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(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2009-10

(session year)

Assembly

(Assembly, Senate or Joint)

Special Committee on Clean Energy Jobs...

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: Stefanie Rose (LRB) (December 2012)

RENEW Wisconsin

222 South Hamilton Street, Madison, WI, 53703 • 608.255.4044 • www.renewwisconsin.org



Clearing Up Wisconsin's Lakes With Clean Energy

by Michael Vickerman, RENEW Wisconsin

February 19, 2010

In the next six weeks the Legislature will make a truly momentous decision on the state's energy future. Either it can embrace an ambitious 15-year commitment to invigorate the state's economy through sustained investments in clean energy or it can decide to coast along on current energy policies until they lapse and lose their force and effect.

For supporters of the Clean Energy Jobs Act, as it's now called, the economic stakes could not be higher. In their eyes, this legislation is necessary to organize the relatively undersized clean energy sector into an economic powerhouse that will generate jobs and help Wisconsin businesses remain competitive.

Unfortunately, those opposed to the legislation also believe that their economic livelihoods are at stake, and they have mobilized considerable resources to defeat this bill. Opponents are convinced that such a transition, due to its expense, will result in a net loss of jobs.

Arguably the most innovative feature in the legislation is a proposed requirement on larger electric providers to acquire locally produced renewable electricity with Advanced Renewable Tariffs (ARTs). These are technology-specific buyback rates that provide a fixed purchase price for the electricity produced over a period of 10 to 20 years, set at levels sufficient to recover installation costs along with a modest profit. Now available in more than a dozen nations in Europe as well as the Province of Ontario, ARTs have proven to be singularly effective in stimulating considerable growth in small-scale production of distributed renewable electricity.

Unlike standard buyback rates, which are based on the wholesale price of conventional energy sources (e.g., coal and natural gas), ARTs are pegged to the production costs of individual renewable energy technologies. Thus, the rates will be set differently for solar, biogas, wind and biomass. The buyback rates would apply only to small, renewably powered installations that utilities have no interest in building and operating themselves.

What about existing incentives from Focus on Energy and federal tax credits, you may ask? Aren't they sufficient to maintain a steady flow of installation activity for these smaller systems?

From what we've observed during our many years of interaction with the Focus on Energy renewable energy program, the current base of financial support is not sufficient to drive significant installation activity when utility buyback rates are pegged to the cost of operating 40-year-old coal plants. It's unrealistic to assume that a brand-new farm-sized renewable energy system, regardless of the resource used, can compete head-to-head with central station power plants that have been fully amortized.

However, when existing incentives and tax credits are supplemented with an additional source of financial support, such as higher buyback rates, installation activity picks up noticeably. When buyback rates or other additional contributions from utilities allow for the full recovery of installation in 10 years or less, a major investment barrier is breached.

Consider the much-vaunted Dane County Cow Power Project, which should be operational before the end of the year. Using anaerobic digestion technology, this Waunakee-area installation will treat manure from three nearby dairy farms and produce biogas that will fuel a two-megawatt generator. This community digester project, the first of its kind in Wisconsin, will be built with private capital and a State of Wisconsin award to support a technology that reduces the flow of phosphorus into the Yahara Lakes. A second digester project is also planned for Dane County.

While the up-front incentives are certainly important, the key element that makes the financing of this project work is the special biogas buyback rate that Alliant Energy, the local utility, had voluntarily put in place a year ago. With the higher rate, the project's return on investment was sufficient to interest outside investors.

Unfortunately, once this initiative reached its predetermined capacity limit, Alliant discontinued the special biogas rate. This complicates matters for future digester installations, in that the other utilities that serve Dane County, including Madison Gas & Electric, do not offer special buyback rates to customers who generate electricity from biogas. The only utility that has an active biogas tariff is Milwaukee-based We Energies, but that's of little solace to Dane County dairy farmers who live outside that utility's territory.

Indeed, unless a policy is adopted statewide that requires utilities to increase their purchases of locally generated renewable electricity, there is no guarantee that Dane County will see a second digester project built. Keep in mind that Dane County is home to 400 dairy farms and 50,000 dairy cows, and that this \$700 million/year industry also churns out more than two billion pounds of nutrient-rich manure each year that can harm area lakes and streams.

If we are serious about neutralizing the algae blooms that turn the Yahara Lakes green each year, we'll need to adopt a clean energy policy that facilitates the development of biodigesters in farm country. Higher buyback rates are a necessary part of that policy. And let's not stop there. Higher buyback rates will also support the installation of small wind turbines and solar systems at schools, businesses and local governments.

The Clean Energy Jobs Act will address the long-overdue question of buyback rates, and if it's passed, the legislation will direct badly needed investments and job-creating opportunities into the local economy. Please communicate your support for this bill by writing letters to your state legislators and to your local newspaper. But time is of the essence – there are only three more working weeks left in this legislative session.

Michael Vickerman is the executive director of RENEW Wisconsin, a sustainable energy advocacy organization headquartered in Madison. For more information on the Clean Energy Jobs Act bill (SB450/AB649), visit RENEW's web site at: www.renewwisconsin.org.



February 22, 2010

Representative James Soletski
Room 307 West
State Capitol
P.O. Box 8953
Madison WI 53708

Dear Representative Soletski:

I am writing this letter in support of the SB 469/AB 696 which would bring outdated laws current with today's consumer preferences and new technologies. This legislation provides a level playing field which encourages competition and allows traditional landline providers to be regulated the same way as newer phone companies.

Technology is a major component to all of the educational opportunities and innovative careers offered at Northeast Wisconsin Technical College. In order for Northeast Wisconsin and the State to rebound and compete in today's economy, this legislation is necessary and important for business and industry to stay competitive in a global marketplace.

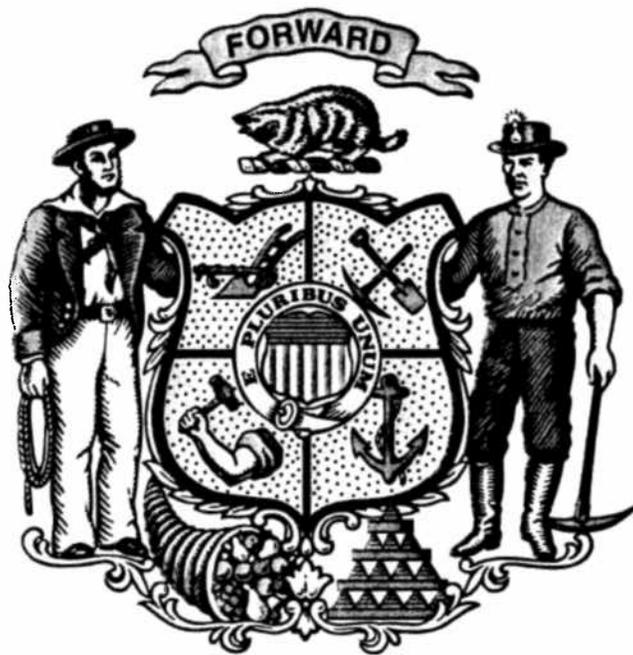
We strongly encourage you to support this legislation which will boost consumer choice, create jobs, and encourage companies to invest in Wisconsin.

Thank you for your consideration in supporting SB 469/AB 696 legislation.

Sincerely,



Sandra M. Duckett
Vice President of College Advancement



RENEW Wisconsin

222 South Hamilton Street, Madison, WI, 53703 • 608.255.4044 • www.renewwisconsin.org



Of Molehills and Renewable Energy Purchases

by Michael Vickerman, RENEW Wisconsin

February 22, 2010

As the Legislature mulls over the pending comprehensive energy bill known as the Clean Energy Jobs Act (SB 450/AB 649), both supporters and opponents have been keeping their artillery banks busy, peppering the airwaves and cyberspace with press releases, position papers, radio advertisements and economic impact studies. It's a veritable war of words out there.

In pursuit of the larger objective of undermining public support for that bill, several opponents of the energy bill are attempting to manufacture a controversy out of the State of Wisconsin's purchasing of renewable electricity, an outgrowth of the state's current energy policy law (2005 Act 141). That law directed the State of Wisconsin to source 10% of its electrical usage from renewable resources by 2007 and 20% by 2011. In the initiative's first year, the purchase of renewable energy added \$1.4 million, or 1.7%, to the state's overall electric bill.

The critics, led by Rep. Brett Davis (R-Oregon), contend that the state's purchase is a budget-straining extravagance that taxpayers cannot afford at this time. In a letter sent to the Department of Administration, Davis insinuated that one of the energy purchase contracts amounts to a sweetheart deal for the utility provider, WPPI Energy, because it charged higher premiums than the other two utilities. Davis has asked the Legislative Audit Bureau to review the WPPI contract. WPPI, it should be noted, is a nonprofit wholesale energy provider serving more than 40 municipal electric utilities in Wisconsin.

Before we plunge into the politics behind this puffed-up molehill, a brief primer little on energy pricing is in order. First and foremost, the renewable energy in question is acquired by the state under long-term contracts that set forth a fixed price. Whether we're talking about windpower, solar or biogas, the price of that resource remains steady over time. It does not yo-yo up and down the way certain fossil fuel prices do.

By contrast, an unregulated energy commodity like natural gas is especially susceptible to price volatility. Even though natural gas is primarily used as a heating fuel in Wisconsin, its price behavior strongly influences wholesale electricity costs at the margin.

Back when the State of Wisconsin signed its contracts with its renewable energy providers, natural gas prices were significantly elevated. After July 2008, they plummeted, which took the air out of wholesale electric markets. As a result, the cost differential between conventional energy and renewable energy widened going into 2009. But the renewable resources didn't become more expensive; their costs stayed the same as it was two years ago.

The energy provided by WPPI Energy comes from the Forward Wind Energy Center located in Fond du Lac and Dodge counties. Keep in mind that the Forward project is a local energy source; no state dollars leave the state to procure the electricity. This 129-turbine installation pumps more than \$1 million a year into the local economy in the form of land rental payments, local

government revenues and maintenance crew salaries. Not a single dollar from the State of Wisconsin stays with WPPI Energy.

The State's arrangement with WPPI Energy is nothing more than a standard hedge contract. This type of arrangement is common between suppliers of propane or fuel oil and their customers. Those businesses routinely offer their customers an opportunity to lock in a certain fuel price in advance of the heating season. Sometimes it works out for the customer, sometimes it doesn't. But many customers and suppliers elect to enter into hedged contracts, because both parties can lock in their fuel expenses for the winter regardless of how the energy markets behave.

Yet, if wholesale electricity prices are slumping, then so is the cost of heating buildings with natural gas. According to a recent post by Milwaukee Journal Sentinel reporter Tom Content, residential and business customers are spending 15% to 30% less on heating bills this winter. The primary cause of the reduction in heating bills is the ongoing slump in the price of natural gas.

Content goes on to say that while electric rates rose at the beginning of this year, the savings on the heating side are neutralizing the impact on customer pocketbooks. If you and I and every other utility customer are seeing significant reductions in our heating bills, then it stands to reason that the State of Wisconsin is too. Put another way, the very dynamic that lifted renewable energy premiums last year also lowered energy bills statewide this winter.

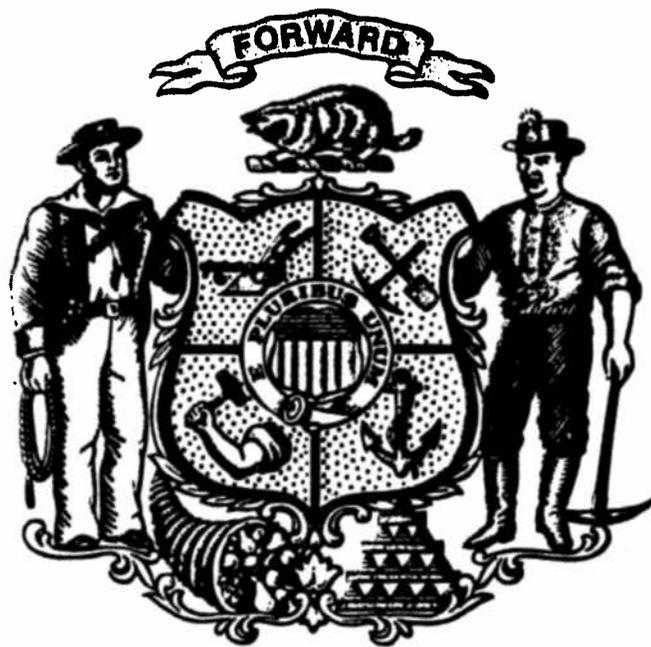
Most people expect fossil fuel prices will rise again, and history will not disappoint them. Rep. Davis knows this too, which is why he and every other Republican legislator except one lone dissenter voted in favor of the state renewable energy purchasing initiative four years ago. But the Republicans were in the majority back in 2006, and thus took credit—deservedly so—for their leadership in passing Act 141.

In a further irony, the source of Davis's ire was a pet policy of a fellow Republican legislator, former representative Scott Jensen. As a member of Gov. Doyle's Task Force on Energy Efficiency and Renewables, Jensen championed the idea of the state acting as a "model customer," whose leadership by example serves to educate other customers on the virtues of renewable energy.

But the real reason why Rep. Davis and others have sought to make a federal case out of this molehill is to blow up the Clean Energy Jobs Act bill before it can pass a Legislature that is, this time around, controlled by Democrats. Unlike their rivals four years ago, Republicans don't see any electoral advantage to working with the majority party on this bill, even though it is clearly the most important economic development initiative that the Legislature will entertain this session.

During most of my 19 years as a renewable energy advocate, there has been an implicit recognition that both parties should share in the risks and rewards associated with something as fundamentally important as state energy policy. But times have certainly changed. Bipartisanship is completely MIA in this debate, as evidenced by the unnecessary and unconvincing posturing over the state's renewable energy purchase. To echo the great Irish poet W.B. Yeats, the center is not holding.

Michael Vickerman is the executive director of RENEW Wisconsin, a sustainable energy advocacy organization headquartered in Madison. For more information on the Clean Energy Jobs Act bill (SB450/AB649), visit RENEW's web site at: www.renewwisconsin.org.





Wisconsin Builders Association

DATE: February 23, 2010

TO: Wisconsin Legislature

FROM: Brad Boycks, Director of Government and Political Affairs
Patrick Stevens, General Counsel

RE: Climate Change Legislation

The Wisconsin Builders Association has significant concerns regarding the cost implications of SB 450/AB 649 bills, and how these costs may impact the ability of Wisconsin's citizens to afford homes. Beyond those general concerns, we have some specific concerns that are set forth below.

Before getting into those issues, it is important to note that WBA has been a supporter of energy efficiency and green efficiency. WBA has endorsed the "Green Built" program in Wisconsin. Moreover, many of our members build Energy Star" homes. In addition, the WBA Foundation helped fund the construction of a "Trend Home", which served as a model of energy efficiency and green building. Consequently, the policy concerns expressed below should not be misconstrued as any wavering in WBA's commitment to provide the citizens of with energy efficient homes at an affordable price. In fact, if anything, these concerns arise from our members' expertise in both home construction and their desire to continue providing the most efficient, green, quality homes that Wisconsin families can afford.

A. Energy Conservation Code Requirements for One and Two Family Dwellings

WBA requests the provisions relating to the energy conservation code for one and two family dwellings be deleted from these bills (page 66, lines 16 through page 69, line 15).

Wisconsin currently has a Uniform Dwelling Code (UDC) that applies to one and two family dwellings. UDC currently contains stringent energy conservation provisions. Under the climate change bills, Wisconsin Department of Commerce (DOC) would be required to adopt an energy conservation code containing design standards for "construction and equipment" that conforms to the International Energy Conservation



Code (IECC) or generally accepted code that generates at least the same energy conservation benefits. DOC could only adopt less stringent standards than those in the code if the "code is unreasonably burdensome because of specific conditions in this state" and the less strict conditions provide the greatest conservation benefits consistent with those conditions. However, DOC could adopt more stringent requirements if costs and benefits are considered. An existing statutory requirement specifying the DOC consider costs and benefits associated with adopting all code provisions is or similar code was adopted.

WBA is adamantly-opposed to this provision for a number of reasons. Cost is a critical consideration in all Wisconsin's building codes, including the energy code. One of WBA's main objectives is to work towards providing the people of Wisconsin with affordable housing, and this is directly contrary to achieving that goal. Moreover, we disagree with the notion that Wisconsin should automatically adopt an international code with only extremely limited opportunities to change the code. Wisconsin should not abrogate its ability to adopt an energy code, or other building codes, that it believes is in the best interest of its citizens, given consideration of all relevant factors. In addition, Wisconsin's existing energy code is very stringent. If there is a perceived inadequacy, that should be addressed through the UDC process.

WBA also has a concern over what appears to be a significant expansion of DOC's duties under these bills. Currently, Wis. Stat. § requires DOC to "establish standards for construction and inspection of one- and 2-family dwellings and components thereof." In contrast, the bills require DOC to adopt "an energy conservation code that sets minimum design standards for construction and equipment for the purpose of energy conservation in one- and 2-family dwellings" (underline added). WBA questions what is meant by the reference to "equipment." Does this requirement, for example, that DOC is to set standards for all appliances, televisions, light bulbs, toasters and other items that are used in a house? Is this really the intent of the authors?

B. Energy Conservation Code Requirements for Multifamily Housing

These bills contain similar provisions to those discussed above for Wisconsin's commercial building codes, and we request that these provisions be removed (page 62, line 3 through pages 64, line 15).

These changes impact the commercial building code, which also applies to multifamily housing. We recognize that under current law Wisconsin generally follows the International Energy Conservation Code. However, under current law see (Wis. Stat. § 101.027(2)) there is a requirement to consider the costs and benefits associated with a

proposed energy conservation code requirement. Under the bills, this language is eliminated (see page 63, lines 14 through 18).

C. Voluntary Environmental Commercial Code

These bills require the Department of Commerce to promulgate rules that set voluntary design standards for reducing the environmental impact of constructing, maintaining and using public buildings and places of employment (page 64, line 17 through page 65, line 6).

We request that a provision be added to this section that prohibits local governments from mandating the use of this voluntary code. Local units of government have the ability to go beyond the state commercial code. While this code is "voluntary", we are concerned that local governments will mandate the use of the code.

D. Surface Transportation Planning to Achieve Greenhouse Gas Emission Reductions

WBA has concerns regarding the impact of these provisions on development. We request that the requirement in regard to developing strategies for the implementation of zoning and other land use regulations and plans be eliminated from the bills (page 48, lines 18-20).

This portion of the bills requires the Department of Transportation (DOT), in "consultation" with the Department of Natural Resources and others, to identify certain strategies for reducing greenhouse gases. In identifying these strategies, DOT is required to consider the implementation of zoning and land use regulations and policies to support increase population density, transit oriented development or redevelopment, or mixed-use development. These strategies, to the "extent practicable", are to be incorporated into the transportation plans and transportation improvement programs prepared by the state and metropolitan planning organizations.

WBA objects to the provision referenced above for a number of reasons. Zoning and land use policies and decisions should be formulated at the local level, and not at the state level. Moreover, decisions regarding development decisions need to be considered in light of other important considerations, such as the needs of the community and economic development opportunities, and not simply based on theoretical greenhouse gas reductions. In addition, the "extent practicable" standard, with its corresponding lack of clarity, simply provides fodder for litigation to attempt to block needed projects that are supported by local communities.





February 25, 2010

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

The Honorable Spencer Black
The Honorable James Soletski
Co-Chairs
Assembly Select Committee on Clean Energy Jobs
State Capitol, Madison, Wisconsin

RE: Request by the Citizens Utility Board for amendments to the Clean Energy Jobs Act AB 649 and SB 450

Dear Senator Miller, Senator Plale, Representative Black, and Representative Soletski:

I would like to provide you with recommendations for improving the Clean Energy Jobs Act, AB 649 and SB 450.

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.

Though we greatly appreciate your efforts to create legislation that reflects many of the task force recommendations, I respectfully request that you consider the following suggestions that would improve the legislation.

February 25, 2010

Page 2 of 2

CUB supports the changes proposed by Roy Thilly and Tia Nelson, co-chairs of the task force, who provided you with suggested changes from former members of the task force in a memo dated January 26, 2010. 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.

Regarding the modifications to the so-called nuclear moratorium, CUB supports the provisions in AB 649 and SB 450 as currently drafted. We believe these provisions 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 the legislation, would make sure that new nuclear power plants meet Wisconsin's need for electricity, and that the output from these plants would be sold to Wisconsin utilities (and then to their customers), even if the nuclear plants were built or owned by an entity other than a Wisconsin utility.

According to the testimony of many parties, the proposed modifications to the nuclear moratorium appear to be very controversial. Several groups have suggested weakening the proposed modifications to the nuclear moratorium currently in the legislation by removing the "output finding" and the "nonseverability clause." Unfortunately, CUB would be unable to support the legislation should the output finding or the nonseverability clause be amended inappropriately or deleted. CUB agreed to the recommendations of the task force regarding changes to the nuclear moratorium. Any further compromise on this issue would force us to oppose the legislation. Indeed, we urge you to leave the nuclear moratorium provisions as they are, and to strengthen the energy efficiency provisions as outlined above.

Please contact me if you have any questions, and thank you for your consideration.

Sincerely,



Charlie Higley
Executive Director





Wisconsin Propane Gas Association

One South Pinckney Street, Suite 504
Madison, WI 53703

PHONE **608-251-0927**

FAX **608-244-9030**

EMAIL **bahner@charterinternet.com**

February 26, 2010

State Senators Mark Miller and Jeffrey Plale
State Representatives Spencer Black and Jim Soletski

We would like to thank you for taking the time to meet with us regarding SB 450 and AB 649, the Clean Energy and Jobs Bills. We appreciated your attention and thoughtful comments regarding your goals as sponsors of the bills.

Enclosed is a summary of the proposal of the Wisconsin Propane Gas Association for preserving rural Wisconsin jobs and promoting propane safety while working to reach your goals for conservation and decreased green house gas emissions.

Attached to this memo are:

- 1) Information on the Research & Development activities of the Propane Education and Research Council (PERC)
- 2) A brochure on propane use in forklifts
- 3) An excerpt from a study titled *Propane Reduces Greenhouse Gas Emissions: A Comparative Analysis 2009*. This study was sponsored by the Propane Education and Research Council and prepared by Energetics Incorporated. A full copy of the report can be found at:
www.propanecouncil.org/rd
- 4) A U.S. Department of Energy bulletin on the Freedom CAR and Vehicle Technology Program

Work is currently being done on sample bill language for your use and we anticipate getting that to you shortly. In the meantime if you need additional information about propane, please feel free to contact us at 251-0927. Thank you.

Sincerely,

Betsy Ahner
Executive Director

Brandon Scholz
WI Propane Gas Association

Enclosures



Wisconsin Propane Gas Association

One South Pinckney Street, Suite 504
Madison, WI 53703

PHONE **608-251-0927**

FAX **608-244-9030**

EMAIL **bahner@charterinternet.com**

Proposal to Establish a Program for Propane Safety, Conservation, Training and Consumer Education in Wisconsin

The Wisconsin Propane Gas Association proposes the establishment of an industry check-off program for the purpose of promoting propane conservation, safety, training and consumer education and marketing in Wisconsin. This fund would be administered by the Wisconsin Propane Education and Research Council under the supervision of the Wisconsin Department of Commerce. The administration and regulation of a fund by existing organizations ensures that programs would launch quickly with minimum administrative expenses and the support of the propane marketers in Wisconsin. We believe Wisconsin consumers will look favorably on a program that puts the majority of its dollars into programs that benefit energy efficiency and conservation programs and do not fund regulatory oversight expenses at the Public Service Commission.

The Wisconsin Propane Education and Research Council (WPERC), a 501(c)(3), currently receives funding from the National Propane Education and Research Council (NPERC) for the purpose of providing industry training, consumer education, and safety programs in Wisconsin. This program has been in existence since 1996 and is administered by a board of directors and executive director according to rules established under United States law. Funding for NPERC is derived from a 0.4 cent fee on odorized propane and payments to individual states are prorated according to propane use in the state.

Modeling after this national program, a number of states including Minnesota and Iowa have established state PERC programs. This allows their state's PERC to match federal dollars with state dollars and expand their programming to include appliance rebate programs, regulator replacement, propane education for the construction and HVAC industries and fire department propane safety training.

Nationally, propane is an important part of fuel emission reduction programs and energy conservation programs. A U.S. Department of Energy report on Energy Efficiency and Renewable Energy states, "Unlike natural gas, propane is not a greenhouse gas (GHG) when released directly into the atmosphere. When considering the entire lifecycle of propane used in converted LDVs, ANL found that propane reduced GHG emissions by 21% to 24% and petroleum use by 98% to 99%."

The propane industry in Wisconsin serves not only rural home owners, but also agriculture, and industries throughout the state. Some of Wisconsin's best known manufacturers, including Kohler and Generac, are working with the propane industry to develop more fuel efficient generators and propane appliances. Public bus systems, including Madison, are switching to propane powered buses as a clean

alternative to diesel fueled buses. Yet despite demonstrated fiscal savings in fuel costs and the clear advantage of burning a cleaner fuel, bus fleets seem slow to switch from diesel.

In 2008 residential use of propane consumed 72% of the propane sold in Wisconsin while 6.8% was used by agriculture, 5.3% industrial, 10% commercial, 2.5% was sold to retailers and only 3.1% for internal combustion.

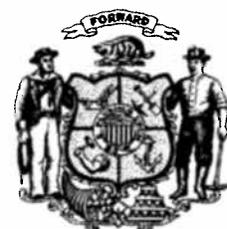
The large percentage of residential propane consumption makes it almost impossible to forecast propane needs during Wisconsin winters. There seems to be no typical year and no long term trend. In 2005 propane consumption decreased by 38,610 thousand gallons from 2004 levels and in 2006 it plummeted another 45,937 thousand gallons. In 2007 Wisconsin propane consumption climbed by 42,850 thousand gallons and in 2008 consumption fell again by 37,120 thousand gallons.

Unlike the regulated utilities in Wisconsin, which enjoy monopolies in the areas they serve, the propane industry in Wisconsin is composed mainly of locally owned privately held businesses. The Wisconsin marketplace is highly competitive and additionally provides jobs in rural communities that suffer a lack of industry and economic development opportunities. A policy to decrease the use of propane in this state and to levy a tax of an unstated amount will severely damage the Wisconsin propane industry and the jobs it provides.

We hope the legislature will work with the Wisconsin Propane Gas Association to include this forward-thinking conservation measure in the Clean Energy Jobs Bill. We would welcome inquiries and an opportunity to discuss The Wisconsin Propane Education and Research Council with you further.



WISCONSIN STATE LEGISLATURE





WISCONSIN LEGISLATIVE COUNCIL

Terry C. Anderson, Director
Laura D. Rose, Deputy Director

TO: REPRESENTATIVES SPENCER BLACK AND JAMES SOLETSKI AND
SENATORS MARK MILLER AND JEFF PLALE

FROM: John Stolzenberg, Chief of Research Services

RE: Requested Amendments to 2009 Assembly Bill 649 and 2009 Senate Bill 450

DATE: February 26, 2010

This memorandum was prepared and distributed to you at the request of Representative Spencer Black. The memorandum responds to Representative Black's request for a list of amendments that have been requested to your companion bills, 2009 Assembly Bill 649 and Senate Bill 450, which implement portions of the recommendations of the Governor's Task Force on Global Warming (GWTF). This list is set forth below. It is based on amendments requested in all the following:

- Written testimony submitted at the public hearings on Assembly Bill 649 on February 2 and 15, 2010.
- Written testimony submitted at the public hearings on Senate Bill 450 on January 27, and February 10 and 11, 2010, that does not duplicate the testimony on Assembly Bill 649 identified in the first bullet point.
- Memorandum to Senators Jeff Plale and Mark Miller and Representatives Jim Soletski and Spencer Black, Proposed *Modifications to the Clean Renewables Job Act*, from Roy Thilly and Tia Nelson, Co-Chairs of the GWTF, dated January 26, 2010. (The recommendations in this memorandum were agreed upon by a group of the former members of the GWTF and its work groups convened by Mr. Thilly and Ms. Nelson. This group is referred to as the "former GWTF group" in this memorandum.)
- Memorandum to Roy Thilly and Tia Nelson, Co-Chairs, GWTF, *Comments on Climate Change Legislative Draft*, from Bill Oemichen and Todd Holschbach, Co-Chairs, and Jeff Crawford, Member, GWTF Agriculture and Forestry Working Group, dated January 20, 2010. (The recommendations in this memorandum were agreed upon by the former GWTF group.)
- Other miscellaneous items forwarded from Representative Black or his staff to Legislative Council staff.

The list of amendments does not identify organizations that expressed concerns in the hearing testimony identified above over the costs of provisions in the bills relating to energy efficiency and renewable resource programs, the enhanced renewable portfolio standard (RPS), or renewable tariffs.

In addition, no amendments were requested in the materials listed above on any of the following topics addressed in the bills: Climate Change Coordinating Council, greenhouse gas reduction program evaluation, public education, state government as leader, local government programs, sustainable forestry management and carbon sequestration, air permitting streamlining, and industrial development revenue bond allocation.

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ENERGY EFFICIENCY AND RENEWABLE RESOURCE PROGRAMS (FOCUS ON ENERGY, ETC.)

Funding Floor

1. Provide for a 1.2% funding floor for conservation and efficiency programs funded by investor-owned utilities, as well as an \$8.00 per meter floor for municipal utilities and cooperatives, consistent with Act 141. Section 106; §196.374 (3) (br). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

Joint Finance Committee Review

1. Restore the requirement of Joint Finance review of PSC four-year budget determinations above the floor specified above. Section 106; §196.374 (3) (br). See existing §196.374 (3) (b) 3. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10; Alliant Energy, 1/27/01; Xcel Energy, 2/2/10; Northwestern Wisconsin Electric and Northcentral Power, 2/2/10; and Wisconsin Utilities Association, 2/2/10.]

2. If the state determines that significant additional funding for energy efficiency is necessary, the Legislature should make that decision as part of a public process in which it is clear to all how much energy fees will increase. [Wisconsin Paper Council, 2/2/10.]

3. Legislative oversight of the public benefits programs must be retained. [Wisconsin Industrial Energy Group, 2/2/10.]

PSC's Exercise of Regulatory Authority and Statewide Energy Conservation Goals

1. Delete Section 67/§196.025 (1) (e) which imposes a general duty on the PSC to maximize conservation and efficiency in exercising the PSC's regulatory authorities and substitute language that provides that the Commission shall set the quadrennial energy conservation and efficiency savings targets and budgets to reflect all achievable, cost effective energy savings and enable the state to meet or exceed the goals set forth in Section 1.12 (4) and Section 299.03 (2) and (3m) (a) - (b). Restore the criteria currently in Section §196.374 (3) (b) as applicable to programs and funding. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Center the energy efficiency policy on achievement of statewide energy savings goals with the PSC recommending, and the Legislature through the Joint Committee on Finance approving, the funding level necessary to meet that goal. [MG&E, 2/2/10.]

3. Delete provisions on the PSC exercise of regulatory authority to reduce demands for efficiency and conservation, Section 67. [Wisconsin Utilities Association, 2/2/10; Alliant Energy, 1/27/10; and Wisconsin Industrial Energy Group, 2/2/10.]

4. Change the statewide energy conservation goals in s. 299.03 (3m) (a) to reflect the GWTF's recommendation to include an underlying growth rate for electricity of 1.8%. [Wisconsin Utilities Association, 2/2/10.]

5. Require PSC to direct energy efficiency investments necessary to reach 2% energy efficiency goals. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

6. Set achievable goals for reductions in electricity use that are averaged over multiple years and that reflect the GWTF's assumption of an underlying annual growth rate for electricity of 1.8%. [Dairyland Power Cooperative, 1/20/10.]

Utility Fees

1. In order to provide funding equity with respect to large customers, include in the Act the recommendation made by the PSC to the legislature on funding equity dated December 30, 2008. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. WMC ... supports maintaining the agreed-upon cap on utility charges that applies to large industrial customers enacted in 2005 Act 141. [Wisconsin Manufacturers and Commerce, 2/2/10.]

Equity Among Customer Classes

1. Clarify provisions related to non-regulated fuels to provide that the funding for those programs must go back to non-regulated fuel users, and similarly, funds from regulated fuel users must be used for regulated fuel programs. See Section 126/§196.374 (5m) (a). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Establish mechanisms to ensure equitable distribution [of Focus on Energy Funds] throughout all areas of the state. [Northwestern Wisconsin Electric; and Northcentral Power, 2/2/10.]

3. Clarify the budget for non-electric energy efficiency expenditures. (Electric customers should not subsidize efficiency programs for propane users.) [Dairyland Power Cooperative, 1/20/10.]

Contested Case Hearings

1. Provide that budgets must be set in a contested case proceeding by requiring a hearing. Section 106; §196.374 (3) (br). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. A public benefits budget should be determined periodically by the PSC in a contested case hearing process, taking account of relative benefits and costs of program efforts. A contested case is not referenced in the bill draft but should be. [Wisconsin Industrial Energy Group, 2/2/10.]

Program Design and Administration

1. With respect to utility administrated programs for which utilities may apply to use dollars in the PSC's approved conservation and efficiency budgets, restore the provision in Act 141 that utility administered programs shall not include residential and smaller business customers. Section 100/§196.374 (b) 1. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Eliminate the requirement of non-duplication with respect to utility programs in Section 110/§196.374 (3) (c) 2. am., but retain the other criteria. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10; and Alliant Energy, 1/27/10.]

3. Take a much more incremental approach for implementing new energy efficiency programs to better manage the costs of fee increases verses the longer-term gains. For example, maintain current energy efficiency and conservation fees and programs and require a periodic study of options and potential improvements, similar to the process included in the bill. However, the output would be a report to the Legislature. The Legislature could then undertake a public process of review in action, as appropriate. The PSC would not have independent authority to raise fees. Under this type of process the planning horizon would be shorter, allowing a more accurate comparison of costs and benefits. [Wisconsin Paper Council, 2/2/10.]

4. Opt-out/opt-in provisions related to energy efficiency for large energy customers must be expanded. There are examples of opt-outs in many other states that can be used as a model. (See appended examples.) [Wisconsin Industrial Energy Group, 2/2/10.]

5. Implement a rate crediting mechanism that rewards substantial early action and conservation energy efficiency taken by large, energy-intensive industry at its own expense after 2004. [Wisconsin Industrial Energy Group, 2/2/10.]

6. Define in the energy efficiency and RPS provisions in the bill "service territory" of a utility and "premises" of a cooperative customer. [Dairyland Power Cooperative, 1/20/10.]

7. Change the definition of "retail electric cooperative" in the energy efficiency and RPS requirements to be consistent with the definition in s. 196.01 (5) (a) 1., Stats., which includes that a cooperative is organized "for the purpose of serving members only." [Dairyland Power Cooperative, 1/20/10.]

Utility Earnings on Investments in Energy Conservation

1. Clarify Section 148/§196.374 (9) to provide that an investor-owned utility can earn a return only on capital invested by it and leave it to the Commission to establish by rule the criteria that apply to requests for returns on conservation and efficiency investments, rather than specify the criteria in subsections (b) 1. and 2. Also, the provision should be reviewed to be sure there is no implication that the PSC cannot provide incentives for conservation and efficiency as it does today in other ways, such as approval of a shared savings program. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Clarify that utilities can only earn a return on efficiency if it is the utility shareholders' capital, not the customer's capital used in the project. [Wisconsin Industrial Energy Group, 2/2/10.]

OTHER ENERGY EFFICIENCY INITIATIVES

1. Amend the municipal and county residential loan program for energy efficiency improvements and renewable resource applications created by 2009 Wisconsin Act 11 to also apply to commercial and industrial premises and for water efficiency improvements (proposed language provided). [Johnson Controls via Lee Cullen email note, 2/17/10.]

2. Expand the energy efficiency provisions in the bill to apply low-income heating assistance and weatherization programs to low-income households that are LP gas and heating oil users. [Coalition for Clean Energy, undated (1/27/10 hearing handout); and Wisconsin Community Action Program Association, 2/11/10.]

3. Address the transfer of funds from the low-income benefits program for non-energy purposes in the last two biennial budgets by doing the following: (a) restore the transferred revenues (\$36,743,000); (b) require more analysis contemplation and public input before considering future transfers from the fund by requiring that: (i) any future transfer would be authorized by the Assembly and Senate standing committees with jurisdiction over utilities and the Joint Finance and that a public hearing be held as part of that process; (ii) the statutory 3% ceiling on the low-income assistance fee automatically increased from the amount sufficient to equal the amount of any approved transfer; and (iii) that Class A utilities, cooperatives, and municipalities be required to notify their customers of the increase in the low-income assistance fee and transfer at least 60 days prior to its implementation. [Wisconsin Community Action Program Association, 2/11/10.]

4. Find a way to facilitate non-profit entities ability to acquire renewable energy equipment. One such method might be to use federal funds to establish a zero interest loan program for non-profit entities administered by Focus on Energy. [Johnson Controls, 2/2/10.]

COORDINATION WITH FEDERAL PROGRAMS

1. Identify how state and federal compliance targets will be aligned to achieve least cost compliance when similar federal laws are passed, such as for RPS, monitoring of sequestration for forestry and greenhouse gas reporting requirements, and other potential federal-state differences. [Wisconsin Utilities Association, 2/2/10.]

2. Provide that the PSC is obligated in its administration and oversight of conservation and efficiency programs to minimize administrative and reporting burdens through coordination with any federal conservation and efficiency legal requirements that are adopted, without weakening the Wisconsin requirements. In addition, if federal requirements are imposed, the PSC should be required to make a report to the legislature recommending any changes that it believes should be made to the law to avoid duplication and resolve inconsistencies between the federal and state programs, consistent with the state's goals. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

3. Reconcile federal and state RPS requirements. [Alliant Energy, 1/27/10.]

4. Incorporate a strategy for rectifying state energy policy and rules with federal legislation or regulations, including for federal and state RPS and energy efficiency requirements. [Dairyland Power Cooperative, 1/20/10.]

5. Similar to the provision with respect to conservation and efficiency, require the PSC to take steps to minimize administrative and reporting burdens through consistency if a federal RPS is adopted, without weakening the Wisconsin RPS, and to recommend any changes it deems appropriate to the state RPS in such event. Clarify that only the thermal output of cogeneration projects produced by biomass or biogas fuel qualify for the RPS. See Section 172/§196.378 (1r) (dm) (1). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

6. Add a provision that would federalize Wisconsin's renewable portfolio program if Congress acts to create a national program. [Wisconsin Paper Council, 2/2/10.]

7. Wisconsin's RPS must not exceed a future federal RPS. [Wisconsin Industrial Energy Group, 2/2/10.]

ENHANCED RENEWABLE PORTFOLIO STANDARD (RPS)

The Standard

1. Allow the current 10% RPS mandate to work, let market factors like cost, demand, and affordability determine our future renewable energy portfolio. [Wisconsin Manufacturers and Commerce, 2/2/10.]

2. The RPS must be technically feasible and clearly provide benefits that outweigh its costs. [Wisconsin Industrial Energy Group, 2/2/10.]

3. Exclude from the RPS utilities that are defined as a "small electric utility" in Section 208 of the bill. [Northwestern Wisconsin Electric and Northcentral Power, 2/2/10.]

4. The RPS mandate must be limited by a cap on excess generation capacity. Wisconsin cannot afford to build new generation when there is no showing of need for new generation. [Wisconsin Industrial Energy Group, 2/2/10.]

In-State and Technology Based Requirements

1. The Sierra Club would like to see a greater percentage of our renewable energy from in-state sources to ensure that green jobs are created locally. [Sierra Club, John Muir Chapter, 2/2/10.]

2. Clarify the RPS "baseline." The bill is silent as to whether that baseline will incorporate the new criteria, definitions, and restrictions made by the bill. [Dairyland Power Cooperative, 1/20/10.]

3. Increase the in-state portion of the RPS to require a majority of the renewable power to come from in-state sources. [Invenergy Wind, LLC, 2/2/10.]

Baseline

1. Delete the in-state RPS requirement. [Dairyland Power Cooperative, 1/20/10.]

2. Include technology-specific set-asides in Wisconsin's RPS. Establish set-asides of 0.5% of the RPS for each of the following technologies: customer cited biomass co-generation systems, utility-

owned and utility-customer-owned solar-electric systems (each megawatt-hour of electricity produced should be awarded two bonus renewable energy credits to allow this technology to economically compete with wind energy), and customer-owned wind turbines and wind turbine clusters up to 10 megawatts. [Johnson Controls, 2/2/10.]

3. While Xcel Energy supports the advance RPS, we are seeking changes to the baseline calculation that was established in Act 141. Due to Xcel Energy's early investments in renewable energy technology, this baseline calculation requires the company to go almost 3% above the statewide average requirement. [Xcel Energy, 2/2/10.]

4. Increase the percentage of clean energy that must be sited in Wisconsin to at least half of the renewable energy generation required under the RPS (i.e., 12.5% in 2025). [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

5. Change the RPS to make it more equitable. We ask that each utility achieve a 25% renewable portfolio individually and that no utility would be required to increase the renewable mix after reaching the 25% threshold. (Over 33% of the energy North Central Power sells comes from renewables.) [Northwestern Wisconsin Electric and Northcentral Power, 2/2/10.]

Regulatory Flexibility

1. "Circuit breakers" must be adopted in connection with the RPS, including direct retail rate caps or per customer bill impact limits. [Wisconsin Industrial Energy Group, 2/2/10.]

2. Add policy "circuit-breakers" to help mitigate cost increases due to the enhanced RPS; e.g., the renewables target for a particular utility could be suspended if biomass supply to meet both the needs of manufacturing and energy generation is not sustainable, if pressure on the wood supply from energy generation pushed up prices for manufacturers, the cost to ratepayers exceeded some pre-defined threshold, or if excess energy generation capacity exceeded some pre-defined maximum allowable level. [Wisconsin Paper Council, 2/2/10.]

3. Rate mitigation strategies such as levelization of cost recovery should be added to the bill. [Wisconsin Industrial Energy Group, 2/2/10.]

4. Exempt industrial customers from costs related to RPS mandates as other states have done in an effort to retain well-paying manufacturing jobs in business; examples from other states appended. [Wisconsin Industrial Energy Group, 2/2/10.]

Energy Sources Deemed “Renewable”; Nonelectric Energy

1. Review and, if appropriate, clarify the definition of biomass in Section 154/§196.378 (1r) so there is no implication that any change from existing law is intended with respect to woody biomass and to include biogas. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]
2. Improve the definition of biomass in the RPS. [Alliant Energy, 1/27/10.]
3. Retain the existing definition of “biomass” in the RPS and add to it “animal byproducts and other gases” to ensure methane digesters and various biomass feedstocks are expressly included. [Dairyland Power Cooperative, 1/20/10.]
4. Provide that not only new biomass facilities are covered by the RPS, but also conversions of existing facilities to biomass or biogas, as well as fuel switching. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]
5. Revert back to the existing RPS definition of “biomass” that includes “wood” in this definition. [Xcel Energy, Midwest Forest Products Co., Plumb Creek Timber Co. Inc., Great Lakes Timber Professionals Association, Alliant Energy, We Energies, Domtar-Rothschild Mill, Potlatch Corporation, 1/28/10; and Wisconsin Utilities Association, 2/2/10.]
6. Provide with respect to geothermal systems that in determining the renewable energy equivalent for a certificate, the PSC should take into account the estimated net greenhouse gas emission benefits. It is possible that this may most easily be done by subtracting any increase in electric use required by such a system. See Section 172/§196.378 (1r) (dm) (3). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]
7. Replace the term “non-electric energy” 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 PSC. [Orion Energy Systems, 2/2/10; and Rep. Ted Zigmunt, 2/2/10.]
8. Energy efficiency initiatives must count toward fulfilling the RPS obligation, just as renewable generation does under current law and as contemplated by federal standards, and is already the case in other states. [Wisconsin Industrial Energy Group, 2/2/10.]
9. Remove from the RPS projects involving the thermal output from coal-fired cogeneration facilities, burning and municipal solid waste, and geothermal. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

Renewable Resource Credits and Certificates

1. Add comparable stringency and verification requirements if the PSC approves use of a tracking system other than MRETS. Section 201/§196.378 (3). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]
2. All but one member of the group agreed that the requirement that certificates for non-electric energy such as light tube and geothermal systems are good only for the year in which the energy is produced should be eliminated. Related to this issue, a sub-group will be discussing the certificate provisions further in order to propose changes to facilitate the use of such certificates and to recognize that it would be desirable for the technologies covered eventually to be included in the MRETS system. See Section 202/§196.378 (3m). [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]
3. 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. Replace language in the bill regarding non-electric energy (as modified by their proposed terminology change) with the provisions in 2009 Assembly Bill 401 and Senate Bill 273. [Orion Energy Systems, 2/2/10 and 2/7/10; and Rep. Ted Zigmunt, 2/2/10.]
4. Direct use renewables (light pipes, solar water heaters, etc.), should generate renewable energy credits in the same way as photovoltaic and other renewable technologies do, rather than one year "renewable certificates." [E4, 2/15/10.]
5. Non-electric energy certificates should have an unlimited life, like electric energy credits. [Wisconsin Paper Council, 2/2/10.]
6. Existing sources should be allowed to generate certificates if they increase production above some type of historical baseline. In this case, the facility would not be bound by the fossil fuel replacement condition. This change should apply to all existing renewable energy assets, including hydro. [Wisconsin Paper Council, 2/2/10.]
7. Reward combined heat and power projects--a much more efficient way to generate energy--whether a credit or certificate premium that is higher than 1:1. [Wisconsin Paper Council, 2/2/10.]
8. Allow credits for biomass conversion and co-firing of large-scale coal-fired power plants that are already being developed rather than just those that are placed in service on or after the effective date of the bill. [Dairyland Power Cooperative, 1/20/10.]
9. Clarify that renewable energy credits can be created when a utility enters a power purchase agreement and these credits can be "banked" from year to year. [Wisconsin Utilities Association, 2/2/10.]
10. Clarify that the automatic transfer of renewable resource credits as part of a wholesaler energy sale only applies to contracts or sales effective after the bill is enacted. [Dairyland Power Cooperative, 1/20/10.]
11. Delete the requirement that renewable energy credits must be used in the year it is generated. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

12. In the determination of the amount of renewable resource credits associated with electricity supplied by a facility fueled by renewable energy resource and a fossil fuel, remove the requirement that the total amount of the electricity generated is based upon the total amount sold at retail. Section 196.374 (2) (bm) 2., Stats. [Dairyland Power Cooperative, 1/20/10.]

Legislative Findings

1. We would like to work further with the authors to refine the findings in Section 170/§196.378 (1g) to support the provision while avoiding an implication that bringing in power from outside the state raises significant reliability issues. We believe this can be done by focusing on congestion cost risks, concerns related to long term transmission adequacy and the need for, and benefits of, a geographically diverse portfolio of renewable resources. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Remove the legislative findings from the RPS provisions. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

RENEWABLE ("FEED-IN") TARIFFS

1. The group also discussed the ARTS provision. It was evident from our discussion that there is not a meeting of the minds of the members of the Task Force on the intent of that template recommendation. Some believe any such tariff was intended to be voluntary, while others believe it was intended to be mandatory. There did appear to be agreement that any mandatory requirement should not force a utility to go beyond the RPS. While the ARTS provision is quite controversial, we hope the groups concerned about the provision will continue informal discussions. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Remove the provisions related to renewable tariffs. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

3. The bill would mandate that utilities pay a premium for renewable energy (under the renewable tariffs provisions). We are opposed to such a mandatory approach, unless safeguards for ratepayers are built in. [Wisconsin Paper Council, 2/2/10.]

4. Make the renewable tariff provisions voluntary rather than mandatory (implied or explicit). [Alliant Energy, 1/27/10; MG&E, 2/2/10; Xcel Energy, 2/2/10; Northwestern Wisconsin Electric and Northcentral Power, 2/2/10; and Wisconsin Industrial Energy Group, 2/2/10.]

5. Remove language that exempts rural electric cooperatives and municipal utilities from offering advanced renewable tariffs. [Homegrown Renewable Energy Campaign, 1/22/10.]

6. Apply the renewable tariff provisions statewide. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

7. A utility should not have to purchase renewable energy through ARTS if their RPS requirements have been met. [Wisconsin Industrial Energy Group, 2/2/10.]

8. Retain the Act 141 agreements and limits on additional renewable or energy efficiency requirements in the renewable tariff provisions. [Alliant Energy, 1/27/10.]
9. Remove the “small utility exemptions” in the renewable tariff provisions. [Alliant Energy, 1/27/10.]
10. Do not limit renewable tariff projects to a utility’s service area. [Alliant Energy, 1/27/10.]
11. Allow utilities to invest in or own renewable tariff projects. [Alliant Energy, 1/27/10.]
12. Include a statewide minimum megawatt (MW) cap and a minimum project size cap in the renewable tariff provisions. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

OTHER RENEWABLE ENERGY RELATED INITIATIVES

1. Provide flexibility to DOT in addressing regulatory barriers to the transport on highways of wind turbine components and the associated report in the bill. [Wisconsin Transportation Builders Association, 2/10/10, as modified based on a personal communication with Legislative Council staff, 2/24/10.]
2. Provide consumer protection safeguards for homeowners and businesses installing renewable energy systems. (Consumer protections in ch. 196, Stats., only apply to utility customers.) [Johnson Controls, 2/2/10.]

NEW NUCLEAR POWER PLANTS

1. Delete the nuclear power provisions in the bill. [Wisconsin Network for Peace and Justice, 2/2/10; Institute for Energy and Environmental Research, 2/2/10; Madison Area Peace Coalition, 1/27/10; Nuke Watch, 1/27/10; and Wisconsin Network for Peace and Justice (Diane Farsetten and Bill Christofferson), 1/27/10.]
2. Replace the provisions on nuclear power in the bill with legislation that repeals the “nuclear moratorium” (consistent with Assembly Bill 516 and Senate Bill 340). [Wisconsin Manufacturers and Commerce, 2/2/10; and Wisconsin Utility Investors, 2/2/10.]

Applicability; Delayed Effective Date

1. Delete the conditioning of changes in the nuclear moratorium law on implementation of the RPS and energy efficiency programs. [Dairyland Power Cooperative, 1/20/10.]

Requirements and Legislative Findings

1. We also discussed the new nuclear plant provision. Further thought should be given to issues that have been raised with respect to constitutionality and the nonseverability clause, so these concerns can be resolved, while staying true to the Task Force’s intent. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. Revise the nuclear energy provisions so that the framework does not, right out of the gate, contemplate a potential constitutionally based lawsuit. [Nuclear Energy Institute, 2/2/10.]

3. We express concerns over proposed language regarding the nuclear moratorium that would require all of the energy produced from a new nuclear power plant in Wisconsin to be used by Wisconsin ratepayers. Given the way Xcel Energy plans and operates its system and the related multi-state cost-sharing agreement, if we cannot consider combined load growth of NSP-Wisconsin and NSP-Minnesota when evaluating the construction of nuclear power in Wisconsin, we would not consider a new nuclear facility. [Xcel Energy, 2/2/10.]

4. Remove requirement that any new nuclear energy be sold only to serve Wisconsin load. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

5. Remove the legislative findings in the nuclear power provisions. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

6. Add to the nuclear provisions that spent fuel, when moved from storage pools, will be stored in facilities that are sufficiently secure but foreseeable terrorist attacks would not cause severe economic disruption and casualties outside the perimeter of a nuclear power plant. [Carbon Free Nuclear Free Coalition, 2/18/10/.]

7. Remove the provision giving the PSC the responsibility for defining "adequate" long-term radioactive waste storage. [Physicians for Social Responsibility Wisconsin, 1/27/10.]

8. Preserve federal regulation over decommissioning by removing all provisions in the bill relating to state involvement in nuclear power plant decommissioning. [Dairyland Power Cooperative, 1/20/10.]

Nonseverability Clause

1. Remove the nonseverability clause for the nuclear power provisions. [Wisconsin Utilities Association, 2/2/10; and Dairyland Power Cooperative, 1/20/10.]

2. Remove the nonseverability clause in the nuclear power provisions and relax the nuclear moratorium reflecting the GWTF recommendations without the unconstitutional requirement on the use of output of any new nuclear power plant in Wisconsin. [Alliant Energy, 1/27/10.]

LABOR STANDARDS

1. Include labor standards and local hire requirements for the RPS, renewable tariffs, and certain energy efficiency policies. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

CALIFORNIA VEHICLE EMISSION STANDARDS

1. Delete the provisions creating the California vehicle emissions standards (implied). [Wisconsin Farm Bureau Federation, 2/10/10; and Wisconsin Manufacturers and Commerce, 2/10/10.]

2. WTBA opposes the provisions relating to California vehicle emissions standards, including the mandated DNR study on standards for other motor vehicles. [Wisconsin Transportation Builders Association, 2/10/10.]

ENGINE IDLE REDUCTION

1. Exempt utility trucks that use a power take-off to operate aerial and digger units or cranes, DC to AC power inverters, safety lighting, and under-deck air compressors, equipment repair, all of which require the trucker equipment to remain idling during such use. [Wisconsin Utilities Association, 2/2/10.]

2. Exempt utility trucks from the freight idle reduction provisions. [Dairyland Power Cooperative, 1/20/10.]

3. Exempt from the idling restrictions utility power-operated equipment, such as backhoes, trenches, and skid steers. [Wisconsin Utilities Association, 2/2/10.]

4. Delete the provisions on diesel truck idling and substitute provisions agreed to by our members and attached to this letter. [Wisconsin Clean Diesel Coalition, 2/15/10; and Wisconsin Transportation Builders Association, 2/10/10.]

5. Substitute the diesel engine idling provisions developed by the Wisconsin Clean Diesel Coalition for the freight truck idling provisions in the bill. If the Coalition's recommendations are not accepted, include five specific exemptions to the idling provisions in the bill. [Wisconsin Energy Corporation, 2/10/10.]

LOW CARBON FUEL STANDARD

1. Delete the low carbon fuel standard (implied or explicit). [Murphy Oil USA, Superior Refinery, 2/2/10; Flint Hill Resources/Koch Companies, 2/10/10; Marathon Petroleum Co., 2/15/10; Wisconsin Farm Bureau Federation, 2/10/10; Wisconsin Manufacturers and Commerce, 2/10/10; Wisconsin Petroleum Council, 2/10/10; and Wisconsin Transportation Builders Association, 2/10/10.]

2. Add language to the low carbon fuel standard provisions that would set targets reducing the carbon content of our fuels at least 10% by the year 2020, as recommended by the GWTF. [Homegrown Renewable Energy Campaign, 1/22/10.]

3. Include the specific standard of reducing carbon and fuels by 10% by 2020 in the provisions on the low carbon fuel standard and remove from these provisions the requirement that a majority of the Midwest Governors need to approve the Midwest Governors' model low carbon fuel standard rule when it is developed. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

CARBON-AUDITED TRANSPORTATION INVESTMENTS

1. Remove the provisions on carbon-audited transportation investments (relating to environmental review of transportation projects and revision of DOT's 2030 Plan) (implied or explicit). [Wisconsin Transportation Builders Association, 2/10/10; and Wisconsin Manufacturers and Commerce, 2/10/10.]

GRANTS FOR COMPACT DEVELOPMENT

1. Implement the GWTF's Transportation Work Group recommendation that DOT provide financial assistance to counties that are implementing walkable, compact community design standards. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]
2. Substitute for the provisions on DOA comprehensive planning grants involving traditional neighborhood development a new series of planning grants for municipalities that would be awarded on a competitive basis for municipalities that want to go forward with traditional neighborhood development. Phase 1 grants would allow municipalities to determine what they want to do and Phase 2 grants would provide implementation resources. [Wisconsin Transportation Builders Association, 2/10/10.]

MODEL PARKING ORDINANCE

1. Modify the provision on the model parking ordinance to do the following: provide several ordinances for municipalities to choose among (e.g., urban center versus shopping mall); provide a major focus on off-site lots and parking structures; explore the use of electronics for on-site parking; and consider the complexities of preferential parking (should an E-85 flex fuel vehicle get preferential parking when the owner is not using E-85 fuel?). [Wisconsin Transportation Builders Association, 2/10/10.]

SURFACE TRANSPORTATION PLANNING

1. WTBA opposes the provision that requires DOT, in conjunction with DNR, to establish statewide goals for transportation emissions. [Wisconsin Transportation Builders Association, 2/10/10.]
2. WTBA opposes the provision that requires MPOs to establish goals that are consistent with DOT's statewide goals. [Wisconsin Transportation Builders Association, 2/10/10.]
3. WTBA opposes the provision on the development of transportation planning methods and principles that requires DOT, in consultation with a number of state agencies, the UW, public institutions, and MPOs to study an extensive list of alternatives that encourage model shift, rather than only fuel and vehicle technology to reduce greenhouse gas emissions. If this provision, s. 85.0215 (3) (a) is not deleted, remove the last two bullet points in par. (a) 9. and 10., relating to use of materials and equipment associated with the construction or maintenance of transportation projects that reduce greenhouse gas emissions, and public facilities for supplying electricity to electric or plug-in hybrid electric vehicles. [Wisconsin Transportation Builders Association, 2/10/10.]
4. WTBA opposes closely related provisions requiring reports and assessments by MPOs and DOT. [Wisconsin Transportation Builders Association, 2/10/10.]
5. WTBA opposes the provision that requires DOT to withhold financial payments to MPOs for failure to make a good faith effort to use the tools developed by DOT under the bill. [Wisconsin Transportation Builders Association, 2/10/10.]

GROWTH ACCOMMODATION INCENTIVES

1. The group agreed that certain provisions that relate to the grants for governmental entities should be reviewed for inclusion of tribes. [Former GWTF group, Roy Thilly and Tia Nelson memo, 1/26/10.]

2. WTBA objects to the provision that is part of the growth accommodation incentives that requires DOT to revise its Transportation Facilities Economic Assistance and Development Program rules to provide a higher state match for projects meeting a list of greenhouse gas emissions criteria. [Wisconsin Transportation Builders Association, 2/10/10.]

ENERGY EFFICIENCY OF BUILDINGS

Mandatory Building Codes

1. Change references to the International Energy Conservation Code in Section 54 to be to this code and the energy conservation standard most recently adopted under the code. [Keith Spruce, 2/10/10.]

Voluntary Commercial Green Building Code

1. Establish or direct the Department of Commerce to establish a building code study group with the specified membership to advance consensus within Wisconsin on green building codes and to "further the work" on these codes by the GWTF's conservation and energy efficiency work group. [Keith Spruce, 2/10/10.]

Agricultural Energy Conservation Code

1. Direct the Department of Agriculture, Trade and Consumer Protection, rather than the Department of Commerce to establish energy conservation standards for agricultural facilities. [Keith Spruce, 2/10/10.]

Zero Net Energy Building Goal

1. Delete the zero net energy building goals by 2030 or dramatically scale it back from 100% of residential and commercial structures. [Dairyland Power Cooperatives, 1/20/10.]

APPLIANCE EFFICIENCY STANDARDS

1. Add to the appliance efficiency standards California's new standards that apply to TVs when they are turned on. [Rep. Black, 2/2/10.]

2. Remove provisions that specify energy efficiency for compact audio products, DVD players and recorders, and televisions. [Consumer Electronics Association, 2/10/10.]

INDUSTRIAL BOILER EFFICIENCY

1. Delete the industrial boiler inspection provision. [Wisconsin Paper Council, 2/2/10.]
2. Delete the provisions that mandate annual boiler inspections. If not deleted, it should be replaced with the recommendations in the Global Warming Task Force's final report on pages 187-193. [Wisconsin Industrial Energy Group, 2/2/10.]

BIOENERGY

1. ... we would ask that the policy recommendations for Afforestation and Reforestation, Forest Loss Prevention, Sustainable Forest Management and Urban Forestry (pp. 159-170 of the Task Force Final Report) be considered for inclusion in Clean Energy Jobs Act (CEJA). If a determination is made that these programs are not affordable this session, we urge that a study by the Department of Agriculture, Trade and Consumer Protection and the Department of Natural Resources be conducted to determine the costs and benefits of these programs, including both economic and environmental benefits. At a minimum, we believe CEJA should require such a study. [Former GWTF group, Bill Oemichen, Todd Halschbach, and Jeff Crawford memo, 1/20/10.]
2. Include additional GWTF recommendations related to land-based activities (forestry and agriculture) that result in carbon sequestration or reduced greenhouse gas emissions, or both. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]
3. Include the GWTF's recommendation on recovery of untreated wood waste. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]
4. Include the GWTF's recommendations on the forestry legacy program. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]
5. Include the GWTF's recommendations for afforestation and reforestation, forest loss prevention, sustainable forests management, and urban forestry. [Sierra Club, John Muir Chapter, 2/10/10.]
6. Add to the bill a new program on renewable fuels for schools and communities, including designation of a state agency responsible for establishing a revolving loan program for schools and communities to invest in biomass assistance. [Homegrown Renewable Energy Campaign, 1/22/10.]

ENERGY CROP RESERVE PROGRAM

1. We note the Energy Crop Reserve Program is not provided with funding nor is a funding source identified. This, in turn, will assure that to the extent such a program evolves, it will be dependent on federal funding, and may not take in account working group considerations. We ask that this program be funded. [Former GWTF group, Bill Oemichen, Todd Halschbach, and Jeff Crawford memo, 1/20/10.]
2. We recommend that the Energy Crop Reserve Program language require (not simply allow) DATCP to promulgate rules to ensure the goals of ecological and environmental integrity and

sustainability, as well as carbon sequestration and farmland preservation and priorities for projects with lowest life cycle greenhouse gas emissions. [Former GWTF group, Bill Oemichen, Todd Halschbach, and Jeff Crawford memo, 1/20/10.]

3. We recommend that, consistent with the Task Force recommendations, the Energy Crop Reserve Program be expanded to include forestry biomass (potential amendment text provided). [Former GWTF group, Bill Oemichen, Todd Halschbach, and Jeff Crawford memo, 1/20/10.]

BIOENERGY FEEDSTOCK PRODUCTION INCENTIVE STUDY

1. Expand this study to also require DATCP and DNR to study the need for and benefits of potential incentives for sustainable forestry, agriculture, biomass production, and carbon sequestration (potential amendment text provided). [Former GWTF group, Bill Oemichen, Todd Halschbach, and Jeff Crawford memo, 1/20/10.]

CAP AND TRADE

1. Includes stronger language with regards to regulating greenhouse gas emissions rather than directing DNR to report to the Governor and the State Legislature once a regional or national cap and trade system is established. [Sierra Club, John Muir Chapter, 2/11/10.]

GREENHOUSE GAS EMISSIONS REPORTING

1. Delete the provision requiring DNR rules on greenhouse gas emissions reporting or require that the rules mirror EPA standards (10,000 vs. 25,000 ton per year thresholds). [Wisconsin Industrial Energy Group, 2/2/10.]

OTHER INITIATIVES

1. Include the GWTF's recommendations on enhanced water efficiency and conservation. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

2. Include the GWTF's recommendations on enhanced statewide recycling. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

3. Include the GWTF's recommendations on reduced landfilling on food waste. [Coalition for Clean Energy, undated (1/27/10 hearing handout).]

4. Ensure that low-income households have access to any process created by the bill quantifying its job creation, business development, and related training and development activities, including provision of tax credits for employers who hire low-income individuals and jobs created by the bill, creation of programs like the Community Actions Skills Enhancement and Job and Business Development models that provide technical school training and job placement and support services to low-income households in growing technologies related to alternative energy and energy efficiency jobs; and provisions which require measurement of the number of jobs, and jobs held by low-income individuals, which are created as a result of the bill. [Wisconsin Community Action Program Association, 2/11/10.]

If you have any questions on any of the amendments listed in this memorandum, please feel free to contact me directly at the Legislative Council staff offices.

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February 26, 2010

Representative James Soletski
Co-Chairman, Special Committee on Clean Energy Jobs
State Capitol
Room 307 West
Madison, WI 53708

RE: State of Wisconsin Assembly Bill 649/Senate Bill 450

Dear Representative Soletski:

Growth Energy appreciates the opportunity to provide written testimony regarding AB 649/SB 450. Since our inception in November 2008, Growth Energy has actively engaged in discussions at the federal level and with the California Air Resources Board (CARB) concerning Low Carbon Fuel Standards (LCFS) and specifically Indirect Land Use Change (ILUC) theory. Growth Energy's 54 ethanol plant members, its nearly three dozen associate members, and its approximately 20,000 grass roots members have taken a specific position on this issue, precisely because domestic ethanol is a low-carbon fuel and has an important role in making ours a low-carbon society.

Growth Energy's position is that a LCFS – done correctly – would reduce emissions, create American jobs, and strengthen our national security by making our nation less dependent on carbon-intensive, foreign oil. But we oppose including controversial, unproven and scientifically-suspect ILUC penalties on biofuels as part of a LCFS. Doing so would only erect new regulatory obstacles to achieving low carbon goals. California's LCFS, which levies ILUC penalties on low-carbon, domestic ethanol in that state, is facing challenges in both federal and state court. Additionally, we believe that low-carbon fuel standards do not stop at the state border or any one particular region of the United States. Therefore, we oppose state or regional development of a patchwork of criteria and regulatory action administered with different strategies and different levels of enforcement throughout the United States.

Attached is our Policy Position Paper, which outlines the fact that ILUC remains an untested and unsettled theory that has no place in public policy or regulation until it has been thoroughly studied.

While we believe the so called Clean Cars concept has merit, we certainly would not adopt the California model given that it fails to recognize corn-based ethanol as an alternative energy source for our nation's automotive fuel source. Recent EPA standards acknowledge the emission reduction value of corn ethanol.

We recognize that states will be called upon to implement the standards that are ultimately adopted at the state level. Until that happens, we respectfully encourage state governments to avoid creating the kind of unworkable conditions that a patchwork of legislation and regulation would bring.

Respectfully,

Dennis Wiese
Growth Energy
State Policy Analyst



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Growth Energy Policy Brief: California's Dangerous Gamble with Indirect Land Use Change

Introduction

Reducing carbon emissions in transportation fuel, a subject of recent national debate, is in fact an ambitious and admirable goal for the state of California. It is also a goal fraught with danger. Unless sound, proven science is used to determine carbon emissions, the state and nation could suffer the reverse effect: a transportation system that actually emits more pollution.

An issue before California's Air Resources Board (ARB) threatens to cause just that. The theory of Indirect Land Use Change (ILUC) employs no empirical evidence and an unfair notion of justice to single out one industry – ethanol – as the culprit behind poor environmental practices in other countries. The Air Resources Board should reject use of ILUC and prevent bad policy from undermining America's only clean, green alternative to gasoline available today.

In January 2007, Governor Arnold Schwarzenegger signed an Executive Order establishing the first Low Carbon Fuel Standard (LCFS). The goal of the LCFS is to lower the carbon intensity of California's transportation fuels by 10 percent by 2020. Governor Schwarzenegger charged the California Air Resources Board (ARB) with developing the regulations that would govern the LCFS, and the agency is now in the final stages of releasing a draft rule for public comment with the final rule to be voted on by the ARB on April 23 or 24.

One of the most controversial aspects of the ARB's rulemaking has centered on the carbon accounting of biofuels, and more specifically the inclusion of indirect land use change (ILUC) models in calculating the carbon intensity of biofuels. Currently, the carbon intensity of transportation fuels is determined through "lifecycle analysis." So for corn-based ethanol, its carbon intensity is calculated from the time the crop is planted and farmed until it is harvested, turned into ethanol and burned as an additive in gasoline. According to the most recent data from the University of Nebraska-Lincoln¹, the ethanol industry currently is producing a fuel that is 48 to 59 percent lower in lifecycle greenhouse gas emissions than gasoline.

However, the ARB is now proposing a significant shift in these internationally-recognized standards for lifecycle analysis by including indirect emissions theoretically related to production and use of biofuels.

This theory claims that growing crops for biofuel production displaces other crops, which are then grown in other parts of the world, leading to deforestation. Based on this theory, the ARB would assign an indirect land use change "addor" or penalty to ethanol in addition to its direct carbon intensity. According to ARB's preliminary work on this issue, it has calculated the carbon intensity of dry-mill corn-based ethanol to be 67.6 (gCO₂/MJ), which is not as good as the University of Nebraska's findings, but is

significantly better than California Gasoline Blendstock's calculation of 96.88 (gCO₂/MJ). But, when adding the indirect land use change penalty to ethanol, ethanol's carbon intensity jumps to 97.6 (gCO₂/MJ)ⁱⁱ.

The debate over ILUC has become increasingly polarized, with opponents of ILUC models pointing to the scientific problems with its application and proponents saying any number is better than zero, even if there are many unknowns. Often lost in this debate is whether applying ILUC penalties to biofuels will actually accomplish the original goal – reducing carbon emissions.

In this policy paper, we examine the theory behind ILUC and show that it fails to be realized empirically. Further, we will explain how the adoption of ILUC models could have the opposite intended effect - creating disincentives to decrease a fuel's carbon intensity. The paper will also demonstrate why it could have dangerous repercussions in the broader policymaking effort to reduce carbon emissions. And finally, we will present a series of alternatives to ARB's proposal that would promote incentives for biofuels producers to adopt more sustainable practices that are verifiable and would ultimately contribute greatly to California's efforts to reduce its greenhouse gas emissions.

Indirect Land Use Change – How Did We Get Here

The effort to include ILUC models in lifecycle analysis has been driven by a small group of academics who have relied on a theoretical framework rather than observable data. The first person to promote this theory was Mark Delucchi from the University of California-Davisⁱⁱⁱ. In a paper he released in October 2004, Delucchi claims the calculation of GHG emissions for transportation fuels should include a wide array of factors, including policy action, production and consumption of energy and materials, prices, emissions, and environmental systems. Instead of citing data, Delucchi provides imagined scenarios on how these factors could impact a fuel's carbon footprint.

Delucchi's theory was then promoted by a group of academics at University of California-Berkeley, Alex Farrell, Richard Plevin, Michael O'Hare, and Daniel Kammen. As part of his Masters in Science degree, Richard Plevin submitted a dissertation calling for California policy to measure the carbon intensity of biofuels by using "market-based" lifecycle tools^{iv}. It's important to note that while these academics are now firm opponents of corn-based ethanol, they had supported it in a paper they published in *Science* in January 2006^v. Once Governor Schwarzenegger signed the Low Carbon Fuel Standard in 2007, he appointed Alex Farrell to work with the ARB to develop the regulations for the standard and in August 2007, Farrell and his team submitted a policy analysis on how the ARB should establish the rules^{vi}. In the document, they acknowledge "indirect land use changes associated with biofuel production in the LCFS would be difficult to estimate because it is uncertain how increased biofuel production in one location (for instance California or Iowa) would affect the use of land in another location (for instance prairie land in the Great Plains or rain forests in Malaysia or Brazil). Few economists believe that an international computable general equilibrium model could reliably predict such land use changes." Yet they go on to conclude that even though a correct indirect land use change penalty cannot be accurately determined, any number is better than zero. They justify this policy position by writing that it would send a "signal" to biofuels producers.

At that point, it was clear the ARB would move forward in developing a model to calculate an ILUC penalty for biofuels. The theory's proponents scored another victory when ILUC language was inserted in the final version of the Energy Independence & Security Act of 2007, which gave the U.S. Environmental Protection Agency authority to use ILUC models to determine the greenhouse gas emissions of biofuels.

Then, in February 2008, the concept of indirect land use change gained enormous attention when Tim Searchinger, an environmental lawyer with no scientific background, published a study in *Science* claiming that carbon emissions related to ILUC made corn-based ethanol more carbon intensive than gasoline^{vii}. According to Searchinger, the land diverted for increased corn production used for ethanol would lead to sharp decreases in American grain exports, which in turn would lead to increased land cultivation elsewhere, releasing the carbon stored in that particular region. This paper will address the many flaws of Searchinger's paper in the next section, but it's important to note that his research was widely disputed by experts in lifecycle analysis, including Dr. Michael Wang of Argonne National Laboratory^{viii} and Dr. Bruce Dale of Michigan State University^{ix}. Unfortunately, the media did not include these critiques in their stories and treated Searchinger's paper as actual "science."

Meanwhile, the ARB continued work on a model to include ILUC in its calculation of the Low Carbon Fuel Standard. In April 2008, Alex Farrell passed away, and now Michael O'Hare is lead advisor to the ARB. In addition, the ARB hired Lifecycle Associates, a company that includes Richard Plevin as part of its staff to conduct the lifecycle analysis for the various transportation fuels. The ARB's findings have all been posted on its Web site^x.

Theory vs. Reality

While the environmental impacts of land use changes related to international market effects need to be carefully studied for all land use-related activities, the assumptions behind ILUC models are not supported by real world data. Further, policies are already in place that address many of the concerns raised by indirect land use change proponents.

It's easy to understand why the media and opponents of biofuels have come to embrace ILUC theory. It's an uncomplicated concept – corn for ethanol displaces other crops, namely soy, and therefore farmers in Brazil cut down the rainforest to grow soy and fill the demand. However, the facts dispute this simple narrative. First, the theory of ILUC is built on the idea that American grain exports will plummet because of corn used for ethanol. In his paper, Searchinger estimates that corn exports will decrease by 62 percent and that soy exports will decline by 28 percent^{xi}. In fact, nothing could be further from the truth. Even with growing ethanol production, corn production has been able to meet the demands for food, fuel, and exports. In 2007, the U.S. produced a record 13 billion bushels of corn and in 2008, American farmers harvested more than 12 billion bushels of corn, the second largest crop ever produced^{xii}. Meanwhile, since 1998, corn exports have remained at 1.5-2.5 billion bushels sold abroad each year^{xiii}. These exports have been supplemented by the surge in distiller grains, a key co-product in ethanol production used to feed livestock. According to the USDA, exports of distiller grains increased by 91 percent from 2.36 million metric tons (mmt) in 2007 to 4.51 mmt in 2008^{xiv}. The story is similar for soybeans. According to the U.S. Soybean Export Council, 2008 was a record year for soy exports, totaling 1.5 billion bushels exported, a 7 percent increase over the previous year^{xv}. Indeed, according to the United States Department of Agriculture's Long-Term Projections Report released this month, American exports of corn and soy will grow or remain stable through 2015, showing that Searchinger's dire predictions are baseless^{xvi}.

American farmers have been able to meet the demand for corn because technology has allowed them to grow more on the same amount of land. For example, in 1980, the average corn yield per acre was 91 bushels and in 2007, it was 152.8 bushels^{xvii}. Similarly, ethanol yield has increased from 2.4 gallons per bushel in 1980 to 2.81 in 2007^{xviii}. Had there been no improvements in ethanol and crop yield since 1980, it would have required significantly more land to grow the corn needed for ethanol.

The second major component of the ILUC theory is that corn for ethanol production leads to increased soybean farming worldwide which then encourages deforestation in places like the Amazon rain forest in Brazil. While deforestation continues to be an environmental challenge, there is no verifiable correlation between deforestation in Brazil and ethanol production. According to the National Institute of Space Research, deforestation in the Amazon has declined sharply just as American biofuels production doubled. In 2004, 10,588 square miles of the Amazon was deforested and in 2008, that number dropped to 4,621 square miles^{xx}.

In addition to government policies that have reduced deforestation in the Amazon, partnerships between the private sector and non-governmental agencies also are helping to keep the rainforests intact. One such project is the Soybean Moratorium. In July 2006, the Brazilian Vegetable Oils Industry Association (ABIOVE), which includes ADM, Cargill, and Bunge, signed an agreement with Conservation International, World Wildlife Fund, and Greenpeace to implement a voluntary ban on the purchase of soybeans grown on deforested land, destroying the market for soybeans grown in the Amazon. ABIOVE and Greenpeace say the moratorium has been effective at reducing new rainforest clearing for explicit soy production. A joint report released in April 2008 found no new soybean plantations in any of the 193 areas that showed deforestation of 100 hectares (250 acres) or more between August 2006 and August 2007^{xx}. The moratorium has been extended until 2010.

Violates Tenants of Established International Environmental Law

In addition, the policy of punishing individuals, or in this case, an entire industry, for indirect environmental effects violates the basic "polluter pays" principle that has been one of the bedrocks of international environmental law. According to the polluter pays principle, the party responsible for producing pollution is responsible for paying for the damage done to the environment. This principle has been widely adopted by countries that belong to the Organization for Economic Co-operation and Development (OECD), including the United States, and is part of Principle 16 of the Rio Declaration on Environment and Development.

By applying an ILUC penalty to biofuels, the ARB would punish biofuels producers for actions they are not involved in nor have any control over. Indeed, policy ramifications of adopting ILUC models for the LCFS could be massive. Consider how stakeholders involved in a cap and trade system would react if they were suddenly not only responsible for their own carbon emissions but also indirect carbon emissions from the international market effects related to their product. Indeed, adopting ILUC models as the standard for lifecycle analysis could cause the collapse of the burgeoning carbon market.

Most importantly, applying an ILUC penalty to biofuels will do nothing to reduce carbon emissions. Even if one accepts the ILUC theory, why would a party engaged in deforestation activities change its behavior, since someone else is paying the price for the released carbon?

Endorses Different Standards for Different Types of Energy

It is important to note that land use is only one type of indirect impact that can be accounted for with respect to greenhouse gas emissions. In fact, there are many complex economic, social, and political indirect effects that could lead to energy sources being more carbon intensive. Unfortunately, indirect effect penalties are only applied to biofuels. By singling out biofuels for ILUC penalties, the ARB would be applying different standards to different types of transportation fuels and artificially creating winners and losers in the Low Carbon Fuel Standard.

For example, a study presented by Life Cycle Associates at the last ARB meeting found that there are many direct and indirect carbon emitting effects of oil production that are not captured by the board's current lifecycle analysis^{xxi}. Further, it shows that several elements of direct carbon emissions, including oil refining and transport are either not included or not well understood by the current models. And while the ARB has indicated that indirect land use changes may not be applicable to petroleum, there are many indirect effects that are not currently calculated in its lifecycle analysis for gasoline. These include carbon emissions related to refinery co-products, which are often toxic and hazardous waste, macroeconomic effects, the use of military forces and equipment to protect the Middle East oil supply, and the reconstruction of Iraq. Indeed, the increased carbon intensity from the characterization, storage, transport, and disposal of oil production waste products could dwarf what the ARB is considering as a penalty for ILUC related to biofuels.

Creates Disincentives to Innovate

From an industry perspective, adoption of ILUC models in GHG measurements could slow advancements in second-generation biofuels and discourage corn-based ethanol producers from investing resources to reduce their carbon footprint. ILUC models lead to decreases in innovation because the models inject uncertainty in the marketplace. Already, it is widely understood that the penalties assigned for ILUC cannot be verified. Therefore, even though the penalty is derived from a model, the result is ultimately an arbitrary figure based on theoretical assumptions that have no basis in reality. With that in mind, why would someone invest in second generation biofuels when the feedstock they are using could be deemed to have indirect land use change effects? Why would corn ethanol producers, who have been making their production process increasingly efficient, continue to invest millions of dollars in new technology to be greener when that reduction in GHG emissions could be wiped out by an ILUC penalty?

Alternative Solutions

If California's ultimate goal is to reduce GHG emissions, there are other policies the ARB can pursue that will achieve this objective much more effectively than an ILUC penalty for biofuels. These alternatives are based on empirically researched best practices for biofuels production that can be verified by internationally recognized standards for lifecycle analysis.

For example, California could allow biofuels producers to submit independent carbon intensity studies (beyond the options currently available) based on the source of their feedstock and methods of production and then provide preferred market access to biofuels found to be most efficient. Already, many ethanol producers use methane from landfills and cogeneration or biomass boilers to power their plants, but currently the draft rule only recognizes two types of ethanol production, dry mill and wet mill. By providing flexibility in the calculations, the ARB will provide incentives for ethanol producers to speed up innovative techniques and encourage them to reduce their carbon footprint throughout their supply chain. The ARB can also promote sustainable agricultural practices that mitigate GHG emissions and can even be carbon sinks. In fact, according to research by Dr. Bruce Dale of Michigan State University, even if one believes that indirect land use changes result from biofuels production, using sustainable crop management practices like no-till and no-till plus cover crops can make any carbon from land use impacts negligible^{xxii}.

Another way the biofuels industry can work with California to reduce carbon emissions is by providing technical expertise and logistical support for nations affected by deforestation. In fact, biofuels producers could be a major asset in the effort Governor Schwarzenegger has spearheaded to find ways that California, Illinois, and Wisconsin can work with states and provinces in Brazil and Indonesia to stop tropical deforestation.

Conclusion

As the world's efforts to reduce greenhouse gas emissions continue, carbon accounting will be an increasingly important factor in identifying the best solutions to our climate challenges. That is why the best available science must be employed, and the standards for such measurements need to be the same across the board. But as we have seen, indirect land use change models fail to accurately account for carbon emissions and are used selectively. As a result, the inclusion of ILUC models to determine the carbon intensity of biofuels should be rejected by California's Air Resources Board.

Not only is the foundation for the theory flawed, its use would violate principles of international environmental law, create different standards for lifecycle analysis, and ultimately damage any innovation that would help decrease GHG emissions further.

Members of the biofuels industry take great pride in the environmental benefits of their product and want to work with states like California and the environmental community to ensure that renewable fuels like ethanol are as clean and green as possible. But that also means policy decisions need to be based on science and facts, not rigid ideology or speculative models.

About Growth Energy

Growth Energy is a group committed to the promise of agriculture and growing America's economy through cleaner, greener energy. Growth Energy members recognize America needs a new ethanol approach. Through smart policy reform and a proactive grassroots campaign, Growth Energy promotes reducing greenhouse gas emissions, expanding the use of ethanol in gasoline, decreasing our dependence on foreign oil, and creating American jobs at home. More information can be found at GrowthEnergy.org

Press Contact: Shelley Venus, 202-530-4608

ⁱ <http://ianrnews.unl.edu/static/0901220.shtml>

ⁱⁱ <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>

ⁱⁱⁱ <http://www.its.ucdavis.edu/publications/2004/UCD-ITS-RR-04-45.pdf>

^{iv} <http://plevin.berkeley.edu/docs/Plevin-MS-2006.pdf>

^v <http://www.sciencemag.org/cgi/content/abstract/311/5760/506>

^{vi} http://www.arb.ca.gov/fuels/lcfs/lcfs_uc_p2.pdf

^{vii} <http://www.sciencemag.org/cgi/content/abstract/319/5867/1238>

viii http://www.bioenergywiki.net/images/0/0a/Michael_Wang-Letter_to_Science_ANLDOE_03_14_08.pdf

ix <http://www.bioenergywiki.net/images/e/e5/Dale.pdf>

x <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>

xi <http://www.sciencemag.org/cgi/content/abstract/319/5867/1238>

xii <http://www.ncga.com/files/pdf/2009WOC.pdf>

xiii *ibid*

xiv <http://domesticfuel.com/2009/02/18/record-distillers-grains-exports/>

xv <http://www.ussoyexports.org/news/stories/pr/pr102008.pdf>

xvi <http://www.ers.usda.gov/Publications/OCE091/OCE091c.pdf>

xvii <http://www.ers.usda.gov/Data/feedgrains/StandardReports/YBtable1.htm>

xviii <http://www.cleanfuelsdc.org/pubs/documents/FoodFeedandFuel08.pdf>

xix <http://www.mongabay.com/brazil.html>

xx http://news.mongabay.com/2008/0623-soy_amazon.html

xxi <http://www.arb.ca.gov/fuels/lcfs/013009lca.pdf>

xxii <http://news.msu.edu/story/5836/>