# ZERO CARBON RUGELEY
# WP6-D1: HIGH-LEVEL ANALYSIS OF THE CURRENT AND FUTURE ENERGY CONSTRAINTS AND NEEDS

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| Element | Description |
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| Title | ZERO CARBON RUGELEY<br>WP6-D1: High-level analysis of the current and future energy constraints and needs |
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| Subject | Keywords – Distribution Networks (DNs), Embedded generation, Energy demand, Future energy development, Geographical Resources, Local assets, Rugeley Power Station, Smart Local Energy System (SLES), Storage, Transportation, Zero Carbon Rugeley (ZCR)<br>Glossary – Western Power Distribution (WPD) Future Scenarios |
| Description | Zero Carbon Rugeley project aims to design a Smart Local Energy System (SLES), which consists of different individual energy solutions that are integrated with each other and seek to decrease carbon emissions, reduce energy bills by at least 25% and provide wider benefits to the local area by 2030. In order to identify and design suitable energy solutions, a high-level analysis of the Rugeley energy system was conducted that would understand the current and future needs and constraints of the project area.<br>Overall, Rugeley SLES area is expecting a major on-going redevelopment with an important increase in the number of dwellings until 2030. However, the electricity distribution network has little capacity left and with the expected electrification of heat and mobility in the proceeding years, as well as possible integration of local generation, it would mean that extensive and quite costly reinforcement of the network would be required. Therefore, a detailed design of the smart local energy system for Rugeley Town that will take into account current and future assets in the area and will encompass smart innovative energy solutions for the vectors of electricity, heat and mobility is deemed necessary and will be able to drive the regeneration of the whole Rugeley town and wider region, offer additional value and services to its residents and be an innovative regeneration example for other areas in the UK. |
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