

# Making the economic case for Enhanced NDCs

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# Context

- Ambition and implementation gaps
- NDCs 3.0 in 2025
- Enhanced NDCs
  - **Ambitious**: scaled up ambition, which collectively leads to a Paris-aligned pathway (no ambition gap)
  - **Implementable**: policies are implemented to reach the stated levels of ambition (no implementation gap)
  - **Investible**: finance is mobilised to enable policies implementation and technology deployment

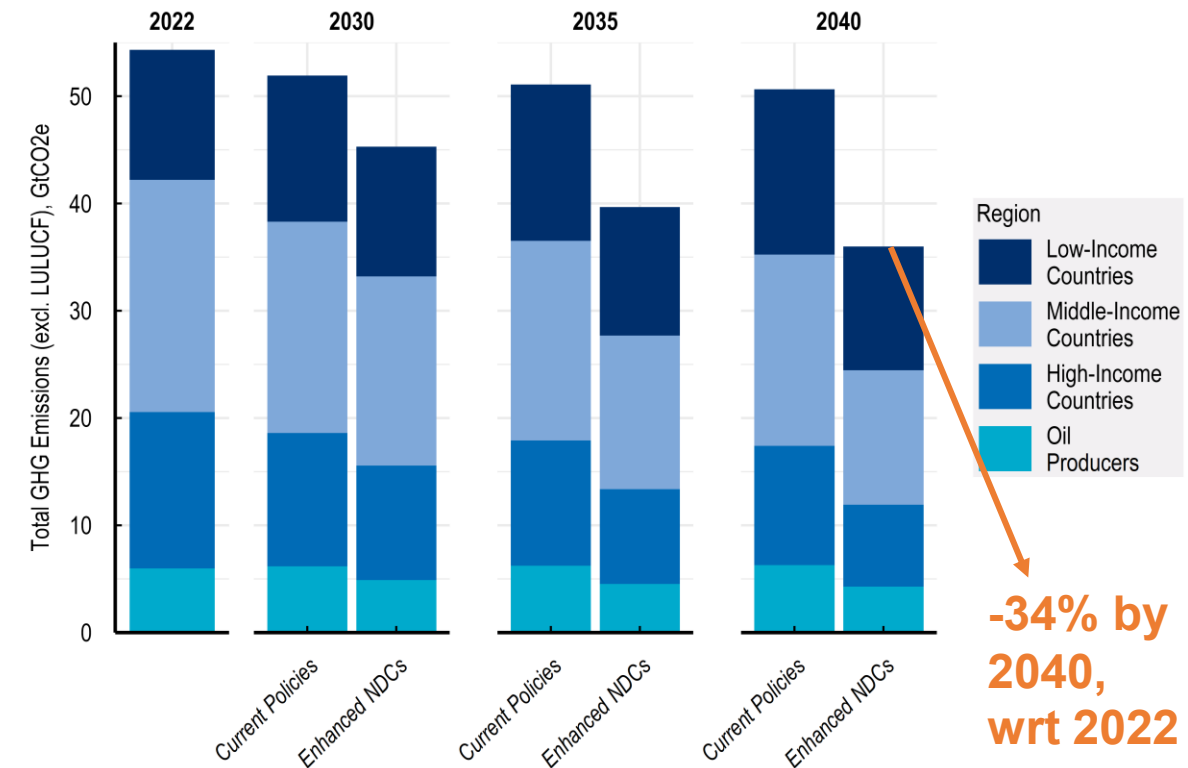
Aim of the project:  
**Highlight the economic rationale for Enhanced NDCs**

# Scenarios

- **Current Policies scenario**
  - Policies already in place or legislated
  - Ambition and implementation gap in current NDCs
  - 2.4 degrees by 2100
- **Enhanced NDCs scenario**
  - Accelerated climate policies and investments
  - Emission reductions in line with the “well-below 2°C goal of the Paris Agreement
  - 1.7 degrees by 2100
- Calibration based on IEA 2023 World Energy Outlook
  - Stated Policies (STEPS) and Announced Pledges Scenario (APS)

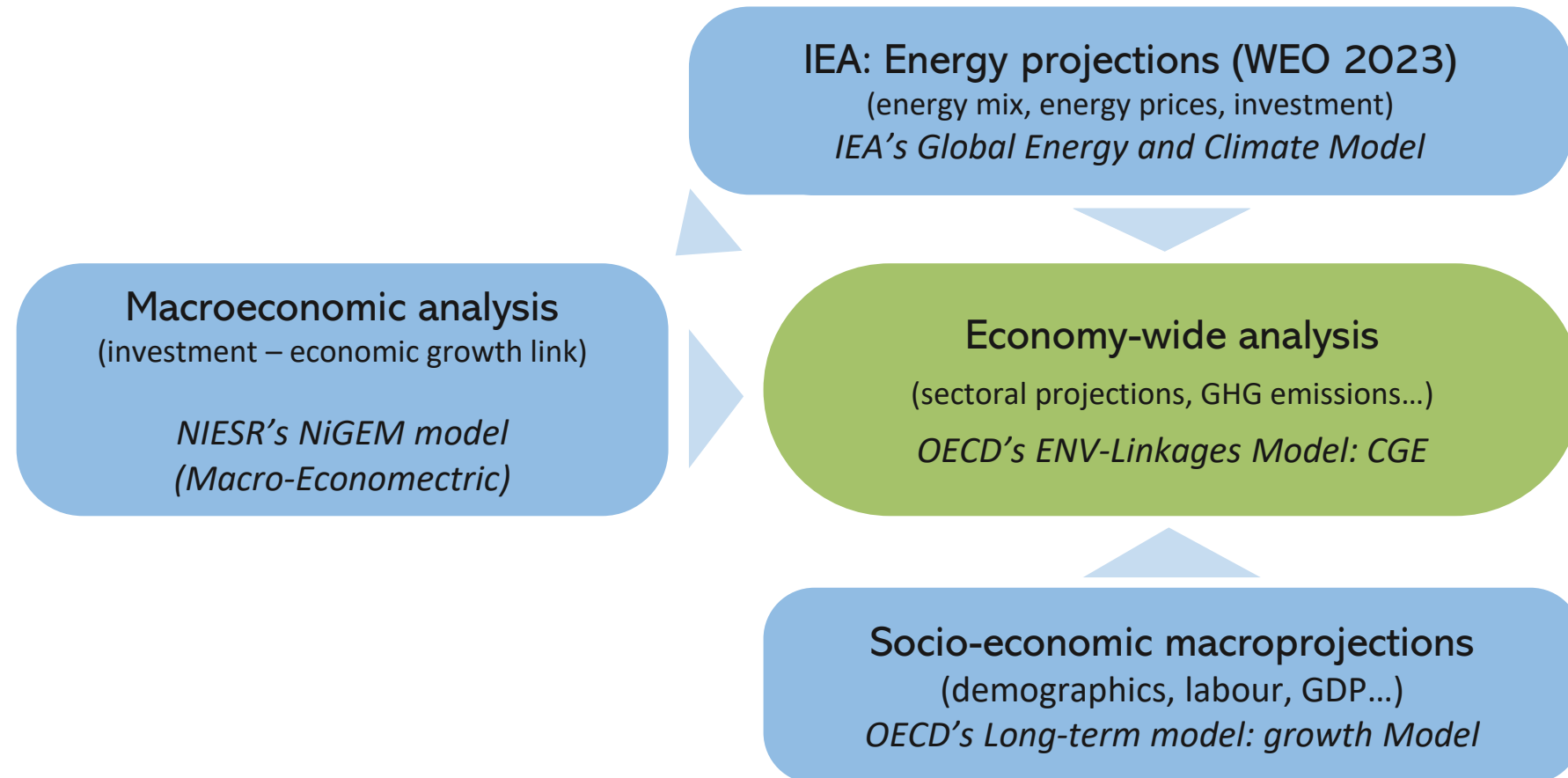
## Emission reductions

Total GHG emissions (excluding Land Use, Land Use Change and Forestry (LULUCF) emissions) by country grouping and by scenario between 2022 and 2040, GtCO<sub>2</sub>e



Source: OECD ENV-Linkages model, with inputs from the NiGEM and IEA's GCEM models.

# Modelling toolkit



# Macro-economic effects of climate policies

## POLICY CONSTRAINTS

- Changes in production processes of firms
- Changes in consumption patterns and prices
- Changes in government expenditure

## ENERGY TRANSITION

- Energy efficiency gains
- Accelerated electrification and deployment of renewable energies and technologies

## INCREASED INVESTMENT

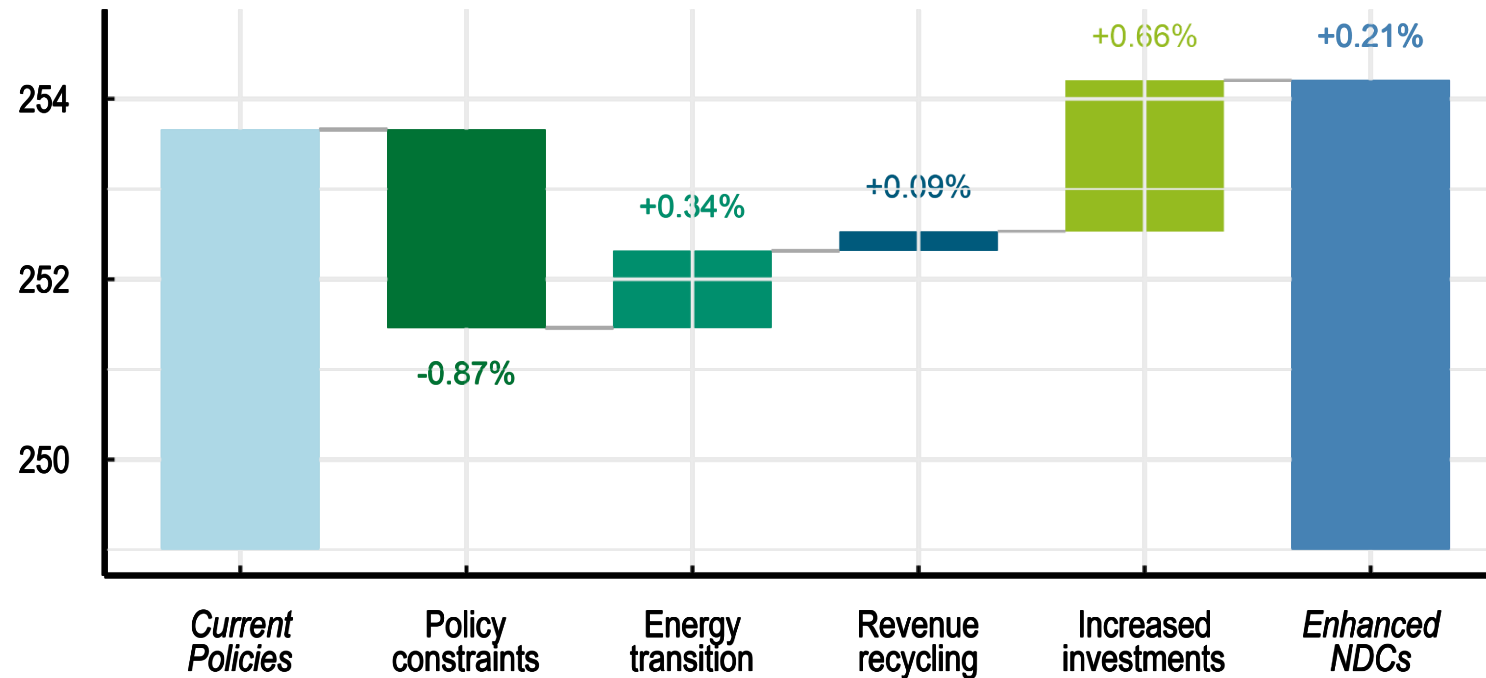
- Resources needed to finance the transition, with expected returns
- Strong links with macroeconomic policies and performance
- Spurs economic activity

## REVENUE RECYCLING

- Possibility to use revenues from carbon pricing or removals of subsidies, when applicable, to finance the transition or alleviate negative social impacts

# Enhanced NDCs are compatible with economic growth

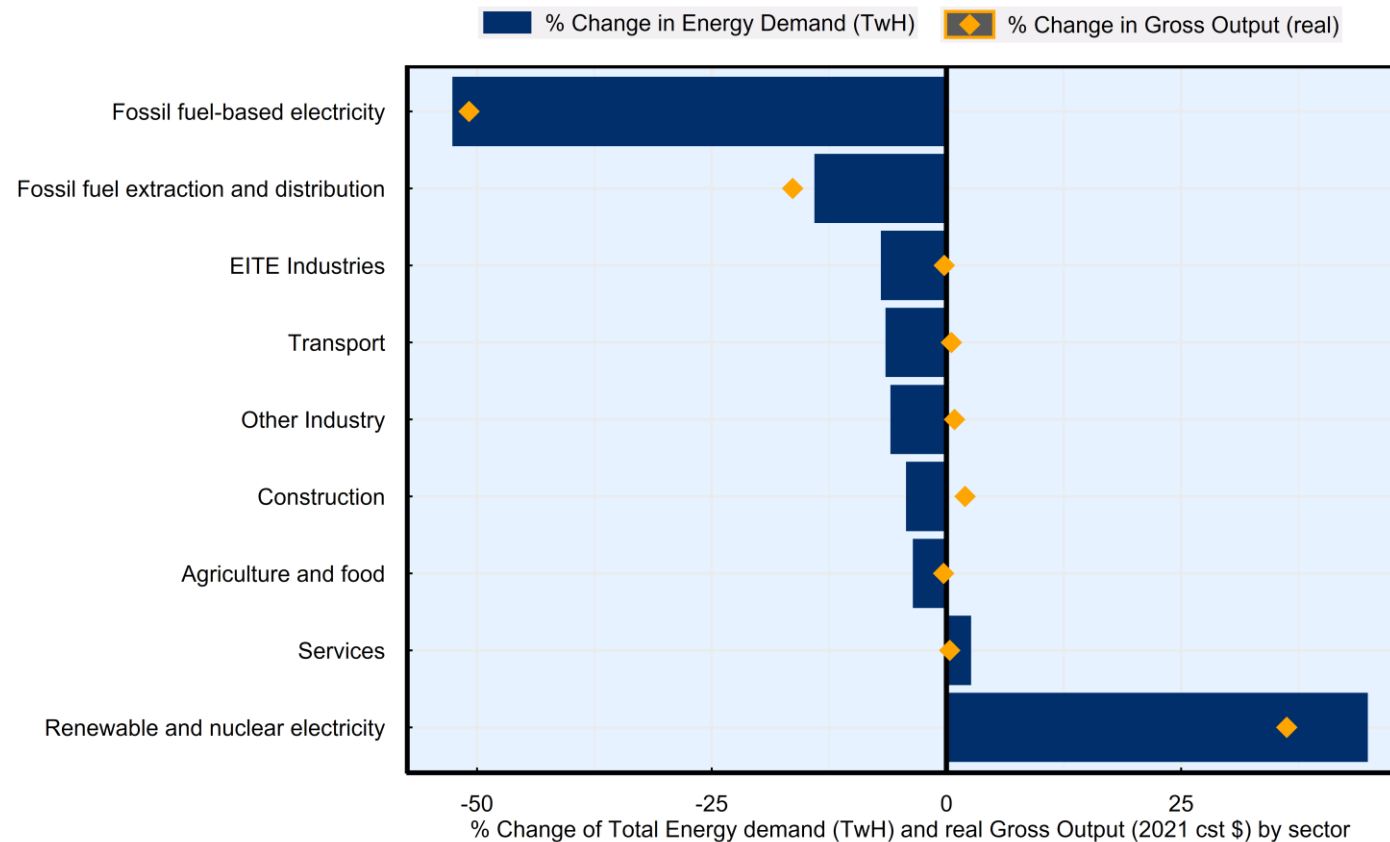
Decomposition of changes in global GDP (2021 USD purchasing power parity) between the *Current Policies* and *Enhanced NDCs* scenarios in 2040



Source: OECD ENV-Linkages model, with inputs from the NiGEM and IEA's GCEM models.

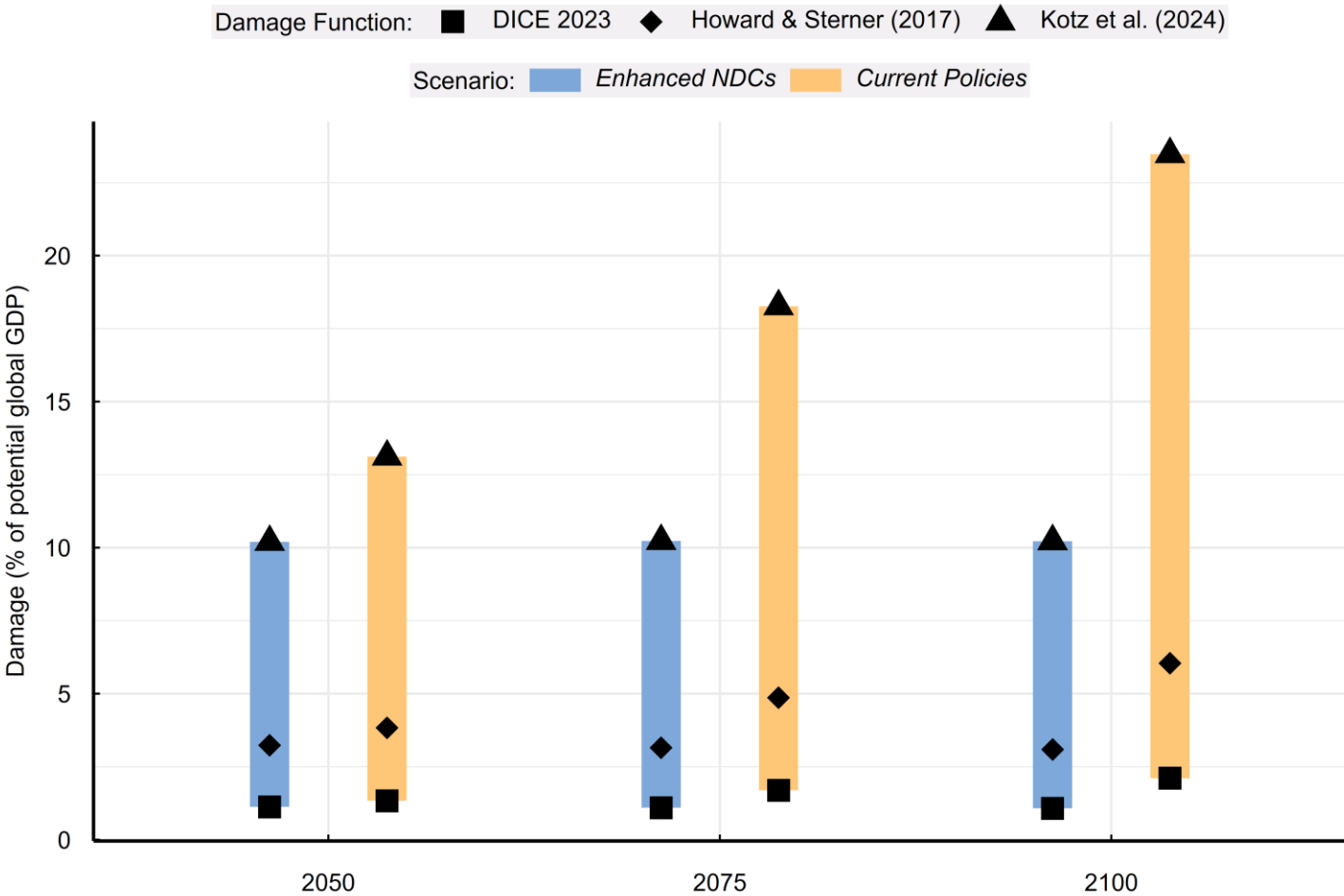
# Energy demand is reduced in most sectors but increases in services

Difference in global sectoral energy demand (TWh) between Current Policies and Enhanced NDCs scenarios (%) , 2040



Source: OECD ENV-Linkages model, with inputs from the NiGEM and IEA's GCEM models.

# The economic case for climate ambition gets even stronger when factoring in avoided climate damages



Source: Authors, based on three damage functions (Howard and Sterner, 2017; Barrage and Nordhaus, 2024; Kotz, Levermann and Wenz, 2024).



# Beyond GDP impacts

- Health and other environmental benefits, e.g. air pollution
- Interactions with other environmental issues, which depend on policy mix (e.g. forests and nature conservation)
- New energy security challenges (from fossil fuels to materials needed for batteries)

# Placing people at the center of climate strategies is essential for a just transition

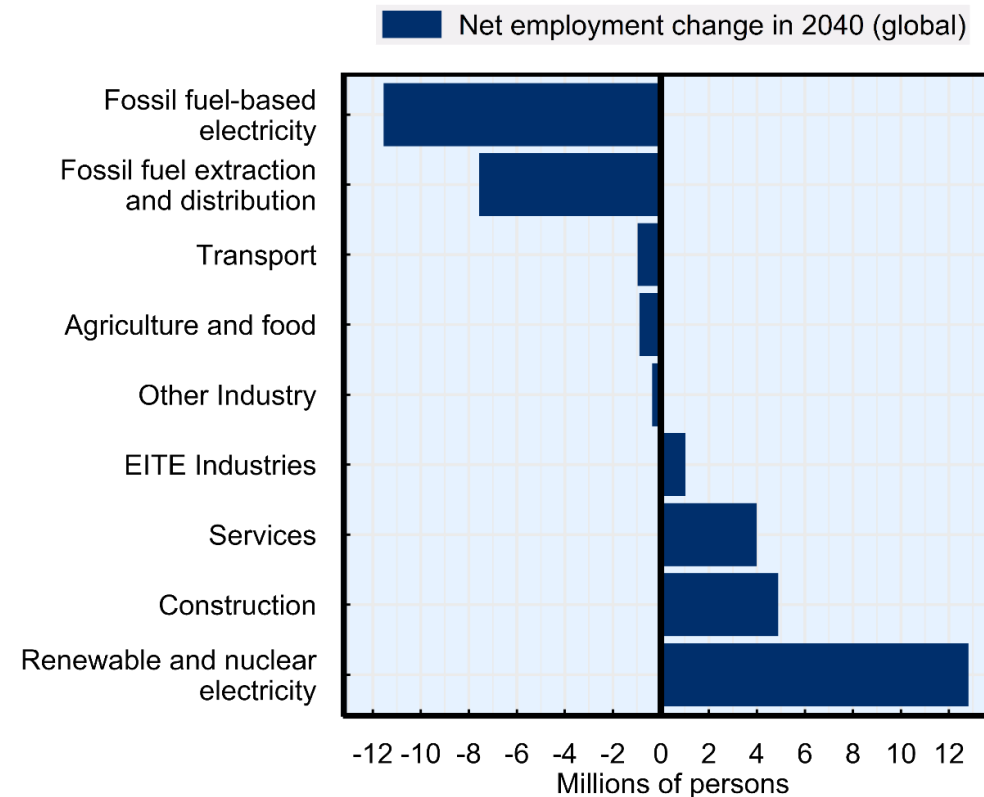
## Climate action has large social benefits in the long run...

- Low-income and vulnerable populations are more exposed to climate risks and workers can benefit from green jobs

## ...but can be regressive and cause disruptions in the job market in the short run, requiring targeted approaches

- Well-designed support policies and compensation mechanisms are essential
- A coherent set of labour market policies can steer workers towards growing sectors

## The net impact of Enhanced NDCs on global employment is marginally positive



Source: OECD ENV-Linkages model, with inputs from the NiGEM and IEA's GCEM models.

# Key messages

- Explicit modelling of investment can highlight economic opportunities from the transition
- Enhanced NDCs bring costs but also economic gains, which balance each other out
- Effects vary by region; the transition will be more difficult in some countries
- Large benefits from reduced climate damages in the second half of the century

## Investing in Climate for Growth and Development

The Case for Enhanced NDCs



# Thank you

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