

# ENERGYwise

FOR YOUR BUSINESS



## Cooling Efficiency Rebate Program

*Don't lose your cool with your electric bill.*

Proper cooling is a key to maintaining a comfortable, healthy and productive work environment. Collectively, these systems account for a large share of the electricity used in commercial and industrial buildings. Improved cooling performance along with substantial energy savings can be achieved by implementing energy efficiency measures.

### Value for Your Business

Did you know cooling and ventilation use about 20% of the energy in buildings nationwide? Whether you're installing cooling in a new facility, replacing a dated or unreliable system, or upgrading to a higher efficiency model, you'll benefit from:

- Immediate savings on the new equipment through an energy rebate

- Lower maintenance costs
- Energy savings year after year
- Up-to-date, reliable, efficient equipment
- More comfortable working conditions

With lower cooling and maintenance costs, you'll have more money to invest in your business, instead of spending it on energy bills and repairs.

### How does it work?

The cooling rebate program provides rebates for qualifying commercial cooling equipment. The rebates are paid on a \$/ton basis with significant additional dollar incentives for units that further exceed the minimum efficiency requirements. The higher the efficiency of your cooling system, the higher your rebate will be. Prescriptive rebates are available for the following commercial cooling equipment:

- Chillers
- Cooling towers
- Air handling Variable Air Volume (VAV)
- Water source heat pumps
- Rooftop units (RTU's)
- Condensing units
- Split systems
- Economizers
- Packaged Terminal Air Conditioners (PTAC)



The basic principle behind the operation of a chiller is similar to conventional air conditioning in that the cooling is provided by refrigerant evaporation. There are significant differences though, including the fact that chillers typically use water as the primary cooling medium rather than air. Chillers are generally large systems, often found in medium to large commercial and industrial facilities.

# Cooling Efficiency Rebate Program **Don't lose your cool with your electric bill**

## Who can participate?

Any commercial, agricultural or industrial cooperative customer can participate. Only new and complete central air conditioning units, water chillers and remote condensing unit retrofits qualify. Rebuilds and air-cooled chillers are not eligible for rebates. The new equipment must use a minimum ozone-depleting refrigerant. Documents establishing proof-of-purchase must be furnished with the rebate application.

## What you'll receive

Rebate based on installed equipment and efficiency and years of savings on your cooling costs.

## What you need to do

1. You are responsible for checking with Agralite Electric Cooperative to verify funding availability and program parameters.
2. Installation must be complete before funds will be issued.

3. Itemized invoices from equipment vendors must accompany rebate application.
4. Invoices must itemize labor charges, quantity and price of the equipment installed.
5. Invoices must include manufacturer and model numbers for the installed equipment.
6. Agralite reserves the right to conduct inspections.
7. The maximum rebate amount is limited to 50% of the project costs, and \$100,000 annually per member.

## Contact us and start saving today

If you have any questions or need assistance in making these savings a reality for your business; please contact your local energy expert at Agralite Electric Cooperative.

## Success Story: Stroh Brewery

To optimize performance of the plant's glycol cooling system for its beer products, engineers targeted ways to improve the efficiency of the pumping systems that support the chiller. After brewing is completed, the beer is cooled in a heat exchanger to 54°F and moved to storage tanks. The beer is further cooled in the storage tanks by a glycol cooling system. A solution of water and 36 percent propylene glycol is pumped through a 400-ton chiller that uses ammonia from the central refrigeration plant to cool the solution to 22°F to 24°F. The glycol solution is then

channeled through an intricate piping and pumping system in order to cool the beer storage tanks.

The glycol pumping system was improved by trimming the impeller diameter of the pumps from 17 inches to 11.75 inches. This allowed the pump motor size to be reduced from 150-hp to 75-hp, more than halving electrical demand from 112kW to 54kW. Even with the smaller motor, the flow rate was increased by 15 percent, from 1,200 gpm to 1,380 gpm. Project costs, consisting primarily of labor to trim the impeller, were estimated at \$1,500. Based on the annual savings of \$19,000, the simple payback for the adjustment was approximately one month.

Source: U.S. Department of Energy

