



Northumberland

County Council

CABINET

10TH DECEMBER 2019

NORTHUMBERLAND CLIMATE CHANGE ACTION PLAN 2020-21

Report of: Rick O'Farrell, Interim Executive Director of Regeneration,
Commercial and Economy

Cabinet Member: Cllr Glen Sanderson, Environment & Local Services

Purpose of report

1. To provide an update on the actions taken by the County Council since declaring a Climate Change Emergency in June 2019 and to seek Cabinet approval to the proposed Climate Action Plan for 2020/21 attached as Appendix A, and the associated additional capital and recurring revenue expenditure.

Recommendations

2. It is recommended that the Cabinet:-
 - a. Notes the current position and progress made since declaring a Climate Change Emergency in June 2019;
 - b. Approves the Climate Action Plan for 2020/21, as detailed in Appendix A;
 - c. Seeks the approval of County Council for the provision of additional capital of £3,357,151 within the Medium Term Financial Plan to cover the period 2020/21 to 2022/23;
 - d. Seeks the approval of County Council for the provision of recurring annual revenue expenditure of £80,125 from 2020/21, and;
 - e. Gives delegated approval to the Service Director - Local Services in consultation with Cabinet Member for Environment and Local Services, to update and amend the action plan so that it remains accurate and further measures can be progressed in a timely manner.

Link to Corporate Plan

The draft Climate Action Plan will contribute to all of the priorities included in the Northumberland County Council Corporate Plan 2018-2021:

- How - efficient, open and work for everyone: We will listen to and consider public views as we develop our plan and we will empower local communities to do their part to tackle climate change
- Living - living, safe, healthy and cared for: We will work to reduce the impact of fuel poverty and climate change on community wellbeing
- Enjoying - love where you live: We will conserve and protect our exceptional natural environment assets
- Connecting - access to the things you need: We will promote resident access to sustainable transport options and renewable energy sources
- Learning - achieve and realise your potential: We will encourage the uptake of science, technology, engineering and maths (STEM) skills to support the development of our green economy
- Thriving - attract more and better jobs: We will position the county as a national exemplar location for renewable and low carbon energy generation and other green industry

Key Issues

Climate science has clearly shown that in order to prevent dangerous levels of global warming carbon emissions do not just need to be reduced, they need to end. It is necessary to achieve 'net zero' emissions as soon as possible, the Government has legislated for this to happen by 2050.

Northumberland County Council recognises the need for urgent action, which is why it has declared that there is a climate emergency and has set the target date of net zero emissions for the county as 2030. We have also brought forward our target date to halve our own operational emissions from 2030 to 2025, and we will publish an updated action plan for our own aim for net zero emissions by 2030 before 2024.

Clean growth is about decarbonising the county whilst improving the local economy. There are economic opportunities for Northumberland as the need for renewable, clean energy generation and use can attract clean economic growth, potentially lowering our residents', communities' and businesses' energy costs.

Decarbonising the county will require the support, commitment and action of our residents, communities and businesses to make changes in their day to day activities that have an impact on the climate. We also have to attract significant

investment and funding in the application and advancement of low and zero carbon technologies. We are making good progress in positioning the county to allow this change, such as securing the Borderlands Inclusive Growth Deal.

In June we committed to developing a draft Climate Change Action Plan within 6 months of declaring a climate change emergency. We have honoured this commitment and, following a public event in Morpeth and various other engagement activities, the action plan was approved by the Climate Change Steering Group in November and is now submitted to Cabinet before being considered by the Full County Council in January 2020.

Background

Improved sustainability, reducing carbon emissions and tackling climate change are key priorities for the County Council. An e-petition asked the Council in June 2019 to further its efforts in its approach to climate change management in light of the Intergovernmental Panel on Climate Change (IPCC's) special report on global warming and specifically to:

- 1) Declare a 'Climate Emergency'.
- 2) Pledge to make Northumberland County Council carbon neutral by 2030, taking into account both production and consumption emissions.
- 3) Call on Westminster to provide the powers and resources to make the 2030 target possible.
- 4) Continue to work with partners across the county and region to deliver this new goal through all relevant strategies.
- 5) Report to Council within six months with an action plan identifying what steps the Council will take to address this emergency.
- 6) Establish a committee of people representing local groups to oversee the action plan.

The Council's draft Climate Action Plan has delivered points 1,2,4 and 6 of the petition and is on course to deliver 3 and 5.

The actions contained in the draft were shared with:

- Members of the public at an information event in October
- Town and Parish Councils Liaison Committee in October
- Three Rivers Learning Trust in October
- All Members' briefing in October
- Local Area Councils during November.
- Climate Change Working Group in November

The draft action plan was also approved by the Climate Change Steering Group in November and is attached as Appendix A.

Progress to Date

The main areas of progress made since declaring a climate change emergency in June 2019 are as follows:-

- A Governance structure has been established to oversee the approach to addressing climate change targets. Along with this has been the appointment of a Senior Project Manager to oversee the whole programme.
- A dedicated email address has been established for anyone to write to the Council regarding climate change, and is generating a wide range of enquiries, including offers of assistance which are being responded to.
- An online staff resource is being progressed which will raise the awareness of climate change understanding and how staff can play their part towards emission reduction.
- The draft Climate Action Plan has been reported to the Climate Change Working Group and approved by the Climate Change Steering Group in November 2019.
- Additionally the Council has announced its intention to set up a Northumberland Climate Commission formed from a wide range of both academic, professional and business experts to provide independent strategic advice, guidance and feedback to the Steering Group and Council. Terms of reference and membership of that group are being progressed by the Programme Management Team.
- Also invitations to potential members of the five thematic groups which form our approach to climate change have been issued, and plans for the first meetings are due to take place in December 2019.

As existing actions within the plan are progressed, new opportunities are identified and funding is secured, it will be necessary to ensure the plan is updated quickly and projects can be delivered when they are needed. It is therefore recommended that delegated approval is given to the Service Director - Local Services, in consultation with the Cabinet Member for Environment and Local Services, to update and amend the action plan so that it remains accurate and further measures can be progressed in a timely manner.

Areas of Ongoing and Immediate Work

The action plan contains a range of on-going, immediate and future actions that will be progressed over the next financial year and beyond. The key areas of on-going and immediate work include the following:-

- Continuing dialogue and engagement with members of the public has been noted from feedback the Council has received (on how to tackle climate change). Both residents and businesses being engaged is key to success.

To aim for a net zero county requires all to do 'their part' and that climate message needs to be fully understood and acted upon. A Communications Officer would allow for the increased engagement required keeping residents and businesses informed of measures they can take and measures the Council has taken. A new 0.5 FTE Communications Officer is proposed costing £20,000 per annum, along with a dedicated communications and campaigns budget of £30,000 giving an annual recurring cost of £50,000.

- Working with public transport service providers to improve access to bus and rail services and to promote and attract passengers to services which serve the many residential, tourist and business destinations.
- Increasing access to EV charging infrastructure to build upon the current provision and improve the geographic coverage across the whole county. It is proposed that, subject to council approval, £0.5m is allocated in the capital budget for 2020/21 for the provision of additional charging infrastructure.
- Making walking and cycling more attractive and accessible. Finalise our local cycling and walking infrastructure plans that identify a network plan for walking and cycling preferred routes and core zones giving a prioritised programme of infrastructure investment.
- Decarbonising the Council fleet, undertaking a fleet review with a view to securing an investment in new electric vehicles to replace petrol and diesel commencing in 2020.
- Continuing to support the Northumberland to Newcastle passenger train line through bids to the Rail Network Enhancements Pipeline funding and Transforming Cities Fund.
- Working with partners and funders to establish an increased provision of emissions capture, including increased tree planting, forest and peat restoration. This will be achieved by a proposed Emissions Capture Officer being financially supported (employed by the Northumberland National Park) which would have an annual recurring cost of £10,125. To fully understand the potential for increasing carbon capture from natural interventions such as deep peat, hedgerow, tree restoration and planting it is envisaged a dedicated Officer would be able to measure and ensure:
 - ❑ Current levels of natural capture coverage
 - ❑ Future potential natural capture coverage
 - ❑ Land management change opportunities to increase and sustain capture
 - ❑ Grants and support opportunities for capture
- It is also intended to develop proposals that will encourage residents to become actively involved in tree planting activity. This will be realised by a 'free tree' scheme which would see the council offering the opportunity of a free tree to every household in the county, with £20,000 allocated in year 1 and the budget reviewed the following year subject to uptake. As part of this initiative the Council will also develop a tree planting scheme for schools.
- Identifying Renewable Energy Projects is key to reducing the council's own emissions. The current renewables programme financial value is established but it does not reflect the now urgent need to decarbonise heat, particularly in the light of the potential end of financial incentives to do so (see below).

Proposed Renewable Energy Projects

Northumberland County Council has a good track record in renewable heat having installed 12 ground source heat pump systems (in place of electric or oil) annually delivering a reduction of 333 tonnes of carbon, with a further two recently completed and commissioned in November 2019 delivering a further 22 tonnes.

Emissions from burning gas for heat are difficult to tackle as the price of gas is extremely low when compared against the price of electricity, which is used to power the ground source heat pump systems. By way of comparison a unit of heat from a gas boiler would be approximately 2.1p/kWh whereas the cost of heat from a ground source heat pump would be approximately 3.5p/kWh.

To encourage the wider uptake of renewable heat the Renewable Heat Incentive (RHI) pays an amount that roughly covers the capital expenditure but where the new heating system displaces one where the energy running costs are lower than the ground source system it does not make a positive NPV which is the case for gas burning heating systems.

There are three important considerations to make in relation to gas replacement:

- RHI is currently due to finish 31st March 2021 at which point these systems would be very expensive to install and not provide a return.
- There is a value at stake in terms of the RHI availability which offers a cost avoidance benefit of **£4,888,177** if NCC decides to progress with these installations and secures their completion before the end of March 2021. However, it should be noted that the NPV for these schemes over a 20 year period does still represent an estimated net cost to the Council of £1,239,780 to deliver an annual carbon reduction benefit of 437.9 tonnes.
- Without replacing some of our gas boilers with ground source heat pumps it is unlikely that Northumberland County Council will be in a position to deliver its 50% carbon emissions reduction target by 2025 (see above).

Heat pumps alone will not ensure the 2025 target is met but they play a significant role, given their proven reduction in emissions in moving closer to that target.

Table 1 - Proposed Additional Renewable Projects Heat

	Site Name	GSHP kW Install Size	Year 1 tCo2 Saved	Investment	20 Year RHI	NPV	Boiler remaining life
1	Mowbray Daycare GSHP	77	77.4	£213,481	£170,535	-£45,888	End of Life
2	Blyth Leisure Centre	450	99.5	£990,000	£1,413,786	-£246,206	2 years
3	Willowburn Leisure Centre	450	99.5	£990,000	£1,413,786	-£246,206	End of Life
4	County Hall "Dog Leg" GSHP	638	161.5	£1,806,000	£1,890,070	-£701,480	C. 5-10 years
Total		1615	437.9	£3,999,481	£4,888,177	-£1,239,780	

It should be noted that the leisure centres within the list above utilise numbers based on high level calculations undertaken by a consultant and are subject to change should we have them surveyed by our nominated ground source heat pump installer.

Hydroelectricity Generation

A number of commissioned pieces of work have identified two potential hydroelectric projects which merit further investigation. We are waiting to confirm external funding to support the development of Hexham Hydro to full feasibility and design stage, however Table 2 below has indicative numbers based on the high level feasibility study already completed.

A high level feasibility study has also been completed at Morpeth, however it is seen to be prudent to only take one project forward at a time so that the learning outcomes of that project can be used to improve the second. As such Morpeth will not be taken to full design and feasibility study stage until the completion of Hexham Hydro. Table 2 below has details of both projects taken from the high level figures. Both projects are intended to supply renewable electricity to the leisure centres of their respective towns.

In order to make a final decision on whether the Hexham Hydro should be undertaken to an actual installation, then a full study has to take place to a very detailed level to ensure the potential of the energy generation will be realised and anticipated carbon reductions are met. External funding is being sought to help support the feasibility study. However, a provision of £50,000 has been included

within Table 3 below so that if external funding is not forthcoming this essential work can still progress.

Table 2 - Hexham Hydro (should it go to construction).

Site	kW	kWH / Year	NCC Use %	Energy Used directly by NCC building	% of building electric demand supplied by Hydro	Investment Cost (*includes £50k feasibility cost)	Pay back (years)	NCC Carbon Saved 2025 Year (tonnes)
Hexham Hydro	230	1,165,000	90% (approx)	1,048,500	90%	£1,900,000	14.1	113.2
Total	230	1,165,000	90% (approx)	1,048,500	90%	£1,900,000	14.1	113.2

Solar PV

Cabinet approved on 12 November 2019 the capital budget requirement of £377,670 from the renewable energy provision within the 2020-21 capital programme for 5 projects that will generate an additional 350,664 kWh/year and save 31.85 tonnes of carbon per year.

The Council is also progressing a project to install a Solar Car Port in the rear car park at County Hall, which has been awarded ERDF grant funding to match the amount agreed by Cabinet on 6 August 2019. This project is therefore expected to go into delivery in Autumn 2020 and be completed by Summer 2021. This will support the roof mounted solar which is due to be completed at the same time as the external refurbishment and is expected to generate 877,174 kWh/year of electricity and save 86.6 tonnes of carbon.

Work is on-going to develop a further 7 solar PV business cases which will be taken through the Council's capital approvals process in the coming months on the following sites.

- Alnwick Lionheart Depot
- Blyth Leisure Centre
- Concordia Leisure Centre
- Foundry House
- Prudhoe Water World
- Tynedale House Aged Persons Home
- Wentworth Leisure Centre

These additional 7 projects are expected to require capital investment of approximately £600k to achieve and will approximately yield a further 50.6 tonnes of carbon saved each year.

The total increase in renewable energy generation from all solar projects will move the current 600,000 kWh of generation level to almost 2,200,000 kWh.

It should be noted that all of the Solar PV business cases to date, and it is expected that this will be the case for future projects, have a positive NPV over the life of the assets.

A summary of additional total capital ask and how this has been calculated is shown in Table 3 below, this shows a requirement when taking into account schemes existing and new along with the funding already secured in the MTFP as **£3,357,151**.

Summary of Funding Requirements

Tables 3 and 4 below summarise the additional capital and revenue funding requirements that have been identified to date as being required to support the delivery of the Climate Action Plan. These costs are from projects and measures which are the most financially advantageous as well as bringing about carbon emission reductions. It is recommended that this funding provision be allocated within the MTFP so that it can be drawn against once projects have been through business case and capital strategy consideration and other funding potential avenues explored such as ERDF, Borderlands Inclusive Growth Deal etc.

It should be noted that the list is not exhaustive and other capital and revenue projects will come forward for consideration in the coming months and years as the council measures performance against climate change targets.

In all cases external funding routes will be fully explored to reduce the financial burden placed on the council.

Table 3 - Capital Funding Requirements 2020-21 to 2022/23

Capital Funding Requirements	2020-21	2021-22	2022-23	Total
	£	£	£	£
<u>Schemes Identified</u>				
Hexham Schools climate change schemes as approved by Cabinet	200,000	200,000		400,000
5 Solar schemes as approved by Cabinet on 12 November	377,670			377,670
County Hall Solar Car Port	0	2,682,180	256,940	2,939,120
County Hall Roof Mounted Solar (£101,309 spent in 2018-19)		150,571		150,571
Development of further Solar PV cases	0	600,000		600,000
Hydro Schemes - Hexham	50,000	900,000	950,000	1,900,000

Renewable Heat	3,999,481	0	0	3,999,481
Sub Total	4,627,151	4,532,751	1,206,940	10,366,842
Funding Identified in draft MTFP				
Renewable Energy Programme Current MTFP	1,200,000	1,670,000	1,050,000	3,920,000
County Hall Solar Car Port	0	2,682,180	256,940	2,939,120
County Hall Roof Mounted Solar		150,571		150,571
Sub Total	1,200,000	4,502,751	1,306,940	7,009,691
Balance (Additional Capital Funding Requirement)	3,427,151	30,000	-100,000	3,357,151

A summary of annual recurring revenue ask is calculated at £80,125 and Table 4 below shows how this is calculated.

Table 4 - Recurrent Revenue Funding Requirements

Revenue Funding Requirements	2020-21
	£
Schemes Identified	
Emissions Capture Officer	10,125
Communications Officer	20,000
Communications & Campaigns Budget	30,000
Free Tree	20,000
Total	80,125
Funding Identified in MTFP	0
Revenue Funding Requirements	80,125

Implications

Policy	Policies of the Council may be aligned to mitigate and adapt to climate change.
Finance and value for money	<p>It is recommended that Cabinet seeks the approval of the Full County Council for the provision of additional capital of £3,357,151 within the Medium Term Financial Plan for 2020/21 to 2022/23 and that Cabinet approves recurring revenue expenditure of £80,125 per year.</p> <p>It should be noted that if this additional capital expenditure is approved it would bring the Council's total capital investment in renewable energy schemes to £10.366m over the MTFP period.</p> <p>Investing in low carbon technologies can bring about expenditure savings and a positive return on the capital investment over the lifetime of the technology from reduced utility costs. However, some investment may also result in increased costs of capital expenditure and potential increased costs in staff in order to achieve the carbon reduction targets. Projects will be subject to the Council's normal governance arrangements with businesses cases having to demonstrate value for money in terms of the investment made and expected benefits that will be realised (including level of carbon reduction). Wherever possible external funding and grants will be sought.</p>
Legal	Environmental lawyers have threatened legal action against 100 local authorities across England unless they introduce new climate change plans. There is a growing understanding of climate change urgency in a legal context.
Procurement	Procurement will have to consider sustainable procurement options and to work with our supply chain to reduce carbon emissions associated with their goods/services as well as plan for the new projects highlighted in this paper.
Human Resources	Staff will need to be made more aware of climate actions at work and how they can make a positive contribution to tackling climate change.
Property	Property will have new technologies installed and be better insulated and planned with climate change in mind.
Equalities (Impact Assessment attached)	Where possible projects and programmes will assist residents in fuel poverty and try to bring about fairer and more equal access to more affordable energy.

Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	
Risk Assessment	None at this stage undertaken.
Crime & Disorder	N/A
Customer Consideration	Residents of the council can expect the council to lead a move to a net zero target as climate change understanding accelerates.
Carbon reduction	Significant reductions will be met by the adoption of the draft Climate Action Plan
Wards	All

Background papers:

Cabinet Report titled 'Responding to Climate Change' 11th June 2019.

Report sign off.

Authors must ensure that relevant officers and members have agreed the content of the report:

	Full name of officer
Monitoring Officer/Legal	Liam Henry
Service Director Finance & Interim S151 Officer	Alison Elsdon
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