Power to the people, literally

Distributed and peer 2 peer systems seem to have found it's way into several applications:

- instant messaging (icq, jabber, msn etc.)
- source control (bitkeeper)
- file and content sharing (kazaa and the likes)
- personal content (weblogs)
- connectivity (wifi grids)

It is my belief that this trend is more general than in computing only. By its character the principles of distributed production and p2p delivery are just easier to implement in information technology than in other areas. The area in which the principle will have the most impact in the next decades is distributed energy management.

We will, most likely based on a combination of solar/wind energy and fuel cells, produce our energy needs in a distributed manner, delivering surplus energy to micro-grids in our neighborhood which in turn delivers to the macro-grids in our town.

The same advantages which hold in computing are also valid in energy production:

- localisation: create energy based on where it is needed, not at the place we have the largest factory;
- reliability: the effect of a failure is only affecting a small area, not a whole city, like last summer in the US;
- choice: if i have a surplus of energy i can deliver it *peer-to-peer* to someone of my choice;
- customization: energy needs for everyone are different, smaller energy plants controlled by the users, not the producers;

Now that fuel-cells will start to appear in notebooks and cellphones the process has started; we're still at the *mainframe* stage though, but the general outline of the things to come isn't hard to imagine. Each change in type of energy and type of communication has caused radical changes in the past, i fully expect this one to do the same.

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