Fossil fuel subsidies: Typologies and estimates

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Fossil fuel subsidies: different angles

- Environmental impacts
- Legal mechanisms
- Energy type (oil, gas, coal, electricity)
- Production or consumption?
- How efficient they are?
- Activity targeted (e.g. exploration)?
- National, subnational or international?
- Trade effect
Environmental impact: all fossil fuel subsidies act as a negative carbon tax

- **$320 billion**
  - Consumer subsidies (IEA 2015 estimate, only emerging & developing countries)

- **$100 billion**
  - Producer subsidies (GSI global estimate, per year)

- **$5.3 trillion**
  - IMF 2015 global estimate, consumer subsidies incl. externalities + some producer subsidies

- **~6-8% emissions reduction by 2050**
- **~2% emissions reduction by 2050**

Legal mechanisms: ASCM definition

• “a financial contribution by a government [...] where:
  (i) a government practice involves a direct transfer of funds (e.g., grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g., loan guarantees);
  (ii) government revenue that is otherwise due is foregone or not collected (e.g., fiscal incentives such as tax credits);
  (iii) a government provides goods or services other than general infrastructure, or purchases goods;
  (iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments.”

• specificity requirement.

Source: ASCM
**Legal mechanisms: the nesting doll of definitions when it comes to national contexts**

*Regulated energy prices (induced transfers) & tax breaks account for the bulk of FFS*

<table>
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<tr>
<th>Fossil-fuel Consumption Subsidies</th>
<th>Fossil-Fuel Production Subsidies</th>
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<tr>
<td>Fossil fuels exempt from social cost of externalities (non-internalized externalities).</td>
<td>Government tax and regulation levels below regional or international levels.</td>
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<td>Fossil fuels sold below regional or international tax levels.</td>
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<tr>
<td>Fossil fuels exempt from VAT, GST and carbon taxes</td>
<td>Government revenue forgone (reduced and exempt tax rates).</td>
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<td>Fossil fuels sold below the cost of production, imports and international benchmark price to consumers</td>
<td>Government provided or purchased goods and services (above or below market rates).</td>
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<tr>
<td>Direct transfers or potential direct transfers of funds to producers.</td>
<td>Income or price support (above market rate prices for producers).</td>
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Sources: updated from GSI (2014)
Producer subsidies ($70 billion on annual average in G20 countries) by energy type

- Oil, 32 billion, 46%
- Natural gas, 18 billion, 26%
- Coal, 8.5 billion, 12%
- Electricity generation, 8.5 billion, 12%
- Other, 3 billion, 4%

Sources: GSI & ODI (2017) based on OECD (n.d.)
Producer subsidies by activity

Consumer subsidies ($320 billion in 2015, IEA data) by energy type

*Categories of consumers: private sector, public sector, households*

**Economic value of global fossil-fuel consumption subsidies by energy source**

Sources: IEA (2017)
Consumer subsidies (at their highest in 2013, IEA data) by country

Sources: IEA (2014), p. 323
“Efficient” vs. “Inefficient” Fossil Fuel Subsidies

Both APEC and G20 leaders committed in 2009 to phase out “inefficient fossil fuel subsidies that encourage wasteful consumption”.

APEC peer reviews:
• Peru, New Zealand, the Philippines (completed)
• Chinese Taipei, Vietnam (in progress)
• Brunei (pending)

G20 peer reviews:
• US & China (completed in 2016)
• Germany & Mexico (in progress)
• Indonesia & Italy (pending)

Sources: GSI (2016)
Exploring the Trade Effects of Fossil Fuel Subsidies

• In parallel to the WTO definition, IEA defines an energy subsidy as

> "any government action directed primarily at the energy sector that lowers the cost of energy production, raises the price received by energy producers or lowers the price paid by energy consumers”.

• Consumer subsidies thought to affect energy prices in short term
• Producer subsidies likely to affect energy prices in longer term
Sources:


Sources (continued):


NCM (2017). Making the Switch: From fossil fuel subsidies to sustainable energy 

OCI & ODI (2015). Empty promises: G20 subsidies to oil, gas and coal production 

OECD (n.d.). OECD analysis of budgetary support and tax expenditures 
http://www.oecd.org/site/tadffss/data/