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Service Area Factsheet

# Energy Management

## How will energy management be impacted by climate change?

Our climate is changing. We each need to understand our role in addressing this challenge and work together to increase the resilience of organisations and society. Reducing carbon emissions is one of the elements to reduce the severity of climate change. This process of reducing carbon emissions is called 'Climate Mitigation'. It is equally important to preparing for the increase in extreme weather which we are already experiencing, and which is projected to increase substantially in intensity and frequency in the coming decades. We call this act of preparation 'Climate Adaptation'.

Local councils will play a pivotal role in the implementation of both Mitigation and Adaptation measures and must adopt a collaborative approach from different service areas to address the impact of climate change. Every service has something to offer to increase resilience for the council and communities it represents, from overall strategies to daily decisions and management.

This brief is not designed to provide a comprehensive overview, but rather to initiate discussion on the role of energy management in addressing the impact of climate change as part of a wider suite of documents for other services.

## What are the climate risks posed to energy management?

The role of energy management in combatting the impact of climate change is a key issue for local government, due to the huge impact on local communities, the economy and sustainability. Current and future impacts of climate change pose a number of risks to management of the energy infrastructure including:

- Extreme weather events, such as strong wind, potentially damaging power lines or wind turbines.
- Extreme weather events potentially causing damage to equipment that will impact on power distribution.
- Temperature fluctuations may result in a reduction of transmission efficiency of electrical power.
- Extreme climate change events impact the wholesale price on energy in the global energy markets impacting on the cost and security of energy[1].

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## What actions could you take?

Adaptation measures can reduce system vulnerability to environmental change by building capacity and integrating climate risks into management and operational decisions[2]. You could take action by getting involved with your council's adaptation planning process, which should outline short to long-term impacts.

Reducing carbon emission by effective Energy Management will reduce the future impact of climate change at a local level. Recommended actions for Energy Management, include but are not limited to:

- Investing in technologies and practices that are resilient to predicted climate changes. For example, buildings to include ventilation systems to avoid overheating as summer temperatures are predicted to increase.
- Consideration of weather events and climate change trends in the planning and design of new infrastructure. For example, taking consideration of possible flooding when selecting sites such as, coastal locations which may need enhanced flood protection or critical assets may need to be elevated[3].
- Amend Building Standards to futureproof the energy efficiency of buildings and implement appropriate adaptation measures, including risk-based design and construction standards and structural upgrades to infrastructure[4].
- Develop, invest and resource an energy strategy including resilience, a carbon reduction action plan and carbon baseline analysis and targets.
- Work with central government, business, higher education and local stakeholders to define local vulnerability and achieve carbon targets.

## References


[1]Adaptation Scotland (2020) 'The security and efficiency of our energy supply' Available online: https://www.adaptationscotland.org.uk/why-adapt/impacts-scotland/security-and-efficiency-our-energy-supply

[2]Ebinger, J. & Vergara, W. (2011) 'Climate Impacts on Energy Systems- Key Issues for Energy Sector Adaptation' Available online: https://www.esmap.org/sites/esmap.org/files/E-Book_Climate%20Impacts%20on%20Energy%20Systems_BOOK_resized.pdf The World Bank.

[3]Chartered Institute for Securities & Investment (2014) 'Energy Sector Faces Major Challenges from Climate Change- infographic' Available online: https://www.cisl.cam.ac.uk/business-action/low-carbon-transformation/ipcc-climate-science-business-briefings/pdfs/infographics/ipcc-ar5-implications-for-energy-infographic-we.pdf


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