

Agenda item 4 (c) ii. Long-term technological transition pathways

LT-LEDS Synthesis Report 2023: Technology components

Technology Executive Committee, 28th meeting and TEC-CTCN Joint session
16-19 April 2024, Copenhagen, Denmark



Technology components of LT-LEDS



Focus on decarbonizing technologies and innovation

- All LT-LEDS: Technologies and innovation are fundamental for addressing climate change and fostering economic growth; common challenges are in industrial processes, variable renewable energy integration.



Decarbonizing transport

- 94% LT-LEDS: Electric vehicles essentials for decarbonizing transport.



Building efficiency

- 93% LT-LEDS: Building technologies for energy efficiency; international cooperation for advancing building energy codes and appliance standards, renovation of public buildings.



Hard-to-abate industry sectors

- 75% LT-LEDS: Transformation of hard-to-abate industry sectors, including through electrifying energy-intensive processes, using flexible power system and green hydrogen.

Technology components in LT-LEDS



Digital technologies

- 76% LT-LEDS: Digital technologies for emission reduction across sectors; use of AI for circular economy, route optimizing, waste management, agriculture and smart grids.



Shifting to renewables

- 71% LT-LEDS: Solar, wind, biofuels, hydrogen costs significantly decreased; grid improvements for renewables integration.



Frontier technologies

- Low and near zero emission aviation.



Technology transfer

- Raise awareness for available and affordable climate technologies.
- Enhanced international cooperation for deployment and application of cutting edge, critical and disruptive technologies.

Thank you.

