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# Fossil-Fuel Subsidy Reform: Critical Mass for Critical Change

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Fossil-fuel subsidy reform is a low-hanging fruit in global effort to prevent dangerous climate change. As such, the reform has moved up the climate change and fiscal policy agenda over 2010-2015. Over 50 countries have committed to phase out "inefficient fossil fuel subsidies that encourage wasteful consumption" under G20 and APEC processes. In 2014 almost 30 countries made some efforts to remove fossil-fuel consumer subsidies, often while bringing down emissions and boosting public spending on much needed development priorities such as health, education and infrastructure (Merrill, Harris, Casier, & Bassi, 2015) (The Economist, 2015). In 2015 the reform continued.

Unlike many costly climate change mitigation measures (Stern, 2006) (Nordhaus, 1994), phasing out fossil-fuel subsidies combines mitigation with a net economic gain for most economies (Burniaux & Chateau, 2014). Although still extremely difficult from the political economy perspective, this reform is an example of a climate-friendly change of policy that, through success and failure, has been gradually building a potential for replication both across countries and sectors. This memo note summarises the global discourse on fossil-fuel subsidy reform that feeds into the wider conversation on sustainable development and climate change in the run-up to adoption of Sustainable Development Goals and the UNFCCC COP21 in Paris in fall 2015.

#### Fossil-Fuel Subsidies: How much?

Fossil-fuel subsidies have always been large. But how large they are estimated to be, depends on the definition and quantification methodology. For instance, the International Energy Agency (IEA) has defined energy subsidies as any government action that lowers the cost of energy production, raises the price received by energy producers or lowers the price paid by energy consumers (IEA, 2006). This encompasses direct and indirect transfer of funds and liabilities, tax breaks, price and market support measures as well as other regulations giving an advantage to fossil fuels. Using the price-gap approach, the IEA provides a global estimate to fossil fuels at US\$ 548 billion in 2013, which is limited only to consumer subsidies, and only to developing countries (IEA , 2014).

Relying on a much broader scope, the International Monetary Fund (IMF) considers that non-imposition of an adequate tax on carbon, congestion and negative health externalities also constitutes a subsidy to fossil fuels (IMF, 2013) (IMF, 2015). Thus IMF estimates the global fossil-fuel consumer subsidies at US\$ 5.3 trillion in 2013, or US\$ 10 million per minute. There also exist other estimates of fossil-fuel subsidies, although estimates of fossil-fuel subsidies on production side require much more work and transparency.

#### Fossil-fuel subsidies: Impacts

Regardless of the value estimates, the case for the reform of fossil-fuel subsidies is clear, because they fail to meet their stated policy objectives and have a lot of negative impacts, including those not intended or thought of at the time of subsidy introduction.

**Socially regressive:** globally, in 2010 only 8 per cent of all consumer subsidies went to 20 per cent of the poorest (IEA, 2011). At a country level. in 2008 the poorest 40 percent of Egyptians received only three percent of gasoline subsidies (The Economist, 2015). Furthermore, this money can be better spent on targeted social safety nets, energy efficiency measures or renewable energy development supporting long-term growth.

**Destructing the environment** by encouraging wasteful consumption which drives up GHG emissions. The Organisation for Economic Co-operation and Development (OECD) and the IEA have found that if fossil-fuel subsidies were eliminated between 2010 and 2020, global GHG emissions would decrease by ten percent in 2050 (Burniaux & Chateau, 2014). An assessment of the reform's benefits from the IMF is even more radical: by removing fossil-fuel subsidies and taxing carbon correctly, the world can reduce global emissions of carbon dioxide by 23 per cent and raise government revenue through savings and taxation, equivalent to 2.6 per cent of the global GDP (IMF, 2014).

**Distorting markets and undermine fair competition for renewables**. Fossil-fuel consumer subsidies are four-five times higher than subsidies to renewable energy (see Figure 1). This is particularly problematic given that new infrastructure can lock in that dependence on fossil fuels promoted by subsidies.



**Figure 1. Fossil-fuel consumer subsidies versus subsidies to renewable energy and energy efficiency.** Source: (Merrill, 2014)

#### **Barriers to Reform**

The entrenchment or slow pace of fossil-fuel subsidy reform can be explained by rent-seeking behaviour of powerful lobby groups, path dependency and institutions weakness of. Both (Victor, 2009) and (Cheon, Urpelainen, & Lackner, 2013) argue that fossil-fuel consumer subsidies are more common in countries with no or weak institutions such as democracy, whereas "the countries with the highest level of political freedoms also have fuel prices that are about four times the level in the most authoritarian countries" (Victor 2009, p. 20). However, even in democratic countries, rent-seeking behaviour and the ability of subsidy recipients to organiser themselves better then subsidy opponents explains a lot of resistance to fossil-fuel subsidy reform (Victor, 2009) (OECD,

2005), (OECD, 2013). There have been countless attempts to reform fossil-fuel subsidies that failed in the fast, with most striking examples including Nigeria's attempt in 2013 (Akosile, 2011).

#### Window of Opportunity for Reform in 2009-2015

Fossil-fuel subsidy reform, at least with respect to support to fuel consumers, is gaining momentum. The years 2014-2015 have seen almost thirty countries, including Indonesia (see Text Box 1), Egypt, Mexico, India, Morocco and Thailand, taking efforts to reduce their fossil fuel subsidies. What has changed in recent years that made it possible to advance the reform of fossil-fuel subsidies?

#### Text Box 1. Indonesia ends decades-long policy of subsidizing gasoline consumers

At the beginning of 2015, the Indonesian government ended a decades-long policy of subsidizing gasoline. The new government of President Joko Widodo took advantage of falling oil prices by stopping to use public money to bridge the gap between the prices at the domestic and world levels (Global Subsidies Initiative). According to economist Wellian Wiranto, "This is a big deal.... Subsidies were supposed to eat up more than 13 percent of total expenditure in 2015 originally, but now [are] whittled down to a mere one percent. The country can now look ahead to how best to improve living standards, rather than look over its shoulders all the time for oil price risk." (Bloomberg, 2014)

In the meantime, the government has freed up funding for addressing bottlenecks in economic development, especially infrastructure. Some concerns have been voiced over part of the savings being redirected for coal plant construction (Indonesia Energy Subsidies Briefing February 2015). However, there are concerns that the government will be under pressure to reintroduce subsidies when the world price for oil goes up again.

We can describe this change using an analogy of the "window of opportunity", which in this case is a hybrid between the framework proposed by (Kingdon, 2003) and (Beaton, Gerasimchuk, Laan, Lang, Vis-Dunbar, & Wooders, 2013). There are four main sections of this "window" where different determining, contributing or facilitating factors of change can be placed: context, champions, benefits and co-benefits, and measures on impact-managing of the reform.

### Figure 2 illustrates this idea.

The major changes have happened perhaps at the **context level**. Fossil-fuel subsidy reform is an increasingly sought-after measure to cut budget deficits in the times of financial and economic downturn. That is why among the main proponents of the reform at the national level are always Finance Ministries. The second very powerful context change with implications for fossil-fuel subsidy is fluctuation in oil prices. It is well-recognised advice to governments to phase out fossil-fuel subsidies at the time of low energy prices. In 2014-2015 many countries followed this advice and phased out consumer subsidies. At the same time, fossil-fuel producing companies have seen a dramatic drop in their revenue and therefore built up pressure on national governments to introduce tax breaks and other subsidies in the upstream segment.

## Figure 2. Window of Opportunity for Fossil-Fuel Subsidy Reform



Source: IISD-GSI.

The second section of the "window of opportunities" accommodates **champions** of fossil-fuel subsidy reform, whose number and influence is growing. In 2009 the G20 leaders made a commitment to "rationalize and phase out over the medium term inefficient fossil-fuel subsidies that encourage wasteful consumption" (G-20 Pittsburgh Summit, 2009, September 24–25), which was followed by the same initiative within the Asia-Pacific Economic Co-operation (APEC) (APEC Summit, 2009, November 14 -15). Within both G-20 and APEC the most recent development are voluntary peer-reviews of fossil fuel subsidies by countries that are members of the organisations. The issue of fossil-fuel subsidy reform is on the agenda of more and more forums. One is the informal grouping "Friends of Fossil Fuel Subsidy Reform" (Costa-Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden, Switzerland) that in 2015 launched a dedicated Communiqué (Friends of Fossil-Fuel Subsidy Reform, 2015). The influential international organisations increasingly working on fossil-fuel subsidy reform include the World Bank, the Asian Development Bank, the Inter-American Development Bank, the IMF, the OECD, and the IEA. Fossil-fuel subsidy reform is also on the radar of non-governmental organisations such

as the Global Subsidies Initiative (GSI), Oil Change International (OCI), Overseas Development Institute (ODI), 350.org and some business associations such as B-20. Fossil-fuel subsidy reform is also more and more frequently discussed within the process of UN Framework Convention on Climate Change, including for potential inclusion into Intended Nationally Determined Contributions (Merrill, Harris, Casier, & Bassi, 2015).

The arguments in favour of fossil-fuel subsidy reform have not changed and remain largely linked to the implications of subsidies discussed in the **Impacts** section above. The **benefits and co-benefits** of the reform include budgetary savings and freeing up resources for other needs (see Text Box 1 on Indonesia), reduction of GHG emissions and local pollution. For net-importers of fossil fuels, these arguments can also be supported by energy security considerations and interest in cutting trade deficits (Beaton, Gerasimchuk, Laan, Lang, Vis-Dunbar, & Wooders, 2013). The room for increased role of these arguments is around better communicating strategies of governments who will facilitate the reform and reduce resistance to it by explanation of the reform's benefits to all groups of stakeholders.

Finally, countries influence each other by example, and here one of very important qualitative changes is accumulating experience on how to **mitigate impacts** of the reform, the fears of which can sometimes be a major barrier. Lessons learned from other countries can help address these fears and introduce sound policies such as targeted cash transfers for the vulnerable groups and improved safety nets, measures aimed at managing inflation potentially driven by fuel-price increases, fuel-pricing mechanisms that cushion the volatility of world oil price, green industrial policies and support for renewables.

There is no "one-size-fits-all" advice on implementation of fossil-fuel subsidy reform. The reform is very context-specific, and its scenarios can be very different depending on fuel in question, subsidy type, and many other factors. In the meantime, based on lessons learned from dozens of successful and failed reform attempts, IISD-GSI's "Guidebook to Fossil-Fuel Subsidy Reform for Policy Makers in Southeast Asia" (Beaton, Gerasimchuk, Laan, Lang, Vis-Dunbar, & Wooders, 2013) recommends the following to policy-makers faced with the need to reform fossil-fuel subsidies, as well as, possibly, some other reforms:

- Fossil-fuel subsidy reform cannot be undertaken as a single-issue reform. It is important to examine its interaction with other political and economic.
- Quality of institutions, transparency and stakeholder consultation around fossil-fuel subsidies are critical for successful subsidy reform.
- Fossil-fuel subsidy reform should be implemented together with policy measures mitigating its negative impacts on vulnerable social groups.
- Contrary to the political discourse in some developing countries, there is no "secret formula" according to which for each level of income and development there is, allegedly, an optimal price of energy.

#### **Fossil-Fuel Subsidies: Future prospects**

Given its economic inefficacy, social repressiveness, environmental destructiveness, and inevitable forthcoming changes in the wider context, fossil-fuel subsidy reform is bound to continue. It will keep appearing on the agenda of all relevant international fora, from UNFCCC to Sustainable Development Goals and their supporting frameworks, from G20 to APEC, from Bretton Woods institutions to NGOs. However, as always, the real drivers of the reform will remain at the national level.

As countries reform consumer subsidies, there will be more and more questions about government support received by producers of oil, gas, coal and carbon-intensive electricity. Unlike consumer subsidies that exist almost exclusively in developing countries, producer subsidies persist in both developed and developing countries. This lifts fossil-fuel subsidy reform from the level of "the gold billion countries telling the rest of the world what to do". However, political economy of producer subsidies reform is arguably even more challenging

than that of consumer subsidies. Fear of the reform and perceived "first-mover disadvantage" are a significant barrier to the reform on the producer side. In the meantime, the experience of consumer subsidies' reform and some other structural reforms testify that the "window of opportunity" can open for fossil-fuel producer subsidy reform, too. It is time for all stakeholders to prepare for it.

#### References

Akosile, A. (2011, June 30). Corruption, Not Petroleum Subsidy, is Nigeria's Problem. This Day .

APEC Summit. (2009, November 14 -15). Leaders' Declaration—Sustaining growth, connecting the region. Singapore.

Beaton, C., Gerasimchuk, I., Laan, T., Lang, K., Vis-Dunbar, D., & Wooders, P. (2013). A Guidebook to Fossil-Fuel Subsidy Reform for Policy-Makers in Southeast Asia. Geneva: IISD-GSI.

Bloomberg. (2014, December 31). Widodo Makes Biggest Change to Indonesia Fuel Subsidies: Economy. *Bloomberg*.

Bridel, A., & Lontoh, L. (2014). Lessons Learned: Malaysia's 2013 Fuel Subsidy Reform. IISD-GSI.

Bruvoll, A., J., S., & Vennemo, H. (2011). *Reforming environmentally harmful subsidies. How to counteract distributional impacts.* Nordic Council of Ministers.

Burniaux, J. M., & Chateau, J. (2014, 140). Greenhouse gases mitigation potential and economic efficiency of phasing-out fossil fuel subsidies. *International Economics*, 71-88.

Burniaux, J.-M., & Chateau, J. (Mitigation potential of removing fossil fuel subsidies: A general equilibrium assessment). *2010.* Paris: OECD.

Cheon, A., Urpelainen, J., & Lackner, M. (2013). Why do governments subsidize gasoline consumption? An empirical analysis of global gasoline prices, 2002–2009. *Energy Policy 56*, 382-390.

Clarke, K., Sharma, S., & Vis-Dunbar, D. (2014). India Energy Subsidy Review. Geneva.

Friends of Fossil-Fuel Subsidy Reform. (2015). *Fossil-Fuel Subsidy Reform Communique*. Friends of Fossil-Fuel Subsidy Reform.

G-20 Pittsburgh Summit. (2009, September 24–25). Leaders' statement. Pittsburgh, PA.

Global Subsidies Initiative. Indonesia Energy Subsidies Briefing February 2015. Global Subsidies Initiative.

GSI. (2010). Untold billions: Fossil fuel subsidies, their impacts and path to reform. A summary of key. Geneva.

Hassanzadeh, E. (2012). Recent Developments in Iran's Energy Subsidy Reforms. Geneva: IISD-GSI.

IEA . (2014). World Energy Outlook 2014. Paris: IEA.

IEA. (2006). Carrots and Sticks: Taxing and Subsidising Energy. Paris: IEA.

IEA. (2011). World Energy Outlook 2011. Paris: IEA.

IEA. (2012). World Energy Outlook 2012. Paris: OECD/IEA.

IEA. (2013). World Energy Outlook 2013. Paris: OECD/IEA.

IEA, World Bank, OECD, IMF, GSI. (2014). *Comparison of Fossil-Fuel Subsidy and Support Estimates.* IEA, World Bank, OECD, IMF, GSI.

IMF. (2013). Energy Subsidy Reform: Lessons and Implications. Washington: IMF.

IMF. (2014). Getting Energy Prices Right. Washington: IMF.

IMF. (2015). How Large Are Global Energy Subsidies? Washington: IMF.

James, L. (2014). Recent Developments in Sudan's Fuel Subsidy Reform Process. Geneva: IISD-GSI.

Kingdon, J. (2003). Agendas, alternatives, and public policies. Bostom: Little, Brown and Co.

Laan, T. (2010). *Gaining traction – the importance of transparancy in accelerating the reform of fossil.* Geneva: IISD-GSI.

Lontoh, L., Clarke, K., & Beaton, C. (2014). Indonesia Energy Subsidy Review. Geneva: IISD-GSI.

Meadows, D. (2009). Thinking in Systems - A primer. London: Earthscan.

Merrill, L. (2014, December 5). Maximizing Contributions to Emissions Mitigation From Fossil Fuel Subsidy Reform. *Global Subsidies Initiative's Blog.* 

Merrill, L., Harris, M., Casier, L., & Bassi, A. (2015). *Fossil-Fuel Subsidies and Climate Change: Options for policy-makers within their Intended Nationally Determined Contributions.* Copenhagen: Nordic Council of Ministers.

Nordhaus, W. (1994). *Managing the global commons: the economics of climate change.* Cambridge, MA: MIT Press.

OECD. (2012). An OECD-Wide Inventory of Support to Fossil-Fuel Production or Use. Policy Brief. Paris: OECD.

OECD. (2005). Environmentally Harmful Subsidies – Policy Issues and Challenges. Paris: OECD.

OECD. (2013). *Inventory of Estimated Budgetary Support and Tax Expenditures Relating to Fossil Fuels.* OECD.

Peters, B. (2012). Institutional Theory in Political Science: The New Institutionalism. London: Continuum.

Peters, B., Pierre, J., & King, D. (2005). The Politics of Path Dependency: Political Conflict in Historical Institutionalism. *The Journal of Politics 4*, 1275.

Randers, J. (2012). 2052: A Global Forecast for the Next Forty Years. Chelsea Green Publishing .

Reuters. (2014b, July 14). Ghana cuts fuel subsidy in policy U-turn to reduce spending. Reuters .

Reuters. (2014a, January 17). Morocco ends gasoline, fuel oil subsidies. Reuters .

Sabatier, P. (1988). An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences, 21 (2-3)*, 129-168.

Sabatier, P. (1998). The advocacy coalition framework: revisions and relevance for Europe. *Journal of European Public Policy*, *5:1*, 98 - 130.

Segal, P. (May 2012). Oil Subsidies in Mexico. Oxford Energy Forum, 11-12.

Stern, N. (2006). Stern Review: The economics of climate change. London: HM Treasury.

The Economist. (2015, January 17). Pump Aligning. The Economist .

The Telegraph. (2014, July 5). Egypt's government dramatically raises fuel prices. The Telegraph .

Victor, D. (2009). The Politics of Fossil-Fuel Subsidies. IISD-GSI.

Whitley, S. (2013). Time to change the game. Fossil fuel subsidies and climate. London: ODI.