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EⁿR Full & Regular Meeting (M62)

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The Crystal

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EST staying relevant in a rapidly changing landscape

As energy agencies, we operate in an incredibly fast moving environment. New technologies, and new consumer expectations of energy services, mean our services need to be constantly evolving.

In this presentation, I am going to address some of the ways the Energy Saving Trust (EST) is developing its services, building on some of the themes in the [video](#) you've just seen. These are all areas where we are keen to explore greater collaboration through the EnR network.

The fundamentals of the energy system are going through the most profound change since the first development of national electricity and gas distribution grids. In the EU the Energy Union provides the policy framework for that change. Energy Agencies provide a wide range of services in the area of sustainable energy transition. In this speech, I'm going to focus on support for decarbonising energy use in buildings, and particularly homes, and the support we provide to citizens around that. Bringing together the expertise to support citizens through the shift to a decentralised, decarbonised, smart energy system can only be achieved through collaboration.

When the Energy Saving Trust was founded in 1992, following the Rio de Janeiro Earth Summit, our mission was comparatively simple. We supported householders install highly cost effective energy efficiency measures. We did a huge amount of work to help citizens replace old central heating systems and to take very inefficient products out of the market - we talked a lot about light bulbs and fridges. Most importantly we supported a massive roll-out of wall and roof insulation across the UK homes. The impacts have been immense. In Scotland, as the video explained, homes use a third less gas for heating than a decade ago. Over six million UK homes have had wall insulation.



Over time, as technologies changed, our services developed. Since the early 2000s home and community scale renewable energy has been a part of our work. And supporting the shift to more sustainable transport has become central to our mission.

As an agency we were created in an off-line world. Citizens accessed our services principally by telephone, even through the post.

But, now, digital has become dominant. Because it's the cost-effective way of providing information and advice. And because it is the way most citizens now want to access advice and information, across all areas of our lives.

In England and Scotland we're seeing different governmental responses to that digital transition. In Scotland, the government is continuing to invest strongly in locally provided energy advice with a first line of advisors accessible over the phone and even face-to-face for some customers. There, digital services are being developed to work alongside traditional routes to engaging households.

In England, the situation is very different. Here, the Government is keen to take a digital first approach. EST are working with the Energy Department on the roll out of a newly designed digital tool that will be the principal face of publicly-funded home energy advice.

Responding to the digital transition is a challenge for us. Skills such as digital service design are not embedded in our organisation. We're rapidly forming new partnerships with digital agencies.

The challenge is to weld the Energy Savings Trust's immense depth of knowledge of the consumer and home energy issues into the best online services. Getting it wrong risks impartial, publicly funded energy advice becoming marginalised. Customer will seek information through other online services that are easier to use, better meet their expectations, but which ultimately fail to point them in the right direction.

I think this a problem that many agencies face: European Intelligent Energy Europe and Horizon 2020 energy projects have almost become famous for producing clunky online energy tools that hold little appeal for the public. Embracing digital best practice has to be a priority for energy agencies across Europe.

From an energy system perspective, digital energy advice is just one part of the transition to a smart energy system.

Over the last five years, smart technologies are increasingly present in UK homes. That's both because of the smart meter roll out, and because of customers choosing smart heating and energy management systems.



An exciting development for the Energy Saving Trust is the Smart Meter Advice project in Scotland: whereby we are integrating customers smart meter data into our telephone and online advice service. Critically, we will be able to adjust the advice we provide about the benefits of different energy improvements based on live, real data about how that household is using energy.

EST is also looking at the longer term smart energy opportunities for citizens. I mentioned that EST has long worked on transport. One move towards a smart grid is the potential integration of transport and home energy services.

We're now starting on a second research project, called PowerLoop, focused on vehicle2grid technology. In 135 homes across the UK we're exploring the potential for citizens to power their house with their car and vice versa.

This is just one area of smart grid development that's a major focus for public and private investment in the UK. Too often though the consumer perspective on such developments is a late consideration in research. Through the PowerLoop project, EST is helping embed the citizen's perspective right into the centre of this research. There is a huge potential for us, as agencies, to do much more to form new partnerships as new actors – like vehicle manufacturers – become players in energy.

Similar issues surround the heat transition. As we increasingly decarbonise electricity use, tackling the high carbon energy used in heating and cooling is a global priority. Thinking about homes, in the UK, currently, 85% of homes are heated by gas central heating boilers. It's an affordable technology that householders are used to and comfortable with.

Meanwhile UK government is planning a transition that will see traditional boilers replaced in most homes, with electric heating, district heating, maybe hydrogen in the gas grid. That's a fact virtually unknown to the public.

As an energy agency we're looking at how we begin to advise customers on the heat transition. Home owners will face new choices, new technologies. And that's work on reformulating our advice on heat needs to begin now.

Smart technologies are one way - beyond traditional energy efficiency technologies - that we can change the way we use energy in homes. We also need a focus on deep energy efficient renovation. That's particularly important for fuel poor homes.

In the UK we've addressed fuel poverty as a distinct issue for longer than any other country. we've successfully focused programmes to install cost-effective insulation and boiler replacements on the fuel poor. But that's left many households living in homes which haven't been targeted because they require more costly and deeper renovation. Often those are the homes of people in the deepest fuel poverty.



In Wales, EST delivers the NEST programme. Rather than focusing on installing particular insulation or heating improvements, NEST support is targeted at homes with the lowest energy performance certificate ratings, and where the resident is likely to be in fuel poverty. The result is a tailored set of renovations, provided at no cost to the householder, that bring the property up to a decent, warm standard.

In Scotland our services are going to a stage beyond that. Often the homes of the fuel poor aren't just energy inefficient, but they have wider repair problems - broken window frames, damp problems, roofs in poor condition. Our new HomeCare service targets the most vulnerable fuel poor households with in-home visits providing tailored advice and support to carry out wider repairs to the home before energy improvements are made.

These sorts of tailored deep renovation interventions are expensive.

In Wales and Scotland, EST works with governments that are generally more comfortable with public expenditure on home energy and fuel poverty programmes than the government in England. To make the case for ongoing public support in England as well as across the UK we need a wider recognition of the benefits of investment in home energy.

Most importantly we talk about the health benefits. The evaluation of our NEST programme showed that - in a year where there was a 10% increase in elderly and low income patients presenting with respiratory problems at Welsh doctors - those living in homes which had benefited from NEST renovations were four percent LESS likely to visit their doctor with respiratory problems. The energy efficiency improvements also reduced the occurrence heart problems and infections.

I raise this not just because these are impressive figures but because we need to monetise these benefits. Lower numbers of hospitalisations and GP visits are direct savings on health service budgets. That needs to translate into financial support for in-home, tailored interventions for the fuel poor.

Evidence of the health benefits of home energy interventions - both advice and delivery - is just one important way in which we can continue to make the case for public sector financing of our programmes. There are also jobs, growth, wellbeing and community benefits. Of course a focus on the wider benefits of energy efficiency is not, now, new. But it is complex, difficult, long term evaluation work. Putting budgets and brains together to do those evaluations must remain a focus for collaboration through EnR.

How do we deliver that collaboration? As Philip has explained, while the UK may be leaving the EU, EST is not leaving Europe. Brexit casts a cloud of uncertainty, but we are pleased that a "transition" agreement has now been reached that enables us to continue to collaborate within H2020 up to the end of the current budget period (2020).



We are also keen to work with our European partners to explore global opportunities. To give an example, I shall shortly be travelling to Canada. The Canadians are developing their equivalent to Energy Performance Certificates. Alongside ADENE and other agencies, last July EST participated in a European Union workshop to advise on the European experience of nearly ten years of mandatory building energy labelling programmes. Building from that we've been funded by the UK Government to provide further support to Canada. Our next step will be to work with the provinces, who, under a Canadian federal framework, will each introduce their own labelling scheme. I highlight this to show how Europe-wide expertise can open up opportunities for us to work together with

I've highlighted just a few areas where the Energy Saving Trust is focusing on developing our services. Compared to the major players in the energy industry none of us energy agencies are large organisations. We all struggle to maintain levels of public and political support that will give us the funding and reach that we need.

I've highlighted the areas of digital service design and delivery, new smart grid services [and the heat transition] as areas where we need to be working urgently to look at how we deliver advice and support to the public. As more countries begin to focus on energy poverty, we need to be redoubling efforts to track the longer term health and community benefits of these interventions. And – highlighting our experiences in working with Canada - I'd re-emphasise that collaboration can build from our powerful linkages as a group of European agencies, to happen on a global scale. I'm looking forward to working with you all in the years to come.