



IEA Work on Energy Subsidies

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**Climate Policy Initiative Launch
Berlin, 12 November 2009**

Overview of IEA Activities

- **World Energy Outlook**
 - *Insights 1999: Looking at Energy Subsidies*
 - *WEO-2006-8: quantitative estimates*
- **IEA/UNEP Subsidy Reform Project 2000-2002:**
 - *Regional workshops & paper on OECD subsidies*
 - *Synthesis Report to CSD-9 (New York)*
 - *Reforming Energy Subsidies summary publication (basis for 2004 UNEP report)*
- **IEA/OECD analysis of fossil-energy subsidies (2009)**
- **Regular activities:**
 - *Country reviews (4-yearly cycle for member countries, ad hoc for non-members)*
 - *Energy prices & taxes database*
 - *Public energy R&D funding*

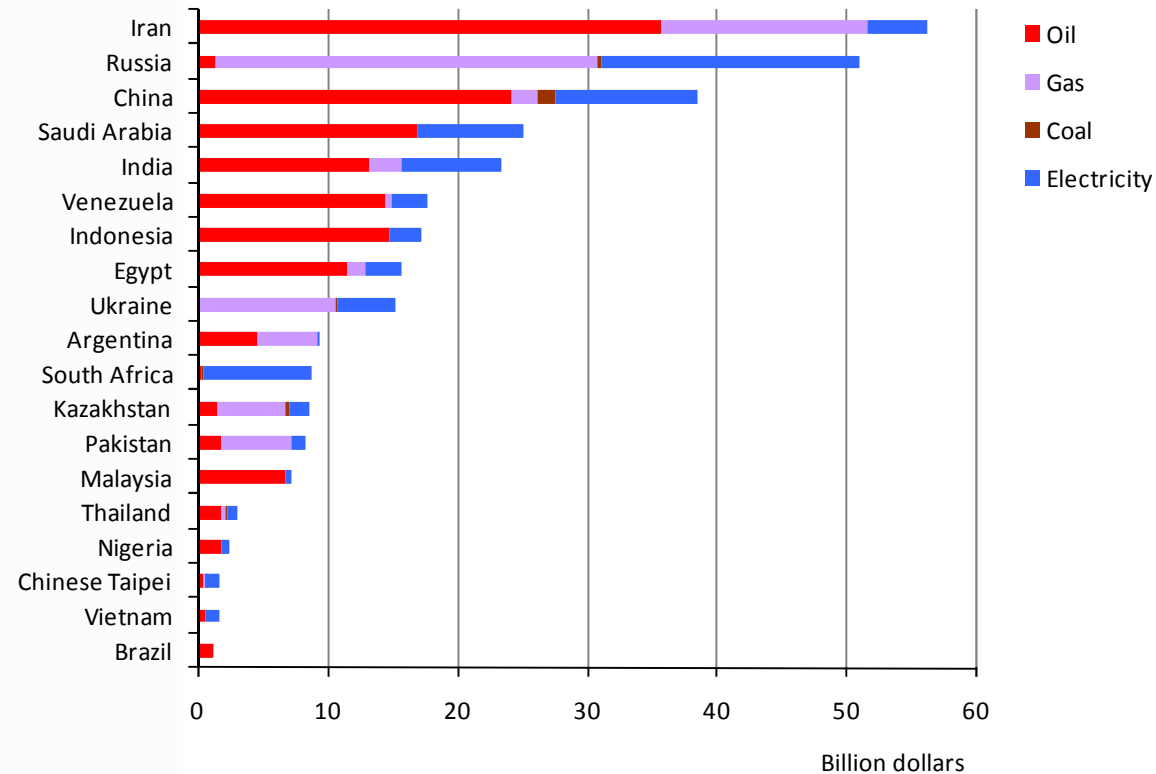
WEO-1999: Main Findings

- **Quantification of subsidies & *impact* in 8 non-OECD countries**
- **Price-gap approach (consumption subsidies)**
- **Total value of subsidies = \$95 billion**
- **End-user prices on average 20% below full supply cost (market-based)**
- **Removing all subsidies would**
 - ***Reduce their primary demand by 13% (3.5% of world demand)***
 - ***Increase their GDP by 1% per year***
 - ***Lower their CO2 emissions by 16% (5% of world emissions)***

WEO-2008: Main Findings

- **Quantification of subsidies in 20 largest non-OECD countries (over 80% of world demand)**
- **Price-gap approach (as for WEO-99)**
- **Total value of subsidies = \$310 billion (2007) – up from \$220 in 2005**
- **Biggest subsidies on oil products: c.\$150 billion..**
- **.. and by country, in Iran: c.\$55 billion**
- **Degree of under-pricing biggest for natural gas (about half on weighted average basis)**

Economic Value of Subsidies in non-OECD Countries, 2007



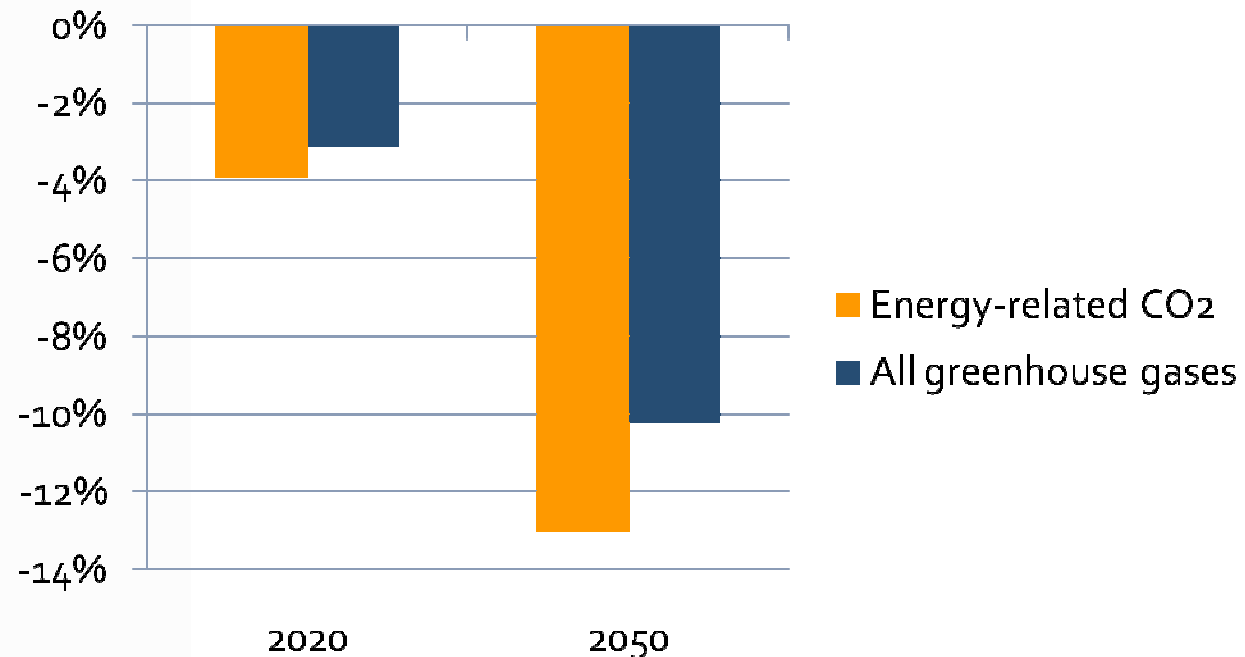
OECD/IEA analysis 2009

- Collaborative study with the OECD on the *impact of removing fossil-energy subsidies*
- Results published in *Burniaux et al (2009)*
- First such analysis since *WEO-1999*
- Based on 2007 price gaps (*WEO-2008*)
- Assumptions:
 - *Zero price gaps in countries not covered by IEA analysis*
 - *All subsidies phased out gradually over 2013-2020*



OECD/IEA 2009 Results

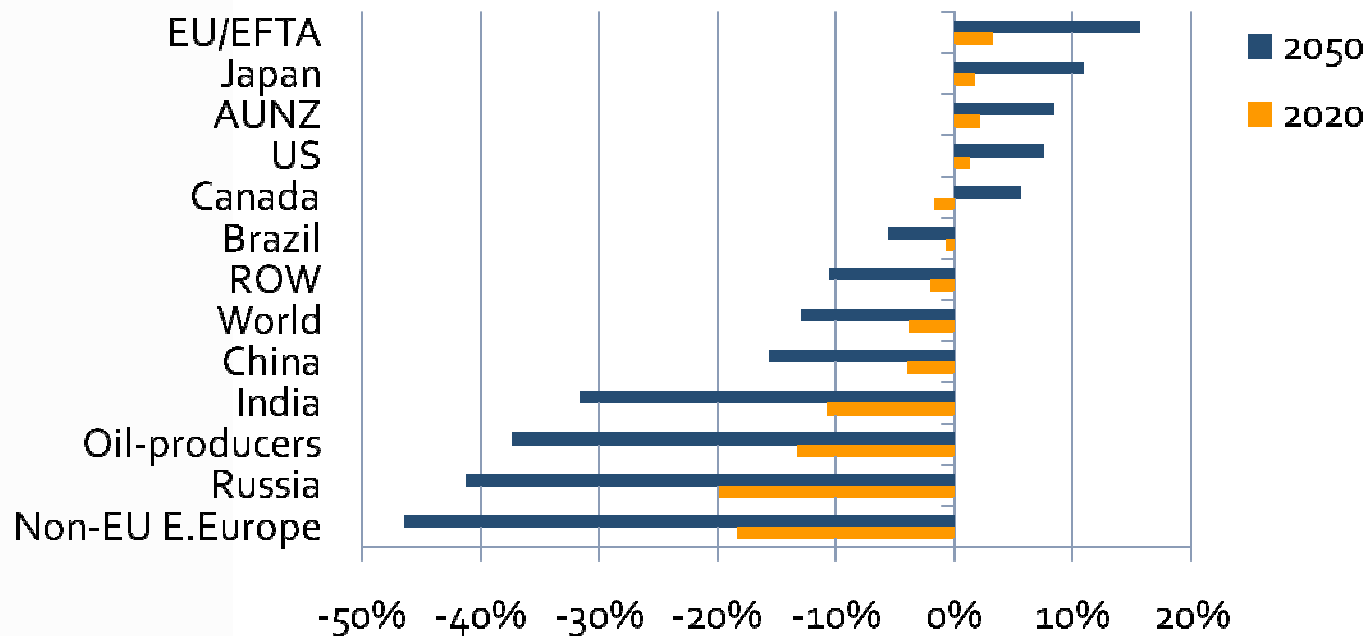
Impact on emissions of multilateral removal of subsidies (deviation from BAU)



CO2 emission would be 13% lower in 2050 compared with the baseline were all fossil-energy subsidies in the 20 largest non-OECD countries to be removed

OECD/IEA 2009 Results

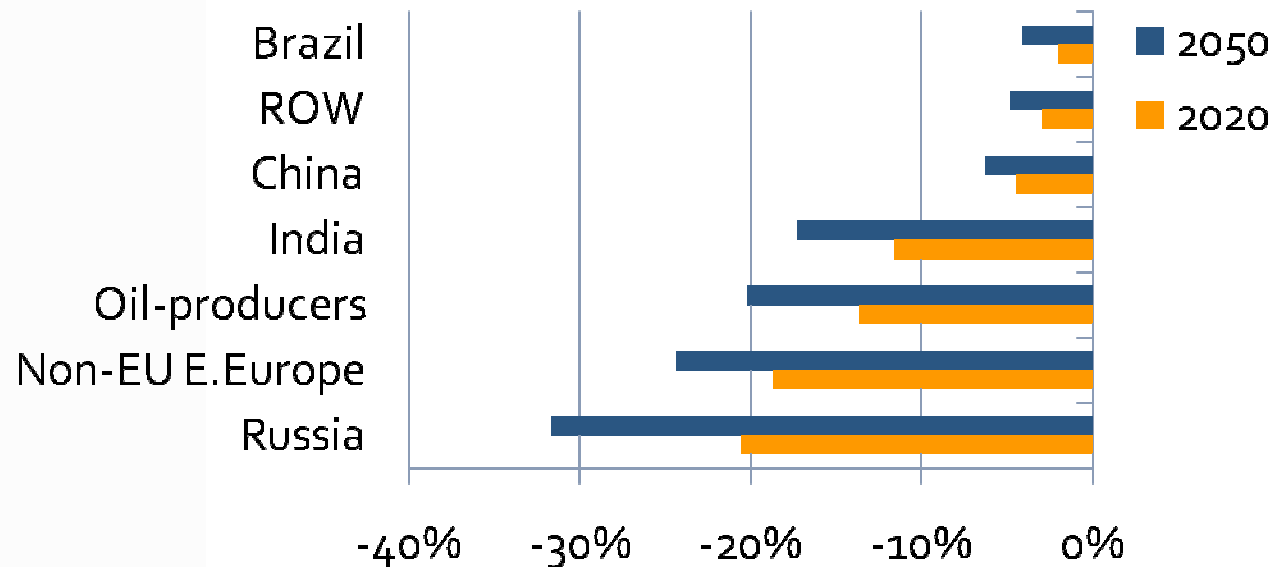
Impact on energy-related CO₂ emissions of multilateral removal of subsidies by region (deviation from BAU)



Emissions rise in regions with no subsidies, because lower demand in regions that remove subsidies cuts global demand & therefore international prices

OECD/IEA 2009 Results

Impact on energy-related CO₂ of unilateral removal of subsidies by region (% deviation from BAU)



Emission reductions are much bigger when subsidies are removed unilaterally, as international energy prices are not affected

What about producer subsidies?

- Information compiled by IEA in piece-meal fashion mainly thru country policy reviews
- Evidence of sizeable coal subsidies
 - *Coal production subsidies remain in some OECD countries, notably Germany, Spain & Poland*
 - *Data patchy for non-OECD, but generally not big*
- Oil & gas production subsidised through tax credits in many countries
- Renewables subsidised in most countries – on environmental rationale
 - Feed-in tariffs, grants, tax credits, R&D....
- Nuclear power – hidden subsidies?

Summing up what we know about energy subsidies

- **Biggest fossil-energy subsidies are in non-OECD countries**
- **Most of those subsidies – mainly in form of price controls – still go to consumers of fossil fuels**
- **Some significant subsidies to fossil-energy production in OECD**
- **Fossil-fuel subsidies have probably risen in recent years in general with higher international prices**
- **IEA & other studies provide evidence of detrimental impact of existing fossil-energy subsidies**
- **Big potential for subsidy reform to enhance energy security & curb GHG emissions**

Implications for policy

- **Never subsidise consumption of fossil fuels!**
- **May be justification for limited subsidy for**
 - *Modern energy for poor (essentially electricity)*
 - *Non-fossil energy & investment in efficient technology (to overcome market barriers)*
- **Fuel taxes/carbon pricing the most economically efficient way to internalise externalities**
- **Approaches to reform to overcome political hurdles:**
 - *Phasing*
 - *Compensating measures (e.g. welfare support)*
 - *Communication*
 - *Support from multi-lateral lending agencies*

IEA work for the G20

- *"we commit to rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption."*
- *"We will have our Energy and Finance Ministers, based on their national circumstances, develop implementation strategies and timeframes, and report back to Leaders at the next Summit. We ask the international financial institutions to offer support to countries in this process. We call on all nations to adopt policies that will phase out such subsidies worldwide."*
- *"We request relevant institutions, such as the IEA, OPEC, OECD, and World Bank, provide an analysis of the scope of energy subsidies and suggestions for the implementation of this initiative and report back at the next summit."*



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Thank you

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