

ALIGNING POLICIES FOR THE TRANSITION
TO A LOW-CARBON ECONOMY

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ISAP 2015
29 July 2015



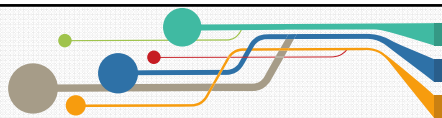
Agenda

CONTEXT

KEY MESSAGES

CONCLUSIONS AND NEXT STEPS

OECD Ministerial Council Meeting 2014



*At their Ministerial Council Meeting, OECD countries invited “**OECD, in cooperation with the IEA, the NEA and the ITF [...]** to examine **how to better align policies** across different areas* for a successful economic transition of all countries **to sustainable low-carbon and climate-resilient economies** and report to the 2015 OECD MCM.”*

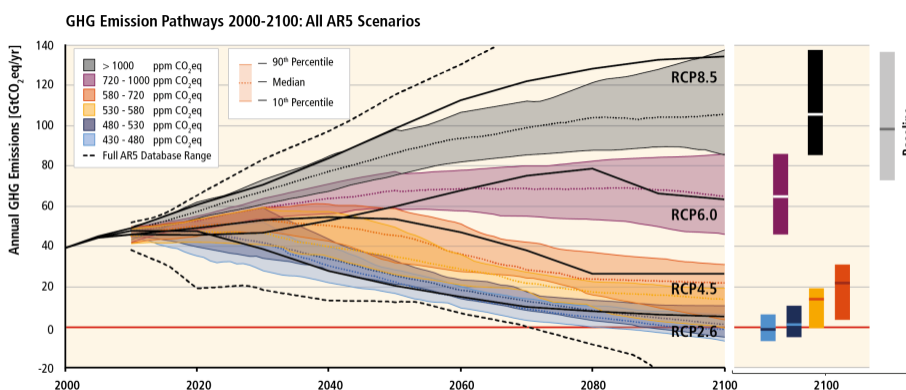
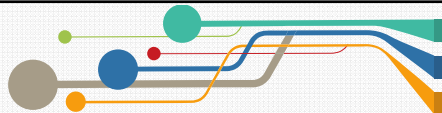
*“ *economic, fiscal, financial, competition, employment, social, environmental, energy, investment, trade, development co-operation, innovation, agriculture and sustainable food production, regional as well as urban and transport policies”*

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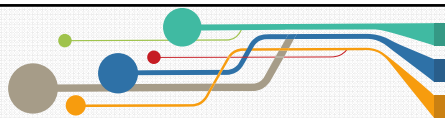
The climate challenge



Source: IPCC, 2014, Synthesis Report

Net zero emissions by the second half of the century

A three-pillar approach is necessary...

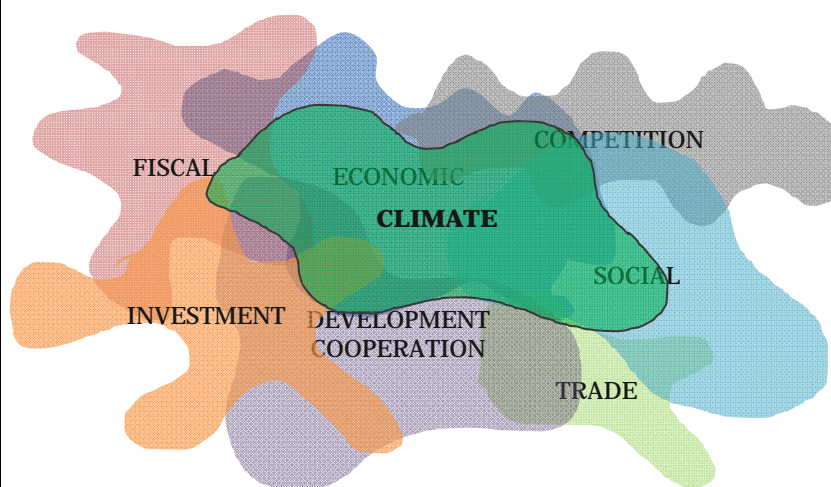
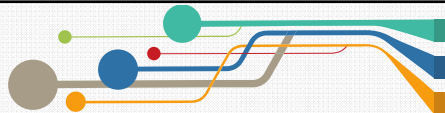


Stable and predictable climate policies:

- A **strong price on carbon**, so that low carbon investments are competitive with carbon intensive technologies.
- Strong **regulatory support** in areas where price signals are not efficient, such as energy efficiency measures.
- **Targeted support for the uptake of low-carbon technologies.**

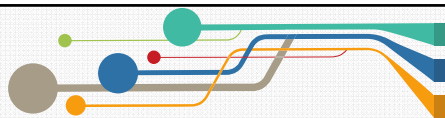
... but not sufficient

Our policy framework is wired to fossil fuels



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What is this report about?



- The first diagnosis of misalignment between overall policy frameworks and climate goals across:
 - Policy domains: investment and finance, taxation, innovation, trade and adaptation policies
 - Specific sectors: electricity, urban mobility, land use.

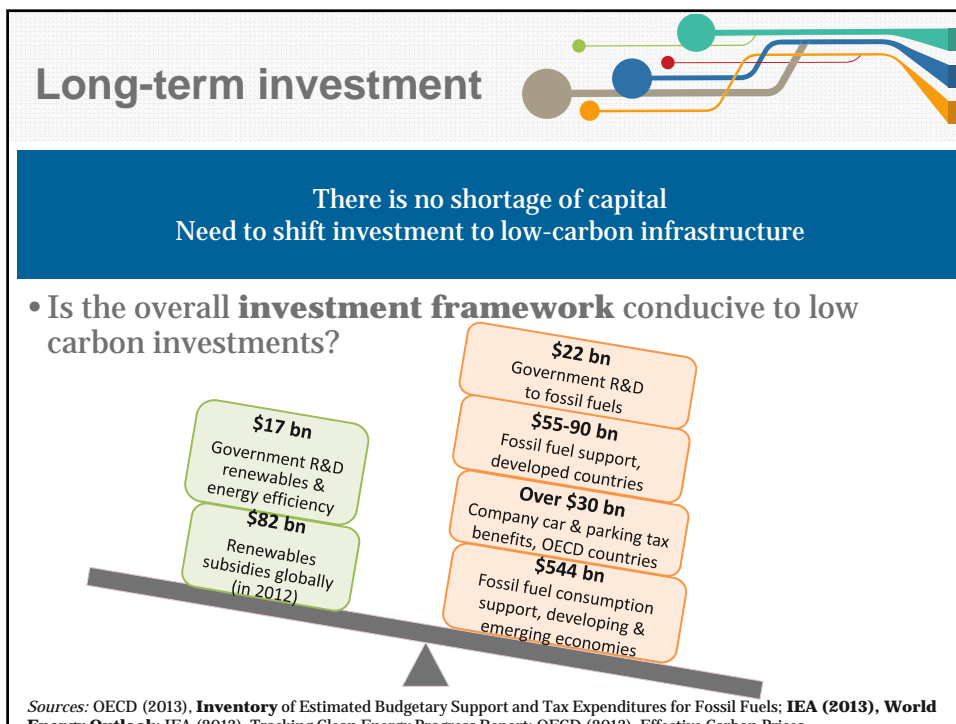
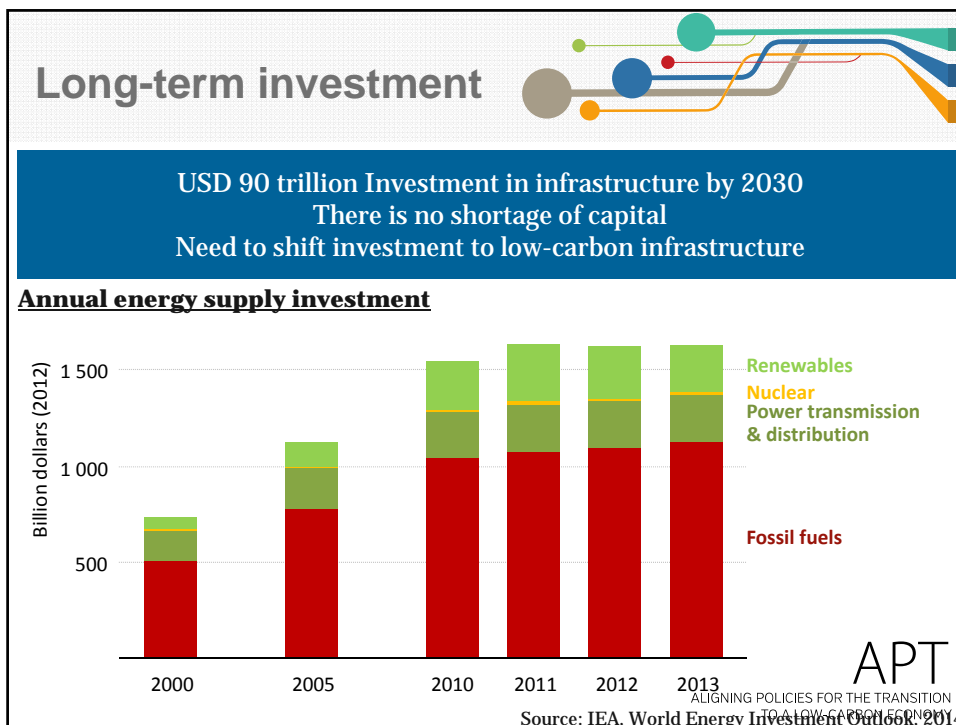
Facilitate climate action by improving the effectiveness of climate policies and lowering the cost of the transition

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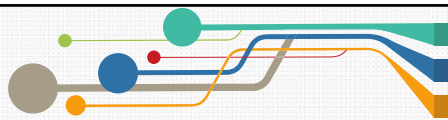
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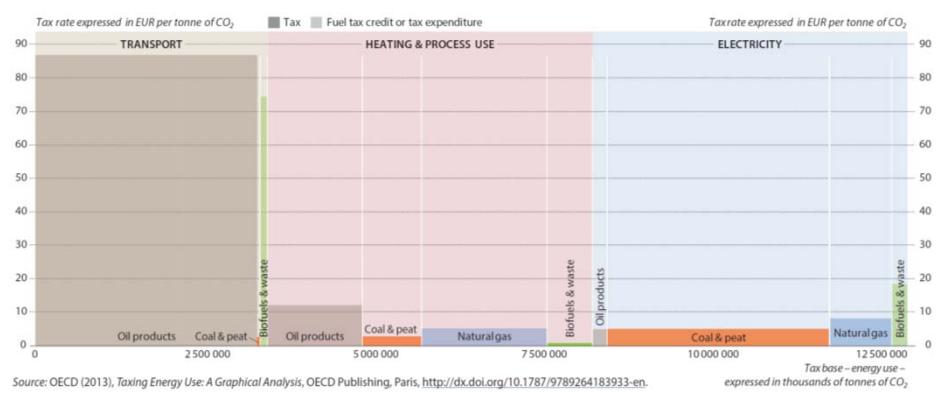
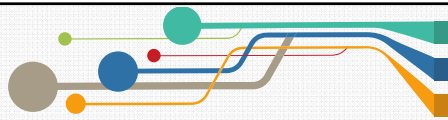
Long-term investment



There is no shortage of capital
Need to shift investment to low-carbon infrastructure

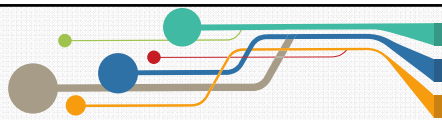
- Is the overall **investment framework** conducive to low carbon investments?
- Is the **regulatory framework for investors and financiers** conducive to low carbon, long-term investments?
- Do corporations and investors sufficiently value and disclose **climate risks and liabilities**?
- Are climate goals mainstreamed in **public spending and development policies**?

Taxation of energy in the OECD area on a carbon content basis



Source: OECD (2013), *Taxing Energy Use: A Graphical Analysis*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264183933-en>.

Taxation: looking at energy and beyond



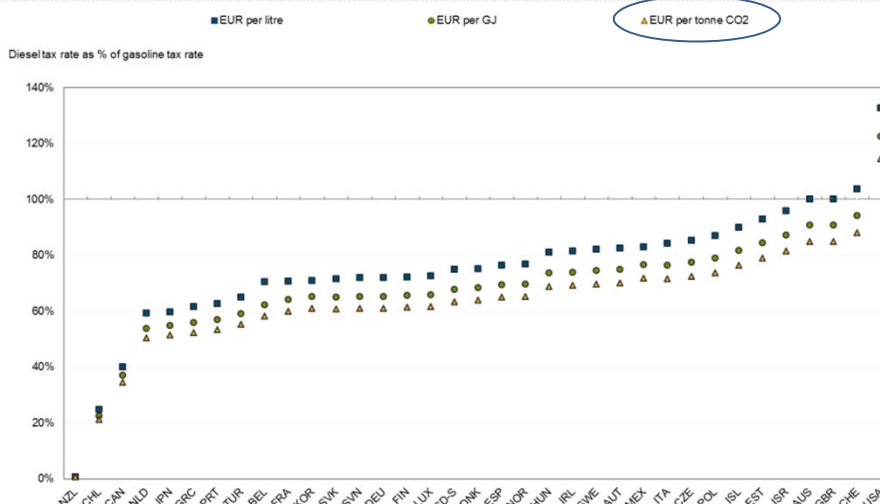
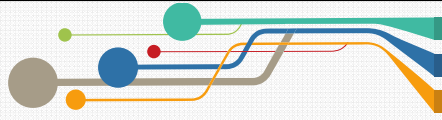
Taxes and tax expenditures send multitude of signals to companies and households

- Are **energy-related taxes and tax expenditures** conducive to low-carbon choices?
 - Fossil Fuel Subsidies - Taxing Energy Use – Gasoline/Diesel
 - Are there misalignments **in tax provisions** outside energy?
 - Company cars and commuting expenses – Corporate income tax provisions (preliminary) – Property and land taxes
 - Could the low-carbon transition **affect future tax revenues**?
- Further research on corporate income tax codes (2015)

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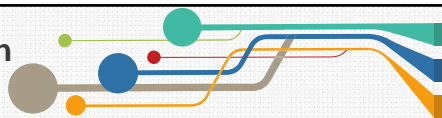
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Differential tax treatment of diesel and gasoline



Harding, M. (2014a), "The diesel differential: Differences in the tax treatment of gasoline and diesel for road use", *OECD Taxation Working Papers*, No. 21, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jz14cd7hk6b-en>

Aligning innovation policies with climate policy dynamics



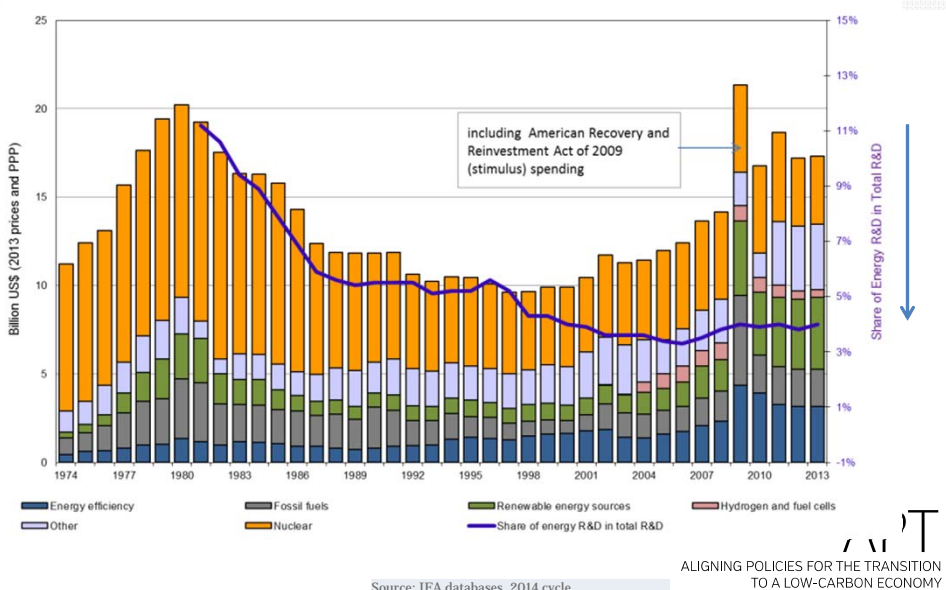
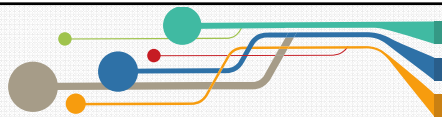
Innovation needed to bring low-GHG technologies and practices to market, and allow new dynamic firms to emerge

- Are **public RD&D expenditures** measuring up against the low-carbon transition challenge?
- Are **innovation incentives** conducive to competition by new entrants?
- Could the **governance of demand-side** innovation policy be improved?
- Should targeted policies address **any skill gap** for the low-carbon transition?

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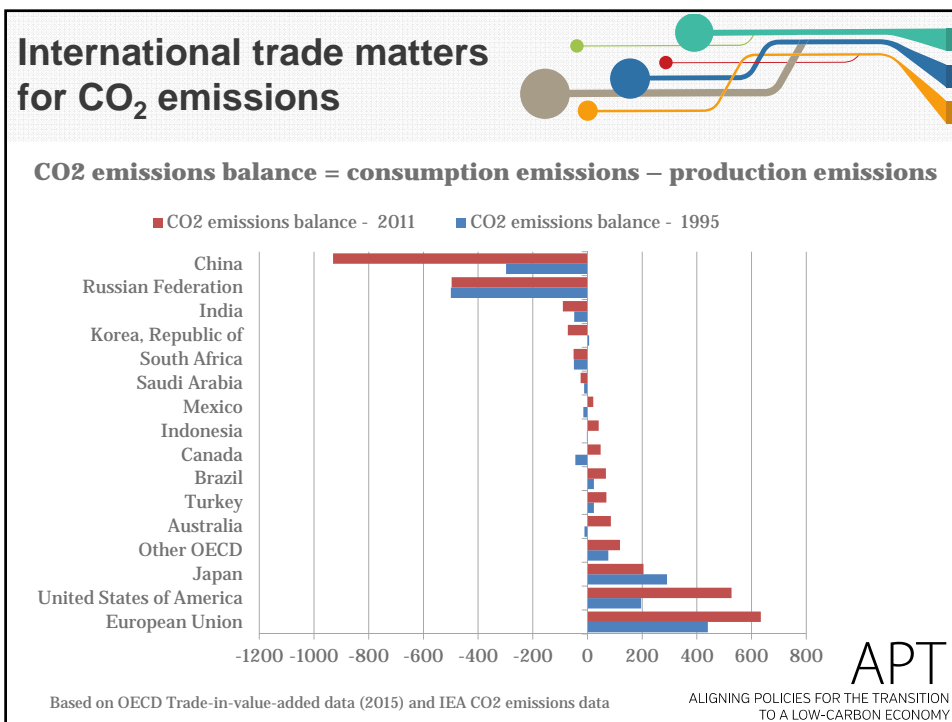
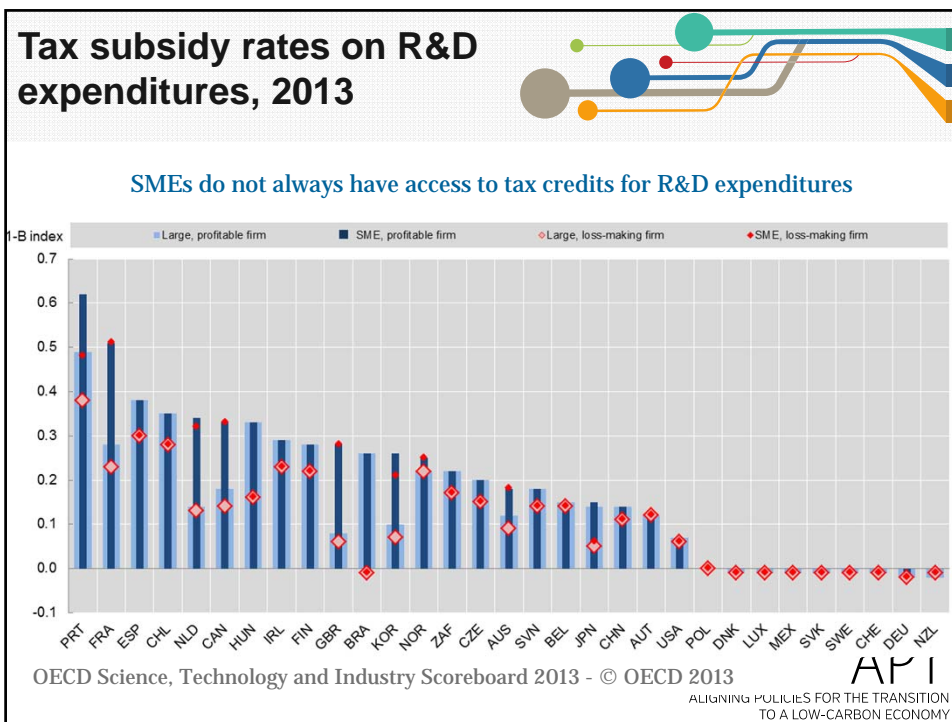
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Public Sector Energy RD&D in IEA Countries

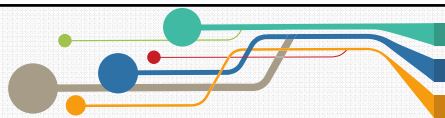


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Misalignments relating to International trade



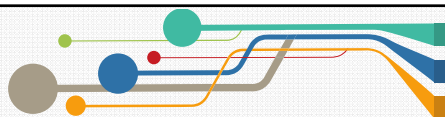
Trade itself is not the climate villain

- How do **WTO rules** and **tariff-based trade barriers** affect the low-carbon transition?
- How can **trade in services** enhance the transition?
- Are “**green**” **domestic support measures** conducive to international trade?
- Are policies for **aviation and maritime fuel** aligned with climate objectives?

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Reframing investment signals and incentives in electricity systems



Electricity market liberalisation was made possible by flexible fossil-based technologies

- Should **electricity market design** be revamped for the low-carbon transition?
- Will **regulated systems** do better in the transition?
- Are policies **helping the resilience of electricity**?

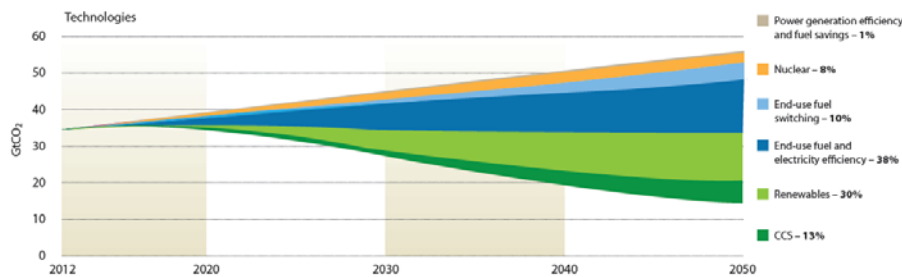
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Electricity: Contribution to annual emission reduction



Figure 6: Contributions to annual emissions reductions between a 6°C and a 2°C scenario



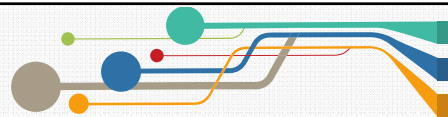
Notes: The higher limit represents an emission trend leading to a 6°C increase in global average temperature. The lower limit is consistent with a stabilisation of the increase at 2°C.
Source: IEA (2015), *Energy Technology Perspectives: Mobilising Innovation to Accelerate Climate Action*, International Energy Agency, Paris.

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Reframing investment signals and incentives in electricity systems



Electricity market liberalisation was made possible by flexible fossil-based technologies (flexible combined-cycle gas turbines)

- Should **electricity market design** be revamped for the low-carbon transition?
- Will **regulated systems** do better in the transition?
- Are policies **helping the resilience of electricity**?

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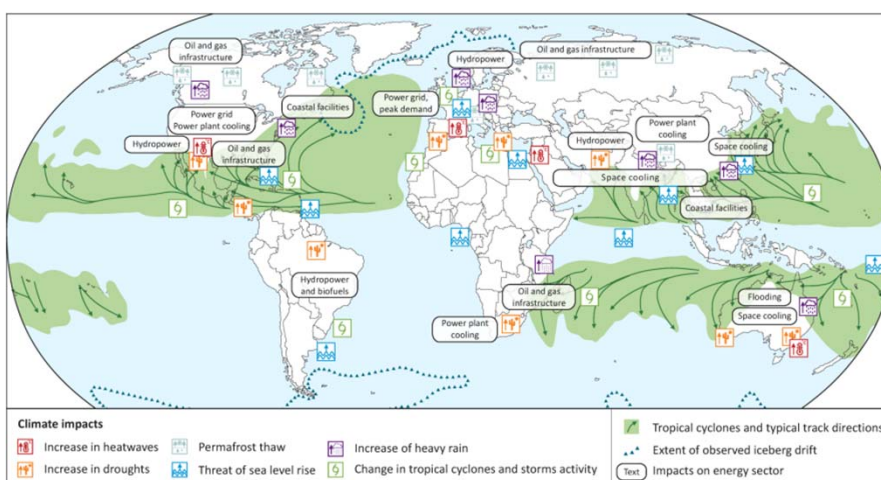
Reframing investment signals and incentives in electricity systems (2)

- Regarding wholesale electricity market organisation
 - “Current designs of wholesale electricity markets in many OECD countries are not strategically aligned with the low-carbon transition”
 - Absence of a long-term price signal vs high capital cost low-carbon technologies
 - Under current setting, and without ‘out of market’ support (feed-in tariffs, contracts for differences), no investment in low-carbon would occur without:
 - Periods of scarcity (extreme electricity prices), high CO2 price, rolling black-outs.
- How to organise competition to facilitate investment, including in low-carbon technologies, and a cost-effective response to the multiple challenges of electricity systems?
 - How to make the price of carbon a more powerful instrument for the decarbonisation of electricity?

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Selected climate change impacts on energy



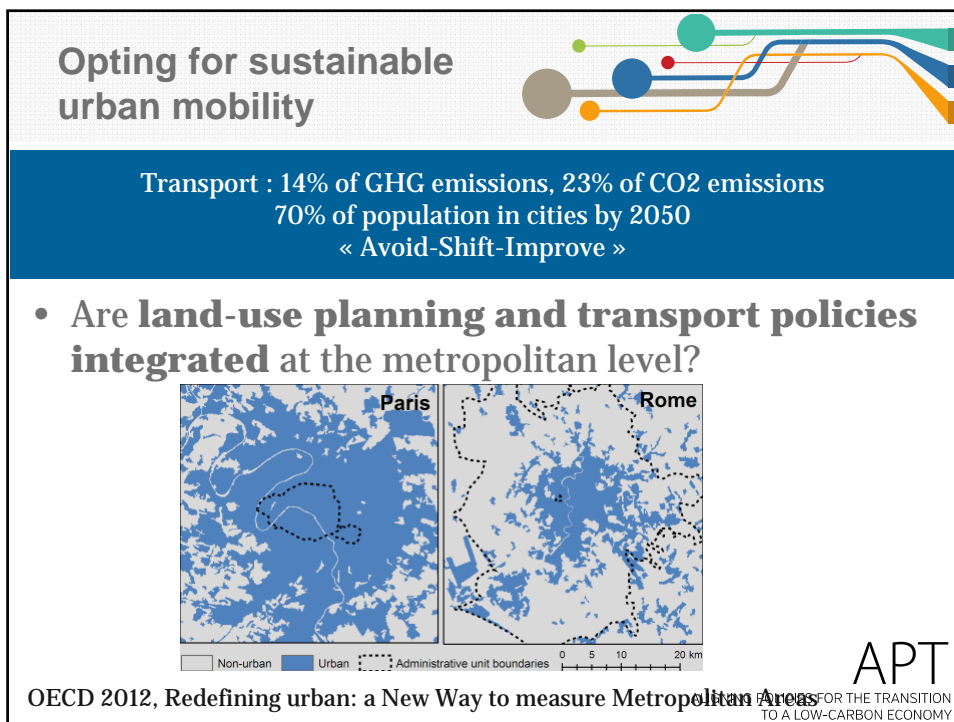
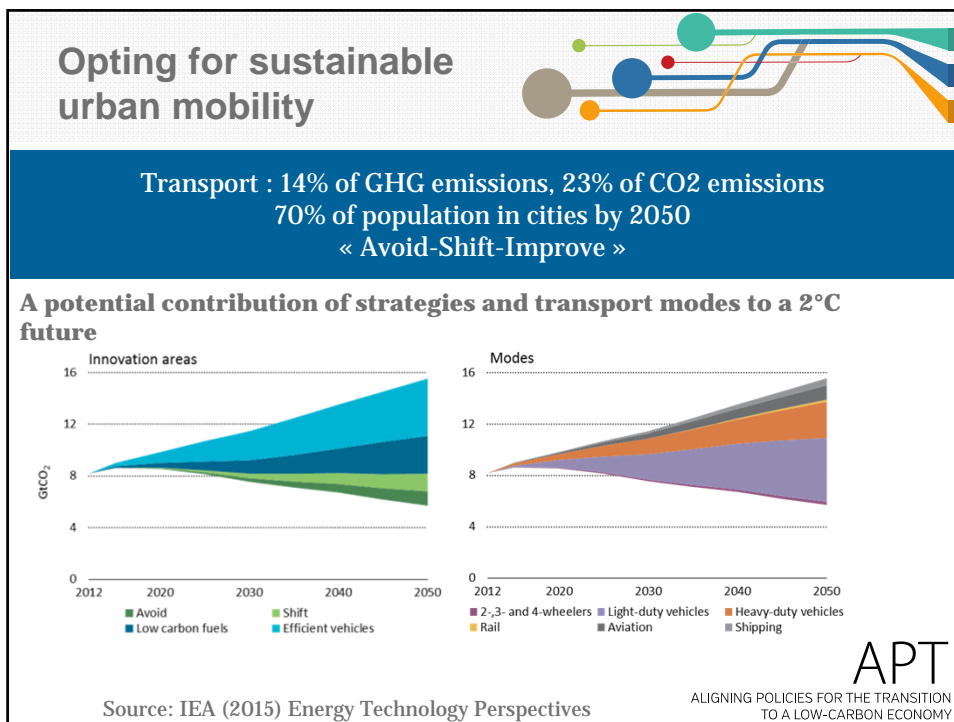
This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

IEA (2015), “Resilience of the energy sector to climate change”,

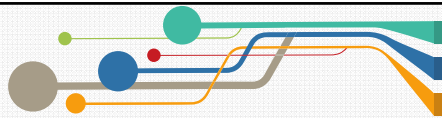
www.iea.org/topics/climatechange/subtopics/resilience (accessed on 23 March 2015).

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Opting for sustainable urban mobility

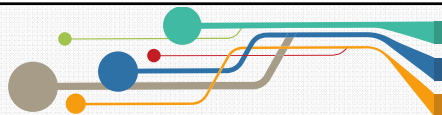


Transport : 14% of GHG emissions, 23% of CO2 emissions
 70% of population in cities by 2050
 « Avoid-Shift-Improve »

- Are **land-use planning and transport policies integrated** at the metropolitan level?
- Do cities have enough **financial or political leeway** to make low-carbon choices?
- Are policy signals aligned to facilitate the **penetration of low-carbon breakthrough technologies**?

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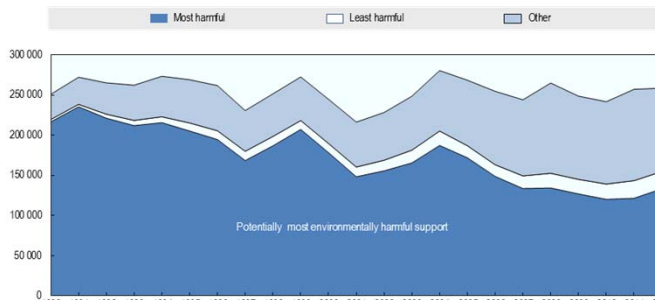
Strengthening incentives for sustainable land use



AFOLU: 25% of GHG emissions
 Food demand by 2050: +60%
 Net carbon sink by the end of the century?

- Do **agricultural support policies** encourage low carbon practices?

Evolution of producer support in OECD countries by potential environmental impact



Source: OECD (2013), "Producer and Consumer Support Estimates", OECD Agriculture Statistics Database

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Strengthening incentives for sustainable land use



AFOU: 25% of GHG emissions

Food demand by 2050: +60%

Net carbon sink

- Do **agricultural support policies** encourage low carbon practices?
- Is the **trade regime** for agricultural products supportive of climate goals?
- Do policies support **agriculture's resilience** to climate change?
- Are **services provided by forests and ecosystems** properly valued in economic decisions?
- Are policies sufficiently joined-up **to address the roots of food waste?**

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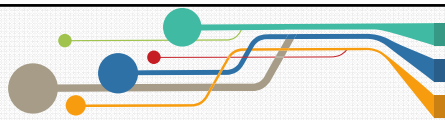
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Conclusions



- **Urgency of climate action with core climate policies**
- **Resolving misalignments provides important structural levers for the low-carbon transition**

→ At national level

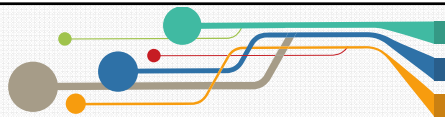
- Engage whole-of-government diagnosis of existing alignment issues
- Envision co-benefits of action (investment, inclusive growth, energy security, innovation, better mobility)
- Conduct, and regularly report on, reform

→ At international level

- Agreement at COP21 can be a first step towards co-operation on domestic policies

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Next Steps (Council conclusions)



- Encourage continued OECD-IEA-ITF-NEA collaboration
- Mainstreaming APT in OECD reviews
- Possible in-country discussions on policy alignment
- Targeted activities:
 - Short-termism of financial markets vs low-carbon transition
 - Tax codes, beyond direct energy choices
 - Innovation and competitiveness, managing social impacts of transition

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