

UPDATE ON RECENT PROGRESS IN REFORM OF INEFFICIENT FOSSIL FUEL SUBSIDIES THAT ENCOURAGE WASTEFUL CONSUMPTION

*Contribution by International Energy Agency (IEA) and
Organisation for Economic Cooperation and Development (OECD)*

to the G20 Energy Sustainability Working Group

*in consultation with:
International Energy Forum (IEF), Organization of Petroleum Exporting Countries (OPEC)
and the World Bank**

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1. Introduction

In April 2015 the Energy Sustainability Working Group (ESWG) of the G20 requested that an update “that captures recent progress in countries, the peer review process and other developments to phase out inefficient fossil fuel subsidies that encourage wasteful consumption” be prepared by the International Energy Agency (IEA) and the Organisation for Economic Co-operation and Development (OECD), in consultation with the International Energy Forum (IEF), the Organization of the Petroleum Exporting Countries (OPEC), and the World Bank. The report is to be made available for the next ESGW meeting in Istanbul on 25-26 May 2015. This document responds to that request.

Inefficient fossil-fuel subsidies that encourage wasteful consumption have been a focus of G20 work since September 2009, when G20 Leaders issued a Communiqué calling on its member economies to “rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption over the medium term while providing targeted support for the poorest”.¹ No precise date was given as to what constituted the medium term. Since that time, the G20 has commissioned three reports from selected intergovernmental organisations (IOs) and issued annual reports on members’ own reported progress² towards identifying and reforming inefficient fossil fuel subsidies.

Previous reports to the G20 have highlighted the fact that not all fossil-fuel subsidies are inefficient. A social-cost-benefit analysis would need to be carried out to distinguish between those fossil-fuel subsidies that enhance the well-being of an economy and those that can be classified as inefficient. Reform of inefficient fossil-fuel subsidies is also recognized as a sovereign issue dependent on the unique situation and priorities of the individual countries. Moreover, the issue should be considered within the context of the common but differentiated responsibilities of developed and developing countries.

Fossil fuels receive many types of subsidy, provided through direct and indirect channels.³ Such subsidies can be differentiated according to whether they confer benefits to consumers or producers of energy. Fossil-fuel consumption subsidies, many of which lower prices to end-users below the international prices for the same fuels, are now rare in most developed economies, but are still present in many other regions. Some consumption subsidies are provided through direct grants or vouchers. Others are provided through the tax system and targeted at certain end-users of energy, particularly off-road users of petroleum products, which are commonly exempted from excise taxes normally levied on those fuels.

¹ The G20 work focuses on the phasing out of *inefficient* fossil fuel subsidies *that encourage wasteful consumption over the medium term*. These important qualifications (in italics) are central to the update. Still, for reasons of succinctness and readability in the text, the update refers to fossil fuel subsidies without the additional qualifications.

² Done on a voluntary basis.

³ See the joint report by the IEA, OPEC, the OECD, and the World Bank, “Analysis of the Scope of Energy Subsidies and Suggestions for the G-20 Initiative”, Prepared for submission to the G-20 Summit Meeting Toronto (Canada), 26-27 June 2010. Available at <http://www.oecd.org/env/45575666.pdf>.

Production subsidies involve measures that seek to maintain or expand the domestic supply of fossil fuels. They remain a common form of subsidisation in both developed and developing countries, though many subsidies in this category that were previously provided to maintain high-cost production of coal were phased-out in the 1985-2004 period. Both production and consumption subsidies, by encouraging excessive consumption or production, can lead to an inefficient allocation of resources and market distortions, posing barriers to the introduction of cleaner technologies and fuels and discouraging the uptake of more resource-efficient practices. They can also put a strain on government budgets.

IEA and OECD analyses indicate that momentum has been building behind subsidy reforms for several years now, with good prospects that this will continue. Reforms have included moves in developed and developing countries to reduce consumption and production subsidies. Many of the reforms in developing and emerging countries have, in large part, been facilitated or triggered by the extended period of persistently high energy prices up until mid-2014, which pushed the cost of subsidies to very high levels in some countries, particularly those experiencing fast growth in energy demand. The ongoing subsidy reform initiatives being pursued by the G-20 and other groups such as APEC and the Friends of Fossil Fuel Subsidy Reform (a group of non-G-20 countries that support the reform of inefficient fossil-fuel subsidies) and civil-society organisations have also played a role, along with conditions placed on some loans for energy projects by international lending agencies and sovereign lending by the IMF.

This report documents progress made in conducting peer reviews of economies' policies supporting fossil fuels, highlights recent developments in policy reforms around the world, and summarises other significant developments to further the goal of fossil-fuel subsidy reform.

2. Peer reviews

Since September 2009, when the G20 Leaders called on their membership to “rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption over the medium term while providing targeted support for the poorest”, both the G20 and APEC (whose leaders issued a similar declaration in November 2009) have engaged in a voluntary process of periodically reporting on their fossil-fuel subsidies. Both organisations have also developed peer-review processes. The aim of these voluntary peer reviews is to further the process of mutual learning and to deepen the level of understanding of the challenges confronting reform efforts.

The following paragraphs provide an update on these efforts.

G20 peer reviews

In February 2013, G20 Finance Ministers committed to develop and undertake a voluntary peer review process and report to G20 Leaders on the outcomes of the peer reviews. They agreed also to develop methodological recommendations⁴ for undertaking a voluntary peer-led process to review progress towards reforming inefficient fossil fuel subsidies that encourage wasteful consumption, with the view to encouraging broad participation among the G20 members.

In 2014, China and the United States agreed to be the first countries to engage in mutual peer reviews. As of the beginning of May 2015, the members of the two review teams had been selected and self-reviews by the two countries were being finalized. Once the self-reviews are shared with the peer review teams, the review teams will evaluate the information on each country in course of several months.

⁴ See: <http://www.g20russia.ru/load/783530379>.

Germany has announced it will serve on both the Chinese and American peer review teams and will undergo a peer review of its own. Mexico will serve on the American peer review team and also undergo a peer review.

APEC peer reviews

In March 2013, the Energy Working Group (EWG) of Asia-Pacific Economic Cooperation (APEC) recommended a voluntary peer review of inefficient fossil fuel subsidy reform (VPR-IFFSR) to assess APEC's progress towards its green-growth agenda.⁵ These peer reviews are intended to assist APEC economies in rationalizing and removing inefficient fossil fuel subsidies, while identifying essential energy services that need to be provided to vulnerable populations. In November of the same year, the EWG adopted guidelines for conducting the peer reviews, and Peru and New Zealand volunteered to be the first APEC economies to undergo the process.

Box 1. The 2014 APEC voluntary peer review of Peru's fossil-fuel subsidies

Peru selected three policy instruments for evaluation by the review panel: (i) a preferential value-added tax (VAT) exemption that was originally enacted to promote economic development in the Amazonian region; (ii) a price stabilization mechanism for petroleum products designed to protect Peruvian consumers from volatility on international markets (FEPC); and (iii) a cross-subsidy program designed to assist the most vulnerable populations in Peru to obtain access to LPG (FISE).

With regard to the VAT exemption, the review panel concluded that it had been ineffective in meeting its objective of spurring economic development in the Amazon regions and led to wasteful and inefficient consumption of fossil fuels. It found that richer population groups gain more benefit than the poorer since they consume more fossil fuel than the poor. Moreover, it had resulted in high fiscal costs to Peru. The panel concluded that the VAT exemption should be eliminated and replaced with targeted social and regional development programs aimed at improving schools, hospitals, transportation, and other infrastructure.

With regard to the FEPC, the review team found that it has likely caused higher fossil fuel consumption than would otherwise be the case; has resulted in significant fiscal costs to Peru; and has likely undermined the competitiveness of Peru's refineries. It acknowledged that the incremental reforms to FEPC have been positive, but concluded that the potential benefits of the FEPC are poorly targeted and regressive and that it has only marginally reduced inflationary pressures. The team recommended that the Peru should depoliticize fuel pricing completely and eventually close down the FEPC — in line with Peru's long term goals. It said, however, that the FEPC should be removed in a phased manner and be accompanied by offsetting measures targeted to vulnerable segments of the populations.

With regard to the FISE, the review team found that it had been effective in meeting its goal of providing fuel access to the populations it is designed to serve; did not substantively increase the consumption of fossil fuels, and provided a good model for other similar government programs. Moreover, the Cuzco pilot program for FISE rollout was well-thought out and successful, and the government has been successful in its outreach and communication to eligible groups. Revenue collected for FISE appears to be effective, but the full economic costs of these cross subsidies are not well understood. Accordingly, the panel advised that a review of these economic costs be undertaken. Overall, the team determined that the impacts of the FISE on recipients have been positive. The team recommended that the FISE program should be continued, as well as current efforts to examine methods for improving the program. They advised that it should also be expanded to segments of the population not currently being served.

Source :Based on the presentation of Ananth Chikkatur (on behalf of the APEC Peer Review Panel for Peru), "Voluntary Peer Review on Fossil Fuel Subsidy Reforms in Peru", November 20, 2014, APEC Energy Working Group.

⁵ See APEC (2013), "45th APEC Energy Working Group meeting non-paper: A brief review of the APEC fossil fuel subsidy reform process", March. Available at http://apecenergy.tier.org.tw/database/db/ewg45/Fossil_Fuel/NON_PAPER_brief_review_of_APEC_fossil_fuel_subsidy_reform_process.pdf

The peer review for Peru began in earnest in March 2014, and a final report was published in November 2014 (Box 1). In March 2015 New Zealand was visited by a six-member review team, who will finalise their report later in 2015. The Philippines will be the third APEC economy to undergo a peer review.

3. Global progress in fossil-fuel subsidy reform

The IEA puts the value of fossil-fuel consumption subsidies at USD 548 billion in 2013.⁶ Globally, 40 countries have been identified as subsidising fossil-fuel consumption. In total, they account for over half of the world's energy consumption. The value of subsidies as a share of total GDP of these countries averages 5%. The rate of subsidisation (the ratio of the subsidy to the international reference price) averages 23%. Ten countries account for almost three-quarters of the world total for fossil-fuel consumption subsidies; five of them — all oil and gas exporters — are in the Middle East or North Africa. Most of the other leading subsidisers are also important hydrocarbon producers. They generally set domestic prices above the cost of production, but well below the prices those fuels could reach on the international market, net of transport costs.

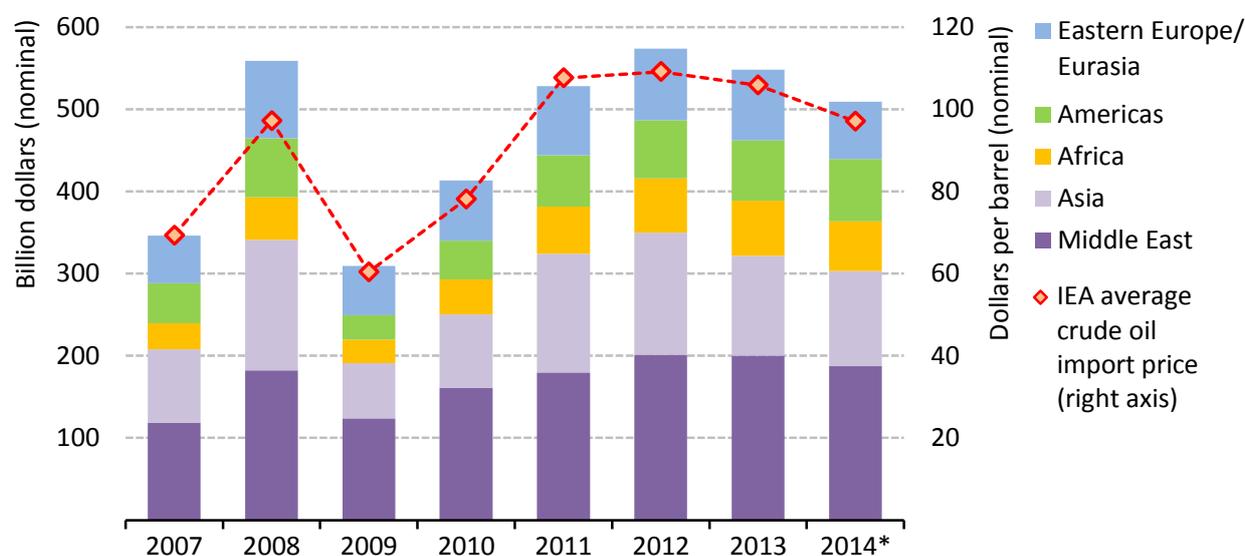
Globally, fossil-fuel consumption subsidies fell slightly in 2013, after rising marginally in 2012 and more sharply in 2011, as a result of a combination of lower international energy prices and policy reforms in a number of countries. Consumption-subsidy estimates also fluctuate from year-to-year in line with changes in exchange rates and demand. Based on preliminary data⁷, the IEA estimates that the value of these types of subsidies fell further in 2014, to USD 510 billion (Figure 1).

IEA analysis indicates that momentum has been building behind reforms to fossil-fuel consumption subsidies for several years now, with good prospects that this will continue. Many of the reforms have, in large part, been facilitated or triggered by the extended period of persistently high energy prices between 2008 and mid-2014, which pushed the cost of subsidies to very high levels in some countries, particularly those experiencing fast growth in energy demand.

⁶ The IEA measures subsidies based on the amount by which the price of a given fuel falls short of its reference price, which corresponds to the international market price, adjusted for the costs of transportation and distribution and value-added tax (VAT), or where appropriate the full cost of supply. The estimates cover subsidies to fossil fuels consumed by end-users and subsidies to fossil-fuel inputs to power generation. For countries that import a given product, the estimates represent net expenditures resulting from the domestic sale of imported energy (purchased at world prices in hard currency), at lower, regulated prices. For countries that export a given product, the estimates represent the opportunity cost of pricing domestic energy below market levels. It is important to note that a number of countries that are well endowed with energy resources are of the opinion that the reference price in their markets should be based on their cost of production rather than on import- or export-parity pricing (see Section 3 below).

⁷ Final data will be reported in the 2015 edition of the *World Energy Outlook*, due out on 10 November 2015.

Figure 1. . Economic value of global fossil-fuel consumption subsidies by region



Source: International Energy Agency

*Estimate using preliminary data for 2014.

Somewhat paradoxically, given what is said above about the motivation force of high oil prices, the plunge in oil prices since mid-2014 could add further momentum to the phase-out of consumer subsidies, by making their withdrawal less politically controversial. Indeed, several countries have already seized the opportunity, including Egypt, India, Indonesia, and Malaysia. On the one hand, by reducing the cost of subsidising energy consumption, lower international prices may be said to reduce the budgetary urgency for governments to take action. But they also present a unique opportunity to abolish subsidies without having a major upward impact on prices — or inflation — and provoking public outcry. The durability of such reforms will be tested if and when international prices again move higher.

In addition to the subsidies identified by the IEA, the OECD produces and maintains an online *Inventory of Support Measures for Fossil Fuels*⁸, which systematically identifies, documents, and estimates the value of support arising from about 800 individual policies that encourage the production or consumption of fossil fuels. This unique source of information covers 40 countries, including all 34 OECD Members and a great number of sub-national jurisdictions in the case of federations (e.g. all Canadian provinces and 11 US states), as well as large emerging economies (Brazil, China, India, Indonesia, the Russian Federation, and South Africa).

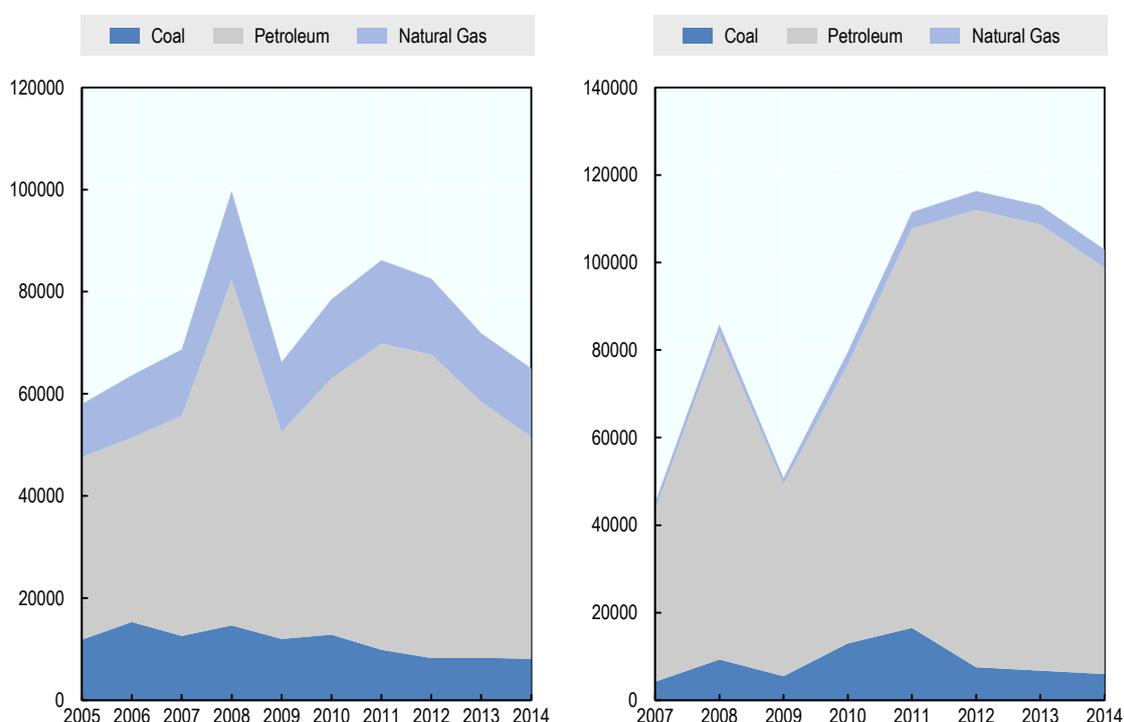
Taken together, the measures covered in the OECD Inventory amounted to USD 160-200 billion annually over the period 2010-14, most of it going to the consumption of refined petroleum products (Figure 2).⁹ Although some progress has been visible over the past three years, total support remains high, emphasising the need for sustained and reinforced reform efforts on the part of governments. This is especially the case as more than half of all measures were introduced prior to 2000, in a context that was very different from

⁸ <http://www.oecd.org/site/tadffss/data/>

⁹ OECD (2015), *OECD Companion to the Inventory of Support Measures for Fossil Fuels 2015*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264239616-en>

today’s social, economic, and environmental circumstances. The following paragraphs provide details of the reform efforts in Mexico, India, and Indonesia.

Figure 2. . Total support for fossil fuels in OECD countries (left) and selected partner economies (right) by year and type of fuel (Millions of current USD)



Notes: The above charts are based on an arithmetic sum of the individual support measures identified in the OECD Inventory. Along with direct budgetary support, it includes the value of tax relief measured under each jurisdiction’s benchmark tax treatment. The estimates do not take into account interactions that may occur if multiple measures were to be removed at the same time. Because they focus on budgetary costs and revenue foregone, the estimates for partner economies do not reflect the totality of support provided by means of artificially lower domestic prices. Particular caution should therefore be exercised when comparing these estimates to those reported by the IEA for these countries.

Source: OECD (2015), *OECD Companion to the Inventory of Support Measures for Fossil Fuels 2015*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264239616-en>

Mexico has eliminated the support it provided for the consumption of gasoline and diesel fuel through its *Impuesto Especial sobre Producción y Servicios por Enajenación de Gasolinas y Diesel* (IEPS), a floating excise tax. Variable rates of IEPS are set by the government on the basis of international oil prices for two grades of gasoline, and for diesel fuel. During periods of high international oil prices, IEPS rates turn negative, generating a tax expenditure. Conversely, lower international prices trigger an increase in the variable rate of IEPS, which reduces the tax expenditure or, as is currently the case, results in a net positive tax. The Federal Government has over the years increased retail prices on a monthly basis in order to reduce the support conferred to consumers. Coinciding with lower international prices, these efforts have contributed to reducing total consumer support in Mexico from MXN 244 billion (USD 18.5 billion) in 2012 to MXN 34 billion (USD 2.5 billion) in 2014. Since late 2014, rates of IEPS have been positive and it is expected that these will generate revenues of around 1% of GDP in 2015.

In late 2012, India’s Federal Government started increasing retail prices for diesel fuel by small amounts (about INR 0.50, equivalent to USD 0.008, per litre) every month, which led to the complete phase-out of

subsidies for diesel fuel in September 2014. Total consumer support for petroleum products fell accordingly, from about INR 970 billion (USD 18 billion) in 2012 to INR 610 billion (USD 10 billion) in 2014. Both kerosene and LPG (liquefied petroleum gas) continue to be subsidized. However, the Government has begun to switch to conditional cash transfers for subsidized 14.2-kg cylinder LPG by May 2015. It has opened bank accounts for every LPG customer and assigned them a 17-digit customer number. Currently, every LPG customer receives a transfer under the Direct Benefits Transfer for LPG (DBTL) programme. Wealthy households and politicians have been encouraged to voluntarily forfeit these payments.

Indonesia's Government has historically subsidized gasoline, diesel, kerosene, LPG, and electricity. Pricing was *ad hoc* until 2015. Energy subsidies reached USD 33 billion in 2012 and 2013, and USD 37 billion in 2014. New pricing regulations went into effect on 1 January 2015, abolishing the subsidy for low-octane (88 RON) gasoline, while retaining a fixed subsidy for diesel of IDR 1000 (USD 0.08) per litre, and fixing the kerosene price at IDR 2500 (USD 0.20) per litre. (On top of these, a VAT and 5% excise tax is applied to automotive gasoline and diesel fuels.) These changes are expected to reduce the total cost of Indonesia's consumer subsidies for petroleum fuels from IDR 247 trillion in 2014 to IDR 65 trillion in 2015, an approximately USD 14 billion reduction in a single year. Other developments in fossil-fuel pricing policies and subsidy reforms are summarised in Table 1.

Table 1. Recent developments in fossil-fuel pricing policies and subsidy reforms

Country	Recent developments
Angola	In December 2014, reduced subsidies by increasing prices to AOA 90 (USD 0.83) per litre for gasoline and AOA 60 (USD 0.55) per litre for diesel.
Argentina	In April 2014, announced a 20% reduction in natural gas subsidies for commercial and residential users. It raised natural gas prices again in June and August. Price increases for small consumers were based on how much consumers reduce their consumption. Those who reduce consumption by more than 20% compared with the same month a year earlier pay a much lower price than those who reduce consumption by less than 5%. Estimates are that these changes will save the government up to ARS 13 billion (USD 1.6 billion), earmarked to cover utility costs and finance social spending. In March 2015, the government launched an LPG cash transfer system to target subsidies to poor households without access to natural gas.
Bahrain	In January 2015, announced that the price of natural gas sold to companies would increase by USD 0.25 per MBtu each year until it reaches USD 4 per MBtu in 2022.
Bangladesh	The FY 2014/15 budget for fuel subsidies was slashed by 67%, to BDT 24 billion (USD 309 million) to meet IMF loan conditions. The government committed to keep refined oil product prices within BDT 10 (USD 0.13) per litre of international prices. Retail electricity prices were raised by 64%, to BDT 6.15 (USD 0.08) per kWh on average, between March 2010 and March 2014.
Brazil	From June 2012 through April 2015, the Brazilian federal government reduced its CIDE (<i>Contribuição sobre Intervenção no Domínio Econômico</i> , or Contribution of Intervention in the Economic Domain) tax rates for gasoline, diesel fuel, kerosene, aviation kerosene, and natural gas to zero in order to offset a further increase in ex-refinery prices for petroleum products. As of 1 May 2015, CIDE fuel-taxation was resumed, at rates of BRL 0.12 (USD) per litre on gasoline and BRL 0.08 (USD) per litre on diesel. Tax rates for kerosene, aviation kerosene, fuel oils and natural gas still remain at zero. Similarly, effective 1 May 2015, the Brazilian federal government raised the combined PIS (Contribution to the Social Integration Program) and COFINS (Contribution to Social Security Financing) fuel-tax rate on gasoline from BRL 0.05 to per litre, and on diesel from BRL 0.03 to BRL 0.07 per litre. The per-litre tax rates on aviation kerosene and natural gas rates are, respectively, BRL 0.01 per litre and BRL 0.03 per kilogram.
Ecuador	In May 2014, the electricity tariff for commercial and industrial sectors was increased by USD 0.02 as part of a plan to reduce electricity subsidies.
Egypt	In July 2014, the price of 92RON gasoline was increased by 41% to EGP 2.60 (USD 0.37) and of 80RON gasoline by 78% to EGP 1.60 (USD 0.22) per litre; the price of automotive diesel was raised by 63% to EGP 1.80 (USD 0.25) per litre and of natural gas for vehicles to EGP 1.10 (USD 0.15) per litre; electricity prices were raised by EGP 0.23 (USD 0.03) per kWh on average, as the first step towards eliminating subsidies within five years; natural gas prices for a range of industries increased by 30% to 70%. As a result of these changes, spending on fuel subsidies was cut by around 30% during the first half of FY 2014/15 compared with the same period in the previous year, from EGP 64.5 billion to EGP 44.8 billion (USD 5.9 billion). Egypt's fuel subsidy.
Ghana	In July 2014, subsidies for gasoline and diesel were abolished, leading to an increase of at least 22% in pump prices.
India	India abolished diesel subsidies in October 2014. LPG and kerosene remain subsidized. The Government intends to switch to conditional cash transfers for subsidized 14.2-kg cylinder LPG (liquefied petroleum gas) by May 2015. It has opened bank accounts for every LPG customer and assigned them a 17-digit customer number. Currently, every LPG customer receives a transfer under the Direct Benefits Transfer for LPG (DBTL) programme. However, wealthy households and politicians have been encouraged to voluntarily forfeit these payments.
Indonesia	At the end of 2014, abolished subsidies to gasoline (88 RON) and capped the diesel subsidy at IDR 1 000 (USD 0.08) per litre. Prices for these fuels are now set each month in accordance with movements in international markets.
Iran	The parliament approved a 5% increase in fuel prices for FY 2015/16. The revised price of regular gasoline will be IRR 7 350 (USD 0.27) per litre.
Jordan	Removed most subsidies on petroleum products in November 2012 and February 2013 and raised electricity prices (largely based on fossil fuels) from the

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Country	Recent developments
	beginning of 2014.
Kuwait	In January 2015, the price of diesel and kerosene was increased from KWD 0.055 to KWD 0.110.
Malaysia	In December 2014, subsidies for 95RON gasoline and diesel were abolished, with prices now set monthly to track international levels. In January 2014, electricity tariffs were increased by 15% on average to MYR 0.38 (USD 0.12) per kWh. Fuel cost pass-through, based on international gas price movements, was resumed in the same month. In May 2014, increased natural gas prices by up to 26% for certain users.
Mexico	The prices of gasoline and diesel have been increased each month in 2014 to bring them closer to international levels. The government applied an increase of 1.9% to gasoline and diesel prices on 1 January 2015 and declared there would not be any further increase in 2015.
Morocco	Ended gasoline and fuel oil subsidies in early 2014 and diesel subsidies in January 2015.
Myanmar	In 2014, a new block electricity tariff scheme for households and industry was approved, though tariffs are still among the lowest in Asia.
Nepal	In March 2014, gasoline, diesel, kerosene and aviation fuel prices were raised, but the move was subsequently reversed following protests. Adopted a new fuel pricing mechanism in September 2014 that is based on international prices trends.
Nigeria	Natural gas prices for power generation and industry were raised in August 2014. In January 2015, gasoline prices were cut by 10% to NGN 87 (USD 0.44) following the decline in global oil prices.
Oman	In May 2014, announced plans to gradually reduce fuel subsidies, especially for gasoline. In January 2015, gas prices for industrial consumers were raised by 100% to OMR 0.041 per cubic meter (USD 3.01 per MBtu). A 3% annual rise is to be introduced for industrial users.
Thailand	In October 2014, increased the price of CNG for vehicles by THB 1 (USD 0.03) per kilogramme. In December 2014, it ended subsidies for LPG.
Turkmenistan	In February 2014, the price of natural gas for households was raised in line with the objective of phasing out some energy subsidies.
UAE	Electricity prices in Abu Dhabi were increased in January 2015 for some categories of users. In August 2015, the UAE began to deregulate prices for petroleum fuels. On the first of that month it increased retail prices for gasoline by around 25%.
Ukraine	In April 2014, as part of an agreement for IMF lending, natural gas prices for industrial consumers were increased by 29% to USD 366 per 1 000 cubic metres and for government users by 64% to USD 354 per 1 000 cubic metres.
Uzbekistan	In July 2014, diesel prices were increased by 11.7% to UZS 1 910 (USD 0.84) per litre.
Yemen	In July 2014, the price of gasoline was increased by 60% to YER 200 (USD 0.93) per litre and of diesel by 95% to YER 195 (USD 0.91) per litre. Subsidies were partially restored in September 2014 following protests.

Progress is also visible in a number of OECD countries, in addition to Mexico. In 2013 the Netherlands phased out the excise-tax reduction it had previously been applying to diesel fuel used for non-transport purposes (e.g. in farming activities or for heating) on the grounds that the concession was environmentally harmful and costly to monitor. Austria and the Slovak Republic took similar steps in 2013 and 2011 respectively. Also in 2014, France started to phase out the exemption from excise tax it applied to natural gas consumed by households by progressively introducing a carbon component in excise taxes (known as the Climate Energy Contribution, or *Contribution Climat Énergie*). On the production side, Canada has in recent years reformed federal provisions relating to the treatment of certain capital expenses for oil sands and coal mining in order to improve the neutrality of the country's corporate tax system. And Germany has continued to reduce the large budgetary transfers it provides to hard-coal mines located in North Rhine-Westphalia; payments were about EUR 1.5 billion in 2014, compared with more than three times that much twenty years earlier. The country plans to phase out these transfers entirely by 2018.

3. Other developments

This section provides information on other developments in Inter-Governmental Organisations.

The World Bank

Report on Transitional Policies to Assist the Poor while Phasing Out Inefficient Fossil Fuel Subsidies that Encourage Wasteful Consumption

In September 2014, the World Bank, with input from the IMF, the IEA, the International Energy Forum (IEF), the OECD, the OPEC Fund for International Development (OFID), and the Organisation of Petroleum Exporting Countries (OPEC), contributed a report to G20 Finance Ministers and Central Bank Governors on transitional policies to assist the poor while phasing out inefficient fossil-fuel subsidies that encourage wasteful consumption.¹⁰ It discusses some of the options available to countries that choose to phase out inefficient fossil fuel subsidies (FFS) while continuing to ensure access to essential energy services for the most vulnerable.

The report finds that, “as a mechanism for redistributing income in favour of the poor, untargeted fossil fuel subsidies are widely considered to be economically inefficient. They benefit the poor only in proportion to their consumption of the good being subsidized. Given that the non-poor typically utilize more of the fuels covered, the effects of these subsidies tend to be regressive. Even so, price increases from the removal of FFS are likely to adversely affect lower-income households who are already struggling to meet basic needs. The consumption and income opportunities of the poor are reduced by an increase in the price of fuels (direct effects) or fuel-intensive goods (indirect effects). Inflation linked to a rise in the price of transporting goods and of public transport is likely to play the greatest role in affecting lower-income households. In addition, to the extent that higher fuel prices cause consumers to shift back to traditional biomass (such as wood, charcoal, dung, and agricultural residues), the elimination of FFS may have broader health, environmental and social impacts on households and communities.”

¹⁰ The report can be downloaded at <https://g20.org/wp-content/uploads/2014/12/14%20Transitional%20Policies%20To%20Assist%20The%20Poor%20While%20Phasing%20Out%20Inefficient%20Fossil%20Fuel%20Subsidies.pdf>.

*The Energy Subsidy Reform and Delivery Technical Assistance Facility*¹¹

In 2013 the Energy Sector Management Assistance Program (ESMAP) of the World Bank launched the Energy Subsidy Reform and Delivery Technical Assistance Facility in 2013. This USD 20 million, multi-year initiative is supporting countries as they design and implement subsidy reform programs, involving close collaboration with key stakeholders in the country, such as government ministries, think tanks, and civil society organizations. The facility offers countries technical assistance on various aspects of energy subsidy reforms, including:

- analysis of the poverty, social, fiscal, macroeconomic, political, economic, and climate change aspects of subsidy reform;
- assessment of distributional impacts of subsidies at the household and macroeconomic levels;
- support for policy dialogue, consultations and stakeholder engagement, communications strategies, and consensus building;
- support for improving the targeting and delivery of subsidies, including via technology-enhanced approaches;
- design and implementation of subsidy reform approaches, energy pricing frameworks, transition plans, stakeholder consultations, and communication strategies; and suitable social protection and other mitigation mechanisms, including adoption of energy efficiency and renewable-energy solutions to mitigate the impacts of price increases

Engagement at the country and regional level is being conducted through World Bank teams composed of experts in poverty reduction, social protection, energy pricing and reforms, fiscal policy, climate change, social development, and communications.

The facility has also launched a series of knowledge exchange activities encouraging peer learning on both diagnostics and solutions among client countries and at the international level. A series of in-depth case studies is being written on the political economy aspects of energy-subsidy reforms, which focuses on the implementation details of past country engagements.

A Global Conference was held in Copenhagen in October 2014, bringing together governments from across the world that have undertaken energy subsidy reforms or may be considering such reforms. Several other regional workshops have been held in the Middle East and North Africa and Central America, and at the World Bank and IMF Spring Meetings 2015.

The facility has also set up a Panel of Experts and Peers who are available to help client countries in various aspects of subsidy reforms, and will also help with knowledge exchange.

As part of the knowledge exchange aspects of the facility, a members-only online platform — the Energy Subsidy Reform Online Community (ESROC)¹² — has been constructed that is available for client country practitioners who are reforming or are planning to reform their energy subsidies. The platform, which is run by ESMAP and is open to all participants in ESMAP events about energy subsidies, brings together

¹¹ Note that this technical-assistance facility is just one of the instruments the Bank Group offers to support countries with subsidy reform.

¹² <https://collaboration.worldbank.org/groups/esmap>.

government officials from around the world, experts from the World Bank and from other international organizations interested in reforming energy subsidies.

The Energy Subsidy Reform and Delivery Technical Assistance Facility is collaborating closely with other organizations that already produce analysis and research on subsidy reforms (such as the Global Subsidies Initiative (GSI), the International Energy Agency (IEA), the IMF, and the OECD) in promoting knowledge exchange.

Organization of the Petroleum Exporting Countries (OPEC)

Phasing out or rationalizing inefficient fossil fuel subsidies is a sovereign issue dependent on the unique situation and priorities of individual countries. When pursuing such initiatives at the international level, the common but differentiated responsibilities of developed and developing countries should also be acknowledged.

Not all fossil fuel subsidies can be termed inefficient. It is therefore important to carry out a social-cost benefit analysis to distinguish between those fossil fuel subsidies that enhance the well-being of an economy and those that can be classified as inefficient. Moreover, according to estimates by the Global Subsidies Initiative (GSI, 2011), in 2009 fossil fuel subsidies for fossil fuels were lower than those for other energy forms, measured per unit of energy: 0.7¢/kWh in the countries with the highest subsidies. By comparison, subsidies for nuclear and renewable energy for electricity generation were as high as 11.6¢ per kilowatt hour (kWh) and 15.4¢/kWh respectively; for transportation, biofuels received a subsidy of 3.3¢/kWh compared with 0.5¢/kWh for oil-related products. Subsidies for non-fossil fuel energies continue to be provided mainly by OECD countries. According to the EIA, the OECD countries are responsible for more than 80% of the world's nuclear and renewable-energy-based electricity generation. These countries also account for two-thirds of the world's biofuel production.

While the *Price Gap Approach* (PGA) used in this report is one of many tools to measure fossil fuel subsidies, other methodologies come to different conclusions, particularly in the oil producing countries where fossil fuel subsidies may exist. Therefore, the following points should be taken into consideration when reviewing the input provided here. First, oil producers usually produce at much lower prices than the Price Gap Approach accounts for. Second, PGA utilizes an estimated world market price (i.e. import parity pricing for net importers; export parity pricing for net exporters). Thirdly, PGA does not account for purchase power parity, which would rightly consider local prices, even if they are low on an international scale. Fourth, foreign exchange effects also should be taken into consideration. This leads to the conclusion that, where they exist, fossil fuel subsidies are much lower in oil producing nations than the PGA methodology implies. Moreover, if an oil producer does not have any cash outflow for subsidising oil products — as production costs are significantly lower than for oil importers — then an increase in domestic oil prices to an artificial world market price would hardly be justified. It should be further noted that a number of countries that are well-endowed with energy resources are of the opinion that the reference price in their markets should be based on their cost of production, rather than prices on international markets as applied within this analysis. The basis for this view is that these countries are using their natural resources in a way that effectively promotes their general economic development, and that this approach more than offsets the notional loss of value by selling the resource internally at a price below the international price.

IEA reviews

The IEA has been reviewing its countries' energy policies on a triennial basis since the 1980s, mainly through its *Energy Policies of IEA Countries* series. On occasion these reviews have discussed, and made

recommendations regarding particular energy subsidies. The IEA's *Energy Policies Beyond IEA Countries* series goes much more deeply into fossil-fuel subsidies and their reform. The IEA released an Indonesia Review in 2015, which found that energy subsidies lie at the heart of the challenge to developing the country's energy sector. The report acknowledged progress made in decreasing fossil fuel subsidies since the first IEA review, in 2008, and stated that the government's recent move to phase out subsidies on gasoline and diesel is a powerful sign for change but needs to be sustained and extended to other fuels. In 2014, the IEA published studies on Russia (July) and Morocco (November). Its recommendations to Morocco on oil products include: "(i) gradually replace butane subsidies with direct monetary subsidies to low-income households, taking into account the possible social repercussions of this subsidy's elimination; and (ii) immediately regulate the butane market in order to limit its use in the agricultural and industrial sectors."

The IEA published on 15 June 2015 a Special Report on Energy and Climate Change. As input to negotiations in the lead up to the crucial COP21, the report suggests pragmatic policy measures to advance climate goals without blunting economic growth. It finds that a peak in global energy-related CO₂ emissions could be achieved as early as 2020 if governments implement just five key policy measures, as shown in the IEA's "Bridge Scenario". This major milestone is possible utilising proven technologies and policies, and without changing the economic and development prospects of any region. Intended as an effective bridge to further action, the five measures focus on:

- Increasing energy efficiency in the industry, buildings and transport sectors;
- Reducing the use of the least-efficient coal-fired power plants and banning their construction;
- Increasing investment in renewable energy technologies in the power sector;
- Reducing methane emissions in oil and gas production; and
- Gradual phasing out of fossil-fuel subsidies to end-users by 2030.

The contribution that subsidy reform makes to the abatement achieved in the "Bridge Scenario" is important at the global level and a major factor in those regions where subsidies are more prevalent. Savings from subsidy reform increase over time as rising prices provide consumers with growing incentive to change their behaviour and purchase more energy efficient equipment and provide renewables producers with improved competitive prospects.

OECD reviews

Reviews of fossil-fuel support policies and fuel taxation are undertaken systematically by the OECD's Economics Department and its Environment Directorate. The *Economic Surveys* of OECD countries and key partners have discussed the need for reforms of fossil-fuel subsidies in several countries over the years, including European Union, Finland, Hungary, Indonesia, India and Mexico. The Environment Directorate's *Environmental Performance Reviews (EPRs)* have routinely discussed fossil-fuel support policies in countries under examination since 2011.¹³ A summary of the *Economic Surveys* and *EPRs* published in 2014 that have discussed fossil-fuel subsidies or fuel taxation are listed in Table 2.

¹³

The most recent report on a country with significant subsidies, Colombia (a country in the process of acceding to the OECD), recommends that it: "Assess how the use of environmentally related taxes could be extended, including by: i) restructuring fuel and vehicle taxes to take account of their contribution to GHG emissions and local air pollutants; ii) removing tax exemptions on transport fuel and on mining and oil exploration; iii) introducing excise duties on energy products used for stationary purposes; and broaden the

The OECD's Environmental Action Programme (EAP) Task Force also undertakes reviews of energy subsidies in the EU's six Eastern Partnership (EaP) countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine). A pilot review of Moldova was conducted in 2014 in co-operation with the UNDP. During 2015, the EAP Task Force plans to undertake in-depth country reviews, which will include compiling subsidy information and providing recommendations for reform, in the remaining five EaP countries. As part of the EAP Task Force work in Central Asia, a similar review was carried out in Kazakhstan, in 2013.

Table 2. OECD Economic Surveys and Environmental Performance Reviews in 2014 that discuss support to fossil fuels

Economy	Comment
European Union	The 2014 <i>Economic Survey</i> highlights challenges related to the Emission Trading Scheme, CO2 taxation, and fossil-fuel subsidies.
Finland	The 2014 <i>Economic Survey</i> identifies phasing-out environmentally harmful subsidies, the taxation of carbon emissions and other environmental externalities as challenges.
Hungary	The 2014 <i>Economic Survey</i> discusses energy taxation (e.g. preferential taxation of diesel relative to gasoline), internalising negative externalities of private transport (e.g. with annual vehicle taxes) and moving towards market-based pricing in the electricity and gas sectors.
India	The 2014 <i>Economic Survey</i> highlights energy subsidies, as well as the pricing of environmental externalities.
Sweden	The 2014 <i>Environmental Performance Review</i> notes tax exemptions for fossil-fuels as a challenge area.

The OECD's Investment Committee has also on occasion discussed fossil-fuel support policies in the context of its *Investment Policy Review (IPR)* series. Since 2011, for example, it has discussed fossil-fuel subsidies (or their reform) in the *IPRs* of Ukraine (2011), Jordan (2013) and Myanmar (2014), mainly as a barrier to "green investment".

The Friends of Fossil Fuel Subsidy Reform's Communiqué

On 17 April 2015, the Friends of Fossil Fuel Subsidy Reform (FFFSR)¹⁴, together with France and the United States, launched a Communiqué calling for governments and other actors to prioritise fossil-fuel subsidy reform (FFSR).¹⁵ The Communiqué encourages the international community to advance reform

annual review of tax expenditure to include assessment of the environmental and social impact of tax expenditure and subsidies with a view to reforming those that are environmentally harmful; assess environmentally motivated tax incentives with a view to reforming those which are not environmentally effective and economically efficient."

¹⁴ The Friends of Fossil Fuel Subsidy Reform (FFFSR) was set up in June 2010 to support the commitments of G-20 and APEC leaders to phase-out inefficient fossil-fuel subsidies with maximum ambition and transparency, and aims to build political consensus on the importance of fossil-fuel subsidy reform within international forums. The FFFSR's current members are Costa Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden, and Switzerland. For further information see <http://www.mfat.govt.nz/fffsr/tabs/friends.php>.

¹⁵ See <http://www.iisd.org/publications/fossil-fuel-subsidy-reform-communication>

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through three inter-related principles: increased transparency around fossil-fuel subsidies; greater ambition in the scope of reform; and the provision of targeted support for the poorest. The Communiqué Annex provides a high-level platform for countries to showcase where and how they are making progress on FFSR domestically, or where they are co-operating internationally to support reforms. The Communiqué will be presented at the 21st Conference of Parties to the United Nations Framework Convention on Climate Change (COP21) in Paris, in December 2015.