

Non-Technical Barriers to Renewable Energy

The National Renewable Energy Laboratory reviewed the literature and identified 10 key non-technical barriers to the adoption of renewable energy. They are listed in the box at right; several are self-explanatory, some are discussed below.ⁱ

Policy: Missouri’s policy support for renewable energy will be reviewed in a following white paper. It is weak compared to some states’.

Cost: In some locations, some renewable energy sources are cost competitive. However, Missouri’s renewable energy resources are lower in quality, and our electrical rates are lower than average. Renewable energy costs continue to decline, but for now, subsidies are required in Missouri to propel the conversion. Businesses are often reluctant to create manufacturing capacity for a product until demand exists, but demand cannot exist until the product is available. Manufacturing efficiencies accrue as volume increases, leading to reduced cost. But volume can’t increase until the product is cost effective. Governments often play critical roles as early adopters of new technology, stimulating demand and increasing volume, helping new technology achieve cost effectiveness.

Entrenched systems: New technology often presents challenges for preexisting systems, which sometimes resist the change. Sometimes, their ability to resist new technology is considerable. Governments can use their purchasing power and their regulatory role as a carrot and a stick to facilitate adoption of a new technology that is opposed by an entrenched system.

Codes: Codes, standards, and guidelines sometimes pose regulatory hurdles even when the will for renewable energy exists. Originally enacted as a protection, progress has made some provisions obsolete. Government can play an important role in adopting, mandating, or modeling the needed changes.

Accounting/ stakeholder participation: In a previous white paper, we discussed the problem of economic externalities.ⁱⁱ Too many energy decisions are made without taking into consideration external costs such as pollution or energy security. Similarly, too many energy decisions are made by builders rather than users. The builder may not occupy a given development, and therefore is insulated from the costs of energy inefficient design and construction. Those accrue to the buyers, who do not have a voice in the decision-making.

The adoption of renewable energy is a desirable national and state goal; governments should play judicious roles in overcoming the above barriers and facilitating its adoption.

Renewable Energy Barriers

1. Lack of policy support.
2. Lack of public awareness.
3. High cost of renewable energy.
4. Difficulty penetrating entrenched energy systems.
5. Inadequate financing options.
6. Failure to account for all costs and benefits of energy choices.
7. Inadequate workforce skills.
8. Lack of adequate codes, standards, and interconnection/ net metering guidelines.
9. Poor perception by public of renewable energy system aesthetics.
10. Lack of stakeholder/ community participation in energy choices.

ⁱ Margolis, R. & Zuboy, J. (2006). *Nontechnical barriers to solar energy use: Review of recent literature*. National Renewable Energy Laboratory. Retrieved online 1/31/2008 at <http://www.osti.gov/bridge>.

ⁱⁱ May, John. (2007) *Sustainability white paper 1: Three fundamental sustainability factors*. An economic externality is a cost associated with an economic decision. But the cost is not directly included in the economic transaction. For instance a consumer purchases electricity generated by burning coal. The pollution has a variety of health related and environmental costs, but those aren't included in the price of the electricity. They accrue to the individual in other ways at other times. They are said to be external.