



October 16, 2020

Mr. Josh Korth
Air Pollution Control Division (APCD)
Colorado Department of Public Health and Environment (CDPHE)
4300 Cherry Creek Drive South
Denver, CO 80246-1530

RE: Comments of Center for Resource Solutions (CRS) on the September 25, 2020 Clean Energy Plan (CEP) Guidance Draft Release for Public Comment

Dear Mr. Korth:

CRS appreciates this opportunity to submit comments on September 25, 2020 Clean Energy Plan (CEP) Guidance Draft Release for Public Comment (“CEP Draft Guidance”) and Appendices. In addition to the comments below, we have also attached some background information on renewable energy certificates (RECs) and their role in utility greenhouse gas (GHG) emissions reporting.

BACKGROUND ON CRS AND GREEN-E®

CRS is a 501(c)(3) nonprofit organization that creates policy and market solutions to advance sustainable energy. CRS provides technical guidance to government entities, utilities, NGOs and others on renewable energy policy and program design, electricity product disclosures and consumer protection, and GHG reporting and accounting. CRS also administers the Green-e® programs. For over 20 years, Green-e® has been the leading independent certification for voluntary renewable electricity products in North America. In 2018, Green-e® certified retail sales of over 62 million megawatt-hours (MWh), serving over 1.2 million retail purchasers of Green-e® certified renewable energy, including 61,000 businesses.¹

COMMENTS ON THE SECTION ON RENEWABLE ENERGY CERTIFICATES IN THE CEP DRAFT GUIDANCE

¹ See the 2019 (2018 Data) Green-e® Verification Report here for more information: <https://resource-solutions.org/g2019/>.

1. CRS recommends that the following statement on pg. 9 of the CEP Draft Guidance document be revised to clarify the rationale for the treatment of RECs in the 2005 baseline calculation and support the integrity of the REC accounting instrument: “Assigning an emissions intensity to that energy now would incorrectly increase the baseline emissions levels above what the utility has previously reported.”

Accurate REC accounting in the 2005 baseline that excludes renewable energy generation for which it cannot be demonstrated that the RECs have been retired on behalf of 2005 sales may not be necessary or conservative, considering that the CEP is a planning document for reductions in emissions associated with electricity sales. However, we are concerned that this statement calling that accounting “incorrect” could undermine the integrity of the REC accounting instrument.

Rather, we recommend that CDPHE state more plainly that where REC data is not available or where CDPHE is unable to verify that RECs were in fact retained or retired, the generation will not necessarily be treated as “null” power or assigned emissions. We further recommend that CDPHE clarify that since the data is not available, and due to the general inconsistency of REC data for 2005 generation, this would not necessarily produce the most accurate accounting of the 2005 baseline, and it may artificially inflate baseline emissions, resulting in fewer reductions.

2. CRS recommends that the following statement on pg. 9 of the CEP Draft Guidance document regarding the 2030 All Electricity sheet be removed or revised, and further explanation provided: “For this sheet, information about REC creation, retirement, and sales are not included in the data entry or calculations.”

As referenced in the following two sentences, RECs must be retired in 2030 for all renewable energy included in the sheet per 40-2-125.5(3)(a)(III) C.R.S. As a result, this statement is not accurate. We recommend that CDPHE state more plainly that the 2030 All Electricity sheet cannot reflect REC retirements in 2030 at the time of CEP submission and approval because they will not have happened yet. While the information in the sheet does not reflect REC retirements that have been made, and while CEPs will not include documentation of REC retirements, those REC retirements are nevertheless required by law. Therefore, the guidance document and the 2030 All Electricity sheet reflect the assumption that all RECs will need to be retired in the year generated.

COMMENTS REGARDING REC RETIREMENT AND OTHER REQUIREMENTS FOR RECs

3. Acknowledging that interpretations of statutory language at 40-2-125.5(3)(a)(III) C.R.S. may fall within the jurisdiction of the Public Utilities Commission (PUC), we encourage CDPHE and the Air Quality Control Commission (AQCC) to seek and/or provide clarity on whether this language—requiring retirement of RECs associated with renewable energy that is included in

CEPs “in the year generated”—means REC retirement in the year that the generation occurred vs. the year that the *REC* was issued, created, or “generated.”

An interpretation that RECs must be retired in the year that the generation occurred may produce a problem for fourth quarter generation because RECs are not created in the Western Renewable Energy Generation Information System (WREGIS) until 90 days after generation, which would be the first quarter of the following year. Fourth quarter RECs could not be retired in the same year as the generation. On the other hand, an interpretation that RECs must be retired in the year that the *RECs* are generated (i.e. RECs must be retired in the year that they are issued) would not present such a problem for fourth quarter generation.

4. Again, acknowledging that this may be the PUC’s decision, we also encourage CDPHE and the AQCC to seek and/or provide clarity on whether the statutory language at 40-2-125.5(3)(a)(III) C.R.S. requires annual retirement starting the year after the CEP is filed or simply retirement starting in 2030. Annual REC retirements are needed in order to create a glidepath down to 80% below 2005 by 2030, in order for CEPs to create benefits for Colorado over time, and in order to reduce the risk of policy failure.

If the intent of the law was to create a glidepath down to 80% below 2005 by 2030, then annual REC retirements are needed, for the reasons that that Western Resource Advocates (WRA) clearly articulates in its September 30, 2020 comments to the PUC (pg. 12-14) in response to Interim Decision No. C20-0661-I as a part of Proceeding no. 19R-0096E.²

From a policy perspective, annual retirement is preferred. Without annual REC retirement, utilities could in effect do no renewable energy procurement for retail sales until 2030. This would mean that the CEP does not create benefits to Colorado over time, and it creates the risk for catastrophic policy failure should utilities be unable to demonstrate compliance in 2030 without any interim compliance or progress reporting in previous years. It would also have implications for region-wide and overall grid emissions over time since annual REC retirement by Colorado utilities would prevent those RECs from being available for other entities’ renewable energy procurement, and that demand would be directed at other and potentially new renewable energy development, maximizing the demand-side impact.

5. We also encourage the CDPHE to seek or provide additional clarity regarding other requirements for RECs retired for renewable energy in CEPs—for example, requirements related to the location of the generation (e.g. geographic limitations) or the type of procurement (e.g. bundled vs. unbundled).

² Available at: https://www.dora.state.co.us/pls/efi/EFI.Mark_Show_Filing?p_key=A_99257&p_fil=C_769732.

A determination from the PUC regarding comment no. 3 above would provide clarification on the use of banked RECs and eligible REC vintage, for example. Specifically, an interpretation of 40-2-125.5(3)(a)(III) C.R.S. that RECs must be retired in the year that the RECs are created in WREGIS would effectively prohibit use of banked RECs and restrict eligible vintage to the year of generation or the fourth quarter of the preceding year.

Apart from these questions related to REC retirement, we understand that other questions about geographic limitations and eligible types of procurement, for example, may be answered by CDPHE, either as a part of this CEP guidance or in the supplemental data form being developed for the AQCC's Regulation 22.

COMMENTS ON THE SECTION ON MARKET EMISSIONS INTENSITY RATES IN THE CEP DRAFT GUIDANCE

6. CRS recommends using Emissions & Generation Resource Integrated Database (eGRID) Combustion Rates for market emissions intensity rates, rather than eGRID Total Output emissions rates, in order to achieve more accurate and conservative accounting of 2005 baseline and 2030 projected emissions.

eGRID Total Output emissions rates represent total electric generation and renewable energy generation (and respective emissions factors) reflected in these rates is likely transacted and claimed by others, including by the many Western state Renewable Portfolio Standards (RPS), clean energy standards (CES), and voluntary programs. eGRID Combustion Rates, representing emissions associated with fossil generation only, would provide a more accurate and conservative estimate of the emissions from short-term market purchases than allowing utilities to account for all renewable energy in the West.

Ideally, market emissions factors should represent delivered generation, which for renewable energy would require ownership and retirement of the associated RECs by the purchasing utility. However, “residual mixes” of generation—from which voluntary and other specified generation purchased for individual utility load have been removed—are not widely available for different markets in the West or in WREGIS. Furthermore, it may not be possible for utilities to identify and acquire the RECs associated with renewable generation participating in wholesale markets or that is included in an estimated market emissions factor precisely because market purchases are not specified, and RECs are not usually tracked through the market. There is no resource mix that is identified with a market purchase and there is no mechanism for resource-specific allocation or allocation of renewable energy in the market to specific utility load in Colorado.

APCD describes proposed use of eGRID Total Output emissions rates for 2030 projections as realistic and conservative, “because it is anticipated that much of the energy available for real time market purchases in 2030 will be from renewable resources that would have otherwise been curtailed in the absence of energy imbalance markets or other types of organized markets.”[1] However, in 2030 (just ten years from now), it is unlikely that the real-time Western Energy Imbalance Market (EIM) or an Extended Day-ahead Market (EDAM), for example, will be so large that the amount of *unclaimed* renewable energy in the West overwhelms the double counting of renewable energy, and associated emissions factors, being used for state and voluntary programs that will occur if Colorado uses a Total Output Emissions rate. In the case that state targets are being rapidly met, states have historically acted to increase compliance targets or timeframes to reduce the potential for large amounts of excess unclaimed renewable generation.

Furthermore, we have found no evidence that buying from the short-term markets will have an impact on curtailments. From a utility’s perspective, there are many considerations that would factor into a decision to grow the portion of load reliant on the short-term market (e.g. resource adequacy, hedging long-term vs. short term prices, etc.).

If, in the future, markets do include significant renewable energy that is not used for state and voluntary programs, the market emissions factor could be revisited at that time. And should improved data become available that reflects exclusively delivered renewable energy in markets (e.g. residual mix emissions rates, resource-specific allocation mechanisms in centralized markets, RECs associated with market purchases), it should be used. Language could be added to the guidance indicating that it will.

Finally, from a policy perspective, it is important that utilities not be able to meet reduction targets for delivered electricity by relying in significant part on changes in overall grid composition reflected in grid average or market average emissions rates without having to make meaningful changes to their own procurement. The proposed approach to estimate market emissions rates for 2030—using the historical eGRID Total Output Emission Rates from 2005 through 2018 and creating a trend extending through 2050—would not be appropriate, from this perspective, if utilities are meeting a large percentage of their load with market purchases in 2030.

Please let me know if we can provide any further information or answer any other questions.

Sincerely,

_____/s/____

Todd Jones
Director, Policy

Attachment: Background Information on RECs

ATTACHMENT:

BACKGROUND INFORMATION ON RENEWABLE ENERGY CERTIFICATES (RECS)

The Role of RECs for Delivery and Consumption of Renewable Energy

The following is an excerpt from: Jones, T. and Bucon, N. October 17, 2017. Corporate and Voluntary Renewable Energy in State Greenhouse Gas Policy: An Air Regulator's Guide. Center for Resource Solutions. Sec. 4.3 (pg. 9-12).

Purchasing, delivering or selling green or renewable power means differentiating electricity based on how it was generated or the attributes of generation—that is, allocating the renewable attributes of generation to specific customers. Again, these attributes and specified generation are not physically delivered and are separate from physical electricity. Generation attributes cannot be tracked to suppliers or consumers with physical electricity. Electricity is indistinguishable based on how it was produced and untraceable on the grid. Nevertheless, differentiated electricity products, and specifically renewable energy products, are bought and sold in the U.S., both wholesale and retail. Specified electricity is transacted using contracts, and in the case of renewable electricity using contractual instruments called renewable energy certificates (RECs)³.

RECs are the only way to deliver or consume renewable energy in the U.S. They represent property rights to the fully aggregated non-power generation attributes of renewable electricity generation. They are the essential accounting and tracking tool used to allocate renewable generation to specific customers and to purchase green power, either to demonstrate RPS compliance or meet voluntary demand. Each REC represents the generation attributes of one MWh of renewable electricity that has been added to the grid. These attributes include the renewable fuel type, location, and in almost all cases both GHG attributes described previously—the direct GHG emissions and the avoided grid emissions associated with generation—as well as all other environmental and social impacts and benefits of the generation.⁴ This treatment and use of RECs is accepted and consistent across the U.S. Thirty-five (35) states and territories, along with voluntary buyers and sellers of renewable energy—including U.S. federal agencies, utilities and other electric service providers, thousands of companies and municipalities and millions of individuals—use RECs to verify and legally enforce delivery and

³ The term renewable energy certificate (REC) is used in this guide in place of slightly different names as used by some state, regional, and voluntary programs (e.g. renewable energy credit), which have the same basic features as described here.

⁴ In most state and tracking system definitions of RECs and green attributes, these GHG attributes are either explicitly included in definitions of RECs or attributes, or they are implicitly included in “all environmental benefits,” “whole certificate,” or similar inclusive language. But, slight variations in state REC or attribute definitions do not significantly affect the uniformity of the REC instrument as used across the U.S., and certainly do not affect their use in the voluntary renewable energy market. We are aware of only one state, North Carolina, that allows the avoided emissions attribute to be traded separately from the REC for RPS compliance. Though Delaware and Pennsylvania do not appear to require avoided emissions with RECs for compliance, the PJM-GATS tracking system used for compliance in these states includes avoided emissions attributes as a part of a “whole certificate.” In the case of North Carolina, the contracting parties can specify that the avoided emissions attribute is attached to the REC if they so choose.

consumption of renewable energy on the grid.⁵ The exclusive use of RECs for this purpose is not contradicted by the remaining states and territories.⁶

As explained in the previous subsection, RECs are not needed for and do not affect renewable energy generation or production claims, precisely because generation attributes can be directly measured and because there is no double counting between production and consumption claims. Rather, RECs enable demand, purchasing, and supplier- or consumption-based compliance for renewable energy generation.

In RPS states, RECs are retired by load-serving entities (LSEs) and other regulated entities to verify that they are complying with state requirements to provide their customers with renewable energy. In addition, all options for voluntarily delivering, purchasing or otherwise using renewable electricity in the U.S., including onsite generation, must include RECs to substantiate a renewable energy usage or environmental claim. According to the U.S. Federal Trade Commission (FTC), the federal law enforcement agency responsible for oversight of marketing claims:

“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 manufacture any part of the advertised item or is used to power any part of the advertised service, unless the marketer has matched such nonrenewable energy use with renewable energy certificates;”⁷

and,

“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.”⁸

RECs are created at the point of generation, owned by the generator and then transacted to electricity distributors and suppliers (e.g. utilities) or directly to electricity consumers, either “bundled” with the electricity or separate from electricity (“unbundled”):

⁵ Jones, T. (2015). The Legal Basis of Renewable Energy Certificates. Center for Resource Solutions. Available online at: www.resource-solutions.org/pub_pdfs/The%20Legal%20Basis%20for%20RECs.pdf.

Also see U.S. Environmental Protection Agency. (2008) Renewable Energy Certificates. Available online at: www.epa.gov/greenpower/documents/gpp_basicsrecs.pdf.

⁶ Jones, T. (2015). The Legal Basis of Renewable Energy Certificates. Center for Resource Solutions. Available online at: www.resource-solutions.org/pub_pdfs/The%20Legal%20Basis%20for%20RECs.pdf

⁷ U.S. Federal Trade Commission (FTC). (2012). Guides for the Use of Environmental Marketing Claims; Final Rule. Sec. 260.15(a). Available at: www.ftc.gov/sites/default/files/documents/federal_register_notices/guides-use-environmental-marketing-claims-green-guides/greenguidesfrn.pdf.

⁸ Ibid. Sec. 260.15(d).

“RECs have become an important tool for the renewable electricity market. Once renewable electricity is introduced into the grid, it is physically indistinguishable from electricity generated from conventional sources. Accordingly, consumers cannot determine the source of the electricity flowing into their homes and businesses. However, because electricity transactions can be tracked, entities can ‘buy’ renewable power by purchasing power bundled with RECs. Under the REC system, a renewable electricity generator splits its output into two components: (1) the electricity itself (i.e., ‘null’ electricity); and (2) certificates representing the renewable attributes of that electricity. Generators that produce renewable electricity sell their electricity at market prices for conventionally produced power and then sell the renewable attributes of that electricity through separate certificates. Organizations purchase these RECs to characterize all or a portion of their electricity usage as ‘renewable’ by matching the certificates with the conventionally-produced electricity they normally purchase. By allowing these certificates to be sold separately and not requiring the renewable attribute to remain attached to the generated electricity, the REC approach provides flexibility and efficiency for the renewable electricity market.”⁹

RECs are either created by a generator or issued to generators by one of several electronic certificate tracking systems (“REC tracking systems”) that cover different regions of the U.S. Even in the case that a renewable generator is not registered with a tracking system, RECs are de facto created for each MWh of generation and may be transferred and retired contractually.

Trading a REC in the U.S., whether bundled or unbundled with underlying electricity, effectively transfers ownership rights to all of the attributes of the associated renewable electricity generation to the REC purchaser. Therefore, power without the renewable attributes, or “null power” where the renewable attributes have been sold to a different purchaser, is not renewable power and cannot be claimed as renewable or zero-emissions energy:

“In addressing these issues in the Green Guides, the Commission [...] 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.”¹⁰¹¹

In this way, RECs prevent double counting of the same renewable generation by multiple consumers or more than once by a particular consumer:

⁹ U.S. Federal Trade Commission. (2015). Letter from James A. Kohm, Associate Director, Division of Enforcement, Bureau of Consumer Protection, to R. Jeffrey Behm, Esq., Sheehey, Furlong & Behm, P.C. February 5, 2015. Available at: www.ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf.

¹⁰ See Statement of Basis and Purpose at 225, available at: www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguidesstatement.pdf.

¹¹ U.S. Federal Trade Commission (FTC). (2015). Letter from James A. Kohm, Associate Director, Division of Enforcement, Bureau of Consumer Protection, to R. Jeffrey Behm, Esq., Sheehey, Furlong & Behm, P.C. February 5, 2015. Available at: www.ftc.gov/system/files/documents/public_statements/624571/150205gmpletter.pdf

“[T]he 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 [...] renewable energy claims made by a company that already sold the RECs for its renewable generation. [...] 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.”¹²

Besides allowing suppliers and grid customers to verify delivery and use of renewable energy and preventing double counting, RECs also facilitate consumer demand and create access to renewable energy. RECs represent a standardized currency for renewable energy. They facilitate trading, creating market efficiencies, which creates a more vigorous market for renewable energy.

RECs for Load-based GHG Accounting and Reporting

As a general rule, RECs include the direct GHG emissions of renewable generation or the zero emissions benefit. There are no states that exclude the direct GHG emissions associated with generation from the attributes included and conveyed in RECs, and they are commonly defined to include “all environmental attributes” of electricity generation,¹³ as they are in Colorado.¹⁴ The same is true for the REC definitions used by all major regional renewable energy tracking systems across the country,¹⁵ and certification standards for the voluntary renewable energy market.¹⁶ The Greenhouse Gas Protocol’s *Scope 2 Guidance* also recognizes the role of RECs in accounting for the GHG emissions associated with purchased electricity by corporate consumers.¹⁷ RECs also convey GHG emissions benefits in energy contracts across markets.

More fundamentally, emissions allocated to load should match the fuel type allocated to load. Neither is measurable at the point of electricity consumption, and emissions should follow fuel type. Emissions are determined by fuel type. Disaggregating the GHG 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. This would damage the integrity of voluntary and compliance renewable energy programs, like RPS, which would not be able to deliver carbon benefits.

¹² Ibid

¹³ See Jones, T. et al. (2015). *The Legal Basis of Renewable Energy Certificates*. Center for Resource Solutions. <https://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf>.

¹⁴ 4 COLO. CODE REGS. § 723-3-3(3652)(y): “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.

¹⁵ See for example, Western Electricity Coordinating Council, Western Regional Generation Information System (WREGIS) Operating Rules (July 15, 2013). Section 2, pg. 2, 4-5. Available at: <https://www.wecc.biz/Corporate/WREGIS%20Operating%20Rules%20072013%20Final.pdf>.

¹⁶ See <https://www.green-e.org/glossary>.

¹⁷ Sotos, M. (2015) *GHG Protocol Scope 2 Guidance: An Amendment to the GHG Protocol Corporate Standard*. World Resources Institute. Available online: http://www.wri.org/sites/default/files/Scope_2_Guidance_Final.pdf.

Finally, requiring RECs for GHG accounting and reporting by suppliers does not contradict source-based emissions reporting programs that do not calculate the GHG emissions associated with sales, retail deliveries to customers, or power delivered to serve load. The emissions associated with the generation of electricity located in a state or other geographic area, which can be directly measured at the source, may be different from the emissions associated with the resources contracted to meet load and purchases for retail sales of electricity, which cannot be measured at the point of consumption and must be contractually tracked (for renewable energy, using RECs).