

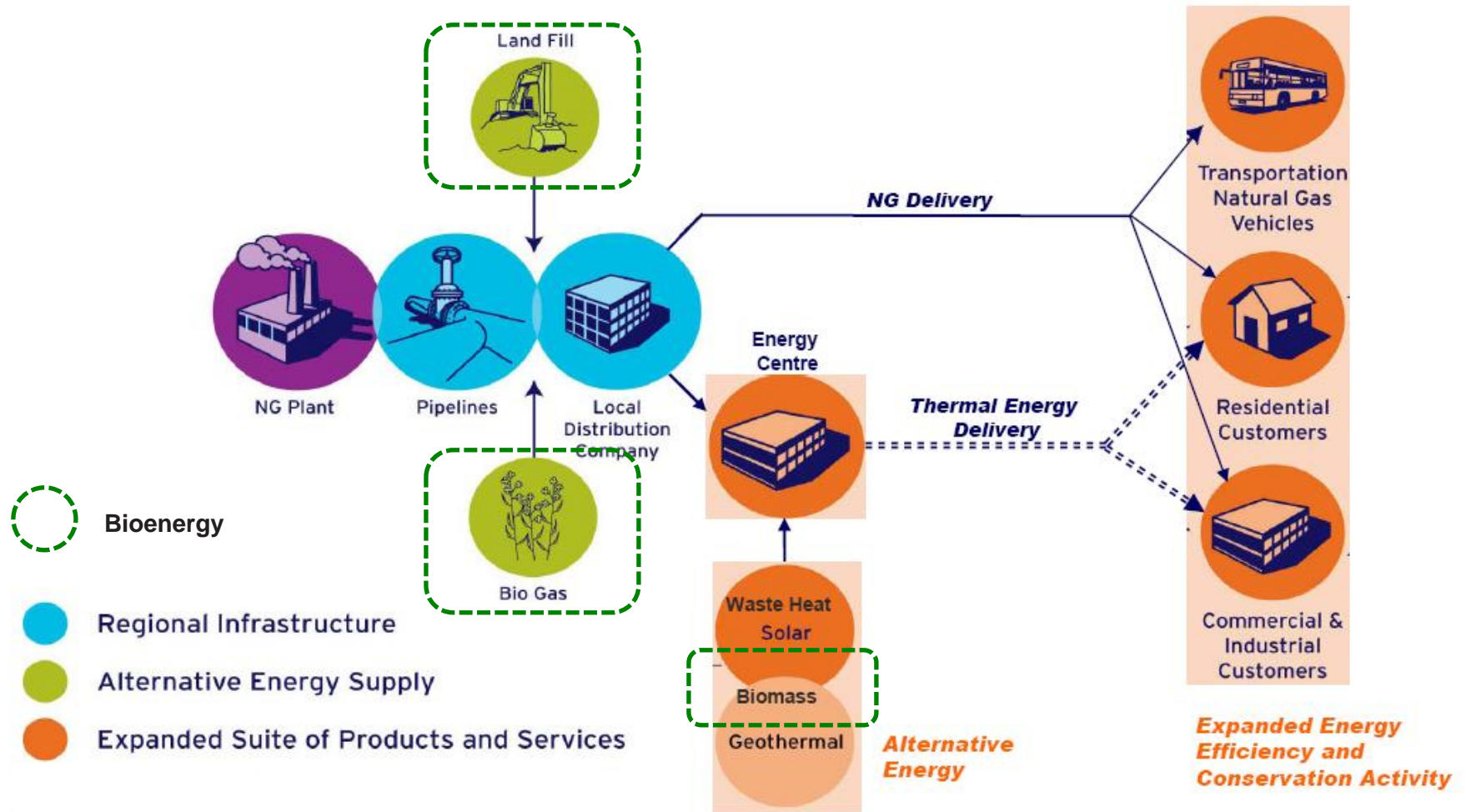
# Terasen Gas Biomethane Program

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# Terasen as an Energy Company

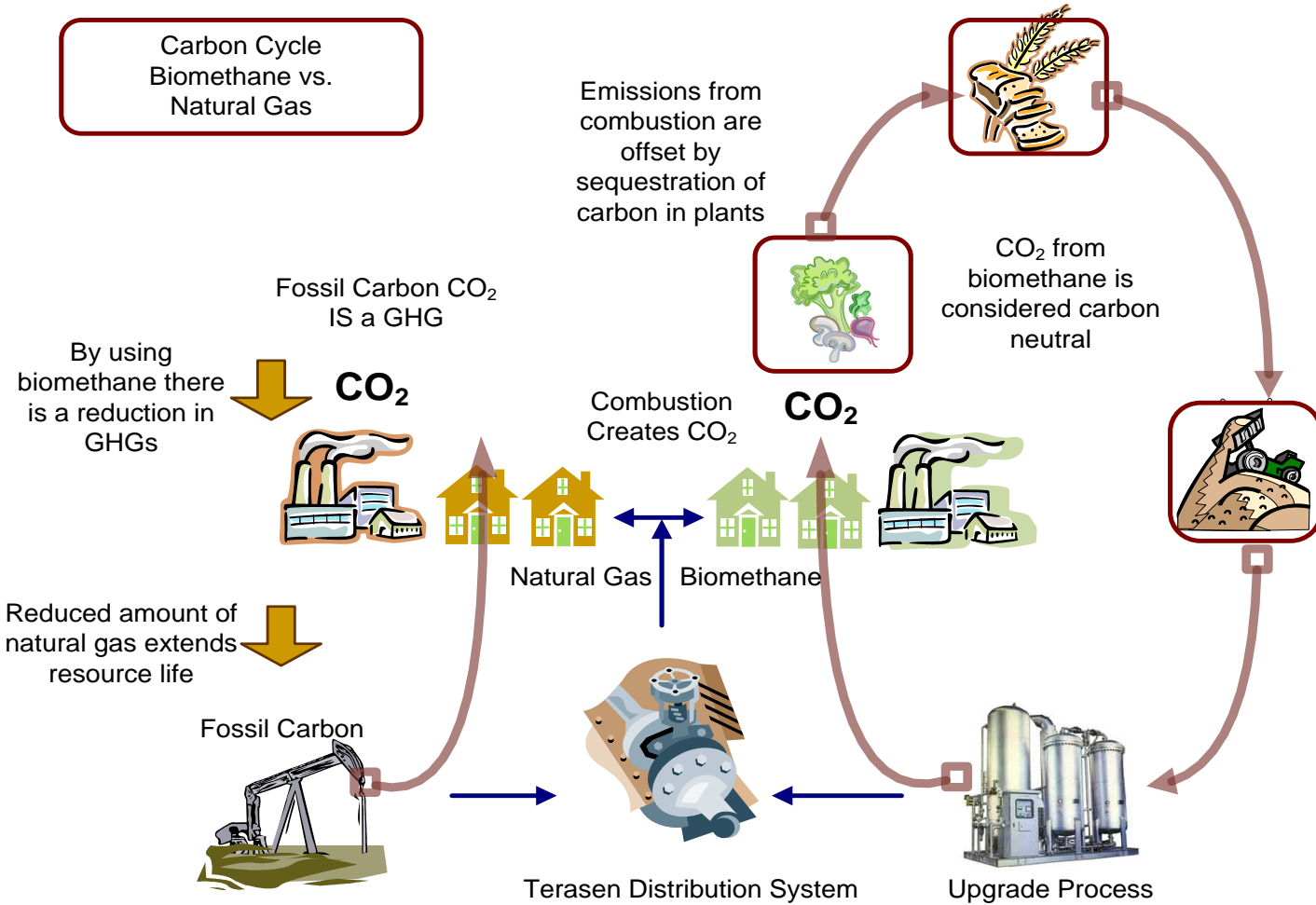


# Biogas vs. Biomethane

- Gas generated from organic material
  - Primarily consists of methane – 50% - 60% typically
- Potential Sources:
  - Anaerobic Digester (AD) Gas
  - Landfill Gas:
- Biomethane:
  - Methane from a renewable source – “Upgraded Gas”



# Biomethane is Carbon Neutral



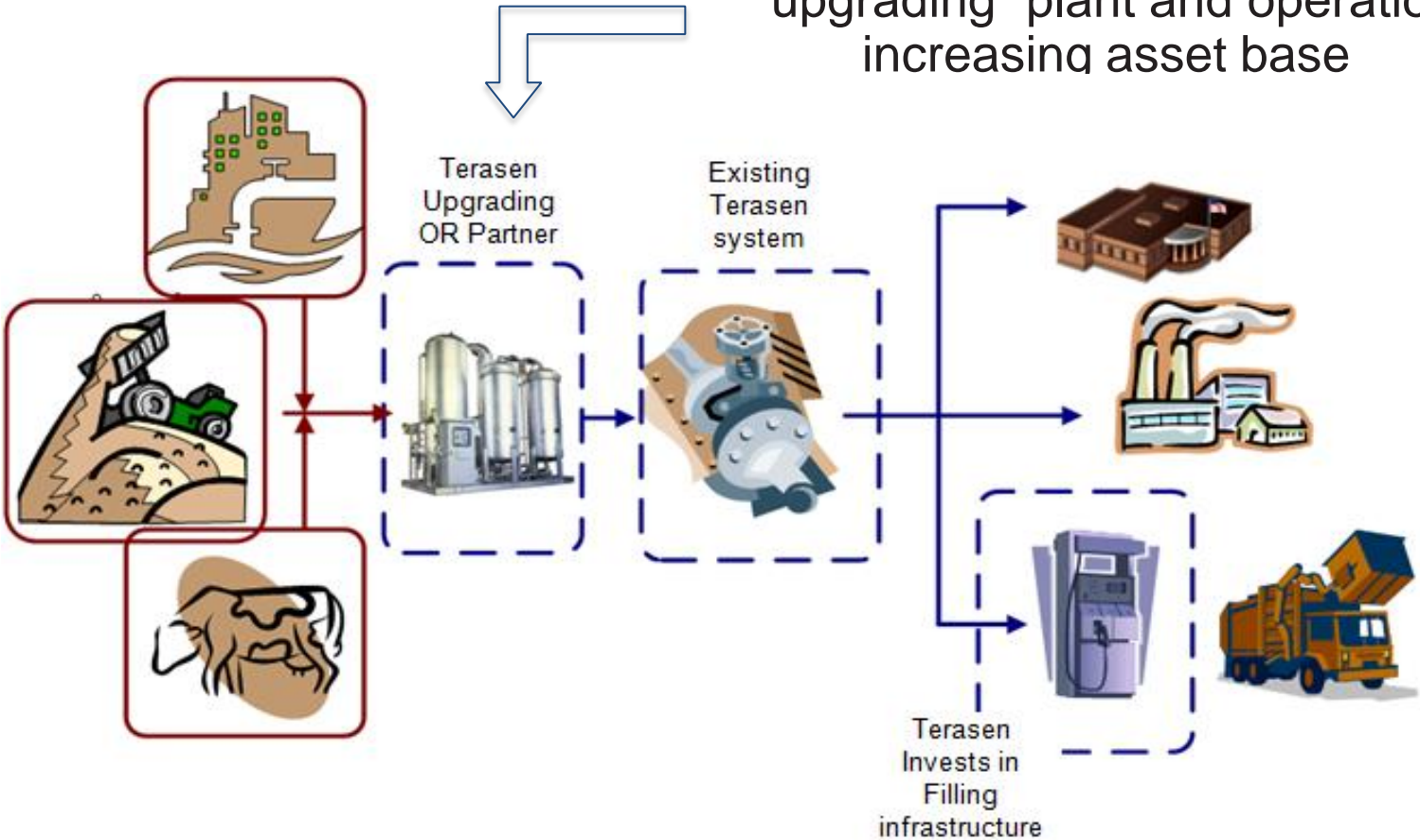
Supply

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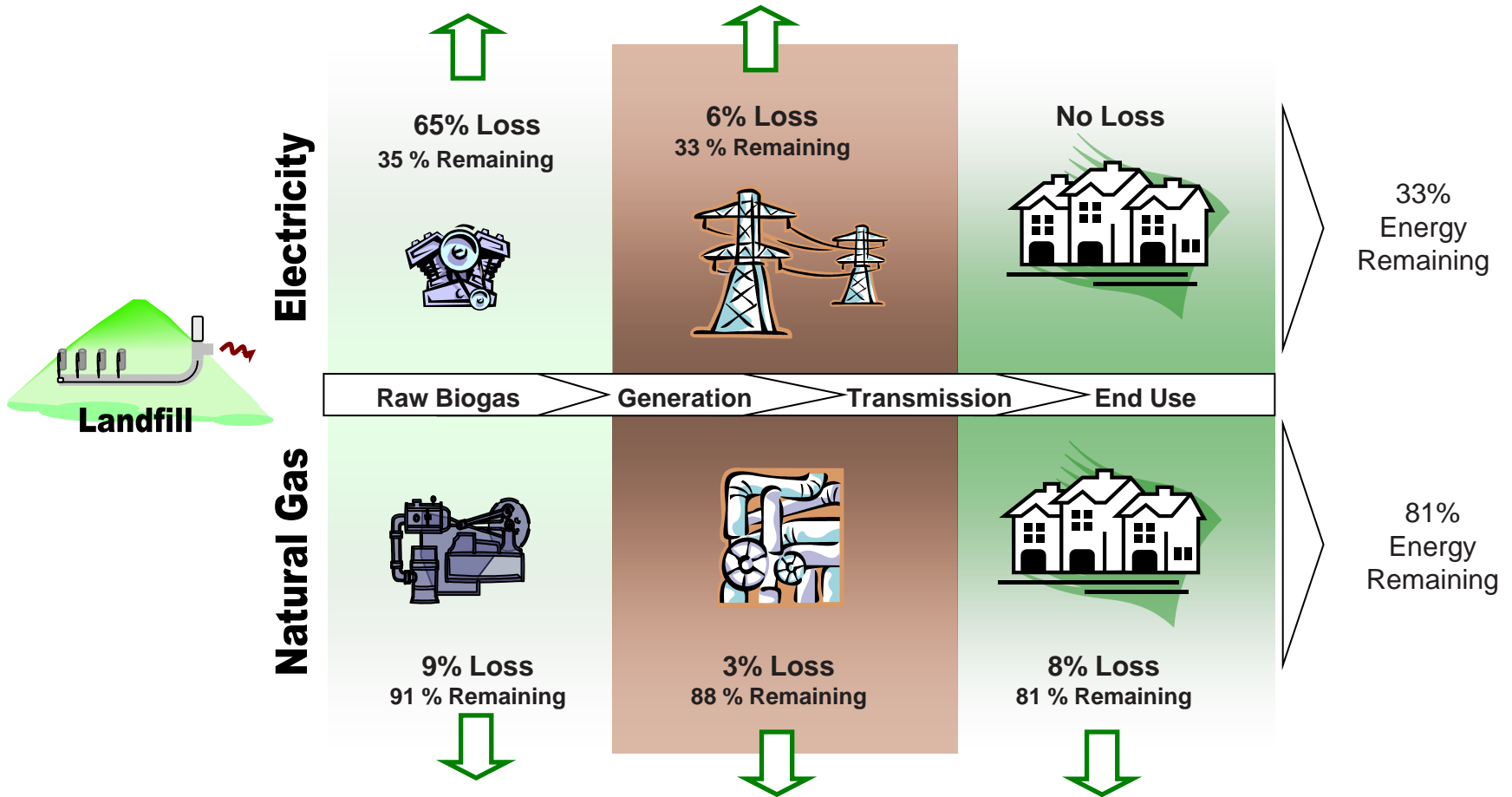
  
terasen  
Gas

# Terasen Biogas Supply Model

Terasen Gas may invest in “upgrading” plant and operation increasing asset base



# Biomethane to Pipeline Makes Sense



# Progress 2010

- Projects
  - Catalyst, Abbotsford, On-line September 2010
  - Salmon Arm Landfill, in-progress, On-line April 2011
- Prospects (2011)
  - Three potential projects for up to 235,000 GJ/y

# Columbia Shuswap Regional District (\$7.1M )

Terasen Gas upgrading with Xebec PSA technology

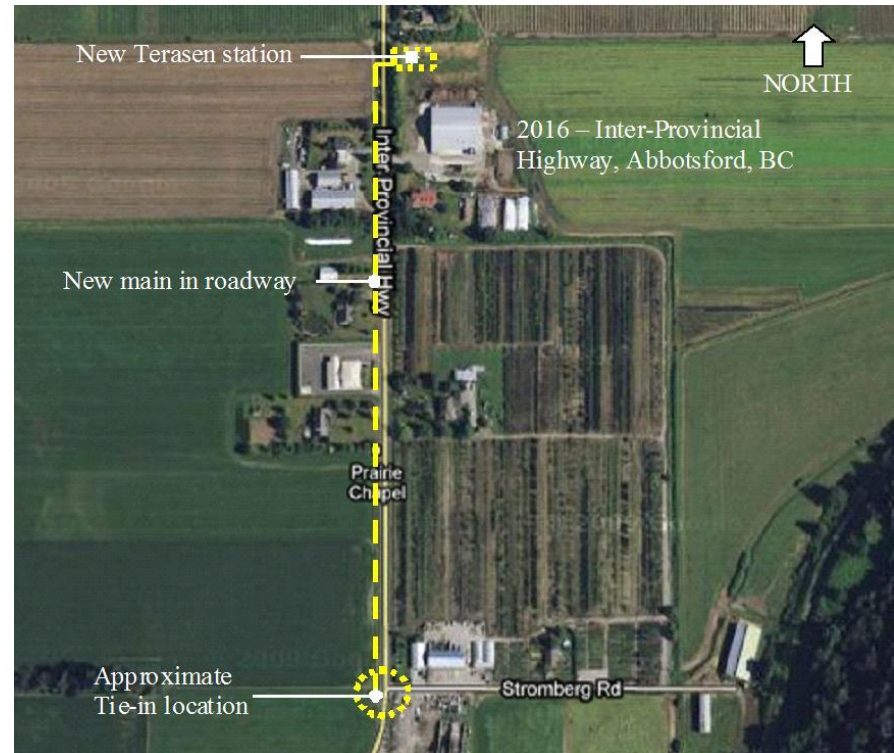


Capital Costs:

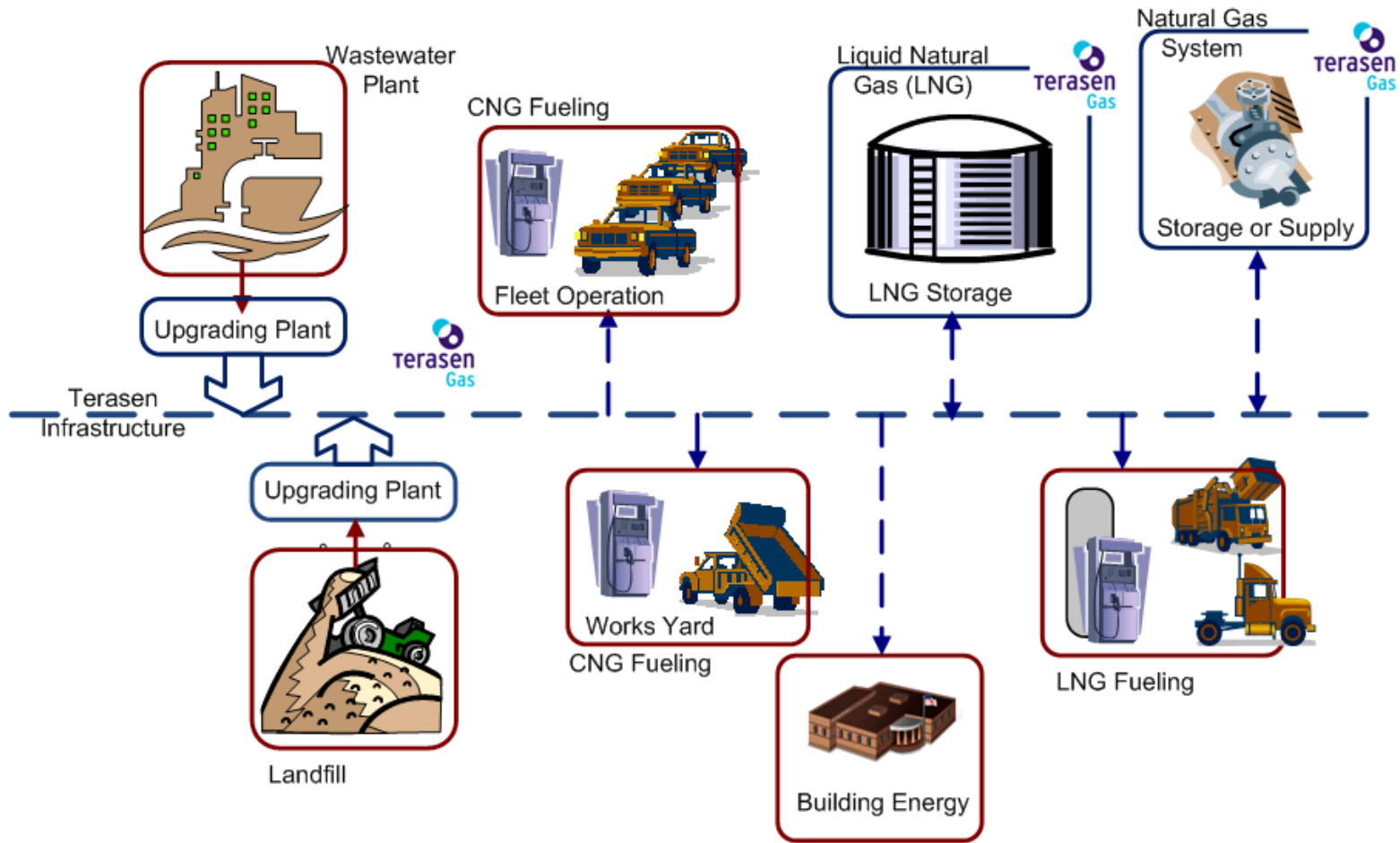
- Partner : ~\$4.8M
- Terasen: \$2.3M (\$0.5M ICE & BCBN Funding, \$1.8M Terasen)

# Catalyst Power Inc. (\$5.6M )

- Biogas from digestion of agricultural waste products
- Partner upgrading with water wash technology
- Capital Costs:
  - Partner :~\$5.0M (partner receiving ICE Funding)
  - Terasen: \$0.6M



# Terasen Infrastructure



Terasen can connect supply and demand with existing infrastructure

Demand

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# Strong Preference for a Renewable Energy-Based Program

## Should Terasen offer a biogas program?

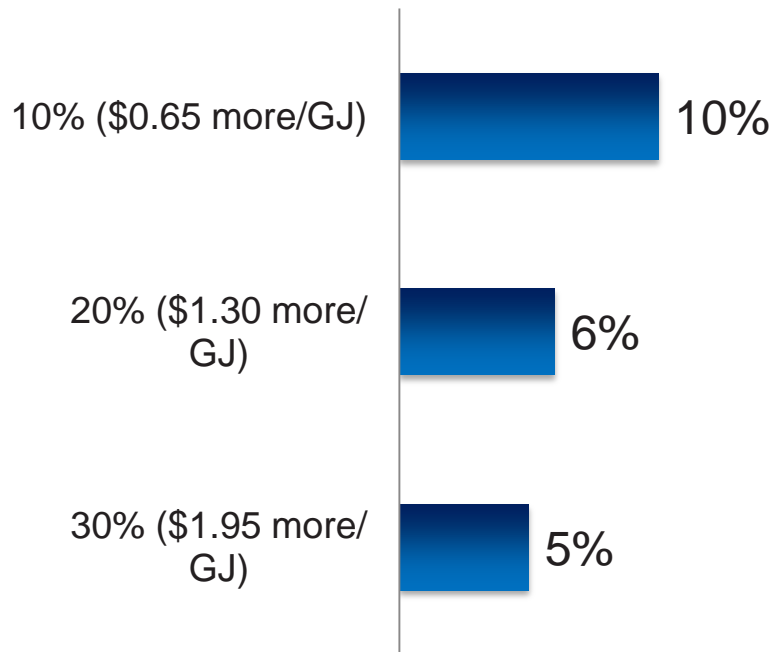
- Residential:
  - 65% Yes
  - 30% Maybe
  - 1% No
- Commercial
  - 71% Yes
  - 22% Maybe
  - 2% No

## What type of program should Terasen have?

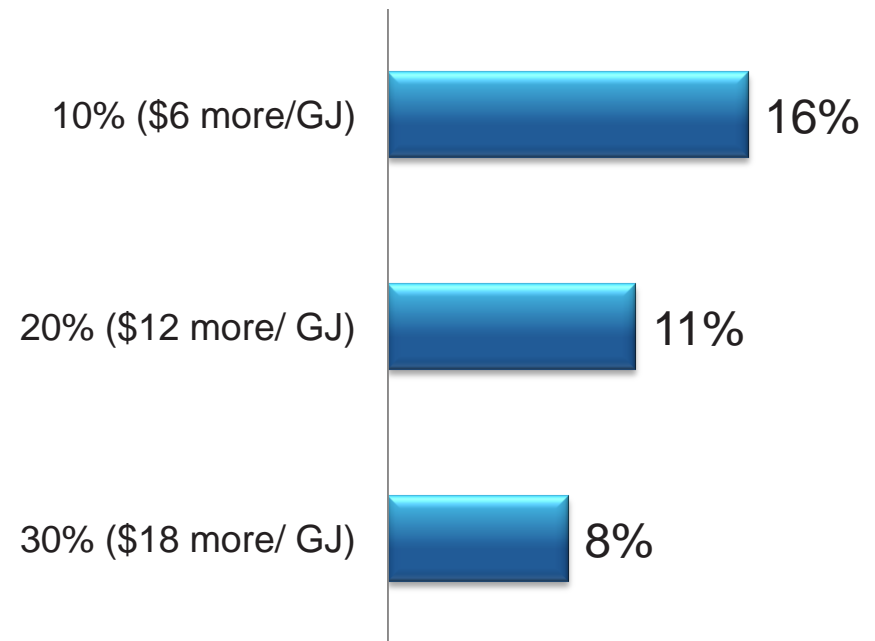
- Renewable Energy preferred over Carbon Offset
  - 2.8: 1 for Commercial
  - 3.2: 1 for Residential

# Strong Market Potential for a User-Pay Renewable Energy-Based Program

## Commercial



## Residential



# Efficient Process for Future Supply Projects

- Competitive alternative for clean energy
- BC Hydro Residential Tier 2 Rate

April 1/10* BC Hydro Tier 2 Rate:		8.78 ¢/kWh		
Conversion to Gigajoules	x	277.778	=	\$24.389/GJ
90% Efficiency Adjustment	x	0.90	=	\$21.950/GJ
Terasen Rate 1 Basic Charge	-	\$1.800/GJ	=	\$20.150/GJ
Terasen Rate 1 Delivery Charge	-	\$3.145/GJ	=	\$17.005/GJ
Terasen Rate 1 Midstream Charge	-	\$1.725/GJ	=	<b>\$15.280/GJ</b>

\*All rates based on those in effect in the fall of 2010

Questions?

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