

Global energy transformation

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The International Renewable Energy Agency has produced a report called "Global Energy Transformation". There are number of headlines being pulled out of this report, but the main one is that renewable capacity will make up most generation capacity by 2050 with wind and solar providing most of that. There would 8.5TWp of solar capacity and 6TWp of wind capacity. This would provide 50% of global electricity. The report covers the areas that are going well and going badly for the Global Energy Transformation, with very interesting and clear graphics. As you can see from the one below there is much to be cheerful about.

[progress so far in the global energy transformation](#) However other graphics make plain there is still much progress still to make. Energy efficiency gains need to be over 3% a year, not 2% as they are now. Share of electricity in final energy consumption i.e. electrification of the economy is off track, as is annual wind additions, use of heat pumps, use of liquid biofuels, energy consumption per capita, reduction in fossil fuel demand (there isn't any -apart from coal)and energy related emissions. On track are; Renewable energy share in power generation, solar capacity, (surprisingly) electric car use, use of solar thermal collectors, solar energy costs and use of smart meters. There is much in the above and other parts of the report I don't agree with. There is too much support and reliance on biofuels and only a tiny reference to competition with growing food. "Bioenergy must be produced in ways that are environmentally, socially and economically sustainable. There is a very large potential to produce bioenergy cost-effectively on existing farmland and grassland, without encroaching upon rainforests, and in addition to growing food requirements." I disagree. I think the use of agricultural wastes will provide limited amounts of biofuel for transport. I also regard the use of hydrogen as a waste of space. However there is much that is good in the report and its well worth a [look at](#). Neil

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