

Forest County Potawatomi Community Energy Program



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"Let us share our natural resources for the good of our People. Let us work for clean air and water and pray for the courage to stand up to those who would abuse our Mother Earth. So be it."

- Bemwetek (Elder James Thunder)

Excerpt from 2007 Class I Air Redesignation Public Hearing Prayer

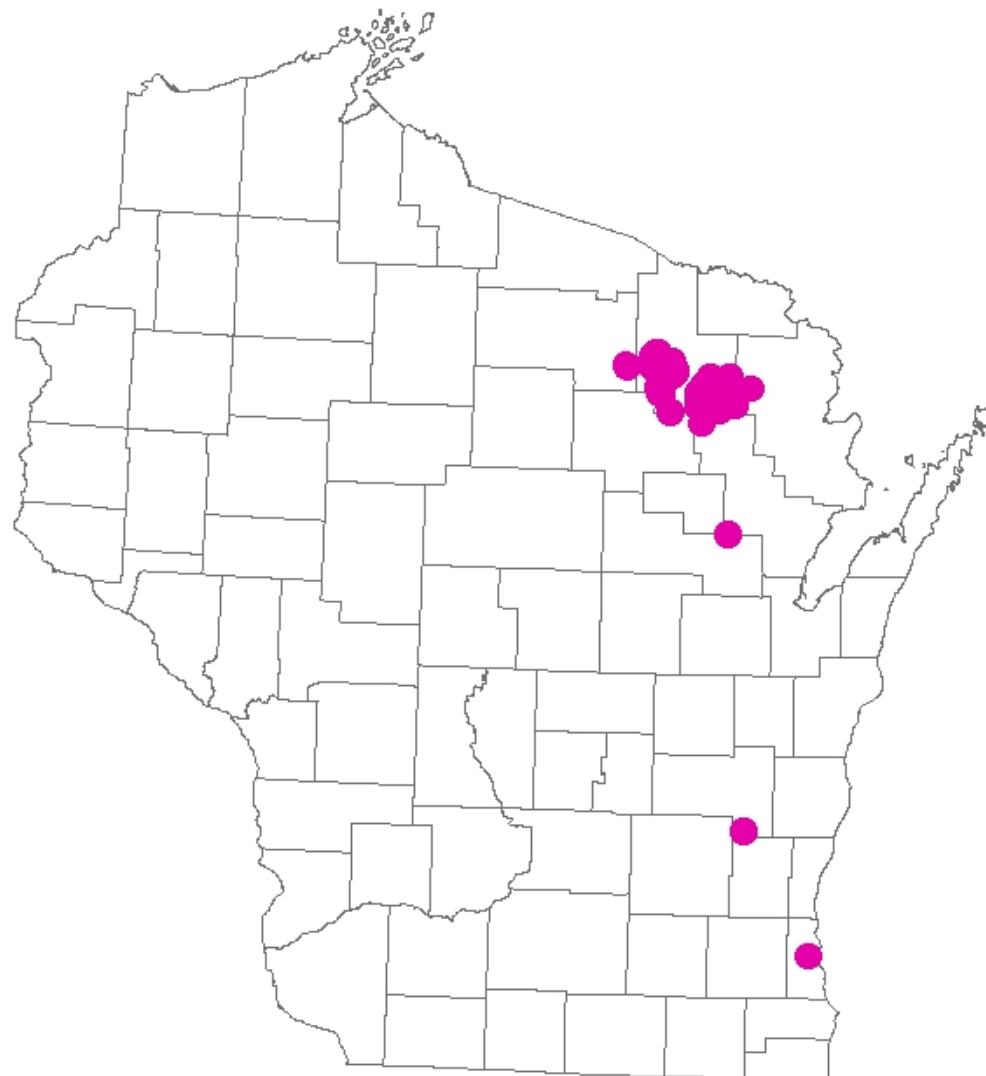
The People

- Potawatomi are part of a confederacy with the Ojibwa (Chippewa) and Odawa (Ottawa), other Algonquins, called the Council of the Three Fires.
- Potawatomi were designated the “Keeper of the Fire”.
- From 1789 to 1867, through a series of treaties entered into under duress, ceded all lands east of the Mississippi.

The Land

- Many Potawatomi refused to move West or quickly returned to the Great Lakes Region, including to the Forest County, Wisconsin area
- 1913 Act of Congress provided funds to Potawatomi who relocated, and money was used to purchase trust lands (11,786 acres) in Forest County

Forest County Potawatomi Community Land Base 2015



The Tradition

- Tradition and history teach a strong commitment to protecting and preserving the natural environment.
- Elders communicating that things are out of balance.

Stand up to those Who Would Abuse Mother Earth

- Crandon Mine Opposition (1970s-2003)
- Class I Air Redesignation (1993-2008)

The Work for Clean Air and Water

- Project Greenfire (2007)
- Participation in (former) Governor Doyle's CCTF (2007-2008)
- Adopted “Environmental Mission Statement” (2008)
- A Comprehensive Energy Audit(2008)
- Renewable Energy Credits (RECs) were purchased
- Four day work week was also established
- #10 On the EPA Top 20 Local Government List
- Member of the Green Power Partnership



Project Greenfire (2007)

- Established goal of energy independence using only renewable carbon-neutral or carbon-free resources
- Adopted “Environmental Mission Statement” to help implement and institutionalize goal (2008)
- Comprehensive Energy Audit
 - Established baseline of energy consumption / carbon footprint
 - Identified “List of 100” facilities improvements
- RECs purchased to completely offset electricity use and serve as bridge to energy independence
- Resource assessments for potential projects

Building Energy Efficiency

- In June 2008, the Tribe's Potawatomi Bingo Casino in Milwaukee completed its expansion, tripling the size of the Casino.
- The expansion incorporated energy efficient design. The Casino now uses 12.5% less energy per square foot than pre-expansion.



Lighting Upgrades at PBC

- Lighting upgrades in parking structure from metal halide to LED – 2,368,618 kWh/year saved
- Cove lighting converted from incandescent to LED – 981,120 kWh/year saved
- Ten similar projects throughout facility – total annual savings 4,367,237 kWh



Sustainability and the Potawatomi Hotel

- LEED Certified Gold
- Negative pressure zone in link between casino and hotel to prevent air transfer between facilities
- Food waste and grease trap waste will be recycled back through biogas plant
- Individual room controls tied back to reservation/ check in system and room occupancy sensors. Access, lighting and HVAC controls integrated.
- Diversion of construction waste.
- High utilization of regionally sourced materials –vanities in all rooms were manufactured by Menomonee Tribal Enterprises from sustainably managed forest lands

Sustainable Neighborhoods

Wgema Campus





WE VALUE....

- Consensus and collaboration
- Environmental sustainability
- Making the Tribe's economy stronger & more diverse
- Helping those who want to help themselves
- Wellness
- Supporting all
- Native American people in Wisconsin

Executive Council Visioning for the Concordia Trust Property
December 2008

sustainability



LEED Certified Gold

Renovations to former Wunder Hall - now named the Bgemagen Building (meaning War Club) - are completed



2015



The Forest County Potawatomi Community has a \$30 million, 5-year plan to complete the renovations at Wgema Campus.





Technology and Sustainability

PBDC Data Center

- What is it?
 - \$33 million Tier III data center – first in Southeast Wisconsin
 - State-of-the-art facility that provides tenants a cost-effective, flexible, secure and highly reliable IT facility for primary data center and secondary disaster recovery data center needs.
 - LEED Certified Gold

Green Energy Production

- DOE Community Renewable Energy Deployment Grant (2010)
- Milwaukee Solar (completed 2011)
- Milwaukee Biodigester and Biogas Facility (completed 2014)
- Community- Scale Solar Project (nearing completion 2015)

Milwaukee Administration Building Solar Photovoltaic Installation

- In October 2011, Tribe completed installation and commissioning of 35 kW array of solar photovoltaic panels on the roof of its Milwaukee Administration Building.

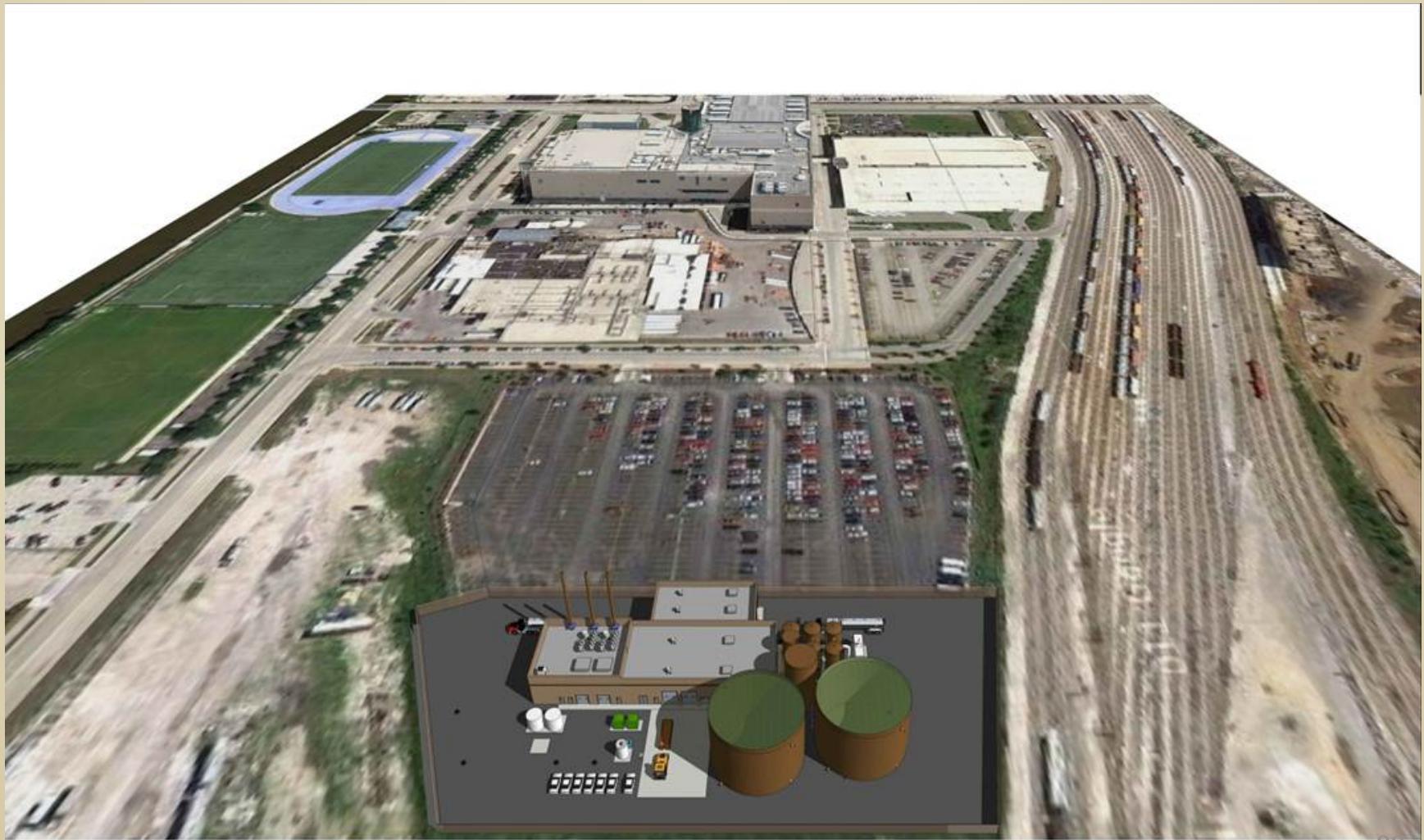


Milwaukee Administration Building Solar Photovoltaic Installation

Tribe partnered with DOE (under the Community Renewable Energy Grant), WE Energies (the local utility) and Wisconsin Focus on Energy to implement the project.



Milwaukee Biodigester and Biogas Facility 2014

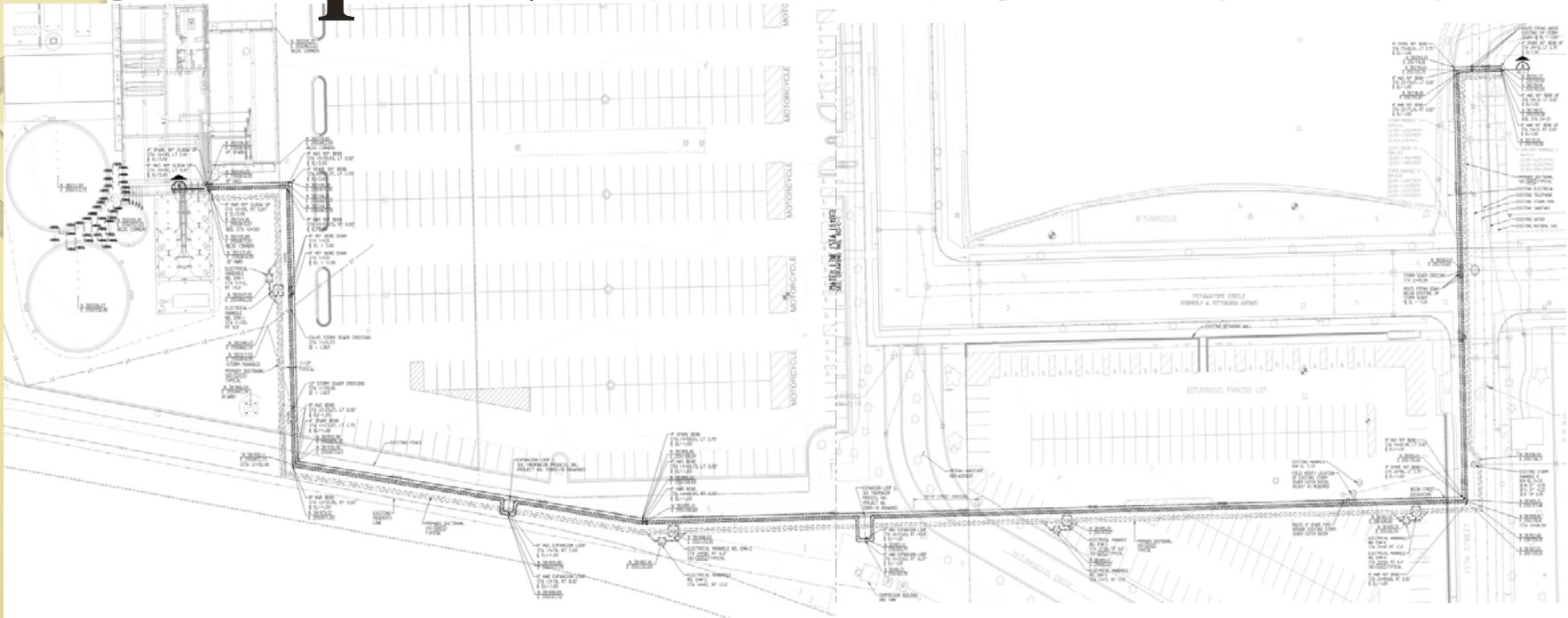


Overview of Facility

- 2.0 megawatt anaerobic biodigester and biogas facility located near Potawatomi Bingo Casino in Milwaukee, WI
- Operates on liquid (pumpable) food wastes
- Generates revenue from a combination of tipping fees and electricity sold through a WE Energies Renewable Energy Tariff (local utility)



Compatible Infrastructure



- Heat loop added as separate project to take excess heat from plant to PBC and Hotel
- Enough heat is available to offset natural gas requirements for domestic water usage in both Casino and Hotel
- CNG?
- Vertical Urban Farm?

Funding

- Section 1603 Grant
- DOE CRED Funding
- Focus on Energy Grant
- Self Funding

Community Scale Clean Energy Project (2015)



Community Scale Solar Photovoltaic Systems

- FCPC received a DOE Community-Scale Clean Energy Projects in Indian Country Grant for the Installation of Solar Photovoltaic Systems in November, 2013.
- The \$1.4 million grant provided half of the total project cost.
- The remaining project costs were funded in part through a partnership with a solar company. The company invested 30% of the remaining costs as a match for the Company's investment tax credit. The solar company also receives the benefit of annual tax depreciation of the system.
- The Tribe's portion is 20% payable through a Power Purchase Agreement.

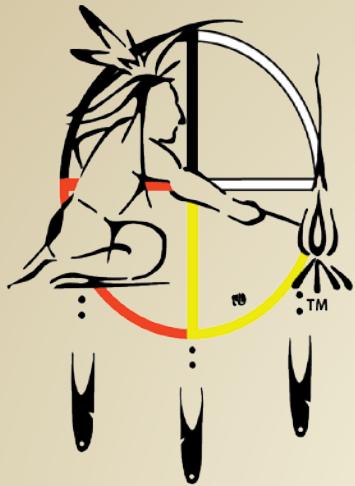
Specific Outcomes

- Install solar PV at 15 Tribally owned buildings. The buildings were chosen based on the match between the time of use of the buildings and solar production hours to maximize offsets.
- Solar production will result in offsets between 20% and more than 97% at individual locations.
- The project will result in a total of 922.95 kW of installed solar. As the project developed the parties were able to find ways to increase efficiencies. The project as originally designed was for the installation of 737 kW at an average price of \$3,790/kW. As installed the average price will total \$3,034/kW.
- Solar designs were able to accommodate both Tribal business interests and cultural and historical concerns. By working closely with Tribal members installations were sited based on specific locational needs.

Other Potential Reservation Projects

- Small Scale Biomass Deployment
 - Investigating, with assistance from NREL and Office of Indian Energy, potential small scale biomass project(s) on the reservation.
- Decreasing Efficiency of Biomass Power
 - “Increasing temperatures due to climate change may reduce future power output capacity and revenue for retail sales of power.”(Tribal Energy Systems Vulnerabilities to climate change and Extreme Weather. September 2015 U.S. Department of Energy, Office of Indian Energy.)
- Clean Power Plan Impacts/Opportunities?

Questions?



Thank you!