Beehives are among nature’s most efficient production plants, both in form and function. Throughout history, they have been used to symbolize industry, cooperation and resourcefulness. It seems fitting that Mann Lake Ltd., a full-service manufacturer of beekeeping products and supplies would strive for the same in its own facilities.

Mann Lake Ltd. is headquartered in Hackensack, Minn., a small rural community near Leech Lake. It also operates a branch in Woodland, Calif. This growing company produces and distributes a full range of products for the worldwide beekeeping industry, from feeds, medications and pesticides to wooden frames and fully assembled hive bodies.

Over the last few years, the company has added production capacity and storage space to its northern Minnesota facilities. Its most recent expansion included construction of a new 12,000-square-foot warehouse, plus equipment upgrades to make its wood plant operations more energy efficient and cost effective.

Company personnel contacted Minnesota Power early in the planning process looking for ways to conserve energy, lower costs and maximize utility rebates.

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Dwight Nelson, Maintenance Manager, Mann Lake Ltd.

“They are very interested in energy conservation and wanted to keep us in the loop,” said Tanuj Gulati, of Energy Management Solutions, a consultant with Minnesota Power’s POWERGrant commercial conservation program. He visited Mann Lake Ltd., reviewed plans and discussed a variety of energy-saving options related to equipment and lighting.

That dialogue helped company officials choose high performance, 28-Watt T8 lighting for the new warehouse—an option that offers increased efficiency and longer life than standard 32-Watt T8s, which were originally proposed. The new four-foot lights with reflectors provide all of the light needed in the warehouse, plus offer maintenance advantages over conventional eight-foot models.
“We’re getting twice as much light using half the electricity, and it is a lot easier to change four-foot bulbs than it is to change eight-foot bulbs,” said Dwight Nelson, maintenance manager, Mann Lake Ltd. He noted the new system has multilevel manual controls so alternate lights can be switched off for even greater savings.

Other energy-saving advances made during the expansion included the purchase and installation of exterior induction lighting, dust collectors with variable frequency drives, and premium efficiency motors with variable frequency drives on production equipment throughout the wood plant. In one case, a standard motor was already purchased, but, through this process, company officials chose to return it in favor of a more energy-efficient premium model.

Combined, these conservation measures are expected to save Mann Lake Ltd. 10.9 kW demand per month and conserve 240,689 kWh in electricity per year, translating to an annual cost savings of nearly $12,950. The company qualified for more than $10,000 in POWERGrant rebates from Minnesota Power, lowering the cost of the initial investment and improving payback to less than 2.5 years.

In competitive industries, every dollar saved goes right to the bottom line. One unique challenge making cost savings even more important to beekeeping manufacturers and suppliers is Colony Collapse Disorder, a phenomenon that has devastated United States honeybee populations in recent years. Energy and resource conservation is a strategic move that lowers costs and satisfies customers with strong environmental values.

“Our products are made primarily with renewable or recycled resources, and great care is taken to use materials efficiently and reduce waste. Energy efficiency is just another part of that commitment.”

David Heem, Wood Plant Manager, Mann Lake Ltd.