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Details:

(FORM UPDATED: 08/11/2010)

**WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS**

2009-10

(session year)

Senate Select

(Assembly, Senate or Joint)

Committee on ... Clean Energy (SCC-CE)

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
(**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
(**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Gigi Godwin (LRB) (November/2011)

Senate

Record of Committee Proceedings

Select committee on Clean Energy

Senate Bill 450

Relating to: goals for reductions in greenhouse gas emissions, for construction of zero net energy buildings and for energy conservation; information, analyses, reports, education, and training concerning greenhouse gas emissions and climate change; energy efficiency and renewable resource programs; renewable energy requirements of electric utilities and retail cooperatives; requiring electric utilities to purchase renewable energy from certain renewable facilities in their service territories; authority of the Public Service Commission over nuclear power plants; motor vehicle emission limitations; a low carbon standard for transportation fuels; the brownfield site assessment grant program, the main street program, the brownfields grant program, the forward innovation fund, grants to local governments for planning activities, the transportation facilities economic assistance and development program, a model parking ordinance; surface transportation planning by the Department of Transportation and metropolitan planning organizations to reduce greenhouse gas emissions; environmental evaluations for transportation projects; idling limits for certain vehicles; energy conservation codes for public buildings, places of employment, one- and two-family dwellings, and agricultural facilities; design standards for state buildings; energy efficiency standards for certain consumer audio and video devices, boiler inspection requirements; greenhouse gas emissions and energy use by certain state agencies and state assistance to school districts in achieving energy efficiencies; creating an exception to local levy limits for amounts spent on energy efficiency measures; creating an energy crop reserve program; identification of private forest land, promoting sequestration of carbon in forests, qualifying practices and cost-share requirements under the forest grant program established by the Department of Natural Resources; air pollution permits for certain stationary sources reducing greenhouse gas emissions; allocating a portion of existing tax-exempt industrial development revenue bonding to clean energy manufacturing facilities and renewable power generating facilities; requiring a report on certain programs to limit greenhouse gas emissions; granting rule-making authority; requiring the exercise of rule-making authority; and providing a penalty.

By Senators Miller and Plale; cosponsored by Representatives Black and Soletski, by request of Governor James E. Doyle.

January 07, 2010 Referred to Select Committee on Clean Energy.

January 20, 2010 **PUBLIC HEARING HELD**

Present: (0) None.

Absent: (0) None.

Appearances For

- None.

Appearances Against

- None.

Appearances for Information Only

- None.

Registrations For

- None.

Registrations Against

- None.

Registrations for Information Only

- None.

January 27, 2010

PUBLIC HEARING HELD

Present: (8) Senators Miller, Plale, Wirch, Hansen, Jauch, Grothman, Kanavas and Lazich.

Absent: (0) None.

Appearances For

- Eric Callisto — Chairman, Public Service Commission
- Matt Frank — Secretary, Department of Natural Resources
- Dick Leinenkugel — Secretary, Department of Commerce
- Jeff Crawford, Milwaukee — Forest County Potawatomi
- Forrest Ceel, Menomonee Falls — Local 2150 of the International Brotherhood of Electrical Workers
- Jonathan Patz, M.D., M.P.H., Madison — Professor, University of Wisconsin-Madison
- Joel Charles, Middleton — UW Medical School--Public Health Interest Group
- Jesse Charles, Green Bay
- Steve Ostrenga, Burlington — Helios USA
- Bill Mc Clenahan, Chicago — Invenergy Wind
- Keith Reopelle, Madison — Clean Wisconsin
- Joel Haubrich, Milwaukee — Wisconsin Energy Corp.
- Dan Kohler, Madison — Wisconsin Environment
- John Sumi, Madison — Madison Gas and Electric Co.
- Ron Burke, Chicago — Union of Concerned Scientists--Midwest Office
- David Boetcher, Waunakee — Wisconsin IBEW--Inside Construction Locals
- Frank Jablonski, Madison — Nuclear Energy Institute
- Michael Vickerman, Madison — RENEW Wisconsin
- Bill Christofferson, Milwaukee — Wisconsin Network for Peace & Justice
- Ed Ritger, Random Lake — rural landowners
- Brian Antonich, Minneapolis — Horizon Wind Energy, LLC
- Lincoln Tice, Madison — Full Spectrum Solar
- Shahla Werner, Madison — Sierra Club

- Jennifer Nordstrom, Racine — Institute for Energy & Environmental Research
- Rosy Ricks, Milwaukee
- Royal Elmore, Madison
- Diane Farsetta, Madison — Wisconsin Network for Peace and Justice

Appearances Against

- Jim Ott — Representative, 23rd Assembly District
- Todd Stuart — Wisconsin Industrial Energy Group
- Tom Scharff — New Page
- Ed Wilusz — Wisconsin Paper Council
- Scott Manley, Madison — Wisconsin Manufacturers & Commerce
- Brian Mitchell, Oconomowoc — Wisconsin Cast Metals Association
- Bob Seitz, Madison — Wisconsin Utility Investors, Inc.

Appearances for Information Only

- Kevin Crawford, Manitowoc — Orion Energy Systems
- Neal Verfeurth, Manitowoc — Orion Energy Systems
- Bill Skewes, Madison — Wisconsin Utilities Association
- Emily Hiatt — Dairyland Power
- David Donovan — Xcel Energy
- David Dahlberg — North Central Power
- John Richards — Northwestern Wisconsin Electric
- John Barnes, Verona — No Nuclear Coalition
- Dave Steffenson, Ph. D., Madison — Rev., The Upstream Institute for Ecological Ethics
- Edward Kuharski, Madison — Mother Earth & Her Good Sense in Housekeeping

Registrations For

- Jeanne Hoffman, Madison — City of Madison
- Paul Soglin, Madison — Energies Direct, LLC
- Scott Barnum, Milwaukee — Verterra Energy, LLC
- David J. Koene, Madison — Madison Area Peace Coalition
- John La Forge, Luck — Nukewatch
- Sara Barczak, Milwaukee — Southern Alliance for Clean Energy
- Chris Collins, Madison — H&H Solar Energy Services
- James Yocky, Madison — Seventh Generation Energy System
- Pam Kleiss, Madison — PSR Wisconsin
- Ted M. Petith, Madison — TMP Project Development
- Larry Krom, Spring Green — L & S Technical Associates, Inc.
- Todd Halschbach, Madison — The Nature Conservancy
- Kathryn Walter, Madison
- L.D. Rockwell, Elkhorn
- Sarah Shanahan, New Lisbon
- Guy Selsmeyer, Little Suamico — Northern Biogas
- Dino Zucchi, Columbus

- Walker Shapiro, Madison
- Steve Books, Mount Horeb
- Jim Connors, Madison
- Brian Strebel, Madison
- David Benforado, Sun Prairie — Executive Director, Municipal Electric Utilities of Wisconsin
- Alicia Leinberger, Madison — Seventh Generation Energy Systems
- Rick Bergman, Grafton
- George Edgar, Madison — Wisconsin Energy Conservation Corp.
- Casey Anderson, Madison
- Evan Western, Madison
- Amy Laspe, Madison
- Seth Nowak, Madison — ACEEE
- Judy Miner, Madison — Wisconsin Network for Peace & Justice
- Lindsay North, Madison
- Ryan Schryver, Madison
- Shaina Kilcoyne, De Forest
- Richelle Lisse Lehmann, Middleton
- Steve Burns, Madison — Wisconsin Network for Peace & Justice
- Michelle Yun, Madison
- Jason Holzman, Middleton — UW-Madison Nuclear Engineers

Registrations Against

- Ron Kuehn, Madison — Murphy Oil USA Superior, WI
- Andrew Cook, Madison — American Coalition for Clean Coal Electricity
- Jeff Lyon, Madison — Wisconsin Farm Bureau
- Brandon Schulz, Madison — Wisconsin Grocers Association
- Bill G. Smith, Madison — National Federation of Independent Business
- Beata Kalies, Madison — Wisconsin Electric Cooperatives
- Pam Christenson, Madison — WI Petroleum Marketers & Convenience Store Assoc.
- Pat Osborne, Madison — Marathon Oil
- Pat Osborne, Madison — Aggregate Producers of Wisconsin
- Andrew Cook, Madison — Alliance of Automobile Manufacturers
- Mary Ann Gerrard, Madison — Wisconsin Automobile & Truck Dealers Association
- Nick George, Madison — Midwest Food Processors Association
- Betsy Ahner, Madison — Wisconsin Propane Gas Association
- Steve Lewallen, Neenah — Wisconsin Cast Metals Association
- Marc Bentley, Madison — Wisconsin Motor Carriers
- Marc Bentley, Madison — Wisconsin Engine Manufacturing and Distribution Alliance
- Marc Bentley, Madison — Schneider National
- Marc Bentley, Madison — Marten Transport
- Robin Vos — Representative, 63rd Assembly District

Registrations for Information Only

- Seth Jensen, Madison — Wisconsin Network for Peace and Justice
- Chris Kustra, Deerfield
- Kurt Koepp, Milwaukee/McFarland — Hot Water Products, Inc
- Cassandra Dixon, Wisconsin Dells
- Mary Beth Schlagheck, Windsor
- Charlie Higley, Madison — Citizens Utility Board

February 10, 2010

PUBLIC HEARING HELD

Present: (7) Senators Miller, Plale, Wirsch, Hansen, Jauch, Grothman and Lazich.

Absent: (1) Senator Kanavas.

Appearances For

- Keith Roepelle, Madison — Clean Wisconsin
- Peter Taglia, Madison — Clean Wisconsin
- Rod Nilsestuen, Madison — Secretary, Department of Agriculture, Trade and Consumer Protection
- Rick Adamski, Seymour — himself
- Keith Spruce, Milwaukee — himself
- Judy Skog, Madison — herself
- Dan Nemke, Milwaukee — Clear Horizons
- Scott McNab, Chicago — Pennan Energy
- Tony Hartmann, Middleton — Great Lakes Ag Energy & Green Diesel Wisconsin Foundation
- Dave Merritt, Madison — Dane County
- John Welch, Madison — Dane County
- Don Ferber, Madison — Sierra Club
- Bridget Holcomb, Madison — Michael Fields Agricultural Institute
- Mark Torresani, Middleton — Cornerstone Environmental Group
- Andy Grimmer, Madison — AWGI Energy & Natural Gas Vehicle Industry
- Steve Hiniker, Madison — 1000 Friends of Wisconsin
- Eric Sundquist, Madison — himself
- Joel Haubrich, Milwaukee — We-energies
- Johanna Lathrop, Madison — WISPIRG
- Dona Wininsky, Brookfield — American Lung Association
- Steve Brooks, Mt. Horeb — himself
- Hans Noleldner, Oregon — himself

Appearances Against

- David Podratz, Superior — Murphy Oil USA, Inc.
- Thomas Walker, Madison — Wisconsin Transportation Builders Assn.
- Matt Hauser, Madison — WI Petroleum Marketers & Convenience Store Assn.

- Jack Sobczak, Fox Point — Lakeside Oil Co.
- Scott Manley, Madison — WMC
- Jeff Schoepke, St. Paul — Flint Hills Resources - Koch Companies
- Jay Reinhardt, St. Paul — Flint Hills Resources - Koch Companies
- Bob Welch, Madison — WI Corn Growers
- Jeff Lyon, Madison — Wisconsin Farm Bureau
- Richard Frazier, Caledonia — himself
- Laura Dooley, Arlington — Alliance of Automobile Manufacturers
- Andrew Cook, Arlington — Alliance of Automobile Manufacturers
- Richard Kandansky, Madison — Marathon Petroleum Co.
- Bob Fassbender, Madison — Marathon Petroleum Co.
- Dan Gunderson, Madison — American Petro. Institute

Appearances for Information Only

- Brian Herman, Chicago — Consulate General of Canada
- Georges Rioux, Chicago — Consulate General of Canada
- Andy Lisak, Superior — The Development Association
- Gary Radloff, Madison — Wisconsin Bioenergy Initiative
- Brendan Jordan, Minneapolis — Midwest Governor's Association
- Mike Stranz, Madison — Wisconsin Farmers Union
- Jesse Charles, Green Bay — himself
- Maggie Grabow, Wauwatosa — University of Wisconsin-Madison
- Melissa Whited, Madison — University of Wisconsin-Madison

Registrations For

- Jamie Derr, Marshall — Derr Family Farm
- Steve Steinhoff, Madison — himself
- Shahla Werner, Madison — herself
- David Hansen, Oconomowoc — Electric Change Mobility
- Yang Xie, Fitchburg — self
- Gary Goyke, Madison — Wisconsin Urban & Rural Transit Association
- Rick Chamberlin, Sauk City — himself
- Laura Stoesz, Madison — herself
- Amanda Matt, Madison — herself
- David Vitse, Madison — himself
- Seth Nowak, Madison — ACEEE
- Svein Morner, Madison — Sustainable Energy LLC

Registrations Against

- Bill Sepic, Madison — Wisconsin Auto & Truck Dealers Assn.
- Nick George, Madison — Midwest Food Processors Assn.
- Jordan Lamb, Madison — Wisconsin Pork Assn.
- Jordan Lamb, Madison — Wisconsin Potato & Vegetable Assn.
- Jolene Plautz, Mequon — Kwik Trip
- Marc Bently, Madison — WI Engine Manufacturers & Distributors Alliance
- Marc Bently, Madison — Schneider National

- Marc Bently, Madison — Marten Transport
- Jordan Lamb, Madison — WI Cattlemen's Assn.
- Dan Gunderson, Madison — Enbridge
- Brad Boycks, Madison — Wisconsin Builders Assn.
- Katie Walby, Madison — GM
- Tom Howells, Madison — Wisconsin Motor Carriers Assn.
- Jason Childress, Madison — Kwik Trip

Registrations for Information Only

- Keith Spruce, Milwaukee — AIA

February 11, 2010

PUBLIC HEARING HELD

Present: (8) Senators Miller, Plale, Wirsch, Hansen, Jauch, Grothman, Kanavas and Lazich.

Absent: (0) None.

Appearances For

- Andrea Kaminski, Madison — League of Women Voters
- Margi Kindig, Madison
- Peter Bakken, Sun Prairie — Wisconsin Council of Churches
- Martin David, Middleton
- Brett Hulse, Madison — Dane County
- Bob Jones, Madison — WISCAP

Appearances Against

- Paula Quinn, Hartland
- Bob Thill, Cedarburg — Maynard Steel

Appearances for Information Only

- Terry Mulville, Berlin — Sunny Solutions, LLC
- Allison Hannon, Chicago — The Climate Group

Registrations For

- Megan Phillips, Madison
- John Young, Madison — Resource Solar, LLC
- Cindy Rose, Verona
- Dino Zucchi, Columbus

Registrations Against

- Pamela Thill, Cedarburg
- Sharon Blank, Sussex
- Peggy Kirby, Brookfield
- Lori Schmeling, Hartland
- David Storey, Madison — Wisconsin Retail Council

- Nick George, Madison — Midwest Food Processors Association

Registrations for Information Only

- None.

April 22, 2010

Failed to pass pursuant to Senate Joint Resolution 1.

Elizabeth Bier
Committee Clerk

	Present	Absent
Piala	x	
Miller	x	
Wirch	x	
Hansen	x	
Jauch	x	
Gröthman	x	
Kanavos	x	
Lazich	x	

2/11/ PH Attendance



44 East Mifflin Street • Suite 202 • Madison, Wisconsin 53703 • 608/257-3151

To: Wisconsin Legislature

From: Bill Skewes, Executive Director
Wisconsin Utilities Association

Re: Utility Comments on the Global Warming Task Force Legislation

Date: January 19, 2010

On behalf of Wisconsin's investor-owned gas and electric utilities, the Wisconsin Utilities Association (WUA) submits the following comments that represent the collective concerns of our industry regarding the draft legislation that is intended to implement the recommendations of the Governor's Task Force on Global Warming. Generally, these concerns are related to discrepancies between what participating utility task force members approved for the next level of discussion and how they appear in AB 649/SB 450. In addition, individual WUA members will submit comments specific to their companies. WUA appreciates the opportunity to provide these comments.

ARTs: WUA members oppose the imposition of mandatory advanced renewable tariffs required in the bill. 2005 Act 141 provides utilities with the regulatory certainty that they will not be ordered to install additional renewables if they are in compliance with an existing RPS, but the LRB draft opens the door to additional renewable mandates on top of the 25% RPS requirement, such as ARTs, which threatens this certainty. It also forces customers across the rate base to subsidize the cost of renewables that are above the avoided-cost threshold, as federal law prohibits under the Public Utility Regulatory Policy Act (PURPA) of 1978. WUA maintains that the draft language is inconsistent with recommendations of the Task Force and requests that the ARTs language be removed from the bill. Delete Section 196.379.

Nuclear Moratorium: WUA members oppose the provisions in the draft which require that all changes to the current nuclear construction moratorium be invalidated if any one portion is found to be unconstitutional, i.e. the "non-severability" language, and questions the requirement that any new nuclear energy be sold only to serve Wisconsin load. The bill draft seems to deliberately attempt to provoke a constitutional challenge to ensure that any easing of the moratorium would be struck down. This is clearly contrary to the intentions of the task force and should, therefore, be eliminated. Remove applicable sections on page 130-132 and page 170, Section 9141, as well as the Nuclear Findings on page 127, Section 242.

RPS Legislative Findings: The legislative findings on pages 101-102 of the LRB draft reveal an apparent misunderstanding of the regional energy market and do not seem to consider

renewable energy in a broader geographical context to meet the enhanced RPS goals contained in the legislation. Dramatically increasing the RPS while simultaneously limiting from where renewable energy may be obtained is counterintuitive, especially so in light of other provisions within these same findings that state "the most abundant and affordable sources of electricity that can be used to comply with the RPS are wind resources in western Minnesota, the Dakotas, and Iowa." This would appear to discourage investment in long-distance transmission lines. WUA requests that the legislative findings be removed from the draft.

Energy Efficiency & Conservation: WUA members object to the elimination of oversight by the Legislature's Joint Committee on Finance as currently prescribed in 2005 Act 141 for requiring additional state energy efficiency and conservation spending beyond the Act's 1.2%. This is contrary to the understanding of participating utility members on the task force and the page 81, line 7 section 105 changes in the draft should NOT be adopted, thus retaining JFC oversight per 196.374 (b) 2-4 Wis. Stats.

In addition, clarification and/or change is needed in 229.03 (3m) (a) Wis. Stats for the calculation of the Statewide Energy Conservation Goals. The Task Force Reports Enhanced Conservation and Energy Efficiency Program paper called for annual savings targets to be "established over a program year (e.g. 3-4 years)" and that for purposes of the estimates "it was assumed that the underlying growth rate for electricity is 1.8%" [Task Force Final Report pg. 69]. Section 229.03(3m) (a) does not seem to take the Task Force Report's recommendation on this issue into account for the calculation and could be read to potentially lead to 0% energy consumption if a 2% reduction is incorporated continually every year after 2015 without inclusion of load growth. This section should be changed to reflect, at the very least, the Task Force's recommendation to include growth.

Freight Idle Restrictions: WUA requests language to exempt utility trucks that use a PTO (power take off) to operate aerial and digger units or cranes, DC to AC power invertors, safety lighting, and under-deck air compressors, equipment repair, all of which require the truck or equipment to remain idling during such use. Currently, there are approximately 11 states that have idle restriction laws. Attached is a link showing the states.

http://www.atri-online.org/research/idling/2009ATRIdlingComp_Aug09.pdf This link also includes those idling policies. WUA requests that the exceptions be added to those in 346.94 (21) (d).

WUA also requests an idling restriction exemption for utility power-operated equipment such as back hoes, trenchers, and skid steers. This exemption is needed because this equipment will need to idle in certain situations, such as in cold weather conditions. This equipment utilizes complex hydraulic systems, and in the cold winter months, the engine must idle in order to circulate and warm the hydraulic fluid before the attachments can be operated.

Biomass Definition: The draft bill removes Refuse Derived Fuel from the definition of biomass. It adds the existing RDF qualification to the definition of renewable energy. It also removes wood from the definition. WUA does not support these changes as they were not within the scope of the Task Force discussions, and, the new biomass definition would

no longer compliment the Energy Priorities Law (Wisconsin Statutes §§ 1.12(3)(b)). In fact, the LRB draft would weaken the existing biomass definition as it applies to the proposed expansion of the RPS. Therefore, WUA requests that the current biomass definition be retained.

Alignment with Federal Law: In order for a utility to comply at the lowest cost to customers, it should have one compliance strategy for meeting both the federal and State RES/RPS. Lack of one master strategy to comply with both sets of regulations could cause Wisconsin customers significantly higher costs than customers in other states and bear a higher burden than people in other states – putting Wisconsin at a competitive disadvantage.

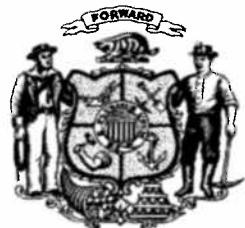
The LRB draft should address this issue by identifying how state and federal compliance targets will be aligned to achieve least cost compliance. The draft should address how issues such as the RPS, monitoring of sequestration for forestry and greenhouse gas reporting requirements and other potential federal-state differences will be addressed when similar federal laws are passed.

RECs: The LRB draft should clarify that REC's can be created when a utility enters a power purchase agreement and that REC's can be "banked" from year to year. In addition, LRB draft language should be deleted that requires that the REC be used in the same year in which it is generated.

PSC Exercise of Regulatory Authority: Section 67 on pages 72-73 of the LRB draft requires PSC to exercise its regulatory authority to reduce demand through efficiency & conservation. WUA requests that this section be deleted because these goals are adequately addressed by the revised quadrennial proceedings in the bill and could otherwise lead to unintended consequences and regulatory uncertainty.



WISCONSIN STATE LEGISLATURE



January 21, 2010

From: The Homegrown Renewable Energy Campaign

A-A Exteriors.com	Lake Michigan Wind and Sun, Ltd.
Agrecol Corporation	Legacy Solar
Arch Electric, LLC	Marathon Renewable Energy, Inc.
Artha Sustainable Living Center LLC, Amherst	Marth Wood Products
Better Environmental Solutions	Michael Fields Agricultural Institute
Biomass Solution	Midwest Renewable Energy Association
Bubbling Springs Solar	Next Step Energy, LLC, Eau Claire
Cardinal Solar, Sun Prairie	Northwind Renewable Energy, LLC, Stevens Point
Clean Wisconsin	Organic Valley Cooperative
Clear Horizons	Partners in Forestry Landowners Cooperative
Cosmic Walker Wood Products	Photovoltaic Systems, LLC
D & D Equipment	Prairie Solar Power & Light
EcoEnergy LLC	RENEW Wisconsin
Ecomanity, LLC	Ritger Law Office
Energies Direct	Seventh Generation Energy Systems
Energize, LLC	The Nature Conservancy
Energy Concepts, Inc.	Timmerman's Talents
Full Spectrum Solar	UrbanRE Vitalization Group
GHD, Inc.	W.E.S. Engineering
Global Energy Options	Wave Wind, LLC
GrassWorks, Inc	Wind Energy Systems LLC, Iron Ridge
Green Diesel Wisconsin Foundation	Wisconsin Center for Environmental Education
H&H Solar Energy Services, Inc.	Wisconsin Farmers Union
Lake County Energy	Wisconsin League of Conservation Voters

To: Senator Jeff Plale – Chair, Senate Committee on Commerce, Utilities, Energy, and Rail
Senator Mark Miller – Chair, Senate Committee on Environment
Representative Jim Soletski – Chair, Assembly Committee on Energy and Utilities
Representative Spencer Black – Chair, Assembly Committee on Natural Resources

Copy: Governor Jim Doyle
Wisconsin State Legislators
Members, Governor's Task Force on Global Warming

RE: Support for policies included in the Clean Energy Jobs Act (AB 649 & SB 450):
Advanced Renewable Energy Tariffs, Low Carbon Fuel Standard, Energy Crop Reserve Program, and Fuels for Schools and Communities

The Homegrown Renewable Energy Campaign was formed to support policies that will create jobs and spur economic growth in Wisconsin's rural communities by creating new opportunities for farmers, foresters, rural landowners, and businesses to participate in a clean energy economy. All four of our campaign's core policies have been included to some degree in the Clean Energy Jobs Act recently introduced in the state legislature. The Homegrown Renewable Energy Campaign supports these policies as included in the bill and looks forward to working with legislators to ensure that the policies can be strengthened to maximize the benefit to Wisconsin's farm and rural economies.

Advanced Renewable Energy Tariffs

There are currently no guarantees that individuals, farmers, businesses and entrepreneurs wishing to make investments in renewable energy will receive fair prices from their electric utilities for extra energy they produce from their small-scale renewable energy systems. In the past, electric utilities voluntarily purchased electricity from owners of manure digesters, wind turbines and solar panels for excess energy those systems produce. These programs provided farmers with an additional revenue stream and brought more dollars into rural areas. Unfortunately, many Wisconsin utilities are no longer offering these programs (known as feed-in tariffs).

The Clean Energy Jobs Act charges the Public Service Commission to design mandatory programs that would create fair payments (also called Advanced Renewable Energy Tariffs or ARTs) for excess energy produced from customer-sited renewable energy systems. Fair buy-back rates encourage investments in small-scale renewable energy generation by providing fixed returns that allow farmers, homeowners, businesses and municipalities to adequately plan for the upfront investments these projects require. Because they are structured to support only local generation sources, Advanced Renewable Energy Tariffs are especially effective at attracting renewable energy manufacturers, creating local jobs, reducing energy bills and stimulating Wisconsin's economy.

The Homegrown Renewable Energy Campaign encourages the Wisconsin State Legislature to strengthen this section of the Clean Energy Jobs Act by removing language that exempts Rural Electric Cooperatives and Municipal Utilities from offering Advanced Renewable Energy Tariffs. In general the rural areas covered by these utilities are endowed with quality resources and have the greatest need for sustainable economic development. Furthermore, we believe that ensuring energy producers a fixed price, including a return on investment is essential to the success of a renewable energy tariff program. Rates that remain stable over time are essential to providing the financial certainty that will lift these industries to new heights.

Low Carbon Fuel Standard

A Low Carbon Fuel Standard would help break our dependence on foreign sources of oil and promote energy independence by gradually moving Wisconsin toward the cleanest and most efficient sources of transportation fuels. A Low Carbon Fuel Standard rates different types of transportation fuels by their efficiency and carbon footprint and establishes a schedule for using low-carbon fuels to power our vehicles.

Biofuels are a winner under a Low Carbon Fuel Standard. The economic benefit of producing fuel from Wisconsin farms has been clearly demonstrated in recent years. A Low Carbon Fuel Standard will create a market for more farmers to sell their crops. All of the existing corn ethanol plants in Wisconsin use natural gas and have a lower carbon footprint than coal-fired ethanol plants in adjacent states; Wisconsin has tremendous opportunities to lower the carbon footprints of its corn ethanol plants even more by switching from natural gas to biomass for process heating. Moreover, if adopted, the Clean Energy Jobs Act would allow the thermal energy from biomass used in the ethanol refining process to count towards the state's Renewable Energy Standards in 2020 and 2025. Advanced forms of biofuel under development in Wisconsin, such as cellulosic ethanol, biomass gasification diesel, and green gasoline will become particularly attractive due to their high efficiency and low carbon footprint. This policy will help ensure that Wisconsin remains a leader in the development of biofuels for decades to come.

Methane digesters on farms, factories and food processing plants will be especially attractive when producing biogas that can be used as a transportation fuel under a Low Carbon Fuel Standard. There are already several businesses and farms in Wisconsin producing biogas with methane digesters. Businesses

across the state have begun to produce the equipment for distributing the fuel and manufacturing components for vehicles specifically designed to use these homegrown transportation fuels.

The Homegrown Renewable Energy Campaign encourages the Wisconsin State Legislature to strengthen this provision in the Clean Energy Jobs Act by adding language that would set targets reducing the carbon content of our fuels at least 10% by the year 2020 as recommended by the Governor's Global Warming Task Force.

Energy Crop Reserve Program

The Energy Crop Reserve Program would direct payments to farmers and landowners who begin planting crops that can later be sold for the production of biofuels. This policy will ensure that farmers and landowners can continue to make profits from their working lands as they transition to the production of biofuels. Ensuring that there is an adequate supply of biomass will create even more economic development as the number of businesses, aggregators, distributors and biofuel producers increase in the state to take advantage of these new resources.

The legislation directs the Department of Agriculture, Trade and Consumer Protection to begin rulemaking proceedings to design an effective Energy Crop Reserve Program. The Homegrown Renewable Energy Campaign encourages the Wisconsin State Legislature to support the Energy Crop Reserve Program.

Fuels for Schools and Communities

The Homegrown Renewable Energy Campaign also supports adding language to the Clean Energy Jobs Act that would create a Renewable Fuels for Schools and Communities program. Seven other states have already adopted similar policies that would establish a revolving loan program to generate capital for the purchase of equipment for biomass systems to be installed in schools and government-owned buildings. Wisconsin schools spend close to \$200 million dollars each year on energy. A recent study by the Biomass Energy Resource Center found that "200 to 300 schools in Wisconsin now heating with natural gas may find biomass heating economical at current fuel prices and these systems will often cash flow positive in their first year of installation." Biomass heating will save schools and communities tens of thousands of dollars in heating costs each year and help increase demand for local sources of energy. Also, if adopted, SB450/AB 649 would allow the thermal energy from biomass heating systems installed through this policy to count towards the state's Renewable Energy Standards in 2020 and 2025.

The Clean Energy Jobs Act currently directs the Office of Energy Independence (OEI) to provide information, encouragement and assistance to school districts to provide opportunities for renewable energy. The Homegrown Renewable Energy Campaign supports including specific language that would designate a state agency responsible for establishing a revolving loan program for schools and communities to invest in biomass systems.

As members of the Homegrown Renewable Energy Campaign, we would like to indicate our support for Advanced Renewable Energy Tariffs, a Low Carbon Fuel Standard, the Energy Crop Reserve Program, and for the addition of a Fuels for Schools and Communities provision in the Clean Energy Jobs Act. We look forward to working with the Legislature to ensure that these policies designed to promote economic growth in Wisconsin's rural economies remain integral parts of the Clean Energy Jobs Act.

Thank you for your consideration.

Members of the Homegrown Renewable Energy Campaign

Homegrown Renewable Energy Campaign



The Homegrown Renewable Energy Campaign began in 2008 to advance policies that would build Wisconsin's rural economies by spurring investments in renewable energy technologies. The following organizations and businesses have signed on in support of the campaign goals of Advanced Renewable Tariffs, a Low Carbon Fuel Standard, an Energy Crop Reserve Program, and a Renewable Fuels for Schools and Communities Program:

A-A Exteriors.com
Agrecol Corporation
Arch Electric, LLC
Artha Sustainable Living Center LLC, Amherst
Better Environmental Solutions
Biomass Solution
Bubbling Springs Solar
Cardinal Solar, Sun Prairie
Clean Wisconsin
Clear Horizons
Cosmic Walker Wood Products
D & D Equipment
EcoEnergy LLC
Ecomanity, LLC
Energies Direct
Energize, LLC
Energy Concepts, Inc.
Full Spectrum Solar
GHD, Inc.
Global Energy Options
GrassWorks, Inc
Green Diesel Wisconsin Foundation
H&H Solar Energy Services, Inc.
Lake County Energy
Lake Michigan Wind and Sun, Ltd.
Legacy Solar
Marathon Renewable Energy, Inc.
Marth Wood Products
Michael Fields Agricultural Institute
Midwest Renewable Energy Association
Next Step Energy, LLC, Eau Claire
Northwind Renewable Energy, LLC, Stevens Point
Organic Valley Cooperative
Partners in Forestry Landowners Cooperative
Photovoltaic Systems, LLC
Prairie Solar Power & Light
RENEW Wisconsin
Ritger Law Office
Seventh Generation Energy Systems
The Nature Conservancy
Timmerman's Talents
UrbanRE Vitalization Group
W.E.S. Engineering
Wave Wind, LLC
Wind Energy Systems LLC, Iron Ridge
Wisconsin Center for Environmental Education
Wisconsin Farmers Union
Wisconsin League of Conservation Voters

For more information about the Homegrown Renewable Energy Campaign, please contact Bridget Holcomb of the Michael Fields Agricultural Institute at bridget@michaelfieldsaginst.org or by phone at 608-256-1859.



WISCONSIN STATE LEGISLATURE





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January 25, 2010

Senator Jeffrey Plale
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Madison, WI 53707-7882

companion
to SB 450

Dear Senator Plale:

Recycled Energy Development (RED) – which seeks to profitably reduce greenhouse-gas emissions – commends you for authoring AB 649 and offers a suggested amendment.

Include facilities that generate from waste energy recovery under the definition of renewable facility.


The capture and recycling of waste energy to generate clean heat and power does not require the burning of fossil fuels or the emission of any pollution or greenhouse gases. Waste heat recovery projects are collocated at industrials and help make these facilities more cost competitive while reducing their carbon footprint. The inclusion of recycled energy within Wisconsin's feed-in tariff would attract substantial investments that increase the productivity of the state's industries. We urge you to insert the following language in AB 649:

Recycled Energy, which means useful thermal, mechanical or electrical energy produced from (a) exhaust heat from any commercial or industrial process; (b) waste gas, waste fuel or other forms of energy that would otherwise be flared, incinerated, disposed of or vented; and (c) electricity or equivalent mechanical energy extracted from a pressure drop in any gas (excluding any pressure drop to a condenser that subsequently vents the resulting heat).

Any recycled energy generation system that captures heat which otherwise would have been wasted - or prevents the burning of additional fossil fuels - is clean and should be included under the *renewable facility* definition.

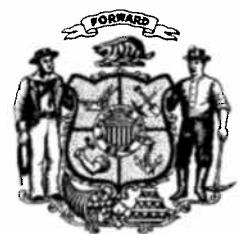
RED respectfully requests this change be incorporated into AB 649. We would welcome the opportunity to provide additional information. Thank you for your consideration.

Sincerely,


Melissa Mullarkey
Policy Associate



WISCONSIN STATE LEGISLATURE



TO: Senate Select Committee on Clean Energy
FM: Bill McClenahan, Martin Schreiber & Associates
DT: January 26, 2010

SB 450?

RE: *Invenergy Wind LLC testimony in favor of RPS and Clean Energy Jobs Act*

Thank you, Co-Chairman, for the opportunity to testify today. I'm Bill McClenahan. I am here today to testify on behalf of Invenergy Wind LLC in support of the proposed Clean Energy Jobs Act and, in particular, in support of increasing Wisconsin's Renewable Portfolio Standard to 25% by 2025. Invenergy also supports requiring a majority of that renewable power to come from in-state sources, to ensure that the economic benefits are maximized in Wisconsin.

Invenergy is the largest U.S. non-utility developer of wind projects. Invenergy owns and operates the Forward Wind Energy Center, the first large scale wind facility permitted and constructed in Wisconsin and one of the state's largest wind farms at 129 MW. The renewable power from Forward is purchased under long-term contracts by Wisconsin utilities.

Invenergy is also seeking approval for a 100-turbine, 150 MW wind project in southern Brown County called the Ledge Wind Energy Center. That is enough power for approximately 40,000 homes. The project will prevent the emission of 480,000 tons of carbon dioxide, 1,350 tons of sulfur dioxide and 600 tons of nitrogen oxide every year.

The Ledge project represents an investment of more than \$300 million in Wisconsin. The project would provide approximately 150 construction jobs. It would also provide utility shared revenue payments of \$600,000 per year to the local towns and to Brown County. In addition, direct payments to landowners will total more than \$750,000 per year. These economic benefits – jobs, shared revenues and payments to Wisconsin landowners – are often ignored when people discuss the cost of renewable energy.

Critics also ignore the price certainty of renewable energy, which uses no fuel and is not subject to the price fluctuations of coal or natural gas. Increasing the state's percentage of renewable energy also helps reduce the risk of Wisconsin's over-dependence on coal.

But Wisconsin will not reap the benefits of renewable energy – the jobs, the shared revenues and the payments to the people who host it – without a requirement for utilities to increase the amount of electricity they get from renewable power. That is why Wisconsin needs an enhanced RPS. Increasing the RPS will benefit our environment, increase our energy independence and create new jobs and economic opportunities.

The Clean Energy Jobs Act proposes that 10% of the state's power come from in-state sources of renewable power. Inenergy believes that number can and should be increased. Although some people have questioned Wisconsin's capacity for producing renewable energy, Inenergy – with 2,000 MW of operating wind projects nationwide – sees plentiful opportunity for wind development in the state. In addition, there are opportunities for biomass, solar and other renewable projects. Wisconsin should not let those opportunities be exported to other states.

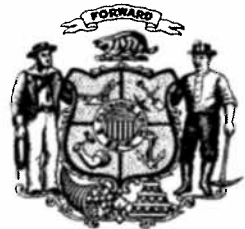
The importance of this issue is illustrated by Wisconsin Public Service Corporation's announcement that it plans to purchase 500 MW of energy from Manitoba Hydro. Although Wisconsin's neighboring states do not count large hydro toward their Renewable Portfolio Standards, the bill before you would count it toward the Wisconsin RPS. If not for the proposed requirement to provide or purchase renewable power from in-state sources, WPS could meet nearly its entire RPS – from 0 to 25% – with that 500 MW of Manitoba hydro. Other utilities could make their own purchases and do the same. Wisconsin can and should ensure that its energy dollars benefit its own workers, communities and landowners by keeping and increasing the in-state requirement in this bill. It's important to remember that the PSC, under the bill and under current law, can provide relief from the RPS requirements if costs or reliability require.

Again, I urge you to increase the state's RPS and to require a majority of the renewable power to come from in-state sources.

Thank you for the opportunity to testify.



WISCONSIN STATE LEGISLATURE



Date: January 26, 2010

Re: Clean Energy Jobs Act

SB 450?

Company: Northern Biogas, Fond Du Lac, Wisconsin

Business: Electric Generation through Anaerobic Digestion

Potential Jobs created by projects presently proposed:

Three Project Engineers

Three assembly crews of five each

Work for support businesses

Concrete
Excavation/earth work
Electricians
Plumbing
Fabrication shops

Testimony in favor of Clean Energy Jobs Act:

Guy Selsmeyer, President, Northern Biogas

I have been associated with the Energy business for over 25 years, specifically anaerobic digestion and electric generation through the use of Biogas for the last ten years. First, through the development of the process on our Dairy farm, now as a supplier of the technology. Without a doubt Wisconsin is the leader in the US in providing this technology. But others are working very hard to catch up. Wisconsin is the leader due to a great extent to the environment created here by legislation such as the Clean Energy Jobs Act. Wisconsin does not have a lot going for it from an energy resource standpoint, no oil or gas production, no natural gas storage fields, and the lake limits interstate transmission. We do have agriculture and agriculture will in the near future provide our nations greatest opportunity for dependable renewable energy. It is a resource and an opportunity we must take advantage of.

Every administration in memory has had a stated goal of lessening our dependence on foreign oil; none have had the political will to actually do much about it. Sooner or later we must make a commitment; perhaps pay extra to develop technologies now to save money, jobs and lives later. Maybe, after taking into account the potential business development opportunity it will cost Wisconsin nothing.



WISCONSIN STATE LEGISLATURE



Informational Testimony on SB450
Wisconsin Joint Legislative Committee on Global Warming
Wednesday, January 27, 2010

By the Rev. **Dave Steffenson**, Ph.D. Consulting Director
The Upstream Institute for Ecological Ethics
344 W. Dayton St., #401
Madison, WI 53703

I offer this as “informational” testimony because I strongly support most of this bill. As a member of one of the groups asking Governor Doyle to appoint the Global Warming Commission, I endorse this plan for creating green jobs and a sustainable future. To convert our economy *from* a carbon-based (mainly coal and oil) economy *to* a sustainable, green and mostly carbon-free economy, is the greatest money-making, jobs creating, growth opportunity ever opened up to human beings. To *not* make this conversion dooms most of us to a grim and hopeless future.

I strongly urge the passage of this bill with three reservations:

1. The first is the question of **TIMING**. Let me explain. There are many ways to reach the goal of a sustainable, carbon-free future. A useful tool comes from the Princeton University Carbon Mitigation Initiative (funded by BP and Ford Motors).¹ They look at 15 “wedges” or strategies to eliminate the current burning of carbon fuels (in industry, buildings, or internal combustion engines)--the chief sources for rapid global warming, climate change, and the rapid build-up of atmospheric toxic poisons.

However, *neither* the Princeton strategies *nor* the Governor’s Commission and this bill, which represents the legislative form of the Commission’s recommendations, *assumes that we must move on all fronts at once* toward our goals by 2050. In fact, it appears that we must move in stages through several phases while maintaining a steady reduction in GHG emissions of 2% to 3% per year.

The first phase starts with the lowest hanging fruit, the easiest and cheapest to gather. The immediate priority for the next few years should be **Efficiency** and **Conservation** – ending waste and closing the wasteful feedback loops in our homes, buildings, appliances, autos, developing alternative transportation, using renewable energy sources as they become available, efficient electrical transmission and storage (70% or better compared with our current 30%). My informed guess is that such efforts would move us 30% to 40% toward our goals. A third early wedge is **Fuel Switching**, namely switching to natural gas to produce electricity though that pathway is limited by supply and it still creates GHG emissions.

The second phase of wedges to be fully implemented in 20 years or less are **Wind**, **Direct Solar Capture** and **Solar Fuel Cells**. By storing excess wind energy in pressure tanks next to the windmills, then using that compressed air to drive the windmills during calm periods, makes wind a suitable baseload electrical source as is already being done in Europe. Or we can site large wind projects where the wind blows all the time such as up the center of Lake Michigan out of sight of land. Also, some of that solar or wind energy can be used to produce hydrogen which can then be moved to where electricity is needed, and then fuel cells can convert the hydrogen energy back into electricity to use at distant sites. Maybe another 30% or more of non-carbon energy could soon be produced from this second phase.

A third phase is directly relevant to Wisconsin; our state has been called the “Saudi Arabia of **Biomass** and **Biowaste**.” That’s our only “natural” resource. Our economy is largely based on dairy products, forest products, paper, and food. All of these industries produce waste of which only small amounts are recovered. What we now call waste could be used as food or fuel for other new products or energy. Using some of that waste, and by adding new crops such as perennial grasses for ethanol; and using **Geothermal** heating and cooling for new buildings, or retrofitting existing buildings, this third phase

¹ See <http://cmi.princeton.edu/wedges/intro.php>.

could add another 20% of new energy, bringing us to at least 80% of what is needed for a carbon-free future.

A fourth wedge or phase in the Princeton strategy is developing new **Natural Carbon Sinks** by conserving tropical forests and planting new forests around the world. That might add another 5%.

Then, in the far future, as we develop and bring on-line new technologies for **reliable Carbon Capture and Storage**, we might be able to resume using coal providing we believe that the carbon so captured will never be released from storage. Since we've already passed the petroleum peak, I don't think we can ever go back there which will end our dependence on foreign oil. Domestic oil must be saved for non-energy uses such as medicines and plastics.

I would add what I call a "**Serendipity Wedge**" made up of yet to be discovered technologies or very new technologies such as the use of pond algae as both a capture and storage medium, or tidal power. I submit that as we move forward, all of the above will evolve into even better or more creative ways to avoid GHG-free emissions far beyond what we are doing now.

Lastly, you may note that I have left out one of the wedges -- the **Nuclear** wedge which envisions doubling the world's use of nuclear energy. **This is where timing is crucial.** If nuclear energy were developed **now**, that would be a high-grade industrial energy source driving us to continue business as usual now with that energy, while our current wasteful and toxic systems would continue. ***Nuclear should be held in abeyance to use at the end of this conversion period if our other strategic wedges are insufficient.*** It would only be used sparingly, if at all. If we make it available too soon, or relax our criteria too soon, that will divert us from first fully following the other paths. I won't be here, but it would be appropriate to make the decision to develop some improved nuclear capacity around 2030 to 2040 if that is necessary. In the meantime, the nuclear wedge now needs to be removed from this plan. Research can continue, and the present restrictions on waste disposal and cost would continue, until we have some idea that we will need the nuclear boost to finish the race to survival..

2. The second consideration is **Cost**. A few years ago in Madison, we had a debate about Wisconsin's nuclear energy future. Speaking against was Carl Pope, the then Sierra Club Executive Director, using all the usual arguments about safety, transportation, storage and sabotage of nuclear energy and waste. But significantly, his opponent was Jerry Taylor, Cato Institute senior fellow, arguing from a libertarian, free-market, business-oriented position. Mr. Taylor made the flat-out statement **that no nuclear energy plant of the American style will ever be built in America or anywhere else because of its huge cost** (which is much greater now) – unless it is totally socialized with public subsidies and the people are convinced that it is necessary. Do we want to socialize nuclear energy? Or even worse, socialize all the costs and the risks, while allowing utility companies and investors to privatize only the profits with little liability for mistakes? I ask that the nuclear provisions be dropped from this bill now and that they be considered again separately as they have been in the past.

3. A third quick observation: When anyone comes to testify here from the UW-Madison Nuclear Engineering Department, from power utilities, certain legislators, or other business interests, they always narrowly focus on the nuclear power plant *itself* and its lack of any GHG emissions. What is disingenuous about this half-truth is that when you consider the **full life-cycle history** of any nuclear plant, from mining the ore at the beginning on over to decommissioning at the end, **the total nuclear development process produces even more carbon GHG emissions than conventional coal!**

I close with the question that constantly haunts me, and I hope it will haunt each one of you,

“Whatever you decide, will your grandchildren bless you, or curse you, for the choices you are now making?”





January 27, 2010

The Honorable Mark Miller
The Honorable Jeff Plale
Co-Chairs
Senate Select Committee on Clean Energy
State Capitol
Madison, WI 53707

Dear Senator Miller, Senator Plale, and Members of the Committee:

Thank you for this opportunity to provide you with several comments regarding SB 450, the Clean Energy Jobs Act.

The Citizens Utility Board of Wisconsin is a member-supported, nonprofit organization that advocates for reliable and affordable utility service. CUB represents the interests of residential, farm, and small business customers of electric, natural gas, and telecommunication utilities before the Legislature, regulatory agencies, and the courts.

I had the privilege of serving on Governor Doyle's Task Force on Global Warming, and CUB's research director Dennis Dums also participated on several task force working groups and as my alternate.

CUB supports the recommendations of the task force, including the recommendations to strengthen Wisconsin's energy efficiency programs, to increase the requirements for renewable energy development, and to modify the so-called nuclear moratorium, as outlined in the report of the task force sent to Governor Doyle in July 2008. We believe these recommendations will help Wisconsin residents and businesses use less energy and reduce their monthly energy bills, spur the development of Wisconsin's renewable energy resources and related businesses, create new jobs, slow down the flow of dollars for out-of-state for fossil fuels, and reduce Wisconsin's greenhouse gas emissions.

I would like to thank Senator Miller and Senator Plale, and their colleagues in the Assembly Representative Spencer Black and Representative Jim Soletski, for drafting SB 450 and its companion AB 649. The bill largely reflects many of the recommendations of the task force.

However, I respectfully request that you consider making several changes to SB 450, so that it more closely follows the task force recommendations. More importantly, these suggested changes will provide more benefits to Wisconsin's residents and businesses.

(over)

First, CUB supports the changes proposed by Roy Thilly and Tia Nelson, co-chairs of the task force, who, in a memo dated January 26, 2010, provided you with suggested changes from former members of the task force. In short, these suggested changes would strengthen the goals and requirements for Wisconsin's energy efficiency programs, and clarify several provisions of the renewable energy portfolio standard.

In particular, we strongly support the recommendation by former task force members that the Public Service Commission shall establish energy savings targets and budgets so that the state will meet or exceed the goals set forth in the existing "energy priorities law" 1.12(4) and the new Section 287, which creates 299.03. CUB believes strong energy efficiency goals and the budgets needed to meet them are essential requirements of a rational energy policy.

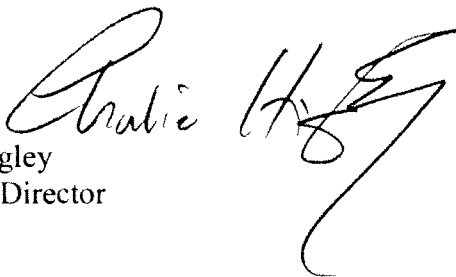
Second, CUB supports the changes proposed by the Coalition for Clean Energy in its memo to you dated January 27, 2010. As with the suggested changes from the former members of the task force, the suggested changes from the Coalition for Clean Energy ask to strengthen the requirements of the energy efficiency and renewable energy programs outlined in the bill.

Third, CUB supports the provisions in SB 450 regarding the modifications to the nuclear moratorium. We believe these provisions nearly capture the intent of the recommendations of the task force, especially the so-called "output finding" of Section 250, which creates 196.493(2)(am)4; and the "nonseverability clause" of Section 9141. These two items, along with other provisions of SB 450, work together to make sure that new nuclear power plants meet Wisconsin's need for electricity, and that the output from these plants will be sold to Wisconsin utilities, as recommended by the task force. That said, we believe the bill must strengthen the requirements for energy efficiency programs, as outlined above, before we can support the overall bill and the proposed modifications to the nuclear moratorium.

Thank you for this opportunity to provide you with our comments on SB 450.

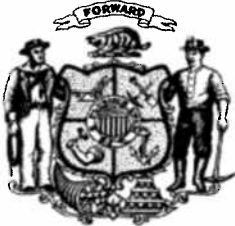
Sincerely,

Charlie Higley
Executive Director

A handwritten signature in black ink, appearing to read "Charlie Higley". The signature is written in a cursive, flowing style with a long, sweeping tail that extends downwards and to the right.



WISCONSIN STATE LEGISLATURE



Testimony by Kevin Crawford | SVP Governmental Affairs Orion Energy Systems

January 27, 2010

Dear Select Committee on Clean Energy Co-Chair Senator Plale:

Thank you for your service to the families of the state of Wisconsin. In particular, thank you for taking on the monumental task of establishing energy policy that will combat the issues of climate change and at the same time put our citizens back to work.

Orion Energy Systems has deployed its energy management systems in 5,082 facilities across North America, including 120 of the Fortune 500 companies. Since 2001, Orion technology has displaced more than 477 megawatts, saving customers more than \$710 million and reducing indirect carbon dioxide emissions by 6.1 million tons.

Orion employs 230 full time employees and our world headquarters is located in Manitowoc, Wisconsin.

Manitowoc, like many of our state's communities, has seen its share of hard times, but our talented and skilled workforce is resilient and manufacturing businesses are in recovery from America's economic crisis.

Certain other manufacturers though, while hampered by the downturn, are doing much better than others due to energy and environmental policy already set in place by our state and other sub-national governments. The Renewable Portfolio Standards established by 28 of America's states and districts have contributed to 170 jobs at Tower Tech (manufacturer of huge wind towers), 600 jobs at Manitowoc Cranes (manufacturer of lift cranes used to construct wind farms) and 230 jobs at Orion Energy Systems (manufacturer of very high-efficiency lighting systems, energy control devices, and "direct use" renewables).

The jobs at these three companies in Manitowoc, along with the myriad jobs within the cluster of businesses that support them, are but an example of how carefully crafted environmental and energy policy can positively affect Wisconsin's economy.

Orion is proud to have a technology included in the Green Energy Jobs Act as a qualifying renewable that can be counted toward achieving our State's Renewable Portfolio Standard.

January 27, 2010

The Apollo™ Solar Light Pipe harvests the direct energy of the sun to illuminate a building's interior cavity, oftentimes taking a facility's lighting load completely off the grid. This technology is already employed in facilities in the control of such notables as Coca Cola, Miller-Coors, Polo Lauren, Apple (computer), Sysco and US Foods.

In order to create additional jobs and put Wisconsin's unemployed back to work, Orion requests the following changes to the legislation being discussed.

First, replace the term "non-electric energy" currently used in the bill to describe "direct-use renewables" with the term "renewable non-electric resources". The latter term is more consistent with other "renewable terms" in the bill and will help define appropriate rule promulgation by the Public Service Commission.

Second, the bill as drafted creates one year Renewable Certificates for the megawatt hours displaced by "direct-use renewables". These certificates are unlike Renewable Energy Credits generated currently under state law, making it impossible to trade them regionally, thus dramatically reducing their value.

Light pipe technology, a solar renewable non-electric resource, should generate Renewable Energy Credits in exactly the same way as those credits generated by photovoltaic technologies.

Orion metrics indicate that if these changes are made to the legislation, more than 1.4 million hours of work will be generated in Wisconsin's construction industry alone for the purpose of the installation of the technology. New jobs would also be developed in the areas of sales, distribution and manufacturing.

Thank you for hearing us on this issue of importance to Orion Energy Systems and the workforce of Wisconsin.

**Radical Ideas.
Extreme Energy Savings.
Proven Results.**

- + A leading power technology enterprise
- + Energy management systems and controls
- + Direct renewables

Neal Verfuert
CEO

Office 920.482.1916
Fax 920.482.1917
nrv@oesx.com

Orion Energy Systems Inc.
2210 Woodland Drive
Manitowoc, WI 54220

www.oesx.com Nasdaq: OESX

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Proven Results.**

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- + Energy management systems and controls
- + Direct renewables

Kevin Crawford
Vice President
Governmental Affairs

2210 Woodland Drive
Manitowoc, WI 54220

Office 920.482.5990
Fax 920.482.5991

kmc@oesx.com

Nasdaq: OESX
www.oesx.com

OESX

Orion Energy Systems Apollo[®] Solar Light Pipe

GREEN JOBS LEGISLATION • SB450 and AB649

Creating Jobs | Reducing GHG | Achieving Energy Independence

1.4 million

The estimated
number of **WORK**

HOURS created by passage of the bills
for the installation alone of light pipes.



146,000

The number
of **TONS** of **CO₂** avoided in Wisconsin
by the installation of light pipes
stimulated by passage of the bills.



100

The **PERCENT** of Orion
products manufactured in
the state of Wisconsin.



MADE IN USA

Senator Plale |
7th District

Orion Technology is deployed in the following businesses among others
in the region of your district:

- CUDAHY
- Ewald Venus Ford
 - Meltric Corporation
 - National Tissue Company
 - Vilter
 - Consolidated Graphics
 - Rexnord, Inc
 - Hanson Storage
 - Superior Health Linens
 - Home safe Building Performance
 - Extra Mile Dairy Supply
 - Wood Products Corp
 - Bird's Eye Foods
- OAK CREEK
- AAA Sales and Engineering
 - Bay View Industries
 - McAdams Graphics
 - National Technologies Inc
 - Nordco
 - Northwest Coatings
 - Steelwind Industries
 - Taylor Made Express
 - The Grunau Company

- Unlimited Inc
- Zierden Co.
- Harley Davidson Motor Company
- Henkel International
- Nucor Corporation
- PPG Industries
- Fastenal Company
- Karls Party Rental
- Riteway Bus

116+ locations throughout Milwaukee
including

- Coca Cola Enterprises
- Briggs and Stratton
- Milwaukee Journal Sentinel
- Charter Steel
- Campbells Soup Supply Company
- Miller Brewing Company
- Gardetto
- Avery Dennison
- Carhartt Work Wear
- Olympus Flag & Banner
- Ball Corporation

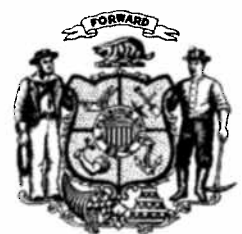


www.oesx.com

Orion has deployed its energy management systems in 5,082 facilities across North America. Since 2001, Orion technology has displaced more than 477 megawatts, saving customers more than \$710 million and reducing indirect carbon dioxide emissions by 6.1 million tons.



WISCONSIN STATE LEGISLATURE





January 27, 2010

Testimony before the WI Senate select committee on Clean Energy, Senate bill 450:

Chairman Plale, members of the senate committee, thank you for the opportunity to be here with you and to share with you how Senate bill 450 will affect my company.

Hello, I am Tom Scharff, Director of Energy Services for NewPage Corp, my office is located in Wisconsin Rapids. I was a member of the Governors Task Force and one of three (out of 29) that voted "no" to the recommendations and the primary reason was due to a lack of a cost benefit analysis. I will elaborate further later....

Let me start by describing my company, NewPage Corporation:

NewPage Corporation is the largest coated paper manufacturer in North America based on production capacity. The company's product portfolio is the broadest in North America and includes coated freesheet, coated groundwood, supercalendered, newsprint and specialty papers. These papers are used for corporate collateral, commercial printing, magazines, catalogs, books, coupons, inserts, newspapers, packaging applications and direct mail advertising.

NewPage owns 12 paper mills in Kentucky, Maine, Maryland, Michigan, Minnesota, Wisconsin, and Nova Scotia, Canada. 6 mills are in Wisconsin, 10 mills currently operating, only 4 of the 6 in Wisconsin.

We were forced to shutdown our Niagara WI mill in July 2008 and our Kimberly WI mill in September 2008.

Within our energy portfolio, 50% of our boiler fuels is biomass and 16% of our electricity is renewable.

NewPage Corporation
Energy Services
P.O. Box 8050
Wisconsin Rapids, WI 54495
t: 715 422 3073

We were a founding member of Chicago Climate Exchange, thus we have been voluntarily tracking and reporting our CO2 reductions since 2003 with our total reductions exceeding 700,000 metric tons of CO2.

We have a very aggressive and focused energy efficiency program and have achieved a 16% reduction in energy consumed per ton of paper sold. We continue to attack our energy consumption, because it reduces our costs, contributes to the bottom line, primarily because it is the right business decision!

My point with this is we have been and continue to be good environmental stewards, we know our GHG footprint; we understand energy efficiency and our results show it. We get it and I believe that is why I was asked to serve on the Governors Task force for Climate Change.

In 2000 when we were Consolidated Papers, we had 3,300 Wisconsin based employees; TODAY in Wisconsin we have 2,300! That is a loss of Wisconsin employment of 1,000 high paying manufacturing jobs within our company alone!

While I still consider it an honor to have been asked and to have served on the task force, it was quite frustrating to me that little concern was placed on what the cost impact of the recommendations would be. I hear people advocating that we will have all these "green jobs", well frankly it is more expensive to try and create a new job than it is to retain a job and I would much rather have kept the over 1,000 high paying paper company jobs than trade them for the possibility of job creation!

Energy is one of our top three highest costs of manufacturing paper, with fiber (Pulpwood) being #1 and labor #2.

We know what the cost to make a ton of paper is at each of our mill sites and from each paper machine. When we have to remove capacity due to market conditions, we shutdown the most expensive machines first, when we removed over a million tons of paper capacity from the market in 2008 we shutdown the Niagara and Kimberly mills, both Wisconsin mills.

Our current Central Wisconsin mills monthly electric bill exceeds \$6 million dollars! How would you like to get that whopper of a bill in the mail each month!

In 2000 the average cost of electricity to our mills was approximately 3.4 cents/kwh.

In 2009 the average was 5.8 cents per kwh for an increase of 70%!

With this background let me explain our concerns with this proposed legislation:

Boiler efficiency and mandatory inspections are problematic for us, we have a total of 16 operating boilers, if I add in Niagara and Kimberly's we have 25. Mandatory boiler inspections could significantly increase our costs or cause us to shutdown facilities. Additionally, required inspections could trigger the need to install expensive pollution controls under the Prevention of Significant Deterioration program. This program requires the installation of Best Available Control Technology when certain actions are taken, like boiler modifications. Our environmental folks have estimated this could cost us in excess of \$10-20 million PER boiler! With 16 operating boilers in our Wisconsin mills, you can do the math. If this is passed, we may be forced to consider moving production to one of the other 5 states where we have facilities since they would not have this onerous requirement. Let me add, as a member of the task force I do not recall this EVER being discussed at the task force meetings, I believe this goes beyond the original intent of the task force!

Public Benefit fee increase:

The bill is proposing to increase public benefit fees from a current 1.2% average to 3-4%. There currently is a cap on this which we support and feel needs to continue, however, if for some reason we are held to a 4% level of funding, this would increase our cost for Wisconsin operations only an additional \$3 Million dollars a year! We would once again have to look at moving orders away from WI operations to another state where this does not hit us.

Lastly, the Renewable Portfolio Standard (RPS):

Why would we increase our states RPS to 25%? My understanding is that the utilities are currently at about 5%, with a requirement to get to 10% by 2015... We have already experienced a 70% increase in electricity costs and the state is not even at the 10% target yet.... How much of an increase in electricity costs will I see if the utilities are required to get to 25%? I can't answer that because I don't know, why? Because a cost analysis was not conducted on this recommendation by the task force.

However, economists at the Boston based Beacon Hill Institute have and the number they have provided says for Wisconsin to get to a 25% RPS level, electric customers would see an increase of \$16.2 Billion, our own PSC data says \$15 Billion.

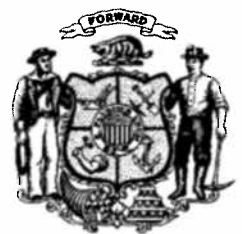
NewPage consumes about 3% of all energy in the state so to do a high level estimate what impact this could have on NewPage Wisconsin operations, I would have to tell my senior executives that a 25% RPS could potentially cost us 3% of \$15 Billion.

These are tough economic times and the paper industry is struggling against increased costs, a tough market and foreign competition. Why would Wisconsin, the number one papermaking state in the country add these additional costs to their core industry? We have already lost thousands of jobs; personally I have a very hard time seeing how this is can be called a jobs bill!

Chairman Plale, and the Senate select committee members, thank you for your time and the opportunity to share with you how this legislation would affect our company.



WISCONSIN STATE LEGISLATURE





Sierra Club - John Muir Chapter
222 South Hamilton Street, Suite 1, Madison, Wisconsin 53703-3201
Telephone: (608) 256-0565 Fax: (608) 256-4562
E-mail: john.muir.chapter@sierraclub.org Website: wisconsin.sierraclub.org

John Muir Chapter

Support SB 450 / AB 649, The Clean Energy Jobs Act

Before the Select Senate Committee on Clean Energy, 01/27/10, 10:00 AM, RM 412E
Shahla M. Werner, PhD, Director, Sierra Club- John Muir Chapter

First, I would like to thank Clean Energy Committee co-chairs Senators Miller and Plale for holding this public hearing today. The Sierra Club is grateful to have the opportunity to speak to you today about energy efficiency, renewable energy and nuclear energy provisions of the Clean Energy Jobs Act.

As you know, the Sierra Club was one of the stakeholders, which included utilities, labor unions, and industries, that helped to create the comprehensive Global Warming Task Force recommendations that are the framework for this bill. We appreciate the tremendous effort that has gone into making sure that this bill embodies the spirit of that comprehensive package critical to revitalizing Wisconsin's economy and reducing the threat of climate change.

Wisconsin Policy Research Institute Inc has asserted that this bill will cost billions to implement and result in thousands of job losses. Some of the problems with their analysis are that Wisconsin's overreliance on coal and other fossil fuels is currently costing us at least \$16 billion a year, unemployment is now at 8.3%, and we are currently losing clean energy jobs to Minnesota and Illinois – states which have already enacted a requirement to get 25% of their energy from renewable sources by 2025. Clearly, the status quo is not serving Wisconsin well.

The Sierra Club strongly supports provisions in SB 450 to reduce Wisconsin's electricity and natural gas use by 2% and 1% per year respectively through statewide energy efficiency programming, appliance standards and better building codes. We further recommend including language in the Clean Energy Jobs Act to bring it in line with Task Force recommendations to require the Public Service Commission to direct energy efficiency investments to make sure that energy reduction targets are met. Investing in energy efficiency is the single most cost-effective, powerful step that we can take to reduce the threat of climate change. For every dollar invested in energy efficiency, three dollars are saved by Wisconsin ratepayers. What's more is that jobs providing home energy evaluations, insulating attics, installing energy efficient heaters, hot water heaters and air conditioners, and installing energy efficient windows, are jobs that can't be outsourced to China.

Sierra Club strongly supports provisions to create Advanced Renewable Tariffs, which have a proven track record of driving investments in small-scale, distributed renewable energy. This will reduce the need for new transmission lines and it will provide families and farmers with the incentives they need to invest in clean energy. We need policies in the Clean Energy Jobs Act that will increase Wisconsin's commitment to using clean, renewable sources of energy to 10% by 2013, 20% by 2020, and 25% by 2025. In addition, Sierra Club would like to see a greater percentage of our renewable energy from in-state sources to ensure that green jobs are created here. Finally, preserving the integrity of the definition of renewable energy- and excluding things like garbage burning- is critical to driving clean technology investments in Wisconsin. We urge you not to further broaden the definition of renewable energy in SB 450.

Wisconsin has barely scratched the surface in unlocking our state's massive renewable energy potential. Sierra Club's Great Lakes Program Director Emily Green recently participated in a study on the tremendous capacity of offshore wind in the Great Lakes, where wind speeds are equal to or greater than the Great Plains. In fact, there is between 123-249 gigawatts (1 gigawatt = 1,000 megawatts) of offshore wind potential in waters less than 40 meters deep (shallow enough to use a standard monopile

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The John Muir Chapter is proud to be a member of



foundation) in the Great Lakes. These areas also benefit from being close to large population centers where electricity is needed most. Her group also found that while the turbines need to be sited appropriately, there are no major environmental issues that would prevent the development of offshore wind in the Great Lakes. The economic benefits of offshore wind are also impressive. Because offshore wind turbines are too large to be imported, they must be made near where they are installed, and this will ensure Wisconsin jobs. Because Manitowoc Shipbuilding Company is one of the few shipbuilders capable of making the barges needed to install these turbines, shipbuilding and longshoreman jobs would also be supported. Wisconsin, Michigan, Ohio and New York are all currently investigating the potential for offshore wind development in the Great Lakes. Failing to pass the Clean Energy Jobs Act this session will risk Wisconsin falling years behind these other states on developing and approving offshore wind projects.

In August 2008, Millenium Solar testified on behalf of Sierra Club at the PSC to show that carefully designed investments in utility scale solar would save Wisconsin Power and Light (WPL) and their ratepayers \$3.8 billion (mostly through fuel savings) and decrease greenhouse gas emissions by 17.5 million tons. Wisconsin has comparable solar resources to other states that lead the nation in solar market growth, including NY, NJ, OR, and CT- the only thing we are missing are the policies. Solar fills a unique niche in the mix of renewable energy that will provide reliable power for Wisconsin - it produces electricity precisely when we need it the most and precisely when it is the most expensive. It is clear that utility scale solar will not become a reality in Wisconsin without enhanced renewable portfolio standards and ARTs provisions in the Clean Energy Jobs Act.

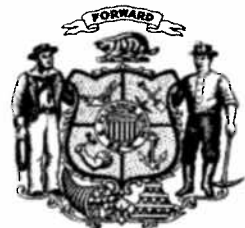
Much has been said about language in the Clean Energy Jobs Act to reform the state's current statutes on constructing nuclear power plants in Wisconsin. The Sierra Club feels that the language in the bill is consistent with the Task Force recommendations we supported. The new language applies to both merchant plants and utilities, and it would require a demonstrated need for electricity in Wisconsin- a state projected to have an excess of power for the next two decades- before a new nuclear plant is built. Moreover, new nuclear plants can not be considered until we have completed all of our energy efficiency and renewable energy requirements. This is drastically different than the stand alone proposal to eliminate Wisconsin's so called "nuclear moratorium" which we have consistently opposed. Furthermore, research clearly shows that energy efficiency and clean, renewable energy are the safest, quickest, cheapest and most effective means of reducing the threat of climate change.

Finally, although the 15,000 jobs that this bill will create are vital, there is something even more important than jobs in this bill. Sierra Club is here today to urge real action to reduce the devastating threat of climate change to future generations who will have to live with the consequences of the energy choices we make today. We are here today to prevent the loss of eastern hemlock, as its disappearance will change the face of Wisconsin's north woods forever. We are here today to urge you as legislators to put partisanship aside and unite around the need to take the long view to solve this daunting problem. It doesn't matter whether you do it because you believe that climate change is real or because you believe in energy independence or because you would like less mercury in our fish and lower asthma rates in children- just as long as you support the package of policies that make up the Clean Energy Jobs Act, and oppose weakening amendments to this legislation.

Thanks for your consideration in supporting the Clean Energy Jobs Act. We urge you to work to pass this vital bill this session without weakening amendments.



WISCONSIN STATE LEGISLATURE



Remarks

Senate Select Committee on Clean Energy

January 27, 2010, 10:00 a.m.

Room 412 East, State Capitol

Madison, WI

Co-chairs Miller and Plale and members of the Senate Select Committee on Clean Energy thank you for the opportunity to testify on Senate Bill 450the Clean Energy Jobs Act. I am very pleased that Governor Doyle created the Global Warming Task Force back in 2007 to determine Wisconsin's leadership role in renewable energy and energy conservation. The bill before you represents the fruits of this effort turning the comprehensive set of recommendations into legislation. It is a landmark legislative package that will accelerate the state's green economy and create jobs. I am extremely proud to provide remarks on this progressive forward-thinking package.

I am going to focus my remarks on the job-creating potential of Senate Bill 450. I trust that you and others in this room recognize the significant environmental impacts of addressing climate change. I certainly do. But frankly this legislation is about creating thousands of good, family supporting jobs in Wisconsin. It is about creating a new sector of Wisconsin's economy that will focus on using alternative energy sources and on energy conservation. During the task force's deliberations, the Office of Energy Independence undertook a comprehensive economic assessment of the package. As a consequence, we have industry-recognized research that reports this package, at a minimum, will directly create more than 15,000 jobs in Wisconsin by 2025. More than 1,800 jobs will be created in the first year alone, according to the Office of Energy Independence.

How do we achieve this job-creation goal?

This package will update Wisconsin's Renewable Portfolio Standards. Since coming into government I have come to realize and appreciate the importance of acronyms so I will underscore the term, RPS. Yes, this package will update Wisconsin's RPS to require that 25 percent of Wisconsin's fuel be generated from renewable sources by 2025. The package also sets a realistic goal of a 2- percent annual reduction in energy consumption by 2015.

Updating the Renewable Portfolio Standards will work. Five years ago, Wisconsin was one of the first states to enact RPS. Since then, we have witnessed a rapid expansion in alternative energy production and a real growth in green jobs.

For an example, WE Energies and Domtar launched a project to build a \$250 million biomass plant in Rothschild in central Wisconsin. The plant turns waste wood into electricity and will create 400 construction jobs and 150 permanent jobs. It promises to be a real asset to this community.

Updating and setting new standards have other economic benefits. We need to ensure that more of our energy dollars stay in the state. Wisconsin has no coal, no natural gas and no oil deposits. I was astounded to learn that right now we spend \$16 billion—that is right—\$16 billion—each year to operate our businesses, heat and cool our homes and fuel our vehicles. Those dollars are lost to the Wisconsin economy. It is critical that we keep some portion of these dollars. We have the production capabilities in our forests, in our farm fields and in our factories to utilize these dollars in Wisconsin.

Many Wisconsin companies will benefit from Senate Bill 450. There are more than 300 companies in Wisconsin that are part of the supply chain for the wind industry, and they employ thousands of people. These firms include companies such as Magnetek and ABB, which are wind component manufacturers—firms reputed for their quality products. As you may be aware, the New North region in northern Wisconsin is a hub for wind.

In addition, Wisconsin is already the seventh—largest producer of ethanol in the country. This bill will help build on the success we have had in this area. Ethanol, as one of the alternative energy sources, is needed to power a thriving biofuel industry, and will help reduce our reliance on imported oil.

The potential economic benefits from this bill are enormous, but we need to take action in updating the standards because the world is moving rapidly in this direction. Other states and other countries are recognizing the opportunities for creating economic growth. If we do not stay in the front row, we will soon be left behind.

It is important to understand that this focus on building a sustainable green economy is not “pie in the sky.” Many Wisconsin companies already understand the opportunities here. Wisconsin companies, such as Johnson Controls, Orion Energy and Kohler, have all built their business models around saving energy and improving energy efficiency.

Commerce Role:

Code Development: The Department of Commerce will be a key partner in helping to attain the goals underscored in this legislation. The bill strengthens residential and commercial codes as a way to improve energy efficiency. As we all know, the cheapest way to lower carbon emissions is through energy efficiency.

We will adopt the most recent generally accepted standards for energy conservation in construction, and we will submit these updates to the Legislature within 18 months of a revision to the standards. This procedure has been and will continue to be an integral and on-going process in code development in our agency.

We will also promulgate rules that establish voluntary energy conservation standards—standards which provide significantly greater energy conservation benefits than those provided under the required Commercial building energy conservation code.

Finally, we will promulgate rules establishing standards for energy in agricultural buildings, as well as rules that require owners of industrial boilers to obtain an annual inspection for compliance with energy efficiency standards.

Beginning in 2013, and every four years after that, Commerce will prepare an assessment on the progress made towards meeting the new building zero energy use goals contained in this bill.

Financing: Our financial and local assistance programs will help communities become more energy-efficient. Our Forward Innovation Fund, Main Street Program, Development Opportunity Program and the Brownfields Program all specify additional criteria to be considered in awarding grants and in selecting communities that relate to promoting the energy-efficiency goals in this bill.

The Department also has a crucial role in administering the volume cap allocation for Industrial Revenue bonds in the state. A portion of these bonds is allocated annually to municipalities for the issuance of private activity revenue bonds that help finance local development projects. Under this bill, the Department will dedicate annually 25 percent of the private activity allocation to help finance clean energy manufacturing facilities and renewable power generating facilities. Because the private activity allocation is approximately \$250 million annually, we will dedicate approximately \$63 million to assist in financing these clean energy-related facilities each year.

Summary and Conclusion:

This legislation is crucial for the future of our state. By investing in clean energy products here in Wisconsin to address the new standards under the strengthened RPS, we will not only be keeping energy dollars in the state . . . and creating thousands of good wage, family supporting jobs, but we will also be taking responsibility to be good stewards of the environment for our children and grandchildren.

In closing, let me mention a company that serves as an example of the potential for green collar jobs, Orion Energy Systems in Manitowoc. The company also has a plant in Plymouth. Orion Energy is a leading power technology enterprise that designs, manufactures and implements energy management systems. In the past decade, the systems it has deployed have displaced more than 47 megawatts, saving customers more than \$710 million and reducing indirect carbon dioxide emissions by 6.1 million tons. Orion has a signature innovation—specialized high intensity lighting systems that reduce energy costs. Its Apollo solar light pipe could represent up to 1.4 million hours of work for Wisconsin installers, plus hours of time spent manufacturing the patented technology, which will create jobs statewide. In developing these systems, Orion Energy has demonstrated the entrepreneurial spirit that will carry Wisconsin into the future.

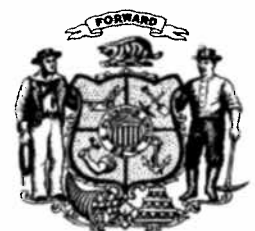
Orion has reminded me of the experience of my family. The Leinenkugel family has been doing business in Chippewa Falls, Wisconsin for five generations. My great-great-

great grandfather, Mathias, was one of Wisconsin's original bio-technology companies, taking a single-cell organism, yeast, to ferment a maltose sugar solution called wort, to make beer. His entrepreneurial spirit and that of his succeeding generations is just one of many examples in a state that has spawned names like Harley-Davidson, Kohler, Cray, Briggs and Stratton, Pierce, Patrick Cudahy, Oscar Mayer, Case, Ariens, Thompson and Quadracci. And yes, as we have found out, many of the businesses spawned by those entrepreneurs are not immune to the tough economic environment that we face. Yet, it is the spirit of the people of Wisconsin that separates us from the rest of the country, and indeed, from the rest of the world. It will be that spirit of originality that sees us through this difficulty. It will be your efforts, your leadership, and your partnership with those you serve that will position Wisconsin as the best place to start, to grow, to expand and to locate a business.

Thank you for the opportunity to speak with you today.



WISCONSIN STATE LEGISLATURE





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David A. Davis, R.L.S.

Financial Officer
Steven B. Danner-Rivers
Hydrogeologist
Brynn Bemis

January 27, 2010

Re: City of Madison testimony at the State of Wisconsin Public Hearing on the Clean Energy
Jobs Act - ~~SB 450~~ SB 450

The City of Madison would like to submit the following:

Expanded Renewable Energy Standard:

Madison Gas and Electric (MGE) has significantly expanded its supplies of renewable energy under Act 141, and is now fully compliant with the 2015 standard. The renewable energy acquired by MGE has had a negligible impact on rates. For the City of Madison, using renewable energy is a significant way to reduce the City's carbon emission profile. Using renewable energy has produced significant results at a very modest cost.

However, MGE is not likely to increase the amount of renewable energy in its rate base unless the current Renewable Energy standard is expanded and extended. This is because the Public Service Commission would likely reject an application from MGE to add more renewable energy to its rate base on the grounds that the electricity from such a facility is not needed.

The City of Madison also supports allowing the thermal output from (new) solar hot water and biomass energy systems to count towards the proposed 20% by 2020 and 25% by 2025 standards in the Clean Energy Jobs Act. This would cover the energy produced from biomass fuel burned at the Charter Street station that is used to heat UW-Madison buildings.

Advanced Renewable Tariffs (Renewable Energy Buyback Rates)

Madison has a number of successful renewable energy businesses that specialize in small-scale solar and wind. These include: H&H Solar, Full Spectrum Solar, and Seventh Generation Energy Systems. The availability of a 25 cents/kWh solar electric incentive from MGE has led to about 400 kW of solar electric capacity installed in and around Madison. A decent buyback rates generate enough installation activity to support several dozen skilled labor jobs in the area.

January 27, 2010

Page 2

In addition, MGE's rate makes it possible for the City to build and own solar electric systems. The City has built 8 systems and would like to increase that number. This is difficult to do under net energy billing, because retail rates aren't high enough to justify investment.

Water quality is a huge issue in Madison and Dane County. Both entities are sponsoring innovative approaches to reducing the flow of agricultural runoff into the Yahara River lakes. One of them is a community digester north of town that will take manure from several medium-sized dairy farms and create biogas for use as generator fuel. In this process pathogens are destroyed and nutrients stay out of the lakes. The flow of manure into this community anaerobic digester operation can support a 2 MW generator. The key to making this process work is a biogas-specific buyback rate that allows the system owner to recover fully the capital costs and earn a modest rate of return from this investment. Alliant Energy's biogas buyback rate, which is the most attractive in the state, made it possible for the owner to secure financing; without that special rate, Dane County's community digester could stalled. Alliant recently disclosed that its biogas program is fully subscribed, and the rate is no longer available to its customers. This will slow down the development of future installations fueled with manure, food waste, and municipal wastewater, including at least one in Dane County.

Developing local sources of renewable energy through special buyback rates (1) reduces energy imports, (2) helps communities like Madison become more self-sufficient, (3) reduces the need for expensive, long-distance transmission projects, and (4) increases the attractiveness of communities to new businesses looking to establish a Wisconsin presence.

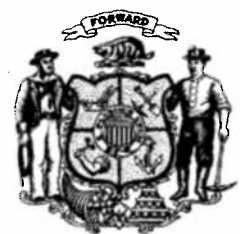
Sincerely,



Jeanne Hoffman
Facilities and Sustainability Manager
City of Madison, Wisconsin



WISCONSIN STATE LEGISLATURE



Attn.: Sen. PLALE

January 27, 2010

Testimony of John LaForge, Co-Director of Nukewatch
Re. SB 450 provision that would repeal Wisc. Stat 196.493 on requirements for new reactor construction

To Whom it May Concern:

Please accept these comments in opposition to that section of SB 450 that would repeal or weaken Wisc. State 196.493 regarding the need for a nuclear waste storage solution, and the relative costs of nuclear power generation.

Nuclear power production is no longer as cheap a simple wind power generation. The failure of Yucca Mountain in Nevada as a proposed nuclear waste dump is a message to everyone that science has not met the daunting challenge of isolating high level radioactive waste from the environment. Even before the President's action, five federal lawsuits barred the site from opening, and a dozen scientific studies denied the site's ability to contain such waste.

Some of the scientific reasons why Yucca Mt. should never be used include:

- 1) **New findings raised questions about the dump at Yucca Mt.**, just northwest of Las Vegas, the *San Francisco Chronicle* reported Monday [Nov. 17, 2002]. During the past year, two DOE-funded scientific teams discovered that the buried fuel rods could experience unexpected chemical changes. **“Those changes could alter present estimates of how fast the buried fuel rods would disintegrate, leaking poisonous plutonium, neptunium, iodine and other radionuclides into the surrounding terrain and groundwater....”**¹
- 2) In a Sept. 21, 2001 response to the 9/11 attacks, the **U.S. Nuclear Regulatory Commission (NRC)** — responsible for regulating the West Valley waste transport containers — **admitted that “the capacity of shipping casks to withstand such a [large aircraft] crash has not been analyzed.”**²
- 3) **The metal containers** designed to carry spent nuclear fuel from the Calvert Cliffs plant and other reactors to a proposed storage site in Nevada **would have failed if the transport train had been engulfed in the estimated 1,500-degree heat of the Baltimore rail tunnel fire last summer**, according to a consultant's report prepared for the state of Nevada....³
- 4) **Scientists published a report Thurs. [Apr. 25, 2002] that the plan to store highly radioactive waste from nuclear power plants inside Nevada's Yucca Mountain is based on “unsound engineering.”** On the same day, the House Energy and Commerce Committee voted 41-6 in favor of a resolution to overrule Nevada's rejection of the repository and sent the plan to the House floor. The House is expected to vote within weeks to override Gov. Kenny Guinn's “veto” of President Bush's decision to create the repository. Opponents of the site are pinning their slim hopes on the Senate. Writing in today's issue of *Science Magazine*, engineers Rodney C. Ewing of the University of Michigan and Allison Macfarlane of the Massachusetts Institute of Technology say the government is going ahead with the waste-storage plan without dealing with “relevant scientific issues” about the way spent nuclear fuel rods will react with the environment inside the mountain....⁴
- 5) **In August 1999, evidence that the inside of the mountain is periodically flooded with water came in the form of Zircon crystals found deep inside.** “Crystals do not form without complete immersion in water,” said Jerry Szymanski, a former DOE geologist whose suggestion that deep water rises and falls inside Yucca Mt. was discarded by the DOE.⁵ “That would mean hot underground water has invaded the mountain and might again in the time when radioactive waste would still be extremely dangerous. The results would be catastrophic.”⁶
- 6) **In March 1998, the Yucca Mt. site was found to be subject to earthquakes or lava flows every 1,000 years — 10 times more frequently than earlier estimated** — according to a California Institute of Technology study. The finding means that radiation dispersal from the Yucca Mt. site is much more likely during the proposed 10,000-year lifetime of the dump — not to mention the 250,000-year-long radioactive hazard period.⁷
- 7) **In June 1997, DOE researchers announced that rain water has seeped from the top of Yucca Mt. 800 feet into the repository** in a mere 40 years (as dated by chlorine-36). Government scientists had earlier claimed that rainwater would take hundreds or thousands of years to reach the waste. Federal guidelines have long required that the existence of fast-flowing water would disqualify the site.⁸
- 8) **In March 1995, physicists at Los Alamos National Laboratory dropped a bomb on the Yucca plan by charging that the wastes might erupt in a nuclear explosion**, scattering radioactivity to the winds or into ground water or both.⁹ Dr. Charles Bowman and Dr. Francesco Venneri noted that serious dangers will arise thousands of years from now after the steel waste containers dissolved and plutonium slowly begins to disperse into surrounding rock. “We think there's a generic

problem with putting fissile materials underground," Dr. Bowman said.¹⁰ So serious a dispute so late in the planning process might cripple the plan or even kill it," the *New York Times* reported.

9) In July 1990, the National Research Council said the DOE's plan for Yucca Mt. is "bound to fail" because it is "a scientific impossibility" to build an underground nuclear waste repository that will be safe for 10,000 years.¹¹

10) In 1989, sixteen geologists at the U.S. Geologic Survey bluntly charged that the DOE was using stop-work orders to prevent the discovery of problems that would doom the repository.¹² The government geologists reported that, "There is no facility for trial and error, for genuine research, for innovation, or for creativity."¹³ Even the U.S. NRC complained then that work at Yucca Mt. seemed designed mostly to get the repository built rather than to determine if the site is suitable.¹⁴

11) In 1983, the National Academy of Sciences noted that the chemical characteristics of the water at Yucca Mt. are such that the wastes would dissolve more easily than at most other places.¹⁵

Finally, many legislators have been told that France has "managed to deal with all the radioactive waste issues." This unsubstantiated claim is 100 percent untrue.

France has no operating radioactive waste repository — just a faulty and controversial hole in the ground in the village of Bure. As Lind Gunter of Beyond Nuclear has reported, most French waste sits at the LaHague reprocessing facility on the Normandy Coast, including 81 metric tons of plutonium in thousands of soda-sized canisters. One hundred million gallons of liquid radioactive waste resulting from reprocessing are discharged each year into the English Channel, contaminating waters as far as the Arctic. There are well-documented cancer clusters along the Normandy coast near La Hague. The krypton gas released by La Hague has traveled across the globe.

Much French reactor waste is too contaminated to reprocess. Some plutonium is retrieved and "reused" in reactors that produce more waste containing about the same amount of plutonium. This waste cannot be reprocessed and has no where to go.

Without a federal dumpsite for the industry's waste fuel rods, the production of more waste by new reactors, and any weakening of State Stat. 196.493 is recklessly irresponsible.

Thank you for your consideration,

JOHN M. LaFORGE, NUKEWATCH, 740 ROUND LAKE ROAD, LUCK, WI 54853, (715) 472-4185

¹ "Last-minute glitches in Nevada nuclear-waste burial plan," *Las Vegas Sun*, Nov. 17, 2003

² "Cleanup won't end nuclear waste sites," by Jim Drinkard, *USA Today*, June 25, 2002

³ "Radioactive wastes: the risks on the rails; Safety: Last summer's tunnel fire would have ruptured containers, contaminating Baltimore, report says," by Mike Adams, *Baltimore Sun*, Feb. 11, 2002

⁴ "Scientists reject nuclear dump," *Atlanta Journal-Constitution*, April 26, 2002

⁵ *Las Vegas Sun*, March 27, 1995; *Washington Post*, Dec. 15, 1998

⁶ *New York Times*, Aug. 10, 1999

⁷ *Christian Science Monitor*, March 27, 1998

⁸ *New York Times*, June 20, 1997

⁹ *New York Times*, March 5, 1995

¹⁰ *Ibid.*

¹¹ *Milwaukee Journal-Sentinel*, July 19, 1999

¹² *New York Times*, Jan. 17, 1989

¹³ *New York Times*, Feb. 12, 1989

¹⁴ *New York Times*, Jan. 17, 1989

¹⁵ *Ibid.*

Groundwater Radioactively Contaminated By U.S. Reactors

Kewaunee & Point Beach Among Radioactive Polluters

Nukewatch Fact Sheet

The history of accidental, unregulated radiation leaks from nuclear reactors should be enough to slam the door on nuclear power. Among others, the Union of Concerned Scientists (UCS) lists 350 separate incidents since 1961, at 101 of the country's reactors.¹

Tritium for example, with a radioactive half-life of 12.3 years, is the unstable form of hydrogen which leaks from hot uranium fuel, combines easily with and contaminates water. Accidental tritium leaks and consequent contamination of groundwater have become routine at operating and even shutdown reactors. In addition, the UCS has documented off-site contamination by cesium-137 (half-life: 30 years), cobalt-60 (half-life: 5.26 years) and other isotopes. It takes 10 half-lives for an isotope to decay to other elements.

Nuclear reactors shake, rattle and rumble like freight trains from their giant turbines' powerful vibrations. As they age, cracks occur in holding tanks, waste fuel pools and concrete slab floors. Radioactive water springs from tanks, flanges, valves, pumps, drums, pits, waste concentrators, tubes and even laundry systems. Leakage pathways are almost unlimited.

Contaminated water has repeatedly leaked into the soil below reactors, onto roofs of adjoining buildings, onto outdoor blacktop areas and into storm drains and culverts. The Nuclear Regulatory Commission (NRC) has recorded spills of between 20 and 787,000 gallons.

Wisconsin's Kewaunee and Point Beach reactors are no exception. In 1975, Point Beach Unit 1 leaked approximately 10,000 gallons of radioactively-contaminated water after a steam tube ruptured. The water flowed into a retention pond and from that pond into groundwater. In 1997, another steam tube in the same reactor spilled another 10,000 gallons of radioactively-contaminated water that ran eventually into Lake Michigan. That year, Unit 2 had a leaking discharge pipe that also contaminated a stream and Lake Michigan. In 2006, Kewaunee workers found tritium in the groundwater below the facility. The NRC said the radiation had infiltrated narrow shafts beneath two buildings. The leak rate was thought to be one gallon every five minutes. The operators could not find the leak's source, but were investigating.

In the case of E.I. Hatch reactor, in Georgia, the operator claims a building "settled" in 2006 and that leaks then sprang from buried pipes, from an isolation valve, from

failed seals on an outdoor radioactive water storage tank transfer pump, from waste fuel pool expansion bellows and from outdoor radioactive water tanks. The leaks contaminated soil and groundwater.

Accidental releases (in addition to daily "allow-able" releases) cumulatively and irreversibly add radioactive pollution to the soil, water and air. Near Braidwood in Illinois, area residents were drinking radioactive water for years until Exelon Corp., the operator, began supplying bottled water, buying up property near the reactor and offering to pay for a municipal water system to replace the private wells it poisoned. Exelon officials were derelict in reporting the tritium contamination which was ongoing for over 10 years. The state of Illinois has sued Exelon.

Documented groundwater contamination has occurred at: Palisades in Michigan, Kewaunee and Point Beach in Wisconsin, Limerick in Pennsylvania, Connecticut Yankee near Haddam, San Onofre, Diablo Canyon and Humboldt Bay (still registering contamination from the 1960s) in California, Perry in Ohio, St. Lucie in Florida, Brunswick and McGuire in North Carolina, Catawba in South Carolina, Callaway in Missouri, Watts Bar, Browns Ferry and Sequoyah in Tennessee, Ft. Calhoun in Nebraska, Salem in New Jersey, Palo Verde in Arizona, Indian Point and Ginna in New York, Braidwood, Dresden, Quad Cities and Byron in Illinois, Prairie Island in Minnesota, Seabrook in New Hampshire and Palisades and Cook in Michigan.

Groundwater contamination at the Cook reactor is just below legal limits for drinking. The EPA holds that tritium up to 20,000 picocuries (abbreviated as pCi) per-liter (pCi/l) is not safe but is legally "allowable" in drinking water.²

At Quad Cities, contamination from a spill 25 years ago still exceeds "allowable" levels of tritium. Millstone, Fermi I, Perry and a myriad of other reactors have leaked tritium to the environment, but their operators claim no current groundwater contamination.

California's San Onofre reactor, shutdown since 1992, continues to leak radiation into groundwater and to a nearby beach where a 13-foot deep, 12-foot wide swath was excavated. Twenty-one thousand cubic feet of contaminated sand was shipped to the Hanford H-bomb production site in Richland, Washington for burial. In 2006, San Onofre's Unit 1 had groundwater tritium levels of between 50,000 and 330,000 pCi/l.

Tritium is not the only danger from nuclear reactors. Tests at Oyster Creek in New Jersey show elevated levels of cesium-137 in leaf and soil samples nearby. Cesium-137 is a beta and gamma radiation emitter that affects humans in proximity to it, and it does even more damage via ingestion. The isotope has a 30-year half-life and persists in the environment for 300 years.

Dangerous releases:

- Yankee Rowe, in Western Mass., caused numerous leaks resulting in the excavation of 420 cubic feet of dirt and rock. Shutdown in 1992, its operators have both recovered contaminated asphalt, and excavated and dumped it. They even collected and dumped *snow* contaminated with cobalt-60 and cesium-137.
- In Minnesota, Prairie Island reactor workers detected cobalt-60 and cesium-134 in adjacent soil which was subsequently excavated and dumped elsewhere.
- Cobalt-60 and cesium-137 contamination has been detected under Browns Ferry, Tennessee in 2006.
- In 2007, Fort Calhoun Unit 1 reactor in Nebraska had detectable tritium, cesium-137 and antimony-125 in water seeping through an exterior wall. The tritium level was 173,000 pCi/l and rising.
- An entire concrete slab floor, along with eight barrels of contaminated soil, at the Big Rock Point reactor in Michigan was removed and dumped off-site.
- At Millstone 2 & 3 in Connecticut, workers went off-site to dump twenty 55-gallon drums of contaminated soil from an unplanned water and steam discharge.
- Ten years after Georgia's Vogtle reactor was found leaking tritium, it is still detected in groundwater. The leaking lasted for two years as operators failed to keep it contained. Concrete from the reactor has been dumped off-site as radioactive waste.
- In 1995, concentrations of tritium in test wells at Ginna, Penn. were at the maximum allowable level of 20,000 pCi/l (the maximum allowed by EPA).
- Between 1999 and 2004, the Seabrook reactor had 10 to 30 gallons-per-day of radioactive water leaking from its waste fuel cask "wash pit transfer canal area." The leak contaminated groundwater.
- The Wolf Creek reactor in Kansas has had 3 radioactive water leaks from its waste fuel pool since 2001.
- A leak from a steam seal "evaporator" forced the excavation and off-site dumping of six inches of gravel in an area measuring 100 square feet at the Limerick reactor in Pennsylvania.
- Operators of the McGuire 1 & 2 reactors in North Carolina, found very high and dangerous levels of tritium in groundwater — 138,000 pCi/l — near the Unit 2 equipment staging area. In 2006, unsafe levels were measured in the auxiliary building, and testing in 2006 showed pCi/l contamination: Feb. 14: 35,200;

Feb. 15: 33,800; March 10: 33,100; May 1: 31,900; June 1: 33,200; June 21: 30,000; July 2: 30,000; July 17: 26,000; and July 26: 31,700.

- North Anna in Richmond, Virginia, reported 56 radioactive water releases. Specific dates and amounts were not made public. The Surry reactor, near Newport News, Va. reported eight such incidents.
- South Carolina's Catawba has groundwater contamination surpassing safe drinking water levels. Concentrations have been measured at 42,335 pCi/l.
- Commercial reactors continuously expel radiation as do experimental, research and military reactors. The Brookhaven Laboratory High Flux Beam Reactor, in 1997, leaked to the point that groundwater contamination registered 32 times higher than EPA drinking water standards. The Oak Ridge High Flux Isotope Reactor has also leaked tritium — no groundwater contamination has yet been detected.

Tritium hazards

Ingestion, inhalation or absorption of small amounts of radioactive tritium results in irradiation of the internal organs, possibly for long periods of time. Tritium spontaneously disintegrates into a helium atom which disrupts chemical bonds in cells.

According to the epidemiologist Dr. Rosalie Bertell, ingestion of tritium quadruples internal damage and disproportionately affects women, children and anyone under age 20. Tritium easily crosses the placenta, so spontaneous abortions, stillbirths, congenital malformations and childhood diseases can be a consequence of exposure to tritium. The young are not only more vulnerable because of an underdeveloped immune system, but also because of their long expected life-span after exposure.

¹ David Lochbaum, "Groundwater Events Data Base," Union of Concerned Scientists, Washington, DC, Jan. 28, 2008 <ucs.org>

² A curie is an enormous amount of radioactivity — 37 billion atomic disintegrations-per-second — and a standard measure for the intensity of radioactivity. A *picocurie* is about one-trillionth of a curie. A *picocurie* represents 2.2 disintegrations per-minute.

No radiation exposure is safe according to the EPA. See "Ionizing Radiation Series" No. 2, Air & Radiation, 6601J, EPA 402-F-98-010, May 1998; and "Radiation: Risks & Realities," Air & Radiation, 6602J, EPA 402-K-92-004, Aug. 1993.

Nukewatch

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Unsafe Operations Wisconsin Reactors Cause Violations & Face Fines

NUKEWATCH FACT SHEET

Wisconsin has three operating nuclear power reactors, two at Point Beach and one at Kewaunee, that have been plagued with frequent unplanned shutdowns caused by accidents, that have resulted in official warnings, fines and even criminal convictions. A smaller reactor at La Crosse has been shutdown since 1987 and waste fuel is still stored there.

Only four "Red Findings" — the highest safety failure warning in the industry — have ever been issued by the U.S. Nuclear Regulatory Commission (NRC). Two of the four went to Point Beach in Wisconsin. The two-reactor, 1,023-megawatt Point Beach nuclear station, about 30 miles southeast of Green Bay, is now owned by FPL Energy (formerly Florida Power & Light) of Juno Beach Florida.

April 8, 2009

The owner of Wisconsin's Point Beach reactors, Florida Power and Light, was fined for so-called security guards caught sleeping at FP&L's Turkey Point reactor. An NRC investigation found that six guards at the reactor slept or served as lookouts for other sleeping guards between 2004 and 2006.

— *Sun-Sentinel & Miami Herald*, April 8, 2009

January 15, 2008

At Point Beach's Unit 1, an "Unusual Event" emergency was prompted by the complete loss of all offsite electric power to essential buses for more than 15 minutes, mandating a notification of the Nuclear Regulatory Commission. A supply breaker opened "for unknown reasons," was being investigated and preparations were made for a Unit 1 shutdown. — NRC Event Number 43907, date 1/15/08

January 12, 2007

A turbine and reactor trip at Kewaunee, now owned and operated by Dominion Resources Inc. of Richmond, Virginia, was caused by a loss of auto stop oil pressure on the main turbine. Following the trip one of the moisture separators associated with the main turbine had its associated steam inlet valve fail open which resulted in contaminated steam being vented to the environment.

— NRC Event Number 43096, date 1/12/07

December 8, 2006

At Point Beach, the Control Room Emergency Filtration System was declared inoperable. The Control Room Charcoal Filter Fan tripped during a surveillance test, an event or condition that could have prevented the filter's performance during a contamination emergency or, in the NRC's words, "could have prevented fulfillment of a safety function." — NRC Event Number 43040, date 12/8/06

December 12, 2006

At the long shut-down La Crosse reactor, airborne levels of radioactive americium-241 contamination rose to ten times above normal inside the reactor building. By Oct. 16, "Reactor Building ventilation [to the outside environment] through HEPA filters had not reduced the level of Am-241 as expected. Unusual Event was declared and investigations commenced to identify source of contamination. — NRC Event Number 42908, Notification date 10/16/06

August 22, 2006

In an August 22, 2006 letter to Point Beach, the NRC charged that a senior reactor operator was discriminated against by Point Beach management for identifying potential technical violations. The discrimination was an apparent violation of employee protection requirements.

— NRC, "Point Beach Summary," Inspection Procedure 95002, <nrc.gov/reactors/operating/ops-experience/degraded-cornerstone/pt-beach-summary.html>

August 14, 2006

The NRC announced that groundwater beneath the Kewaunee Power Station is contaminated with radioactive tritium. The NRC said the event was of "possible safety or public interest significance." Reactor staff detected measurable tritium in groundwater at several locations beneath the auxiliary and turbine buildings on Aug. 9. The contaminated water had leaked into four shafts beneath the two buildings which are used to measure possible settling of the structures. The shafts are not interconnected and indicate the presence of a large amount of contaminated water. The source of the 1-gallon-every-5-minutes leak is still unknown.

— NRC Preliminary Notification of Event or Unusual Occurrence, No. PNO-iii-06-019, date 8/14/06

March 20, 2006

The Kewaunee reactor faces increased oversight from the NRC after being cited for two safety violations; one concerns failure to properly analyze the impact of flooding, and another involving a design flaw affecting the reactor's backup cooling water system. The NRC said in a letter to owner/operator Dominion Resources that the facility had a "moderate degradation in safety performance" last year while it was shutdown for 5 months.

— *Mlwk Journal Sentinel*, 3/20/06

December 16, 2005

Point Beach paid a \$60,000 fine imposed Jan. 13, 2006 after two workers "deliberately provided NRC inspectors with inaccurate information" about the critique of an emergency preparedness drill at the Point Beach reactor in August 2002. The two were fired, and one was convicted in federal court of knowingly making false written statements to the NRC. — NRC News, No. III-05-046, date 12/19/05

December 13, 2005

A manual reactor trip shut down Point Beach Unit 1, due to loss of a condenser vacuum caused by failure of the running circulating water pump. Decay heat was being removed by "atmospheric dump valves." The backup feedwater system was required. The operator, Florida Power

& Light, said there are no known steam generator tube leak issues. — Notification of NRC, 12/13/05, event date 12/13/05

November 29, 2005

A reactor trip at Kewaunee followed a Main Feedwater pump trip. All three Auxiliary Feedwater pumps automatically started due to low Steam Generator level. The reactor had been stabilized at Hot Shutdown. "There are no known primary to secondary leaks," the operators said, not ruling out an *unknown* primary to secondary leak. "All safety related buses are powered from offsite power," the company said. — Notification to NRC, notice date 11/29/2005; event date 11/28/05.

November 25, 2005

The Control Room received a fire alarm on the Main Generator and the fire protection system was activated. Air sampling showed carbon dioxide in the Cardox Storage Tank Room at life-threatening levels. An Unusual Event was declared based on "a release of toxic or flammable gas on site and portable monitors indicate toxic or explosive concentrations at life-threatening levels of the gas near the spill area." Ventilation of the affected areas was in progress to reduce the toxic gas levels. — Notification to NRC dated 11/25/05, Event date: 11/25/05

February 23, 2005

The Kewaunee reactor was shutdown when all three auxiliary feedwater pumps were declared inoperable. During the shutdown to fix the problem, an automatic reactor trip was caused by low water in the 'B' Steam Generator. Another problem occurred when at least 1,000 gallons of service water, which is water drawn from Lake Michigan, entered the steam generators and had to be flushed out.

— Preliminary Notification of Event or Unusual Occurrence to NRC, PNO-III-05-003, Doc. 50-305, 2/23/05

November 9, 2004

While operating at 100 percent power, Point Beach Unit 2 sprang a steam leak from a valve in the main steam flow transmitter. The leak of potentially contaminated steam forced an unplanned shutdown. The leak involved what is called "containment penetration" of the main steam line passing through the concrete containment building. Accordingly, operators declared a Technical Specification Condition "not met," forcing operators to isolate the "affected penetration flow path with a completion time of 72 hours." Operators were unable to meet the allowed completion time for this task. — NRC Event Number 41212, Notification date 11/19/04

October 30, 2004

A worker was contaminated inside the Kewaunee reactor and was rushed to the hospital after immediate decontamination attempts failed. The NRC said it did not know what isotopes had been involved.

— NRC Notification, date 10/30/04; NRC Region 3 phone interview, date 11/16/04

April 8, 2004

Point Beach paid a \$60,000 imposed March 20, for last summer's problems with the reactor's backup cooling pumps. — *The Capital Times*, 3/20/04

February 11, 2004

The ongoing risk of a breakdown in Point Beach's cooling feedwater pumps results in a NRC "Red" finding, the agency's most severe safety failure warning.

— NRC News, 2/11/04

October 2002

A "Red" finding was issued by the NRC against Point Beach for problems with cold water circulation for cooling the reactor. — NRC News, 2/11/04

June 5, 2001

Kewaunee's reactor was shut down when the computer Safety Parameter Display System and Emergency Response Data System both failed. The operators did not know the status of "emergency response availability."

— NRC Event Number 38052, date 6/5/01

November 18, 1997

Point Beach Unit 2 was hastily shut down because of electrical problems. — *Mlwk Journal Sentinel*, 11/18/97

August 12, 1997

The NRC recorded 21 violations at Point Beach in the 90-day period between Dec. 1996 and Feb. 1997.

— *St. Paul Pioneer Press*, date 8/12/97

July 25, 1997

Reactor 2 at Point Beach was shutdown when a cooling water pump failed. — *Mlwk Journal Sentinel*, 8/25/97

February 18, 1997

Reactor 1 at Point Beach was shut down when a cooling water pump defect required the pump's replacement.

December 1996

Point Beach owner WEPCO was fined \$325,000 for 16 safety violations and a 1996 explosion inside a loaded high-level waste cask. The NRC said WEPCO was "inattentive to their duties," "starting up a power unit while one of its safety systems was inoperable," and had failed to install "the required number of cooling pumps."

— *Mlwk Journal Sentinel*, 8/12/97 and 12/5/96

September 21, 1996

The Kewaunee reactor was shut down when "more than expected" corroded steam tubes were discovered.

— *Mlwk Journal Sentinel*, 2/26/97

May 28, 1996

At Point Beach, a potentially catastrophic explosion of hydrogen gas, "powerful enough to up-end the three-ton lid," pushed aside a 6,390-pound cask lid while it was atop a storage cask filled with high-level waste. The lid was being robotically welded to the cask.

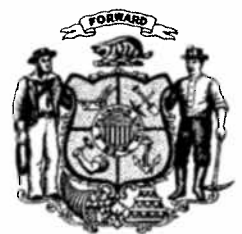
— *Mlwk Journal Sentinel*, 6/8/95

March 30, 1995

A Point Beach reactor was shut down due to instrument failure in the emergency generator system used to circulate cooling water when regular power is cut off during emergencies. — *Wisconsin State Journal*, 3/30/95



WISCONSIN STATE LEGISLATURE





WISCONSIN'S BUSINESS VOICE SINCE 1911

TO: Members, Senate Select Committee on Clean Energy
FROM: Scott Manley, Environmental Policy Director
DATE: January 27, 2010
RE: Senate Bill 450 – Wisconsin Global Warming Legislation

Wisconsin Manufacturers & Commerce (WMC) has serious concerns with the energy and economic impacts of numerous proposals in Senate Bill 450 (SB 450), which seeks to implement sweeping global warming regulations in Wisconsin. For the reasons cited below, we respectfully urge Committee members to oppose this legislation.

WMC is the state's largest business trade association, with roughly 4,000 members in the manufacturing, health care, retail, energy, banking, insurance and other service sectors of our economy. WMC is dedicated to making Wisconsin the most competitive state in the nation to do business, and toward that goal, we support consistent, cost-effective and market-driven regulatory approaches that recognize a balance between environmental protection and the competitiveness of Wisconsin's jobs and economy.

Before highlighting some of our specific concerns with this legislation, it is important to understand the importance of manufacturing to Wisconsin's overall economy, as well as the relationship between affordable energy and the viability of Wisconsin's manufacturing sector.

The Importance of Manufacturing to Wisconsin's Economy

Wisconsin leads the nation with the single-most manufacturing intensive economy in the United States. In 2008, manufacturing accounted for \$48.9 billion in economic output—a 20.3% share of Wisconsin's overall economy. Wisconsin ranks in the top ten nationwide in exports, and manufacturing accounts for 94% of Wisconsin's exported goods.

Manufacturing is also one of the highest-paying sectors of our economy. The average manufacturing job in Wisconsin pays \$62,959 per year, which is 37% higher than the state average of \$45,905. These family-supporting jobs provide work for more than 430,000 Wisconsinites. Unfortunately, we have lost nearly 160,000 manufacturing jobs in the last decade, with more than 60,000 manufacturing jobs lost since 2008 alone.

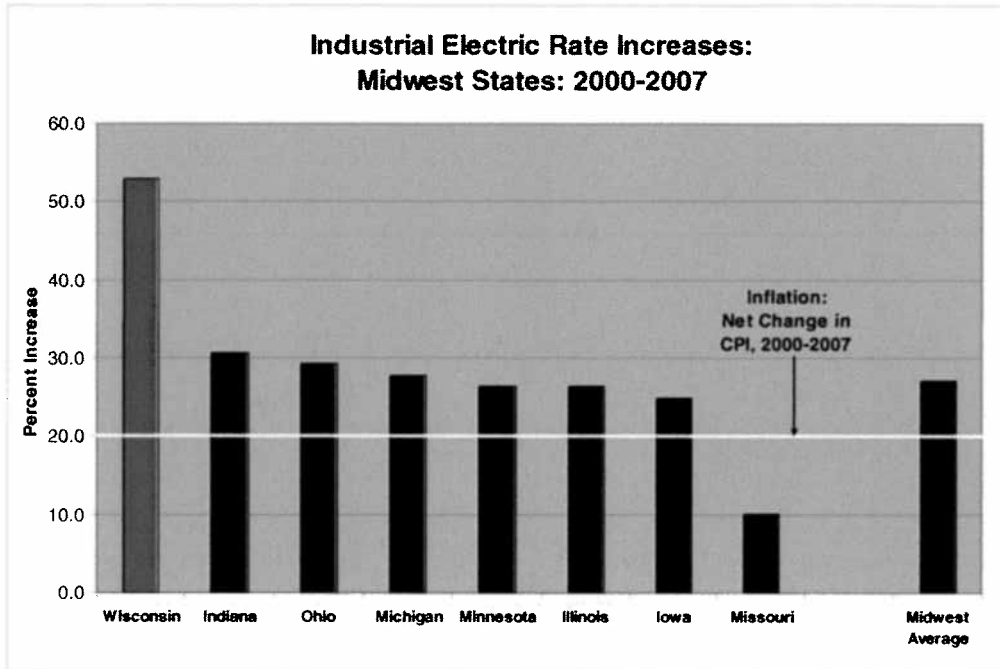
The Link Between Manufacturing & Affordable Energy

There are various reasons for the recent decline in Wisconsin manufacturing jobs, including rising prices for electricity. Manufacturing is one of the most energy-intensive sectors of Wisconsin's economy—factories consume more electricity each year than residential or commercial electric users. For example, electricity may account for 20% of a manufacturer's operating costs, with some manufacturers paying monthly electric bills that exceed \$1 million.

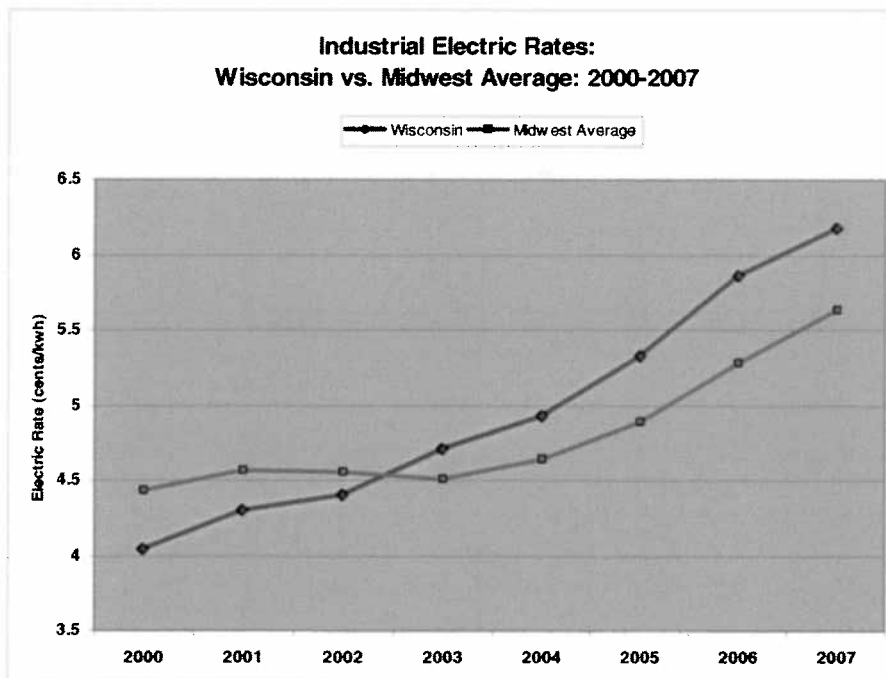
Many manufacturing sectors, including the food processing, pulp & paper, and foundry industries, are under intense regional, national and international competitive pressure. Increasing the cost of energy in our state may force the loss or migration of Wisconsin manufacturing jobs to other states and countries.

Wisconsin Electricity Prices are Trending in the Wrong Direction

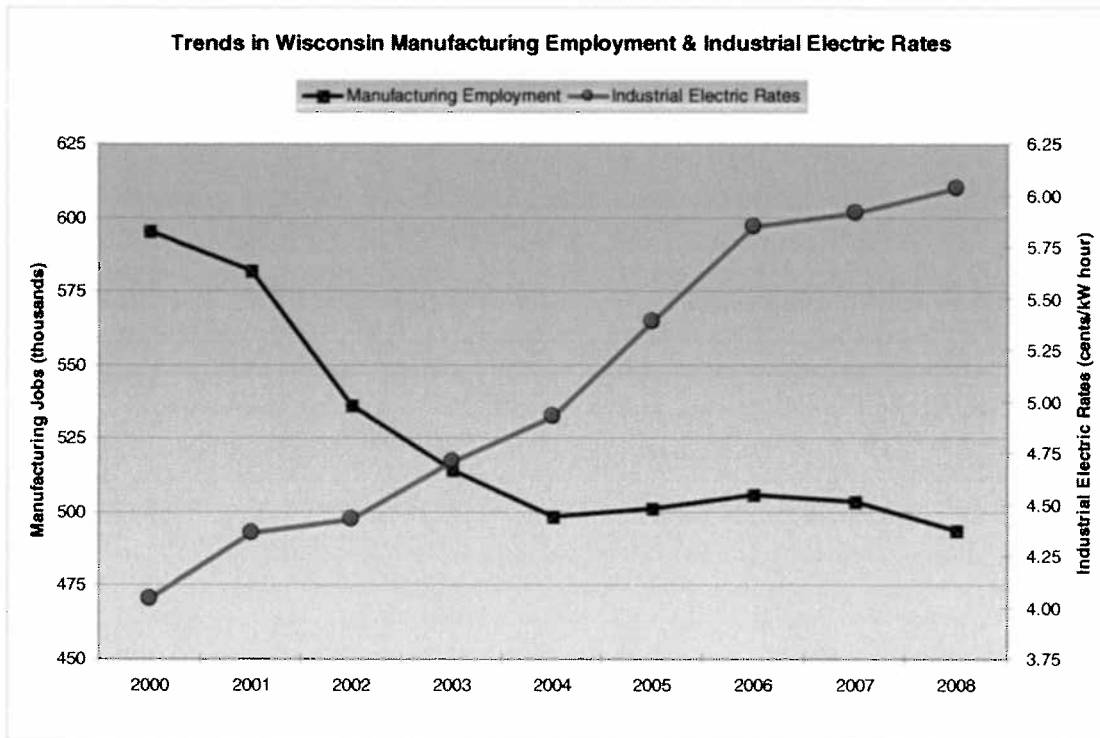
As shown in the graph below, industrial electric rates grew by more than 50% between 2000 and 2007—much faster than any other Midwest state, and more than twice the rate of inflation. While much of this increase is due to needed investments in additional generation and transmission to promote a reliable grid, Wisconsin cannot expect to attract and retain manufacturing jobs if we continue to make electricity more expensive here than in competing markets.



In 2000, our comparatively affordable electric rates gave Wisconsin businesses a competitive advantage in the Midwest. Since that time, steeply rising electric rates have placed Wisconsin employers at a competitive disadvantage as rates have climbed above the Midwest average.



There is a link between the affordability of electricity, and Wisconsin's ability to attract and retain well-paying manufacturing jobs. As the cost of electricity has risen, the number of manufacturing jobs has declined.



WMC is concerned that the expensive energy policies proposed in SB 450 will further widen the gap between the cost of electricity in Wisconsin, and the cost of electricity in competing states and countries. Manufacturing jobs rely upon affordable and reliable sources of energy, and the proposed bill threatens the viability of thousands of jobs by making our electricity significantly more expensive.

25 Percent Renewable Portfolio Standard (RPS)

WMC believes that renewable energy must continue to play a role in Wisconsin's future energy mix, and our organization supported the current 10% renewable mandate. However, the extent to which renewable energy exceeds the existing 10% mandatory threshold should be driven by market factors such as cost and demand, rather than an arbitrarily-imposed mandate from the Legislature. Wisconsin homeowners and businesses simply cannot afford to pay for ever-increasing renewable generation requirements regardless of cost.

The 25% RPS requirement proposed in SB 450 will be tremendously expensive. A study published last November by the nonpartisan Wisconsin Policy Research Institute (WPRI) concluded that the 25% RPS would cost \$16.2 billion in increased costs to generate electricity in Wisconsin. By comparison, Wisconsinites pay roughly \$5.5 billion each year for electricity. Consequently, electric customers in Wisconsin should expect double-digit increases in their electric bills each year if the Legislature adopts the 25% RPS policy.

Another cost estimate of the 25% RPS policy, which utilizes the assumptions of Governor Doyle's Public Service Commission (PSC), results in a very similar cost figure. The PSC published its *Strategic Energy Assessment 2014* (SEA) in April of 2009, and specifically examined the cost of meeting a 25% RPS. The PSC found that meeting the 25% RPS would require the addition of at least 400 megawatts of new renewable generation each year until 2025. The PSC further concluded that wind would be the most cost-effective source of generation, with a capital cost of \$2.32 million per megawatt.

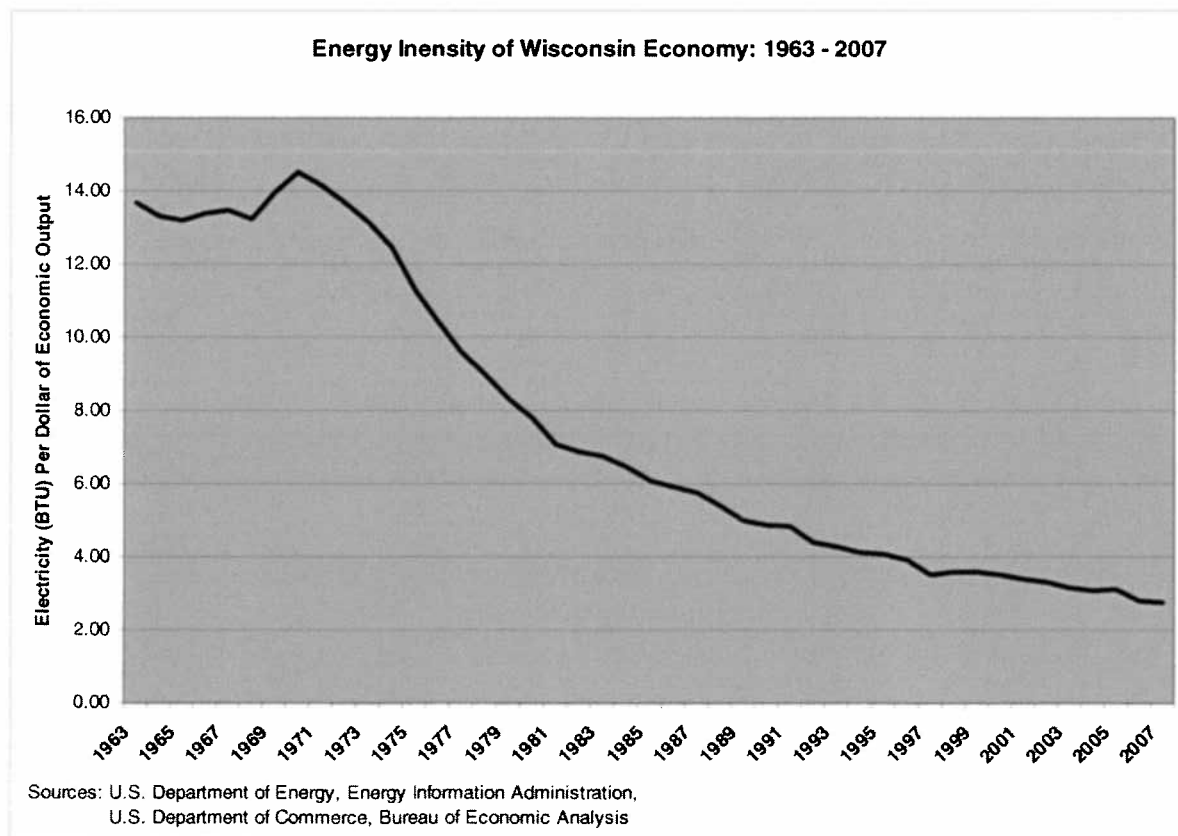
Using the PSC's published assumptions, it would cost roughly \$15 billion to construct 400 megawatts of wind each year between now and 2025 in order to meet the 25% RPS. Notably, this figure does not include the additional cost associated with constructing new transmission lines to add electricity to our grid. Because SB 450 would allow 60% of the renewable generation to be built outside Wisconsin's borders, the cost to transmit the electricity back to Wisconsin customers from states like Minnesota, Iowa and South Dakota is likely to be considerable.

Wisconsin businesses and families cannot afford to pay many billions of dollars in higher costs for electricity. We must find a way to curb the increasing cost of electricity in Wisconsin if we hope to keep employers in a competitive position to emerge from the current economic recession. Unfortunately, SB 450 would take us in the wrong direction by mandating expensive new renewable electricity requirements at a time when our state can least afford it.

According to the PSC, Wisconsin had a 30% surplus of electric generation capacity in 2008. We should not be mandating the construction of additional electricity when we already have more power today than we need to meet customer demand. Wisconsin is already on track to double our renewable generation over the next five years because of the existing 10% RPS law. Requiring Wisconsin electricity customers to spend \$15 billion or \$16 billion on additional renewable generation that is not needed to meet consumer demand is an unwise use of ratepayer dollars. Lawmakers should instead allow the current 10% mandate to work, and let market factors like cost, demand and affordability determine our future renewable energy portfolio.

Energy Efficiency Spending

WMC believes that energy efficiency and conservation efforts remain the most affordable mechanism to reduce our state's energy footprint while keeping Wisconsin businesses competitive. Wisconsin businesses continually strive to conserve energy and make their operations more efficient. Significant progress has been made toward this goal, as is shown in the graph below.



As the graph shows, Wisconsin used 14.5 units of energy to produce each dollar of economic output in our state in 1970. By 2007, we were using only 2.7 units of energy to get that same dollar of economic output. That is a more than 5-fold increase in efficiency over a 35-year period.

Senate Bill 450 proposes a new mechanism for increasing the energy “surtaxes” paid on monthly electric and heating in Wisconsin in order to pay for government spending programs to promote energy efficiency and conservation. Unlike the current 1.2% surtax on monthly bills, the proposed bill allows the PSC to set the amount that will be charged to utility customers each year, without any meaningful limitation on how much may be collected.

WMC is concerned that this “blank check” grant of authority to the PSC could result in significant increases in monthly energy bills, especially given the absence of legislative oversight. The Global Warming Task Force recommended at least tripling the amount collected in monthly energy surtaxes, and estimated the financial impact to be \$285 million by 2012, and \$380 million by 2020.

Aside from the magnitude of the higher energy taxes proposed in SB 450, we are concerned that money collected for energy efficiency and conservation purposes will be spent on unrelated programs. Since 2002, nearly \$166 million in utility surtaxes have been skimmed by the Legislature for unrelated budget spending, including more than \$18 million in the current biennium. Diverting utility taxes to pay for non-utility programs does not promote energy efficiency or conservation.

History has shown that businesses have already made significant progress in terms of energy efficiency, and will continue to do so. This is an issue where the market drives innovation without the need for government intervention. That is, fuel and electricity are expensive—businesses cannot afford to waste either. The price of energy will continue to drive businesses to find ways to become more efficient. While grants and incentives are certainly helpful toward achieving that goal, it is important to ensure that increases in energy surtaxes do not make electricity less affordable. WMC, therefore, supports maintaining the agreed-upon cap on utility charges that applies to large industrial customers enacted in 2005 Act 141.

Advanced Renewable Tariff (ART)

The ART policy would authorize the PSC to force utilities to purchase renewable energy from small-scale renewable energy facilities located within their service territory. By their very nature, these smaller projects often produce the least cost-effective renewable energy, which may explain the need to *require* their purchase by government mandate rather than having purchases occur voluntarily in the market.

In this regard, the ART policy implicitly requires utilities and their customers to purchase the most expensive renewable energy sources, and to do so at levels above and beyond their RPS requirements. The policy of forcing utilities to purchase renewable energy without regard to cost, and in place of less expensive alternatives, is not in the best interest of consumers. WMC also believes that the proposed ART language goes beyond what was contemplated by the Global Warming Task Force.

Nuclear Moratorium

WMC supports legislation to repeal the state nuclear moratorium, and place nuclear generation on a level playing field with other generation types. Nuclear remains the only commercially available technology that generates base load electricity with no carbon emissions, no smog emissions, no particulate emissions and no mercury emissions. Nuclear is a safe, clean and reliable form of energy, and lawmakers should allow Wisconsin to consider it as an option to meet future generation needs.

Unfortunately, SB 450 falls well short of the reforms necessary to allow nuclear to be considered as a viable option for Wisconsin’s energy future. The numerous preconditions related to cost and need, which are restrictions that do not apply to the renewable generation mandate, place nuclear on an unlevel

playing field. Moreover, the proposed restriction on selling nuclear power to other states is almost certainly unconstitutional, and is, therefore, likely to invalidate the entire nuclear language in the bill. Rather than the restrictive approach in SB 450, the Legislature should enact legislation consistent with Assembly Bill 516 and Senate Bill 340 to allow nuclear generation to receive serious consideration in the future.

Conclusion

WMC believes the energy policies in SB 450 will significantly increase the cost of electricity in Wisconsin, and result in thousands of lost jobs. Wisconsin's electric rates have risen faster than those of any other Midwest state in the last decade, and more than twice the rate of inflation. The 25% RPS mandate will add at least \$15 billion to the cost of generating electricity over the next 15 years, making our current competitive disadvantage relative to energy prices even worse. This is not a recipe for creating jobs.

While the proposals in SB 450 may be very well-intentioned, they are the result of a task force process that did not meaningfully study economic costs or benefits. In reality, these policies will not make a significant reduction in greenhouse gas emissions – the task force's own modeling demonstrates that emissions in 2025 are expected to remain higher than 2005 baseline levels even after implementing all of the proposals, including the 25% RPS. These policies are therefore not an effective means to reduce greenhouse gas emissions.

WMC stands ready to work with legislators on reforms that will improve our business climate, and place our employers in a position to create jobs. Reducing our state tax burden, controlling state spending, eliminating unnecessary bureaucratic red tape, and curbing lawsuit abuse are steps the Legislature can take to immediately improve our state's business climate. By contrast, dramatically increasing the cost of doing business in Wisconsin with the expensive energy policies proposed in SB 450 will result in net job losses, not job creation. We therefore respectfully request that the Select Committee not move this legislation forward.

Thank you for your thoughtful consideration of this legislation. Please feel free to contact me if you have any questions, or if I can provide you with additional information at (608) 258-3400 or smanley@wmc.org.