

## **WCUTA AUGUST 19, 2016 BOARD MEETING MINUTES**

### **PRESENT:**

Supervisors John Tramburg, Larry Willkolm, Linda Sinkula, Chuck Hoffman, William Goehring and Don Pazynski by phone; Bob Yeoman, Rock County, WCA staff, Kyle Christianson and Chelsea Filbert.

EXCUSED: Tom Wegner, Robert Keeney, Mark Klubertanz, Nick Osbourne

Staff: Alice O'Connor.

The meeting was called to order at 10:33 by Chairman Willkolm. It was noted Alice did not have the Audit Report ready so it will be an agenda item at the October meeting.

### **President's Report – Supervisor Larry Willkolm**

He stated Excel Energy in his area is contracting with people about expanding solar, not wind energy projects. They are also contacting people in La Crosse and Eau Claire. Each project needs the equivalent of two football size fields and they want two in Chippewa Falls. They asked the Chippewa County Board for a \$200,000 contribution in exchange for 20 years of a tax credit. The Chippewa County Board is assessing would they be better off with a 10-year ROI or investing \$200,000 themselves. It was suggested Chippewa County should negotiate the number of kilowatts they are given over a five-year period. Larry said there is a coal problem. Taxation of solar will be a future issue because property taxes will be involved. The questions remain, what is a football field's worth? Rock County also just announced Alliant Energy is converting a local coal fired power plant. Bob Yeoman referenced the Legislative Fiscal Bureau 2015, Paper 18 on shared revenue, page 6, saying money to locals can be affected according to state statutes if you have an alternative energy source that fulfills your measurement or name plate capacity.

**MINUTES APPROVED** The minutes of the May 6, 2016 WCUTA board meeting were approved on a motion by Supervisor Tramburg, seconded by Supervisor Hoffman.

### **WCA REPORT – Kyle Christianson included Chelsea Filbert and said she will be the new point person.**

He said there will be no money with 2017 budget so counties won't be asking for their typical \$1 million increase. Instead, they will be asking for more flexibility to enforce different programs. Also likely to see more local wheel or sales tax. Sheboygan County raised \$10 million with a 10% sales tax. Kyle said there are only four pots of money left. K-12 education, , UW and they took a \$250 million hit last budget, Corrections (where the only way to save money is to do early releases) and local government/shared revenue spending. He said no bad news will come out before the election and the next economic forecast September 15<sup>th</sup> will be guarded.

He said, the Department of Transportation budget has proposed a variety of tax increases. Governor Walker has said he won't support. Something may be done on the Transportation budget before December, 2016. The Governor's budget bill and State of the State will be around February 2, 2017.

### **Executive Director Report-Alice O'Connor**

Echoing what Kyle Christiansen said, she reiterated that any resolution with towns on their desired revenue increase, that does not take it from towns, will remain WCUTA's primary goal. A bigger

challenge will be to protect the estimated \$48 of the utility tax now dispersed to counties by the Dept. Of Revenue. Future efforts will be to prevent the Department of Revenue from keeping more. She said people seem to speculate Governor Walker won't run for re-election again if his approval numbers don't rise above the 30% range.

**SPEAKERS were introduced by Alice.**

**Speaker Erv Selk who represents QUEST**, a group who wants useful energy in Wisconsin. He is the Founder and Chair for the Calumet Citizens for Responsible Energy. Their group wants responsible siting of wind turbines. He provided a variety of supporting documents and said Wisconsin need to acknowledge there are health effects for homeowners near a wind turbine. The reports he shared were:

- Wind Turbine Siting, Calumet County for Responsible Energy
- WI Citizens for Safe Wind Setting Guidelines with annotations
- Position of the National Institute of Public Health – National Institute of Hygiene on Wind Farms
- Open letter to members of the panel developing the World Health Organization (WHO) Environmental House Guidelines for the European Region

Wisconsin policy should allow set back provisions to be at least a mile from a home, he said.

**Speaker Rep. Thiesfeldt Chief of staff, Hariah Hutkowski.** He reported on AB490 from last session, which both WCUTA and the WCA had opposed because it proposed to change the current utility tax formula by reducing payments to counties and shifting revenue to counties with a lot of wind tower development. Under his bill, Fond du Lac County would have been the primary beneficiary.

Hariah said the Dept. of Revenue has been unable (or unwilling) to give them exact figures on what they collect in taxes from wind turbines. They could tell him they give counties \$2.7 million. He said his boss feels now that there is wind, the utility tax formula should be changed. A new approach he says for next session is to consider a 50/50 split between counties and towns but take it from the wind line item, not the utility tax line item. This would be a shift of \$245,000 and negatively impact 6 counties while benefitting towns.

He said if they could squeeze just \$500,000 out of the Dept. of Revenue, counties would be held harmless and towns would have money they need. There was additional discussion about drafting language so that all counties are held harmless or there is a phase approach to funding changes. Hariah said his boss right now is thinking he would do an even split of one-third to each for State, County and Towns. Under this formula, Fond du Lac would receive \$20,000 less, and Calumet County \$15,000 less. If the wind siting formula was more fair, there would be more wind sitings, he said.

WCA Kyle Christianson said a clause in any proposed legislation that state government adds "not withstanding" would allow the Dept. of Revenue to negatively impact counties.

**Treasurer's Report – Supervisor Linda Sinkula**

She said Kenosha County has indicated they will finally be sending their check for 2015 dues in the amount of \$2,469.56. She said the balance in the WCUTA check books as of July, 2016 is \$72,813.74 This includes \$32,469.7 in the checkbook and a \$40,343.77 CD that was not renewed and will mature January

31, 2017. Expenses for May through July totaled \$6,020.18. This left a total balance of \$66,793.56 An audit of WCUTA books at the October meeting was accepted on a motion by Supervisor Tramburg, seconded by Supervisor Hoffman. In the same motion, the Treasurer's report was approved.

**Audit Committee Report** – will be at the October meeting. Those sitting on the audit committee will be Supervisors Sinkula and Tramburg, chaired by Supervisor Goehring.

**NEXT MEETING DATE:** The next meeting date was set for Oct. 21, 2016 AT 10:30 a.m. at the WCUTA office, 44 East Mifflin St., Suite 603, Madison. The meeting adjourned at 1:30 on a motion by Supervisor Goehring, seconded by Supervisor Hoffman.

Open Letter to the members of the panel developing the WHO Environmental Noise  
Guidelines for the European Region.

Marie-Eve Héroux  
Wolfgang Babisch.  
Goran Belojevic.  
Mark Brink.  
Sabine Janssen.  
Peter Lercher.  
Jos Verbeek.

Marco Paviotti.  
Göran Pershagen  
Kerstin Persson Waye.  
Anna Preis.  
Stephen Stansfield.  
Martin van den Berg.

Ladies and Gentlemen,

We understand that you are currently in the process of developing the WHO Environmental Noise Guidelines for the European Region as a regional update to the WHO Community Noise Guidelines. We also understand that:

1. The new Guidelines will be based upon a review of evidence on the health effects of environmental noise in the light of significant research carried out in the last few years.
2. The guidelines will review evidence on the health benefits of noise mitigation and interventions to decrease noise levels.
3. The evidence will be systematically reviewed to assess likely effects such as: sleep disturbance, annoyance, cognitive impairment, mental health and wellbeing, cardiovascular diseases, hearing impairment and tinnitus and adverse birth outcomes.

One of the sources of noise you are investigating is that from wind turbines which was not addressed in previous guidelines.

We welcome your review because, despite mounting anecdotal and academic evidence, for too long mitigation against adverse health effects following the construction of wind turbines has been absent from planning guidelines and **noise pollution regulations** in many European countries, especially **with respect to sound below 200 Hz**.

There is a pressing need for new guidelines to encourage governments better to safeguard the health of their citizens.

You will be aware that these problems are not confined to Europe. Neither are they confined to human beings.

We are hopeful that your deliberations will result in tough new European guidelines which in turn will prompt a serious worldwide examination of all aspects of this problem, including the widely-reported effects on animals.

Yours sincerely,

The undersigned:

Mrs. V.C.K. Metcalfe Community Councillor	Scotland	07.07.2016
Mauri Johansson, MD, MHH Specialist in Community and Occupational Medicine, including Environmental Medicine (retired)	Denmark/EU	07.07.2016
Susan Crosthwaite Community Councillor. Author of 'Request for Action' to Scottish Government	Scotland.	07.07.2016
Sarah Laurie Bachelor Medicine, Bachelor Surgery and CEO, Waubra Foundation	Australia	07.07.2016
Dr. Rachel Connor Bachelor Medicine, Bachelor Surgery, and Fellow of the Royal College of Radiologists. Chair of Moscow and Waterside Community Council	United Kingdom	07.07.2016
Virpi Poikolainen Physical therapist, Bachelor of Health Care. Community & County Councillor	Finland	07.07.2016
Alun Evans MD Professor Emeritus. Centre for Public Health. The Queen's University of Belfast. Institute of Clinical Science B	Northern Ireland	08.07.2016
Vojko Bernard, metallurgist, President of Alpe Adria International	Slovenia	08.07.2016
Angela Armstrong, M.B., Ch.B. retired General Medical Practitioner and Occupational Physician	Scotland	08.07.2016
Tomaž Ogrin, BSc, MSc Chemistry, researcher, scientist	Slovenia	08.07.2016
Dr. Katarina Dea Žetko, BA, MSc, PhD historical and germanic linguistics, Lecturer	Slovenia	08.07.2016
William K.G. Palmer P. Eng.	Ontario, Canada	08.07.2016
Jerry L. Punch, Ph.D. Professor Emeritus, Department of Communicative Sciences and Disorders, Michigan State University, East Lansing, Michigan	USA	08.07.2016
Curt Devlin, B.A., MA Software Architect, Health Sciences	USA	08.07.2016
Alec N. Salt, PhD. Professor of Otolaryngology, Washington University School of Medicine, St Louis	USA	08.07.2016

Gary Goland, Cert App Sci, (Medical Lab), Royal Melbourne Institute of Technology, Medical researcher, Adelaide	Australia	08.07.2016
Dominic Mette Friends Against Wind	France	08.07.2016
Sven Johannsen CEO & Erik Brunne, Cert. Acoustic Engineers & Infrasound Experts, GuSZ Gutachter u. Sachverständigen Zentrum für Umwelt-Messungen GmbH <a href="http://www.umweltmessung.com">www.umweltmessung.com</a>	Germany	08.07.2016
Johannes Mayer M.D. Family medicine, Osteopathic Medicine Clin. Ass. Prof. Osteopathic medicine Athens/Ohio/USA President Osteopathic physicians (BDOÄ)	Germany	08.07.2016
Greta Gallandy-Jakobsen author, retired teacher, editor of wind turbine victims' website <a href="http://vind-alarm-danmark.eu">vind-alarm-danmark.eu</a>	Denmark	08.07.2016
Sherri Lange <a href="http://www.na-paw.org">www.na-paw.org</a> CEO North American Platform Against Wind Power.	USA & Canada.	08.07.2016
Wayne C. Spiggle, MD physician	USA	08.07.2016
John Harrison, PhD Expertise in wind turbine sound generation and propagation. Former member: Ontario Ministry of the Environment Focus Group on Wind Turbine Noise Regulation. Invited Speaker: 2008 World Wind Energy Conference	Canada	08.07.2016
Mark Duchamp President, Save the Eagles International <a href="http://www.SaveTheEaglesInternational.org">www.SaveTheEaglesInternational.org</a> Chairman, World Council for Nature, <a href="http://www.wcfn.org">www.wcfn.org</a> +34 693 643 736	Spain	08.07.2016
Maxwell Whisson, MB,BS FRCPATH retired medical consultant and leader in Medical Research, primarily cancer & haematology	Australia	09.07. 2016
George Papadopoulos Pharmacist (B. Pharm), Yass, NSW	Australia	09.07.2016
Mary Morris Community based noise and health researcher and community advocate, (near) Waterloo, South Australia	Australia	09.07.2016
R.Y.McMurtry CM, MD, FRCS, FACS	Canada	09.07.2016
Arline L. Bronzaft, Ph.D Professor Emerita, City University of New York	USA	09.07.2016

Angela Kearns Retired Registered Nurse and Midwife	Australia	09.07.2016
Eric Rosenbloom President National Wind Watch, Inc. < <a href="https://www.wind-watch.org/">https://www.wind-watch.org/</a>	USA	09.07.2016
Mariana Alves-Pereira, PhD Researcher and Expert on the biological response to Infrasound and low-frequency noise exposure	Portugal	09.07.2016
Susan Smith Retired teacher. Founding member of Mothers Against Wind Turbines. Experiencing life within 900 metres of an industrial wind turbine	Canada	09.07.2016
George M Lindsay, B.Sc., PhD Engineer	United Kingdom	09.07.2016
Ove Björklund Engineer. Board member of the Association "Good Environment Hylte"	Sweden	09.07.2016
Madeleine Kura Co-founder of Cesme Sustainability Platform website <a href="http://www.cesmeplatformu.org/en/">http://www.cesmeplatformu.org/en/</a> Izmir	Turkey	09.07.2016
Sandy Reider, MD Lyndonville, Vermont	USA	09.07.2016
Per Fisker, MD retired Consulting Gynecologist and Obstetrician	Denmark	10.07.2016
Jutta Reichardt, Soz.Päd.(graduate degree) behavioral therapist Spokeswoman of sound victims on <a href="http://www.opfer.windwahn.de">www.opfer.windwahn.de</a> (Affected by infra, low frequency and structure born sound of technical facilities such as wind turbines, pumps etc.)	Germany	10.07.2016
Esen Fatma Kabaday Whiting Çeşme Municipality Councillor Biologist, Environmental Specialist (MS), Project Cycle Management Specialist	Turkey	10.07.2016
Bernd Stymer Oldest and largest resistance against wind madness in Sweden website <a href="http://www.helgaro-liv.se/">http://www.helgaro-liv.se/</a>	Sweden	10.07.2016
William G. Acker Consulting Engineer with Acker & Associates; Eight years of research work on Infrasound & Low Frequency Noise from Cooling Towers, Industrial Wind Turbines, Boilers and Automobiles. Green Bay, Wisconsin	USA	10.07.2016
James Vanden Boogart President, Brown County Citizens for Responsible Wind Energy. Brown County	USA	10.07.2016

David Moriarty Falmouth, Mass	USA	10.07.2016
Marshall Rosenthal MA Cultural Anthropology, Syracuse University, BS Biology, City College of NY, former Health Officer, Child Development Group of Mississippi	USA	10.07.2016
Bruce Rapley, BSc, MPhil, PhD Consulting Scientist. Principal Consultant: Environmental Health, Acoustics and Human Cognition, Atkinson & Rapley Consulting Ltd. <a href="mailto:arg@paradise.net.nz">arg@paradise.net.nz</a>	New Zealand	11.07.2016
Steven Cooper Acoustical Engineer, The Acoustic Group	Australia	11.07.2016
Janet Holtkamp practitioner of Chinese Medicine, Nieuw-Buinen	Netherlands	11.07.2016
Ipar Buğra Dilli Head of Karaburun City Council	Turkey	11.07.2016
Ghislaine Siguier Présidente, Victimes des Éoliennes (Victims of Wind Turbines), <a href="http://en.friends-against-wind.org/victims">http://en.friends-against-wind.org/victims</a>	France	11.07.2016
Dr Mireille Oud medical physicist, founder of Dutch LinkedIn Expertise Group on Low Frequency Noise, author of 'Explanation for <u>suffering from low-frequency sound</u> '	Netherlands	11.07.2016
Prof. Dr. Ümit Erdem EGE University, Agricultural Faculty, Dep. of Landscape Architecture, Izmir Emeritus Fellow Member of the European Ecological Federation <a href="http://www.europeanecology.org">http://www.europeanecology.org</a>	Turkey	11.07.2016
Prof. Dr. Zuhail Okuyan (MD) Community Health specialist and Medical Ethics lecturer Dokuz Eylul University, Izmir	Turkey	11.07.2016
Mustafa Tanışık Bodrum Peninsula Environmental Protection Platform	Turkey	11.07.2016
Stephen E. Ambrose, ASA, INCE Brd.Cert. Acoustic Investigator	USA	11.07.2016
Jean Pierre Riou Président de l'association "Le Mont Champot" ( <a href="http://lemontchampot.blogspot.fr">lemontchampot.blogspot.fr</a> )	France	11.07.2016
Robert W. Rand, ASA, INCE	USA	11.07.2016



Christine Lavanchy Research laboratory technician. Member of Paysage Libre Vaud committee, 1096 Cully	Switzerland	11.07.2016
Paul Housiaux Solicitor (retd.)	United Kingdom	11.07.2016
Simon & Brooke Yates Mt Torrens, South Australia	Australia	11.07.2016
Barbara Lebieadowska Professor emeritus, independent researcher <a href="http://www.kdepot.eu/http://lebieadowska.blog.onet.pl/">http://www.kdepot.eu/ http://lebieadowska.blog.onet.pl/</a>	Poland	11.07.2016
Marek Lebieadowski Professor emeritus, independent researcher <a href="http://www.kdepot.eu/">http://www.kdepot.eu/</a>	Poland	11.07.2016
Marcin Przychodzki Lawyer and editor-in-chief of stopwiatrakom.eu website	Poland	11.07.2016
Paweł Kotwica Political scientist, translator and community advocate	Poland	11.07.2016
Marek Jasudowicz Mayor, Municipality of Giżycko, Masurian Lake District	Poland	11.07.2016
Hal Wilson B.Ed ((Chemistry and Mathematics) retired, Staffordshire	England	11.07.2016
Rick James, INCE E-Coustic Solutions, LLC, Okemos, MI 48805	USA	11.07.2016
Prof. Dr. Ali Osman Karababa Faculty of Medicine, Department of Public Health, Ege University, Izmir	Turkey	11.07.2016
Annette Smith Executive Director, Vermonters for a Clean Environment	USA	11.07.2016
Dr Gary Hopkins Emergency physician	Australia	11.07.2016
Dr. Alan C Watts OAM; HDA; B.Sc; M.B., Ch.B; L.R.C.P; M.R.C.S. retired medical practitioner with an interest in the health effects of wind turbines	Australia	12.07.2016
Dr. Colleen J Watts OAM; B.Sc.Agr.(Hons); M.Phil; Ph.D. Environmental scientist	Australia	12.07.2016
Carl V Phillips, MPP PhD consumer health advocate; former professor of public health and evidence-based medicine	Australia	12.07.2016
Annie Gardner	Australia	12.07.2016

Patina Schneider Australian Industrial Wind Turbine Awareness Network	Australia	12.07.2016
Jean-Louis Butré President of EPAW.org. Also: President of the French Fédération Environnement Durable regrouping 1060 French local associations	France	12.07.2016
Witold Jaszczyk, D.Eng. Vice President, Central Board, Liga Walki z Hałasem (Anti- Noise League), <a href="http://www.lwzh.org.pl/">http://www.lwzh.org.pl/</a>	Poland	12.07.2016
Zbigniew Sienkiewicz Ecology, environment & human health, protection of citizens' rights	Poland	12.07.2016
Keith Stelling, MA, MNIMH, Dip Phyt Independent Researcher, Ontario	Canada	12.07.2016
David R. Lawrence, MD Board Certified Internal Medicine ABIM Member Connecticut State Medical Society. Member Litchfield County Medical Association, Executive Committee. Assistant Clinical Professor, Department of Medicine, University of Connecticut School of Medicine	USA	12.07.2016
Norma C. Schmidt, RN BScN Retired Professor of Nursing	Canada	12.07.2016
Peter R Mitchell, AM BchE Founding Chairman of the Waubra Foundation	Australia	13.07.2016
Catherine Mitchell Director, Mothers Against Wind Turbines, Ontario	Canada	13.07.2016
Linda Rogers, NP-PHC Nurse Practitioner Primary Health Care, Ontario	Canada	13.07.2016
John O'Sullivan CEO, Principia Scientific International, <a href="http://principia-scientific.org">principia-scientific.org</a>	United Kingdom	13.07.2016
Krzysztof Skotak Researcher, Environmental and Health expert, National Institute of Public Health	Poland	13.07.2016
Dr. Matthias Kleespies Environmental scientist and climate researcher	Germany	13.07.2016
Ross McLeod Environmental Health Officer(retired), Queensland	Australia	13.07.2016
Dr Timothy Ball (Climatologist), Professor (retired), University of Winnipeg	Canada	13.07.2016

Andrew Duncan B.S.c Property Studies. County Councillor Westmeath County Council. Spokesperson Lakelands Windfarm Information Group. (LWIG).	Eire	14.07.2016.
Malcolm Roberts, BE, Engineering University of Queensland, MBA, Business, University of Chicago. Project manager for The Galileo Movement (Aus).	Australia	14.07.2016
Lon Briet, Environmental Platform. Bodrum.	Turkey	14.07.2016
Michael Jankowski. Electronics Engineer.	Canada	14.07.2016
Nicholas Kouwen, PhD., P.Eng., FASCE. Distinguished Professor Emeritus and Adjunct Professor Department of Civil and Environmental Engineering University of Waterloo. Waterloo, ON. N0C 1E0	Canada	14.07.2016
Shellie Correia, Mothers Against Turbines TM	Canada	15.07.2016
Ferdinand Deželak. Head of laboratory for physical measurements Institute of Occupational Safety. Ljubljana. Vice president of the Slovenian Acoustic Society.	Slovenia	15.07.2016
Miha JANC, Dr.Vet.Med., Dr.Sci., Emeritus Professor of Microbiology., University of Ljubljana, Slovenia.	Slovenia	15.07.2016
Mads F. Hovmand, Senior Scientist Terrestrial Ecology, Department of Biology University of Copenhagen. DK-1353 Copenhagen K, <a href="mailto:MFH@bi.ku.dk">MFH@bi.ku.dk</a>	Denmark	15.07.2016
Gitte Nielsen Monnetvej 8	Denmark	15.07.2016
Jay J Tibbetts MD Vice Chair/Chair Brown County Board of Health Declared Shirley Wind IWTs a Human Health Hazard Oct, 2014 Green Bay, WI	USA	15.07.2016
Kalevi Nikula Legal and External Affairs Director (retired) M.Sc., Physiology/Biophysics/Biochemistry. Chairman, The Finnish Association of Citizens Against Industrial Wind Power Plants (TV-KY ry.) <a href="http://www.tvky.info">http://www.tvky.info</a>	Finland	16.07.2016

# Wind Turbine Siting

Erv Selk

CCCRE

Calumet County Citizens for Responsible Energy

Home Phone: (920) 849-3143

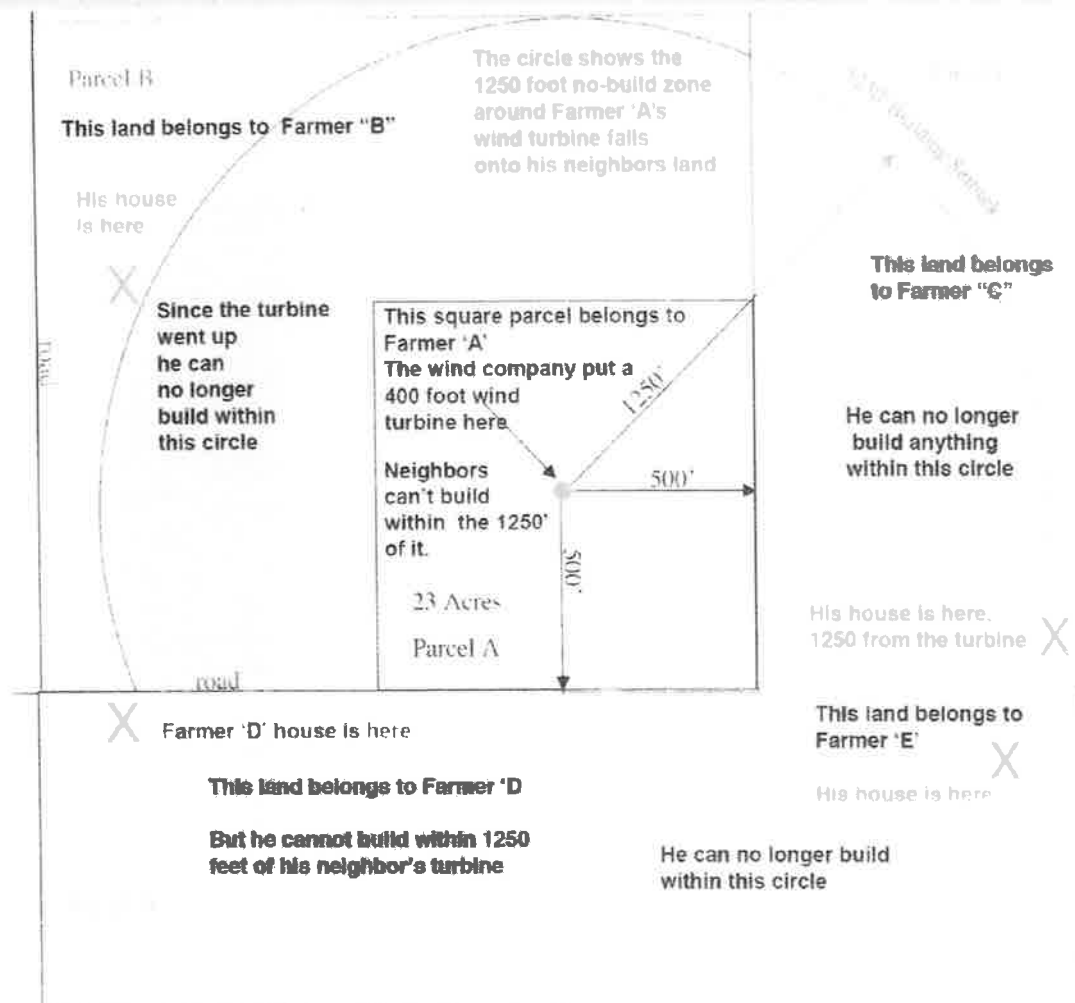
Email: [carquilt@msn.com](mailto:carquilt@msn.com)

# What's not to like?

- Wind is Free
- Reduce Carbon Emissions
- Energy Diversity/Independence
- Green Jobs
- Low Cost
- Feel Good Syndrome, Doing the Right Thing

# Wind is Free

- According to a 2010 Federal report, per unit of power generated, the wind industry receives federal subsidies approximately:
  - 18 times higher than nuclear energy
  - 88 times higher than coal
  - 88 times higher than natural gas
- Amount of subsidies for wind energy exceeded the amounts for all conventional sources of electricity, **combined**



# What is happening in Madison?

- Act 40 – removed local control
- Wind Siting Council
- Wind Siting Rules (PSC 128)
- Committee sent back to PSC
- Rules made worse for Townships and Residents
- JCRAR - Joint Committee on Review of Administrative Rules
- Latest budget removed money for health study



# Public Service Commission Rule

## Wind Siting Rule - 128

- Developed by pro-wind staff, Wind Siting Council, and Commissioners
- Scientific data ignored
- Objective was to site as many turbines as possible in rural Wisconsin
- 1.1 times height to property line
- 1250 foot setback from homes
- 50 dba noise limit

# “Wisconsin Citizens Safe Wind Siting Guidelines”

- A tool for Townships and Counties
- Giving Townships a Voice
- Science based
- Not an arbitrary setback
  - 2,640 feet from homes
- Noise Measurement protocol
  - Cannot exceed 5 dba above ambient noise levels
- Library of References

# Columbia County

- 90 turbines
  - 410 feet high
  - 1.8 megawatt each rated output
- Issues include noise, TV reception, shadow flicker, and property values
- 2 families bought out by WE Energies
- Participating landowner bought out for health reasons after project operating
- \$2,000/year for noise and nuisance waiver

# Brown County Health Impact of Shirley Wind Project

- 8 Turbines
- 3 Families have abandoned their homes
- Board of Health declares turbines “Health Hazard”
- County Health Director (Chua Xiong) disagrees but states in an email:

“Carolyn the times I have been out there by the Wind Turbines, I get such migraine headaches. I think I should take some preventive Tylenol before I head out there.”

She and the Corp Counsel have since resigned

# Fond du Lac County

- Over 150 Turbines
- People also complaining about health effects
- Bat survey showed 41 bats and 12 birds killed per turbine annually (6150 bats & 1800 birds)
  - Significant impact given white-nose syndrome
- Money to study bats but not people?????

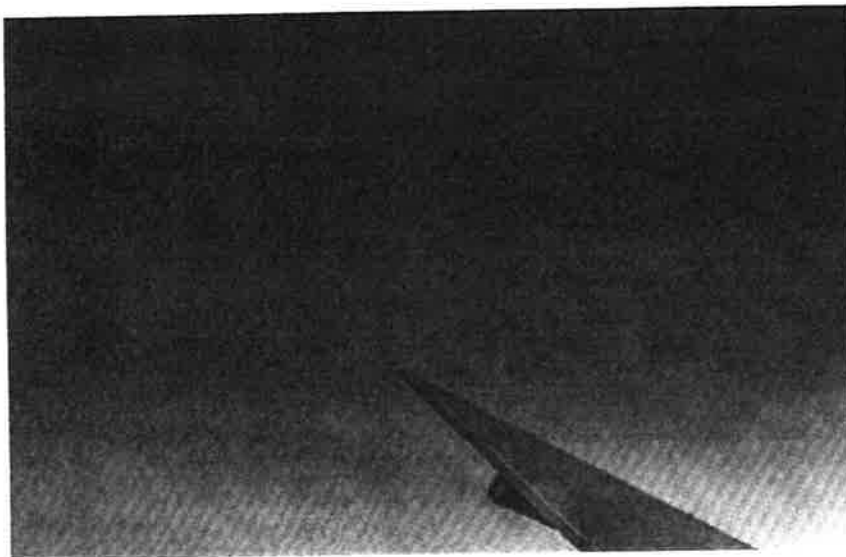
# PSC Negligence

- In a turbine noise study by acoustic engineers at Shirley Wind in Brown County in 2012 commissioned by the PSC, the summary said:
  - “The four investigating firms are of the opinion that enough evidence and hypotheses have been given herein to classify LFN and infrasound as a serious issue, possibly affecting the future of the industry. It should be addressed beyond the present practice of showing that wind turbine levels are magnitudes below the threshold of hearing at low frequencies.”
  - In other words, what you can’t hear CAN hurt you.
  - All four firms “strongly recommended additional testing at Shirley.”
  - Duke Energy (project owner) refused to cooperate in the testing process.
  - PSC Reference # 178263 (12/28/2012)
- PSC has taken no action

## Other Information

- Helpful web sites
  - [Windaction.org](http://Windaction.org)
  - [Wind-watch.org](http://Wind-watch.org)
- World Health Organization updating noise guidelines to include turbines
- Poland Institute of Public Health recommends 2km minimum distance from buildings
- Poland Parliament mandates 10X turbine height setback



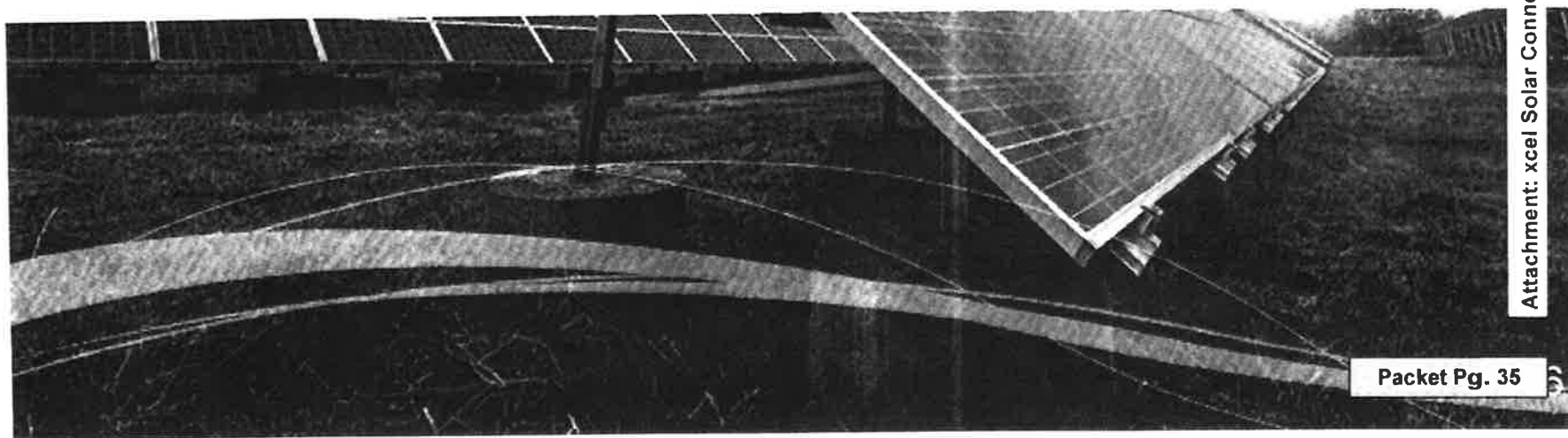


5.B.2.a

Attachment: xcel Solar Connect PP Feb2016 REVISED (3118 : Xcel Energy Solar Garden



SOLAR\*CONNECT  
COMMUNITY<sup>SM</sup>



Packet Pg. 35

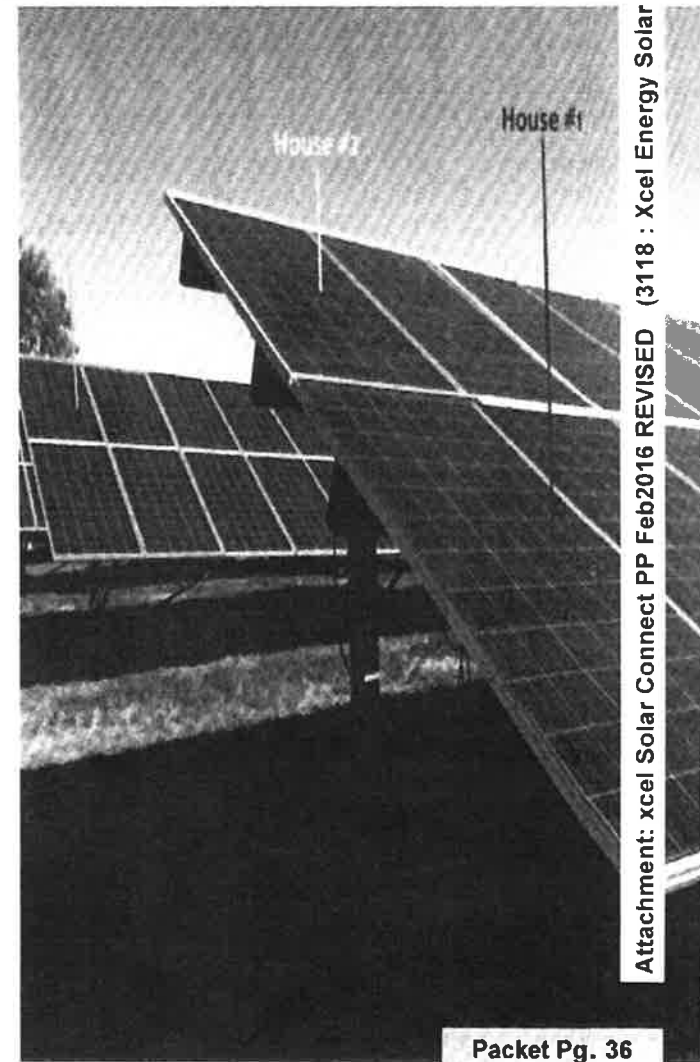


# COMMUNITY SHARED SOLAR GARDENS

5.B.2.a



**Centrally-located solar PV  
arrays that provide  
electricity to participating  
subscribers.**



Attachment: xcel Solar Connect PP Feb2016 REVISED (3118 : Xcel Energy Solar Garden

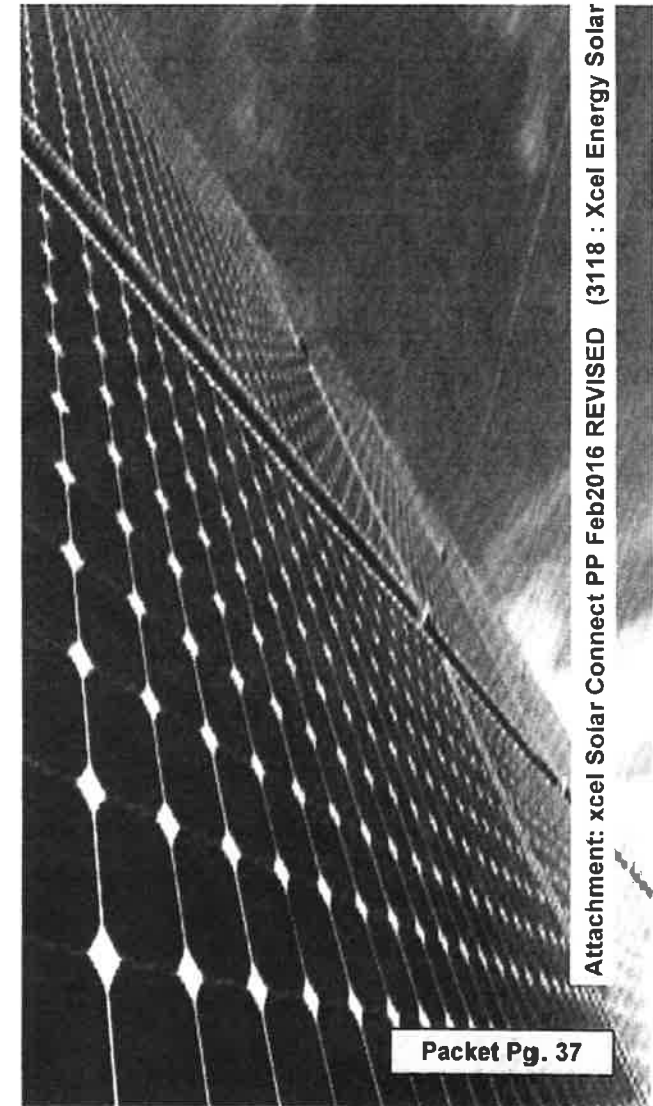
Packet Pg. 36

# WHY COMMUNITY SHARED SOLAR?

- Allows anyone to “go solar”
- No need to install and maintain panels
- Less \$\$ than an individual PV array
- Roof may be shaded or oriented in a way that cannot support a PV array
- Great option for those who rent
- No ongoing O&M costs



5.B.2.a



Attachment: xcel Solar Connect PP Feb2016 REVISED (3118 : Xcel Energy Solar Garden

Packet Pg. 37

# SOLAR\*CONNECT COMMUNITY

## **Easy.**

- Quick, simple one-time enrollment
- Customers claim RECs which are then retired on behalf of the customer

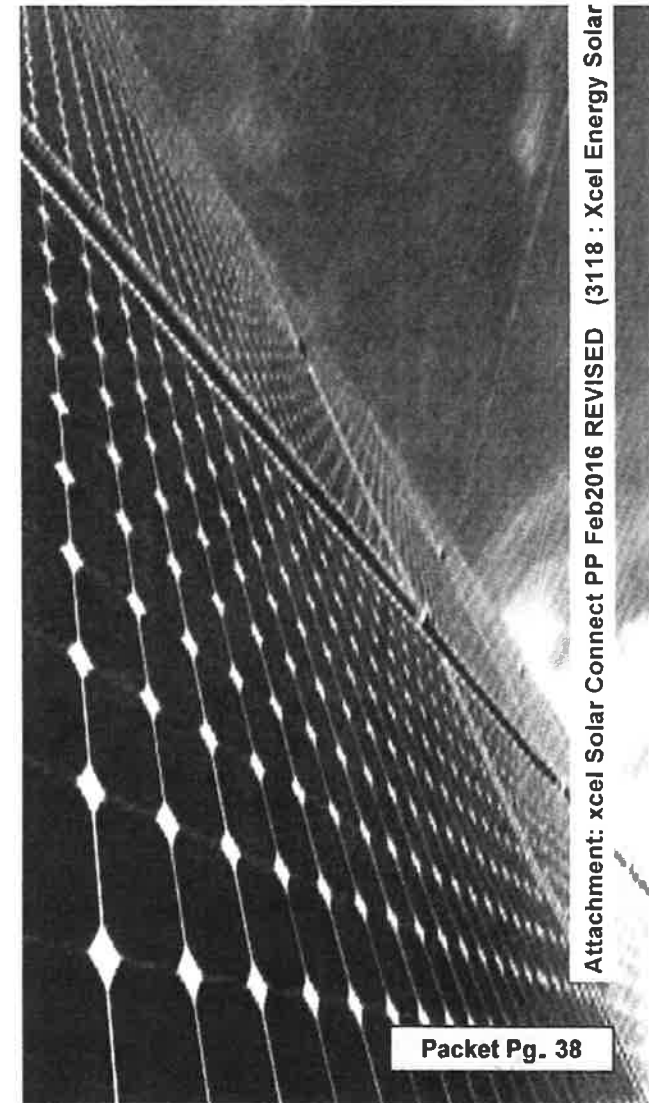
## **Flexible.**

- Up to 100% of average annual use
  - Minimum: 200 watts
  - Maximum: 400 kilowatts

## **Local.**

- Solar from locally-sourced arrays in Lacrosse and Eau Claire

5.B.2.a



Attachment: xcel Solar Connect PP Feb2016 REVISED (3118 : Xcel Energy Solar Garden

Packet Pg. 38

# HOW DOES IT WORK?



1. Choose amount of solar subscription
2. Purchase subscription with a one-time enrollment cost
3. Solar bill credit appears monthly for next 25 years

January						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# SOLAR CREDIT

5.B.2.a



**NEXT READ DATE:** 12/23/15  
**ELECTRICITY SERVICE DETAILS**

**PREMISES NUMBER:** 303780451  
**INVOICE NUMBER:** 0597225291

**METER READING INFORMATION**

METER			
Read Dates: 10/20/15 - 11/18/15 (29 Days)			
DESCRIPTION	CURRENT READING	PREVIOUS READING	USAGE
Total Energy	68340 Actual	67805 Actual	535 kWh

528 Heating Degree Days

**ELECTRICITY CHARGES**

**RATE: Sm Gen Svc (Metered)**

DESCRIPTION	USAGE UNITS	RATE	CHARGE
Customer Charge			\$8.00
Energy Charge Winter	535 kWh	\$0.117500	\$62.86
<b>Subtotal</b>			<b>\$70.86</b>
WI Low Income Assist		3.00%	\$2.13
County Tax		0.50%	\$0.35
State Tax		5.00%	\$3.54
<b>Total</b>			<b>\$76.88</b>

**OTHER RECURRING CHARGES DETAILS**

DESCRIPTION	CHARGE
Solar*Connect Community Solar	
Production Credit	
Solar Production Period	November, 2015
SCC005 Production Credit	000 kWh x 0.00000
<b>Total</b>	<b>-\$00.00 CR</b>

Packet Pg. 40

Attachment: xcel Solar Connect PP Feb2016 REVISED (3118 : Xcel Energy Solar Garden

# COST

## Price

- \$1780 (1 kW)
- \$ 356 (200 watts)

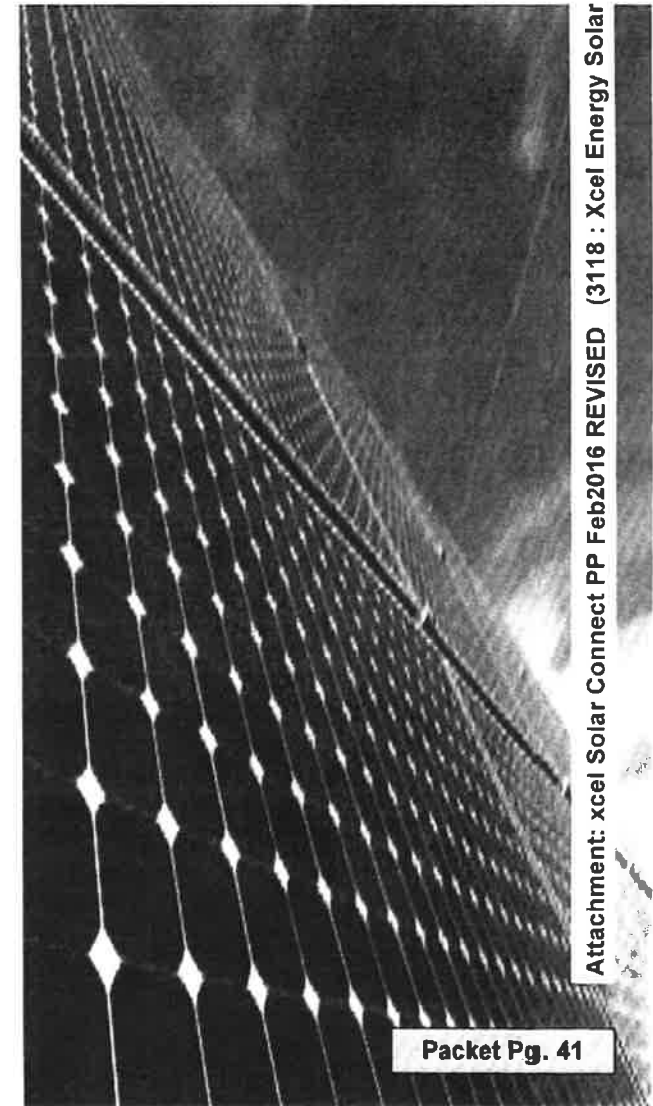
## Deposit

- \$200 per kW (DC)

## Solar Credits (2016)

- Residential, Farm, Small Comm. Rate  
\$0.074/kWh
- Demand Rate  
\$0.069/kWh

5.B.2.a



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Packet Pg. 41



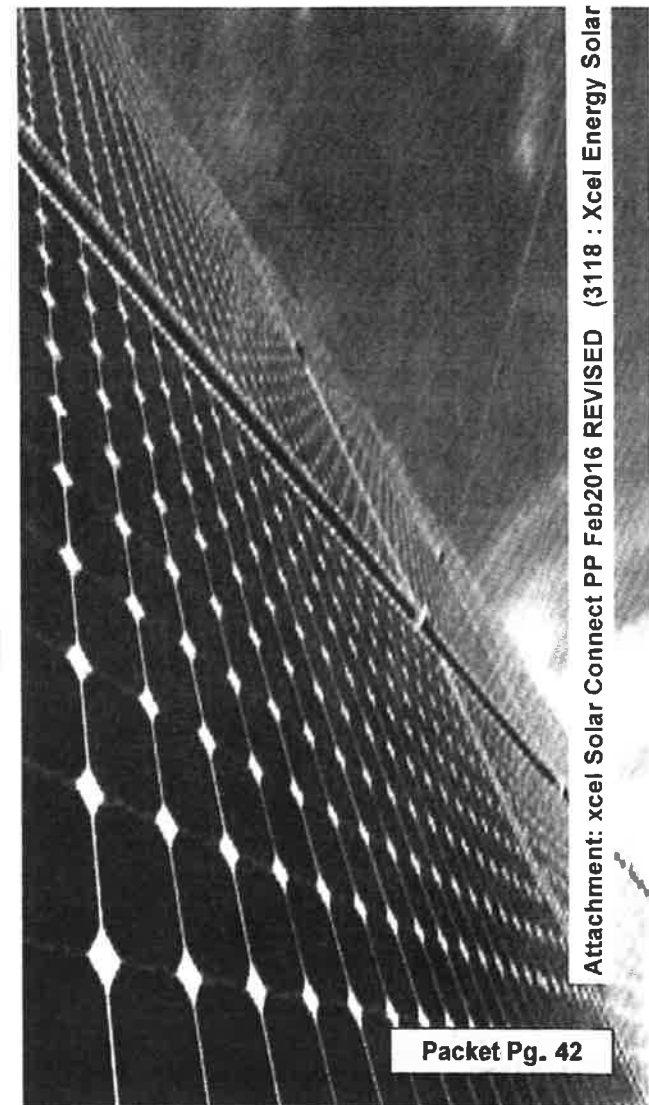
# EXAMPLES

**Demand Rate (.069 kWh/year)**

<b>Subscription Size</b>	<b>10 kW</b>
<b>Cost (est.)</b>	<b>\$17,800*</b>
<b>Deposit</b>	<b>(\$2,000)*</b>
<b>Balance</b>	<b>\$15,800*</b>

<b>Solar Production – Year 1 (est.)</b>	<b>12,800 kWh*</b>
<b>Solar Credit – Year 1 (est.)</b>	<b>\$883.00*</b>
<b>25 year Savings (est.)</b>	<b>\$22,075*</b>

\* Using these estimates subscribers can anticipate **net solar credits in excess of subscription costs** over the life of the contract.



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## Choosing your Subscription Size



- Find your annual energy usage
- Choose a percentage of your consumption  
or
- A dollar amount you would like to cover  
with solar

(You can use the Xcel Energy Solar Connect calculator  
for this at [XcelEnergy.com/SolarConnectCommunity](https://www.xcelenergy.com/SolarConnectCommunity))





# TIMELINE

## February-April 2016

- Early Subscription Drive
- Town Halls – “Solar Power Hours”

## Fall 2016

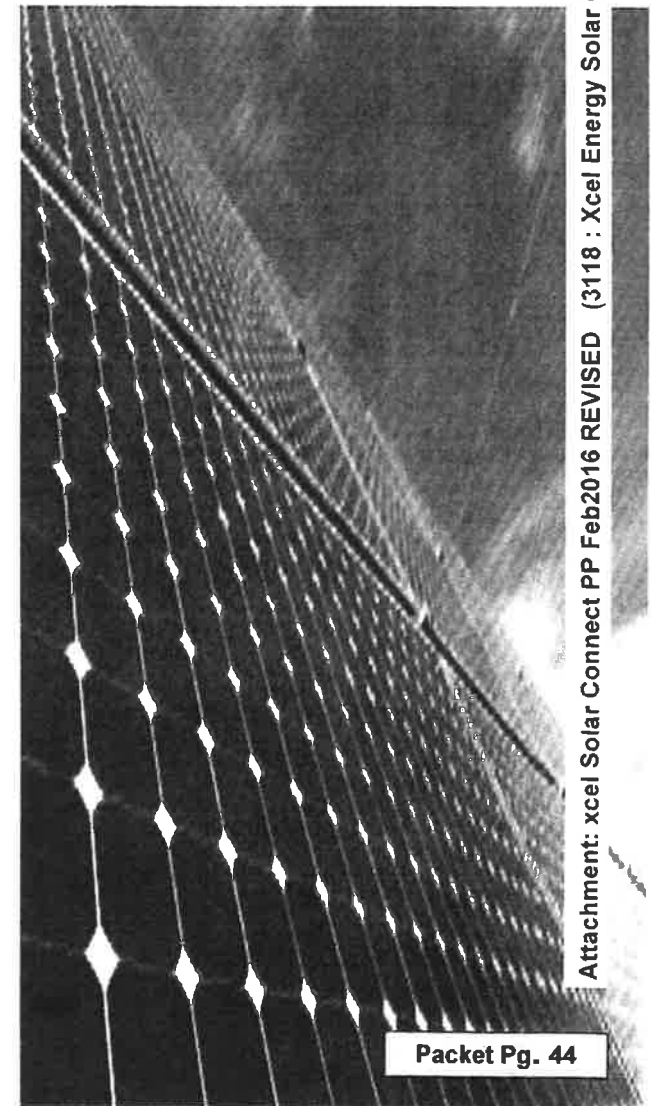
- Solar arrays constructed

## December 2016

- Solar gardens operational

## January-February 2017 (est.)

- Subscribers receive first credits from solar production



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# RESOURCES

**[www.xcelenergy.com/SolarConnectCommunity](http://www.xcelenergy.com/SolarConnectCommunity)**

**[SolarConnectComm@xcelenergy.com](mailto:SolarConnectComm@xcelenergy.com)**

5.B.2.a



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