

Report to	North Wales Fire and Rescue Authority
Date	20 January 2025
Lead Officer	Stuart Millington, Assistant Chief Fire Officer
Contact Officer	Tim Christensen Environment and Climate Change Manager
Subject	Power Decarbonisation Plan



PURPOSE OF REPORT

- 1 This report sets out the details of North Wales Fire and Rescue Service's (the Service) Power Decarbonisation Plan (the Plan), which provides detailed measures and timescales to mitigate the carbon emissions arising from the electricity consumption of the Service's fleet and estate for the period up to 2030.

EXECUTIVE SUMMARY

- 2 Under Welsh law, the Service is required to mitigate its operational carbon footprint by 2030. The Plan addresses the emissions from electricity consumed by the Service's estate and vehicle fleet, with a detailed plan to eliminate these emissions as required under our Environmental Strategy.
- 3 The Plan proposes installation of solar photovoltaic arrays at all Service sites where power demand is sufficient to warrant them. This is to be funded by external borrowing on preferential terms from Salix Finance Ltd. (a body set up by central government to fund self-funding efficiency measures in public buildings), and will be repaid from savings achieved on a cost-neutral basis, yielding positive financial return once the capital cost has been repaid.
- 4 Other energy efficiency measures may be undertaken to sites under the same scheme of works (such as LED lighting upgrades) where the overall package meets the cost neutrality criteria required by Salix Finance. The Plan also sets out the Service's aims around procurement of low carbon electricity where commercially viable to do so.

RECOMMENDATION

- 5 **It is recommended that Members:**
 - i) **Approve the Power Decarbonisation Plan.**

OBSERVATIONS FROM THE EXECUTIVE PANEL/AUDIT COMMITTEE

6 This paper has not previously been considered.

BACKGROUND

7 The Environment (Wales) Act 2016 requires Welsh Government to enact a series of carbon budgets, setting out a path for Wales as a nation to be carbon neutral by 2050. Under Carbon Budget 2, the Welsh public sector is required to have reached this goal by 2030.

8 To comply with this ambition, the North Wales Fire and Rescue Authority (the Authority) adopted an Environmental Strategy on 17 July 2023 covering the period 2023-2030. Among other targets, this Strategy mandated the development of a Power Decarbonisation Plan, setting out how we would mitigate the Scope 2 (indirect) carbon emissions arising from the consumption of electricity.

9 A Members Working Group was convened between April and July 2023 to provide Members with relevant information and to obtain strategic direction for the development of detailed decarbonisation plans. This group endorsed the power decarbonisation strategy set out in this report.

INFORMATION

10 The Plan sets out a series of measures the Service may employ to reduce the carbon footprint of its electricity consumption. This includes micro-generation (with a preference for solar photovoltaic), energy efficiency improvements to the fabric of our estate, and measures around the procurement of green energy delivered via the National Grid.

11 We intend to enact the Plan in tandem with the Heating Decarbonisation Plan (approved by the Authority on 21 October 2024). Where sites have heating systems replaced with low-carbon alternatives, we will aim to install solar photovoltaic arrays, battery systems, and carry out efficiency retrofits to building fabric. These schemes will be funded via Salix Finance, with cost savings modelled beforehand to ensure the schemes are cashflow neutral or positive.

12 Although the Service plans to generate a significant amount of its own renewable energy, the Plan relies on decarbonisation of the National Grid to fully mitigate Scope 2 carbon emissions. Current central government policy is to have <1% hydrocarbon-derived electricity on the grid by 2035, therefore it is anticipated that there will remain some residual Scope 2 carbon emissions by the target date of 2030.

- 13 Mitigating this small residual carbon footprint would be disproportionately difficult and expensive, and has not been recommended to Members at this time as it is believed that the resources required are better utilised in mitigating the Service's Scope 1 (direct) emissions instead.
- 14 Structural surveys of the roofs of all Service-owned buildings have recently been undertaken, to identify suitable locations for solar arrays.

IMPLICATIONS

Well-being Objectives	The proposed Plan aligns with the Authority's stated Well-being Objectives.
Budget	Proposed retrofits are to be funded by external borrowing, with repayments fully offset by improved efficiency. The Plan is anticipated to be cashflow neutral initially, and positive within eight years.
Legal	Risk of non-compliance with Well-being of Future Generations (Wales) Act 2015 and Environment (Wales) Act 2016.
Staffing	No changes to staffing levels are anticipated as a result of this Plan
Equalities/Human Rights/ Welsh Language	EDI Manager consulted through the development of this Plan, no issues raised.
Risks	<ul style="list-style-type: none"> Fluctuations in energy markets can directly affect the business case for renewable energy installations. Proposals will be set out based on electricity prices at the time; however solar arrays will ultimately end up profitable regardless. Battery storage systems may present a slightly increased risk of fire. The Service will take all reasonable measures to mitigate this through procurement, regular inspection and careful location of installations. Insurers will be notified to ensure continuity of cover.