NEWSLINE

Trends, marketing, regulations and people in dairy processing.

Be an energy star by cutting costs in the plan and, on the road

Free online resources from the EPA and the Innovation Center for U.S. Dairy simplify process of reducing energy, cutting costs.

Consumers want the foods they eat to be nutritious, affordable and good-tasting. Increasingly, consumers care about the environmental impact of their food, and want to know that the products they buy were produced in an environmentally responsible way. As a result, retailers and foodservice companies are evaluating the sustainability of their suppliers, and environmental organizations are evaluating the sustainability of business and cities.

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Whether processors, manufacturers and transportation operators already have established sustainability and sustainability reporting efforts, or are just looking to get started to respond to these growing requests, they can take advantage of new, free, science-based tools from the U.S. Environmental Protection Agency (EPA), Washington, D.C., and the Innovation Center for U.S. Dairy (established under the leadership of dairy producers), Rosemont, Ill.

EPA Energy Star Energy Performance Indicator (EPI) tools and tools from the Innovation Center such as Dairy Plant Smart and Dairy Fleet Smart help companies assess their environmental footprints against national benchmarks and measure progress; offer best management practices for mitigation; and provide the information needed to effectively communicate the sustainability of plants and products to customers and consumers.

By using verified tools and learning from success stories, the industry can reduce sustainability learning curves and free up time to focus on other important initiatives such as innovation, efficiency and safety.

"The dairy industry has shown great initial leadership, but there is much more that can be done," said Walt Tunnessen, who coordinates Energy Star work with the dairy sector. "There are many opportunities for the dairy sector to improve efficiency, reduce costs and protect our environment."

Gain perspective

EPA's Energy Star Industrial Focus for the Dairy Industry is a valuable resource for ideas to improve energy efficiency, reduce energy costs and lower greenhouse gas (GHG) emissions associated with energy use. Tools have been developed together with program participants — including the International Dairy Foods Association, Washington, D.C., and the Innovation Center — to benefit dairy processing facilities.

An "Energy Star Guide for Energy and Plant Managers," available at EnergyStar.gov, discusses energy-efficiency measures, technologies and projects that can be implemented today in dairies, ice cream plants and cheesemaking facilities. All measures have a payback period of four years or less. The site also offers "Energy Management Guidelines" and an assessment matrix that can help organizations compare their energy-management practices to those in the Guidelines.

Read more about dairy sustainability
Turn to page 66 for "10 big and little green ideas" about how dairy processors are reducing their environmental footprint. On page 98, AMPI tells how it manages transportation costs.

Energy Star Energy Performance Indicator (EPI) tools for fluid dairies and ice cream processing plants are being developed that allow companies to compare their plant's energy performance to the rest of the industry. Using basic plant information, the EPI provides a percentile ranking of the plant's energy efficiency by comparing it to the industry's average of efficient plants, which are defined as having performance that is better than 75% of the plants in the industry.

"Collaboration is a critical component of developing useful energy benchmarking tools, such as the EPI," said Gale Boyd, director of the Triangle Research Data Center and senior research scholar economics, Duke University, Durham, N.C. "Energy managers in dairy companies and the research community that supports the industry are encouraged to test the draft EPI tools and provide feedback to Duke and the EPA."

Go online to find out more

Here are the URLs of the organizations mentioned in this article:

- Dairy Plant Smart, www.usdairy.com/plantsmart
- Dairy Fleet Smart, www.usdairy.com/fleetsmart
- Energy Star Guide for Energy and Plant Managers, www.EnergyStar.gov

Learn about making sustainable packaging choices. Read "A new tool to help choose eco-friendly packaging" by Gail Barnes on www.dairyfoods.com.

Clay Detlefsen of the International Dairy Foods Association writes about sustainable dairy processing practices for *Dairy Foods*. Search for his columns on www.dairyfoods.com.

The Innovation Center has mirrored this collaborative approach in its Dairy Plant Smart and Dairy Fleet Smart tools, which were developed with a team of experts from milk processing plants, research universities and government and nongovernment organizations. The tools allow a deeper dive into understanding, measuring and mitigating the carbon footprint from manufacturing and transportation.

Design a plan

For dairy business decision-makers, Dairy Plant Smart offers software tools that can help processors make data-driven decisions about management practices. The carbon footprint benchmarking tool helps calculate GHG emissions in accordance with the Innovation Center-commissioned GHG Life Cycle Assessment (LCA) for Fluid Milk, and to benchmark performance. The fluid milk plant simulation tool helps processors model their plants' current performance and identify next steps to reduce emissions, energy use and cost.

"Our hope is that the simplicity of the Dairy Plant Smart tool will encourage wide use within the industry, assisting with tracking and benchmarking efforts," said Dr. Darin Nutter, professor of mechanical engineering for the University of Arkansas and team leader of the Innovation Center's Dairy Plant Smart team.

The Innovation Center also worked collaboratively with EPA on the SmartWay program to develop Dairy Fleet Smart. This online benchmarking tool provides recommended management practices and improvement strategies to help dairy transporters and distributors reduce fuel consumption through best management practices and advanced technologies. Users can run scenarios of different management practices, determine GHG emissions-reduction goals that consider current efficiency levels and align with business strategies, and communicate improvement results.

The Dairy Fleet Smart tool is a customized version of the carbon and emissions assessment and benchmarking tools that EPA offers to its SmartWay partners.

"The Innovation Center for U.S. Dairy collaborated with EPA to develop this customized tool for dairy industry users, to make it easier for the dairy sector to join the 3,000 other U.S. businesses that use SmartWay. The tool will help them to achieve key sustainability goals in their transportation supply chains," said Cheryl L. Bynum, national SmartWay program manager.

Be inspired

There are dozens of case studies and success stories on the USDairy.com and EPA.gov websites that showcase the tangible benefits of reducing energy use to save money and protect the environment. Dairy processors share their own success stories by joining the Energy Star challenge. As part of the challenge, processors track and communicate reduction efforts, contributing to the goal to achieve $50 million in savings and a GHG reduction of more than 160,000 metric tons by 2020.

Strategic corporate energy management is the basis for achieving long-term, sustained energy savings. Tapping into free, science-based tools to assess, measure, mitigate and communicate not only simplifies the process for dairy companies, but also ensures consumers can continue to feel good about choosing their favorite dairy foods and beverages. ■

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