

## ERP Low-Carbon Heat

### Plenary discussion item

At the last Plenary meeting ERP approved a new project on Low-Carbon Heat. This agenda item will present early findings from the project and provide an opportunity to discuss how the issues raised might be addressed and what the priorities for the remainder of the project.

The session will include two presentations. The first, from a leading think tank, will highlight the techno-economic challenges of addressing the challenge of decarbonizing heating. Following on from that, the ERP Analysis Team will set out some of the challenges of the transition, with a particular focus on the governance aspects.

The following gives a brief synopsis of the two presentations.

### Too Hot to Handle?

Richard Howard is Head of the Energy and Environment unit at Policy Exchange, one of the UK's leading think tanks.

Richard co-authored a major publication in 2016, *Too Hot to Handle?*, which considered how to decarbonise domestic heating. This considers all of the main options to decarbonise heating – including electric heating, greener gas, heat networks, and dwelling scale renewables, as well as considering the potential for further improvements in energy efficiency. The report provides an assessment of these various options in terms of their decarbonisation potential, cost/impact on consumers, and infrastructure requirements.

The report recommends that the Government should develop a new heat strategy, focusing on the lowest-cost routes to decarbonise heating. It suggests that the 'path of least resistance' would be a diversified strategy involving a substantial reduction in heat demand through improvements in efficiency (thermal efficiency and boiler efficiency), the use of greener gases such as biomethane, the rollout of heat networks to c.20% of homes, and some uptake of electric heat pumps.

### The Transition to Low-Carbon Heat - ERP Project

As the Policy Exchange study demonstrates, it is becoming increasingly recognised that a range of technology options will be required to deliver low-carbon heat. However, there are several dimensions that affect when and where each option will be deployed as some options have regional constraints, while others are best suited to specific applications. Others options, such as heat pumps and district heating, will require changes to the local, and possibly national, energy infrastructure.

The drivers that determine how each option is deployed vary, with the risk that without an holistic picture it could become uncoordinated and potentially conflicting. The ERP project has been looking at the deployment aspects of the various options for decarbonizing heat, including the timeframes and trajectory to 2050. A particular focus has been on the governance implications, with consideration of the financing aspects and regulatory issues that need to be addressed.

The presentation will conclude with an overview of the timeframe for the decisions that will need to be made. It also highlights the range of issues that will need to be addressed in the next 5-10 years, and the research, development and trials that will be needed to inform them.