

From: **Paul King, Cabinet Member for Economic Development and Coastal Regeneration**

Simon Jones, Corporate Director Growth, Environment and Transport

To: **Growth, Economic Development and Communities
Cabinet Committee - 11 November 2025**

Subject: **The Regional Energy Strategic Plan**

Classification: **Unrestricted**

Electoral Division: County Wide

Summary: This paper briefs the Cabinet Committee on the Regional Energy Strategic Plan (RESP), the transitional Regional Energy Strategic Plan (tRESP), and Kent County Council's (KCC) role in shaping the energy system in the South East, including outlining the national policy context and clean power targets within which the RESPs are being developed, regional boundaries, governance arrangements, and the purpose and initial draft outputs of the tRESP relevant to Kent.

Recommendation: The Committee is asked to note the contents of the report and make recommendations to the Cabinet Member for Economic Development and Coastal Regeneration on the County Council's participation in the transitional Regional Energy Strategic Plan (2026-2028) and full Regional Energy Strategic Plan (2028 onwards).

1. Introduction and Background

- 1.1 Clean Power 2030 (CP2030), published in December 2024, is the UK's strategy to deliver a predominantly clean electricity system by 2030¹. Led by the Department for Energy Security and Net Zero (DESNZ), it aims to ensure that:
- Clean sources produce at least as much power as Great Britain consumes annually; and
 - At least 95% of electricity generation comes from clean sources such as renewables, nuclear, hydrogen, and carbon capture-enabled plants
- 1.2 Regional Energy Strategic Plans (RESPs) were announced by Ofgem, the UK's energy regulator, in November 2023, and are key to achieving CP2030. They will be produced across the 11 regions of Great Britain (see map at 2.1) with the aim of ensuring regional priorities and spatial plans integrate into national energy system planning and support the Government's CP2030 target.

¹ <https://www.gov.uk/government/publications/clean-power-2030-action-plan>

“The purpose of the RESPs will be to support coordinated development of the energy distribution system and enable long-term investment to be made with confidence and ahead of need”².

- 1.3 Led by the National Energy System Operator³ (NESO), RESPs will be responsible for ensuring local objectives and aspirations that require energy are translated into investment in the necessary energy infrastructure and networks.
- 1.4 Ensuring energy supply matches demand as electrification accelerates is vital to the development and growth of Kent and Medway in the coming years. The lack of generation within Kent means that the county is already a net importer of energy from abroad and from the UK transmission network and this disparity will increase if we do not build more regional sources of generation. Securing resilient infrastructure for sustainable growth and enabling innovative, creative, & productive businesses – two of the Kent and Medway Economic Framework’s⁴ five core ambitions – will only be possible in the long-term through investments in the energy system at the right time, and in the right locations.
- 1.5 Ultimately, RESPs aim to ensure that local areas get the energy infrastructure they need to meet local growth ambitions, and help communities to access reliable, clean and affordable energy. It is a whole-system approach to planning, replacing (currently) fragmented energy infrastructure planning with coordinated regional strategies.
- 1.6 Alongside the 11 RESPs, NESO is developing a Strategic Spatial Energy Plan (SSEP) for Great Britain’s Energy System. The overall goal of the SSEP is to help accelerate and optimise the transition to clean, affordable and secure energy across Great Britain by providing a guide for industry and the public as to the likely shape of our future energy system. The SSEP will interact with and inform the RESPs – and vice versa – to align top-down and bottom-up energy system planning⁵.

2. RESP regions

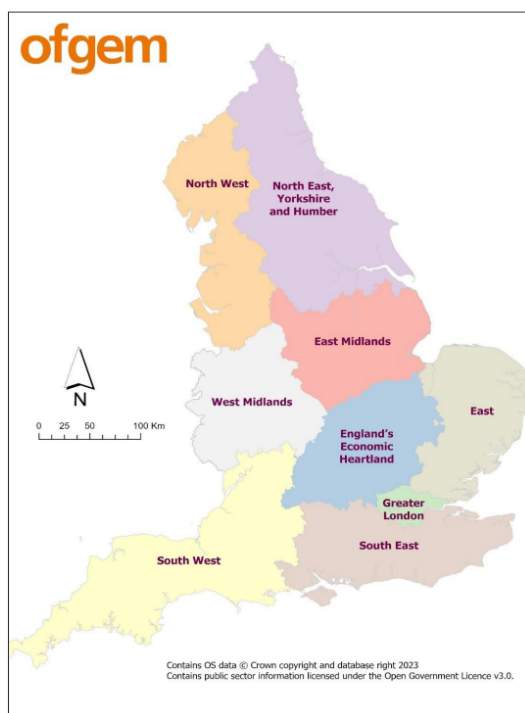
- 2.1 The 11 RESP areas consist of one region covering Wales, one region covering Scotland and a further nine regions covering England.

² [Regional Energy Strategic Plan policy framework consultation](#)

³ NESO launched on 1 October 2024 as an independent, publicly owned system planner and operator regulated by ofgem. It was established to accelerate the country’s energy transition through a ‘whole system’ approach and replaced the former National Grid ESO. Its core role is to centrally and strategically plan the development of the UK’s energy system.

⁴ www.kmep.org.uk

⁵ [Strategic Spatial Energy Plan: commission to NESO](#)



Map 1. Proposed RESP regional model for England⁶

- 2.2 The proposed South East RESP area represents a population of 7.71 million people and mimics the Transport for the South East Sub-national Transport Body boundary. It incorporates Kent, Medway, Berkshire, Hampshire, the Isle of Wight, Surrey, East Sussex, West Sussex and Brighton & Hove.

3. Regional governance arrangements

- 3.1 Ofgem proposes each region has a strategic board to facilitate transparency, heighten visibility of regional priorities and provide oversight of RESP development. Importantly for KCC, it is suggested that the Strategic Board be made up of local (upper tier/strategic authorities) and devolved government and network company representatives, as well as any wider cross-sector actors highly relevant to energy system and spatial planning in a region. The Strategic Board should provide a forum for collaboration, navigating trade-offs and supporting whole system planning.
- 3.2 Sign-off of each region's RESP will sit with its strategic board where a clear majority consensus can be reached. In the absence of a consensus, sign-off will revert to Ofgem. Each RESP will be updated every three years.
- 3.3 Ofgem believe that effective institutional arrangements for the RESPs need to be in place and delivering benefits by the end of the decade. To achieve this, the capability to deliver the RESPs aims to be set up by late 2025 and for the initial output to be produced in 2026 to inform the setting out of the next price control (the price control is the regulatory framework used by Ofgem to limit how much energy network companies and suppliers can charge consumers). The full RESPs, to be in operation from 2028 onwards, will be signed off by

⁶ [Regional Energy Strategic Plan policy framework consultation](#)

each region's strategic board. KCC will therefore have significant influence over regional energy planning in the near future.

- 3.4 In the meantime (from Q1 2026 to Q4 2027), a transitional RESP (tRESP) will be produced for each region. This will be designed from the top down (led by Ofgem/NESO), with organisations that will form future strategic boards (i.e. KCC) feeding evidence into the tRESP but without sign-off powers. The full RESPs (2028 onwards) will be driven from the bottom up (at least this is the proposal)⁷.

4. The transitional RESP (tRESP)

- 4.1 The tRESP is the first formal output of NESO's new strategic planning role, designed to align regional energy needs with national targets and investment priorities.
- 4.2 The tRESP aims to:
- Identify Strategic Investment Needs (SI) across electricity, gas, and hydrogen networks
 - Model short-term (10-year) and long-term (to 2050) energy pathways for each region
 - Integrate local priorities (e.g. housing, transport, industrial growth, renewables) into national energy planning
 - Accelerate decarbonisation and economic development by targeting network upgrades where they're most needed⁸.
- 4.3 There is limited opportunity for KCC to influence the tRESP compared to the full RESP. NESO/Ofgem have been tasked by Government to lead the tRESP due to the perceived urgency of energy system reform (to meet ambitious government renewables targets and to increase energy security following Russia's invasion of Ukraine). It is believed that the institutional arrangements are not yet in place, and the capacity for relevant local actors to effectively plan the regional energy system, are currently insufficient to create a full RESP by Q1 2026. However, KCC has responded to RESP consultations and fed data into the regional NESO team that are creating the tRESP. It was our suggestion that the Strategic Board have sign-off powers for the full RESP, something that NESO/Ofgem had not proposed initially, that led to this change.

5. tRESP draft outputs relevant for Kent⁹

Demand side

- The South East region is reliant on the transmission network to import energy to the region from abroad and other parts of Great Britain (GB) to meet peak demand due to low volumes of local generation on the south

⁷ [Decision on the Regional Energy Strategic Plan Policy Framework](#)

⁸ [transitional Regional Energy Strategic Plan \(tRESP\) Consultation | National Energy System Operator](#)

⁹ [tRESP Pathways | National Energy System Operator](#)

coast. Additional interconnectors and significant generation and demand projects anticipated in the region are expected to further impact the transmission network, alongside increased distribution loads.

- As of 2024, the South East RESP region reported a fuel poverty rate of 9.4%, below the national average of 11.0%. Of the 57 lower tier authority areas (including unitary authorities), 37 have a fuel poverty rate below 10%. However, the picture across the region is varied. There is a trend that coastal areas tended to be most affected by fuel poverty, with the 15 worst affected local authority areas all having a coastline. Hastings and Thanet are worst affected with fuel poverty percentages above 14%. At a ward level in Kent, Sheppey East in Swale, Folkestone Central, Folkestone Harbour, Tower Hamlets in Dover, and Barton in Canterbury experience fuel poverty percentages above 20%. This highlights the locality of such statistics and that while the South East as a whole has lower levels of fuel poverty than many other RESP nations and regions, there are still significant areas of fuel poverty within the region.
- For domestic heat pumps, the baseline at the end of 2024 was 54,000 installed units across the South East RESP region, of all types (air source, ground source). This is projected to rise to 330,000 in 2030, and 3,054,000 in 2050. A household that replaces a gas boiler with a heat pump increases its demand for electricity by around 60% per year¹⁰, thereby placing significant extra demand on the electricity grid.
- For electric vehicles, the baseline at the end of 2024 was 317,000 vehicles of all types (pure, hybrid, car, van, motorcycle, coach, heavy goods vehicles) across the South East RESP region. This is projected to rise to 1,827,000 vehicles in 2030, and 5,919,000 vehicles in 2050 (forming 14.5% of electric vehicles in GB by mid-century). As with heat pumps, this corresponds to a significant increase in electricity demand on the grid as an average household that converts from a petrol car to an electric vehicle will use between 30 and 40% more electricity than before making the change¹¹.

Supply side

- In order to achieve a clean power system, the Government has set targets for clean energy generation that need to be achieved by 2030. The total target for GB for batteries is 11.2 gigawatts (GW¹²), for solar 36.2 GW, and for onshore wind 13.2 GW (there are also targets for nuclear and offshore wind, but these projects tend to connect directly to the transmission network and so are not relevant for the RESP/tRESP, which focuses on the distribution network. The transmission network carries electricity over long distances at high voltages from power stations to regional

¹⁰ [Household Heat Pump Adoption and Energy Use | NBER](#)

¹¹ [How much electricity will the UK need as it switches to electric heating and cars? | Carbon Commentary](#)

¹² A gigawatt is a unit of power. Power measures the rate at which energy is generated, used, or transferred. Watts are the standard unit of power, and a gigawatt is a much larger unit, equivalent to one billion watts.

substations, while the distribution network delivers electricity at lower voltages from those substations to homes and businesses).

- The UK Government's Clean Power 2030 (CP2030) Action Plan Connections Reform Annex¹³ published in April 2025, provided national and regional target capacity breakdowns – at Distribution Network Operator level – for batteries, solar and onshore wind. For the South East RESP area, this corresponds to 3.3 Giga Watts (GW) of distribution-connected solar capacity in the region. For onshore wind generation, the plan calls for 300 Mega Watts (MW) and for battery storage it calls for 1 GW.
- The South East RESP region currently has one of the highest installed solar capacities of the RESP areas, with 1.1 GW of installed capacity. An additional 2.8 GW is listed as 'planned' within the renewable energy planning database, again one of the highest totals across the RESP areas. The solar generation capacity is spread across the region, with projects of varying scale, and is on course to meet the 3.3 GW regionally aligned tRESP target.
- In contrast, there is 90.9 MW of onshore wind installed and a further 39.5 MW planned in the South East, one of the lowest totals across RESP areas. This reflects a combination of planning policy, population density and scarcity of natural wind resource.
- Battery storage capacity has seen significant growth in recent years but is a more recent addition to the GB wide energy system. The South East currently has 288 MW of installed capacity from batteries. However, there is a planned additional 5.3 GW, reflecting the steep increase in planned deployments.

6. Conclusion

- 6.1 The energy system is changing nationally and locally at a rapid pace. The transition towards a more renewables-based system requires careful and considered planning, and the RESPs are intended to ensure that national energy policy and targets are met through regionally appropriate projects.
- 6.2 As an upper-tier authority, KCC is set to play a key role in the future design of the South East's energy system, helping to ensure that Kent's residents and businesses benefit from a secure and efficient energy supply. From 2026-2027, KCC will work closely with NESO to help identify strategic investment needs for Kent's energy system and ensuring that local priorities are represented in national energy planning. From 2028 onwards, as a member of the strategic board for the South East RESP, KCC will play a more central role in the design and implementation of the regional energy system, with sign-off powers for the final plans.

¹³ <https://assets.publishing.service.gov.uk/media/67f3b417d3f1efd2ce2ab8a5/clean-power-2030-action-plan-connections-reform-annex-update.pdf>

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