



All Party Parliamentary Water Group

Welcome to this virtual meeting of the APPWG

We kindly ask that you observe the following etiquette to ensure the meeting runs smoothly:

- Please keep your **microphone muted at all times** to avoid background noise unless called on by the Chair
- If using your camera, make sure there isn't something behind you that you don't wish for people to see
- The Chair will address questions to speakers once all of the presentations are finished
- As a parliamentary forum, priority will be given questions posed by MPs and Peers which can be given verbally
- If you are an MP or a Peer and would like to ask a question, the Chair will call on you at the end of presentations
- If you are a stakeholder and you'd like to ask a question please do this via the chat function
- If you'd like to tweet during the meeting, please use the handle @APPGWater

Baroness Anne McIntosh

Co-Chair of the All-Party Parliamentary Water Group

Net zero 2030

Samuel Larsen



#Routemap2030

Reaching net zero together by 2030

Summary

1. **Samuel Larsen** – sector lead for the net zero programme which reports to our CEO level board
2. **April 2019 Commitment** - Net zero operational emissions by 2030 (England) – sooner than the 2050 target in law
3. **Routemap** – drawing on ten years of operational emissions data
4. **Trajectory** – c40% reduction since 2011, own work on renewables and grid decarbonisation – but not enough to reach net zero without faster progress
5. **Significant ambition – must protect customers by finding the efficient path**

Our 2018-19 year:

Net operational emissions:
2.4MtCO₂e

Majority of our emissions are CO₂ associated with the consumption of electricity – pumping water to customers and treating waste consumes c.2% of UK electricity.

Quarter of the emissions reported in the CAW, are methane and NO_x - treating sewage and recycling waste water from c.28 million homes.

Reaching net zero together by 2030

Our analysis and pathways

Apply reductions and renewables first:

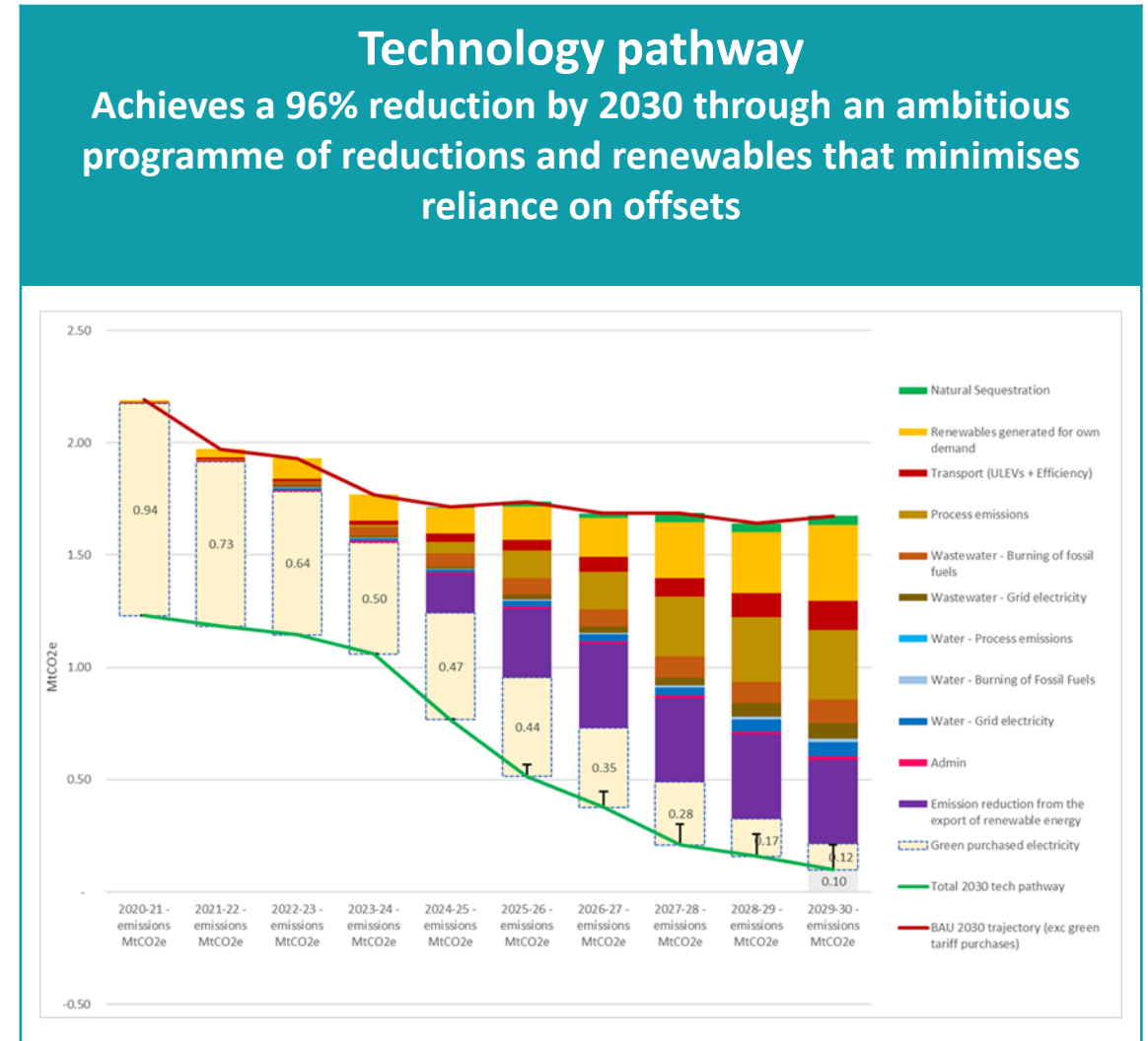
- **Low emissions vehicles** - commercial fleet
- **Water and energy saving** – leakage and efficiency programmes to reduce energy intensity of water
- **Process emissions challenge** – monitoring and research to inform innovation and reduction pathways
- **Renewable power** – meet as much of our own demand as possible

Removing residual emissions:

- **Nature-based solutions** – meeting future demands
- **Trees, Peatland, Grassland**
- **UK Offsets market**

Full Routemap gives more detail

- www.water.org.uk/routemap2030/



Reaching net zero together by 2030

Recommendations and support

Industry commitments – individual plans to find an efficient transition, protect customers, develop our approach to capital carbon so that also supports the governments 2050 target.

Recommendations for policymakers (Page 21) – see Routemap summary on website:
www.water.org.uk/routemap2030



- ***An economy-wide transition strategy from government***
 - Systems approach – efficient approach, hydrogen,
 - NIC recommendation – embed in frameworks
- ***Government policy that prioritises carbon***
 - White goods labelling, building regulations, SuDS
- ***Enable more nature-based solutions***
 - Catchment-first or “default”
 - WINEP reform – less carbon intensive
 - UK offsets market



Thank-you
Samuel Larsen



[#Routemap2030](#)

Professor Ian Barker

Vice-President Environment, Fellow and non-executive Director, Institute of Water & Managing Director, Water Policy International Ltd

Bart Schoonbaert

Director – Environment, Public Value and Governance, Ofwat



All Party Parliamentary Water Group

A Year to COP26: how will the water sector reach net zero?

Paul Horton – CEO Future Water

Future Water

**Hundreds of
Members**
**Utilities to
Entrepreneurs**

Water
Dragons

'Core issues
remain

Climate change
Population
Ageing
Infrastructure

**Data
Driving
change**

'Future
Water
Networks

People
Skills &
Customers

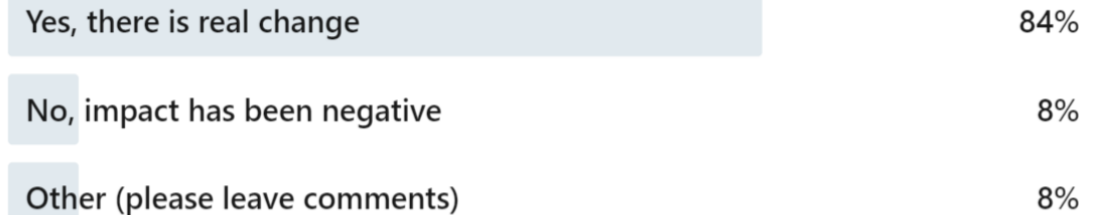
Supply
Chain
Value
70%

Net Carbon Zero Journey

- Transformational change – the impact of COVID-19
- Smarter sewer networks
- Driving innovation – smart networks and the supply chain
- Achieving net carbon zero
- Data led solutions
- Encouraging new talent & emerging technology

Does remote working offer greater opportunity for positive change across the water sector?

You can see how people vote. [Learn more](#)



Key Focal Areas

Pumps
Pumping Stations

Network
Renewals
Sewers

'Leakage

Meters -Smart
Sensors

**Opportunity
to
Re-imagining
AMP 7/8**

intelligent tools

**Changes to
Working
Practices**

Net Carbon Zero Water Sector - Innovation



- Leak detection
- Water audits
- Pipe Corrosion
- Toxicity
- Innovation in Sewer design
- AI systems

Transformation of the Water Sector



- Remote monitoring
- Use of satellites
- Sustainable water systems
- Symbiotic 'water to wastewater & vice versa
- Re-thinking Treatment systems

Transformation of the Water Sector - Net Carbon Zero Journey

1. Utilise sensors, instrumentation, automation and analytics to move to predictive, and potentially adaptive, asset management
2. Reducing pumping, through more use of local treatment and removing storm water from sewers
3. Offset pumping to times when flexible power (e.g. wind) is available.
4. Data Driven world (not forgetting the cyber challenges)
 - * More support from the regulators on developing new techniques and ideas that are more eco-friendly but may have a impact on customer supplies initially * developing products for mains repairs that will take over 3 hours.
 - * development of more IT Network across the country to support smart data being able to be transferred from site to cloud