

A large white cylindrical storage tank with the Shell logo and 'Shell BioLNG Blend' text. The tank is situated in an industrial area with other equipment and a fence in the foreground. The scene is lit with warm, golden light, suggesting sunset or sunrise.

Net Zero Economy Forum: Accelerating the transition

**Shell
BioLNG**
ON THE ROAD TOWARDS SUSTAINABILITY

Geoffrey Mansfield

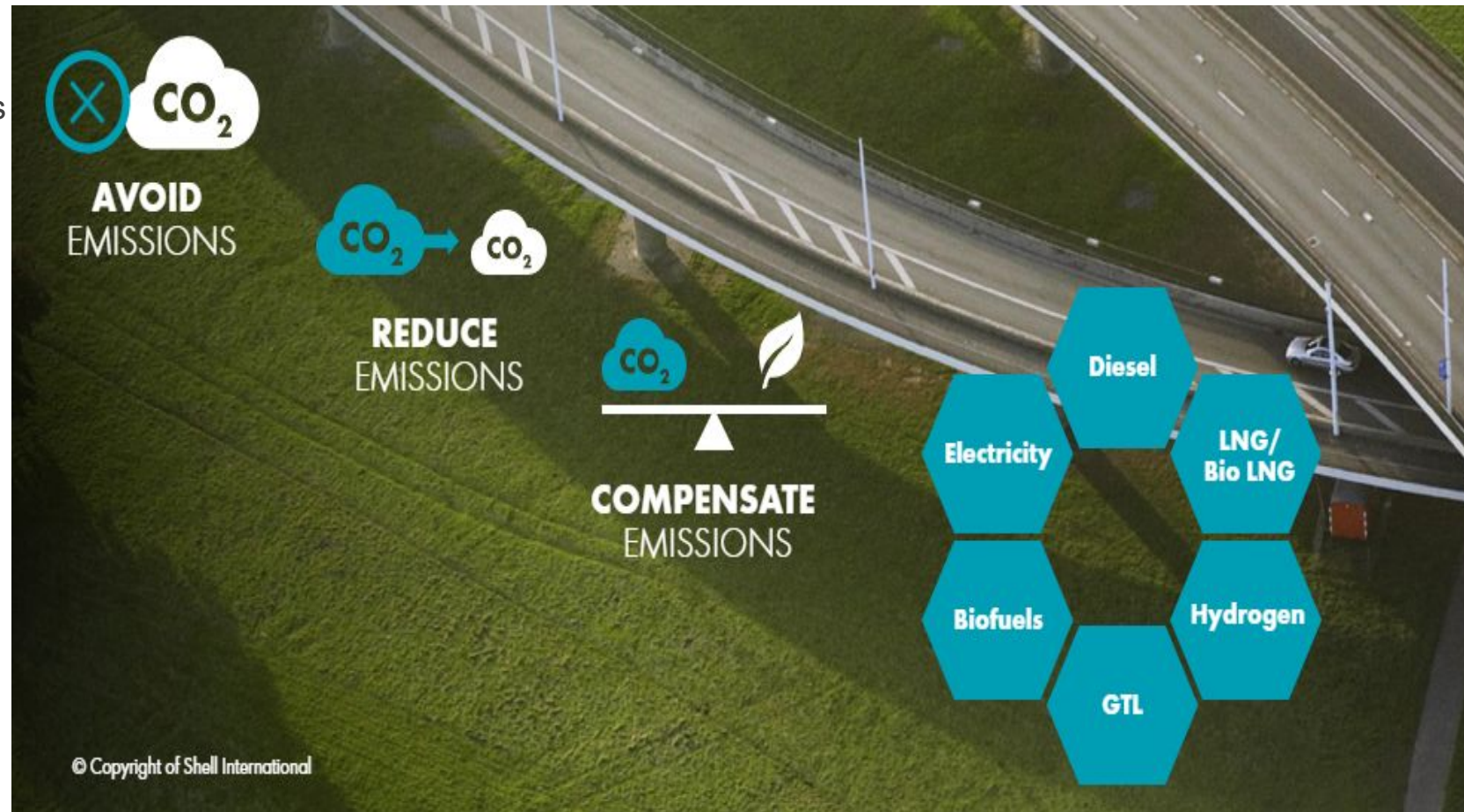
General Manager Low Carbon Fuels
Shell Trading & Supply

INTRODUCING THE SUSTAINABILITY BUNDLE

Fleet projected to reach 400 million vehicles worldwide by 2050 (including 80 million HDVs)

Products and solutions designed to help you make smart business decisions that contribute towards achieving your fleet's sustainability goals.

- 01 Avoid**
Avoid producing CO₂ emissions by integrating alternative fuels. Our consultants can advise on the best options for your fleet.
- 02 Reduce**
Reduce your emissions with our products and services designed to help improve your vehicles' fuel efficiency.
- 03 Compensate**
Compensate your unavoidable carbon emissions by opting to drive carbon neutral and contribute to our nature-based projects around the world.



BIO-LNG

A RESOURCE THAT CAN HELP MEET DEMAND

The long-haul and heavy-duty road, marine and aviation industries pose a particular challenge in terms of energy demand, as they require a high density of energy in the fuel they use.

Bio-LNG presents an opportunity to help reduce emissions across the transport sector by offering customers already using LNG-run vehicles or looking to switch to an attractive alternative for lowering their carbon footprint and meeting their sustainability goals, this fuel in a reliable and efficient manner.

*default value according to Renewable Energy Directive 2009/28/EC

Over 100% GHG EMISSION SAVINGS

Bio-LNG sourced from a variety of feedstocks can result in significant reduction (even carbon negative) in life-cycle greenhouse gas emissions.*

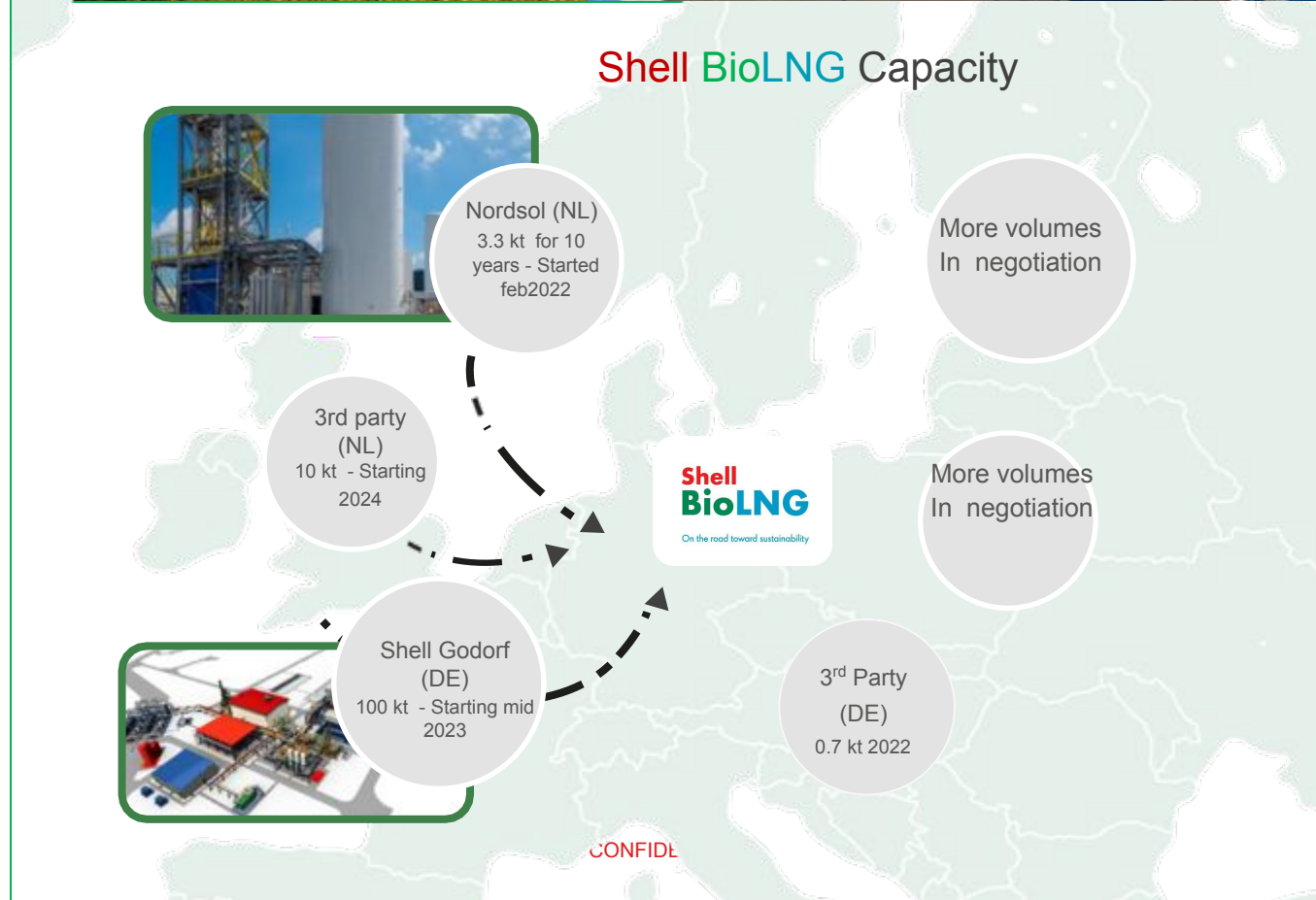


Bio-LNG IS BEING PRODUCED TODAY AND SCALING UP

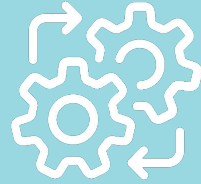


Shell BioLNG is helping to decarbonise heavy duty transport

- Some customers already benefit from approx. 85% of CO₂e reduction
- In NL, all customers benefit from 30% CO₂e reduction
- Open biggest liquefaction plant in DE
- European ambition of 100+ full bio-LNG



SHELL HAS CRITICAL CAPABILITIES TO SUCCEED IN THE BIO-LNG BUSINESS



Leader in process safety



Decades of experience in LNG



Continued investments in innovation, research and development



Extensive network of strong partners and customers



Widely recognized for project execution capabilities



Integrated offer from production to supply



Credible partner in a coalition to work with governments

THE EU'S REGULATORY STRATEGY LEADS THE WAY

EUROPEAN REGULATION

- RENEWABLE ENERGY DIRECTIVE (RED II JULY 2021)
 - Regulatory framework for the promotion of the use of energy from renewable sources with binding national targets on a share of renewable energy in energy consumption and in the transport sector.
 - Significant impact on biomethane market e.g. through additional sustainability criteria. GOO Scheme previously for renewable electricity expanded to Renewable Gas.
 - EU member states required to recognize GOOs from other member states and co-operation becomes mandatory across registries.
- EUROPEAN UNION EMISSION TRADING SYSTEM (EUETS)
 - Regulates GHG emissions from power, industry and aviation in 30 EU countries
 - 0 emission factor applied to biomethane except in transport sector
 - Use of mass-balance is mandatory
- FIT FOR 55 (RED III)
 - Revisions linked to the EU Green Deal i.e. expanded scope to include Marine and Aviation.
 - Significant changes expected for Renewable Gas.

THE COMMISSION PROVIDES THE FRAMEWORK BUT NATIONAL
MINISTRIES SET THE RULES





THANK YOU