



Outside The Box

First In A Series of Simple Solutions
To Extremely Complex Problems

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Energy Research



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What if each state were to partner with educational institutions, their DNR's, the Federal government, and independent agencies (like the Nature Conservancy) to set aside a parcel of land (say 500+ acres per state) as a living laboratory for advanced energy conservation and green technology research. The idea would be to create entire communities that are completely "off the grid". A school, company or individual would receive a small parcel of land for free (and tax free) to develop a residence or other facility that is self, or community sustainable. These small "land grants" would be based on proposals for a project that would be built and maintained as permanent structures or projects by an institution, company, or individual.

The entire community would have no access to outside electricity, natural gas or other utilities or services. No gasoline powered vehicles or construction equipment (including cars - except carbon free). All carbon based or non green power and fuel usage would stop at the boundary of the community. Only institutions, companies, or individuals committed to an on site project would have any say in the development of the community so that once the land grants are made, the community becomes self governing as long as the "off the grid proviso" remains intact. The community would not be subject to outside taxes, fees or the resulting services provided by local governments. (An exception would be made for health and major emergencies – ambulance service and major fires for example).

Eventually the community would have to deal with issues that can not be solved on an individual site or by a single project. These include power generation and distribution, retail, communication, employment, waste disposal, roads and transportation, land use, public facilities, trash and recycling, taxes or utility fees, parks, governance, public safety, and the thousands of other issues that every community must deal with. They would of course remain under federal, state and local statutes, but would need to address many issues as an independent community.

As our 50+ "experiments" evolve each community would eventually become a tourist destination so outsiders could explore a sustainable community functioning completely off the grid. Tourism could even become a revenue source for some of these communities. Media would no doubt take an interest in the projects and provide coverage that would attract corporate attention. I am guessing that companies like NEW Holland, Mercedes-Benz, Honda, GM, Hyundai, VW, Mazda, Ford, Caterpillar and other would be quick to bring electric or hydrogen powered vehicles to the communities. Of course GE, Siemens, Vestas, Acciona, and other wind companies would be very interested power generation and distribution. This list would grow exponentially as solar power producers as well as bio-digestion, geothermal, and other companies bid to participate and be seen as a solution to our energy problems. This list will not stop -- think of: insulation, windows, building materials, power tools, sewage treatment, electronics, water delivery and purification, refrigeration, cooking, foods, pets, livestock, gardening.... Clearly my one page mantra will abbreviate this list long before I run out potential problems or partners to solve them.

There are so many questions to answer. Communication for example, is using a powered cell tower or internet provider not in the community fair? What about radio or tv signals? How does this differ from materials manufactured off site and then used for homes, businesses or projects in the community? Do we bring our trash to the "border" and pay someone to haul it away or do we deal with it internally?

By allowing the communities to address all of these issues without outside influence, additional funding, or specific mandates, we could learn from the attempts to establish next generation power and other services, as well as governance. By having 50+ separate communities we would see several different solutions to everyday problems. By not funding the individual projects we would see the true economics of the various solutions. Communities could range from survivalist camps to ultra tech new urban cities and everything in between. The best of the ideas and technologies would quickly find their way into mainstream and others would be found to economically or otherwise unfeasible.

Well, there you have it, my one page solution to the worlds energy problems. Really though, I believe that with the right backing and support we could get some of the best minds in the world working on energy solutions with a very minimal investment. We poured billions into ethanol, only to see many of the projects fail and very little return on our investment, we invested little or nothing into Low-E glass and now it is a building standard seen by most developers as an investment. My suggestion is to grow solutions from needs and economic sustainability rather mandate them from our perceived notion of what the solution might be.

One of my favorite events is the [U.S. Department of Energy Solar Decathlon](#). A program that challenges 20 collegiate teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency. It is this year and open to the public from September 23 to October 2. This is also the problem with the event – it is every two years for just one week. While the projects eventually are relocated they become isolated and only address limited issues. My idea just raises the bar a bit.

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