# The State Policy Component of the EISPC Energy Zones Study

Warren Leon and Heather Rhoads-Weaver January 9, 2013



# **Outline of Presentation**

- Introduction to EISPC and the Energy Zones Study
- Review of the policy project with a description of the information included in the policy inventory
- 3. Explanation of the review process
- 4. Demonstration of the policy database and how to use it for reviewing the policy inventory

# EISPC (aka "Ice Pick"): What Is It?

- Eastern Interconnection States' Planning Council
- 39 Eastern Interconnection States, DC, New Orleans, and 8 Canadian Provinces
- Established through a DOE funding opportunity
- Interconnection-wide resource planning
- Interconnection-wide transmission planning
- Two representatives per state

# **EISPC Tasks**

- Identify 8 hypothetical futures/72 sensitivities
  - Select 3 hypothetical scenarios for grid design
- Provide input on grid planning and design
- Conduct studies to inform future transmission actions and state decisionmaking
  - Including a study of Energy Zones in the states in the Eastern Interconnection)
- Prepare whitepapers to inform decisionmaking

# **Energy Zones Study**

- Mandated by the DOE funding opportunity
- Overseen and directed by an EISPC Workgroup
  - Chaired by Maine PUC Commissioner David Littell
- Help identify opportunities for clean energy development: renewables, coal with carbon capture and storage, natural gas, nuclear
- Identify the energy resource potential in Eastern Interconnection states
- Primary result: a layered mapping tool
  - Being developed by a team from the national labs, led by Argonne National Lab
- Identify laws, policies, practices impacting clean energy development

# **Policy Inventory Tasks**

- Compile all the clean energy laws, regulations, incentives, and other policies in all the EISPC states, plus Canadian provinces
- Place these policies into an inventory that can be easily searched on the EISPC Energy Zones Mapping Tool

# Populating the Inventory

- Started with the DSIRE database
  - The Database for State Incentives for Renewables & Efficiency is funded by U.S. DOE and implemented by the North Carolina Solar Center and the Interstate Renewable Energy Council
  - DSIRE is sufficiently accurate and current in most cases for inclusion in the EZ inventory and mapping tool
- Added a wide range of other policies
  - Technologies (e.g., nuclear, natural gas, geothermal) and types of policies (e.g., environmental regulations, state economic development incentives, climate action plans, forestry policies) not included or covered comprehensively in DSIRE
- All the policies will be displayed equally and equally searchable in the EZ mapping tool

# Principles Used in Selecting Policies to Include

- When in doubt, included a policy (easier to edit out than add)
  - We realize that our preliminary judgments may not always have been correct.
  - When you review the inventory, consider whether all the policies should be included or some should be omitted.

### Included:

- Personal as well as business and property tax incentives
- Net metering policies
- Forestry policies summarized in single entry for each state
- Some but not all natural gas policies
- Some but not all Canadian policies
  - Emphasized policies related to clean energy generating facilities that could export their power to one of the EISPC states

### North Dakota Policies in DSIRE

- Business Energy Efficiency Rebates (Offered by 5 Utilities)
- Geothermal Tax Credit
- 3. Large Wind Property Tax Reduction
- 4. Net Metering
- 5. Renewable and Recycled Energy Objective
- 6. Renewable Energy Property Tax Exemption
- 7. Renewable Energy Tax Credit
- 8. Sales and Use Tax Exemption for Electrical Generating Facilities
- 9. Sales and Use Tax Exemption for Gas Processing Facilities
- 10. Sales Tax Exemption for Hydrogen Generation Facilities
- Solar Easements
- 12. Wind Easements

### North Dakota Policies Added

1.	Air Pollution Control	21.	Interstate Oil & Gas Conservation Act Compact
2.	Appropriation of Water	22.	Little Missouri State Scenic River Act
3.	Business Development Loan Program	23.	MATCH Program
4.	Coal Conversion Facility Privilege Tax Exemptions	24.	Main Street Loan Program
5.	Coal Mining Reclamation	25.	Mining and Gas and Oil Production
6.	Coal Severance Tax	26.	Nature Preserves
7.	Common Pipeline Carriers	27.	North Dakota Energy Conversion and
8.	Control, Prevention, and Abatement of Pollution		Transmission Facility Siting Act
	of Surface Waters	28.	Oil and Gas Gross Production Tax
9.	Dakota CDC Intermediary Relending Program	29.	Partnership in Assisting Community Expansion
10.	Dams, Dikes, and Other Devices: Dam Safety		(PACE) Program
	Program	30.	Qualifying RPS State Export Markets
11.	Dredged and Fill Material Disposal	31.	Radiation
12.	Electric Companies & Electric Transmission Lines	32.	Renaissance Zones
13.	Electrical Generation Facility Tax Exemptions	33.	Soil Conservation Districts Law
14.	Energy Policy Commission	34.	Solid Waste Management and Land Protection
15.	Flex PACE Program	35.	Venture Capital Program
16.	Forestry Policies	36.	Water Distribution & Wastewater Systems
17.	Garrison Diversion Conservancy District		Operators
18.	Ground Water Protection	37.	Water Management Plans for Surface Coal Mining
19.	Hazardous Waste Management		Operations
20.	Interstate Mining Compact Commission	38.	Water Resource Districts
	<b>3</b> 11 <b>1 1 1 1 1 1 1 1 1</b>	39.	Waters: General Provisions
		40.	Wetlands
		41.	Workforce 20/20

42.

Yellowstone River Compact

# Sample Entries for Wisconsin

#### Dam Design and Construction (Wisconsin)

From Open Energy Information

No revision has been approved for this page. It is currently under review by our subject matter experts.

Last modified on October 17, 2012.

#### **EZFeed Policy**

Place	Wisconsin
Name	Dam Design and Construction (Wisconsin)
Policy Category	Other Policy
Policy Type	Siting & Permitting
Affected Technologies	Hydroelectric, Hydroelectric (Small)
Active Policy	Yes
Implementing Sector	State/Province
Start Date	1985
Primary Website	http://dnr.wi.gov/topic/Dams/documents/nr333.pdf
Information Source	http://dnr.wi.gov/topic/Dams/hydroElectric.html 🗗

#### Summary

These regulations apply to dams that are not owned by the U.S. government and (a) have a structural height of more than 6 feet and a maximum storage capacity of 50 acre-feet or more of water, (b) have a structural height of 25 feet or more and a maximum storage capacity of more than 15 acre-feet of water, or (c) have a structural height of 6 feet or less or a maximum storage capacity of less than 50 acre-feet of water if the department determines that the dam is likely to endanger life, health or property if it is not designed, constructed or reconstructed in accordance with this chapter. Dams are exempt from the requirements of these regulations if they meet requirements which are at least as restrictive. Prior to dam construction or reconstruction, hazard ratings must be assigned to the project and estimated costs must be calculated. Additionally, a professional engineer registered in the state of Wisconsin must prepare several documents, which must be submitted to and approved by the Department of Natural Resources prior to the start of the project. These documents include plans and specifications for the dam project, as well as hydraulic, hydrologic, and stability analyses.

#### **Energy and Utility Project Review (Wisconsin)**

From Open Energy Information

No revision has been approved for this page. It is currently under review by our subject matter experts.

Last modified on October 26, 2012.

#### **EZFeed Policy**

Place	Wisconsin
Name	Energy and Utility Project Review
Policy Category	Other Policy
Policy Type	Siting & Permitting
Affected Technologies	Biomass and Biogas, Coal with CCS, Concentrating Solar Power, Energy Storage, Fuel Cells, Geothermal Electric, Hydroelectric, Hydroelectric (Small), Natural Gas, Nuclear, Solar Photovoltaics, Tidal Energy, Wave Energy, Wind energy
Active Policy	Yes
Implementing Sector	State/Province
Program Administrator	Wisconsin Department of Natural Resoures
Primary Website	http://dnr.wi.gov/topic/Sectors/PowerPlants.html@
Information Source	http://dnr.wi.gov/topic/Sectors/Energy.html@

#### Summary

The DNR's Office of Energy & Environmental Analysis is responsible for coordinating the review of all proposed energy and utility projects in the state. The Office provides project management within DNR, acting as the main point of contact for project applicants, the Public Service Commission (PSC), other DNR programs and affected stakeholders. The Office provides statewide guidance and consistent application of the regulatory processes established by statutes and rules and provide a corps of experienced natural resource experts whom understand the specifics of energy and utility projects.

While the primary mission is to coordinate the regulatory review for siting utility projects, the Office also serves all DNR programs by developing guidance and information on natural resources issues as they relate to the broader planning and infrastructure development efforts for Wisconsin's energy future.

#### Policy Contact

Contact Name	act Name David Siebert, Director		
Department Department of Natural Resources			
Division Office of Energy and Environmental Ana			
Phone	608-264-6048		
Email	david.siebert@wisconsin.gov		

### **RPS Sales Opportunities**

Generator Location	Renewable Energy Sales Targets: Where Generation Qualifies for RPS			
Alabama	NC (if energy delivered to in-state utility)			
Arkansas	KS (if energy delivered)			
Connecticut	CT, MA, ME, NH, RI, VT; NY (if energy is delivered)			
DC	DC, DE, IN (up to 50% of compliance), MD, NJ, PA, VA, WV			
Delaware	DC, DE, IN (up to 50% of compliance), MD, NJ, PA, VA, WV			
Florida	NC (if energy delivered to in-state utility)			
Georgia	NC (if energy delivered to in-state utility)			
Illinois	IL, IN, OH (if energy is deliverable); DE, MD and NJ (if delivered to PJM), PA*, WI (if delivered), MN (if participating in M-RETS)			
Indiana	IN, IL, MI (if owned by a MI utility), MN (if registered in M-RETS), OH (up to 50% of compliance), PA*; DC, DE, MD, NJ, VA, WV (if energy is delivered to PJM); WI (if energy is delivered)			
lowa	MN, IL, IN, ND, SD, OH (if energy is deliverable), DE, MD, NJ (if energy is delivered to PJM)			
Kansas	KS			
Kentucky	IL, OH (up to 50% of compliance); DC, DE, MD, NJ (if energy is delivered to PJM); IN, VA, WV (if generator located in PJM)			
Louisiana	NC (if energy delivered to in-state utility)			
Maine	CT, MA, ME, NH, RI, VT (Northern ME must deliver to NEPOOL for other NE states); NY (if energy is delivered)			

\* Generators located in PJM may sell to any LSE in PA; generators located in MISO may sell to LSEs serving PA load in MISO.

<sup>13</sup> 

# **RPS Sales Opportunities**

Generator Location	Renewable Energy Sales Targets: Where Generation Qualifies for RPS			
Maryland	DC, DE, MD, NJ, PA, VA, WV; IN (up to 50% of compliance)			
Massachusetts CT, MA, ME, NH, RI, VT; NY (if energy is delivered)				
Michigan	MI, PA*; DE, MD, NJ (if energy delivered to PJM); OH (up to 50% of compliance, must be deliverable), WV and VA only if generator located in southwestern MI served by PJM			
Minnesota	MN, IN, PA*, OH (if energy is deliverable), WI (if energy is delivered)			
Mississippi	NC (if energy delivered to in-state utility)			
Missouri	IL, MO; IN (up to 50% of compliance, and if generator is in MISO); KS (if energy is delivered)			
Montana (eastern) MN, WI (if energy is delivered); DC, DE, MD and NJ (if energy is delivered to PJM)				
Nebraska	RPS states with no or minimal geographic limitations or energy delivery requirements include IL (if insufficient cost-effective resources in-state or in adjoining states), MO (RECs may be required to be transferred to NAR), NC (up to 25% of compliance), ND and SD			
New Hampshire	CT, MA, ME, NH, RI, VT; NY (if energy is delivered)			
New Jersey	DC, DE, MD, NJ, PA, VA, WV; IN (up to 50% of compliance)			
New Mexico (eastern)	NM, KS (if energy is delivered)			
New York  NY, DC, MD; CT, MA, ME, NH, RI (with energy delivery to NEPOOL); DE, NJ (with energy delivery to NEPOOL); DE,				
North Carolina	NC, DC, MD; DE and NJ (if energy is delivered to PJM); WV and VA (if generator is located in PJM)			
North Dakota ND, SD, MN, WI (if energy is delivered); DE, MD, and NJ (if energy is delivered to PJN				

### **RPS Sales Opportunities**

Generator Location	Renewable Energy Sales Targets: Where Generation Qualifies for RPS		
Ohio  DC, DE, IN, MD, NJ, OH, PA*, VA, WV; NC and NY (if energy delivered); MI (if generator is out-of-state service area of a MI utility)			
Oklahoma	OK; KS and NM (if energy is delivered)		
Pennsylvania DC, DE, IN, MD, NJ, PA, VA, WV; NC and NY (if energy delivered), OH (up to 50%, energy deliverable)			
Rhode Island	CT, MA, ME, NH, RI, VT; NY (if energy is delivered)		
South Carolina	NC (if energy delivered to in-state utility)		
South Dakota (except SW)	ND, SD, MN, WI (if energy is delivered); DE, MD and NJ (if energy is delivered to PJM)		
Tennessee	NC (if energy delivered to in-state utility)		
Texas (panhandle)	TX; KS and NM (if energy is delivered)		
Vermont	CT, MA, ME, NH, RI, VT; NY (if energy is delivered)		
Virginia	DC, DE, IN, MD, NJ, PA, VA, WV; NC (if energy delivered), OH (up to 50%, energy must be deliverable)		
West Virginia	DC, DE, IN, MD, NJ, PA, VA, WV; NC (if energy delivered), OH (up to 50%, energy must be deliverable)		
Wisconsin	MN, WI, MI (if generator is in the out-of-state service area of a MI utility)		

NOTE: Sales opportunities unrelated to RPS policies, e.g. voluntary markets, are not mentioned because geographic limitations often do not apply. IN, ND, OK, SD, VA, VT have voluntary goals; REC prices in such markets may be lower.

# The Review Process for States

### Who

- EISPC members and anyone who you want to ask to review
- NASEO representatives
- Most of the people listed as contacts
- When
  - By January 31

### How

- Make edits to individual policies
  - Both new entries and DSIRE entries
- Suggest additional policies that should be included
- Respond to question:
  - Which few state policies have been and will likely be particularly significant in leading to clean energy development in your state?

# For Questions and Help with Review

- Slides and recording from today's webinar www.cleanenergystates.org/Events
- Review process recap:
  - http://en.openei.org/wiki/EZPolicies/Help
- For questions, contact Val Stori (CESA staff member) at:
  - Val@cleanegroup.org
  - 802-223-2554

# Demonstrating the Policy Inventory

### -and the Review Process

- Using OpenEI—both for the review process and for permanent storage of the policy inventory
  - A knowledge-sharing online community with an unprecedented amount of energy information and data
  - Developed by NREL and sponsored by DOE
- Advantages of Using OpenEl
  - Has a pre-existing, applicable database structure
    - · Includes a process for checking, editing, and updating entries
    - Saves the National Lab team from having to design a separate database for policies and setting up protocols for editing them
  - DSIRE information is already in it
    - DSIRE entries can be used in the mapping tool directly
    - DSIRE entries are updated whenever DSIRE updates its information

# States & Provinces Currently Available for Review

- With the exception of Arkansas, Florida, Kentucky, and Maryland, all states in the Eastern Interconnection are ready and available for review.
- Those states will become available in the next few days

## For the Demonstration

- Go to: <a href="http://en.openei.org/wiki/EZPolicies">http://en.openei.org/wiki/EZPolicies</a>
  - Use this as your starting point when you want to review and edit entries
  - Create an account, login
  - Both DSIRE and added policies "feed" into map

## A Review of the Review Process

- Select state, review table for completeness and relevancy
  - Use form to create new entries <a href="http://en.openei.org/wiki/Form:EZFeed\_Policy">http://en.openei.org/wiki/Form:EZFeed\_Policy</a>
- Click on column headings to sort; ensure Active status is accurate
- Right click on Policy name in left column (open in new tab) to view summary; click "Edit with form" to make revisions
  - Hover on blue ? icons for tips; review red \* searchable fields for accuracy
  - Enter "substantial" or estimated MW of installed/expected capacity related to policy if likely to be in state's top tier of significance for EZ study
  - If policy does not affect or influence clean energy development, select No from "Relevant for EZ Mapping Tool" pull-down menu
  - Update or add any web links, contacts, shape files, authorities as needed
  - Ensure summary is accurate and understandable; save page before closing

# A Review of the Review Process

- Should be included for most states:
  - Environmental regulations, including ones related to water, air, hazardous materials, solid waste, and land use
  - Policies related to natural gas and forestry (often grouped)
  - Generic economic development policies
- May or may not be included:
  - Climate policies and action plans, nuclear regulations, mining policies, and policies related to permitting
- Upcoming dates:
  - Edits due: January 31

For questions: Val@cleanegroup.org 802-223-2554

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#### OPENEI FACILITATES THE DESIRED EXCHANGE

http://en.openei.org

#### **History**

- Gives public access a collaborative, knowledge-sharing platform
- Provides free and open access to energy-related data, models, tools, and information
- Developed in 2009 by the National Renewable Energy Laboratory
- Sponsored by the U.S. Department of Energy in support of the White House's Open Government Initiative

### OpenEl Statistics \*

Content Pages 55,674
Downloadable Datasets: 798
Languages Used: English, Spanish
Registered Users: 3,231
Unique Visitors/Week: over 8,000
Visits Last Year: 359,195
Countries Visiting Site: 212

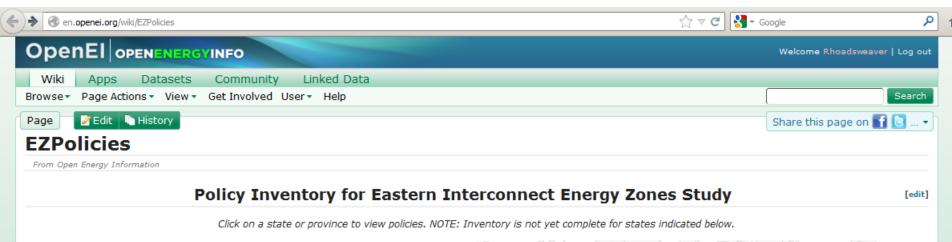
\*per Google Analytics as of January 25, 2012

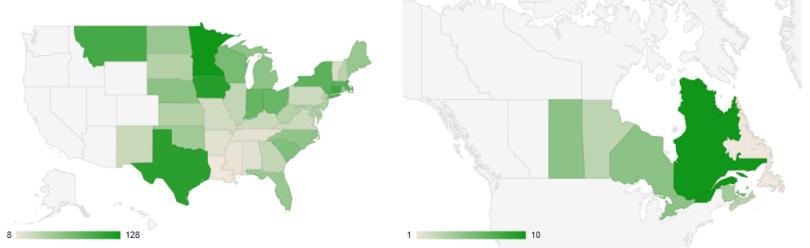
#### Wiki Platform

- Utilizes same underlying technology as Wikipedia
- Enables users to view, edit, add and download, data all for free
- Allows the assignment of queryable properties via semantic links
- Creates relationships automatically between pages
- Permits querying and exporting of data, similar to a database, in universal formats such as RDF and CSV
- Includes a variety of data display formats including maps, charts, graphs, and timelines

#### **Data Quality**

- Forms often requires references be cited
- Pages can be "watched" for changes, updates
- User community can help expand the data and increase accuracy





The EZ Policy Inventory is searchable by technology, policy type, and other fields with the EZ Policy Search Form.

Create new entries with the form EZFeed Policy.

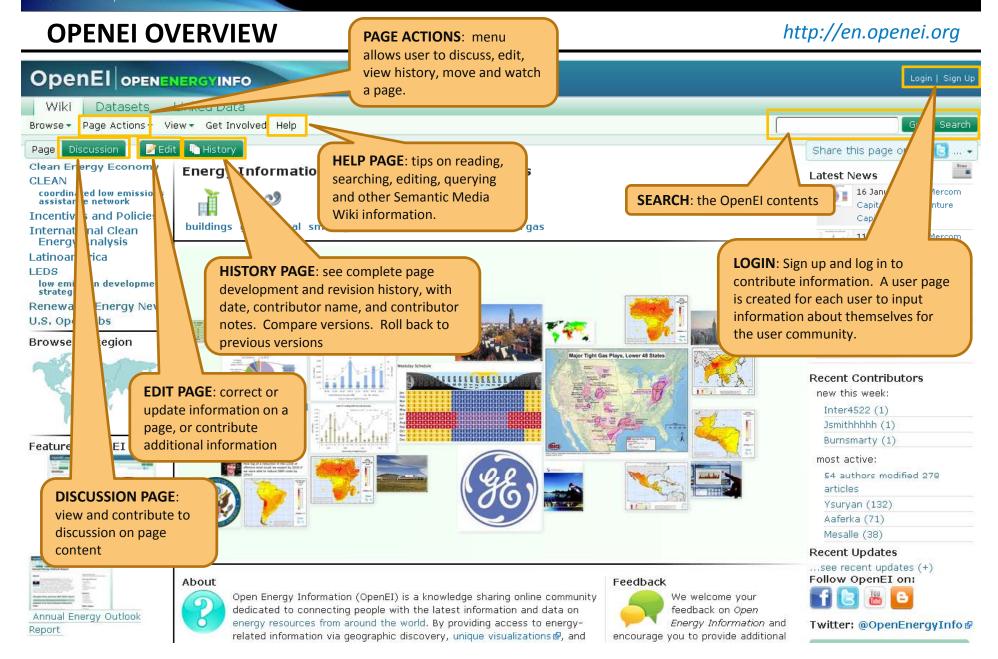
• All EZ Policies (2155)

#### States available for review:

- Connecticut/EZ Policies (104)
- Delaware/EZ Policies (35)
- District of Columbia/EZ Policies (19)

OpenEI OPENENERGYINFO

#### Exploration Best Practices and the OpenEI Knowledge Exchange



#### **Connecticut/EZ Policies**

From Open Energy Information

#### **EZ Policies for Connecticut**

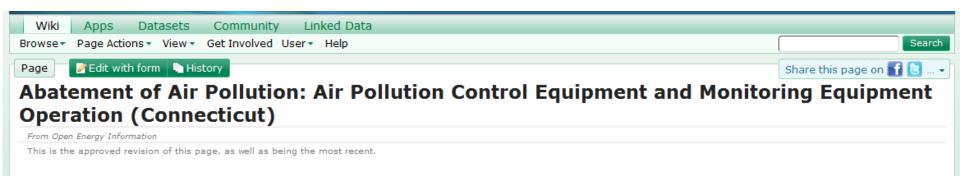
[edit]

To create a new entry use the form EZFeed Policy.

**Download EZ Policies for Connecticut** 

CSV (rows 1 - 105)

<b>▼</b> Policy	■ Place	■ Policy Type		■ Implementing Sector	✓ Summary
Abatement of Air Pollution: Air Pollution Control Equipment and Monitoring Equipment Operation (Connecticut)	Connecticut	Environmental Regulations	Yes	State/Province	These regulations contain instructions for the operation and monitoring of air pollution control equipment, as well as comments on procedures in the event of equipment breakdown, failure, and deliberate shutdown.
Abatement of Air Pollution: Connecticut Primary and Secondary Standards (Connecticut)	Connecticut	Environmental Regulations	Yes	State/Province	No person shall operate a source which has a significant impact on air quality in such a manner as to cause or contribute to a violation of ambient air quality standards. Connecticut primary and secondary standards for sulfur oxides, particulate matter, carbon monoxide, ozone, hydrocarbons, nitrogen dioxide, lead, and dioxin are listed here.
Abatement of Air Pollution: Control of Carbon Dioxide Emissions/Carbon Dioxide Budget Trading Program (Connecticut)	Connecticut	Environmental Regulations	Yes	State/Province	Any source that serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe is considered a CO2 budget source for the purpose of these regulations. This section lists monitoring and reporting requirements as well as CO2 thresholds for such sources, and describes the CO2 allowance budget trading program.
Abatement of Air Pollution: Control of Nitrogen Oxides Emissions (Connecticut)	Connecticut	Environmental Regulations	Yes	State/Province	These regulations may apply to reciprocating engines, fuel-burning equipment, or waste combusting equipment which are either attached to major stationary sources of NOx or have high potential NOx emissions. Exceptions apply. The regulations require owners or operators of relevant equipment to meet certain emissions limitations, comply with equipment provisions, reduce Nox emissions,



#### **EZFeed Policy**

Last modified on November 2, 2012.

Place	Connecticut		
Name	Abatement of Air Pollution: Air Pollution Control Equipment and Monitoring Equipment Operation (Connecticut)		
Policy Category	Other Policy		
Policy Type	Environmental Regulations		
Affected Technologies	Biomass and Biogas, Coal with CCS, Natural Gas, Nuclear		
Active Policy	Yes		
Implementing Sector	State/Province		
Program Administrator	Department of Energy and Environmental Protection		
Primary Website	http://www.ct.gov/dep/lib/dep/air/regulations/mainregs/sec7.pdf		
Information Source	http://www.ct.gov/dep/cwp/view.asp?a=2684&Q=322184&depNav_GID=1621@		

#### Summary

These regulations contain instructions for the operation and monitoring of air pollution control equipment, as well as comments on procedures in the event of equipment breakdown, failure, and deliberate shutdown.

Authorities (Please contact the Web administrator ■ if there are any file problems.)

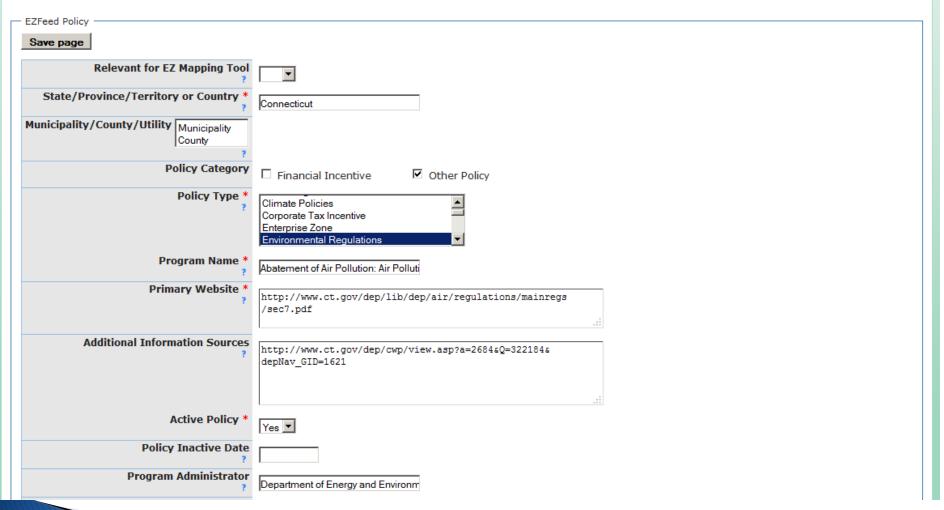
Authority 1: DEEP Regulations 22a-174-7

Date Effective 2004

### Edit EZFeed Policy: Abatement of Air Pollution: Air Pollution Control Equipment and Monitoring Equipment Operation (Connecticut)

From Open Energy Information

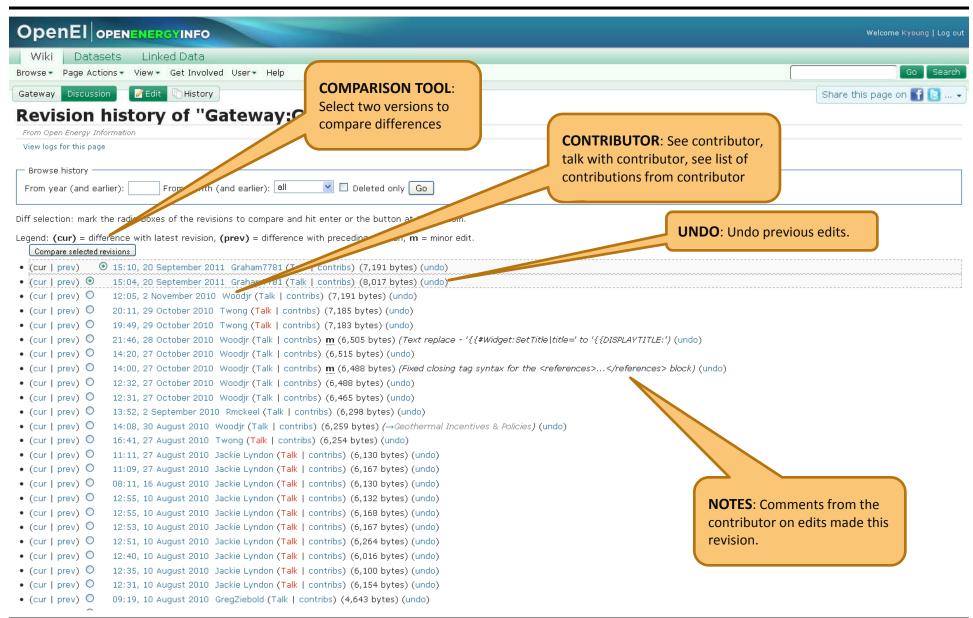
Thank you for providing information on local, state and federal clean energy policies and incentives. Please fill out the basic information below. Our subject matter experts will use the information you submit to gather additional information to include in the database. If you prefer not to fill out the form, you can Email Us at the source or any changes.



#### Exploration Best Practices and the OpenEI Knowledge Exchange

#### **EXAMPLE HISTORY PAGE**

http://en.openei.org



## A Review of the Review Process

- Select state, review table for completeness and relevancy
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- Click on column headings to sort; ensure Active status is accurate
- Right click on Policy name in left column (open in new tab) to view summary; click "Edit with form" to make revisions
  - Hover on blue? icons for tips; review red \* searchable fields for accuracy
  - Enter "substantial" or estimated MW of installed/expected capacity related to policy if likely to be in state's top tier of significance for EZ study
  - If policy does not affect or influence clean energy development, select No from "Relevant for EZ Mapping Tool" pull-down menu
  - Update or add any web links, contacts, shape files, authorities as needed
  - Ensure summary is accurate and understandable; save page before closing

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- May or may not be included:
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- Upcoming dates:
  - Edits due: January 31

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