THE ASSOCIATION FOR RENEWABLE ENERGY & CLEAN TECHNOLOGY

Solar & Energy Storage Forum Joint Meeting

10am – 12.15pm, Thursday 22nd July 2021

Decarbonising the economy

Agenda

10am – 11.05am – Welcome; sector updates and discussion

- CCC Progress Report & Net Zero Innovation Programme
- Smart Systems & Flexibility Plan
- Call for Evidence on Large-scale, Long-Duration Energy Storage
- Future System Operator & Energy Code Governance Consultations
- Energy Digitalisation Strategy
- Solar Supply Chain update
- Business Rates Consultation
- Capacity Market
- CfD
- Grid Securities
- Access & Forward Looking Charges
- Published & Upcoming Papers

11.05am – 11.15am - BREAK

Agenda

11.15am – 11.45am – PACT Presentation (James McQuilken, Programme Officer)

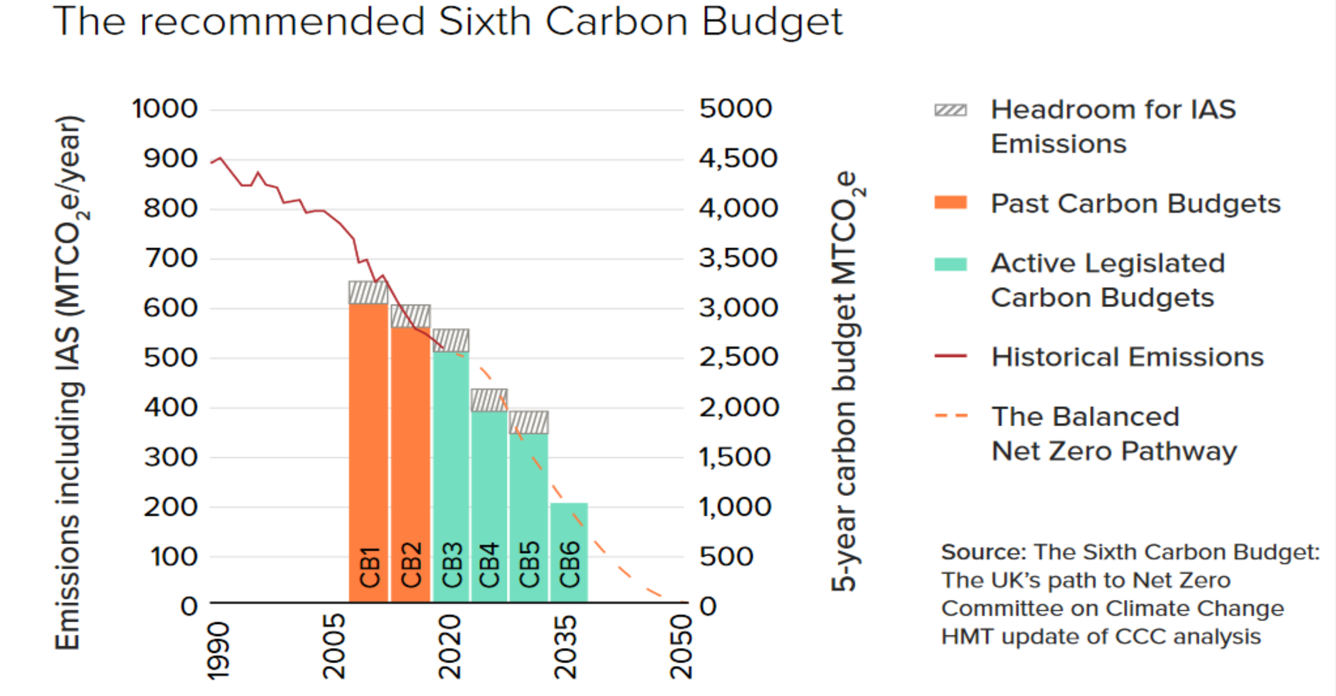
11.45am – 12.10pm – Briefing on the ENA's Shared Capacity Proposals & discussion (Paul Thompson, REA's Head of Renewable Transport Fuels & Landfill Gas)

12.10 - 12.15 – MEETING CLOSE

Sixth Carbon Budget

Sixth CB is a 78% reduction from 1990 to 2035.

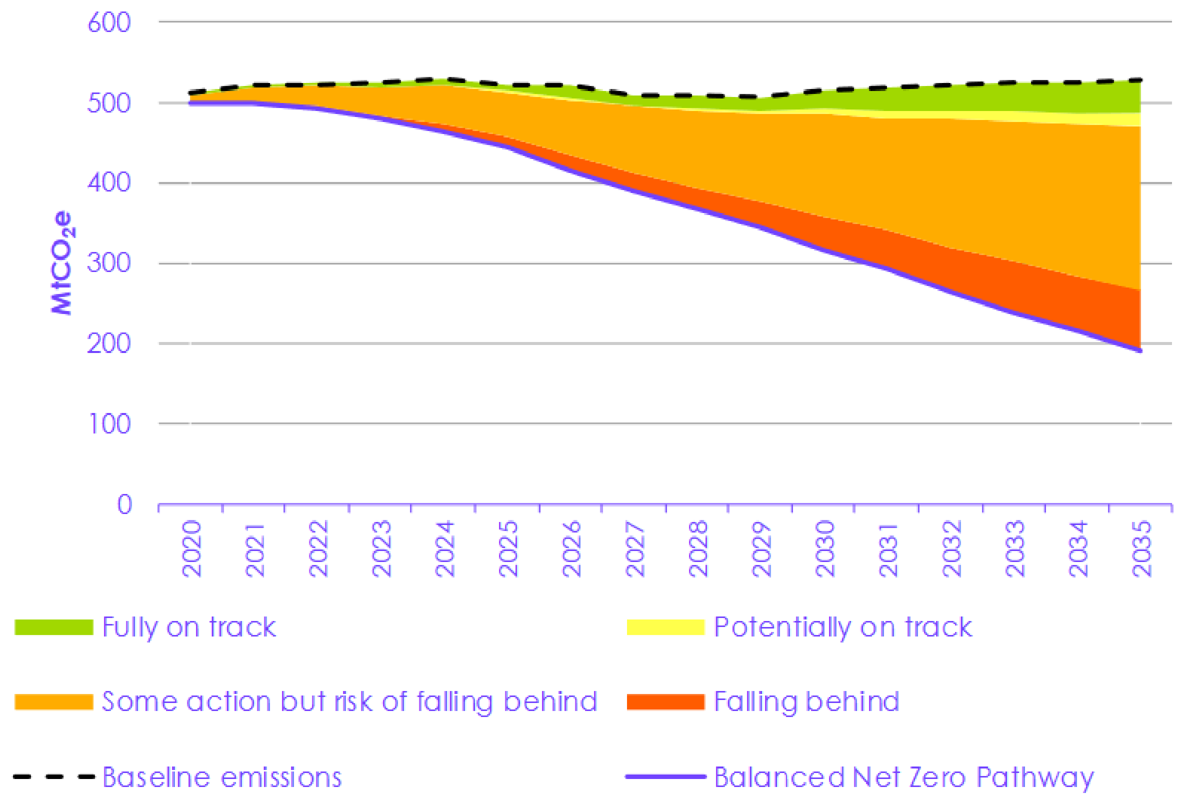
Set into law in April 2021



CCC Progress Report

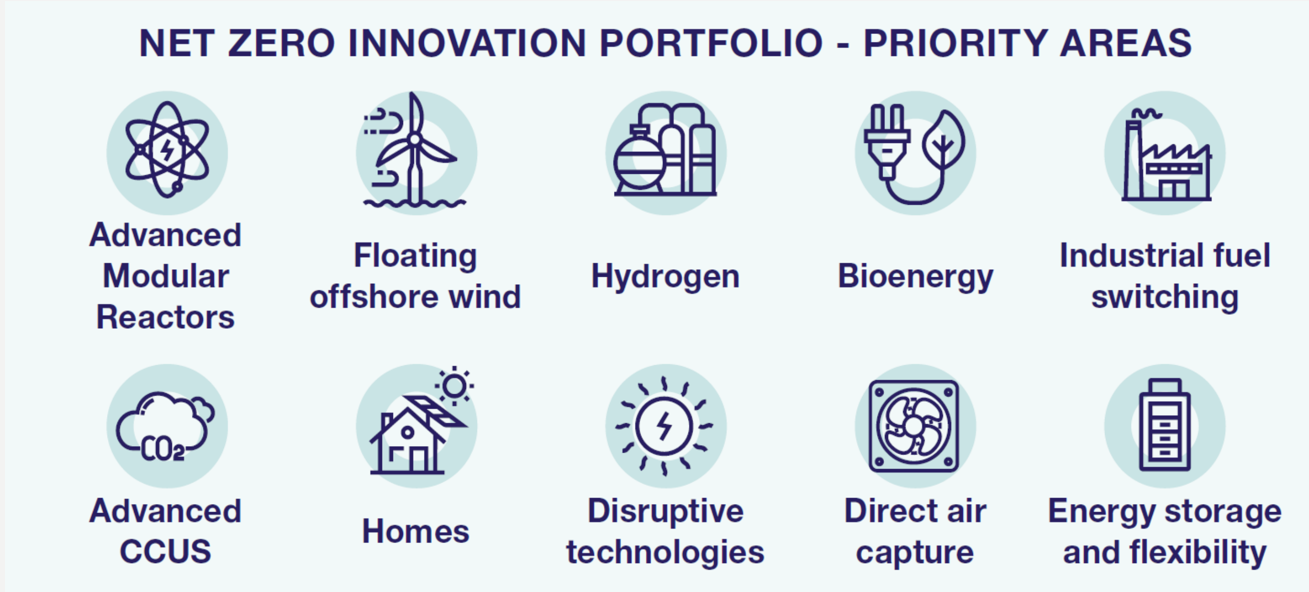
"Despite the recent willingness of the Government to raise ambition to cut emissions, delays in policy and implementation continue. Much greater urgency is now required from Ministers" - CCC Progress Report 2021

Figure 4 Are Government policies on track?



Source: CCC analysis; CCC (2020) *The Sixth Carbon budget – The UK's path to Net Zero.*

£1 bn Net Zero Innovation Portfolio



Current Competitions:

- Floating Offshore Wind Demonstration Programme
- **Longer Duration Energy Storage Demonstration Competition**
- Biomass Feedstock Innovation Programme
- Low Carbon Hydrogen Supply 2 Competition
- Direct Air Capture and other Greenhouse Gas Removal Technologies competition
- CCUS Innovation Competition
- Green Distilleries Competition
- Energy Entrepreneurs Fund

Note:

LDES competition: Stream 1 (Actual Demonstration) and Stream 2 (Prototype Demonstration.

Deadline for registration on Longer Duration Energy Storge Competition is tomorrow (23rd July) at 14.00. Completed application deadline 13th August, 14.00.

https://www.gov.uk/government/collections/longer-duration-energy-storage-demonstration-lodes-competition

Smart Systems Flexibility Plan 2021

The SSFP 2021 updates the governments priorities in this area from its previously published 2017 plan.

Government keen to emphasis benefits:

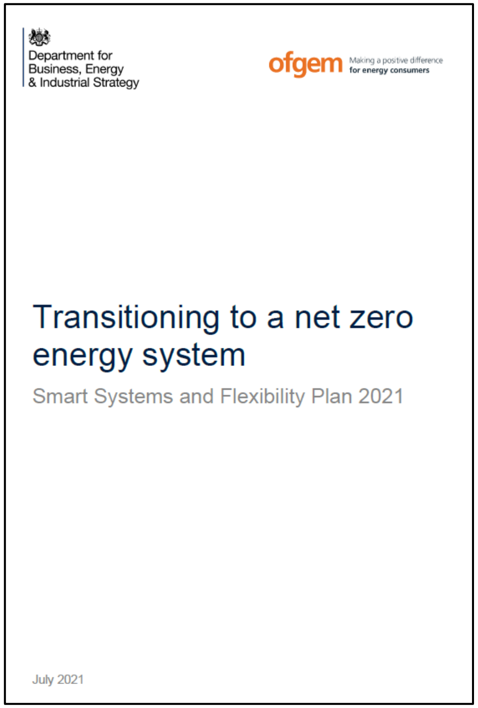
- £10bn of systems cost savings by 2050
- Potential for up to 10,000 jobs.

Their Modelling suggests:

- 2030 will require 30 GW of low carbon flexible assets (storage, DSR and interconnection) will be required, ***13 GW*** coming from storage.
- 2050, 60 GW of total flexible capacity will be needed, with ***15 GW*** of both DSR and Storage.

Long duration storge not included in this analysis, but CfE gathering more information.

Annex 1 provides complete list of commitments – we highlight some key ones in the next few slides.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Transitioning to a net zero energy system

Smart Systems and Flexibility Plan 2021

July 2021

Select SSPF General Commitments

- A smart systems **skills gap analysis** to be conducted this year.
- Consultant in 2022 on a **regulatory approach for flexibility service providers,** and other organisations controlling load, focused on interoperability, data privacy, grid stability and cyber security.
- Build smart systems into **energy efficiency and heat policies** – including investigating involvement in Future Homes and Future Building Standards , SAP and existing and future heat support schemes.
- Ofgem and Government to work to address **barriers to co-location of storage**, including within the CfD.
- Government will use primary legislation, when parliamentary time allows, to **define storage as a distinct subset of generation.**
- Government and Ofgem will work to develop a system to **prevent double charging of final consumption levies** on electricity that is re-exported by domestic storage and vehicle-to grid.
- Government will work with the **industry-led storage health and safety governance group** to implement, where appropriate, recommendations from an independent gap analysis.

Select SSPF Grid Flexibility Commitments

- The ESO to deliver **net zero operability by 2025**, including a new suite of ancillary services, and implement a single day ahead market for response and reserve by 2023. Progress measured by a Net Zero Operability Indicator.
- ESO to adopt **a "presume open" approach -** ensure all sharable data is available in an accessible format by September 2021.
- Distribution networks will deliver and adopt a **standardised approach to procuring flexibility** and managing connections across all GB distribution networks by 2023.
- Networks and the system operator will, through the ENA Open Networks project, deliver **alignment between distribution flexibility services and ESO balancing and ancillary services.**
- Networks and the system operator will develop consistent methodologies for **carbon reporting** by 2023.
- Ofgem will **improve price signals for flexible network usage through network charging reform** including considering how demand and generation charges should be applied where storage is acting in a way that benefits the system. (See SCR consultations)

Call for Evidence: Large-scale, Long-duration Electricity Storage

Stated Government aims:

- determine whether their understanding of LLES (Large-scale, long-duration Electricity Storage) is correct and whether industry agrees with the benefits outlined;
- establish the need for large-scale, long-duration storage on the future power system;
- collect evidence on the potential pipeline of storage projects;
- determine whether there is a case for intervention;
- consider what sort of mechanism would be most appropriate;
- identify appropriate and cost-effective mechanisms for intervention and associated risks

Considers parameters to be "LLES projects would need to be able to store and discharge energy for over 4 hours, and up to days, weeks, and months, and deliver power of at least 100MW when required'

The Government believe that a reformed Capacity Market or a Cap and Floor mechanism would be the most viable options for a mechanism.

The Government will soon publish a Call for Evidence on reforms to the Capacity Market.

Closes 28th September.

Future System Operator

Future System Operator (FSO) consultation

The consultation proposal is for the Future System Operator ('FSO') to conduct strategic network planning, long-term forecasting, and market strategy functions in gas system and assume all the current National Grid Electricity System Operator (ESO) roles and functions.

The new body's structure could be as follows, either:

- A standalone privately owned organisation independent of energy sector interests;
- A corporate body model classified within the public sector, but with operational independence.

The consultation seeks further views on the new roles and functions the FSO could fulfil, including in network planning and independent advice. It is intended that there be a phased implementation of the FSO – no dates provided.

The consultation closes on 28th September.

Energy Code Governance

Energy Code Governance consultation

This is the latest iteration of a process that started in 2019 to explore new options for the management and governance of the GB electricity and gas grid codes. This covers all 12 current codes and a number of Engineering Standards for the system, as well as the delivery bodies. The earliest date for implementation is 2024 or 2026.

The aim is a "governance framework that is forward-looking, agile, easy to understand, and able to accommodate a growing number of market participants."

Two governance frameworks have been developed. The consultation is on the preferred option whereby Ofgem would be the 'strategic body' over the energy codes, with separate 'code managers' for individual codes.

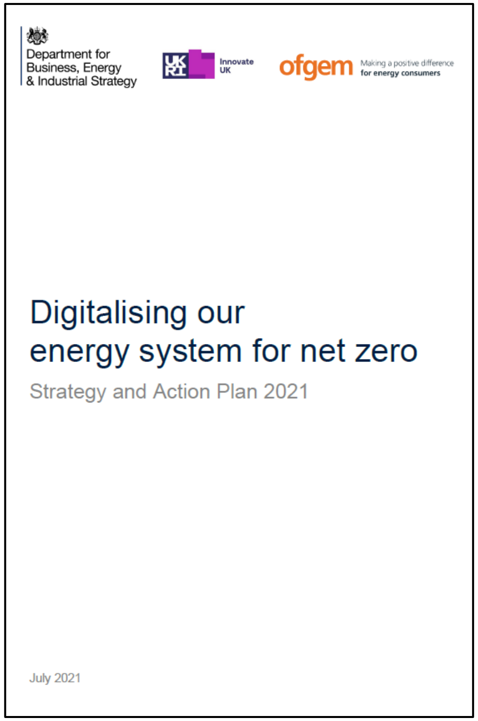
Ofgem would develop and annually publish a strategic direction for codes, ensure it is delivered by code managers, decide whether to approve material code changes and, under some circumstances, lead code changes itself. There would be more power for Code Managers but new stakeholder advisory groups too.

This consultation closes on 28th September.

Members will also wish to keep an eye out for the ENA's Flexibility Consultation 2021, which will be published in August.

Digitalising our energy system for net zero: strategy and Action Plan

- Government & Ofgem are considering options for a framework for localised planning and mapping for energy decarbonisation
- ENA are procuring a National Energy Systems map, with a concept due in winter 21/early 22
- Government is working with EnergyRev & Energy Systems Catapult to provide a 'Catalogue of projects on energy data' to improve sector engagement.
- Icebreaker 1's beta-phase platform for a common data architecture across the sector is to be delivered this summer
- An Energy Data Visibility Project (to help standardize meta-data) will deliver an alpha-phase prototype by summer
- Government will work with industry to 'simplify data collection by streamlining small-scale asset registration processes'. A receipt of notification process will be set up for consumers by the end of 2021.



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Strategy and Action Plan 2021

July 2021

Solar Supply Chain - update

- REA members raised concerns about allegations of abuse in the Solar supply chain.
- (See Sheffield Hallam University report). Increasing awareness in press & politics.
- We had a call with members of our Solar Steering Group.
- Engagement from REA on this issue must cover range of techs.
- Since then we have had a number of meetings with several stakeholders, including:
  - SEU
  - Solar Power Europe
  - Department for Business, Energy & Industrial Strategy
  - Faraday Institute
  - PACT

Business Rates; CfD; Capacity Market

Business Rates Consultation

- Still awaiting outcome of Fundamental Review.
- Consultation on moving to a 3-year revaluation system.
- REA is supportive of the move.
- No acknowledgement of certain sectoral needs for more frequent revaluations in some circumstances.

Consultation closes 24th August 2021.

Contracts for Difference – update

- Redesigned supply chain questionnaire for projects of 300MW+.
- CfD Round 4 opens December 2021.
- Introduction of third, offshore wind-only pot.
- Inclusion of Pot 1 (including Solar).

Capacity Market – update

- Government will hold 2 CM auctions in 2022 – T-1 auction for 2022 – 2023; T-4 auction for 2025 – 2026.
- Parameters also published.
- Follows last year's announcements to reduce capacity threshold to 1MW and carbon emissions threshold.

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Grid Securities

User Commitment issues (Grid Securities)

- Following meetings with REA & other stakeholders – ENA has expressed an intent to issue a Connection & Use of System Code Modification as soon as possible.

- They have sent REA a list of issues – seeking feedback on priority levels – this has been distributed among the Grid Securities WG for feedback.

- Acknowledged problematic areas identified for review include:
  - Trigger date period, pre-trigger period & percentage – inc.
  - Security percentage (distribution)
  - Wider Cancellation Charge – inc. percentage and £/MW.
  - Fixed liability
  - Transmission impact assessment
  - Embedded/DNO concerns
  - Security provision
  - Security calculation
  - Accessibility/clarifications

- REA will send members the detailed list as requested.

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Access and Forward Looking Charges SCR Outcomes

Focus on Access rights / charges

Forward looking charges delayed until after a 'Full Chain Flexibility Review' from Ofgem

Three major outcomes:

1. Distribution network connection charges: Shallower approach, no reinforcement costs for Demand. Lower charges for Generation

Good news. Implementation from 1 April 2023

2. Improved definition and choice in access rights: More choice of firmness and time of access (off peak, set times)

Good news. Implementation from 1 April 2023

3. Ongoing transmission network charges: Charging TNUoS to distribution generators above 1 MW for first time, and removing the cost cap for some remote location DG under 1MW

Scottish & Northern DG (c0.4 GW Solar) hit. Maybe 10GW Gain though

Mixed news. Implementation 'Delayed until full chain review'

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Published and *Upcoming* Policy Papers

Transport Decarbonisation Plan (Published)

Smart Systems and Flexibility Plan Update (Published Tuesday)

Still to come:

- Heat and Building Strategy (Spring 2021)
- Outcome of Fundamental Business Rate Review (Autumn 2021)
- Future Home/Building Standards (Ongoing)
- Hydrogen Strategy (Spring 2021)
- Biomass Strategy (Q2 2022, interim update in 2021)
- Industrial Energy Transformation Fund (Round 2)
- Carbon Capture Business Models (ongoing)
- OZEV EV Charging Strategy
- Launch of Rapid Charging Fund

- **UK Treasury Net Zero Review (In run up to COP26)**
- **UK Net Zero Strategy (In run up to COP26)**

Overall comprehensive plan forgetting to net zero by 2050.

BREAK

Presentation by PACT

- James McQuilken & Dan Jarman

ENA's Shared Capacity Proposals

- briefing & discussion (Paul Thompson, REA Head of Transport Fuels & Landfill Gas)

Meeting Close

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