

Energy Efficiency as a Public Priority

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EXECUTIVE SUMMARY

Energy use in the United States has been substantially increasing for many years. Coal, oil, and natural gas, also known as *fossil fuels*, are the primary sources for this energy consumption. This heavy reliance on fossil fuels has increased the U.S. dependence upon foreign countries for its energy source and way of life, in addition to exacerbating pollution problems across the globe.

This practice guide illustrates some of the ways that public entities can encourage energy efficiency within their jurisdictions. The guide begins with a review of what many states are currently doing to promote energy efficiency, moves on to show how public entities can serve as guiding examples to consumers, and concludes with some examples of simple calculations of the benefits of adopting incentive programs directed at encouraging energy efficiency.

The most common forms of financial incentives are tax deductions, tax credits, tax holidays, tax exemptions, rebates, grants and loans. Coupled with utility company programs, and federal incentives, the complexity and breadth of types of state and local incentives for lighting efficiency continues to grow.

The guide calculates energy savings in energy efficient lighting programs that mandate a switch to compact fluorescent bulbs for state-owned offices. If the 264 state-owned office buildings in Kentucky were to convert existing incandescent lighting to compact fluorescent lights (CLT), the annual savings in energy costs is estimated to be at least \$356,710. Converting state-owned educational buildings to CFL would save about \$101,200 each year. Those savings could more than offset the expenses involved in financing the capital costs of the conversions.

Having state-owned buildings set the goal of adopting energy efficient lighting and demonstrating the cost savings in its own efforts would serve as a strong statement for the private sector. In addition, those state conversions and efforts will act as demonstrations of the prospects for reducing operating costs through energy conservation and means of financing the capital costs for all of Kentucky's county and city governments, school districts and universities. In aggregate, the public sector savings could translate into significantly lower needs for tax and other revenues, providing significant benefits to the state's taxpayers – and students in post-secondary educational institutions.

Demonstrating the ease of establishing state rebate programs, the guide provides a hypothetical example of how, with a simple state-funded rebate of \$2.00 per CFL bulb purchased and a goal of distributing 100,000 rebates over two years, Kentucky consumers would save approximately \$4.15 million, while reducing their carbon dioxide emissions by 64 million pounds annually (the equivalent of taking 5,500 cars off the roads).

Performance contracting is also described in the guide. This effort involves a contract between a large power user and a utility company, in which the energy provider provides new energy efficient equipment to the user, thus reducing the need for power, and is reimbursed over time with payment for the loans and installation made out of the savings on power costs. While it is not a new tool, it is not yet in broad use in Kentucky.

The guide also suggests several specific public incentive programs to demonstrate the potential benefits that would accrue. One targeted for the residential sector examines the opportunity presented by programs centered on ENERGY STAR Qualified New Homes and ENERGY STAR Appliances. It is proposed that Kentucky could couple the federal government's current \$2,000 tax credit for builders of a new energy efficient home with a similar state level tax credit. Currently, Kentucky falls far below the national average for the percentage of new ENERGY STAR qualified homes built. This guide proposes that the state piggy back on the federal tax credit with its own tax credit and thus boost the number of ENERGY STAR Qualified New Homes that are built.

We conservatively estimate that if Kentucky increased its percentage of ENERGY STAR Qualified New Homes to the national average of 10 percent of total homes built, the energy savings would be about 28,614MMBtu each year. If all new homes built in Kentucky were ENERGY STAR Qualified, the energy savings would be 396,515 MMBtu each year. Translating lower energy use into consumer dollars saved, we find that energy cost savings for Kentucky if it could succeed in increasing sales of ENERGY STAR appliances to the national averages for new appliance purchases would amount to about \$198,365 using five-year energy cost averages total. Should Kentucky succeed in a 100 percent market saturation for the more efficient appliances (all new purchases being ENERGY STAR efficient), the energy cost savings could reach \$1.8 billion per year for households.

Finally the guide briefly reviews several funding mechanisms for the incentives we suggest. These include an income tax deduction and/or a sales tax exemption for ENERGY STAR appliances. This incentive is meant to piggy back on federal programs and increase sales of ENERGY STAR appliances