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RAM / SWANA Conference  
An Economic Perspective of Anaerobic Digestion  
By: Peter Klein, VP Finance

# Anaerobic Digestion Projects Analyzed By Saint Paul Port Authority

## Completed Project:

Liberty Paper	Becker, MN	Paper Fiber	\$11M	Biogas
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## Other Potential Projects:

Sanimax	South Saint Paul, MN	MSW Organic Waste	\$35M	Biodiesel
Randy's Sanitation	Delano, MN	MSW Organic Waste	\$30M	CNG
Michael Foods	Chaska, MN	Potato Waste	\$10M	Biogas
Rembrandt Farms	Renville, MN	Eggs and Sugar Beets	\$30M	Fertilizer
City of Austin	Austin, MN	Packing Plant Waste	\$10M	Biogas
American Crystal Sugar	East Grand Forks, MN	Sugar Beets	\$20M	Biogas
Met Council	Saint Paul, MN	Waste Water Treatment	\$30M	Biogas
Rock-Tenn	Saint Paul, MN	Paper Fiber	\$10M	Biogas

# Lessons Learned From Funded AD Projects:

1. Most had a payback of 5-7 years
  - With 1603 grant (30% rebate)
2. Best scenario:
  - Waste is on-site
  - No additional transportation costs
  - Energy can be used on-site
3. Most had a funding gap
4. All had technology concerns



# Anaerobic Digestion Financing Options

- Saint Paul Port Authority (SPPA)
- Metropolitan Council Environmental Services (MCES)
- Minnesota Tax-Exempt Small Issue Pool
- Hennepin, Ramsey & Washington Counties



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# Saint Paul Port Authority Energy Programs

- Trillion BTU (TBTU)
- Property Assessed Clean Energy (PACE)
- Energy Savings Partnership (ESP)

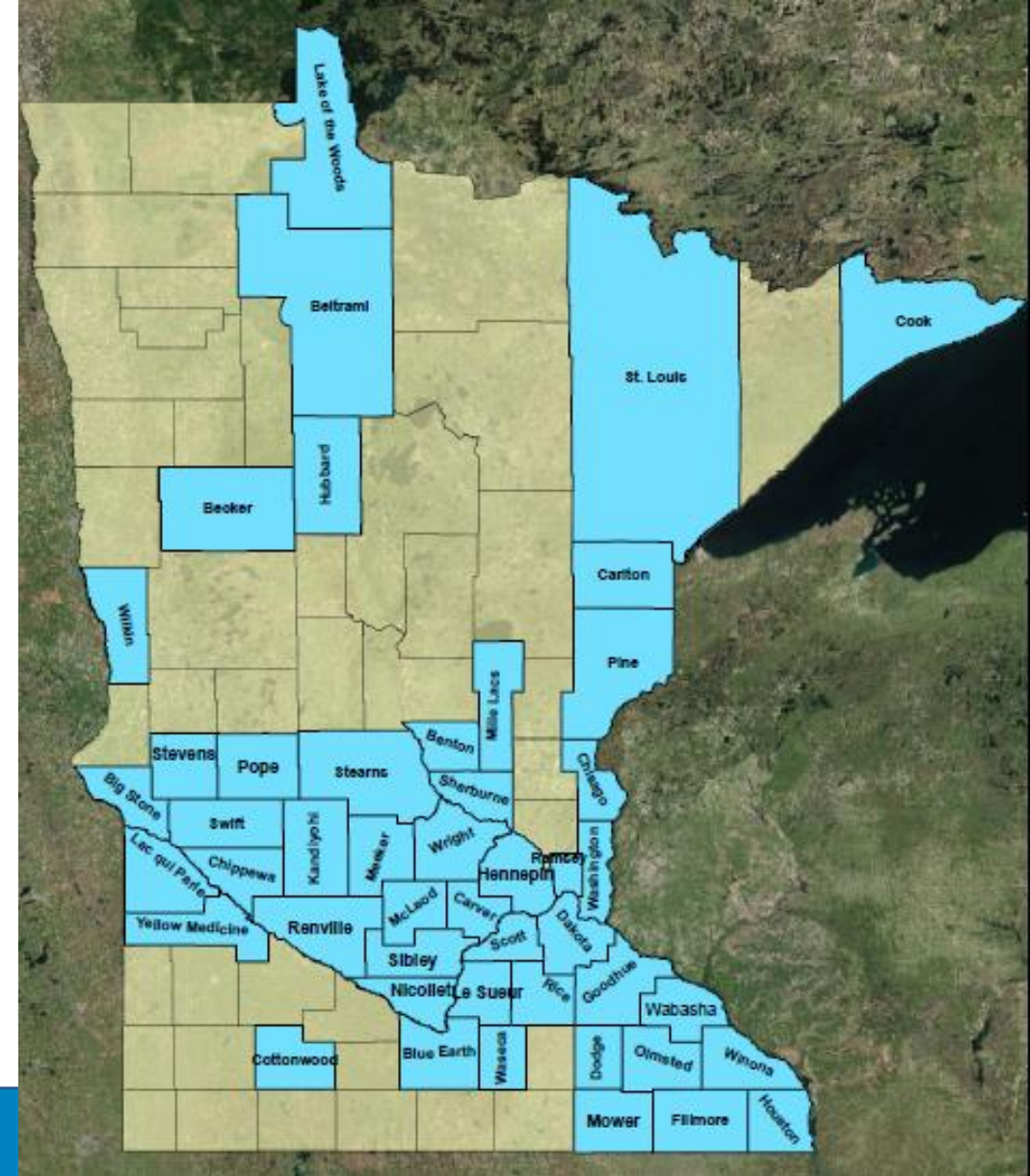


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# Current County List

## Joint Powers Agreements

- Becker
- Beltrami
- Benton
- Big Stone
- Blue Earth
- Carlton
- Carver
- Chippewa
- Chisago
- Cook
- Cottonwood
- Dakota
- Dodge
- Fillmore
- Goodhue
- Hennepin
- Houston
- Hubbard
- Kandiyohi
- Lake
- Lake of the Woods
- Lac qui Parle
- LeSueur
- McLeod
- Meeker
- Mille Lacs
- Mower
- Nicollet
- Olmsted
- Otter Tail
- Pine
- Pope
- Ramsey
- Rice
- St. Louis
- Scott
- Sherburne
- Sibley
- Stearns
- Steele
- Stevens
- Swift
- Wabasha
- Waseca
- Washington
- Wilkin
- Winona
- Wright
- Yellow Medicine



Pending: Anoka, Cass, Clay, Lyon, Isanti, Marshall



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# Property Assessed Clean Energy (PACE)

- Projects with less than a 20-year payback
- Limited to 20% of property tax assessed value
- Paid twice each year with property taxes
- 5% interest for 10 years
- Around 7% interest for 20 years
- First payment on May 15 of following year
- Mortgage holder acknowledgment

# Metropolitan Council Environmental Services (MCES)

- Industrial Pretreatment and Incentive Program (IPIP)
- \$50,000,000 budget
- MCES would construct and own facilities for 10 years
- Businesses save on treatment charges
- Businesses utilize the biogas
- MCES financing – around 3.5%
- Business pays as low as 70% of debt service
  - Better than the 1603 grants
- Discharge must meet monthly strength reduction goal





# Industrial Pretreatment and Incentive Program

## Projects:

- Michael Foods
- Kemps



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# Minnesota Tax-Exempt Small Issue Pool

- Tax-exempt interest rates around 4%
- Up to 20 years
- Large projects – greater than \$4MM
- Less than \$10MM of capital expenditures over 6 years



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# Hennepin, Ramsey & Washington Counties

- Currently studying anaerobic digestion to process organic waste
- Hennepin: RFQ to identify technologies, vendors
- Ramsey/Washington: likely to seek private owner/operator
- Key point: AD is in play in the region



# Questions?



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