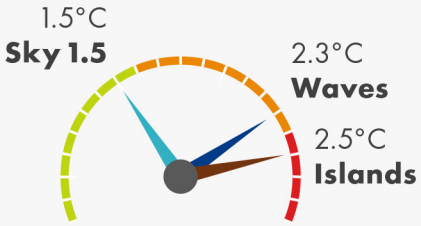
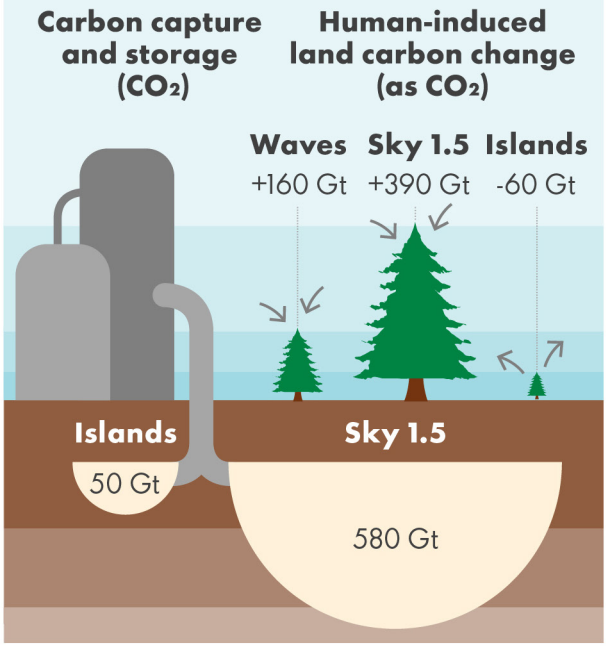
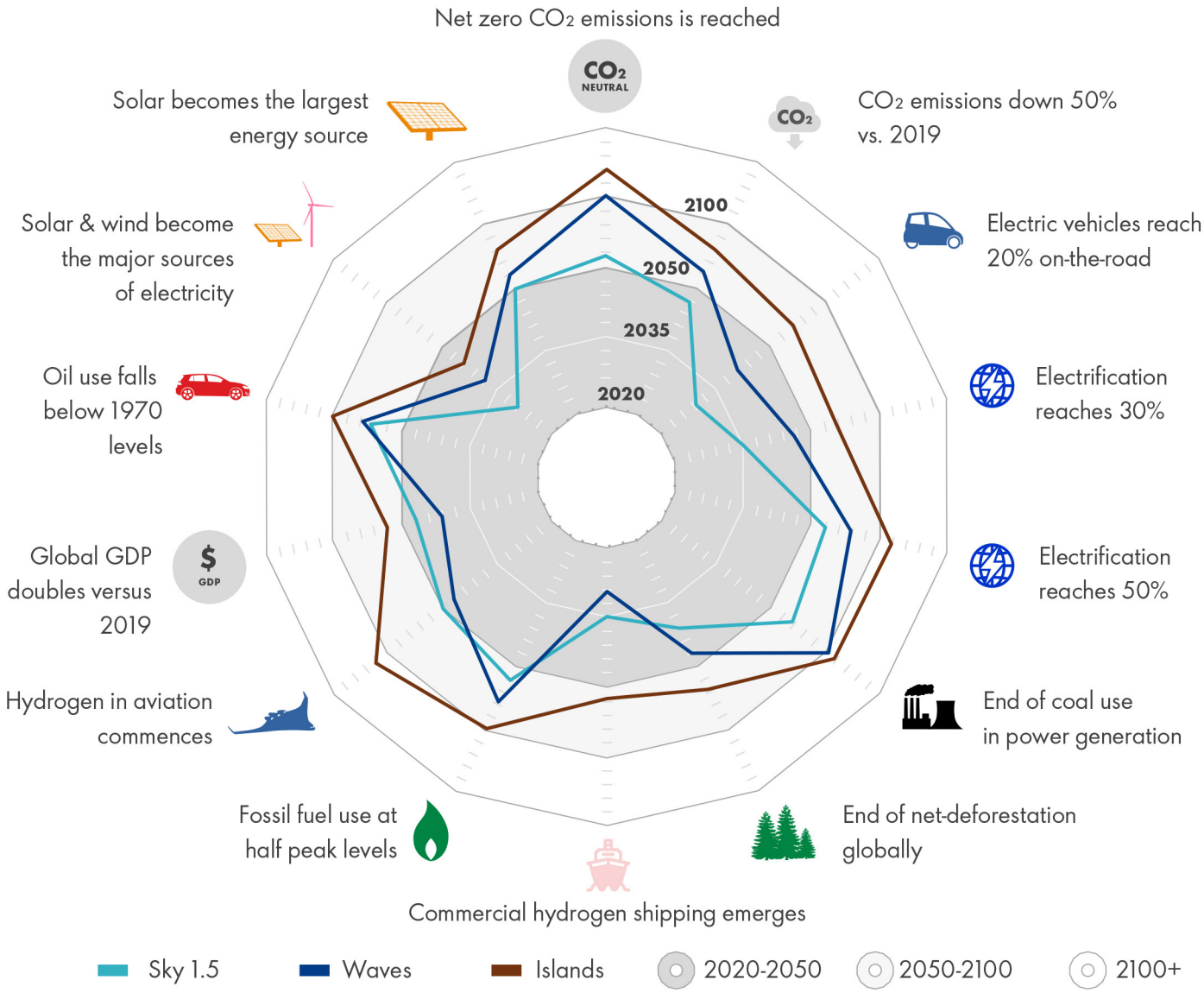
All three pathways decarbonise – the issue is speed

2100 global average surface temperature rise vs. 1850-1900



Cumulative sinks using technology and nature to 2100





Accessibility transcript:

The Energy Transformation Scenarios explore three possible future pathways – these are called Waves, Islands and Sky 1.5. In all three of the scenarios the energy system is decarbonised, but the speed at which this happens differs considerably. The infographic shows that there are common milestones across all three scenarios, but the timelines to achieve these differ from one to the other. All contain substantial improvements in energy efficiency, alongside overall growth in global energy consumption. They all involve significant electrification of the global economy, with renewable resources dominating. In sectors that are harder to electrify, there is a continued need for energy-dense and portable liquid and gaseous fuels. However, all also have progressive deep decarbonisation in these sectors as biofuels and hydrogen-based energy options gain ground. Finally, all three scenarios rely on an increasing level of emissions removals through technology and through nature. As a result of the different paces of decarbonisation in each scenario, they all achieve net-zero emissions at different times in the future. This directly impacts the average global temperature rise above pre-industrial levels for each scenario.