

Energy Technology Perspectives 2012

Pathways to a Clean Energy System

Tracking Clean Energy Progress

Antonia Gawel

International Energy Agency



International
Energy Agency

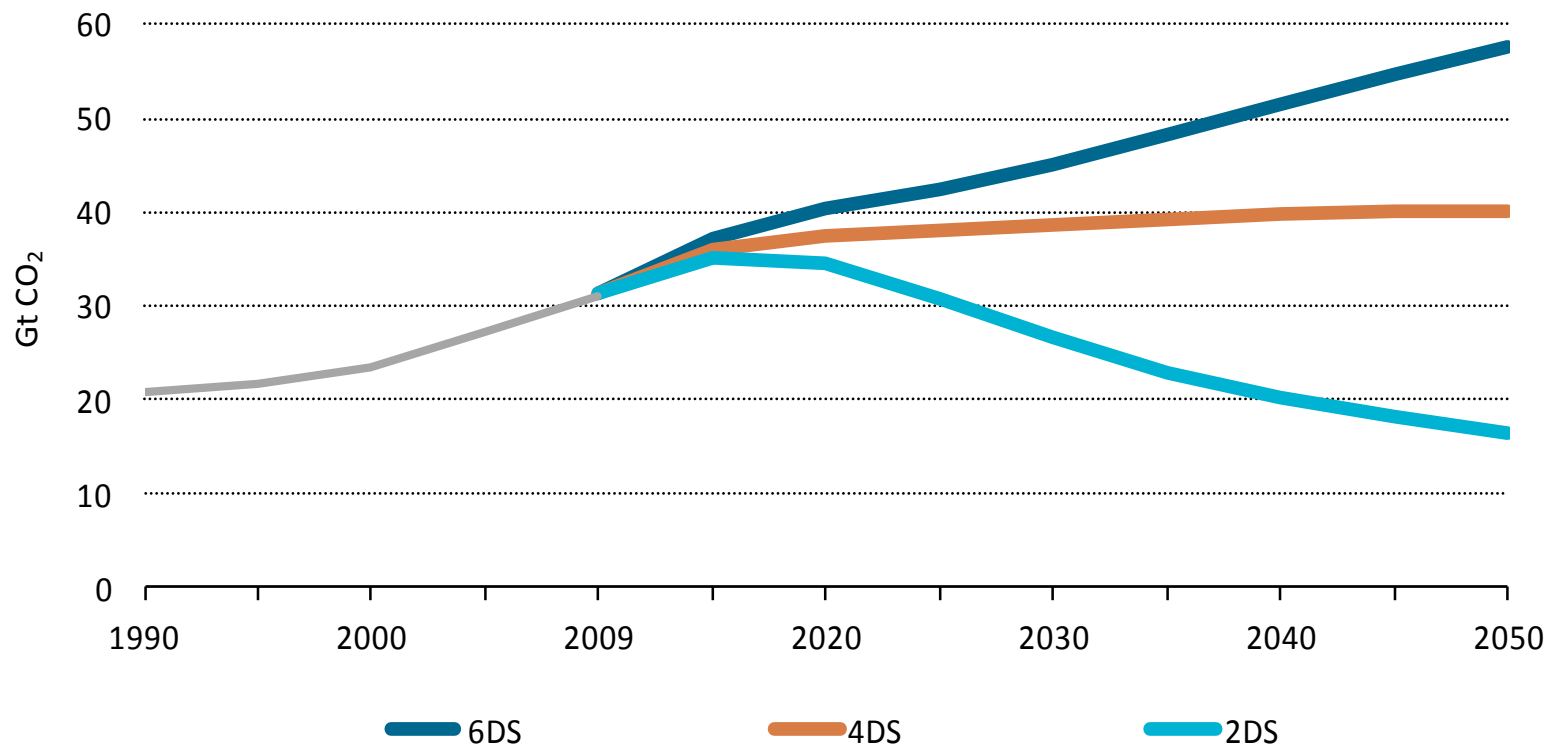
© OECD/IEA 2012

- The IEA's most ambitious project on technology
- Pathways to 2050
 - Which technologies?
 - What is the progress to date?
 - Necessary milestones?
 - Policies needed?

CO₂ emissions must cut in half by 2050

ETP
2012

ETP 2012 scenarios

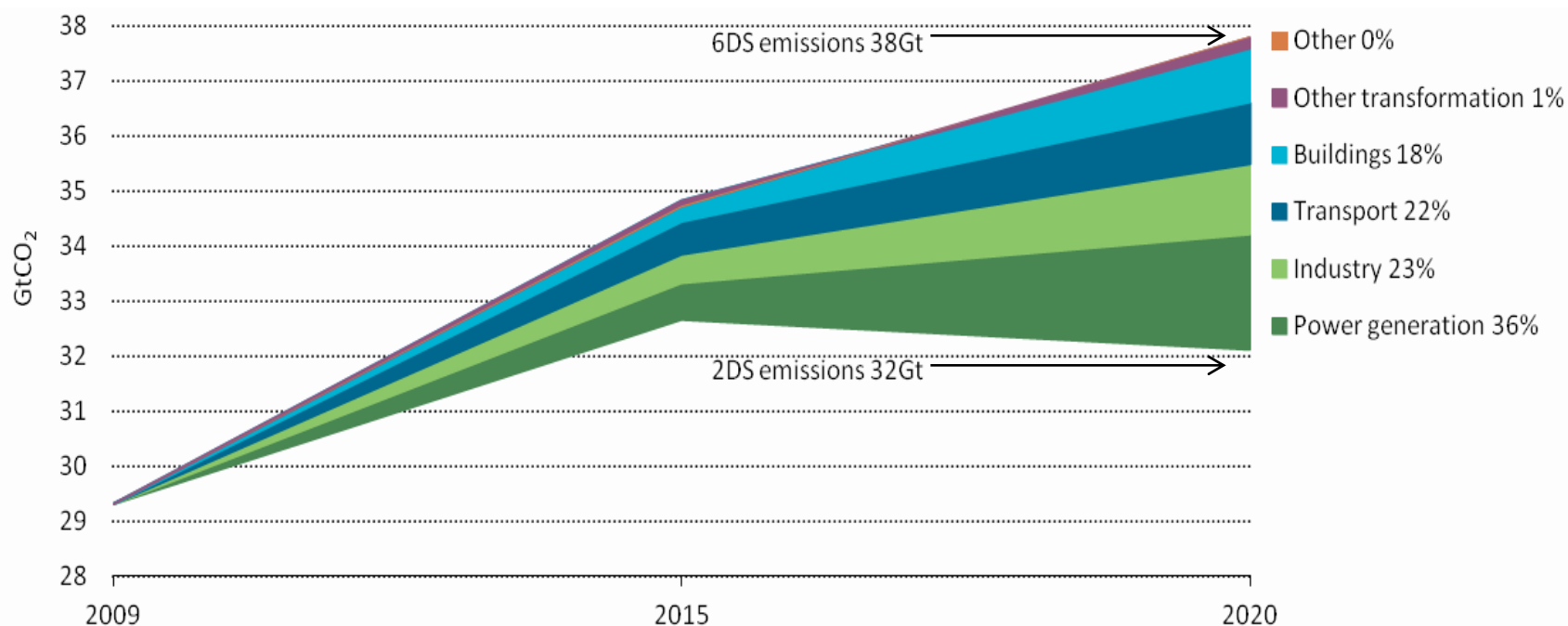


Source: preliminary results from *ETP 2012*

Action in all sectors is necessary...

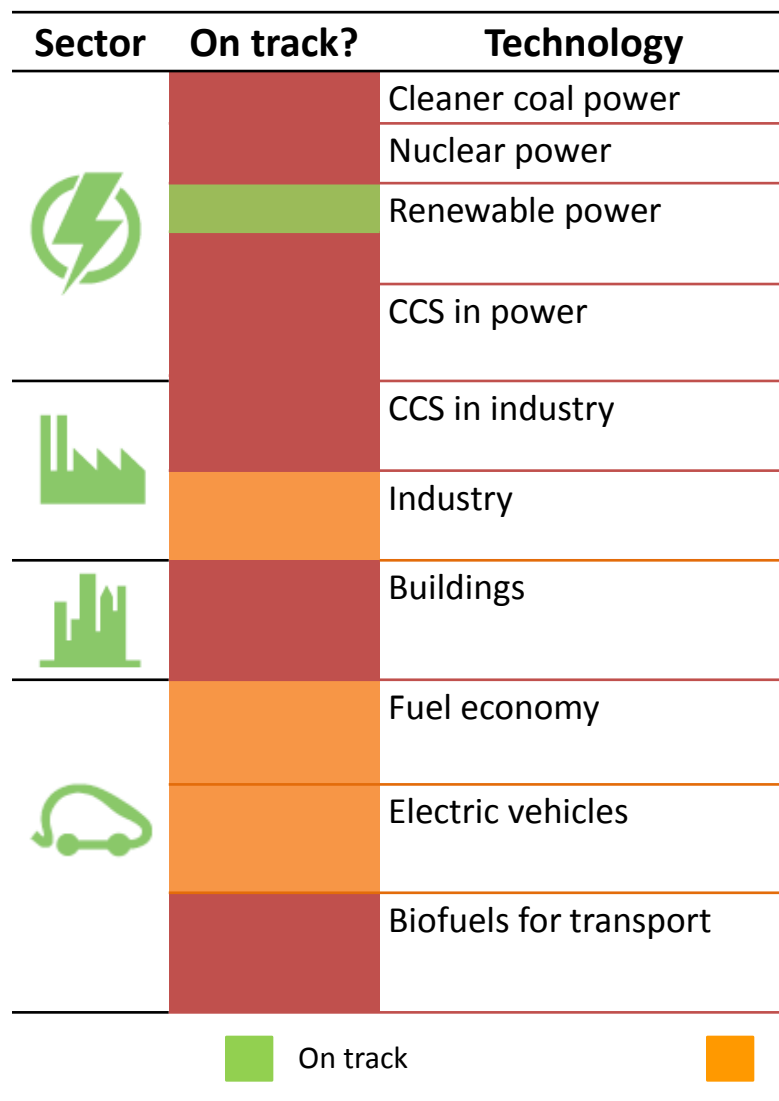
ETP
2012

Global CO₂ emissions under ETP 2012 scenarios



Progress is falling short

ETP
2012

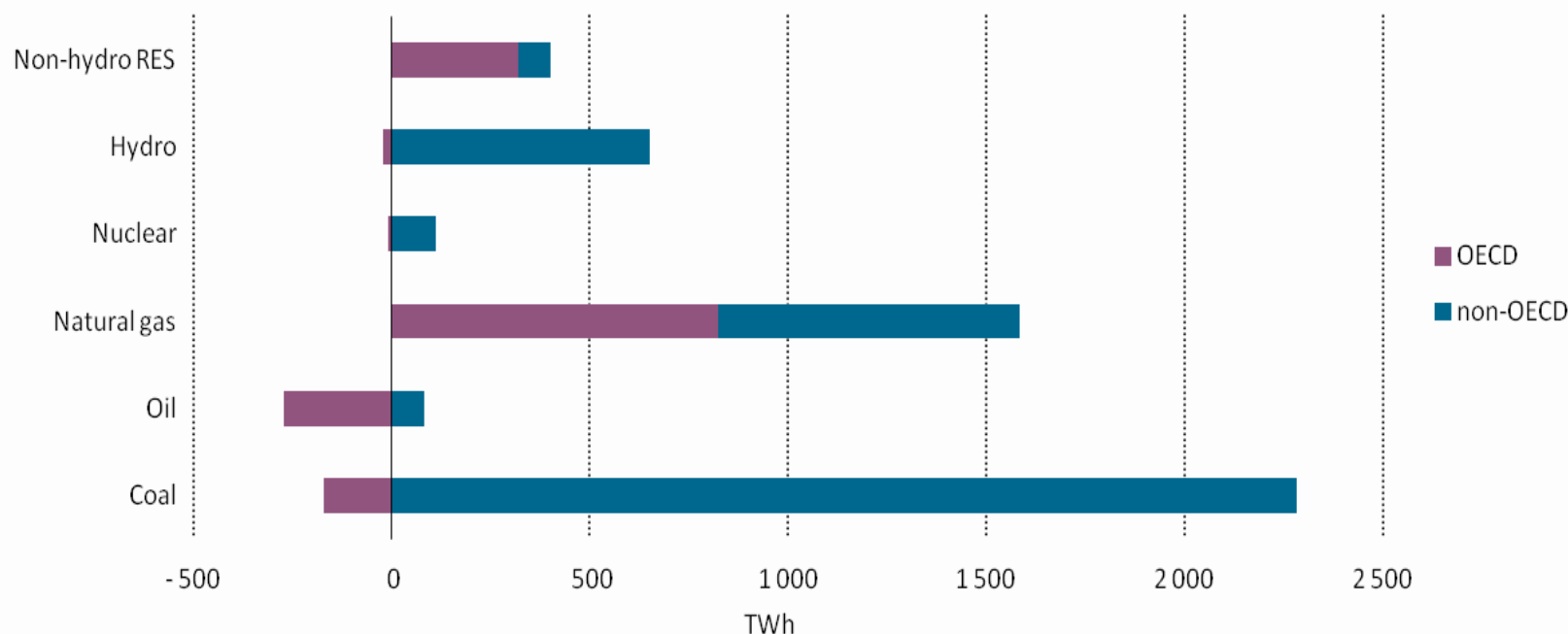


- Progress in almost all technologies areas is not where it needs to be*
- Significant action is required to get back on track*
- Energy security, economic and environmental benefits will be far reaching...*

Fossil fuels continue to dominate

ETP
2012

Changes in sources of electricity supply, 2000-09

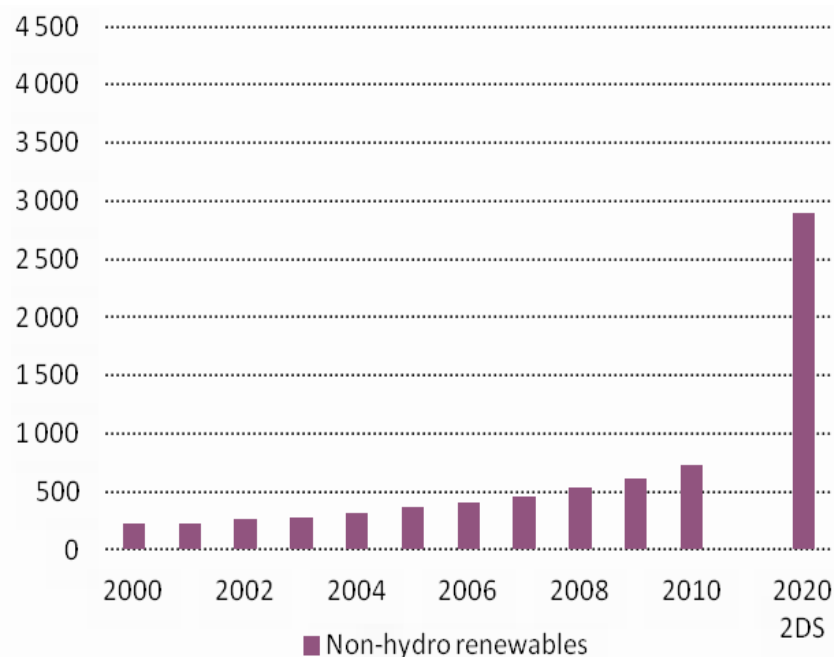
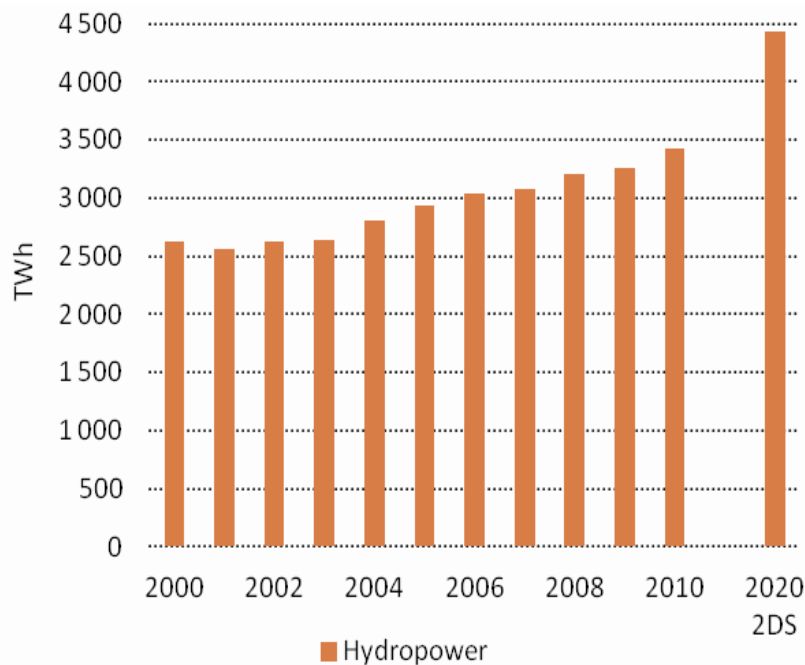


Coal remains the largest source of electricity supply, and met about half of additional electricity demand over the last decade.

Renewables have seen notable success

ETP
2012

Renewable power generation



42%

Average annual
growth in Solar PV

75%

Cost reductions in
Solar PV in just three
years in some
countries

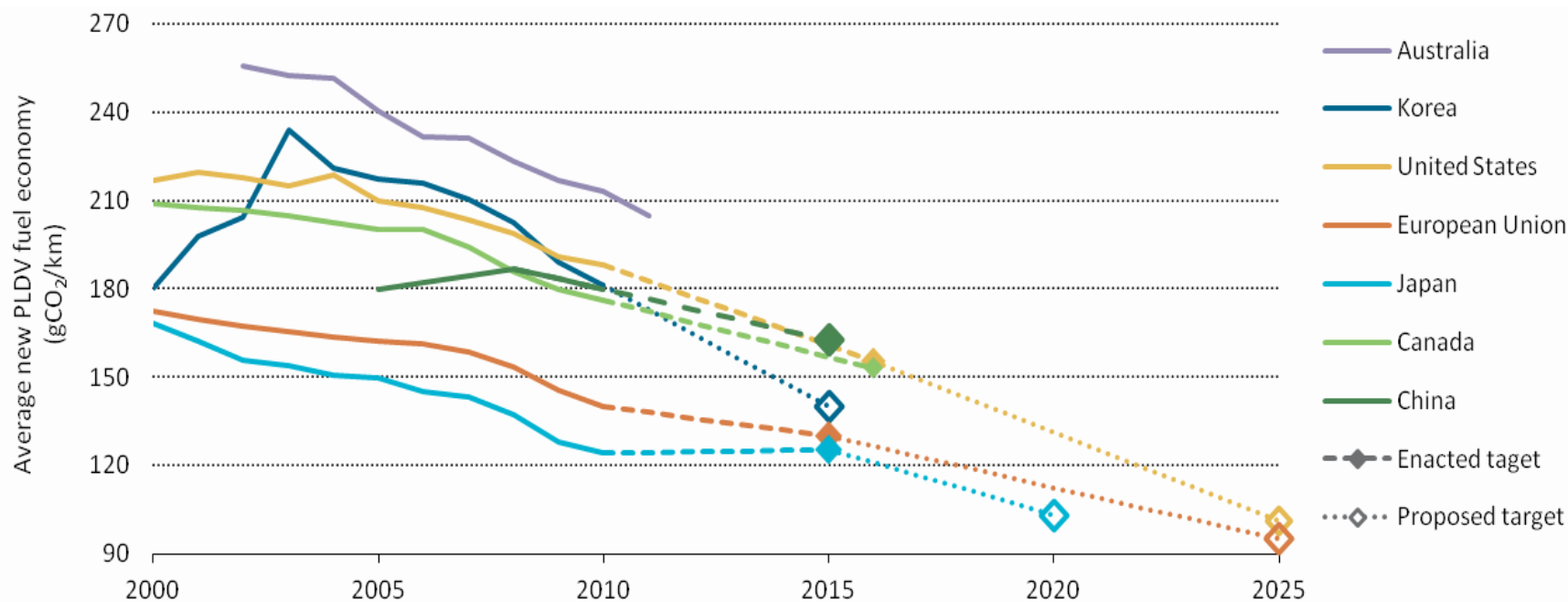
27%

Average annual
growth in wind

Fuel economy has improved

ETP
2012

Vehicle fuel economy, enacted and proposed standards

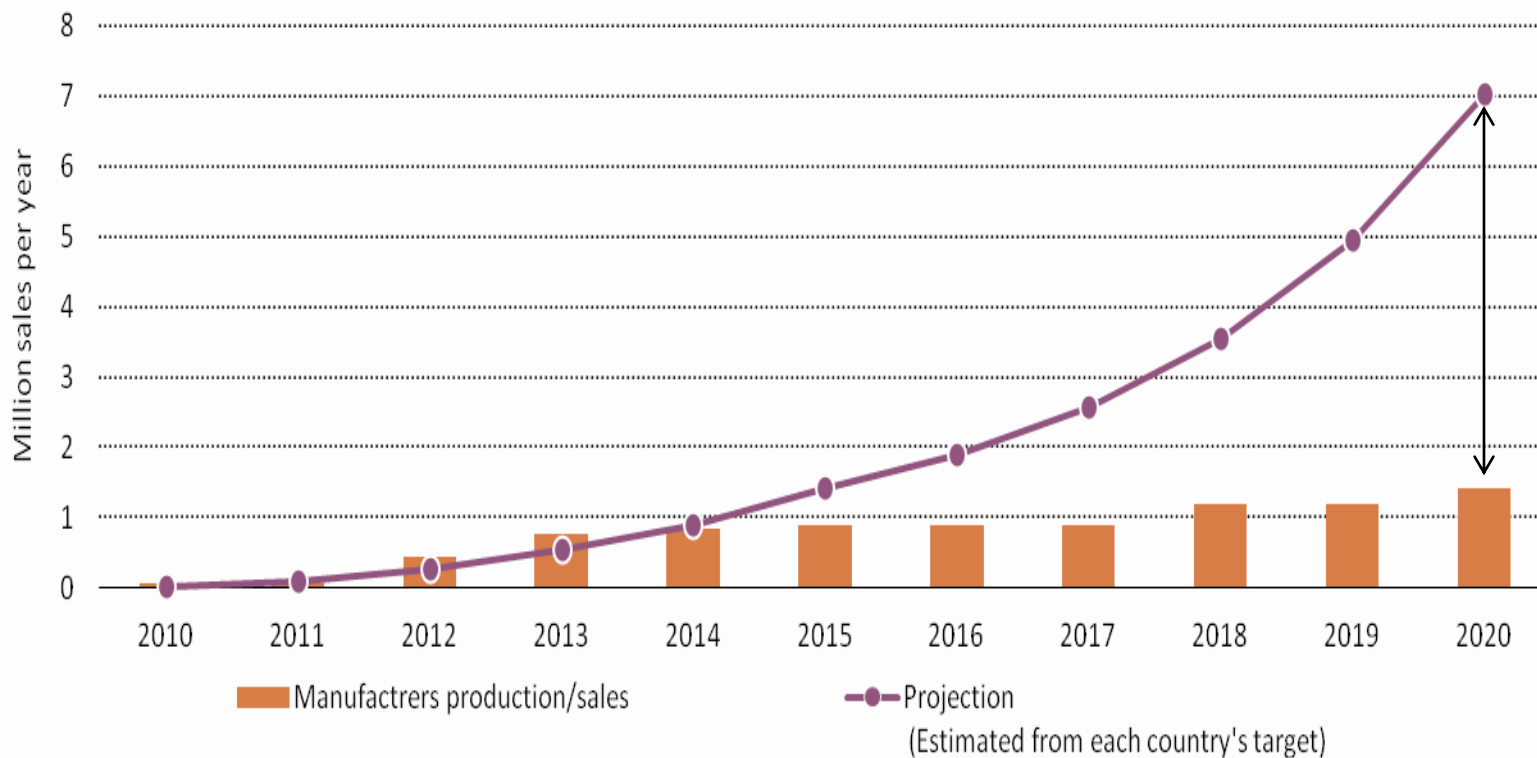


The number one opportunity over the next decade in the transport sector, but few countries have standards in place.

Translating ambitions into reality

ETP
2012

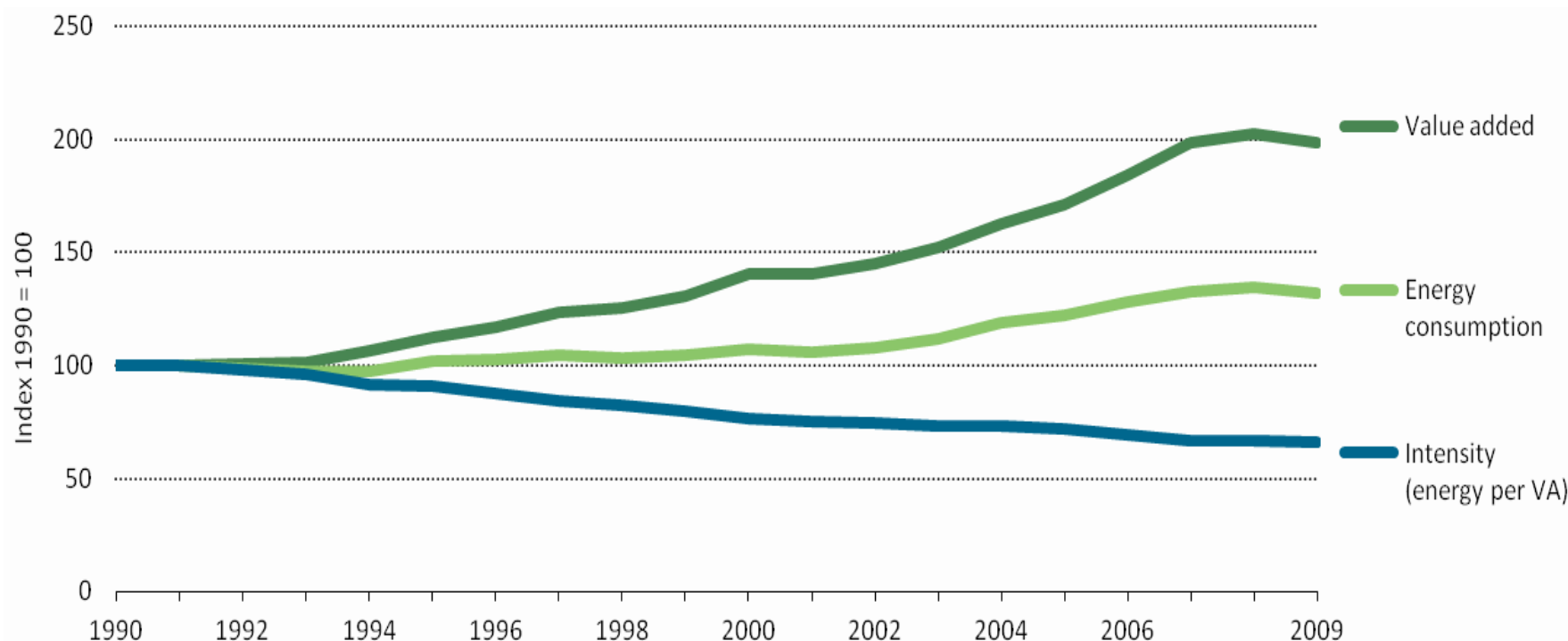
Government and manufacturer Electric Vehicle targets



Energy intensity must decline further

ETP
2012

Progress in energy intensity

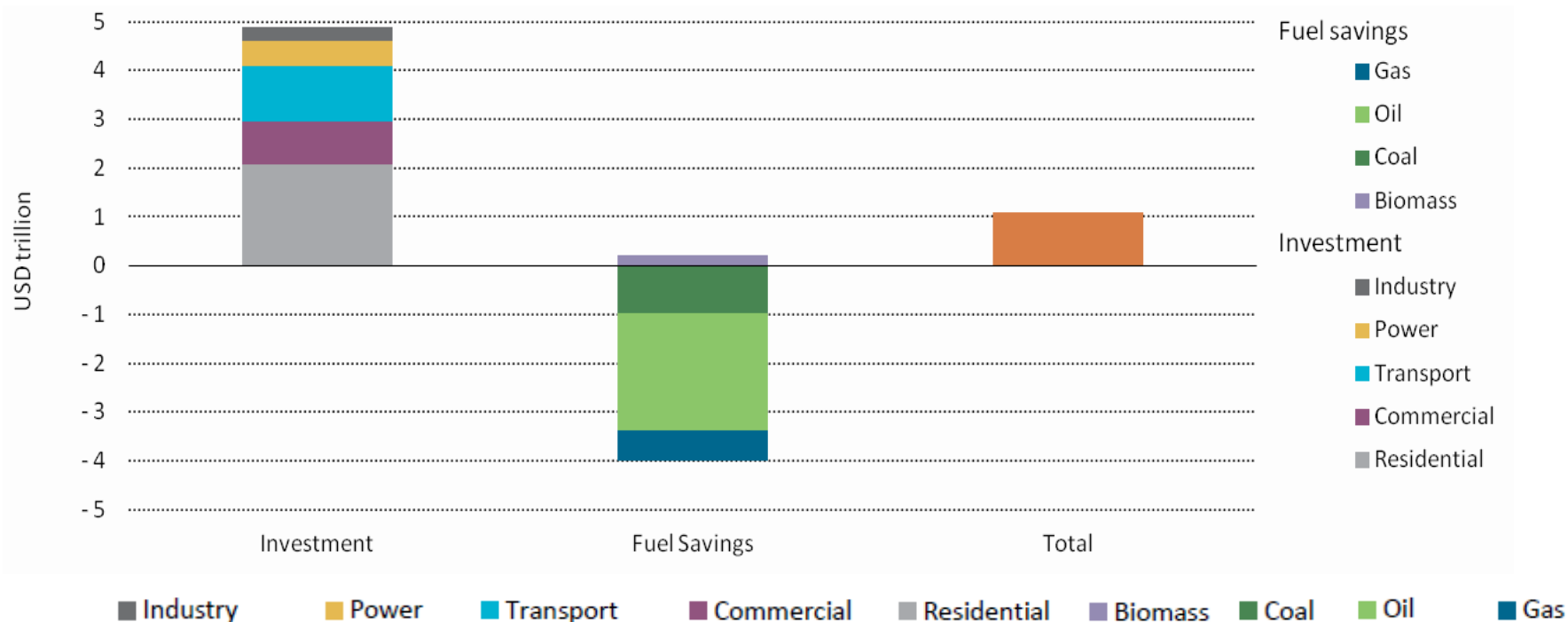


Significant potential for enhanced energy efficiency can be achieved through best available technologies.

Fuel savings and additional investments

ETP
2012

Additional investments and fuel savings in the 2DS



In the near-term, USD 5 trillion of additional investment is required, but USD 4 trillion in fuel savings is achieved.

- 1) Level the playing field for clean energy technologies
- 2) Unlock the potential of energy efficiency
- 3) Accelerate energy innovation and public research, development & demonstration

Help move clean energy from fringe, to main stream markets...

Energy Technology Perspectives 2012

Pathways to a Clean Energy System

Released June 11



International
Energy Agency

© OECD/IEA 2012