

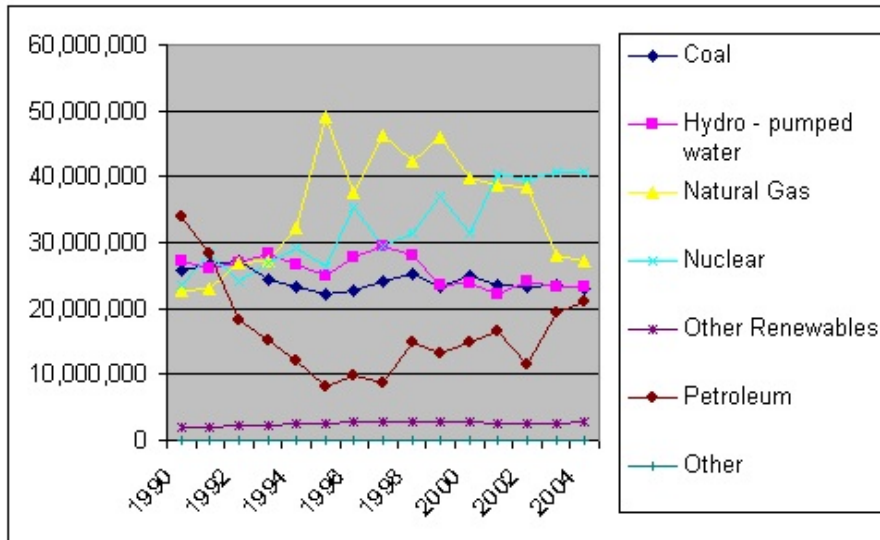


Electricity: How Much? From Where? What Fuel?

Posted by [Glenn](#) on March 16, 2006 - 7:16pm in [The Oil Drum: Local](#)

Topic: [Policy/Politics](#)

Tags: [coal](#), [electricity](#), [natural gas](#), [nuclear](#), [oil](#), [peak oil](#), [renewable energy](#) [[list all tags](#)]



New York's Net Energy Production by Source in Megawatts

Source: [EIA](#)

We will have some tough choices to make in the coming years, not just with transportation fuels, but also with electric generation. All energy fuel is linked together in either as a direct input into the production / distribution of other types of energy or as a substitute for another form of energy. That's why as oil and natural gas prices have risen so have prices for ethanol, uranium and coal. And each state has it's own mix of energy sources. I found [Baloghblog's questions](#) from yesterday interesting to consider:

Where does your local power come from?

The answer for New York State's 138,000 Megawatt hours is surprising: 29% Nuclear, 20% Natural Gas, 17% Coal, 17% Conventional Hydro, 15% Petroleum and 2% Renewables (mostly wood and waste incineration)

This is a relatively diverse energy supply compared to most states which rely mostly on either coal, nuclear or natural gas. New York is an oddity in that it still uses petroleum to fire a considerable amount of it's electrical supply.

Which would you rather have within a 10, 20 or 50 mile radius of your home? a) Nuclear Power, b) Hydro-power (large scale dam), c) Coal-fired plant, d) Natural Gas fired plant, e) Windmills

Where do you build future additional power capability? a) In city centers, high population poorer population, b) Suburbs, middle population density, c) Rural, farming country, d) rural, wildlife area. You have to choose somewhere, where is it going to be? There is no "none of the above".

The obvious first answer is to lower the local consumption to as low a level as possible. I think New York could reduce it's electric demand by 25-40% as rising prices destroy demand and there is a massive conservation effort.

While imperfect, it seems to make sense to keep in place New York's existing diversified infrastructure of coal, nuclear, NG and Oil **until the renewables can be ramped up to meet demand** (which should be shrinking). They can serve as a diversified bridge to the next phase. This may take a long time, but until then it makes no sense constructing any more fossil fuel electric generating capacity.

In terms of siting new renewable electric units, it seems to make sense to have them as close to the consumer as possible. For instance if there is a major industrial consumer of electricity, they should have an electric generating unit co-located onsite or close by to offset their demand. And knowing how little space there is in highly urban areas, the capacity will not be able to meet local demand, thus new units will have to be built in rural areas or offshore (wind, tidal, other hydro). Income and energy security from this new local electrical generating capacity will be able to offset whatever inconveniences there are to the local population.

But the real pain is not where to put the new renewables, it's how we reduce demand to a level that can be sustainable.



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