

Smart Grids

December 28th 2008

Links to the websites mentioned below are also available via

<http://www.jimhadams.com>

20th November 2008

Hi

A quick question to the core members of the energy group. I've not attended all the energy group meetings and I was wondering whether you have discussed local smart grids and their possible applicability to B&H; maybe it is implicit in the smart meter proposals.

I've been thinking about this since the Scottish Power event last week, where we mentioned local mini grids and changes in the current power distribution value chain. There has been a lot of discussion on renewable energy generation but little on how we distribute this locally or indeed whether the intention is to keep this locally generated energy for local rather than national distribution.

From the discussions it is clear we are keen on local distributive generation but to keep this power local do we need to advocate a local smart grid?

If the answer is yes, could a local pilot smart grid be something we could pull together as a project?

I know it's very ambitious but I'm not aware of much happening elsewhere in the UK at the present and we could attract a lot of interest. At the minimum it would be a great 2020 scenario for the EDRAP.

There is stuff happening on smart grids in US and Europe and descriptions to download, see:

<http://www.smartgrids.eu> and <http://www.oe.energy.gov/smartgrid.htm>

I suggest the issues are not only technical but commercial, regularity etc. Would also fit very nicely with NEF stuff.

Jim, perhaps we could have an energy group special topic meeting on this?

Cheers

David Greenop

20th November 2008

Hi All,

I have always had the target of local autonomy for Power in Brighton. In the long term, the question is not, "Will the lights go out one day", but simply, when.

If we are autonomous, decentralized, with distributed local power from solar photo-voltaic, wind, marine, biomass, etc, we will survive. The physical essential is local isolator switches for the Brighton network, to keep the local power local, in the event of a national failure.

Regards

Graham Ennis

20th November 2008

Before going along the lines of thinking about how to keep power local, I'd need to be convinced that this is a good idea. In a certain sense, power is always local, because it can't get transported for extremely long distances (not with our current grid). But surely having power connected to a national grid is useful in case there are local shortages? Graham's proposal is something that can be done anywhere, not just in Brighton, so what is the point in isolating ourselves?

Cheers,

Doly García

20th November 2008

Hi Doly,

It's very simple. We are entering into a national crisis, over the next 10 years, due to peak oil, peak everything, etc, and other Global crisis. The UK Government have shown staggering incompetence and ignorance in even understanding the situation, let alone doing anything about it. I think that the Government's response, when the first big energy crisis hits, will be about as stupid as the Bush administration's reaction to Hurricane Katrina.

We need to have a plan for local survival of the local grid, with local power, when the National grid collapses under the load failures. It's that simple. When power output is not enough for the power consumption of the grid, parts of it have to be switched off.

I am certain that elsewhere in the UK, especially England, there will be near total failure to prepare and pre-plan, let alone building any kind of local power supplies. We have to take the lead in Brighton.

Perhaps, if we show the way, others will follow.

Regards

Graham Ennis

20th November 2008

Hi All

I think smart grids and local networks are important for renewables and distributed energy and I think it would be a good topic to discuss in a meeting - although I'm not sure it is something TTBH can progress beyond getting it on the agenda.

Regards

[a contributor]

21st November 2008

Dear Doly

Graham is right. I used to design grids. In times of fuel shortages (eg miners strikes in 1971 and 1984) the power is rationed, first by brownouts, when the voltage is reduced to reduce the load, then by selected blackouts, shutting down whole towns or districts. In 1971 there were 3 day weeks, because there were planned blackouts on Tues and Thursdays, to save coal.

Yours

John Kapp

21st November 2008

Hi All,

Thanks John for the confirmation of my thinking. One of the important tasks is to start thinking, in step by step layers, about Brighton during a blackout. (This might happen during the next five years.)

Basically, first step:

Keep basic power for the Hospitals, schools, local government offices, police, fire, and ambulance/emergency services, likewise, large supermarkets (otherwise, they will close).

Many of the above already have back-up generators, but with limited fuel supplies. Local government has very little. A plan to stockpile fuel in Brighton, under local Government control, (out in a place like Hangleton, away from problems) and distribute it to key places, with enough there

to last at least a month.

Generators for all LG offices, etc, that do not have them. Ditto schools, clinics, etc.

Most important; back-up for the sewerage/drainage pumps.

But: A local green array of wind and marine turbines must be developed, over 10 years, to give us local grid independence. Sooner or later, the gas supply for the local power station will go, either from political crisis or simply supplies running low.

A study needs to be made of the technical problems of disconnecting the local network from the main grid connections, as well.

Various other things, but that's it. In normal times, we would be grid connected, sharing power, etc, balancing loads, etc, etc, but in time of crisis, could survive, for a good while, off grid.

The alternative, if this is not done, is a crisis of local Government collapse, school collapse, no sewerage or fresh water supplies, no shops open (to buy food) etc, etc.... a serious disaster.

Comments?

Graham Ennis

21st November 2008

Hi

I have attached a very top level smart grid vision from the EU Smart Grids projects; I do recommend people have a look at <http://www.smartgrids.eu>

Smart grids are about a lot more than isolating an area from the national grid, they are way of dealing with multiple local generating points, balancing power used in homes and businesses against that available and providing a high degree of local resilience.

What excites me is that whilst we cannot ourselves build or modify the current local power distribution network we could choose to make people aware of the technology and if we feel it's a good longer term goal argue for a smart grid in B&H. If we were really convinced we could even model how such a local smart grid would behave and put some costs against implementing one. I believe between us we have the expertise to do this.

I was a member of the IEE, but resigned a few years ago as I no longer saw any need for being a member. My professional interests were telecommunications and now I wish I had paid more attention to all the power engineering stuff the IEE did!

Cheers

David Greenop

21st November 2008

Hi,

This is very good. In "Normal" times it would be very useful. In "Future" times, (AD 2012-2020?) when critical climate and energy resource crisis might start to happen, and the national grid becomes unstable, it might be even more important, in a localized city grid, if we have local power, and are thrown back on our own resources.

Regards

Graham Ennis

22nd November 2008

We need to have a plan for local survival of the local grid, with local power, when the National grid collapses under the load failures.

You guys need to make up your mind about the scope it makes sense to work in, whether local or national. One day you say that we have to influence policy at national level, the next that we have to work locally and expect the rest of the country to fall apart.

The Transition Network approach is the one that makes the most sense to me. Work locally, but assume that other people are working locally as well. (They are, look at Transition Lewes). Don't expect the national government to do the right things, but you can point them in the right direction if the occasion comes (as in a consultation). Don't make too much effort to lobby at national level, because it takes a lot of effort and the chances of success aren't impressive. Proof of concept with local initiatives are likely to be more effective.

Cheers,

Doly García

22nd November 2008

Hi All

I agree we do need to decide what we are trying to achieve and the scope of it.

As far as "lobbying" activity goes my view is we should highlight items to policy makers and utility/infrastructure providers which are worthwhile, supporting our recommendations with examples and scientific argument. This is something we can do at a local level - I think John and Graham are already doing this? We also have a dialogue with Shoreham power station. As far as National issues go I think we did what we could with the response to the BERR consultation although I think a letter to Ed Miliband would highlight the Transition Movement and the Peak Oil issue - again provided it is based on evidence. Perhaps as Transition develops there will be opportunities for the Movement as a whole to agree National objectives?

As far as "acting" locally goes (as oft expressed!) my view is we should be concentrating on change through informing and motivating people to lead a less

energy intense life. Hence energy efficiency and conservation are top priorities. They are within the control of individuals, have good EROEI and are effective immediately. I think John B and David are involved in dialogue with the Council on this with regard to a community initiative? I also think we can act cooperatively with other groups such as BPEC - hence cc's to *Aisha*.

All in all for a small group of volunteers meeting in our own time I think we are doing Ok given the wide range of topics we have covered and attempt to cover. As we move towards Easter for our contribution to the EDRAP, it will be good to formalise and prioritise our activities so we can let others know what we are doing. I must say I smiled when I saw a post asking "What is the point of the energy group?!"

Regards

[a contributor]

RE: "What is the point of the Energy Group?".

Cut and paste of Martin Grimshaw's email of Friday 21 Oct 08 - bottom link is the query re: energy group:

Dear all

Sincere apologies for 'replying to all'. I'm on this list because I want to stay in touch with what the group is doing, because I can't make as many meetings as I'd like to. I DID NOT sign up for a high volume email discussion group, I can't keep up, don't have the time to and my inbox is overloaded. If this group doesn't have consensus for a high volume discussion then I imagine it is annoying people and pushing them away.

Why not move these very valuable discussions to the web-forum, where instead of alienating (outsiders wondering what the inside clique are doing) you may attract others in? Keep the emails for the essential or boring stuff to those who need it only?

There is some web-forum discussion on this topic currently, your views welcome esp. difficulties in using the website (need help?

*webmaster@transitionbrightonandhove.org.uk) -
<http://forum.transitionbrightonandhove.org.uk/viewtopic.php?t=332>*

*Thanks to those who are discussing this energy group stuff online -
<http://forum.transitionbrightonandhove.org.uk/viewtopic.php?t=347>*

*I've also offered some provocative thoughts on the energy group forum page
<http://forum.transitionbrightonandhove.org.uk/viewtopic.php?t=351>*

Kind regards

Martin Grimshaw