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The Legal Basis for Renewable Energy Certificates

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There is a strong legal basis for the use of renewable energy certificates (RECs)¹ as instruments that represent the attributes of renewable electricity generation. RECs are not controlled by any one organization or group of organizations, and neither are they instruments of recognition or donation. Rather, RECs are a part of the machinery of U.S. electricity markets, used to demonstrate renewable electricity purchasing, delivery, and use within the broader context of functioning voluntary and compliance renewable electricity markets.²

As shown in this report,³ multiple governmental entities at different levels, state legislation and regulation, regional electricity transmission authorities, non-governmental organizations (NGOs), trade associations, and market participants have recognized that RECs represent and convey the renewable, environmental and/or social attributes of renewable electricity generation to the owner, along with the legal right to claim usage of that renewable electricity. These entities recognize further that without RECs such a claim could not otherwise be substantiated,⁴ either by utilities and electric service providers (ESPs) for the purpose of demonstrating compliance with state laws, or by utilities/ESPs, other companies, and individuals for the purpose of meeting voluntary targets.

- Thirty-six (36) U.S. states and territories recognize that RECs can be used to track and transact renewable electricity on the grid.⁵ This is not contradicted by the remaining states and territories.
- Thirty-five (35) U.S. states and territories recognize the supremacy of RECs to demonstrate compliance of regulated entities with state laws requiring provision of renewable electricity to grid customers, such as Renewable Portfolio Standards (RPSs), or participation in voluntary state programs for provision of renewable electricity to grid customers.⁶ The remaining seven (7) states and territories with such mandates or goals do not track or allocate generation to specific users or deliverers of electricity.⁷
- Twenty-four (24) U.S. states and territories explicitly recognize RECs as representing “attributes” of generation (or similar);⁸ twenty-four (24) recognize them as mechanisms for “tracking” or “trading” (or equivalent) electricity or attributes;⁹ sixteen (16) describe them as representing electricity or energy “generation” (or equivalent);¹⁰ five (5) recognize them as “proof of generation,” or equivalent;¹¹ and three (3) explicitly identify RECs as “property.”¹²

For example, according to the State of Iowa:

Because of the laws of physics that govern operation of the electric transmission system, it is impossible to ensure that electricity produced by a particular renewable source is specifically and exclusively directed, in a physical sense, to the purchasing entity. An accounting system that verifies compliance must therefore rely on

an agreed-upon abstract medium of exchange similar to the way the financial markets rely on money to represent value. In the renewable energy area, Tradable Renewable Certificates (TRCs) have been developed as a medium of exchange representing the renewable attributes of renewable energy. TRCs can be used to show compliance with energy-based RPS mandates.¹³

According to the State of New York, which began developing its certificate-based tracking system—NYGATS—this year:

Unbundling [energy from its environmental attributes] allows NYSERDA, as the RPS Program's central procurement administrator, to acquire environmental attributes from generators instead of the rights that prevent generators from selling or transferring their environmental attributes to others. Increased control of the attributes can provide more assurance that double counting of attributes is avoided. If a certificate-based tracking system is developed, then the title to the environmental attributes could be in the form of renewable energy certificates (RECs), which would be easily transferred to NYSERDA as proof of its acquisition of renewable attributes. Thus, unbundling of attributes has the potential of strengthening significantly the market for renewable energy and opportunities for achieving the objectives of the RPS Program.¹⁴

Renewable energy tracking and certificate-issuing entities cover the whole of the U.S. and Canada. With the exception of the North American Renewables Registry (NAR), all of these multi-jurisdictional entities were established with the support of U.S. states, which have designated specific tracking systems to be used for issuing and tracking certificates and verifying compliance with state policies or programs.

- Seven (7) of these regional tracking systems define their certificates explicitly as “attributes” of renewable generation.¹⁵ PJM-GATS and the forthcoming NYGATS tracking systems have “generation attribute” as a part of the name of the entity—Generation Attribute Tracking System.
- All define their instruments as the mechanisms for “tracking” or “trading” (or equivalent) attributes or proof of generation for the purposes of compliance with state programs and/or voluntary programs.¹⁶

The U.S. Federal Energy Regulatory Commission (FERC) has also recognized that “environmental attributes” can be traded separately and are not necessarily bound to or conveyed with the “energy or capacity,” such that Public Utility Regulatory Policy Act (PURPA) avoided cost contracts for energy and capacity produced by a facility do not necessarily include any environmental attributes unless this is specified in the contract or determined by applicable state law.¹⁷

On Oct 1, 2003, FERC issued an order declaring that avoided cost contracts entered into pursuant to PURPA, absent express provisions to the contrary, do not inherently convey to the purchasing utility any RECs.¹⁸ Rather, the power purchase price that the utility pays under such a contract compensates a generation facility only for the energy and capacity produced by that facility and not for any environmental attributes associated with the facility. FERC later reaffirmed this order by denying a request for rehearing in 2004:

[Those seeking a rehearing] oppose having this Commission rule that contracts for the sale of QF [Qualifying Facility] capacity and energy entered into pursuant to PURPA convey only the capacity and energy, and do not convey RECs, to the purchasing utility (absent express provision in the contracts to the contrary). We disagree.¹⁹

If avoided cost rates are not intended to compensate a QF for more than capacity and energy, it follows that other attributes associated with the facilities are separate from, and may be sold separately from, the capacity and energy. Indeed, states in creating RECs that are unbundled and tradeable have recognized this. The very fact that RECs may be unbundled and may be traded under State law indicates that the

environmental attributes do not inherently convey pursuant to an avoided cost contract to the purchasing utility.²⁰

We note that cogeneration facilities, to receive QF status, are required to produce both electricity and useful thermal output. [...] The thermal output that is a pre-requisite to a cogeneration facility's achieving QF status is saleable separately from the capacity and energy of the cogeneration facility. [...] If the thermal output of a cogeneration QF is separately saleable, the renewable attributes of a small power production QF are similarly separate.²¹

The U.S. Department of Energy (DOE) Federal Energy Management Program (FEMP) recognizes that RECs “represent the technology and environmental (non-energy) attributes of energy generated from renewable sources,” and it affirms that they “can be sold separately from the mega-watt hour of generic electricity with which it is associated,” which “enables customers to offset a percentage of their annual energy use with certificates generated elsewhere.”²² FEMP requires that federal agencies retain ownership of RECs in order to demonstrate renewable energy consumption to comply with the Energy Policy Act of 2005 and Executive Order 13423, and it affirms that, “Retention of a REC that explicitly states that the Federal agency retains or precludes transfer to other parties of all renewable energy and non-energy attributes of the project is the best evidence of meeting this standard.”²³

In its guidance to federal agencies complying with Executive Order 13514, The White House Council on Environmental Quality (CEQ) also recognizes that “RECs are essential to claims concerning renewable energy and adjustments to GHG emissions,” and that, “Whatever acquisition method is used [for renewable energy], the REC must be owned by the agency in order to qualify for adjustment to their Scope 2 emissions to meet GHG reduction targets.”²⁴

U.S. case law also supports the legal basis of RECs as attributes and property rights. For example, the Superior Court of New Jersey has recognized that “One Renewable Energy Certificate represents the environmental benefits or attributes of one megawatt-hour of generated renewable energy,” and RECs are considered “property.”²⁵

The Connecticut Supreme Court has recognized that:

The certificates verify that specified units of electricity have been generated using renewable fuel or have been produced with low emissions and, pursuant to state law, can be purchased to satisfy the state renewable energy requirements. See General Statutes § 16-245a (b). Thus, the certificates effectively “unbundled” the renewable energy attribute of the electric product from the generic energy component for accounting purposes and allowed them to be traded separately.²⁶

It too refers to certificates as “property.” The United States Court of Appeals, Second Circuit has recognized that:

Generally speaking, RECs are inventions of state property law whereby the renewable energy attributes are “unbundled” from the energy itself and sold separately. The credits can be purchased by companies and individuals to offset use of energy generated from traditional fossil fuel resources or by government agencies to satisfy certain requirements that these agencies purchase a certain percentage of their energy from renewable sources.²⁷

The Armed Services Board of Contract Appeals (ASBCA), the body that resolves contract disputes between government contractors and the US Military, also agrees that RECs, “are personal property, given their exclusive nature and transferability,” and on this basis denied an appeal in August of 2013 to a delivery order that characterized RECs as “energy savings.”²⁸ The Board found that RECs are not simply financial

incentives offered by New Jersey relating to the generation of renewable energy that constitute energy savings. Rather, “SRECs simply reflect the clean, renewable aspect of electricity produced by a solar facility.”²⁹ It found that although the electricity produced by a solar array reduces the amount of energy the owner must purchase, and though RECs may generate revenue that could be used to pay energy costs, the certificates themselves do not reduce those energy costs.³⁰ Furthermore, the ASBCA found that even were the definition of energy savings to be expanded to include the sale of excess electricity generated by solar facilities, “SRECs are not electrical energy. They are marketable certificates, representing the clean, renewable nature of a solar facility's electrical production that has been severed from the electricity for the very purpose of being sold separately.”³¹

The supremacy of RECs to demonstrate the voluntary usage of renewable electricity and the attributes of its production is recognized by the U.S. Environmental Protection Agency (EPA), the U.S. DOE, the U.S. Federal Trade Commission (FTC), The Climate Registry, the CDP (formerly the Carbon Disclosure Project), and Center for Resource Solutions (CRS)/Green-e, among others.

- The U.S. EPA and the U.S. DOE have recognized RECs as “property rights to the environmental benefits from generating electricity from renewable energy sources.”³²
- The Western Area Power Administration, the power marketer within the DOE, recognizes RECs as “the environmental, social, and other positive attributes of power generated by renewable resources,” which “include the tons of GHGs that were avoided by generating electricity from renewable resources instead of fuels, such as coal, nuclear, oil, or gas.”³³
- The Environmental Markets Association (EMA) recognizes RECs as “the property rights to the environmental benefits from generating electricity from renewable energy sources” that “can be sold and traded and the owner of the REC can legally claim to have purchased renewable energy.”³⁴
- The American Bar Association (ABA) has recognized that “parties can create a record of the verification and disposition of the environmental attributes of the REC that can travel with further downstream transactions in the particular REC.”³⁵
- According to the FTC, “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.”³⁶
- Last year, the U.S. Commodity Futures Trading Commission (CFTC) recognized that “market participants often engage in environmental commodity transactions in order to transfer ownership of the environmental commodity (and not solely price risk), so that the buyer can consume the commodity in order to comply with the terms of mandatory or voluntary environmental programs.”³⁷
- The legitimacy of voluntary renewable energy usage and ownership claims through RECs was recognized by the California Energy Commission in 2009, when they ruled that a claim against RECs by a utility after the RECs had already been claimed by voluntary purchasers is not allowed as it would lead to a double-recovery.³⁸

According to the U.S. Federal Trade Commission:

Once renewable electricity is introduced into the grid, it is physically indistinguishable from electricity generated from conventional sources. Consumers, therefore, cannot determine for themselves the source of the electricity flowing into their homes. Because electricity transactions can be tracked, however, retail customers can “buy” renewable power by either: (1) purchasing renewable energy certificates (RECs); or (2) purchasing renewable power through contracts with their utility. Under the REC method, a renewable electricity generator splits its output into two components: (1) the electricity itself; and (2) certificates representing the renewable attributes of that electricity. Specifically, 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 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.³⁹

According to the U.S. EPA:

RECs were created to help convey the attributes of electricity generated from renewable resources to buyers. Analogous to the utility delivering the physical electricity through wires, RECs serve as the means to deliver the environmental and non-power attributes of renewable electricity generation to buyers—separate from the physical electricity,” and as such, “RECs are increasingly seen as the ‘currency’ of renewable electricity and green power markets.”⁴⁰

Certification through Green-e Energy along with the same tracking systems that are used for state compliance programs (and/or verification of contracts with the original generator) are used in the U.S. voluntary renewable energy market to provide equivalent assurances related to ownership, full aggregation,⁴¹ and avoidance of double counting to voluntary buyers.

RECs are essential to any renewable electricity usage claim in the U.S. Despite any differences between states and voluntary programs in terms of eligibility requirements,⁴² 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. The evidence is overwhelming that trading a REC in the U.S., whether bundled or unbundled with underlying electricity, effectively transfers ownership rights over all of the attributes of the associated renewable electricity generation to the REC purchaser. RECs therefore allow trading of differentiated electricity products despite the physical inability to identify the exact generating source supplying electricity to an individual customer or facility, and it is inappropriate for renewable energy or attribute reporting and accounting systems to disregard or deemphasize RECs on the basis of the distribution of electricity on a shared grid.

END NOTES

¹ Renewable energy certificate (REC) in this document is a term used to describe the various REC and equivalent instruments in the U.S., with perhaps different names as used by various state, regional, and voluntary programs, but with the same basic features as described in this document.

² Renewable energy certificate (and equivalent instrument) state definitions:

- AZ: ARIZ. ADMIN. CODE § R14-2-1801(N) (2007), http://apps.azsos.gov/public_services/Title_14/14-02.pdf
- CA: CAL. PUB. UTIL. CODE § 399.12(h)(1) (2003), <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>
- CO: 4 COLO. CODE REGS. § 723-3-3(3652)(y) (2014), <http://cdn.colorado.gov/cs/Satellite/DORA-PUC/CBON/DORA/1251631146828#tab3>
- CT: CONN. GEN. STAT. §16-245(a-b) (1998), <http://www.cga.ct.gov/2011/pub/chap283.htm#Sec16-245a.htm>
(RECs are not specifically defined in CT law. The above Connecticut General Statute citation mentions RECs and states that the CT RPS uses the operating rules of NEPOOL-GIS, *available at*, <http://www.nepoolgis.com/documents/>)
- DC: D.C. MUN. REGS. PUB. SERV. COMM’N. 15, 29 § 16738 (2999.1) (2015), http://www.dcpsc.org/pdf_files/commorders/orderpdf/orderno_16738_FC945.pdf
- DE: 26-3000-3008 DEL. ADMIN. CODE § 1.1 (2013), <http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>
- IA: IOWA CODE ANN. § 476.41, AEP-07-1 (West 2007), https://iub.iowa.gov/files/archive/orders/2007/1121_aep071.pdf
(No explicit definition exists, but references Tradable Renewable Certificates as a means of exchanging renewable attributes.)
- IL: 20 ILL. COMP. STAT. 3855 / 1-10 (2014), <http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapAct=20%26nbsp%3BILCS%26nbsp%3B3855%2F&ChapterID=5&ChapterName=EXECUTIVE+BRANCH&ActName=Illinois+Power+Agency+Act>
- IN: IND. CODE ANN. §8-1-37-3 (2011), <https://iga.in.gov/documents/8850f79f>
(No explicit definition exists, but references Tradable Renewable Certificates as a means of exchanging renewable attributes.)
- KS: KAN. ADMIN. REGS. § 82-16-1 (k) (2010), http://www.kssos.org/pubs/register%5C2010%5CVol_29_No_44_November_4_2010_p_1577-1616.pdf

KAN. STAT. ANN. § 66-1257 (e) (2009), http://www.kslegislature.org/li/b2015_16/statute/066_000_0000_chapter/066_012_0000_article/066_012_0057_section/066_012_0057_k/
- MA: 225 MASS. CODE REGS. 14.02 (2010), <http://www.mass.gov/eea/docs/doer/renewables/biomass/225-cmr-14-00-final-reg-doer-081712-clean-copy.pdf>
(Definition for GIS Certificate and Generation Attribute.)

- MD: H.B. 226, 2013 Leg., Reg. Sess. (Md. 2013), <http://mgaleg.maryland.gov/2013RS/bills/hb/hb0226e.pdf>
- ME: 65-407-311 ME. CODE R. § 2 (F) (LexisNexis 2007),
<http://www.maine.gov/sos/cec/rules/65/407/407c311.doc>
(Definition for GIS Certificate.)
- ME. REV. STAT. tit. 35, § 3210 (B-2) (2006), <http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>
(REC definition.)
- MI: MICH. COMP. LAWS § 460.1011 (2008)
[http://www.legislature.mi.gov/\(S\(yospjiegx0ccymhf3zjwow4ed\)\)/mileg.aspx?page=getObject&objectName=mcl-460-1011](http://www.legislature.mi.gov/(S(yospjiegx0ccymhf3zjwow4ed))/mileg.aspx?page=getObject&objectName=mcl-460-1011)
(MCL § 460.1041 (2008) gives more information on REC resource eligibility and use [tracking, trading, compliance, etc.])
- MN: MINN. STAT. § 216B.1691 (4) (2007)
<https://www.revisor.mn.gov/statutes/?id=216b.1691#stat.216B.1691.4>
- MO: MO. CODE REGS. ANN. tit. 4, §240-20.100 (2010)
<http://www.sos.mo.gov/adrules/csr/current/4csr/4c240-20.pdf>
- MT: MONT. CODE ANN. §69-3-2003 (14) (2005)
<http://leg.mt.gov/bills/mca/69/3/69-3-2003.htm>
- NC: N.C. GEN. STAT. ANN. § 62-133.8 (6) (West 2008)
http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_62/GS_62-133.8.html
- ND: N.D. ADMIN. CODE 69-09-08-02 (5) (2011)
<http://www.legis.nd.gov/information/acdata/pdf/69-09-08.pdf?20150409160640>
(ND has two separate definitions for Renewable Energy Certificate and Renewable Energy Credit.)
- NH: N.H. REV. STAT. ANN. § 34.362 (2007),
<http://www.gencourt.state.nh.us/rsa/html/XXXIV/362-F/362-F-2.htm>
- NJ: S.B. 1925, SEN. COMM., (N.J. 2012),
http://www.njleg.state.nj.us/2012/Bills/AL12/24_.PDF
- NM: N.M. CODE R. § 17.9.572.7 (E) (LexisNexis 2013),
<http://164.64.110.239/nmac/parts/title17/17.009.0572.htm>
- N.M. STAT. ANN. § 62-16-3 (F) (2007), *available at*:
<http://www.nmonesource.com/nmnextadmin/nmpublic.aspx>
- NV: NEV. REV. STAT. § 704.7803 (2002),
<http://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7801>
(Definition for Portfolio Energy Credit.)
- NEV. ADMIN. CODE § 704.8908 (2002),
<http://www.leg.state.nv.us/nac/NAC-704.html#NAC704Sec8908>

- NY: N.Y. ENERGY LAW SERDA ACT, tit. 9, 8 § 1851 (18) (2012),
<http://www.nyserda.ny.gov/-/media/Files/About/NYSERDA-Act.pdf>
 (Definition for Generation Attribute Certificate.)
- OH: OHIO ADMIN. CODE 4901:1-40-01 (BB) (2009),
<http://codes.ohio.gov/oac/4901%3A1-40>
- OR: OR. ADMIN. R. § 330-160-0015 (15) (2008),
http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_330/330_160.html
- OR. REV. STAT. § 469A.005 (1) (12) (2007),
https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2013ors469A.html
- PA: 52 PA. CODE § 75.1 (2009), *available at:* http://www.pacode.com/secure/data/052/chapter75/052_0075.pdf
 (Definition for Alternative Energy Credit.)
- PR: S.B. 1519, SEN. COMM. § 82 (P.R. 2010), *available at:*
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>
- RI: R.I. GEN. LAWS § 39-26-2 (13) (2004),
<http://webserver.rilin.state.ri.us/Statutes/TITLE39/39-26/39-26-2.HTM>
 (Definition for NE-GIS Certificate.)
- SD: S.D. CODIFIED LAWS § 49-34A-101 (2008),
http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=49-34A-101
 (RECs are not specifically define in law. Most “utilities use M-RETS or WREGIS to track and retire credits, which specifically defines a REC as including all attributes” [Hamrin, 2014].)
- TX: 16 TEX. ADMIN. CODE § 25.5 (101) (2014),
[http://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=F&p_rloc=153710&p_tloc=29622&p_ploc=14913&pg=16&p_tac=&ti=16&pt=2&ch=24&rl=142](http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=F&p_rloc=153710&p_tloc=29622&p_ploc=14913&pg=16&p_tac=&ti=16&pt=2&ch=24&rl=142)
- TEX. UTIL. CODE ANN. § 25.173(c) (13) (2000),
<http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.173/25.173.pdf>
- UT: UTAH CODE ANN. §10-19-102 (10) (2008),
<http://le.utah.gov/xcode/Title10/Chapter19/10-19-S102.html>
- VA: VA. CODE ANN. § 56-585.2 (2007),
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+56-585.2>
- VT: VT. STAT. ANN. tit. 30, § 8002 (22) (2013),
<http://legislature.vermont.gov/statutes/section/30/089/08002>
- WA: WASH. ADMIN. CODE § 480-109-007 (17) (2007),
<http://app.leg.wa.gov/WAC/default.aspx?cite=480-109-007>
- WASH. REV. CODE § 19.285.030 (20) (2006),
<http://apps.leg.wa.gov/RCW/default.aspx?cite=19.285>
- WI: WIS. ADMIN. CODE PSC § 118-02 (7r) (10) (2007),
http://docs.legis.wisconsin.gov/code/admin_code/psc/118
 (WI has two separate definitions for Renewable Resource Credit and Renewable Energy Certificate.)

³ This paper is not intended to be a comprehensive or exhaustive listing of all sources supporting the use of RECs. There may be many other specific laws, regulations, etc. that also support the key findings described.

⁴ While this document primarily describes RECs that are issued by tracking systems, RECs may be created and conveyed in contracts even if a renewable generator is not registered with a tracking system.

⁵ Listing of state regulations that support use of RECs to track and transact renewable electricity on the grid:

- AZ: ARIZ. ADMIN. CODE § 14-2-1803 (E) (2007),
http://apps.azsos.gov/public_services/Title_14/14-02.pdf
- CA: CAL. PUB. UTIL. CODE § 399.21 (a)(1) (2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>
- CO: 4 COLO. CODE REGS. § 723-3 (3659) (n) (LexisNexis 2014),
<http://cdn.colorado.gov/cs/Satellite/DORA-PUC/CBON/DORA/1251631146828>
- CT: 283 CONN. GEN. STAT. § 16-245a (b) (1998),
<http://www.cga.ct.gov/2011/pub/chap283.htm#Sec16-245a.htm>
- DC: D.C. MUN. REGS. tit. PSC Order15, §29 No. 16738 (2901.3) (2012), *available at*:
http://www.dcpsc.org/pdf_files/commorders/orderpdf/orderno_16738_FC945.pdf
- DE: 26-3000-3008 DEL. ADMIN. CODE § 1.1 (2013),
<http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>

DEL. CODE ANN. tit. 26, § 359 (a) (2005),
http://delcode.delaware.gov/title26/c001/sc03a/index.shtml#P11_150
- IA: IOWA CODE § 476.44A (2003), <http://coolice.legis.iowa.gov/Cool-ICE/default.asp?category=billinfo&service=IowaCode&ga=83&input=476.44A>
- IL: 20 ILL. COMP. STAT. ANN. 3855/1-75 (2013),
<http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapterID=5>
- IN: S.B. 251, GEN. ASSEM., REG. SESS. (IN. 2011),
<http://www.in.gov/legislative/bills/2011/SE/SE0251.1.html>
- KS: KAN. ADMIN. REGS. 82-16-6 (d) (2010), *available at*:
http://www.kssos.org/pubs/register%5C2010%5CVol_29_No_44_November_4_2010_p_1577-1616.pdf
- MA: 225 MASS. CODE REGS. 14.08 (1) (2010), <http://www.mass.gov/eea/docs/doer/renewables/biomass/225-cmr-14-00-final-reg-doer-081712-clean-copy.pdf>
(Endorses use of NEPOOL GIS tracking system in its operating rules.)
- MD: MD. CODE REGS. 20.61.01.03 (2015),
<http://www.dsd.state.md.us/comar/comarhtml/20/20.61.01.03.htm>
(Endorses use of GATS tracking system.)

- MD. CODE ANN. PUB. UTIL. COS. §7–708 (LexisNexis 2004),
<http://mgaleg.maryland.gov/webmga/fmStatutesText.aspx?article=gpu§ion=7-708&ext=html&session=2015RS&tab=subject5>
- ME: ME. REV. STAT. tit. 35, § 3210-C (B-2) (2006), *available at*:
<http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>
- MI: MICH. COMP. LAWS § 460.201 (1) (2008),
<http://www.legislature.mi.gov/documents/2015-2016/executiveorder/pdf/2015-EO-10.pdf>
- MICH. COMP. LAWS § 460.1041 (1) (2008),
[http://www.legislature.mi.gov/\(S\(w4fn5oomxpa0k0gtcmrbmhjs\)\)/mileg.aspx?page=getObject&objectName=mcl-460-1041](http://www.legislature.mi.gov/(S(w4fn5oomxpa0k0gtcmrbmhjs))/mileg.aspx?page=getObject&objectName=mcl-460-1041)
- MN: MINN. STAT. ANN. § 216B.1691 (2013),
<https://www.revisor.mn.gov/statutes/?id=216b.1691#stat.216B.1691.4>
- MO: MO. CODE REGS. ANN. tit. 4, §240-20.100 (1) (J) (2010),
<http://www.sos.mo.gov/adrules/csr/current/4csr/4c240-20.pdf>
- MT: 20 ILL. COMP. STAT. ANN. 3855/1-75 (2013), <http://leg.mt.gov/bills/mca/69/3/69-3-2003.htm>
- NC: N.C. GEN. STAT. ANN. § 62-133.8 (k) (West 2008),
http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_62/GS_62-133.8.html
- ND: H.B. 1506, 60 LEG. ASSEMB., (N.D. 2007),
<http://www.legis.nd.gov/assembly/60-2007/bill-text/HBIO0500.pdf>
- NH: N.H. REV. STAT. ANN., § 34:362-F:6 (I) (2007),
<http://www.gencourt.state.nh.us/rsa/html/XXXIV/362-F/362-F-6.htm>
- NJ: N.J. Admin. Code § 14:8-1.2 (2015), *available at*: <http://www.lexisnexis.com/hottopics/njcode/> (free public access Official Publisher of the New Jersey Administrative code)
- ND: N.D. CENT. CODE ANN. § 49-02-25 (West 2015),
<http://www.legis.nd.gov/cencode/t49c02.pdf?20150610172444>
- NM: N.M. STAT. ANN. § 62-16-5 (2007),
<http://www.nmprc.state.nm.us/utilities/renewable-energy-act/05.html>
- NV: NEV. REV. STAT. § 704.7821 (7) (2002),
<http://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7801>
- NEV. ADMIN. CODE § 704.8872 & 8933 (2002),
<http://www.leg.state.nv.us/nac/NAC-704.html#NAC704Sec8831>
- NY: N.Y. PUB. SERV. LAW, § 03-E-0188, (2006),
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={99B37D71-602B-47F1-8989-5729836A3809}>
- OH: OHIO ADMIN. CODE 4901:1-40-04 (D) (2) (2009), <http://codes.ohio.gov/oac/4901%3A1-40>

- OR: OR. REV. STAT. ANN. § 757.600 (West 2015),
https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2013ors757.html
- PA: 73 PA. STAT. ANN. § 1648.3 (e) (2) (West 2004),
73 PA. STAT. ANN. § 1672.213.3(e) (2) (West 2004),
<http://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2004&sessInd=0&act=213>
- PR: P.R. LAWS ANN. tit. 82, §1519 (2010), <http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>
- RI: R.I. GEN. LAWS § 39-26-2 (12) (2004),
<http://webserver.rilin.state.ri.us/Statutes/TITLE39/39-26/INDEX.HTM>
(Endorses use of NE-GIS tracking system.)
- SD: S.D. CODIFIED LAWS § 49-34A-94 (2006),
S.D. CODIFIED LAWS § 49-34A-101 (2006),
<http://puc.sd.gov/commission/dockets/rulemaking/2011/RM11-001/finalrules.pdf>
- TX: TEX. UTIL. CODE ANN. §25.173(d) (2000),
<http://www.puc.texas.gov/agency/ruleslaws/subrules/electric/25.173/25.173.pdf>
- UT: UTAH ADMIN. CODE r. 10-19-102 (4) (2008),
UTAH ADMIN. CODE r. 10-19-102 (12) (2008),
<http://le.utah.gov/UtahCode/section.jsp?code=10-19>
- VA: VA. CODE ANN. § 56-585.2 (2015),
<https://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+56-585.2>
- VT: VT. STAT. ANN. tit. 30, § 8006 (2013),
<http://legislature.vermont.gov/statutes/section/30/089/08006>
- WA: WASH. ADMIN. CODE § 480-109-007 (17) (2007),
<http://apps.leg.wa.gov/WAC/default.aspx?cite=480-109>

WASH. REV. CODE § 19.285.030 (20) (2006),
<http://apps.leg.wa.gov/RCW/default.aspx?cite=19.285>
- WI: WIS. STAT. § 196.378 (2014),
<https://docs.legis.wisconsin.gov/statutes/statutes/196/378>

⁶ Listing of state regulations that support use of RECs to demonstrate compliance of regulated entities with state laws requiring provision of renewable electricity

- AZ: ARIZ. ADMIN. CODE § 14-2-1803 (D-F) (2007),
ARIZ. ADMIN. CODE § 14-2-1804 (2007),
http://apps.azsos.gov/public_services/Title_14/14-02.pdf
- CA: CAL. PUB. UTIL. CODE § 399.21 (a) (West 2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>
- CO: 4 COLO. CODE REGS. §72-3 (3659) (n) (LexisNexis 2014),
<http://cdn.colorado.gov/cs/Satellite/DORA-PUC/CBON/DORA/1251631146828>

- COLO. REV. STAT. § 40-2-124 (1) (d) (2014), *available at*:
<http://www.lexisnexis.com/hottopics/colorado/>
- CT: 283 CONN. GEN. STAT. § 16-245a (b) (1) (1998),
<http://www.cga.ct.gov/2011/pub/chap283.htm#Sec16-245a.htm>
- DC: D.C. MUN. REGS. tit. PSC § 16738 (2901.1) (2012), *available at*:
http://www.dcpsc.org/pdf_files/commorders/orderpdf/ordermo_16738_FC945.pdf
- DE: 26-3000-3008 DEL. CODE REGS. § 3.2.2 (LexisNexis 2013),
<http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>
- DEL. CODE ANN. tit. 26, § 358 (a) (2005),
 DEL. CODE ANN. tit. 26, § 360 (a) (2005),
http://delcode.delaware.gov/title26/c001/sc03a/index.shtml#P11_150
- IA: IOWA UTIL. CODE § AEP-07-1 (2007),
https://iub.iowa.gov/files/archive/orders/2007/1121_aep071.pdf
- IL: 20 ILL. COMP. STAT. 3855/1-75 (2007),
<http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapAct=20%26nbsp%3BILCS%26nbsp%3B3855%2F&ChapterID=5&ChapterName=EXECUTIVE+BRANCH&ActName=Illinois+Power+Agency+Act>
- IN: 170 IND. ADMIN. CODE r.17.1-3-4 (2012),
<http://www.in.gov/legislative/iac/T01700/A00171.PDF>
- KS: KAN. ADMIN. REGS. § 82-16-6 (d) (2010), *available at*:
http://www.kssos.org/pubs/register%5C2010%5CVol_29_No_44_November_4_2010_p_1577-1616.pdf
- MA: 225 MASS. CODE REGS. 14.09 (2010),
<http://www.mass.gov/eea/docs/doer/renewables/biomass/225-cmr-14-00-final-reg-doer-081712-clean-copy.pdf>
- MD: MD. CODE ANN., PUB. UTIL. COS. §7-709 (LexisNexis 2004),
<http://mgaleg.maryland.gov/webmga/frmStatutesText.aspx?article=gpu§ion=7-709&ext=html&session=2015RS&tab=subject5>
- ME: ME. REV. STAT. tit. 35-A, § 3210 (8) (2000), *available at*:
<http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>
- MI: MICH. COMP. LAWS § 460.1041 (2) (2008),
[http://www.legislature.mi.gov/\(S\(w4fn5oomxpa0k0gtcmrbmhjs\)\)/mileg.aspx?page=getObject&objectName=mcl-460-1041](http://www.legislature.mi.gov/(S(w4fn5oomxpa0k0gtcmrbmhjs))/mileg.aspx?page=getObject&objectName=mcl-460-1041)
- MN: MINN. STAT. § 216B.1691 (4) (b) (2007),
<https://www.revisor.mn.gov/statutes/?id=216b.1691#stat.216B.1691.4>
- MO: MO. CODE REGS. ANN. tit. 4, § 40-20.100 (2010),
 4 CSR 240-20.100 (3), p.39 (2010),
<http://www.sos.mo.gov/adrules/csr/current/4csr/4c240-20.pdf>

- MT: MONT. CODE ANN. § 69-3-2004 (7) (2005),
<http://leg.mt.gov/bills/mca/69/3/69-3-2004.htm>
- NC: N.C. GEN. STAT. § 62-133.8 (a) (6) (2008),
 N.C. GEN. STAT. § 62-133.8 (b) (2) (e) (2008),
http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_62/GS_62-133.8.html
- ND: N.D. CENT. CODE § 49-02-28, (2007),
 N.D. CENT. CODE § 49-02-31, (2007),
<http://www.legis.nd.gov/cencode/t49c02.pdf?20150409160556>
- NH: N.H. REV. STAT. ANN. § 34:362-F:6 (I) (2007),
<http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XXXIV-362-F.htm>
- NJ: N.J. ADMIN. CODE § 14:8-2.8 (2014),
[http://www.state.nj.us/bpu/pdf/rules/R%202014%20d%20048%20\(46%20NJR%20549\(a\)\)%20\(2\).pdf](http://www.state.nj.us/bpu/pdf/rules/R%202014%20d%20048%20(46%20NJR%20549(a))%20(2).pdf)
 S.B. 1925, SEN COMM. (N.J. 2012),
http://www.njleg.state.nj.us/2012/Bills/AL12/24_.PDF
- NM: N.M. STAT. ANN. § 62-16-5 (2007),
<http://www.nmprc.state.nm.us/utilities/renewable-energy-act/index.html>
 N.M. CODE R. § 17.9.572.17 (A) (2013), *available at:*
<http://164.64.110.239/nmac/parts/title17/17.009.0572.htm>
- NV: NEV. REV. STAT. § 704.7803 (2002),
<http://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7803>
 NEV. REV. STAT. § 704.7821 (4) (2002),
<http://www.leg.state.nv.us/nrs/NRS-704.html#NRS704Sec7821>
 NEV. ADMIN. CODE § 704.8875 (7) (2014),
<http://www.leg.state.nv.us/nac/NAC-704.html#NAC704Sec8875>
- NY: N.Y. PUB. SERV. ORDER, § 03-E-0188, (2006),
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={99B37D71-602B-47F1-8989-5729836A3809}>
- OH: OHIO ADMIN. CODE 4901:1-40-04 (D) (2009),
<http://codes.ohio.gov/oac/4901:1-40-04>
- OR: OHIO REV. CODE ANN. § 469A.070 (LexisNexis 2007),
https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2013ors469A.html
- PA: 73 PA. CONS. STAT. § 1648.3 (e) (2) (2004),
 73 PA. CONS. STAT. § 1672-213-3 (e) (4) (i) (2004),
<http://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2004&sessInd=0&act=213>
- PR: P.R. LAWS ANN. tit. 1519 § 82 (2010), *available at:*
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>

- RI: R.I. GEN. LAWS § 39-26-4 (2004),
<http://webservice.rilin.state.ri.us/Statutes/TITLE39/39-26/39-26-4.HTM>
- 90-60 R.I. CODE R. § 015 (7.2) (2007),
<http://sos.ri.gov/documents/archives/regdocs/released/pdf/PUC/4694.pdf>
- SD: S. D. CODIFIED LAWS § 49-34A-101 (2008),
 S. D. CODIFIED LAWS § 49-34A-106 (2008),
http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Statute=49-34A&Type=Statute
- TX: TEX. UTIL. CODE ANN. Â§ 39.904 (PURA) (b) (West 1999),
<http://www.statutes.legis.state.tx.us/Docs/UT/htm/UT.39.htm#39.904>
- UT: UTAH CODE ANN. § 10-19-201 (LexisNexis 2008),
<http://le.utah.gov/xcode/Title10/Chapter19/10-19-S201.html>
- VA: VA. CODE ANN. § 56-585.2 (2007),
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+56-585.2>
- WA: WASH. ADMIN. CODE § 194-37-120 (2) (2008),
<http://apps.leg.wa.gov/WAC/default.aspx?cite=194-37>
- WI: WIS. STAT. § 196.378 (2) (bm) (2001),
<http://docs.legis.wisconsin.gov/statutes/statutes/196/378/2/bm>
- WIS. ADMIN. CODE PSC § 118-04 (2007),
http://docs.legis.wisconsin.gov/code/admin_code/psc/118/04

⁷ Meaning, they either have capacity-based targets or generation-based targets where all generation in the state is counted toward the RPS.

⁸ Listing of state regulations to support that RECs represent “attributes” of generation (or similar):

- AZ: ARIZ. ADMIN. CODE § 14-2-1804 (E) (2007),
http://apps.azsos.gov/public_services/Title_14/14-02.pdf
 (Ariz. Admin. Code § 14-2-1804 (E) states that RECs are not whole if some of the environmental attributes are stripped. A definition of a REC including the term “attribute” is not in the law itself.)
- CA: CAL. PUB. UTIL. CODE § 399.12 (h) (2) (Deering 2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>
- CAL. PUB. UTIL. CODE § 04-06-014 (2) (Deering 2004)
- CO: 4 Colo. Code Regs. § 723-3 (3652) (y) (LexisNexis 2014)
<http://cdn.colorado.gov/cs/Satellite/DORA-PUC/CBON/DORA/1251631146828#tab3>
- DE: 26-3000-3008 DEL. ADMIN. CODE § 1.1 (2013)
<http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>
- IA: IOWA CODE § 476.44A (2003)
<http://coolice.legis.iowa.gov/Cool->

[ICE/default.asp?category=billinfo&service=IowaCode&ga=83&input=476.44A](http://www.legis.iowa.gov/legislation/bills/default.asp?category=billinfo&service=IowaCode&ga=83&input=476.44A)

- IL: 20 ILL. COMP. STAT. 3855/1-10 (2007),
<http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapAct=20%26nbsp%3BILCS%26nbsp%3B3855%2F&ChapterID=5&ChapterName=EXECUTIVE+BRANCH&ActName=Illinois+Power+Agency+Act>
- KS: KAN. ADMIN. REGS. § 82-16-1 (k) (2010),
http://www.kssos.org/pubs/register%5C2010%5CVol_29_No_44_November_4_2010_p_1577-1616.pdf
- MA: 225 MASS. CODE REGS. 14.02 (2010),
<http://www.mass.gov/eea/docs/doer/renewables/biomass/225-cmr-14-00-final-reg-doer-081712-clean-copy.pdf>
- MD: MD. CODE ANN., PUB. UTIL. COS. § 7-701 (n) (LexisNexis 2004),
<http://mgaleg.maryland.gov/webmgaleg/frmStatutesText.aspx?article=gpu§ion=7-701&ext=html&session=2015RS&tab=subject5>
- ME: ME. REV. STAT. tit. 35-A, § 3210 (8) (2000),
<http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>

65-407-311 ME. CODE R. § 2 (F) (LexisNexis 2007),
<http://www.maine.gov/sos/cec/rules/65/407/407c311.doc>
- MN: MINN. STAT. §216B. 1691 (2007), *available at*:
<https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7B9BC0C548-1B8D-4FAF-B96F-F97BA88B0ABB%7D&documentTitle=4872137>
(Describes how Minnesota uses MRET's definition of RECs, which specifies that the RECs must remain "whole".)
- MT: MONT. CODE ANN. § 69-3-2003 (14) (2005),
<http://leg.mt.gov/bills/mca/69/3/69-3-2003.htm>
- ND: N.D. ADMIN. CODE 69-09-08-02 (8) (2011),
<http://www.legis.nd.gov/information/acdata/pdf/69-09-08.pdf?20150409160640>
- NJ: N.J. ADMIN. CODE § 14:8-2.2 (LexisNexis 2015), *available at*:
<http://www.lexisnexis.com/hottopics/njcode/>

S.B. 1925, 2012 LEG. REG. SESS. (N.J. 2012),
http://www.njleg.state.nj.us/2012/Bills/AL12/24_.PDF
- NM: N.M. STAT. ANN. § 62-16-3 (F) (2007),
<http://public.nmcompcomm.us/nmpublic/gateway.dll/?f=templates&fn=default.htm>

N. M. CODE R. § 17.9.572.7 (E) (LexisNexis 2013),
<http://164.64.110.239/nmac/parts/title17/17.009.0572.htm>
- NY: N.Y. PUB. SERV. LAW § 03-E-0188 (2006),
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={99B37D71-602B-47F1-8989-5729836A3809}>
- OH: OHIO ADMIN. CODE 4901:1-40-01 (BB) (2009),

<http://codes.ohio.gov/oac/4901%3A1-40>

- OR: OR. ADMIN. R. 330-160-0015 (15) (2008),
http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_330/330_160.html
("Representation of the environmental, economic, and social benefits.")
- PR: P.R. LAWS ANN. tit. 1519 § 82 (2010),
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>
- RI: R.I. GEN. LAWS § 39-26-2 (10) (12) (2004),
<http://webserver.rilin.state.ri.us/Statutes/TITLE39/39-26/39-26-2.HTM>
- TX: 16 TEX. ADMIN. CODE tit. 16, § 25.5 (108) (2014),
[http://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=T&app=9&p_dir=F&p_rloc=153710&p_tloc=29622&p_ploc=14913&pg=16&p_tac=&ti=16&pt=2&ch=24&rl=142](http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=T&app=9&p_dir=F&p_rloc=153710&p_tloc=29622&p_ploc=14913&pg=16&p_tac=&ti=16&pt=2&ch=24&rl=142)
- UT: UTAH CODE ANN. § 10-19-102 (4) (LexisNexis 2008),
<http://le.utah.gov/xcode/Title10/Chapter19/10-19-S102.html>
("Attributes" are only explicitly included in the definition for "bundled" energy certificates.)
- VT: VT. STAT. ANN. tit. 30, § 8002 (22), (6) (2013),
<http://legislature.vermont.gov/statutes/section/30/089/08002>
- WA: WASH. ADMIN. CODE § 480-109-007 (2007),
<http://app.leg.wa.gov/WAC/default.aspx?cite=480-109-007>

⁹ Listing of state regulations to support that RECS are mechanisms for "tracking" or "trading" (or equivalent) electricity or attributes:

- AZ: ARIZ. ADMIN. CODE. § 14-2-1801 (N), 1803 (C) (2007),
http://apps.azsos.gov/public_services/Title_14/14-02.pdf
- CA: CAL. PUB. UTIL. CODE § 399.25 (c) (Deering 2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>
- CT: 283 CONN. GEN. STAT. § 16-245a (b) (1998),
<http://www.cga.ct.gov/2011/pub/chap283.htm#Sec16-245a.htm>
- DC: D.C. MUN. REGS. tit. 16738, § 2903.1 (2012),
http://www.dcpsc.org/pdf_files/commorders/orderpdf/orderno_16738_FC945.pdf
- DE: 26-3000-3008 DEL. CODE REGS. § 1.0 (LexisNexis 2013),
<http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>
- IA: IOWA CODE § 476.44A (2003), *available at*: <http://coolice.legis.iowa.gov/Cool-ICE/default.asp?category=billinfo&service=IowaCode&ga=83&input=476.44A>
- IOWA UTIL. CODE § AEP-07-1 (2007)
https://iub.iowa.gov/files/archive/orders/2007/1121_aep071.pdf

- IL: 20 ILL. COMP. STAT. 3855/1-10 (2007),
<http://www.ilga.gov/legislation/ilcs/ilcs5.asp?ActID=2934&ChapAct=20%26nbsp%3BILCS%26nbsp%3B3855%2F&ChapterID=5&ChapterName=EXECUTIVE+BRANCH&ActName=Illinois+Power+Agency+Act>
- IN: IND. CODE § 8-1-37-3 (2011),
<https://iga.in.gov/documents/8850f79f>
- KS: KAN. ADMIN. REGS. § 82-16-6 (d) (2010),
http://www.kssos.org/pubs/register%5C2010%5CVol_29_No_44_November_4_2010_p_1577-1616.pdf
- ME: ME. REV. STAT. tit. 35-A § 3210-C (2) (B-2) (2006),
<http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>
- MI: MICH. COMP. LAWS § 460.1041 (1) (2008),
[http://www.legislature.mi.gov/\(S\(h24m2tk1wgbvelfvc5dmx0cp\)\)/mileg.aspx?page=getObject&objectName=mcl-460-1041](http://www.legislature.mi.gov/(S(h24m2tk1wgbvelfvc5dmx0cp))/mileg.aspx?page=getObject&objectName=mcl-460-1041)
- MN: MINN. STAT. § 216B.1691 (4) (2007),
<https://www.revisor.mn.gov/statutes/?id=216b.1691#stat.216B.1691.4>
- MO: MO. CODE REGS. ANN. tit 4, § 240-20.100 (1) (J) (2010),
<http://www.sos.mo.gov/adrules/csr/current/4csr/4c240-20.pdf>
- MT: MONT. CODE ANN. § 69-3-2003 (14) (2005),
http://leg.mt.gov/bills/mca_toc/69_3_20.htm
- NC: N.C. GEN. STAT. § 62-133.8 (a) (6), (i) (7) (2008),
http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_62/GS_62-133.8.html
- ND: N.D. CENT. CODE § 49-02-24 (2007),
<http://www.legis.nd.gov/cencode/t49c02.pdf?20150409160556>
- PA: 52 PA. CODE § 75.1 (2009),
http://www.pacode.com/secure/data/052/chapter75/052_0075.pdf
- PR: P.R. LAWS ANN. tit. 1519 § 82 (2010),
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>
- SD: S.D. CODIFIED LAWS § 49-34A-96, 102 (2008),
http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=49-34A-96
- TX: TEX. UTIL. CODE. ANN. § 25.173(c) (15), (d) (2000),
<http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.173/25.173.pdf>
- UT: UTAH CODE ANN. § 10-19-102 (4) (12) (LexisNexis 2008),
<http://le.utah.gov/xcode/Title10/Chapter19/10-19-S102.html>
- VT: VT. STAT. ANN. tit. 30, § 8002 (22) (2013),
<http://legislature.vermont.gov/statutes/section/30/089/08002>
- WA: WASH. ADMIN. CODE § 480-109-007 (2007),
<http://app.leg.wa.gov/WAC/default.aspx?cite=480-109-007>

WI: WIS. ADMIN. CODE P.S.C. § 118.02 (7r) (c) (2007),
http://docs.legis.wisconsin.gov/code/admin_code/psc/118/02/7r/c

¹⁰ Listing of state regulations to support that RECs represent electricity or energy “generation” (or equivalent):

CA: CAL. PUB. UTIL. CODE § 399.12 (h) (1) (Deering 2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>

DC: D.C. MUN. REGS. tit. 16738, § 2999.1 (2012),
http://www.dcpsc.org/pdf_files/commorders/orderpdf/orderno_16738_FC945.pdf

DE: 26-3000-3008 DEL. CODE REGS. § 1.1 (2013),
<http://regulations.delaware.gov/AdminCode/title26/3000/3008.shtml#TopOfPage>

IN: IND. CODE § 8-1-37-3 (2011),
<https://iga.in.gov/documents/8850f79f>

KS: KAN. STAT. ANN. § 66-1257 (e) (2009),
http://www.kslegislature.org/li/b2015_16/statute/066_000_0000_chapter/066_012_0000_article/066_012_0057_section/066_012_0057_k/

ME: ME. REV. STAT. tit. 35, § 3210-C (B-2) (2006),
<http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3210.html>

MI: MICH. COMP. LAWS § 460.1011 (d) (2008),
[http://www.legislature.mi.gov/\(S\(ylkrq5o10thudmo0ik3ha25y\)\)/mileg.aspx?page=getObject&objectName=mcl-460-1011](http://www.legislature.mi.gov/(S(ylkrq5o10thudmo0ik3ha25y))/mileg.aspx?page=getObject&objectName=mcl-460-1011)

MN: MINN. STAT. § 216B.1691 (4) (2007),
<https://www.revisor.mn.gov/statutes/?id=216b.1691#stat.216B.1691.4>

NC: N.C. GEN. STAT. § 62-133.8 (a) (6) (2008),
http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_62/GS_62-133.8.html

ND: N.D. ADMIN CODE 69-09-08-02 (5) (2011),
<http://www.legis.nd.gov/information/acdata/pdf/69-09-08.pdf?20150409160640>

NH: N.H. REV. STAT. ANN. § 34:362-F:2 (III) (2007),
<http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XXXIV-362-F.htm>

NV: NEV. ADMIN. CODE § 704.8908 (1997),
<http://www.leg.state.nv.us/nac/NAC-704.html#NAC704Sec8908>

PA: 73 PA. CONS. STAT. § 1648.3 (e) (2) (2004) /1672 Pa. Legs. § 213, 3 (e)(4)(ii) (2004),
<http://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2004&sessInd=0&act=213>

PR: P.R. LAWS ANN. tit. 1519 § 82 (2010),
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>

TX: TEX. UTIL. CODE ANN. § 25.173(c) (13) (2000),
<http://www.puc.texas.gov/agency/ruleslaws/subrules/electric/25.173/25.173.pdf>

WI: WIS. ADMIN. CODE P.S.C. § 118-02 (2007),
http://docs.legis.wisconsin.gov/code/admin_code/psc/118/02/7r

¹¹ Listing of state regulations that support that RECs are “proof of generation” (or equivalent):

CA: CAL. PUB. UTIL. CODE § 399.12 (h) (1) (2003),
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=00001-01000&file=399.11-399.32>

MO: MO. CODE REGS. ANN. tit. 4 § 240-20.100 (1) (J) (2010),
<http://www.sos.mo.gov/adrules/csr/current/4csr/4c240-20.pdf>

MT: MONT. CODE ANN. § 69-3-2003 (14) (2005),
<http://leg.mt.gov/bills/mca/69/3/69-3-2003.htm>

VA: VA. CODE ANN. § 56-585.2 (2007),
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+56-585.2>

WA: WASH. ADMIN. CODE § 480-109-007 (17) (2007),
<http://apps.leg.wa.gov/WAC/default.aspx?cite=480-109>

¹² Listing of state regulations to support that RECs are “property:”

PA: 52 PA. CODE § 75.1 (2009),
http://www.pacode.com/secure/data/052/chapter75/052_0075.pdf

PR: P.R. LAWS ANN. tit. 1519 § 82 (2010),
<http://www.oslpr.org/download/en/2010/A-0082-2010.pdf>

VT: VT. STAT. ANN. tit. 30 § 8002 (22) (B) (2013),
<http://legislature.vermont.gov/statutes/section/30/089/08002>

¹³ IOWA UTIL. BD. AEP-07-1 (2007), available at: https://iub.iowa.gov/files/archive/orders/2007/1121_aep071.pdf
(Order Approving Facilities and Associated Capacities, Adopting Requirements for M-RETS Participation, and Requiring Report; *In Re: Interstate Power & Light Co. & Midamerican Energy Co.* AEP-07-1, 2007 [Nov. 21, 2007])

¹⁴ N.Y. PUB. SERV. COMM’N. CASE 03-E-0188 (2006), available at:
<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={99B37D71-602B-47F1-8989-5729836A3809}> (Order regarding Retail Renewable Portfolio Standard. Recognizing Environmental Attributes and Allowing Participation of Projects with Physical Bilateral Contracts, Issued and Effective June 28, 2006)

¹⁵ List of tracking systems that define certificates explicitly as “attributes” of renewable generation:

ERCOT: ERCOT. 2005. *Glossary - R*. Electric Reliability Council of Texas, Inc. <http://www.ercot.com/glossary/r>

M-RETS: MRETS. 2014. *Midwest Renewable Energy Tracking System Operating Procedures*.

Midwest Renewable Energy Tracking System, Inc. p. 78, 83 <http://www.mrets.org/wp-content/uploads/sites/8/2014/03/Operating-Procedures-09-09-14.pdf>

NAR: NAR 2013, p. vii http://www.narecs.com/wp-content/uploads/sites/2/2013/10/NAR-Operating-Procedures_April_2013.pdf

NEPOOL-GIS: NEPOOL-GIS 2015, Appendix 1.1 p. 1 http://www.nepoolgis.com/wp-content/uploads/sites/3/2015/01/GIS-Operating-Rules-effective-1_1_15.doc

NYGATS: NYSERDA. 2015. RFP 3014: New York State Generation Attribute Tracking System (NYGATS). p. 3 <http://www.nyserda.ny.gov/-/media/Files/FO/Current%20Funding%20Opportunities/RFP%203014/3014Summary.pdf>.

(No NYGATS Operating Rules exist at publication date. As of February 2015, NYSERDA has released the RFP for NYGATS in order to obtain a qualified contractor to design and implement the system.)

PJM-GATS: PJM-GATS. 2014. *Generation Attribute Tracking System (GATS) Operating Rules*. p.4 <http://www.pjm-eis.com/~media/pjm-eis/documents/gats-operating-rules.ashx>

WREGIS: WREGIS 2013. *WREGIS Operating Rules*. Western Electricity Coordinating Council at 2 <http://www.wecc.biz/Corporate/WREGIS%20Operating%20Rules%20072013%20Final.pdf>

¹⁶ List of tracking systems that define their instruments as the mechanisms for “tracking” or “trading” (or equivalent) attributes or proof of generation for the purposes of compliance with state programs and/or voluntary programs:

ERCOT: ERCOT. 2005. *Glossary - R*. Electric Reliability Council of Texas, Inc. <http://www.ercot.com/glossary/r>

ERCOT. 2005. *Renewable Energy Credit*. Electric Reliability Council of Texas, Inc. <http://www.ercot.com/services/programs/rec/>

M-RETS: MRETS. 2014. *Midwest Renewable Energy Tracking System Operating Procedures*. Midwest Renewable Energy Tracking System, Inc. p. 6, 15 <http://www.mrets.org/wp-content/uploads/sites/8/2014/03/Operating-Procedures-09-09-14.pdf>

MIRECS: MIRECS 2012 <http://www.mirecs.org/wp-content/uploads/sites/4/2014/02/MIRECS-Operating-Procedures-111312.pdf>

NAR: NAR 2014, p. 1 http://www.narecs.com/wp-content/uploads/sites/2/2013/10/NAR-Operating-Procedures_April_2013.pdf

NEPOOL-GIS: NEPOOL-GIS 2015, A1.1 p. 3–4 http://www.nepoolgis.com/wp-content/uploads/sites/3/2015/01/GIS-Operating-Rules-effective-1_1_15.doc

NC-RETS: NCRETS 2011, p. iii, 1 <http://www.ncrets.org/wp-content/uploads/sites/7/2014/03/NC-RETS-Operating-Procedures.docx>

NYGATS: NYSERDA. 2015. RFP 3014: New York State Generation Attribute Tracking System (NYGATS). p. 3 <http://www.nysenda.ny.gov/-/media/Files/FO/Current%20Funding%20Opportunities/RFP%203014/3014Summary.pdf>.

(No NYGATS Operating Rules exist at publication date. As of February 2015, NYSERDA has released the RFP for NYGATS in order to obtain a qualified contractor to design and implement the system.)

PJM-GATS: PJM-GATS. 2014. *Generation Attribute Tracking System (GATS) Operating Rules*. p. 13, 38 <http://www.pjm-eis.com/~media/pjm-eis/documents/gats-operating-rules.ashx>

WREGIS: WREGIS 2013. *WREGIS Operating Rules*. Western Electricity Coordinating Council. p. 16–20 <https://www.wecc.biz/Corporate/WREGIS%20Operating%20Rules%20072013%20Final.pdf>

¹⁷ *Federal Energy Guidelines: FERC Reports (FERC) Am. Ref-Fuel Co., Covanta Energy Grp., Montanay Power Corp., & Wheelabrator Technologies Inc.*, 105 FERC ¶ 61004 (Oct. 1, 2003), available at: http://www.cfcae.org/sites/default/files/federal/FERC_Order_on_REC.pdf

¹⁸ *Federal Energy Guidelines: FERC Reports (FERC) Am. Ref-Fuel Co., Covanta Energy Grp., Montanay Power Corp., & Wheelabrator Technologies, Inc.*, 107 FERC ¶ 61016 (Apr. 15, 2004) available at: <http://www.ferc.gov/whats-new/comm-meet/041404/E-28.pdf>

¹⁹ *Id* at 4.

²⁰ *Id* at 6.

²¹ *Id* at 6.

²² *Exec. Order No. 13,423*. Prepared by U.S. Department of Energy Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program (FEMP). January 28, 2008. Section 2.2.12. Pg.4. http://www1.eere.energy.gov/femp/pdfs/epact05_fedrenewenergyguid.pdf.

²³ *Id* at 8.

²⁴ The White House, Council on Environmental Quality (CEQ) *Federal Greenhouse Gas Accounting and Reporting Guidance* Rev. 1 (June 2012), available at: http://www.whitehouse.gov/sites/default/files/microsites/ceq/revised_federal_greenhouse_gas_accounting_and_reporting_guidance_060412.pdf.

²⁵ *In re Ownership of Renewable Energy Certificates ("RECs")*, 389 N.J. Super. 481, 913 A.2d 825 (App. Div. 2007), <http://law.justia.com/cases/new-jersey/appellate-division-published/2007/a5191-04-opn.html>.

²⁶ See *Wheelabrator Lisbon, Inc. v. Connecticut Dep't of Pub. Util. Control*, No. CV054003405, 2006 WL 894895 (Conn. Super. Ct. Mar. 20, 2006) aff'd sub nom. *Wheelabrator Lisbon, Inc. v. Dep't of Pub. Util. Control*, 283 Conn. 672, 931 A.2d 159 (2007)

²⁷ See *Wheelabrator Lisbon, Inc. v. Dep't of Pub. Util. Control*, 283 Conn. 672, 931 A.2d 159 (2007)

²⁸ *Honeywell Int'l Inc. v. ICM Controls Corp.*, No. 11-CV-569 JNE/TNL, 2013 WL 6169671 (D. Minn. Nov. 22, 2013) (Opinion by Administrative Judge Melnick on the Government's Motion for Partial Dismissal and the Parties' Cross-motions for Partial Summary Judgment), <http://www.pubklaw.com/rd/boards/asbca57779.pdf>.

²⁹ *Id* at 8.

³⁰ *Id* at 8.

³¹ *Id* at 8.

³² *Guide to Purchasing Green Power: Renewable Electricity, Renewable Energy Certificates, and On-Site Renewable Generation* (March 2010), available at: http://www.epa.gov/greenpower/documents/purchasing_guide_for_web.pdf.

Quick Guide: Renewable Energy Certificates (RECs), (2011), available at: <http://www.nrel.gov/docs/fy11osti/52105.pdf>.

³³ Western Area Power Administration, *Request for Proposals Regarding the Purchase of Renewable Energy Certificates* (July 25, 2012), available at: <http://ww2.wapa.gov/sites/western/renewables/pmtags/Documents/RECRFP072512.pdf>.

³⁴ Environmental Markets Association, *Glossary of Terms: Renewable Energy Credits* (Last visited June 10, 2015) available at: <http://www.emahq.org/news-resources/glossary-terms>

³⁵ American Bar Association, et al., *Master Renewable Energy Certificate Purchase and Sale Agreement 1.0* at iv (2007), available at: <http://apps.americanbar.org/enviro/committees/renewableenergy/RECMasterContract.pdf>.

³⁶ FTC Guides For the Use of Environmental Marketing Claims 16 C.F.R. § 260.15 (2015), available at: <https://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/guides-use-environmental-marketing-claims>

³⁷ Commodity Futures Trading Commission, *Further Definition of "Swap," "Security-Based Swap," and "Security-Based Swap Agreement"; Mixed Swaps; Security-Based Swap Agreement Recordkeeping*, RIN 3038-AD46, 97-98 (July 2012).

³⁸ See Barkalow, Gina, Theresa Daniels, Lorraine Gonzalez. 2010. *Renewables Portfolio Standard 2006 Procurement Verification Draft Staff Report*. California Energy Commission. CEC-300-2009-006-SD, available at: <http://www.energy.ca.gov/2009publications/CEC-300-2009-006/CEC-300-2009-006-SD.PDF>.

³⁹ Federal Trade Commission *Federal Proposed Revisions to the Green Guides*, 152 (Oct. 2010). available at: <http://www.gpo.gov/fdsys/pkg/FR-2010-10-15/html/2010-25000.htm> (last visited June 10, 2015, 4:43 PM)

⁴⁰ See EPA's Green Power Partnership, *Renewable Energy Certificates* (2008), http://www.epa.gov/greenpower/documents/gpp_basics-recs.pdf.

⁴¹ “Full aggregation” means that individual attributes contained in the REC have not been sold, counted, or claimed separately and that the REC contains all legally-available attributes of renewable electricity.

⁴² See Ed Holt & Ryan Wisser, *The Treatment of Renewable Energy Certificates, Emissions Allowances and Green Power Programs in State Renewable Portfolio Standards* Lawrence Berkeley National Laboratory (2007), <http://www.cesa.org/assets/Uploads/Treatment-RECs-LBNL2007.pdf>.