

Grants and Other Funding Opportunities

Greening Water and Wastewater Infrastructure Workshop

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The Nicest that You'll See is at Your Own Front Door

- Energy Efficient Projects are Cost Effective by Definition



Do you know where your energy dollars are going?

Your energy audit will recommend projects that will pay for themselves – look at ROI

Money saved from reduced energy bills can pay for efficiency projects

Surprise! You may be paying for energy you don't need. Tracking energy turned up \$30,000 + from energy company mistake!

Where is the Money?

- Biggest source of funding - Stimulus ARRA – has already been spent
- FY2010 Clean Water SRF draft allotment: \$13,901,000 AZ
- FY2010 Drinking Water SRF: \$27,259,000
- New SRF Money will include Green Project Reserve – so lets review

What is the Green Project Reserve?

- ARRA legislation:

“That, to the extent there are sufficient eligible project applications, not less than 20 percent of the funds appropriated herein for the Revolving Funds shall be for projects to address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities”

- 4 categories of projects:

- Water efficiency
- Energy efficiency
- Green (stormwater) infrastructure
- Environmentally innovative

What is Eligible?

- Planning, design and building activities
- Portions of a project – or the entire project – may be green
- EPA has determined that some projects automatically apply – *categorical projects*
 - No business case required in most cases
- In other projects, the green components are not as clear – *require a business case*
- Only the “green” portion of the project can count towards the 20% reserve

1. Water Efficiency

- The use of improved technologies and practices to deliver equal or better services with less water
- Categorical projects are:
 - Installation of water meters (previously unmetered system)
 - Reclamation, recycling and reuse and existing rainwater, condensate, degraded water, stormwater and/or wastewater streams
 - Retrofit or replacement of water use equipment or appliances
 - Efficient landscape or irrigation equipment
 - Systems to recycle gray water
 - Collection system leak detection equipment



2. Energy Efficiency

- The use of improved technologies and practices to reduce the energy consumption of water quality projects
- Categorical projects are:
 - Energy efficient retrofits and upgrades to pumps and treatment processes (including aeration systems)
 - Leak detection equipment for treatment works
 - Producing clean power for treatment works on site (solar, wind, hydroelectric, etc.)
 - Solids treatment (e.g., sludge dryers and incinerators, improved anaerobic digestion systems) and handling (e.g., fly ash, lime)
 - Variable frequency drives
- If energy savings are less than 20%, a compelling argument will be needed in the business case to get a green determination



3. Green Infrastructure

- No clear definition of “green infrastructure”. Here, generally means stormwater projects
- Includes a wide range of practices that:
 - Manage and treat stormwater
 - Maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater
- Help maintain pre-development hydrology for discharge rates, frequencies, durations, temperatures etc.
- Can be large or small scale (e.g., wetland restoration to green roofs)
- EPA Green Infrastructure Website:



http://cfpub.epa.gov/npdes/home.cfm?program_id=

3. Green Infrastructure, cont'd

- Categorical projects are:
 - Green streets
 - Water harvesting and reuse programs or projects
 - Wet weather management systems for parking areas (e.g., incremental cost of porous pavement, bioretention, green roofs, constructed wetlands)
 - Hydromodification to establish or restore riparian buffers, floodplains, wetlands and other natural features
 - Downspout disconnection to remove stormwater from combined sewers and storm sewers
 - Comprehensive retrofit programs designed to keep wet weather out of all types of sewer systems using green infrastructure technologies and approaches
 - Implementation of comprehensive street tree or urban forestry programs, including planter boxes
 - Green roofs (entire cost is eligible, including necessary structural changes to the building)

4. Environmentally Innovative Projects

- Projects that demonstrate new and/or innovative approaches to managing water resources in a more sustainable way.
Includes:
 - § Projects that achieve pollution prevention or pollutant removal at the lowest life cycle cost
 - § Projects that foster adaptation of water protection programs and practices to climate change
- A business case will always be needed to explain the environmentally innovative approaches

4. Environmentally Innovative Projects, cont'd

- Eligible projects are:
 - Green infrastructure/low impact development
 - Wetland restoration and constructed wetlands
 - Decentralized wastewater treatment solutions to existing deficient/failing on-site systems
 - Water reuse projects that reduce energy or water use and treatment costs
 - Redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design
 - Solid waste composting
 - Implement EPA Green Building practices (<http://www.epa.gov/greenbuilding/>)



4. Environmentally Innovative Projects, cont'd

- Categorical projects, continued
 - Projects that use water balance approaches (water budgets) at the project, local, or state level that preserve site, local or regional hydrology
 - Projects that facilitate adaptation of clean water programs and practices to climate change
 - Projects that incorporate differential uses of water, based on the level of treatment to reduce the costs of treating all water to potable water standards
 - Projects that identify and quantify the benefits of using integrated water resources management approaches

Example Projects: State of Arizona

- DW
 - 8 projects at \$12.9 Million as of 11/2/09
 - Multiple meter installation projects
 - Multiple SCADA application projects
 - Sustainable energy generation
- CW
 - 6 projects at \$10.7 Million as of 11/2/09
 - Storm water diversion and retention
 - Multiple Variable flow drive installations
 - Solar energy generation on site
 - Water reclamation and reuse infrastructure

Current EPA Solicitations

- Community Action for a Renewed Environment Program (CARE)
 - Closes March 9, 2010
 - Announcement
http://www.epa.gov/air/grants_funding.html
 - Purpose: help communities understand and reduce risks due to toxic pollutants and environmental concerns from all sources
 - \$2 million at \$75,000 – 100,000 per grant

Current EPA Solicitations

- Source Reduction Assistance Grant Program
- Due February 4, 2010
- \$130,000 for Region 9
- \$10,000 - \$130,000 per award
- Eligible Applicants – State, County, City, Districts, Tribes
- Priorities: Encourage GHG, toxics reductions
- Recycling, energy recovery, treatment projects not eligible

Current DOT Funding

- DOT Federal Transit Administration Urban Circulator Program
- \$130 million
- Due Feb. 8, 2010
- Purpose: Support streetcars, buses to connect urban destinations and foster redevelopment of urban spaces into walking, mixed use, high density
- 6 awards anticipated
- http://www.fta.dot.gov/funding/grants_financing_7829.html

Current DOT Funding

- DOT's Federal Transit Administration Livability Bus Program
- \$150 million
- Due Feb. 8, 2010
- Purpose: Capital projects to replace, rehabilitate, and purchase buses
- Selection Criteria: does it make a more environmentally sustainable transportation system, improve energy efficiency, reduce GHGs
- http://www.fta.dot.gov/funding/grants_financing_7829.html

Recent EPA Grant Opportunities

- **Local Climate and Energy Program**
- \$10 million in Climate Showcase Communities grants to establish and implement climate change initiatives
- Proposals were due July 2009
- July 2010 Proposals Due \$200,000 per Grant
- <http://www.epa.gov/RDEE/energy-programs/state-and-local/showcase.html>
- Environmental Education – closed 12/31/09

Other Government Incentives

- US Department of Treasury

- Allows taxpayers eligible for federal business energy investment tax credit to receive a grant instead of the tax credit (could be used by partnering company)
- Clean Renewable Energy Bonds (Muni Bonds)
Certain entities, mostly public sector, may use CREBs to finance renewable energy projects. CREBs are issued, theoretically with a “0%” interest rate. The borrower pays back only the principal of the bond and bondholder receives federal tax credits in lieu of bond interest. Not for energy retrofits, all 2010 allocations are spoken for \$2.2 billion.
- Qualified Energy Conservation Bonds. Same as CREBs but can fund energy retrofits and private projects. Allocations go to cities and counties over 100,000 and they should still be available.

Grant Project Example

East Bay Municipal Utility District

- Project funded through an EPA Region 9 grant
- Pilot study researching:
 - Volatile solids destruction rates
 - Temperature regimes
 - Solids residence times
 - Methane production
- **GREAT RESULTS!!!!!!**



Source Reduction Assistance Grant

Anaerobic Digestion at Wastewater Treatment Facilities

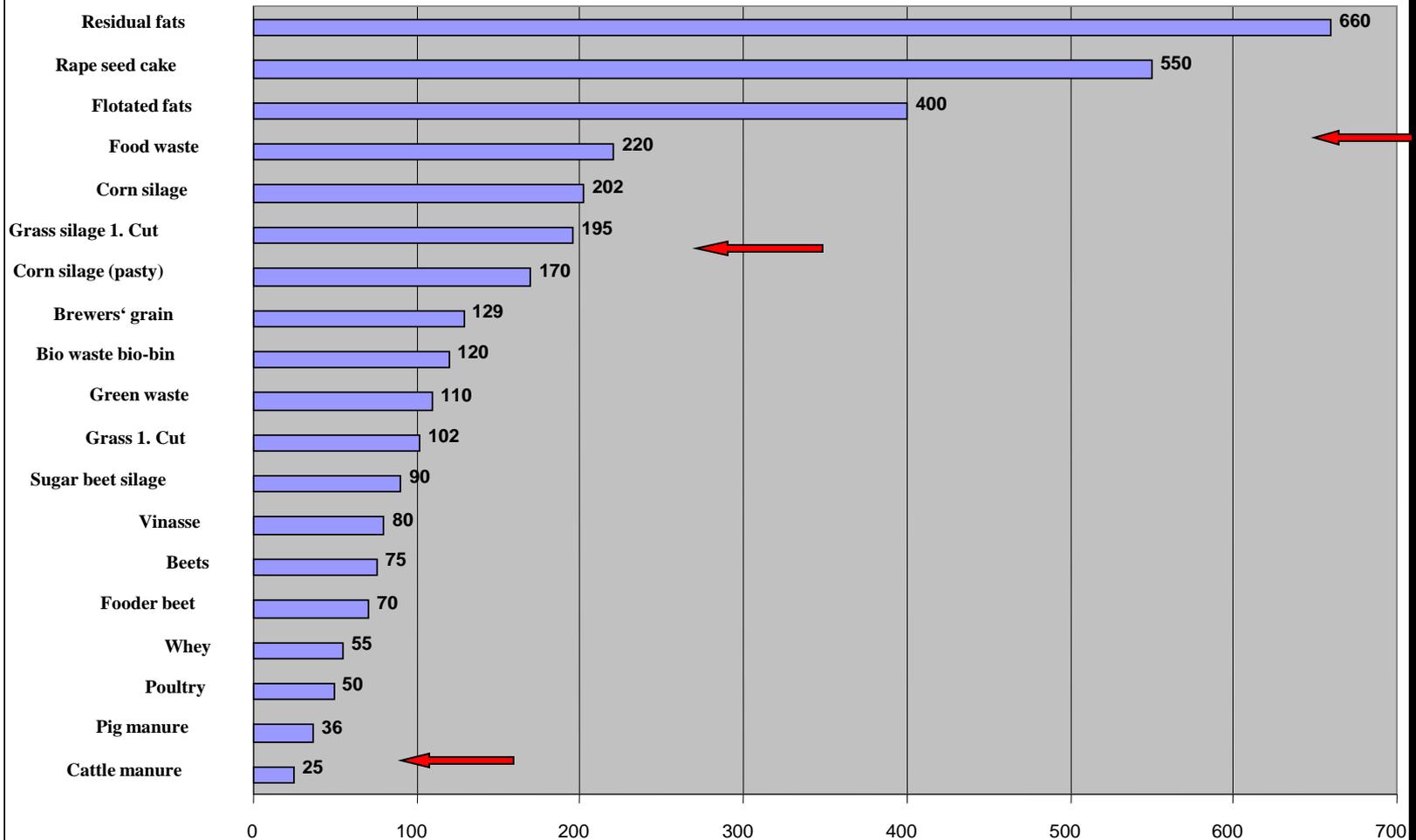
- Ideal for urban areas
- Avoid permitting difficulties
- Excess Capacity
- Expertise on site
- Biogas utilization
- VOC Reduction
- Effluent disposal
- Potential to reduce 15% of landfill waste



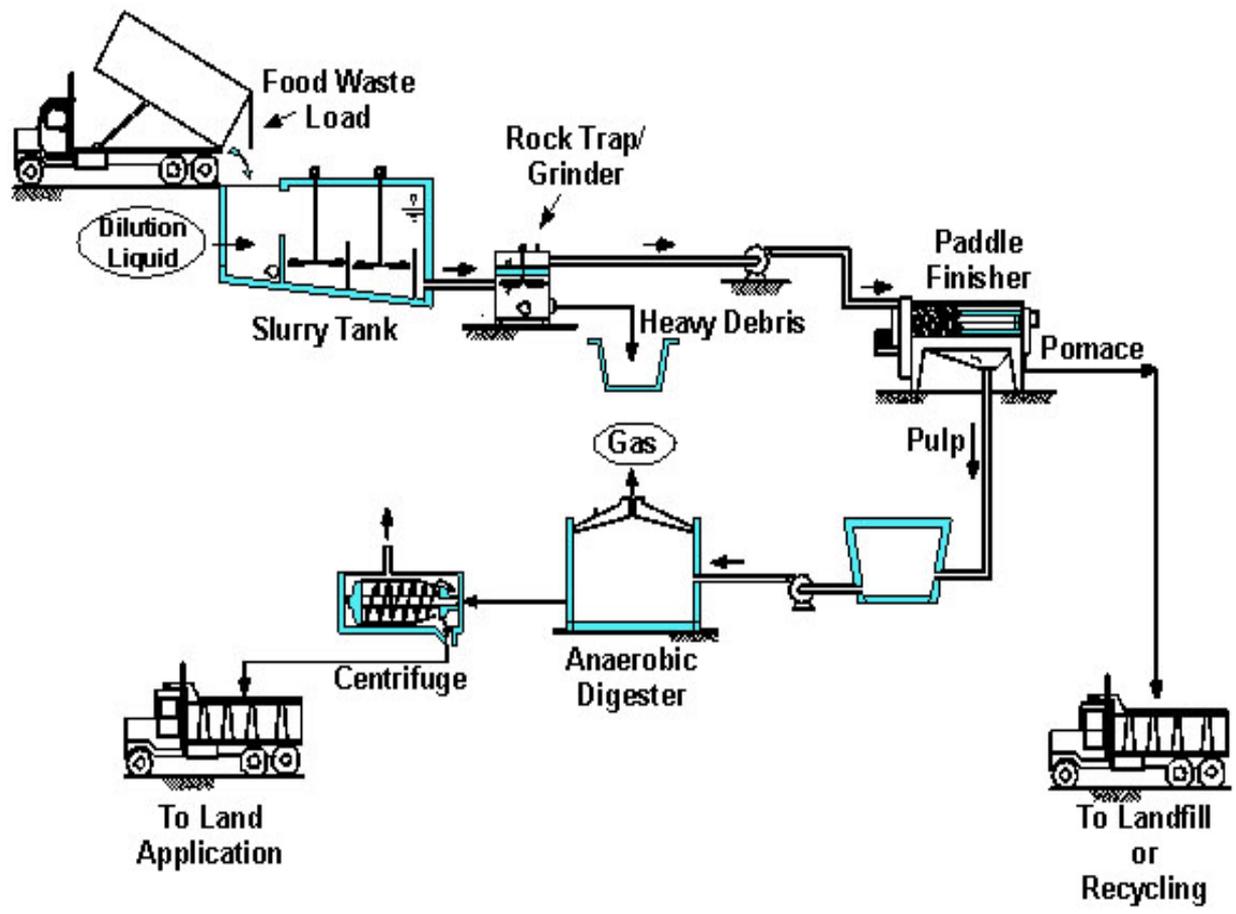


Food Waste Has Valuable Energy!

Gas Yields of Various Organic Materials (m3 gas/ton)



Courtesy of M-Con Bio and Farmatic biotech energy ag



Summary

- Food waste is a very valuable product
- We need finished compost to return to the soil to have a closed-loop, sustainable system
- However, the energy value in the food should first be utilized
- Europe has banned food waste from landfills



Potential Funding Opportunities

Jobs for Main Street Act of 2010

- Recent legislation passed by Senate
- Proposes \$75 billion in TARP (Troubled Asset Relief Program) savings fund infrastructure and job investments
 - \$2 billion to help communities provide clean and safe water for citizens and the environment to assist more than 670 communities access the programs.
 - \$100 million to the Bureau of Reclamation for reliable drinking water to rural areas and adequate water supply to drought impacted areas
 - \$2 billion to DOE to promote rapid deployment of renewable energy and electric transmission projects