

26th September 2018

**IGov
Setting the Direction for Energy
System Transformation
Roundtable Event**

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SP Energy Networks – Who We Are

We are SP Energy Networks. As a Distribution and Transmission Network Operator we keep electricity flowing to homes and businesses throughout Central and Southern Scotland, North Wales, Merseyside, Cheshire and North Shropshire.

We have 3.5m customers in a broad mix of urban and rural geographies

Our three regulated electricity businesses are:

SP Transmission PLC (SPT)

SP Distribution PLC (SPD)

SP Manweb PLC (SPM)

Our aim is to deliver a safe and reliable electricity supply **24 hours a day, 365 days a year** whilst providing exceptional value for money.

**3,000 direct staff
and 3,000
contractors**

**12,000 jobs
indirectly
supported in
supply chain**

**£1bn annual
expenditure**



Electric Vehicles



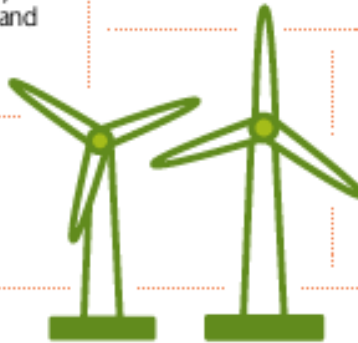
The adoption of EVs is predicted to happen in a disproportionate way, with majority uptake in **urban** and **suburban** areas.

Swapping a convention combustion engine car for an electric version could provide "fuel" **savings of over £1000** for a typical user.



£1000 saving

An average electric vehicle will use the same power in 1 year as one wind turbine generates in 1 hour.



Accelerated uptake in Scotland could see around **700,000 Electric Vehicles** on the road in our region by 2032.



2x electricity consumption

Charging an average domestic EV at home every night would **almost double** the electricity consumption of the home.

An electric vehicle has fewer than 20 moving parts – compared to a diesel engine which has over 2000...



To cope with demand we need to invest around **£200m to £300m** across central and Southern Scotland in the next decade.

If we don't adopt smart charging, this could rise to over **£1 billion** investment in our areas.



£1 billion investment

Extensive reinforcements to **upgrade around 15% of the network** in Scotland (5000 circuits and 1000 substations).

We need a fair funding system to ensure vulnerable customers don't bear the costs of early adopters of new technology

EVs: Our views

Network operators must be **at the heart of the EV charging infrastructure rollout** in order to ensure a co-ordinated, timely and ultimately lowest-cost solution.

Greater certainty is required across a range of demographic customer types e.g. domestic, industrial and commercial, public transport, destination parking, motorway charging.

Managed charging should be implemented in a co-ordinated manner across the UK to minimise impact on peak demand and therefore network reinforcement.

Our analysis indicates that even with managed charging in place and the use of smart solutions, network investment will still be required, therefore **access to appropriate and timely funding is essential**.

How the cost of a low carbon future is allocated across customers should **consider vulnerable and fuel poor customers**, who are often unable to take advantage of the benefits of low carbon technologies.

If we are planning for the adoption of wide scale EV by 2032/2040, **revision of building regulations for new build housing** should be considered.

Heat: Our views

To achieve 2032 targets, the decarbonisation of heat must begin imminently

The **phased introduction of policy** that **coordinates the uptake of decarbonised heat and transport** providing certainty for network investment would be welcomed. We believe this will provide the best opportunity to deliver flexibility services and the most efficient network solution for customers.

63% of domestic households in Denmark are connected to a district heating system. This level of uptake was only possible by **mandatory legislation** by the Danish Government – it would not have happened if left to free markets and competition alone.

We see interest from **local community groups** in exploring communal heating schemes, especially in multi-occupancy and/or multi-storey residential buildings.

Present regulations restrict DNOs from providing reinforcement based on predicted load growth. At the magnitude expected by EVs and Heat, changes will be required if the network is not to become a potential barrier to decarbonised heat and transport.

Helping cities and communities realise their ambition

People want a **cleaner energy future** – and SPEN is ready to deliver now

We want “smart cities” with the best air quality, conditions for investment, jobs, the best digital infrastructure – and for this we need a robust energy infrastructure, fit for its evolving purpose.

The current regulatory system is not equipped for the challenges ahead. Networks have often restricted the pace of growth due to regulatory rules restricting our ability to be ahead of growth. This needs to change. We need a new model that gives cities and communities more control in how we deliver infrastructure. A model that empowers people to have a say in the kind of communities where they want to live – and the infrastructure that underpins it.



We want to form partnerships with those who want to enact change in order to avoid infrastructure bottlenecks which will strangle GB growth.
