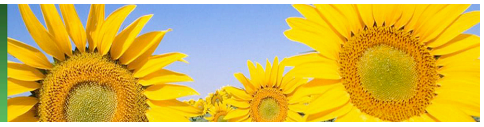
Southern Alberta Alternative Energy Partnership



Opportunity Identification for the Bio-Fuel Industry

This report defines the bio-fuels cluster for bio-ethanol and bio-diesel plants in the Southern Alberta Alternative Energy Partnership (SAAEP) Region. Cluster components include plant engineering, design and structural construction, process equipment manufacture, control system design and installation, plant production inputs and operations, transportation and distribution, and on-going plant supply and service, and maintenance.

A GAP analysis showed that the SAAEP region has considerable capability and capacity for plant design, engineering and construction, process control system design, agricultural production inputs, and on-going plant supply and services.

Cluster deficiencies were found to be a lack of bio-diesel process equipment manufacture in the region; methanol production for bio-diesel production inputs; and various other smaller inputs such as chemical catalyst supply for bio-diesel production, and enzyme and yeast supply for bio-ethanol production. Other deficiencies include a possible need to add transport capacity in terms of grain super-B equipment, and possibly petroleum grade (methanol) bulk chemical liquid tank trailers.

Major bio-fuels business opportunities for the SAAEP region include:

- Attraction of a bio-diesel process equipment manufacturer, and/or
- Local manufacturing under license of bio-diesel process equipment
- Local design, engineering and structural construction of plants
- Local design of process control systems

Transportation related opportunities, particularly for inbound wheat and c