

INNOVATION

A production process for converting animal fat and recycled cooking oil to biodiesel at costs competitive with traditional diesel fuel, resulting in the potential wide-scale commercial production of a viable alternative fuel.

ACCOMPLISHMENTS

- ▶ Multi-feedstock conversion process for fats, oils, and greases to biodiesel.
- ▶ Production of biodiesel at costs comparable to hydrocarbon diesel.
- ▶ Development of a production and recovery process which eliminates waste water discharge, ensures complete solvent recovery, and reduces catalyst consumption.
- ▶ Product quality meeting the requirements of the American Society for Testing and Materials for biodiesel (ASTM D 6751) and Technical Grade for the glycerin co-product, irrespective of the feedstock source.

COMMERCIALIZATION

- ▶ Formed a joint venture with a leading company in the Quick Serve Restaurant (QSR) Industry to provide services to the emerging biodiesel industry.
- ▶ Established strategic alliance with a major process equipment fabrication and assembly contractor for the construction of commercial scale biodiesel production facilities.
- ▶ Successfully completed the first commercial-scale sale of a biodiesel plant to be located in the US upper Midwest with projected annual production of 10-million gallons per year.



PILOT PLANT FOR BIODIESEL PRODUCTION

IMPACTS

- ▶ Lowest production costs in the industry.
- ▶ Competitively price capital investments.
- ▶ Consistent production of high quality biodiesel and a glycerin by-product.
- ▶ Elimination of water wash step.

SBIR COMPETITIVELY AWARDS SMALL BUSINESS GRANTS FOR INNOVATIVE RESEARCH THAT HAS THE POTENTIAL OF SOLVING IMPORTANT AGRICULTURE AND RURAL DEVELOPMENT PROBLEMS.