and therefore in terms of providing anonymous environmental protection as a use value to the customer present especial interest as a commodity.

[104]E.g., "With Light Green, 60% of your electricity service is from renewable sources (currently 60%), while being cost competitive to PG&E With Deep Green, 100% of your electricity service is from zero-emission solar and wind sources in California. With Local Sol, 100% of your electricity service is from locally-produced solar power from the Novato Cooley Quarry solar farm." Marin Clean Energy, Clean Energy Options for your home, avail. at https://www.mcecleanenergy.org/residential/#choices.

[105]See Drew Stilson, et al., Environmental Defense Fund, Turning Climate Commitment into Results: December 2020 Analysis, avail. at https://www.edf.org/sites/default/files/documents/FINAL_State%20Emission%20Gap%20Analysis.pdf.

[106]California Senate Bill No. 100 (Sept. 10, 2018), avail. at https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

[107]Duke Energy, *Achieving a Net Zero Carbon Future, Duke Energy 2020 Climate Report*, p. 18, avail. at https://www.duke-energy.com/_/media/pdfs/our-company/climate-report-2020.pdf.

[108]See discussion below.

[109]An example of California's highly inclusive view is set forth in CPUC, *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028, at 26 ("The REC, in sum, may be available for

multiple purposes, but may be used for only one of them."); App. B (Aug. 21, 2008).

[110]CPUC, *Decision on Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard,* D. 08-08-028, p. 35 n. 70 (Aug. 21, 2008). Likewise, the WREGIS Operating Rules provide on pp. 4-5, n. 2: "Avoided emissions may or may not have any value for complying with any local, state, provincial, or federal GHG regulatory program. Although avoided emissions are included in the definition of a WREGIS Certificate, this definition does not create any right to use those avoided emissions to comply with any GHG regulatory program."

[111]CPUC, *Decision on Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard,* D. 08-08-028 p. 24 (Aug. 21, 2008). The CPUC continued, "Thus—assuming that [the California Air Resources Board] adopts this analysis—our characterization of the REC will not require any RPS-eligible generation with zero GHG emissions to need allowances when delivered to the California grid." *Id.*

[112]CRS agrees with the CPUC that there is no net change to emissions at regulated sources due to renewable energy generation under a GHG cap, and as such, the avoided emissions at regulated units associated with renewable energy generation are equal to zero. See Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, p. 6-7, 18 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf

[113]See Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, p. 4 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf.

[114]See Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, p. 6-7, 18 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf

[115]See Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, p. 14 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf.

[116]See Todd Jones, et al., *The Legal Basis of Renewable Energy Certificates*, Center for Resource Solutions (2015), aval. at https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf.

[117]California is one example. See Cal. Pub. Util. Code § 399.11(b)(4).

[118]The form also enabled independent separation of many of the other attributes in a REC through a disclosure-driven model. *See also* Jeremy Weinstein & Christopher Berendt, *The Nature of the Thing*, Environmental Finance (Jun. 2011) pp. 20-21 (avail. at http://docsjweinsteinlaw.com/pdfs/EF0611_pp,20-21.pdf). The form is avail. at https://emahq.org/sites/default/files/ABA%20EMA%20ACORE%20Master%20RECs%20Agreement%20v1.0.doc and is discussed at length in Jeremy Weinstein, *The New ABA/EMA/ACORE Master Renewable Energy Certificate Trading Agreement*, chapter 10 *in* Energy and Environmental Trading: U.S. Law and Taxation (Andrea S. Kramer and Peter C. Fusaro eds., Cameron May 2008).

[119]The Account Holder transfers the certificate to its Reserve Subaccount and then conducts transactions outside of WREGIS for the distinct subset of Renewable and Environmental Attributes. WREGIS Operating Rules 18.1 p. 52.

[120]See Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, table on p. 8 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf.

[121]See Todd Jones and Noah Bucon, CRS,

Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide, table on p. 17 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf.

[122]EPA Green Power Partnership, *Offsets and RECs: What's the Difference* (Feb. 2018), avail. at https://www.epa.gov/sites/production/files/2018-03/documents/gpp_guide_recs_offsets.pdf. EPA provides a table showing differences between offsets and RECs at https://www.epa.gov/greenpower/carbon-footprint-reduction-instruments.

[123]EPA Green Power Partnership, *Offsets and RECs: What's the Difference* p. 3 (Feb. 2018), avail. at https://www.epa.gov/sites/production/files/2018-03/documents/gpp_guide_recs_offsets.pdf.

[124]Taskforce on Scaling Voluntary Carbon Markets, Consultation Paper (Nov. 2020), avail. at https://www.iif.com/Portals/1/Files/TSVCM_Consultation_Document.pdf; website: https://www.iif.com/tsvcm. See Financial Times, *Carney calls for '$100bn a year' global carbon offset market* (Dec. 2, 2020), avail. at https://www.ft.com/content/8ed608b2-25c8-48d2-9653-c447adbd538f. The Carney Report is an excellent explanation of the voluntary Carbon offset marketplace and its development. Sadly, there is little in the Carney Report that wouldn't have looked the same had it been written 10 years ago. See the excellent reporting of the state of the voluntary Carbon market, with annual reports for each year since 2007, by Forest Trend's Ecosystem Marketplace, avail. at https://www.ecosystemmarketplace.com/carbon-markets/; House of Commons Environmental Audit Committee, *The Voluntary Carbon Offset Market, Sixth Report of Session 2006-07, Report* (2007) (299 pages) avail. at https://publications.parliament.uk/pa/cm200607/cmselect/cmenvaud/331/331.pdf; Alexandre Kossoy and Phillippe Ambrosi, *World Bank Carbon Finance Unit, State and Trends of the Carbon Market 2010* (primarily concerning Kyoto Protocol flexible mechanisms trading), avail. at https://openknowledge.worldbank.org/handle/10986/13401. An example of how the voluntary market has long gravitated toward robust structures is Talitha Haller and Gabriel Thoumi, *Financial Accounting for Forestry Carbon Offsets* (2009) avail. at https://www.ecosystemmarketplace.com/wp-content/uploads/archive/documents/Doc_65.pdf. The Carney Report suggests setting up further global governance bodies and standards. This would likely be counter-productive and stifling. Voluntary offset markets have not failed because those working in them have not done great work, and need Mr. Carney to ride to the rescue with more standards and more governance, but because several highly influential environmental NGOs hate offsets and campaign against them and the companies that use them. They accuse companies using them of "greenwashing," and write attack pieces, like Greenpeace, *Carbon Scam: Noel Kempff Climate Action Project and the Push for Sub-national Forest Offsets* (Oct. 2009), avail. at https://www.greenpeace.org/usa/wp-content/uploads/legacy/Global/usa/report/2010/1/carbon-scam-noel-kempff-clima.pdf; Tim Hirsch, BBC, *Carbon Trading in Bolivia* (Nov. 10, 2000), avail. at http://news.bbc.co.uk/2/hi/americas/1016598.stm. The discrediting problems were primarily with limited high-profile players, such as CCX, e.g., CFTC, *Order Finding That the Carbon Financial Instrument Contract Offered for Trading . . . Does Not Perform a Significant Price Discovery Function*, 75 Fed. Reg. 23686 (April 28, 2010), and with UN compliance failures, e.g., New York Times, Nathaniel Gronewold, *Secretive U.N. board awards lucrative credits with few rules barring conflicts*, Apr. 7, 2009, avail. at https://archive.nytimes.com/www.nytimes.com/cwire/2009/04/07/07climatewire-secretive-un-board-awards-lucrative-credits-10458.html?pagewanted=all, not voluntary markets, but those are not major voluntary market failures that need "more governance" to be fixed. Voluntary offset markets may just not be able to overcome the intense loathing some influential NGOs have for Carbon offsets in any context. Greenpeace International's virulent campaign to prevent the possibility of Russian and Canadian forestry offsets in international climate agreements, e.g., Bill Hare, Greenpeace International, *Undermining the Kyoto Protocol: Environmental Effectiveness versus Political Ex-*

pediency (1998); Greenpeace International, *Should Forests and Other Land Use Activities be Allowed in the CDM* (June 2000), helped torpedo the then-good prospects for an international climate treaty in 2000; the perfect was such an enemy of the good that the current debate concerning U.S. participation in the Paris climate accords should be put in the context of the Paris agreement coming 16 years after, and being far weaker than, what Greenpeace helped knock off the table in 2000. See Council on Foreign Relations, *Global Climate Agreements: Successes and Failures* (Nov. 4, 2020) avail. at https://www.cfr.org/backgrounder/paris-global-climate-change-agreements and timeline at https://www.cfr.org/timeline/un-climate-talks; New York Times, Colin Sullivan, *EDF Chief: 'Shrillness' of Greens Contributed to Climate Bill's Failure in Washington*, Apr. 5, 2011, avail. at https://archive.nytimes.com/www.nytimes.com/gwire/2011/04/05/05greenwire-edf-chief-shrillness-of-greens-contributed-to-37964.html. NGOs prevailed on California legislators to propose to outlaw Carbon credits that came from other state programs or the United Nations. CRS California Market Advisory California Senate Bill 722 (Steinberg), avail. at http://www.resource-solutions.org/pressreleases/2009/061809.htm. Despite the fervent wishes of Greenpeace and some other NGOs, offsets are present, and belong, in U.S. climate policy and programs, including California's AB32. 17 CCR § 95970 et seq.

[125]*n.b.* CO_2e = equivalent emissions of Carbon dioxide.

[126]Todd Jones and Noah Bucon, CRS, *Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy An Air Regulator's Guide*, table on p. 16-17 (Oct. 17, 2017), avail. at https://resource-solutions.org/wp-content/uploads/2017/10/Corporate-and-Voluntary-RE-in-State-GHG-Policy.pdf.

[127]CRS *Renewable Energy Certificates, Carbon Offsets, and Carbon Claims Best Practices and Frequently Asked Questions* (Apr. 9, 2012), avail. at https://resource-solutions.org/wp-content/uploads/2015/08/RECsOffsetsQA.pdf; The Environmental Tracking Network of North America, *The Intersection between Carbon, RECs, and Tracking: Accounting and Tracking the Carbon Attributes of Renewable Energy*," avail. at http://etnna.org/images/PDFs/Intersection%20btwn%20Carbon%20RECs%20and%20Tracking.pdf.

[128]The Offset Quality Initiative (which was The Climate Trust, the Pew Center on Global Climate Change, the California Climate Action Registry, the Environmental Resources Trust, the Greenhouse Gas Management Institute, and The Climate Group), *Maintaining Carbon Market Integrity: Why Renewable Energy Certificates Are Not Offsets*, avail. at https://ghginstitute.org/wp-content/uploads/2010/01/OQI-REC-Brief-Web_Jun09.pdf.

[129]Center for Resource Solutions. *The Green-e Climate Standard v.2.1*, § 5.1e(e) (p. 8), avail. at https://www.green-e.org/docs/climate/Green-eClimateStandard_V2.1.pdf.

[130]Id. p. 17.

[131]CARB, Compliance Offset Protocol Livestock Projects Capturing and Destroying Methane from Manure Management Systems Adopted: November 14, 2014 avail. at https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program/compliance-offset-protocols/livestock-projects.

[132]E.g., CPUC, Resolution G-3410 (June 12, 2008), Advice Letter 2846-G/3075-E, Pacific Gas and Electric Company, June 27, 2007, ClimateSmart Manure Management Project Reporting Protocol in Compliance with Decision 06-12-032 (I was one of Pacific Gas & Electric's counsel in connection with writing this Advice Letter).

[133]Intergovernmental Panel on Climate Change, *AR5: Fifth Assessment Report, Climate Change 2014: Synthesis Report*, p. 87 (2014), avail. at https://archive.ipcc.ch/report/ar5/syr/.

[134]CPUC, *Decision on Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard*, D. 08-08-028, App. B (Aug. 21, 2008).

[135]E.g., CPUC, Resolution G-3410 (June 12, 2008), Advice Letter 2846-G/3075-E, Pacific Gas and Electric Company, June 27, 2007, ClimateSmart Manure Management Project Reporting

Protocol in Compliance with Decision 06-12-032.

[136]Cal. Pub. Util. Code § 399.12.6(f). CEC regulation provides: "If the biomethane source is not required by law to capture and destroy the methane produced by the biomethane source, a POU [public utility] or intermediary party to a biomethane procurement contract, including the electrical generator, may make marketing, regulatory, or retail claim of GHG reduction related to the destruction of methane associated with the biomethane procurement contract only if one of the following applies: 1) The environmental attributes associated with the capture and destruction of the biomethane are transferred to the [public utility] and retired on behalf of its customers consuming the electricity associated with the use of biomethane and not resold. 2) The biomethane procurement contract does not allow the biomethane source to market separately the environmental attributes associated with the capture and destruction of the biomethane sold under the contract, and the attributes are retired by the POU on behalf of its customers, or by the intermediary party, and not resold. If the POU or intermediary party to a biomethane procurement contract, including the electrical generator, makes a regulatory, marketing, or retail claim of GHG reductions related to the destruction of methane, the POU must demonstrate that the attributes associated with methane destruction are retired and not resold by demonstrating both of the following to the Energy Commission: 1) The biomethane source is registered with a GHG project verification program and registry. 2) Carbon credits or offsets have been retired in a voluntary offset program on behalf of the POU's customers consuming the electricity associated with the use of biomethane." CEC, *Renewables Portfolio Standard Eligibility Commission Guidebook* (9th ed.), pp. 12-13 (2017).

[137]FTC, *Proposed Revisions to Guidelines, Guides for the Use of Environmental Claims in Marketing*, 75 Fed. Reg. 63552 at 63595-97 (Oct. 15, 2010). FTC, *Guides for the Use of Environmental Marketing Claims; Carbon Offsets and Renewable Energy Certificates; Public Workshop, Announcement of public workshop; request for public comment*, 72 Fed. Reg. 66094 (Nov. 27, 2007); FTC, *Guides for the Use of Environmental Marketing Claims, Request for public comment; announcement of public meetings*, 72 Fed. Reg. 66091 (Nov. 27, 2007). Workshop materials avail. at https://web.archive.org/web/20101005104109/http://www.ftc.gov:80/bcp/workshops/carbonoffsets/.

[138]See Council on Environmental Quality, *Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews*, 79 Fed. Reg. 77802 at 77828 n. 44 (Dec. 24, 2014).

[139]These could include environmental additionality (that the RECs purchase was a cause of, or impetus for, the development of the new renewable energy resource); financial or investment additionality (that the new renewable energy resource could not have been successfully developed or would not have had an acceptable rate of return for its investors but for the RECs purchase); regulatory or legal additionality (that the RECs purchase caused or is causing environmental improvement and global warming mitigation in excess of what is required by law); Technological additionality (that the RECs purchase promoted or caused the technological advancement inherent in the construction, installation, or operation of the new renewable energy resource); project additionality (that the commitment to purchases RECs was before the new renewable energy resource became commercially operational); barriers additionality (that the RECs purchase contributed to the overcoming of local opposition to the new renewable energy resource); and performance additionality (that the RECs purchase improved the new renewable energy resource's performance or output).

[140]E.g., Environmental Defense Fund, *Cooperative Mechanisms Under the Kyoto Protocol*, p. 39 (1998); Ertel & Egelston, *COP 6- Big Decisions or Big Disappointment*, Environmental Finance (Jun. 2000); CFTC, *Order Finding That the Carbon Financial Instrument Contract Offered for Trading . . . Does Not Perform a Significant Price Discovery Function*, 75 Fed. Reg. 23686 at 23689, n. 18 (April 28, 2010) (citing

comment letter I wrote). Federal regulatory definitions of "additionality" are at Dept. Interior, *Notice of Final Policy, Endangered and Threatened Wildlife and Plants,* 81 Fed. Reg. 95316 at 95339 col. 2, 95341 col. 3, 95342 col. 1, 95346 col. 2 (Dec. 27, 2016);

[141]See CRS *Additionality and Renewable Energy Certificates: Understanding the value of REC claims* (March 7, 2016) Avail. at https://resource-solutions.org/wp-content/uploads/2016/03/RECs-and-Additionality.pdf. Also see Mary Sotos, *Greenhouse Gas Protocol: GHG Protocol Scope 2 Guidance* (n.d.) pg. 90-1. avail. at https://ghgprotocol.org/scope_2_guidance. Also see Tawney et al. (April 2018). *Describing Purchaser Impact in U.S. Voluntary Renewable Energy Market*s. pg. 2, 7-9. Avail. at https://www.epa.gov/sites/production/files/2018-06/documents/gpp_describing_purchaser_impact.pdf.

[142]There is no standard for "additionality" in renewable energy markets, and the activity may not pass offset-type additionality tests. There is broad recognition that impact, broadly defined, is multi-dimensional. See Letha Tawney et al. (April 2018). *Describing Purchaser Impact in U.S. Voluntary Renewable Energy Market*s. pg. 2, 7-9, avail. at https://www.epa.gov/sites/production/files/2018-06/documents/gpp_describing_purchaser_impact.pdf.

[143]17 CCR § 95111(a)(4) of California's Mandatory Reporting Regulation (MRR). § 95111(g)(1)(M)(3) of the MRR requires reporting entities to report the serial numbers of RECs associated with specified renewable imports and whether or not they have been retired. But based on 17 CCR § 95111(a)(4), failure to report RECs with specified renewable imports is treated as a nonconformance that does not affect reported emissions and therefore does not lead to an adverse verification statement.

[144]17 CCR § 95802(a).

[145]See 17 CCR §§ 95852(b)(3)(D); 95111(a)(4); 95111(g)(1)(M). 17 CCR § 95852(b)(3)(D) formerly read: "If RECs were created for the electricity generated and reported pursuant to MRR, then the RECs must be retired and verified pursuant to MRR."

[146]CPUC, *Decision On Definition And Attributes Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, D. 08-08-028, App. B (Aug. 21, 2008).

[147]CEC, *Renewables Portfolio Standard Eligibility Commission Guidebook* (9th ed.) p. 60, n. 43: "Use of a REC for compliance with the California RPS does not preclude an [Load Serving Entity]'s ability to report a specified import or use the RPS adjustment in accordance with the California Air Resources Board's [Programs]." The CEC has similar language in the 2015, 8th edition of its Eligibility Guidebook on p. 60 n. 35.

[148]*See* 17 CCR §§ 95852(b)(3)(D); 95111(a)(4); 95111(g)(1)(M).

[149]Oregon Dept. of Energy letter seeking stakeholder comments dated Jun. 23, 2017, avail. at http://www.oregon.gov/energy/energy-oregon/Documents/2017-06-23-Public-Comment-Request-RECS-RPS-and-CA-EIM.pdf.

[150]the comments sent to ODOE are avail. at http://www.oregon.gov/energy/energy-oregon/Documents/2017-Public-Comments-RECs-EIM.pdf; http://www.oregon.gov/energy/energy-oregon/Documents/2017_6_PacifiCorpREC_Presentation.pdf.

[151] https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%2020170810%20Meeting%20Minutes%20FINAL.pdf.

[152]ODOE, avail. at https://www.westerneim.com/Documents/OregonDOEPresentation-OregonsRPS_RECsAndEIM.pdf; Western Power Trading Forum, avail. at https://www.westerneim.com/Documents/WPTFPresentation-REC-GHGTreatment-EIM.pdf; PacifiCorp; avail. at https://www.westerneim.com/Documents/PacifiCorpPresentation-EnergyImportedIntoCaliforniaViaEIM.pdf; and Center for Resource Solutions (CRS) https://www.westerneim.com/Documents/CRSPresentation-REC-GHGTreatmentinEIM.pdf.

[153]avail. at https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20CEC,%20CARB,%20CPUC.pdf. Interestingly, the CPUC had

previously discussed, and dismissed, the scenario of a REC going into California without the energy. CPUC, *Decision on Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard*, D. 08-08-028, p. 27, n. 59 (Aug. 21, 2008).

[154]avail. at https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20California%20Energy%20Commission.pdf.

[155]Comments of PacifiCorp, avail. at https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20PacifiCorp.pdf; Avangrid Renewables, avail. at https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20Avangrid%20Renewables.pdf; and Western Power Trading Forum, avail. at https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20Western%20Power%20Trading%20Forum.pdf.

[156] https://www.wecc.biz/Administrative/WREGIS%20EIM%20Task%20Force%20Comments%20082017%20-%20Center%20for%20Resource%20Solutions.pdf.

[157]See CRS letters to California's Independent Emissions Market Advisory Committee (IEMAC) of Oct. 5, 2018 and Aug. 22, 2019; avail. at https://resource-solutions.org/wp-content/uploads/2018/10/CRS-Comments-for-IEMAC-10-5-2018.pdf and https://resource-solutions.org/wp-content/uploads/2019/12/CRS-Letter-to-IEMAC-8-22-2019.pdf.

[158]See Independent Emissions Market Advisory Committee Annual Report—2019, pp. 16-17, avail. at https://calepa.ca.gov/wp-content/uploads/sites/6/2020/01/Final_2019_IEMAC_Annual_Report_2019_12_06.a.pdf

[159]See EIM RIF meeting materials and recordings for meetings on September 7, 2017 and June 18, 2019, avail. at https://www.westerneim.com/Pages/Governance/RegionalIssuesForum.aspx.

[160]See MWG documents and recordings avail. at https://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=190760.

[161]See https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcfpe2021.aspx.

[162]IEMAC Annual Report 2019, pp. 16-17, avail. at https://calepa.ca.gov/wp-content/uploads/sites/6/2020/01/Final_2019_IEMAC_Annual_Report_2019_12_06.a.pdf

[163] http://www.energy.ca.gov/pcl/; comments posted at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=16-OIR-05; my comments are at https://efiling.energy.ca.gov/GetDocument.aspx?tn=230400&DocumentContentId=61960. Final Power Source Disclosure Regulations at 20 CCR §§ 1391-1394, avail. at https://efiling.energy.ca.gov/GetDocument.aspx?tn=232986&DocumentContentId=65451.

[164]20 CCR § 1393(b)(1) and 20 CCR § 1393(c)(1)(B).

[165]See Final Statement of Reasons (FSOR) for Modification of Regulations Governing the Power Source Disclosure Program Docket No. 16-OIR-05, pp. 23, 24, 32, 41, 42, 45-6, 58, avail. at https://efiling.energy.ca.gov/GetDocument.aspx?tn=232946-2&DocumentContentId=65394: "these regulations are consistent, to the extent practicable, with the GHG emissions accounting practices for the electricity sector as performed through CARB's MRR."

[166]20 CCR § 1393(a)(1).

[167]20 CCR § 1393(c)(1).

[168]FSOR for Modification of Regulations Governing the Power Source Disclosure Program Docket No. 16-OIR-05, p. 21.

[169]EPA, Final Rule, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units*, 40 C.F.R. Part 60, 80 Fed. Reg. at 64662 (Oct. 23, 2015).

[170]80 Fed. Reg. at 64908; 80 Fed. Reg. at 64990.

[171]80 Fed. Reg. at 64850 ("a MWh of electric generation from a wind turbine could be used by an electric distribution utility to comply with state RPS requirements and also be used by an affected [generating unit] to comply with emis-

sion standard requirements under a state plan.").

[172]80 Fed. Reg. at 64735, col. 2.

[173]80 Fed. Reg. at 64735, col. 2.

[174]80 Fed. Reg. at 64896.

[175]80 Fed. Reg. at 65092.

[176]See, e.g., Gehring & Streck, *Emissions Trading: Lessons from SOx and NOx Emissions Allowance and Credit Systems Legal Nature, Title, Transfer, and Taxation of Emission Allowances and Credits*, 35 Environmental Law Reporter 10219 at 10221-22 (Apr. 2005).

[177]80 Fed. Reg. at 64735.

[178]80 Fed. Reg. at 64741.

[179]80 Fed. Reg. at 64754.

[180]80 Fed. Reg. at 64747.

[181]80 Fed. Reg. at 64806.

[182]e.g., 80 Fed. Reg. at 64908.

[183]80 Fed. Reg. at 64908 ("The interaction of **other instruments** and ERCs may also impact existing or future arrangements in the private marketplace.").

[184]" 'Renewable energy credit' or 'REC' means a contractual right to the full set of non-energy attributes, including any and all credits, benefits, **emissions reductions,** offsets, and allowances, **howsoever entitled,** directly attributable to a specific amount of electric energy generated from a renewable energy resource. One REC results from one MWH of electric energy generated from a renewable energy resource. . . ." Code of Colo. Regs. 723-3 3652(y).

[185]80 Fed. Reg. at 64806.

[186]80 Fed. Reg. at 64806.

[187]80 Fed. Reg. at 64908 (emphasis supplied).

[188]Todd Jones, *Renewable Energy in the EPA Clean Power Plan, Part 2: Interactions With and Impacts on RECs and Renewable Energy Markets*. Center for Resource Solutions (October 16, 2015), pp. 2-3, avail. at https://resource-solutions.org/wp-content/uploads/2015/10/Renewable-Energy-In-the-EPA-CPP-2.pdf.

[189]EPA, *Proposed Rule, Carbon Pollution Emissions Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34830 (Jun. 18, 2014).

[190]79 Fed. Reg. at 34886 col. 1; 79 Fed. Reg. at 34889.

[191]79 Fed. Reg. at 34856 col. 1; 79 Fed. Reg. at 34888 col. 2; 79 Fed. Reg. at 34883 col. 2; 79 Fed. Reg. at 34885 col. 1; 79 Fed. Reg. at 34894 col. 2; 79 Fed. Reg. at 34886 col. 1; 79 Fed. Reg. at 34889 col. 1; 79 Fed. Reg. at 34889 col. 2.

[192]79 Fed. Reg. at 34880 col. 2.

[193]80 Fed. Reg. at 65003-04.

[194]80 Fed. Reg. at 65011.

[195]80 Fed. Reg. at 64908 ("The EPA also notes that non-ERC certificates may be issued by states and other bodies for MWh of energy generation and energy savings that are used to meet other state regulatory requirements, such as state RPS and EERS, or by individuals to make environmental or other claims in voluntary markets.").

[196]See, e.g., Peskoe, Harvard Environmental Policy Initiative, *Emission Rate Credits (ERCs) in the Clean Power Plan: An FAQ for States and Stakeholders*, pp. 5-6 (Oct. 20, 2015).

[197]*Trustees of Dartmouth College v. Woodward*, 4 Wheat. 518 (1819).

[198]79 Fed. Reg. at 34918 col. 2; 79 Fed. Reg. at 34913 col. 2; 79 Fed. Reg. at 34914 col. 2; 79 Fed. Reg. at 34921 col. 3; 79 Fed. Reg. at 34922 col. 1. See reports posted at http://resource-solutions.org/press-releases/crs-publishes-guides-to-renewable-energy-in-the-epa-clean-power-plan/, Renewable Energy in the EPA Clean Power Plan. Part 1: Introduction to Emission Rate Credits (Oct. 16, 2015) and Renewable Energy in the EPA Clean Power Plan. Part 2: Interactions With and Impacts on RECs and Renewable Energy Markets (Oct. 16, 2015).

[199]80 Fed. Red. at 64908.

[200]77 Fed. Reg. at 62122 (emphasis supplied).

[201]"what is knowledge? Knowledge means expecting a particular event to occur after some other specific events have occurred. One who

does not know anything can expect everything. One who knows something thinks that not everything can occur, but only certain things, while he considers other events impossible. Knowledge is thus a restriction placed on diversity; it is greater the lesser the uncertainty of the person expecting something to happen is." Stanislaw Lem, Summa Technologiae, p. 169 (Univ. of Minnesota Press 2013 tr. by Joanna Zylinska; orig. Wydawnictwo Literackie, Kraków 1964).

ATTACHMENT 2

CLIMATE RISK ANALYSIS TABLES

Parhelion Underwriting Ltd. and Standard & Poor's, *Can Capital Markets Bridge the Climate Change Financing Gap?*[88] excerpts.

[88] avail. at https://www.environmental-finance.com/assets/files/Parhelion_Climate_Financing_Risk_Mapping_Report_2010.pdf.

Policymakers Look To Private Capital To Fund The Shift To A Low-Carbon Economy - *continued*

The results of this exercise were subsequently analyzed by Parhelion to show how the four main risk categories--policy risks, capacity risks, transaction risks, and project risks--interact in terms of probability and severity (see chart).

The Risks Involved In Securing Climate Change Finance

	Category	Risk	Description
1.	Policy Risks ■	Additionality Risk	Lack of clear environmental additionality
2.		Cannibalisation Risk	Climate budgets are not additive to ODA spending
3.		Enforcement Risk	Rules not fully binding or difficult to enforce
4.		Illegitimate Policy Changes	Nationalisation, confiscation, expropriation, deprivation
5.		Inconsistency Risk	Regional, national, international rules and regulations in conflict
6.		Legitimate Policy Changes	Change in legislation in the ordinary course of government
7.		Longevity Risk	Regulations only in force for a short period compared to investor horizon / capital commitment
8.		Methodology, Reporting & Verification (MRV) Risk	Lack of appropriate methodologies
9.		Multitude Risk	Multiple project types in multiple countries and/or employing multiple technologies
10.	Capacity Risks ◆	Aggregation/ Commoditisation Risk	Difficulty in aggregating &/or commoditising individual transactions into large-scale investment vehicles
11.		Human / Operational	Lack of well trained work force to implement projects
12.		Infrastructure	Poor physical infrastructure
13.		Institutional - property rights	Lack of property rights and/or legal system
14.		Institutional - Regulatory	Lack of well established and resourced regulator
15.		Policy Development Risk	Lack of understanding within policy development role / civil service
16.	Transactional Risks ●	Branding Risk	Public unacceptability of mechanism e.g. market-based solution, securitisation etc.
17.		Complexity Risk	Financial instruments are too complex
18.		Currency Risk	Currency fluctuations
19.		Economic/Commodity Price Volatility	Fluctuation in economic conditions and commodity prices
20.		Fungibility Risks	Lack of fungibility between regimes / environmental instruments
21.		Liquidity Risk	Fragmented measures lead to too many different regimes
22.		Private Sector Funding Shortage	General shortage of funding
23.		Risk/Reward Imbalance	Insufficient returns available given risks involved

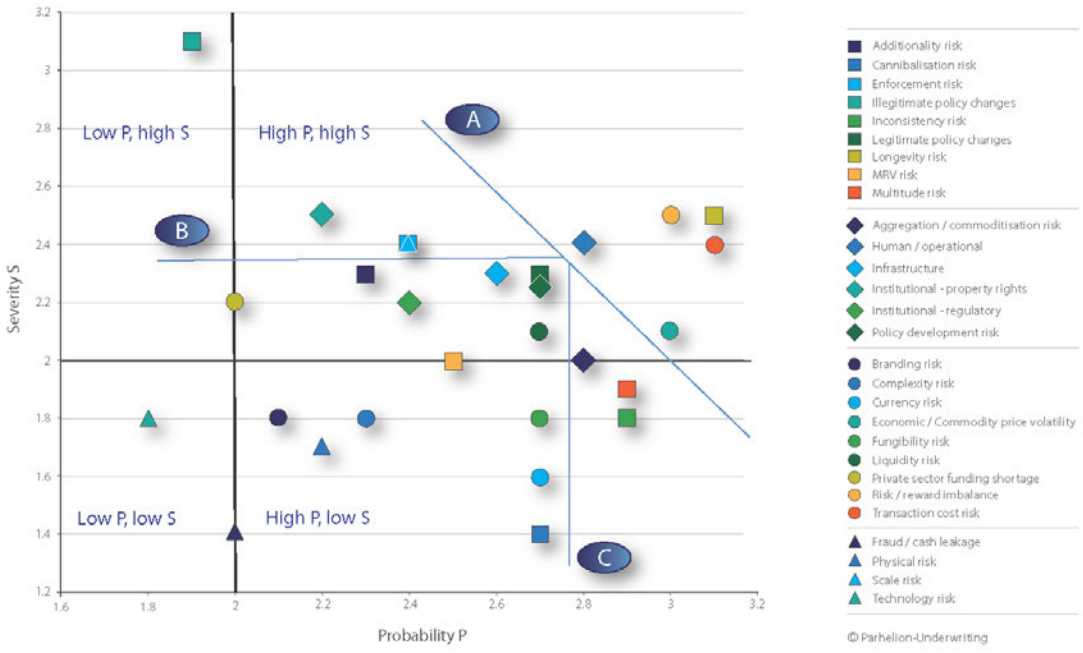
Policymakers Look To Private Capital To Fund The Shift To A Low-Carbon Economy - *continued*

The Risks Involved In Securing Climate Change Finance - *continued*

	Category	Risk	Description
24.		Transaction Cost Risk	High transaction costs, including high costs of complying with MRV requirements
25.	Project Risks ▲	Fraud/Cash Leakage	Investment eroded by leakage costs &/or fraud
26.		Physical Risk	Natural hazards, including fire, explosion, war, machinery breakdown and other material damage
27.		Scale Risk	Individual project size unattractive
28.		Technology Risk	Technology is not efficient and/or too complex and/or not publically accepted

Source: Parhelion Underwriting Ltd

Risk List - Average Probability and Severity Scales



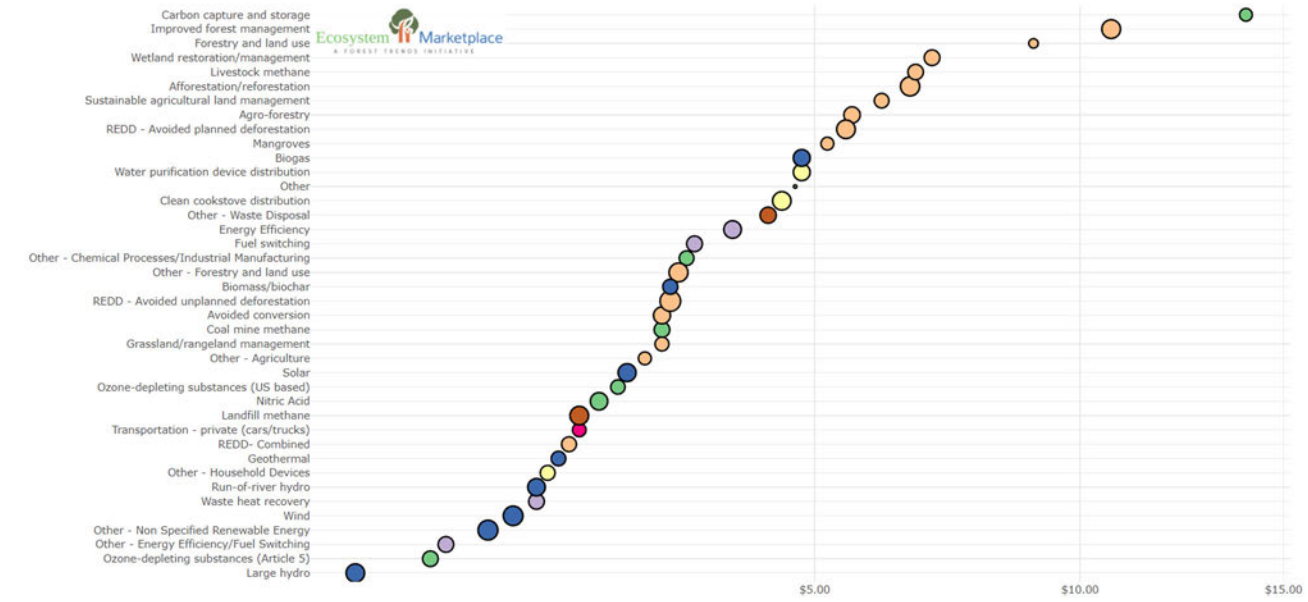
■ Policy risks ◆ Capacity risks ● Transaction risks ▲ Project risks

Source: Parhelion Underwriting Ltd.

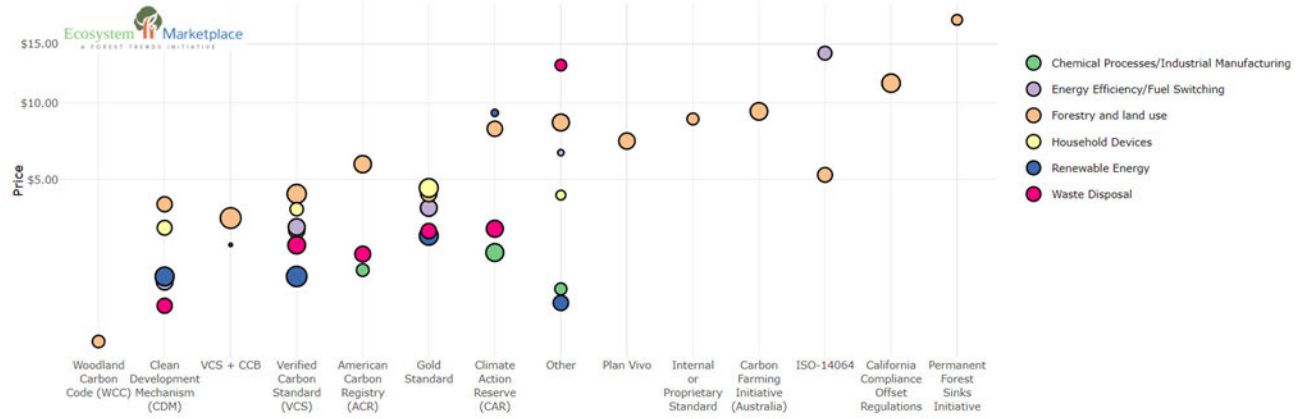
ATTACHMENT 3

Ecosystem Marketplace 2019 Carbon offset price reports.

Credit Prices and Volumes (2019), By Project Type



Credit Prices and Volumes (2019), By Standard and Category



Credit Prices and Volumes (2019), By Buyer Type and Region