



NegaWatts

The Greenest Renewable Energy of them All

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Negawatt is a theoretical unit of power representing an amount of energy (measured in watts) saved

Coined by Amory Lovins of the Rocky Mountain Institute in 1989



“Every negawatt generated has the potential to increase our wealth and health as few other investments can. Negawatts enable us to do more with less and the opportunities are almost boundless. Energy efficiency is the great new energy resource of our future and a vital key to a sustainable environment.” *Amory Lovins*



The idea was to be able to trade energy credits from energy avoidance or efficiencies like renewable energy credits are traded today.



Negawatts exist (sort of)

- While not achieving that status yet, there have been various manifestations that essentially amount to the same thing
- Act 129 in Pennsylvania, in which utilities have a stick driving them to reduce energy consumption in their territories.
 - Funded by rate payers and administered through PUC
- Is a penny saved, a penny earned?



Does it really matter?

- Payback on investment:
- Change an incandescent to CFL – payback in 3-6 months, depending on how much you operate that light.
- Solar Panel Array – 16-20 year payback (8 with incentives)



- To a power company, reducing kilowatt requirements through solar or wind is the same as reducing it through reductions from efficiency

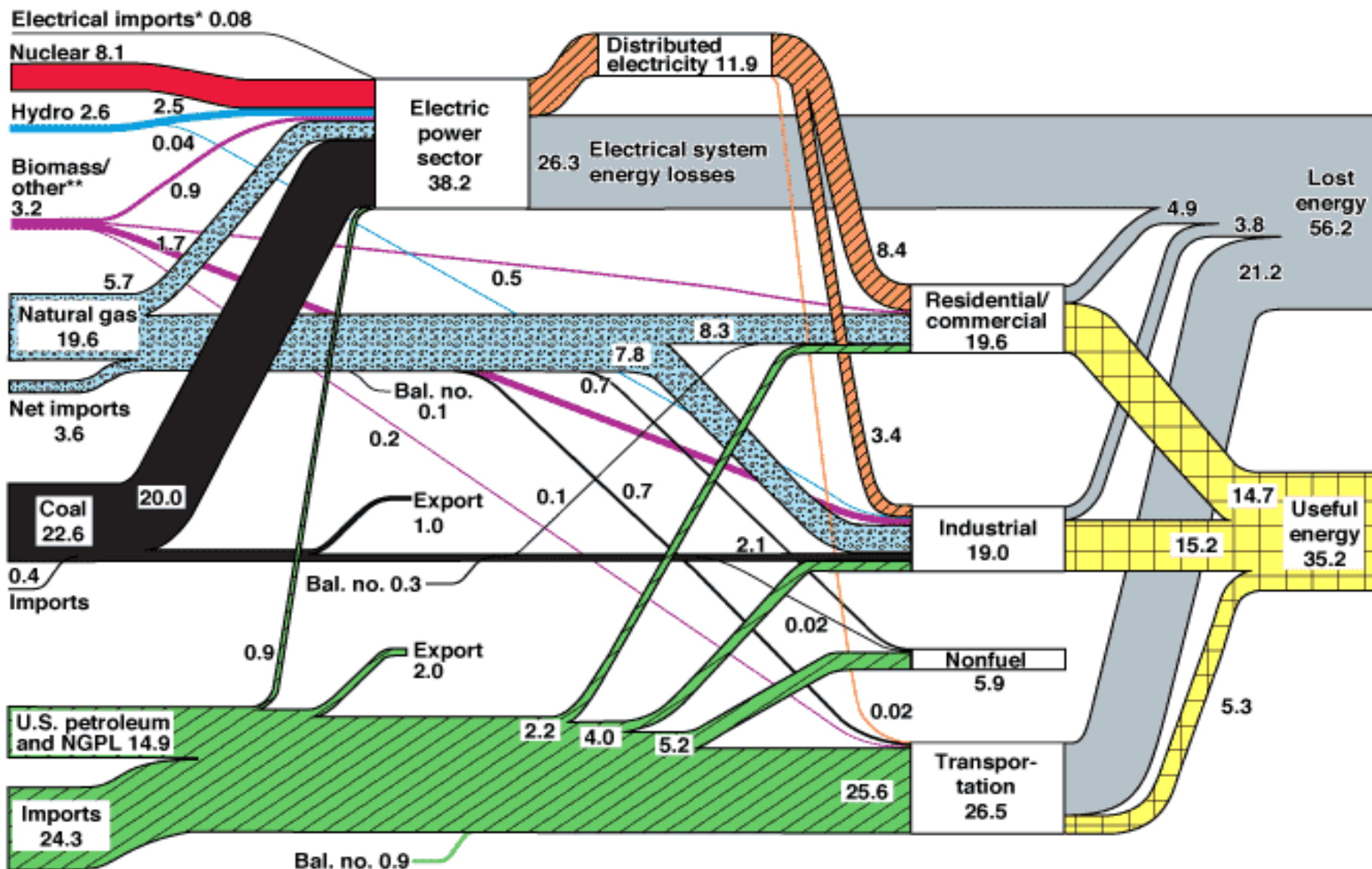


- Of the power generated at a power plant, 70% of it does not become useful energy
- If you reduce your energy use by 1kWh, you are reducing the burning of fossil fuels equivalent to 3.3 kWh



U.S. Energy Flow Trends – 2002

Net Primary Resource Consumption ~97 Quads



Source: Production and end-use data from Energy Information Administration, *Annual Energy Review 2002*.

*Net fossil-fuel electrical imports.

**Biomass/other includes wood, waste, alcohol, geothermal, solar, and wind.

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<http://eed.llnl.gov/flow>

