

# Strategies towards climate neutrality goals: How are LTES used to develop Long-term Low Emission Development Strategies (LT-LEDS)?

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# Scene setting presentation topic

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- The Paris Agreement and LT-LEDS  
(Long-term Low greenhouse gas Emission Development Strategies)
- Common elements of LT-LEDS communicated by the governments
- How LTES can bring insights to create net-zero LT-LEDS?
- LTES toward ambitious net-zero LT-LEDS

# The Paris Agreement and LT-LEDS

## **LT-LEDS** (Article 4.19)

“All Parties should strive to formulate and communicate LT-LEDS, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.”

## **Collective goals** (Article 2.1)

- a) Long-term temperature goal
- b) Climate resilience and low GHG emission development
- c) Consistent finance flow

## **Collective efforts toward long-term temperature goal** (Article 4.1)

- Peaking emissions as soon as possible
- Rapid reduction in accordance with best available science
- Balance between emissions and removals in the second half of this century

# LT-LEDS common elements

## 29 Parties have submitted their LT-LEDS (15 Parties since 2020)

- France (update), Switzerland, Denmark, Republic of Korea, Austria, Netherlands, Sweden, Belgium, Spain, Latvia, Norway, Finland, South Africa, Singapore, Slovakia, EU (since 2020)
- Costa Rica, Portugal, Japan, Fiji, Marshall Islands, Ukraine, UK, Czechia (2018, 2019)
- Germany, France, Benin, Canada, Mexico, USA (2016, 2017)

## Common elements

Quantitative target on emissions reduction

Net-zero emissions,  
Climate/Carbon neutrality ↑  
(14 LT-LEDS since 2020)

Long-term scenarios emission trajectories

19 Parties described scenarios in LT-LEDS

Mitigation measures

Energy supply, Transport, Building, Industry, Waste, Agriculture, Land use and Forest, Cross-cutting

Periodic review / update

Economic impact assessment

Guidance to NDCs  
(Nationally Determined Contributions)

# How LTES can bring insights to create net-zero LT-LEDS?

## ➤ Exploring pathways toward long-term net-zero emissions goal

- Multiple socioeconomic & technology trajectories
- Speed & size of transformation for net-zero emissions by mid-century

## ➤ Informing policy intervention

- Medium & short-term sectoral requirements (e.g. power planning)
- Long-term implication of today's decision
- Synergies & trade-off between multiple policy objectives

## ➤ Providing scenario and model methodology

- Assumption  
(e.g. technology diffusion timeline, energy demand, cost, sectors interaction)
- Indicator  
(e.g. renewable energy deployment, end-use sector electrification, energy efficiency)

## Net-zero carbon emissions in energy “well before 2050”

- IPCC Special Report on 1.5 °C (best available science) indicates model pathways to achieve 1.5 °C temperature goal require net-zero CO<sub>2</sub> emissions by 2050 and decline 45% from 2010 levels by 2030
- Available CO<sub>2</sub> removals may be offset by CO<sub>2</sub> emissions from hard-to-abate sectors (e.g. steel, cement)

## Interaction with policy implementation “governance”

- LTES with net-zero emissions goal pathways facilitates inter-Ministerial policy coordination & stakeholder consultation toward LT-LEDS
- Interaction between scenario modelling experts in different sectors & policy-makers
- Sector-level monitoring & reporting strengthen policy implementation accountability

Thank you

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