



# Decarbonisation pathways in the sugar industry

## - A snapshot perspective from the UK

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Ulf Nahrath – Shell UK VP Energy Transition & Infrastructure

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## Shell’s net carbon intensity

Also, in this presentation we may refer to Shell’s “Net Carbon Intensity”, which includes Shell’s carbon emissions from the production of our energy products, our suppliers’ carbon emissions in supplying energy for that production and our customers’ carbon emissions associated with their use of the energy products we sell. Shell only controls its own emissions. The use of the term Shell’s “Net Carbon Intensity” is for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries.

## Shell’s net-Zero Emissions Target

Shell’s operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and Net Carbon Intensity (NCI) targets over the next ten years. However, Shell’s operating plans cannot reflect our 2050 net-zero emissions target and 2035 NCI target, as these targets are currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell’s operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target.

## Forward Looking Non-GAAP measures

This presentation may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc’s consolidated financial statements.

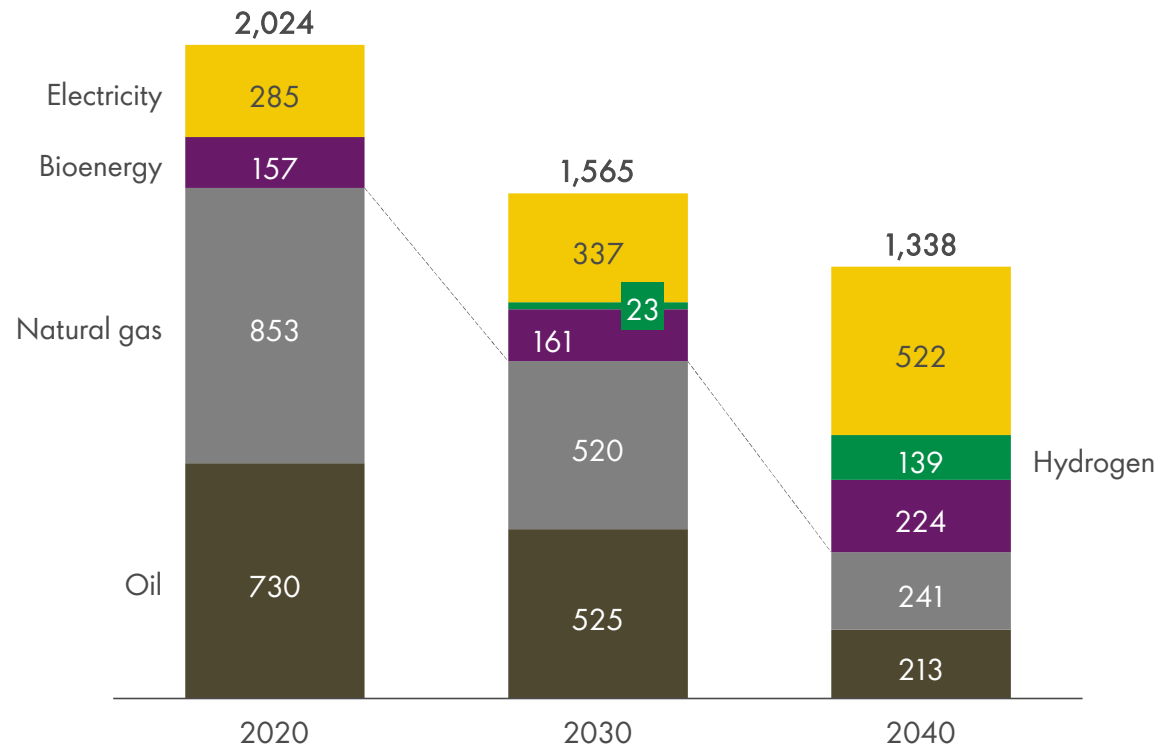
The contents of websites referred to in this presentation do not form part of this presentation.

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# UK energy market shift to cleaner products until 2040

## UK primary energy demand by Vector 2020 - 2040 (TWh)

(1 TWh = 0.1 bcm)



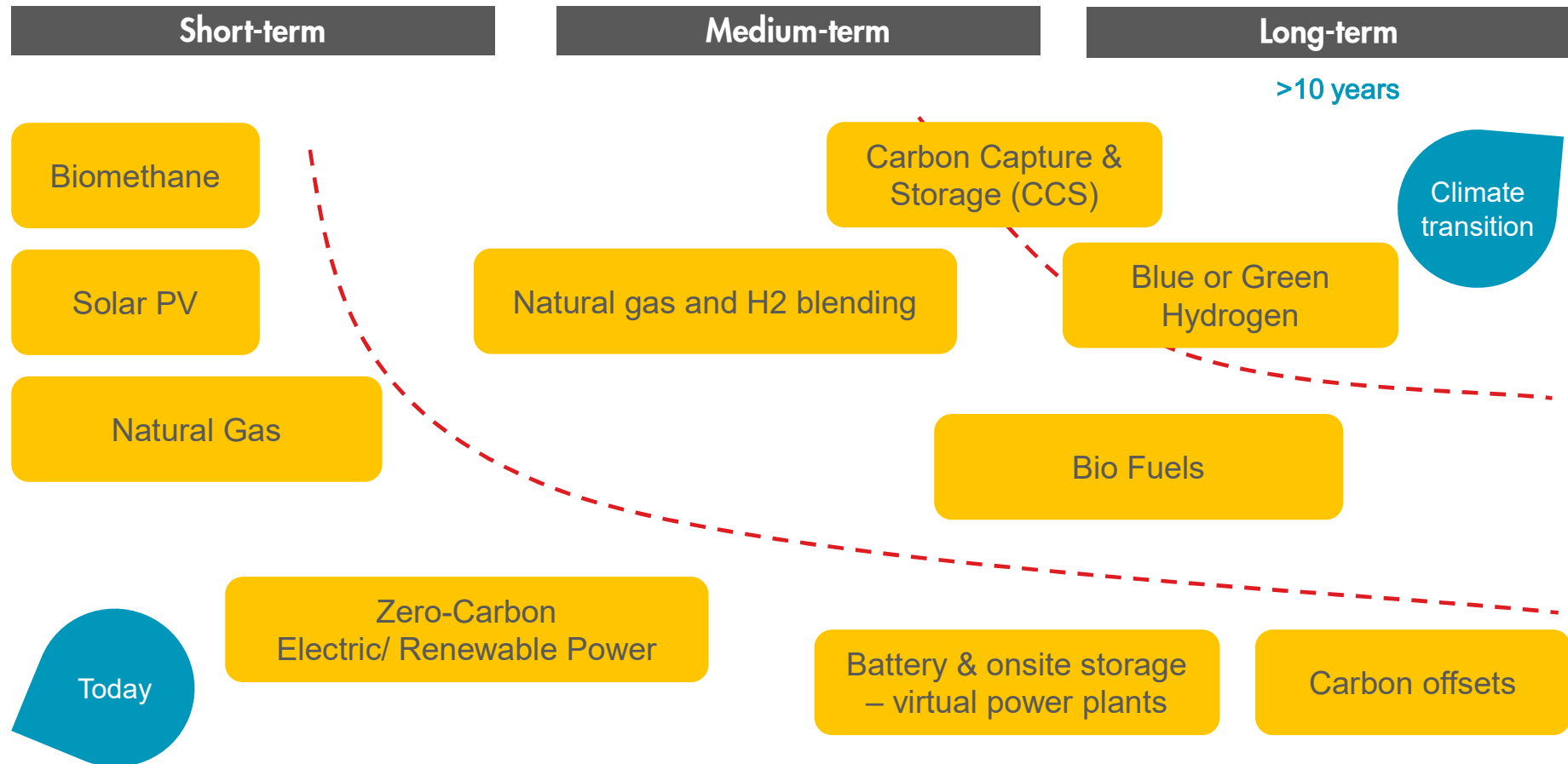
Source: BEIS 2021 Net Zero Strategy "Net Zero Strategy: Build Back Greener", Indicative Delivery Pathway to 2037 pg. 81, Note: 2038-2040 data extrapolated

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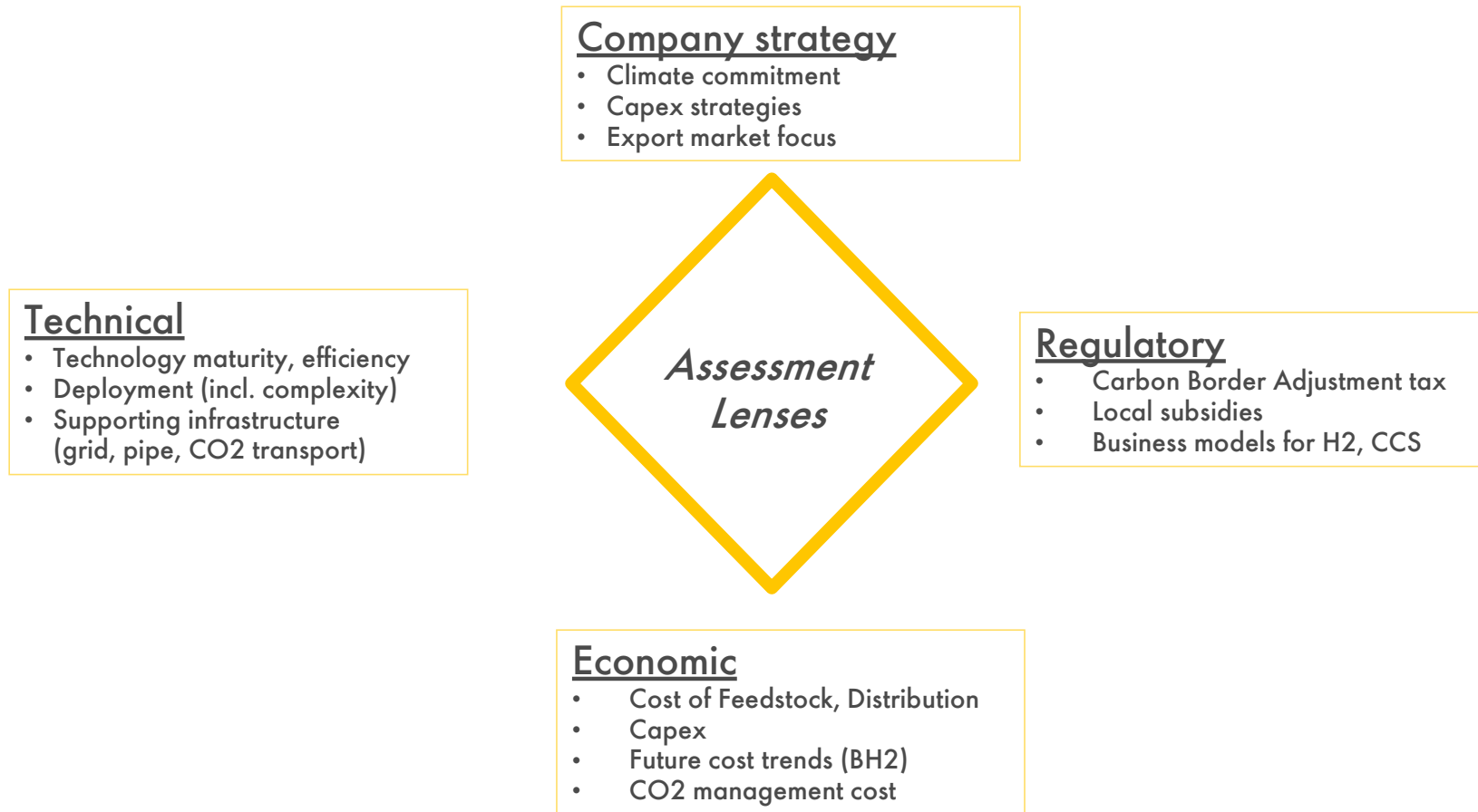
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# The sugar sector has various decarbonisation pathways

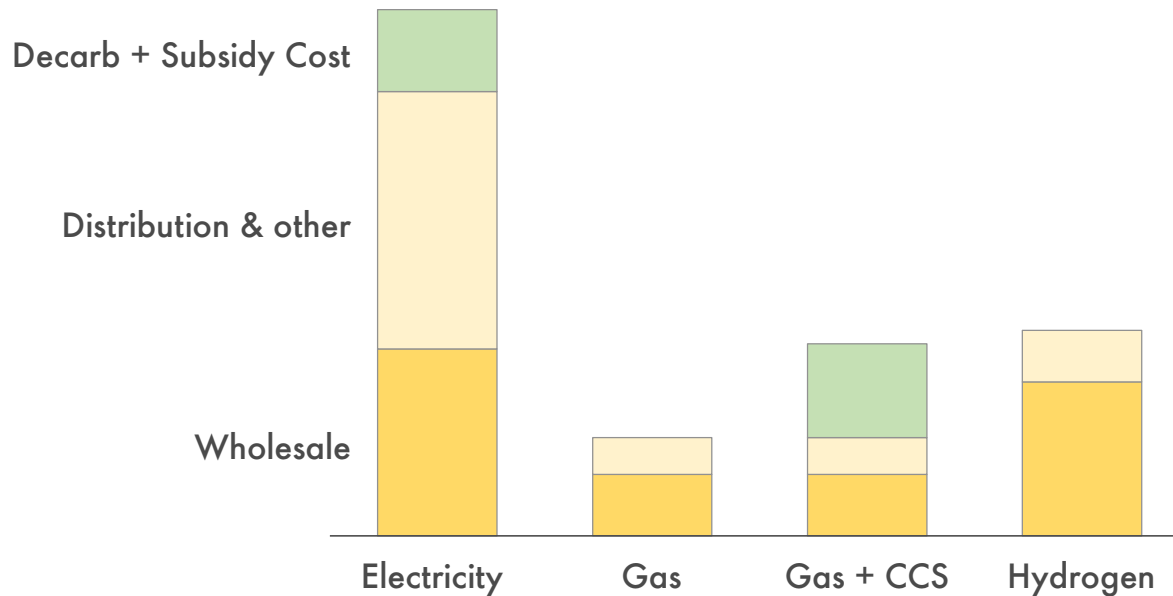


# Decarbonisation options need to be assessed through multiple lenses



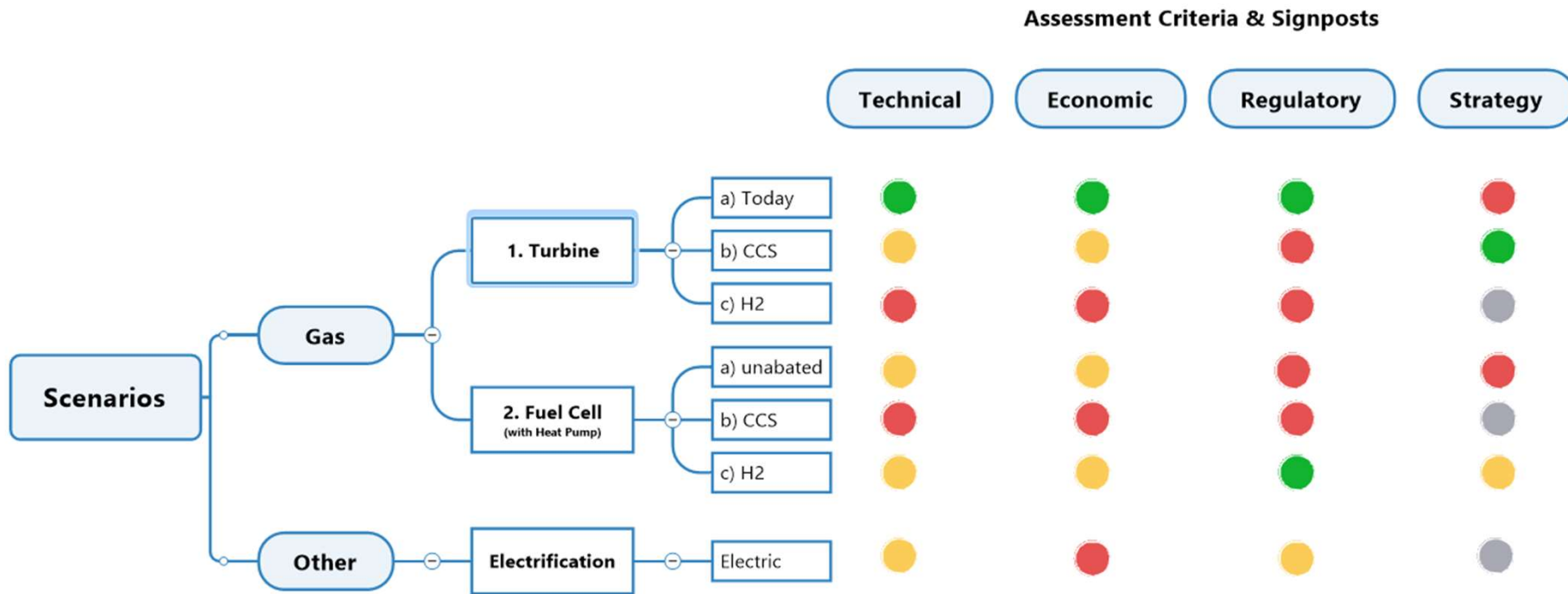
# Unit economics assessment needs to contain all cost of delivered energy

Energy Unit Cost Comparison (£/MWh)  
(delivered end-cost to London, illustrative)



Sources: Typical UK based energy off-taker at indicative medium term wholesale prices; Distribution costs include Standing & Availability charges, Balancing & Local Distribution cost, Losses; CCS cost assumes ~160 GBP/Ton for Capture, Transport and Storage and a Gas CO<sub>2</sub> intensity of 0.2 tons/MWh per UK Government Conversion GHG 2023.

# Energy supply scenarios: assessment summary (illustrative)





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# Summary: steps on the decarbonisation journey

1. Set up decarbonization Team
2. Understand current CO2 baseline
3. Define & assess options
4. Define strategy roadmap

