

BIG SKY WEST DAIRY – GOODING, ID

DAIRY FARM IN IDAHO – FIRST THIRD-PARTY-OWNED AND OPERATED DAIRY DIGESTER

SYSTEM DESIGN

Operational since 2009, Big Sky West Dairy’s anaerobic digestion project is owned by a joint venture of Dean Foods and AgPower Partners and is operated by Andgar Corporation. The success of the [Big Sky West](#) third-party-owned and -operated dairy digester project is described by the Innovation Center for U.S. Dairy.

The anaerobic digester project utilizes a modified mixed plug-flow digester designed by DVO, Inc. (formerly GHD, Inc.). The digester is fed by a mix of manure from nearly 4,700 dairy cows and a small amount of other organic wastes. The manure is scraped into a flume, flushed into a collection pit, and then pumped to the digester. The biogas produced is then used to fuel two 710 kilowatt (kW) engines, which produce electricity that is sold to the local utility, Idaho Power Co. There is also a two stage solid-liquid separation system that is used for solid separation.

PROJECT BENEFITS

- Reduction in methane emissions into the atmosphere
- Reduction in the dairy’s manure management costs
- Creation of bedding for the livestock
- Reduction in odor
- Producing commercialized product as [Magic Dirt](#)



Photo: AgSTAR

“We are very excited about this project and the benefits it will provide to us in operating our farm.”

—Russel Visser
Owner, Big Sky West Dairy
quoted in Dean Foods press release

- **Population Feeding Digester:** 4,700
- **Baseline System:** Storage Lagoon
- **Digester Type:** Mixed Plug Flow
- **Co-Digestion:** Organic Wastes
- **System Designer:** DVO, Inc. (formerly GHD, Inc.) (Design); Andgar Corp. (Manufacture and Installation); Developed by AgPower Partners
- **Biogas Use:** Electricity
- **Generating Capacity:** 1,500 kW
- **Receiving Utility:** Idaho Power Company