

# **ENERGY & ENVIRONMENT**



## **NET SMART**

**2021**



# ENVIRONMENT MATTERS

We are all concerned about the environment, and we all want cleaner air. The UK has been leading the world over the last 30 years in reducing our emissions by over 40% so firstly let's celebrate our success.

The climate has been changing for thousands of years and will always change in the future. Multiple factors cause this change, such as solar variability, sea level oscillation, and volcanic activity, over the very long term. We still have much to learn about these factors and we have no control over them.

Man made greenhouse gas emissions also impact the climate and here we can reduce some of our emissions, but it is important to appreciate the overall context. Even the Intergovernmental Panel on Climate Change (IPCC) states that if the world achieves net zero by 2050, it will be hundreds of years before this makes any difference to sea level changes. We also need to prepare for the related impacts.

We need to be smart about having an energy policy which embraces a range of technologies to reduce emissions in a way that is affordable, proportionate, fair and strategic.



# **TORY GREEN PLAN = NET STUPID**

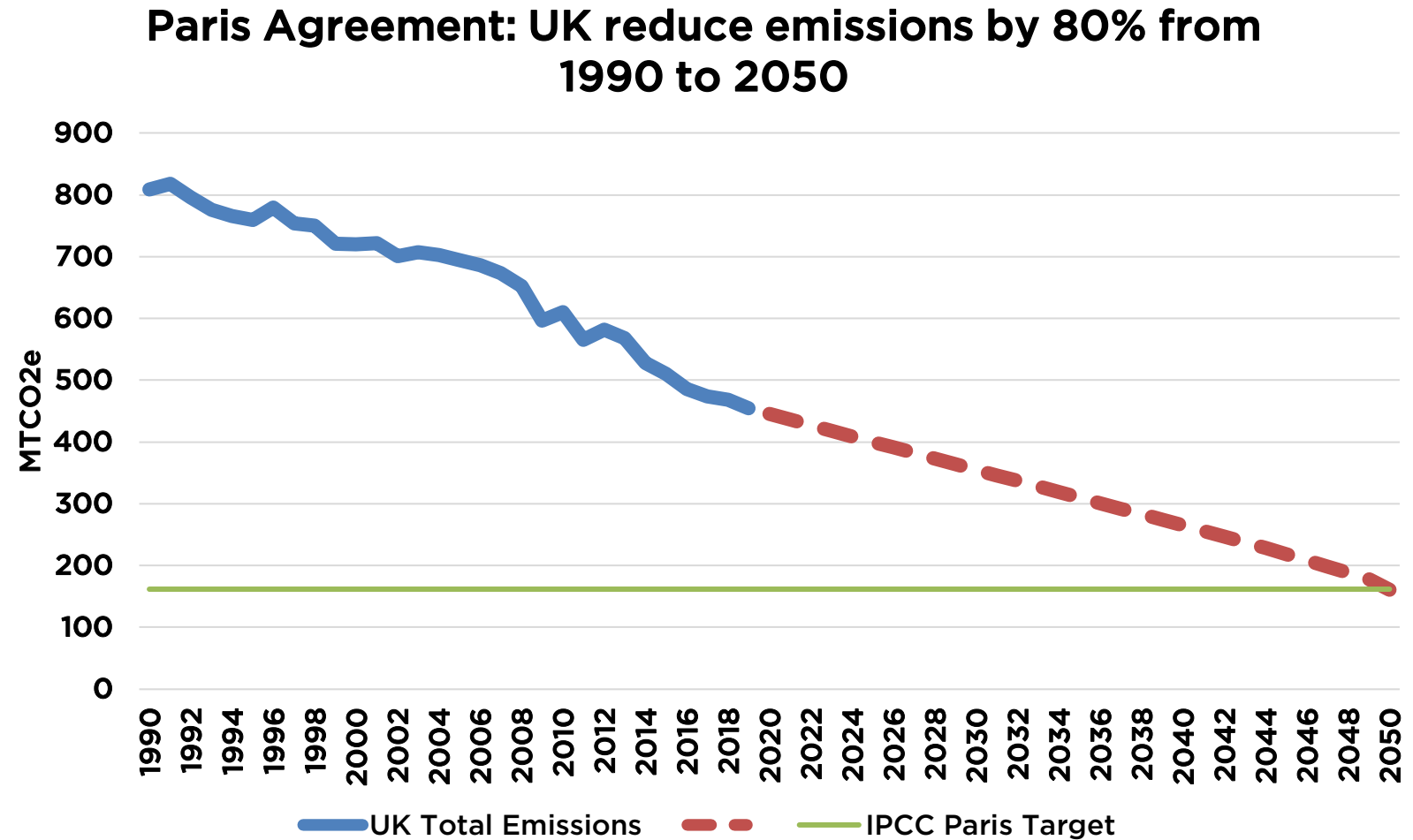
## **REFORM UK PLAN = NET SMART**

	<b>Con-Socialists (Tories) net zero/net stupid plan</b>	<b>Reform UK's Net Smart Plan</b>
<b>IPCC Target</b>	Far exceeds UK target under IPCC Paris Agreement.	Meet UK target under IPCC Paris Agreement of reducing emissions by 80% by 2050
<b>Jobs</b>	Destroy 100,000s of British jobs, sending them to China and elsewhere	Save and create 100,000s of decent British jobs
<b>Cost</b>	Will cost British families £100s every year in higher bills, with most of the money going overseas	Will save every household many £100s each year in lower energy bills
<b>Boilers</b>	Chaotic Boiler ban meaning confusion, alarm and cold houses.	Cancel boiler ban. Focus on building infrastructure to keep houses warm, lights on and economy working.



# REFORM UK POLICY - IPCC PARIS COMPLIANT

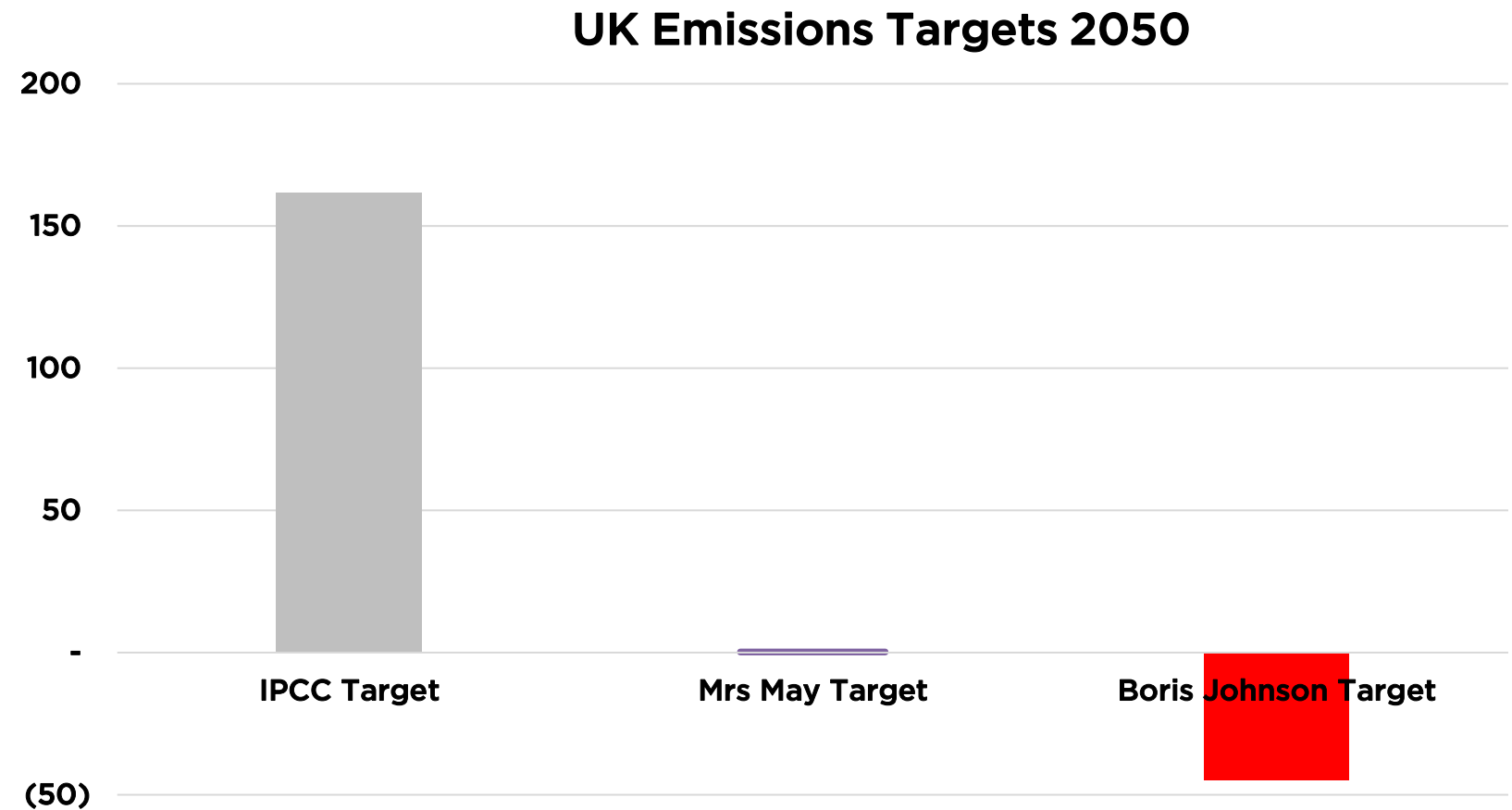
- UK target at time of IPCC Paris Agreement is 162 Million tonnes of CO<sub>2</sub> equivalent (MTCO<sub>2</sub>e) in 2050.
- We've cut annual emissions by over 40% since 1990.
- We are a world leading performer so far.
- Aim to save some 270 million tonnes MTCO<sub>2</sub>e annually by 2050.





# TORY NET ZERO DELUSION

- In 2019, May imposed a target of zero emissions:
  - Minimal debate, No vote
  - No costing appraisal
- In 2021, Boris included international transport.
- National Grid estimates net zero cost possibly £3 trillion.
- Tories happy for overseas investors to own and make huge profits from UK energy at consumers expense.

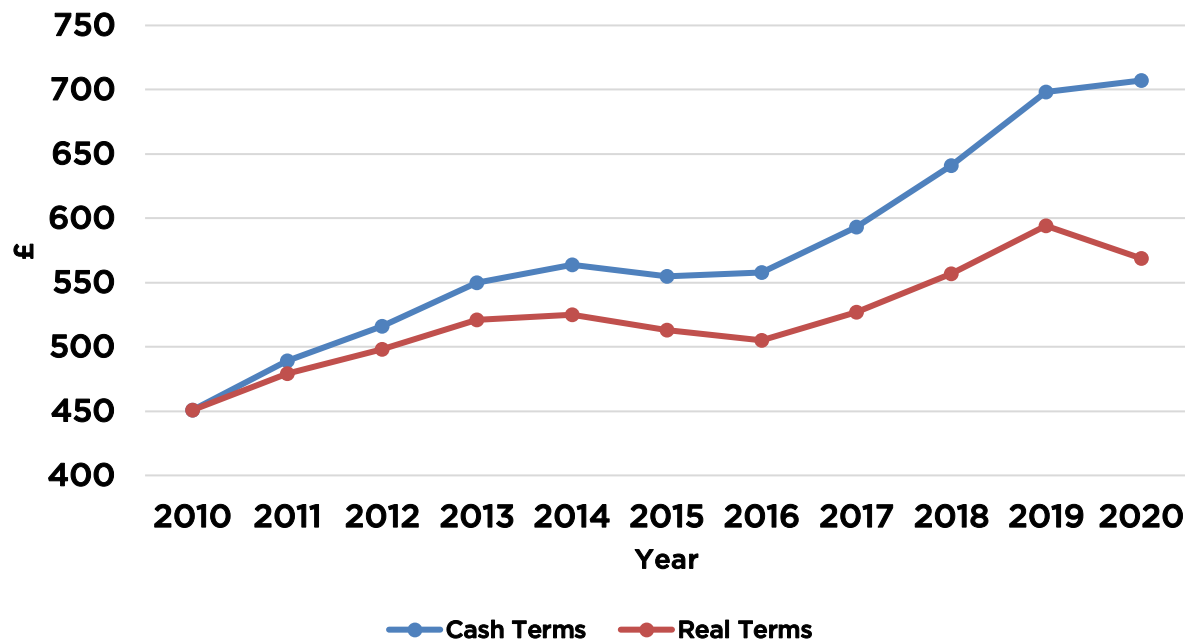




# ELECTRICITY IN THE UK AND WORLDWIDE

- Electricity bills grew by over 26% from 2010 to 2020 in real terms with inflation taken into account.

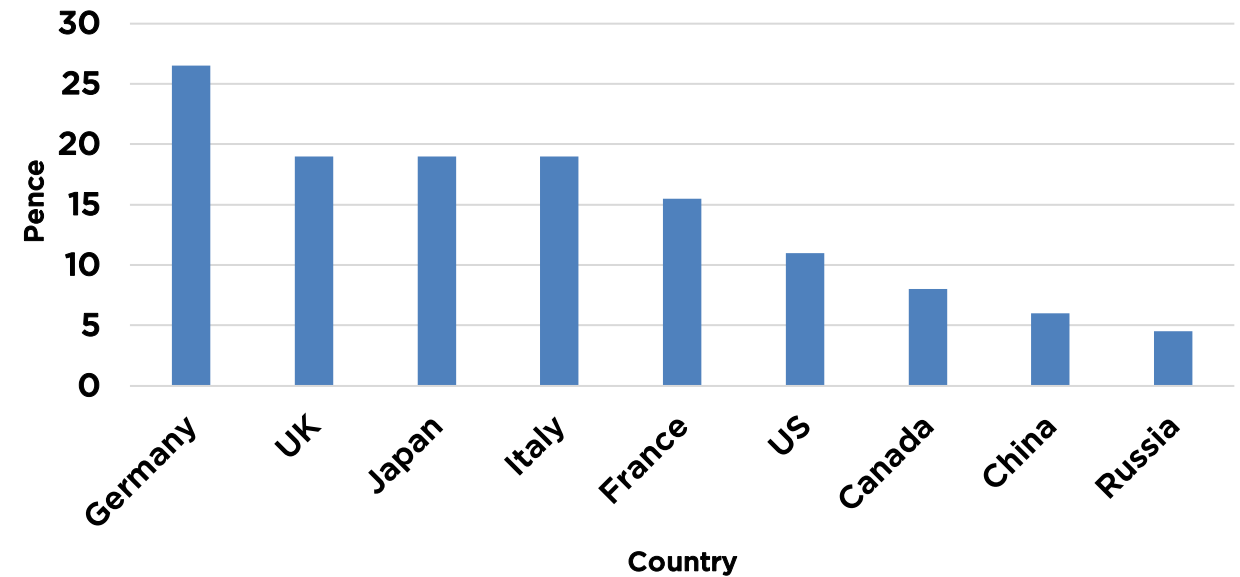
### Average Electricity Bill each year in UK per household



Source: Department for Business, Energy & Industrial Strategy

- UK one of the most expensive countries in the world for electricity, costing 19p per kWh.

### Domestic price per kWh of electricity in G7 countries plus Russia and China (2020)



Source: globalpetrolprices.com



# WHY IS UK ENERGY SO EXPENSIVE?

- Tories privatised the utility companies with no ownership restrictions
- Much of our utilities now overseas owned, with Chinese owners amongst largest. Countries like the US and France prevent or restrict such foreign ownership. This exposes the UK to strategic vulnerability and risk of being held ransom.
- These private overseas owners making excessive profits often 5x larger than UK pension funds would expect. Sometimes 20% profit per year on money invested. Nice work if you can get it!
- Tories wanted these private owners to invest in renewables and green energy, but their expensive money required huge increases in bills to British families. (Approaching £200 per household every year)
- Late 2021: huge further increases being imposed on British families. Gas price crisis due to lack of UK generated supply, storage, lack of self-sufficient resilience and Tory party failures.



# HOW TO MAKE UK ENERGY AFFORDABLE

- UK Energy Infrastructure should be owned 50:50 by UK pension funds and by UK taxpayers/consumers (who pay for it and rely on it)
- Win win solution: Proper commercial management, with smart UK-based ownership, meaning responsible profit levels.
- Smart use of UK Government Balance sheet.
- This will reduce excessive profiteering.
- Energy bills will rise slower under our strategy than if remain under current ownership regime, as we invest in clean technology.
- Average British family can expect annual savings compared to expensive Tory plans of many hundreds of pounds.
- Must have diverse range of energy sources as technology & pricing will evolve over time





# CLEAN ENERGY TECHNOLOGY - CURRENT

## **Nuclear**

UK leads world with new Small Modular Reactors (SMRs).  
Rolls Royce SMR has great potential – especially in combination with district heating.

## **Wind**

We're doing well, but the wind does not always blow so only part of the solution.  
Use cheaper Govt balance sheet and public ownership, not expensive private equity money.

## **Solar**

Ambition for over 5 million homes to install solar panels, funded by 100% Government loans.  
Must design & manufacture panels in UK. Increase panels on industrial buildings but cease solar farms at ground level.  
Efficiency of new panels will improve over time as technology improves.

## **Biomethane**

Produced from food, cattle wastes and energy crops, which reduces methane emissions.  
Interim renewable fuel for HGVs and natural gas substitute.  
Encourage production and more efficient use.



# CLEAN ENERGY TECHNOLOGY - FUTURE

## **Hydrogen**

Essential for domestic heating as heat pumps won't work in at least 50% of UK homes  
Deliverable today into existing gas grid, in increasing concentrations.  
Many appliances are already capable of running 20% hydrogen.

## **Allam Cycle**

Uses natural gas with no emissions.  
Almost immediately available. Distribution infrastructure already in situ.

## **Tidal/Hydro**

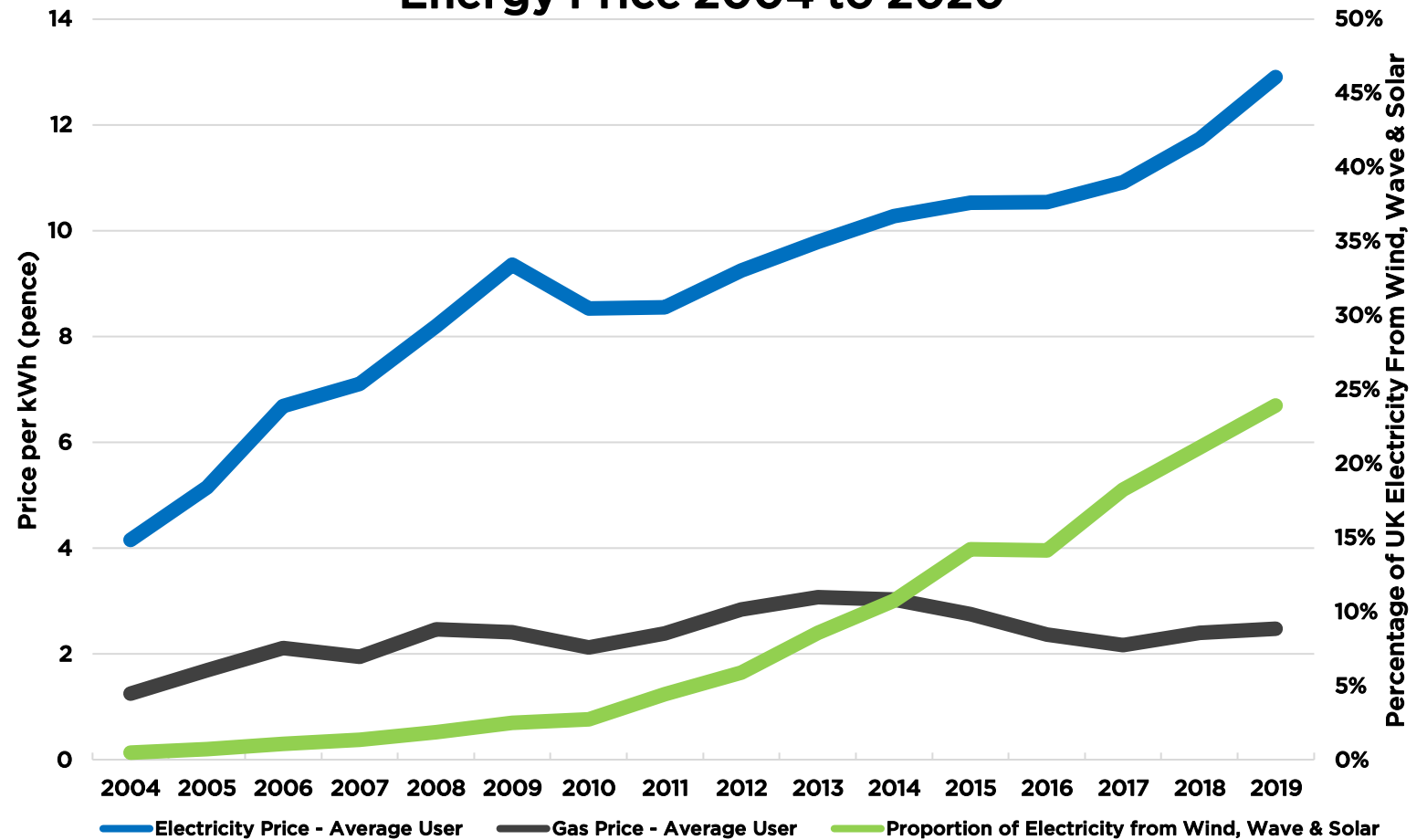
Potential huge resource for both generation and storage.  
Swansea Bay scheme should proceed with more to potentially follow.



# CUTTING THE COST OF RENEWABLES

- Chart shows the uncapped non-domestic costs (i.e. the truth).
- About 40% of UK energy comes from gas, so electricity price should track gas price.
- Electricity price increase about four times the increase in gas price.
- Due to expensive subsidies on renewable schemes often to overseas investors
- Reform renewable subsidy and contract regimes to cut costs & protect British customers

### Renewable Electricity is Expensive: Non-Domestic Energy Price 2004 to 2020



Source: BEIS & DUKES 2021



# **NEW TAXPAYER OWNED RENEWABLE BANK**

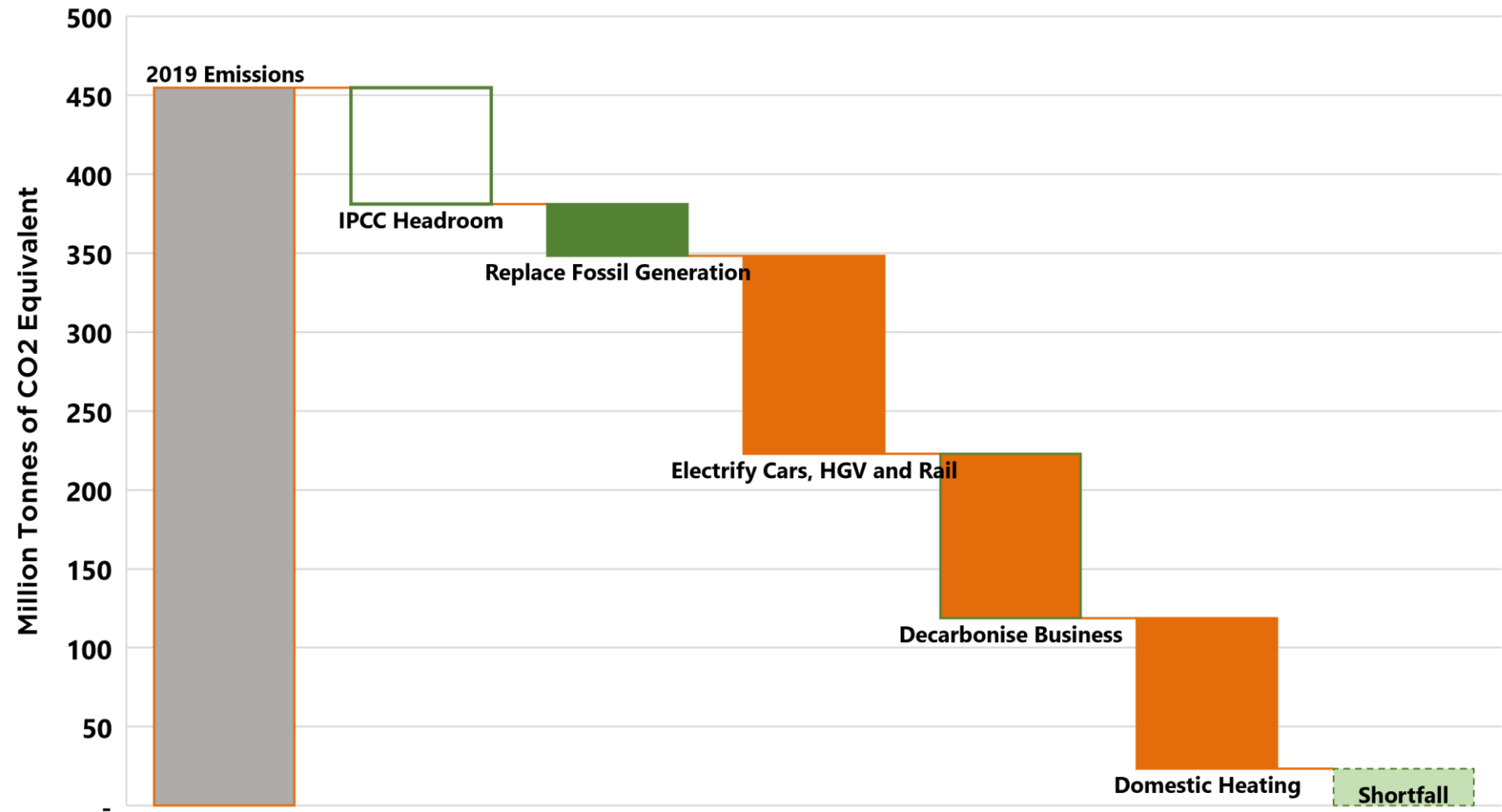
- Establish taxpayer owned Renewable Bank that will use the government balance sheet to fund new joint venture clean energy technology investments.
- This will save consumers money and the taxpayer will benefit as these world leading technologies are used and sold elsewhere.
- For example, this Renewable Bank should invest jointly with Rolls Royce in world beating new small modular reactors (SMR) for nuclear energy.
- Renewable Bank can provide 100% solar and wind loans, interest free, repaid via energy generated.
  - Solar Power: we must design and manufacture world beating solar panels in the UK. Ambition: 5 million+ homes and many industrial buildings
  - Wind Turbines: we must design and manufacture wind turbines in the UK.
- This creates genuine British green jobs, world leading British technology and will save British families hundreds of pounds every year.



# REDUCING EMISSIONS TO IPCC LIMIT

- Our plan delivers:
  - Emissions reduction to IPCC Paris Target
  - British Jobs
  - Affordable costs
- World leading British technology
- Without ceding control to overseas profiteering.
- Range of energy sources to guarantee supply and self-reliance

### Reducing UK Emissions to Inside the IPCC Target



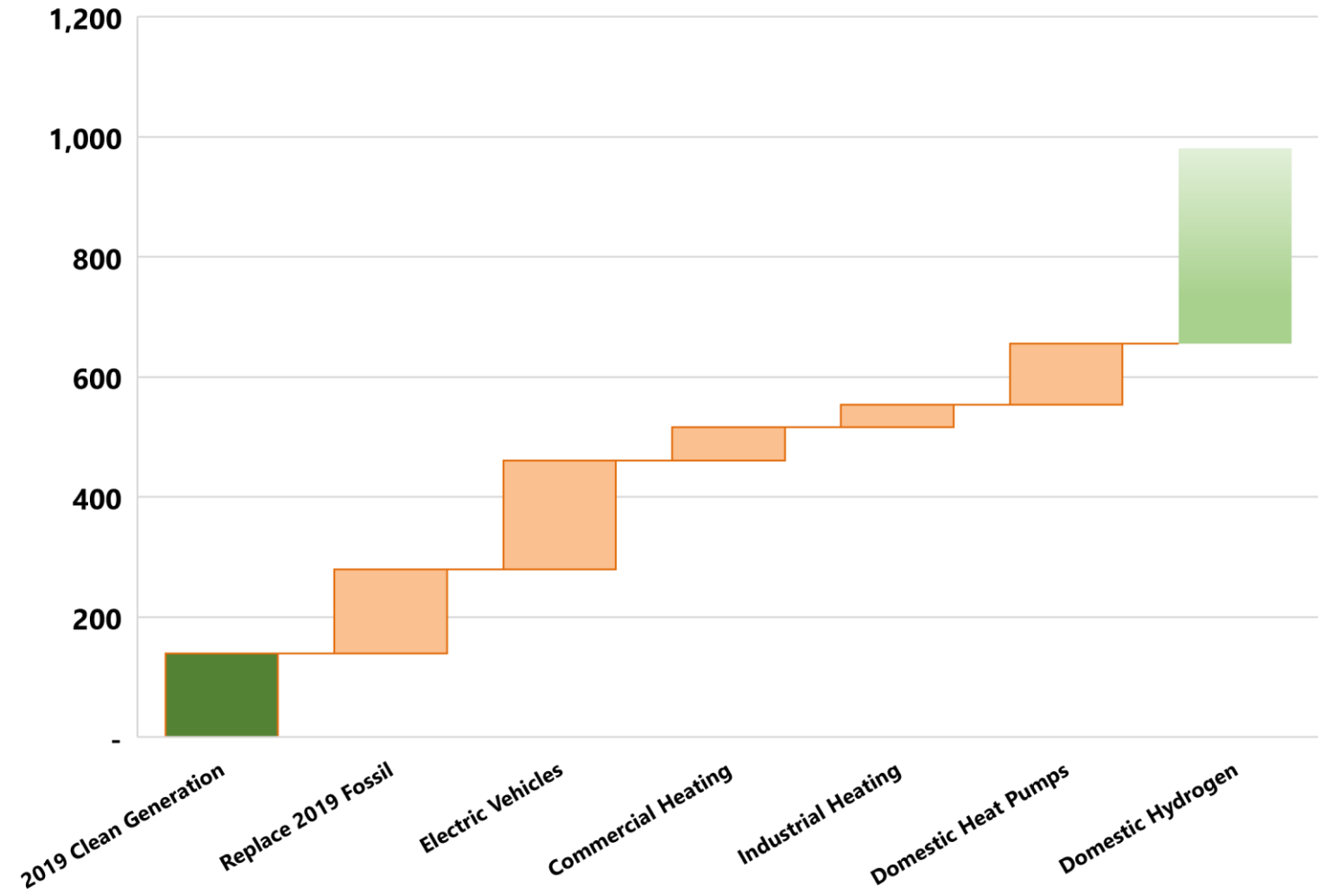
Source: BEIS



# HOW MUCH CLEAN ENERGY DOES THE UK NEED?

- Assuming:
  - Road transport electrified.
  - Mains gas blended with hydrogen.
    - Retrofitting domestic heat pumps not viable.
    - Gradual increase of hydrogen in mains avoids urgent replacement of boilers
  - Commercial buildings converted to heat pumps.

### The Clean Energy We'll Need (TWh)



Source: DUKES



# SUMMARY

**Our Energy & Environment policies are net smart, and to be IPCC Paris compliant whilst:**

- **Saving and creating hundreds of thousands of British jobs**
- **Saving hundreds of pounds for British families every year**
- **Saving our gas boilers as blended part of overall energy sources**
- **Put UK at the forefront of world leading low carbon technology industries**

**Current Tory policies run the risk of energy rationing and further economic damage. These Tory policies are net stupid, not net zero. They will result in people being colder in their own homes as they cannot afford the heating bills whilst destroying British jobs.**



**IT'S TIME FOR  
REFORM.**

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