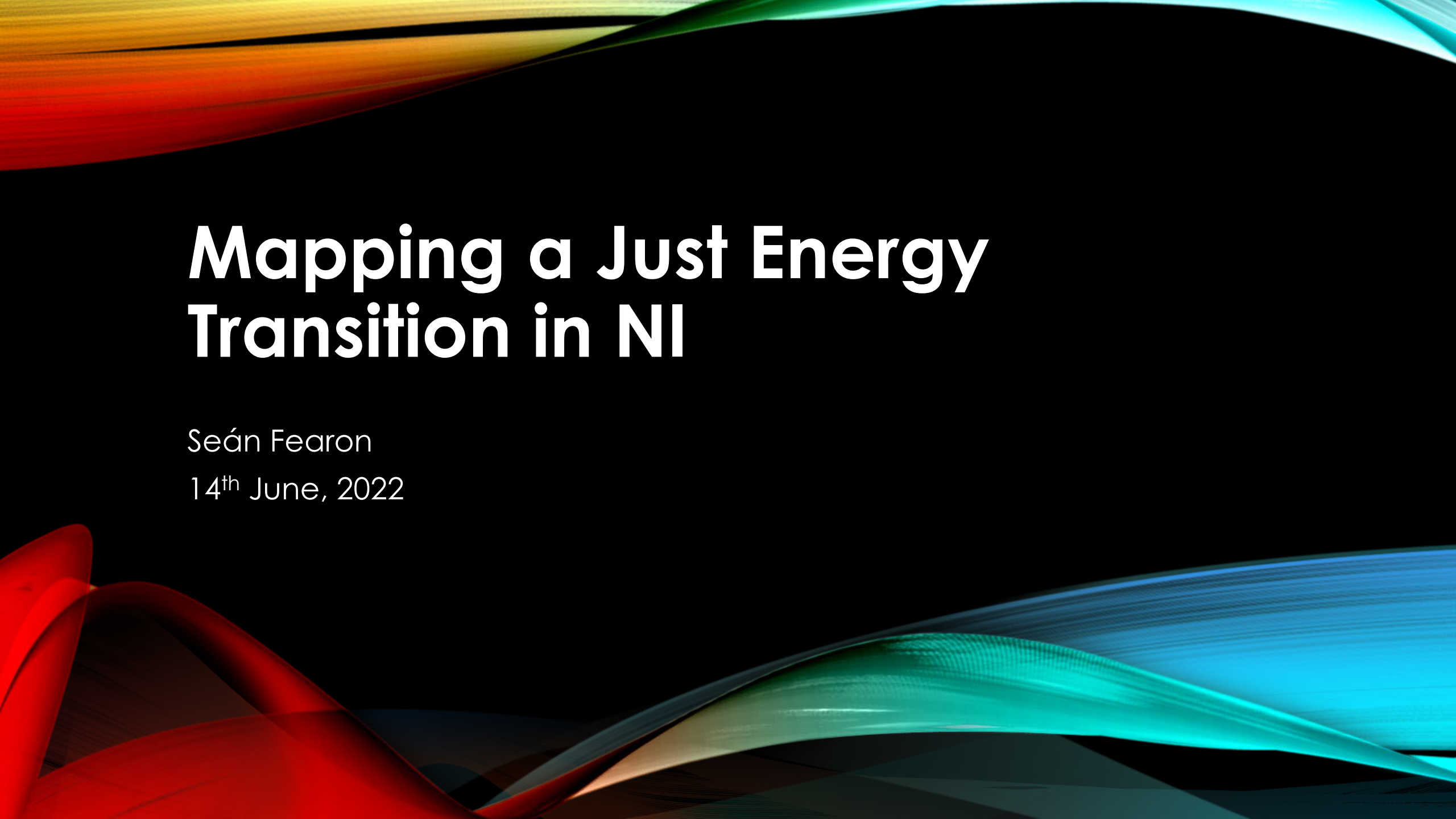




Mapping a Just Energy Transition in NI

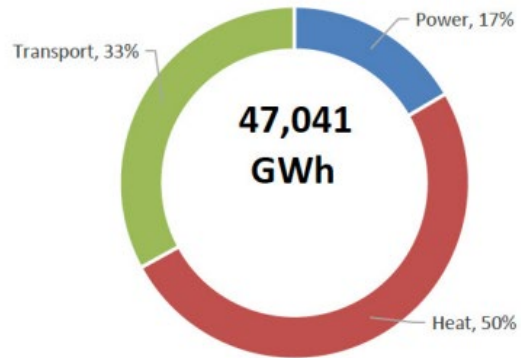
Seán Fearon

14th June, 2022

Key points

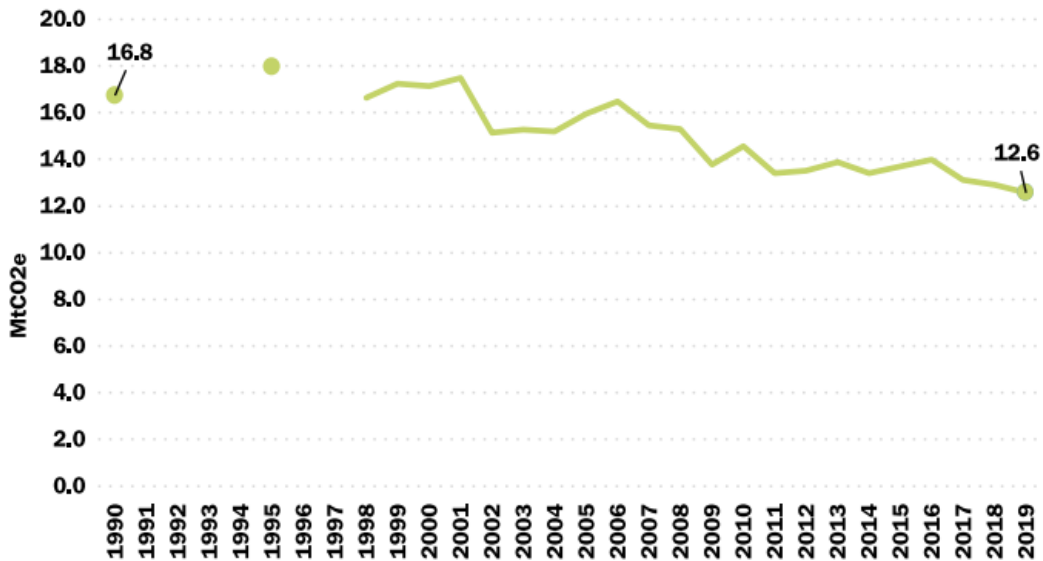
- Macro-level employment vulnerability (data limitations)
- Employment opportunities
- Case study – Kilroot power station
- NI Climate Change Act

Total Final Energy Consumption by Sector, Northern Ireland, 2017



NI Energy & Emissions Profile

- GHG emissions down 25% since 1990
- Agriculture & transport emissions up, fall driven by power sector
- ROC scheme, few new renewables projects
- Heat main driver of energy consumption (68% of homes oil heating)
- £2.8bn on imported fossil fuels (2021)



Employment vulnerability - Rol

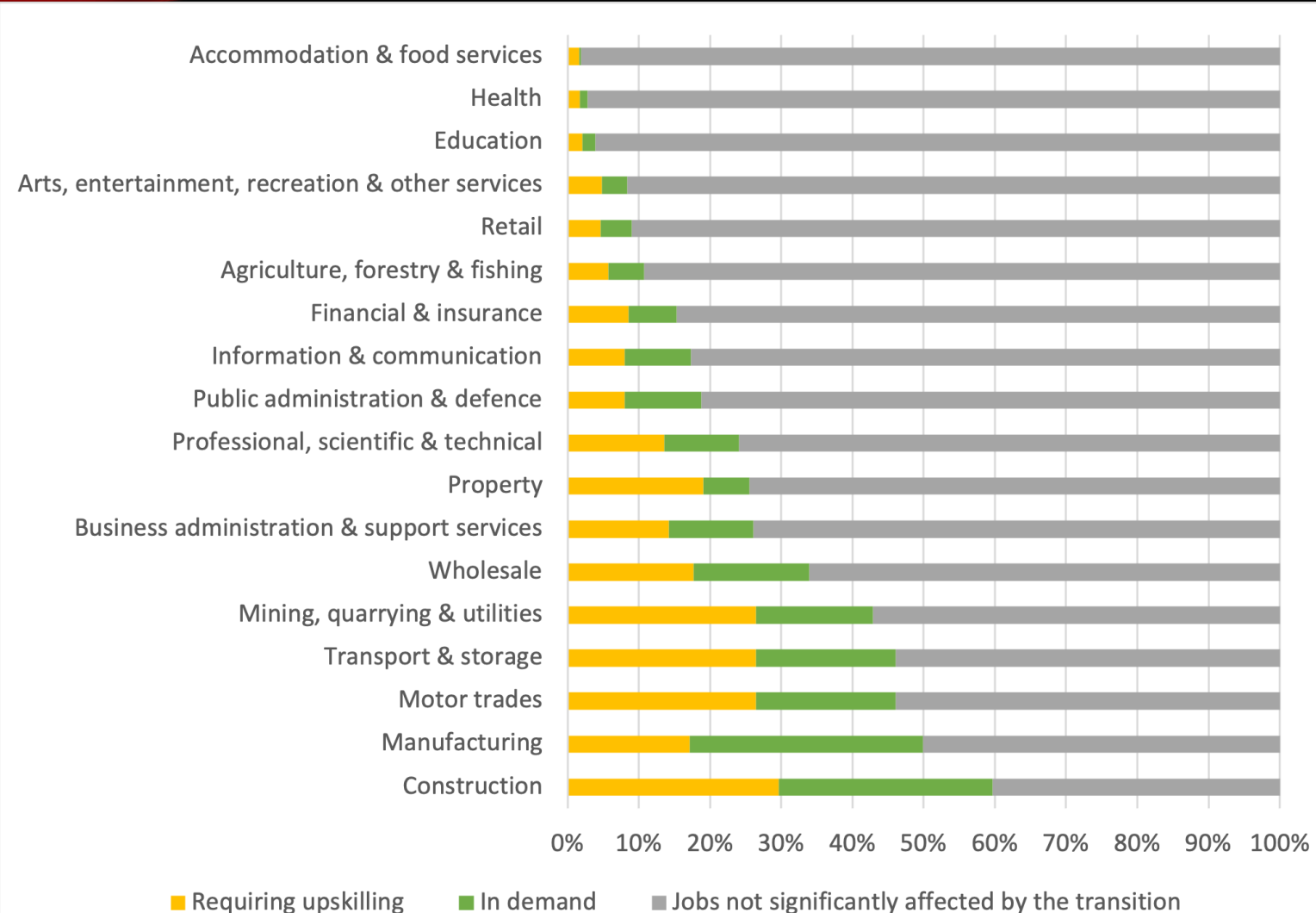
Table 1: Sectoral Emission and Economic Statistics (2019)

Sector	% of Emissions	% of Employment	% of GVA	Carbon Intensity Level
Agriculture	44.5	4.7	1.1	186.3
Energy and Utilities	22.4	1.1	1.4	393.6
Manufacturing	16.2	10.9	34	29.4
Transport	6.9	4.6	2.1	30.3
Retail	2.6	13.1	7.5	3.9
Public Admin	1.5	4.9	2.8	6.1
Construction	1.1	6.3	2.5	3.3
Health	1	12.5	4.7	1.6
Accommodation	0.9	7.7	1.7	2.3
Education	0.6	7.9	2.9	1.6
Admin	0.5	4.8	7.1	2
ICT	0.5	5.3	15.4	1.8
Professional	0.5	5.9	4.5	1.5
Other services	0.4	2.5	0.9	3.5
Arts	0.2	2.3	0.5	2.3
Finance and Real Estate	0.2	4.9	10.8	0.8

Employment vulnerability - NI

- Energy intensive manufacturing (Ní Lochlainn, 2020)
- Agriculture (27% emissions in NI) – falling labour intensity, rising capital intensity
- Fossil fuel adjacent industries – 10,000 workers in home heating oil sector (NIOF)
- Power supply sector – Kilroot, Ballylumford, Coolkeeragh

Employment vulnerability & opportunity



‘Investing in a just transition in the UK’, Robins et al (2019)

Employment opportunity

- **Followers and leaders** – role in just transition
- **Neutrals and laggards** – less functional role in just transition

Figure 3: NI employment shares in 'Eco-Transformation of Industries Matrix'*

Leaders – 22% P. Education – 9.2% M. Professional, scientific and technical activities – 4.6% O. Public administration and defence – 6.3% R. Arts, entertainment and recreation – 1.9%	Followers – 19.6% C. Manufacturing – 11.1% F. Construction – 4.5% S. Other service activities – 2% A. Agriculture, forestry, and fishing – 1.7% D. Electricity, gas, steam and air conditioning supply – 0.3%
Neutrals – 30.2% Q. Human health and social work activities – 16.7% N. Administrative and support service activities – 7% J. Information and communications – 2.9% K. Financial and insurance activities – 2.3% L. Real estate activities – 1.3%	Laggards – 28% G. Wholesale and retail trade, repair of motor vehicles, etc. – 16.6% I. Accommodation and food service activities – 7.3% H. Transportation and storage – 3.8% B. Mining and quarrying – 0.3%

*Shares may not equal a whole due to rounding.

Currently, 39% of Belfast's emissions come from the domestic housing sector, with transport responsible for 20% of emissions, public and commercial buildings for 24% and industry 18%. Emissions related to land use contribute c.0.5% and are not considered technically in this report. By 2050, under BAU, we project emissions from transport will decrease very slightly (still producing c.19%) with a significant 11% increase in the proportion of emissions from housing. Small decreases are forecast in the proportion of emissions from public and commercial buildings and industry, largely as a result of expansion in the output of the domestic buildings sector over this period.

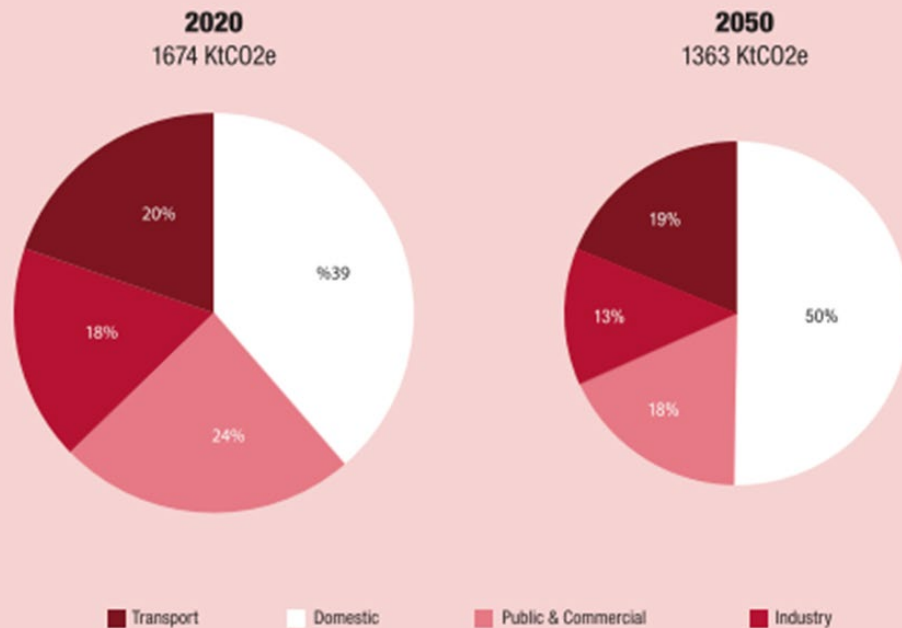


Figure 2: Belfast's Present and Projected Emissions by Sector

Employment opportunity

- Construction sector
- Retrofits for sharp curve reduction
- Cost of living crisis
- £2bn for NIHE stock

A NET-ZERO CARBON ROADMAP FOR BELFAST

AGGREGATING UP: THE BIGGER PICTURE FOR BELFAST

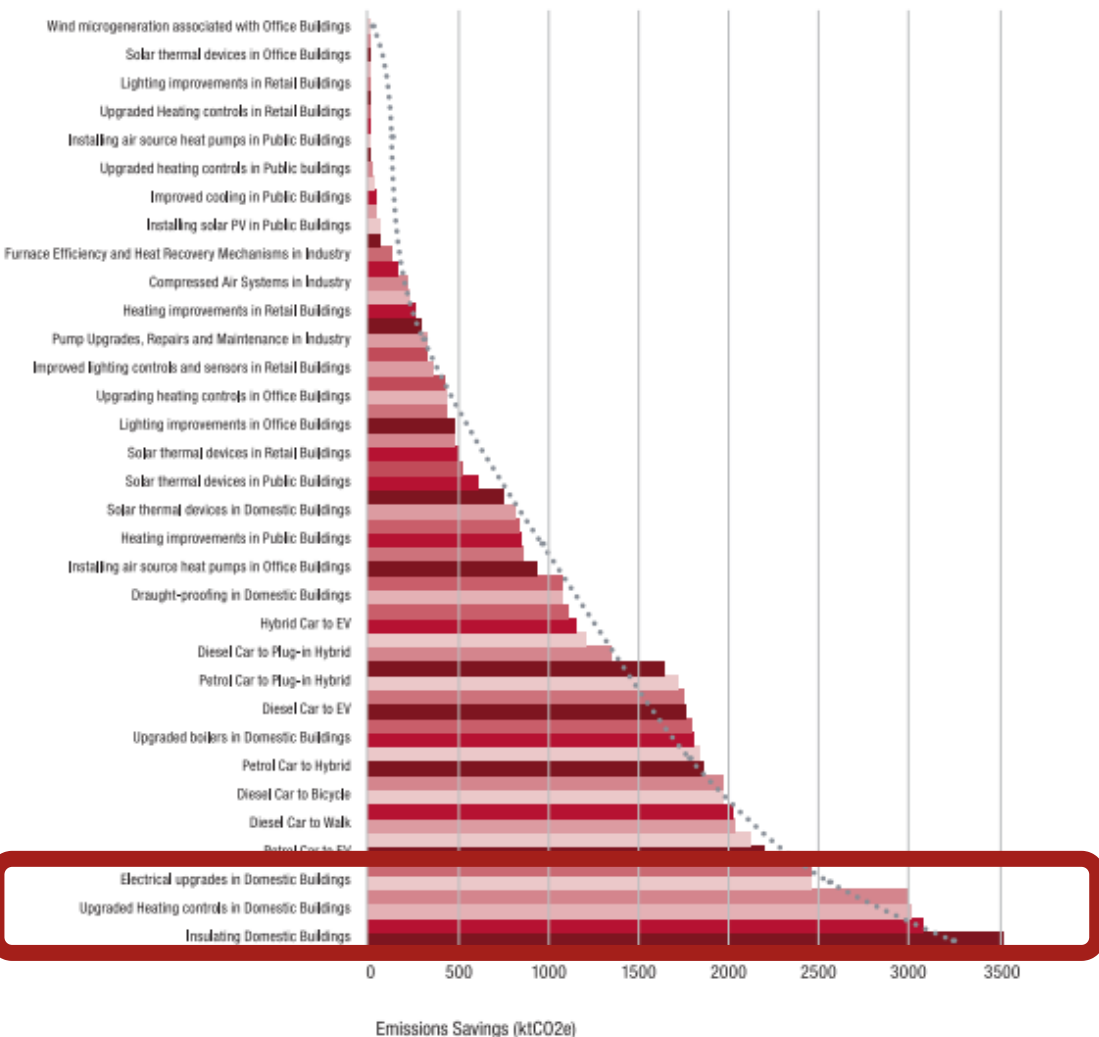


Figure 6: Simplified Emissions Reduction Potential by Measure for Belfast

A NET-ZERO CARBON ROADMAP FOR BELFAST

APPENDIX 1. LEAGUE TABLE OF THE MOST CARBON-EFFECTIVE OPTIONS FOR BELFAST

Measure	Emissions Reduction Potential (ktCO2e)
Insulating Domestic buildings	1,162
Petrol Car to Bicycle Journeys	1,014
Upgraded Heating controls in Domestic buildings	998
Petrol Car to Walk Journeys	982
Electrical upgrades in Domestic buildings	811
Installing heat pumps in Domestic buildings	808
Petrol Car to EV Journeys	725
Petrol Car to Bus (electric) Journeys	700
Diesel Car to Walk Journeys	675
Fabric improvements in Public buildings	663
Diesel Car to Bicycle Journeys	651
Fabric improvements in Retail buildings	647
Petrol Car to Hybrid Journeys	613
Petrol Car to Bus (diesel) Journeys	608
Upgraded boilers in Domestic buildings	597
Installing solar PV in Domestic Buildings	590
Diesel Car to EV Journeys	584

Policy interventions

- Policy blend of retraining opportunities & early retirement compensation at firm & sectoral level
- Coordinated labour market activation policies
- Provision of bespoke FE & technical courses, apprenticeships
- Revision of existing FE and HE offerings – agriculture, construction, manufacturing, etc.
- Industrial policy to match greening sectors to new skills

Case study – Kilroot power station

- **Regulatory change** – 2023 deadline for coal exit, ownership transition from AES to EPUK & £600m investment
- **Opportunity for state intervention** – trust, co-production, public stewardship cornerstones of just transition principles
- Employment vulnerability of **between 100-250**
- Gas capacity contracts, coal 2025, CHP, no state involvement

NI Climate Change Act

- Net zero by 2050 target (48% by 2030, 2040 reductions 'in line' with 2050)
- Carbon budgets set by DAERA, departmental Climate Action Plans (CAP)
- Climate Commissioner
- Just Transition Commission & Just Transition Fund for Agriculture
- 80% renewables by 2030 target
- Major problem – UFU lobbying, 46% methane reduction target (22% of CO₂e)

NI Climate Change Act

- Just Transition Commission – important model for state & community buy-in
- Just Transition Fund for Agriculture – size & shape? ‘Going for growth?’
- Net zero target undermined – amendment?
- Financing – devolved fiscal restrictions

