Topic: Heating and cooling

Engagement version November 2024

Requirements addressed in this section

Table 1 Information required by the Town and Country Planning (Scotland) Act 1997, as amended, regarding the issue addressed in this section.

Section	Requirement
Section 15(5)(b)	the principal purposes for which the land is used,
Section 15(5)(d)	the infrastructure of the district (including communications, transport and drainage systems, systems for the supply of water and energy, and health care and education facilities),
Section 15(5)(e)	how that infrastructure is used,

Links to evidence

- National Park (Scotland) Act 2000
  https://www.legislation.gov.uk/asp/2000/10/contents

- National Planning Framework 4
  https://www.gov.scot/publications/national-planning-framework-4/documents/

- Cairngorms National Park Partnership Plan 2022
  https://cairngorms.co.uk/wp-content/uploads/2022/09/Cairngorms-National-Park-Partnership-Plan-full-version-FINAL.pdf

- Securing a green recovery on a path to net zero: climate change plan 2018 – 2032 – update
  https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2020/12/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/documents/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero/govscot%3Adocument/update-climate-change-plan-2018-2032-securing-green-recovery-path-net-zero.pdf

- Energy Efficient Scotland
https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2018/05/energy-efficient-scotland-route-map/documents/00534980-pdf/00534980-pdf/govscot%3Adocument/00534980.pdf

- Scottish Government Energy Efficiency Policy
https://www.gov.scot/policies/energy-efficiency/energy-efficiency-in-homes/

- Scottish Government – Energy Efficient Scotland: route map
https://www.gov.scot/publications/energy-efficient-scotland-route-map/documents/

- Draft Energy Strategy and Just Transition Plan
https://www.gov.scot/publications/draft-energy-strategy-transition-plan/

- Historic Environment Scotland Climate Action Plan 2020 – 2025
https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=94dd22c9-5d32-4e91-9a46-ab6600b6c1dd

- Bioenergy update – March 2021
https://www.gov.scot/publications/bioenergy-update-march-2021/

- Draft Bioenergy Policy Statement
https://www.gov.scot/publications/draft-bioenergy-policy-statement/

- New Build Heat Standard
https://www.gov.scot/collections/new-build-heat-standard/

- Heat in Buildings Strategy 2021
https://www.gov.scot/publications/heat-buildings-strategy-achieving-net-zero-emissions-scotlands-buildings/

- Heat in Networks Delivery Plan
https://www.gov.scot/publications/heat-networks-delivery-plan/documents/

- Scotland's Heat Map
https://heatmap.data.gov.scot/custom/heatmap/

- Opportunity areas for district heating networks in the UK: second National Comprehensive Assessment https://www.gov.uk/government/publications/opportunity-areas-for-district-heating-networks-in-the-uk-second-national-comprehensive-assessment

- Moray Council Local Heat and Energy Efficiency Strategy 2023 – 2028 http://www.moray.gov.uk/downloads/file156795.pdf

- Highland Council Local Heat and Energy Efficiency Strategy 2023 https://www.highland.gov.uk/downloads/file/28141/local_heat_and_energy_efficiency_strategy_lhees

- Aberdeenshire Council Local Heat and Energy Efficiency Strategy 2024 https://engage.aberdeenshire.gov.uk/aberdeenshire-lhees

- Perth and Kinross Council Local Heat and Energy Efficiency Strategy 2024 – 2045 https://www.pkclimateaction.co.uk/files/LHEES-Strategy_PKC_10.07.24.pdf

- Angus Council Local Heat and Energy Efficiency Strategy 2024 https://engage.angus.gov.uk/angus-local-heat-energy-efficiency-strategy-and-delivery-plan

- Renewable Energy Guide for Developers and Communities working with Scottish Water https://www.scottishwater.co.uk/-/media/ScottishWater/Document-Hub/Key-Publications/Energy-and-Sustainability/ScottishWaterCommunityRenewableGuidanceUpdated12022019.pdf

- Ballater and Crathie Community Action Plan 2023 https://www.ballaterandcrathiecommunitycouncil.com/_files/ugd/ff0841_f2f9573586ef4cf3a753d7a57adcb57c.pdf

- Braemar Community Action Plan https://cairngorms.co.uk/wp-content/uploads/2021/01/2017-BraemarAction-Plan.pdf

- Carrbridge Community Action Plan: Looking to 2030 https://cairngorms.co.uk/wp-content/uploads/2022/07/Carrbridge-Community-Action-Plan-2022.pdf

- Dalwhinnie Community Action Plan: Looking to 2030 https://cairngorms.co.uk/wp-content/uploads/2024/03/DalwhinnieCAP2023Report.pdf

- Kincraig Community Action Plan https://cairngorms.co.uk/wp-content/uploads/2015/07/2011-KincraigActionPlan.pdf

- Laggan Community Action Plan: Looking to 2023 https://cairngorms.co.uk/wp-content/uploads/2023/02/Laggan-Community-Action-Plan-2022.pdf

- Mount Blair Community Action Plan https://cairngorms.co.uk/wp-content/uploads/2021/01/1013_18-Mountblair-and-Glenshee-Action-Plan.pdf

- Nethy Bridge Community Action Plan: Looking to 2030 https://cairngorms.co.uk/wp-content/uploads/2024/03/Nethy-Bridge-Community-Action-Plan-2023-1.pdf

- Newtonmore Community Action Plan: Looking to 2023 https://cairngorms.co.uk/wp-content/uploads/2022/07/Newtonmore-Community-Action-Plan-2022.pdf

- Strathdon Community Action Plan 2016 https://cairngorms.co.uk/wp-content/uploads/2015/04/160601StrathdonActionPlan.pdf

- Cairngorms climate change projections https://cairngorms.co.uk/wp-content/uploads/2024/02/Climate-projections-for-the-Cairngorms-James-Hutton-Institute-31-Jan-2024.pdf

- Opportunity areas for district heating networks in the UK – National Comprehensive Assessment of the potential for efficient heating and cooling https://assets.publishing.service.gov.uk/media/61371cdbd3bf7f05b166a517/opps_for_dhnnca_hc.pdf

- ParkPower Methodology Report Green Heat in Greenspaces 2021 https://www.greenspacescotland.org.uk/Handlers/Download.ashx?IDMF=335590f1-e4bb-4dea-b2fd-904fe6b1e3c8

- Green Heat in Greenspaces Settlement Profile Dashboard https://gscot.maps.arcgis.com/apps/dashboards/f2f378969d21430cab5c8e14529e56e5

- Green Heat in Greenspaces Greenspace Dashboard https://gscot.maps.arcgis.com/apps/dashboards/cb44d859b4934da0ad09221012f42274

- Green Heat in Greenspaces data – Scotland https://www.data.gov.uk/dataset/e98578c6-9a32-47bc-8e01-c83b7061c8a0/green-heat-in-greenspaces-ghigs-scotland

Summary of evidence

Policy context

National Parks (Scotland) Act 2000

The National Park has four distinct aims as set out in The National Parks (Scotland) Act 2000). Of particular significance to this paper are the second and forth aims; 'to promote sustainable use of the natural resources of the area' and 'to promote sustainable economic and social development of the area's communities'. The aims are all to be pursued collectively. However, if there is conflict between the first aim and any of the others, greater weight is given to the first aim (as set out in Section 9(6) of the 2000 Act).

National Planning Framework 4

National Planning Framework 4 Policy 19 aims to 'to encourage, promote and facilitate development that supports decarbonised solutions to heat and cooling demand and ensure adaptation to more extreme temperatures.'.

The Local Development Plan should take into account the Local Heat and Energy Efficiency Strategy (LHEES) produced by all of the five local authorities which overlap the boundary of the Cairngorms National Park (Figure 1). The spatial strategy should take into account areas of heat network potential and any designated Heat Network

Zones (HNZ) in the National Park as identified by the local authorities Local Heat and Energy Efficiency Strategies.

Development proposals within or adjacent to a Heat Network Zone identified in a Local Development Plan will only be supported where they are designed and constructed to connect to the existing heat network. Existing Heat networks in the National Park are identified in this report.

In line with Policy 19, where the Local Heat and Energy Efficiency Strategy has identified a potential heat network which is not yet in place, development proposals will only be supported where they are designed and constructed to allow for cost-effective connection at a later date.

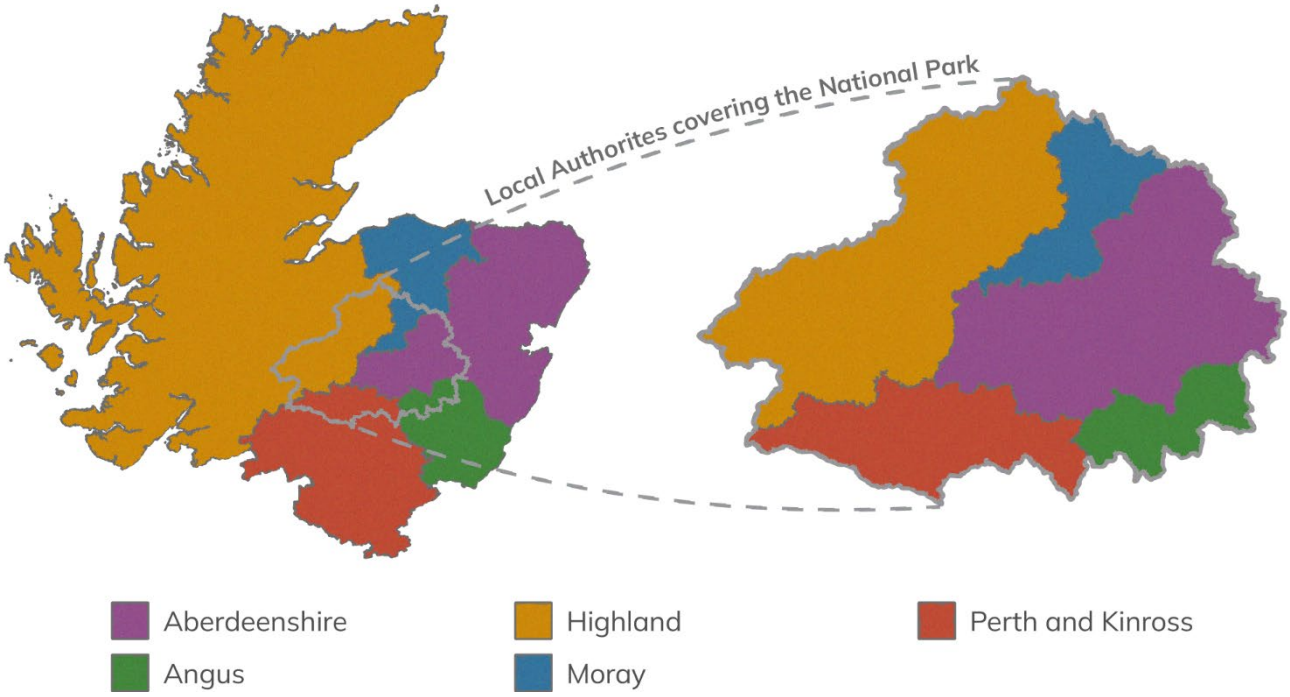

Figure 1 Map showing the five Local Authorities which cover areas of the Cairngorms National Park. Each Local Authority has or will be publishing their own local heat and energy efficiency strategy and plans. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2024. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

National Planning Framework Policy 18 is closely linked to the delivery of Policy 19 in that Local Development Plans sand delivery programmes should:

- Be informed by evidence on infrastructure capacity, condition, needs and deliverability within the plan area, including cross boundary infrastructure.

- Set out the infrastructure requirements to deliver the spatial strategy, informed by the evidence base, identifying the infrastructure priorities, and where, how, when and by whom they will be delivered.
- Indicate the type, level (or method of calculation) and location of the financial or in-kind contributions, and the types of development from which they will be required.

Plans should align with relevant national, regional, and local infrastructure plans and policies and take account of the Scottish Government infrastructure investment hierarchy and sustainable travel and investment hierarchies in developing the spatial strategy. Consistent early engagement and collaboration between relevant stakeholders will better inform decisions on land use and investment.

Policy 19 is closely linked to Policy 1, where National Planning Policy Framework 4 places significant weight on addressing the climate crisis and reducing greenhouse gas emissions.

Policy 19 is also linked to Policy 11, Energy, which states that local development plans should seek to realise their area's full potential for heat from renewable, low carbon and zero emission sources by identifying a range of opportunities for energy development.

Policy 2: Climate mitigation and adaption also has a bearing on the plans and strategies outlined in this section. Policy 2 has been detailed in a separate topic paper.

The North region's spatial priorities, which cover the National Park and are relevant to this policy area are:

- Protect environmental assets and stimulate investment in natural and engineered solutions to climate change and nature restoration, whilst decarbonising transport and building resilient connections.
- Support local economic development by making sustainable use of the areas' worldclass environmental assets to innovate and lead greener growth.

Infrastructure Investment Plan 2021 – 2022 to 2025 – 2026

Scottish Government's Infrastructure Investment Plan focuses on three core strategic themes for guiding investment in decisions in Scotland, namely:

- Enabling the transition to net zero emissions and environmental sustainability.
- Driving inclusive economic growth.
- Building resilient and sustainable places.

The Infrastructure Investment Plan is closely linked to the development of the National Planning Framework 4 and the Climate Change Plan which aim to support the delivery of the Plan.

The Climate Change Plan update shows how Scotland will drive down emissions to meet its climate targets up to the year 2032. Scottish Government have committed to £1.6 billion investment in heat and energy efficiency in Scotland's homes and buildings. Scottish Government are rolling out a Net Zero Carbon Public Sector Buildings Standard, ensuring new public buildings are net zero ready.

The Plan also aims to support the Energy Efficient Scotland route map which aims to transform Scotland's buildings to be warmer, greener and more efficient by 2040.

Securing a green recovery on a path to net zero: climate change plan 2018 – 2032 – update

The document provides an update to the 2018 Climate Change Plan. Since that Plan Scottish Government have set new ambitious targets to end its contribution to climate change by 2045. Scottish Government have committed to reduce emissions by 75% by 2030 (compared with 1990) and to net zero by 2045. As Scotland emerged from COVID-19 the Government identified an opportunity to rebuild the economy in a way that delivers a greener, fairer and more equal society. This Plan sets out the Governments approach to delivering a green recovery and sets out a pathway to deliver its climate change targets. In line with the 2018 plan, the focus is on the period up to 2032. It sets out a number of outcomes, that are supported by policies and proposals, relating to heating and cooling. These are as follows.

The outcomes 'the heat supply to our homes and non-domestic buildings is very substantially decarbonised, with high penetration rates of renewable and zero emissions heating' and 'our homes and buildings are highly energy efficient, with all buildings upgraded where it is appropriate to do so, and new buildings achieving ultra-high levels of fabric efficiency' are supported by the following policies:

- Energy Company Obligation (ECO) requires obligated energy supply companies to deliver energy efficiency measures in homes – mainly insulation-based measures and boiler replacements.
- Energy Efficient Scotland Delivery Schemes:
  - Area Based Schemes and Warmer Homes Scotland.
  - Home Energy Scotland Advice Service and Loans.

  - Home Energy Scotland cashback scheme for zero emissions heating technologies and energy efficiency measures - boosted.
  - SME Advice Service and Loans.
  - SME cashback scheme for zero emissions heating technologies and energy efficiency measures - boosted.
- We will review existing Scottish Government funding schemes to ensure that they support the deployment of low and zero emissions heat. We will expand the provision of loans to the SME sector, and enhance the wider energy efficiency and heat advice service and provision of tailored start-to-end support.
- Procure a new national delivery scheme, to replace the existing Warmer Homes Scotland contract, to open in 2022.
- Energy Efficiency Standard for Social Housing: will be met by social landlords by 2020.
- 2024 New Build Zero Emissions from Heat Standard: requiring new buildings to have zero emissions heating systems.
- Review of energy standards within building regulations. The review investigates the potential for further, significant improvement on 2015 standards and how building standards can support other carbon and energy policy outcomes, including our decarbonisation of heat agenda.
- Heat in Buildings regulation: Put in place regulation to increase uptake of zero emissions heating systems and improve energy efficiency standards across all tenures, prioritising the raising of standards for households living in fuel poverty.
- Re-introduce revised regulations to the Scottish Parliament requiring mandatory minimum energy efficiency standards for the Private Rented Sector, to come into force from 2022.
- Low Carbon Infrastructure Transition Programme (LCITP) - supports investment in decarbonisation of business and the public sector.
- Expanded £1.6bn Heat in Buildings capital funding over the next parliament Building on the Low Carbon Infrastructure Transition Programme (LCITP) and existing energy efficiency and zero emissions heat support programmes.
- Non-Domestic Public Sector Energy Efficiency (NDEE) Framework:
  - A four-year framework launched in March 2016, designed to support public and third sector organisations to procure Energy Efficiency retrofit work. The Framework will continue for a further four years commencing in 2020.
  - NDEE Support Unit accelerates the number of projects and delivery timescales of public sector energy efficiency projects using the Non-Domestic Public Sector Energy Efficiency Framework and supports our wider ambitions around energy demand reduction.

- The Renewable Heat Incentive (RHI) - a GB-wide scheme created by the UK Government (with the agreement of the Scottish Government). UK Government is extending both the domestic and non-domestic Renewable Heat Incentive out to 2022.
- UK Green Gas Support Scheme - a GB-wide Green Gas Scheme is planned to come into force in 2022, stimulating biomethane injection into the gas grid.
- UK Clean Heat Grant - a GB-wide Clean Heat Grant is planned to come into force in 2022, supporting uptake of heat pumps (and limited biomass boilers) via up-front grants.
- Support for Heat Networks: the District Heating Loan Fund helps address the financial and technical barriers to district heating projects by offering low interest loans.
- Implement the provisions of the Heat Networks (Scotland) Bill to create a strong regulatory framework to support delivery by 2023.
- Continue to support the Heat Network Partnership - a collaboration of agencies focused on the promotion and support of district heating schemes in Scotland.
- Net Zero Carbon Public Sector Buildings Standard will be introduced in 2021 and progressively rolled out across the public sector, as announced in the Programme for Government 2019.
- Local Heat and Energy Efficiency Strategies (LHEES) will be in place by the end of 2023, setting out preferred heat solutions zones, guiding building owner decision making about replacement heating systems, and forming the basis for local delivery plans targeting heat and energy efficiency investment.
- Assessment of Energy Performance and Emissions Regulations (Non-Domestic Buildings) - The Assessment of Energy Performance of Non-domestic Buildings (Scotland) Regulations 2016 require assessment of the energy performance and emissions of larger non-domestic buildings (those over 1,000m²). A review programmed for 2021 will investigate and consult upon amended scope of standards and more challenging improvement targets to create a viable pathway for all existing non-domestic buildings to deliver the level of energy demand and emissions reductions needed.
- Support for community low and zero emissions heat projects through the Community and Renewable Energy Scheme (CARES).
- Salix financing facility to support investment in non-domestic buildings retrofit.
- Work with social landlords to bring forward the review of the existing Energy Efficiency Standard for Social Housing (EESSH2) with a view to strengthening and realigning the standard with net-zero requirements.

- Work with our partners, including the UK Government, local authorities and utility providers to determine the best approach to heat decarbonisation for buildings currently heated by natural gas.
- Review the system of building assessments and reports on energy performance and heat to ensure a system that is fit for purpose in meeting net zero emissions objectives for heat in buildings.
- Work with stakeholders to further understand and support the application and use of low and zero emissions heating within designated historic environment assets and hard to treat buildings.
- Develop and introduce future regulation for non-domestic buildings and launch a consultation on these proposals.
- Develop and introduce future regulation for non-domestic buildings and launch a consultation on these proposals.
- Undertake work to identify the capacity and output of renewable electricity generation required in Scotland to support the projected roll-out of heat pumps.
- Consider whether to extend Permitted Development Rights for zero-emission heat networks and micro-renewable technologies.
- Undertake work to better understand the impact on electricity networks of projected heat pump deployment.
- Work with the Distribution Network Operators through the Heat Electrification Partnership to build an evidence base to inform business planning.
- Work with industry and networks to understand need for heat pumps systems to be smart enabled, and identify options to integrate smart systems into our delivery programmes; and to explore how innovation can help to improve the consumer experience.
- Support heat networks through:
  - Introducing a Non-Domestic Rates Relief for renewable and low carbon heat networks until 2023 / 2024.
  - Working to identify how new buildings in Heat Network Zones could be made ready to connect to heat networks.
  - Including district heating within the Permitted Development Rights review.
  - Through National Planning Framework 4, ensuring that local development plans take account of where a Heat Network Zone has been identified.
- Explore how local tax powers could be used to incentivise or encourage the retrofit of buildings, and commission further analysis to identify potential options.
- Design future delivery programmes to ensure significantly accelerated retrofit of buildings, with new programmes to be in place from 2025.

The outcome that 'the heat transition is fair, leaving no-one behind and stimulates employment opportunities as part of the green recovery', is supported by the following policies:

- Develop a long-term public engagement strategy in 2021 and begin implementation of early actions.
- Smart Meter installation: All homes and businesses will be offered a smart meter by 2020 under a UK Government initiative, providing the opportunity for a greater understanding of final energy consumption.
- Respond to the recommendations of the Expert Advisory Group on a heat pump sector deal for Scotland, by Quarter 1 2022.
- Bring forward and support demonstrator projects, such as: hybrids and high temperature heat pumps; the use of hydrogen for space and water heating; projects to understand the impact of heat transition on existing energy networks.
- Publish a 'Heat Network Investment prospectus' in 2021 / 2022 - a first-cut of Heat Network Zones across Scotland, combined with information on decarbonisation needs of existing networks.
- Establish a short life working group on finance for the heat transition.
- Establish principles to underpin our commitment to 'no-one being left behind' in the heat transition, ensuring our approach neither increases the fuel poverty rate nor increases the depth of existing fuel poverty. This will include the effective design and targeting of our fuel poverty and heat in buildings programmes.
- Ensure Local Heat and Energy Efficiency Strategies are developed through extensive engagement with local communities.
- Continue delivery of energy efficiency investment to support fuel poor households and conduct further modelling and analysis to better understand the potential impact of the heat transition on fuel poor households and the scale of, and options for, mitigation that may be required.

The outcome that 'Scotland's Industrial sector will be on a managed pathway to decarbonisation, whilst remaining highly competitive and on a sustainable growth trajectory', is supported by the following policies and proposals:

- Establish and deliver a Scottish Industrial Energy Transformation Fund (SIETF) – to support the decarbonisation of industrial manufacturing through a green economic recovery.
- Making Scotland's Future: multi-faceted programme will boost manufacturing productivity, innovation, and competitiveness, supporting manufacturing businesses to make the transition to net zero and realise the opportunities of a low carbon economy.

- Low Carbon Manufacturing Challenge Fund: to support innovation in low carbon technology, processes and infrastructure. Will be based on successful delivery of European Regional Development Fund (ERDF) funded Advancing Manufacturing Challenge Fund.
- The Renewable Heat Incentive is a GB-wide scheme created by the UK Government (with the agreement of the Scottish Government). UK Government is extending both the domestic and non-domestic Renewable Heat Incentive out to 2022.
- Scottish Industrial Decarbonisation Partnership (SIDP): Scottish Government - convened cross-sector energy-intensive-industrial (EII) stakeholder forum with representatives from manufacturing sites. Initial objectives: bring together other initiatives; build a shared narrative between government / industry on decarbonisation; and disseminate best-practice.
- Deliver a Net Zero Transition Managers Programme to embed Managers in organisations tasked with identifying, quantifying and recommending decarbonisation opportunities for the business.
- Green Jobs Fund, to help businesses create new, green jobs, working with enterprise agencies to fund businesses that provide sustainable or low carbon products and services to help them develop, grow and create jobs. Further funding will help to ensure that businesses and supply chains across Scotland can capitalise on our investment in low carbon infrastructure such as the decarbonisation of heating and green transport.

Draft Energy Strategy and Just Transition Plan

In 2023 Scottish Government opened the consultation for the Energy and Just Transition Plan which will provide a route map of actions Scottish Government will take to deliver a flourishing net zero energy system that supplies affordable, resilient and clean energy to Scotland's workers, households, communities and businesses.

Ambitions are set for increased contributions from solar, hydro, marine energy and hydrogen in the energy mix, and for accelerating the decarbonisation of heating in Scotland.

Energy Efficient Scotland

Scottish Ministers designated energy efficiency as a National Infrastructure Priority in 2015, recognising the many benefits delivered by improving the energy performance of Scotland's buildings. The Energy Efficient Scotland programme sets out Scottish Governments commitment delivering on this priority.

The programme aims to set out a route map for improving the energy efficiency of Scotland's buildings to reduce energy consumption leading to reduced greenhouse gas emissions. In 2018 the Scottish Government published the Energy Efficient Scotland: route map which sets out the Governments programme for making Scotland's homes, businesses and public buildings more energy efficient.

Energy efficiency in homes

Scottish Government published a consultation on proposals for a Heat in Buildings Bill in November 2023. This sought views on the introduction of a new Heat in Buildings Standard. This standard will require privately-owned homes across Scotland to meet a minimum standard of energy efficiency before the end of 2033, and before the end of 2028 for homes in the private rented sector. It also proposes to prohibit the use of polluting heating systems after 2045. Under the plans, the new laws proposed include:

- That all homes and businesses will have to move to a clean heating system by the end of 2045
- People buying new homes and buildings before 2045 would be asked to move to a clean heating system within a set period after the sale.
- Minimum energy efficiency standards for all homes by the end of 2033, to make them warmer and less expensive to heat - private landlords would need to do this by the end of 2028.

Heat in Buildings Strategy: Achieving Net Zero Emissions in Scotland's Buildings

Scottish Government's Heat in Building Strategy, published in 2021, sets out Scotland's vision for the future of heat in buildings. It sets out the actions being taken in the buildings sector to deliver Scotland's climate change commitments, maximise economic opportunities, and ensure a just transition, including helping address fuel poverty.

The strategy sets out Scottish Government ambition that by 2033, all homes in Scotland will be at an energy efficiency of at least EPC band C (where feasible and cost effective). This will be done simultaneously with rapidly upscaling the deployment of zero emissions heating systems, with the aim that by 2030 over one million homes and the equivalent of 50,000 non-domestic buildings are converted to zero emissions heat. This will be delivered by partnership working with local government through the Local Heat and Energy Efficiency Strategies.

The Strategy provides an update to the 2018 Energy Efficient Scotland Route Map and the 2015 Heat Policy Statement and bringing together Scottish Government's ambitions

on energy efficiency and heat decarbonisation into a single framework. It reflects and supports the policies and actions set out by the Climate Change Plan and the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, delivering a pathway to zero emissions in buildings by 2045. Its actions are also reflected in the Housing to 2040 Strategy.

In Scotland over 450,000 homes do not use gas as their primary heating fuel and of these, just over 260,000 use electric heating, such as storage heaters, with around 170,000 using high emission fuels including heating oil, LPG or high carbon solid mineral fuels such as coal.

This is the case for the majority if the homes in the Cairngorms National Park in the absence of a gas network. Although there is a small proportion of buildings in the National Park that will utilise renewable or low emissions heating systems, there remains a significant challenge in the National Park to decarbonise the building stock in terms of heating demand.

In order to meet Scotland's interim climate targets and ensure long-term delivery of its net zero objectives, by 2030 the vast majority of the 170,000 off-gas homes that currently use high emissions oil, LPG, and solid fuels (as well as at least 1 million homes currently using mains gas) must convert to zero emissions heating. By 2030, Scotland will also need to convert the equivalent of 50,000 of Scotland's non-domestic properties. In energy terms, Scotland will need to reduce fossil fuel consumption for heat in buildings by at least an estimated 28 TWh, of which at least 21 TWh will be natural gas.

In addition to the existing deployment of grants and support currently being focused on cost-effective energy efficient first improvements in buildings (in terms of retrofit and deployment of heat pumps for off gas grid buildings) there is a commitment to support the delivery of low and zero emissions heating networks, where suitable.

Heat network regulation

The regulation of heat networks is devolved to the Scottish Parliament. The Heat Networks (Scotland) Act 2021 introduced powers to regulate the heat networks market in Scotland for the first time. The Act sets targets for the amount of heat to be supplied by heat networks, requiring this reaches 2.6 Terawatt hours (TWh) (3% of current heat demand) by 2027, and 6 TWh (8% of current heat demand) by 2030.

The Act also introduces heat network consents to build or operate heat networks: including creating a bespoke system of scrutiny for new networks, to ensure that they can contribute to climate change and fuel poverty targets, before they are consented for development.

In taking forward the Heat Networks (Scotland) Act 2021, Scottish Government are working with the sector and local councils to develop the secondary legislation and guidance needed to get an effective regulatory system up and running. Scottish Government are also working with UK Government so that the legislation Scotland and UK Government develop works as seamlessly as possible for both heat network operators and consumers. Scotland's secondary legislation is planned to be phased in by 2025.

The Energy Act 2023 was passed by the UK Parliament in October 2023. This Act includes introductory powers to develop regulatory protections for heat network consumers.

Heat in Networks Delivery Plan 2022

The Heat Networks Delivery Plan sets out what Scottish Government are doing to expand the development of heat networks. This includes funding new projects and introducing rules to regulate the sector. The plan is reviewed every two years when Scottish Government will update on progress against its targets. The first Heat Network Delivery Plan review report was published in March 2024.

The document sets out Scottish Governments intentions to work with local government to deliver the local heat and energy efficiency strategies.

The Plan further sets out Scottish Government's proposals to introduce a New Build Heat Standard requiring new buildings consented from 2024 to install only zero direct emission heat sources, and, subject to devolved competence, bring forward regulatory proposals to require the installation of zero or very near zero emissions heating systems in existing buildings.

Additionally, as an initial step to increase use of waste heat, Scottish Government are considering introducing a requirement for potential heat suppliers to provide information about recoverable heat when formally requested to provide it by a relevant authority or licenced heat network operator.

To guide the development of heat networks Scottish Government has adopted the Building Connection Hierarchy, which prioritises the connection of existing buildings based on their size, heat demand and ownership. The Building Connection Hierarchy is set out in the Heat Networks Delivery Plan.

First National Assessment of Potential Heat Network Zones

The First National Assessment of Potential Heat Network Zones (FNA) carries out an analysis to identify and characterise potential zones for heat networks in Scotland. It carries out an initial, automated analysis to identify potential zones for heat networks in Scotland, based on heat demands captured within the Scotland Heat Map.

In identifying potential zones, the analysis does not take into account local development plan sites, existing heat networks and sources of waste or surplus or low carbon heat. The focus of the assessment is on the district heat network scale, defined in the Heat Networks (Scotland) Act 2021 as "a network by which thermal energy is distributed from one or more sources of production to more than one building.

The analysis identifies 647 potential zones (this is increased to 712 when potential zones are split by local authority boundaries) using the baseline screening criteria, which contain a total heat demand of 25.7 TWh/yr.

The assessment aims to support the development of policy and regulations, including informing:

a) The Heat Networks Delivery Plan (as detailed in the 2021 Act), published in March 2022 after public consultation in 2021.
b) The local identification of potential zones for heat networks as part of local heat and energy efficiency strategies.

As the Cairngorms National Park Authority is not a local authority, it does not have a duty under the Local Heat and Energy Efficiency Strategies (Scotland) Order 2022 to prepare a local heat and energy efficiency strategy. Therefore, the Proposed Plan will be informed by the local heat and energy efficiency strategies produced by the local authorities that cover the National Park. The Plan's spatial strategy should take into account areas of heat network potential and any designated Heat Network Zones identified in these strategies.

Renewable energy guide for developers and communities working with Scottish Water

The document aims to help developers and communities understand how to engage with Scottish Water to develop renewable energy and low carbon heat projects

The document also sets out Scottish Water's Horizon project which is facilitating low carbon heat projects by enabling the extraction of heat from Scottish Water's vast wastewater network. The Horizons project is partnered with SHARC Energy Systems who provide technology to capture and distribute the heat found in the sewer network. However, due to the applied use being most efficient and practical for buildings with a circa heat demand of over 1GWh, in the National Park application of this technology would be limited.

Bioenergy Update March 2021

In 2021, Scottish Government published a Bioenergy Update which set out the current role of bioenergy and how that may change as Scotland moves towards a net zero future. Scottish Government identified the complex interdependencies throughout the biomass supply chain, as well as the potential competition for finite resources. The Update set out the importance of a strategic deployment of bioenergy technologies to ensure available resources are used in the most effective way. The document highlights the emerging role for Bioenergy with Carbon Capture and Storage (BECCS) as integral to achieving the negative emissions potential which will make net zero possible in Scotland.

Draft Bioenergy Policy Statement

The draft Policy Statement sets out the parameters that need to be considered when setting bioenergy use now and, in the future, to support a reduction in emissions to meet the Climate Change Plan targets. It identifies what Scottish Government think the priority uses of bioenergy are in the short, medium and long term, and sets out the potential domestic biomass supply that could be available as feedstock for energy production. It examines how available domestic biomass feedstock could be increased by planting energy crops. It also acknowledges the potential constraints on the use of bioenergy, the importance of having strict sustainability criteria and that biomass feedstock production and use should facilitate key sustainable development goals.

The Statement points out that in Scotland the wood fuel supply chains are efficient and for the most part based on domestic supplies, and Scotland has a large number of distilleries, including many located in remote or island locations. The by-products of

whisky production can be used to generate energy, or they can utilise biomass to displace fossil fuels.

Scotland's priorities for bioenergy use at a high-level follow those set out by the UK Biomass Strategy. In the short term there will continue to be demand for biomass to be used in power, heat and transport. Where possible, Scottish Government will support early adoption of Carbon Capture Utilisation and Storage (CCUS) paired with bioenergy applications. In the medium term it is expected bioenergy will transition away from unabated uses towards Bioenergy with Carbon Capture and Storage (BECCS) technologies.

In the short to medium term, it is expected bioenergy will be utilised through the following:

- Power – new biogas combined heat and power plants that utilise waste resources.
- Heating – biomass or biofuel offer a solution to buildings not able to transition to clean heating systems (for example heat networks and heat pumps).
- Transport – use of biofuels for Heavy Duty Vehicles and Heavy Good Vehicles.
- Industry - Distilleries and breweries, pulp and paper mill, wood panel and pellet production, fuel switching from fossil fuels with potential for linking to future Carbon Capture and Storage (CCS) infrastructure.

The longer term (post-2035) use of bioenergy should prioritise Bioenergy with Carbon Capture and Storage applications where possible, and the majority of biomass uses should deliver negative emissions, but specific timing and detail will depend on how technologies develop.

The majority of Scotland's renewable heat currently comes from bioenergy, with 67% from biomass and 16% from biomethane injected to the gas grid (biomethane currently accounts for 1.65% of Scottish gas demand). For buildings, biomass boilers that burn wood pellets, chips or logs are a well-established heating technology, however changes to the Building Standards in Scotland in 2024 mean that under the New Build Heat Standard, solid fuel burning stoves can only be installed in new homes to provide 'emergency heating' where required.

Historic Environment Scotland Climate Action Plan 2020 – 2025

In this action plan Historic Environment Scotland have set out how they plan to transform the way they operate in response to the growing climate emergency. The actions focus on:

- How they will tackle the causes of the climate crisis and respond to the impacts.

- Changes in the way they protect and operate some of Scotland's most recognisable places and landmarks and the landscapes and infrastructure around them.
- Sharing knowledge, building resilience, and investing in sustainability to support others to address the climate emergency.

The action plan contains a number of actions specific to energy and carbon management, which encompasses matters relating to heating and cooling. These include:

- Setting a long term 'net-zero' target by 2045, in line with new national emission reduction targets.
- Ensure that energy and carbon management objectives are mainstreamed within strategic and operational decision-making across the organisation.
- Develop increased funding options for carbon reduction projects, including external partnerships, loan funding and potential for leasing of appliances and infrastructure.
- Support energy efficiency retrofit programmes and qualification development for construction industry, including working with Scottish Government and partners (e.g. Energy Saving Trust, Home Energy Scotland) to develop toolkits such as the Energy Improvements Report to improve domestic energy efficiency.
- Continue to improve energy reduction at sites through the installation of low-energy systems (e.g. lighting and heating), improved controls and insulation measures.

Cairngorms National Park Partnership Plan 2022

Outcome 1A of the Partnership Plan aims to 'ensure the Cairngorms National Park reaches net zero as soon as possible and contributes all it can to helping Scotland meet its net zero commitments'. It is supported by Policy C2, which seeks to support the development of a low carbon, circular economy, with a particular focus on:

- Increasing renewable electricity and heat generation, especially biomass, hydro, solar, small-scale wind turbines and heat exchange pumps that are compatible with conserving the special qualities of the National Park and maintain the integrity of designated sites.
- Supporting businesses and communities to use less energy, reduce emissions, improve the energy efficiency of existing buildings, generate low impact renewable energy, reduce, reuse and recycle resources, and plan for a changing climate.
- Maximising the benefits to communities through direct use of locally-generated energy or, where sold to the grid, reinvesting income to support community development.
- Promoting high standards of sustainable design and efficient use of energy and materials in construction.

Policy C3 seeks to enhance the design and sense of place in new development and existing settlements, including:

- Promoting a high standard of sustainable design, energy efficiency, sustainably sourced materials and construction in new development.

The Wellbeing Economy Action Plan aims to address cost-of-living issues which includes the need to explore long-term solutions to issues such as rising heating costs.

Cairngorms 2030

The Cairngorms 2030 projects will support the delivery of the National Park Partnership Plan 2022 – 2027. In Partnership Plan, the Park Authority have committed via objective A1 – 'Net Zero' to putting the power to tackle the climate and nature crises in the hands of people who live, visit and work in The Cairngorms National Park.

Two projects that are of relevance to heating and cooling are:

- Climate conscious communities
- Climate learning and education

The climate conscious communities project will increase awareness and deepen understanding of the climate emergency and its relevance to residents, communities, landowners and businesses in the National Park through a series of dedicated workshops. The workshops, led by Keep Scotland Beautiful, are aimed at anyone with a desire to increase their understanding and make more informed decisions to reduce their impact on the environment.

The climate learning and education project will put the voices of young people at the heart of decision making in the National Park and will empower and inspire our young people and educators to take forward pro-environmental behaviours and activity. We will adopt UNESCO's Education for Sustainable Development mission and make it relevant to the Cairngorms National Park and its people.

Community action plans

The following action plans identified issues and / or priorities relating to heating and cooling, which includes matters related to energy generation. Detailed matters related to energy generation, transmission and distribution are covered in the Energy evidence paper[1].

[1] See https://cairngormsldp.commonplace.is/en-GB/proposals/energy-survey/step1

Ballater and Crathie Community Action Plan 2023

Under the Environment and Energy theme, the community set out the aim 'to strive to make Ballater and Crathie as resilient, self-sufficient and carbon negative a place in which to live, work and visit as they can'. The community set the following strategic goal:

- To investigate the provision of local energy supply whether ground source, solar, hydro-electric or geothermal and how best to improve the provision of transport with less carbon dioxide generation.

It also sets the following tactical goal to:

- Promote the insulation of properties and ways to assist reduction in the need for energy.

Braemar Community Action Plan

In the Action Plan summary section of the document there are two actions that relate to energy. In Theme one: Visitor experience there is an action to improve energy efficiency, reduce heating bills by exploring schemes like the green deal and provide assistance to local residents and businesses. The community set out plans to investigate district heating schemes, powered by. For example, local woodchips, wood pellets or ground source heat pumps.

Carrbridge Community Action Plan: Looking to 2030

In the Action Plan, under the priority aimed at building up community resilience, Carrbridge seeks to address and initiate community projects that support carbon reduction in local homes. It sets out the following actions to achieve this:

- Host an Energy Efficiency event (with experts) for advice, products, installers and
- sources of financial support. Especially for those with older homes
- Community knowledge-share of ideas for heating / insulation of homes.
- Contact Energy Saving Trust, Community Energy Scotland, CARES, Local Energy
- Scotland for support.

During the public consultation the following suggestions were made supporting the proposed actions:

- Make some improvements to the Village Hall: more efficient heating and energy usage Community-wide project to support a reduction in the carbon and energy footprints of our homes and our travel.
- Assistance to improve energy efficiency of existing housing stock (insulation,
- advice from experts etc).

- Improvements to the Village Hall to make it more energy efficient. (underfloor heating).

Dalwhinnie Community Action Plan: Looking to 2030

In the Dalwhinnie Community Action under the climate conscious community theme the community have set out a priority to 'reduce energy consumption as a village / (and for) households', The Plan sets out the community aim to investigate and seek advice and support available with the aim of setting up an information event at hall for local residents and businesses to drop in. They set out the aim to work with Laggan Community Council who expressed a desire to do something similar.

Kincraig Community Action Plan

Within the Kincraig Community Action Plan under the low priority heading there is a desire to improve the heating system at the Kincraig Hall. It is uncertain whether any work has been carried out yet to date to this end. There are no other implications for the Heating and Cooling topic paper with respect to this Plan.

An updated Kincraig Community Action Plan is due to be published in November 2024.

Laggan Community Action Plan: Looking to 2023

Under the theme of 'a climate conscious community' in the Laggan Community Action Plan sets out the priority of 'energy efficient housing / community properties' to achieve this the community will seek to:

- Improve efficiency in tenanted and community-owned properties Including Village Hall, through inspection / advice / installation of energy cost-reduction measures.
- Investigate opportunities for a village turbine (electric or hydro).

Under the theme of 'a socially connected community' the community sets out the priority of 'having affordable places to live' The community have set out the following action to achieve this:

- Community support scheme to help residents and businesses make their homes more energy efficient / better insulated (double glazing, solar panels, heat pumps, smart meters etc) this will be delivered through:

1. Investigating advice / support available – set up an information event at hall for local residents and businesses to drop in.
2. Exploring possible use of SSE money for a scheme.

Under the suggestions put forward as part of their community consultation the following responses were garnered:

- The need for insulation and energy efficiency programme with support for local housing.
- Initiate a programme of insulation and energy efficiency inspections undertaken in all tenanted properties and community owned properties to reduce energy use and costs.

Mount Blair Community Action Plan

The vision set out in the Mount Blair Community Action Plan includes the following aim of reducing our carbon footprint and lowering our costs of living, which in part can be achieved through the use of renewable energy and lowering the communities carbon footprint.

One of the main strategies, titled Infrastructure and renewable energy specifically addresses the communities' challenges in terms of high cost of fuel. To tackle this the community proposed the following priorities:

- Develop wood fuel / biomass community initiative
- Establish collective buying scheme for oil.

The Action Plan also sets out the priorities under the Community and recreational facilities theme (three) to:

- Support Ballintuim Village Hall to make improvements to car parking area, install renewable and cost-effective heating and other upgrades.
- Support Bridge of Cally Village Hall to improve heating system and other upgrades.

Nethy Bridge Community Action Plan: Looking to 2030

Under the other suggestions the community would like to explore / see initiatives to help the community learn about better insulation and other energy efficiency measures. There are no other implications for the Heating and Cooling topic paper with respect to this Plan

Newtonmore Community Action Plan: Looking to 2023

Under the other suggestions the community would like to explore options for future proofing for houses with alternative heating supplies away from fossil fuels / home insulation measures. There are no other implications for the Heating and Cooling topic paper with respect to this Plan.

Strathdon Community Action Plan 2016

Under theme 9 of the Action Section for Housing and resident support the community sets out the aim of ensuring privately rented houses are in appropriate condition including in terms of energy efficiency and fuel costs.

An update to Strathdon Community Action Plan is being undertaken in November 2024.

Baseline of matters relating to heating and cooling

This paper summarises a number of matters relating to waste infrastructure, including:

- Central heating in current households
- Local heat and energy efficiency strategies
- Heat networks
- Heat mapping
- Local area energy plans.

There are links between this policy area and climate change, blue and green infrastructure, economic development, energy[2], and housing[3].

Central heating in current households

The Cairngorms National Park has a significantly different profile of central heating use compared to the national average, reflecting the area's rural area and the lack of a mains gas network. The lack of central heating is one of the key indicators of deprivation used by the Scottish Index of Multiple Deprivation (SIMD) in its housing domain. The most recent Scottish Index of Multiple Deprivation release was in 2020 and since then Census 2022 estimates have been released that supersede the 2011 Census estimates used by the Index. Therefore 2022 Census estimates have been used in this report to report on central heating systems used in the National Park.

According to the 2022 Census, of the 8,451 households[4] in the Cairngorms National Park, around 4.4% have no central heating (equating to 368 households), compared to 2.1% for Scotland as a whole. There is also significant geographical variation across the National Park, with the highest rate of households with no central heating in the west, encompassing the settlements of Laggan and Dalwhinnie, where it reaches 14.4%

[2] See https://cairngormsldp.commonplace.is/en-GB/proposals/energy-survey/step1
[3] Topic papers on climate change, blue and green infrastructure, economic development and housing will be engaged on in 2025.
[4] Census estimates cover occupied households only. They do not include empty homes, second homes or short-term holiday lets in these estimates.

(Figure 2).The highest rate of households with central heating is Aviemore, where just 1.4% of households lack central heating.

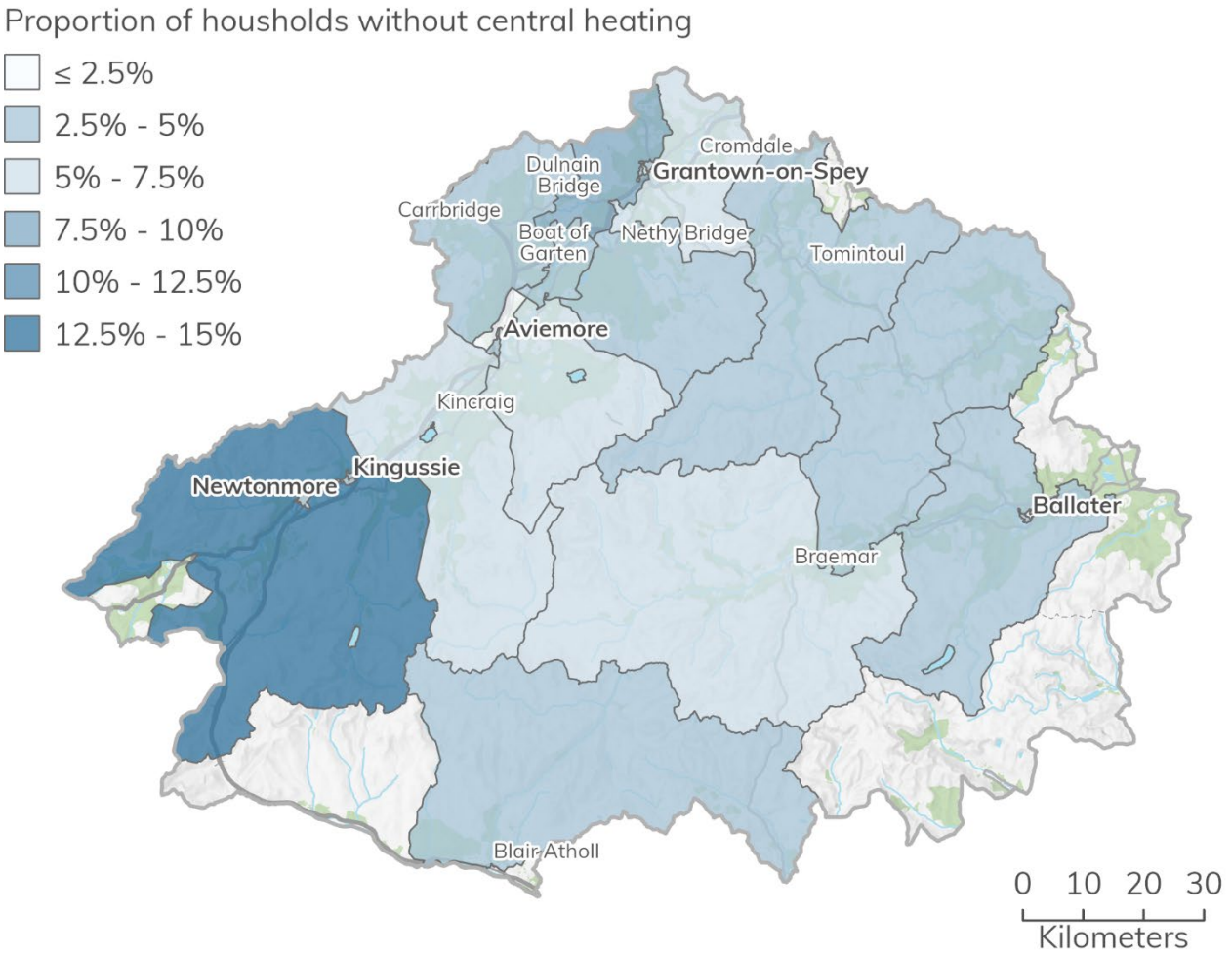

Figure 2 Proportion of households in the Cairngorms National Park with no central heating in 2022 (Census table UV407). Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2024. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority. Contains data © Census Scotland 2024.

The most common form of central heating in the National Park is fuelled by oil, accounting for around 35.7% of households (3,015 households), compared to 5,1% for Scotland as a whole. The use of electric central heating is also significantly higher than the National average, around 25.5% (2,155 households) compared to Scotland's 9%. According to the Census estimates, only 26 households (0.3%) in the National Park received central heating from a district or communal system (Figure 3).

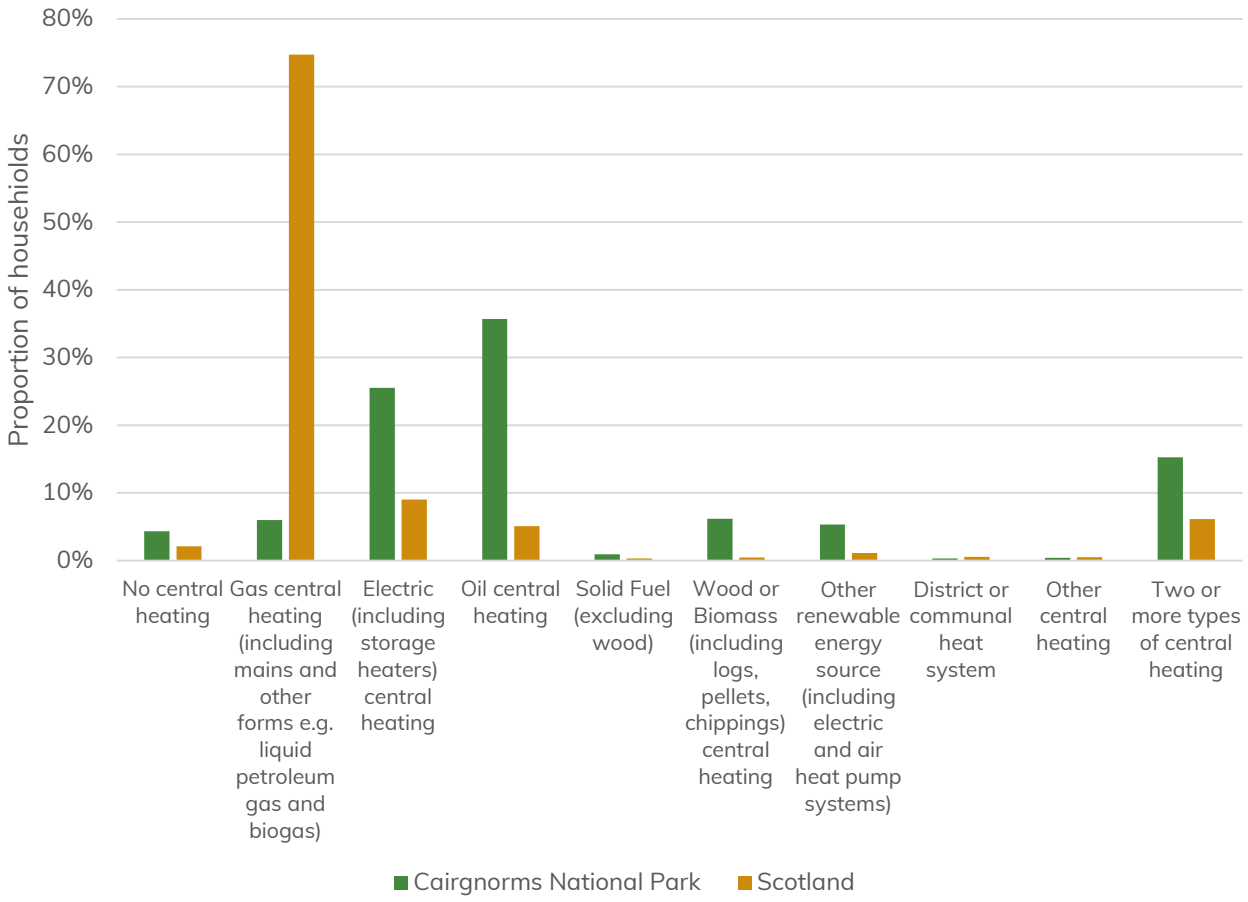

Figure 3 Central heating in households in the Cairngorms National Park and Scotland in 2022 (Census table UV407).

Local heat and energy efficiency strategies

The Local Heat and Energy Efficiency Strategies (Scotland) Order 2022 places a duty on local authorities to produce Local Heat and Energy Efficiency Strategies. The Park Authority does not have this duty, therefore the Proposed Plan must take account of the five local authority local heat and energy efficiency strategies (LHEES) covering its area.

Local heat and energy efficiency strategies set out the long-term plan for decarbonising heat in buildings and improving their energy efficiency across an entire local authority area, framed around the considerations set out in Table 2.

Table 2 Local heat and energy efficiency strategy considerations and the National Park context.

Local heat and energy efficiency consideration	Description	Cairngorms National Park context
Heat decarbonisation		
Off-gas grid buildings	Identify off-gas heat decarbonisation pathways and opportunities at a strategic level and at a delivery level.	In the National Park there is no gas network so considerations relating to this consideration in the Local Authority's Local Heat and Energy Efficiency Strategies need to be prioritised.
On-gas grid buildings	Identifying potential on-gas heat decarbonisation pathways and opportunities at a strategic and delivery level.	There are no on-gas grid buildings in the Cairngorms National Park. Therefore, considerations relating to this category do not need to be prioritised.
Heat networks	Highlighting zones within a local authority where heat networks present a potential decarbonisation option	There are a number of existing heat networks and further sites suitable for new heat networks. These should be supported by the Local Development Plan.
Energy efficiency and other outcomes		
Poor building energy efficiency	Identify possible locations at a strategic and delivery level where poor building energy efficiency exists across the local authority.	Development will need to consider domestic energy efficiency interventions in indicative Heat Network Zones identified in the local Heat and energy efficiency strategies.
Poor building energy efficiency as a driver for fuel poverty	Identifying possible locations at a strategic and delivery level where poor building energy efficiency acts as a driver for fuel poverty.	This consideration can be used as mechanism of reducing fuel poverty and heat demand.

Highland Council Local Heat and Energy Efficiency Strategy 2023

The Strategy is a long-term plan for decarbonising heat and improving energy efficiency for all buildings across the Highland Council area and the Delivery Plan sets out how the Council and its stakeholders propose to support implementation of its first Local Heat and Energy Efficiency Strategy.

Two examples of exemplary heat networks in the National Park covered by the Highland Local Authority are named in the Strategy:

- The Aviemore Heating Project (Albyn Housing Society Ltd)
- The Milton Burn, Aviemore.

There are a number of smaller heat networks. The Strategy does not set out any other heat network projects in development in the Highland Local Authority area of the National Park.

Key conclusions outlined in the Highland Council Local Heat and Energy Efficiency Strategy include:

- The energy efficiency rating in the Highlands falls below the average for Scotland, showing that domestic dwellings in the region are less efficient. Key reasons include the buildings age, heating fuel and levels of insulation.
- A significant amount of non-domestic properties in the Highlands have the potential to decarbonise. Oil heated buildings are more likely to be suitable for heat network connection as they will have wet heating distribution system. Retrofit for heat networks is likely to be less costly and complex compared to electricity heated buildings.
- Detached, semi-detached and terraced properties present an opportunity to install individual heat pump installations, replacing carbon intense fuels such as oil and liquid petroleum gas (LPG) with cleaner and greener sources of energy.
- Domestic flats may be more suited to connect to a district's heating rather than to install individual heat pumps.
- Significant external funding will be required, as the Housing Revenue Account will not be sufficient to meet the funding needs to make domestic properties more energy efficiency and compliant with the Energy Efficiency Standard for Social Housing (EESSH2).
- Public buildings are required to submit building assessment reports to inform suitability for connection to heat networks. This will help improve confidence in heat demand data.

- Retrofitting listed buildings or buildings in conservation areas requires careful consideration of planning permission and a good understanding of building characteristics and design restrictions to meet the standards for energy efficiency.

The first iteration of the Highland's Local Heat and Energy Efficiency Strategy identifies indicative Heat Network Zones to understand the scale of potential and initial areas of focus. The outputs of the Strategy can be used to start work on the consideration of heat networks through follow-up work for Heat Network Zoning, as required by the Heat Networks (Scotland) Act 2021.

When analysing the 'heat pump ready' property clusters in both the on and off-gas areas, over 1,550 green spaces in the off-gas areas have been identified that show a high potential to be used for small-scale heat networks such as shared ground source heat pumps (GSHPs) for the nearby properties. Within the Cairngorms National Park these include areas covering Grantown on Spey, Nethy bridge, Aviemore and Coylumbridge and Kingussie and Newtonmore.

The Highland Council Local Heat and Energy Efficiency Delivery Plan sets out the actions which will be developed into detailed delivery Plan at a later time. At present it is intended to help understand what actions can currently be delivered, given the changing policy landscape as well as understanding that new future policies and programmes will be developed.

Moray Council Local Heat and Energy Efficiency Strategy 2023 – 2028

Moray Council's Local Heat and Energy Efficiency Strategy is centred on a place based, locally led and tailored approach to the decarbonisation of heat in its buildings. The Strategy aims underpin an area-based approach to heat and energy efficiency planning and delivery. It was developed in collaboration with key stakeholders across Moray and sets out the long-term plan for decarbonising heat in buildings and improving their energy efficiency.

The main priorities set out in the Local Heat and Energy Efficiency Strategy, in relation to delivering change with regard to energy include:

- Building sustainable and climate resilient communities – this will include actions in the Delivery Plan to support communities with support for community led energy efficiency and adaptation projects.
- Delivering a just transition for the energy system.
- Tackling fuel poverty and improving health.
- Improving the energy efficiency of buildings.

- Decarbonising building heat sources – this will include identifying actions in the Delivery Plan to identify existing electricity grid capacity to meet heat decarbonisation requirements.

The Strategy sets out the locations in Moray that have been identified as being potentially suitable for new heat networks, they do not include any areas within the Cairngorms National Park. The Strategy recognises that most domestic properties in Moray will not be in areas suitable for heat networks so individual heating solutions such as heat pumps will be the most suitable solution for these. Although not specifically mentioned it can be included this includes the smaller settlements within the National Park.

Moray council has also produced a Local Heat and Energy Efficiency Strategy Delivery Plan. The actions captured in the delivery plan are in draft, with the requirement for further stages of consultation and agreement over governance, timescales and specific details around completion.

Aberdeenshire Council Local Heat and Energy Efficiency Strategy 2024

The Local Heat and Energy Efficiency Strategy for Aberdeenshire highlights the existing heat networks in Braemar, Ballater, Glen Tanar and Strathdon. No further projects or areas for heat networks are identified in the Local Heat and Energy Efficiency Strategy or Delivery Plan for areas / settlements in the Cairngorms National Park.

The Strategy also highlights the localities most at risk from poor energy efficiency driving fuel poverty. The likelihood of fuel poverty is higher in off-gas properties, which applies to almost half of Aberdeenshire. One area highlighted as most at risk from poor energy is East Cairngorms.

Perth and Kinross Council Local Heat and Energy Efficiency Strategy 2024 – 2045

The Local Heat and Energy Efficiency Strategy notes that to the rural nature of Perth and Kinross, the potential for heat networks in the local authority area is limited to a few urban areas and towns. As such no potential Heat Networks have been identified of areas / settlements within the Cairngorms National Park. The areas in the Perth and Kinross, that are located within the Cairngorms national Park as some of the highest areas in terms of potential benefits is widespread heat pump deployment. More information on the energy efficiency of these areas and potential energy savings and Co2e reductions that can be delivered are shown here:

- https://www.pkclimateaction.co.uk/files/PKC-LHEES-Strategic-Zoning-Report.pdf

The Strategy highlights that when comparing areas with high energy efficiency driven fuel poverty with properties requiring lower cost retrofit options, the areas within the National Park of Blair Atholl, and Glenshee, showed some of greatest opportunity.

The Strategy highlights that for the majority of Perth and Kinross rural properties that fall outside of potential heat network zones, heat pumps will be the recommended low carbon heating source. The strategy recognises that decarbonising heat, focusing on heat networks and heat pumps, which run on electricity, places significant pressures on the grid.

The Delivery Plan, produced alongside the Local Heat and Energy Efficiency Strategy sets out the strategic priority of delivering decarbonised heat within a transitioning energy system, which translates to a local authority area priority of identifying off-gas homes suitable for heat pump retrofit and improving building energy efficiency to meet regulatory standards.

Angus Council Local Heat and Energy Efficiency Strategy 2024

Angus is predominantly a rural council, hence the percentage of off-gas grid domestic buildings being higher than the Scottish average. The area of Angus covered by the Cairngorms National Park is of extremely low density with no intermediate or strategic settlement and rural housing that is off-gas. Heat pumps and solar photovoltaic installations in the areas of the National Park within the Angus council area are recommended (alongside energy efficiency improvement measures to the building fabric), and as such no heat networks are proposed in these locations. Buildings in this area rely on a mix of oil, electricity and solid fuel heating sources (other).

Off-gas heated properties increases the risk facing local residents in this area being susceptible to fuel poverty as outlined in the Local Heat and Energy Efficiency Strategy. However, the average Scottish Index of Multiple Deprivation rating for the data zones in these areas is six, which suggests lower levels of fuel poverty, despite the Off-Gas Category 3[5] domestic buildings being poorly insulated and considered hard to treat. In

[5] Those with tertiary potential for heat pump retrofit (i.e., buildings in need of significant fabric upgrade/heat distribution system upgrades to be heat pump ready) or those less suited to heat pump technology, with electric (storage or direct) or biomass likely to be the most viable decarbonisation technology. Significant fabric upgrades are generally considered to be insulating the walls of solid brick and stone and timber constructed buildings, topping up loft insulation and installing double/ triple glazed windows.

general, the poor energy efficiency of the off-Gas Category 3 domestic buildings doesn't seem to be acting as a driver for fuel poverty.

Heat networks

A key consideration of the local authority local heat and energy efficiency strategies is heat decarbonisation (Priority 1), which can in part be achieved by the delivery of heat networks. The strategies also assist accelerating deployment and in meeting their duty under the Heat Networks (Scotland) Act 2021. Section 47 of the Heat Networks (Scotland) Act places a duty on local authorities to carry out a review to consider whether one or more areas in its area is likely to be particularly suitable for the construction and operation of a heat network.

Heat networks supply heat and hot water from a central source to consumers, through a network of pipes usually underground. Ofgem offer the following definitions of the two types of heat networks:

- Communal heat network: this supplies heat and hot water to a number of premises and customers within a single building. This is the most common form of heat network in the UK.
- District heat network: supplies heat to more than one building. District heat networks can cover a large area and supply many buildings.

In the context of the Proposed Plan and heat networks (also referred to as district heating) the evidence is concerned with heat networks that distribute heat from a central source to multiple buildings, reducing energy consumption.

Section 92 of the Heat Networks (Scotland) Act sets statutory targets for heat supplied by heat networks. These require the combined supply of thermal energy by heat networks in Scotland to reach 2.6 TWh of output by 2027 and 6 TWh of output by 2030. The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 came into force on 30 May 2023 and require local authorities to identify, consult on and designate potential heat network zones in their areas.

Potential heat network zones are identified by the relevant local authorities local heat and energy efficiency strategies and will be developed further for adoption within the Council's Local Development Plan as required by the Heat Networks (Scotland) Act 2021.

More information on the guidance used to produce the local heat and energy efficiency strategies can be found here:

- https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/10/local-heat-energy-efficiency-strategies-delivery-plans-guidance/documents/local-heat-energy-efficiency-strategies-delivery-plans-guidance/local-heat-energy-efficiency-strategies-delivery-plans-guidance/govscot%3Adocument/local-heat-energy-efficiency-strategies-delivery-plans-guidance.pdf

Existing and proposed heat networks

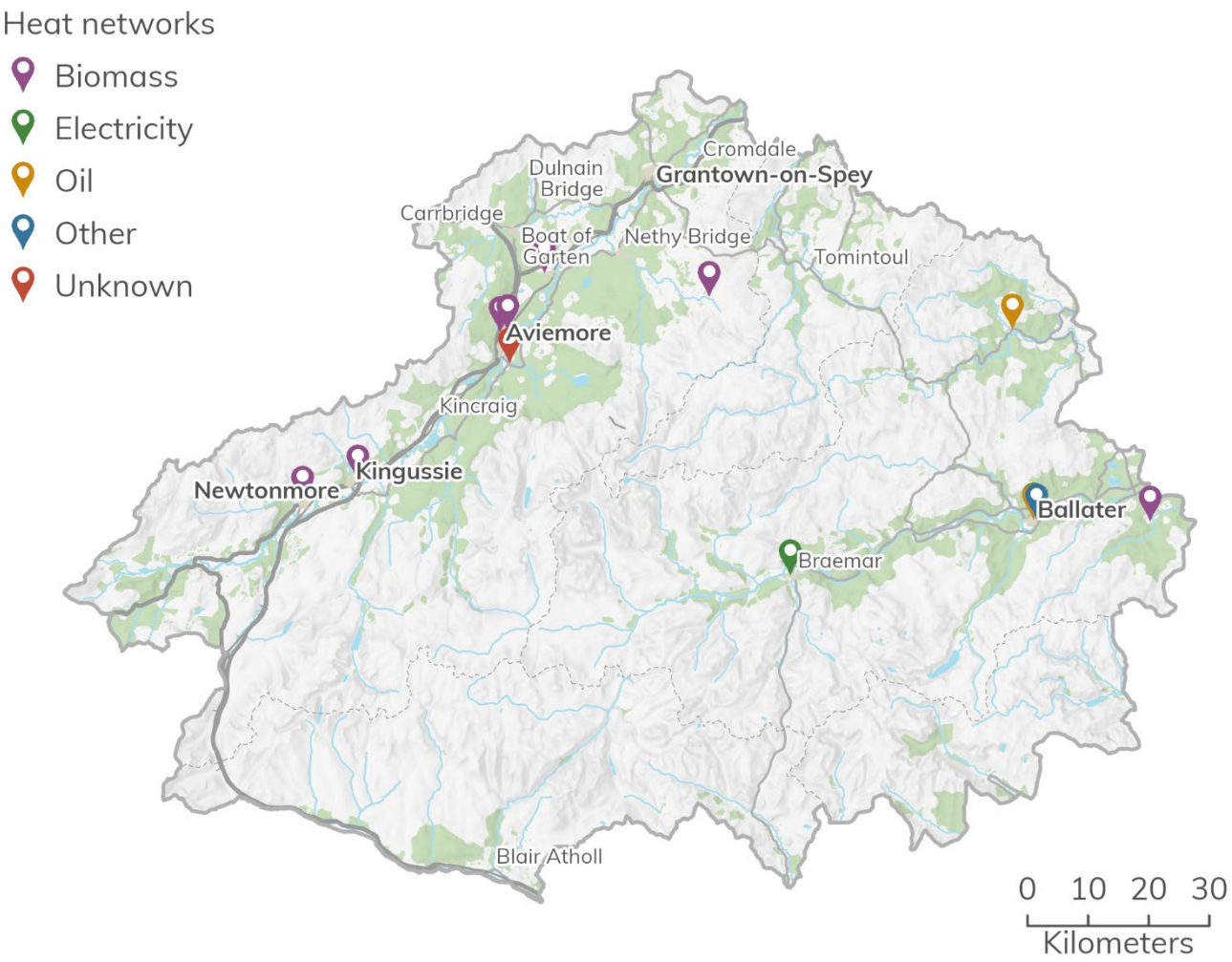

Figure 4 Existing Heat Networks in the Cairngorms National Park, 2024. Reproduced by permission of Ordnance Survey on behalf of His Majesty's Stationery Office. © Crown copyright and database right 2024. All rights reserved. Ordnance Survey Licence number AC0000821810, Cairngorms National Park Authority.

Existing and proposed Heat Networks in the National Park are set out in the local authority local heat and energy efficiency strategies. The proposed new heat networks build upon the National Assessment work carried out by Scottish Government. Decarbonising heat, focusing on heat networks and heat pumps, which run on electricity, places significant pressures on the electricity grid[6].

In the Highland Council area of the National Park there are currently seven heat networks in operation (Figure 4), with one in development at Rothiemurchus (Table 3). There are no new heat networks proposed in the National Park within the Highland Council's Local Heat and Energy Efficiency Strategy.

Table 3 Heat Networks in the Highland area of the National Park, both operational and in development. Scottish Government, 2024 and Highland Council Local Heat and Energy Efficiency Strategy.

Location	Primary technology	Project name	Status
Newtonmore	Boiler	33 Glen Grove	Operational
Kingussie	Boiler	39 Glebe Court	Operational
Aviemore	Unknown	Rothiemurchus, Aviemore	In development
Aviemore	Boiler	Milton Side	Operational
Aviemore	Boiler	Aviemore	Operational
Aviemore	Boiler	Unit 15 Dalfaber industrial Estate	Operational
Boat of Garten	Boiler	Boat of Garten	Operational
Nethy Bridge	Boiler	Attinlea	Operational

There are no existing district heat networks in the Moray Council or Angus Council areas of the National Park (Figure 4). The Local Heat and Energy Efficiency Strategies for Moray or Angus do not propose any new heat networks in the National Park.

Due to the rural nature of Perth and Kinross, the potential for heat networks in the local authority area is limited to a few urban areas and towns. At present there are no heat networks, nor are there any proposed new heat network developments, in the Perth and Kinross area of the Cairngorms National Park (Figure 4).

[6] See https://cairngormsldp.commonplace.is/en-GB/proposals/energy-survey/step1

Within the Aberdeenshire Council area of the National Park there are a number of small existing heat networks (Figure 4), five being operational and a further two in development (Table 4).

Table 4 Heat Networks in the Aberdeenshire area of the National Park, both operational and in development. Scottish Government, 2024 and Aberdeenshire Council Local Heat and Energy Efficiency Strategy.

Location	Primary technology	Project name	Status
Ballater	Ground Source	Monaltrie	In development
Ballater	Boiler	Ballater Station	Operational
Braemar	Ground Source	Kindochit	In development
Ballater	Boiler	Sluiemohr Hawthorn Grove	Operational
Ballater	Boiler	Sluiemhor Sheltered Housing	Operational
Strathdon	Boiler	Doune Court, Bellabeg	Operational
Glen Tanar	Boiler	Glen Tanar	Operational

Opportunity areas for district heating networks in the UK: second national comprehensive assessment

The research provides more detail on the geographic opportunities for low carbon heat network deployment across the country as a whole and for each of the four nations separately, including:

- An overview of current heating and cooling demand and supply in the UK.
- Detailed maps showing the spatial distribution and density of supply and demand across the UK and each nation separately.
- An assessment of the economic potential for district heating as an efficient heating solution in the UK, accompanied by maps showing opportunity areas.
- A simplified cost benefit analysis comparing heat networks with other, non-networked heating solutions based on highly stylised alternative future energy pathways.
- An overview of existing, planned and possible policy measures that are or could support delivery of the economic potential.

The study represents the second UK National Comprehensive Assessment of the potential for efficient heating and cooling undertaken to meet the requirements of Regulation 4 of the Energy Efficiency (Encouragement, Assessment and Information) Regulations 2014. The study is focused on district heating networks which are seen as

having a key role to play in the delivery of efficient low carbon heating. Aside from estimating current cooling demand in the UK, no further analysis on cooling was undertaken. The paper sets out the UK position that, heat is a devolved matter in Scotland and Northern Ireland and these nations are responsible for developing their own heat policies. The study provides maps for Scotland setting out the heat demand density, heat supply density and areas with potential for economically viable heat networks.

Further detail on the opportunities in Scotland can be found at Scotland's Heat Map.

Scotland Heat Map

The Scotland Heat Map is a GIS (geographic information system) based tool that can be used to identify opportunities to reduce carbon emissions from heat in buildings. It brings together a range of data sources available to the Scottish Government to provide estimates of heat demand at a property and area level. It provides estimates of annual heat demand for almost 3 million properties across Scotland. Demand is given in kilowatt-hours per year (kWh/yr). Property level estimates can be combined to give values for various geographies, including settlements. Both domestic and non-domestic properties are included. The dataset gives the total estimated heat demand of properties within each 2016 Settlement in Scotland in kilowatt-hours per year (kWh/yr)). Heat demand is calculated by combining data from several sources, ensuring that the most appropriate data available is used for each property. The data can be used by local authorities and Cairngorms National Park Authority to identify or inform opportunities for low carbon heat projects such as district heat networks in the National Park.

Table 5 provides values for Strategic Settlements in the Cairngorms National Park. Figure 5 – Figure 9 show heat demand in these settlements by a 50m grid.

Table 5 Annual heat demand values from the Scotland Heat Map for the Strategic Settlements in Cairngorms National Park as identified in the National Park Partnership Plan 2022 and Local Development Plan 2021.

Settlement	Area	Heat demand density	Heat demand total
	km²	GWh/yr/m²	GWh/yr
Aviemore	2.58	19.66	50.72
Ballater	0.93	27.6	25.56
Grantown on Spey	1.34	30.3	40.48
Kingussie	1.15	20.4	23.39
Newtonmore	1.35	14.25	19.17

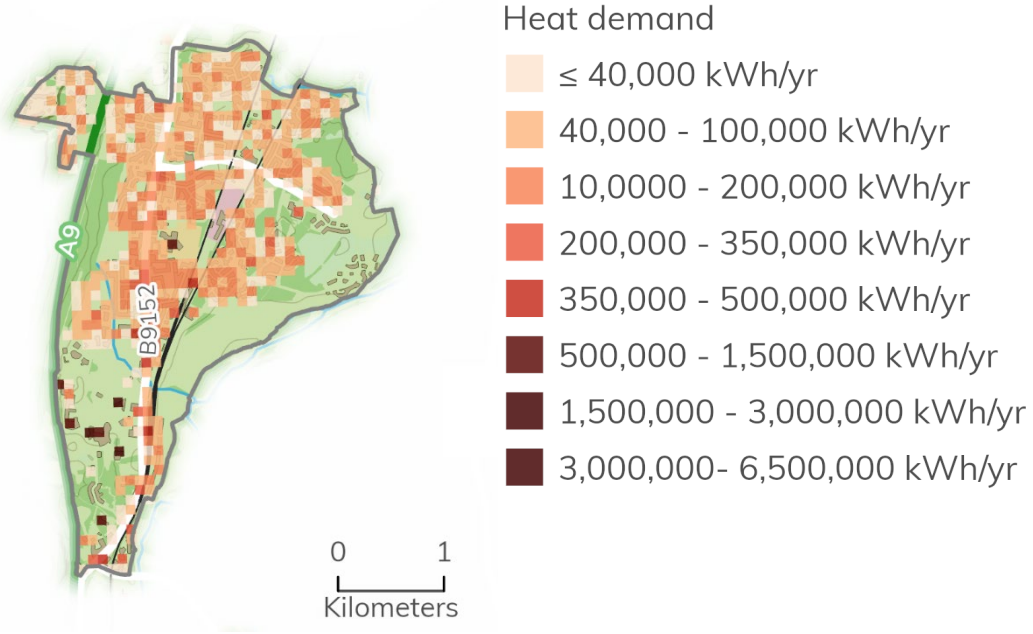

Figure 5 Heat demand by 50m grid in Aviemore.

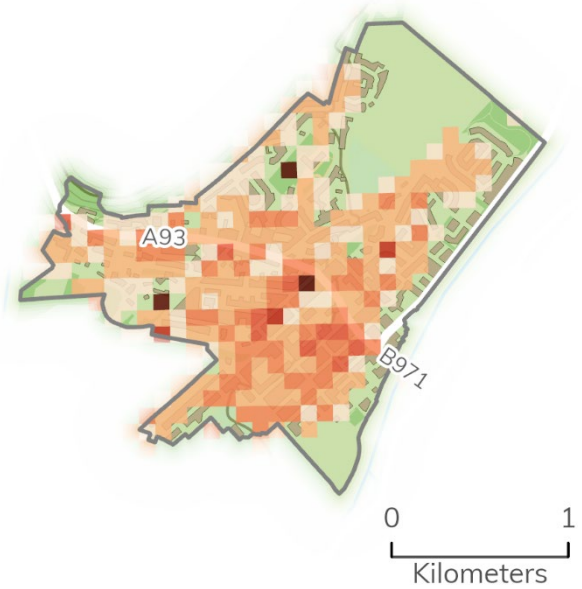

Figure 6 Heat demand by 50m grid in Ballater.

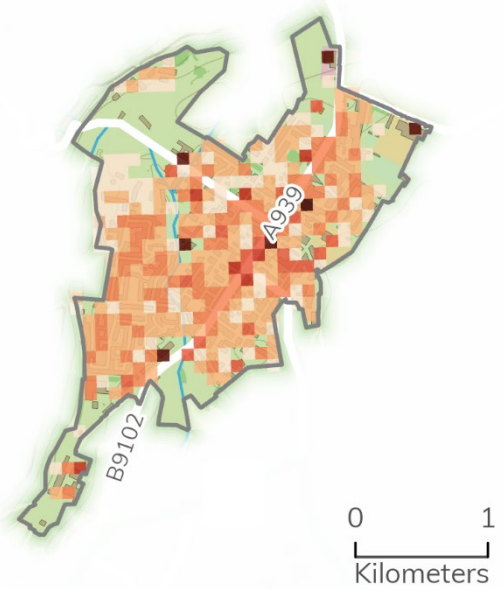

Figure 7 Heat demand by 50m grid in Grantown on Spey.

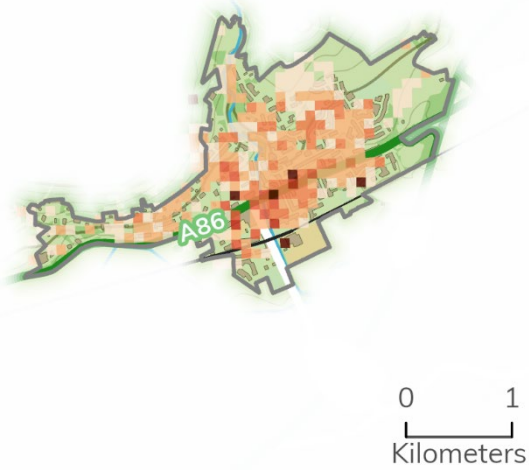

Figure 8 Heat demand by 50m grid in Kingussie.

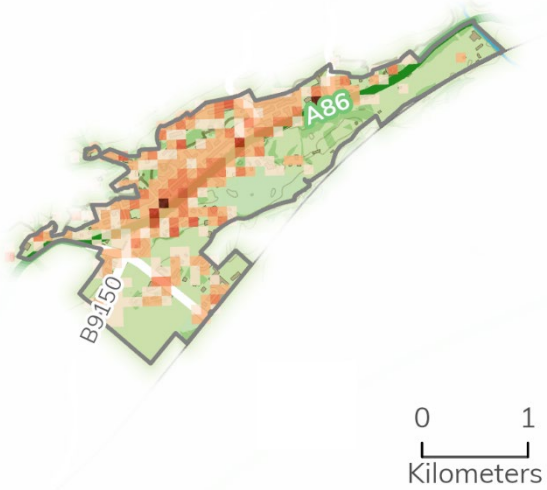

Figure 9 Heat demand by 50m grid in Newtonmore.

Legend on page 38.

The Scotland Heat Map can be accessed here:

- https://heatmap.data.gov.scot/custom/heatmap/

More information on the Scottish Heat Map tool and methodology can be found here:

- https://www.gov.scot/publications/scotland-heat-map-documents/

Heat demand (non-electrical) statistics are provided for local authority areas in Scotland from the Scottish Energy Statistics Hub. However, as the data is not available at the National Park's geography, no data can be included in this paper. The Hub may be accessed here:

- https://www.gov.scot/publications/scottish-energy-statistics-hub-index/

Greenspace heat network capacity

Greenspace Scotland has worked with a wide range of partners across the public and private sector on a Scotland-wide programme to explore the contribution that green and blue spaces can make to the Scottish Government's ambitions to decarbonise the energy system.

The Green Heat in Greenspaces (GHiGs) project was set up to identify and quantify specific opportunities in green and blue spaces within settlements across Scotland to support low carbon heat solutions (heat pumps and district heat networks). The project considers ground source and water source heat generation potential, as well as consideration of specific indicators for promising sites for district heat networks as the key infrastructure required for enabling the transportation of renewable heat from green and blue spaces to nearby buildings.

As part of this methodology, the Scottish Government's Scotland Heat Map was used as an address base and starting point for the demand assessment. More information on the methodology used to collate the data and produce the map can be accessed here:

- https://www.greenspacescotland.org.uk/Handlers/Download.ashx?IDMF=335590f1-e4bb-4dea-b2fd-904fe6b1e3c8

The Green Heat in Greenspaces Settlement Profile Dashboard can be viewed here:

- https://gscot.maps.arcgis.com/apps/dashboards/f2f378969d21430cab5c8e14529e56e5

The Green Heat in Greenspaces Greenspace Dashboard can be viewed here:

- https://gscot.maps.arcgis.com/apps/dashboards/cb44d859b4934da0ad09221012f42274

Figure 10 Green Heat in Greenspaces data for Aviemore.

Figure 11 Green Heat in Greenspaces data for Ballater.

District heat network viability

Highest viability

High viability

Viable

Greenspaces

Figure 12 Green Heat in Greenspaces data for Grantown on Spey.

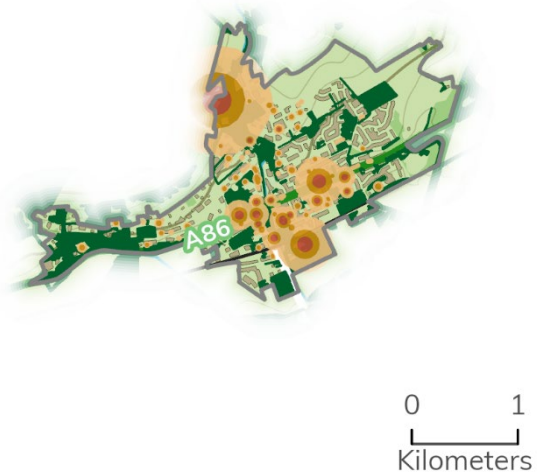

Figure 13 Green Heat in Greenspaces data for Kingussie.

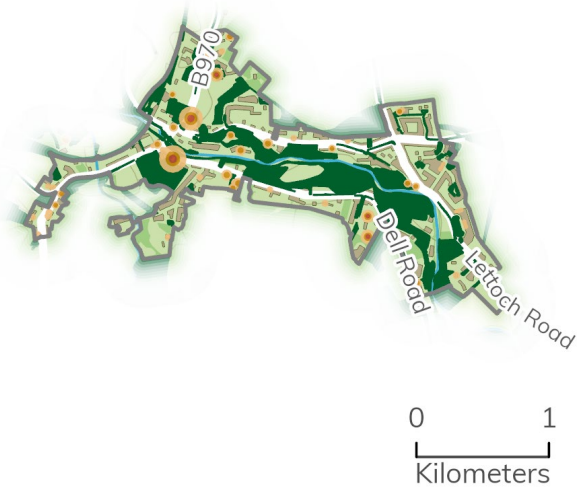

Figure 14 Green Heat in Greenspaces data for Nethy Bridge.

Figure 15 Green Heat in Greenspaces data for Newtonmore.

Legend on page 41.

The project provides information and analysis at a settlement level. The following settlements in the National Park were investigated for their potential opportunities in terms of potential for ground source heat capacity from greenspaces:

- Aviemore (Figure 10 and Table 6)
- Ballater (Figure 11 and Table 7)
- Grantown on Spey (Figure 12 and Table 8)
- Kingussie (Figure 13 and Table 9)
- Nethy Bridge (Figure 14 and Table 10)
- Newtonmore (Figure 15 and Table 11).

Table 6 Detailed potential for district heating networks in Aviemore. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	20% (High)
Potential ground source heat capacity from greenspaces	96,731 MWh/ year (High)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	100% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	High
Static water body source heat potential (High / Medium / Low)	Medium
District Heat Networks	
Suitability for district heat networks	High
Estimated number of higher demand (>50 MWh/yr) public buildings	7
Suitability for district heat networks - public buildings only (High / Medium / Low)	High
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	High
Current number of district heat networks	3
Heat density class (High / Medium / Low)	Low
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	No
Heat General	
Total heat demand	38,387 MWh/year
Total of heat demand addresses	2,027
Average heat demand per heat address	19 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	Medium
Percentage homes in extreme fuel poverty (High / Medium / Low)	Medium
Percentage of social housing (High / Medium / Low)	Medium
Percentage of pre-1949 residential properties (High / Medium / Low)	Low
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Table 7 Detailed potential for district heating networks in Ballater. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	15% (High)
Potential ground source heat capacity from greenspaces	23,118 MWh/ year (Medium)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	89% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	High
Static water body source heat potential (High / Medium / Low)	Low
District Heat Networks	
Suitability for district heat networks	Medium
Estimated number of higher demand (>50 MWh/yr) public buildings	6
Suitability for district heat networks - public buildings only (High / Medium / Low)	Medium
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	Medium
Current number of district heat networks	3
Heat density class (High / Medium / Low)	Medium
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	No
Heat General	
Total heat demand	26,076 MWh/year
Total of heat demand addresses	1,159
Average heat demand per heat address	22 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	High
Percentage homes in extreme fuel poverty (High / Medium / Low)	High
Percentage of social housing (High / Medium / Low)	Low
Percentage of pre-1949 residential properties (High / Medium / Low)	Medium
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Table 8 Detailed potential for district heating networks in Grantown on Spey. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	15% (High)
Potential ground source heat capacity from greenspaces	29,061 MWh/ year (Medium)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	90% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	Low
Static water body source heat potential (High / Medium / Low)	Medium
District Heat Networks	
Suitability for district heat networks	Medium
Estimated number of higher demand (>50 MWh/yr) public buildings	13
Suitability for district heat networks - public buildings only (High / Medium / Low)	Medium
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	High
Current number of district heat networks	0
Heat density class (High / Medium / Low)	Medium
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	No
Heat General	
Total heat demand	32,199 MWh/year
Total of heat demand addresses	1,398
Average heat demand per heat address	23 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	High
Percentage homes in extreme fuel poverty (High / Medium / Low)	High
Percentage of social housing (High / Medium / Low)	Low
Percentage of pre-1949 residential properties (High / Medium / Low)	Medium
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Table 9 Detailed potential for district heating networks in Kingussie. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	35% (High)
Potential ground source heat capacity from greenspaces	69,024 MWh/ year (High)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	100% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	High
Static water body source heat potential (High / Medium / Low)	Low
District Heat Networks	
Suitability for district heat networks	Medium
Estimated number of higher demand (>50 MWh/yr) public buildings	8
Suitability for district heat networks - public buildings only (High / Medium / Low)	High
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	High
Current number of district heat networks	1
Heat density class (High / Medium / Low)	Medium
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	None
Heat General	
Total heat demand	19,631 MWh/year
Total of heat demand addresses	818
Average heat demand per heat address	24 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	High
Percentage homes in extreme fuel poverty (High / Medium / Low)	High
Percentage of social housing (High / Medium / Low)	Low
Percentage of pre-1949 residential properties (High / Medium / Low)	Medium
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Table 10 Detailed potential for district heating networks in Nethy Bridge. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	24% (High)
Potential ground source heat capacity from greenspaces	30,371 MWh/ year (Medium)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	100% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	Medium
Static water body source heat potential (High / Medium / Low)	None
District Heat Networks	
Suitability for district heat networks	Low
Estimated number of higher demand (>50 MWh/yr) public buildings	2
Suitability for district heat networks - public buildings only (High / Medium / Low)	Low
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	Medium
Current number of district heat networks	1
Heat density class (High / Medium / Low)	Low
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	None
Heat General	
Total heat demand	10,064 MWh/year
Total of heat demand addresses	427
Average heat demand per heat address	24 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	High
Percentage homes in extreme fuel poverty (High / Medium / Low)	High
Percentage of social housing (High / Medium / Low)	Low
Percentage of pre-1949 residential properties (High / Medium / Low)	Medium
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Table 11 Detailed potential for district heating networks in Newtonmore. Green Heat in Greenspaces data 2021.

Ground Source Heat	
Percentage of the settlement area that is suitable greenspace to generate ground source heat.	18% (High)
Potential ground source heat capacity from greenspaces	41,131 MWh/ year (High)
Percentage of annual heat demand that could be met from ground source heat in greenspaces	100% (High)
Water Source Heat	
River source heat potential (High / Medium / Low)	High
Static water body source heat potential (High / Medium / Low)	Medium
District Heat Networks	
Suitability for district heat networks	Medium
Estimated number of higher demand (>50 MWh/yr) public buildings	3
Suitability for district heat networks - public buildings only (High / Medium / Low)	Low
Percentage of heat demand from higher demand public buildings (High / Medium / Low)	Medium
Current number of district heat networks	1
Heat density class (High / Medium / Low)	Low
Energy from Waste	
Potential of energy from waste plants as heat source (High / Medium / Low)	None
Heat General	
Total heat demand	15,534 MWh/year
Total of heat demand addresses	675
Average heat demand per heat address	23 MWh/year
Percentage homes off gas grid (High / Medium / Low)	High
Percentage of homes in fuel poverty (High / Medium / Low)	High
Percentage homes in extreme fuel poverty (High / Medium / Low)	High
Percentage of social housing (High / Medium / Low)	Low
Percentage of pre-1949 residential properties (High / Medium / Low)	Medium
Percentage of residential properties SAP (Standard Assessment Procedure) classes D – G (High / Medium / Low)	High

Local area energy plans

Local area energy planning is a relatively new process designed to deliver effective local action to contribute to the 2050 net zero emission target. Local authorities are setting out intentions to deliver local area energy plans through the local heat and energy efficiency strategies and delivery plans.

Community-led local energy plans enable local communities to look at their existing and future energy needs (in terms of power, heat and transport) and state where they see priorities for action. They may also identify opportunities that can help communities take practical action to support their current and future energy system developments.

As local area energy plans are developed, they will need to be considered in the Proposed Plan, if they cover areas that fall within the boundary of the National Park.

Public sector investment

The Scottish Government provides financial support for public bodies through the Salix loans scheme to help fund energy efficiency projects encouraging uptake of low carbon technologies and stimulating wider investment in energy efficiency. More information on investment opportunities can be found here:

- https://www.salixfinance.co.uk/scotland

Summary of implications for Proposed Plan

The proposed plan needs to be prepared in accordance with:

- The four aims of the National Park as set out in The National Parks (Scotland) Act 2000), in particular the first aim to 'conserve and enhance the natural and cultural heritage of the area' and the fourth aim 'to promote sustainable economic and social development of the area's communities'.
- The spatial strategy and principles of National Planning Framework 4.

In its preparation the proposed plan should seek to:

- Support future heat networks put forward through the local authority Local Heat and Energy Efficiency Strategies and Delivery Plans.
- Identify Heat Network Zones as set out in local authority Local Heat and Energy Efficiency Strategies.
- Take account of any local area energy plans that are prepared for areas in the National Park.
- Support development that includes retrofitting a connection to a heat network.