SEBESTA BLOMBERG

PROVIDING SUSTAINABLE TECHNICAL AND BUSINESS SOLUTIONS

CASE STUDY

Arizona Public Service - Phoenix, Arizona

FAST FACTS

- Arizona Public Service began operation in 1920
- Arizona Public Service serves more than one million customers
- Arizona Public Service provides service to customers in 11 counties throughout the state of Arizona
- Arizona Public Service has a generating capacity of 4,000 mega-watts

Arizona Public Service began operation in 1920 and today is the largest electric utility in Arizona. Arizona Public Service, with 4,000 mega-watts of generating capacity, serves more than one million customers in eleven counties throughout the state of Arizona.

In 2004, Arizona Public Service wanted to increase the Environmental Portfolio Standard (EPS) component of overall megawatt-hour sales (MWH) and concurrently alleviate solid waste management issues of the local cattle and dairy industry. Sebesta Blomberg was retained to develop a conceptual solution for the production of biogas from cattle manure, the conversion of biogas to electricity, as well as the treatment and processing of resulting waste products.

Sebesta Blomberg's services would reduce farm expenses and/or regulatory liability and reduce water usage through the use of flush systems. The improvements would also maximize recycling and cleanup needs to meet discharge requirements. The solutions provided by Sebesta Blomberg were aimed at controling odors and reducing volatile organic compounds that were emitted from the decomposition of manure on the ground and in sludge ponds.

In 2005, Sebesta Blomberg completed the final concept development phase of the four-phase project that identified the optimum sites and the most suitable technologies and configurations for the overall processing of waste material. This phase encompassed all the activities, from pre-processing at the farm, collection and transportation, plant site processing, through electricity generation.

Major variables were evaluated by Sebesta Blomberg for the concept development phase, including the cost of operation, location, volume of manure for collection, effect of transportation on the local infrastructure, distributed versus centralized facilities and handling, storage and permitting requirements.

While working on the project, Sebesta Blomberg considered the basic utility infrastructure upgrades and additions, such as electric generation, power distribution and underground sludge pumping lines in lieu of trucking that could be tied into community sewage lines in response to future urban growth. Shared treatment facility resources were considered as much as allowed by regulations. Sebesta Blomberg's solution allowed for third-party operation of the community digester for cooperative benefit and profit.

The project resulted in a windfall of benefits for the client, the community and the environment, including increased employment opportunities, improved economic development and maximized "green" energy generation.