

2017 DRAFTING REQUEST

Bill

For: **Roger Roth (608) 266-0718** Drafter: **amckean**
 By: **Jason** Secondary Drafters:
 Date: **10/4/2016** May Contact:
 Same as LRB: **-2348**

Submit via email: **YES**
 Requester's email: **Sen.Roth@legis.wisconsin.gov**
 Carbon copy (CC) to: **mark.kunkel@legis.wisconsin.gov**
Aaron.McKean@legis.wisconsin.gov

Pre Topic:

No specific pre topic given

Topic:

Waste heat recovery as part of renewable portfolio standard

Instructions:

See attached

PER ASIM

Drafting History:

<u>Vers.</u>	<u>Drafted</u>	<u>Reviewed</u>	<u>Submitted</u>	<u>Jacketed</u>	<u>Required</u>
/?	amckean 10/18/2016	kfollett 10/19/2016			
/P1	amckean 11/21/2016	kfollett 11/21/2016	lparisi 10/19/2016		
/P2	amckean 2/1/2017	kfollett 2/2/2017	hkohn 11/21/2016		
/P3	amckean 2/28/2017	kfollett 2/28/2017	rmilford 2/2/2017		
/1			lparisi	lparisi	

Vers. Drafted

Reviewed

Submitted
2/28/2017

Jacketed
2/28/2017

Required

FE Sent For:

<END>

not needed

McKean, Aaron

From: Vick, Jason
Sent: Tuesday, October 04, 2016 3:00 PM
To: McKean, Aaron
Subject: Draft request - Waste heat recovery to RPS

Hi Aaron,

Senator Roth would like a draft for the following:

Include "Waste heat recovery" under the renewable resources list - 196.378 (1)(h):

"Waste Heat Recovery is defined as an energy recovery process that converts otherwise lost energy that is normally discharged as a byproduct of a separate process and utilizes that energy to produce electricity."

Thanks,

Jason Vick

*Office of Senator Roger Roth
608-266-0718
306-South, State Capitol*

**DRAFTER'S NOTE
FROM THE
LEGISLATIVE REFERENCE BUREAU**

PI
LRB-0318/?dn
AJM...

PF

Date

Senator Roth,

Please review this draft carefully to ensure that it is consistent with your intent.

In drafting this bill, I noticed that adding waste heat recovery to the renewable resource list in s. 196.378 (1) (h) 1. could make it possible for an investor to claim an angel investment tax credit from WEDC (s. 238.15) if that investor is investing in a construction company that builds power plants. That tax credit is available for investing in construction companies that build power plants that use renewable resources, as defined under s. 196.378 (1) (h) 1.

I am not certain how WEDC would interpret this statute, but it appears possible under this bill that a construction company could build a conventional power production plant that includes a waste heat recovery process and that company's investors could be eligible for the tax credit, even though the power plant primarily uses conventional resources for production. Please let me know if you think this issue needs to be addressed in this draft.

Aaron McKean
Legislative Attorney
(608) 266-0132
aaron.mckean@legis.wisconsin.gov



PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

IN - 10/18
DOE - 10/19
Thulu!

- D-NOTE -

Gen

1 AN ACT ...; relating to: resources eligible for renewable resource credits.

Analysis by the Legislative Reference Bureau

This bill provides that the process of recovering and using heat to produce electricity is considered a renewable resource for the purpose of the renewable portfolio standards law. Under current law, an electric utility or retail electric cooperative is subject to certain requirements for ensuring that, in a given year, a specified percentage of the electricity that the utility or cooperative sells to retail customers is derived from renewable resources, commonly referred to as "renewable portfolio standards." To meet its specified percentage, a utility or cooperative can produce electricity from renewable resources, counted as renewable resource credits. The utility or cooperative may also receive renewable resource credits from a customer or member that uses renewable resources, to the extent that that use displaces the use of conventional resources for producing electricity. Current law defines "renewable resource" to include solar and wind power, geothermal technology, biomass, and other specified resources. This bill allows a utility or cooperative to count towards its renewable energy percentage electricity that is produced by the utility or cooperative, or its customers or members, by recovering and using heat that is produced as a byproduct of a separate process.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

2 SECTION 1. 196.378 (1) (h) 1. k. of the statutes is created to read:

1 196.378 (1) (h) 1. k. A process by which heat that is usually discharged as a
2 byproduct of a separate process is recovered and used to produce electricity.

3 **SECTION 2.** 196.378 (3) (a) 1m. of the statutes is amended to read:

4 196.378 (3) (a) 1m. The commission shall promulgate rules that allow an
5 electric provider or customer or member of an electric provider to create a renewable
6 resource credit based on use in a year by the electric provider, customer, or member
7 of solar energy, including solar water heating and direct solar applications such as
8 solar light pipe technology; wind energy; hydroelectric energy; geothermal energy;
9 biomass; biogas; synthetic gas created by the plasma gasification of waste; densified
10 fuel pellets described in sub. (1) (h) 1. i.; or fuel described in sub. (1) (h) 1. j.; or heat
11 recovery process as described in sub. (1) (h) 1. k.; but only if the use displaces the
12 electric provider's, customer's, or member's use of electricity that is derived from
13 conventional resources, and only if the displacement is verifiable and measurable,
14 as determined by the commission. The rules shall allow an electric provider,
15 customer, or member to create a renewable resource credit based on 100 percent of
16 the amount of the displacement. The rules shall also allow an electric provider,
17 customer, or member to create a renewable resource credit under this subdivision
18 regardless of when the source used to create the credit was placed in service. The
19 rules may not allow an electric provider to create renewable resource credits under
20 this subdivision based on renewable energy upon which renewable resource credits
21 are created under subd. 1. The rules may also not allow an electric provider to create
22 renewable resource credits under this subdivision based on hydroelectric energy that
23 is not eligible for creating renewable resource credits under subd. 1.

24 **History:** 1999 a. 9; 2001 a. 30; 2005 a. 141; 2009 a. 40, 406; 2011 a. 34, 155; 2013 a. 290, 300.

(END)

O-Note

**DRAFTER'S NOTE
FROM THE
LEGISLATIVE REFERENCE BUREAU**

LRB-0318/P1dn
AJM:kjf

October 19, 2016

Senator Roth,

Please review this draft carefully to ensure that it is consistent with your intent.

In drafting this bill, I noticed that adding waste heat recovery to the renewable resource list in s. 196.378 (1) (h) 1. could make it possible for an investor to claim an angel investment tax credit from WEDC (s. 238.15) if that investor is investing in a construction company that builds power plants. That tax credit is available for investing in construction companies that build power plants that use renewable resources, as defined under s. 196.378 (1) (h) 1.

I am not certain how WEDC would interpret this statute, but it appears possible under this bill that a construction company could build a conventional power production plant that includes a waste heat recovery process and that company's investors could be eligible for the tax credit, even though the power plant primarily uses conventional resources for production. Please let me know if you think this issue needs to be addressed in this draft.

Aaron McKean
Legislative Attorney
(608) 266-0132
aaron.mckean@legis.wisconsin.gov

McKean, Aaron

From: Vick, Jason
Sent: Thursday, November 17, 2016 3:14 PM
To: McKean, Aaron
Subject: LRB-0318/P1

Hi Aaron,

We would like to make the following change to LRB 0318/P1 (resources eligible for renewable resource credits) to use the following definition:

196.378(1)(h) 1. k. Heat that is a byproduct of a manufacturing process.

Thanks,

Jason Vick

*Office of Senator Roger Roth
608-266-0718
306-South, State Capitol*



P2

PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

IN-11/21
DUR-11/22
Thats!

Heat that is a byproduct of a manufacturing process

Regen

1 **AN ACT to amend** 196.378 (3) (a) 1m.; and **to create** 196.378 (1) (h) 1. k. of the
2 statutes; **relating to:** resources eligible for renewable resource credits.

Analysis by the Legislative Reference Bureau

This bill provides that the process of recovering and using heat to produce electricity is considered a renewable resource for the purpose of the renewable portfolio standards law. Under current law, an electric utility or retail electric cooperative is subject to certain requirements for ensuring that, in a given year, a specified percentage of the electricity that the utility or cooperative sells to retail customers is derived from renewable resources, commonly referred to as "renewable portfolio standards." To meet its specified percentage, a utility or cooperative can produce electricity from renewable resources, counted as renewable resource credits. The utility or cooperative may also receive renewable resource credits from a customer or member that uses renewable resources, to the extent that that use displaces the use of conventional resources for producing electricity. Current law defines "renewable resource" to include solar and wind power, geothermal technology, biomass, and other specified resources. This bill allows a utility or cooperative to count towards its renewable energy percentage electricity that is produced by the utility or cooperative, or its customers or members, by recovering and using heat that is produced as a byproduct of a separate process.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

manufacturing
electricity that is displaced by

Heat that is a byproduct of a manufacturing process

1 SECTION 1. 196.378 (1) (h) 1. k. of the statutes is created to read:

2 196.378 (1) (h) 1. k. A process by which heat that is usually discharged as a
3 byproduct of a separate process is recovered and used to produce electricity.

4 SECTION 2. 196.378 (3) (a) 1m. of the statutes is amended to read:

5 196.378 (3) (a) 1m. The commission shall promulgate rules that allow an
6 electric provider or customer or member of an electric provider to create a renewable
7 resource credit based on use in a year by the electric provider, customer, or member
8 of solar energy, including solar water heating and direct solar applications such as
9 solar light pipe technology; wind energy; hydroelectric energy; geothermal energy;
10 biomass; biogas; synthetic gas created by the plasma gasification of waste; densified
11 fuel pellets described in sub. (1) (h) 1. i.; ~~or fuel described in sub. (1) (h) 1. j.; or heat~~
12 recovery process as described in sub. (1) (h) 1. k.; but only if the use displaces the
13 electric provider's, customer's, or member's use of electricity that is derived from
14 conventional resources, and only if the displacement is verifiable and measurable,
15 as determined by the commission. The rules shall allow an electric provider,
16 customer, or member to create a renewable resource credit based on 100 percent of
17 the amount of the displacement. The rules shall also allow an electric provider,
18 customer, or member to create a renewable resource credit under this subdivision
19 regardless of when the source used to create the credit was placed in service. The
20 rules may not allow an electric provider to create renewable resource credits under
21 this subdivision based on renewable energy upon which renewable resource credits
22 are created under subd. 1. The rules may also not allow an electric provider to create
23 renewable resource credits under this subdivision based on hydroelectric energy that
24 is not eligible for creating renewable resource credits under subd. 1.

25 (END)

McKean, Aaron

From: Vick, Jason
Sent: Monday, January 23, 2017 10:25 AM
To: McKean, Aaron
Subject: RE: LRB 0318/P2

Hi Aaron,

You had asked for more information about the draft request change we want to make to LRB 0318/P2

Section 2, beginning at line 10, should read as follows: fuel pellets described in sub. (1)(h)1.i.; ~~or~~ fuel described in sub. (1)(h)1.j.; heat as described in sub. (1)(h)1.k; or waste heat that is recovered from an industrial process to provide thermal energy for another purpose; but only if the use displaces the electric provider's, . . .

The rationale for the language change:

Background: waste heat can be used by a manufacturer in two different ways.

A. waste heat can used to generate electricity on site;

B. waste heat can be used to provide thermal energy for another manufacturing purpose. Examples

include:

- * to generate steam or hot water used in the manufacturing process
- * to heat air for drying manufactured products
- * to heat the facility or to chill water for cooling the facility.

Of these two types of using waste heat, what I've identified here as B. is by far the most common.

Draft Legislation:

Section 1 — creates 196.378(1)(h)1.k — the effect of Section 1 is simply to identify waste heat that generates electricity as a renewable resource.

Section 2 — the purpose of 196.376(3)(a)1m, which section 2 aims to amend, provides how renewable resource credits are created — and they are created by the list that follows. As currently drafted, the only type of waste heat that will create renewable resource credits is the waste heat that generates electric. It currently is so limited because the amendment only includes "heat as described in sub. (1)(h)1.k.", which we know from Section 1, is waste heat that generates electricity.

Upshot is that renewable resource credits are to be created by waste heat that either A (generates electricity) or B (is used as thermal energy for another purpose—a purpose other than generating electricity).

If you have additional questions, we are working with the WI Industrial Energy Group and you could talk directly to their attorney. His contact information is:

W 608-467-2033
C 608-209-7468
steve.heinzen@heinzenlaw.com

Thanks,

Jason Vick

*Office of Senate President Roger Roth
608-266-0718
220-South, State Capitol*

From: Vick, Jason

Sent: Wednesday, January 11, 2017 10:26 AM

To: McKean, Aaron <Aaron.McKean@legis.wisconsin.gov>

Subject: LRB 0318/P2

Aaron,

We would like to make one change to the draft 0318/P2:

Section 2, beginning at line 10, should read as follows: fuel pellets described in sub. (1)(h)1.i.; ~~or~~ fuel described in sub. (1)(h)1.j.; heat as described in sub. (1)(h)1.k; or waste heat that is recovered from an industrial process to provide thermal energy for another purpose; but only if the use displaces the electric provider's, . . .

Thanks,

Jason Vick

*Office of Senate President Roger Roth
608-266-0718
220-South, State Capitol*



13

PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

INSERT
[IN 2/1
DUE 2/2]

1 **AN ACT to amend** 196.378 (3) (a) 1m.; and **to create** 196.378 (1) (h) 1. k. of the
2 statutes; **relating to:** resources eligible for renewable resource credits.

INS
Analysis

Analysis by the Legislative Reference Bureau

This bill provides that heat that is a byproduct of a manufacturing process is considered a renewable resource for the purpose of the renewable portfolio standards law. Under current law, an electric utility or retail electric cooperative is subject to certain requirements for ensuring that, in a given year, a specified percentage of the electricity that the utility or cooperative sells to retail customers is derived from renewable resources, commonly referred to as "renewable portfolio standards." To meet its specified percentage, a utility or cooperative can produce electricity from renewable resources, counted as renewable resource credits. The utility or cooperative may also receive renewable resource credits from a customer or member that uses renewable resources, to the extent that that use displaces the use of conventional resources for producing electricity. Current law defines "renewable resource" to include solar and wind power, geothermal technology, biomass, and other specified resources. This bill allows a utility or cooperative to count towards its renewable energy percentage electricity that is produced by the utility or cooperative, or electricity that is displaced by its customers or members, using heat that is a byproduct of a manufacturing process.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

1 SECTION 1. 196.378 (1) (h) 1. k. of the statutes is created to read:

2 196.378 (1) (h) 1. k. Heat that is a byproduct of a manufacturing process.

3 SECTION 2. 196.378 (3) (a) 1m. of the statutes is amended to read:

4 196.378 (3) (a) 1m. The commission shall promulgate rules that allow an
5 electric provider or customer or member of an electric provider to create a renewable
6 resource credit based on use in a year by the electric provider, customer, or member
7 of solar energy, including solar water heating and direct solar applications such as
8 solar light pipe technology; wind energy; hydroelectric energy; geothermal energy;
9 biomass; biogas; synthetic gas created by the plasma gasification of waste; densified
10 fuel pellets described in sub. (1) (h) 1. i.; ~~or~~ fuel described in sub. (1) (h) 1. j.; or heat
11 as described in sub. (1) (h) 1. k.; but only if the use displaces the electric provider's,
12 customer's, or member's use of electricity that is derived from conventional
13 resources, and only if the displacement is verifiable and measurable, as determined
14 by the commission. The rules shall allow an electric provider, customer, or member
15 to create a renewable resource credit based on 100 percent of the amount of the
16 displacement. The rules shall also allow an electric provider, customer, or member
17 to create a renewable resource credit under this subdivision regardless of when the
18 source used to create the credit was placed in service. The rules may not allow an
19 electric provider to create renewable resource credits under this subdivision based
20 on renewable energy upon which renewable resource credits are created under subd.
21 1. The rules may also not allow an electric provider to create renewable resource
22 credits under this subdivision based on hydroelectric energy that is not eligible for
23 creating renewable resource credits under subd. 1.

24 (END)

or heat that is a byproduct of a manufacturing process
and is used to provide thermal energy for another purpose;

2017-2018 DRAFTING INSERT
FROM THE
LEGISLATIVE REFERENCE BUREAU

LRB
AJM:...

INS Analysis

This bill provides that heat that is a byproduct of a manufacturing process is considered a renewable resource for the purpose of the renewable portfolio standards law. Under current law, an electric utility or retail electric cooperative is subject to certain requirements for ensuring that, in a given year, a specified percentage of electricity that the utility or cooperative sells to retail customers is derived from renewable resources, commonly referred to as "renewable portfolio standards." To meet its specified percentage, a utility or cooperative uses renewable resource credits (RRCs) that it may create or purchase from others. A utility or cooperative creates an RRC when it generates electricity from a renewable resource. Current law defines "renewable resource" to include solar and wind power, geothermal technology, biomass, and other specified resources. Under this bill, heat as described above is also a renewable resource.

Current law also allows a utility or cooperative, or its customers or members, to create an RRC based on their use of certain energy sources, to the extent that the use displaces the use of electricity derived from conventional resources. This bill provides that heat as described above that is used as thermal energy for another purpose may be used to create an RRC, to the extent that its use displaces the use of electricity derived from conventional resources.

McKean, Aaron

From: Vick, Jason
Sent: Tuesday, February 28, 2017 2:31 PM
To: McKean, Aaron
Cc: Perchinsky, Dan
Subject: LRB 0318/P3

Hi Aaron,

Please create a final introducible draft for LRB 0318/P3 (resources eligible for renewable resource credits).

Also, please draft an Assembly companion bill for Rep. Robert Brooks.

Thanks,

Jason Vick

Office of Senate President Roger Roth

608-266-0718

220-South, State Capitol



State of Wisconsin
2017 - 2018 LEGISLATURE

LRB-0318/P3
AJM:kjf

1

PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

- NO CHANGES -

- 1 **AN ACT to amend** 196.378 (3) (a) 1m.; and **to create** 196.378 (1) (h) 1. k. of the
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12 and is used to provide thermal energy for another purpose; but only if the use
13 displaces the electric provider's, customer's, or member's use of electricity that is
14 derived from conventional resources, and only if the displacement is verifiable and
15 measurable, as determined by the commission. The rules shall allow an electric
16 provider, customer, or member to create a renewable resource credit based on 100
17 percent of the amount of the displacement. The rules shall also allow an electric
18 provider, customer, or member to create a renewable resource credit under this
19 subdivision regardless of when the source used to create the credit was placed in
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21 credits under this subdivision based on renewable energy upon which renewable

1 resource credits are created under subd. 1. The rules may also not allow an electric
2 provider to create renewable resource credits under this subdivision based on
3 hydroelectric energy that is not eligible for creating renewable resource credits
4 under subd. 1.

5 (END)