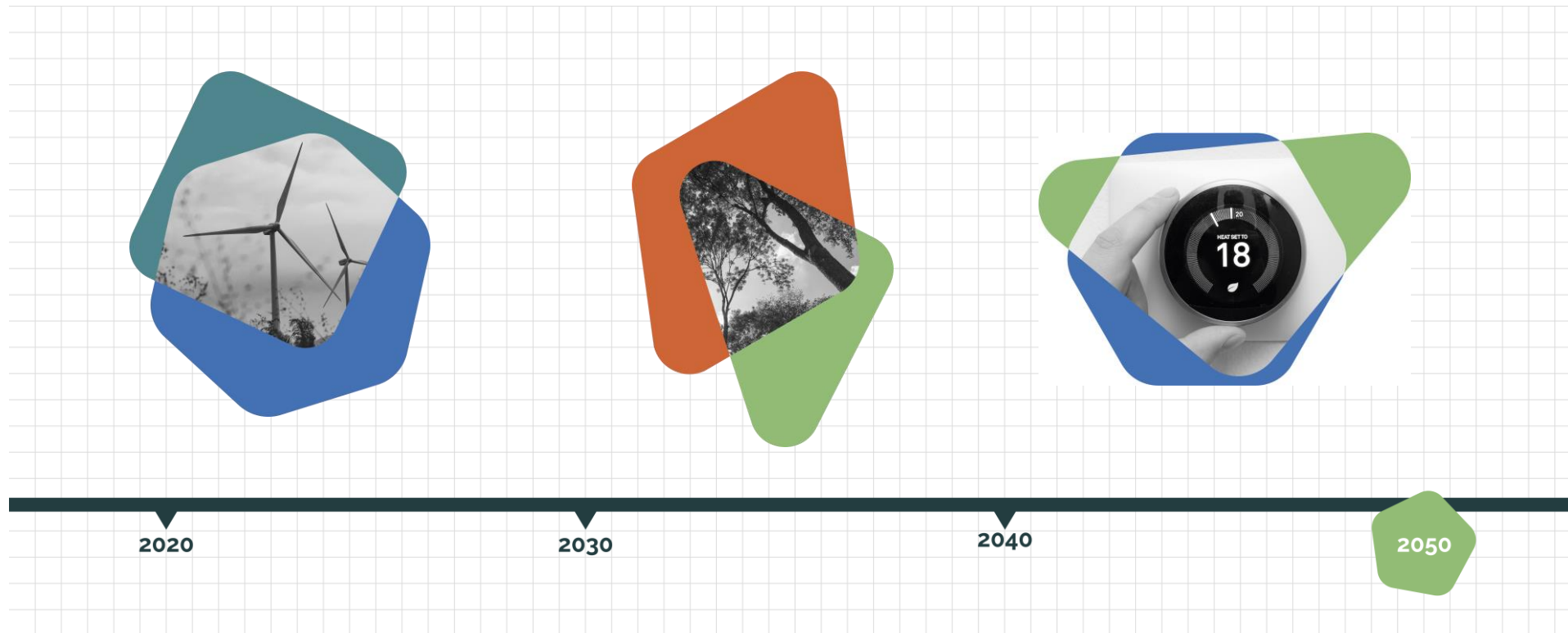


# Energy demand reduction

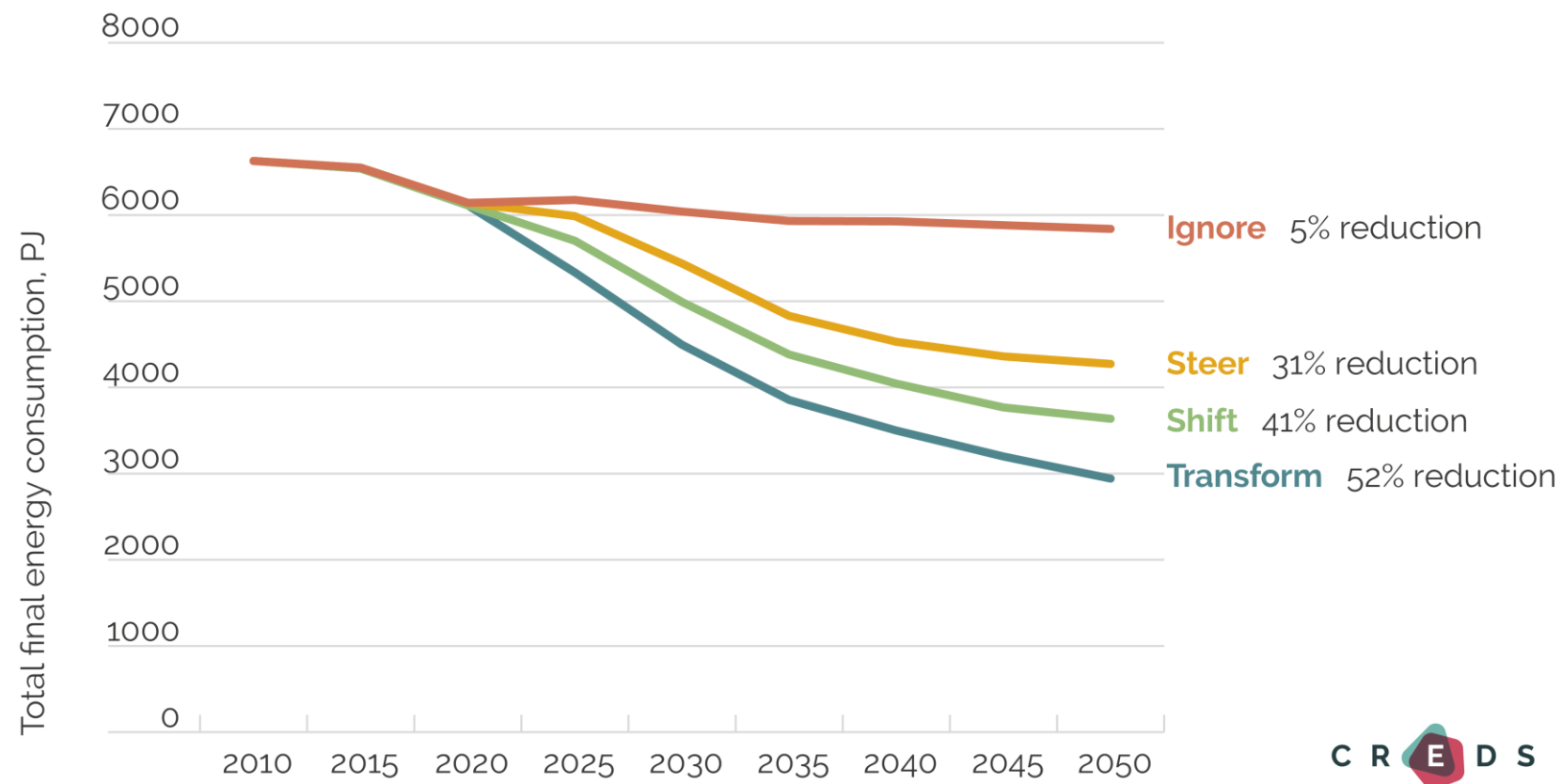
Professor John Barrett OBE  
University of Leeds



# Decarbonisation, removal and energy demand reduction



# Energy demand reduction potential



Source: Barrett et al, 2022

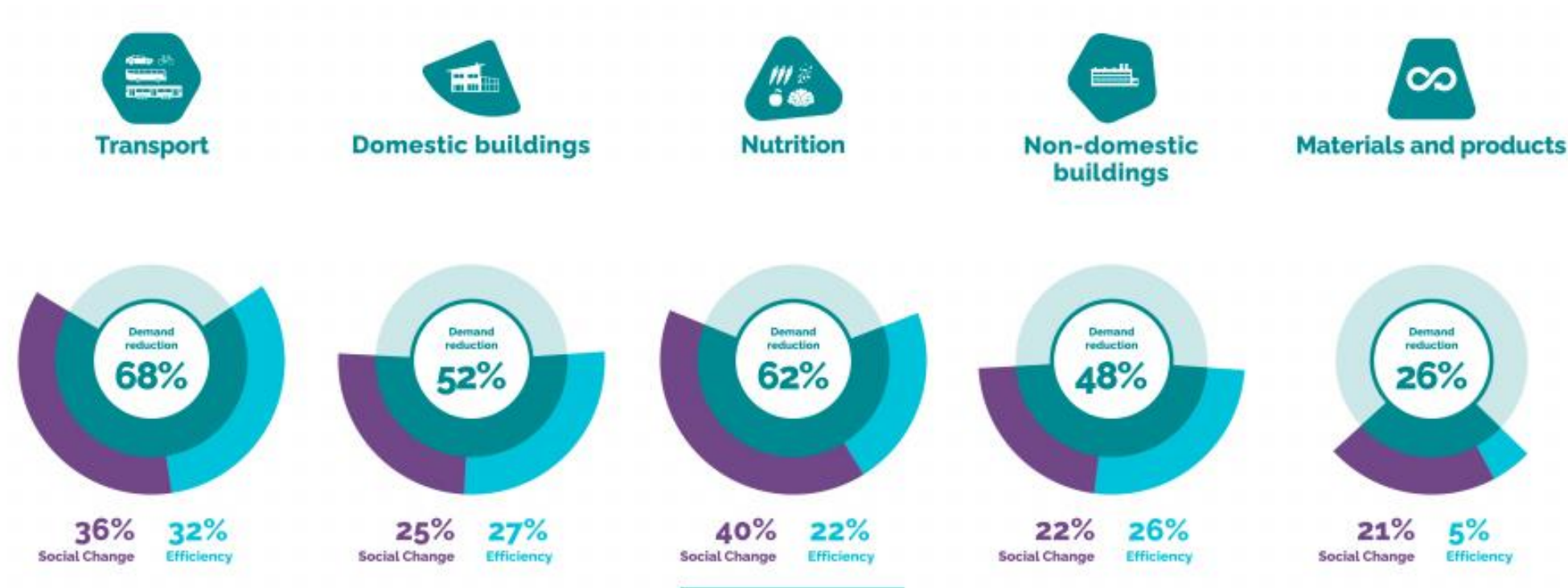
# Where do the savings come from?

Four broad categories change:

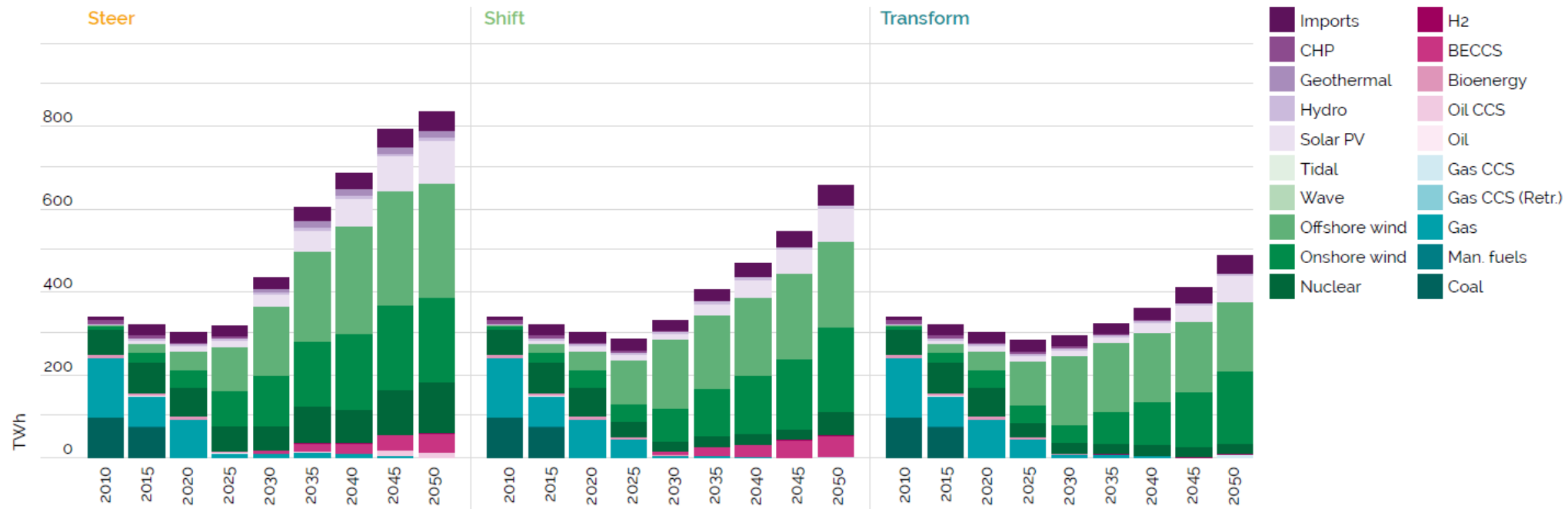
- Efficiency improvements – insulation, products, processes etc;
- Efficiencies from energy system change – notably electrification of vehicles and heating;
- Systemic change in other sectors, notably to:
  - public and active transport,
  - circular economy for energy-intensive materials,
  - low meat food systems.
- Reduced consumption, especially by high consumers.



# Efficiency and sufficiency

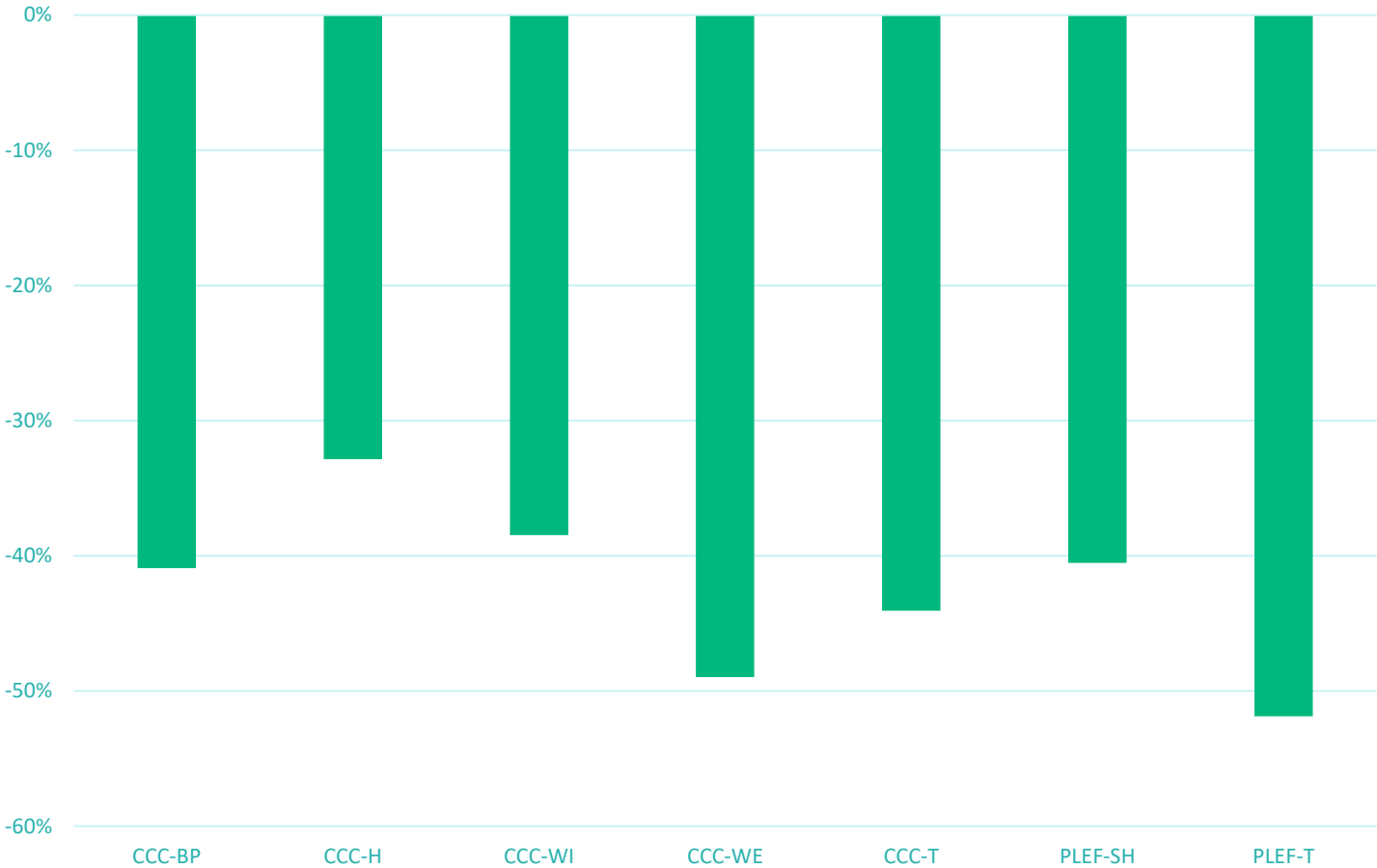


# We can reduce the scale of change needed in the electricity system



Source: Barrett et al, 2022

# Energy demand target



Percentage reduction in energy demand by 2050 (2020 baseline) in 7 UK decarbonisation scenarios. CCC - BP = the CCC Balance Pathway. CCC - H = Headwinds. CCC - WE = Widespread Engagement. CCC - WI = Widespread Innovation. CCC - T = Tailwinds. PLEF - SH = Positive Low Energy Futures Shift demand scenario. PLEF - TR = Positive Low Energy Futures Transform Demand scenario.

Source: Betts Davies et al, 2024