

Renewable Energy Credits: What Are They and Who Owns Them?

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About Van Ness Feldman, P.C.

- An energy, environment, and natural resources law and policy firm
- Offices in Washington, D.C., and Seattle
 - 80 attorneys and professionals
- Significant representation of independent power producers (QFs and EWGs)
 - Litigated REC ownership issues before FERC and federal courts
- Climate change and emissions trading practice since late 1990s

Overview

- What are RECs?
- What opportunities exist in REC markets?
- What are the disputes on REC ownership?

What are RECs?

- RECs represent the market value of the non-electricity attributes of “renewable” generation
 - Intangible valuable property
 - Traded as a separate product from electricity
 - Monetize environmental / social benefits attributed to displacement of conventional generation
- No uniform definition
 - Different products (e.g. Green Tags, GIS, GATS)
 - Compliance v. voluntary markets
 - Typically, one REC associated with one MWH of electricity

Evolution of RECs

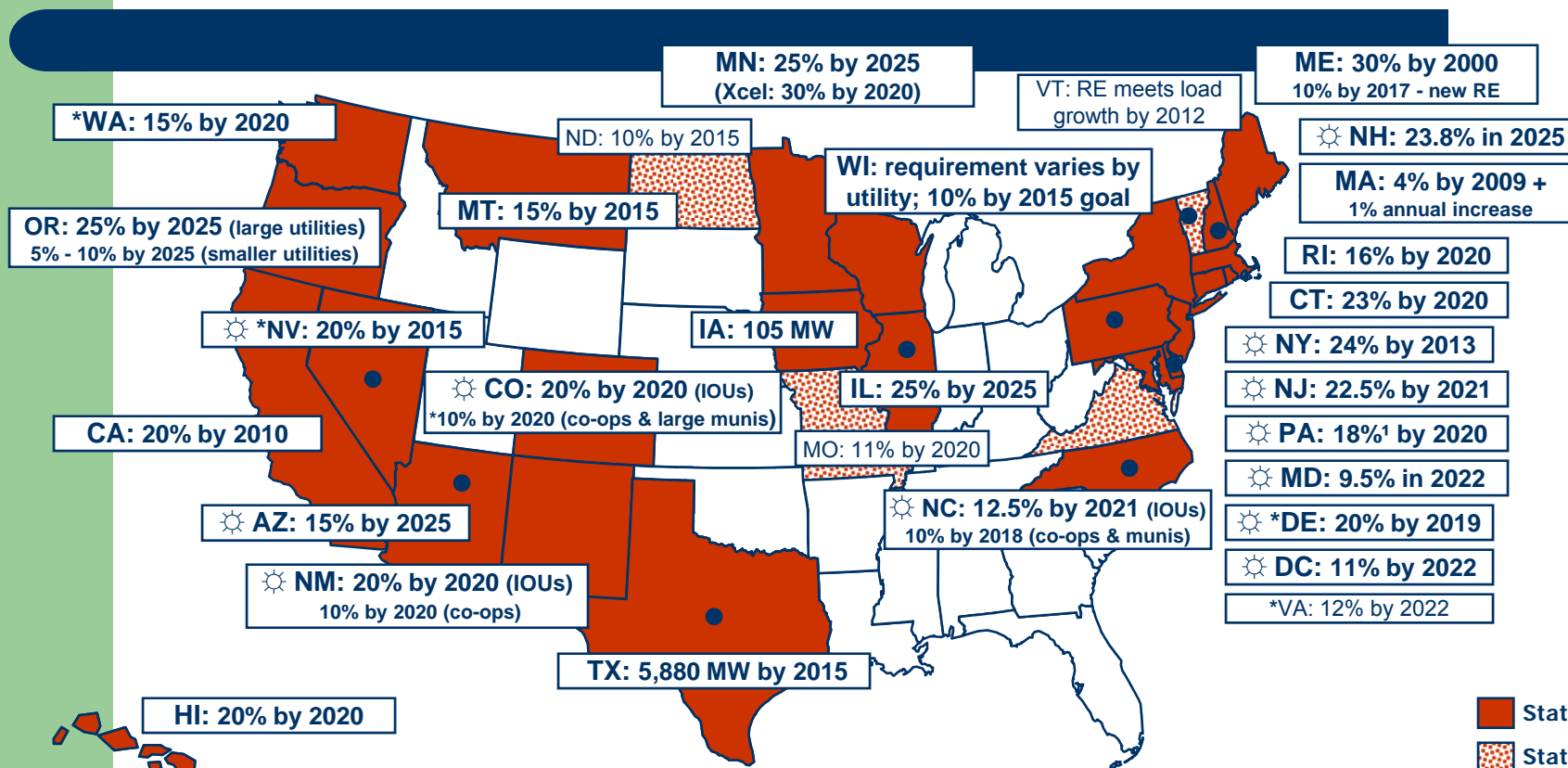
- 1995/96: Proposals before CPUC (attributes v. electricity)
- 1997: Enron proposal (trade attributes separately)
- 1998: First REC retail product sold in Massachusetts
- 1999: APX starts market for “green tickets”
Texas approves first REC trading program
- 2002: NEPOOL GIS
Green-e certification standard
- 2005: PJM GATS
- 2006: CT Distributed Resources Portfolio Standard
- 2007: WREGIS

State compliance markets

- Renewable portfolio standards
 - States set share of renewable sources in utilities' portfolio
 - Most targets fall between 15% and 25%
- Different states, different standards
 - Which sources/technologies qualify?
 - Set-asides / extra credits
 - Location: in-state only generation?
 - New or existing facilities?
 - REC trading?
 - ACP (de facto cap on REC value)

RPS by state

Source: www.dsireusa.org; North Carolina Solar Center



☀ Minimum solar or customer-sited RE requirement
 * Increased credit for solar or customer-sited RE
¹PA: 8% Tier I / 10% Tier II (includes non-renewables)

■ State RPS
▨ State Goal
● Solar water heating eligible

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Voluntary markets

- Private and public organizations purchase RECs to offset electricity consumption
 - Independent of RPS programs
 - Third party certification; private contracts
- Who are the buyers?
 - Companies with “high visibility”, universities
 - Federal government
 - Section 203 of EPAAct 2005

EPA's Green Power Partnership

Top 10 Fortune 500 - Source: www.epa.gov/grnpower

	Green Power (MWh)	Electricity Used	Resources		Green Power (MWh)	Electricity Used	Resources
1. PepsiCo	1.1M	100%	Various	6. Kohl's	201K	20%	Biogas, biomass
2. Wells Fargo	550K	42%	Wind	7. Starbucks	185K	20%	Wind
3. Whole Foods	509K	100%	Biogas, solar, wind	8. DuPont	180K	4%	Biogas, wind
4. Pepsi Bottling	458K	100%	Various	9. Cisco	128K	22%	Various
5. Johnson & Johnson	401K	39%	Biomass, small hydro, solar, wind	10. Staples	122K	20%	Biomass, solar, wind

EPA's Green Power Partnership

Top 10 100% Green Purchasers - Source: www.epa.gov/grnpower

	Green Power (MWh)	Electricity Used	Resources		Green Power (MWh)	Electricity Used	Resources
1. PepsiCo	1.1M	100%	Various	6. NYU	119K	100%	Wind
2. Whole Foods	509K	100%	Biogas, solar, wind	7. World Bank	115K	100%	Wind
3. Pepsi Bottling	458K	100%	Various	8. Mohawk Fine Papers	100K	100%	Wind
4. EPA	330K	100%	Biogas, biomass, geother., wind	9. Tower Companies	79K	100%	Wind
5. Pepsi Americas	157K	100%	Various	10. Coldwater Creek	60K	100%	Wind

What's the value of RECs?

Source: Holt & Bird (2005)

	2004 REC Market Size (million MWh)	2004 REC Market Value (\$millions)	2010 REC Market Size (million MWh)	2010 REC Market Value (\$millions)
Compliance Markets	8-13	\$140	45	\$600
Voluntary Markets	3	\$15-\$45	20	\$100-\$300
Total	11-16	\$155-185	65	\$700-\$900

Prices in compliance markets

Source: www.evomarkets.com

	Price	Term		Price	Term
CT Class I	\$54	2007	NJ solar	\$220	PY06/07
CT Class 2	\$ 0.55	2007	NJ Class I	\$ 25	PY06/07
MA new	\$54.57	2007	NJ Class I	\$ 18.50	PY07/08
DE existing	\$ 1.75	2007	NJ Class II	\$ 1.35	PY07/08
RI new	\$48	2007	MD tier I	\$ 0.8	2006
TX	\$ 2.75	2006	MD tier I	\$ 0.95	2007
TX	\$ 3.30	2007	MD tier II	\$ 0.6	2006
TX	\$ 3.40	2008	MD tier II	\$ 0.55	2007

Prices in voluntary markets

Source: www.evomarkets.com

Product	Generation	Region	Term	Volume (MWH)	BID	Offer
New TRC	Wind	National	2007	50,000	\$2.00	\$4.00
New TRC	Wind	WECC	2010-2012	25,000	\$4.00	\$8.00
New TRC	Any Technology	National	2007-2008	100,000	\$1.25	\$3.25
New TRC	Wind	CA	2008-2011	150,000	\$7.00	\$15.00
New TRC	LFG	National	2007	25,000	\$1.00	\$3.00
New TRC	Solar	National	2007-2009	5,000	\$10.00	\$20.00

Why are RECs successful?

- Flexible
 - Utility may procure RECs beyond state boundaries
 - Generator may sell in voluntary markets nation-wide
- Fungible
 - From compliance to PR
- Market system
 - RECs allocated to those who value them most
 - Opportunities for arbitrage, brokering

Opportunities: Changes in fuel mix

(billion kilowatthours)

● 2020

- Coal
 - 2471 → 1829 (-35%)
- Nuclear
 - 886 → 996 (+12%)
- Renewables
 - 519 → 868 (+67%)
- *Natural Gas*
 - 1049 → 1055 (+.05%)

● 2030

- Coal
 - 3346 → 1051 (-59%)
- Nuclear
 - 870 → 1909 (+119%)
- Renewables
 - 548 → 1509 (+175%)
- *Natural Gas*
 - 914 → 792 (-13%)

Opportunities

- REC markets increasingly robust and liquid
 - Brokers and markets (wholesale/retail)
 - Master REC Purchase and Sale Agreement
- Federal legislation
 - Federal electricity standard
 - Nationwide REC market
- RECs beyond renewables
 - Energy efficiency, conservation, demand management, low emissions
- Anticipate carbon regulation

Legal and policy issues on REC ownership under PURPA contracts

- Are QFs compensated for both electricity and attributes?
- Does purchase obligation create a link between electricity and attributes?
- Are RECs a new commodity or an unbundled product?
- Does an RPS make RECs creatures of the state?
- Are RECs an incentive or a compliance tool?
- Should reward for environmental attributes go with liability for environmental liability?

QFs' petition to FERC

- Do PURPA contracts convey RECs to the purchasing utility, in absence of express provisions?
 - Avoided cost pricing
 - Discrimination between cogeneration and SPP
 - Sale of attributes, allowances, certificates is separate from the electricity

American Ref-Fuel (2003)

- “avoided cost rates . . . are not intended to compensate the QF for more than capacity and energy”
- “contracts for the sale of QF capacity and energy entered into pursuant to PURPA do not convey RECs to the purchasing utility (absent express provision in a contracts to the contrary)”

American Ref-Fuel (2003)

- “RECs are created by the States. They exist outside the confines of PURPA.”
- “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”

States response to *American Ref-Fuel*

- Some states followed FERC's holding
 - PURPA contracts do not inherently convey RECs
 - DC, FL, IA, NC, OR, TX
- CT and NJ reformed existing contracts
 - RECs cannot exist apart from the electricity
 - State approval linked to renewable attributes
 - QFs received “special consideration”

Issues before Second Circuit

- Did DPUC modify the contract?
 - RECs did not exist at the time of the contract
 - 2 commodities sold for the price of 1
- Did the QF receive “special consideration”?
 - Avoided cost reflect utility’s costs, not QF’s attributes
 - Cogen. QFs not required to sell thermal output with electricity

Conclusions

- RECs present increasing opportunities
- Likely to continue to play a significant role as regulatory tool and market mechanism
- Ownership should be expressly addressed and negotiated in new contracts
- Second Circuit's decision may affect issues that remain under existing contracts

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