

www.iea.org

Boosting sustainable mobility and delivering on the Paris Agreement and the New Urban Agenda

COP 22, Marrakech, Morocco 12 November 2016

Jean-François Gagné Energy Technology Policy Division Head International Energy Agency



The IEA works around the world to support an accelerated clean energy transition that is

enabled by real-world SOLUTIONS supported by ANALYSIS and built on DATA

IEA supports the low-carbon transition



- **IEA: the global energy authority**
- Part of the OECD family
- **Founded in 1974 to co-ordinate a response to oil supply disruptions**
- **2015: IEA Modernisation grounded on three main pillars**
 - global energy security
 - energy cooperation and global dialogue
 - promoting an environmentally sustainable energy future
- Build on a decade of analysis on what we need to do to keep temperature increase below 2°C
- Now developing analysis on faster and deeper energy-sector decarbonisation





Sizing the scale of the challenge... ... and its solutions



Contribution of technology area to global cumulative CO₂ reductions



The carbon intensity of the global economy can be cut by ETP two-thirds through a diversified energy technology mix 2016

But the challenge increases to get from 2 degrees to "well below" 2 degrees



Energy- and process-related CO_2 emissions by sector in the 2DS



Industry and transport account for 75% of the remaining emissions in the 2DS in 2050.

ETP 2016 • OECD/IEA, 2016

Understanding transport impacts: Mode matters







Transport is the least diversified energy demand sector ETP Solutions need to be adapted transportation modes 2016

Cities are key to carbon abatement





Impacts to global cumulative CO₂ reductions

Cities represent 70% of the cost-effective CO2 abatement potential by 2050

Understanding transport impacts: Mode matters



Well-to-wheels GHG emissions in 2015, by mode



Transport is the least diversified energy demand sector ETP Solutions need to be adapted transportation modes 2016

Need to decouple activity & emissions Avoid/shift, vehicle efficiency, low carbon fuels



GHG Emissions in the 2DS, 4DS, and 6DS – 2010 to 2050



OECD transport emissions have peaked, while Non-OECD transport emissions can be brought back to current levels in 2050



Transport energy demand projections Policy and technology have great potential



Global Energy for Transport in 2015 & in 2050 in the ETP Scenarios



2DS sees a net global decline in transport energy demand, but not in all regions

Sustainable transport systems: a cheaper way to provide service



Urban transport investments



In the 2DS, by 2050 one billion cars are electric vehicles ETP while public transport travel activity more than doubles 2016

Local and national actions can make the lowcarbon transition possible



- Capacity-building programmes
- Funding mechanisms
- Regulatory frameworks alignment

Local Policies

- Integrated Land Use and Transport planning
- Enforcement of Building Codes
- Green municipal buildings and transport fleets

Business Models

- Integrated service offerings
- Energy performance contracting
- Eco-Choice labelling

SUSTAINABLE URBAN ENERGY SOLUTIONS

Leveraging all solutions to urban energy sustainability requires strong private and public action both at local and national levels

Sustainable Transport Systems analysis: the IEA Mobility Model and ETP



- Foundation of transport-related analysis in the IEA
- Projections to 2050+, 29 global regions (including most of G20), all transportation modes except pipelines
- Assess urban and non-urban activity, energy use, emissions (GHG, pollutants), infrastructure and materials demand
- Shared with OECD Directorates (TAD), ITF



Developed in the framework of a partnership with major industrial and governmental stakeholders, some academic institutions and NGOs (MoMo partnership)







Explore the data behind ETP





www.iea.org/etp

www.iea.org/statistics