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: Carbon copy (CC) to: Sen.Roth@legis.wisconsin.gov

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

Drafting History:

Vers.	<u>Drafted</u>	<u>Reviewed</u>	Submitted	Jacketed	<u>Required</u>

/?	amckean 10/18/2016	kfollett 10/19/2016	
/P1	amckean	kfollett	lparisi
	11/21/2016	11/21/2016	10/19/2016
/P2	amckean	kfollett	hkohn
	2/1/2017	2/2/2017	11/21/2016
/P3	amckean	kfollett	rmilford
	2/28/2017	2/28/2017	2/2/2017

lparisi

lparisi

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Vers. <u>Drafted</u>

Reviewed

Submitted 2/28/2017

<u>Jacketed</u> 2/28/2017

Required

FE Sent For:

not needed

<**END>**

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

LRB-0318/?dn AJM:...

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



State of Misconsine 2017 - 2018 LEGISLATURE



PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

IN-10/18 - D-NOTE DOE-10/19

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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:

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

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

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

0-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

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,

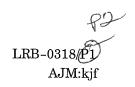
Jason Vick

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



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State of Misconsin 2017 - 2018 LEGISLATURE



PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

DUR-11/22)

Heat that is a bygraduet of a manufacturing process

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AN ACT to amend 196.378 (3) (a) 1m.; and to create 196.378 (1) (h) 1. k. of the

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:

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manufacturing	process)

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

196.378 (1) (h) 1. k. A process by which heat that is usually discharged as a

byproduct of a separate process is recovered and used to produce electricity.

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

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

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 <u>waste heat that generates</u> <u>electricity</u> 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

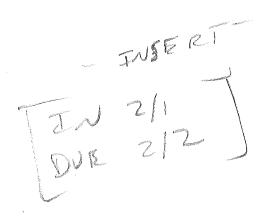
Office of Senate President Roger Roth 608-266-0718 220-South, State Capitol



State of Misconsin 2017 - 2018 LEGISLATURE



PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION



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statutes; relating to: resources eligible for renewable resource credits.

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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:

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SECTION 1.	196.378 (1)	(h) 1.	k. of	the statutes is	created to read:
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2 196.378 (1) (h) 1. k. Heat that is a byproduct of a manufacturing process.

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

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

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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.

From:

Vick, Jason

Sent:

Tuesday, February 28, 2017 2:31 PM

To:

McKean, Aaron

Cc: Subject:

Perchinsky, Dan 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,

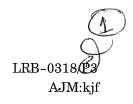
Jason Vick

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



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State of Misconsin 2017 - 2018 LEGISLATURE



PRELIMINARY DRAFT - NOT READY FOR INTRODUCTION

- No CHANGES-

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statutes; **relating to:** resources eligible for renewable resource credits.

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 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

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purpose may be used to create an RRC, to the extent that its use displaces the use of electricity derived from conventional resources.

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

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

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

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

196.378 (3) (a) 1m. The commission shall promulgate rules that allow an electric provider or customer or member of an electric provider to create a renewable resource credit based on use in a year by the electric provider, customer, or member of solar energy, including solar water heating and direct solar applications such as solar light pipe technology; wind energy; hydroelectric energy; geothermal energy; biomass; biogas; synthetic gas created by the plasma gasification of waste; densified 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 heat that is a byproduct of a manufacturing process and is used to provide thermal energy for another purpose; but only if the use displaces the electric provider's, customer's, or member's use of electricity that is derived from conventional resources, and only if the displacement is verifiable and measurable, as determined by the commission. The rules shall allow an electric provider, customer, or member to create a renewable resource credit based on 100 percent of the amount of the displacement. The rules shall also allow an electric provider, customer, or member to create a renewable resource credit under this subdivision regardless of when the source used to create the credit was placed in service. The rules may not allow an electric provider to create renewable resource credits under this subdivision based on renewable energy upon which renewable

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

(END)

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