



# Just Transitions: A Blue Economy Context

MASTS 2022: SRII++

Prof Tavis Potts

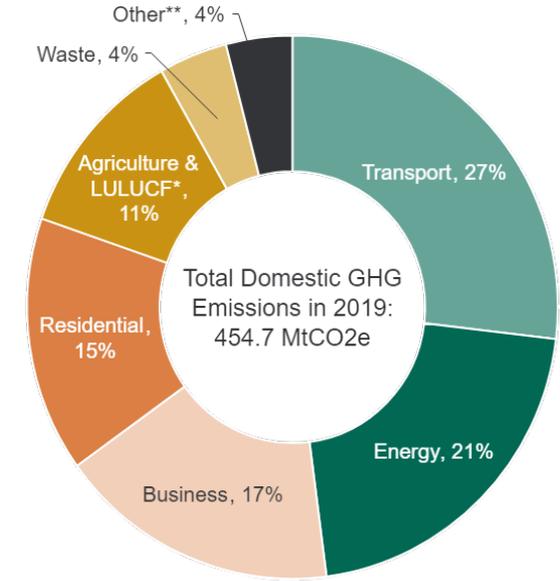
Just Transitions Lab

[www.abdn.ac.uk/jtl](http://www.abdn.ac.uk/jtl)



# UK Drivers in Net Zero

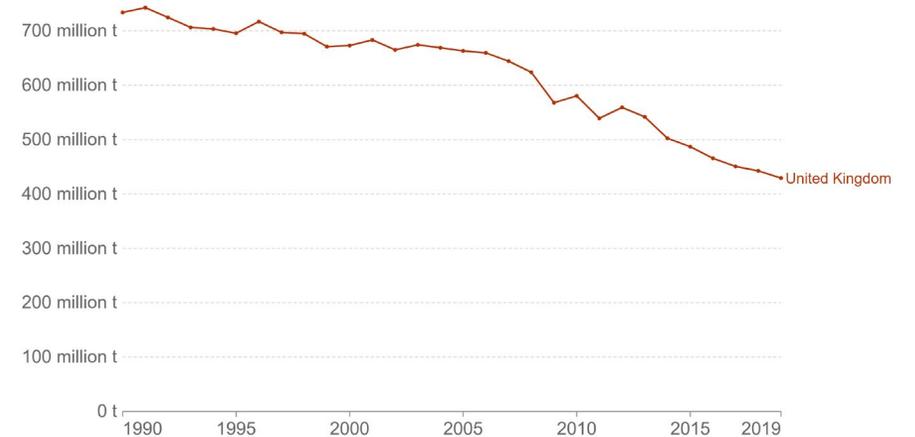
Electrical generation capacity from x2 to x4	Offshore wind 50GW by 2030 (currently 10GW UK and 1 GW in Scotland)	CCS: 10 Mt CO2 by 2030
Afforestation 30,000ha per annum	29 Million existing homes installed with low carbon heat	Zero carbon cars: 23 million by 2032
10GW Hydrogen production capacity 2030	Major societal and structural changes in use of energy, housing, transport & mobility, diet social behaviours.	Just Transition of workers in current employment and energy justice in communities



**Total greenhouse gas emissions**

Emissions are measured in carbon dioxide equivalents (CO2eq). This means non-CO2 gases are weighted by the amount of warming they cause over a 100-year timescale. Emissions from land use change – which can be positive or negative – are taken into account.

Our World in Data



Source: Our World in Data based on Climate Analysis Indicators Tool (CAIT).  
 Note: Greenhouse gases are weighted by their global warming potential value (GWP100). GWP100 measures the relative warming impact of one molecule of a greenhouse gas, relative to carbon dioxide, over 100 years.  
 OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

Vision

**A Wellbeing Economy:**  
Thriving across economic, social and environmental dimensions.

Ambition

**Fairer**  
Ensuring that work pays for everyone through better wages and fair work, reducing poverty and improving life chances.

**Wealthier**  
Driving an increase in productivity by building an internationally competitive economy founded on entrepreneurship and innovation.

**Greener**  
Demonstrating global leadership in delivering a just transition to a net zero, nature-positive economy, and rebuilding natural capital.

Programmes of Action

  
**Entrepreneurial People and Culture**

  
**New Market Opportunities**

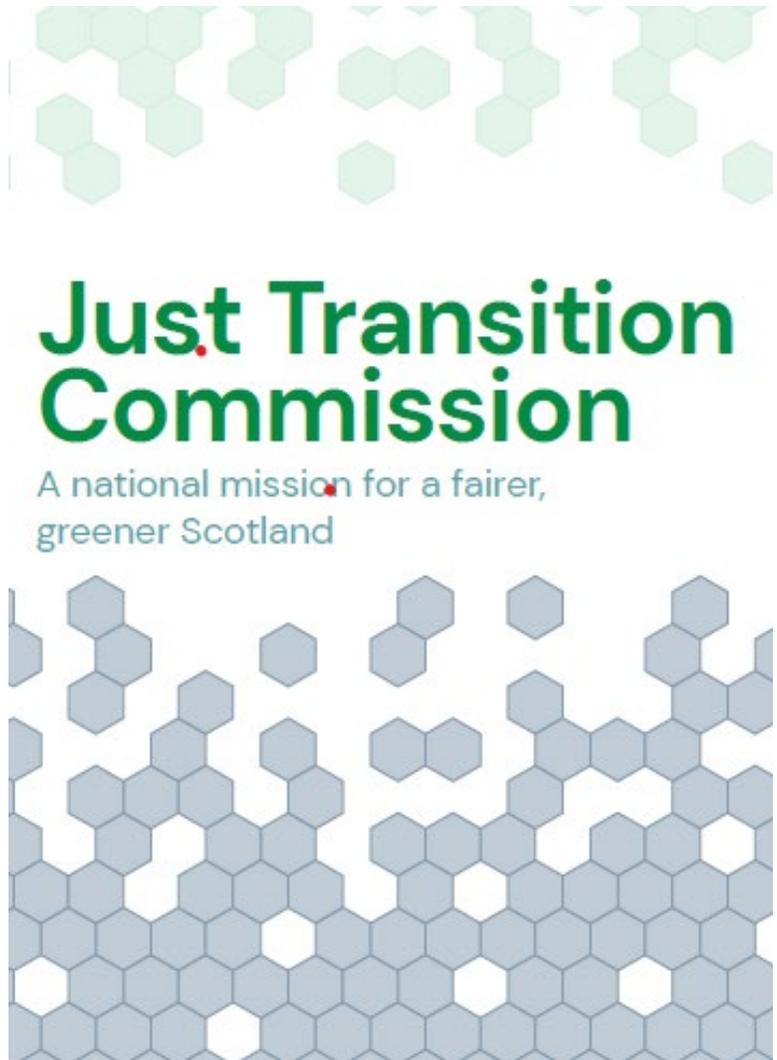
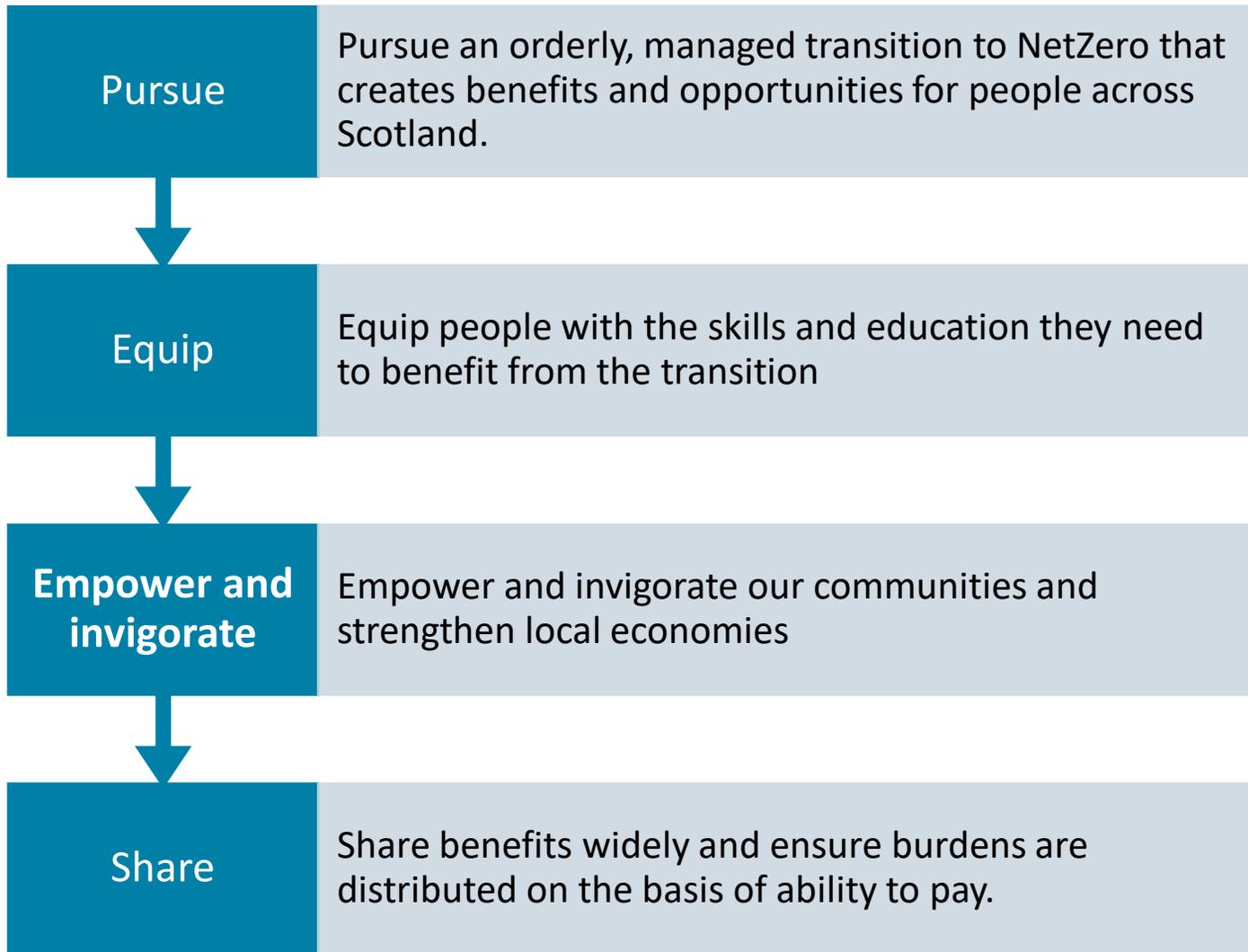
  
**Productive Businesses and Regions**

  
**Skilled Workforce**

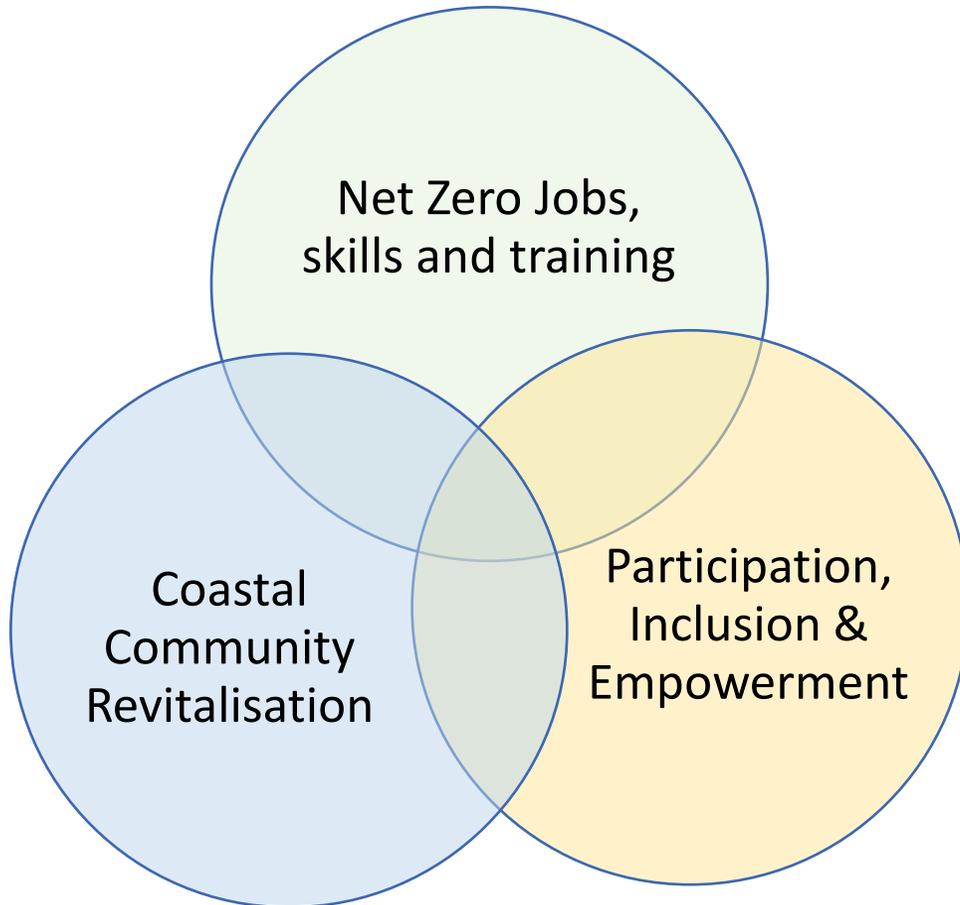
  
**A Fairer and More Equal Society**

 **A Culture of Delivery**

# Just Transition



# Just Transition in a Blue Economy – Key challenges



- Diversification in the blue economy : Offshore wind, ocean energy, CCUS, H, Decommissioning.
- Accessibility in Skills & training - transitioning the workforce
- Accessibility, diversity and geographical spread of opportunities.
- Fair distribution of benefits, focusing on manufacturing in addition to installation / operations.

- Community ownership of energy assets
- Community benefit from ORE
- Investment to address marginalisation & disadvantage in coastal communities
- Social innovation and value creation
- Enhancing natural capital
- Recognition of tenure and sea use.

- Empowering voices – citizen assemblies
- Local & traditional knowledge
- Climate, marine & energy literacy
- Capacity, representation and participation in MSP and planning
- Direct democracy, co-creation and participation

# Net Zero...Blue Economy

Net Zero  
Jobs, skills  
and training

- Growing number of countries declaring objectives of Net Zero by 2050 (mainly policy statements rather than legal commitments) to limit warming to 1.5%.
- In the UK we have aim to achieve N0 by 2050 and in Scotland by 2045.
- The role of the ocean in delivering decarbonised energy and contributing to Net Zero targets is increasingly in the spotlight.
- While a relatively minor player in the energy system, there is increasing attention on ocean renewable technologies as a means to diversify power generation.

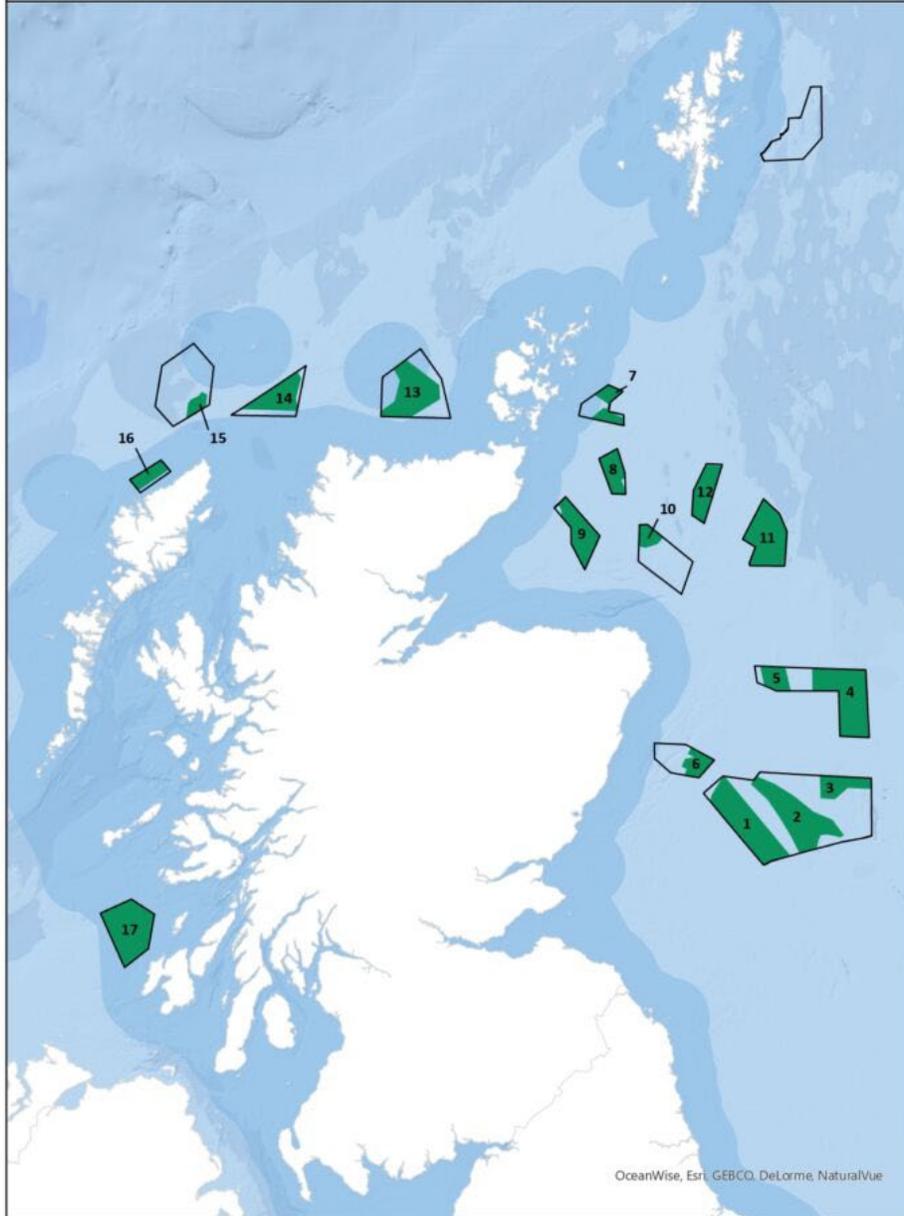


# Global renewables growth

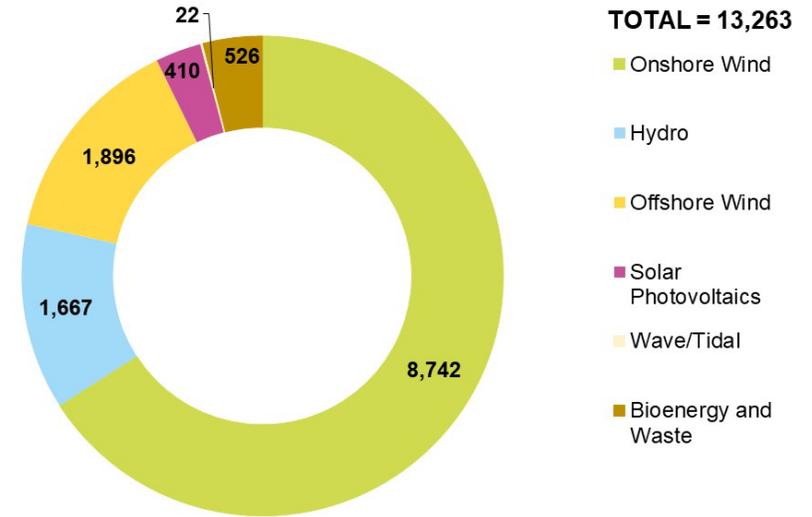
- The Net Zero by 2050 report (IEA 2021) emphasised the need for a **radical transformation of the energy system**, ramping up of the ambitions of Net Zero targets.
- The IEA states that **global renewables needs to grow three-fold** from 2,990 GW in 2020 to 10,300GW in 2030 and to 26,600GW by 2050, providing 88% of total global power generation.
- 2020 capacity dominated by hydropower (1,153 GW), onshore wind (699 GW) and solar PV (707 GW) .
- **Offshore wind installed capacity in 2020 is 34GW** (1.2%), Ocean energy such as wave and tidal installed capacity is 2020 of 0.5GW or 0.01%.



# ScotWind Awarded Sites

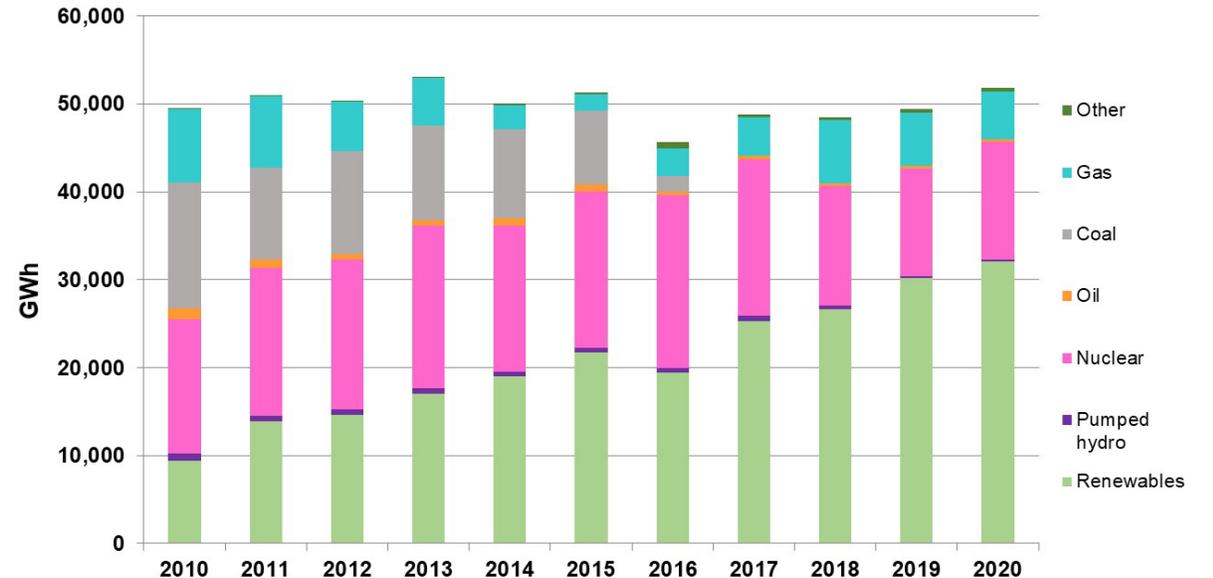


# CURRENT INSTALLED CAPACITY BY TECHNOLOGY Q1 2022 (MW)

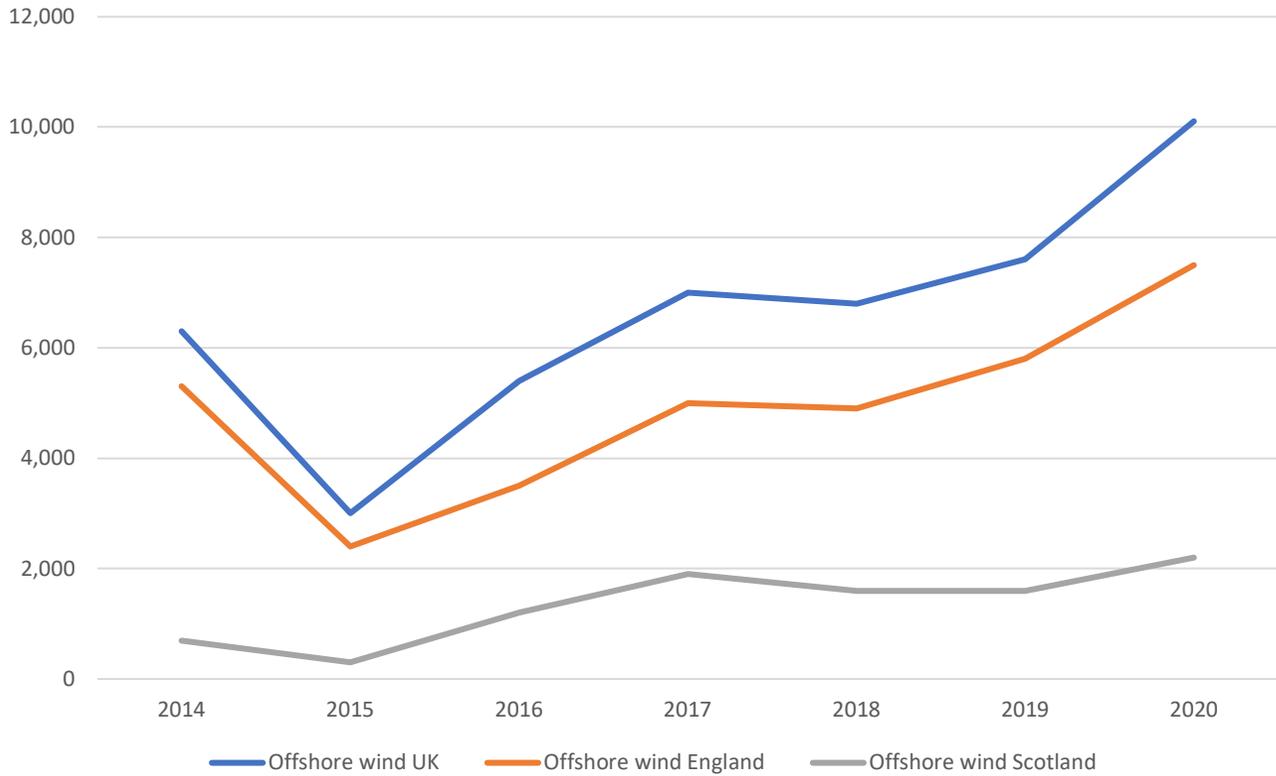


Note: Bioenergy and Waste includes biomass (272 MW), landfill gas (116 MW), energy from waste (70 MW), anaerobic digestion (60 MW) and sewage, sludge digestion (8 MW).

# ELECTRICITY GENERATION IN SCOTLAND BY FUEL 2010-2020 (GWh)

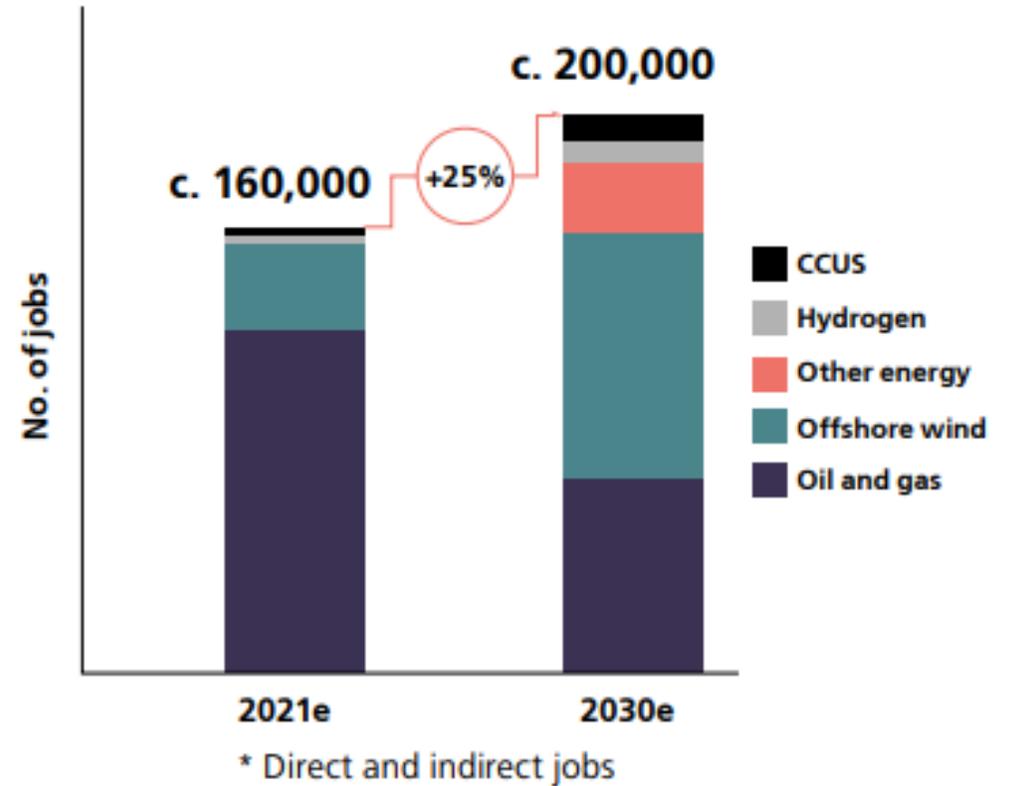


Employment FTE Offshore Wind



**ONS Low Carbon and Renewable Energy Economy (LCREE) survey estimates, UK, 2014 to 2020**

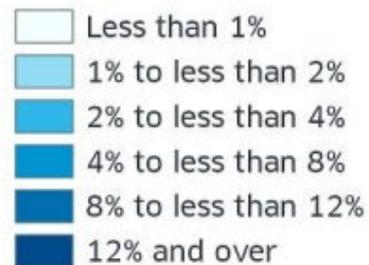
UK offshore energy workforce 2021 - 2030\*



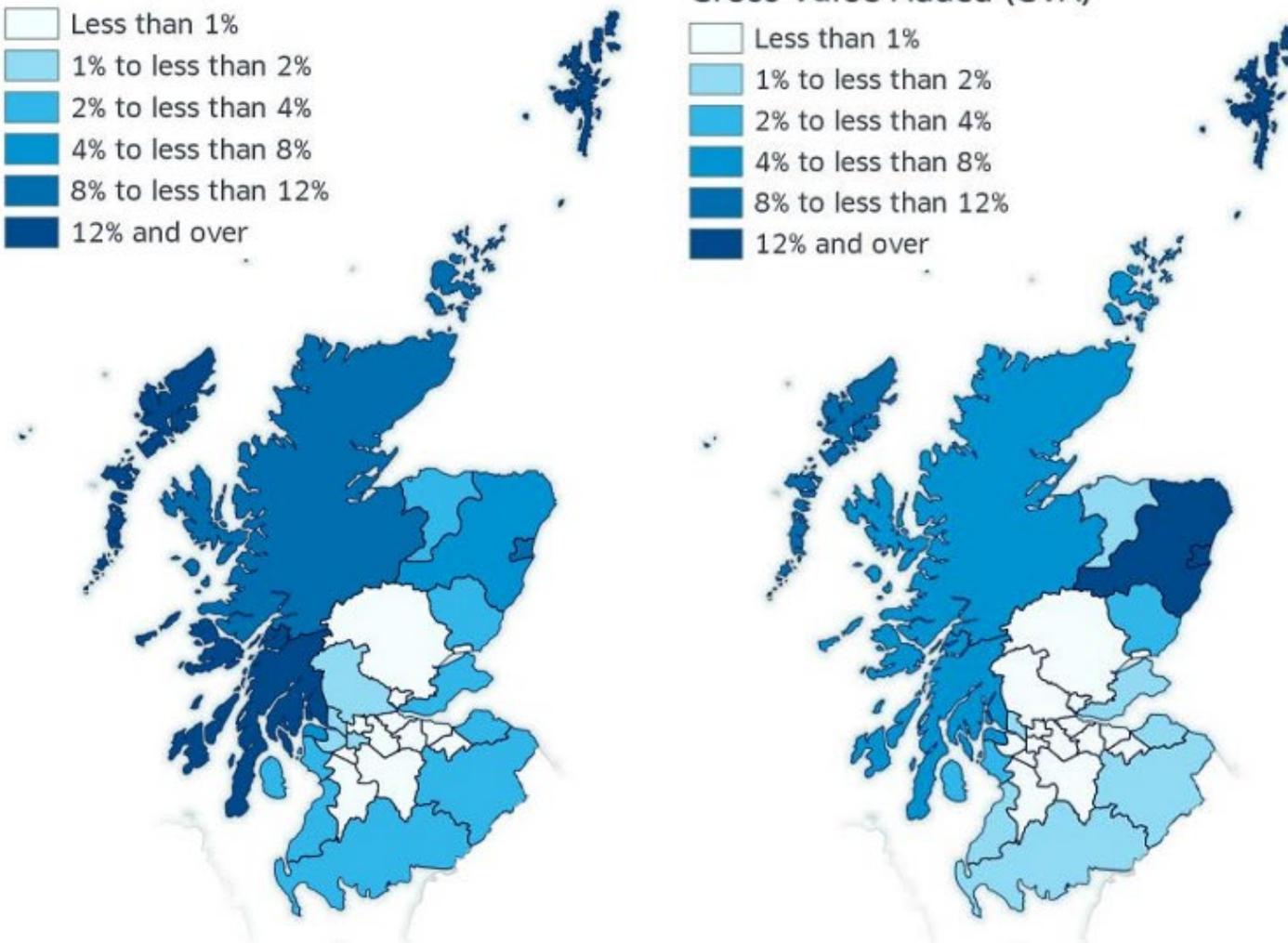
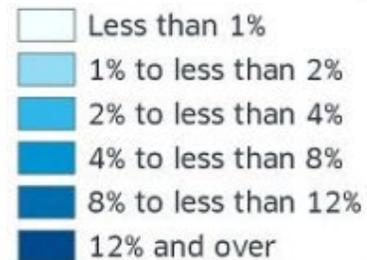
**UK Offshore Energy Workforce Review  
Robert Gordon University, May 2021**

Figure 3: Percentage of overall employment and GVA accounted for by the marine sector by local authority, 2019

Total Employment



Gross Value Added (GVA)





Access to jobs and training associated with net zero will likely remain skewed towards certain socio-economic groups, unless this issue is proactively addressed.

Critical sectors of the economy are male dominated, with under-representation of women and ethnic minorities.

Additionally, those in lower skilled, low income or unstable employment are less likely to have the funding, information or flexibility to take advantage of new training opportunities.

- CESAP 2020

Scottish offshore wind directly employed an estimated **1,600 full time equivalent (FTE)** staff in 2019. It generated **3,161 GWh of electricity, 10% of all renewable energy generation in Scotland** and had an estimated **turnover of £603 million** in 2019, accounting for 0.25% of overall Scottish turnover.

**26,093**

Total UK Offshore Wind Workforce

**15,205** **10,888**

Direct Jobs Indirect Jobs

Gender Balance

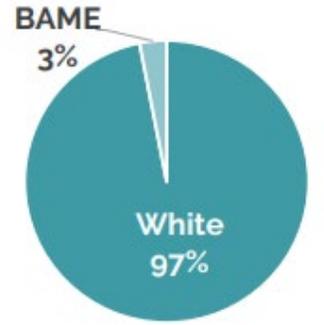


**18%**  
Women



**79%**  
Men

Ethnicity



**Offshore Wind Skills Intelligence Model Report:  
February 2021**

*The decarbonisation imperative presents an opportunity to decisively steer societies towards an ecologically and socially more inclusive path, reflecting ‘a decision to live in a different type of society, not simply a low-carbon version of the current one – COP26 Universities Network.*





## Community revitalisation

- Community ownership of infrastructure, assets, land – Comm. Wealth creation.
- Capacity building – from volunteers to paid employment, civic –private partnerships.
- Decentralisation of the energy system – owning the infrastructure.



## Net Zero Jobs & Skills

- Build upon O&G skills, capacities and knowledge
- Diversify into broad range of Net Zero industries e.g, homes, food, transport, local energy
- Diversify skills and make training accessible within and without energy industry



## Fuel Poverty

- Smart local energy systems & public infrastructure for energy.
- Expand Heat networks – with social consent - and move away from gas CHP.
- Prioritise energy efficiency, local energy, prosumers, storage, new financial models.



## Greenspace

- Recognition that Green Space supports wellbeing, resilience & adaptation (esp. Green Space in urban areas) not to be traded off.
- No sacrifice zones, use existing brownfield & industrial sites.
- Use Green Space to advance social, health and local energy innovation while protecting biodiversity.



## Participation & Empowerment

- Reform local decision making with inclusive approaches that represent all interests. Include marginalised voices. E.g. Climate Assemblies
- Clear Net Zero vision for the NE – deal with fractured governance and competition.
- Empower communities, not passively 'consult' on JT.

# Community empowerment and social dialogue in the 'times of transition'.

*"People actively participate in shaping just, fair and inclusive policies that promote mitigation of and adaptation to climate change"* - **Climate change - Net Zero Nation: Public Engagement Strategy.**

*"Effective engagement, participation are integral to the process of developing plans and activities to achieve a Just Transition".* – **JTC 2<sup>nd</sup> report 2022.**

- Reaching the most marginalised
- Systematic & inclusive stakeholder Engagement
- Clarify on scope & definitions
- Properly resourcing engagement

"The fishing village of Old Torry was bulldozed in 1975 to make way for one of the supply bases; 140 flats and houses were demolished and about 350 people moved elsewhere"

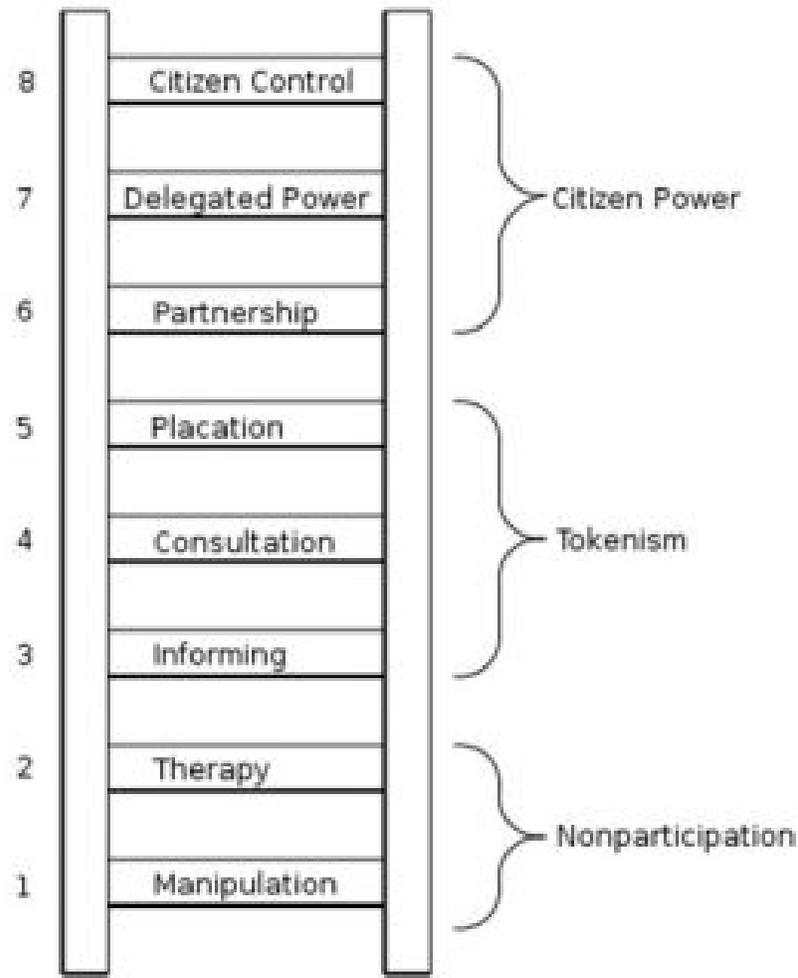
"Ten thousand oil jobs were lost in the Aberdeen area and thousands of houses and flats went up for sale [following the 1980s oil price collapse]"

Oil Strike North Sea, Mike Shepherd 2015



Participation,  
Inclusion &  
Empowerment

## A Ladder of Citizen Participation, Arnstein, 1969



**1 Manipulation and 2 Therapy.** non participative, cure or educate the participants. achieve public support by PR.

**3 Informing.** one way flow of information

**4 Consultation.** attitude surveys, neighbourhood meetings and public enquiries. Window dressing ritual

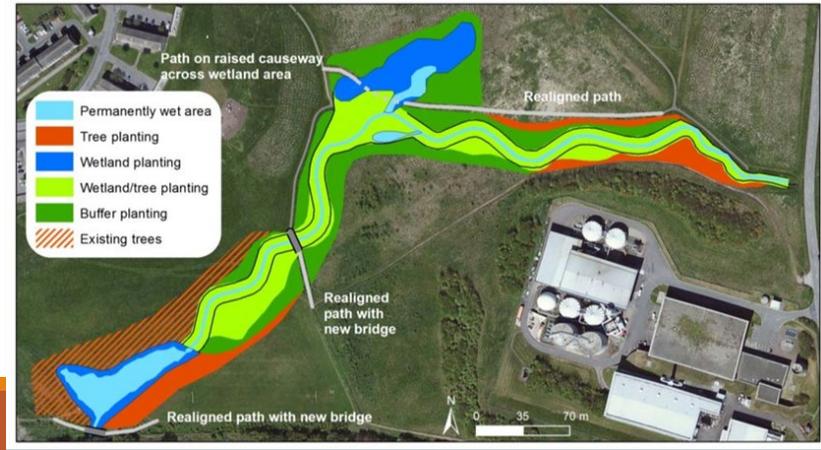
**5 Placation.** Allows citizens to advise but retains for power holders the right to judge the legitimacy or feasibility of the advice.

**6 Partnership.** Power is redistributed through negotiation between citizens and power holders. Shared decision-making responsibilities.

**7 Delegated power** to make decisions. Public now has the power to assure accountability.

**8 Citizen Control.** Participants handle the entire job of planning, policy making and managing a programme.

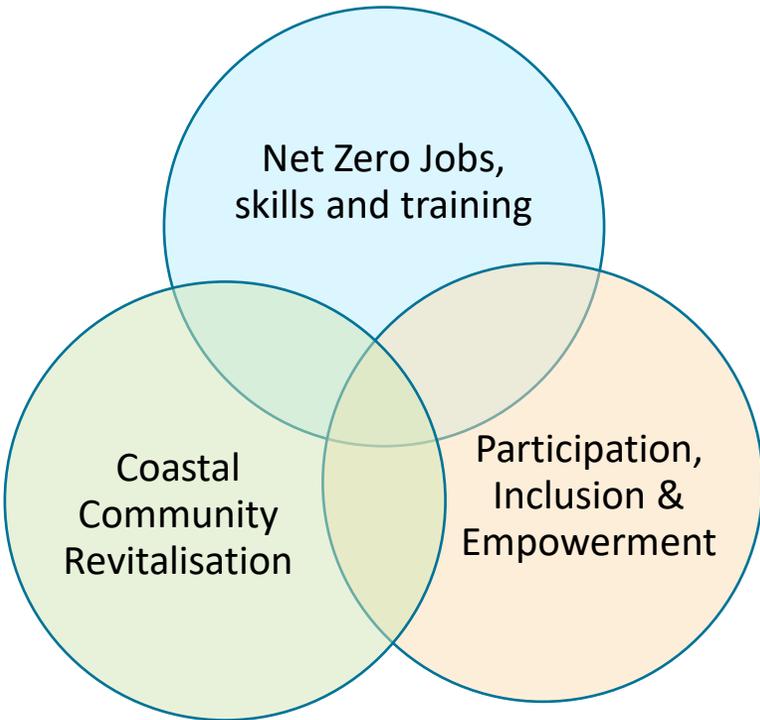




Energy Justice	Criterion	Themes from interviews
<b>Distributional</b>	What are the primary benefits?	Benefits from low carbon industrial development: offshore wind, CCS, decommissioning (long term); local employment opportunities; skills & training; investment; commercial opportunities.
	Who are the intended beneficiaries?	Energy workers; energy companies (local – international); economic agencies (ONE, AHB, ACC), SMEs; local people for ‘jobs and training’ opportunities.
	What are the costs and how are these costs distributed?	Loss of St Fittick’s Park and commons / greenspace. Loss of access for immediate population and long term impacts on community wellbeing. Deprived communities bear the costs.
<b>Recognition</b>	Who does this proposal serve?	Proposal is aligned with economic interests in the energy sector and regional economic development interests. Community cited as beneficiaries for jobs.
	How does the proposal level the playing field in terms of access to energy services or benefits?	Advances industrial decarbonised energy production. No reference to community energy initiatives or services.
<b>Procedural</b>	What channels have been employed to provide stakeholders with input to decision-making processes?	Limited public consultation on FS and D-LDP. Ad hoc informal consultation via community planning groups. No recognition of community alternatives.

## Metrics

## Interventions



- Regional employment in OFW
- Spatial distribution of employment
- Employment by gender / BAME
- Investment in skills / training
- Access to training
- Skills mobility

- Community wealth building - local supply chains and inward investment
- Equality & inclusivity in STEM & workforce participation
- Supply chain reforms
- Targeted investment in marginalised communities

- # community owned OFW assets
- Community investment
- Community LC infrastructure
- Regional social demographics e.g. Indices of deprivation
- Social innovation indicators
- Natural capital assessments

- Community ownership of coastal space
- Voluntary carbon markets & natural capital
- Capacity building
- Investment in community infrastructure
- Genuine social contribution from MRE
- Addressing fuel poverty & marginalised populations

- Community values & attitudes
- Sector attitudes (e.g. fishing)
- Seascape / landscape assessments
- Citizen assembly outcomes
- MSP participation by sector
- Stakeholder engagement logs

- Climate assemblies
- Regional Net Zero visions that are inclusive and pluralistic
- Ongoing reform to local governance (e.g. Community Empowerment Act)
- Parity in investment

# Thankyou!



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[Tavis.Potts@abdn.ac.uk](mailto:Tavis.Potts@abdn.ac.uk)