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Views from UK energy professionals

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Innovation and Disruption: the energy sector in transition

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Background

- Second year of project
- Survey
- Report
- Objectives:
  - explore some new topics
    - levels of governance and EU Referendum
    - future energy system
    - types of communication
  - dive deeper into others
    - energy efficiency behaviour change
    - energy storage

Method

Analysis and reporting results

- **Top level review** (qualitative and quantitative) of all responses to ascertain trends, tease out messages
- Identified **4 themes**:
  - Global context and drivers for change
  - Policy stability
  - Future energy system
  - Levers and actions

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2015 vs 2016 Biggest challenges

Free responses coded and consolidated from two questions: What do you think is the biggest challenge for the energy industry in 2016? N = 393 (N = number of respondents); Please list any other challenges you think the energy industry will face in 2016. N = 313

1st	Energy policy continuity	—
2nd	Investment and cost	—
3rd	Low oil price	↑7
4th	Supply security	↓1
5th	Low carbon energy	↓1
6th	Public engagement	↓1
7th	International aspects	New
8th	Sustainability and climate change	↓1
9th	People and skills	↓1
10th	Whole system thinking and long term planning	New

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GLOBAL CONTEXT; DRIVERS FOR CHANGE

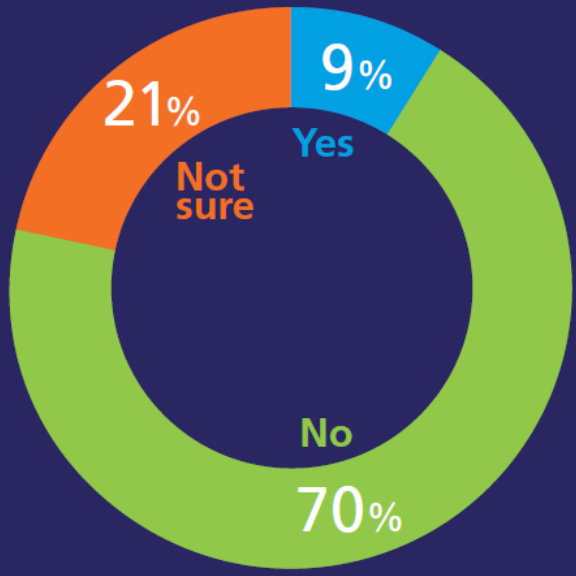
UK 2050 emissions target

The 2050 UK climate target is to reduce emissions by at least 80% (from 1990 levels). Given current UK emission reduction policies, do you expect emissions reductions to: N = 438: Expressed as a percentage of respondents. Each small box equals one percent.

- **Fall significantly short of the target** 72%or smaller reduction
- **Fall short of the target** 73–77% or smaller reduction
- **Meet the target** 78–82% reduction
- **Exceed the target** 83–87% reduction
- **Significantly exceed the target** 88% or larger reduction

COP21 Agreement preventing a 2°C rise

Do you think the agreement reached at the 2015 Paris Climate Conference will be sufficient to keep global temperature rise below the targeted 2 degree Celsius? N = 438



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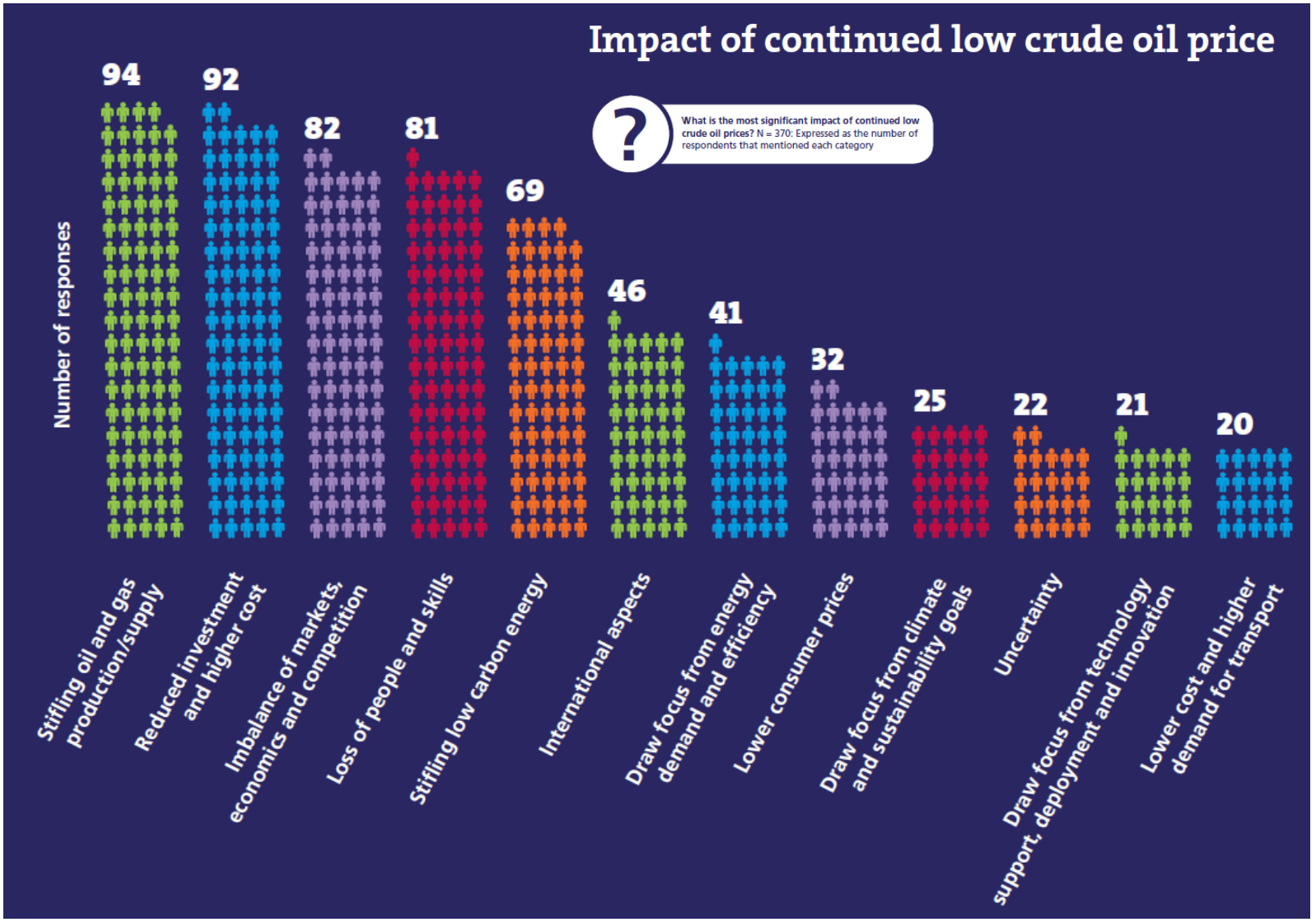
GLOBAL CONTEXT; DRIVERS FOR CHANGE



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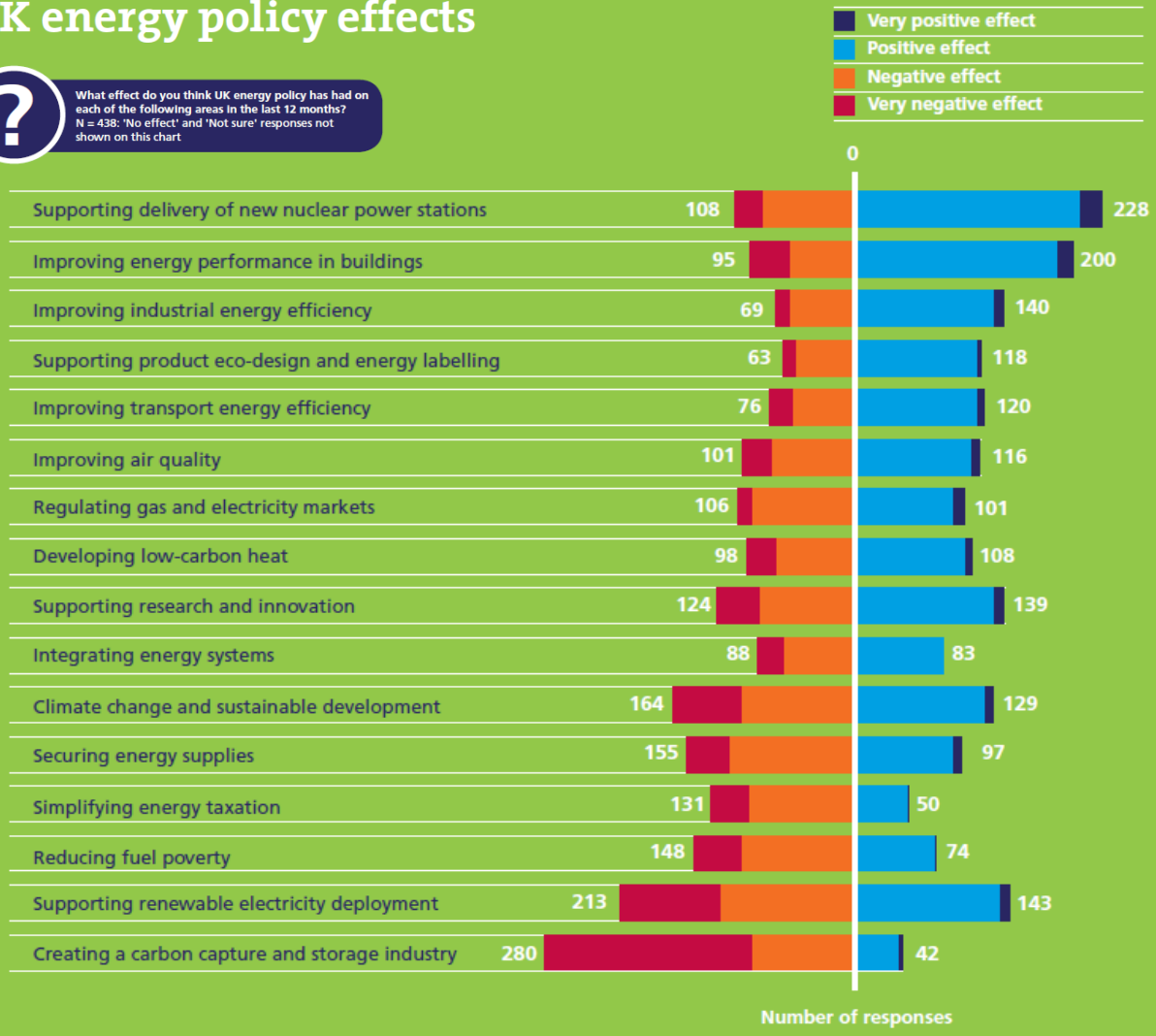
UK energy policy effects

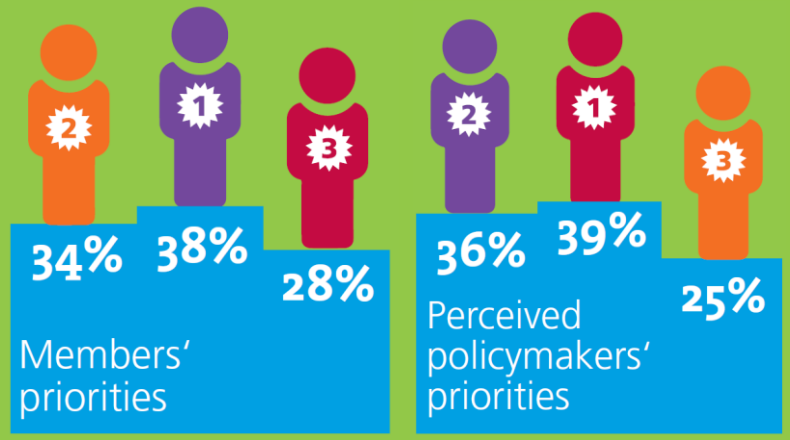
What effect do you think UK energy policy has had on each of the following areas in the last 12 months? N = 438: 'No effect' and 'Not sure' responses not shown on this chart



Priorities vs perceived priorities

In what order would you prioritise the three elements of the Energy Trilemma? How do you expect UK policymakers to prioritise the three elements of the Energy Trilemma during the next 3 years? N = 438: Answers ranked by priority and shown as a percentage

Sustainability
Security
Affordability



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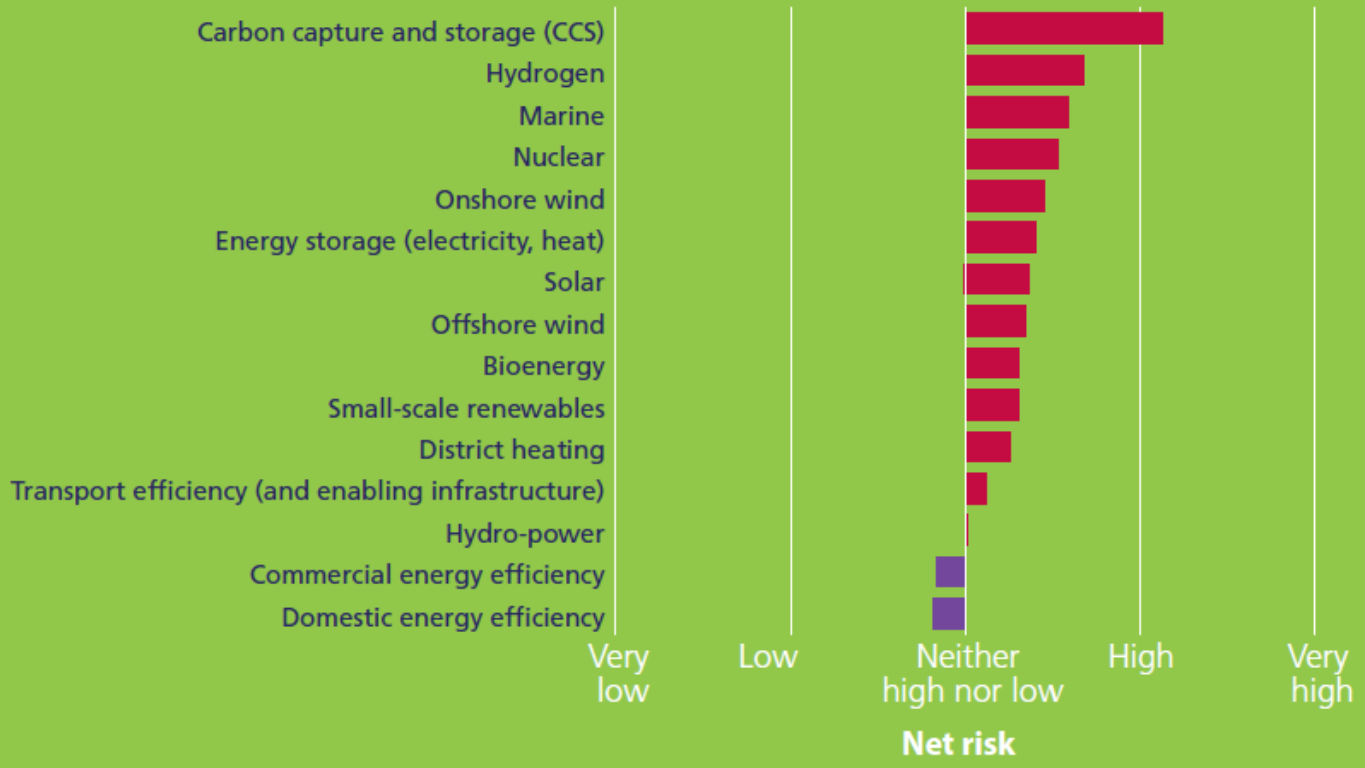
POLICY STABILITY

UK investment risk

In the UK, what is the level of investment risk due to policy uncertainty for the following low-carbon technologies?
N = 438: Net risk score calculated by subtracting 'Low' and 'Very low' (weighted 2x) from 'High' and 'Very high' (weighted 2x)



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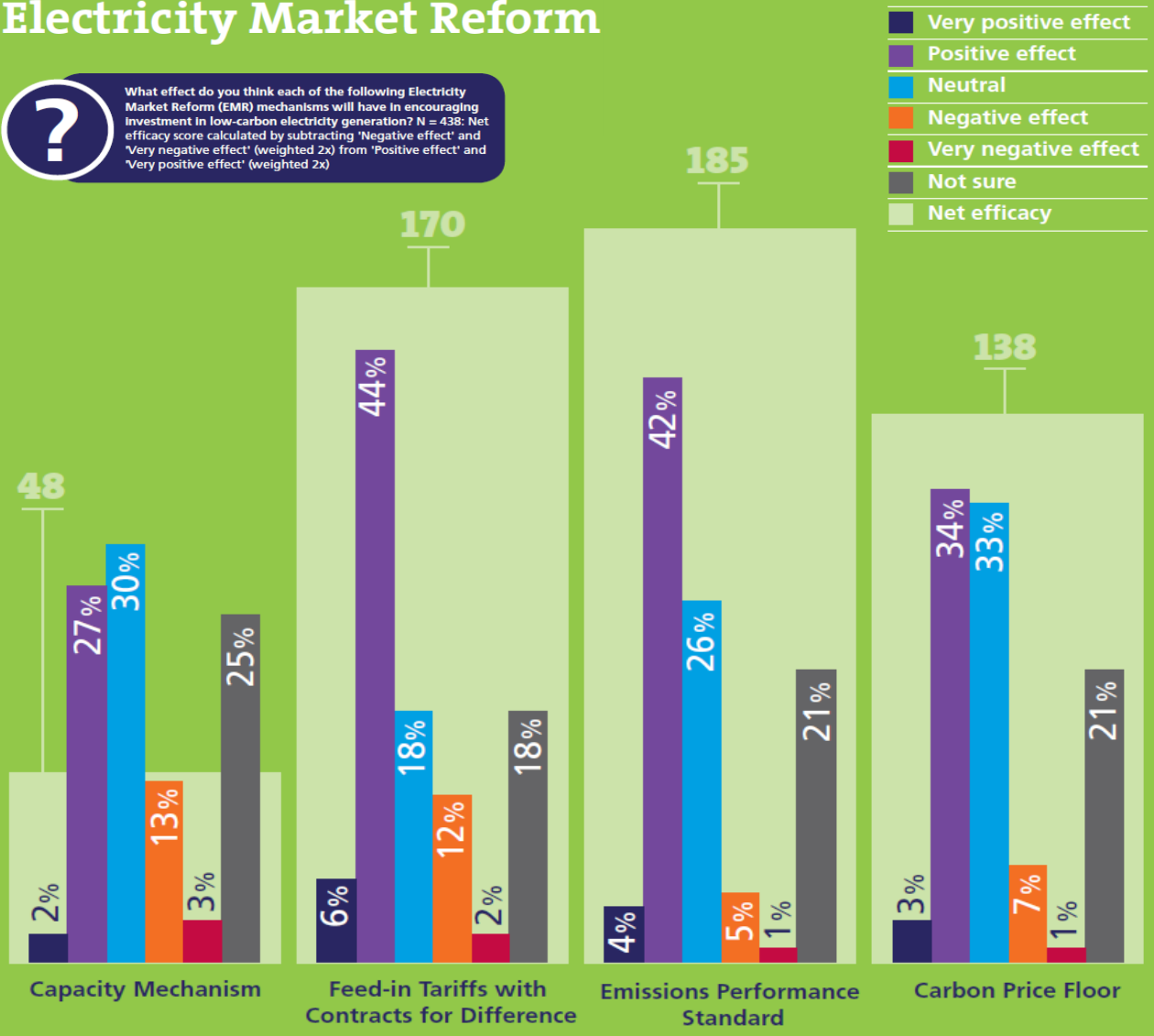
Electricity Market Reform

What effect do you think each of the following Electricity Market Reform (EMR) mechanisms will have in encouraging investment in low-carbon electricity generation? N = 438: Net efficacy score calculated by subtracting 'Negative effect' and 'Very negative effect' (weighted 2x) from 'Positive effect' and 'Very positive effect' (weighted 2x)



POLICY STABILITY

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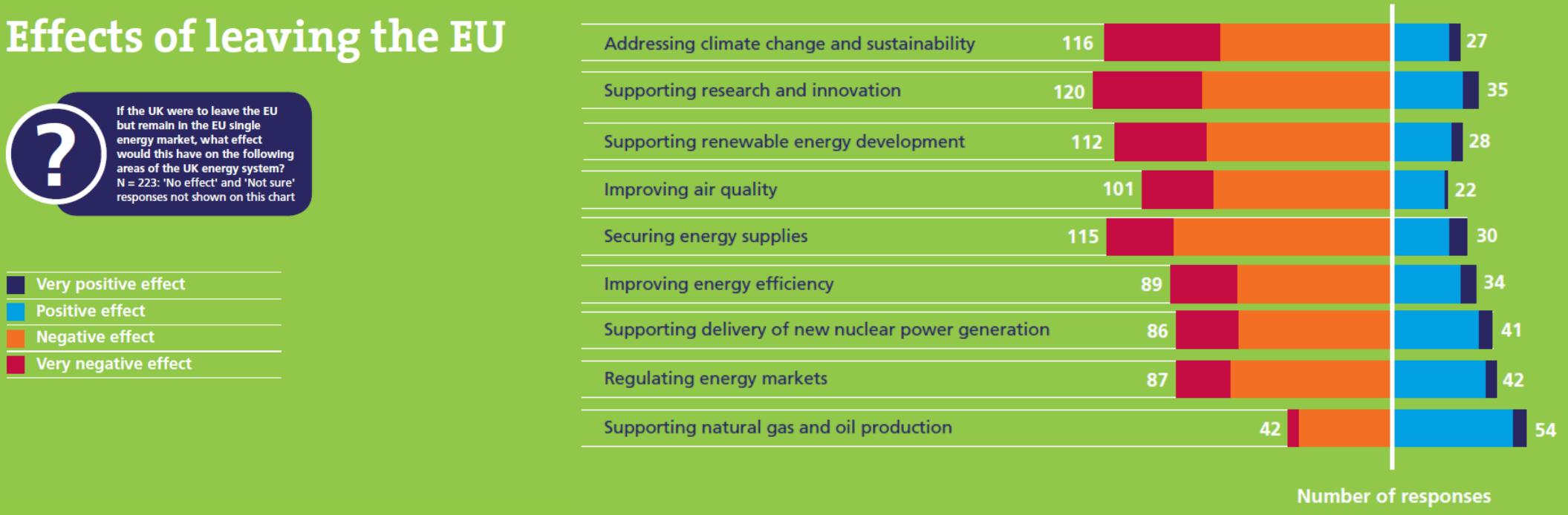
POLICY STABILITY

Effects of leaving the EU

If the UK were to leave the EU but remain in the EU single energy market, what effect would this have on the following areas of the UK energy system?
N = 223: 'No effect' and 'Not sure' responses not shown on this chart



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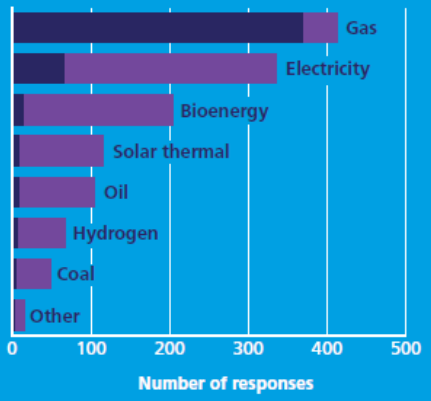
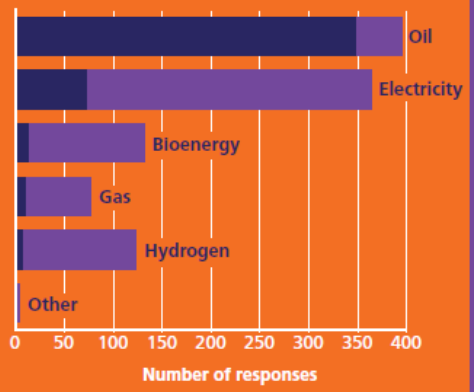
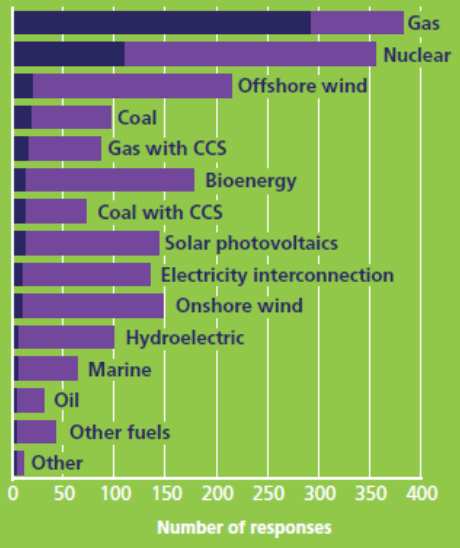
Heat



Transport



Electricity



Future energy sources

In 2030, which primary energy source will contribute most to the UK heat/transport/electricity mix? What other sources will make a significant contribution?
N = 438

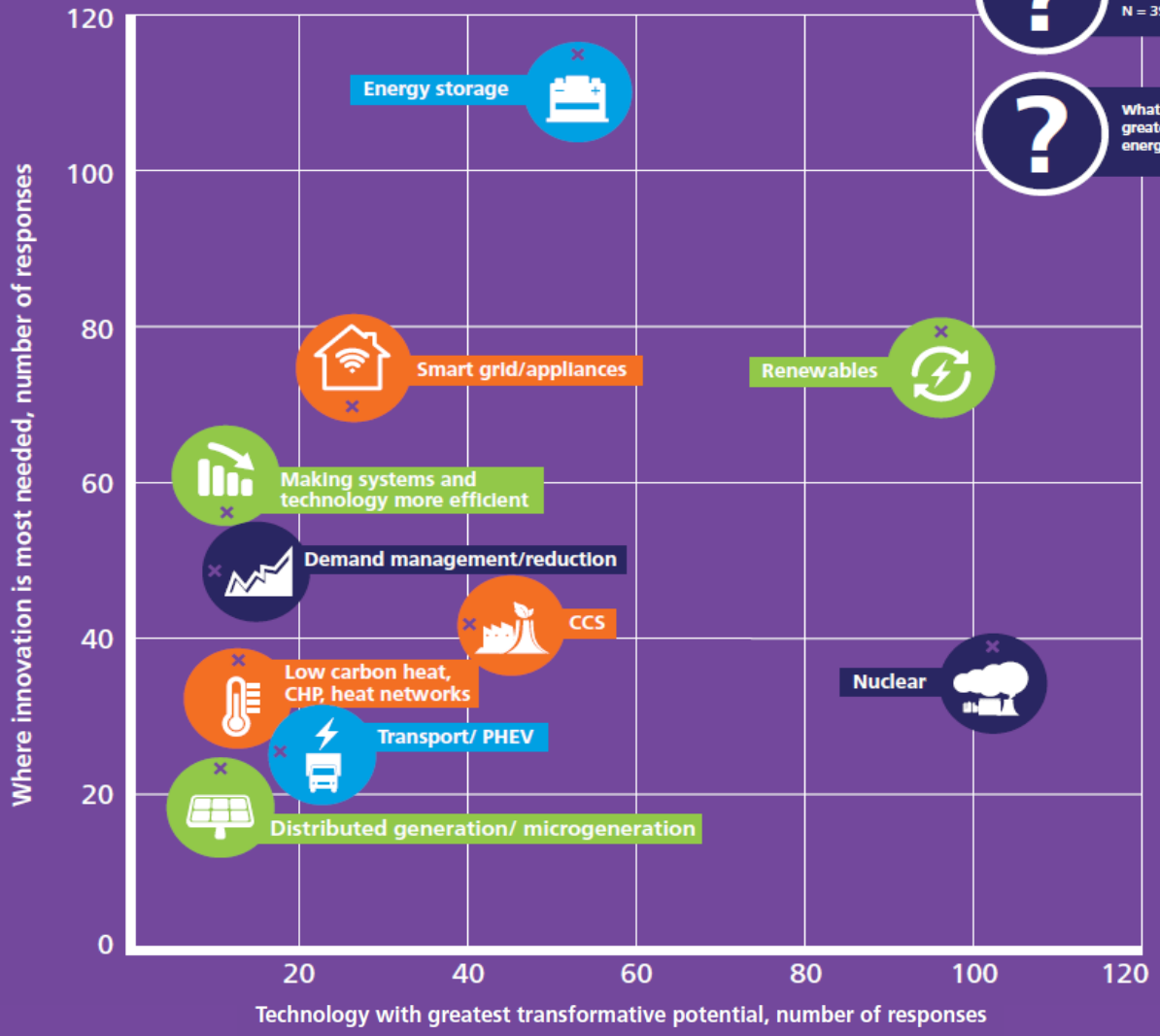
Greatest contribution

Other sources

Innovation need and technology potential

Where in the energy system do you think innovation is most needed? N = 395

What is the technology with the greatest potential for transforming the energy system by 2030? N = 357



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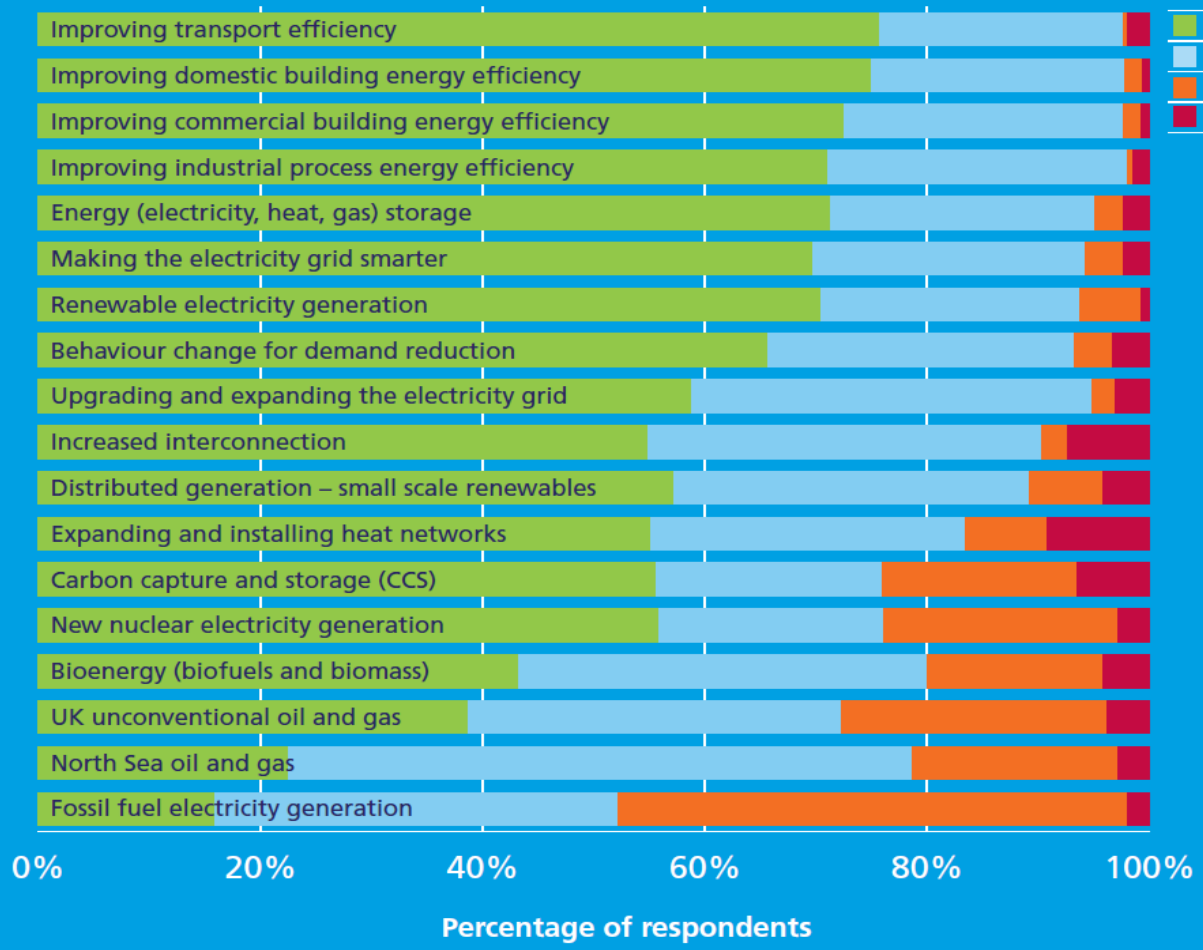
LEVERS AND ACTIONS

Changes in investment levels

In order to maintain security of supply and meet environmental goals affordably, what do you think should happen to UK investment levels (from all sources) for the following areas over the next 3 years? N = 438



What single measure would be best taken by the current government to reach these UK emissions targets? N = 368: Free responses coded and summed

Measure	Responses
Renewable energy	77
Nuclear	70
Policy stability	58
Financial incentive	43
Energy efficiency	43
Technology support, deployment and innovation	40
Carbon pricing/tax/trading	35
CCS	33
Focus on transport	31
Demand management/reduction	21

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LEVERS AND ACTIONS

Public communication by sector

How do you think your area of the energy industry communicates with the public? N = 438: Results displayed as a percentage of the respondents within each sector.

- There is little or no effort made with this type of engagement
- This is not considered a priority area
- This is done as a matter of course
- This is prioritised and is part of key strategies for my sector
- My sector leads the way with this type of engagement

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Available at energyinst.org/energy-barometer

Questions?