



# WISCONSIN

Wisconsin Focus on Energy Program

## On-Site Energy Generation and Beneficial Utilization

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# Introduction



- FOCUS ON ENERGY® is Wisconsin's statewide energy efficiency and renewable energy program.
- Focus on Energy provides technical and financial assistance to program participants to reduce their energy use and utilize renewable energy.
- I assist municipal and industrial water and wastewater systems to access Focus on Energy resources in order to become more energy efficient and beneficially utilize renewable energy resources.

# Implemented project

- **Community A** – The municipality wanted to further utilize the biogas it produced
- **Results**
  - Energy assessment identified several energy efficiency opportunities:
  - Aeration system, disinfection system and anaerobic digestion
  - Flexible membrane diffusers, new technology blowers, micro turbines for electric generation and additional heat for heating loop

# Implemented project

- **Community B** – The municipality wanted to become energy efficient and utilize renewable energy
- **Results**
  - Energy efficiency opportunities: aeration system, screw pump, direct convey industrial high strength waste to anaerobic digesters, high strength receiving station, auxiliary feed stock
  - Renewable energy opportunities: increase biogas production, generator to produce electricity, capture heat, install sludge dryer which reduced volume to dispose

# Implemented project

- **Industry C** – Rural industry had installed an anaerobic treatment system for pretreating waste load from product processing
- **Results**
  - The industry installed an anaerobic pretreatment system.
  - After confirming the production level of biogas they sought to identify the best way to beneficially utilize the biogas.
  - They decided to operate a 500 kW generator to offset the electric energy being used to power its aerobic treatment system.

# Implemented project

- **Industry D** – A rural (dairy) industry analyzed options to manage their high strength waste stream
- **Results**
  - Their consultant developed a report showing they could pretreat their waste load with anaerobic treatment then follow it with aerobic treatment to complete the treatment of their liquid waste.
  - The report projected their system could produce enough biogas to operate a generator to offset all of their treatment energy needs.
  - They could move from hauling waste to land disposal to a secondary treatment system without need of grid energy other than for backup.

# Additional benefits from projects

- Reduced cost of trucking high strength waste from industry to disposal sites
- Fewer heavy truck loads reduced damage to the roads
- Reduced amount of acreage required for land spreading
- Beneficially utilized a waste product (fuel)
- High strength waste actually becoming a sought after product

# Questions – Comments - Contact Information

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