

Green Recovery Dialogues

Joanna Partin, Carbon Neutral Cities Alliance - Transcript

See the video at <https://youtu.be/OIM0fc7xKK8>

I'm Johanna Parton, Director of the Carbon Neutral Cities Alliance. The Carbon Neutral Cities Alliance, or CNCA, is an alliance of 22 of the world's leading cities including Glasgow, working to achieve carbon neutrality in the next 10 to 20 years, the most ambitious climate targets undertaken by any cities in the world. One of the principal tasks facing Glasgow on its road to achieving carbon neutrality by 2030 is decarbonising buildings, especially cooking and heating. Over the past year CNCA members have identified the most critical policies and approaches that cities need to adopt to transform systems and expand and accelerate progress on the pathway to carbon neutrality. We call these gamechangers. One of these gamechangers is electrifying buildings' cooking and heating systems. In many cities a large percentage of greenhouse gas emissions comes from the use of fossil fuels to provide cooking, heating, cooling and hot water in buildings. In Europe half of all energy is used for this purpose. In order to decarbonise buildings, cities need to pursue a number of approaches including: adopting zero emission standards for new buildings; incentivising - and eventually requiring - deep energy efficiency retrofits in existing buildings; where possible connecting buildings to district scale heating and cooling systems, and powering those systems with waste heat and other clean and renewable sources; where it makes sense, installing high efficiency heat pumps and solar water heaters to replace natural gas based systems; lobbying other levels of government to green the grid; empowering local residents, businesses, city government and others to produce or purchase renewable energy supply directly rather than relying on their utility; and finally, thinking about buildings as carbon sinks - structures that actually pull more carbon out of the atmosphere than they emit by dramatically decreasing embodied carbon in building materials. A number of challenges are going to face Glasgow and other cities working to decarbonise cooking and heating systems but there are a few key ones. The first one is behavioural: people are used to cooking with gas and see natural gas as an affordable, clean fuel. Cities are going to need to build awareness campaigns and partner with other sectors, especially the health sector to educate people about the benefits of induction cooking and the negative health, safety and climate impacts of fossil heating and cooling. The second is technical: cities need to address the potential impacts of heat electrification on grid performance. Some of this challenge could be addressed by pairing building electrification with energy efficiency to reduce electric load but the electrification of heating and hot water systems can create major seasonal and time of day load shifts that strains existing electricity generation transmission and distribution systems. And the third is political: cities can expect to face a significant pushback from fossil fuel interests. A number of stakeholders, including utilities and fossil fuel distributors, have a vested interest in maintaining the status quo. Cities need to build strong coalitions in support for electrification from private and non-profit sectors and amongst their residents and businesses to counter opposition campaigns. The good news is that Glasgow is not facing this challenge alone. There are lots of great examples of cities working to phase out fossil fuel cooking, heating and cooling. For example, in California 55 cities are working to ban natural gas hookups in all new buildings. Amsterdam and more than 30 other Dutch cities have signed a green deal for gas-free neighbourhoods which will lead to the first residential districts being disconnected from the gas grid over the next few years. Across the Netherlands no new houses will be connected to the existing gas grid and an average of 170,000 homes will be disconnected every year. And in Oslo as early as 2008, they began phasing out fossil fuel heating by replacing fossil fuel boilers with renewable energy systems through grants and loans from a municipal climate and energy fund,

inspiring a national fossil fuel heating ban that was achieved earlier this year. While transforming one of Glasgow's key greenhouse gas emitting system seems daunting, the pathway to city decarbonisation over the next one to two decades is clear. As Glasgow and other leading cities implement these ambitious gamechangers they create an example for other cities to follow. I look forward to continuing this conversation at the Dialogue later this week.