Resourcing the energy transition

Decom Futures – Jan 2021

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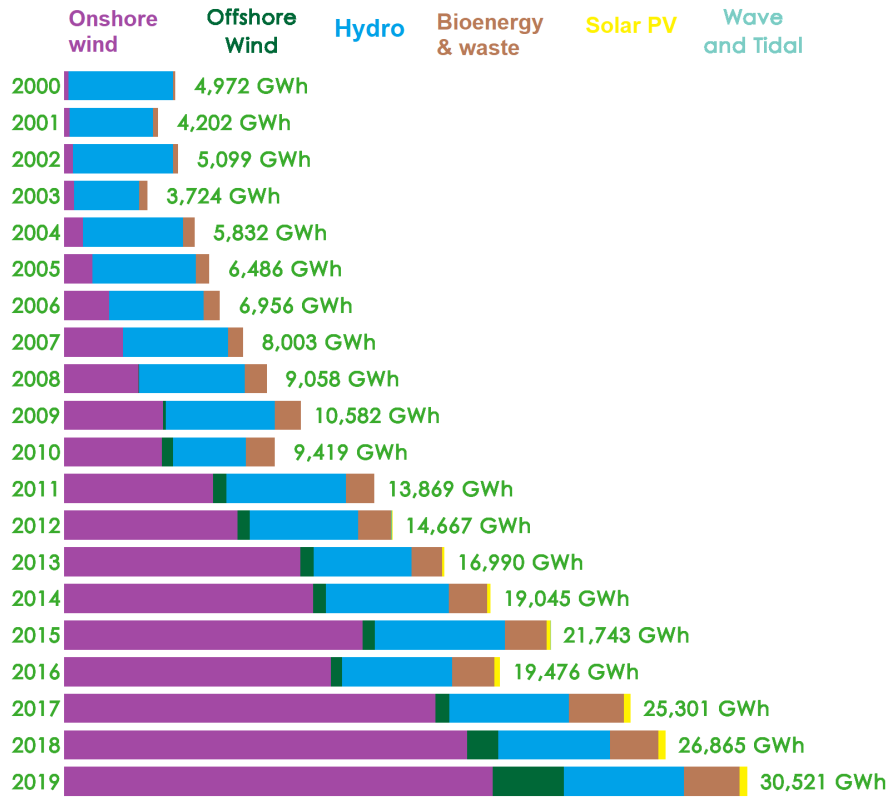
ABOUT US
Zero Waste Scotland exists to lead Scotland to use products and resources responsibly, focusing on where we can have the greatest impact on climate change.
ZERO WASTE SCOTLAND

Renewables in Scotland

Scotland's world-leading climate change targets include supplying 50% of the energy for Scotland's heat, transport and electricity consumption from renewable sources by 2030

Electricity generated from renewable sources

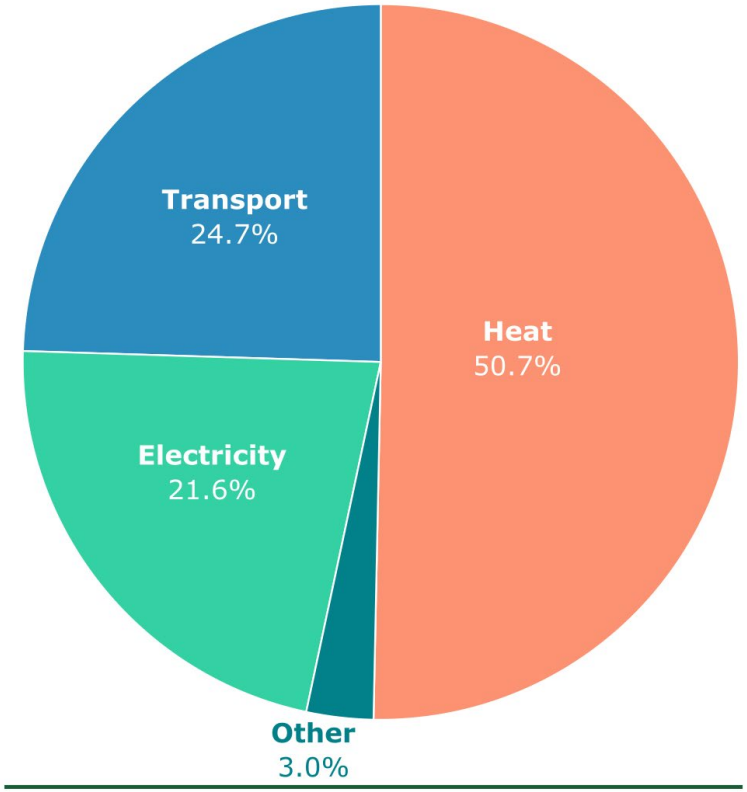
Scotland, 2000 - 2019



Source: BEIS

Total final energy consumption by sector

2019



Source: BEIS

Resourcing the transition

The energy transition must be vast and rapid, and this requires a huge materials transformation.

The building of new energy infrastructure requires the deployment of millions of tonnes of metals, concrete and composites

This will be concurrent with the decommissioning of old assets through repowering and move away from fossil fuels

"…the vast majority of climate and carbon scenarios have paid little, if any, attention to the implications of the requirements for the materials necessary to 'feed' the carbon-constrained future"

World Bank, 2018

The importance of resilience

Guarding against global and local shocks

The challenge

There are specific problems that need to be addressed:

High carbon impact of **imported** raw materials

e.g., new infrastructure committing to using virgin steel from high carbon economies

High carbon impact of **exported** raw materials

e.g., steel from decommissioning exported for recycling in blast furnaces overseas

Global demand for critical materials needed for new technologies

Resilience of local economies against job losses in oil and gas

Trade tariff + carbon pricing impact on cost of raw materials for new infrastructure

Limited economic benefits as supply chain for new infrastructure is focussed overseas

The opportunity

Which also represent opportunities:

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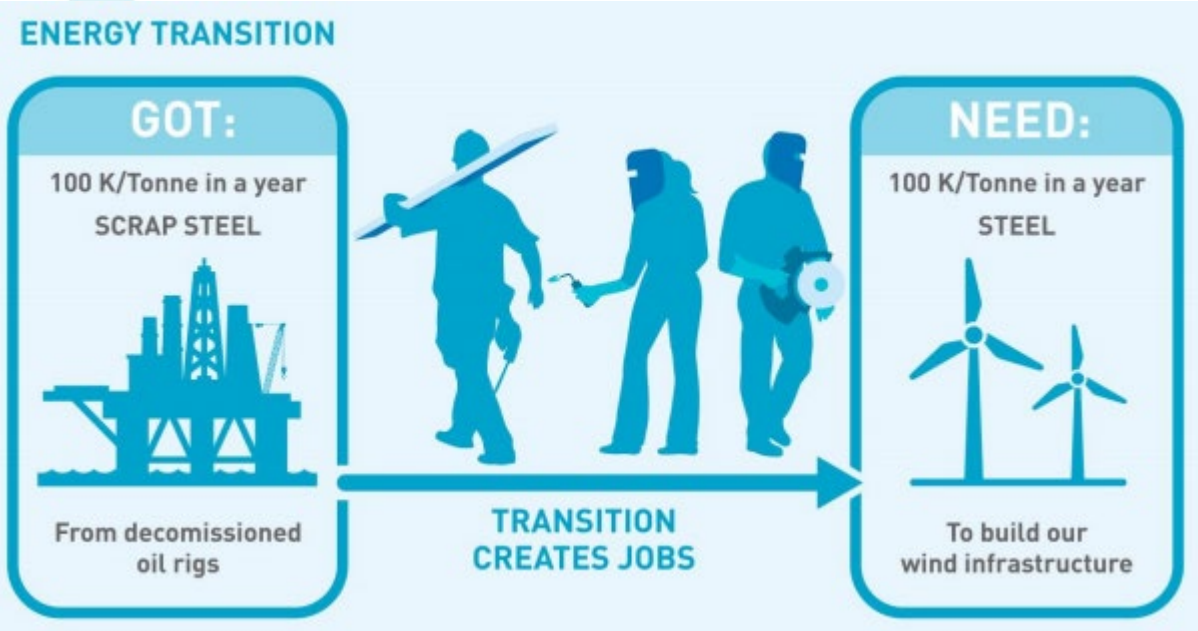
The role of decommissioning

"A circular economy approach to decommissioning, supported by a strong domestic reprocessing sector, can reduce emissions, create jobs, and generate economic prosperity"



How can we turn decommissioning from a final disposal point, to a system of regeneration?