Perth and Kinross Local Heat & Energy Efficiency Strategy (LHEES) and Delivery Plan (2024-29) Progress update

Climate Change & Sustainability Committee meeting

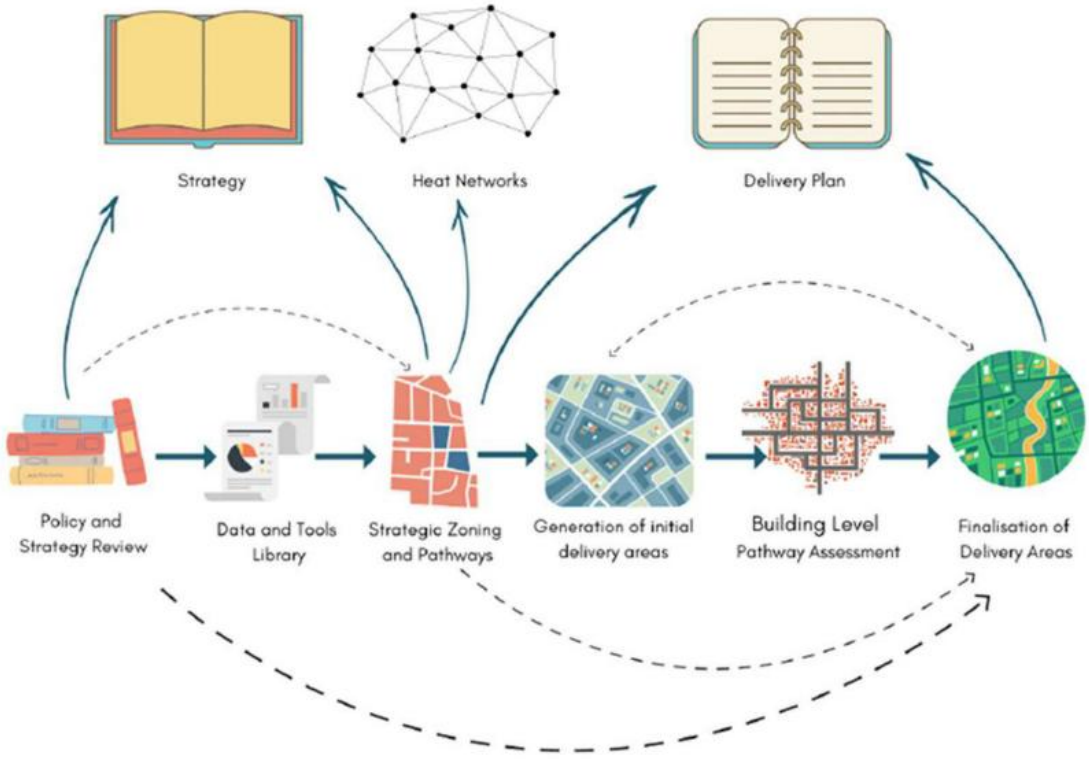
23 August 2023

Divindy Grant, Perth & Kinross Council

Perth and Kinross Local Heat & Energy Efficiency Strategy (LHEES)

PKC has a statutory duty to prepare LHEES and Delivery Plan within a 5-year cycle. The Scottish Government is providing multi-year funding to support this process.

The Strategy and Delivery Plan will help the Council to deliver on several local policies and strategies e.g. LOIP/PKC Corporate Plan, Climate Change Action Plan, Local Housing Strategy, Economic Wellbeing Plan, Poverty Action Plan, etc



What is a Local Heat and Energy Efficiency Strategy (LHEES)?

- Long-term **plan for an entire local authority area** to decarbonise heat and improve energy efficiency, while addressing fuel poverty
- Sets out how each **segment of the building stock** needs to change to reach net zero
- Identifies **strategic heat decarbonisation zones**, and sets out the principal measures for reducing buildings emissions within each zone
- **Prioritises areas for delivery** of heat decarbonisation action
- Act as a **prospectus** for where government funding and private investment for heat decarbonisation and energy efficiency investment should be targeted
- An LHEES is structured in two parts:
  - A Local Heat and Energy Efficiency Strategy
  - A Local Heat and Energy Efficiency Delivery Plan

National Context and Targets

Net zero emissions by **2045** and 75% reduction by **2030.**

Heat Decarbonisation:

- By 2030, emissions from buildings have to be 68% lower than 2020 levels
- By 2032, 70% of heat for non-domestic buildings will be using low carbon technologies

Energy Efficiency:

- By 2026 All Social Housing EPC D and EPC B by 2032
- By 2028 Private Rented Sector EPC C
- By 2033, all homes have the equivalent of EPC C.

Fuel Poverty:

- By 2040 no more than 5% of households in fuel poverty and 1% in extreme fuel poverty

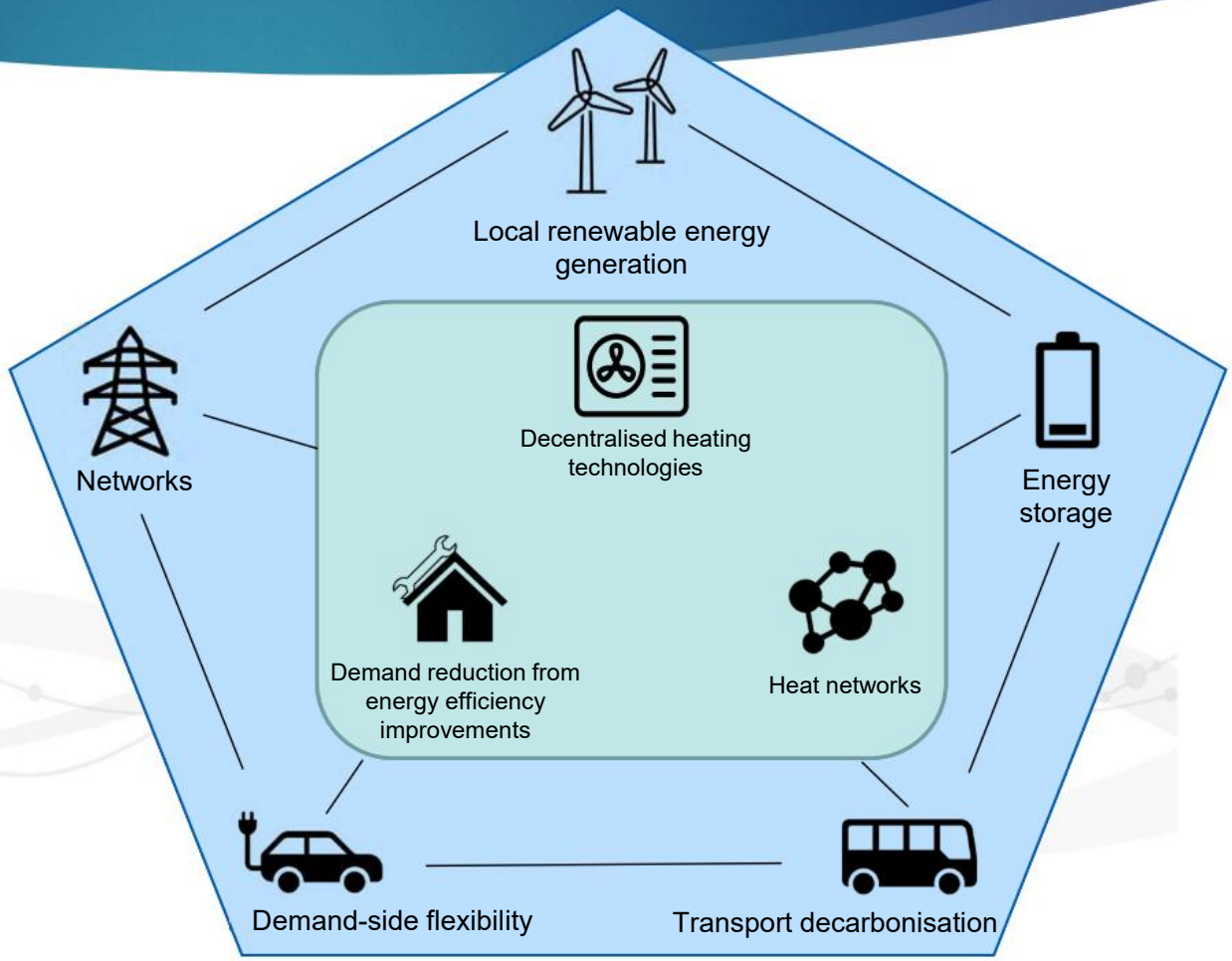
Scale of the Challenge

Key Targets	Target Year	P&K Current value	Number of households	Estimated retrofit costs (£M)
Housing stock				
All Social Housing EPC D or Above	2026	93%	1,100	£145.1
All Social Housing EPC B or Above	2032	17%	13,600	
All Domestic Private Rented Properties EPC C or Above	2028	28%	8,700	£147.5
All properties should meet EPC Band C (residual Owner Occupier)	2033	32%	31,400	£616.1
Fuel Poverty				
No more than 5% of households in fuel poverty	2040	63%	44,900	
No more than 1% of households in extreme fuel poverty	2040	40%	30,200	
Heat				
70% of heat for non-domestic buildings will be using low carbon technologies	2032	9%	4,300	

Taking a joined-up and whole energy system planning approach

Complementary programmes

- Local Area Energy Planning (LAEP)
- Council's estate decarbonisation plan
- Business case investment decision tool to develop Smart Local Energy Systems
- Regional Energy System Optimisation Planning (RESOP) and LAEP+ (visualisation tool)



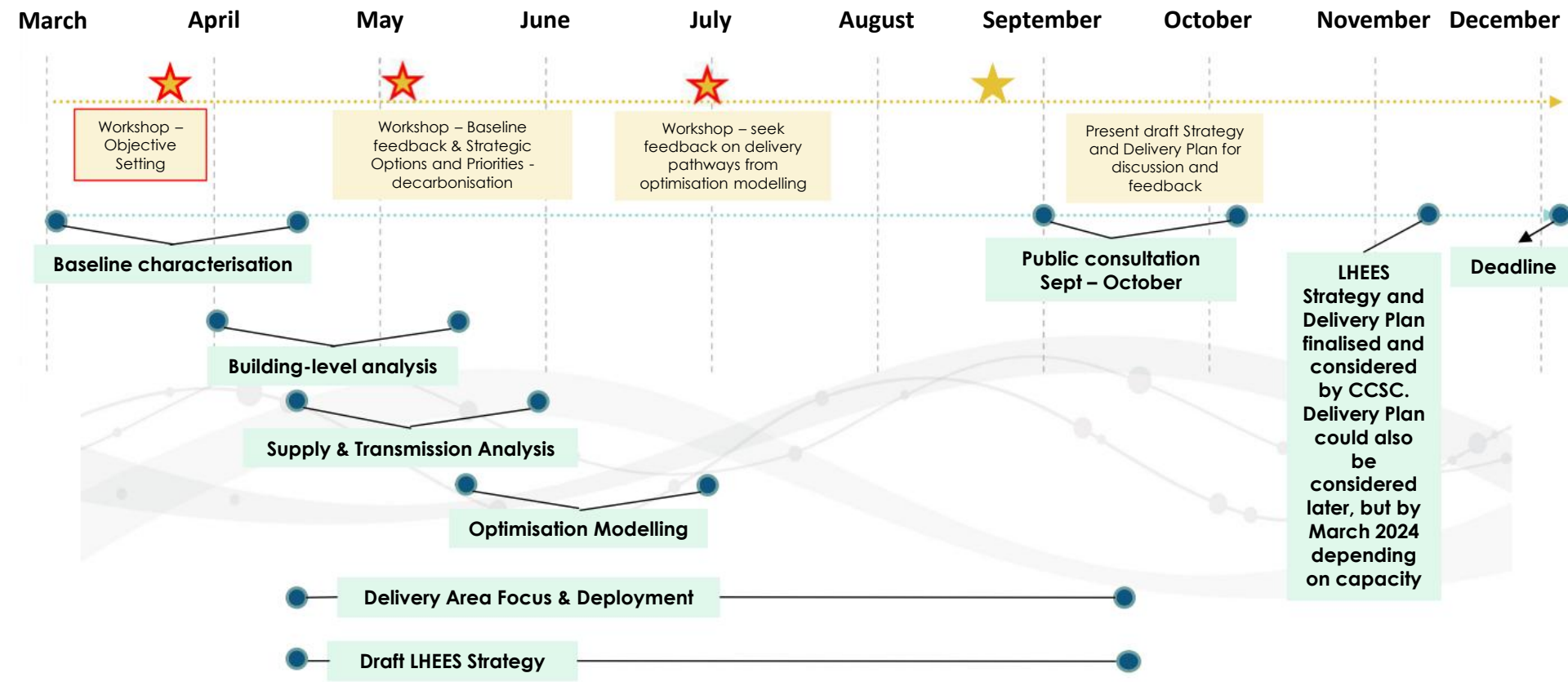
Covered by LHEES (higher granularity)

LAEP (lower granularity)

Governance & Engagement

- Internal LHEES Working Group reporting to Climate Change Board
  - Shelley McCann (SMcCann@pkc.gov.uk) - co-leads
  - Andrew Ballantine (ABallantine@pkc.gov.uk) - co-leads
  - Climate Change
  - Housing
  - Energy
  - Planning
  - Economic Development
- Internal and External Stakeholder Group (Scottish & Southern Electricity Network, Scottish Gas Network, Public Sector Orgs, Delivery Partners, Key Project Partners, P&K Climate Commission)
- Approval of strategy and plan sits with Climate Change and Sustainability Committee
- **Stakeholder engagement at the core of LHEES development and crucial to its successful delivery**

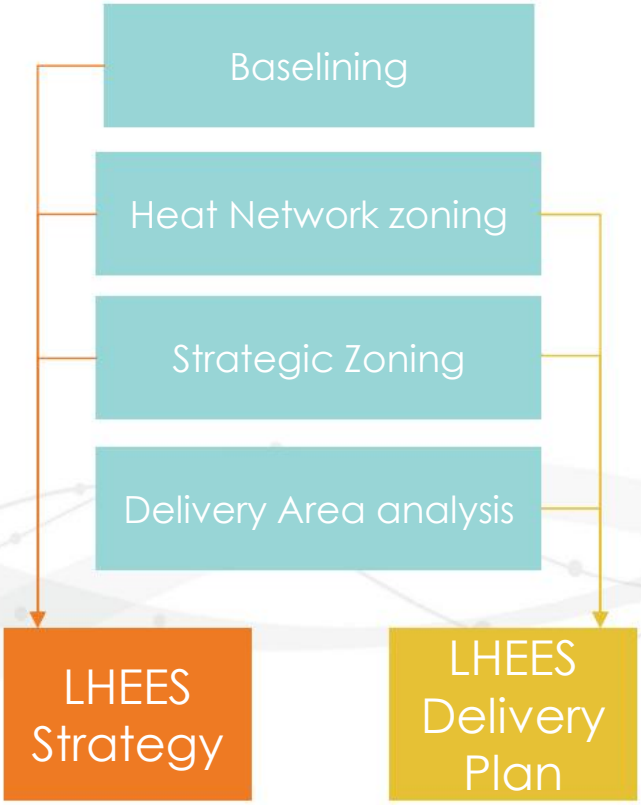
LHEES Engagement milestones



LHEES Strategy - Proposed Strategic Priorities

PKC Corporate Plan Priorities	Proposed LHEES Priorities	Stakeholders' Priorities identified through engagement
Golden thread		
Tackling climate change and supporting sustainable places	• Decarbonising heat within a transitioning energy system (heat networks, heat pumps)	• Net zero / carbon reduction • Wider energy systems planning • Meeting national targets
	• Improving buildings energy efficiency	• Meeting national targets • Addressing fuel poverty
Tackling poverty	• Tackling fuel poverty aiming for affordable warmth	• Addressing fuel poverty
Developing a resilient, stronger and greener local economy	• Developing green skills and jobs from heat transition	• Investment and supply chain considerations
Working in partnership with communities	• Working in partnership with communities to build community wealth and wellbeing from heat transition	• Community plans/grass roots energy planning
	• Mobilising partners and public and private investments to drive heat transition	• Innovation – Smart local energy systems Role of hydrogen

LHEES development evidence-based process



LHEES Evidence Base

- PKC Data
- Stakeholder Data
- Energy Savings Trust
- SSEN Network Data
- National Heat Maps & SG Data

Significant data gaps exist, especially on the non-domestic side

PK LHEES Considerations

	No.	LHEES considerations
Heat decarbonisation	1	Off-gas grid buildings
	2	On-gas grid buildings
	3	Heat networks
Energy efficiency and other outcomes	4	Poor building energy efficiency
	5	Poor building energy efficiency as a driver for fuel poverty
	6	Mixed-tenure, mixed-use and historic buildings

- Heat Networks (Scotland) Act 2021 places a duty on local authorities to carry out a review of potential areas for heat networks
- However, designation of heat network zones falls outside the scope of LHEES
- The outputs from LHEES can be used to start more detailed work on consideration of heat networks
- Further action to take forward heat networks should be included in the LHEES delivery plan

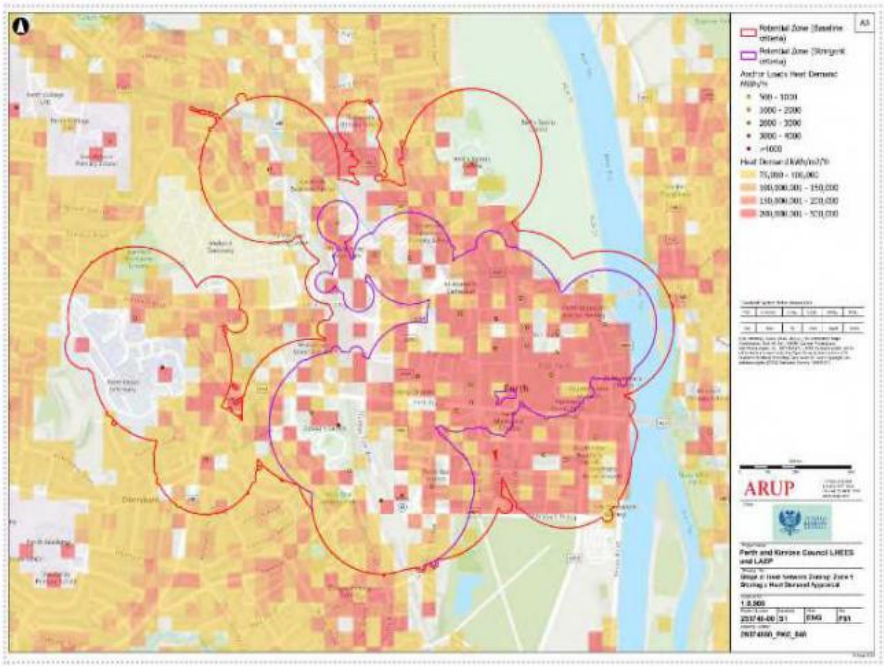
LHEES Strategy - Proposed Heat Network Zones

Example zone – Perth - City Centre

More detailed zoning part of Heat Network Act Duties

Zone ID: 1
Zone location: Perth City Centre
Opportunity category: High
Key contact: xxxxxxx

Screening criteria: 8000 kWh/m/yr LHD (5+ anchor loads)
Date produced: 05/07/2023
Review date: dd/mm/yyyy



Opportunity summary

- 24 anchor loads and 91 GWh/yr of demand identified in the 8000 kWh/m/yr LHD zone
- 32 anchor loads and 161 GWh/yr of demand identified in the 4000 kWh/m/yr LHD zone
- Existing heat network feasibility study for Perth City Centre
- High gridded heat density around proposed Perth City Centre heat network – potential for expansion of proposed heat network

LHEES Strategy - Proposed Potential Heat Network Zones

Proposed Potential Heat Network Zones
Perth - City Centre
Perth - Inveralmond Industrial Estate
Perth - Grammar School
Perth - Perth College
Blairgowrie - High School and Community Hospital
Kinross - Loch Leven Community Centre and Leisure Centre
Auchterarder - Community School)

Vision Heat Network Zones
Perth - Perth Harbour and Industrial Estates
Pitlochry
Crieff
Perth - Tayview Industrial Estate

LHEES Delivery Plan – Action identification

Prioritisation criteria	Example Actions
1. Meeting regulatory targets	• Engage with, and promote more effective working with key stakeholders around implementing prioritised Delivery Areas (e.g. housing associations and landlords)
2. Deliverable, technically feasible and evidence based	• Maintaining and communicating LHEES evidence base
3. Funding available	• Mobilise existing or future investments from energy retrofit and net zero energy projects by universities, NHS Boards and other organisations with large estates.
4. Interventions that are already beneficial and no/low regret	• Develop a portfolio of no/low regret projects such oil boilers replacement • Heat pump promotion to suitable off-gas properties
5. Greatest impact (fuel poverty and net zero)	• Develop a portfolio of greatest impact projects such as social housing retrofit and heat networks
6. Enabling actions required to unlock future transformation	• Use existing publicly funded contracts to support training, retraining and upskilling in the future/ existing workforce to support supply chain development.

LHEES Delivery Plan –delivery area spatial zoning focuses

Focus ID	Focus
1	Off-gas social housing energy efficiency Category 1 suitable for heat pump retrofit
2	Social housing that do not meet regulations (e.g. below EPC Band B)
3	Owner-occupied properties that do not meet targets (e.g. below EPC Band C)
4	Off-gas private homes suitable for heat pump retrofit
5	Social housing that require energy efficiency improvements to enable suitability for heat pumps
6	Off-gas social housing energy efficiency Category 2 suitable for heat pump retrofit
7	Owner-occupied properties below EPC Band E
8	Owner-occupied properties that do not meet targets (eg below EPC Band C) AND potential suitability for HEEPS:ABS funding

Delivery Area analysis – Example

Focus ID 7: Owner occupier properties below EPC Band E

Focus

Identification

Prioritisation

Summary

Which of these buildings (or clusters of buildings) should we target first?

- Aggregate identified buildings to Delivery Area
- Prioritise areas based on prioritisation criteria

Delivery Area analysis – Case Study

Focus ID 7: Owner occupier properties below EPC Band E

Focus

Owner occupier properties below EPC Band E

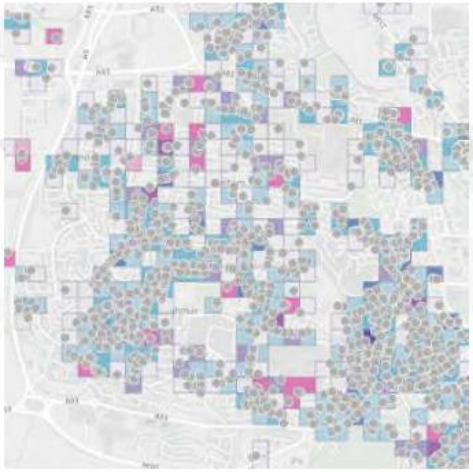
Identification

Aggregate identified buildings to Delivery Area

Prioritisation

Prioritise areas based on Prioritisation Criteria	Delivery Areas in primary energy supply areas with greatest spare capacity
	Fuel poverty probability
	Potential energy savings

Summary



Delivery Area analysis – Case Study

Focus ID 7: Owner occupier properties below EPC Band E

Focus

Identification

Prioritisation

Summary

What do we need to know about these buildings to develop actions?

Summarise relevant data fields:

- To identify synergies / strategic zoning(area based/intervention based)
  - Count of tenure type
  - Count of mixed tenure properties
- To quantify intervention impacts
  - Energy savings (kWh)
  - Fuel poverty change (%)
  - CO2 reduction (tCO2e)
  - Cost of intervention (£)

Key challenges

- **Timeline pressures for LHEES development –** One of the furthest ahead, but deadlines still demanding. Common issue across Councils with a recognition of an extended deadline to March 2024
- **Resources for delivery –** £75k annually from the Scottish Government to develop and coordinate LHEES Strategy and delivery plan, but still large gap to support delivery and meet scale of challenges and national targets
- **Data availability and shareability –** Potential GDPR challenges around using certain data sets for consultation, data gaps and updates

Next steps

- Consultation draft – Summary of Strategy and Delivery Plan (Sep)
- Public Consultation on Strategy priorities, delivery areas, heat network zones and Delivery Plan focus (Sep-Oct)
- Potential workshop with CC&S Committee members (Sep-Oct)
- Workshop with Perth and Kinross Climate Change Commission (Aug-Sep)
- Draft LHEES Strategy (and Delivery Plan) intended to be considered by CC&S Committee in November
- Implementation preparation

Project team Contacts

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