Project Reference Sheet | **Urban** | **Mobility planning**

Integrated mobility and energy for a new eco-district in Rugeley

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Client: Rugeley Power Station
Country: United Kingdom - Rugeley
Date/Period: 03/2019 - 09/2019

Investment: 61 kEUR

PROJECT DESCRIPTION

Rugeley Power Limited (ENGIE UK) requested our support to develop an integrated mobility and energy masterplan for a new eco-district in Rugeley neighborhood (residential, tertiary, shops, school, leisure) on a brownfield zone (former 1GW coal fired power station site). An integrated mobility and energy masterplan was performed to elaborate different scenarios as from now to 2040 and evaluate the actions to reach this final end vision from an energy (building fabric, RES generation asset, thermal storage and electricity storage) and mobility (EV penetration, autonomous shuttle, shared fleet, public transport) point of view. The final objective was to optimize the fabric cost and the local energy auto-consumption by minimizing the CO2 footprint of the overall system.

SERVICES PROVIDED

1. Estimation of the buildings energy demand profiles (electricity, heating, cooling);
2. Pre-sizing of the thermal solutions (gas boiler, boiler biomass and geothermal energy);
3. Priority list of solutions to be implemented (solar panels, batteries, thermal storage, Combined Heat and Power Turbine, biomass, geothermal);
4. Definition of the scenarios:
    a. Business As Usual;
    b. 100% green via certificates of origin;
    c. Same as b with on-site RES generation asset;
    d. Same as scenario c but Shops and Residential only 25% constructed;
    e. Same as scenario c but Shops and Residential only 75% constructed;
5. Optimum technical-economic solutions using simulation through PROSUMER tool, our multi-fluid simulation tool.