New Prospects for Rural Energy Demand & Supply

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Rural Energy Realities....

- Here’s how a different look at rural energy demand and supply can lead to
  - Safer, more comfortable homes
  - Improved ag profits
  - Renewed rural communities
Observation of Rural Energy NEEDs from 30 Years Observation of EE/RE

• NEED a viable response to *Energy Obesity*
• NEED a rational order to energy investments
• NEED to emphasize human capabilities
• NEED to cut across energy forms and “silos”
• NEED to actually integrate Efficiency and Renewables
Intro to the CEDAR Protocol

Simply put, we suggest

– **C**: Conservation (i.e., habits) before…
– **E**: Efficiency (i.e., equipment) before…
– **D**: Demand peak reduction (the next higher level of efficiency) before…
– **A**: Ancillary (non-metered) energy savings, before…
– **R**: Renewables (augmenting fossil energy with clean new supplies harvested locally)
#1 of four keys to rural CEDAR

Harnesses Human Capabilities

– Leverages cost-saving intent and a great rural history of self-sustainability

– Addresses *Energy Obesity* by slimming the Energy Waistline with the sort of new personal skills and habits that are working to reduce actual waistlines
#2 of four keys to rural CEDAR

Delivers Cost-effective Energy Services

– Significantly reduces energy waste in rural and ag settings

– Importantly, CEDAR can do this without beggaring the rural utility with
  • Unreasonable program costs for little return
  • Loss of as much as 50% of load revenue from aggressively pursuing efficiency
#3 of four keys to rural CEDAR

Delivers Broad Economic Benefits

– Lowers direct and indirect input costs of homes, facilities, and processes, improving the viability of every rural/ag lifestyle and venture

– Changes the economic prospects of communities with new sources of rural income, rural jobs, and rural career options
#4 of four keys to rural CEDAR

Addresses the rural utility revenue crisis with three program elements

- Peak demand control
- New sources of off-peak revenue
- Community economic renewal
Progress on CEDAR

• Now we’re beyond the armchair stage
  – The initial launch with a rural Colorado utility has prompted rave participant reviews
  – Evaluation now under way with “before” data

• We anticipate a multiple of cost-effectiveness compared to other types of rural program delivery

• CEDAR’s content and skill-sets appear to be readily transferable
Benefits of “CEDAR on the Farm”

• CEDAR training yields less waste of all forms of rural energy end-use; cost goals are
  – 25% savings with little or no cash investment
  – Another 25% with payback less than 10 years

• CEDAR’s flexible workshop format can emphasize one or more outcomes
  – Immediate cost savings; and/or
  – Mid-term improved comfort, safety, and production; and/or
  – Long-term improvements in the cost and reliability of energy and related products.

• CEDAR facilitates an evolution in energy infrastructure that’s better for rural communities
“CEDAR on the Farm” Issues

CEDAR challenges two current assumptions:

– That we’re really all right continuing “business as usual” related to rural energy end-use
– That we’re doing everything that can be done, practically and cost-effectively

Rather

– Efficiency “business as usual” unreasonably penalizes rural residents and businesses
– We know more about things that work today, and field programs should reflect that
Status of “CEDAR on the Farm”

To “take to the people” an improved approach to rural energy end-use and waste, we should

– Replace rural programs that look and feel good, but are expensive and don’t deliver actual energy savings

– For starters, seriously target with CEDAR the 14 million farm homes that represent the largest stock of non-retrofit buildings in America (and associated farm processes), greatly reducing ag operating costs and building a new rural capacity
Status of “CEDAR on the Farm”

We all agree that it’s hard to deliver urban energy saving models cost-effectively in rural places

• Yet it’s difficult to find non-urban funding support for basic changes in the energy infrastructure
• We’re looking for interest in rural pilot demo’s:
  – CEDAR on the Farm
  – CEDAR on Main Street
  – CEDAR at Home
Ag Forum Listening Exercise

Over the next day or so, do you hear

– Cost-effective payoff for rural communities?
– Building on our learning from field programs, to emphasize outcomes vs. processes?
– Due consideration of rural utility realities?
– Better leveraging of human capabilities?
– Shared willingness to
  • support practical new working approaches to rural energy efficiency?
  • help bring these better program models to market?
Thanks for your attention…

Yes, this is a different vision of a rural energy and economic future

Let’s talk further about how it might fit with your interests

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