



Warmworks

Heat decarbonisation in Scotland
SPREE

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Scotland Division

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About Warmworks

Warmworks is a joint venture, initially set up in 2015 to manage the Scottish Government's national fuel poverty scheme, Warmer Homes Scotland (WHS) – we now deliver contract all across the UK

We were appointed to deliver the £728m new phase of WHS in 2023, which runs to 2030. The scheme provides **whole house retrofits to homes in or at risk of fuel poverty**

Warmworks has also delivered more than £10m of decarbonisation projects for social landlords across Scotland in the last two years, with a further £15m to deliver in the next twelve months

More than 50,000 households have been helped through schemes and projects we manage, with an average annual bill saving of **over £300 per year**

We have also supported or enabled the creation of more than 160 apprenticeships and over 700 new jobs, making 'green jobs' and 'green skills' a tangible reality

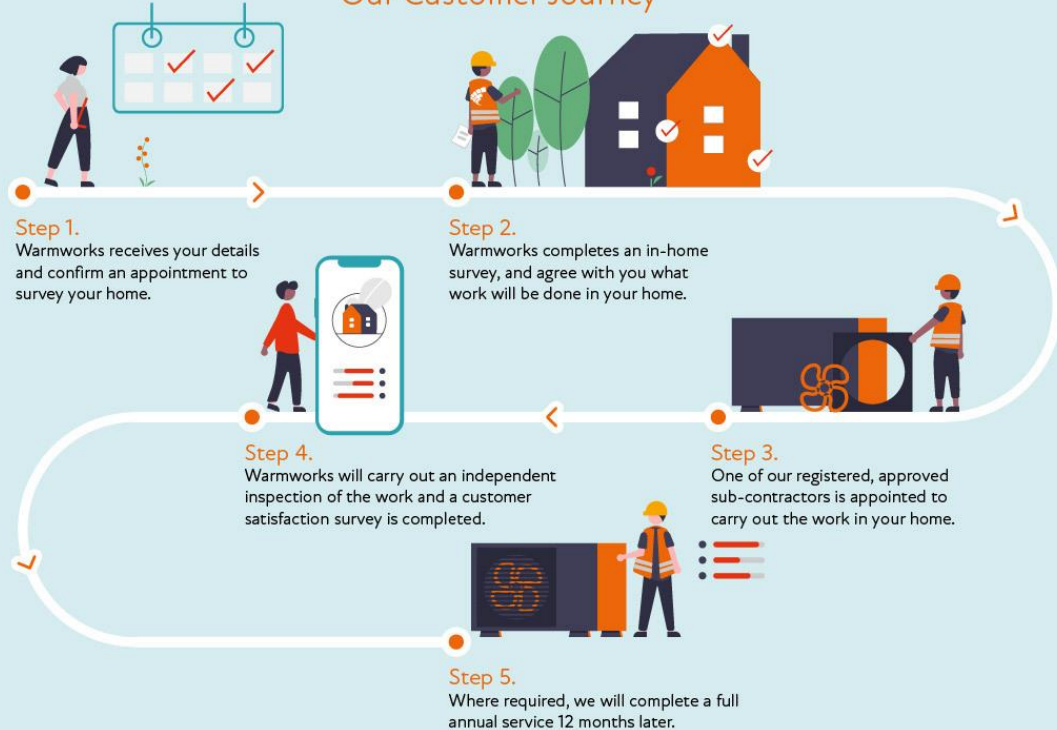
Work is delivered by a supply chain of local installers, mostly SMEs based in all parts of the country: we know that our service must be **national in scale but local in experience**

Our skill set is about providing an end-to-end service for fuel poor homes and communities that understands the circumstances of individual homes, communities and buildings



What we do

Our Customer Journey



The role that innovation plays in decarbonisation

Warmworks' experience has been about making innovation available on our schemes and contracts **at the right time, and in the right way**

Since 2015, we have delivered significant innovations in the retrofit space, including:

- Increasing scale of heat pump and renewable technologies installations year on year
- Introducing Q-Bot, a robotic form of underfloor insulation, to the Scottish market
- Embracing smart ventilation and introducing it to WHS
- Introducing domestic battery storage to the social housing market in Scotland

In each of these cases, we worked closely with our client and with end users to ensure that new technologies were appropriate, would not increase running cost and could be fitted by an installer base that would provide the **right advice, support mechanisms and aftercare** in place throughout the process

Warmer Homes Scotland



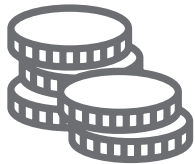
17,000 referrals
received



11,500 retrofit
assessments



4,923 households
completed



£359 average
household saving



99% customer
satisfaction



664 jobs created

Case study: Dumfries & Galloway

- SPEN Green Economy Fund Project: domestic battery storage to reduce energy bills using smart time of use tariffs
- Project value – £1.25m with all funding via the SPEN Green Economy Fund
- Fitted over 140 Tesla Powerwall batteries in homes that were in or at risk of falling into fuel poverty
- Independent monitoring and evaluation carried out
- Based on average consumption and dual tariff, customers could save £290 per year- this increased when alternative tariffs were used
- Further Net Zero Heat projects with client to fit heat pumps, batteries, PV and insulation established on an annual basis following this

What does this tell us?

We understand that the retrofit challenge will be much broader and wider than solely those in fuel poverty and that solutions need to be found to reach national scale for all of the retrofit work that will be required

However, making the transition to net zero is about delivering a just transition – ensuring that **no homes, no communities or individuals are left behind**, otherwise we have delivered no transition at all

That means that finding innovations and implementing them for those who can't or won't get there by themselves is a critical part of the mix – recent price rises mean that **this population is growing**, not decreasing in importance

The case studies here have shown that innovation can work in fuel poor homes, it's a question of how and when it's introduced, as well as having the **right advice, support mechanisms and aftercare** in place throughout the process

Questions?



An Introduction to the Energy Efficiency Association cic

Kenneth Campbell

Chairman

What is the EEA?

Trade Association for the Energy Efficiency sector in the UK

Technologically Agnostic

Politically Neutral

Financially Independent

Community Interest Company

Our Role

**To Coordinate
Communication
& Collaboration**

Across the energy efficiency sector

What we do

We share information through

Our websites energyefficiencyassociation.co.uk

Our publications The Energy Efficiency Handbook 2025

Our conferences Scottish Energy Efficiency Supply Chain Conference

Our zoom calls EEA Special Interest Group Q&A

Our network nights A Pint and a Curry Evenings

And by engaging with partners at events like this

Here to help

**If you have a question about Energy Efficiency,
please ask us and we will try to help.**

We will usually have the answer somewhere within our membership

What can Scottish Policy Makers Learn from other Government's Policy Failures?

1. Thinking Big & Small – big goals and small budgets
2. The Art of the Possible – understanding supply chain delivery
3. Baked in Failure –the risk of stop/start programmes
4. Malodourous Administration – When red tape stinks
5. High-Noon Shootout – where is the sheriff
6. The People Problem – the mind and skills gap

Thinking Big & Small

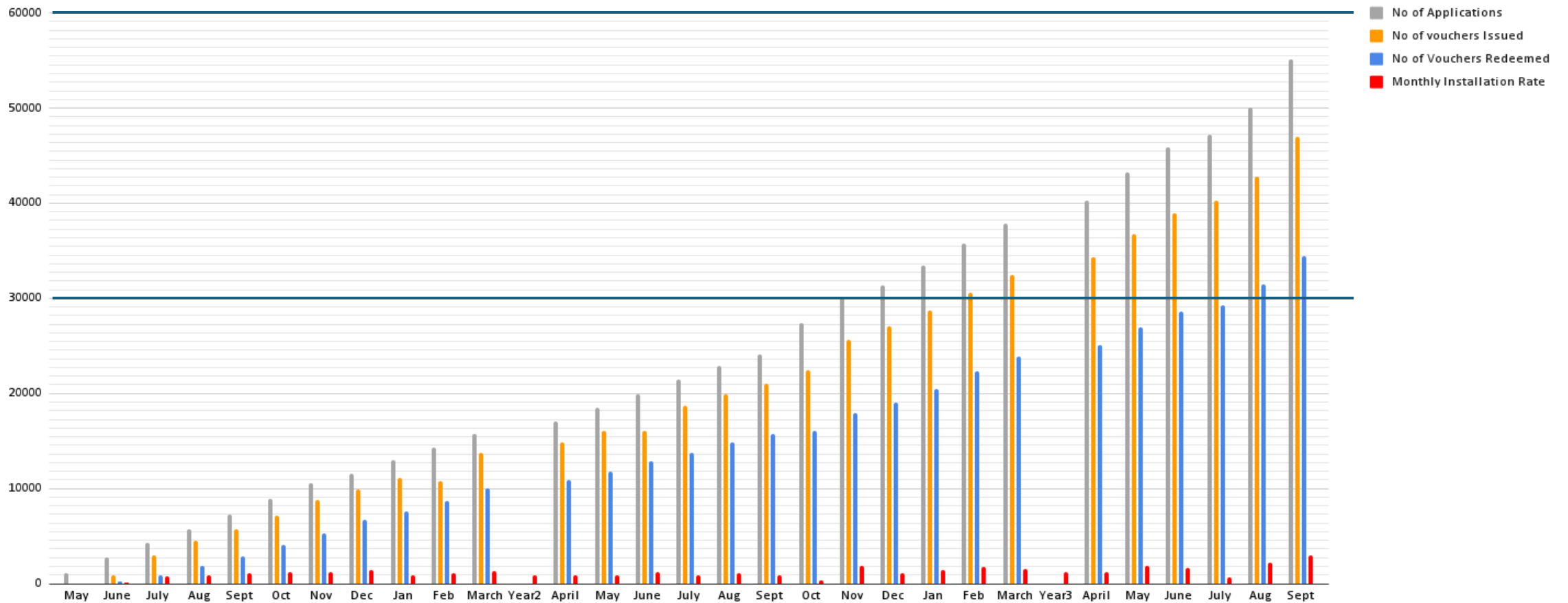
the Boiler Upgrade Scheme (BUS) (April 2022-April 2025 (maybe longer??))

- The Boiler Upgrade Scheme (BUS) contributes upfront capital grants to support the installations of low carbon technologies. These include air source heat pumps (ASHP), ground source heat pumps (GSHP), ground source heat pumps shared ground loops (GSHP SGL) and in some circumstances biomass boilers, in domestic and small non-domestic buildings.
- £450m over 3 years (£150m a year) to provide £5,000 grant to replace boilers with heat pumps in 90,000 homes

Thinking Big & Small

the Boiler Upgrade Scheme (BUS) (April 2022-April 2025 (maybe longer??))

BUS Installations



Thinking Big & Small

the Boiler Upgrade Scheme (BUS) (April 2022-April 2025 (maybe longer??))

- £88m returned to HM Treasury year 1 (60% of annual budget)
- £78m returned to HM Treasury year 2 (48% of annual budget)
- Year 3 was likely to return £50m (30% of annual budget)

- Increase the value of the grant from £5,000 to £7,500
- Extend the scheme for 3 more years to 2028
- Budget an additional £1.5billion for those three years
- Indicate scheme not going to be continued by allocating additional £200m for rollover into 2025.

The Art of the Possible

the Boiler Upgrade Scheme (BUS) (April 2022-April 2025 (maybe longer??))

- Success for 37,417 homeowners who have received the grant so far
 - Just over 12,000 people waiting for installs
 - Average around 4,000 new applications a month
 - 5 month remaining
 - Install rate around 3,000 installs a month.
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- Around 17,000 applications will be outstanding in April
 - Backlog will take 6 months to clear.

The Art of the Possible

the Boiler Upgrade Scheme (BUS) (April 2022-April 2025 (maybe longer??))

- Installation can only progress at the capacity of available supply chain
 - Number of installers
 - Location of installers
 - Quality of installers
 - Availability of materials
 - Availability of Assessors, Coordinators and Surveyors
 - Availability of funding / working capital
 - Profitability of the work

The Art of the Possible

what a simple project requires (eg a simple loft insulation install)

1. Sales meeting with customer / home owner / landlord / tenant
2. Energy Efficiency Assessment (EPCs – are they worth the paper?)
3. Retrofit Coordinator does Pre-install inspection
4. Funding body agrees funding
5. Installer orders up materials from supplier
6. Installer does installation
7. Retrofit Coordinator carries out inspections during and post install
8. Customer signs off the install
9. Funding body pays the installer

Baked in Failure

The stop start of the Energy Company Obligation (ECO)

- The ECO scheme is designed to tackle fuel poverty and help reduce carbon emissions by placing a Home Heating Cost Reduction Obligation (HHCRO) on medium and large energy suppliers. Obligated suppliers must promote measures that improve the ability of low-income, fuel-poor and vulnerable households to heat their homes.
- The overall target for these measures is divided between suppliers based on their relative share of the domestic gas and electricity market.
- The scheme has seen 5 iterations, ECO, ECO1, ECO2, ECO3 and now ECO4. Every time there has been a gap between iterations

Baked in Failure

The Energy Company Obligation (ECO)

Because new statutory legislation is required by iterations of the scheme, the new scheme can't begin until the legislation is passed.

Eg

Energy Companies met their obligation in January 2022 so stopped funding

ECO3 scheme budget finished in March 2022

Statutory Instrument passed in July 2022 so ECO4 could begin

Guidance notes and eligibility criteria were not published until October

Installers went bust waiting

Malodourous Administration

The Green Homes Grant (2020-2021)

- Supposed to boost Post-Covid Green Jobs Recovery, the Green Homes Grant was a voucher based scheme where home owners could claim a voucher for partial funding of energy efficiency improvements to their home.
- Scheme almost destroyed the sector for all the reasons already mentioned
- Timing was wrong
- Budget was wrong
- Focus on Presentation over Implementation

Malodourous Administration

The Green Homes Grant (2020-2021)

- Announced in July 2020 it caused orders from customers to be put on hold, so work for installers stopped dead.
- Installers received hundreds of new enquiries but no scheme details
- August 2020 website for homeowners to lodge applications opened
- September 2020 Scheme Administrator appointed
- October 2020 first projects could be lodged by installers
- November 2020 Installer guidance finally issued
- December 2020 First Installations completed
- Christmas Eve 2020 all installers cancelled by administrator
- January 2020 First payments made to installers

Malodourous Administration

The Green Homes Grant (2020-2021)

- Installers had to wait 7 months to receive income from the scheme
- Payments delayed due to
 - VAT rounding errors of 1p
 - Mis-matching of post codes because of installers entering lower case letters.
 - The wrong information being requested by the administrator from TrustMark
 - Administrators taking direction from HM Treasury not Dept of Energy

EEA directly stepped in to ensure £2.5m in funding made its way to the installers when administrator was blocking release of payments.

Scheme was shut in April 2021 just as it was starting to work

High-Noon Shootout

The Green Deal (2013-2015)

The Green Deal is a scheme which allows homeowners to pay for energy efficiency improvements to their home through a government loan repaid from the savings made in their energy bills.

Over engineered and so complicated even those involved in delivering it, did not fully understand it.

Marketed at the wrong people it was mis-sold everywhere

Cowboys loved it.

High-Noon Shootout

The Green Deal (2013-2015)

- Green Deal Advisor
 - Green Deal Assessor
 - Green Deal Provider
 - Green Deal Installer
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- All lodged with Green Deal ORB
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- Lack of checks on companies in the GD ORB
 - Lack of checks on quality of work

High-Noon Shootout

The Green Deal (2013-2015)

Financial sector refused to step up and take on loan provision, deeming it too high risk

Dept for Energy and Climate Change (DECC) ran out of money

Scheme closed with 40 minutes notice to industry

Cowboy installers took their money and ran

Decent installers were left high and dry

Consumer confidence in the industry was destroyed

High-Noon Shootout

The Green Deal (2013-2015)

- Scheme was only really suitable for landlords with tenants who paid their own energy bills but was pitched to all homeowners
- The £4m marketing budget was almost entirely spent with Evening Standard in London and newspapers around Manchester.
- Insurance and Mortgage companies couldn't clarify how homeowners with a Green Deal plan could sell their property.
- The number of complaints from customers about the quality of installers is an ongoing headache for politicians.
- The need for proper regulator in the sector clear

The People Problem

The LAD Scheme (2020-2023)

The Local Authority Delivery Scheme (LADS) was part of the Green Homes Grant, delivered through Local Authority contracts.

The scheme came in several iterations LAD1, LAD2, LAD3 before being replaced by HUG Scheme

Each iteration started slowly before picking up.

- Local Authority Procurement Issues
- Not enough qualified installers in local area
- Installation companies unable to train more installers locally as no courses
- Not enough funding for training

What Do Schemes Get Right?

- Single strategic programme with multiple targeted scheme tiers
- Area Based schemes to keep costs down and speed up delivery
- Clear communication about eligibility
- Prompt communication about scheme guidance
- Clear rules for installers to follow (proper policing)
- Support for scalability.
- Prompt payment for installers
- Clear support from mortgage and insurance industry

Here to help

**If you have a question about Energy Efficiency,
please ask us and we will try to help.**

We will usually have the answer somewhere within our membership

Contact Us

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Vattenfall Heat UK

SPREEE - Cross Party Renewables Group

Decarbonisation of heat in Scotland

12/11/2024



VATTENFALL

Opportunities and Challenges

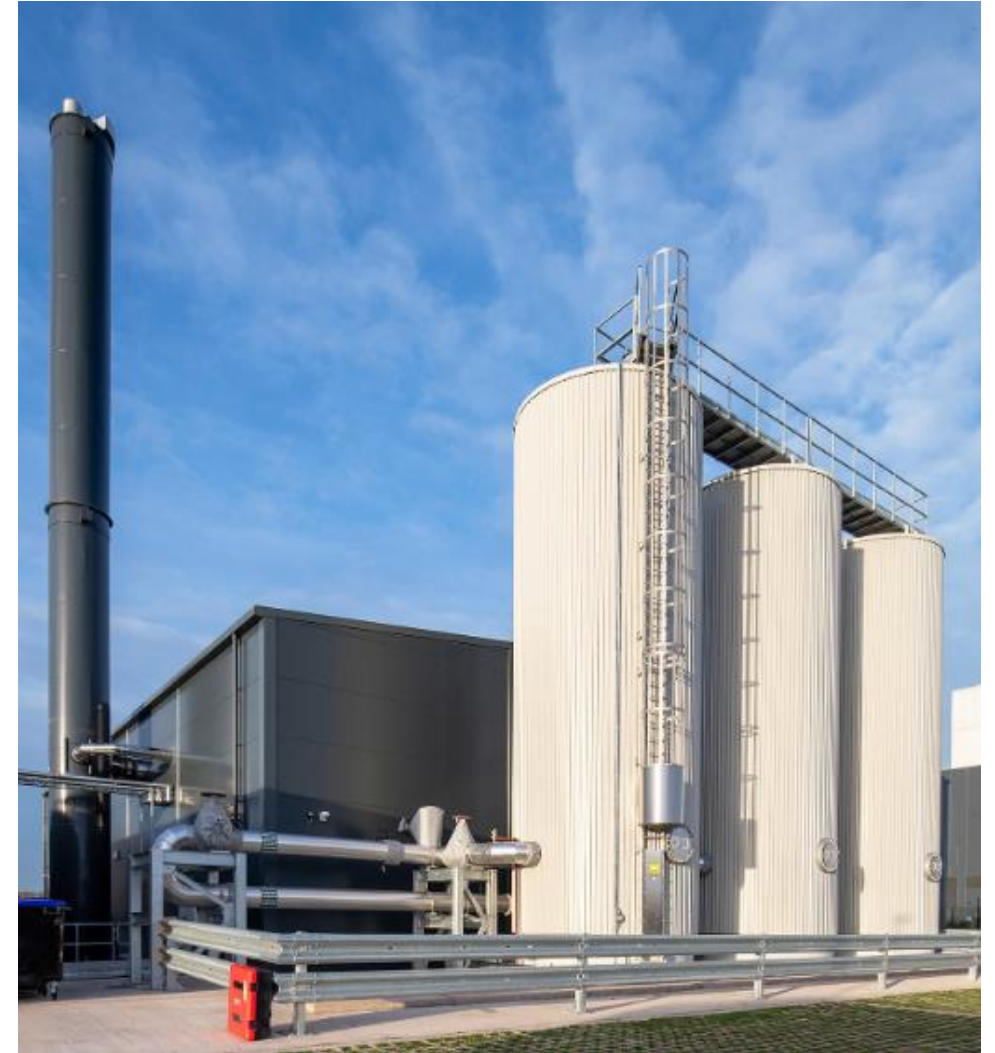
Demand

a) Opportunity

- Urban density lends itself to large-scale low carbon district heating.
- Devolved powers to Scottish Government in this area means that Scotland can lead in the deployment.

b) Challenge

- Without compelling connection it is difficult to aggregate demand for new systems
- DH scheme require large initial capital investment with long payback periods.



Opportunities and Challenges

Project finance and funding

a) Opportunity

- Grant funding is available in Scotland and has been successfully used.
- Part funding the capital investment derisks demand uncertainty.

b) Challenge

- Funding scheme durations have to match infrastructure delivery or they are useless



Opportunities and Challenges

Regulatory

a) Opportunity

- Zoning and the introduction of statutory undertaker powers
- Customer protection through regulated UK consumer protection schemes

b) Challenge - creating a level playing field

- Scottish Building regs - heat networks are at present fundamentally disadvantaged
- HNTAS – Current proposals are unworkable



Thanks!



VATTENFALL