



Investing in cleaner air

More than \$250 million has been included in Dairyland's budget to retrofit Dairyland Power's coal-fired 380 MW Genoa Station #3 (G-3), Genoa, Wis., and 400 MW John P. Madgett Station (JPM), Alma, Wis., with state-of-the-art environmental control equipment.

The phased installation of these new control technologies at both plants will result in cleaner air through further emission reduction of particulates, sulfur dioxide, mercury and nitrogen oxide emissions.

Installation of a fabric filter "baghouse" was completed at G-3 in summer 2007 and will be completed in fall 2007 at JPM. The baghouses remove particulate matter (very light ash) from the exhaust gas stream following the coal combustion process. The new baghouses are in addition to existing equipment (electrostatic precipitators) that removes particulate matter from the air that is discharged from the plants.

Dairyland is also in the engineering and design phase of a project to install a dry flue gas desulfurization system, or "scrubber," to remove 90-95 percent of the sulfur dioxide, an activated carbon injection system to enhance mercury removal and new burners to modify the combustion process to reduce nitrogen oxide emissions.

Dairyland has already reduced sulfur dioxide emissions by 80 percent since the early 1970s and developed a market to recycle coal combustion byproducts. In recent years, about 80 percent of the fly ash has been recycled as an additive for cement and concrete blends. Nearly all of the bottom ash has also been recycled for use in road construction. ■ ■ ■



Dairyland is currently in a post-closure care period at the Genoa Ash Disposal Site. It was restored to a Native Prairie at closure.

Genoa Offsite facility needed

Dairyland is in the process of evaluating sites for a proposed Genoa Offsite facility to contain coal combustion byproducts (ash and lime waste). The need for the facility is due to the environmental control upgrades being implemented at the Genoa Station #3 power plant.

The vast majority of the ash produced at Dairyland's coal-fired power plants has been recycled. While some of this recycling will continue, installation of the environmental control technologies (in particular, the addition of pebble lime in the scrubber system which reduces sulfur dioxide and mercury emissions) will change the composition and volume of the byproducts. This change will make much less of the ash eligible for a recycling program, forcing Dairyland to seek a different disposal method.

An initial site screening performed by a consultant identified 70 sites within a 25 mile radius of Dairyland's Genoa plant that met the initial criteria for the facility. Through the screening process, the list was narrowed and Dairyland will be seeking permission from landowners to perform further evaluations on these sites.

The Wisconsin Department of Natural Resources (WDNR) is the regulatory body responsible for permitting this type of facility. They require an approved Plan of Operation, Air Permit and Stormwater Permit be obtained prior to construction. The siting and permitting process could take up to four years.

A public meeting about the project is planned for Oct. 17 (see Page 3).

Common questions about the Genoa Offsite

After reviewing a number of alternatives, a new facility near Genoa is the only reasonable option with regard to transportation, cost and overall environmental protection.

The following *Questions-and-Answers* have been developed to help address some anticipated questions regarding the proposed Genoa Offsite project:

Have alternatives to building this site been considered?

Dairyland hired an independent consulting firm to seek and evaluate options for waste disposal. Existing disposal sites at a wide variety of locations were reviewed. These reviews included private disposal facilities, as well as Dairyland's current offsite disposal facility near Alma. Issues with size and permitting at existing disposal areas managed by Dairyland proved to be prohibitive.

The option of building a new site was also thoroughly reviewed. The consulting firm evaluated potential sites with regard to Wisconsin Department of Natural Resources (WDNR) stringent landfill siting criteria.

As a result of their evaluation, the consulting firm recommended locating a new disposal facility relatively near the Genoa power plant, where the byproduct is produced. Dairyland's review of the consulting firm's work confirms that they fully reviewed all options, and that a new facility near Genoa is the only reasonable alternative with regard to transportation, cost and overall environmental protection.

How would area groundwater and surface water be protected?

If approved and permitted by the WDNR, the disposal facility would be constructed and operated in compliance with all regulations and requirements that ensure safety, environmental protection and reliability. State-of-the-art technologies would be utilized in all aspects of design, construction and operation.

The facility would be constructed with a **composite liner system** to provide three layers of groundwater protection. This system would consist of two to four feet of clay or low permeability soils, overlain with a geosynthetic clay liner and a geomembrane liner.

Additionally, a **leachate collection system** would be installed. All precipitation and water that comes into contact with the waste material would be collected and treated.

The site would also have a groundwater monitoring well network that would be sampled and monitored for the life of the facility, plus a minimum of 40 years of post-closure care.

How would this site be regulated?

If approved and permitted by governmental regulatory agencies, the disposal facility would be constructed and operated following strict regulations and requirements to ensure safety, reliability and environmental protection.

Regular inspections of the facility would be performed by the WDNR to ensure compliance with applicable solid waste regulations and the facility's approved Plan of Operation.



A composite liner system provides three layers of groundwater protection: two to four feet of clay, a geosynthetic clay liner and a geomembrane such as this being installed at the Alma Offsite.

How would the site be managed?

Dairyland would employ two or more full-time employees to manage the facility. Wastewater treatment would be continuous and groundwater monitoring would be conducted per WDNR guidelines.

Would the site be open to the public for use?

The acreage outside of the actual disposal facility perimeter would be generally open for hunting and continued agricultural use, with permission.

How would this site impact the environment?

Steps to mitigate environmental impacts would be taken throughout the siting and permitting process. As part of any site evaluation, possible environmentally sensitive and/or historically significant areas would be surveyed by regulatory agency staff and University of Wisconsin-La Crosse specialists.

Dairyland will work closely with agencies such as the WDNR, the Rural Utilities Service and the Vernon County Land and Water Conservation Department to ensure environmentally responsible site development and operation.

What traffic increases could I expect to see?

The amount of truck traffic would depend on power plant generation factors. It is estimated that between 8 and 20 trucks would carry material per day from the Genoa power plant to the disposal site.

Will my air quality be impacted?

The new environmental control upgrades at the Genoa power plant are significantly improving air quality. Dairyland expects air emissions at the disposal facility to be minimal because it would be operated in compliance with all state and federal environmental regulations. This includes management of dust through operational controls such as road watering, crusting agents and compaction.

If approved, when will Dairyland decide which site it will build on?

Dairyland will conduct geotechnical, archeological and environmental impact evaluations of the primary and secondary candidate sites. An Initial Site Report, summarizing the results of the evaluations, will be prepared and submitted to the WDNR. Once the WDNR has reviewed the Initial Site Report, they will issue an opinion regarding the suitability of each of the sites as a disposal facility. Based on the results of the WDNR review, Dairyland will then decide how to move forward.

When would it be constructed?

Until the many steps in the complex siting and permitting process are completed, a timeline for construction of the proposed facility cannot be determined. Dairyland estimates it could take up to four years to complete the siting and permitting process. Actual construction of the facility could take up to one year to complete. ■ ■ ■



Dairyland owns and operates the Alma Offsite near its Alma, Wis., power plant site. The Genoa facility would include a truck maintenance shop, pond for stormwater management, heavy equipment for material handling and an on-site domestic well and wastewater treatment system.

Public Meeting

Landowners and other interested parties are invited to an Open House for more information about Dairyland's environmental improvements and the Genoa Offsite project:

- Wednesday, October 17, 2007
- 4:30 to 7:30 p.m.
- Viroqua High School Commons (Main Entrance)
100 Blackhawk Drive, Viroqua

Timeline and Next Steps

Dairyland representatives are personally contacting affected landowners. They will be seeking permission to enter, survey and appraise primary and secondary properties identified in the siting study.

The Initial Site Investigation will include an archaeological survey and endangered species review. In addition, soil borings will be drilled and groundwater monitoring wells will be installed.

An entry agreement will be requested. This agreement would provide the landowner compensation for entry, authorizes specific work activities and provides protections for the landowners, including site restoration. ■ ■ ■

Please visit www.dairynet.com



Turn to Dairyland's website for updates on this project.

Also, learn about conservation programs, energy efficiency ideas and do a home energy audit.

Learn about career opportunities, renewable resources, community involvement, cooperative history, current projects and much more.

Please visit us at: www.dairynet.com.

Who we are

Dairyland Power Cooperative, with headquarters in La Crosse, Wis., provides the wholesale electrical requirements and other services for 25 electric distribution cooperatives and 19 municipal utilities. These cooperatives and municipals located in four states (Wisconsin, Minnesota, Iowa and Illinois), in turn, supply the energy needs of more than half a million people.



Dairyland was formed in December 1941. Today, the cooperative's generating resources include coal, hydro, natural gas, wind, landfill gas and methane digesters. Dairyland delivers electricity via more than 3,100 miles of transmission lines and nearly 300 substations located throughout the system's 44,500 square mile service area.

Dairyland, a Touchstone Energy Cooperative, has provided low-cost, reliable electrical energy and related services to our customers in the upper Midwest for 66 years

Please visit our website at www.dairynet.com for more information on Dairyland Power Cooperative and updates on the Genoa Offsite project. ■ ■ ■

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