

A TALE OF TWO CITIES



Sitting on the hill in front of the Ackermannbogen estate in Munich, it was easy to see how the City had been named Germany's 'Energy Saving City', only 18 months earlier.

The hill wasn't a hill at all. I was actually sitting on top of 6 million litres of water. It was the storage tank for the estate's heating and hot water system. The tank had been covered by earth and grass...and the pipes that connected it to the solar roof had been hidden too.

Tucked away on the roof of the flats complex were row after row of solar water panels. Over the year, the sun provides 50% of the central heating and hot water needs of the whole complex. A connection to the district heating scheme provides the rest.

It all comes as part of a series of connected initiatives that define what Munich is doing as a serious plan, rather than just well intentioned

fragments. Before a single ray of sunlight falls on the flats their design has kicked in to deliver massive energy savings. All housing, including the existing stock, has to be raised to the status of 'low energy housing'. This means cutting their conventional energy needs (and bills) by over 60%.

The Munich programme for doing this goes back over 20 years. They have already raised the energy efficiency of their buildings by 30%. Now, they want to deliver extra carbon savings of 10% every 5 years. By 2050, Germany is also committed to 50% of its energy coming from sustainable and renewable sources. They are well on their way to getting there. In the meantime, Britain languishes way behind.

Only 1.75% of Britain's energy comes from renewable sources. For all our talk of starting to build eco-towns and eco-villages by 2016, we conveniently overlook the 25 million existing houses people live in today.

In contrast, Germany begins from its existing stock. It gives its cities the freedom to set the pace of change. And it empowers citizens in ways the British government runs in fear of.

By the time Britain starts to build our first eco-town, Germany will have between 40 and 60 eco-cities. One look around Munich and you can see how this will be done. First, there is an incredible array of sustainable energy systems that they draw on – a geo-thermal plant (taking heat from deep in the ground), wind turbines, 25 water turbines (driven by the river Isar as it flows through the city), a CHP (combined heat and power) district heating system... and, of course, solar power.

When it was built 10 years ago, the Munich Trade Centre was equipped with the largest solar roof on the planet. Black fields of solar panels stretch as far as the eye can see. They provide energy for the Trade Centre, delivering an equivalent of enough energy for 1000 homes. Public officials proudly point out that there are over 1200 major solar rooftop sites functioning around the City. This comes as no surprise once you realise that Munich has made all of its municipal roofs available (free) for the generation of solar power and solar energy. Once the Council gave this green light to green energy, its

citizens leapt into the driving seat.

I went with the Local Agenda 21 group, in the Hadern district of Munich, to look at just one of the 'citizens solar clubs' that have formed around the City. We climbed out onto the local school roof for 'club' members to proudly show how they had covered it in solar panels.

For €1500 residents can buy a panel within the solar club. Within 2 weeks it is installed and starts generating electricity. People get paid for the energy they generate and this year it looks likely to deliver payments of up to €150 per panel. It looks a lot safer than Northern Rock.

This citizen empowerment has come out of the German government's decision to require energy companies (by law) to pay citizens 4 times the market price for the solar energy that they produce themselves. It is a price guarantee that stays in place for 20 years. How easy it is to become ecologically virtuous when the energy companies are sending you cheques rather than bills.

In Hadern, local people weren't at all uneasy about discussing how much they had earned and how much carbon they had saved. In little over 4 years the 700 members of the solar club had raised €4 million for solar panels, generated 1.6 million kilowatt hours of electricity and saved 1 million kg of carbon. Not a bad bit of community DIY on climate change.

On the other side of Munich, a different project had been kicking in with its own contribution to energy generation. In Kliening, on the outskirts of the City, there is a spanking new bio-energy plant. It takes crops from adjacent fields and puts them into fermenters to produce their own bio-gas.

The German government changed gas market rules a year ago to allow bio-gas to be fed into the gas network, in the same way that solar panels can feed into the local electricity grid. This has meant that gas produced in Kliening could be counted as the gas actually used to run generators in the centre of Munich. It is so much more efficient to transfer gas to the point of heat and energy use rather than trying to move the heat itself from a plant on the edge of the city.

Bio-crops can be controversial if they end up shifting land use from food production to fuel production. This is why Kliening carefully uses non-food crops, grown between food-crop seasons. They also point out that the waste from the process is high quality fertiliser that goes back onto the fields it came from.

A different waste-to-energy project in another part of Munich uses household (or shop) food waste to produce the bio-gas. Such plants at Kliening produces enough heat for 700 houses a year and enough electricity for 8,000 – 10,000 houses. British cities would kill for the freedom to drive this sort of joined up sustainability programme.

Wherever you go around Munich, it appears that they try to generate energy from everything that moves, and from everything that doesn't. If they can't generate new energy they will, in any case, cut existing energy needs dramatically.

A kindergarten project in the Aubing area couldn't have illustrated this better. Using simple design techniques the Council had cut the building's energy needs by 90%. Most of this was by insulation, but they also took stale air out of the building through ducts that warm the fresh air coming in. And as in

every improvement scheme, public bodies get to keep up to 50% of the energy savings they make. It's not rocket science, just common sense, clear thinking...and within budget.

The dynamism of what is happening in Germany today isn't simply down to them starting off before us. Their climate change programme draws its strength from a more fundamental transfer of power into the hands of German citizens.

The German government created a legal right for its citizens to feed gas and electricity into the energy system. In Britain, OFGEM, the National Grid and energy suppliers do all they can to say it can't be done. In Germany, citizens get paid 4 times the market price for supplying 'green' energy. In Britain, Ministers and civil servants say this would be market interference. In Germany, cities can set development plans that require all buildings to generate energy as well as conserve it. In Britain, property developers and Ministers say this would bring chaos.

Local ownership of energy companies has allowed German cities to become stakeholders in the sustainable energy process. And when cities hand over their rooftops to citizens energy clubs, the public become stakeholders too. This is the transfer of power that drives Munich, and other German cities, to be the pace setters in the energy transformation of society.

The trouble with 'those bloody Germans' is that they are just bloody good. The real question is 'why aren't we?'

NB Alan Simpson's film piece on Munich is being shown on the BBC's Politics Show (East Midlands) on Sunday 21st October and will then be put on his website.

alansimpsonmp.co.uk 