ENERGY EFFICIENCY: THE FIRST FUEL

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During the legislative battle over the Holcomb coal plants, we kept hearing from the pro-Holcomb side, "All you say is 'no coal.' But you don't offer any alternatives to meeting Western Kansas' growing electricity demand." They had a point; western Kansas will need 200 megawatts (MW) of electricity by 2012, and either new natural gas generators or buying power on the open market would be expensive. As an alternative, Kansas environmentalists proposed a combination of wind power and energy efficiency and conservation (EE&C) programs. But the pro-Holcomb forces dismissed wind on false premises, and more or less ignored EE&C.

Efficiency and conservation programs alone, however, are very promising. We have a great deal of "low-hanging fruit" of wasted energy in our homes and businesses: leaky doorways, windowpanes, and vents, walls and ceilings without insulation, inefficient appliances, thermostats turned up too high or low, and so on[1,2]. EE&C measures trim this waste, saving us money in the process. The beauty part is, if we slow demand growth through EE&C, utilities can defer the need for expensive new power plants and transmission lines, costs that would be passed on to ratepayers[3].

It may sound too good to be true, but many states already have successful EE&C programs. Perhaps the most lauded example is Vermont, whose comprehensive and aggressive energy efficiency program completely flat-lined demand growth in seven years, according to preliminary reports, and provided the state with millions of dollars in economic benefits.

Vermont has a long history of promoting EE&C, going back to the 1973 oil crisis. Utilities were in charge of developing and implementing EE&C programs, with guidance from the utility regulatory agencies and the legislature[3]. Despite their best efforts, however, Vermont's EE&C framework "was a model of inefficiency for years[4]." The state's many utilities each implemented their own program, with little or no coordination and some were better than others. Moreover, the utilities had a fundamental conflict of interest. They made profits by selling power, not by saving it, so utilities with less EE&C spending were more competitive[5].

Thus, in 1997, the Department of Public Service (DPS), one of Vermont's utility regulatory agencies, proposed creating an independent energy efficiency utility (EEU) to deliver uniform and comprehensive EE measures. Over the next two and a half years, stakeholders held negotiations, legislation was passed to clarify the utility regulators' authority to create the EEU, and utilities transitioned to the new system, Efficiency Vermont began operation in early 2000[3].

Efficiency Vermont was the first state efficiency utility in the nation. It is officially an independent, non-profit corporation, funded by a service benefit charge on electric customers' utility bills[3]. The funds never officially become state revenue, so they bypass several expensive steps of bureaucracy[6]. Vermont's Public Service Board sent out a bid for contractors to run the utility's day-to-day operations, and selected the nonprofit Vermont Energy Investment Corporation (VEIC). The contract is reviewed and renewed every three years, and a new bid is issued every six years. The EEU has considerable autonomy, but answers to the DPS and the Public Service Board (PSB). The contractor's amount of pay and continued employment depend on its meeting rigorous performance goals, and the overseeing agencies verify and adjust its energy savings claims[3].

Efficiency Vermont is a "one-stop shop" for energy efficiency services. Its toolkit includes efficiency improvements for existing appliances and homes (e.g. weather stripping, insulation, and retrofitting), and efficient new appliances and building designs. EVT promotes these tools through activities such as:

- Offering technical advice to customers via its website and a toll-free hotline;

- Fostering relationships with builders, vendors, and contractors;
- Arranging delivery of contractor services and financial incentives;
- Negotiating prices for and purchasing bulk products such as CFLs; and
- Targeting low-income households, farms, and regions with high demand and/or limited generation and transmission capacity[3,7].

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Since its inception, Efficiency Vermont has done a stellar job. In its first three years it reduced demand growth by nearly half, and has only improved, completely offsetting demand growth in 2007. Correspondingly, its budget and performance goals have increased with each contract review period[3,7]. To date, EVT has helped almost 60% of the state's electricity customers[8], with all customer classes and regions reporting benefits[3]. Between 2000 and 2006, EVT has saved Vermonters 307 million kilowatt-hours (kWh) and $31 million in energy costs, with an expected $313 million in savings over the measures' lifetimes[9]. Each dollar spent on energy efficiency yields more than two dollars in benefits, and generates multiplier benefits in the local economy[7]. In a 2006 state scorecard by the American Council for an Energy Efficient Economy (ACEEE), Vermont ranked first in the nation (tied with CA and CT)[10]. In addition, the Council for Excellence in Government granted EVT its prestigious American Government Award in 2003[4]. And the program places a minimal burden on ratepayers: the service benefit charge is currently 4.5%, and EE&C costs ratepayers 2.6 cents per kWh, compared to 10.7 c/kWh for electricity[8].

Compare Vermont's phenomenal success story to Kansas, and the difference is like night and day. On the same ACEEE scorecard that Vermont topped, with 33 out of 44 possible points, Kansas was 34th, scoring only 7 points. Unlike Vermont, Kansas has no statewide EE&C program and no funding for comprehensive energy efficiency efforts[11]. Getting down to basics, we have no plan for energy efficiency or progressive energy policy in general. Our state has long enjoyed cheap energy, and buildings historically were not constructed for efficiency (half of Kansas' homes were built before 1960). Unlike most states, Kansas shrugged off the '73 energy crisis and didn't pursue EE&C; instead, utilities overbuilt generation capacity. (To date, we still have more than enough baseload for most of the year; it's the summer peak demand that's driving our need for new baseload. If we could control this peak demand, there would be no need for new power plants for a long time.)[12]

Recent years have seen some progress on energy efficiency in Kansas, but much of it has been modest and piecemeal[13]. The past ten years of energy-related legislation contain a few laws promoting EE&C[14]. Most are valuable, but they're isolated responses to specific parts of the EE&C challenge. Vermont's legislature, by contrast, has promoted EE&C with strongly-worded laws and broad policy statements since the '80s[15]. Similarly, the Kansas Energy Council has so far fallen short of its mandate to develop a comprehensive energy plan and advise the legislature on energy policy. Many of its 35 members are oil and gas industry representatives and legislators skeptical of global warming, so the Council has been gridlocked on controversial policy issues. To its credit, the KEC is slowly filling in sections of its energy plan outline, and has compiled several reports and datasets. However, these materials have yet to be woven into a comprehensive plan[16]. The energy efficiency section, in particular, seems very preliminary. It gives a brief overview of the EE&C issue in Kansas, and lists existing state and federal policy tools for different sectors, but it doesn't read like a singular attack plan. Most of its five policy recommendations, while useful, are only tentative first steps[1].

Several of Kansas' large utilities and the Kansas Corporation Commission (KCC, the state agency that regulates public utilities), have acted somewhat more decisively. Kansas City Power and Light, Westar, Midwest Energy, and the Kansas City Board of Board of Public Utilities, have voluntarily created energy efficiency programs in the past few years[1,11,17]. With skyrocketing costs for construction and generation, concerns about global warming, and the likelihood of future carbon regulation, they have acknowledged that business as usual doesn't cut it anymore[18]. The KCC, meanwhile, has released one of two dockets on promoting utility-based EE&C programs by "decoupling" energy savings from their

profits. In other words, the state rewards utilities for saving energy; California has used decoupling with great success. In addition, there are new actors on the Kansas energy policy stage: the Kansas Energy and Environmental Planning Advisory Group (KEEP), created by Sebelius to address the climate change issues that the KEC has avoided; and a legislative Joint Committee on Energy and Environment[19,20,21].

The jewel of recent energy efficiency efforts is a report by Summit Blue, a consulting company commissioned by the KEC, on EE&C potential in Kansas. The report contains specific data on energy use by sector and opportunities for savings, a critical ingredient in any comprehensive efficiency plan. It draws the following conclusions:

- EE&C programs could reduce electricity demand by 11% to 18% over the next 20 years.
- Both utility-run and state-run programs can be successful.
- In the very near term, Kansas probably can't develop a program as ambitious as Vermont's. It would be more practical to emulate more modest, but still successful, programs in the Midwest[20,22,23].

What does this flurry of activity mean for energy efficiency and conservation in Kansas? And what does Vermont's experience teach us? First of all, we're not rigid zealots blocking western Kansas' path to energy security. Energy efficiency is a real answer. Secondly, we need hard data and policy tools, as Vermont's DPS had when it proposed the energy efficiency utility. The KEC and KCC are driving at this. We also need to decide whether we want a statewide independent utility like Vermont's, a utility-administered program like California's, or another design.

Another key factor is strong leadership from the groups in charge of planning. Vermont's EEU was developed mostly by the state's utility regulators, who had statutory authority to implement most parts of their plan[5,24]. The KCC already has authority in critical areas[14], so perhaps the KCC could develop a strong plan, if the KEC and other advisory groups won't. Stakeholder groups such as business, industry, utilities, and environmentalists also need strong leaders. Efficiency Vermont owes much of its success to the fact that, in the planning stages, stakeholder leaders were willing to sit down out of court and hash out their differences[24]. And, of course, a Kansas EE&C program will need sufficient, reliable funding[25].

The final ingredient, and the hardest to obtain in Kansas, is legislative approval. Just as Vermont's regulatory agencies did, the KCC will probably need new legislation to fill gaps in its authority to implement an EE&C program. In a state as hostile to expanded government, increased taxes, and encroachment on business interests as Kansas, this will be an uphill battle. As the promoters of Vermont's EEU did, we'll have to emphasize that energy efficiency makes economic sense, a public benefits charge is not a tax, and programs like Vermont's exemplify public-private partnership and government accountability. But Blair Hamilton, Efficiency Vermont's managing director, has hope for Kansas. The watershed of the Holcomb battle, he says, has given us a great opportunity to pursue EE&C[24]. Now, we just have to keep the momentum going.

*Its ongoing short-term goal is to reach a large percentage of energy customers with energy-saving measures, such as home and appliance retrofits, and rebates for buying efficient new products. The long-term goal is market transformation: getting efficient products and building designs so ingrained in the market that incentives are no longer necessary[5]. Utilities still operate some demand-side management (DSM) programs, such as encouraging people to reduce electricity use during peak demand periods[3].

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