

Environmental Watch

Examining Environmental Claims and Their Costs • December 2010

“Green” Project Supporters Not Forthcoming with Data, Hiding Poor Results

by Todd Myers

Claim

“The support of the General Administration’s Division of Engineering and Architectural Services has been great. They have been a critical part of our success in reducing energy usage with our swimming pool.”

GA website claim on the results of South Kitsap High School Conservation Project, August 27, 2010

“The GA Energy Program checked with State Archives to see if any of the records you requested—audit reports and emails related to the South Kitsap High School conservation project—were still around. These records no longer exist.”

General Administration e-mail, August 31, 2010

“Green Jobs legislation (SB 5649), providing residential energy audits and retrofits for 20,000 homes and buildings across the state, and an estimated 8,000 living-wage jobs for skilled workers, apprentices, veterans and disadvantaged populations;”

Senate Democrats, Jobs and the Economy. web page, <http://www.sdc.wa.gov/issues/economy/>

“The existing weatherization programs have failed to create the jobs promised.”

WSU Extension Energy Program e-mail, August 25, 2010

“Workers are almost done installing 100 state-of-the-art solar panels on the top of Machias Elementary School. ... By the time students arrive in their new school after winter break, the panels should be producing a full 25 percent of the school’s energy needs. At that rate, Scott estimates the system will pay for itself in less than ten years.”

KING TV report, September 7, 2010

“No analysis has been done on the energy savings from the solar panels.”

Spokesman for Machias Elementary’s architect, October 2010

Facts

Politicians, businesses and environmental activists have been aggressive recently, highlighting the benefits of green projects. From energy retrofits to installing solar panels, and other energy efficiency efforts, supporters claim modest spending increases by the government will yield significant energy savings and reductions in carbon emissions. They even claim these projects will quickly pay for themselves, making them obvious win-win projects.

The data, however, do not back up these rosy claims—and project supporters often know it. Again and again, when advocates of increased government spending on green projects are asked to support their claims with data, they either fail to provide the data or simply hide the embarrassing reality by refusing to share information.

In the past six months alone, managers of three programs touted as “green” have either refused to share the data behind such claims or have simply admitted that no data existed. Yet, elected



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officials and government agencies continue to advocate spending public money, supported only by optimistic assertions that are not backed up by real data.

General Administration Officials Hide the Data – Then Rush to Release More Bad Data

During the last two legislative sessions, officials at the Department of General Administration (GA) have worked with members of the House Capital Budget Committee to expand the “Energy Saving Performance Contracting” (ESPC) program, which spends millions of dollars to pay for energy efficiency upgrades at schools and other public buildings around the state. GA officials, and other supporters of the program, claim the energy retrofits pay for themselves in about ten years, saving more in energy than it costs to perform the upgrades.

To back up this claim, GA’s ESPC website featured more than two dozen “success stories” across the state. One of the projects highlighted by GA was the retrofit of an element of the heating system at a high school in the South Kitsap School District. Their website included a quote from the facilities director, noting that GA’s support for the project was critical in making it pay off.

When we asked GA for the evidence to back up the claim that the South Kitsap project had saved money, and the other projects on GA’s web page, however, we found something different.

GA officials responded by e-mail that despite the claims made on their own web page, the data showing the energy savings “no longer exist” and they could not back up the claims made there. The same day, GA officials hurriedly pulled down the ESPC web page, removing all trace of the previous claims.

Ironically, supporters of Referendum 52, this fall’s unsuccessful ballot proposal to spend an additional \$500 million on these types of projects, had linked to GA’s “success stories” web page in a number of places in an effort to demonstrate the supposed benefits of passing the Referendum.

But the story does not end there.

When it became public that officials had pulled the data off their web page, GA rushed to put up replacement “success stories.” The new page shows how thin the evidence actually is.

First, although proponents often claim energy projects will pay for themselves in ten years, most of the cases on the new site will take far longer than ten years to payback through energy savings.

Second, while the success stories are used by advocates to justify increased state spending, virtually all of the projects were funded primarily with loans. The estimated savings are significant enough that school districts and others could justify borrowing the money in the private market, paid for with real energy savings.

Third, some of the numbers appear to be incorrect. For example, the electricity savings for a project at Washington State University are exactly the same, down to the dollar, as a project for the Aberdeen School District.

Additionally, some numbers do not add up. For example, in one case the only savings listed on a project is \$35,300 in reduced electricity costs, but the “total” savings shown are \$56,576, with no explanation of why the two numbers are different.

Finally, the reports provide an estimate for the annual amount of CO₂ supposedly reduced by performing the retrofit work. The calculations, however, significantly exaggerate the savings. The estimated savings per kilowatt hour (kWh) are more than double the actual rate of emissions for the entire state.

As with so many policies, the energy retrofits that use performance-based contracting are not all good or bad. However, when agency officials who are supposed to provide timely and accurate information to the public make claims that cannot be justified, provide exaggerated or questionable numbers and appear to advocate for certain policies rather than providing unbiased information, it becomes difficult to tell the difference between policies that work and those that simply waste the people's money.

Energy Savings Program Falls Short

The state, using federal stimulus money, has funded a program intended to help homeowners complete energy audits and encourage them to undertake weatherization projects to save energy. The program is supposed to save energy and create temporary jobs. When the legislation was passed, proponents claimed it would create 8,000 new jobs and lead to significant energy savings.

A year and a half after the bill passed, we wanted to see how the state was doing at creating those promised jobs. Although the promises up front were clear and significant, the data coming from the program is murkier.

State managers of the program readily admit that "existing weatherization programs have failed to create the jobs promised." This is a frank admission of failure, but getting the actual data was more difficult.

Although Washington State University's Energy Office manages the program, they asked that we work with the state Department of Commerce to receive the data. Although WSU had provided a quarterly report to the Department of Commerce, university officials would not share the report with us, requiring that we go directly to Commerce. The data provided by the Department of Commerce, however, was vague and provided only limited information.

Ultimately, WSU's Energy Office did provide data showing that only 615 of the 20,000 promised audits had been completed and that 59.85 full time equivalent workers (FTEs) had been hired. There was no estimate, however, on the number of non-government jobs created. It is possible that a WSU program manager spending the money and a construction worker doing the weatherization were each counted equally as one FTE. As of the end of August, only 100 energy retrofits had been completed, so the number of even temporary private-sector jobs is probably very low.

It should be noted that these jobs are not year-long positions. The job positions are reported quarterly, so a year-long job would actually appear as four FTEs in these statistics, so the actual number is much lower. Furthermore, the jobs may not even last the entire quarter. Any job created during the quarter was reported for the full three month period.

Although the program's performance is poor, program managers hold out hope things will turn around.

We asked program managers if they would, based on their previous comments, confirm this statement: "onerous rules, such as a requirement to pay prevailing wage on weatherization projects, have increased costs and stymied job creation." The managers changed this statement to read: "there are some significant challenges—such as new requirements to pay prevailing wage on weatherization projects. This increase in cost presents a significant variable. While the pilot program is new, data coming in from these projects leads the program manager to say that it is still too soon to accurately speculate on the impact of job retention and creation."

The funding for this project is part of President Obama's 2009 stimulus package, so it will continue to operate until all appropriated funding is gone. Determining whether it was money

well spent will be difficult, although early signs are not positive that anywhere near 8,000 jobs will be created.

Solar Costs Far Exceed Promises

The final example of the gap between the promises and reality on green projects is the installation of solar panels at an elementary school in Snohomish County. On September 7, 2010, KING TV aired a story about the installation of solar panels on one of two new public elementary schools, where the installation company claimed the panels would pay for themselves in about ten years.

Solar panels are expensive, so a claim that they would pay for themselves in ten years is surprising. We asked school officials for the data to back this up. They immediately admitted the promised savings were not accurate, telling us the panels would not pay for themselves in ten years and they were unsure when or whether they ever would.

School officials pointed us to the architect for the data. We asked the architect for the information on September 9th. The architect promised on two occasions to send the data, but by September 30th we had received nothing.

Finally, in early October, the architect called and admitted no analysis of the energy savings had been completed and there was no basis for the claim.

The building contractor, ultimately, did provide the cost estimates for installation.

Solar panels are being installed on these two public elementary schools at the cost of \$690,000 per school. The panels are rated at 100 kilowatts (kw) each and are expected to last 25 years. Assuming that each panel produces 1,180 kilowatt hours (kwh) annually, the high end of solar energy production in the Northwest, the panel would produce nearly three million kwh during their service life. At six cents per kwh, slightly above the current price, this would save about \$177,000 during the life of the panels. The net loss for each school is around \$513,000, at a time when officials say public education is chronically underfunded.

The district is concerned that energy costs might triple in the future. If energy rates tripled next year, the total energy savings would be \$531,000, for a net loss per school of \$159,000, even with this dramatic and unlikely increase in energy prices.

Finally, these numbers do not account for the discounted value of investment over time. If we spend \$100 today to save \$10 for each of the next ten years, we have lost the ability to use that money in the meantime. This is known as a discount rate, and with normal discounting, the savings would fall even farther below the cost of installation.

In late 2009, similar numbers were presented to Snohomish School Board members, showing installation costs for solar panels rated to produce 260 kw to be \$2.5 million, with a savings of \$45,000. At that rate, it would take more than 55 years, without discounting, to recover the cost of installation.

One reason School Board members decided to install the solar panels, according to the contractor, was to help meet the green building regulations state legislators imposed on all new schools. Thus, while the panels do not pay for themselves and add significant cost to school construction, they are part of the cost of meeting state regulations.

Far from paying for themselves in ten years, it is unlikely the solar panels will ever pay for themselves. At a time when school districts are asking for additional funding for a range of

projects, funding devoted to solar panels is money unavailable to help children and will likely never be recovered.

Costs

These three examples, coming all in the last few months, demonstrate how great the distance is between the promises of environmental advocates and the reality of environmental energy projects. The process of finding out that green energy projects are not living up to their promises, however, was far from straightforward. If policymakers cannot rely on the data they are being provided, making accurate judgments about what environmental policies are worthwhile becomes impossible.

In the three cases mentioned:

- Schools ended up spending hundreds of thousands of dollars on solar panels that don't pay for themselves
- The state is spending millions of dollars on a stimulus project that is failing to create temporary jobs or produce significant energy savings for homeowners
- A state agency is advocating a program officials cannot show works and are releasing data that are unreliable and exaggerate potential environmental benefits.

This is not the record of a state that is serious about significantly reducing the state's energy use and environmental impact.