

ICE submission to the Energy Security and Net Zero Committee inquiry on building support for the energy transition

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About the ICE

The Institution of Civil Engineers (ICE) is a 97,000-strong global membership organisation with over 200 years of history.

It is a centre of engineering excellence, qualifying engineers and helping them maintain lifelong competence, assuring society that the infrastructure they create is safe, dependable and well designed.

Its network of experts offers trusted, impartial advice to politicians and decision makers on how to build and adapt infrastructure to create a more sustainable world.

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Submission

1. Has the Government properly explained the potential benefits of the energy transition to the average citizen?

The energy transition will require significant investment in infrastructure. This will ultimately deliver environmental benefits, greater energy security, and lower bills. However, recent polling commissioned by the ICE¹ suggests more needs to be done to engage the public about infrastructure investment, including communicating the benefits:

- Almost two-thirds of respondents (62%) felt that major infrastructure projects are poorly communicated to them (only 19% believed they are currently well communicated).

The polling suggested that people recognise that infrastructure investment can deliver benefits to society and they want to hear more about them:

- People were keenest to hear about why projects are being built and what the benefits will be (47%).
- Who is paying for the projects (38%) and what it will cost people individually (37%) were also priorities, the latter being a higher concern than the overall cost.

¹ The polling was conducted by Opinium Research and explored the UK public's understanding of and attitudes towards infrastructure planning, investment and delivery. Opinium conducted three virtual focus groups, each with 6-8 UK adults aged 18+, between 14 and 16 January 2025 and an online survey with a nationally representative sample of 2,007 UK adults aged 18+, between 5 and 8 February 2025.

Recognition of the benefits of infrastructure investment was stronger at a local and individual level. The connection between infrastructure investment and national goals like net zero was considered less important:

- Respondents believed the most important benefits that could come from new infrastructure projects in the UK were boosting economic growth (43%) followed by more reliable public services (35%) and improved transport and connectivity (32%).
- In contrast, national goals like reducing regional inequalities (14%), climate resilience (12%) and decarbonisation (11%) scored much lower.

In the context of the energy transition, further research carried out on behalf of the ICE by Thinks Insight & Strategy (Thinks) in 2024² found that homeownership, wealth and age are key factors in how people perceive the benefits of behavioural changes linked to the energy transition:

- Almost two-thirds (63%) of people surveyed believed improved insulation would positively affect their way of life. However, that belief was more likely among homeowners and those who are more affluent.
- Younger respondents, including 18-30-year-olds and 31-50-year-olds, were more likely to think net zero behavioural changes will affect them positively compared to those who are older.

2. Is there a clear understanding of the costs of the energy transition to householders and businesses?

As noted above, UK public polling conducted for the ICE suggests most people feel that major infrastructure projects are poorly communicated to them. While the benefits were the most important factor people wanted to hear about, who is paying (38%) and what it will cost people individually (37%) were also high priorities. There was also a perception that infrastructure costs too much and takes too long to deliver. Almost half of respondents believed projects are often delayed or go over budget (44%) and cost more than necessary (40%).

The public ultimately funds new infrastructure through taxes, utility bills or user charges. However, Opinium's research suggests people are divided on the fairest way to pay for new infrastructure and many do not understand how infrastructure is paid for:

- People were relatively evenly divided on whether new projects should be funded mostly or entirely by everyone through taxes (33%) or by those who use them (39%).
- When paying for new major infrastructure projects requires either raising prices for service users or raising taxes for everyone, respondents leaned towards raising prices for service users (38%) rather than raising taxes (16%).
- However, the large proportion of people unsure about the fairest way to pay (27%) suggests many people do not understand how infrastructure is funded. This underlines the need to communicate better the costs as well as the benefits of major investment programmes, like the energy transition.

In Opinium's focus groups, resistance to taxes was linked to doubts about government efficiency and how the money would be allocated. Concerns about user charges focused on the affordability of services and the risk of pricing people out of essential infrastructure and widening social and economic disparities.

² APPGI and ICE (2024) [What are the public behavioural changes required to meet net zero?](#)

The private sector will play a major role in delivering the infrastructure required for the clean energy transition. Neither the public nor the private sector was seen as transparent and accountable for efficient infrastructure delivery (25% public, 22% private, and 35% neither).

Opinium's research found that the public was concerned that private companies would prioritise profit over public good, resulting in poorer service quality, underinvestment in long-term maintenance, and pricing people out of essential services. Trust in the private sector's involvement in infrastructure investment appeared conditional on strong regulation and government oversight.

3. Is there a need for public campaigns to counter the anti net zero narrative?

Shifting global politics and public attitudes around clean energy and net zero are risks to the government's Clean Power Mission. Both the government and the engineering profession could be doing more to capture the hearts and minds of the public on the journey to net zero. The Clean Power Mission is an opportunity to win over the public's imagination by presenting it as an exciting time of industrial transformation.

Research carried out on behalf of the ICE by Thinks Insight & Strategy (Thinks) in 2024 on the role of public behaviour change in delivering net zero segmented the public into four key groups in terms of their engagement with net zero³:

- **Net Zero Enthusiasts (23%):** People who want to make changes and feel they can. This group feels people have individual responsibility to make changes and have peers who also want to make at least small changes.
- **Seeking Empowerment (34%):** People who want to make changes but doubt whether they actually can. As individuals they want to make changes but feel they need extra support to do so.
- **Reluctant Followers (30%):** People who mostly agree that the UK needs to cut emissions but do not think it is their responsibility to help. They will only make significant changes when forced or when they see most others doing so.
- **Net Zero Resistors (13%):** People who have no intention of making changes and don't feel like they need to. They fundamentally feel that the UK does not need to reach net zero.

For the net zero transition, it is significant to note that the two groups that want to change their behaviour – those 'seeking empowerment' and the 'net zero enthusiasts' – represent over half the population. Most of the public fits into groups who want to make a change and believe individuals have at least some responsibility to make changes themselves.

But, as the polling above shows, people need more clarity and transparency around the costs, trade-offs and potential impacts of net zero choices and net zero investment. While there are high levels of public concern about climate change, that does not necessarily translate into a willingness to pay higher taxes or prioritise the environment over other issues.

³ APPGI and ICE (2024) [What are the public behavioural changes required to meet net zero?](#)

4. How should the Government be more positively engaging the public with this goal?

The ICE's research suggests there is a market failure in driving the energy transition at a domestic level which is exacerbated by three 'knowledge' barriers for homeowners and occupiers: 1) lack of knowledge of the options available and how to decide which are suitable for your property; 2) high initial cost of the installation of new technologies and 3) uncertainty regarding running costs (for heating – especially given the current relatively low cost of gas vs electricity).

Key to support and engage the public on the net zero transition is more certainty from government regarding policy directives and financial incentives where behavioural change is required. Inconsistent policymaking and mixed messaging has had a negative impact on the public's ability to engage with net zero. There is a lot of information about the choices people can make to get to net zero in the public domain. Some of this is contradictory, and much of it is unnecessarily complex.

The lack of financial means is also a significant indicator preventing the public from making net-zero-aligned choices. The public has different types of housing tenure and often wildly different financial situations. Inequality in household incomes in the UK has remained roughly similar since the early 1990s but is higher than during the 1960s and 1970s. Therefore, different parts of society will experience the costs and benefits of net zero interventions in very different ways.

In focus groups organised by Thinks for the ICE, many people also focused on the behaviour of others to explain why they are not making more changes themselves. As members of the public do not necessarily know many people making changes, such as installing a heat pump, there is a lack of social pressure for many to make changes. This is because the behaviour has not yet become socially normative.

The government's upcoming public engagement strategy is an opportunity to address these barriers to the net zero transition. The ICE has made the following recommendations on how the government should engage the public about making choices aligned with net zero:

Provide a single point of reference: An information portal or hub (led by the government or an independent body) is needed to demystify net zero choices. There is currently no single trusted source of information that also provides transparent information about costs and 'how to' guides. Easy access to information, using clearer language and tailoring the right incentives for the right audiences are imperative to accelerate the net zero transition.

In Scotland, householders (owner occupiers, tenants) and smaller private landlords can access free, independent, personalised and impartial advice from the Home Energy Scotland (HES) service, provided on behalf of the Scottish Government by the Energy Saving Trust. The advice is delivered online, by phone and in person. After receiving advice from an HES adviser, 47% of customers had installed at least one energy efficiency, low carbon heat or renewable energy improvement and 38% were planning to install at least one improvement in the next 12 months.⁴

Better communication can help reframe net zero choices and how they fit into people's everyday lives as additions that have positive value rather than being a burden. Climate change is complex and some of the language surrounding it can be ambiguous, off-putting, and does not generate commitment from the public. Using

⁴ APPGI and ICE (2024) [What are the public behavioural changes required to meet net zero?](#)

unambiguous language can demystify net zero choices and make them more relatable to the public, including areas such as food supply, biodiversity loss, active travel and plastic pollution.

Framing can highlight the functional, emotional and social co-benefits of the net zero transition:

- Functional benefits include improved health and well-being, cost savings and increased job opportunities.
- Emotional benefits can include an increased sense of purpose, feeling and acting more optimistically and a greater sense of control and stability.
- Social benefits include a greater sense of belonging, stronger local communities and generational bonding and cohesion.

A portal could also act as a feedback loop so the public can see how their actions are making a difference in the transition to net zero. To ensure it is accessible to all members of the public, it would be a national platform with the capacity for links into localisation.

Address market and non-financial barriers: Structural issues with the market include the need for energy companies to provide a market response to encourage public take-up. For heat pumps, this should involve minimising upfront installation costs to incentivise uptake and reduce consumer barriers. Stamp duty incentives could facilitate uptake by encouraging homeowners to invest in heat pump technology when purchasing a property. Non-financial barriers include access to skilled installation operators or improving the design aesthetic of heat pump infrastructure to make it more visually appealing.

Create a clear policy path to follow: The public needs the right infrastructure in place before they can change their behaviour. Public engagement must therefore be included within a wider programme of infrastructure upgrades to accelerate the net zero transition. The government can provide industry with the necessary signals to invest and develop improved low-carbon alternatives to existing behaviours that are equally affordable or cheaper.

A more supportive policy environment will be critical in incentivising widespread public participation in solutions, adoption of technologies, and shifts in behaviours focused on achieving net zero. Rather than enforced push factors, a gentler incentive-based approach will lead to longer-term behavioural shifts, helping to support the public and accelerate the net zero transition.

Share information: Encourage leadership and knowledge transfer from larger-scale businesses and private sector organisations to guide SMEs, third-sector organisations and the public on reducing emissions. Businesses can play a leading role in influencing attitudes and behaviours around adopting net zero behaviours, sharing best practices, and signposting existing awareness campaigns around net zero, which can also strengthen the consistency of a campaign with the public.