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Concurrent Session: **07 Energy security & climate change**

## **THE MAIN RESULTS OF THE G20 PEER REVIEW ON FFSS**

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(\*) The views expressed in this presentation are those of the author and should not be reported as or attributed to the Ministry or to the organizations with which he cooperates

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# Overview

- How everything started: the G20 process and its peer review
- G20 peer-review process: how it works?
- The G20 peer-reviews and the EFR
- China and the Peer-Review on fossil fuel subsidies
- United States and the Peer-Review on fossil fuel subsidies
- Mexico and the Peer-Review on fossil fuel subsidies
- Germany and the Peer-Review on fossil fuel subsidies
- An ongoing process

## **G20 peer review on FFS – How it started**

- G20 (Pittsburgh - September 2009): subsidies to tackle are “inefficient fossil fuel subsidies that encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change”.
- G20 Leaders Summit of Seoul (November 2010), where it was reaffirmed the will to “rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption, taking into account the national circumstances while recognizing the importance of providing targeted support for the poorest”.

## **G20 peer review on FFS – How it started - 2**

- G20 Leader Summit in Saint Petersburg (Russia – 2013) re-focused the attention on subsidies, in order to reaffirm the commitment to rationalize and phase out FFS, welcoming the development of a methodology for a voluntary peer review process across the countries as a valuable way to assure more transparency and responsibility.
- Brisbane Summit (Australia - 2014), the rationalization and removal of FFS was the sixth principle for the energy collaboration approved by G20 Leaders, while underlining the relevance of monitoring and update the state-of-art of FFS reform at the global level, as stated at the G20 Summit in Antalya (2015).

# G7 recommendations

- G7 (Ise-Shima - 26-27 May 2016): “Given the fact that energy production and use account for around two-thirds of global GHG emissions, we recognize the crucial role that the energy sector has to play in combating climate change. We remain committed to the elimination of inefficient fossil fuel subsidies and encourage all countries to do so by 2025.”
- G7 Environment Ministers’ Meeting (Bologna - 11-12 June 2017): We recognize and support effort by G7 and other countries interested in examining and removing incentives, particularly inefficient fossil fuel subsidies, not coherent with sustainability goals. We recognize the benefits of monitoring progress in the phasing out of incentives, including subsidies, not coherent with the sustainability goals, [...]and we support existing initiatives underway such as the G20 voluntary peer review process.

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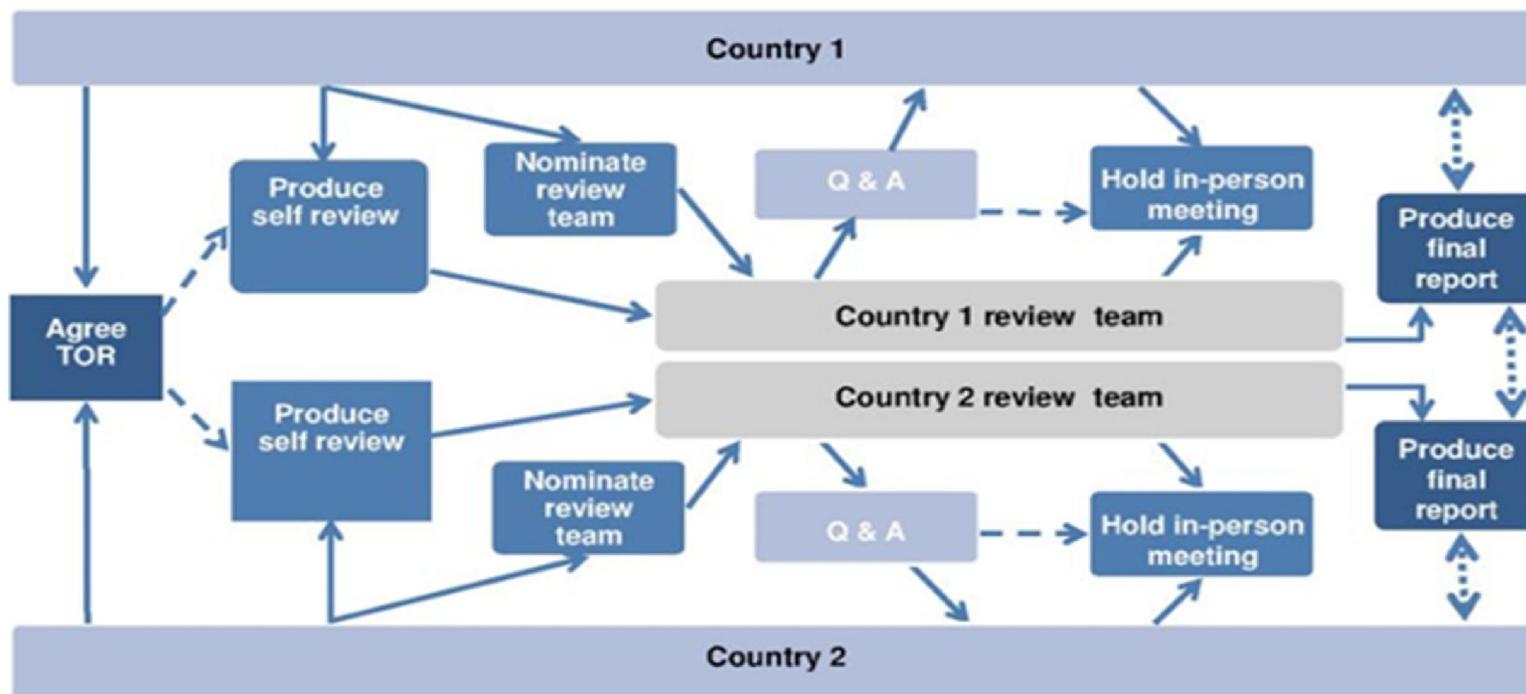
# G20 peer review process: how it works

- G20 peer-reviews assessment are a fruitful experience to share elements for mutual learning in data collection, methodological procedures and policy actions.
- Building a consistent self-report:
  - Countries reviewed agree on a set of Terms of References (ToR) to assert the scope of the measures to be reviewed and a timeline of the process;
  - Produce a self-report where they list the measures, provide background and information on their implementation;
  - Indicate those that are in the process of being phased-out in the medium term

## G20 peer review process: how it works - 2

- Setting the peer-review process:
  - Countries select a peer –review team by inviting experts from other Countries (g20 and beyond), IGOs, think tanks, Universities that might have the same members (as for Germany and Mexico) or different members;
  - Countries send the self-report to peer-review team that send back written comments;
  - The peer-review is then performed during an in-person meeting hosted by the Country under review. This might be separate or joint (as for Germany and Mexico);
  - A final report of the peer-review team is then issued together with the self-report .
  - In all the peer-reviews, OECD chaired the exercise and coordinated the peer-review comments and feedbacks as asked by the Countries under review.

# G20 peer review process: how it works (in figure)



*Note:* Starting from the left side of the chart, the process begins with an agreement on the ToR and ends with a final report. This was the process for the first four peer reviews but could change at the request of member countries.

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## G20 peer-review on FFS and the EFR

- Fossil Fuel Subsidies (FFSs) encourage directly and indirectly congestion in urban areas and unsustainable modes of transport while increasing GHG emissions leading to global warming and climate change.;
- Gradually remove environmentally harmful subsidies, including fossil-fuel subsidies, and shift taxation from income to pollution and natural resources.

## G20 peer-review on FFS and the EFR - 2

- The peer review mechanism highlights the importance of transparency and accountability in this domain, where environmental, climate and economic issues are at stake. As in traditional OECD Peer Reviews, best practices are shared, progress is reported to G20 partners and the global community, critical issues are discussed and receive feedbacks from partners;
- FFS cause excessive consumption of fossil fuels, exacerbate environmental pollution, result in loss of government income and provoke serious health damages.

## G20 peer-review on FFS and the EFR - 3

- Problems arising on the definition of “inefficient” FFS is causing debate among G20 Member Countries.
- “Inefficiency” when we talk of fossil fuels subsidies is descriptive:
  - FFS are always inefficient from an environmental and an economic point of view. They may be efficient on a social ground; but experience and analysis have shown that direct subsidies to poor and vulnerable groups are more efficient and avoid to underprice carbon, giving the wrong price signal in the short- and long-run to the economic system.

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# China and the Peer-Review on FFS

- China published jointly with US his own Peer-Review on FFS just after the ratification of the Paris Agreement;
- The Peer-review team members: Germany, USA and Indonesia;
- China identified 9 «inefficient» FFS. We divided them in four main groups totalling \$ 15 bl. Yearly (financial effect mainly due to last group):
  - Subsidies to State-Owned Enterprises (SOE) for exploration and extraction of fossil fuels, including the tax rebate on petroleum products used for the extraction of natural gas and oil and the exemption from the land-use tax for SOEs;
  - Chinese government recorded a VAT tax benefit for the consumption of energy products (LPG, natural gas, coal, gas for lighting purposes);
  - Energy production for domestic heating purposes is subsidized by the central government to keep tariffs below the market level;
  - “Bundle” of subsidies devoted to people using fuels for “professional use”, such as taxi cabs, fishermen, forest rangers, public transport companies.

# China and the Peer-Review on FFS: main details

No.	Full name of the measure	Measure identifier	Estimate fiscal cost 2014 (billions USD)
<b>Subsidies for the exploration, development, and extraction of fossil fuels</b>			
1	A consumption-tax policy of “refund after payment” for refined oil produced by oil (gas) field enterprises for own use	T-c-2	0.4
2	A policy of exempting China National Petroleum Corporation (CNPC) from land-use tax	T-c-3	n.c.
3	A policy of land-use tax exemption for China National Offshore Oil Corporation (CNOOC)	T-c-4	n.c.
<b>Subsidies for the refining and processing of fossil fuels</b>			
4	A policy of consumption-tax exemption for oil consumed by refined oil manufacturing enterprises for own use	T-c-1	0.02
<b>Subsidies for power and heat generation</b>			
5	A policy of exempting thermal power stations from land-use tax in cities and towns	T-c-6	n.c.
6	A policy of VAT exemption for heating fees of heat supply enterprises for individual residents	T-c-7	n.c.
7	A policy of exempting heat-supply enterprises from real-estate tax and urban land-use tax	T-c-8	n.c.

## China and the Peer-Review on FFS: main details

No.	Full name of the measure	Measure identifier	Estimate fiscal cost 2014 (billions USD)
Subsidies for fossil fuels used in transport			
8	A Series of Subsidies in the Transport Sector comprising urban areas (taxi cabs, public transport, fishermen, forest rangers...)	S-c-1	15
Subsidies for fossil fuels used in the residential sector			
9	A preferential tax-rate policy of value-added tax (VAT) on coal gas and liquefied petroleum gas	T-c-5	n.c.

# China and the Peer-Review on FFS: main comments

- The panel of experts, composed of Germany, USA and Indonesia, judged positively the Chinese report and the intention of the Government to reform subsidies in the medium term. Subsidies to SOEs should be reformed, together with the short-term phasing-out of the exemption of the excise duty on fuels used by oil refining companies and the exemptions on land use tax.
- Subsidies to energy producers for domestic heating should be reviewed to better reflect market prices. A gradual phase-out of subsidies for “professional” use is also envisaged. The VAT tax benefit for domestic consumption on energy products has distributional issues, since it might be more beneficial to high-income household. The panel suggests to explore alternative forms to help the most vulnerable part of the population.

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# United States and the Peer-Review on FFS

- The Peer-review team members: Germany, China and Indonesia;
- Two opposite trends in 2016:
  - fracking and shale energy products, they entered into an era of energy abundance, raising the production level of oil and gas.
  - Secondly, more stringent energy standards and emissions control were approved through the Clean Power Plan (under review by the current Administration).
- US identified 15 federal FFS totaling US \$ 8.2 bl.. We divided them in two main groups:
  - Exploration, development, and extraction of fossil fuels;
  - Low Income Home Energy Assistance Program, a program to fight energy poverty; (not labelled as “inefficient”, so no reform in programme);

# United States and the Peer-Review on FFS – main details

No.	Full name of the measure	Measure identifier	Estimate fiscal cost 2015 (millions USD)
<b>Subsidies for the exploration, development, and extraction of fossil fuels</b>			
1	Expensing of Intangible Drilling Costs	p-1	1629
2	Percentage Depletion for Oil and Natural-Gas Wells	p-2	966
3	Domestic Manufacturing Deduction for Fossil Fuels	p-3	1049
4	Two Year Amortization Period for Geological & Geophysical Expenditures	p-4	288
5	Percentage Depletion for Hard Mineral Fossil Fuels	p-5	209
6	Expensing of Exploration and Development Costs for Hard Mineral Fuels	p-6	53
7	Capital Gains Treatment for Royalties of Coal	p-7	31
8	Deduction for Tertiary Injectants	p-8	10
9	Exception to Passive-Loss Limitation for Working Interests in Oil and Natural-Gas Properties	p-9	19

# United States and the Peer-Review on FFS – main details

No.	Full name of the measure	Measure identifier	Estimate fiscal cost 2015 (millions USD)
<b>Subsidies for the exploration, development, and extraction of fossil fuels</b>			
10	Enhanced Oil Recovery Credit (EOR) Credit	p-10	0
11	Marginal Wells Credit	p-11	0
12	Corporate Tax Income Exemption for Fossil-Fuel Publicly Traded Partnerships	p-12	342
13	Excise Tax Exemption for Crude Oil Derived from Tar Sands	p-13	52
14	Royalty-Exempt Beneficial Use of Fuels	p-14	39
15	Royalty-Free Flaring and Venting of Natural Gas	p-15	70
16	Liability Cap on Natural Resource Damage	p-16	Not calculated
<b>Subsidies for fossil fuels used in the residential sector</b>			
17	Low-Income Home Energy Assistance Program (LIHEAP)	c-1	3400

# US and the Peer-Review on FFS: main comments

- The panel of experts, composed of Germany, China and Indonesia, signaled the potential existence of another “implicit” subsidy provided by the low excise duty on fossil fuels in the transport sector. The revenue is earmarked to the Highway Trust Fund that is in deficit. The Government, in that period, proposed the Congress an additional tariff of US \$ 10,25 / barrel;
- The panel encouraged the US Government to take further step in defining timeline and line for actions for reforming the FFS in the low-medium term.

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# Mexico and the Peer-Review on FFS

- The Peer-review team members: China, Germany, Italy, Indonesia, New Zealand, the United States, and the OECD.
- «Defensive position». Definition of inefficient subsidies:
  - (i) subsidies that hold prices below opportunity cost in the international markets.
  - (ii) tax-exemptions and tax-differentiations are “inefficient taxes”, not inefficiency-inducing subsidies.
- Mexico identified 10 FFS totaling US \$ 2.5 bl.. We divided them in three main groups:
  - Exploration, development and extraction of fossil fuels;
  - Subsidies and tax benefits for fossil fuels used in transport such as subsidies on excise duty on gasoline and diesel (already phased-out), subsidies of excise duty for LPG (already phased-out).
  - FFS in the manufacturing, agricultural and forestry sectors

# Mexico and the Peer-Review on FFS – main details

N°	Full name of the measure	Estimated annual fiscal cost (mln US\$)	
		2013	2016
<b>Measures for the exploration, development and extraction of fossil fuels</b>			
1	Provisions for producers of hydrocarbons	0	0*
<b>Subsidies and tax benefits for fossil fuels used in transport</b>			
2	<b>Subsidies for excise duty on gasoline and diesel</b>	<b>8245</b>	<b>0</b>
3	<b>Subsidies for excise duty on LPG</b>	<b>373</b>	<b>0</b>
4	<b>Tax benefit for gasoline consumption in the northern border region</b>	<b>81</b>	<b>512</b>
5	<b>Diesel excise tax accreditation to public transport</b>	<b>0</b>	<b>1062</b>

# Mexico and the Peer-Review on FFS – main details

N°	Full name of the measure	Estimated annual fiscal cost (mln US\$)	
		2013	2016
<b>Measures for fossil fuels used in the manufacturing, agricultural and forestry sectors</b>			
6	Support for agricultural and fishing activities	245	127
7	Diesel excise tax accreditation to industrial machinery, other than transportation	0	493
8	Diesel excise tax accreditation to fisheries machinery, including vessels	0	85
9	Diesel excise tax accreditation to farming machinery	0	222
<b>Other tax benefits</b>			
10	Carbon tax exemptions and reductions	n.a.	100,8

# Mexico and the Peer-Review on FFS: main comments

- The G20 peer review team regarded positively and encouraged the recent introduction of a carbon tax, the first tax applied to fuel use outside of road transport, even if the tax rate is substantially below the ones originally proposed in 2013 by the Government to the Parliament and remains below of the marginal social cost of carbon emissions. Another limit is represented by a missing criteria for setting the tax: respective carbon contents of different fuels. Nevertheless, the review team recognised that the introduction of a carbon tax, together with the excise taxes, could provide a useful instrument to progressively internalize the negative externalities of fossil fuel use.
- After nearly a decade of heavily subsidising the end-user prices of gasoline, diesel and LPG, Mexico started a gradual reduction of net subsidies in 2013, and eventually succeeded in levying positive net taxes in 2015.

## **Mexico and the Peer-Review on FFS: main comments**

- Despite the particular definition of an “inefficient subsidy” as proposed in the Mexican self-report, the peer review team noted that the term as used by many G20 members could include tax-exemptions and tax-differentiations on fossil fuels. Although Mexico’s effort to include these measures in the report for the sake of transparency is commendable, the country is also encouraged to consider reviewing its fuel-tax concessions, recognising that these measures could be leading to more consumption and pollution than would have otherwise been the case, perhaps causing other distortions.

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# Germany and the Peer-Review on FFS

- The Peer-review team members: China, Italy, Mexico, Indonesia, New Zealand, the United States, and the OECD.
- Germany identified 22 federal FFS totaling totalling US\$ 17.6 billion in 2016 (equal to 14.9 billion of euro). We divided them in three main groups:
  - Exploration, development, extraction and refining of fossil fuels;
  - Subsidies for fossil fuels used in transport: these include tax advantage for energy products in inland shipping, local public transport, domestic aviation industry. Electricity tax advantage for rail and trolleybus. Tax advantage for LPG and natural gas used as fuels.
  - Subsidies for fossil fuels used in the manufacturing, agricultural and forestry sectors

# Germany and the Peer-Review on FFS – main details

N°	Full name of the measure	Measure identifier	Estimated annual fiscal cost 2016 (mln €)
<b>Subsidies for the exploration, development and extraction of fossil fuels</b>			
1	Grants for the sale of German hard-coal for electricity generation, for sale to the steel industry and to offset the impact of capacity adjustment	S-1	1288
2	Granting of adjustment benefit to employees in the hard-coal mining industry	S-2	107
<b>Subsidies for the refining and processing of fossil fuels</b>			
3	Tax advantage for energy products used to produce other energy products for the maintenance of operations (producer's privilege)	T-1	350
<b>Subsidies for power and heat generation</b>			
4	Energy tax advantage for electricity generation	T-2	1700
5	Tax advantage for energy products used to power gas turbines and internal combustion engines at advantaged installations in accordance with section 3 of the German Energy Tax Act (electricity generation, combined heat and power, gas transportation and storage)	T-3	-

# Germany and the Peer-Review on FFS – main details

N°	Full name of the measure	Measure identifier	Estimated annual fiscal cost 2016 (mln €)
Subsidies for fossil fuels used in transport			
6	Tax advantage for energy products used in inland shipping operations	T-4	180
7	Energy tax advantage for local public transport	T-5	72
8	Tax advantage for energy products used in the domestic aviation industry	T-6	570
9	Electricity tax advantage for rail and trolleybus operations	T-7	143
10	Tax advantage for liquefied gas and natural gas used as fuels	T-8	134

# Germany and the Peer-Review on FFS – main details

N°	Full name of the measure	Measure identifier	Estimated annual fiscal cost 2016 (mln €)
<b>Subsidies for fossil fuels used in the manufacturing, agricultural and forestry sectors</b>			
11	Electricity price compensation	T-9	245
12	Energy tax advantage for certain processes and procedures	T-10	553
13	Tax advantage for agricultural and forestry businesses (agricultural diesel)	T-11	450
14	Energy tax advantage for companies in the manufacturing sector, and agricultural and forestry businesses	T-12	153
15	Energy tax advantage for companies in the manufacturing sector in special cases (tax cap)	T-13	172
16	Electricity tax advantage for certain processes and procedures	T-14	836
17	Electricity tax advantage for companies in the manufacturing sector, and agricultural and forestry businesses	T-15	1052
18	Electricity tax advantage for companies in the manufacturing sector in special cases (tax cap)	T-16	1614

# Germany and the Peer-Review on FFS – main details

N°	Full name of the measure	Measure identifier	Estimated annual fiscal cost 2016 (mln €)
<b>Miscellaneous tax benefits</b>			
19	Special equalisation scheme to reduce the surcharge levied to finance the additional costs of the deployment of renewable energies in electricity generations (EEG surcharge)	T-17	4800
20	Special equalisation scheme to reduce the surcharge levied to finance the additional costs of the deployment of combined heat and power plants (CHP surcharge)	T-18	493
21	Relief on grid charges	T-19	No estimate provided
22	General state measures in the social field	T-20	No estimate provided

# Germany and the Peer-Review on FFS: main comments

- The removal of subsidies to the mining coal industry sector (these subsidies are the only ones programmed to be phased out) at the end of 2018 is an important new chapter in the German strategy of subsidy reform, offering a repeatable example in other countries because designed to be socially and regionally acceptable. The review team was particularly interested in the professional training and the successful re-location of the labour force, underlining the good work made by the German government. The gradual and progressive closure of hard-coal mining, with the consequent decline in mining-related jobs, was accompanied by a special support programme for employees and companies to ensure that workers could quickly find new employment.
- The review team encourages the German Administration to take an additional step beyond taking stock of their support measures and assess the sensitivity of their industry competitiveness and carbon leakage to support subsidy reform.

# Germany and the Peer-Review on FFS: main comments

- Note: the Federal Environment Agency (Umweltbundesamt – UBA) regularly publishes the report Environmental Harmful Subsidies in Germany, which includes among the environmentally harmful subsidies the list of FFS mentioned in the report on subsidies of the Federal Finance Minister and adds many others not considered in the G20 exercise; the amount of environmentally harmful subsidies is evaluated in 57 billion of euro in 2014.

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*“It is not the strongest of the species that survive,  
nor the most intelligent, but the  
one most responsive to change.”*

*Charles Darwin*

