



Biomass Energy & Carbon



Challenge: Energy, Climate & Soils

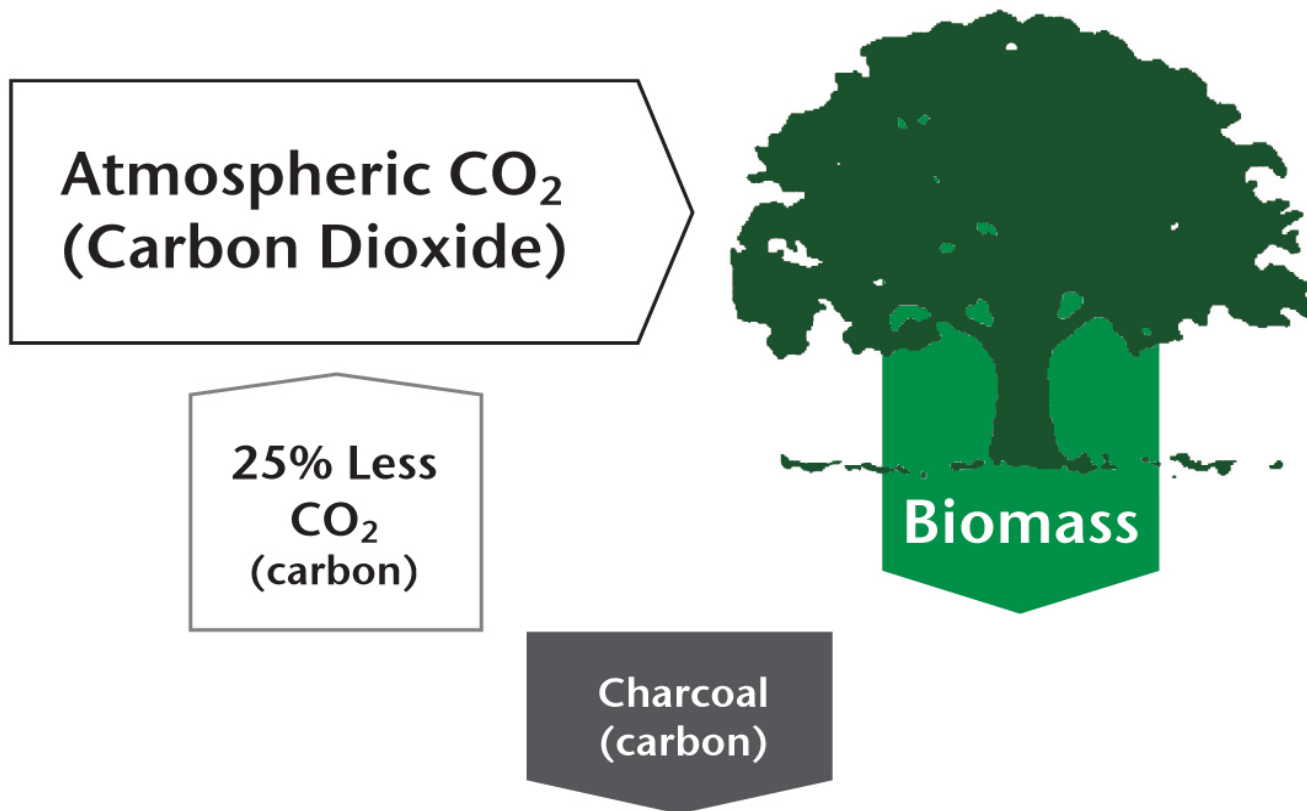
How do we remove 100B tons of Fossil Carbon?



Modular Biomass Gasification
Clean Gas Streams & Carbon



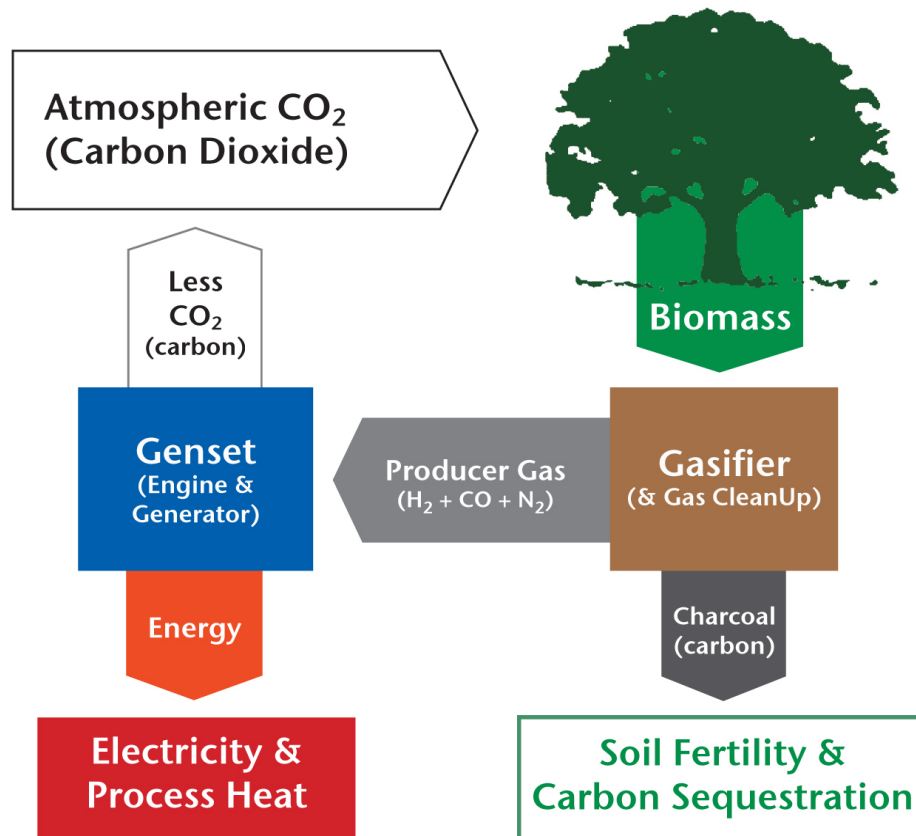
Biochar



Soil Fertility & Carbon Sequestration



Energy & Biochar from Waste Biomass



Distributed Co-Gen

- Combined Heat & Power at Processing Plant
- No Extra Transport Cost
- Lowest Capital Cost: \$2k per kW or less
- 200kW to 2MW of Electricity
- 2 tons Biomass = 1 MWhr
- Total US Waste Biomass: 1.5 Billion tons/year
- \$200 Billion US Market



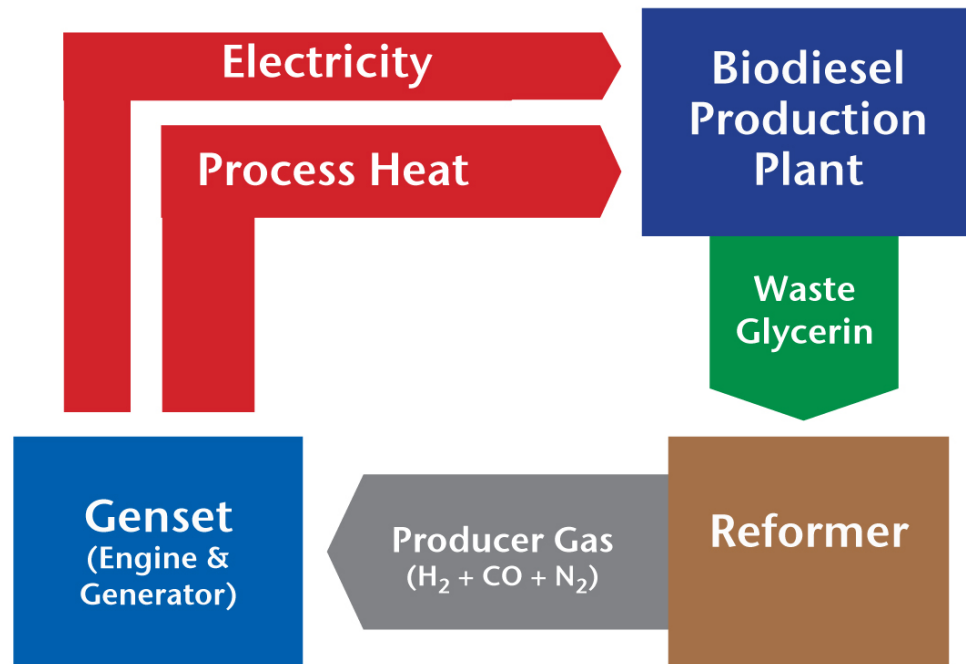
Reformer for Waste Liquids

Glycerin from Biodiesel Manufacture

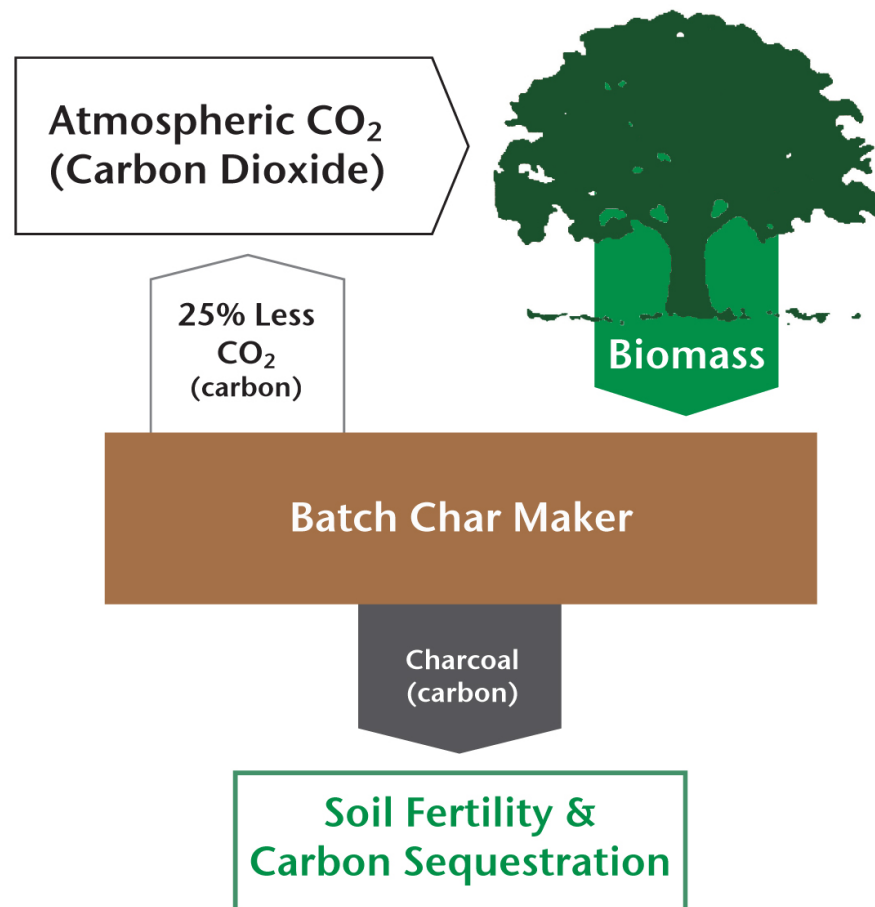
- 250kW Unit @ \$500k
- 1-3 yr payback for Plant
- 30,000 gal Plant needs 2
- 170 Plants in US now
- 50 under construction
- \$100M+ US Market

Vegetable Oil

- 2009 \$750k Army SBIR
- Gas-to-Liquids Methanol
- Licensing for Power Generation



Biochar for Carbon Credits

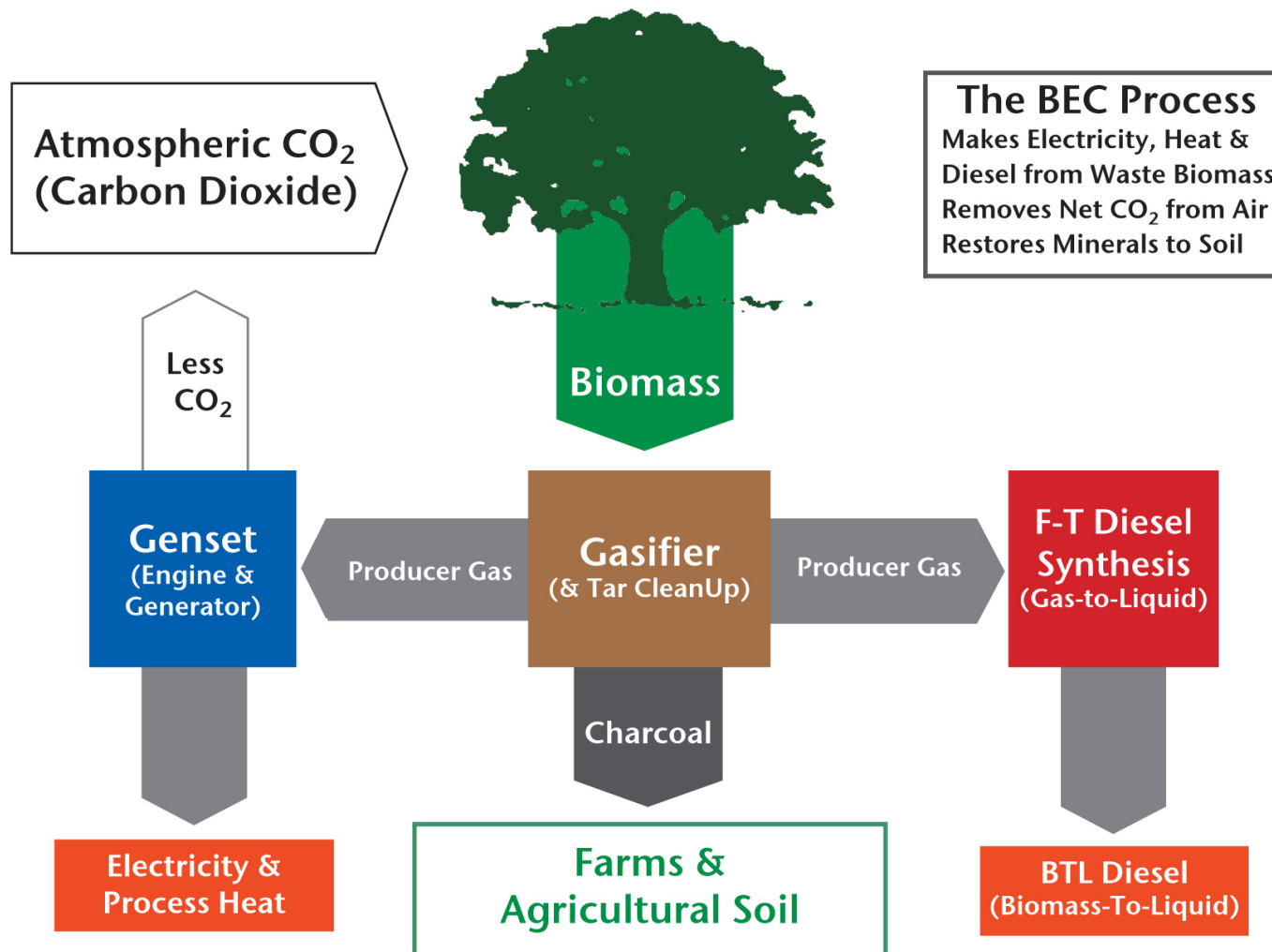


Atmospheric Carbon Removal

- Field Deployable
- Batch Unit
- Very Low Capital Cost
- Unskilled Crews
- Chip Slash & Small Trees
- Remove Forest Fire Fuel
- Patentable Technology
- New Carbon Credit Basis
- Global Carbon Market already \$30B in 2006



Electricity, Heat, Biochar & Liquid Fuels



Key People

Jim Fournier - President / CEO: Award winning Industrial Designer; background in physics, chemistry, and architecture at MIT; founded, owned and operated design & manufacturing company for over 10 yrs.

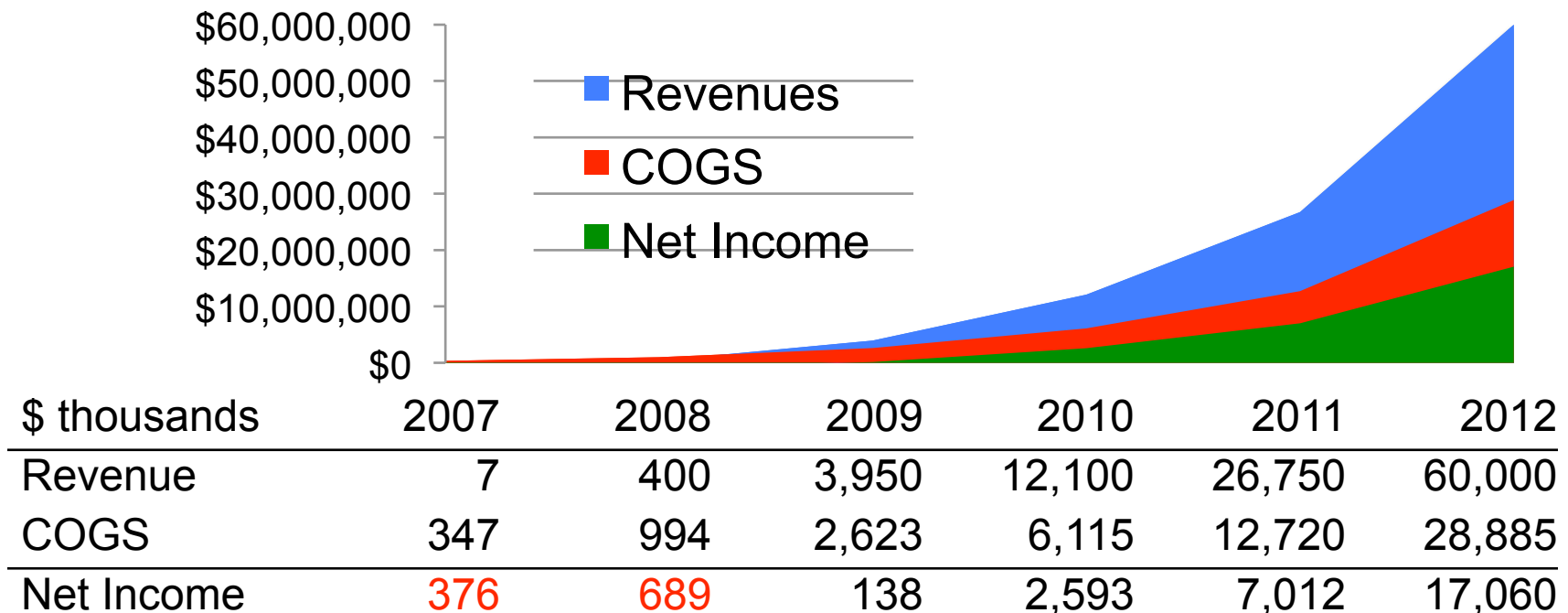
Dr. Thomas Reed - Chief Scientist: Ph.D. in physical chemistry; invented pressure swing absorption and plasma torch cutting at Union Carbide, Linde; while a researcher at MIT was first to propose methanol fuel in *Science*; led biomass gasification at SERI (became NREL) and then Colorado School of Mines; 15 patents, 8 books.

Charles Agua Das Ellis - Senior Research Engineer: 30 years in biomass gasification; holds core patent on downdraft gasification.

Shivayam Ellis - Joint Venture Partner: 15 years experience in biomass gasification; M.S. Engineering for Manufacture at CSM.



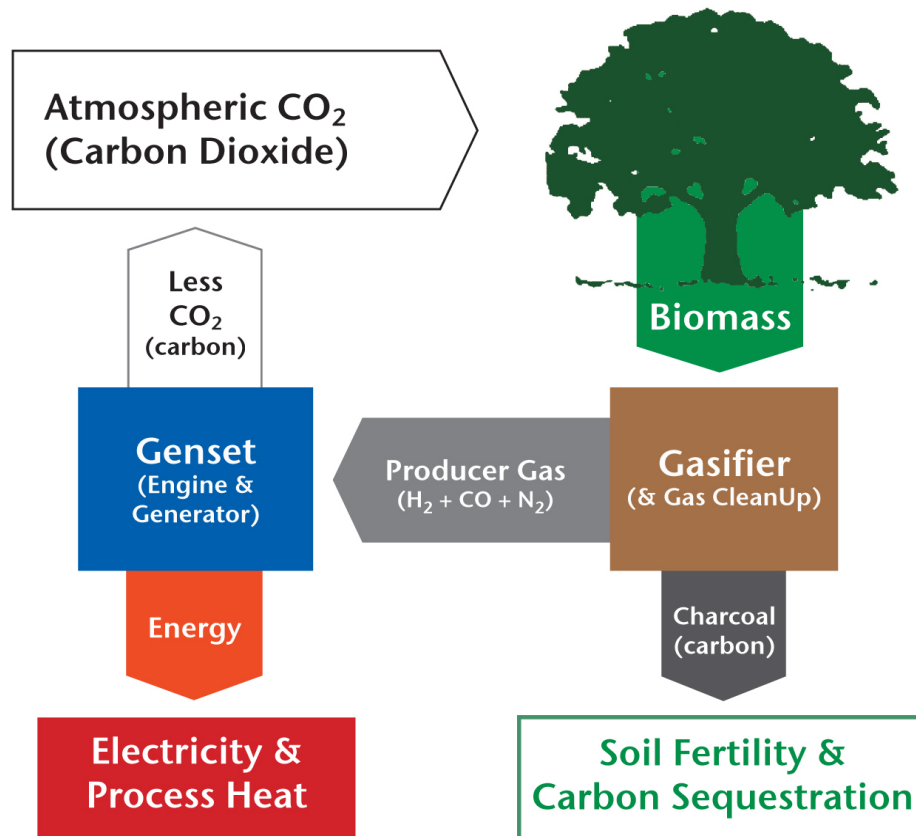
Financials



Raised \$500k in *Series A preferred* seed round @ \$2M post-money in 2007.
 Up to \$1.5M authorized in *Series B preferred* early stage @ \$3M pre-money.
 In 2008, currently raising \$1M in *Series B preferred*; \$500 available.



Maximum US Energy & Biochar Yields



US Waste Biomass

- 1.5 Billion tons/year

Energy Production

- 750 Million MWhr
- 100,000 MW capacity @ 300 days/year
- \$200 Billion Capital Cost @ \$2M per MW

Biochar Production

- 300 Million tons/yr Biochar @ 20% char yield

