

Outlook for the APEC region from IEEJ's Asia/World Energy Outlook 2012

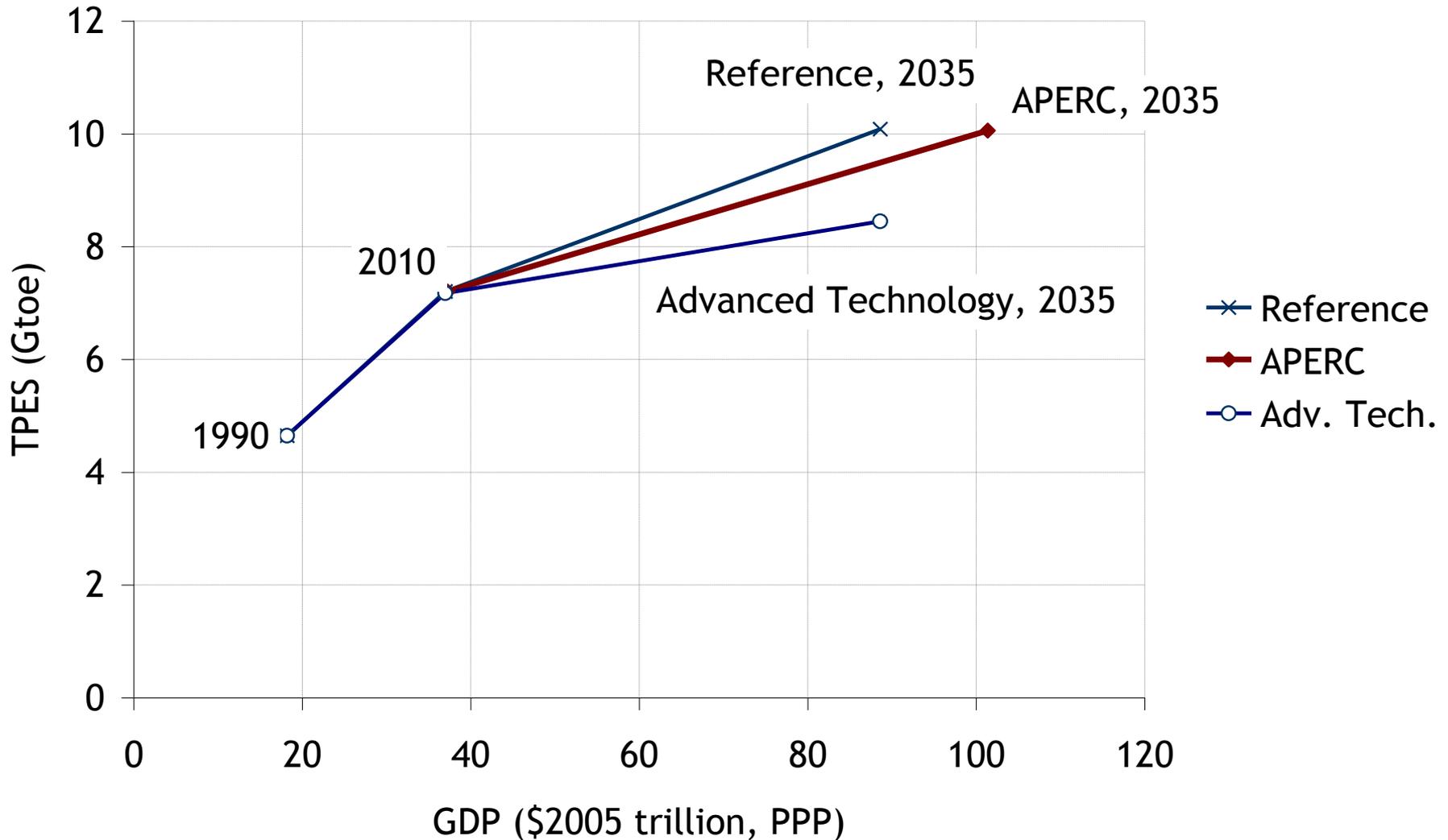
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Is IEEJ's Reference Scenario conservative about efficiency improvement?

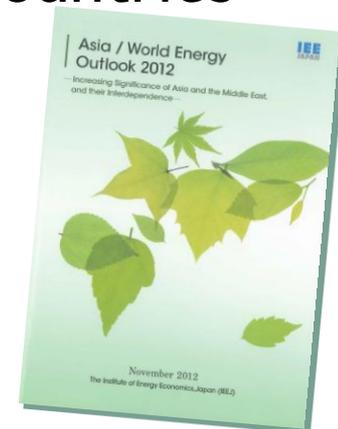


IEEJ's Asia/World Energy Outlook 2012

—Increasing Significance of Asia and the Middle East, and their Interdependence—

Energy supply and demand outlook for 2035 in the world and Asia, in particular

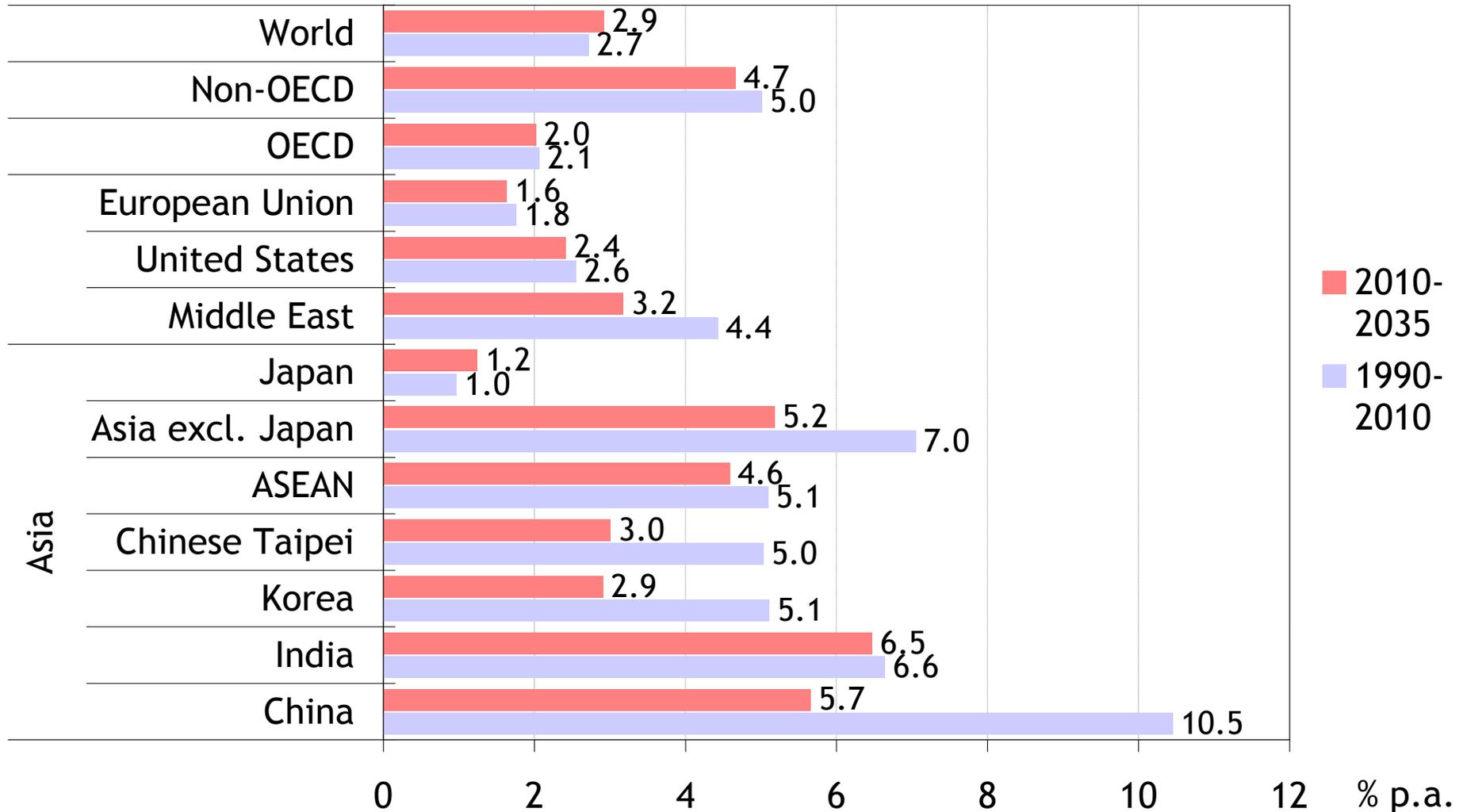
- Two major scenarios—“Reference Scenario” and “Advanced Technology Scenario”—and derivative cases
- Supplemental outlook for 2050
- Focuses in the 2012 edition: analyses of major countries in Asia and the Middle East
 - Energy and economic situation, and policies
 - Fossil fuels, nuclear, renewables and energy efficiency
 - CO₂ emissions
 - Investments



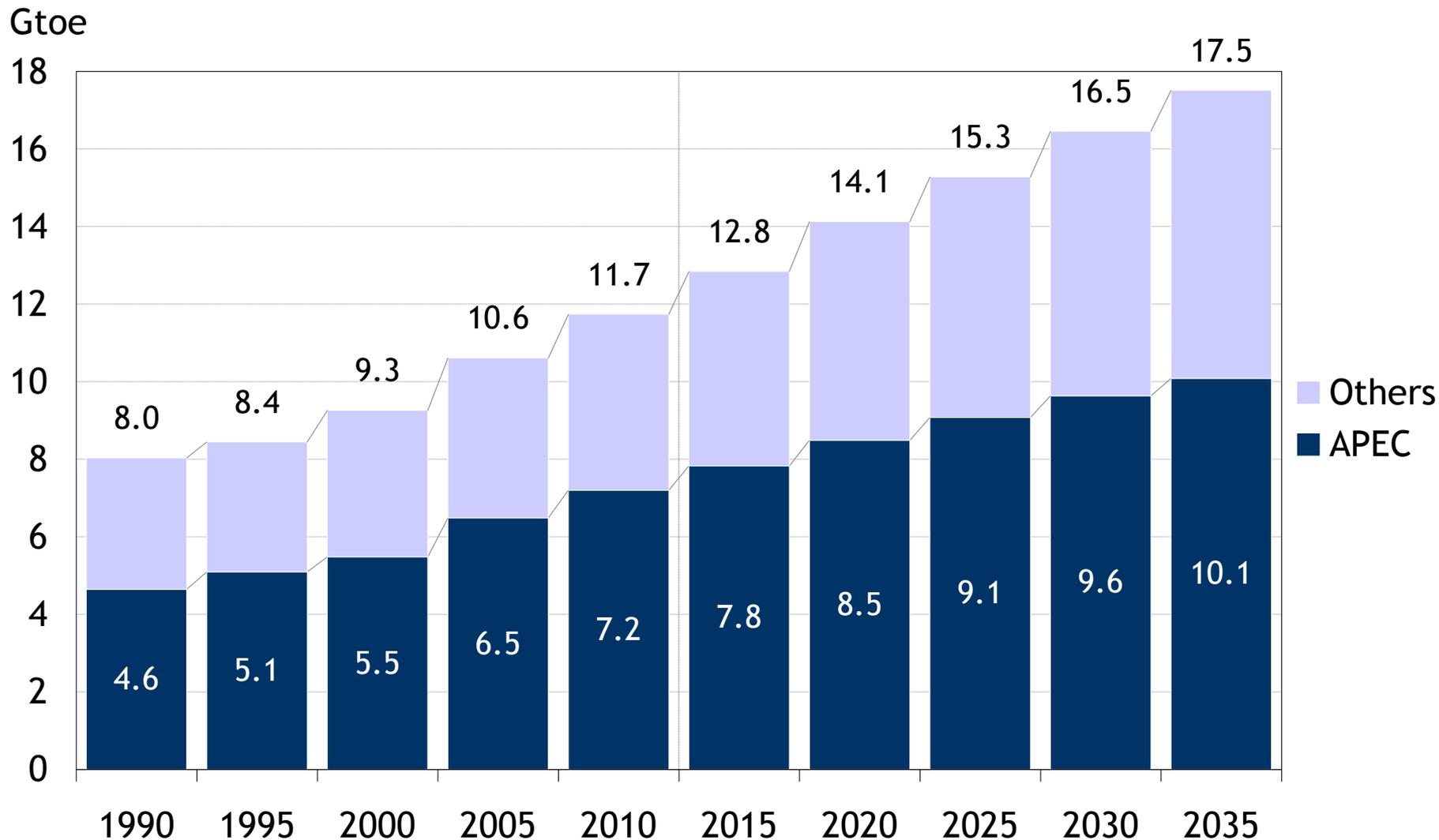
Basic Premises in the Scenarios

- The Reference Scenario assumes highly probable deployment of energy policy and technology based on the current situations
- In the Technologically Advanced Scenario, advanced low-carbon technologies become even more widespread around the world
- Population growth (2010-2035)
 - World: 0.9% p.a.
 - Asia: 0.7% p.a.
- Economic growth (2010-2035, MER): 2.9%
- International energy prices in 2035 (\$2011)
 - Oil: \$125/bbl
 - Natural gas, Japan: \$14/MBtu
 - Natural gas, United States: \$7.1/MBtu
 - Natural gas, Europe: \$13/MBtu
 - Steam coal: \$143/t

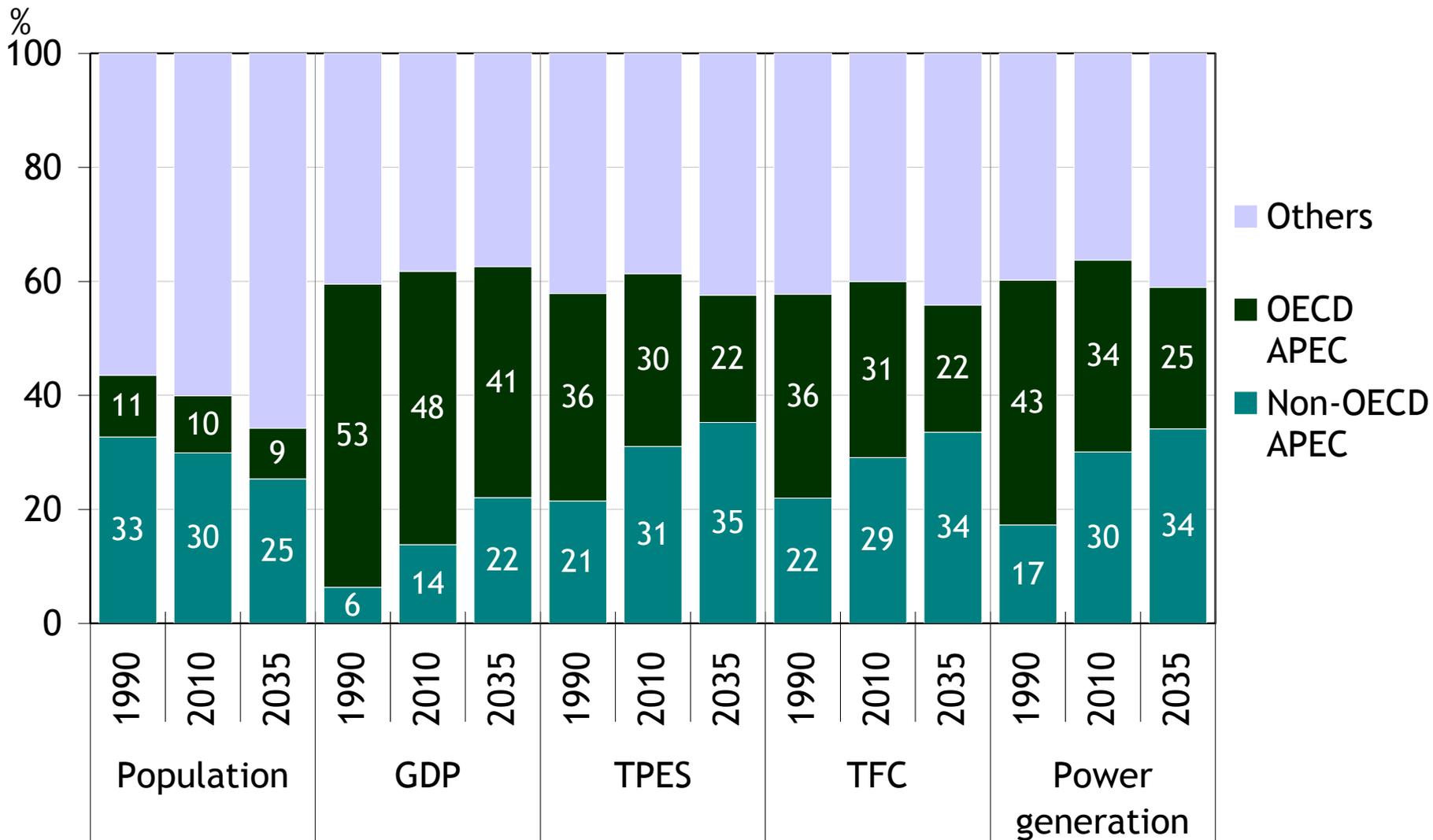
Global economy sees healthy growth with fast expansion in emerging economies



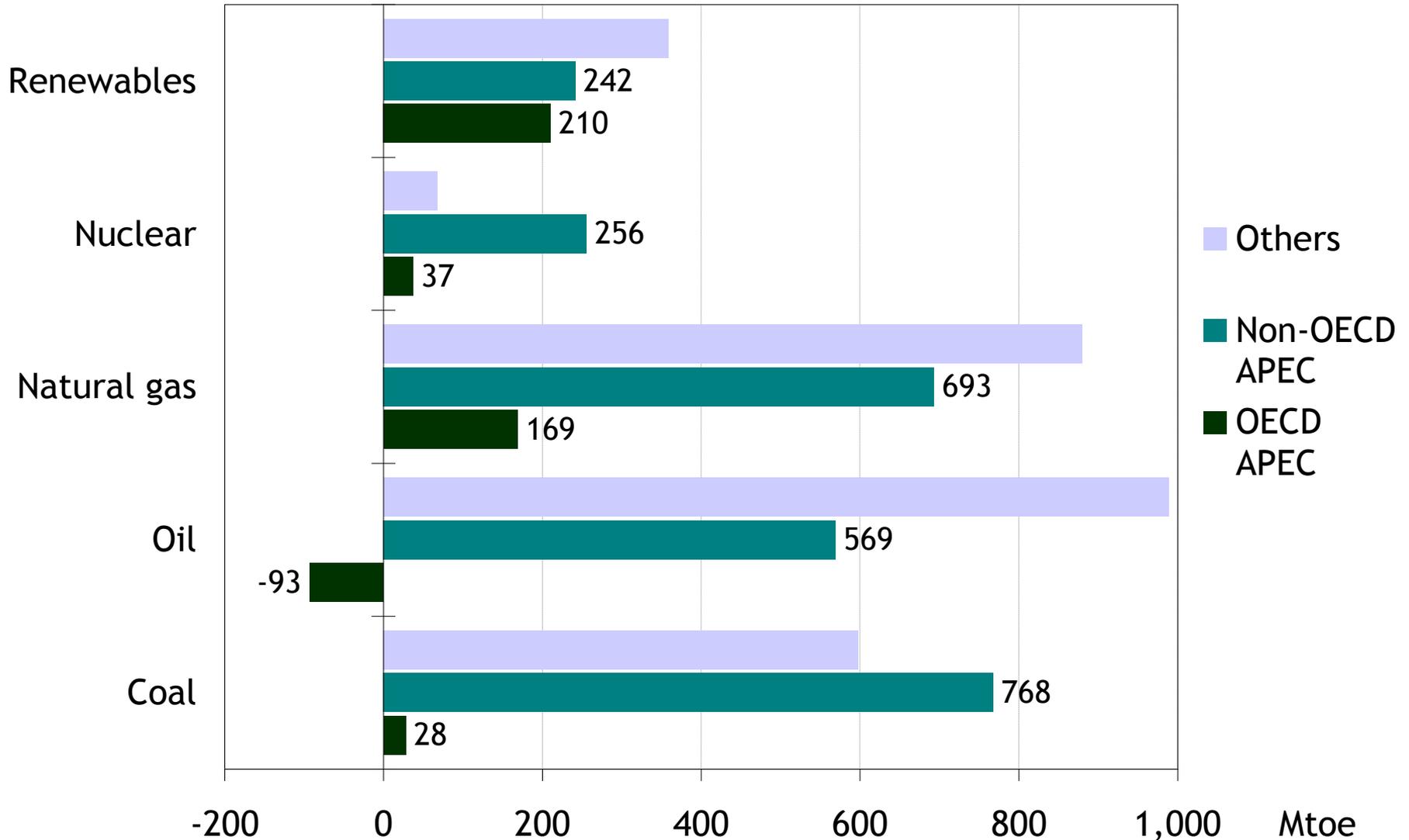
Primary energy supply keeps sharp increase



APEC accounts for more than half in the world in many fields

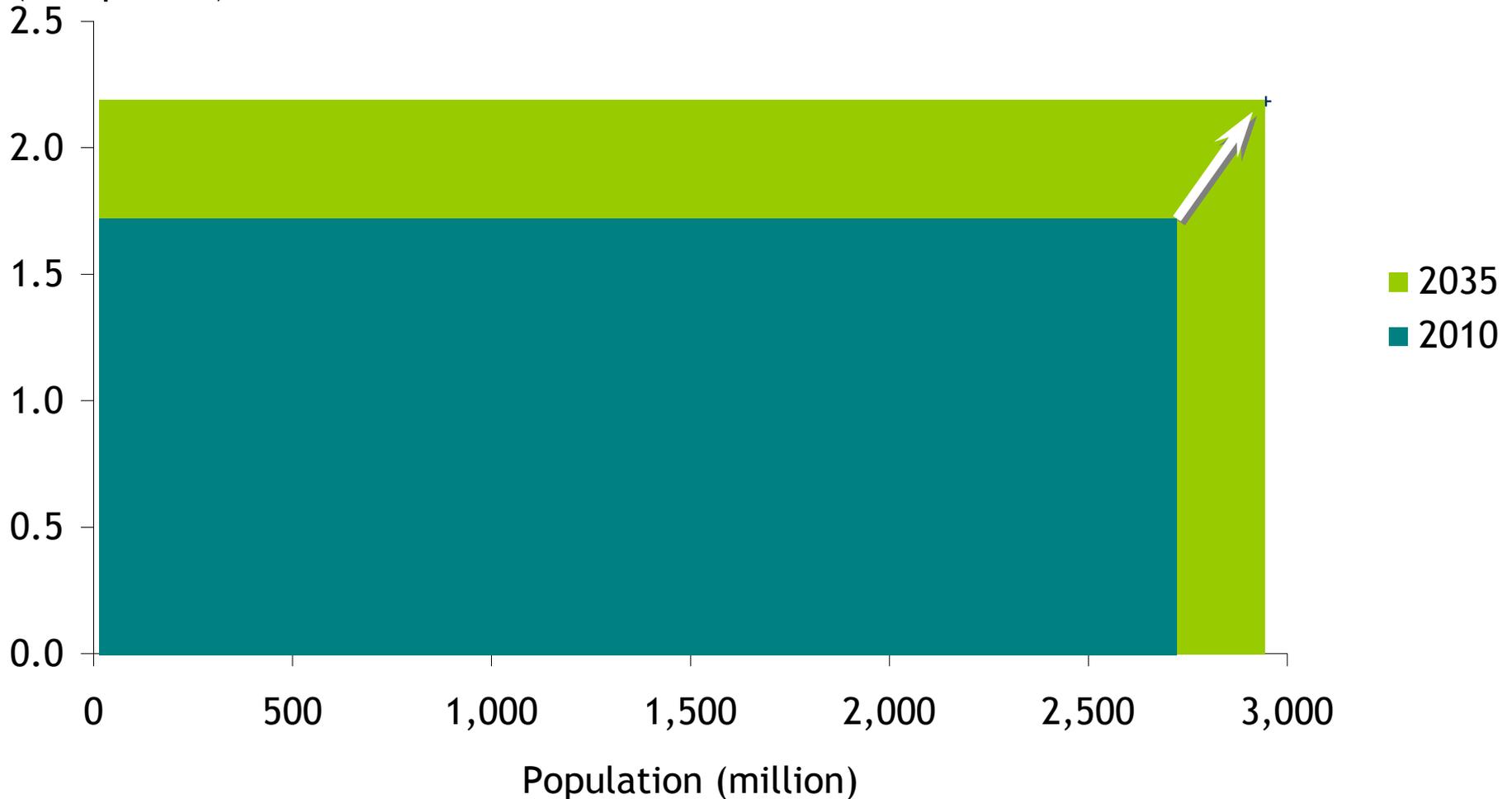


While low carbon energy grow, fossil fuel dominates primary energy supply



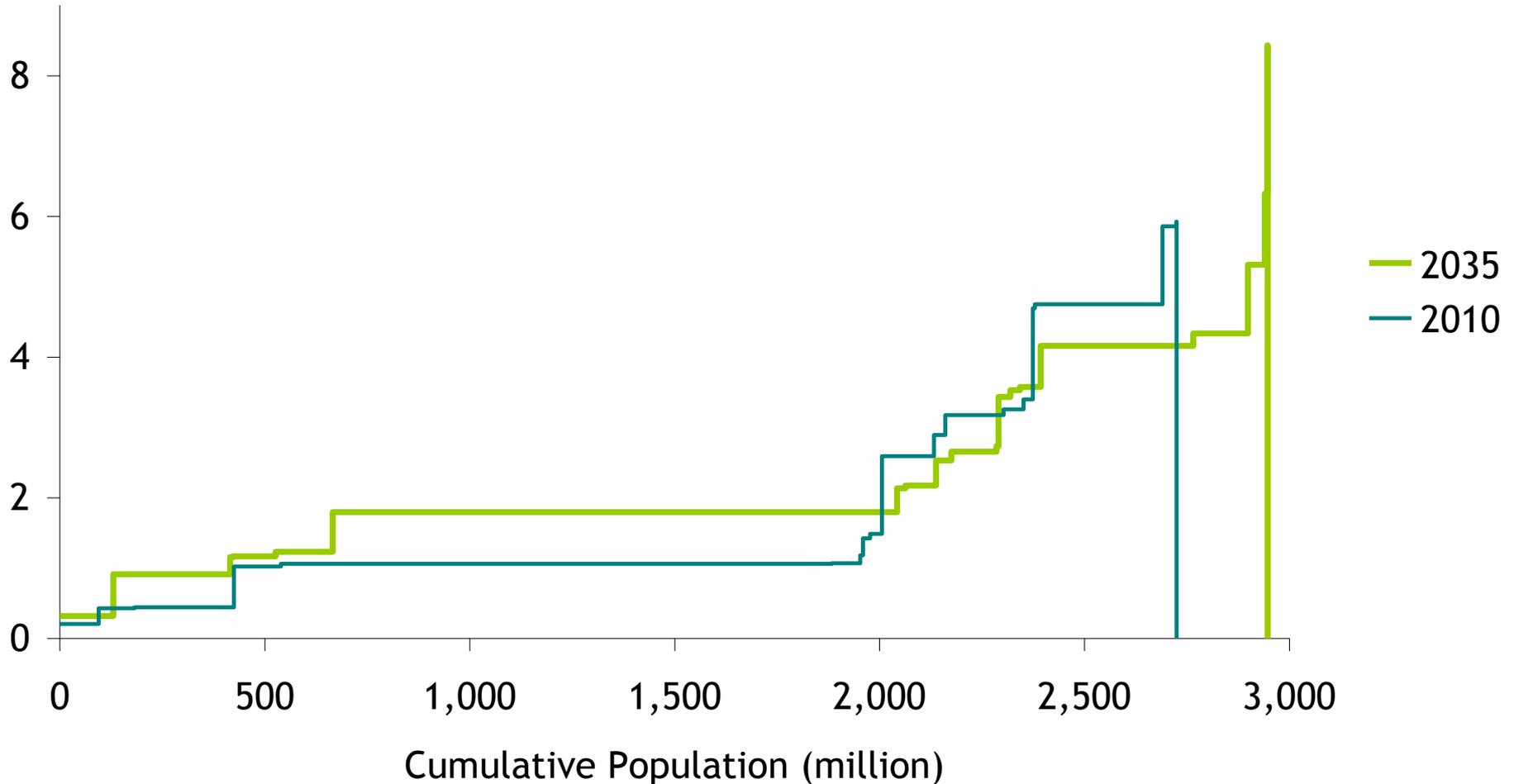
More people will consume more energy...

Final energy consumption per capita
(toe/person)



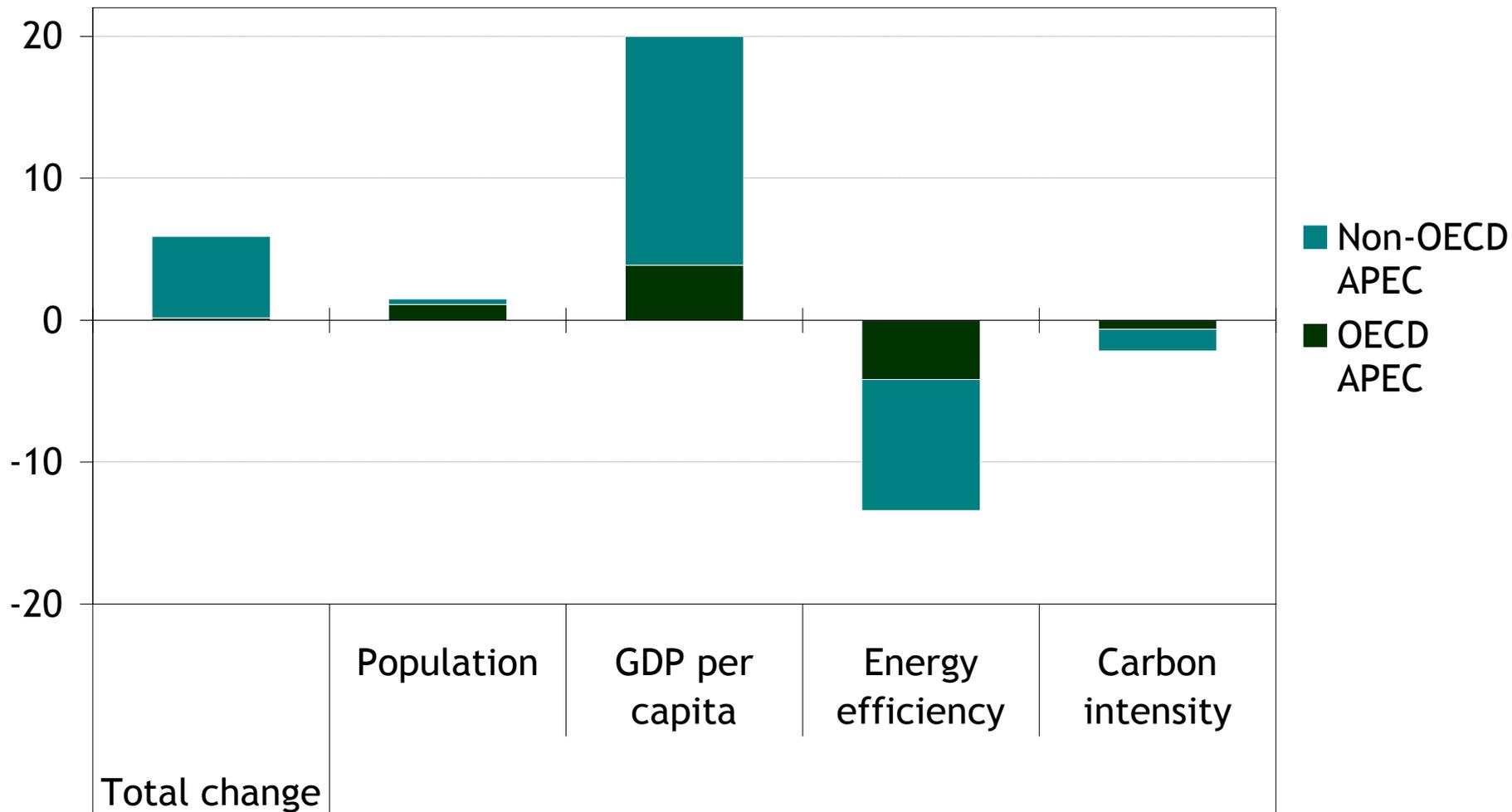
...but disparity in per capita consumption remains

Final energy consumption per capita
(toe/person)



Energy efficiency offsets most of increase in CO₂ by economic growth but not all

Gt



What is needed?

- Anyhow, targets must be reliable, coherent and continuous
 - Targets may not be dream
 - Energy is necessity; therefore insufficient and unstable energy supply results in tragedy
 - Energy infrastructure and equipment need long lead time and life time with large upfront costs
- Challenging targets should be accompanied with relevant measures
 - Although governments set target, key players are private entities not governments
 - Both cost and benefit must be clarified
 - Practice what you preach
- Perception of less attention to energy issue
 - Companies prioritise investments from various fields; capacity expansion, human resource, financial, energy, etc. within limited capital
 - People are capricious and short-sighted
 - Energy issues are regarded as socially important but not central matters for individuals often