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Roadmap to decarbonisation

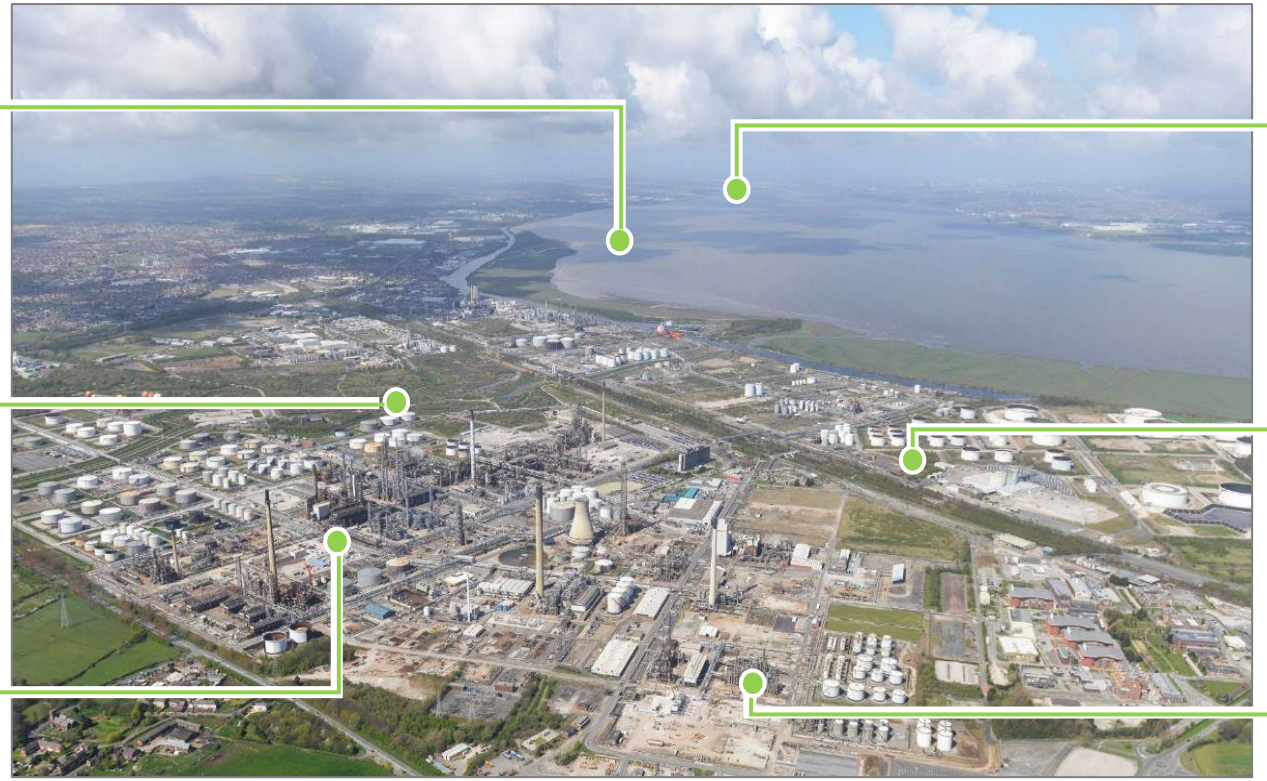
EET will host one of the largest energy transition hubs in Europe

- EET Fuels is a leading player in the decarbonisation of the UK economy and is transforming its Stanlow Manufacturing Complex into one of Europe's largest energy transition hubs
- The combination of hydrogen, refinery decarbonisation, e-fuels and biofuels with unrivalled infrastructure, expertise and EET's large land bank (c.900 acres) will facilitate the process

Green Ammonia[1]

E-fuels & biofuels

EET Fuels Refinery



STL/ Storage Sites

EET Hydrogen / Production

Source: Company information.

[1] Green ammonia produced in India and imported in the UK.

At the heart of HyNet, one of the two Track-1 UK CCUS clusters selected by UK Government to progress to negotiation phase

HyNet provides a **carbon capture & storage network,** and a **low carbon hydrogen transport & storage eco-system** across the North West of England and North Wales

EET is the only supplier of large-scale low carbon hydrogen within the cluster through its subsidiary EET Hydrogen

EET Fuels is the largest industrial CO_2 emitter in the region and is decarbonising its operations through energy efficiency, fuel switching and carbon capture

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Delivering 95% decarbonisation this decade

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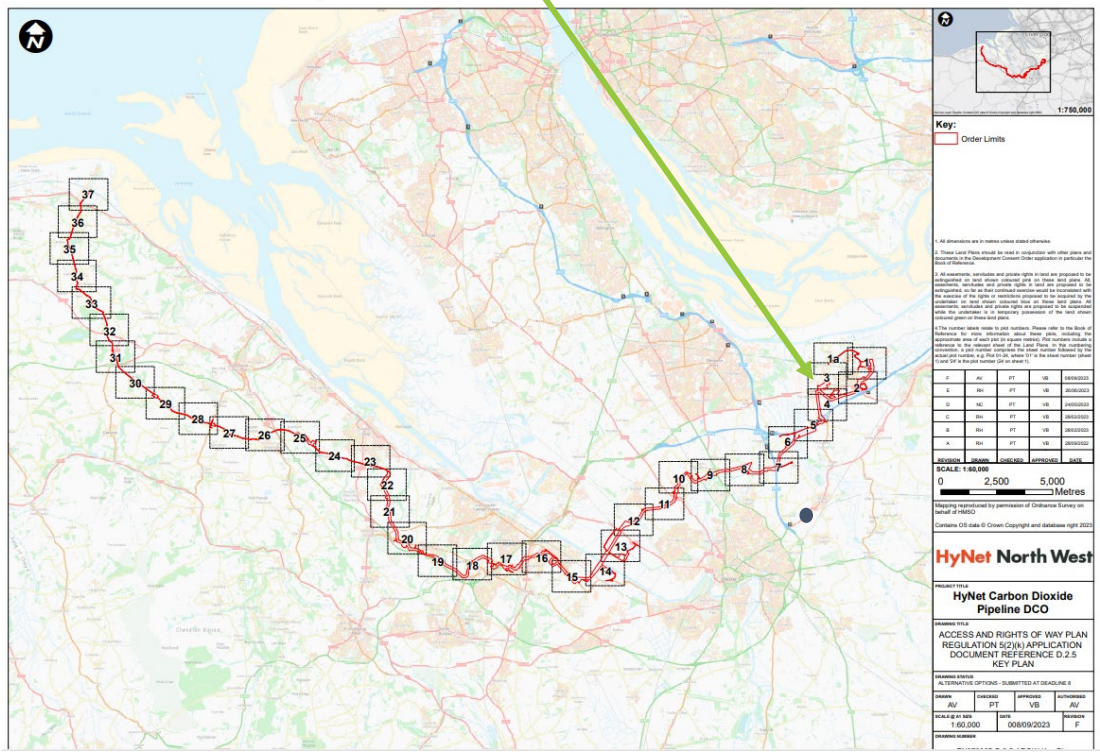
UK's first large-scale low carbon hydrogen production facility

Our unique location

Key EET companies, part of the wider Essar Group, sit in Stanlow, Cheshire, at the heart of HyNet



The **HyNet pipeline:**

- Within the physical boundary of the existing refinery (no need for additional spur lines) and utilises repurposed natural gas pipelines and offshore depleted oil & gas fields in Liverpool Bay.

- Being consented under development consent order (DCO). Expected approval by Secretary of State in March 2024

Decarbonisation plans – our strategy

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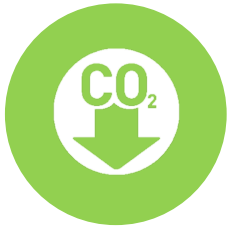
CCUS enabled low carbon hydrogen

Export to other industries



Refinery offgases (feedstock)

Stanlow Refinery

EET Hydrogen Production Plants

Fuel Switching to Low Carbon H_2
Replacement/upgrade of furnaces & CHP complex to burn 100% hydrogen

ICC & Storage Plant
New industrial carbon capture (ICC) plant at the refinery's Fluid Catalytic Cracking Unit to capture and permanently sequester CO_2

eni

Transportation of captured CO_2 via ENI's transport and storage infrastructure

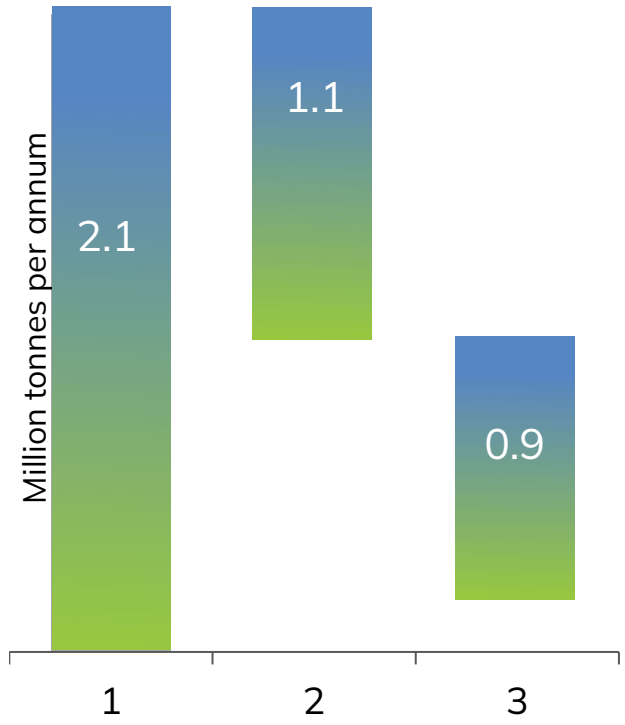
CO_2 storage in ENI's depleted Liverpool bay Oil and Gas fields (under the seabed)

EET Fuels to deliver the UK's first low carbon process refinery

Leading decarbonisation plans amongst global refiners, will achieve a 95% reduction on emissions before 2030

Hydrogen & Energy Efficiency **1.1 Mtpa of CO_2 savings**	• Hydrogen from EET Hydrogen to replace fossil hydrocarbons across EET Fuels' furnaces and combined heat and power (CHP) plant • More low carbon power enables "electrification based" energy efficiency projects • Investments are already underway with the hydrogen-ready crude distiller furnace being commissioned in 2025
Industrial Carbon Capture **0.9 Mtpa of CO_2 savings**	• 43% contribution to total site's CO_2 reduction • ICC project investment to be backed with Government support under the UK's industrial carbon capture business model

Carbon emissions to reduce from 2.1 MTPA to 0.5 MTPA



Source: Company information.
1. Green ammonia produced in India and imported in the UK.

First hydrogen-ready crude distiller furnace being commissioned in 2025, awaiting low carbon hydrogen production from EET Hydrogen

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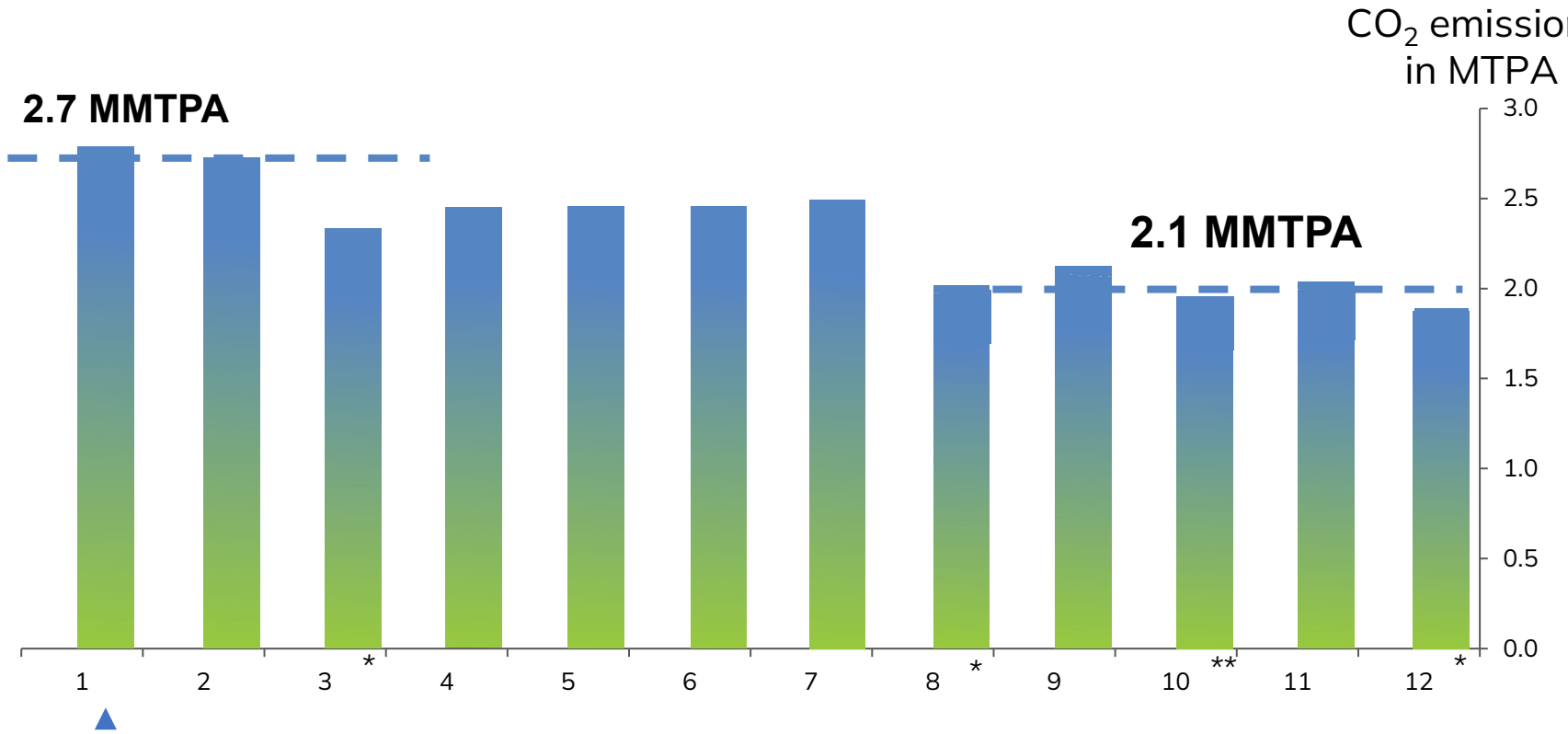
Decarbonisation progress

22% CO_2 reduction at same crude rate



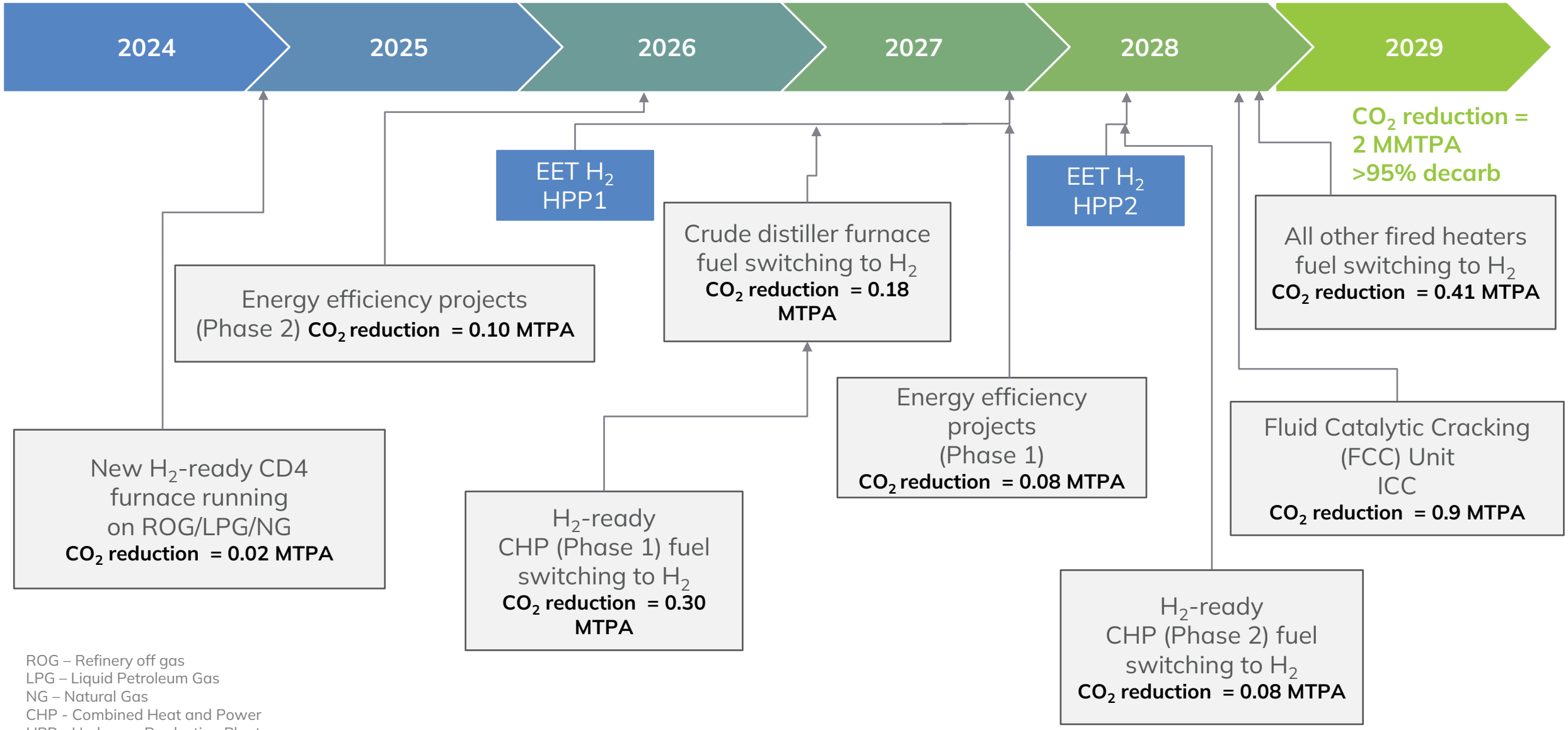
Essar acquired Stanlow refinery

** Planned turnaround year*
*** Low refining throughput due to Covid*

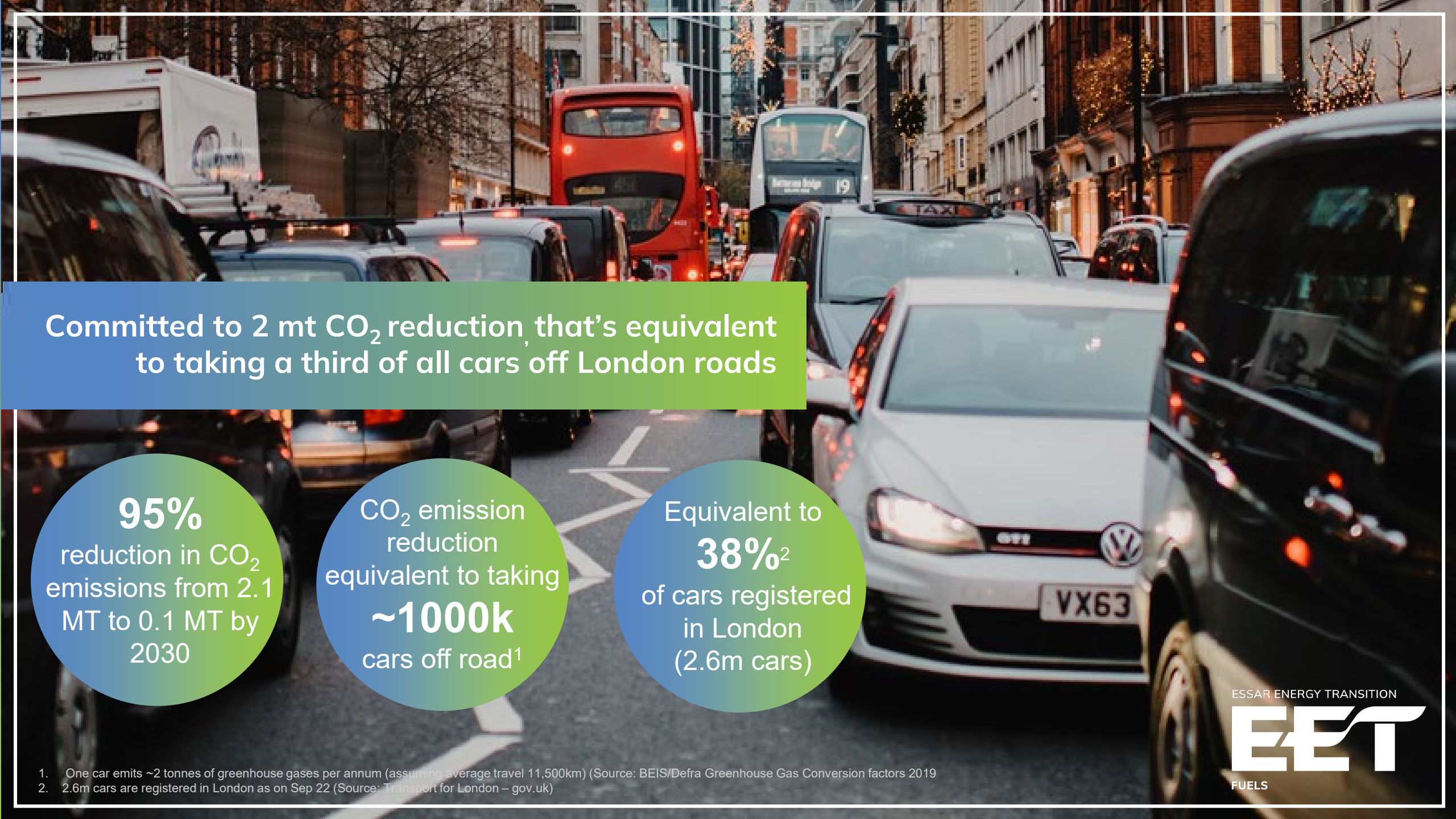
~ $100m invested in refinery decarbonisation projects over the last four years and estimated £1.2bn by 2030

- Hydrogen fuel switching projects
- Targeted energy efficiency projects
- Hydrogen-ready CHP project
- ICC project

Delivery of our energy transition projects – next steps



ROG – Refinery off gas
LPG – Liquid Petroleum Gas
NG – Natural Gas
CHP - Combined Heat and Power
HPP - Hydrogen Production Plant



Committed to 2 mt CO_2 reduction, that's equivalent to taking a third of all cars off London roads

95%
reduction in CO_2 emissions from 2.1 MT to 0.1 MT by 2030

CO_2 emission reduction equivalent to taking
~1000k
cars off road[1]

Equivalent to
38%[2]
of cars registered in London (2.6m cars)

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1. One car emits ~2 tonnes of greenhouse gases per annum (assuming average travel 11,500km) (Source: BEIS/Defra Greenhouse Gas Conversion factors 2019
2. 2.6m cars are registered in London as on Sep 22 (Source: Transport for London – gov.uk)

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Project details

Crude distiller furnace switch to hydrogen fuel

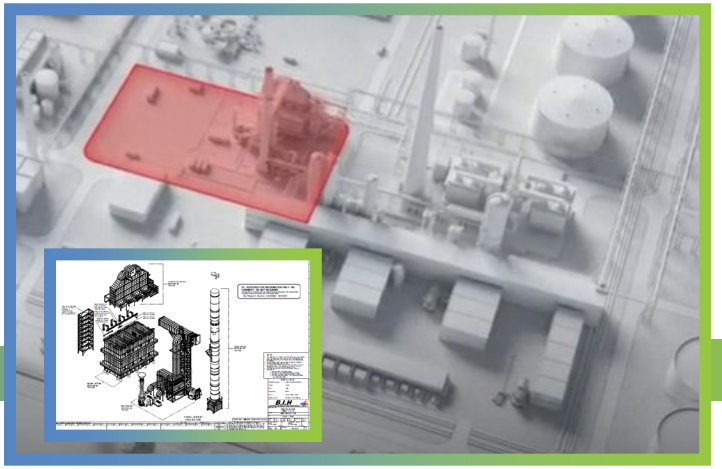
First hydrogen-ready furnace installed at any UK refinery

Capable of running on 100% H_2 or a fuel gas mix. Reduced carbon emissions by 0.02 MTPA from start-up with standard refinery fuel

Further reduction of CO_2 emissions by 0.2 million tonnes per year, once running on hydrogen from EET Hydrogen's Production Plant

Hydrogen is then available to **enable the fuel switching** of all fired-heaters on site and the new set of H_2-ready CHP modules

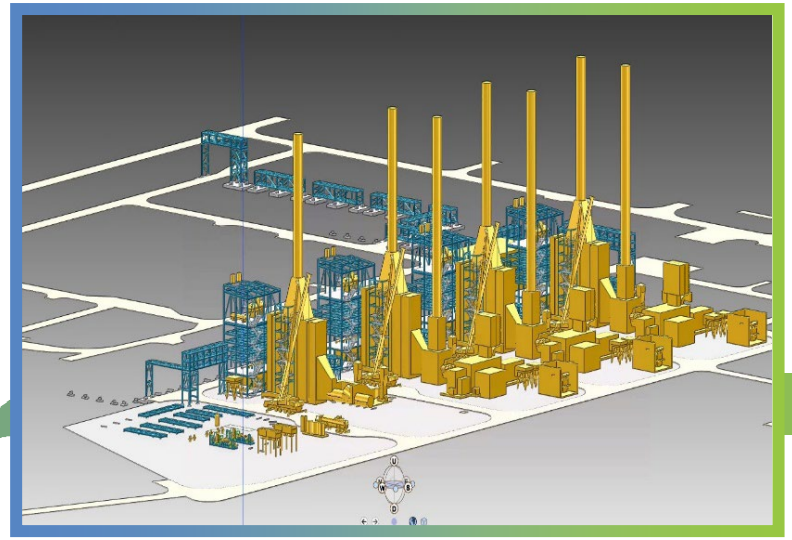
Other process fired-heaters will require retrofit, but not replacement. Project saves an additional 0.4 million tonnes per year of CO_2



Combined Heat and Power switch to hydrogen fuel

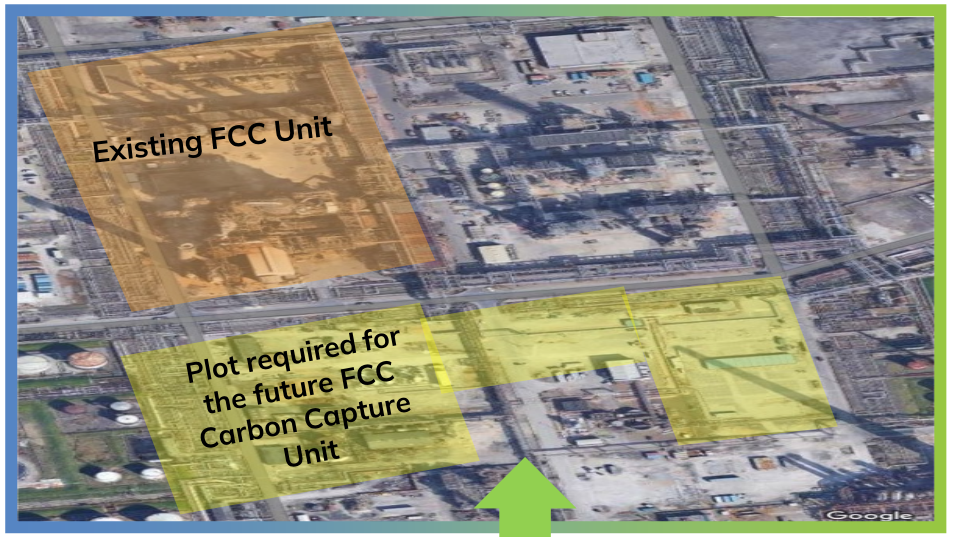
Low carbon CHP will replace existing CHP to rebalance future steam & power needs

- Stanlow refinery generates its own steam & power from its existing CHP, but imports a small amount of grid power
- Existing CHP modules are to be phased out and new hydrogen-ready modules brought online
- Generation of power will come from high efficiency 100% H_2 gas turbines, instead of inefficient steam turbines
- CO_2 savings from CHP is 0.4 million tonnes per year
- The first phase of the hydrogen-ready CHP project with the new hydrogen-ready crude distiller furnace will enable the full offtake of hydrogen from EET Hydrogen's HPP1 plus some energy efficiency projects



FCC and ICC and storage to reduce ~43% of total CO_2 emissions fuel

- Stanlow has one of the largest Full Residue Fluid Catalytic Cracker (FCC) in Europe
- Now investing in a new carbon capture plant to capture CO_2 from the FCC unit
- CO_2 captured will be transported and stored through HyNet transport and storage infrastructure being developed by ENI
- Positive environmental impact (significant reduction in particulate matter, SOx and NOx to single digit ppm levels)
- Project scouting completed, pre-front end engineering and design (licensor selection) has been completed. Now progressing to FEED in 2024
- FID expected in 2025



Large land parcel required for the FCC carbon capture plant has been identified within Stanlow refinery complex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EET Fuels is leading the industry with a clear target to decarbonise manufacturing operations before the turn of the decade...
6.0 Mtrs
SITE ENTRANCE


and setting a global benchmark for high emitting industries
by developing the UK's first low carbon process refinery.
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