# What is different about WECCS carbon capture?

**Update from Viridor project pipeline**

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**15th April 20206**

# Viridor background

UK-based resource recovery and waste-to-energy infrastructure operator with a core focus on Energy from Waste (EfW), recycling and emerging carbon capture & circular economy solutions

**What we operate**

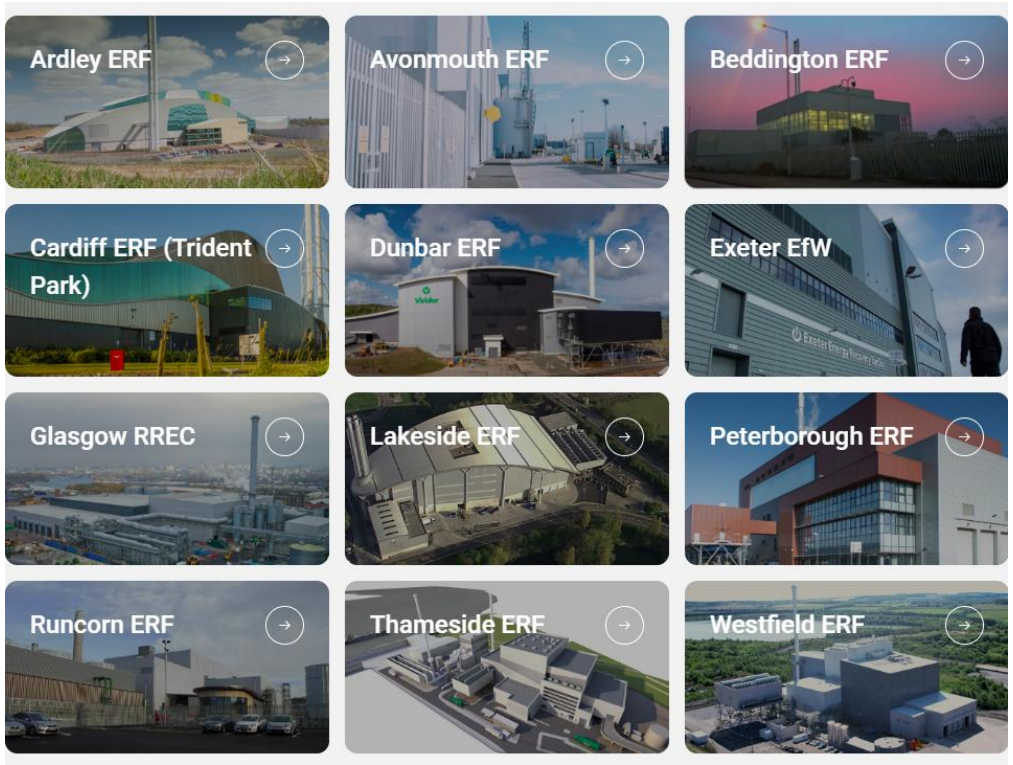
- Portfolio of large-scale EfW facilities providing baseload power and heat
- Integrated waste treatment, energy generation and emissions control systems
- National footprint with assets located close to major industrial and population centres
- The Quantafuel business advancing cutting-edge Plastics-to-Liquids (PtL) technologies that turn plastic waste into valuable resources in Scandinavia

**EfW fleet**

- Stable, continuous thermal process suited to high availability operation
- Significant proportion of biogenic $CO_2$ in flue gas
- Among the most cost-effective industrial sectors for CCS deployment
- Critical part of the UK's transition pathway where residual waste cannot be recycled

**Owner's mindset with strong focus on:**

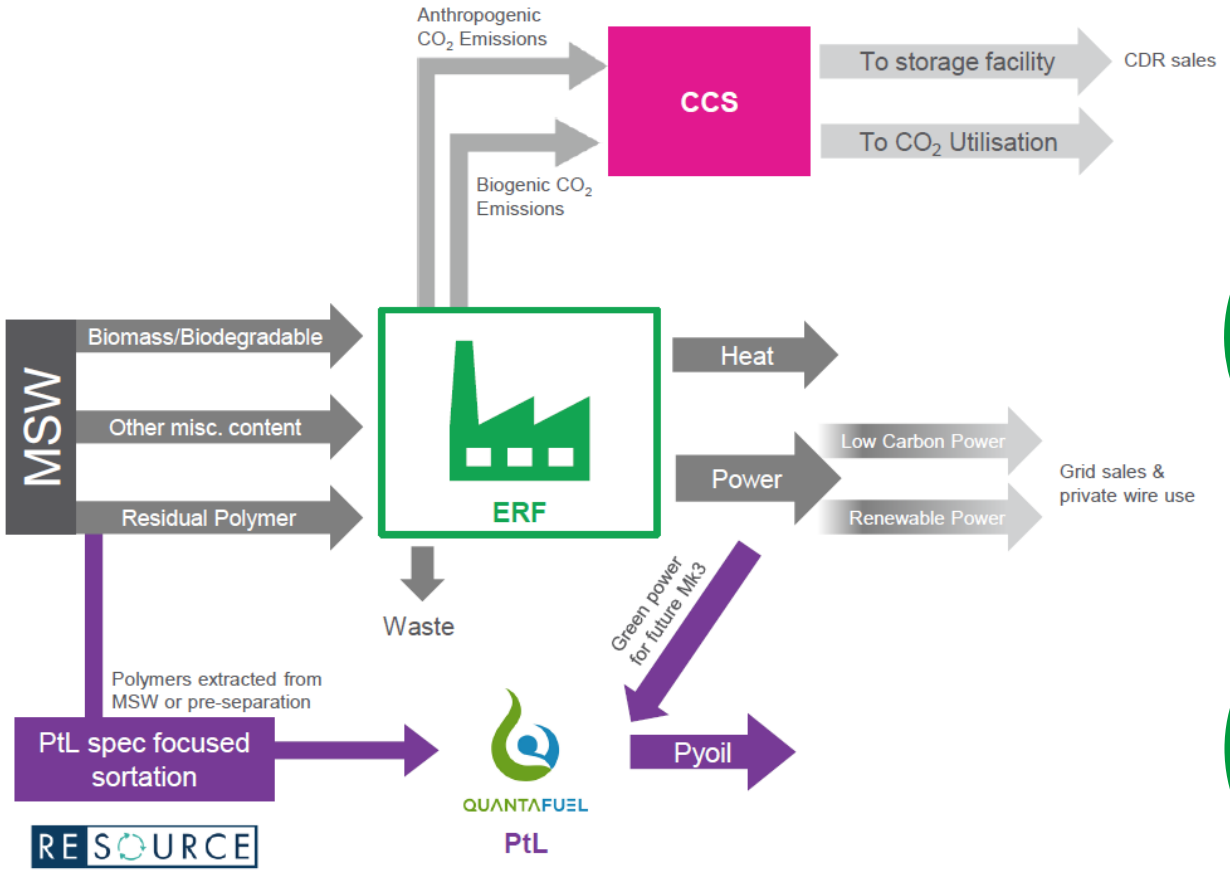
- Process safety, availability and compliance
- Integration of proven technology with scalable innovation
- Long-term asset integrity, operability and whole-life cost

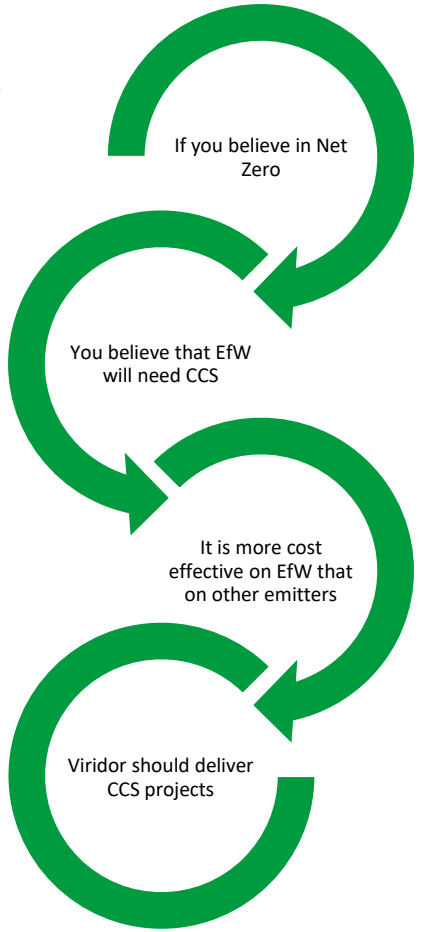



https://www.viridor.co.uk/energy/energy-recovery-facilities/

# Carbon Capture & Circular Solutions

**Decarbonisation can be achieved through both capture of emitted $CO_2$ post combustion or by the pre-sortation and chemical recycling of historically hard to recycle contaminated plastic film**



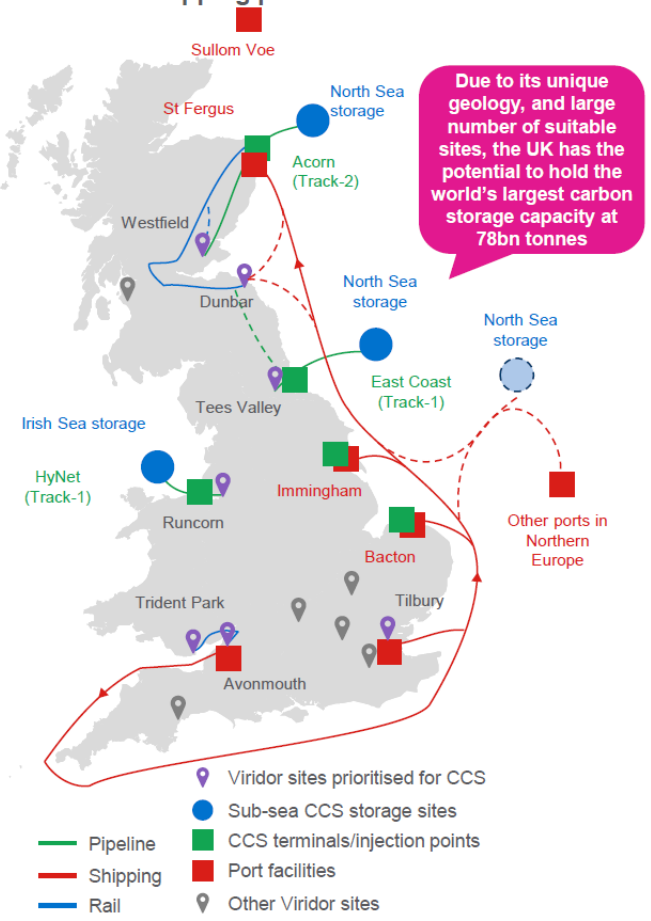




- Viridor is committed to Climate Neutrality by 2040
- Viridor's ESG Strategy goes further to target Climate Positivity by 2045
- Energy from Waste cannot become Net Zero without carbon capture & storage (either self delivered, or paid for others to deliver)
- We consider EfW to be one of (if not the) most competitive sector to deliver CCS
- Viridor has therefore been developing CCS projects since 2021, with Runcorn CCS the first of 7 projects to enter active development for the organisation
- Long term, the PtL business compliments this target through removal of polymers, which increases proportion of treated MSW that is biogenic and makes the business case for CCS increasingly deliverable through sale of CDRs

# Viridor's Carbon Capture Portfolio

For each of the 7 sites that are suited for CCS development, Viridor has a lead option for transport and storage, and back-up options if required

**Viridor's plants are located near the UK's key CCS clusters and / or shipping points**




| Site | Lead option | Alternative option(s) |
|---|---|---|
| **Already in development:** | | |
| Runcorn Operational 2031 | Pipeline to HyNet/East Irish Sea | Shipping to storage in East Irish or North Sea |
| **Next sites for rollout:** | | |
| Tees (earliest 2031) | Pipeline to East Coast, pipeline to storage in North Sea | Shipping to storage in North Sea |
| Westfield (earliest 2032) | Pipeline to Acorn, pipeline to storage in North Sea | Rail then pipeline to storage in N. Sea<br>Pipeline or rail south to Tees, pipeline to storage in North Sea |
| Dunbar (earliest 2033) | Rail to Acorn, pipeline to storage in North Sea | Rail then pipeline to storage in N. Sea<br>Pipeline or rail south to Tees, pipeline to storage in North Sea |
| Avonmouth (earliest 2032) | Shipping to injection point, pipeline to storage in North Sea | Offshore liquefaction, shipping and direct injection, storage in North Sea |
| Trident Park (earliest 2033) | Rail to Avonmouth, shipping to injection point, pipeline to storage in North Sea | Offshore liquefaction, shipping and direct injection, storage in North Sea |
| Tilbury (earliest 2032) | Shipping to injection point, pipeline to storage in North Sea | Offshore liquefaction, shipping and direct injection, storage in North Sea |

# Viridor's Runcorn EfW CCS Project

**Pathfinding**
**1st wave**
ERF CCS Projects in Track 1 cluster(s)

**Capturing**
**up to 1mtpa**
$CO_2$ from flue gas vented by the ERF

**Removing**
**up to 500ktpa**
$CO_2$ from the atmosphere via biogenic waste

**Providing**
**c.20%**
UKG's 2030 GGR target and c. 5% of total capture target

**Utilising**
**95%**
Capture rate efficiency

**Decarbonising**
**up to 45%**
Viridor's total fossil carbon footprint

**Creating**
**c.60**
High skilled permanent jobs in operations

**Investing**
**>£500m**
In the carbon capture facility

Viridor Runcorn ERF, the UK's largest Energy Recovery Facility

Moving grate EfW, permitted for >1Mtpa, processing black bag waste and RDF, generating power and industrial heat

- Delivering steady baseload operations all year round and treating all flue gases from Runcorn Energy Recovery Facility
- Decarbonising the treatment of (at full scale) > 1 million tonnes of black bag waste from the region
- Targeting final investment decision in 2027 and first operations within 2031
- Delivering > 90% availability of $CO_2$ to the HyNet CO2 network for permanent sequestration/storage under the Liverpool Bay
- Project delivery on a phased basis following the outcome of the 2025 HyNet expansion process, with 2 x half-scale capture projects which can align to capacity availability within the cluster

Artist's impression of full-scale CCS at Runcorn (T.EN/Shell FEED output)

**OUR PURPOSE IS:**
**TO BUILD A WORLD WHERE NOTHING GOES TO WASTE.**

# Why WECCS?

- 50% biogenic
- Baseload emissions
- Long term $CO_2$ source commitment
- ETS and GGRs
- Track record of excellent regulated asset operation
- Wider synergy with circular economy
- Phased delivery to match demand

Artist's impression of full-scale CCS at Runcorn (T.EN/Shell FEED output)