

DARE

The Neath Port Talbot Decarbonisation and Renewable Energy Strategy



Cyngor Castell-nedd Port Talbot
Neath Port Talbot Council

Why Should we DARE?

At Neath Port Talbot Council, we recognise that tackling climate change is necessary and urgent.

Dependency on energy derived from fossil fuels is threatening the way we live. Unless we respond, the impact will be felt by everyone in Neath Port Talbot and throughout the world. The council is determined to respond with commitment and speed. So, this DARE (Decarbonisation and Renewable Energy) strategy is our rounded response to the challenges we face.

We want Neath Port Talbot to be at the heart of positive change. The emphasis is on action, and we want to work with partners to accelerate the shift needed. We also want the people of Neath Port Talbot to DARE with us.



**WE WANT
NEATH PORT
TALBOT TO BE
AT THE HEART
OF POSITIVE
CHANGE**

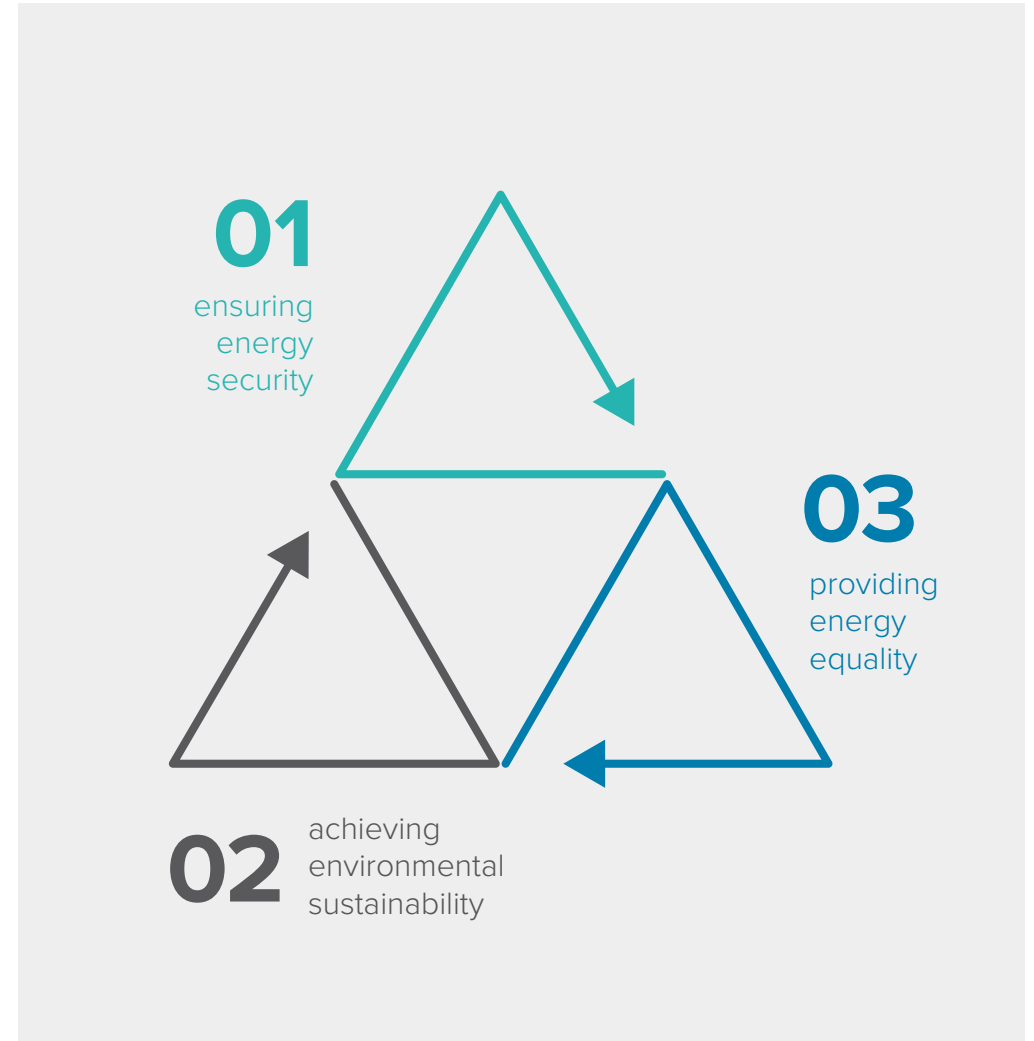
This is a summary of the DARE strategy. The full document is available at:
www.npt.gov.uk/DARE

The Energy Trilemma

Put simply, the energy trilemma is about addressing three often conflicting challenges:

- ensuring energy security
- providing energy equity with access to affordable clean energy and
- achieving environmental sustainability

Balancing these three sometimes conflicting priorities is central to the challenge we face. They provide the framework for climate action for governments and businesses around the globe, and for DARE.





**A CLEANER,
MORE
PROSPEROUS
AND HEALTHIER
COUNTY
BOROUGH**

What is Decarbonisation and Renewable Energy?

Decarbonisation is about minimising greenhouse gas emissions, specifically carbon dioxide (CO₂). Switching to sources of renewable energy is how we achieve this reduction.

Renewable sources are sustainably available within the environment. They include the sun, the wind and the movement of water. Examples of renewable and low carbon energy developments include wind farms, combined heat and power, biomass, hydro, tidal and wave power, and solar technology.

Taking greater care of the natural environment will also play a major role. Plants, the soil and the oceans can store carbon, preventing its damaging release in the atmosphere. Initiatives such as tree planting, peatland restoration and wetland and woodland management, are vital.



Drivers for Change

Since 2010 there have been numerous UK and Welsh Government plans and acts which set the strategic and legislative context for DARE. Perhaps the most notable of which is the Well-being of Future Generations (Wales) Act 2015. This ensures public bodies take account of the issues around health, resource consumption, and the environment for future generations.

Action on climate change and decarbonisation are crucial to achieving the objectives of the Act. Within the Swansea Bay City Region (SBCR), the Re-Energising Wales Project (Regen) sets out a vision for climate action up to 2035. It requires a step change in energy efficiency and renewable energy generation. It also calls for a decarbonisation of heat, a transport revolution, greater local energy generation and ownership, and a switch to smart energy.

A focus on achieving these objectives as part of a wider economic vision for SBCR has been made possible by the Swansea Bay City Deal strategic programme. This is a collaboration between the Welsh Government, the four local authorities, Universities, and the private sector in the city region.

The City Deal investment programme will transform the regional economy by improving skills, commercialising new technologies and ideas, and building expertise in digital technologies, life science and wellbeing, energy and advanced manufacturing.

Decarbonisation and renewable energy are key themes within the programme. It will promote the region as a test bed for the demonstration, integration and commercialisation of Future Energy Systems and create a test bed for renewable energy providers.



Key Projects and Initiatives

Neath Port Talbot Council will lead on two City Deal projects which integrate with DARE:

- **Homes as Power Stations (HAPS)**
- **Supporting Innovation and Low Carbon Growth**, a programme of seven inter-related projects which together are designed to deliver low carbon, sustainable and inclusive economic growth for the region.

The Challenge for Neath Port Talbot

Geographically, Neath Port Talbot is characterised by its diversity. A coastal corridor extending around Swansea Bay with the main centres of population, employment and the M4. And a series of river valleys separated by upland plateaus and mountains.

It is an employment base with long established heavy industries like Tata Steel. This together with the M4 and major arterial roads, 62,000 households and wide mix of industrial, business and extractive industries, impact on our air quality.

Neath Port Talbot has around 45% of woodland cover – nearly three times the average found in other Welsh counties. The county borough also has one of the most significant southerly upland deep peat resources in Wales. This means that our natural environment has the potential to be a significant store of carbon. This carbon store could be released through unsympathetic management practices and changes to land use. So, these areas need to be conserved through sustainable and appropriate management and, in some cases, restored, including degraded upland peatland.

Improving air quality is also important for people’s health and wellbeing. The council’s Air Quality Strategy: ‘Airwise - Clean Air for Everyone’, has already resulted in improvements, but more work is needed, and this is an important aspect of DARE.



DARE – The Vision

A cleaner, more prosperous and healthier county borough.

Our mission

To maximise the economic, social, health and environmental benefits of decarbonisation through a focus on renewable energy.

- Reducing the carbon emissions, resulting from delivering the council’s work programme. Lessening energy consumption and switching to energy sources that are less harmful to the environment.
- Overcoming barriers to renewable energy and encouraging the use of sustainable and renewable resources.
- Managing our natural resources so that carbon sequestration is maximised, and carbon release is minimised.
- Working with partners and business, sharing good practice, assets and resources.
- Promoting the benefits of cleaner energy and emission reduction to council employees and the people of Neath Port Talbot.
- Attracting additional funding from Welsh Government and other relevant sources.



Key Projects and Initiatives

The DARE strategy is a comprehensive programme of priorities, projects and initiatives. Combined, they impact on much of the work of the council.

There are 3 strategic themes:

TRANSPORT

BUILDINGS AND SPACES

INFLUENCING BEHAVIOUR

TRANSPORT



Upgrading of Council Fleet

The annual renewals programme of the council’s fleet of vehicles will focus on migration to cleaner and more energy efficient vehicles. We will trial new alternative fuel vehicles and continue to monitor new technologies as they enter the market. As an example, following various trials which showed reductions in MPG, CO₂ emissions and noise pollution, the council has introduced electric bin lifting technology across the fleet.

Electric Vehicle Charging Infrastructure

The introduction of Electric Vehicles (EVs) is a key component in helping the UK meet its targets for decarbonising transport and reducing air pollution. This will lead to a surge in demand for accessible charge points. The council will work with leading academics and industry partners to produce an effective, impactful and future-proof electric vehicle charging strategy.

The goal is to create smart charging stations and the grid infrastructure required to support modern charging technologies. This will be supported by a wider research programme including future economic/business models for electric vehicle charging stations.

THE GOAL IS TO CREATE SMART CHARGING STATIONS



Integrated Transport Hub

The new Integrated Transport Hub at Port Talbot Parkway Station brings together various modes of transport including rail, bus, car, and taxi. It also links to Active Travel options such as walking and cycling. It helps to encourage modal shift to public transport and can reduce the number of private car journeys. The intention is to make the Port Talbot development a blueprint for other hubs at key locations.

Taxi Licencing

The council will consider options for adopting low emissions specification as a future requirement for licencing. Such a move would need to be coordinated with improvements to the development of EV charging infrastructure, including on street points particularly at taxi ranks or similar.

Biofuels

The council is working with ‘Lanzatech’ which specialises in the re use of waste gases from industrial processes to enable conversion into biofuels. The company plans to deliver a pilot project within Neath Port Talbot which will utilise waste gases from Tata Steel. It is anticipated that once fully operational, the plant will generate 30 million gallons of biofuels for the aviation industry each year.





BUILDINGS AND SPACES

Operational Building Portfolio - Energy/Carbon Management

The council will continue to reduce the consumption of energy, water and carbon emissions throughout our estate. This involves a combination of energy improvement programmes and building rationalisation plans. This is likely to involve a reduction in the number of operational buildings as well as improvements in space utilisation. We will make existing building stock as energy efficient as possible, installing renewable and low carbon technologies where practicable and viable. Energy efficient, environmental and sustainable design will be a key consideration in all new build and refurbishment projects.

BREEAM Excellent

The council actively supports the Welsh Government requirement to achieve a “BREEAM excellent” rating on major publicly funded building development projects. This accreditation covers elements such as green travel, energy performance, insulation, carbon reduction and green energy. For example, planned developments through the 21st Century Strategic Schools Improvement Programme, will all be BREEAM Excellent.





Energy Positive Buildings and Homes as Power Stations.

Energy positive buildings generate more energy from onsite generation low carbon and renewable technologies than they consume. The Homes as Power Stations (HAPS) programme and the energy positive Bay Technology Centre will act as the pathfinder projects to prove the concept of energy positive buildings for homes and non domestic buildings. The council will lead on promoting and delivering the HAPS project aiming to deliver smart, low carbon, energy efficient homes through a coordinated approach across the City Region.

The Bay Technology Centre will provide high quality and flexible office space for start ups and companies including those focused on Cleantech. There will be a focus on innovation and research and development. The development is designed to be energy positive. A hydrogen stimulus programme will link to the Hydrogen Centre at Baglan Energy Park, to export surplus electricity and to produce hydrogen for public sector vehicles.

This will act as a pathfinder low emission transport demonstrator for the council. The ultimate goal is to demonstrate the viability and commercial potential of the creation of hydrogen from renewable sources.

Flexible Integrated Energy Systems Project (FLEXIS)

FLEXIS is a £24.5m project to create next generation low carbon energy systems. The council is working in partnership with three universities and Tata Steel. Neath Port Talbot is the base for the only demonstration area in Wales. The vision is the creation of a national centre of excellence delivering low carbon technology, smart programmes and applications. It will embrace innovative ways to provide multiple benefits which meet the needs of businesses and residents of Neath Port Talbot.


A keystone within the FLEXIS project is the delivery of a Smart Low Carbon Town. The delivery of the Smart Low Carbon Town will require a holistic and integrated approach. This will include real time data analysis, smart technology applications, renewable and low carbon technologies, security of supply, health and wellbeing, commercialisation, awareness raising, inward investment, and a programme of learning,



South Wales Industrial Transition from Carbon Hub (SWITCH)

This is a response to the need to decarbonise the steel and metals industry, and to future proof the industry through innovative R&D. In partnership with academia and the private sector, SWITCH will carry out research to support the steel and metals industry and supply chain to improve competitiveness, build product capability and reduce carbon emissions.





**THE COUNCIL
EMBRACES
RENEWABLE AND
LOW CARBON
TECHNOLOGIES**

Street Lighting

Further upgrading of the street lighting will concentrate on the replacement of nearly 2,000 higher energy street lamps with lower energy LED lighting. The council will take advantage of the Welsh Government Salix funding scheme which enables transfer to more energy efficient lighting.

Renewable and Low Carbon Energy Development

The council embraces renewable and low carbon technologies where practicable and viable. Specific projects include 0.5MW of roof mounted Solar PV at a number of operational sites including Hillside Secure Unit, Gnoll Visitor Centre and Awel-y-môr Primary, Ysgol Bae Baglan, Ysgol Ystalyfera, Ysgol Bro Dur and Ysgol Cwm Brombil Shools. The council is also currently refurbishing a 30kW hydroelectric installation at Margam Country Park.

Active Travel and Rights of Way Networks

The council is continuing to prioritise improvements to the Active Travel network across the county borough and Public Rights of Way (PROW). This will maximise opportunities to make journeys and access the countryside without requiring the use of cars.



Green Infrastructure, Ecosystem Resilience and Biodiversity

The council is prioritising the creation and sustainable management of Green Infrastructure (GI) and wider ecosystems to sequester carbon, address pollution and flood alleviation and provide wider benefits such as health and wellbeing.

A GIS based mapping system has been developed to identify areas with high demand for GI, and those areas which provide opportunity for creation or improvement of GI. The maps can be used to take a strategic approach to GI enhancement ensuring that measures are taken in the appropriate locations.

The council has received funding to restore a historic peatland landscape in the uplands area between Neath Port Talbot and Rhondda Cynon Taf. ‘The Lost Peatlands Project’ seeks to restore more than 540 hectares of historic landscape and habitat, including peat bogs and pools, heathland, grassland and native woodland; and as blanket bog is rare across the world, the project will have a major international impact.

Air Quality Monitoring Programme

This is a comprehensive research project. We are creating a network of air quality monitors which will provide precise, localised data on air quality levels. This is a pathfinder project with potential to roll out across the region, Wales, the UK and worldwide.





Ysgol
Bae
Baglan

**INFLUENCING
BEHAVIOUR**



Partnership Working

Working in partnership with a wide range of partner organisations from the public, private and voluntary sectors, the council will look at establishing and promoting best practice. This will include the creation of a Climate Change Working Group.

Awareness Raising Campaign

Promoting awareness of the vital importance of climate action and encouraging positive change will be key. Messages will include positive lifestyle changes to reduce personal carbon footprints such as waste reduction, sustainable purchasing, less private vehicle use or car sharing.

It will also be important to promote a more active lifestyle which brings additional benefits in terms of health and wellbeing. Encouraging more use of public transport will also be important.



Sustainable Procurement

The council will adopt a ‘Sustainable Procurement’ approach. We will meet our needs for goods, services and works in a way that not only achieves value for money, but also ensures that the potential negative impacts on the environment are minimised.

Agile Working

The council supports agile working within the workplace. The pandemic has demonstrated the potential of virtual meeting technology and home working. It will also reduce the need for travel to and between workplaces, and so reduce our carbon footprint.

Next Steps

Building on the overarching DARE strategy, we will prepare a ‘2030 Net Zero Carbon Action Plan’. It is an ambitious target, but the council is committed to raise the bar on tackling climate change. The Plan will be a living document, continuously reviewed and kept up to date to reflect changes in policy or advances in technology. Key milestone reviews will be built into the Plan to monitor progress and to check we’re on track to deliver.



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