



222 S. Hamilton, Madison, WI 53703

October 17, 2016

Ms. Jolene Sheil
Docket Coordinator, 5-FE-100 and 5-FE-102
Division of Business & Program Management
610 N. Whitney Way
P. O. Box 7854
Madison, WI 53707-7854

RE: Investigation into Improving Access to the Statewide Energy Efficiency and Renewable Resource Programs in Rural Wisconsin that are Underserved by Broadband Service Providers 5-FE-102

Quadrennial Planning Process II 5-FE-100
2017-2018 Program and Budget, Renewable Energy Loan Program, and Anaerobic Digesters

Dear Ms. Sheil:

We thank the Commission for the opportunity to provide our perspective on Focus on Energy in these two dockets. Our comments pertain only to the renewable energy funding and anaerobic digester portions of the Commission Memo issued October 6, 2016 ("the Memo").

We thank the Commission and Commission staff, as well, for moving this issue forward to this point. The renewable energy industry has achieved a period of consistency and predictability with the Focus on Energy program over the past two years. A timely decision on this matter will help all companies and their customers plan for the next two years.

Renewable Energy (pages 26 to 35)

The Commission should authorize renewable energy incentive funding at a level of \$5 million for 2017 and \$5 million for 2018.

Our proposal for \$5 million in renewable energy incentives per year for 2017 and 2018 is widely supported. Appendix A of our comments includes a Letter of Support from 41 businesses and organizations in support of our proposal. These supporters include:

- **Businesses across renewable energy technologies** including biogas, geothermal, and solar
- **Geographic coverage** across the whole state (as demonstrated in map in Appendix A.)
- **Citizens Utility Board**, Wisconsin's leading ratepayer advocacy organization
- **A number of statewide organizations** including the Wisconsin Geothermal Association and the Wisconsin Council of Churches

Additional rationale for this level of funding can be found in our memo of August 25th, attached as Appendix B here.

Focus on Energy has offered renewable energy incentives out of the program's annual funding every year since the program's inception. The average annual funding level for renewable energy incentives has been \$5.7 million over the years 2007 through 2016.

The funding for renewable energy incentives in 2017 and 2018 could come from a variety of sources, including annual funds (\$92 million in 2017 and \$94 million in 2018), any unspent renewable energy revolving loan funds the Commission may wish to redirect, or any of the unallocated, unspent, and reserve funding buckets identified in the Memo.

There are a number of key reasons why renewable energy incentives merit funding at \$5 million per year for 2017 and 2018:

- **The incentives have performed extremely well.** Incentives for large business projects over 2015 and 2016 were all allocated in just one request-for-proposals which occurred in the first half of 2015. The businesses that used these rebates are staying competitive in Wisconsin by locking in electric costs over the long term. Controlling energy costs will help these businesses keep jobs here in the state.

Incentive funding for residential and smaller projects was used up in 2015, and a larger budget of \$1.08 million was exhausted in just 9 months of 2016.

The cost-benefit ratio for renewables has increased steadily over the past four years.

Of the incentive budget of approximately \$8.9 million over 2015-16, 100% has been utilized. In contrast, the revolving loan fund had a budget of \$5 million, of which just \$1.35 million, or 27%, has been financed or is pending.

- **The loan program will perform better if incentives are offered.** If the loan program continues (which we support), it will perform better if rebates are also available. The two programs are not interchangeable, as they address different barriers and gaps for customers.

Programs in neighboring states similar have both direct cost reductions to customers as well as financing offerings. In Iowa, customers have a 15% state tax credit which offers a very similar value to the customer as does a Focus on Energy rebate, in addition to the state's revolving loan fund. In Minnesota, lending programs are available in tandem with utility incentive programs for renewable installations from both Xcel Energy¹ and Minnesota Power².

- **The renewable energy incentives will ensure the best opportunity to ensure “customers throughout the state have an equivalent opportunity to receive the benefits of” statewide energy efficiency and renewable resource programs.** (Wisconsin Stat. § 196.374(5m)(b)).

While the loan program has been expanding, to our knowledge, there are not yet lending offerings available throughout the state.

Meanwhile, renewable energy technology providers and installers do have wide geographic coverage across Wisconsin for all renewable technologies.

Our recommendations for ***Commission Alternatives on Revolving Loan Fund*** (Pages 34-35 of the Memo)

- A. Program Design: we support Alternative Three: Continue the loan program and authorize the Program Administrator to make any modifications to program design it determines to be appropriate, with Commission staff approval prior to implementation.
- B. Program Funding:
 - a. **We propose an additional alternative.**
 - i. **Alternative Six: Set the annual renewable energy incentive budget at \$5 million for 2017 and \$5 million for 2018, with \$1.5 million in each year to residential customers and \$3.5 million in each year to business/nonprofit customers**
 - b. **We support Alternative Two:** Reduce loan program funding to an amount specified by the Commission, and allocate the remaining balance for renewable incentive funding in 2017 and 2018.

¹ Xcel Energy program:

https://www.xcelenergy.com/programs_and_rebates/residential_programs_and_rebates/renewable_energy_options_residential/solar/available_solar_options/on_your_home_or_in_your_yard/solar_rewards_for_residences

² Minnesota power program:

http://www.mnpower.com/Content/Documents/Company/PressReleases/2016/20160601_NewsRelease.pdf

Anaerobic Digesters (pages 35 to 40)

RENEW Wisconsin supports the development of anaerobic digesters that produce renewable energy. Focus on Energy has historically been an important driver for expanding cost-effective digester deployment for agricultural, municipal, industrial, and wastewater treatment plant applications.

We support the Commission's intention to continue investing in digesters in Wisconsin. A variety of policies and changing market dynamics have created strains for many of the on-farm digesters that have been deployed in Wisconsin over the past decade. Buyback rates for electricity produced by digesters and interconnection costs and barriers remain as critical issues for both the continued operation of existing digesters and the development of new digesters of any size in Wisconsin.

Ensuring that state agencies are working together on digester deployment is very important.

But ensuring that the Wisconsin digester industry has the opportunity to engage in these conversations is also very important. The industry will bring a variety of perspectives, including the experiences of projects that have worked well, and projects that have not, as well as experience from throughout the country and the world. We in Wisconsin are blessed with several companies that are global leaders in biogas system design and development. We should take advantage of this expertise in developing interagency plans to increase the use of this beneficial technology.

Thank you for the opportunity to comment on this matter and for your consideration of this information.

Sincerely,

A handwritten signature in dark ink, reading "Tyler Huebner". The signature is written in a cursive, flowing style.

Tyler Huebner
Executive Director
RENEW Wisconsin
608-255-4044 ext 1
tyler.huebner@renewwisconsin.org

APPENDIX A: JOINT LETTER OF SUPPORT

To: Public Service Commission of Wisconsin

From: Able Energy	Integrated Energy Services
Appleton Solar	Legacy Solar
Arch Electric	MEP Associates
BIOFerm Energy Systems	Midwest Renewable Energy Association
Carl Siegrist Consulting LLC	Midwest Solar Power LLC
Carlson Electric LLC	Miron Construction
Chippewa Valley Affordable Energy	Next Step Energy
City of Milwaukee	Next Energy Solution
Citizens Utility Board	North Wind Renewable Energy, LLC
Clean Wisconsin	Photovoltaic Systems LLC
Convergence Energy LLC	RENEW Wisconsin, Inc.
Driftless Solar Inc.	RePower Madison
DVO Anaerobic Digesters	Sierra Club
Eland Electric Corp.	Sisters of St. Agnes
Energize LLC	SunPeak
Energy Concepts	SunVest Solar
Environmental Law & Policy Center	Synergy Renewable Systems LLC
Ethos Green Power	Unlimited Renewable Energies
Full Spectrum Solar	Wisconsin Council of Churches
Geothermal National and International Initiative	Wisconsin Geothermal Association
Hoeper Green Power	

Date: October 17, 2016

Re: Investigation into Improving Access to the Statewide Energy Efficiency and Renewable Resource Programs in Rural Wisconsin that are Underserved by Broadband Service Providers 5-FE-102

Quadrennial Planning Process II 5-FE-100

The entities submitting the joint comments below are Wisconsin businesses, organizations and full party intervenors to 5-FE-102 (hereinafter the “Joint Commenters”) who support continued investment of Focus on Energy revenues into customer-sited renewable energy resources. We appreciate the opportunity to submit comments on the Commission Memorandum (“the Memo”) dated October 6, 2016.

The comments herein address specifically the renewable energy incentive funding matters left open by the Commission from November 2014. Appended to this comment is a letter from RENEW Wisconsin to the Commission, dated August 25, 2016, which contains a

discussion of Focus on Energy's renewable energy program as well as recommendations for continued funding of the program's core renewable energy activities through the remainder of the 2015-2018 quadrennium.

Currently, and absent a Commission decision on this matter, there is no funding allocated to renewable energy incentives for 2017 and 2018. At its November 2014 decision meeting on Focus on Energy, the Commission decided to allocate two years' funding for renewable energy incentives, and left open the question of funding renewable energy incentives in 2017 and 2018 until now.

The discussion on page 30 of the Memo provides a strong rationale for continued investment into both the Renewable Energy Competitive Incentive Program (RECIP) for businesses and the Residential Rewards Program for residential customers. These core programs have been popular and effective since their inception, and have become principal drivers of the marketplaces in Wisconsin for biogas, geothermal, solar electric, solar hot water, and small wind systems.

After describing the savings accrued from the incentive programs in place for both business and residential customers, as well as the dollars spent in those categories, the section closes with this sentence:

"The 2016 program year is on pace to exceed spending compared to previous years, and the full incentive budget amount was committed as of late September 2016."

Based on the strong historic results of the Focus on Energy renewable energy incentive program, and their better-than-expected results in 2015 and 2016, there is a very strong case for continuing incentives through RECIP and Residential Rewards into 2017 and 2018.

Therefore the Joint Commenters recommend the following course of action for the Commission's consideration:

1. Allocate a minimum of \$10 million in Focus on Energy revenues (a minimum of \$5 million in 2017 and \$5 million in 2018) for renewable energy incentives. The allocated funds could come from a number of sources or a combination of sources, including annual program funds, unspent renewable energy revolving loan funds, and/or the other funding sources identified in the Memo.
2. Structure the annual renewable energy allocations along the lines delineated in RENEW Wisconsin's August 25th communication to the Commission, with \$3.5 million set aside for business customers and \$1.5 million for residential customers.
3. Regarding Commission alternatives on the Revolving Loan Fund – Program Design (page 34), we support Alternative 3.

4. Regarding Commission alternatives on the Revolving Loan Fund – Program Funding (page 35), we support Alternative 2.

The Joint Commenters thank you in advance for your consideration of our viewpoints.

/s/ Tyler Huebner
Executive Director
RENEW Wisconsin
Madison

/s/ Jesse Michalski
Project Manager
Eland Electric Corp.
Green Bay

/s/ Kurt Runzler
Acting Executive Director
Citizens Utility Board
Madison

/s/ Dan Walsdorf
President, Wisconsin Geothermal Ass'n
Owner, Advanced Custom Geothermal
Kiel

/s/ Teresa Lehman
Director of Sustainable Services
Miron Construction
Neenah

/s/ Peter Bakken
Coordinator for Public Policy
Wisconsin Council of Churches
Sun Prairie (HQ) and 2,000 congregations
statewide

/s/ Melissa VanOrnum
VP Marketing
DVO Anaerobic Digesters
Chilton

/s/ Nadeem Afghan
CEO
BIOFerm Energy Systems
Madison

/s/ Ryan Harkins
Project Manager
Synergy Renewable Systems, LLC
Stoughton

/s/ Kirk Kindred
National Sales Director
SunVest Solar Inc.
Pewaukee

/s/ Burke O'Neal
Project Engineer/Director
Full Spectrum Solar
Madison

/s/ Steve Johnson
Vice President, Business Development
Convergence Energy, LLC
Fontana

/s/ Alarik Rosenlund
Co-owner/Partner
Midwest Solar Power LLC
Madison

/s/ Michael Dearing
Principal
Driftless Solar, Inc.
Spring Green

/s/ Josh Stolzenburg
Chief Executive Officer
North Wind Renewable Energy
Stevens Point

/s/ Erick Shambarger
Environmental Sustainability Director
City of Milwaukee
Milwaukee

/s/Ingrid E. Nahm
Co-Owner
Appleton Solar
Appleton

/s/Carl Siegrist
Managing Director
Carl Siegrist Consulting LLC
Whitefish Bay

/s/Craig Tarr, P.E.
Owner
Energy Concepts
Hudson

/s/Ross DePaola
President
Integrated Energy Services
Madison

/s/Kris Schmid
Owner
Legacy Solar
Frederic

/s/Chad Sorenson
President
SunPeak
Madison

/s/Michael Harvey
Chief Executive Officer
Able Energy
River Falls

/s/Steve Terwilliger
Convener
Chippewa Valley Affordable Energy
Eau Claire

/s/Jim Funk
Owner
Energize LLC
Winneconne

/s/James Kerbel
Owner
Photovoltaic Systems LLC
Amherst

/s/Peter Murphy
Solar Program Manager
Midwest Renewable Energy Association
Custer

/s/Zeus Stark
Owner
Next Step Energy
Eau Claire

/s/Jeff Urlaub, PE
President
MEP Associates
Eau Claire

/s/Ed Zinthefer
Principal
Arch Electric
Plymouth

/s/Foley Quinn
Business Development
Next Energy Solution Inc.
Spooner

/s/Dave Carlson
Owner
Carlson Electric LLC
Hayward

/s/ Shane Hoeper
Owner
Hoeper Green Power
Cuba City

/s/Trang Donovan
Manager
Unlimited Renewable Energies
Prairie du Sac

/s/Elizabeth Katt Reinders
Senior Representative, Beyond Coal Campaign
Sierra Club
Madison

/s/Keith Reopelle
Policy Director
Clean Wisconsin
Madison

/s/Andy Olsen
Senior Policy Advocate
Environmental Law & Policy Center
Madison

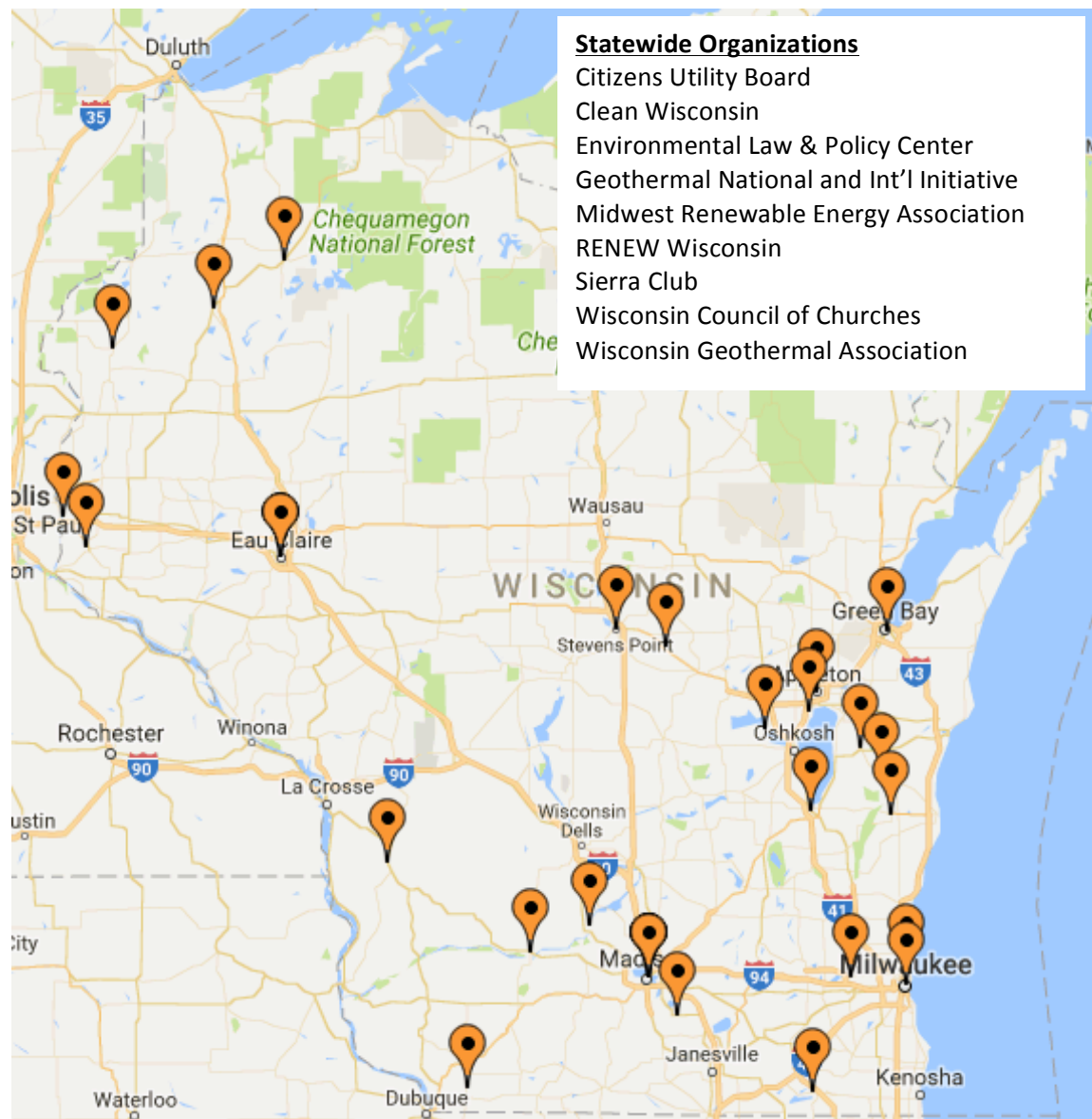
/s/Mitchell Brey
Campaign Director
RePower Madison
Madison

/s/Sister Susan Seeby and the Leadership Team
Leader
Congregation of Sisters of St. Agnes
Fond du Lac

/s/Jack DiEnna Jr.
Executive Director
Geothermal National and Int'l Initiative
Washington, DC

/s/ Michael Reuter
Ethos Green Power
Project Manager
Ethos Green Power
Viroqua

Map depicting businesses and organizations that have signed onto this letter of support, showcasing the geographic distribution of support for Focus on Energy renewable energy incentive funding of \$5 million per year in 2017 and 2018.



APPENDIX B: RENEW WISCONSIN MEMO OF AUGUST 25, 2016



222 S. Hamilton, Madison, WI 53703

August 25, 2016

Ms. Sarah Klein
Administrator
Division of Business & Program Management
610 N. Whitney Way
P. O. Box 7854
Madison, WI 53707-7854

RE: RENEW Wisconsin Recommendations for Focus on Energy
Renewable Energy Program Funding for 2017 & 2018

Dear Ms. Klein:

RENEW Wisconsin respectfully offers the following background, observations, and recommendations for funding renewable energy systems through the Focus on Energy program in 2017 and 2018. We sincerely thank the Commissioners and Commission Staff for the opportunity to provide our perspective. In summary:

We recommend the Commission allocate \$5 million per year in 2017 and 2018 to renewable energy rebates through Focus on Energy. This recommendation is based on:

- A historic average of \$5.7 million per year for renewable energy rebates
- There continues to be more demand for customer renewable energy systems than has been funded in 2015 and 2016
- The up-front cost of renewable energy technologies remains the key barrier to private investment into these projects, and the rebate program directly addresses that barrier
- This budget level will provide consistency, predictability, and stability to the state's renewable energy marketplace and industry, ensuring the total market impact of renewable energy, which is about 5x the rebate amount, remains consistent for the next two years

The renewable energy Revolving Loan Fund holds promise, but thus far only 12% of the funding for 2015 and 2016 has been utilized in that program, while 96% of the rebate funding for 2015 and 2016 has already been utilized (see Table 1 on Page 6).

BACKGROUND ON RENEW WISCONSIN'S INTERESTS IN FOCUS ON ENERGY

RENEW Wisconsin is the state's leading renewable energy advocacy and education organization in Wisconsin, and has been since 1991. We were instrumental in the establishment and design of Focus on Energy's renewable energy program in 1999, and our interest in maintaining the policy mechanisms that support customer-sited renewable energy systems continues to this very day.

In addition, we have 56 businesses amongst our Membership who are in the renewable energy development and installation/construction industry in Wisconsin, across solar, biogas, and wind energy systems. These companies also have a vested interest in this program.

FOCUS ON ENERGY RENEWABLE ENERGY FUNDING HISTORY THROUGH 2016:

In Fall of 2014, during the Quadrennial Planning Process II, the Commission voted to approve renewable energy funding as follows:

Rebates:

- \$5 million in rebates for 2015
- \$3.5 million in rebates for 2016

Revolving Loan:

- Create a new Revolving Loan Fund with \$10 million in funding for 2015 through 2018

Biogas:

- Allocate \$6 million towards a digester program for agricultural farms

The Commission agreed at that time to review the various programs in 2016 to determine how to proceed in 2017 and 2018.

An additional \$380,000 was added to the 2015 renewable energy budget as installation activity for residential and small business customers had exceeded expectations.

Historic Funding & Program Structure

Since the current iteration of Focus on Energy's program funding was established in 2006-7, the funding for customer renewable energy systems has been approximately as shown below, according to RENEW Wisconsin's records.

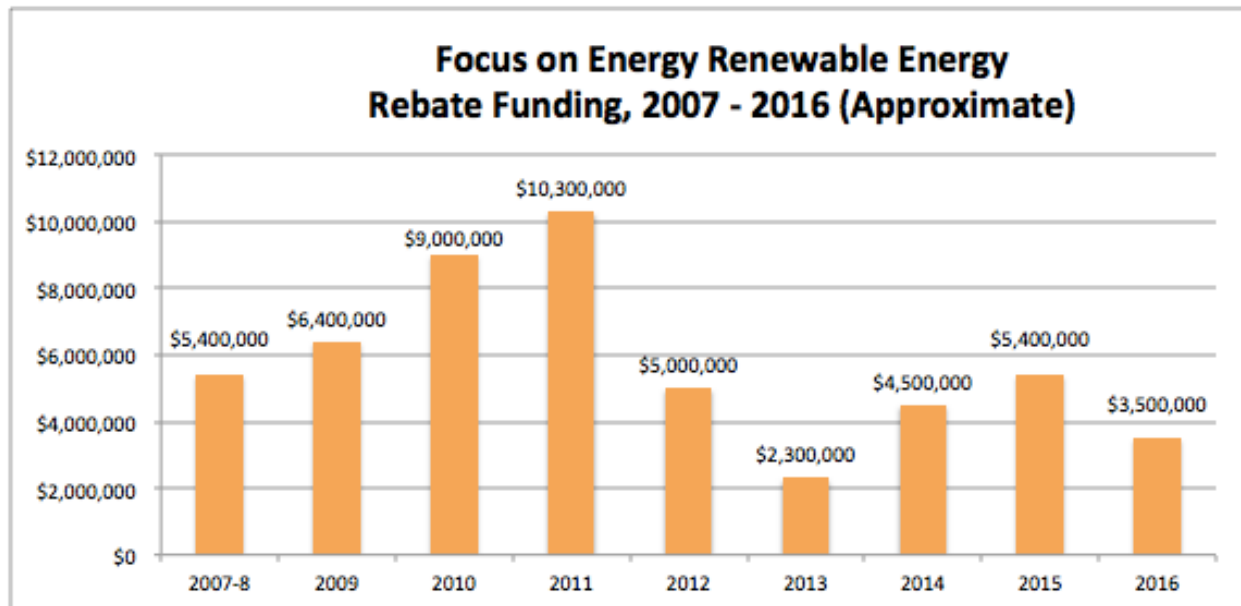


Figure 1: Focus on Energy renewable energy rebate budgets, 2007 through 2016

The average level of Renewable Energy Rebate Funding per Program Year from 2007 through 2016 was **\$5.7 million per year**.

In the late 2000s, the program had a goal of raising the expenditures on renewable energy rebates to be 10% of the total Focus on Energy budget. Following the 2010 and 2011 years when funding reached approximately 10% of the total budget, the renewables program budget was reduced, and there were periods where no rebates were available in the marketplace.

In the past three years, the funding has been more consistent and predictable, which has made a huge difference for the renewable energy market. Consistency and predictability are key factors to successful programs so that customers can take advantage of the program as part of their decision-making analyses when considering investments in renewable energy systems.

The renewable energy program serves the following primary technologies:

- Solar Energy
- Geothermal systems
- Biogas energy systems
- Biomass energy
- Small wind

The program is also divided into two major categories:

- Residential and small business incentives which are a set per-unit rebate amount based on the size of the installation, and currently apply to geothermal and solar. For example, solar installations can receive \$600 per kilowatt of solar installed, up to a maximum of \$2400. The program is first-come first-serve based on a reservation system.

- Larger business incentives which are structured as a competitive request-for-proposals solicitation called RECIP (Renewable Energy Competitive Incentive Program), and apply to any eligible renewable technology

OBSERVATIONS FROM 2015 & 2016 MARKET ACTIVITY

RENEW Wisconsin frequently interacts with the renewable energy marketplace of consumers, potential consumers, industry businesses, and with CB&I and their subcontractors who run these programs. Our observations below are based on these frequent interactions.

1. Rebates are effective and popular and address the primary barrier to customer investment.

The market activity to date demonstrates that the Focus on Energy rebate programs for both residential & small business and the business competitive incentives (RECIP) have been and remain an effective strategy for stimulating renewable energy installations large and small.

Residential and small business rebates: In 2015 the original budget for this sub-market was approximately \$540,000, and an additional \$380,000 was added to this budget in September 2015 because demand for the rebates far exceeded expectations. Still, the rebates budget was fully utilized in 2015.

The budget for this sub-market in 2016 is \$1.08 million. As of 8/22/2016 (as posted on Focus on Energy's website¹) approximately \$704,000 of that has already been paid (\$447,000) or reserved (\$257,000). From our conversations with installers and knowledge of the level of market activity amongst residential customers, we have no doubt that the entire budget will once again be used in 2016.

Business competitive incentives (RECIP). In RECIP (Renewable Energy Competitive Incentive Program), the proposals for funding have far exceeded the level of funding available for projects by a factor of 3 to 1. Although there was funding allocated by the Commission for both 2015 and 2016, the RECIP program in the past two years issued just one request for proposals, in spring 2015. All the available funds were reserved for projects in both years with just one competitive solicitation. Thus, there hasn't even been a competitive offering for larger business projects offered in 2016 despite the large number of unfunded applications from the previous year. A number of prominent businesses and institutions held open houses this year for large solar PV systems, including Letterhead Press in New Berlin, Darlington School District, JONCO Industries in Milwaukee, and O&H Danish Bakery in Racine. The rebates they received came out of the 2015 RECIP round.

¹ The current renewable energy program budgets and remaining funds are available at: <https://focusonenergy.com/residential/renewable-energy>

The up-front investment required for renewable energy systems remains the biggest barrier to enabling private actors to invest their own funds in these projects. The Focus on Energy rebate directly addresses that barrier by reducing the up-front cost of the investment.

2. Rebates are essential for helping nonprofit customers access onsite renewables. Nonprofit entities such as schools, houses of worship, community-serving organizations, and local governments cannot use federal tax credits to reduce the cost of renewable energy systems for their own use. The out-of-pocket cost of a renewable energy generation system can be 30% higher for them than it would be for taxpaying entities investing in the same installation. Up-front rebates for renewables, on the other hand, provide the same benefit to nonprofits as they do for-profit entities. Insofar as nonprofit customers contribute to the Focus on Energy program at the same level as for-profit entities, rebates are essential for equalizing the value of Focus on Energy to all ratepaying customers irrespective of their tax status.

3. Focus on Energy's revolving loan program is still in its infancy and does not fully meet the needs of the renewable energy marketplace

In 2013 and 2014, RENEW Wisconsin worked with then-Commissioner (now Chairperson) Nowak and her Executive Assistant to provide information about the success of a revolving loan program in Iowa that some of our member solar installers were utilizing in that state. We do support this program as a market-transformation opportunity to engage lenders throughout Wisconsin in these technologies, which are new to many lending institutions.

Though the revolving loan program holds promise, it is not yet mature, and does not address all the barriers to investment in renewable energy systems.

This program was intended to be launched in early 2015 so that it could be compared with the rebate program over the same time period. However, the loan program was not launched until January 2016. Since then, the program has started to gain some traction, but uptake has been slow thus far and there are significant hurdles to customer and lender participation.

We have had many discussions with CB&I and their subcontractor for the renewable energy revolving loan fund, as well as with our member companies in the industry and potential customers. Our observations thus far include:

- It is clear that lending institutions are having trouble making the program work for residential customers. One issue is that banking computer systems largely do not allow “participation lending” for consumer loans and are having to do manual work-arounds. Our understanding is that very few, if any, loans have actually been made to homeowners.
- Residential customers that need financing are finding that home-equity loans or home-equity lines of credit tend to be simpler and easier.
- Banking computer systems do allow “participation lending” for business loans, and thus we see the business renewables market being able to utilize this program more readily than residential consumers in the near-term.

- Biogas developers have indicated that other lending programs, such as those offered by the U.S. Department of Agriculture, typically have much less uptake, and that similarly this program is not in-and-of-itself very attractive to multi-million dollar biogas projects.
- Our understanding of the loans issued thus far is that the projects also took advantage of Focus on Energy rebates to bring down the up-front cost. The loan offering solves a cash-flow issue that is faced by a certain segment of customers, but does not address the up-front cost barrier that is prevalent for every customer.

Current Status of Rebate & Loan Programs:

The Focus on Energy website has been updated as of August 22, 2016 for the status of the rebate programs and as of August 11, 2016 for status of the Revolving Loan Fund. Thus far, based on funding allocations, here is how the programs have fared:

Table 1: Status of Focus on Energy Renewable Energy Rebates and Revolving Loan Fund, 2015 & 2016 year-to-date

Market Segment	Rebates: Jan 2015 – Aug 22, 2016	Revolving Loan Fund: Jan 2015 – Aug 11, 2016
Residential & Small Business	\$2.0 million allocated \$1.6 million paid / reserved *	\$0.4 million financed/pending
Commercial	\$6.9 million allocated \$6.9 million paid / reserved	\$0.2 million financed/pending
Total	\$8.9 million allocated \$8.5 million paid /reserved * 96% utilized	\$5.0 million allocated \$0.6 million financed/pending 12% utilized

*As stated above, it is highly likely that the remainder of these rebates will be fully utilized in 2016 by homeowners investing in solar and geothermal systems.

RENEW Wisconsin does believe the loan program is a value-add and will support certain segments of the renewable energy market; however, at this time, the loan program is not structured to meet the variety of market segments and technologies that Focus on Energy's funding has historically supported.

We would support the Commission enabling CB&I some flexibility to identify ways to make this program work more easily for lenders and customers, including piloting concepts to streamline participation. We also support increased budgets on marketing & education to ensure lenders are aware of and educated about how to utilize the program.

4. The Wisconsin Renewable Energy Market Served by Focus on Energy is Local, State-Based, and Still Relatively Small

Wisconsin's renewable energy industry is largely comprised of small-to-medium sized businesses located throughout the state. Most of the businesses in the project development and installation industry employ 5-50 people, and many are still family-owned and operated.

Solar PV: One technology that has garnered particular attention nationally over the past few years is solar PV (photovoltaics) for electricity production. Although this market has been expanding, estimates from Focus on Energy, RENEW Wisconsin, and the Solar Energy Industries Association place the total number of homes with solar PV at approximately 2,100 statewide, and the number of businesses with solar PV at approximately 600, as of the end of 2015.

Wisconsin continues to lag the national solar PV market significantly. Table 2 below compares solar PV installations from the U.S. and Wisconsin over the past seven years.

Table 2: Number of Solar PV Installations by Year, U.S. and Wisconsin, 2009 – 2015²

	2009	2010	2011	2012	2013	2014	2015
U.S.	35,069	51,699	64,904	94,688	154,858	199,000	319,000
Wisconsin	277	334	482	159	217	298	431

One way to put this table in perspective: Wisconsin accounts for approximately 1.8% of the population of the U.S. If we had installed 1.8% of the solar PV projects in 2015, that would have been 5,760. Instead, we installed 431. The U.S. market has grown nearly 10-fold in this time period, while Wisconsin's market has fluctuated somewhat but not grown significantly.

In addition, in looking at the market penetration of solar technology, it is clear that Wisconsin's market is still very nascent. Wisconsin has approximately 2.66 million housing units according to the U.S. Census³. We estimate that 2,100 homes have solar PV, which is approximately 0.08% of Wisconsin's housing units. That is 8 homes with solar for every 10,000 housing units.

Although solar PV adoption is growing nationally, the Wisconsin market still lags significantly. The Focus on Energy rebate funding remains a significant driver to stimulating Wisconsin's renewable energy market.

Biogas & Anaerobic Digesters: Another renewable energy technology that is very important to Wisconsin is anaerobic digesters which produce biogas. Wisconsin remains the national leader

² Data sources: Interstate Renewable Energy Council: *U.S. Solar Market Trends 2013*; Solar Energy Industries Association (SEIA) / GTM Research *U.S. Solar Market Insight*; RENEW Wisconsin

³ U.S. Census Quickfacts, Number of housing units in Wisconsin July 1, 2015, found at <http://www.census.gov/quickfacts/table/PST045215/55>.

in on-farm digesters with 34, although New York, California, and Vermont are adding farm digesters more rapidly than we are. According to the Wisconsin Biogas Survey Report⁴ issued recently there are 136 operating anaerobic digester systems in the state including those on farms, at municipal wastewater treatment plants, and at industrial wastewater facilities.

Focus on Energy over the years has supported the investments into many of these systems, including systems brought online in 2014 and 2015 which Focus on Energy competitive RECIP rebates supported. Three 2015 projects include Focus rebates to wastewater treatment plants for renewable electricity production: City of Kiel, Kenosha Water Utility, and Stevens Point Wastewater Treatment Plant. These biogas generators will partially power the wastewater treatment plants and reduce the plants' operating expenses, saving taxpayer money.

One 2014 project, on Statz B Farm near Sun Prairie, supports electricity generation that offsets about 85% of the electricity usage on the dairy farm, while providing a stream of co-benefits to the farm and the surrounding community including greatly reduced odor, manure management, bedding for the cows, better fertilizer for crops, and water quality protection.

Focus on Energy's rebates have been and remain a critical piece to these successful biogas projects and Wisconsin's leadership role in the biogas industry.

MARKET IMPACT OF REBATES AND LOANS

One important factor in considering funding levels of loans and rebates is the level of renewable energy market activity that these programs generate. The total investment in the sector is what drives job creation and business activity in the state.

Historically, rebates tend to support 10-20% of a project's up-front cost, meaning the rebate program generates a 5x (or more) economic multiplier on projects. In other words, the total investment in renewable energy projects is about 5 times the monetary value of the rebate budget.

The loan program as currently structured initially provides a 2x multiplier on projects: it is a 50% loan from Focus on Energy partnered with a 50% loan of private capital. When the loan recycles one time and the Focus on Energy funds are lent out again, it does create another 1x multiple of market impact. But, the loan dollars will have to revolve 4 times (which takes probably 20-30 years given typical loan repayment periods) to have the same market impact as the same amount of rebate funding.

Given the historic average rebate level of \$5.7 million per year, an estimated \$28.5 million in total renewable energy market impact has been created annually.

For 2017 and 2018, the \$2.5 million of loans will generate \$5 million per year in economic

⁴ Available at <http://www.stateenergyoffice.wi.gov/docview.asp?docid=27510&locid=160>

impact, if they are utilized. To keep the level of market impact consistent, an annual rebate allocation of \$4.7 million is required, which will generate approximately \$23.5 million in annual market impact.

RENEW WISCONSIN'S RECOMMENDATIONS FOR 2017 & 2018 FUNDING

RENEW Wisconsin believes that the combination of rebates and low-interest financing will leverage more high-quality renewable energy installations at a lower overall cost to ratepayers than would a rebate-only or a revolving loan-only program.

The Commission has already committed funds to the revolving loan program through 2018. In our view, the amount approved should be sufficient to give this program a fair test, provided, however, that rebates are adequately funded to reduce the up-front cost of renewable energy systems to business, non-profit, and residential customers.

Based on the factors described above, RENEW Wisconsin respectfully recommends that the Commission allocate \$5 million in 2017 and \$5 million in 2018 to rebates for renewable energy technologies.

We suggest that \$1.5 million be allocated to residential customers and \$3.5 million for business customers. We further suggest that the business renewables program have \$750,000 in prescriptive rebates for smaller business installations, and \$2,750,000 in competitively bid installations.

Table 3: RENEW Wisconsin's Recommended Renewable Energy Rebate Funding for 2017 & 2018

Category	2017	2018
Residential Renewables	\$1,500,000	\$1,500,000
Business Renewables	\$750,000	\$750,000
RECIP (Competitive RFP)	\$2,750,000	\$2,750,000
Total Rebates	\$5,000,000	\$5,000,000

At this point in time, we expect the Revolving Loan Program to carry a significant uncommitted balance going into 2017 given that it is currently 12% subscribed. While RENEW fully supports the PSC's existing commitment to inject \$2.5 million into the revolving loan fund in both 2017 and 2018, we would support repurposing a portion of the uncommitted revolving loan dollars at the end of 2016 into rebate programs for 2017.

We also intend to continue working with CB&I and their subcontractors to identify ways to maximize the market impact of the Focus on Energy renewable energy funding in 2017 and 2018, including reviewing the rebate levels needed to stimulate market activity for solar.

Thank you in advance for the opportunity to comment on this matter and for your consideration of this information.

Sincerely,

A handwritten signature in black ink that reads "Tyler Huebner". The signature is written in a cursive, flowing style.

Tyler Huebner
Executive Director
RENEW Wisconsin
608-255-4044 ext 1
tyler.huebner@renewwisconsin.org