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**Energy Generation/Solar  
Potential on Council  
Buildings**

**Briefing for Climate & Environment Panel  
20 March 2024**



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**Context - 4<sup>th</sup> Carbon  
Management plan to 2029/30**


Electricity emissions account for 30% of the Council's total emissions- the plan sets out the following actions:

- Purchase of electricity from renewable sources
- Reduce electricity demand
- Staff carbon awareness and action

Gas combustion emissions account for 43% of the Council's total emissions

and the plan sets out the following actions:

- Decarbonising heating systems
- Reducing heat demand/improved energy efficiency
- Better controls
- Explore opportunities for new, innovative technologies
- Staff carbon awareness and action



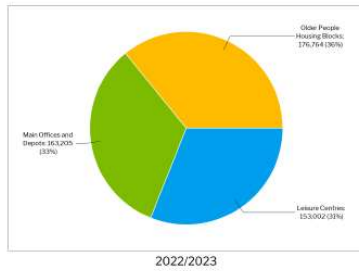
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## Energy generation

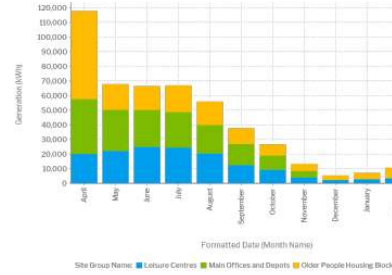
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Electricity - Generated On-Site PV



Electricity - Generated On-Site PV



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## Existing Provision

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- Solar is already installed on 14 major energy intensive assets, including many of our leisure and community centres
- Over 1000kWp of Solar PV installations, equivalent to over 10% of the council's current rate of electricity consumption.
- In 2022/203, solar provided 493,000 kWh of energy generation. The equivalent of electricity for 182 homes for a year\*
- Solar used to power the buildings and heat pumps
- Battery storage is already in place at 4 sites too

Rose Hill Community Centre – solar array

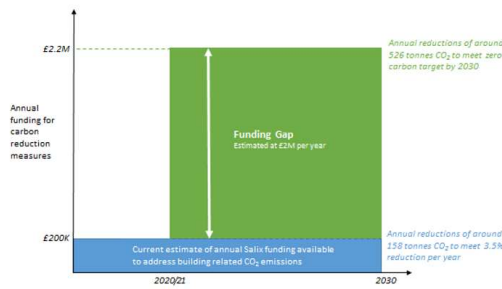


\* Ofgem estimate 2,700kWh of electricity is used in an average house pa. and 11,500kWh of gas.

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## Challenges

- Significant funding gap to meet Net Zero by 2030
- Existing infrastructure often needs upgrading to add solar
- Substantial grid constraints causing a backlog for renewable energy projects looking to join the grid. This impacts both energy generation (PV arrays) and offtake (heat pumps and EV infrastructure)
- Grid reinforcement due in part in 2028 and further in 2030.
- Government funding timescales for decarbonisation don't align with these constraints
- Solar options for much of our heritage assets are complex and expensive



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## Mitigation

### Strategic – Local Area Energy Programme (LAEP)

- Active engagement with County and the other DCs on energy capacity with SSEN. This will be via a Regional Energy Strategic Planner (RESP) model
- RESPs will work with electricity and gas networks, councils and others to determine a strategic, whole-system planning of the energy system at a regional level

### Tactical

- Investigation into use of further battery & solar solutions to counter grid constraints 2024-2030. Aiming for an additional 40kWp to be installed at Barton Leisure Centre
- We have tools that enable the council to determine areas that are less constrained which can reduce risk
- Cross-council service area collaboration to support mitigation of energy constraints in new developments and regeneration projects

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## Rose Hill report

Report assesses opportunities for carbon reduction solutions

- Many solutions reduce carbon but don't save money
- Those that reduce bills are costly to implement
- ROI outside required term to attract current government funding
- Existing infrastructure reinforcements not eligible for current grants, so OCC would need to fund

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