

Control Your

Grants And Incentives Lend A Hand

From the aisles of the smallest hoophouse to the largest greenhouse, an uncomfortable reality has set in where energy costs are concerned. However, greener pastures await growers willing to do a little work.

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THE inclusion of the energy issue as a major theme of this year's State of the Union address spotlighted it as a major political and economic hot button for Americans. Such attention couldn't come at a more crucial time for the struggling commercial industries of the United States, as international conflicts and growing demands from overseas are driving the consumer side of the fuel pricing equation through the ceiling.

Thankfully, there is some help at hand for those willing to reach for it. Recent legislative initiatives have spurred activity within and cooperation amongst governmental agencies (such as USDA's Renewable Energy and Energy Efficiency Program and the U.S. Department of Energy's

Office of Energy Efficiency and Renewable Energy).

Despite such blatant (and in this case, welcome) redundancy, the feds aren't the only, or easiest, source of grant funding, and many greenhouse growers are finding that state and local governments and private utilities are offering immediate rebates and incentives without the paperwork or deadlines placed upon applicants.

At all levels, the programs being offered are tasked towards two separate, but not mutually exclusive, goals. The first is improving energy efficiency by upgrading or replacing existing infrastructure in order to reduce consumption. The second is

concerned with alternative and/or renewable energy production methods.

Energy Efficiency Improvements

Many growers have had their backs against the wall this winter, with no choice but to cut back on production, consolidate crops, close down greenhouses and inch thermostats down to the lowest cultural margins in order to survive until spring. Many do not feel in the position to make capital investments in such uncertain times. However, grant programs and rebates can help growers actually expand or upgrade infrastructure in a cost-effective manner, while simultaneously increasing efficiency.

USDA is offering several grant and guaranteed loan programs that are tasked to assist rural small businesses and agricultural producers to purchase and install efficiency projects and/or renewable energy systems. The next funding deadline for these

“Incentive money in state-and in federal support programs is there for the taking, and any greenhouse will do. Helping-growers get these grants has resulted in a substantial number of successful projects for Total Energy Group, saving our customers up to 35 percent off their energy bills.”

— Peter Stuyt, Total Energy Group

federal grants is June 5, 2006.

A number of states, such as California, Vermont, Maine, New York and Wisconsin, have consolidated all of these types of grants into one state-

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Energy Costs

wide program, making coordination easier for both grantor and grantee (see page 72 for federal and state contact information).

On a local level, both public and private utility companies are offering a variety of free tools, classes and services to guide willing customers through energy efficiency projects. Utility customers who can reduce or cut off their power use when their area's electricity supply is low may be able to receive additional incentives by participating in special "demand

response" programs.

"What many growers may not realize is the willingness of utilities to negotiate with commercial businesses that strive to cut down wasteful usage," remarks Rich Hasselman of GDS Associates, a consultant firm that works with growers for Wisconsin's Focus On Energy public/private energy partnership. "This is due to both increasing energy demands as well as increasing grants funding as energy efficiency becomes a higher governmental priority."

Also, as Total Energy Group's Peter Stuyt points out, energy efficiency often has added benefits for greenhouse growers. "With a modern boiler, a flue gas condenser and proper insulation, 95 percent efficiency is possible, while also creating the absolute best growing climate for the crop," he says. "Because the boilers and related equipment are also-eligible for incentives and rebates, these systems are financially attractive for growers as well as producing excellent crops efficiently."

investment with easily quantifiable returns.

The cost of installing a renewable energy technology is continually being offset by the value of its work. According to Hasselman, the benefits

"Wind energy is one of the fastest growing alternative energy sources because a one-time capital investment will-give you the advantage of "locking in" your electricity rates for-twenty years or more."

— Johan de Leeuw, Director,
Wind Energy Solutions

of renewables are many: higher property values (with no corresponding tax increases), tax benefits and incentives, a lower utility bill, increased energy independence and the potential to sell excess energy back to the grid, spinning the meter backward for a change.

Despite the obvious advantages, Hasselman cautions growers to take a "first things first" approach to saving money through alternative or sustainable technologies. "First, growers should reduce their energy demands through efficiency improvements, and then look at installing a renewable system, because that way they can save money through efficiency, as well as saving money by not installing an oversized system." As Dennis Buffington of Pennsylvania State University remarked recently at an Ohio State University conference on

Energy Grant Candidates

Ventilation:

- Ridge venting
- High-efficiency exhaust fans (greater than 20 cfm per watt)
- High-efficiency HAF fan for air circulation
- Greenhouse structural improvements
- IR-rated poly film (for the inner layer of a double poly house)
- Polycarbonate glazing
- Foundation insulation two feet below grade
- Thermal energy curtains, dual-use and shade curtains
- Replace/repair/upgrade lighting systems

Heating:

- High-efficiency boilers
- Condensing unit heaters
- Power vented or separated combustion unit heaters
- Under-bench or on-bench heating
- In-floor heating
- Automated climate controllers - use a single sensor for controlling heating and ventilating events
- Improvements to weather stations and monitors, computerized control programs, and greenhouse cooling and irrigation system improvements.

Renewable Energy

In all facets of the commercial sphere, companies are looking at investments in alternative energies. In these dark days of windfall profit-taking and near 50 percent growth rates for multinational oil companies, one grower likened the difference to paying rent to a tenement landlord (natural gas) versus paying a mortgage (investing in renewables). This "rent money" is gone like the wind, while wind power is an intelligent business



greenhouse energy management, "The best alternative energy is the energy you don't use."

Program Allies

These incentives, whether at a federal, state or local level, usually involve pre-approval and follow-up audits by the grant agency as well as the involvement of commercial intermediaries who provide the necessary engineering details and technical support.

"We generally rely on 'program allies' at the manufacturer, wholesaler, distributor or retailer level who have the direct customer contact to spread the word about what is out there," says Hasselman. Therefore, if you've been thinking already about an efficiency upgrade or a renewable system, one good place to start asking about the possibility of payback is your next session with your equipment or structures dealer. Ed Van Wingerden of EverBloom Inc., Carpinteria, Calif., who recently re-screened four acres in two of his greenhouses with XLS-10 Ultra from LS Svensson, was able to work with the gas company and an installer (Horticultural Labor Services) to get significant rebates. "Basically, we got the screen for free and just paid for the labor," he notes. "These days, we're using 30 percent less energy but paying three times as much for it. Why would we pass this opportunity up?"

A Motivational Case Study

Since 1998, Keith Hahlbeck of Don Hahlbeck Greenhouses, Inc., Milwaukee, Wisc., has received a number of rebates for efficiency-increasing projects. One thing he has learned over the years is there is a process to follow. "It's not an 'If you build it, they will come' situation," says Hahlbeck. "However, if you follow a little bit of procedure by going to your suppliers first and laying out the project, it's pretty easy to get rebates." He warns that there are some restrictions on incentive availability. "For instance, we've only gotten grants for energy projects that we're going to be using more than eight months out of

the year."

Despite this and other constraints, Hahlbeck has taken full advantage of the opportunities available, across the range of applicable projects. "We put in a computerized rotational boiler control which takes the outside air and the water in the system temperatures every two and a half minutes and automatically increases or decreases the water temperature, as well as automatically rotating the boilers so they get equal wear," notes Hahlbeck.

"We also switched out the glass glazing for 8 mil polycarbonate with anti-condensation and UV resistance, and over a five-year period from about 1992 to 1997, we got somewhere in the neighborhood of \$12,000 back from Wisconsin Energy."

And the list goes on. In the last two years, Hahlbeck Greenhouses has received rebates for HAF fans and mixed combustion unit heaters.

"We just took out some of our fan jets off our gable ends and replaced them with HAF fans, and this past summer we replaced some older unit heaters that were about 25 years old, in a small area, about 8,000 square feet. The heaters were about \$1,800 each, and we only got about \$200 back per heater. But hey, \$200 is \$200, and with energy costs being what they are, every little bit helps." **GG**



Plan To Invest?
www.greenhousegrower.com
 for more on renewable energy

Links and Contact Information:

U.S. Department of Energy Grants
 Information Page
www.eere.energy.gov

USDA Farm Bill 2002 Section 9006
www.rurdev.usda.gov/rbs

Database of State Initiatives for Renewable
 Energy
www.dsireusa.org

Interstate Renewable Energy Council
www.irec.org

American Wind Energy Association
www.awea.org

GDS Associates, Inc.
www.gdsassociates.com

Other energy-related links and
 grower tools available at
www.greenhousegrower.com/grower_tools