



REPORT TO: MEETING OF MORAY COUNCIL 6 APRIL 2022

SUBJECT: ROUTE MAP TO NET ZERO CARBON EMISSIONS

BY: DEPUTY CHIEF EXECUTIVE (ECONOMY, ENVIRONMENT AND FINANCE)

1. REASON FOR REPORT

- 1.1 To ask the Council to approve the Route Map to Net Zero (RMNZ), approve in principle an updated climate change action plan subject to consideration as part of the financial planning process, and note progress with the consultancy studies approved within the Climate Change Strategy (CCS) for 2020-2030.
- 1.2 This report is submitted to Council in terms of Section III (F) (33) of the Council's Scheme of Administration relating to providing, developing and monitoring the Council's Economic Development and Infrastructure Services.

2. RECOMMENDATION

2.1 It is recommended that Council:

- (i) **approve the RMNZ as set out in Appendix 1, subject to the issues noted below at (iii) to (vi);**
- (ii) **notes that In 2020/21 the Council recorded a 17% reduction in its annual carbon emissions reported. These annual greenhouse gas reports will be incorporated into an annual update of the RMNZ to improve accuracy of carbon emissions projections;**
- (iii) **notes that the current pathway the Council is on means that 2030 remains in the range of possible dates when net zero will be met. The RMNZ contains three pathways to help show options available for climate change actions as well as assumptions on which emissions will have to be considered in the definition of net zero. There is still insufficient data to guarantee that the actions the Council is taking to reduce carbon emissions will meet the 2030 target with minimal carbon sequestration;**
- (iv) **notes that decisions around rationalisation of building assets, as well as progress on the decarbonisation of heating and fleet, and progress on improvements to associated depot infrastructure, must be made by 2023-24 to allow for a more accurate estimate of**

- the level of carbon sequestration to meet net zero in 2030 to be determined;**
- (v) **notes the indicative additional budget pressure from 2023/24 onwards arising from new statutory climate change measures;**
 - (vi) **notes the additional actions and proposals as set out in section 5.4 below. These will require to be worked up and progressed through the council's financial planning process; and**
 - (vii) **notes the progress of the consultancy studies approved within the CCS as set out in Appendix 2.**

3. BACKGROUND

- 3.1 Climate change is the biggest challenge that we face in our lifetime and for future generations. On the 27 June 2019 the Council made a Declaration which recognised that climate change is an ecological emergency, and that the Council needs to take action to reduce carbon emissions (para 6 of the Minute refers).
- 3.2 In response to the commitments made in the declaration, on the 10 March 2021 (para 13 of the Minute refers) the Council adopted the CCS for 2020-2030. The strategy set a goal of the Council being carbon neutral by 2030 and that the Council, its Officers and Members will work with others across Moray to deliver that goal.
- 3.3 When the CCS and action plan was approved it was agreed that there was a need to develop a detailed route map to set out a pathway on how the Council could reach net zero emissions by 2030 and forecast how emissions will be reduced through the Council's actions.

4. ROUTE MAP TO NET ZERO

- 4.1 The RMNZ sets out the current pathway to net-zero for the Council by 2030 by explaining actions to target the Council's major emissions sources; buildings (electricity and heat), fleet, waste, and operating emissions.
- 4.2 Since November, engagement with Council services has been undertaken to build on the climate change action plan to develop a fuller implementation plan in the RMNZ. This version includes:
 - More details on estimated carbon impacts of actions in the action tables in each chapter, based on Council's approved budget decisions.
 - Additional emissions reduction projects scoped following thematic RMNZ workshops with services.
 - Emissions savings estimations based on work with services and interim reports from the consultancy studies approved within the CCS.
 - Updated baseline emissions based on the council's latest carbon footprint as published in the 2020/21 Public Bodies Climate Change Duties Report (PBCCD), and re-profiled projections based on most recent electricity grid decarbonisation projections and other emissions factors.

- 4.3 The RMNZ sets out the Council's strategic approach to reducing its corporate emissions and estimates the impact of carbon reduction projects on the Council's current and future carbon emissions. The annual emissions forecast of the Council's current pathway is shown as a range between lowest and highest estimates to highlight the uncertainties around current estimates of carbon reductions due to two main reasons:
- a lack of agreed timed, and costed plans to decarbonise current buildings. Reviews of current building stock and agreed management plans are not yet in place;
 - uncertainty around how scope 3 emissions would have to be included in the council's carbon footprint.
- 4.4 The areas with the greatest potential for securing further reductions are the reduction of thermal demand in buildings through energy efficiency improvements and the replacement of gas boilers with air source heat pumps or other low or zero carbon alternatives. At present, it is difficult to be certain there will be enough progress in the decarbonisation of the Council building stock to ensure the net zero targets are met with minimal offset. The current state of some of the buildings are unknown, and the works required to bring them to net zero is uncertain.
- 4.5 The current exercise to capture a programme of work to bring the public building stock to carbon neutral status will allow accurate figures on financial costs and emissions reductions to assist decisions the council makes on how to progress. An interim summary of this is included in **Appendix 2**. To progress this programme it is essential that the office, depots, and stores reviews are completed by 2023-24 to allow subsequent actions to progress at a pace that will allow the council to reach net zero by 2030.
- 4.6 In addition, it is not clear which emissions will be required to be reported and therefore offset by 2030. If this includes all potential scope 3 emissions then the total carbon footprint of the council might still be large. However, it could be assumed that the carbon footprint of such emissions are likely to reduce in line with expectation of the Council's pathway as businesses and suppliers also reduce their footprint. The scope of which emissions to include will be determined by 2025.
- 4.7 If the Council progresses decarbonisation of its buildings and fleet as a priority, and all decisions on future change are made by 2025, then a more accurate assumption can be made of residual emissions and the need for carbon sequestration through inset/offset. This will give a milestone for the Council to review the 2030 net zero target knowing the costs and carbon offset.
- 4.8 A timeline of current actions and milestones is shown in Table 4 in the RMNZ.

Date	Major Milestones	Additional Resources
2022-23	Publish hydrogen, fleet, and building decarbonisation strategies.	N/A
2022-23	Advance hydrogen strategy.	TBD
2022-23	Waste diverted from landfill to energy from waste plant.	N/A

2022-23	Commission research on carbon sequestration of council land holdings, along with opportunities to expand and manage land holdings to maximise these	TBD
2023-24	Complete office, depot and stores reviews to holistically consider rationalisation and climate change issues.	N/A
2023-24	Complete development of indicative Carbon Offsetting Plan.	N/A
2023-24	Complete school buildings condition and suitability review. Plans developed to achieve category B or higher in all schools.	N/A
2023-24	Ensure management of council land holdings is planned to maximise carbon sequestration.	TBD
2024-25	Complete Learning Estate Asset Management plan to identify opportunities for heating and power refurbishment to provide renewable alternative options for buildings, implemented over the next 10 years.	N/A
2025	All social housing to meet EPC Band C or higher by 2025.	Funded through an agreed Housing Business Plan. Investment and rental increases may be required
2025-26	New school in Findrassie operational – designed to meet energy efficiency targets set by the Scottish Government as part of the Learning Estate Programme investment programme	Energy reduction measures may cost 10% of budget to build school
2025-26	More accurate figures on residual emissions will be known and council can reassess commitment to 2030 date.	
2025-26	Start carbon offset project for estimated emissions between 2030 and 2045 in light of target after review.	Funding required.
2026-27	20% of fleet vehicles transferred to Ultra Low Emissions Vehicles (ULEV).	Target dependent on price, availability of vehicles and charging infrastructure
2029-30	New or refurbished Buckie High School designed with an energy saving methodology including options for renewable energy solutions. Potential Learning Estate Investment Programme project. Timescales for the project may be dependent on receiving SG LEIP funding (outcome based revenue funding linked to energy efficiency targets)	Energy reduction measures may cost 10% of budget to build or refurbish school
2030-31	New or refurbished Forres Academy designed with an energy saving methodology including options for renewable energy solutions. Potential Learning Estate Investment Programme project. Timescales for the project may be dependent on receiving SG LEIP funding (outcome based revenue funding linked to energy efficiency targets)	Energy reduction measures may cost 10% of budget to build or refurbish school
2030-31	75% of fleet vehicles transferred to Ultra Low Emissions Vehicles (ULEV).	Target dependent on price, availability of vehicles and charging

		infrastructure
2030-31	Assuming target remains at 2030, Carbon offset covers remaining emissions and Moray Council is carbon neutral.	
2032	All social housing improved to meet EPC Band B or higher by 2032.	Further investment in property and rental increases may be required
2035	Majority of school buildings improved (to include energy saving measures alongside other capital improvements).	
2038	All school buildings improved (to include energy saving measures alongside other capital improvements)	
2038	Scottish Government target of all public buildings to have decarbonised heating systems.	

A table showing the timings of actions split into three phases (Scoping & Research; Design & Development; Delivery) is included in Section 5 of the RMNZ.

- 4.9 In addition to the current pathway, The RMNZ also estimates two further pathways:
- an aspirational pathway which considers all possible emissions reductions actions with no financial barriers. This option reduces the level of offsetting required but technical barriers such as limitations on how many buildings could be improved annually, or when it is realistic to purchase new fleet vehicles, means that the costs will be considerably higher compared with the current pathway. Overall, this would unlikely be a good use of funds, however it may be that some activities would be practical to advance in a faster, more aspirational manner.
 - a restricted pathway where resources are not prioritised for climate change. This would have the consequence of potentially missing the 2030 deadline and requiring substantially more resources invested in carbon offsetting than the current pathway.
- On their own, neither of these pathways are considered to be practical to meet the goals set out in the CCS, however they have been worked up to estimate the impact on emissions of individual options and allow flexibility in individual actions if required.
- 4.10 It is accepted that there are practical reasons why all of the Council public buildings and fleet will not be converted to net zero by 2030. The Council will have to develop an offsetting strategy to plan how to sequester residual emissions to meet this target. Part of these emissions can be accounted by managing current land and woodland to maximise carbon sequestration. However, expertise will need to be commissioned to determine the extent of this and advice on how to manage current land holdings. Advice on the extent of additional woodland planting or to develop renewable energy projects to create an offsetting programme would also need to be commissioned.
- 4.11 Interim information from the consultancy studies approved within the CCS are set out in **Appendix 2**. These will be reported to committee when complete.

- 4.12 It is entirely feasible for the Council to achieve net-zero by 2030 if key decisions on building decarbonisation and rationalisation of the estate are taken early, and if progress is made to consistently improve fleet vehicles, reduce waste, and improve Council properties insulation, heating, and hot water systems over the next eight years. This would minimise offset which will require financing.

However, considering spend currently anticipated in the 10 Year Capital Plan, securing external funding for measures such as decarbonising council buildings will be essential if the target of 2030 is to be met.

- 4.13 The financial implications of being net zero by 2030 will require to be worked up and progressed through the council's financial planning process. From the interim results of the CCS studies, some indicative costs can be summarised as:

Buildings

- For the Corporate Estate to reach net zero by 2030, a financial budget of £19.3 million is required. This investment is estimated to lead to accrued financial savings of £1.3 million by 2030 with further annual energy cost savings. Even if this work is delayed, it will have to be completed by 2038 at the latest which is the backstop deadline for public buildings to have low carbon heating.

Council Housing - for upgrading 80% of the 6,291 council houses.

- For Council Housing to reach net zero, a financial budget of £61.9 million is required. This investment is estimated to lead to accrued financial savings of £2.5 million by 2030.

Fleet Decarbonisation:

- Estimates of the additional finances needed to decarbonise the fleet and provide associated infrastructure are not yet available. These are difficult to estimate due to restrictions in production models of low emission vehicles and some technological solutions are yet to be developed.

To reach net zero by 2030 under the current pathway, the residual emissions for Moray Council can be summarised as:

- An estimate of at least 60,000 tCO₂e from 2030-2045 to be offset.
- A financial budget estimate of at least £1.5 to £2.5 million will be needed for a long term carbon offsetting project to start before 2030. From 2030, an annual estimate of £25,000 recurring revenue for maintenance, tree felling, and conservation will also be required.
- As explained in the RMNZ, residual emissions should be reduced to as close to zero as is practical and offsetting is not a sustainable mechanism to avoid carrying out actions to reduce carbon emissions.

- 4.14 Delaying work to reduce carbon emissions will mean substantial additional expenditure on offsetting as well as requiring more expenditure in a shorter timescale after 2030 to meet legal requirements. Furthermore, Local Authorities are seen to have a critical role in tackling climate change through implementing national and local climate policy as it is recognised they have

significant influence on emissions beyond their organisational boundary. The Climate Change Strategy confirmed the Council's role in this respect.

- 4.15 The expectation is that over the next few years much of the additional public sector funding will be conditional on wider benefits such as the just transition to a net zero economy where reducing the impact on those most affected by the transition from oil and gas is a key principle. Adopting a clear route map to net zero will enable Moray Council to be in a better position to lever in such funding.

5. NEXT STEPS

- 5.1 The Council's emissions will continue to be reported annually through PBCCD statutory report each November, with the latest data brought to Committee.
- 5.2 The RTNZ will be periodically reviewed and refined as more projects are scoped out and more clarity is obtained in terms of carbon emissions from decarbonisation trends, future technologies or offsetting mechanisms and accounting, as well as greater visibility around the impacts of COVID-19.
- 5.3 An annual progress report on the route map will be brought to the Economic Development and Infrastructure Services Committee each year (in line with its remit) and will provide regular updates against actions and emissions progress.
- 5.4 The additional work to reduce emissions contained in the RMNZ will require substantial funding over the next ten years and will need to be progressed through the council's financial planning process. While, much of the initial planning for these changes should be able to progress using existing budgets, the results of the fleet, buildings, offsetting, and hydrogen strategies will require significant additional resources to progress and so will require future consideration as part of the financial planning process and support from substantial external funding streams which it is expected will become available as part of governmental efforts to achieve net zero.
- **Offsetting:** The work to commission research on the baseline carbon sequestration of Council woodlands and land holdings, along with opportunities to expand and manage will be fundable within current budgets. However, the work of implementing the actions in this research (such as works to change land management regimes, purchase of additional land, and tree planting to sequester emissions) will be set out in an Indicative Carbon Offsetting Plan in 2023/24, and presented to Council through the appropriate channels. This will provide information for the council in 2025 to reassess the commitment to the 2030 net zero target knowing the full costs and carbon offset. There will be a need for budget approval to progress the work contained in the offsetting strategy.
 - **Local Heat and Energy Efficiency Strategies (LHEES):** Work is progressing on phase 1 of LHEES, but to progress this further will require additional staff resources. If LHEES becomes a statutory duty, and is funded accordingly by Scottish Government, there will be a need to employ a coordinator to develop and progress a local strategy for

decarbonising heat in buildings and improving energy efficiency across the entire local authority area. Progressing this post would be subject to a separate report. Once an LHEES strategy is in place, external funding will need to be secured to progress the work of energy efficiency and decarbonisation of buildings in Moray. This development work would be the subject of a separate report.

- **Buildings, EV Charging & Hydrogen:** The consultancy studies for plans for the decarbonisation of buildings, electric vehicle changing and hydrogen opportunities for the Council and Moray will need to be developed, costed, and presented to Council through the appropriate channels. There will be a need for budget to be identified to progress the work in these strategies.
- 5.5 The Scottish Government has announced that a £500 million Just Transition Fund has been established to support Aberdeen, Aberdeenshire and Moray for the transition to a net zero economy over the next ten years. A report on opportunities for this fund in line with the RMNZ will be made in a future Just transition report.

6. SUMMARY OF IMPLICATIONS

(a) Corporate Plan and 10 Year Plan (Local Outcomes Improvement Plan (LOIP))

The CCS supports the priorities set out in the Corporate Plan and Local Outcomes Improvement Plan. The Council has declared a climate change emergency and the measures set out in the CCS seek to create a resilient, biodiverse, fair and more sustainable future for everyone within Moray.

The strategy and RMNZ are aligned to deliver the priorities:

- Ensuring a just transition for all in the shift to a low carbon economy;
- Addressing inequalities of fuel poverty;
- Empowering individuals and communities through education and information provision to make informed choices with respect to climate change;
- Protecting and enhancing the world we live in to protect it for the future; and
- Being innovative in identifying solutions for cost reduction and income generation opportunities.

(b) Policy and Legal

Climate Change (Scotland) Act 2009 places a duty on public bodies to act in a way they consider most sustainable and in the way best calculated to deliver emission reduction targets set in the Act.

Climate change is increasingly being embedded in all government policies ranging from Infrastructure delivery, energy policies and NPF4 and these will influence the majority of council policies moving forward.

(c) Financial implications

To achieve a position of net zero carbon emissions by 2030 will require significant capital investment. This will be subject to consideration as part of the financial planning process and will require substantial external funding.

As part of the Improvement and Modernisation Plan, Council reserves of £500k have been set aside for climate change actions in 2022/23 to fund initial preparatory work for the studies in the CCS.. However, progressing actions from the Electric Vehicles, Buildings, and Hydrogen Strategies, and offsetting plans that are not covered by current approved plans will require additional budgetary approval through the normal process and the leveraging in of external funding.

(d) Risk Implications

Climate change is arguably the biggest challenge that we face in our lifetime and for future generations. It poses significant risks to our health, our economy, our environment, and endangers the wellbeing of future generations. There is a risk that the Council's aim of being net zero by 2030 will not be realised if the actions within the CCS including decarbonisation of Council fleet and buildings are not progressed as a priority. This will require significant external funding, without which the 2030 target will not be reached.

(e) Staffing Implications

Future staffing implications will include the creation of a post of LHEES coordinator to develop and progress a local strategy for decarbonising heat in buildings and improving energy efficiency across the entire local authority area. This is subject to funding from Scottish Government for the post and would be the subject of a separate report.

The actions in the RMNZ were developed with services but significant external funding is required to progress these actions in the rapid pace set out in the report and actions to bridge the budget gap of £20m over 2023-2025 may impact on staffing levels and so capacity.

(f) Property

The outcome of the buildings decarbonisation strategy, summarised in **Appendix 2**, will impact on council housing, corporate buildings and the Learning Estate. These implications will be set out in more detail as the key actions relating to Property are progressed.

(g) Equalities/Socio Economic Impact

Climate Change will impact on every service area delivered by the council. It has the potential to impact on equalities for example in respect of support for active travel and fuel poverty which will have a positive socio-economic impact.

Climate change will lead to more extreme adverse weather events in Moray which will have a disproportionate impact on those already in poverty or with the inability to adapt to this change.

(h) Climate Change and Biodiversity Impacts

The RMNZ will help focus attention on the actions required to ensure the council is on track for the 2030 net zero target. Reducing emissions will help the global climate emergency and allow the council to lead by example. Tree planting and nature restoration to assist in carbon sequestration could be used to help promote biodiversity and amenity.

(i) Consultations

Consultations have been undertaken with the Chief Executive, the Depute Chief Executive (Economy, Environment and Finance), the Depute Chief Executive (Education, Communities and Organisational Development), all Heads of Service, Equalities Officer, Councillor Nicol as the Council's Climate Change Champion and Tracey Sutherland, Committee Services Officer. Where comments have been received, these have been included within the report.

7. CONCLUSION

- 7.1 This report provides an update on progress to the Council target of being carbon neutral by 2030. With the Climate Change team now embedded it is possible to start estimating the impact of current commitments to reduce emissions. The current pathway the Council is on means that 2030 remains in the range of possible dates when net zero will be met, but there are a number of uncertainties that need to be resolved to reduce this range and give a more accurate estimate.**
- 7.2 Decisions around building and depot infrastructure must be made no later than 2023-24 to allow for a more accurate estimate on the offset needed for the 2030 target.**

Author of Report: Rod Lovie, Principal Climate Change Strategy Officer

Background Papers:

Ref: