



Natural Gas and Southern California's
Renewable Energy Future
Los Angeles, CA

June 14, 2011

- BioFuels Energy, LLC (“BFE”) has secured long term bio-gas rights from the Point Loma Wastewater Treatment Facility.
- BFE will purify the digester gas such that the end product meets the new SDG&E pipeline injection standards (Rule 30)
- BFE will nominate the cleaned biogas (“directed biogas”) to the following BioFuels customers and provide renewable energy under a long term Power Purchase Agreement:
 - City of San Diego South Bay Water Reclamation Plant (1.4 MW)
 - University of California San Diego (2.8 MW)
- BFE will provide all the necessary capital to implement the project (\$45 M Total Capital Cost)

Point Loma Wastewater Treatment Plant (PLWTP)

Proposed
BUDG Site

Digesters

Gas Flares

GUFG



PLWTP

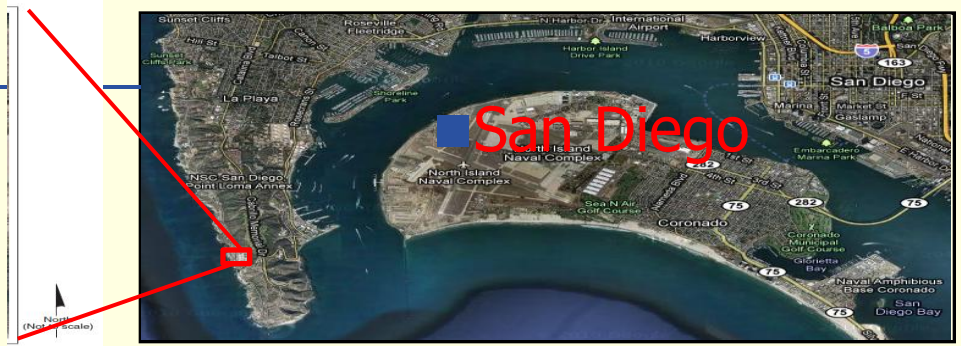
Existing Point Loma Wastewater Treatment Plant Location & Process



Point Loma

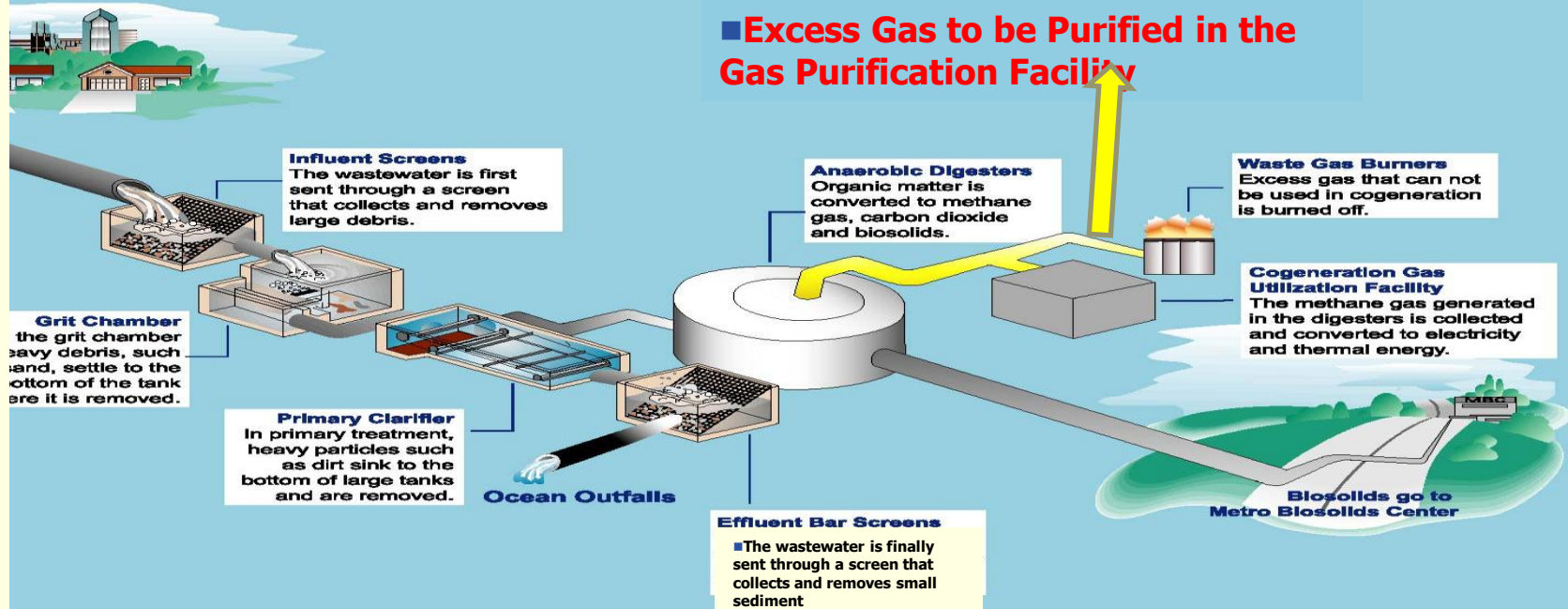
SITE AERIAL PHOTOGRAPH

Aerial Photograph California - January 2008



San Diego

Point Loma Wastewater Treatment Plant Process



BioFuels San Diego Project

- First commercial project in California to purify wastewater treatment digester gas for injection into the SDG&E nat gas pipeline
- Project entails two separate projects (a) gas purification from the San Diego Point Loma Wastewater Treatment Plant with injection to the pipeline and (b) distributed power generation at City of San Diego and University of California, San Diego
- Financing entails: (a) approved tax-exempt California Pollution Control Financing Authority bond \$12 million, (b) Grant Anticipation Bonds \$18 million, (d) US Bank investment \$10 million (incl. New Market Tax Credits) and (e) New Energy Capital \$5 million.
- Community support – Mayor of San Diego, Councilman Kevin Faulconer, San Diego City Council unanimous approval, local Point Loma Community Group

San Diego Gas & Electric Rule 30 Biomethane Gas Delivery Specification

- PUC Approved and Issued August 27, 2009
- Approval of subsequent SDG&E Advise Filing defines “biogas” as being derived from renewable organic sources.
- Specifically excludes California landfill gas from definition
- 98% methane requirement
- Water Vapor 7 lb/MMscf or less
- Oxygen .2% or less
- Total Sulfur .75 gr. S/100 scf
- Others

Strategic Project Alliances

- Biogas Cleaning - SCS Engineers
 - Responsible for cleaning all biogas to within the SDG&E Rule 30 gas specification
- Distribution System – SDG&E Natural Gas Pipeline Systems
 - Responsible for transporting cleaned biogas from the generation site to various customer locations
- Fuel Cell Company - Fuel Cell Energy
 - Provide South Bay (1.4 MW); Point Loma (300KW); and UCSD (2.8 MW) Fuel Cells and long term O&M Services for each
- Fuel Cell E/P/C Company
 - Otto H. Rosentreter Company responsible for fuel cell installation at South Bay and UCSD
- Investment Bank - George K. Baum & Company
 - Responsible for Grant Anticipation Note (GAN) financing
 - Pt. Loma CPCFA Tax Exempt Financing
 - New Energy Capital (Equity Partners)



Government Incentives

- Self-Generation Incentive Program (California Public Utilities Commission/California Center for Sustainable Energy)
 - \$4,500 per KW of electricity rebated for first MW at each site
 - \$2,250 per KW of electricity rebated for capacity 1 to 2 MW
 - \$1,125 per KW of electricity rebated for capacity 2 to 3 MW
- Federal Investment Tax Credit (U.S. Energy Policy Action of 2005)
 - 30% of net project costs (after rebate above) available as a tax credit
- Federal New Market Tax Credits

75% of project cost subsidized

Marriage of Bio-methane & Nat Gas to Deliver Reliable Power

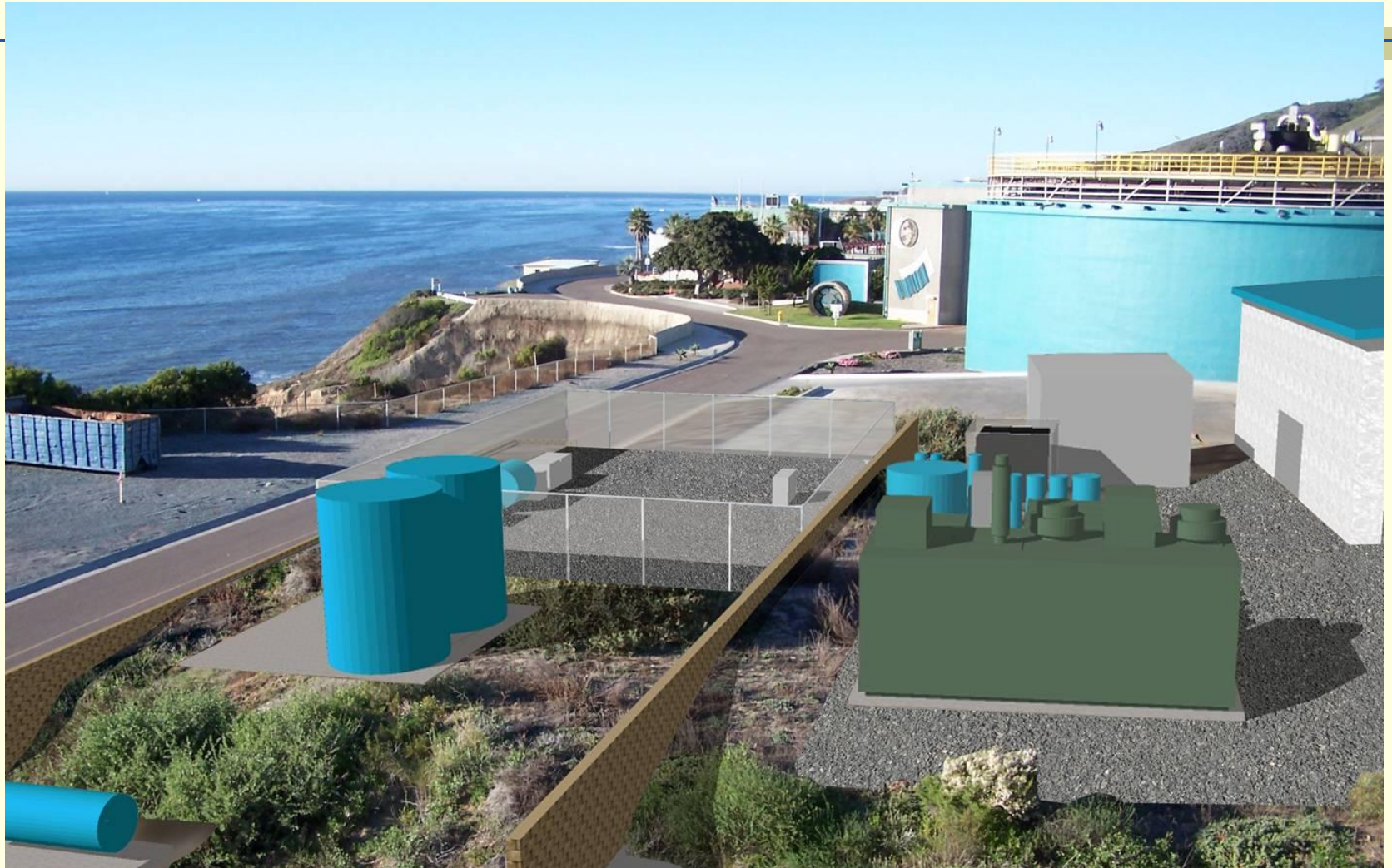
Via HDR Independent Engineers Report

- ❑ Annual Bio-Methane Production-285,700 mmbtu/yr
(at 95 percent operating capacity)
 - 279,700 mmbtu/yr
(at 93 percent operating capacity)

- ❑ Gas Utilization -294,443 mmbtu/yr
(sum of fuel cell requirements @ 93% availability)

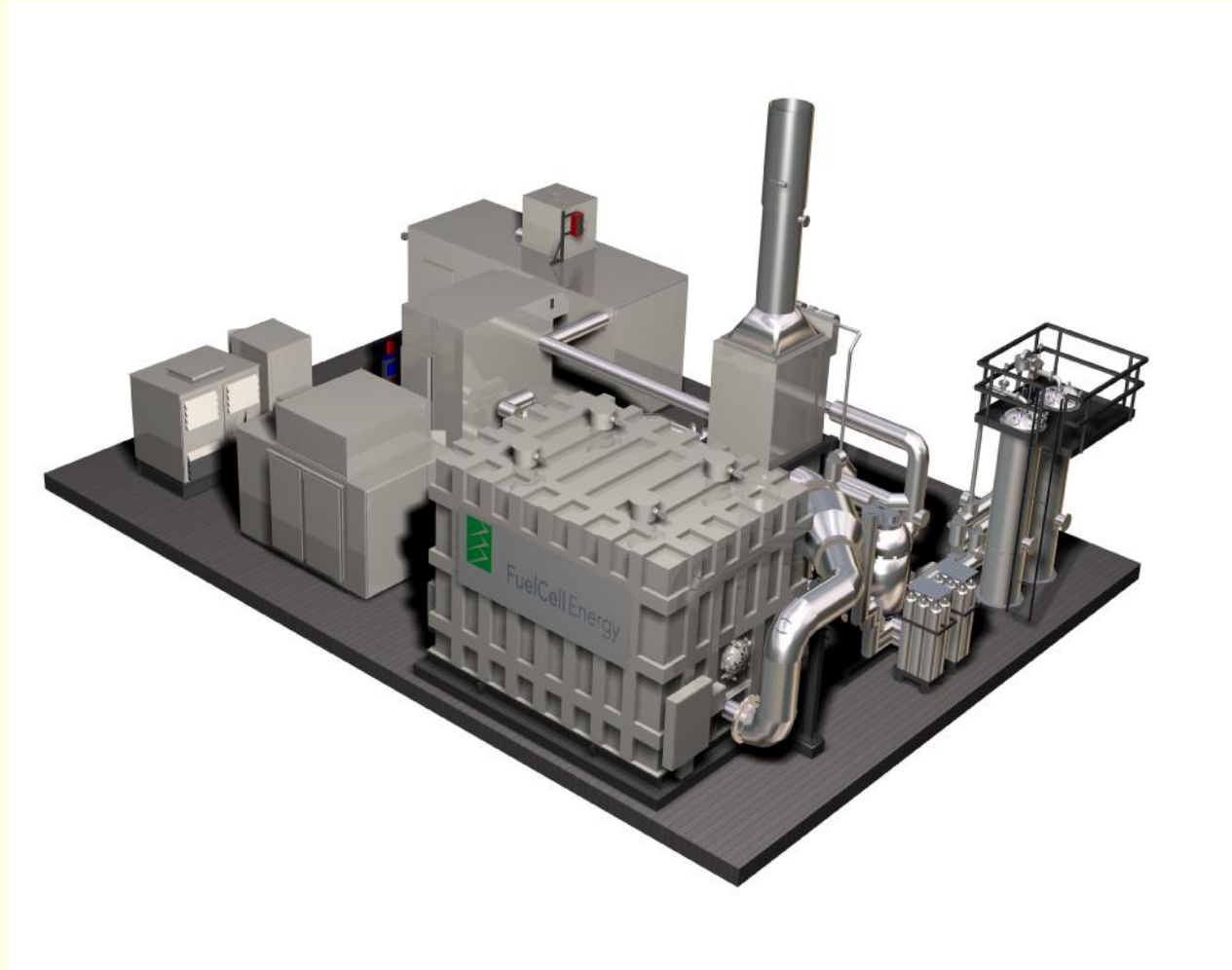
- ❑ 97% - fuel source as renewable energy @95%
95% - fuel source as renewable energy @93%







FuelCell Energy's DFC 1500 B South Bay Water Reclamation Facility



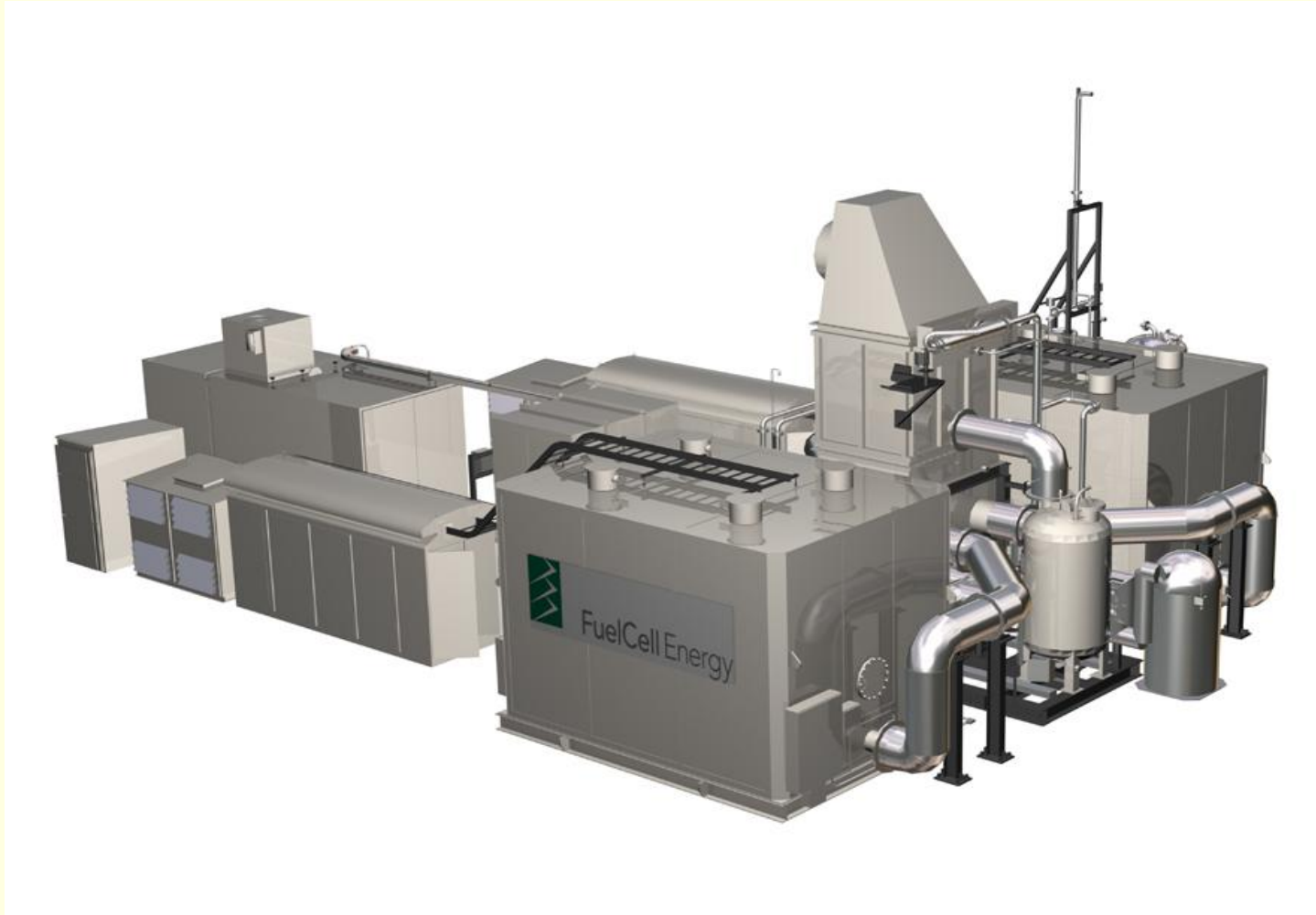
1.4 MW DFC1500



Pepperidge Farm Bakery

FuelCell Energy's DFC3000

University of California San Diego



2.4 MW DFC3000



photographed by
Jeff Park, 2009

World's Largest Fuel Cell – 5 MW Double DFC3000's - Korea

Point Loma Project Status

■ Project Timeline

- Completed Project Financing.....Nov. 2, 2010
- Initiated Construction Dec. 2010
- Fuel Cells Delivery August 2011
- Complete Construction October 2011
- Operation/Maintenance NTP Nov 2011
(starts 10 year term)

Opportunities & Challenges to Expanding Biogas Projects

- Policy Opportunity

Rescind Section 3 (O). “gas from landfills will not be accepted or transported” from Sempra Rule 30, Transportation of Customer-Owned Gas;

- Policy Challenges

CPUC Staff’s Sept.2010 Proposal regarding modifications to the SGIP Program which if adopted will reduce incentives and significantly impact the implementation of fuel cell projects

Opportunity for New Methane Gas Projects

- Duplicate Concept in California based upon;
 - other WWT Facilities (ex. Hyperion)
 - food waste and FOG as feedstock in dedicated Anaerobic Digesters
- LRI Landfill, Graham, Washington
 - Landfill Gas Sale and Purchase Agreement with Waste Connections, Inc. (15 years)
 - 3,000 scfm growing to 8,000 scfm in 15 yrs-
 - Clean Up landfill gas, inject into Northwest Pipeline and utilize as directed biogas in Ca.

Alternate Uses for Renewable Biogas

- Renewable CNG as a Transportation Fuel
- As “Directed Biogas” for use in new Energy Generation Facilities
- For Sale to Investor Owned Utilities as Fuel in existing generation units to meet RPS goals
- For Sale to Commercial, Industrial, & Institutional Customers (boiler or generation applications)

Thank You,



BioFuels Energy, LLC

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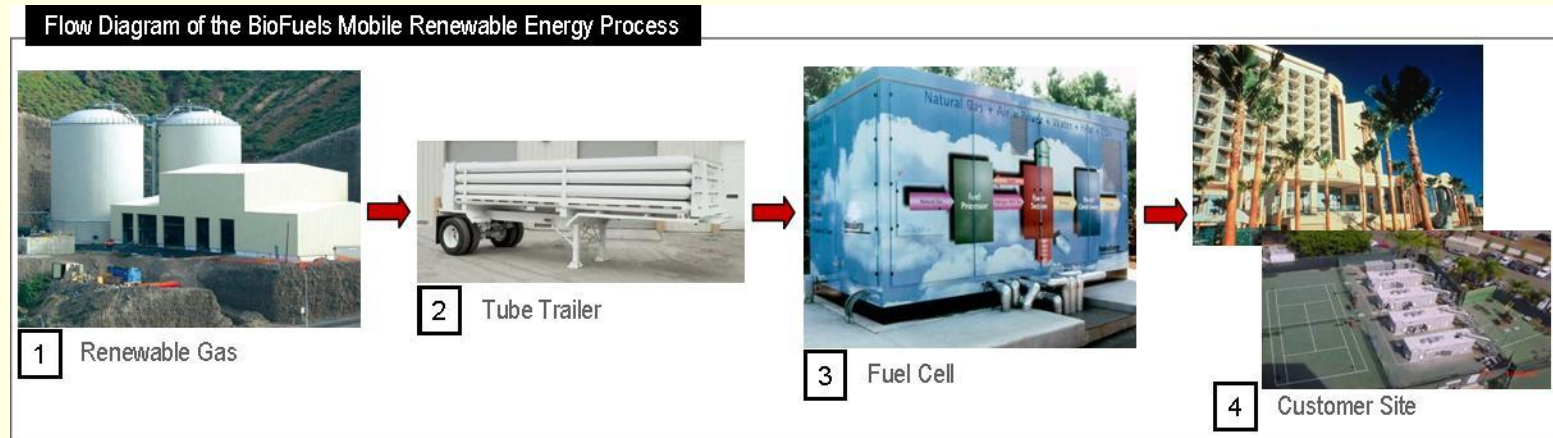
New Market Tax Credit Program

- Established in 2000 Community Renewal Tax Relief Act
- Encourages investment in low income Communities
- Thru the end of 2010- 594 awards totaling \$29.5 B
- Census tracts with a poverty rate of a least 20%
 - 30% of net project costs (after rebate above) available as a tax credit
- Provides Federal Income tax Credit equal to 39% of Qualified Equity Investment
- Tax Credit claimed over a seven year period and can be sold to a third party





BioFuels Conceptual Process



- Biogas recovery process and gas cleanup at digester or landfill
- Gas transported via tube trailers (25 miles or less) - 2400 PSI or
- Gas Injected into local utility natural gas distribution line
- Long-term customer CNG or Biogas Purchase Agreements