

☞ **09hr\_SC-CUER\_sb0273\_pt01**



Details:

(FORM UPDATED: 08/11/2010)

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

### 2009-10

(session year)

### Senate

(Assembly, Senate or Joint)

### Committee on ... Commerce, Utilities, Energy, & Rail (SC-CUER)

### 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**



- Jim Soletski — Representative, 88th Assembly District
- Tony Bartol, Manitowoc — Orion Energy Systems
- Gregg Barrett, Sheboygan — Orion Energy
- Tina Prigge, Manitowoc — Orion Energy Systems
- Mike Lanser, Cleveland — LTC
- Ken Stubbe, Manitowoc — Manitowoc Economic Development Corp.
- Tom Benish, Middleton — Carpenters Local 1314
- Randall Reitmann, Merrimac — Carpenters 314
- Brian Taffora, Madison — Wisconsin Business Council
- Mark Reihl, Madison — Wisconsin State Council of Carpenters
- Ed Huck, Madison — Wisconsin Alliance of Cities
- David Boetcher, Waunakee — IBEW WI State Conference of Inside Construction Locals

Registrations Against

- Dan Kohler, Madison — Wisconsin Environment

Registrations for Information Only

- Thad Nation, Madison — Coalition for Clean, Responsible, Energy for Wisconsin's

April 7, 2010

**EXECUTIVE SESSION HELD**

Present: (7) Senators Plale, Wirch, Erpenbach, Kreitlow, Cowles, Harsdorf and Kedzie.

Absent: (0) None.

Moved by Senator Cowles, seconded by Senator Wirch that **Senate Bill 273** be recommended for passage.

Ayes: (7) Senators Plale, Wirch, Erpenbach, Kreitlow, Cowles, Harsdorf and Kedzie.

Noes: (0) None.

PASSAGE RECOMMENDED, Ayes 7, Noes 0

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Summer Shannon-Bradley  
Committee Clerk

# Vote Record

## Committee on Commerce, Utilities, Energy, and Rail

Date: 4/4/10

Moved by: \_\_\_\_\_ Seconded by: \_\_\_\_\_

AB \_\_\_\_\_ SF ~~243~~ Clearinghouse Rule \_\_\_\_\_  
 AJR \_\_\_\_\_ SJR \_\_\_\_\_ Appointment \_\_\_\_\_  
 AR \_\_\_\_\_ SR \_\_\_\_\_ Other \_\_\_\_\_

A/S Amdt \_\_\_\_\_  
 A/S Amdt \_\_\_\_\_ to A/S Amdt \_\_\_\_\_  
 A/S Sub Amdt \_\_\_\_\_  
 A/S Amdt \_\_\_\_\_ to A/S Sub Amdt \_\_\_\_\_  
 A/S Amdt \_\_\_\_\_ to A/S Amdt \_\_\_\_\_ to A/S Sub Amdt \_\_\_\_\_

*Cowles / Witch (2nd)*

- Be recommended for:
- Passage       Adoption       Confirmation       Concurrence       Indefinite Postponement
  - Introduction       Rejection       Tabling       Nonconcurrence

Committee Member	Aye	No	Absent	Not Voting
<b>Senator Jeffrey Plale, Chair</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Robert Wirsch</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Jon Erpenbach</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Pat Kreitlow</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Robert Cowles</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Sheila Harsdorf</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Senator Neal Kedzie</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Totals:</b>	<u>7</u>	<u>0</u>	_____	_____

Motion Carried       Motion Failed

**Brady, Kevin**

SB 273?

**From:** Kunkel, Mark  
**Sent:** Thursday, May 28, 2009 1:44 PM  
**To:** 'ray@FederalRelations.com'  
**Cc:** Brady, Kevin  
**Subject:** RE: RPS Language for Solar Light Pipe

Ray:

In response to your voice mail, thanks for providing the info below. I think I have enough to draft something. I'll try to get something done on this toward the end of next week, as drafting the state budget is our number 1 priority for the next couple of days. If I need anything else, I will email or give you a call.

Once again, thanks for the info.

-- Mark

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**From:** ray@FederalRelations.com [mailto:ray@FederalRelations.com]  
**Sent:** Wednesday, May 27, 2009 10:09 AM  
**To:** Kunkel, Mark  
**Cc:** Brady, Kevin  
**Subject:** RE: RPS Language for Solar Light Pipe

Mark:

Thanks for the note, and for your insight and advice.

Allowing an electric provider to create a credit based on the electric provider's use of direct-use renewable energy resources listed below, and use those credits to meet the requirements of (2) (a) 2 makes sense to me. I guess you would amend current law by creating 196.378 (3) (a) 2 to give the PSC the authority to promulgate rules that allow an electric provider to do that and by modifying (1) i to read "Renewable resource credit" means a credit calculated in accordance with rules promulgated under sub. (3) (a) 1., 2. and 3?.

To answer your second question, allowing an electric provider to sell the credit to other electric providers would be consistent with (3) (a) 1.

To answer your third question, the electric provider should be allowed a credit equal to 100% of the displaced amount.

To answer your fourth question, I see no reason to make ineligible any customer-sited direct-use renewable energy applications, as long as the electricity displaced can be measured and verified.

To answer your fifth question, solar light pipe technology harvests solar energy and directs that energy to the inside of a building. When the solar energy (direct solar) satisfies the lighting requirements below, the light fixtures that are integrated with the light pipe technology automatically turn off, and the electricity displaced is automatically metered in real time. I have attached a document that illustrates this process and describes the technology in more detail. Please feel free to call me with any clarifying questions.

Ray  
202-783-3333



**Brady, Kevin**

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**From:** Sen.Plale  
**Sent:** Wednesday, July 22, 2009 10:02 AM  
**To:** \*Legislative All Senate; \*Legislative All Assembly  
**Subject:** Cosponsorship of LRB-2962/2 relating to: creation of renewable resource credits by electric providers and granting rule-making authority

SB 273

**Attachments:** 09-29622.pdf

*FROM: Senator Jeff Plale, Senator Rob Cowles, Senator Joe Leibham, Representative Ted Zigmunt and Representative Jim Soletski*

TO: All Legislators

RE: LRB-2962/2 relating to: creation of renewable resource credits by electric providers and granting rule-making authority

*Draft is attached below*

Under Act 141, Wisconsin's Renewable Portfolio Standard (RPS) requires regulated utilities in Wisconsin to obtain at least 10% of the electricity sold to customers from renewable-energy resources by December 31, 2015.

Under Wisconsin's RPS, utilities are able to buy and sell "renewable resource credits" (RRCs) from one another for any electricity generated in excess of the percentage specified for a given year. The Public Service Commission has jurisdiction over Wisconsin's RPS.

Unfortunately, Wisconsin's Renewable Resource Credit Program does not allow electric providers in the State to create RRCs using direct-use renewable energy resources. This means that utilities are unable to maximize their use of renewable energy. In other words, we are currently not able to take full advantage of Wisconsin's renewable energy potential.

LRB-2962/2 would give the Public Service Commission the authority to promulgate rules to allow Wisconsin utilities to use direct use renewable energy to create renewable resource credits that can be used to meet their obligations under the RPS. Renewable resource credits will be created based on the amount of electricity displaced by the renewable energy resources covered by this language. These include direct solar applications such as solar water heating and solar light pipe technology, direct use geothermal applications and other direct use renewable energy resources.

LRB 2962/2 will enable utilities to maximize their use of renewable energy and allow Wisconsin businesses and ratepayers to save significant amounts of money. LRB 2962/2 will help create "green" manufacturing jobs and put hundreds of Wisconsin construction workers, roofers, and electricians to work installing these systems across the state.

If you would like to cosponsor LRB 2962/2 please contact Kevin in Senator Plale's office at 6-7505 or email at [Sen.Plale@legis.wisconsin.gov](mailto:Sen.Plale@legis.wisconsin.gov) or Jay in Representative Zigmunt's office at 6-9870 or email at [Rep.Zigmunt@legs.wisconsin.gov](mailto:Rep.Zigmunt@legs.wisconsin.gov) by **August 5**. You will be signed on to both the Senate and Assembly bills unless you specify otherwise.





**Economic Development Corporation**  
O F M A N I T O W O C C O U N T Y

*Take your Business to the Next Level*

July 22, 2009

Senator Jeff Plale  
PO Box 7882  
Madison, WI 53707-7882

RE: Co-Authorship LRB 2962/2

→ SB 273

Dear Senator Plale:

On behalf of the Economic Development Corporation of Manitowoc County, thank you for your co-authorship of and work on behalf of LRB 2962/2 relating to creation of renewable resource credits by electric providers and granting rule-making authority.

LRB 2962/2 will enable utilities to maximize their use of renewable energy and allow Wisconsin businesses and ratepayers to save significant amounts of money.

In essence, LRB 2962/2 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 construction workers, roofers, and electricians to work installing these systems across the state.

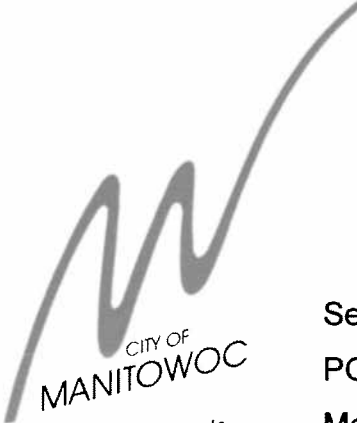
Thank you for your leadership on this important issue.

Sincerely,

*Kenneth L. Stubbe*

Kenneth L. Stubbe, CECD  
Executive Director





CITY OF  
MANITOWOC  
Justin M. Nickels  
Mayor

July 23, 2009

Senator Jeff Plale  
PO Box 7882  
Madison, WI 53707-7882

RE: Co-Authorship LRB 2962/2

→ SB 273

Dear Senator Plale,

On behalf of the City of Manitowoc, I want to thank you for your co-authorship of - and work on behalf of - LRB 2962/2 relating to creation of renewable resource credits by electric providers and granting rule-making authority.

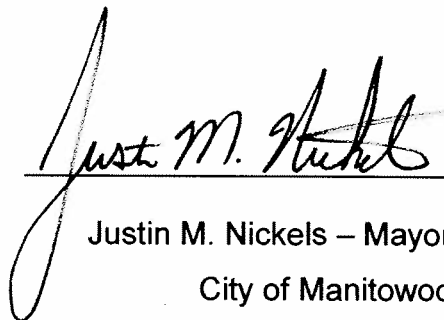
LRB 2962/2 will enable utilities to maximize their use of renewable energy and allow Wisconsin businesses and ratepayers to save significant amounts of money.

In essence, LRB 2962/2 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 the state.

Thank you for your leadership on this important issue.

7/23/09

Date



Justin M. Nickels – Mayor  
City of Manitowoc

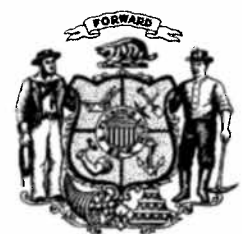


OFFICE OF MAYOR





# WISCONSIN STATE LEGISLATURE



# the Chamber Manitowoc County

City of Kiel  
City of Manitowoc  
City of Two Rivers  
Town of Cato  
Town of Centerville  
Town of Cooperstown  
Town of Eaton  
Town of Franklin  
Town of Gibson  
Town of Kossuth  
Town of Liberty  
Town of Manitowoc  
Town of Manitowoc Rapids  
Town of Maple Grove  
Town of Meeme  
Town of Mishicot  
Town of Newton  
Town of Rockland  
Town of Schleswig  
Town of Two Creeks  
Town of Two Rivers  
Village of Cleveland  
Village of Francis Creek  
Village of Kellnersville  
Village of Maribel  
Village of Mishicot  
Village of Reedsville  
Village of St. Nazianz  
Village of Valdars  
Village of Whitelaw

July 24, 2009

Senator Jeff Plale  
P.O. Box 7882  
Madison, WI 53707-7882

RE: Co-Authorship LRB 2962/2 →

SB 273

Dear Senator Plale:

On behalf of The Chamber of Manitowoc County, thank you for your co-authorship of and work on behalf of LRB 2962/2 relating to creation of renewable resource credits by electric providers and granting rule-making authority.

LRB 2962/2 will enable utilities to maximize their use of renewable energy and allow Wisconsin businesses and ratepayers to save significant amounts of money.

In essence, LRB 2962/2 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 construction workers, roofers, and electricians to work installing these systems across the state.

Thank you for your leadership on this important issue.

Warm regards,



Karen Szyman  
Executive Director  
The Chamber of Manitowoc County





To: Members of the Wisconsin State Legislature

From: Mark Reihl, Executive Director

Date: July 28, 2009

Re: LRB 2962/2

→ SB 273

**I am writing on behalf of the Wisconsin State Council of Carpenters to encourage your co-sponsorship of LRB 2962/2 relating to creation of renewable resource credits by electric providers and granting rule-making authority.**

LRB-2962/2 would give the Public Service Commission the authority to promulgate rules to allow Wisconsin utilities to use direct use renewable energy to create renewable resource credits that can be used to meet their obligations under the RPS. Renewable resource credits will be created based on the amount of electricity displaced by the renewable energy resources covered by this language. These include direct solar applications such as solar water heating and solar light pipe technology, direct use geothermal applications and other direct use renewable energy resources.

Direct solar renewable energy technologies represent a relatively new and effective way to provide free, renewable and carbon-free energy. The light pipe in particular uses direct solar energy to illuminate the inside of buildings, eliminating the need for electrical light fixtures during many of the daylight hours, thereby maximizing available energy savings, significantly reducing carbon emissions, and saving U.S. companies and government at every level millions of dollars each year.

**Equally important is the fact that installation of these technologies would support thousands of construction jobs. By including direct-use renewable energy resources in the RPS, countless companies would install this technology and effectively put hundreds of our members to work. In fact, the Carpenters Union is working with Manitowoc based light pipe manufacturer, Orion to develop an installation training program that will create jobs for carpenters in Wisconsin and across the country.**

Please co-sponsor and support LRB 2962/2. Your help is appreciated.





**Brady, Kevin**

B2B?

**From:** Tina Prigge [tmp@oesx.com]  
**Sent:** Tuesday, August 04, 2009 9:28 AM  
**To:** Brady, Kevin  
**Subject:** CALL to sign on

Hi Kevin:

Kevin met with the following members' staff he suggests that Sen. Plale follow up with a phone call to the member asking them to sign on:

- 7/24/09 Sen. Sullivan
- 7/24/09 Sen. Lasee
- 7/28/09 Sen. Fitzgerald
- 7/28/09 Sen. Decker
- 7/28/09 Sen. Harsdorf
- 7/28/09 Sen. Kreitlow
- 7/29/09 Sen. Lehman
- 7/30/09 Sen. Ellis
- 7/30/09 Sen. Miller
- 8/3/09 Sen. Hansen

Today 8/4/09 he is meeting with the following and you may wish to follow up with phone calls tomorrow:

- Sen. Jauch
- Sen. Robson

And on Wednesday

- Sen. Lassa

And on Thursday

- Sen. Erpenbach

*Tina*

Tina Prigge | tmp@oesx.com | www.oesx.com  
Executive Assistant | Orion Energy Systems



2210 Woodland Dr. | Manitowoc, WI 54220 | ph 920.482.1978

CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL.

8/4/2009



## Brady, Kevin

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**From:** Brady, Kevin  
**Sent:** Monday, August 10, 2009 10:27 AM  
**To:** Ferus, Jay; Kevin Crawford  
**Subject:** Co-Sponsors

Here's a list of who I have as co-sponsors of LRB 2962/2:  
*Let me know if am missing anyone*

→ SB 273

### Senate

Plale  
Cowles  
Leibham  
Sullivan  
Holperin  
Taylor  
Lassa  
Hopper  
Darling  
Olsen  
Lasee  
Hansen  
Kapanke  
Schultz

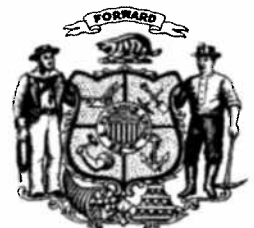
### Assembly

Zigmunt  
Soletski  
Ziegelbauer  
Kestell  
Gunderson  
Berceau  
Nelson  
Milroy  
Grigsby  
Turner  
Montgomery  
Huebsch  
Van Roy  
Nygren  
Suder  
Townsend  
Gottlieb

✦



# WISCONSIN STATE LEGISLATURE



# GREEN BAY ELECTRICAL WORKERS

IBEW, Local #158

1570 Elizabeth Street, Green Bay, WI 54302-2036

(920) 432-0158



August 10, 2009

Governor Jim Doyle  
Members of the Wisconsin State Legislature  
115 East State Capitol  
Madison, WI 53702

RE: LRB 2962/2

→ SB 273

I am writing on behalf of the Green Bay Electrical Workers, IBEW Local 158 with our endorsement of the legislation now known as LRB 2962/2 relating to creation of renewable resource credits by electric providers for "direct-use renewables" and granting rule-making authority. **This legislation needs to be acted upon now.**

LRB 2962/2 would give the Public Service Commission the authority to promulgate rules to allow Wisconsin utilities to use direct use renewable energy to create renewable resource credits that can be used to meet their obligations under the Renewable Portfolio Standard (RPS). Renewable resource credits will be created based on the amount of electricity displaced by the renewable energy resources covered by this language. These include direct solar applications such as solar water heating and solar light pipe technology, direct use geothermal applications and other direct use renewable energy resources.

Direct solar renewable energy technologies represent a relatively new and effective way to provide free, renewable and carbon-free energy. The solar light pipe in particular uses direct solar energy to illuminate the inside of building, eliminating the need for electrical light fixtures during many of the daylight hours, thereby maximizing available energy savings, significantly reducing carbon emissions, and saving US companies and government, at every level, millions of dollars each year.

Equally important is the fact that installation of these technologies would foster jobs creation in the thousands across the state of Wisconsin including members of the IBEW, manufacturers, United Brotherhood of Carpenters and roofers organizations. By including direct-use renewable energy resources in the RPS, countless companies would install this technology and effectively put hundreds of our members to work.

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

The IBEW joins many labor and other organizations in encouraging you to support LRB 2962/2. Your leadership on this important issue is greatly appreciated.

Sincerely,

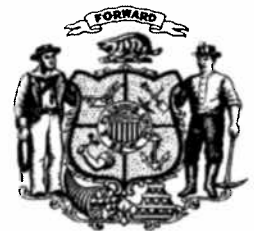
A handwritten signature in black ink, appearing to read "David Jungbluth", is written over a horizontal line.

David Jungbluth  
Business Development

Cc: Senator Joseph Leibham  
State Representative Jim Soletski  
State Representative Ted Zigmunt  
State Representative Robert Cowles  
Kevin Crawford, Orion Energy Systems



# WISCONSIN STATE LEGISLATURE



Dear Governor Doyle



Please Sign SB 273

  
Orion Energy Systems  
2210 Woodland Dr.  
Manitowoc, WI 54220

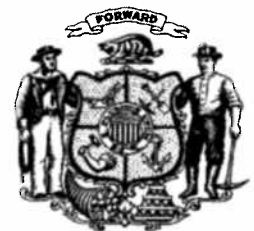
MP4 video  
5/5/2010

Added to the  
LRBS legal library collection.





# WISCONSIN STATE LEGISLATURE







# Apollo™ Light Pipe

## First Law of Thermodynamics

*Energy can neither be created nor destroyed, it can only be converted to heat, vibration and work.*

## Holistic Energy Management System

Orion Energy Systems developed and integrated programmable logic controls that match supply and demand throughout the day to deliver optimal energy utilization with user-defined setpoint optionality.

## Maximum Light Harvest Collector

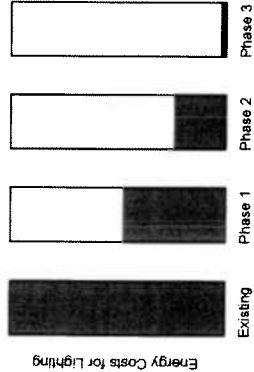
Proprietary collector dome is designed specifically to interrupt the low sun angles associated with seasonal change, early morning, and late afternoon angles of incidence. Our proprietary molding process ensures a water-clear finish with minimal surface tension flaws.

## Minimal Conversion Loss

Delivers best results when demand on the energy grid is greatest. Harvests sunlight and delivers usable light energy almost five times more efficient than a photovoltaic system.

## Base & Peak Energy Load Reduction

With complete integration of the Orion Power Technology platforms and controls, lighting energy consumption can be reduced to near zero.



Phase 1 – Switch from HID to Orion HIF fixtures  
 Phase 2 – Incorporate Orion controls  
 Phase 3 – Install Apollo Light Pipes

## Orion Virtual Power Plant

Control, measure and verify all phases using the Orion Virtual Power Plant for the maximum in energy and cost savings. It also provides verifiable accountability for innovative financing plans and carbon emissions trading.

**Glazing Quality Acrylic Collector Dome**  
 Patent-pending process to manufacture an acrylic dome with the highest possible transmission rating.

**Seamless Flashing**  
 One-piece .080 spun aluminum roof flashing ensures a waterproof installation. All components are made of construction grade materials. No galvanic corrosion or rusting is possible.

**Light Pipe Reflector Tube**  
 Large diameter aperture made of highly polished material provides over 98% total reflectivity.

**Proprietary Diffuser**  
 Delivers maximum zonal cavity light distribution.

Patents Pending

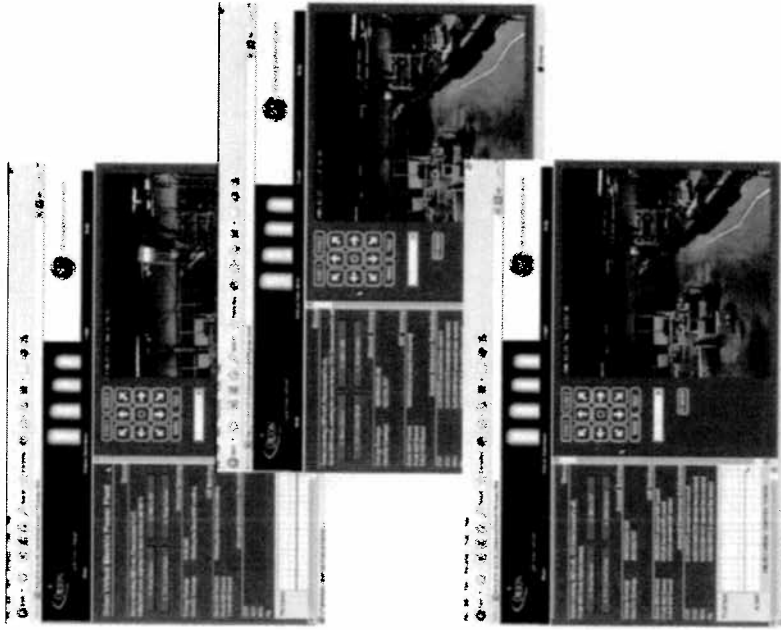
## Phase I Base Load Reduction



### Measurable and Verifiable

The base load energy reduction project starts with a circuit test to show the improved light quality and verify energy savings for your facility. The ultimate validation is the fact that over 75 of the Fortune 500 are using Orion technology to deliver millions of dollars in annual savings without compromise.

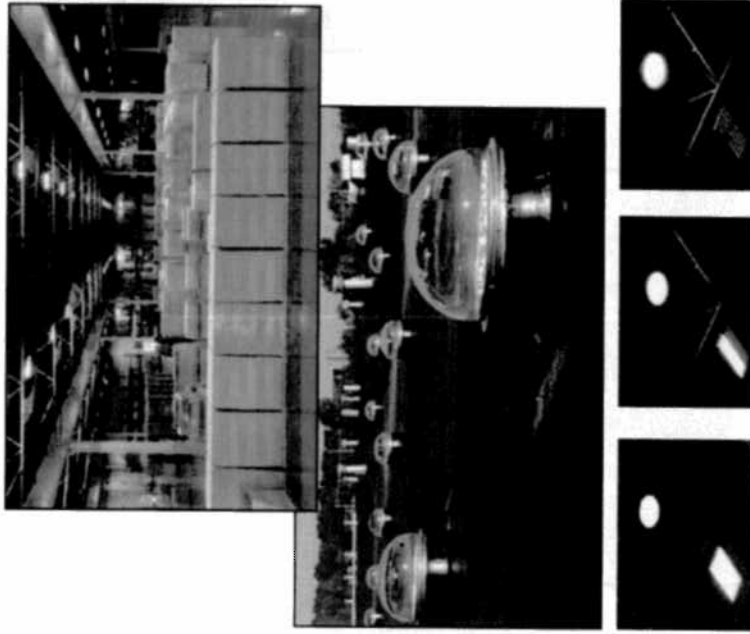
## Phase II Peak Demand Response



### Wireless Peak Load Shedding

You can't manage what you can't measure. The price of peak power is becoming more expensive as utilities reach their reserve margin. This measurement and verification system will allow you to understand your energy use in real time and be responsive to your peak load demands.

## Phase III Off The Grid



### Direct Renewable

We will work with your local roofer and introduce you to direct renewable technology. There is no conversion loss because you are leveraging the natural light from the sun. We will integrate the light pipe into the Orion High Performance Lighting system in order to provide maximum peak load savings.





# **SOLAR LIGHT PIPE TECHNOLOGY IS A RENEWABLE ENERGY TECHNOLOGY**

Page 1 of 2

Orion Energy Systems knows energy efficiency. Their energy efficient lighting fixtures reduce electricity demand by 50-60% while supplying twice as much light. The reason Orion's lighting fixtures are considered energy efficiency is because they use less electricity to do a job, and that job is to illuminate the inside of a building. Orion's solar light pipe technology, on the other hand, uses solar energy (the sun) to do the same job, to illuminate the inside of the same building.

To be more precise, **energy efficiency is about getting more output for less input.** For example:

- When you make a car more efficient, you get more miles for the same tank of gas.
- When you make a light fixture more efficient, you get more light for less energy.
- When you make a business more efficient, you get more widgets for same capital expenditure.

**Solar light pipe technology provides facility illumination over a period of time from an entirely new source (solar power) versus traditional approaches. Therefore, the light pipe is not about getting more output from less input, but the same amount of output (light) from an entirely new input (solar radiation).**

It is also worth noting that the electricity displaced by direct solar energy can be physically metered, while energy efficiency is normally measured using stipulated savings factors.

## ***Solar Light Pipe Technology: Purest Form of Solar Energy Available***

In a sense, direct solar renewable energy applications such as solar light pipe technology create the purest form of renewable energy available. Because solar light pipe technology does not require that solar energy be converted into electricity, there is not a conversion loss, and because the solar light pipe is sited at the load source, there is there a transmission loss. In other words, direct solar renewable energy applications such as solar light pipe technology maximizes the use of the sun's energy, and in so doing, meet the fundamental goal of a national renewable energy standard: to significantly reduce carbon emissions.

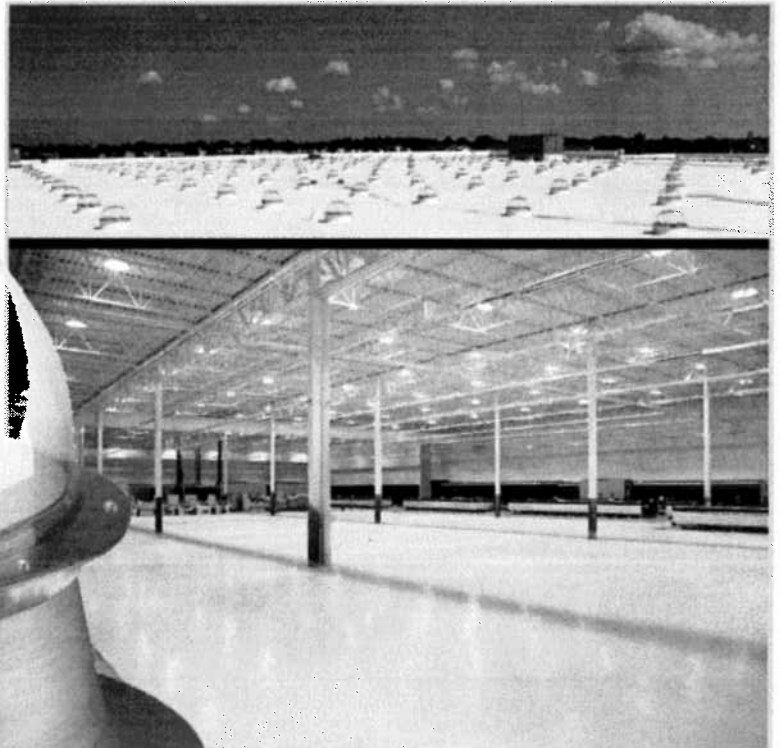
## ***Practical Benefits of Solar Light Pipe Technology***

Direct solar renewable energy applications such as solar light pipe technology will lead to lower, not higher electricity rates, and these technologies will help companies significantly lower their electricity bills, which makes this an economic development engine. Further, direct solar renewable energy technology can be utilized anywhere in the country, even where other renewable energy resources may be scarce. Not only that, including direct solar renewable energy applications in the RPS will put thousands of roofers, electricians and other contractors to work across the US and in Wisconsin.

# SOLAR LIGHT PIPE TECHNOLOGY IS A RENEWABLE ENERGY TECHNOLOGY

Energy derived from these direct solar technologies is generally measured by assessing the amount of fossil fuel consumption they displace; or by measuring the quantity of renewable energy certificates to which the user is entitled determined by the equivalent kilowatt-hours saved.

Apollo Solar Light Pipe®



[www.oesx.com](http://www.oesx.com)



**Contact:** Ray Bucheger, Orion Energy Systems  
[Ray@FederalRelations.com](mailto:Ray@FederalRelations.com) | 202-783-3333

Kevin Crawford, Orion Energy Systems  
[kmc@oesx.com](mailto:kmc@oesx.com) | 920.917.9119