

Comments: Energy Tax Reform Working Group

End production tax credits and all other ongoing support for favored energy sources.

The 50 US states have 50 additional energy policies.

In the US, states have been active in changing electric power generation rules and prices. The proffered reason for most changes is to check global warming by reducing CO₂ emission, even though a single state's small reductions, or even all of the states' reductions, can't make a dent in the global problem. The motivation seems to be to assuage pollution guilt or exhibit leadership in combating climate change, expecting others to follow suit. People feel good about taking any steps, however insignificant.

The national result is a mishmash of confusing and changing rules about electric power, which crosses state boundaries and should be managed with national scope.

The Regional Greenhouse Gas Initiative is a cap-and-trade market for limiting CO₂ emissions, started in 2008. Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont cooperate by requiring utilities to bid for capped rights to emit CO₂ when generating power. The objective is to reduce CO₂ emissions 10% by 2018. The states require power generating utilities to pay for the CO₂ emitted; the market price in 2012 is roughly \$2/ton. This will likely rise as the cap will decrease 2.5% per year beginning in 2014. The cap was set about 20% higher than actual emissions, so CO₂ reductions from this are nil. Quarterly auctions net about \$40 million dollars; total to date is about \$1 billion. The proceeds are divided among the participating states. The money is intended to be used for CO₂- reducing projects such as improving energy efficiency, but states are free to spend the money on other purposes. New Jersey has left RGGI and New Hampshire is debating leaving. The small cost of \$2/ton of CO₂ has little effect on behavior; it is paid for by increased charges for electric power.

Investment tax credits for renewable energy projects exist at the state

level as well as the federal level. In Vermont this was 30%, but this particular tax credit has been eliminated.

Feed-in tariffs are requirements forcing electric utilities to buy specified renewable-sourced power at above-market rates. In the US most states have a deregulated electric power market, where electric utilities buy power from independent companies – merchant generators. The utilities have responsibility for power transmission, distribution, and customer service. They buy power in a competitive marketplace from merchant generators who offer the lowest prices. Feed-in tariffs supersede this process in a market where price competition settles out at roughly 5 cents/kWh for hydro, nuclear, and natural-gas generated electricity. For example, in Vermont, the feed-in tariff for PV solar power was 30 cents/kWh when the first plants were built. The 2012 law now sets prices, not on CO2 abatement, but on the cost of generating each type of renewable energy, for example (in cents/kWh): solar (27), hydro (12), farm methane (14), wind (11), small wind (25), biomass (12). Guaranteeing profitable prices reduces producer cost-reduction incentives. Feed-in tariffs also apply in states of the US where utilities generate power. Feed-in tariffs are common in Europe. Germany has reduced solar rates in 2012 to 23 to 30 cents/kWh. Greece pays up to 63 cents/kWh. Sunny Spain pays 27 cents/kWh. UK plans to reduce its home- scale solar feed-in tariff to 25 cents/kWh.

Production tax credits are paid to power producers for actual generation of power. In addition to the federal 2.2 cent/kWh program, Iowa pays at least 1 cent/kWh to wind power producers. Arizona, New Mexico, Oklahoma, and Maryland offer production tax credits.

Renewable energy certificates (RECs) represent a property right created by generating 1 MWh of CO2-free electricity (except from nuclear power). Generating companies can sell the energy and certificates separately. Utilities can meet requirements for renewable energy by generating it or buying RECs in an open market. RECs are classified by energy source: wind, solar, biomass, etc. Massachusetts specifies a minimum price of 5.5 cents/kWh; elsewhere the auction market prices range from 0.1 to 3.0 cents/kWh. Companies seeking to reduce their

advertised net carbon footprint can buy RECs; Intel bought 2.5 billion kWh of RECs in 2011 to offset over 85% of their electricity use.

Renewable portfolio standards (RPSs) are mandates that require electric utilities to obtain certain fractions of their power from specified renewable energy sources. Every state has different rules, requiring from 10% to 40% of electricity be obtained from various renewable sources by deadlines ranging from 2015 to 2030. Some states allow meeting RPS requirements by purchasing RECs. The US Congress is considering a federal RPS law.

Carbon taxes are taxes on CO₂ emitted to produce power. Small carbon taxes are enacted in Colorado (0.5 cents/kWh), California (4.4 cents/ton CO₂), and Maryland (\$5/ton CO₂).

Administration of the mishmash of policies is expensive. The rules, exceptions, allowances, auctions, audits, and labor are very complex and volatile. Only clever business people can make use of the rats' nest of regulations. One solar power project in Vermont was able to be profitable because of a 30% federal investment tax credit, a 30% state investment tax credit, accelerated depreciation, a feed-in tariff guaranteeing sales at 30 cents/kWh, and opportunities to sell RECs.