

# Energy for a Net Zero Society – Comments on Energy Policy

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Catalina Guillen Rozo

Energy for a Net Zero Society - BIEE

Paper Session: The democratic process and scenario planning

## Abstract

This session will analyse the **barriers and inhibitors of the delivery of policy for a net-zero society**.

The UN Climate Change Conference of the Parties (COP26) presidency provides an opportunity to drive further action and change in policy. The regulatory framework needs a rapid and significant reform to respond to the climate emergency and achieve net zero by 2050.

The UK was the first major economy to legislate for a net-zero target showing leadership and commitment. The Energy White Paper and the various strategic policy documents published this year set clear objectives and long-term goals. While broad policy statements are ambitious, the implementation and detailed regulation can sometimes be slower and less bold. The pathways and mechanisms to achieve long term commitments are not clear.

This session will discuss **four key issues affecting the delivery of a decarbonised energy system and the removal of regulatory barriers for the deployment of energy storage, renewables, and, more broadly, a net zero energy system**.

## Context - Why is change needed?

**Energy policy in the UK needs fundamental change to deliver on net zero targets.**

The UK regulatory framework has served as an example in countries transitioning to a low-carbon energy system or going through a privatisation process. However, the task ahead is ambitious, and there are still barriers and inhibitors slowing down the delivery of policy for a net zero society.

Addressing the Climate Emergency is a priority. The Government amended the Climate Change Act (1) in 2019 to commit the UK to achieve net zero by 2050. The United Nations Intergovernmental Panel on Climate Change (IPCC) published a “code red for humanity” in the words of the UN Secretary-General Antonio Guterres. The first instalment of the IPCC’s Sixth Assessment Report (2) confirms that emissions of greenhouse gases from human activities are responsible for the acceleration of climate change.

The UK has a unique opportunity to shape its regulatory framework and work with other countries in the legislative transition needed to achieve a global net zero economy. In November, the UK will host the 2021 United Nations climate change conference. Given the alarming context, the 26th Conference of the Parties summit (COP26) has a unique urgency to achieve its goals. Securing a global net zero by mid-century and keeping 1.5 degrees within reach is not an easy task. The UK is committed to demonstrating leadership.

Progress has been made but the transition could be accelerated. The Government, BEIS, Ofgem, and other Departments have delivered unprecedented strategic plans and policies on decarbonisation and energy transition. The policy papers include the Energy White Paper (3), the Transport Decarbonisation Plan (4) and the Energy Digitalisation Strategy (5). **While the strategies are ambitious, the pathways, milestones and delivery plans are unclear.**

The Climate Change Committee annual assessment progress report published in June 2021(6), **confirms the need for detailed policy**. Areas in which targets are behind policy ambition cover more than half of emissions reduction required for 2035.

What are the barriers and inhibitors of an effective policy framework? This session will explore four key issues with illustrating examples.

## 1. No embedded target - Should regulators and government departments have net zero targets?

Institutions are often reluctant to make significant changes to their core principles and deviate from the public policy and networks regulation theory. **Net zero requires a fundamental revision of the regulator's role and the industry priorities.**

The Lords committee's call for evidence on Ofgem and net zero recognises that the remit of regulators might no longer be fit for purpose in a net zero economy. **The question is whether or not Ofgem's remit should include net zero targets.**

The Authority's powers and duties are largely provided for in statute, such as the: Gas Act 1986, Electricity Act 1989, Utilities Act 2000, Competition Act 1998 Enterprise Act 2002, Energy Acts of 2004, 2008, 2010 and 2011. Ofgem has been instrumental in keeping the security of supply, affordable prices and regulating the network operators but its remit is no longer fit for purpose.

The aforementioned can be consulted for exact responsibilities and definitions, and readers will notice that future generations and the environment are mentioned. **Despite these allusions to future generations and the environment, Ofgem has been criticised for making decisions solely based on the short-term economic impact on consumers regardless of the impact on renewables and future generations.**

While these critics can be proven right, it is fair to highlight that Ofgem has an impossible task: the regulator is expected to prevent fuel poverty, assure the security of supply, set price controls, prevent climate change and protect future generations. This (unfair) pressure is increased by the fact that Ofgem cannot legally make a decision outside its remit.

Why is it important to have an agile regulatory framework aligned with net zero?

The energy system plays a crucial role in decarbonisation, being one of the major polluters and an enabler to decarbonising other sectors and industries such as transport. The policy framework needs to be forward-thinking and aligned with the UK's legally binding emission targets, and this requires Ofgem's remit to be fit for purpose.

The Charging Futures reform is an example of an Ofgem's decision that was not aligned with the signals sent to the market. Private households, solar developers and major energy users responded to the Government's messages encouraging on-site renewable generation and energy efficiency measures. A couple of years later, the regulator changed the regulatory regime and implemented the decision that was harmful to embedded generation.

The network charging reforms or Charging Futures has been a widely criticised set of reforms. On June 17th 2021, Alan Brown SNP, asked the Secretary of State for Business, Energy and Industrial Strategy what assessment he had made of the potential effect of Ofgem's proposals to reform network charging on the development of renewable energy in Scotland and the UK.

The response acknowledges that the reforms could widely affect some renewable energy projects' investment decisions across Scotland and GB. The lack of net zero target and alignment with renewable deployment targets undermines investment in low carbon technologies.

This lack of coordination between Ofgem's objectives and Government plans is materialised on the decision making process.

Ofgem's main criteria/principles when assessing options are:

- Charging arrangements support efficient use and development of network capacity;
- Arrangements reflect the needs of consumers as appropriate for an essential service;
- Any changes are practical and proportionate.

Net zero, deployment of renewables, and air quality are treated as 'side effects' of policy measures.

In addition, effects on future consumers have a low weighting in the impact assessment.

**Ofgem's decisions are often taken in isolation and not with a long term net zero target in mind or as part of a strategic plan. A change to its remit to include legally binding net zero targets is urgent.** The same rationale could be applied to HM Treasury, BEIS or DEFRA. Policy decisions should be part of a long term plan and strategy and not be taken and assessed in isolation.

## 2. Lag in decision making / Accelerating regulatory change

The energy sector is a rapidly changing environment. Technologies, applications and business models are constantly entering the market. At the same time, the sector is one of the most heavily regulated with many codes, Licence Conditions and RIIO frameworks among other regulatory requirements.

Legislating in this type of environment can be challenging. **Nevertheless some regulatory gaps could be anticipated.** This was the case with storage. Government, BEIS and Ofgem recognise the role of electricity storage in the energy transition and have shown support for storage applications and technologies. Despite acknowledging the technology and the capacity required for deployment, there was no anticipation of regulatory gaps.

BEIS has a dedicated team that has been extremely helpful and instrumental in the deployment of storage in the UK. Identifying potential barriers before they occur would be an even more efficient approach.

Examples of barriers that could have been identified by Ofgem or BEIS beforehand are: the double changing of levies, the non-existing regulatory framework and definition and the non-existing TNUoS storage tariffs.

Instead, small players with no regulatory teams had to engage for months or years to 1) identify the barriers, 2) advocate for change 3) raise code modifications. This causes a delay in deployment and could even prevent new innovative technologies and applications from entering the market.

But it is fair to emphasise that, once the barriers were identified and the players raised the issues BEIS and Ofgem helped remove barriers. The Smart Systems and Flexibility Plan, which lists specific barriers and actions, has been crucial in the process.

## 3. Absence of Accountability & Ownership

It is reassuring to see that BEIS' Committee has launched an inquiry on net zero governance, which will examine the leadership and coordination which will be needed by the government to deliver on the UK's commitment to reach net zero by 2050.

One of the key impediments to net zero is **the lack of accountability** of the different sectors, government departments and regulators. While ambition is welcome, industry and investors need milestones and the mechanisms that will allow the deployment of new technologies. **Accountability** is another major gap.

We saw an unprecedented number of decarbonisation plans and policy papers published this year, including the Energy White Paper (3) and the Transport Decarbonisation Plan (4) and the Energy Digitalisation Strategy (5). The long-term vision and the goals are clear. For examples, The UK is committed to deploy 40 GW of offshore wind by 2030; install 30,000 to 600,000 electric heat pumps per year, and develop 5GW of low carbon hydrogen production by 2030.

Who is in charge of deploying 40GW of offshore wind? Is it Ofgem's responsibility to reform network frameworks to secure investment to connect assets? Are network operators obliged to build the reinforcement needed by 2030? How

and which flexibility assets are needed? Who will procure enough flexibility? **And who is accountable? If by 2030 the UK has not deployed 40GW who is responsible? Government? Ofgem? Investors? Consumers?**

Coming back to the Charging Futures Reforms and its impact on solar farms and solar panels, the lack of accountability was harmful. Ofgem's charging reforms harmed embedded solar generation. Ofgem argued they are not accountable for the deployment of solar. Simultaneously, BEIS wanted to move to a subsidy-free world and let the market send the 'right signal'.

Private owners and the private sector invested following 'big strategic plans' to then have a market reversed and there is no one to blame. The same happened to large scale distribution - connected storage or other big energy users who had invested in onsite renewable generation. Following the political narrative to invest in energy efficiency and low carbon technologies, storage developers and big industrial customers invested in these technologies. Ofgem's targeted charging review (TCR) decision **penalised** those invested in embedded generation or energy efficiency measures.

The political message was then incoherent with the regulator's decision. This lack of responsibility for delivering the 'big plan' set by policy papers can lead to investors losing confidence, investment in renewables and new technologies challenging to find or very expensive in the future. There are no clear owners, milestones or strategic plans.

Industry welcomes clear long-term plans, direction and ambition. **Nonetheless without accountability, intermediate milestones and detailed plans the 'big ambition' is insufficient.**

#### 4. Uncertainty and lack of strategic planning

After many years of criticism of the Charging Futures Reforms and its impact on low-carbon technologies and renewables, Ofgem published the Access and Forward-looking Charges Significant Code Review - Consultation on Minded to Positions.

Ofgem is still testing its policies on a Steady Progression scenario. This scenario assumes the slowest credible decarbonisation, minimal consumer behaviour change and decarbonisation of power and transport but not heat and does not achieve net zero by 2050. We know that energy suppliers are helping consumers to change their behaviour. The Department for Transport published its decarbonisation plan and the first bus strategy. The 'do nothing' scenario will not materialise but continuing to test policy in this way will slow down the energy transition.

The impact on the environment is almost nonexistent, and the alignment with net zero targets is unclear. The minded-to-position does not even explain how it will interact with other parts of the reform and even less how this will impact Government Policy Papers.

The government sets legally binding targets, publishes sectoral plans and vision for the energy sector, and tests its reform in a Steady Progression scenario.

The lack of coherence to work for a net zero future regulatory framework between BEIS, Ofgem and Government sometimes leads to discarding great policy options because they do not perform well in scenarios that should not even be considered.

The least worst regret approach can also delay the deployment of necessary infrastructure.

The EV charging infrastructure has been delayed partly due to the uncertainty of technology adoption, which caused perceived or real 'range anxiety' in consumers. RIIO frameworks can also prevent network operators from investing and building the infrastructure needed for the energy transition due to uncertainty aversion and the 'least worst' regret for stranded assets.

While uncertainty is difficult to manage, high levels of risk aversion will harm technology deployment and the building of the necessary infrastructure.

## Conclusion

The UK as the COP26 host has a leadership role to play. The UK's regulatory framework is often used as reference in countries looking to decarbonise their energy system or entering a privatisation process.

While the UK energy policy governance has proven its efficiency in the past there is scope for improvement if we want to deliver on the UK's net zero commitments.

Actions that could be taken to align have a more climate-friendly regulatory framework include :

- Embedded targets for regulators and Government Departments
- Accelerate regulatory change
- Set owners with clear accountability
- Strategic planning

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