

Socioeconomic impacts of Climate Action Plan, 2021

Discussion Document

21st June 2021



**An Roinn Comhshaoil,
Aeráide agus Cumarsáide**
Department of the Environment,
Climate and Communications



Context and objectives for today

Context:

The Climate Action Plan, 2019 set out a pathway to reduce Ireland's GHG emissions by ~30-35% by 2030. This represents a 3-4% p.a. reduction from 2021 to 2030.

The Climate Action and Low Carbon Development (Amendment) Bill 2021 increased Ireland's climate ambition and committed to reduce emissions by 51% by 2030. This represents a 7% p.a. reduction from 2021 to 2030.

To deliver the PfG ambition:

- **Carbon budgets will be proposed** for the periods, 2021-2025, 2026-2030, and 2031-2035. These will seek to consider “the need to maximise employment, the attractiveness of the State for investment and the long term competitiveness of the economy”
- **A revised Climate Action Plan will be published.** This revised plan will be developed over the coming months. The plan will detail Ireland's target emissions reduction pathway and will provide input to the National Development Plan (NDP).

To support the preparation of Climate Action Plan, 2021 an analytical exercise was undertaken to identify potential measures which are incremental to the 2019 plan and could enable the 2030 PfG targets to be met. The analysis on these measures is serving as input to the Working Groups that are detailing the measures and actions to inform the Climate Action Plan.

Objectives for today is to recap and discuss the primary findings shared in the draft report circulated last week



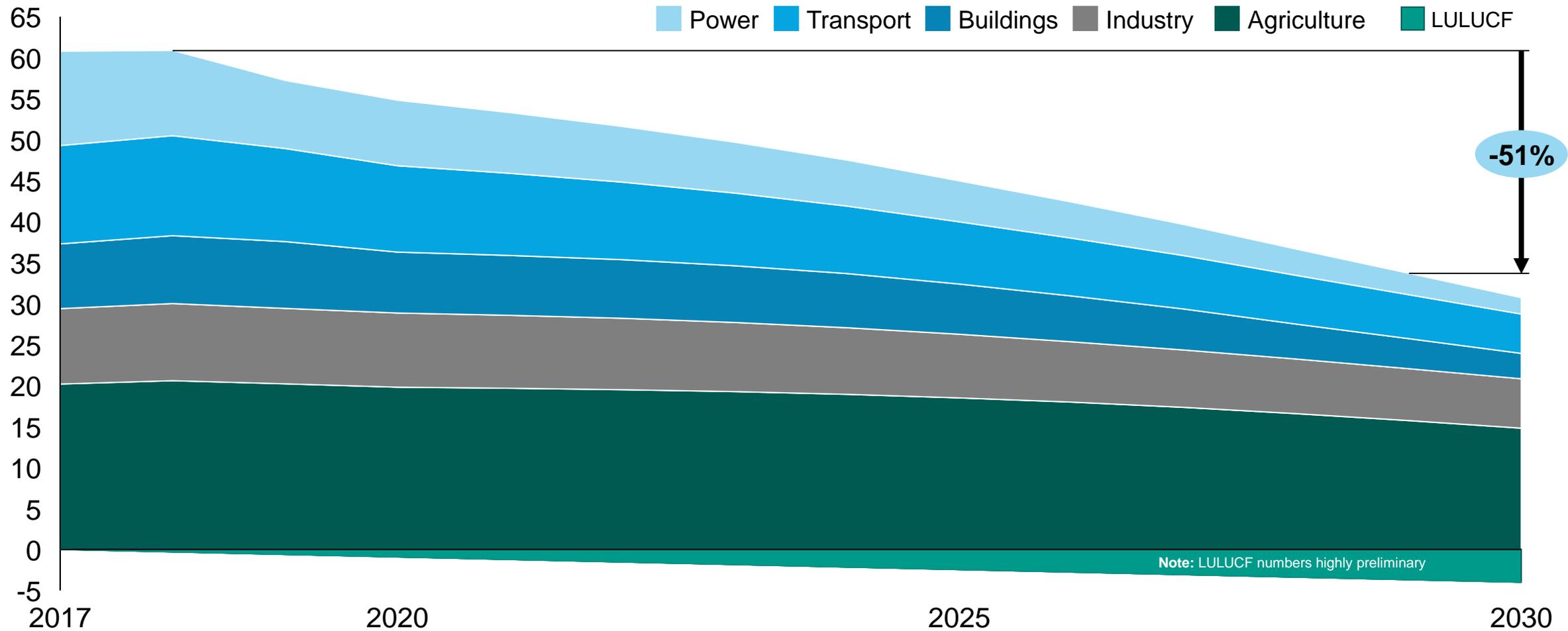
There are 4 priority analyses on socioeconomic impacts to inform the setting of carbon budgets

- 1 Financing need** Use the analysis conducted for Climate Action Plan 2021 to detail the precise financing need to support delivering Climate Action Plan 2021 (i.e., total capital expenditure by sector/ technology and implications on operating expenditure)
- 2 Employment impacts** Use a multiplier-based approach to identify the potential labour market implications, incl. jobs by sector and reskilling/ support needed
- 3 Investment/ competitiveness attractiveness** Quantitatively assess the major drivers of Ireland's competitiveness for existing businesses, including total energy costs (electricity costs. Qualitatively, identify major new commercial opportunities which arise from the transition to net-zero (e.g., low carbon cement)
- 4 Household impacts** Identify the socioeconomic implications on example households (e.g., impact on consumer bills) both in general, and for specific social groups

This analysis is based on the draft Climate Action Plan 2021



Total greenhouse gas emissions Ireland with core measures executed, MtCO₂e

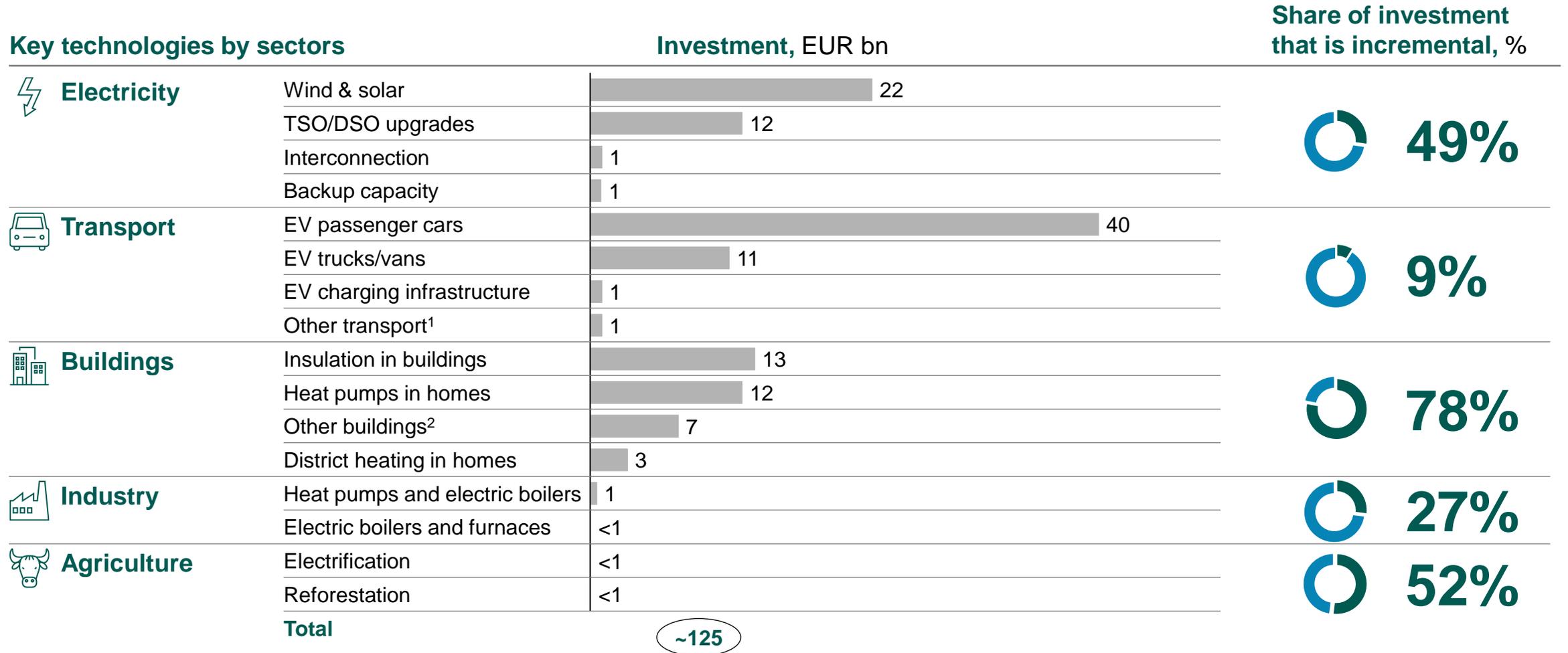


1 – Financing Need: ~€125bn investments will need to be mobilized in key technologies; share of incremental cost is highest in buildings



■ Redirected ■ Incremental

Figures may not sum due to rounding



1. Includes for example buses, trains, 2&3 wheelers

2. Includes for example, heat pumps and insulation in commercial buildings, electrical cooking

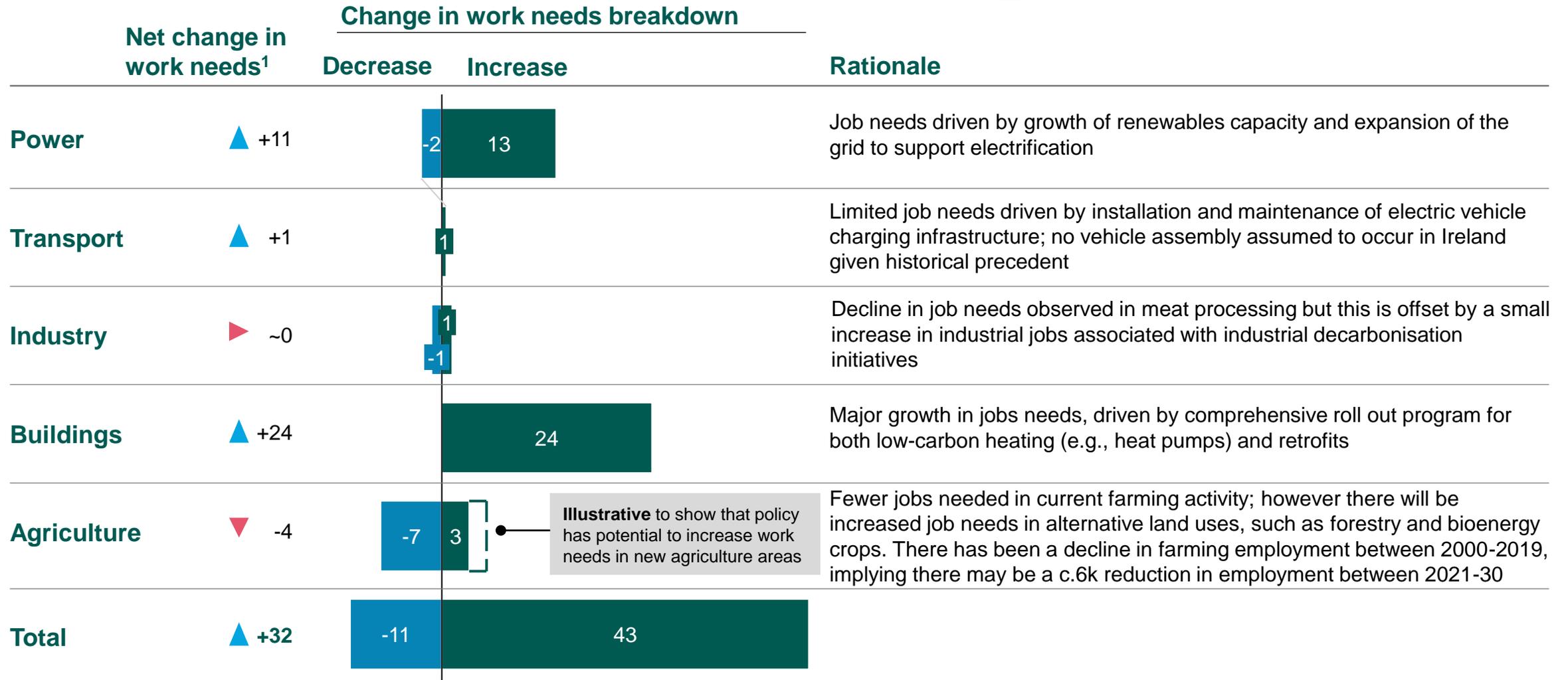
Source: McKinsey DSE (2021)

2 – Employment impacts: Implementation of CAP21 measures could create net work needs for +32k direct FTEs in 2030



Thousands

■ Increase in job needs ■ Decrease in job needs



Illustrative to show that policy has potential to increase work needs in new agriculture areas

1. May not sum due to rounding

Source: McKinsey (2021); Eurostat

2 – Employment impacts: Wide-ranging occupations require skills shift to adapt to low-carbon world



NOT EXHAUSTIVE



| Sector | Occupation | Scale of skill shift | Description of upskilling requirement |
|--------------------|--|----------------------|---|
| Transport | Passenger and commercial vehicle mechanics | | New expertise required in electric powertrains, rather than conventional ICE powertrains |
| Buildings | Plumbers | | New expertise required in range of new heating technologies i.e. district heating, heat pumps, electric boilers |
| | Construction | | New expertise required in low-carbon design and implementation (e.g., using new materials like CLT) |
| Agriculture | Extensification | | New expertise required for how to reduce farming inputs (e.g., fertilizer) and the alternative techniques that can be used |
| Power | Grid operators (TSO/DSO) | | New expertise required in the new technologies that are increasing their share of energy generation (e.g., renewables) and balancing technologies (e.g., batteries) |
| Other | Professional services | | New expertise on ESG topics in range of professional services (e.g., knowledge of new regulations for lawyers and knowledge of green finance for financial professionals) |



3 – Investment / competitiveness attractiveness: Transitioning is essential for Irish business to maintain competitiveness

Businesses need to respond to changing stakeholder expectations:

Talent



84%

of employees are more loyal to a company that contributes to social / environmental issues

B2C customers



+30%

of consumers are looking to move towards sustainable companies and products after COVID 19

B2B customers



+81%

of companies stated that their commitment to sustainable has increased over 5Y

Businesses need to respond to changing market environments

New / more sustainable products are displacing 'old'



~9%

growth of alternative protein consumption in Ireland 2013-18 – in several EU countries beef consumption is flat or declining

Capital is shifting to sustainability



>30%

of capital is ESG; highest scoring ESG players enjoy ~1.1pp cheaper WACC; investors are becoming activists

Stringent targets are the new normal



23%

of Fortune 500 companies have a science-based target, up from <5% 5y ago

If businesses do not act early while options exist, a more sudden decarbonisation journey will cost more, e.g., with stranded assets



3 – Investment / competitiveness attractiveness: Careful management of CAP21 delivery will be required to minimize costs & maximise the benefits

XX Deep dive follows

Careful management of CAP21 delivery will be required to ensure that:

A

Irish business remains competitive in current markets



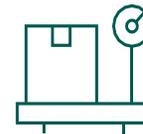
Increased energy costs, e.g. driven by build out of RES



Increased production costs driven by carbon prices

B

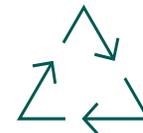
Irish business is well positioned to seize new opportunities



Supplying demand for new products (e.g., alt proteins)



Supplying demand for low-carbon versions of existing products (e.g., lower-carbon cement)



Supplying services that enable the transition (e.g., finance, design)



3 – Investment / competitiveness attractiveness: Ireland is well placed to export emerging agriculture products in the near-term as well as energy, buildings end products longer term

▲ Estimated start date ● Highly relevant ○ Moderately relevant

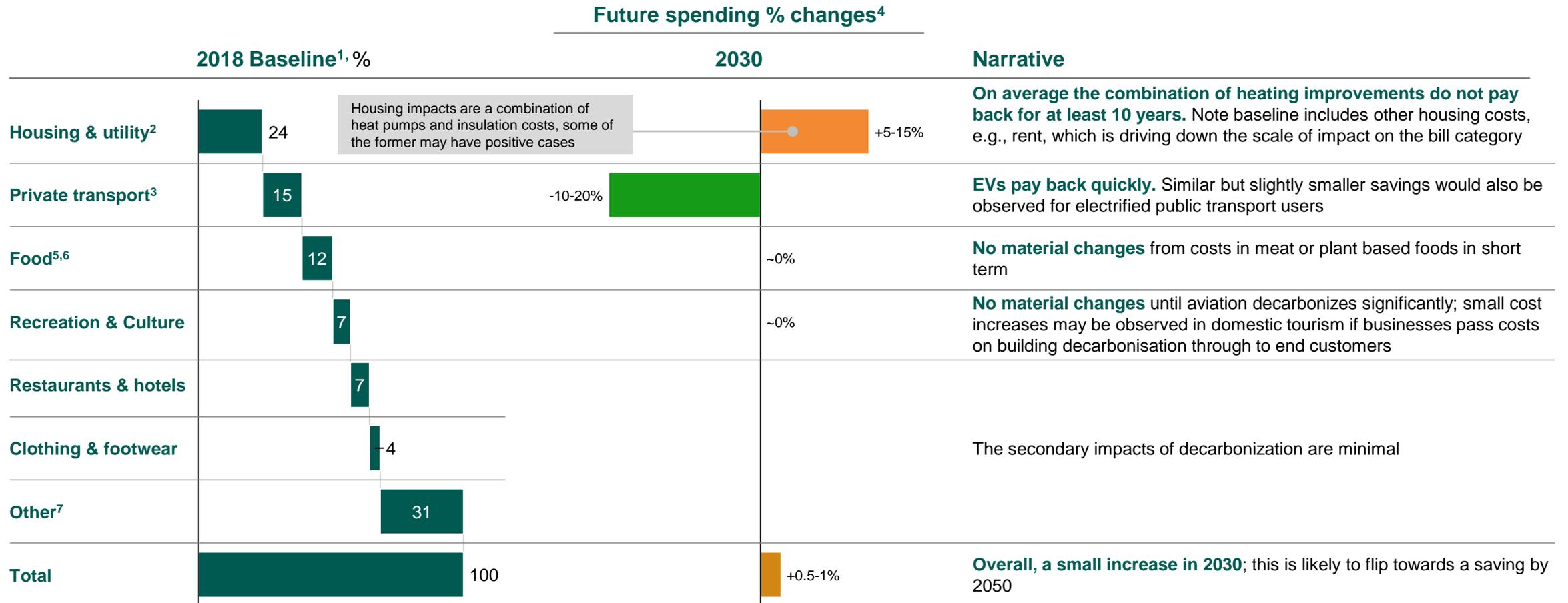
| | Export opportunities | Possible export timeline | | | Competitive strengths | | | |
|-------------------------------------|--|--------------------------|---------|---------|----------------------------|-------------------|-----------------|------------------|
| | | 2021-25 | 2025-30 | 2030-35 | Existing adjacent industry | Natural resources | Relevant skills | Target customers |
| Agriculture | Alternative proteins end product and ingredients | ▲ | | | ● | ● | ● | Global |
| | Low-carbon dairy end product | ▲ | | | ● | ● | ● | Europe |
| | Carbon credits | ▲ | | | ● | ● | | Global |
| | Bioeconomy products | | ▲ | | ○ | ● | | Europe |
| Energy | Green hydrogen end product | | | ▲ | ○ | ● | | Europe |
| | Green electricity end product | | | ▲ | ○ | ● | | Europe |
| Buildings | Heat pumps end product | | ▲ | | ● | | | UK |
| Industry | Lower-carbon cement know how | | ▲ | | ● | | ● | Global |
| Transport | Sustainable aviation fuels end product and know how ¹ | | | ▲ | ● | ● | ● | UK |
| Professional services and IT | Green finance products and services | ▲ | | | ● | n/a | ● | Europe |
| | Low-carbon data management | ▲ | | | ● | | ● | Global |

1. Contingent on there being sufficient available land for bioenergy crops, which may require further land uses changes given the competing needs for bioenergy crops

4 – Household impacts: Delivery of CAP21 expected to only increase the average Irish household's bills by ~0.5-1%



Average household annual spending in Ireland for average household



1. Based on Eurostat; 2. Based on 2017 data, excluding ~5% spending in water; 3. Only for passenger cars (i.e. no bus / rail) and exclude the price for green steel production; 4. Assuming only the true costs are passed on to consumer, i.e. there is no additional mark up from the decarbonization costs; 5. Only ~35% of food spending goes to the farmers and assuming 60% of food spending is for animal based products; 6. Excludes the impact of electrification of tractors; 7. Other includes health, communications, education, alcoholic beverages, tobacco, narcotics, furnishings, household equipment, routine household maintenance and miscellaneous goods and services



4 – Household impacts: Impact on household bills will be unevenly distributed: certain transport and housing circumstances can materially affect the net household bill impact



NON-EXHAUSTIVE

| Mitigation area | Characteristic associated with higher cost impact | Magnitude of cost impact | Rationale |
|------------------|---|--------------------------|--|
| Buildings | Home ownership | | Home owners will face investment cost of retrofitting whilst renters will often be able to benefit from operating cost savings without investment (which is paid by land lord) |
| | Old housing stock & low insulation | | Those living in old housing stock with low insulation will face higher costs of retrofitting. |
| | Detached property | | Those living in detached houses typically have larger houses and less shared surface area (e.g., walls) so the cost per retrofit is typically higher than for smaller, connected properties |
| | Later retrofitters | | Those who retrofit later may incur higher costs associated with using the gas grid as the cost of managing the gas grids might be distributed over fewer billpayers. |
| Transport | 2 nd hand car buyer | | In the short-term, those that buy 2 nd hand cars will have less choice on a BEV because there is a less developed resale market. This may mean they keep an ICE and bear additional cost of fuel from carbon price. |
| | No access to parking | | Those with access to private parking benefit from easier and often cheaper at-home vehicle charging. |