

# **Integrating Climate into Fiscal Sustainability Analysis: Experiences from a Swiss Pilot Study**

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# Fiscal Sustainability Report

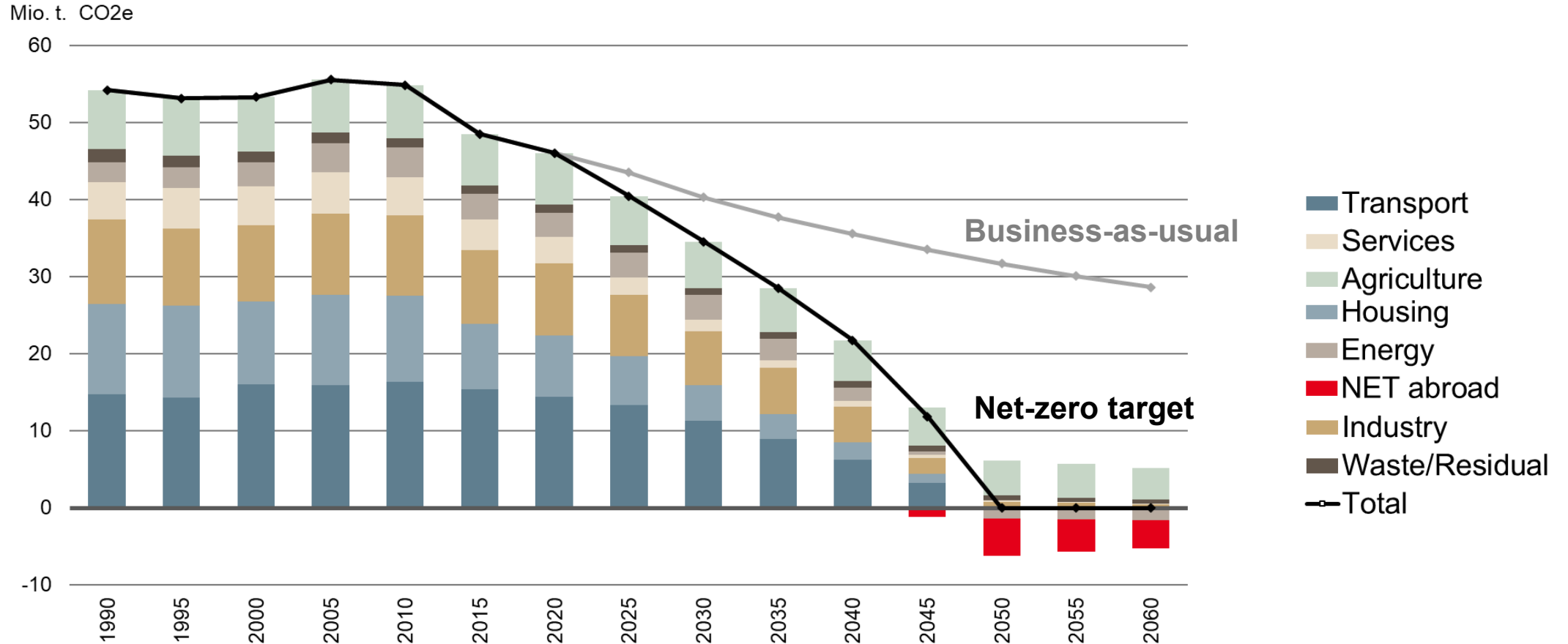
- The Swiss Federal Department of Finance publishes its flagship **Fiscal Sustainability Report** every four years. This report goes beyond the budget and the financial plan, focusing on **long-term structural challenges to public finances**
- The 2024 report includes – for the first time – a model-based pilot study to project the **fiscal impacts of the energy transition**
- Focus on:
  - Revenues, expenditure, budget balance and public debt
  - All levels of government, including social security funds
  - Policy mixes: carbon pricing, regulation and subsidies
- The costs of **climate change** and climate adaptation measures could **not** be **included** in the analysis due to uncertainties and lack of data and modelling tools





# Emissions reduction path to net zero

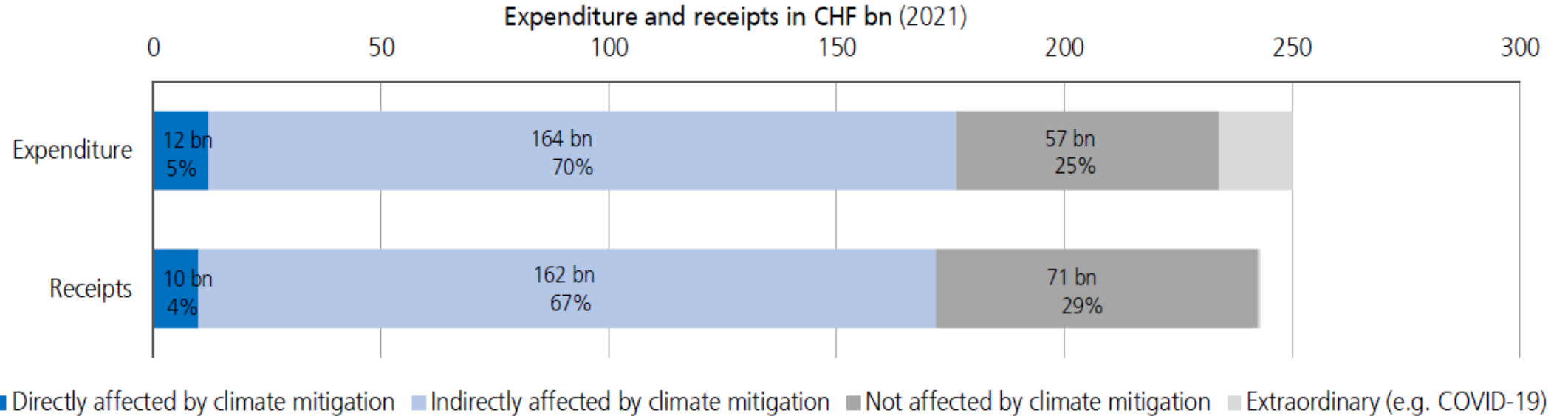
CO<sub>2</sub> emissions reduction by sector (in million tons of CO<sub>2</sub>-equivalent)



Notes: NET = Negative emissions technologies



# Public revenues and expenditure affected by climate mitigation measures

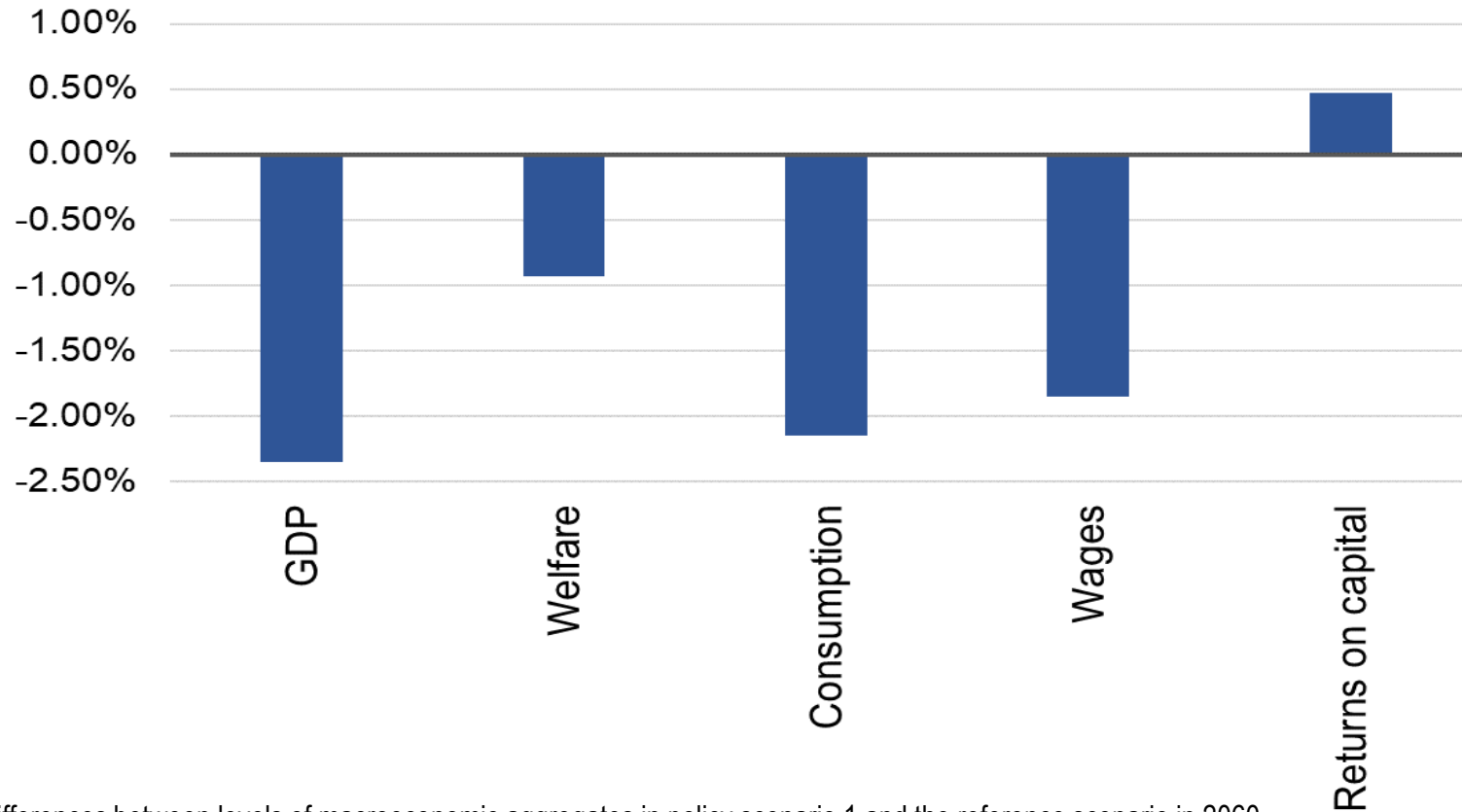


- **Direct:** e.g. mineral oil tax, CO<sub>2</sub> levy on thermal fuels and public expenditure in buildings program of Confederation and Cantons
- **Indirectly affected by slower economic growth (GDP, consumption, wages):** e.g. direct taxes, VAT and personnel expenditure



# Energy transition slows economic growth

Impact of climate mitigation measures on macroeconomic aggregates compared to the reference scenario (2060, level effects in %)

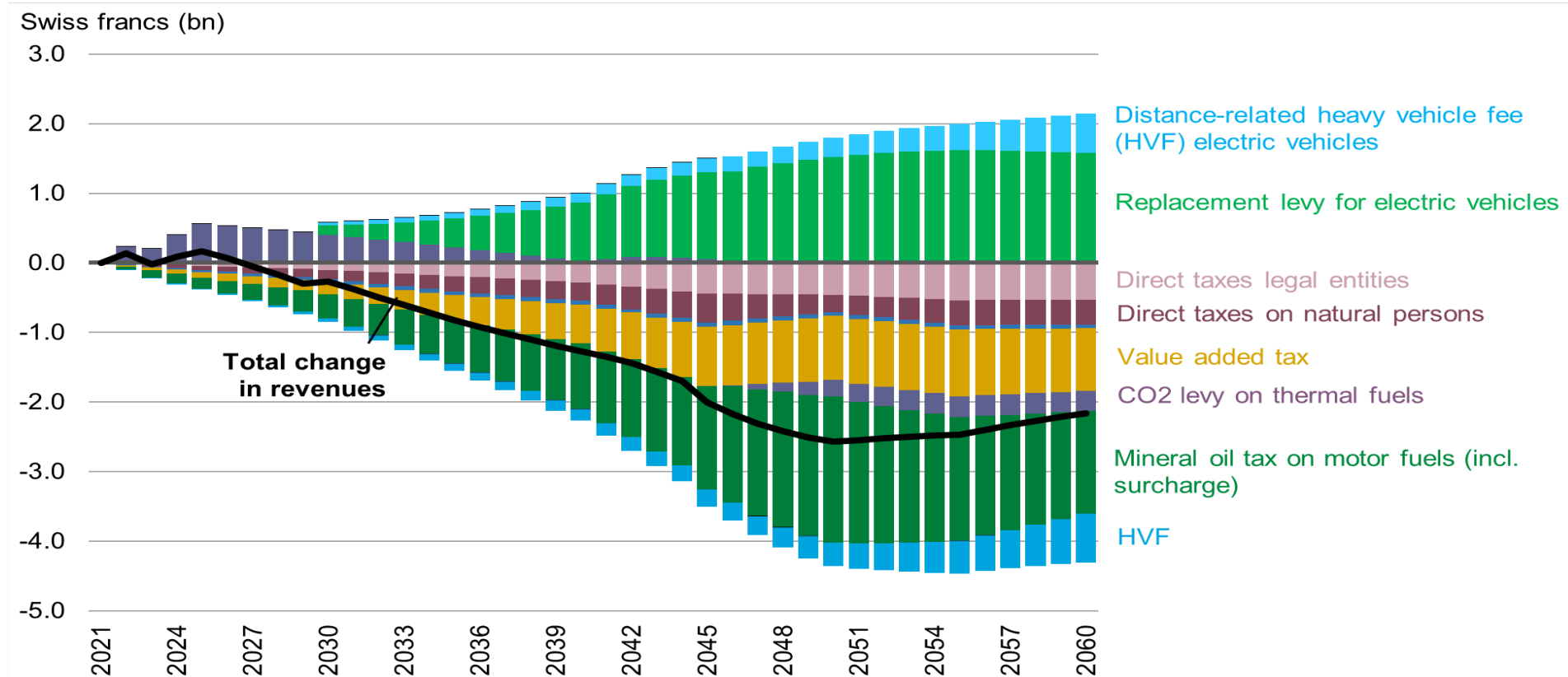


Notes: Percent differences between levels of macroeconomic aggregates in policy scenario 1 and the reference scenario in 2060.



# Energy transition decreases revenue growth

Impact of climate mitigation measures on federal revenues compared to the reference scenario (in CHF bn at 2021 prices)

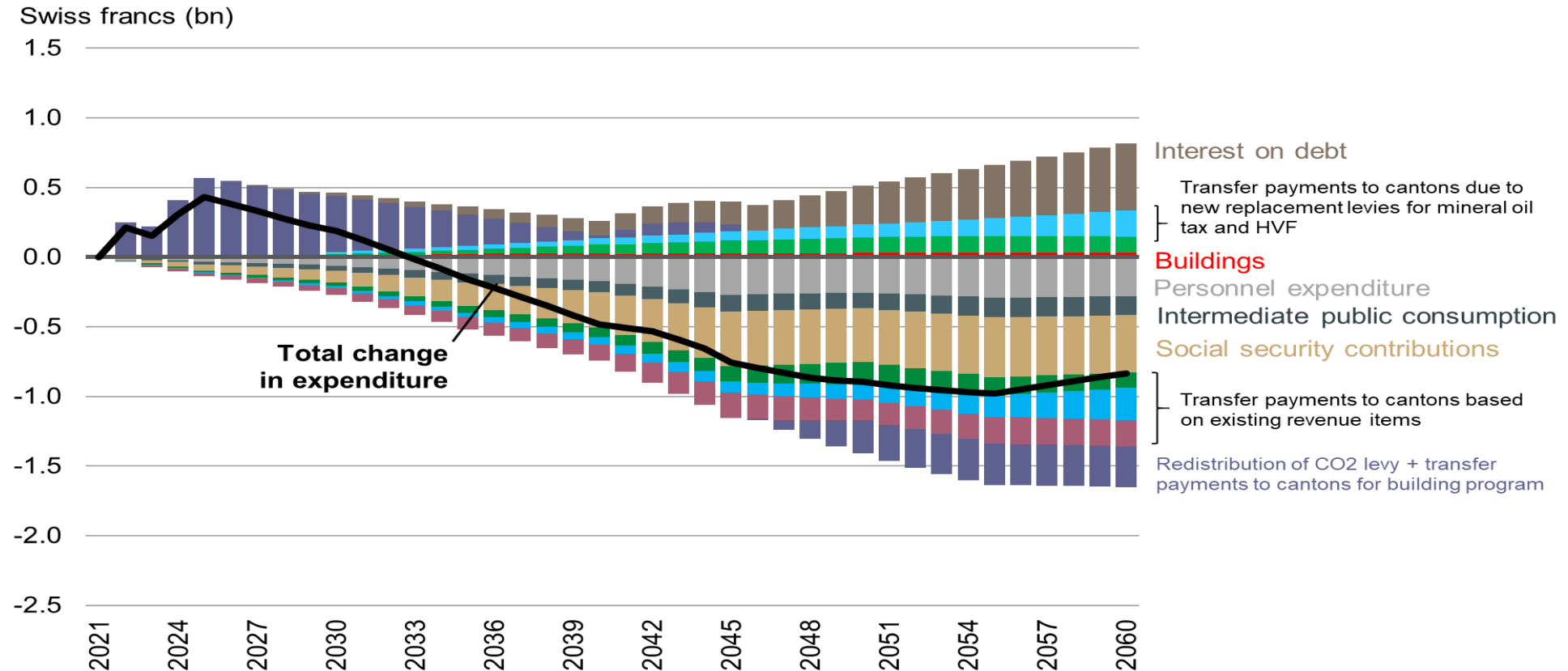


Notes: Absolute differences between revenue in policy scenario 1 and the reference scenario in billions of francs at 2021 prices. In 2060, revenues in the policy scenario are about CHF 2.2 billion lower than in the reference scenario, i.e. **1.7% of total ordinary revenues of the federal government in 2060**.



# Energy transition decreases expenditure growth

Impact of climate mitigation measures on federal expenditure compared to the reference scenario (in CHF bn at 2021 prices)

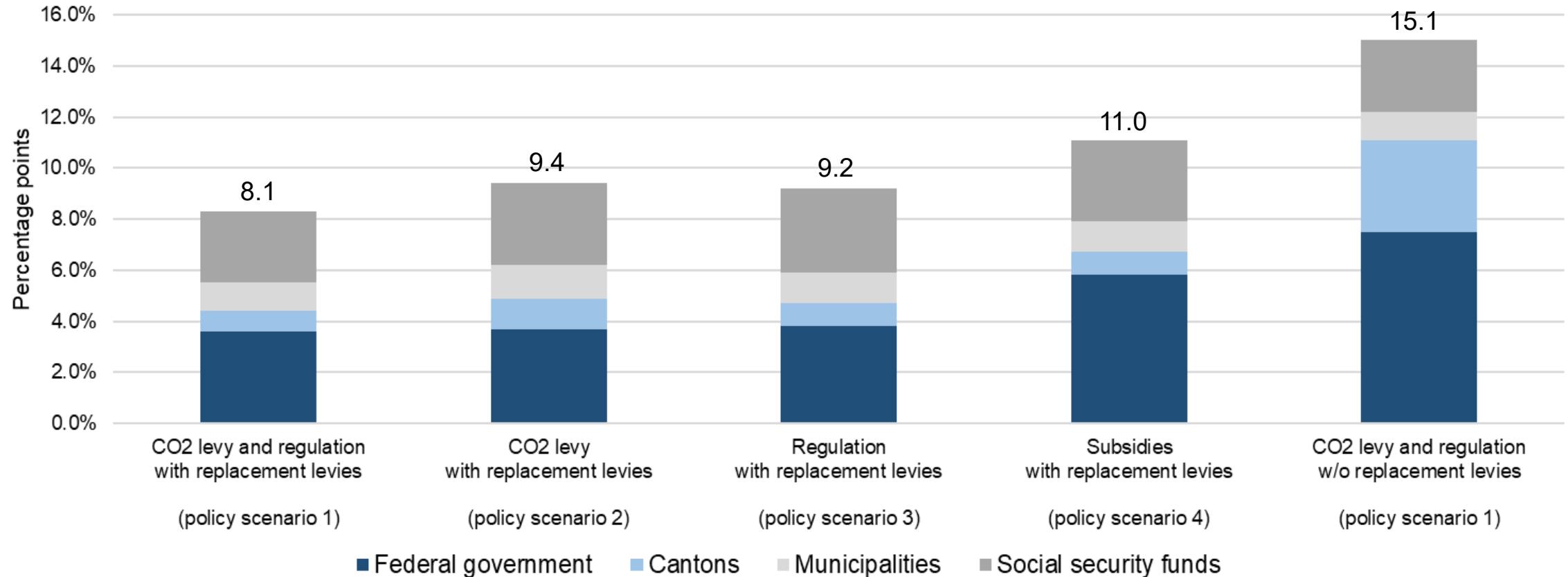


Notes: Absolute differences between expenditure in policy scenario 1 and the reference scenario in billions of francs at 2021 prices. Transfers to cantons include the cantonal shares of mineral oil tax, the HVF and direct federal tax. In 2060, expenditures in the policy scenario are about CHF 0.9 billion lower than in the reference scenario, i.e. **0.7% of total ordinary expenditure of the federal government in 2060**.



# Energy transition increases public debt

Impact of climate mitigation measures on the debt ratio across policy scenarios compared to the reference scenario in 2060 (in percentage points)



Notes: Debt ratios are expressed as a percentage of GDP. Differences between policy scenarios and the reference scenario are in percentage points.





# Main results from Swiss pilot study

## Take-aways

- About  $\frac{3}{4}$  of public revenues and expenditure are **exposed to climate policies**
- The **energy transition** is likely to **increase fiscal pressure** in Switzerland
- Public budgets are adversely affected on the **revenue side**, both through direct and indirect effects (slower economic growth)
- The **federal government** and **social security funds** will be hit hardest
- The introduction of **replacement levies** is crucial to compensate for revenue losses from fuel taxes during the energy transition
- The use of **subsidies** is likely to add to fiscal pressures on the **expenditure** side



# Experiences from Swiss pilot study

## Take-aways

- **Goal:** Provide policymakers with insights into long-term structural challenges to inform the debate on the fiscal impacts of climate policies
- **Public attention:** The report was **well received** by political decision-makers across policy domains, academics, national and international experts and the media
- **Learnings:** The impact of climate policy on emissions, the economy and fiscal aggregates is complex and requires **interdisciplinary knowledge** across ministries:
  - Prerequisite: Comprehensive study by the Federal Offices of Energy and the Environment on the impact of the transition on the energy system and the economy
  - Modelling should **balance detail** and **pragmatism**
  - Provide **policy-relevant results** that are easy to communicate and emphasize the pilot nature of the study
- **Resource constraints:** Cooperation with specialized institutes (outsourcing)



# Coalition of Finance Ministers for Climate Action

## Steering Group on Revamping Economic Analysis and Modelling for Climate Leadership

- Initiative under Helsinki Principle 4 workstream
- Building **community of practice** to advance modelling tools and understanding available to Ministries of Finance to integrate climate into the macroeconomic analyses and fiscal planning
- Products based on country members' experiences to be released in 2025:
  - **Global survey** to understand existing analytical capabilities and gaps for advancing climate action
  - **Compendium of practice** on analytical tools to estimate the macroeconomic and fiscal impacts of physical, transition and adaptation risks
  - **Thematic reports** on pressing policy questions (fiscal challenges, physical and adaptation risks, green industrial and innovation strategies, etc.)