

Greenhouse Energy Tax Incentives

Stephanie E. Burnett and Lois Berg Stack, The University of Maine

Many growers are tightening their belts this winter to conserve fuel in preparation for another long and potentially expensive winter. If you are considering purchasing new technology to save fuel (and money!), one additional saving to consider is tax reductions. New federal, and in some cases, state tax laws, allow commercial greenhouse growers who invest in energy saving technologies to apply for certain tax incentives. In this article, we will explain some federal tax incentives. In addition, we will provide examples of state tax exemptions using Maine as a case study.

Federal Tax Incentives

Federal legislators initiated several energy tax incentives in the energy policy act passed in 2005. These incentives apply to commercial businesses, including greenhouses. Federal tax incentives include both tax credits and tax deductions. Those incentives differ because deductions reduce taxable income and hence, total taxes due. Tax credits on the other hand, are subtracted from the total amount of taxes due but do not reduce taxable income. Both are beneficial, but a tax credit is worth more money to the tax payer than a tax deduction, because a tax credit reduces tax dollar-for-dollar, while a tax deduction reduces the tax load by only a percentage.

Deductions:

First, let's talk about deductions. Growers who make extensive changes to existing

greenhouses would qualify for deductions. A grower who installs energy saving technologies that reduce energy costs by 50% or more qualifies for federal tax deductions. Energy saving technologies include anything that reduces heating, cooling, lighting, and ventilation costs. The savings from these technologies are additive and don't have to represent one large purchase. For example, upgrading from a single to double poly covering typically reduces energy use by 35%. To increase energy savings further, installation of reflective insulation may save up to another 10%, and installing a porous energy curtain could further save up to 20% (Bartok, 2001). The combined energy cost reductions from these upgrades could reduce heat use (and energy costs) by more than 50% and therefore qualify for tax deductions. Deductions will be calculated as \$1.80/ft² of the upgraded building.

Even smaller scale upgrades may qualify for federal energy tax deductions. Reducing your energy costs by 16 2/3 to 49% will qualify growers for a smaller deduction of \$0.60/ft². So, if you want to start small by just installing a porous energy curtain, you would still qualify for the smaller tax deduction. If you have, or plan to, upgrade your greenhouse and wish to qualify for federal tax deductions, you must receive certification from a 'qualified individual' that your upgrades will reduce energy costs by 50% or 16 2/3%. This certification must be kept on record, but it is not submitted with tax forms. For more information and ideas concerning energy saving greenhouse technologies, visit www.greenhousegrower.com/techs_mechs/index.html or refer to John Bartok's energy conservation book (Energy Conservation for Commercial Greenhouses NRAES-3) which may be ordered from www.nraes.org. Several resources for greenhouse energy conservation are also available at: www.hrt.msu.edu/Energy/Default.htm.

Credits:

The other federal tax incentives are credits. They are exactly what it sounds like – monetary ‘credit’ for purchases of energy saving devices or equipment. So, if you purchase new technologies, you may recover some of those expenses through credits on your taxes. Credits are typically given for smaller upgrades that reduce energy costs by less than 16 2/3%. For greenhouse growers, examples of qualifying energy saving equipment would include insulating materials that growers may install over fans or portions of greenhouse walls, construction costs of new (or renovated) energy efficient buildings or greenhouses, or installation of solar heating units. Improving the efficiency of your greenhouse in smaller ways would qualify growers to redeem 30% of those expenses with no maximum cap. Purchases or improvements must be made between January 1, 2006 and December 31, 2007 and would be credited in either the 2006 or 2007 tax year.

State Tax Incentives

Each state may offer additional exemptions (for descriptions of all the specific state tax incentives, visit www.dsireusa.org). In Maine, greenhouse growers are heating space located in USDA hardiness zones 3B-6A (average minimum temperature = -35 to -5 °F). Energy use and fuel costs are of concern to many businesses, including commercial greenhouse operations. For this reason, there is a statewide cash incentive program for businesses called the Efficiency Maine Business Program. Some small, energy-saving devices that a variety of industries use have pre-determined cash incentives. For example, businesses would receive a \$12 cash incentive for each energy star compact fluorescent torchiere they install in place of standard indoor lighting. What would probably apply more specifically to greenhouse growers would be

‘custom’ cash incentives. To qualify for these incentives, equipment purchases would be evaluated individually to determine whether they qualify and if so, the value of the incentive. An apple grower in Maine recently received a cash incentive for replacing standard cider pasteurization equipment that is typically used to pasteurize milk with a more efficient, UV pasteurization system.

Energy Conservation Projects in Maine

Growers throughout the United States have been developing inventive ways of reducing heating costs. Here in Maine, where heat and electricity costs are high, many growers have responded to this situation with typical Downeast ingenuity. As one example, members of the Mid Maine Greenhouse Growers Association recently voted to use part of their annual budget to help member businesses reduce their heating expenses. They have combined their individual orders into a group purchase of a foil-faced bubble wrap material, which they install as an insulator in greenhouse knee walls and end walls. The material insulates and also reradiates heat, and holds up well in moist greenhouse conditions. The association pitches in, paying one-third of the cost of the material.

We're sure that there are other great energy-saving ideas around the United States, and we'd like to offer our help in developing a database of ideas that might help everyone. Do you live in a cold climate and have an innovative idea you would like to share with growers related to reducing energy costs? Let us know! Please contact Stephanie Burnett (sburnett@maine.edu) or Lois Berg Stack (lstack@umext.maine.edu) with your stories, inventions, and creative solutions.