Wisconsin State Assembly
2nd Assembly District

Proudly Serving Brown, Kewaunee
and Manitowoc Counties

TED ZIGMUNT
STATE REPRESENTATIVE

Testimony by Representative Ted Zigmunt Regarding AB 401
For Energy and Utilities Committee,
September 15, 2009

Chairman Soliteski and members of the Assembly Energy and Utilities Committee, I would like to thank you for allowing me to testify today regarding Assembly Bill 401.

I would also like to thank committee members Zipperer, Honadel, Huebsch, Montgomery, Zepnick and Soletski for signing on to this very important energy and jobs bill.

A number of innovative technologies have been recently developed which I feel could expand the definition of a "renewable energy source" and would help utility companies meet the Wisconsin Renewable Portfolio Standard. These technologies include solar energy, solar water heating, solar light pipe technology, geothermal, biomass and biogas.

AB401 aims to help create" green jobs" by giving credits toward fulfillment of the RPS to electricity providers who's customers use these technologies, that are both job-creating and help protect the environment.

Under this proposal, an electric utility could be eligible for the credit if use of a covered technology, displaces the use of coal, oil, nuclear power or natural gas, except for natural gas used in a fuel cell.

AB 401 helps to reduce the need for generating energy from dirty fossil fuels and replaces those dirty fossil fuels with clean, renewable energy sources that create hundreds of good-paying jobs in the process.

This common sense bi-partisan legislation is supported by the International Brotherhood of Electrical Workers Local 158, the United Brotherhood of Carpenters and various roofers' organizations. The Carpenters Union reports it is working with Manitowoc-based light pipe manufacturer Orion Energy Systems to develop and installation training program that will create jobs for carpenters in Wisconsin and across the country. The endorsement of AB 401 includes; the Economic Development Corporation of Manitowoc County, the Chamber of Manitowoc County and the cities of Manitowoc, Kiel and Two Rivers.

Saving and not wasting our valuable energy resources while creating new "green jobs", is the best of both worlds and is necessary for the future of our great state and county. Thank you.

Ted Zigmunt

State Capitol: P.O. Box 8953, Madison, WI 53708 • (608) 266-9870
Toll-free: (888) 534-0002 • E-mail: rep.zigmunt@legis.wi.gov • FAX: (608) 282-3602
District: P.O. Box 321, Francis Creek, WI 54214 • (920) 686-1060

WIEG

WISCONSIN INDUSTRIAL ENERGY GROUP

TODD STUART
Executive Director
WIEG

JOE MUEHLBACH
Board Chairman
Quad Graphics Inc.

BOARD MEMBERS

BERNARD MALNARICK
Airgas Merchant Gases LLC

PAUL LANDON
Basic American Foods

BRUCE WILLIAMS
Bemis Company, Inc.

ROBERT BEHNKE
Brillion Iron Works, Inc.

SHANE HENRIKSEN
Enbridge Energy LLP

TIM MORRIS
ERCO Worldwide

CAL KOOYENGA
Fairbanks Morse Engine

PATRICIA BOWLES
Georgia-Pacific Corp.

TARI EMERSON
Kohl's Department Stores, Inc.

NATHAN HEINLE
Ladish Forging

THOMAS SCHARFF
NewPage Corp.

MIKE POTTS
Orion Energy Systems Inc.

BILL WARD
Procter & Gamble Paper Products Co.

TONY KARWOWSKI
S.C. Johnson & Sons, Inc.

DAVE BREHM
TTM Technologies, Inc.

DARYLL FUENTES
USG Interiors, Inc.

WIEG, INC.

To: Assembly Energy and Utilities Committee

From: Todd Stuart, Executive Director
Wisconsin Industrial Energy Group, Inc.

Re: Support for Assembly Bill 401

Date: September 15, 2009

Thank you for the opportunity to present testimony on this important subject. The following comments are submitted on behalf of the members of Wisconsin Industrial Energy Group, Inc. (WIEG) in support of Assembly Bill 401.

WIEG is a non-profit association of 30 large energy consumers that advocates for policies supporting affordable and reliable energy. Since the early 1970s, WIEG has been the premiere voice of Wisconsin ratepayers and an engine for business retention and expansion. Our member companies spend over $200 million annually on electricity, and collectively employ more than 50,000 Wisconsin residents, who are themselves state taxpayers and utility ratepayers. WIEG members represent most major Wisconsin manufacturing industries, including paper, food processing, metal casting and fabricating.

Industrial customers are very concerned about the reliability of electricity at affordable rates. WIEG members often spend one million dollars or more on their monthly electric bill.

Wisconsin used to be among the cheapest places in the country to buy electricity for homes and businesses. Now, according to federal statistics, we're among the highest in the Midwest. Our rates have gone up over twice the rate of inflation over the last decade. Over $1 billion in higher rates have been approved in just the last five years causing some industrial rates to double. That extra $1 billion in rates means an extra $180 per year for a household and millions of dollars for the state's biggest factories.

The situation could get worse if we are not careful. Wisconsin is currently facing billions in utility-related infrastructure costs over the next decade. Much of this is due to government mandates for renewable energy and environmental compliance for air emissions standards. These estimates are conservative, as they are policies that are already on the books and it does not factor in the costs of federal climate change legislation or even the mandates in the Governor's Global Warming Task Force.

10 E. DOTY STREET | SUITE 800 | MADISON, WI 53703 | PH: 608 441 5740 | FAX: 608 441 5741 | WIEG.ORG

For example, the current 10% renewable mandate causes problems for energy consumers. In order to meet the mandate, state utilities must add billions in new generation, often at a cost premium. This policy does not make sense especially under current economic conditions with significant demand destruction and industry exiting the state. The mandate is leading to some absurd consequences and adverse cost impacts.

On one hand you have utilities seeking roughly $150 million in rate increases to recover money from the declining sales of electricity, yet at the same time having to add significant amounts of renewable generation when the state's utilities have surplus generation capacity. This pushes the rate increase request even higher at a time when we can least afford it. Utilities must build an estimated 1,600 megawatts in new generation in order to comply with the 10% renewable mandate and therefore traditional legal benchmarks of cost and need for new infrastructure are getting trumped by the 10% renewable mandate's very specific generation targets.

That is why WIEG is supporting AB 401. We advocate for policies that drive affordable, efficient and reliable energy. WIEG member companies are facing increasing energy prices in Wisconsin, a brutal recession and are dealing with fierce global competition. In order to manage these rising energy costs and stay competitive, companies need to find practical ways to use less energy and earn a quick return on their investments.

One of the most efficient ways to reduce energy use is to utilize technologies such as direct solar renewable energy technology, and solar light pipe technology in particular. Under the bill, renewable resource credits would be created based on the amount of electricity displaced by the renewable energy resources including direct solar applications such as solar water heating and solar light pipe technology, direct use geothermal applications and other direct use renewable energy resources. WIEG believes that AB 401 is a sensible change to the state's current 10% standard and the bill should help mitigate the significant rate impact of the renewable mandate.

It should be mentioned that WIEG opposes the proposed 25% renewable mandate in the Governor's Global Warming Task Force due to the unprecedented capital expenditures, rate impacts and policies that are potentially above the pending federal legislation that will further deteriorate Wisconsin industry competitiveness. If the Legislature decides later this session to expand the renewable mandate, then language similar to AB 401 must be implemented. The definition of generation resources that qualify as "renewable" simply must be expanded in order to provide rate relief and greater flexibility in meeting the renewable mandates.

In conclusion, energy, economic development and environmental policy are all inextricably linked together. Wisconsin is struggling to cope with rapidly escalating energy costs and the loss of good-paying manufacturing jobs. Wisconsin has lost 58,000 last year and over 150,000 manufacturing jobs in the last decade -- jobs that pay 25% or more than the statewide average wage.

AB 401 will help manufacturers achieve higher levels of conservation and gain improved efficiency. This bill is a good example of policy that can protect the environment, save money and promote manufacturing job growth, which is needed now more than ever. Thank you for your time and consideration and I can respond to any questions that you may have.

SIERRA CLUB
FOUNDED 1892

John Muir Chapter

Sierra Club - John Muir Chapter
222 South Hamilton Street, Suite 1, Madison, Wisconsin 53703-3201
Telephone: (608) 256-0565 Fax: (608) 256-4562
http://wisconsin.sierraclub.org

In Opposition to AB 401/SB 273
Creation of Renewable Resource Credits for Solar Light Pipes

Before the Assembly Committee on Energy and Utilities and

By Caryl Terrell, Sierra Club Legislative Committee Chair

September 15, 2009

The Sierra Club does not support Assembly Bill 401/ Senate Bill 273 which undermines the State definition of renewable energy by creating renewable resource credits (RRCs) for direct solar applications such as solar light pipe technology. The Sierra Club opposes any change to the current Renewable Portfolio Standard, RPS, that would allow efficiency and conservation to count towards our renewable energy goals. Efficiency mandates should be separate in order to create more jobs and more reductions in greenhouse gases in Wisconsin.

The Sierra Club strongly supports clean energy companies and expanding clean energy job opportunities in Wisconsin. We support innovative energy efficient lighting manufacturers such as Orion Energy Systems of Manitowoc and Rudd Lighting of Racine. Energy efficiency is the cheapest, cleanest and smartest strategy for controlling energy costs, stimulating Wisconsin jobs that cannot be out-sourced and controlling emissions of greenhouse gases.

The purpose of AB 401/SB 273is to allow solar light pipes, such as Orion manufactures, to count as renewable energy sources and add these new items to the current Renewable Portfolio Standard, RPS, (s.196.378, Wis. Stats.).

Direct solar applications such as solar light pipe technology do not generate electricity. They are excellent efficiency and energy conservation technologies and should be supported as such. Within Chapter 196, the use of "renewable energy" and "renewable resource" must be consistent with the definitions of these words. Solar light pipe technology is not appropriately covered by the statutory definition, s. 196.378 Renewable resources. (1) DEFINITIONS. (fg) "Renewable energy" means electricity derived from a renewable resource.

Such a change will actually result in LESS investment and jobs in critical local, renewable energy sources that currently qualify under Wisconsin's RPS, like solar, wind, and biomass. There are more optimal ways to incentivize the innovative products described in AB 401 and SB 273 other than undermining Wisconsin's renewable energy standards. The State Energy Program - Recovery Act (SEP-ARRA) - Clean Energy Business Loan Program, promoted by the Wisconsin Office of Energy Independence and administered by the Department of Commerce, incentivizes advanced energy efficient lighting products (http://commerce.wi.gov/BD/BD-SEP-ARRA.html).

This issue was discussed by the Governor's Global Warming Task Force. Their recommendation reads:

"Enhanced Renewable Portfolio Standard (RPS)

The definitions of renewable energy and renewable resources in the existing RPS law would be expanded to include the thermal portion of Wisconsin co-generation projects fired with biomass, as well

as biogas produced in Wisconsin that is put in the natural gas pipeline system, solar water heating and other verifiable renewable applications that displace fossil fuel use."

Page 25 second paragraph under Enhanced RPS, Wisconsin's Strategy for Reducing Global Warming, Final report of the Governor's Global Warming Task Force, July 2008

http://dnr.wi.gov/environmentprotect/gtfgw/documents/Final_Report.pdf

The Task Force also recommended that

"there should be no limit on these of renewable resource credits to meet the revised standards in this Proposal, so long as the underlying resource for the REC qualifies as a "renewable resource" under Wisconsin law." Page 112, http://dnr.wi.gov/environmentprotect/gtfgw/documents/Final_Report.pdf

These bills allow use of RECs derived from light pipe technology for up to four years. Thus these bills will actually result in LESS investment and jobs in Wisconsin.

We look forward to seeing a more comprehensive bill that will implement all of the Governor's Global Warming Task Force's recommendations soon. We urge you not to support AB 401/SB 273.

Thank you for this opportunity to state the Sierra Club's position.

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Tony Bartol

Hello and thank you for allowing me to comment.

My name is Tony Bartol. I am a registered Professional Engineer and licensed Master Plumber in Wisconsin. Currently, Chief Technology Officer and VP of Technical Services at Orion Energy Systems in Manitowoc, Wisconsin. In addition to new products, I frequently evaluate other energy products on a technical basis. From perpetual motion machines to things that actually work.

I've been working on renewable energy since 1978 off and on and nearly full time for the last few years. In addition to the solar light pipe, we are installing solar hot air, solar photovoltaic, microturbines and demand reduction thermal storage systems. We are working on other renewable technologies as well.

I am in favor of the proposed legislation. There is nothing more renewable than the sun. And nothing that utilizes the sun's energy more effectively than the solar light pipe.

Most renewable technologies CONVERT energy from the sun to do work. There is a price to pay to do that conversion. Both in energy loss and reliability. Wind is power derived from the sun through differential heating of the earth's surface. Photovoltaic converts and transforms the sun's energy. Solar thermal converts the sun's energy to heat in a heat transfer medium.

The light pipe uses the sun's energy directly. Direct use solar is simply transferred in a very usable manner to allow electric light fixtures to be turned off, thereby negating the need to power them at the time of day when a utility is most stressed.

Without any conversion, moving parts or required attention or maintenance, losses are FAR lower. 70% of the sun's energy hitting the dome of the light pipe is delivered to the workers' eyes. This is a far higher percentage than any other renewable.

There is an economic component to direct use solar that many don't realize. Good daylighting technology is 4 to 10 times more cost effective than using photovoltaic or wind to power the electric lights that can be simply turned off with good daylighting via the solar light pipe. I can go through those numbers quickly if you would like.

Good daylighting is more reliable and predictable than any other renewable technology.

Good daylighting is also far healthier and increases productivity.

The Orion solar light pipe has brought much needed work to Wisconsin. All of the components of the light pipe are made in Wisconsin. From the plastic supplier cutting blanks to the diffuser molder, to the dome maker, container maker, flashing spinner, installing contractors, etc.

The light pipe is easy to install since it is shipped fully assembled.

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Tony Bartol

It is available to deploy now. There are no strategic materials used in its manufacture or install. No special skill is required to implement the technology. There are no NIMBY concerns from neighbors. There are no roof loading problems as with other technologies. No damage from weather. No negative impacts on anything. It is an install and forget product.

The Orion Solar Light Pipe is the best performing and highest value product in the market and thus gives Wisconsin a competitive advantage in renewable energy.

This legislation will help us to get many more of them in the field with the result of more good jobs in Wisconsin.

I urge you to support Assembly Bill 401 and thank you for your leadership on this important issue to Wisconsin's economy and environment.

clean wisconsin

your environmental voice since 1970

Testimony on Assembly Bill 401
Ryan Schryver, Clean Energy Advocate
Assembly Energy and Utilities Committee
9/15/09

Clean Wisconsin is a non-profit organization that advocates for sound environmental policies on behalf of roughly 10,000 members across the state. Clean Wisconsin played a major role on the Governor's Global Warming Task Force participating on three of the working groups, and co-chairing two of the working groups including the electric generation working group that developed recommendations for changes in the renewable portfolio standard.

We applaud the commitment of Chairman Soletski and the bill author Representative Zigmunt for showing leadership in the area of clean energy.

First and foremost, we want to be clear that we fully support Orion's light pipe technology; we believe it has great potential to reduce greenhouse gases and other harmful emissions by reducing electricity used in lighting. We have had several meetings with Orion about the technology and we will continue to work with them to new avenues to promote this exciting technology. We are committed to working with you, and other policy makers to pursue the best policies and incentives to get as many light pipes manufactured, sold and installed as quickly as possible.

Our problem with the bill is that it ignores a delicate compromise made to increase Wisconsin Renewable Portfolio Standard as part of the Governor's Global Warming Task Force.

The Task Force recommended an increase in the RPS to 25% by 2025. In exchange for that increase, the definition of renewable technologies that qualify under the RPS was expanded to include the thermal portion of co-generation projects fired with biomass, as well as biogas produced in Wisconsin that is put in the natural gas pipeline system and solar water heating. AB 401 expands the definitions, as the Task Force did, but without the other half of the agreement to increase the RPS.

To complicate things further, AB 401 expands the definition of renewable energy beyond those agreed upon in the task force to count technologies such as geothermal. While geothermal is also a promising technology for cutting natural gas use, many in the industry are concerned that the electricity needed to run the underground pumps may actually INCREASE overall electricity load. The fact that this technology could end up being counter productive is one of the reasons the Task Force did not include geothermal in their recommendations and why counting this technology toward our renewable energy standard is unwise at this time.

Community Shares of Wisconsin
Community Shares of Greater Milwaukee

122 State Street • Suite 200
Madison, WI 53703-4333
www.cleanwisconsin.org

Phone 608-251-7020
Fax 608-251-1655
Email: info@cleanwisconsin.org

Printed on recycled paper using soy based inks.

That brings us to Orion Energy's Solar Light Tube technology. As I previously stated, we are extremely supportive of this technology and are working to identify avenues to aggressively promote and deploy this technology across Wisconsin and eventually the country, but we have concerns about promoting it through the renewable energy standard and outside of the recommendations of the Task Force.

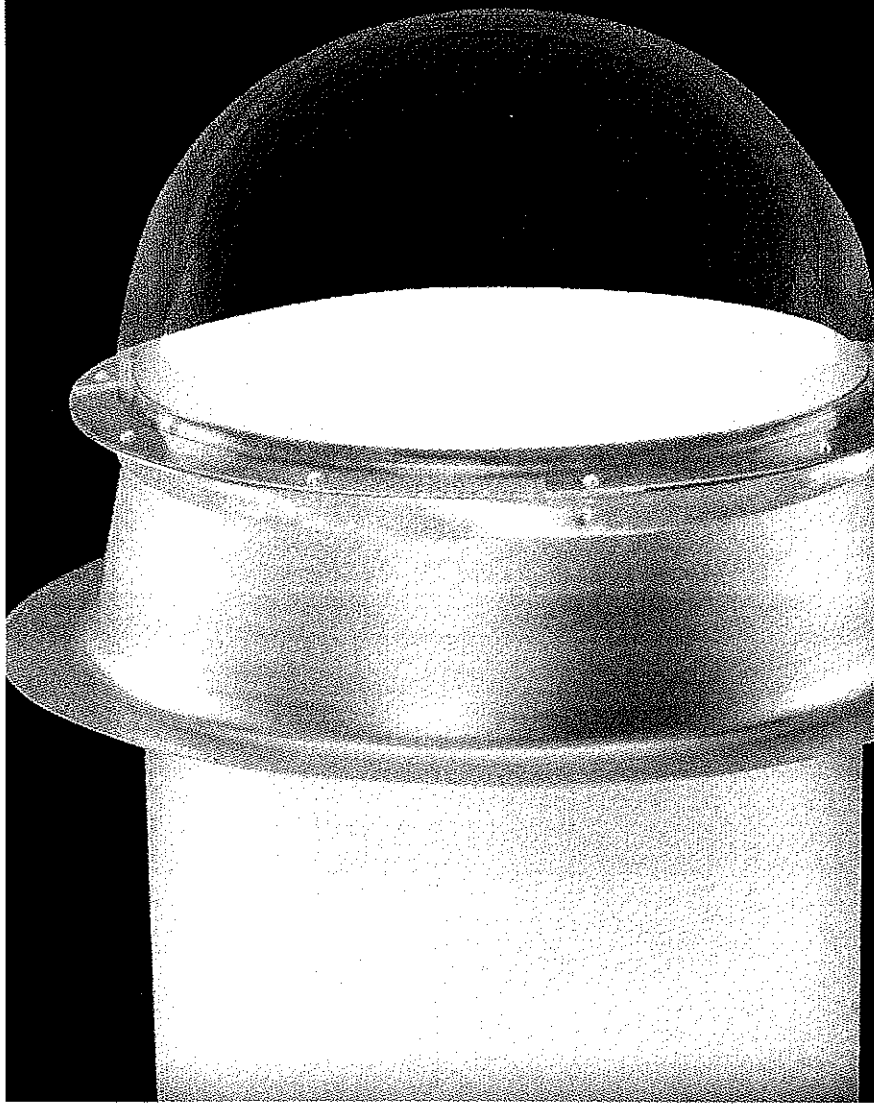
The light tube technology does not actually generate electricity, but saves or avoids USING electricity. Renewable energies are defined as those that actually generate electricity, like solar and wind. Again, I want to make clear that saving energy is a good thing, but defining it as a renewable energy producer is a very slippery slope. Surely Alliant should not get a renewable electricity credit because I install a compact fluorescent lightbulb in my house.

If the bill's primary purpose is to create an incentive for purchasing and installing light pipes we believe there are much more effective and faster ways to do that. We have one of the nation's best statewide programs – Focus on Energy – for delivering incentives to install energy efficiency, conservation and customer sited renewable technologies. The Public Service Commission opened a docket months ago that specifically aims to significantly increase funding for Focus on Energy and review its scope. The timing really couldn't be better to consider adding a rebate incentive program to reduce the cost of installing a technology such as the light pipes. This approach has several obvious advantages over the RPS expansion including reducing the overall cost of the product and creating an incentive for all business and home owners to purchase them directly. It also has the advantage of creating a major incentive much faster because it doesn't depend on legislation and rule making which would be complex and take about a year.

We feel that it is critical that any discussion of changing the RPS needs to take place in the context of the Governor's Task Force legislation and we are grateful for Chairman Soletski's leadership in helping to draft that critical legislation. But again, we think there are much faster and more effective ways to create light pipe incentives.

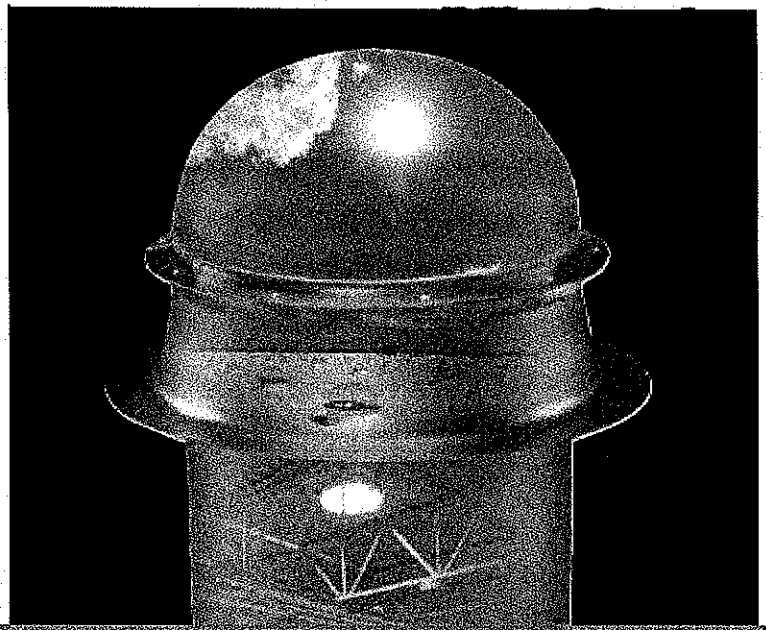
As I said earlier, we look forward to working with all of you to create the most effective incentives for this promising technology and thank you again for this opportunity.

Apollo® Solar Light Pipe



www.oesx.com

ORION



Orion's patented Apollo ® Light Pipe utilizes the lowest cost light available—the sun. Sunlight is harvested through the revolutionary dome and travels through the sealed light pipe. Magnified sunlight then enters the building, effectively lighting specific work areas.

The Apollo® Light Pipe is designed to be a one-for-one daytime replacement of a typical electrical lighting fixture. When combined with other Orion technologies, your organization can completely remove itself from the electrical grid for significant periods of time.

PROVEN RESULTS |

2008 Plant Engineering Product of the Year Grand Award

2008 Platts Global Energy Award: Sustainable Technology Innovation of the year for its energy efficient and direct renewable technology. Recognized internationally for single most innovative advance in green technology.

"The new fixtures provide better light, are more efficient and help reduce Miller's energy consumption. New motion sensors automatically conserve energy when the lights are not needed and the integrated light pipes determine and regulate the amount of light needed, if at all, during daylight hours."

—MILLER'S 2008 SUSTAINABLE DEVELOPMENT REPORT

Miller Brewing Co. Annual Savings

Energy Savings	$127,365
Displaced Energy	2,122,751 kWh
Displaced Capacity	197 kW

ORION

LIGHT YEARS AHEAD®

Coca-Cola®

BRIGGS & STRATTON®

SYSCO®

U.S. FOODSERVICE

POLO RALPH LAUREN

ORION'S breakthrough technologies allow organizations to gain a true competitive advantage. When combined with our innovative line of high-intensity fluorescent fixtures, and the Orion InteLite® Control Platform, the Apollo® Light Pipe becomes a key part of an intelligent energy management system. This integrated system often allows an organization to completely remove itself from the electrical grid for significant periods of time. The significant economic impact goes straight to enhancing the bottom line.

Apollo® Light Pipe

Platts 2008 Global Energy Award
Sustainable Technology Innovation of the year for our energy efficient and direct renewable technology.
Recognized internationally for the single most innovative advance in green technology.

"Direct" Renewable Energy Source

Renewable energy is from a resource that is replaced by a natural process at a rate that is equal to or faster than the rate at which that resource is being consumed.

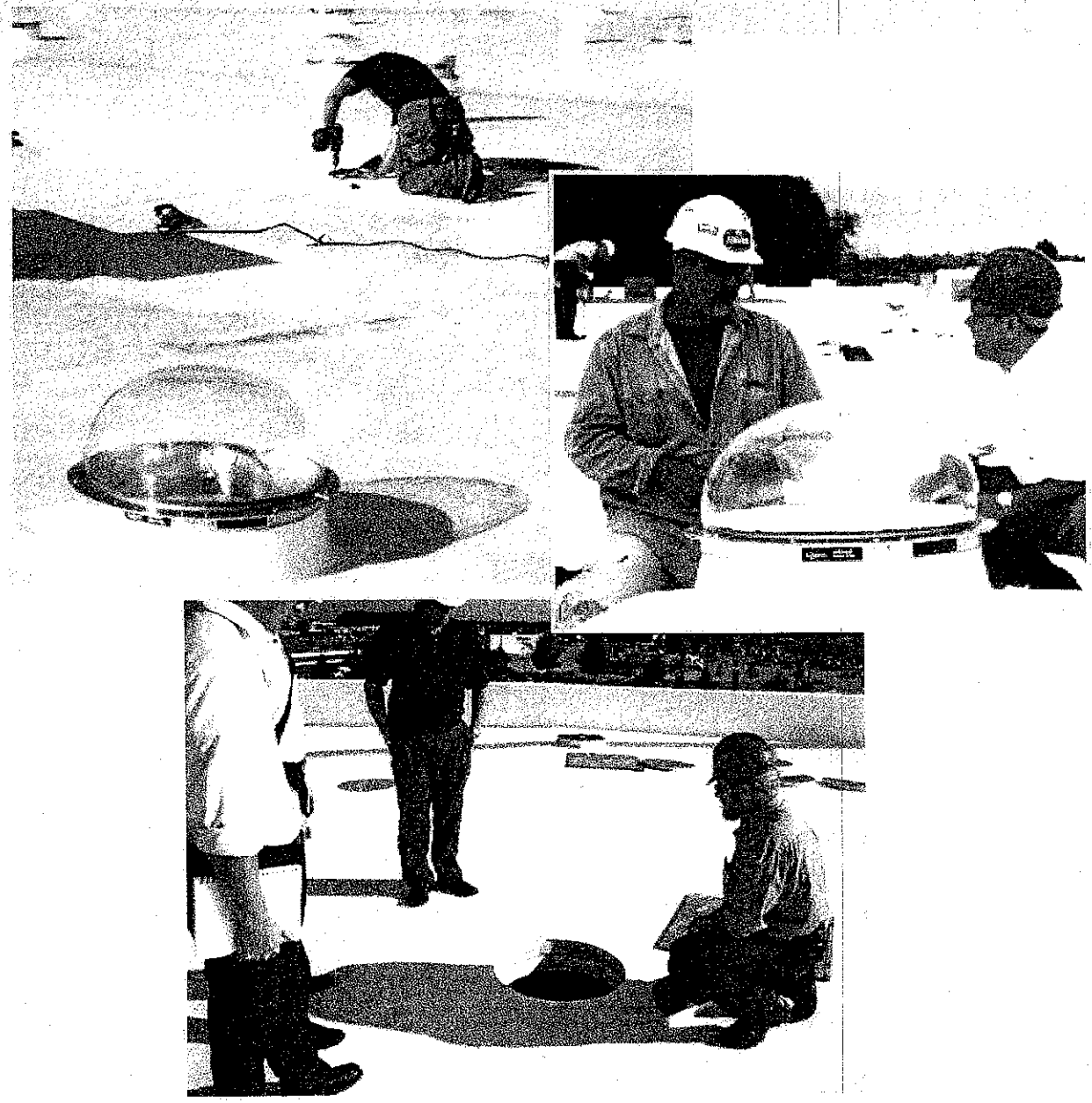
Orion's Apollo® Light Pipe uses "Direct" concentrated daylight, from a very abundant renewable energy resource, the Sun.

Orion's three phase management Platform and the Apollo Light Pipe along with the daylight it delivers systematically reduce and/or eliminate the burning of fossil fuels to artificially light an interior space.

The Apollo® Light Pipe captures full or diffused daylight everyday throughout the year at low to high sun angles, concentrating and delivering solar daylight to the interior space below at reduced to no cost.

ORION
LIGHT YEARS AHEAD.

www.oesx.com



Tuesday, September 15, 2009
Assembly Committee on Energy and Utilities
2:00pm, State Capitol 225 Northwest
ASSEMBLY BILL 401

This proposed legislation will PUT PEOPLE BACK TO WORK NOW. It is a common sense GREEN JOBS STIMULUS PACKAGE.

Assembly Bill 401 is that all too rare WI crossroads junction where good business, labor, public and environmental policy intersect. That is why the Economic Development Corporation of Manitowoc County heartily endorses this legislation relating to creation of renewable resource credits by electric providers for "direct-use renewables" and granting rule-making authority. It needs to be acted upon now.

This legislation is common sense. Direct solar renewable energy technologies represent a relatively new and effective way to provide abundant, renewable and carbon-free energy to illuminate large commercial and industrial spaces. Manufactured in WI, the solar light pipe in particular uses direct solar energy to illuminate the inside of a building, eliminating the need for electrical light fixtures during many of the daylight hours. The sun is the most abundant, renewable source of energy on earth and direct-use renewable energy will help Wisconsin workers and businesses gain a competitive advantage.

At a time when our country is struggling to come out of our longest and deepest economic downturn since the Great Depression, lawmakers must be focused on policies that provide incentives for businesses that create jobs and grow.

Equally important is the fact that installation of these technologies foster green job creation across the state of Wisconsin for roofers, carpenters, electricians and manufacturers.

Immense opportunity awaits. Now is not the time to delay action on this important legislation.

Commons sense dictates that we employ "Direct Use Renewables" in our state's renewable resource strategy.

The Economic Development Corporation of Manitowoc County enthusiastically joins the many labor, business and community organizations in encouraging you to support AB 401. Your leadership on this important issue is greatly appreciated.

Economic Development Corporation
OF MANITOWOC COUNTY

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Greg Barrett

Hello.

My name is Greg Barrett and I am employed at Orion Energy Systems in Manitowoc, Wisconsin where my 250+ co-workers and I manufacture the Apollo Solar Light Pipe, a direct-use renewable technology.

My job manufacturing the solar light pipe is important to my family and to Wisconsin's environment and economy.

Direct-use renewable technology such as the kind we manufacture provides abundant, renewable and carbon-free energy which will allow Wisconsin businesses to gain a competitive advantage.

Furthermore, installation of direct-use renewable technologies will foster "green" jobs creation in the thousands across the state of Wisconsin including manufacturers, electricians, carpenters and roofers.

Now is not the time to delay action on this important legislation.

This proposed legislation will REDUCE Green House Gasses and other harmful pollution AND PUT PEOPLE BACK TO WORK NOW.

We need to employ "Direct Use Renewables" in our state's renewable resource strategy.

I urge you to support AB 401.

Your leadership on this important issue is greatly appreciated.

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Mike Cantwell

Hello.

My name is Mike Cantwell and I am employed at Orion Energy Systems in Manitowoc, Wisconsin where my 250+ fellow workers and I manufacture the Apollo Solar Light Pipe, a direct-use renewable technology.

Direct-use renewable technology such as the kind we manufacture provides abundant, renewable and carbon-free energy. Direct-use solar is the purest form of renewable energy available. This significantly reduces carbon emissions and green house gas emissions AND helps Wisconsin businesses gain a competitive advantage.

Most importantly, this legislation is a about jobs creation. My job manufacturing the solar light pipe is important to my family and to Wisconsin's environment and economy. Now is not the time to delay action on this important legislation.

This proposed legislation will REDUCE harmful pollution while PUTTING PEOPLE BACK TO WORK NOW.

We need to employ "Direct Use Renewables" in our state's renewable resource strategy.

I urge you to support AB 401.

Your leadership on this important issue is greatly appreciated.

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Joel Sandersen

My name is Joel Sandersen and I am employed at Orion Energy Systems in Manitowoc, Wisconsin where my 250+ co-workers and I manufacture the Apollo Solar Light Pipe, a direct-use renewable technology.

Direct-use renewable energy reduces greenhouse gas emissions that harm our environment. Wisconsin needs an energy plan that reduces the need for generating energy from fossil fuels and that replaces those fossil fuels with clean, renewable energy sources.

For example, direct solar energy, just one of the types of direct-use renewable energy supported by this bill, has the potential to provide 250 MW of peak load capacity relief and 520,000,000 kWh in equivalent energy production.

Moreover, direct solar energy alone is likely to create an additional 5,300 jobs for the state of Wisconsin.

In addition, direct solar energy has the potential to avoid harmful emissions, in particular: 447,234 tons of CO_2 avoided; 1,597 tons of SO_2 avoided; 625 tons of NOx avoided; and 19.3 pounds of mercury avoided;

Stated simply, the installation of just four (4) light pipes avoids the release of one (1) ton of carbon dioxide into the atmosphere each year.

Finally, the environmental impact of the pollution avoidance through the implementation of just one the direct-use renewable technologies such as direst use solar would be equivalent to:

- 95,413 acres of trees planted
- 83,980 cars removed from the road
- 42,926,520 gallons of gas saved
- 1,022,060 barrels of oil saved

Now is not the time to delay action on this important legislation. **We need to employ "Direct Use Renewables" in our state's renewable resource strategy. I urge you so support AB 401.**

Your leadership on this important issue is greatly appreciated.

Testimony, Assembly Bill 401 Public Hearing
Tuesday, September 15, 2009
Tina Prigge

My name is Tina Prigge and I am employed at Orion Energy Systems in Manitowoc, Wisconsin where my 250+ colleagues and I manufacture the Apollo Solar Light Pipe, a direct-use renewable technology.

The federal government is currently considering legislation that would require utility companies to generate 25 percent of their power from renewable resources by 2025. Proven and measureable direct-use renewable technologies are ready to be deployed now. Assembly Bill 401 would allow Wisconsin utilities to use direct use renewable energy to meet their obligations under the Renewable Portfolio Standard (RPS).

At a time when our country is struggling to come out of our longest and deepest economic downturn since the Great Depression, lawmakers should be focused on policies that provide incentives for businesses so they can create jobs and grow.

The sun is the most abundant, renewable source of energy on earth and direct-use renewable energy will help Wisconsin businesses gain a competitive advantage.

Assembly Bill 401 is supported by Wisconsin mayors, businesses, laborers and people who care about protecting Wisconsin's environment.

Wisconsin needs to be "True Green". We need to employ "Direct Use Renewables" in our state's renewable resource strategy.

I urge you to support AB 401.

Thank you for your leadership on this important issue.

LEAGUE OF WOMEN VOTERS® OF WISCONSIN EDUCATION FUND

122 State Street, #201A
Madison, WI 53703-2500

Phone: (608) 256-0827
Fax: (608) 256-1761

http://www.lwvwi.org
lwvwisconsin@lwvwi.org

September 14, 2009

To: Assembly Committee on Energy and Utilities

Re: Opposition to AB 401/SB 273

Although at first blush AB 401/SB 273 looks like a good bill, the League of Women Voters of Wisconsin Education Fund opposes it. The bill inappropriately expands the definition of a renewable resource credit to allow electric utilities to take credit for what is properly classified as an energy efficiency, or energy conservation, measure. While we believe light pipe, or solar tube, technology is an important tool, it should be supported in a way that does not dilute our renewable portfolio standard.

Wisconsin's current renewable portfolio standard (RPS) requires electric utilities to increase the share of the electricity they generate from renewable resources so that 10% of Wisconsin's total electricity consumption originates from renewable resources by 2010. Renewable resources include such things as wind, photovoltaic systems, biomass, geothermal, and fuel cells. If a utility exceeds the required percentage in a year, it creates a credit (renewable resource credit or RRC) which it may use the following year or sell to another electric provider.

The Governor's Task Force on Global Warming recommended that the RPS be modified to require that the 10% requirement be moved up from 2015 to 2013, and that 20% by 2020 and 25% by 2025 be added to the law. The Task Force also recommended that the definition of a renewable resource be expanded to include the thermal portion of co-generation projects (i.e. projects that generate both heat and electricity), biogas, and solar hot water.

AB 401/SB 273 would amend the RPS to include the technologies already included in the task force's recommendation, but would add "solar light pipe" technology. Light pipes, sometimes known as solar tubes, are devices which direct outside sunlight to the interior of buildings without the use of electricity. We have a manufacturer of light pipes right here in Wisconsin that is a leader in the energy efficiency field. Light pipes are an exciting new technology that could dramatically reduce the electricity used by lighting in buildings.

Light pipes deserve to be supported and subsidized by the state, but don't belong in the definition of "renewable resource" and should not count towards a utility's requirement to sell an increasing share of electricity generated by renewable resources. To count them would weaken the current RPS by allowing utilities to generate less electricity from renewable resources than otherwise required, and could open the door to allow utilities to count everything a customer might use to conserve electricity or use electricity more efficiently (CFLs, more windows for daylight, motion sensor switches).

Light pipes help to maximize the use of natural light from the sun and reduce the need for electricity-powered lights. They are thus more properly classified as energy conservation, or energy efficiency, products. The Governor's Task Force on Global Warming recommended a significant increase in Wisconsin's investment in energy efficiency. Part of that investment should go towards supporting and subsidizing light pipe technology, along with other technologies and products that will help to conserve electricity or use it more efficiently. It is not necessary to dilute our RPS law to achieve that goal.

TESTIMONY OF ROBERT GUENTHER, BUSINESS REPRESENTATIVE– NORTH CENTRAL STATES REGIONAL COUNCIL OF CARPENTERS, BEFORE A HEARING OF THE ASSEMBLY ENERGY AND UTILITIES COMMITTEE REGARDING AB 401

September 15, 2009

The passage of AB 401 would provide hundreds of jobs for carpenters and thousands of hours of work for carpenters in Wisconsin. Additionally, passage of this bill could provide ten of thousands of jobs and hundreds of thousands of carpenter hours in the United States and Canada.

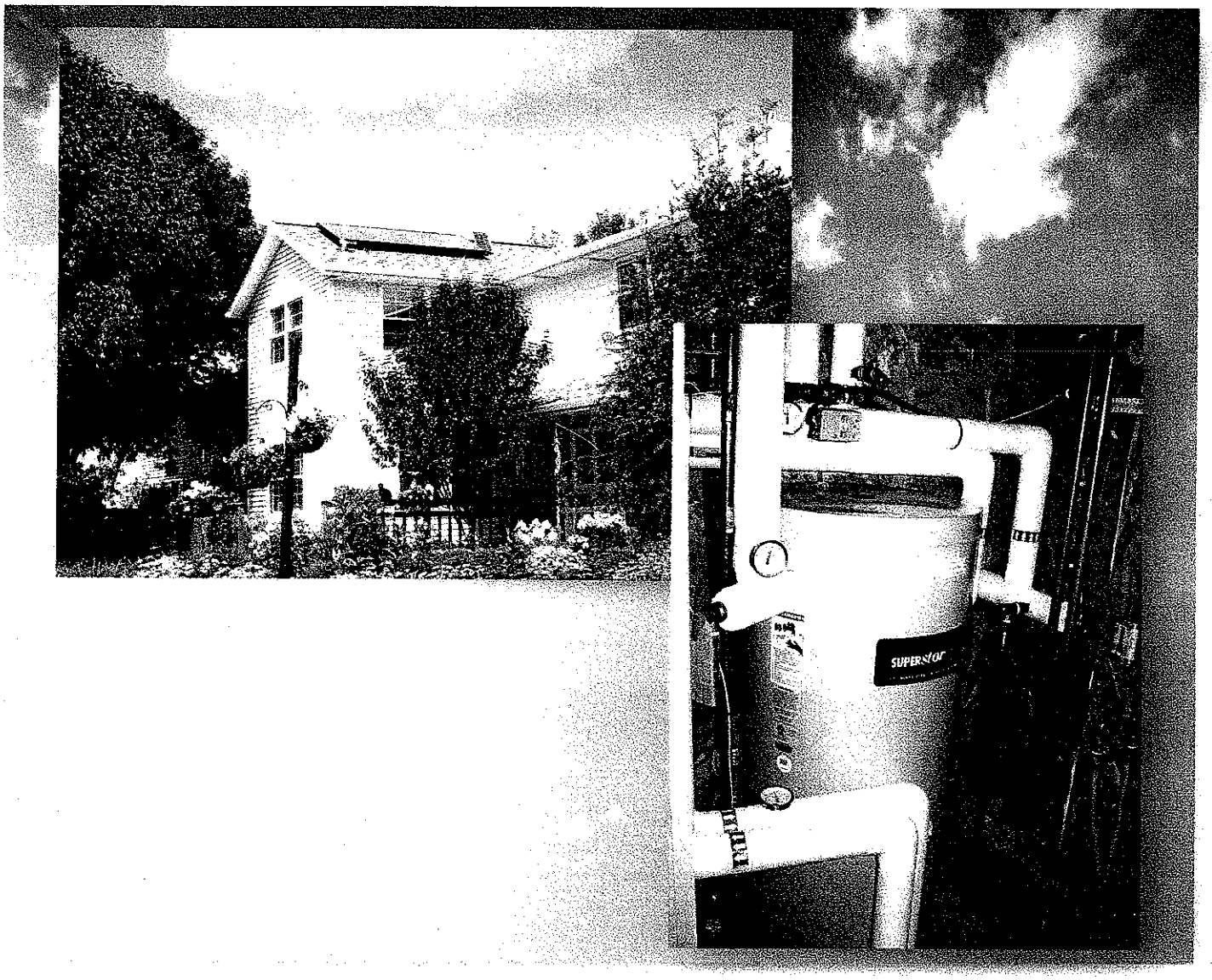
The United Brotherhood of Carpenters and Joiners (UBC) are in the process of training our members to be certified to install Orion's solar Apollo Light Tubes. We have worked closely with Orion to develop curriculum and training to meet their installation needs. With the use of certified installers, Orion would extend its current 10 year warranty to 15 years.

One of the requirements to become certified consists of total station certification. This is a process that uses a GPS system to locate the tubes on the roof after inside verification has been done to ensure pipes, conduits or other obstructions will not be in the way of roof penetration. It will ensure lights are equally spaced vertically, horizontally and diagonally. Safety and advanced math skills are also required. The carpenters will then cut the roof opening to receive the solar tubes. On a pitched roof an elliptical opening will need to be cut, and a curb and flashing will need to be installed. On asphalt, wood or metal roofs, the carpenters will need to reinstall the roofing around the solar tube.

One example of Orion's solar Apollo Light Tube customer projects requires the installation of over 2,000 light tubes on its warehouse. There are numerous other customers with similar needs.

With unemployment of our members currently over 20%, these jobs will help reduce unemployment and allow carpenters to provide for their families. In areas without certified installers, carpenters could be called upon to perform the installation.

The passage of AB 401 will provide living wage jobs for carpenters who live, work, spend and pay taxes in Wisconsin. Thank you for your time.



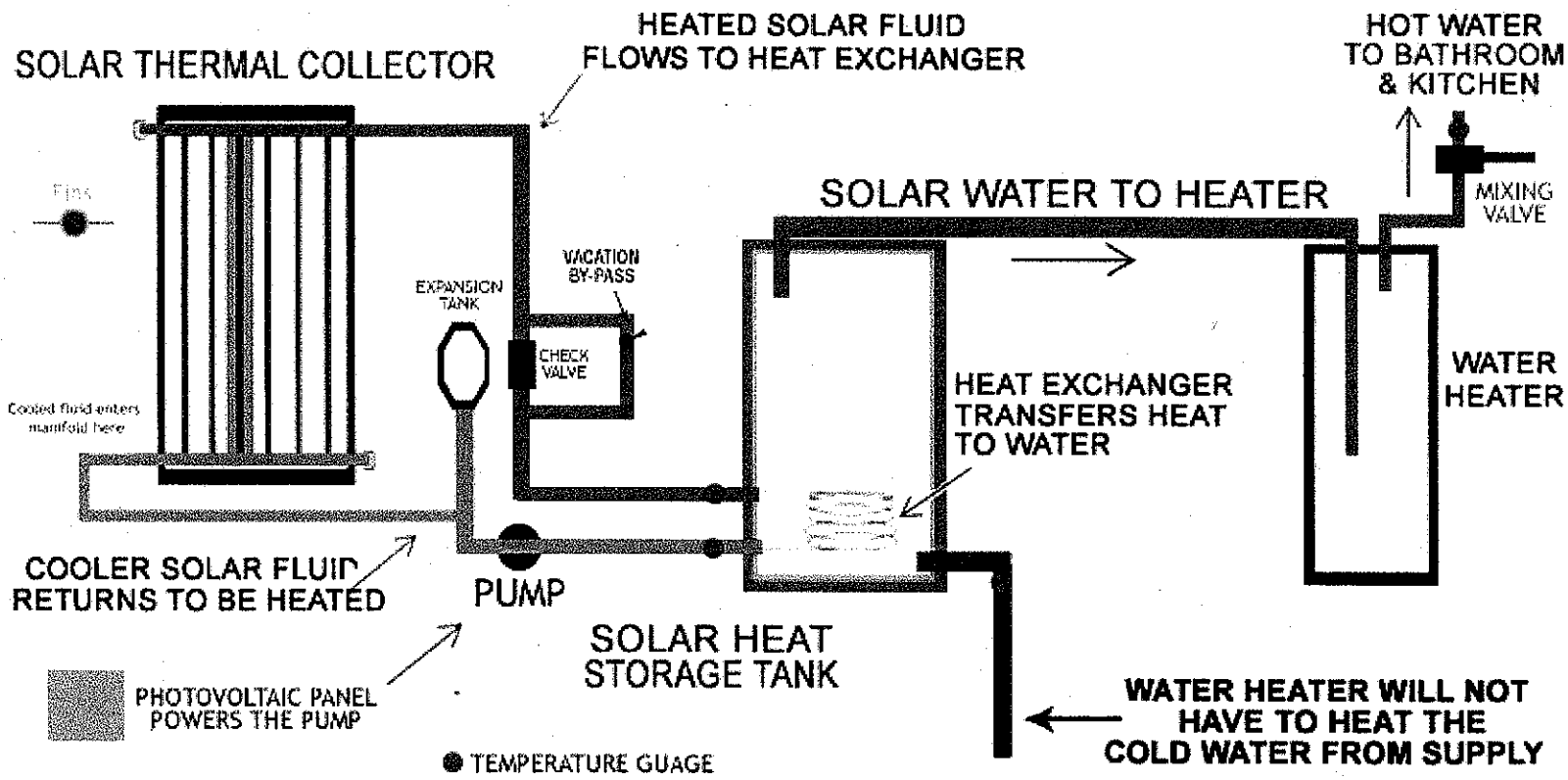
Testimony Presented to Energy and Utility Committee, 4 Minutes

September 15, 2009

Richard Larson, President
GreenSky Energetics, Inc.
1.888.684.5115
www.greenskyenergetics.com

GreenSky energetics, Inc.
SOLAR ENERGY SOLUTIONS

SUN HEATS THE FLUID FLOWING THROUGH THE SOLAR THERMAL COLLECTOR



Thank You, Representative James Soletski. Committee Members.

Assemblyman Ted Zigmunt, thank you for your interest in Solar Domestic Water Heaters, and for drawing my attention to this hearing.

In your investigation of what a solar water heater is, you certainly went beyond what I would expect of an elected official.

Committee Members:

GreenSky installs Solar Domestic Water Heaters - a device highlighted in 2009 Assembly Bill 401 – which is designed to preheat water before it enters a water heater.

These Solar Heaters are primarily installed on homes.

In terms of comparing all the renewable energy-producing devices available to the home owner, a Solar Domestic Water Heater requires the lowest amount of investment.

Solar Domestic Water Heaters can be integrated into a home so as to not draw the ire of neighbors or city planners.

Wisconsin receives an average of 2400 hours of sunlight per year, and since people use hot water all year long, a Solar Domestic Water Heater can take advantage. It even matches our habits – in that we take more showers and wash more clothes in the summer, when there are more sunny days.

The single solar collector highlighted on the front cover of the pamphlet is designed for a 2 occupant home and will displace 1.15 Metric Tons of Green House Gases per year - when supplementing heated water to an electric water heater.

Ordinary citizens can participate in reducing these emissions by purchasing their own Solar Domestic Water Heater.

Properly sized to the number of occupants, it will save a home owner as much as 75 percent of water heater utility charges.

These savings must be included in the Wisconsin Renewable Portfolio Standard.

As such, counting these savings in the mandate - to increase energy from that which is renewable – will encourage utilities to recognize Solar Domestic Water Heaters with marketing and financial support.

Without being included in the mandate, this device might not be mentioned in utility board rooms at all.

I would like to make the Committee Members aware of Wisconsin's most sustainable source of energy comes directly from the Sun.

Solar Domestic Water Heaters could become the most widely distributed of all renewable energy devices now being installed in Wisconsin, as every home has the potential to use this device.

Those home owners are Wisconsin's. They are your voters.

The potential is there. GreenSky Energetics started from zero just over 2 years ago; installing 5 solar heating devices in 2007, 26 in 2008, and so far, 28 devices in this year 2009.

We now have 3 full-time installers – including GreenSky's co-owner and an Environmental Scientist, Andy Williams – one full time administrative assistant, and 2 sales people. I am working, but do not show up on the payroll record as of yet.

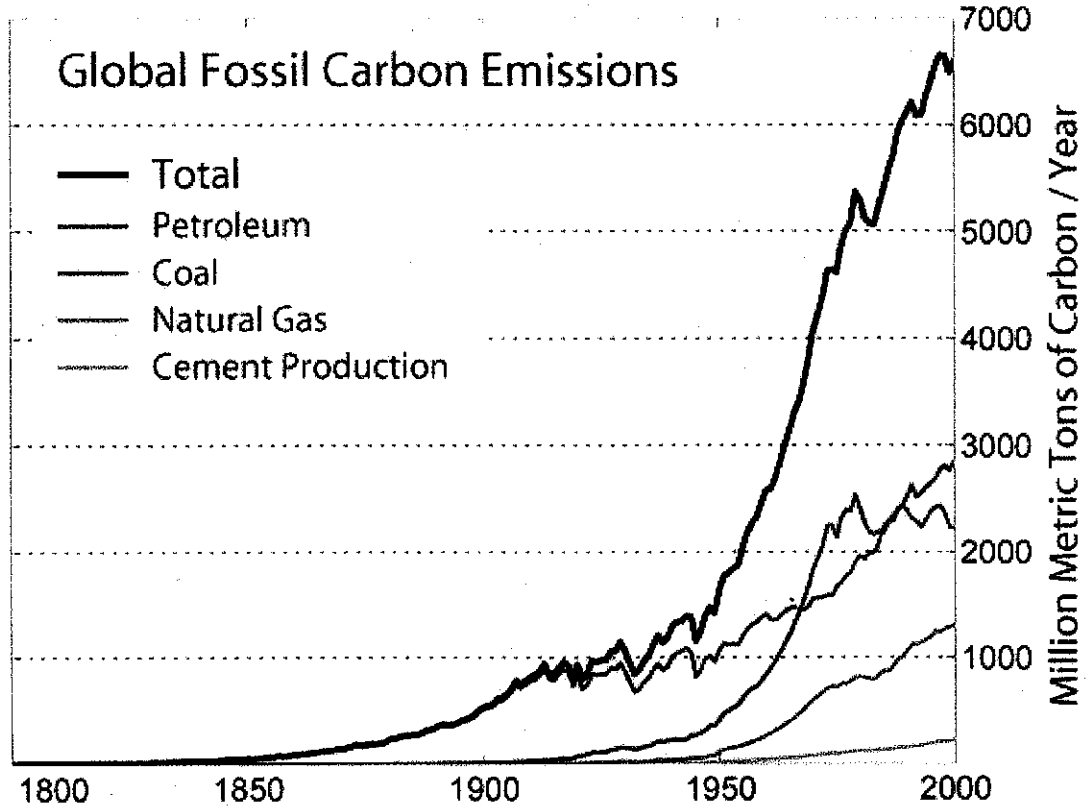
In conclusion, for every dollar spent installing a Solar Domestic Water Heater, I believe more jobs are created - than in installing any other renewable energy-producing device.

With help from this policy change, there could be thousands more Solar Domestic Water Heaters installed in Wisconsin. It will produce Green Jobs – in the long term paid for by reducing payments otherwise made to out-of-state suppliers in the purchase of future fossil fuel energy.

Thank you very much.

Let us work together to slow the flow of working capital out of Wisconsin

From Zero



To 12,500 Million Metric Tons

PRINTED ON PAPER MADE FROM STONE.
100% TREE FREE!

E4, Inc.
Committee on Energy and Utilities
September 15, 2009
Assembly Bill 401

Good afternoon Chairman Soletski and Members of the Committee,

I want to thank you for the opportunity to speak to you today about this very important bill that will shape the future of the economy in Wisconsin. My name is Elizabeth Rich and I am a Board Member of E4, an Environmental, Not-For-Profit, Organization that seeks to advance economic growth and environmental stewardship through the implementation of innovative, practical, sustainable, economically viable, and profitable energy solutions. I am also an attorney who has practiced environmental law in many parts of Wisconsin for 25 years. Assembly Bill 401 is a step in the right direction towards meeting the environmental goals that Wisconsin has set for itself and the nation. Wisconsin's goals have been to reduce our carbon footprint and our reliance on fossil fuels by increasing our renewable energy portfolio. This piece of legislation will be a step towards meeting all of these goals. If we are truly serious about energy independence and a clean environment, we need to expand, not limit, the renewable energy portfolio. Direct solar renewable energy applications such as solar water heating and the solar light pipe create the purest form of renewable energy available.

This piece of legislation will not only help reduce greenhouse gas emissions, but it will create "green" jobs in Wisconsin. Wisconsin cannot afford to sit back and wait for the economy to turn around nor can it stand by while or other states take the lead in direct use renewable energy. Arizona and North Carolina have already included direct solar renewable energy technologies in their own renewable portfolio standards. Wisconsin needs to take the reins and

provide a solution to the environmental issues facing our state and our nation, and put citizens back to work in each and every one of your districts. Assembly Bill 401 is a step towards doing just that.

Since the recession took hold in December 2007, Wisconsin has lost more than 20,000 constructions jobs and more than 140,000 jobs in all sectors (Center on Wisconsin Strategy, May 2009 Wisconsin Job Watch Update). Many of these jobs are being outsourced to different states and countries. Your citizens are counting on you to help keep and create jobs in Wisconsin. Direct use renewable energy will create "green" manufacturing jobs in our state and put hundreds of Wisconsin construction workers, roofers, plumbers, and electricians to work installing direct use renewable energy systems across the state.

Not only will direct use renewable energy reduce harmful greenhouse gas emissions that harm our environment, direct use renewable energy will allow Wisconsin businesses and ratepayers to save significant amounts of money. I urge you to open the door to increase Wisconsin's renewable energy portfolio instead of closing it. You have a unique opportunity in hard economic times to create thousands of jobs in this state and put citizens in your districts back to work. Your citizens are counting on you to do the right thing and VOTE YES TO ASSEMBLY BILL 401.

Very truly yours,

Elizabeth Gamsky Rich

CITY OF
MANITOWOC

Justin M. Nickels
Mayor

Representative Ted Zigmunt
PO Box 8952
Madison, WI 53708

RE: Testimony in favor of AB 401 – September 15, 2009
By: Manitowoc Mayor Justin Nickels for Assembly
Committee on Energy and Utilities

Dear Representative Zigmunt,

On behalf of the City of Manitowoc, I want to thank you for your co-authorship of – and work on behalf of – AB 401 relating to creation of renewable resource credits by electric providers and granting rule-making authority.

OFFICE OF MAYOR

AB 401 will enable utilities to maximize their use of renewable energy and allow Wisconsin businesses and ratepayers to save significant amounts of money.

In essence, AB 401 is a mini-stimulus bill that will help create "green" manufacturing jobs – including production of innovative direct solar applications such as solar light pipe technology – in addition to putting hundreds of Wisconsin workers, roofers and electricians to work installing these systems across our state.

I apologize that I cannot be in attendance at today's hearing, but I do want to thank you for your leadership on this important issue.

9-15-09
Date

Justin M. Nickels – Mayor
City of Manitowoc

CITY HALL • 900 Quay Street • Manitowoc, WI 54220 • Phone (920) 686-6980 • Fax (920) 686-6989
www.manitowoc.org • jnickels@manitowoc.org