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Meeting summary

Strategic Spatial Energy Plan – Industry Engagement Session

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| Date: | 20/08/2025 | Location: | Microsoft Teams |
| Start: | 14:30 | End: | 16:00 |

Participants

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| NESO | Isla Martin-Abel, Rajdeep Bains, Posy MacRae, Robert Gibson, Luke Jenkinson, Eavan Dowse. | | |
| Organisations in attendance: | | | |
| Nuclear Industry Association | Energy UK | | |
| National Grid Electricity Transmission | SSEN Transmission | | |
| Strathclyde University | Wales and West Utilities | | |
| SGN | Carbon Capture and Storage Association | | |
| Future Energy Networks | Cadent Gas | | |
| Association for Decentralised Energy | Solar Energy UK | | |
| Hydrogen UK | Scottish Renewables | | |
| AECOM | REA | | |
| British Hydro | Northern Gas | | |
| Renewable UK | Royal Academy of Engineering | | |
| BEAMA | TechUK | | |
| Regen | | | |
| British Ports Association | | | |

Agenda and discussion

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| # | Topics to be discussed |
| 1. | Introduction – Posy MacRae |
| | Posy MacRae welcomed everyone to the meeting, explaining that this was a special SSEP engagement session to share the latest on the modelling and pathway themes. Posy reminded members of the confidentiality of material discussed at the meeting and provided an outline of the agenda. |

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Posy provided an update on the SSEP developers workshop which is being held on 11th September in Warwick and additional workshops planned for Scotland and Wales.

Posy confirmed that since the group had last met the team have been carrying out sensitivity analysis, collecting feedback on the initial pathway themes and created a pathway longlist. Posy thanked the group for their engagement stating that they received 227 comments from 42 organisations which has informed updates. Posy highlighted the key feedback areas for the initial pathways including, early reliance on emerging technologies, land use, alignment with policy ambitions and the project pipeline.

Discussion took place on the changes to the capital expenditure (CapEx) assumptions for technologies. It was explained that the CapEx assumptions were derived from confidential data provided by DESNZ. Although the details could not be shared, the figures had been challenged and reviewed internally.

2. Modelling Update: SSEP Themes and Branches– Robert Gibson

Robert explained how the exploratory analysis in the economic modelling led to distinct pathway themes. Each theme involves testing selected elements through detailed branches, with geospatial, demand, and cost factors included, with geospatial integration still being refined. Robert discussed various modelling themes, such as running models without policy interventions to identify external influences, strategies for reducing reliance on imported fuels, and investigating the benefits of expanding technologies that use less land. They are also considering scenarios involving emerging or uncertain technologies, especially up to 2050, and integrating green gases like hydrogen and biomethane with the energy system.

There was discussion on how impact on land was being evaluated in the pathways. Currently, the approach involves incrementally testing constraints rather than using a fixed metric.

Robert advised that at present, there has been no detailed analysis on investability, but the viability and attractiveness to private investment will be assessed as part of the development of the pathways.

Summary of technical discussions:

Grid build out and network connection modelling

The economic modelling begins with a baseline set for 2030, using cost assumptions that are tailored to specific boundaries and informed by previous studies. Rather than setting a fixed plan for future network build, the model identifies what would be the optimal generation and network requirements based

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on the scenarios tested. More detailed information and specifics are expected to be provided in future iterations of the Central Scenario Network Plan (CSNP).

Green gases in pathway modelling

The modelling treats biomethane and hydrogen as serving similar roles in supporting the electricity system during periods of low renewable output or high demand. Biomethane is used when available, with hydrogen filling the gap when it is not. Input on the use of biomethane and industry trends is welcomed.

Flexible generation and network connections

The modelling does not differentiate between generation connected to the transmission or distribution network. While much generation is expected to be transmission-connected, the approach does not exclude distribution network connections.

Hydrogen use for homes and heating:

The modelling considers a range of scenarios for hydrogen use in homes and heating, from minimal to significant roles. The primary use for hydrogen is within the hydrogen-to-power system, which includes electrolyzers, storage, and power generation

Blue hydrogen

Blue hydrogen is included as a potential expansion option in the model, meaning it can be developed or scaled up as needed. Its deployment and value are considered in various scenarios as part of broader energy planning.

3. Appraise – Luke Jenkinson

Luke Jenkinson provided a high-level update on the pathway appraisal process, outlining a structured, phased approach over the coming months that involves evaluating and refining the pathways. The process includes exploratory modelling, developing pathway themes, expanding these into a long list and then narrowing down to a shortlist of four to six draft pathways using key criteria and iterative assessments of cost, environmental, societal and spatial factors. The spatial evaluation framework and stakeholder input play crucial roles in ensuring pathways are robust, viable and deliverable, with further sector-specific assessments and stakeholder engagement planned for future phases. Optimised, fully appraised pathways will be included in the options report to the Secretary of State.

Discussion took place on the request from stakeholders for consultation or review of the 4-6 pathways before they are submitted to the Secretary of State. It was explained that in line with the commission of the SSEP the four to six pathways will

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be presented to the Secretary of State with the public consultation on the final chosen pathway which will become the SSEP. Substantial engagement is ongoing to gather input into the development of the pathways.

4. Next Steps – Posy MacRae

Posy closed the meeting by mentioning that this session was focused on the SSEP and a broader SEP industry working group meeting is planned for September, with updates on CSNP and other areas to follow.
