



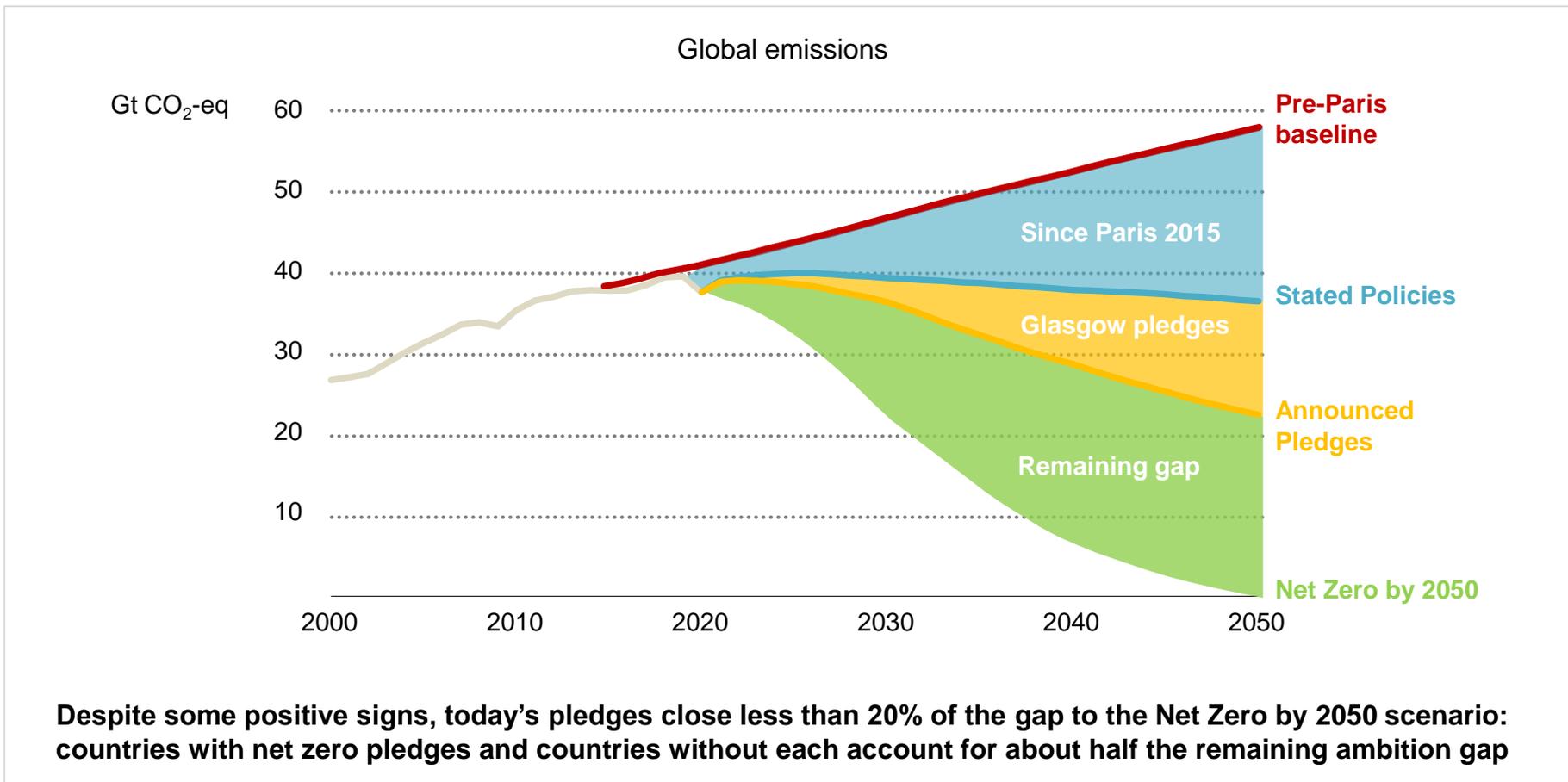
Role of Advanced Biofuels for Net Zero

Dr Paolo Frankl – Head Renewable Energy Division

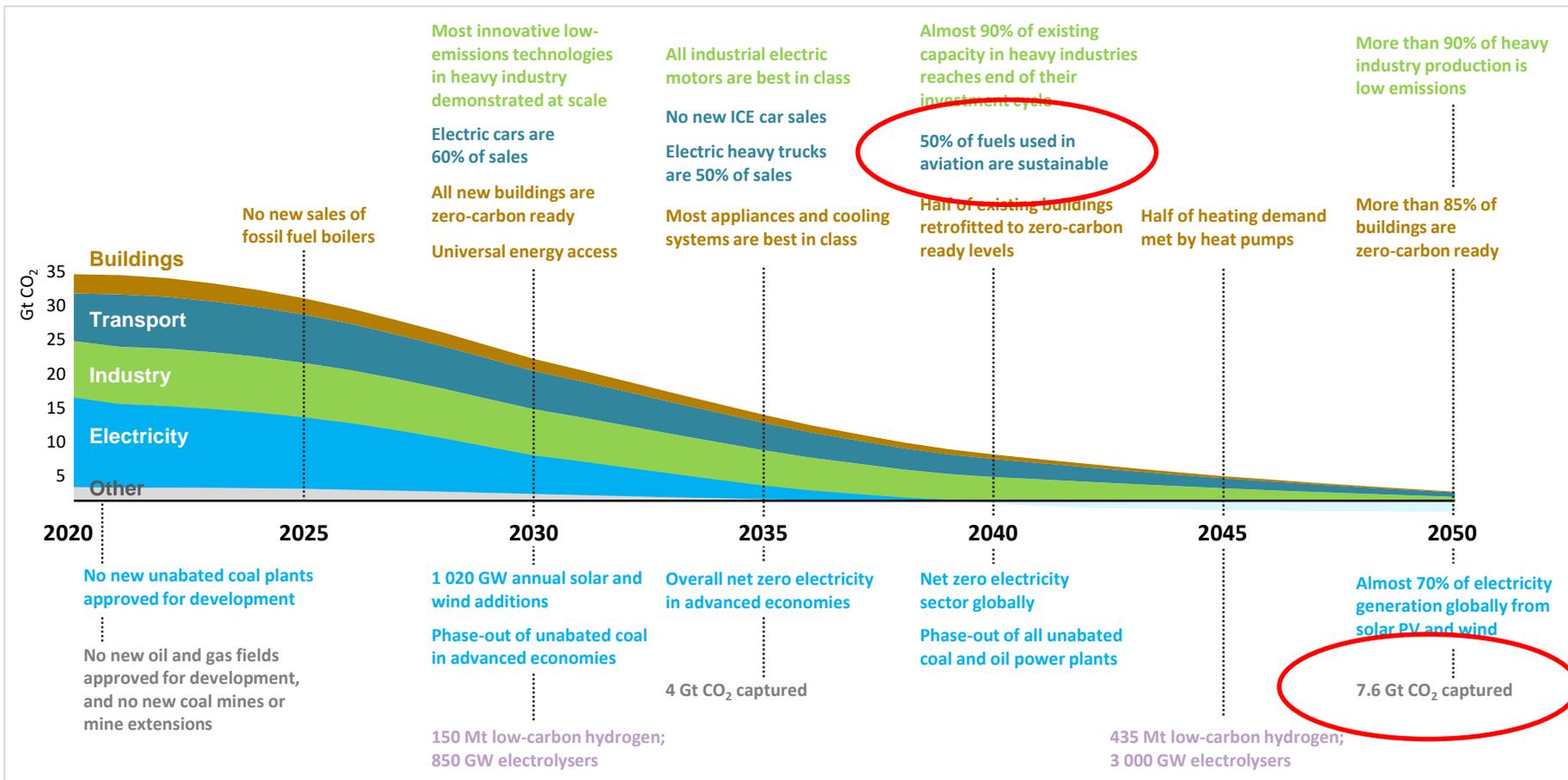
EU-India-BCE Conference – Progress in Advanced Biofuels

2 March 2022

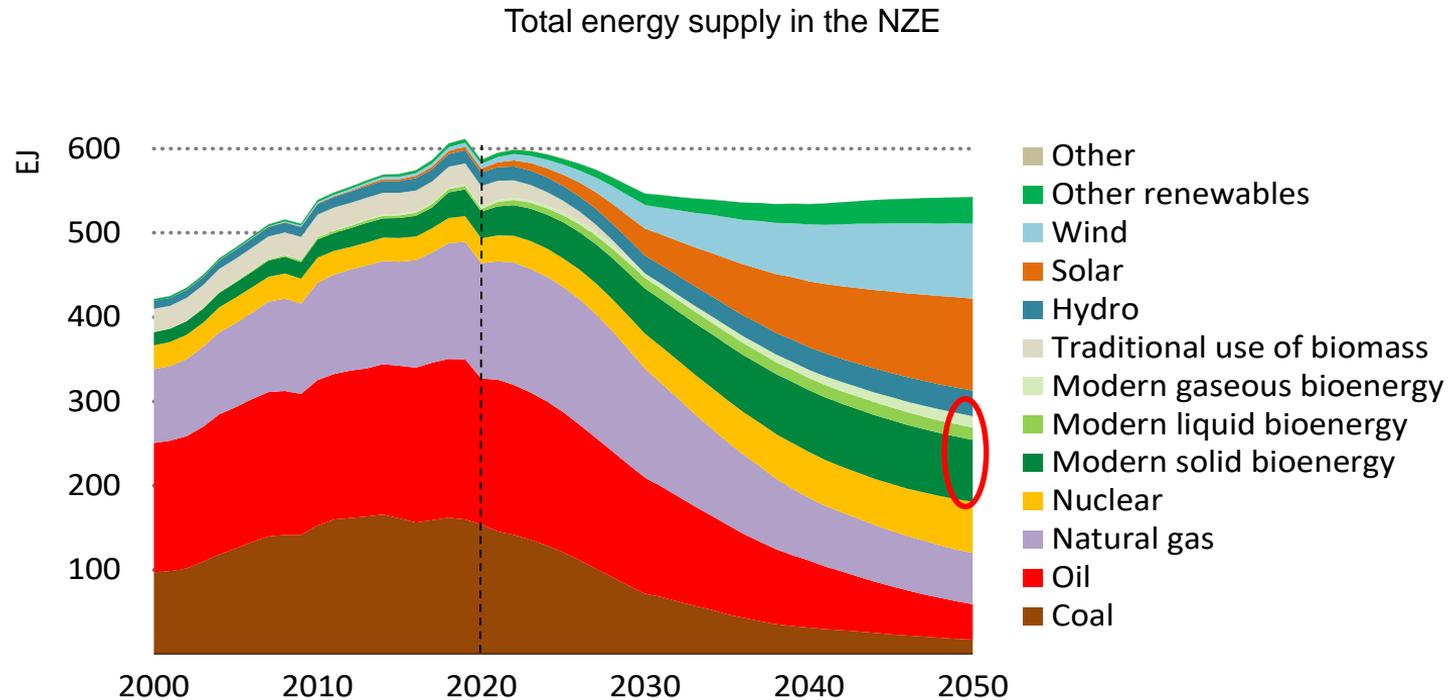
A large ambition gap remains in 2030



Set near-term milestones to get on track for long-term targets



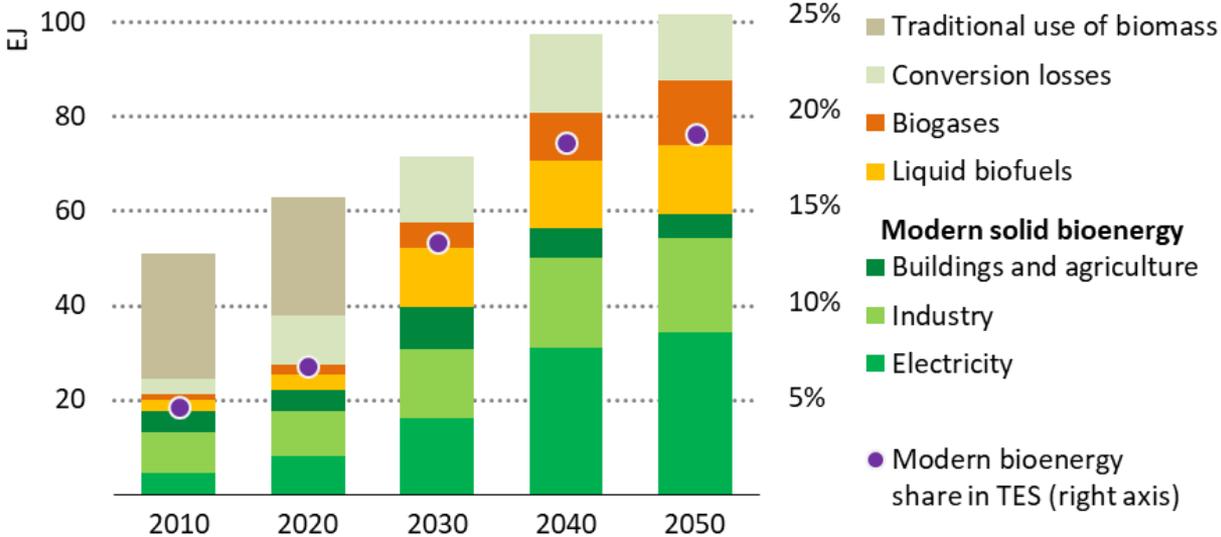
NZE requires a paradigm shift in energy supply and use



By 2050 total energy demand decreases while the global economy is more than twice as large as in 2020. Renewables and nuclear power displace most fossil fuels in the NZE, whose share falls from 80% in 2020 to just over 20% in 2050

Bioenergy to play a major role in various forms

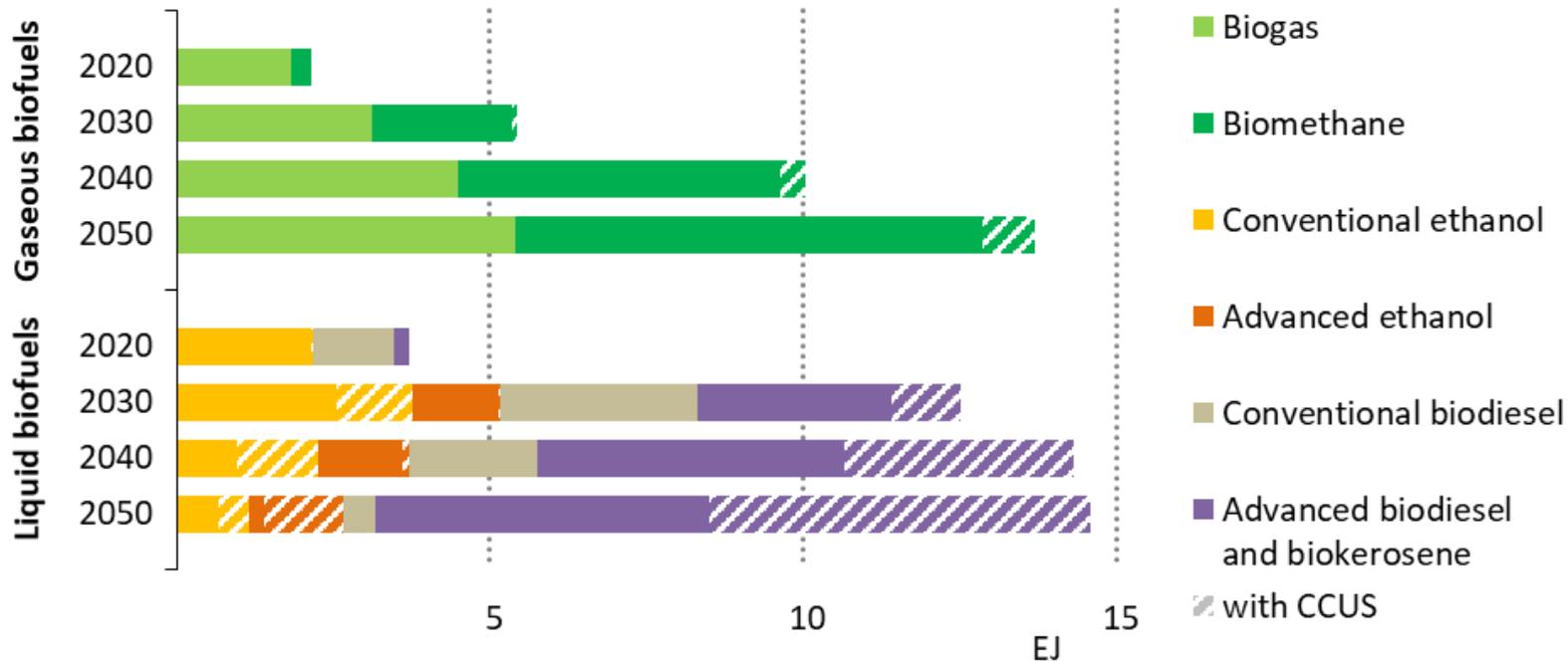
Total bioenergy supply in the NZE



Modern bioenergy use rises to 100 EJ in 2050, meeting almost 20% of total energy needs and becoming the second largest source of energy supply. Global demand in 2050 is below the assessed sustainable potential.

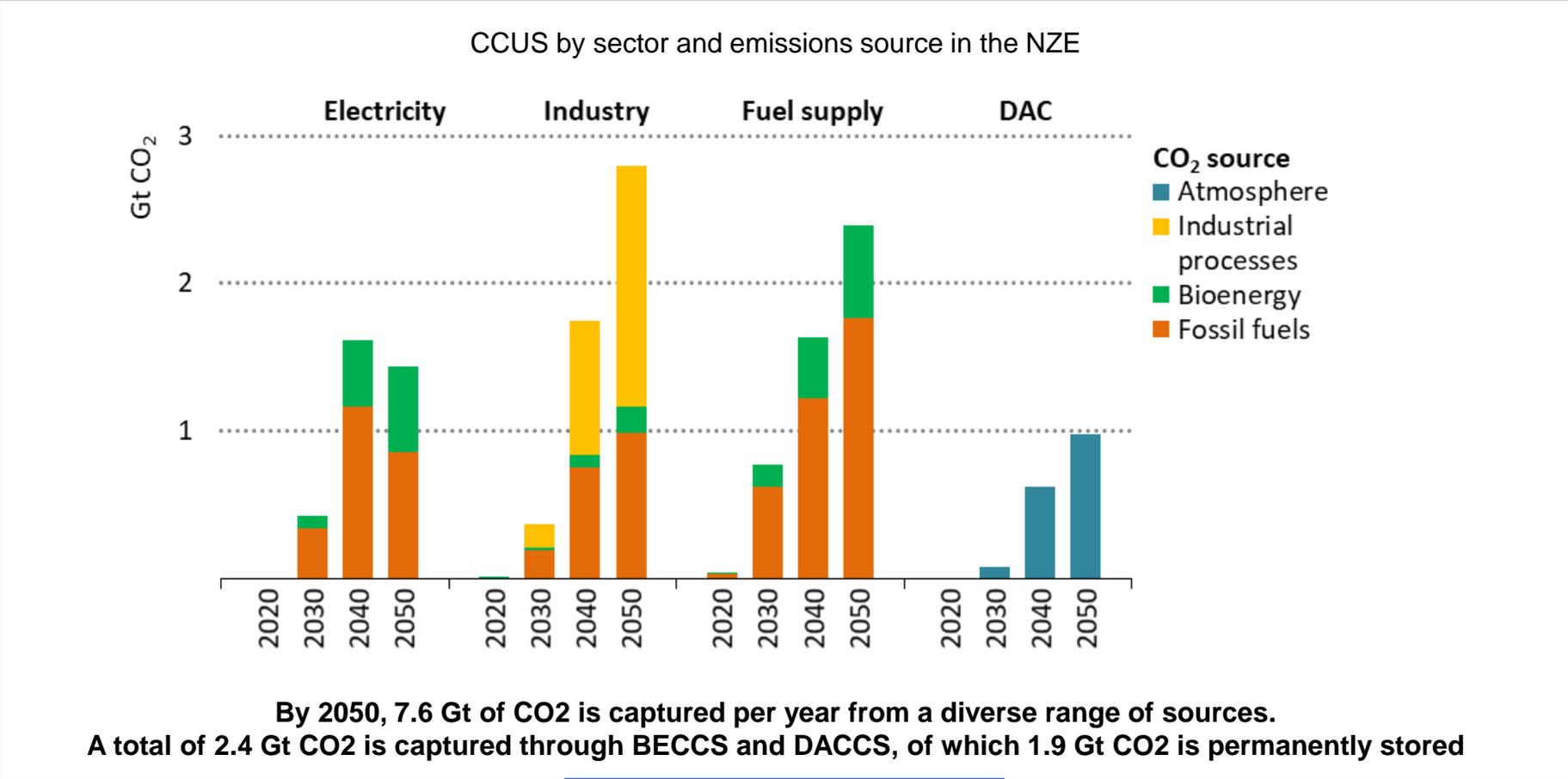
Advanced biofuels are necessary for net zero

Global biofuels production by type and technology in the Net Zero



Advanced liquid biofuel production expands rapidly over the next decade in the Net Zero scenario growing from less than 1% of total biofuel supply in 2020, to almost 45% in 2030 and 90% in 2050

Bioenergy and CCUS can lead to negative emissions



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