



Burn blue. Save green.



Terasen Gas Biogas Initiative

Anaerobic Digester Initiative Advisory Committee (ADIAC)
On-Farm Anaerobic Digestion Workshop, 14th May 2009

Terasen Gas. A Fortis company.



Background



Growing interest in biogas for customer use

- Replaces conventional natural gas
- Limited, but growing use in North America
- Requires “upgrading”



Can we use Biogas?



- Biogas vs. Natural Gas
- Biogas typically high in CO₂ and other
- Upgrading of Biogas required to get appropriate methane content

Raw Biogas		Natural Gas
40-60% CH ₄		>96% CH ₄
30-50% CO ₂		<2% CO ₂
0-2% O ₂		<0.4% O ₂
0-2000+ ppm H ₂ S		Sulphur free
ppm VOC's		VOC free
H ₂ O Saturated		<65 mg/m ³ H ₂ O
Low Pressure		Low Pressure



Why are we interested?



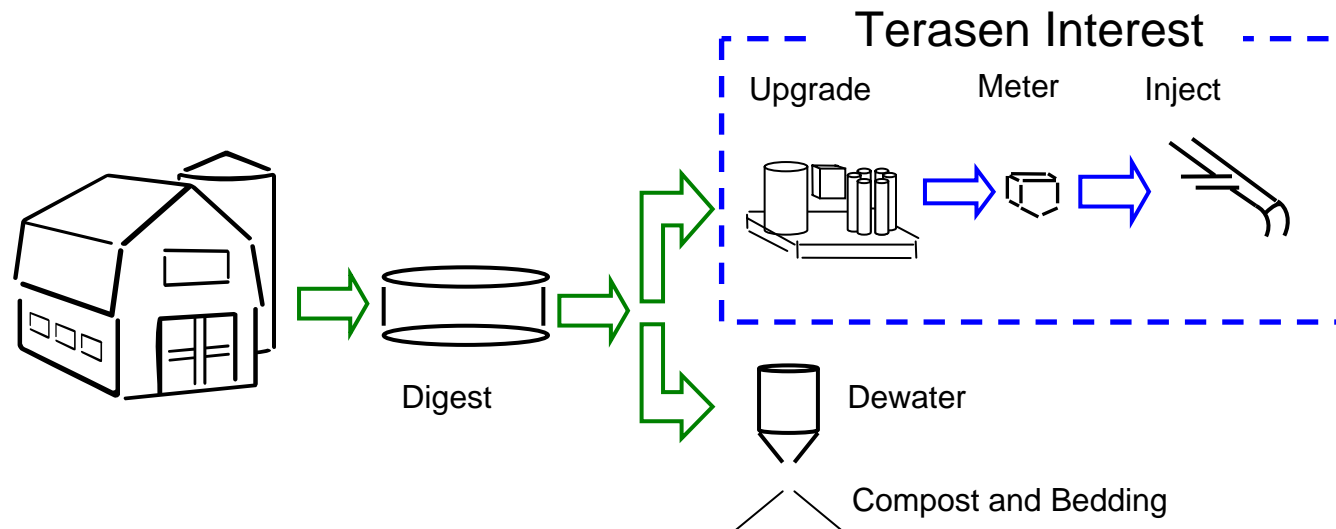
- Supports Government initiatives to reduce Green House Gases
- One of several areas of alternative energy investment
- Natural extension of Terasen Competency
- Logical extension of existing utility business



Partnership Opportunity



- Primary biogas producer is owner and operator of digester and associated plant
- Terasen owns and operates upgrade equipment, monitoring, measurement and connection to gas system
- Terasen purchases biogas from producer
- Logical division of responsibility





What does Terasen Offer?



- Able to finance significant portion of project
 - Typically upgrade equipment & connection
- Long term (15 years +) investment horizon
- Vested interest in success of project
 - Safety
 - Security of gas supply
 - Long term contract
- Expertise in operation and Maintenance of gas related equipment
- Assumption of upgrading removes some project complexity from producer



Partnership Criteria



- Will entertain serious proposals
 - RFEOI
- Need long term commitment
 - Stability
 - Viability
 - Partner must be able to finance digester from the “farm side”
- Economics must work for project
 - Obligation to our customers



Update on Terasen RFEOI



- Request for Expression of Interest
 - Issued December 2008
 - Closed February 2009
 - Received 9 responses
 - Mix of sources (Farm, Landfill, Wastewater, separated solid waste organics)
 - New technology proposals
 - Size range – 15 TJ/year – 350 TJ/year
 - In process of detailed project evaluation
 - No projects eliminated to date

www.terasengas.com/biogas