

FOSSIL FUEL SUBSIDIES IN LEADING GREENHOUSE GAS EMITTING COUNTRIES



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Climate Scorecard Report #16

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Fossil Fuel Subsidies in Leading Greenhouse Gas Emitting Countries: Climate Scorecard Country Summary Report #16

ACTION ALERT

ACTION ALERT FOR POLICY MAKERS, ENVIRONMENTAL NGOS, RESEARCH CENTERS, BUSINESS LEADERS, AND CONCERNED CITIZENS

Contact policymakers at national, provincial, state and local levels of your government and urge them to take steps to comply with the call by the G7 and G20 countries to end all fossil fuel subsidies by the year 2025—or sooner. NGOs should engage in campaigns that expose and work to end all government subsidies to fossil fuel corporations.

INTRODUCTION

A subsidy is a sum of money granted by a government or a public body to assist an industry or business so that the price of a commodity or service may remain low or competitive. In many countries, tax-payers' money is given by governments as subsidies to fossil fuel corporations. These subsidies are used to help develop new sources of coal, oil and gas and to make energy from these sources less expensive to consumers. [According to the journal World Development](#), fossil fuel subsidies were \$4.9 trillion worldwide in 2013 and \$5.3 trillion in 2015 (6.5% of global GDP in both years). Coal subsidies account for about half of global subsidies.

These subsidies to fossil fuel corporations have helped to make these corporations among the wealthiest entities in the world with enormous annual profits going to many of the wealthiest individuals in the world. In addition, the oil industry is one of the most powerful players and influencers in the global economy. In most countries, fossil fuel corporate lobbyists press governments to continue and expand these very beneficial subsidies.

Fossil fuel subsidies take many different forms including: direct support for both national and international exploration of new sources of oil, coal and natural gas; tax breaks and exemptions; concessional loans to fossil fuel producers; and subsidization of consumer energy prices. Subsidies have the effect of artificially lowering the cost of fossil fuel energy, and giving fossil fuel companies a competitive advantage over renewable energy providers. They represent a drain on government revenue and a poor use of taxpayer money. Subsidies contribute to global warming caused by fossil

fuel generated CO₂ emissions, and to atmospheric pollution that has been linked to increases in respiratory illnesses and other diseases.

There is now a worldwide movement to end fossil fuel subsidies. The G7 countries (UK, US, Canada, France, Germany, Italy, Japan and the EU) have pledged to end fossil fuel subsidies by 2025. The G20 nations also have called for the termination of all such subsidies, though have yet to set a target date.

In Report # 16, Climate Scorecard summarizes recent annual fossil fuel subsidies and policies of the 20-leading greenhouse gas emitting countries. They range in magnitude from \$60.9 billion (Saudi Arabia) to \$667 million (South Korea). It should be noted that many countries, e.g. China and Turkey, do not make available information on the full amount of their fossil fuel subsidies.

Amounts of Fossil Fuel Subsidies

Country	Subsidy Amount*
Argentina	\$13.6 billion in 2014 in consumption subsidies
Australia	\$11 billion per annum from tax-based subsidies
Brazil	\$59.3 billion per annum from subsidies to private companies
Canada	\$ 46.4 billion per annum
China	Partial estimate \$15.42 billion; complete estimate is not available
France	
Germany	\$40 billion fiscal support and public finance \$2.88 billion per year, 2014-2016
India	\$20.4 billion in 2016
Indonesia	\$8 billion in 2015, \$4 billion in 2016
Italy	\$17.5 billion in 2016
Japan	\$376 million
Mexico	\$11 billion spent in subsidies in 2012, 1.4% of Mexico's GDP
Nigeria	\$160 million in 2017
Russia	\$14.4 billion in 2010
Saudi Arabia	\$60.9 billion in 2011
South Korea	\$667 million in 2013-2014
Spain	\$1.4 billion between 2014 and 2016
Thailand	\$.438 billion spent on fossil fuel subsidies in 2016
Turkey	Estimated between \$300 million and \$1.6 billion
United Kingdom	\$8 billion every year
United States	\$8.157 billion in 2015

**All figures shown in United States dollars*

ARGENTINA

Submitted by Climate Scorecard Director
RON ISRAEL



Argentina---\$13.6 billion in consumption subsidies in 2014 and additional (unknown) subsidies for new oil and gas exploration and development

Argentina provided US\$ 13.6 billion in fossil fuel subsidies in 2014, based on a comparison of the end-user prices paid by consumers to the full cost of supply. It has provided consumption subsidies for gas and electricity, but started cutting down gas subsidies in 2014, and ended electricity subsidies in 2016, to relieve budgetary pressures. At the same time, it has recently been investing heavily in exploration and the development of new reserves of oil and gas, including through tax breaks for companies. Argentina holds an estimated 27 billion barrels of technically recoverable oil and 23 trillion cubic metres of shale gas (Stafford, 2014). The country is a net importer of coal, with very limited domestic production (90,000 tonnes in 2013) (U.S. EIA, 2013). Despite being one of the largest producers of natural gas and crude oil in Latin America, falling production and rising consumption led Argentina to become a net importer of energy in 2011 for the first time since 1984 (Bordes and Parravicini, 2014; Fin24, 2013). The cost of fossil-fuel imports to the country was \$13 billion in 2013, equal to about 20% of the Central Bank's foreign-exchange reserves (Fin24, 2013; The Economist, 2013b).

To address its dependency on imports and to develop its export markets, Argentina is investing heavily in exploration and the development of new reserves of oil and gas (YPF, 2012). This is linked to the discovery of the Vaca Muerta shale formation in Neuquén, Rio Negro, La Pampa and Mendoza provinces, which is estimated to be the world's second largest shale-gas deposit and fourth largest shale oil deposit (Stafford, 2014). As a result of the discovery of Vaca Muerta and other shale formations in the country, Argentina is now ranked fourth in the world behind Russia, the United States and China in terms of shale-oil reserves and second only to China in shale-gas reserves (Fossett, 2013). By 2017, it is estimated that Argentina could be producing 100,000 barrels of unconventional oil per day, as well as 13 million cubic metres in natural gas (Fin24, 2013).

Learn More

Fossil fuel exploration subsidies: Argentina - Overseas Development

<https://www.odi.org/publications/8939-fossil-fuel-exploration-subsidies-argentina>

AUSTRALIA

Submitted by Climate Scorecard Country Manager
HANNAH CAMPI



Australia---\$11 billion per annum from tax-based subsidies

There are a number of national tax-based subsidies that encourage fossil fuel production and consumption, adding up to a huge total of almost \$11 billion each year. Using estimates from the federal government's Tax Expenditure Statement and Treasury papers, the table below lists a range of measures within the Australian federal tax system that encourage the production and use of fossil fuels. This is Australian taxpayers' money subsidizing fossil fuels. These figures do not include state-level subsidies, direct government handouts to coal, oil and gas projects, or public financing of international projects through export credit agencies or international financial institutions.

By far the largest contributor to the tax-based subsidies total is the Fuel Tax Credit Scheme, which provides around \$6 billion worth of credits and grants to cover the tax paid on fuel to reduce its overall costs to heavy users. It is estimated that some 20% of these fuel tax credits go directly to fossil fuel producers.

Australia also pays out significant subsidies through statutory effective life caps, which allow for accelerated depreciation and a shorter write-off period for many vehicles. These tax deductions cost almost \$2 billion worth of tax-payers' money each year.

There are also a range of tax incentives for fossil fuel exploration and production, as well as measures encouraging aviation, shipping and motor vehicle use.

Learn More

"How Your Taxes Subsidize Fossil Fuels," <http://www.marketforces.org.au>

BRAZIL

Submitted by Climate Scorecard Country Manager
LAURA VALENTE DE MACEDO



Brazil---\$59.3 billion per annum from subsidies to private companies. Infrastructure incentive grants and state-owned energy company investments

Subsidies to fossil fuels continue to be a major part of the developmental strategy in Brazil. In a 2015 study for the ODI and the G20 by Canadian researcher Ravenna Nuaimy-Barker, the authors found that Brazil's subsidies to fossil fuels cover mostly oil and gas production and supply, amounting to an estimate R\$ 11.6 billion (equivalent to USD 4.9 billion at the time). These include R&D investments, drilling and fuel transport, as well as power generation by SUDENE, a development agency for the Northeast of the country, responsible for most subsidies to the energy sector in Brazil. Other national and state development banks and agencies also subsidize the oil industry, such as BNDES, SUDAM and BNB. Investments in refining, transport and marketing by Petrobras has reached USD 7.5 billion in 2014 alone. Investments by Petrobras in Brazil, during 2013-2014 added up to USD 41.6 billion.

Another key source of subsidies for oil and gas in Brazil is tax exemption. Along with incentive programs for the northern, northeastern and central-western regions of the country where areas isolated from the main grid use mostly diesel-powered generators, tax exemptions, suspensions and reductions are a key form of directly subsidizing fossil fuel industries. Although taxes are levied at all levels of government, most are collected through the federal government. Some of the fiscal benefits to the fossil fuel industry involve the suspension of one or more of the following taxes: PIS - Program of Social Integration (Programa de Integração Social); COFINS - Social Security Financing Contribution (Contribuição para o Financiamento da Seguridade Social); IPI - Excise Tax on Industrialised Products (Imposto sobre Produtos Industrializados); IPRJ - Corporate Income Tax (Imposto de Renda sobre Pessoa Jurídica), and the II - Import Duty (Imposto de Importação).

REPENEC, for instance, is a special regime of incentives for the development of infrastructure for the petroleum industry in the northern, north-eastern and central-west regions that exempts companies from a range of taxes in these specific regions. They do not have to pay the PIS and COFINS social contributions, or the IPI excise taxation for domestic sales and imported machinery and materials for infrastructure projects, such as drilling rigs, pipelines and access routes. The reported value of the REPENEC tax breaks for companies averaged \$299 million annually in 2013 and 2014.

The second largest source of funding for the power sector, and largest budgetary transfer supporting fossil fuel production in Brazil is the Fuel Consumption Fund (Conta de Consumo de Combustíveis - CCC), a mechanism established in 1973 to secure power supply in the most isolated areas of the North and Northeast regions. It was estimated at an annual average of USD 1.7 billion in 2013 and 2014. However, as of 2015, a tax reform phased out subsidies that are now covered by consumers. Along with the Energy Development Fund (CDE) and the Global Reversal Reverse (RGR), the CCC also provides funding for other energy sources, therefore making it impossible to single out fossil fuel subsidies.

Eletrobras is the state owned (55%) energy company responsible for electricity generation in Brazil. Along with Petrobras, it is the most important player in the energy sector. In 2013, the company invested \$5 billion in generation, distribution and R&D. In 2014 the company invested \$4.6 billion, shared between generation (\$2.6 billion), transmission (\$1.6 billion), distribution (\$297 million), and other areas (\$150 million). However, only 6.5% of the energy came from fossil fuels. According to the assessment by Nuaimy-Barker, given the relatively small portion of electricity generated from fossil fuels and the lack of fully disaggregated data, it was not possible to estimate the size of the company's investment in fossil fuel production specifically.

Additional direct subsidies include federal programs addressing infrastructure, capacity building for the sector, and carbon capture and storage projects. According to the ODI study, domestic financing for fossil fuels (from state owned banks such as BNDES and Banco do Brasil) amounted to USD\$ 6.3 billion over 2013 and 2014. Furthermore, an important source of indirect subsidies benefits the auto industry. Tax exemptions made available directly to consumers purchasing cars during that period had a significant impact on the economy and on carbon emissions as from 2008. Finally, Brazil contributes to international funds and projects that benefit the oil sector, through its shares in the World Bank Group, the Inter-American Development Bank and the African Development Bank, ranging between 0.4% and 11% in the same period.

Learn More

In Portuguese

Independent news website Agencia Social de Notícias (ASN). Story on the ODI report for Brazil.
<http://agenciasn.com.br/arquivos/5033>

Story by news website Carta Capital on the increase of investments in solar and wind energy in the North and Northeast regions of Brazil available at <https://www.cartacapital.com.br/especiais/nordeste/no-nordeste-cresce-investimento-em-energia-renovavel>

Story on use of ethanol to reduce CO2 emissions from transport sector in Brazil <http://www.observatoriodoclima.eco.br/etanol-brasil-pode-resolver-o-problema-das-emissoes-de-co2-no-transporte-revela-estudo/>

Article by Climate Observatory's Executive Secretary Carlos Rittl on Brazil's trajectory of fossil fuel investments, available at <http://www.observatoriodoclima.eco.br/pre-sal-cleptocracia-e-nova-aposta-suicida-brasil-artigo-de-carlos-rittl-para-o-el-pais/>

In Spanish: Article by Manuel Planelles of the newspaper El País, available at https://brasil.elpais.com/brasil/2017/09/22/ciencia/1506075705_547083.html?rel=mas

In English

Report by the Oil Change International (OCI) and the Overseas Development Institute (ODI), published

in November 2015, "Empty promises: G20 subsidies to oil, gas and coal production", is available at <https://www.odi.org/publications/10058-empty-promises-g20-subsidies-oil-gas-and-coal-production>

For a detailed account on fossil fuel subsidies in Brazil during 2013-2014, see the ODI report Brazil study available at <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9989.pdf>

Study by IISD by Tara Laan and Adilson Oliveira, for IISD, "Lessons Learned from Brazil's Experience with Fossil-Fuel Subsidies and their Reform", available at <http://www.iisd.org/library/lessons-learned-brazils-experience-fossil-fuel-subsidies-and-their-reform>

International Energy Agency (IEA) statistics, news on Brazil and energy subsidies available at <https://www.iea.org/statistics/resources/energysubsidies/> and report on Brazil at <https://www.iea.org/countries/non-membercountries/brazil/>

Article on Brazil's association status at IEA as from 31 October 2017. <https://www.iea.org/newsroom/news/2017/october/brazil-joins-iea-as-an-association-country-reshaping-international-energy-govern.html>

New York Times story on the first round of the auction for deep-sea oil drilling rights in Brazil, in 27 September 2017. <https://www.nytimes.com/2017/09/27/business/energy-environment/brazil-oil-auction.html>

CANADA

Submitted by Climate Scorecard Country Manager
DIANE SZOLLER



Canada---46.4 billion per annum

Canada paid \$3.314 billion (on oil and gas subsidies) to its fossil fuel industry last year, and \$2.9 billion in 2013. The amount changes yearly, \$3.314 billion is an average based on 2013-2015 data. Subsidies are usually associated with production, field development, extraction, and exploration.

However, the International Monetary Fund estimated Canada's energy subsidies in 2011 as \$26 billion, 2013 as \$34 billion and 2015 as \$46.4 billion to producers and as uncollected tax on externalized costs not accounted for such as air pollution, carbon emissions, transport fuels, and traffic congestion. Some agree with these unrecognized figures but others argue the large start-up capital, high degree of risk, and many years between initial investments and profits justify that companies can reduce taxes paid

in the short term deferring them until later in the production cycle, that they are not subsidies but tax treatments common to the natural resources sector.

Coal production in recent years, largely through exports, is decreasing in demand. Canada's own coal consumption has decreased dramatically over the past decade. Coal-fired power generation was reduced by half between 2000 and 2014. In November 2016, Canada announced a phase out of coal-fired electricity by 2030 which most impacts Alberta, Saskatchewan and Nova Scotia.

The amount of fossil fuels burned for energy use has been relatively flat since 2000 as increases from Alberta oil sands were offset by reductions in Ontario and the Maritimes in the phase-out of coal-fired electricity generation. But a rise in carbon emissions is evident. Fossil fuels extracted and used domestically or exported and combusted elsewhere increased 26% from 2000 to 2014. In 2015, Canada's extracted carbon equaled almost 1.2 billion tonnes of CO₂. Infrastructure projects still underway such as Liquefied Natural Gas plants and bitumen pipelines have created a high-emissions course for several decades to come has a major impact on reaching emission targets.

Export Development Canada, Canada's main public finance institution, mostly funds projects for oil and gas production including overseas exploration. A number of subsidies to our oil, gas and mining companies are in the process of being phased out, including special help for the oil sands that ended in January 2015. Also, the Atlantic Investment Tax Credit of \$127 million for past subsidies is scheduled to phase out of oil and gas in 2017. Some subsidies involve the provinces.

The Liberal federal government promised to stop subsidizing fossil fuels as part of their election platform in 2014. A national carbon tax proposed to start in 2018 at \$10 is increasingly emerging as a central policy to reduce greenhouse gas emissions (GGE). This price will rise by \$10 each year per metric ton of emissions to a maximum of \$50 per tonne in 2022 toward Canada's Paris commitments of reducing GGE by 30% from 2005 levels by 2030.

This also means moving from emissions of 742 megatonnes (Mt) of CO₂e (December 2016) to a target of 523 Mt by 2030. While a consistent carbon price across Canada is eventually needed, it is not critical to start with it given our provinces and territories' history of contrasting policies across the country.

Fossil fuel subsidies work against Canada's noteworthy progress in putting a price on carbon. Many tax protocols and accelerated deductions date back to the 1970s and have since outlived their original objectives historically premised on factors such as exploration risk, spillover benefits of exploration to third parties, large capital requirements, price volatility, and a desire to be competitive. Today, however, it is not clear that these factors are unique to the sector or merit preferential treatment. Pembina indicates today the oil sector is not operating in such a market. More importantly, tax preferences are now contrary to our global GGE commitment as well as Canada's domestic policy on carbon pricing and investment in clean technology.

Learn More

about Canadian fossil fuel subsidies and where they are headed -

<https://beta.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/canadas-oil-industry-frets-as-pressure-mounts-to-cut-fossil-fuel-tax-incentives/article27240254/?ref=http://www.theglobeandmail.com>& November 2015

www.theglobeandmail.com

<http://business.financialpost.com/opinion/imfs-imagined-34-billion-silly-stats-are-behind-claims-that-canada-subsidizes-oil-industry> May 21 2014

<https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/about-your-tax-return/tax-return/completing-a-tax-return/deductions-credits-expenses/line-412-investment-tax-credit/atlantic-investment-tax-credit.html> December 2016

<http://www.cbc.ca/news/business/canadian-coal-by-the-numbers-1.3408568> February 2015

<http://www.cbc.ca/news/politics/canada-coal-electricity-phase-out-1.3860131> November 2016

<http://www.cbc.ca/news/politics/g20-fossil-fuel-subsidies-450b-1.3314291> November 2015

https://www.e3g.org/docs/Accelerating_Coal_Phase_Out_-_the_OECD_context_18_09_17.pdf

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http://www.iea.org/media/weowebiste/energysubsidies/second_joint_report.pdf November 2010

<http://www.iisd.org/faq/unpacking-canadas-fossil-fuel-subsidies/> January 2017

<https://www.iisd.org/sites/default/files/publications/canada-ffs-submission-july-2016.pdf>

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November 2014

<http://www.pembina.org/reports/fossil-fuel-subsidies.pdf> July 2014

<http://www.pembina.org/reports/submission-pan-canadian-climate-change-working-groups.pdf> June 2016

https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office%2C%20BC%20Office/2017/01/ccpa_extracted_carbon_web.pdf

<http://www.policynote.ca/canada-cannot-have-it-both-ways-on-climate-and-fossil-fuel-expansion/>

January 25, 2017

<https://www.statista.com/statistics/265453/coal-production-in-canada-in-oil-equivalent/> 1998-2016

<https://www.theguardian.com/world/2016/nov/21/canada-coal-electricity-phase-out-2030>

<https://thetyee.ca/Opinion/2014/05/15/Canadas-34-Billion-Fossil-Fuel-Subsidies/>

CHINA

Submitted by Climate Scorecard Director
RON ISRAEL



China—partial estimate 15.42 billion; complete estimate is not available

The amount of subsidies that China provides to its fossil fuel industry has long remained a mystery. However, in January 2016, after years of work the US and China released their report from a new fossil fuel peer review process in partnership with OECD. The review was intended to stimulate a reform of such subsidies, which both countries saw as a needed step in combatting climate change. China released a list of its major subsidies as highlighted below:

	Estimated fiscal cost (100m yuan)	In effect since	Timetable for reform	Direction of reform
Subsidies for the exploration, development, and extraction of fossil fuels				
A consumption-tax policy of “refund after payment” for refined oil produced by oil (gas) field enterprises for own use	27 (corrected figure)	2009-	Near to mid-term	Move point of taxation for refined oil
A policy of exempting China National Petroleum Corporation (CNPC) from land-use tax	Not currently available	1989-	Mid to long-term	Cancel policy
A policy of land-use tax exemption for China National Offshore Oil Corporation (CNOOC)	Not currently available	1990-	Mid to long-term	Cancel policy
Subsidies for the refining and processing of fossil fuels				
A policy of consumption-tax exemption for oil consumed by refined oil manufacturing enterprises for own use	1 (corrected figure)	2009-	Near to mid-term	Move point of taxation for refined oil
Subsidies for power and heat generation				
A policy of exempting thermal power stations from land-use tax in cities and towns	Not currently available	1989-	Mid to long-term	Cancel policy
A policy of VAT exemption for heating fees of heat supply enterprises for individual residents	Not currently available	Heating season of 2011 to end of 2015	Mid to long-term	Cancel policy
A policy of exempting heat-supply enterprises from real-estate tax and urban land-use tax	Not currently available	July 1, 2011 to end of 2015	Mid to long-term	Cancel policy
Subsidies for fossil fuels used in transport				
A Series of Subsidies Derived from Petroleum Fuels Price and Tax Reform	940	2009-	Mid to long-term	Improvements
Subsidies for fossil fuels used in the residential sector				
A preferential tax-rate policy of value-added tax (VAT) on coal gas and liquefied petroleum gas	Not currently available	1994-	Mid to long-term	Abolish 13% preferential VAT rate

China's Self Report identified nine fossil fuel subsidies in need of reform, amongst them, subsidies supporting extraction and refining, for electricity and heat generation, and for end-user transportation and household consumption. The table below includes estimates of the fiscal cost of these nine subsidies, how long they have been in place, and the proposed method to reform them. A lack of data meant estimates of fiscal costs could only be provided for three policies.

China was not even able to estimate the annual cost of six of the nine policies it identified as subsidies, citing a rapidly changing policy environment. The remaining three totaled around US\$15.42 billion—almost all of which was directed to lowering petrol prices. The government's submission to the peer review set out a framework for "rationalizing" subsidies, without setting a timeline, simply tagging some policies as short-medium term and some as medium-long term.

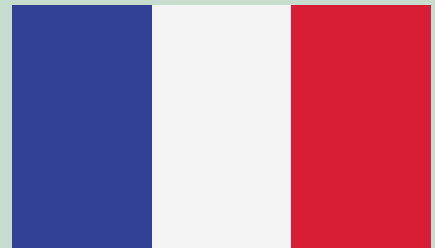
"Although the production and consumption of non-fossil energy is booming worldwide in recent decades, it can be predicted that for a long time in the future, production and consumption of fossil fuels is still dominant," said the Chinese government document, adding that: "The excessive total fossil fuel consumption in China is, to a certain degree, linked to the unsatisfactory system and mechanism relating to energy subsidies."

Learn More

["Us and China Release Fossil Fuel Subsidy Peer Reviews,"](#) Karl Matiesen, The Guardian, September 15, 2016
["China to Reform Fossil Fuel Subsidies,"](#) Liu Shuang, China Dialogue November 16, 2016

FRANCE

Submitted by Climate Scorecard Country Manager
ROY ANDRAOS



Fossil fuel subsidies (excluding tax advantages on Diesel) in France accounted for €1.41 Billion in 2017 down from €3.42 Billion in 2014. The total, including advantages on Diesel, accounts for €7-10 Billion a year. These subsidies mainly consist of tax exemptions / fiscal gifts on the one hand and, direct budget transfer / support on the other hand. For instance, VAT on gas in French Overseas Territories is 13% compared to 20% in mainland France. In the same way, the airline industry benefits from tax exemption on kerosene for domestic flights. On the other hand, direct budget support is relatively limited compared to tax exemptions and mainly consists of direct support to independent gas stations located in remote areas in France.

The Climate-Energy Contribution, aka Carbon Tax, was one of the key tools/policies enacted by the French Government in 2014. Its key strength is believed to be its ability to take into account / measure Carbon, i.e. to gradually enable Carbon pricing and reduce tax benefits / exemptions for fossil energies. For instance, the fiscal advantages / benefits on Diesel alone account for €5 to 6 Billion (often seen as a fiscal niche - not taken into account in the figures cited earlier in the article, i.e. the total fossil fuel subsidies, including tax advantages on Diesel, would reach €8 to 10 Billion). The 2016 draft Budget

Bill is another essential policy that will, once enacted, upgrade and speed up the Climate-Energy Contribution until 2020, by gradually reducing tax advantages on Kerosene for example.

In terms of areas of improvement, experts estimate there are several types of subsidies that need to be reviewed and possibly eliminated. For instance, gradually reducing the tax advantages granted to road transporters could help finance and upgrade public rail infrastructure. Furthermore, the IMF and the OECD clearly advised governments to take advantage of the low prices of fossil fuel/energies and see it as an opportunity to implement taxes and eliminate subsidies without too much risking to antagonise / upsetting populations. Nevertheless, countries, including France, are still failing to accelerate the move and engage in large scale initiatives aimed at reducing or even eliminating fossil fuel subsidies.

Advocacy efforts are, therefore, necessary in this context, be it from NGOs and independent organisations and/or from other stakeholders, including public decision-makers, in order to engage in serious/long-term initiatives that will help reduce fossil fuel subsidies and ultimately reduce the impact on climate and climate change.

Learn More

<https://www.odi.org/publications/10930-monitoring-europes-fossil-fuel-subsidies-france>
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<http://en.rfi.fr/general/20150417-france-backs-fight-against-fossil-fuel-subsidies-ahead-paris-climate-change-confere>
http://www.fondation-nature-homme.org/sites/default/files/presse/153009_cp_plf2016.pdf

GERMANY

Submitted by Climate Scorecard Country Manager
MARY NTHAMBI



Germany---Between 2014 and 2016, Germany provided fiscal support valued at €33.3 billion and public finance of €2.4 billion per year

Germany is one of the countries in the EU region that reports its subsidies on fossil fuels on a biannual basis in a transparent manner (Gençsü and Zerkawy, 2017). Fossil fuel subsidies are financial support incentives in the production and consumption of carbon-intensive fuels such as coal, oil and gas (Bast and Doukas, 2016). Such financial investment discourages the production and consumption of renewable energies e.g. wind, solar and geothermal energy (Bast and Doukas, 2016). Germany provides subsidies to fossil fuels i.e. coal mining, oil, gas and electricity. Between 2014 and 2016, Germany provided fiscal support valued at €33.3 billion and public finance of €2.4 billion per year (Gençsü and Zerkawy, 2017). Outside the European region, Germany provided about €2.3 billion in the period between 2014 and 2016 per year to support oil, gas and fossil fuel-powered electricity projects. To demonstrate, the production and consumption fossil fuel subsidies for the period between 2014 and 2016 per year are as shown in table 1 on the following page:

Table 1: Average fossil fuel subsidies in Germany, by activity in million Euros, between 2014 and 2016

Activity / instrument	Production				Consumption			Total
	Coal mining	Oil and gas	Electricity	Multiple activities or unclear	Transport	Industry and business	Agriculture	
Fiscal support (Budget expenditure + tax exemptions + price relief)	2,690	n/a	1,410	322	18,913	9,585	400	33,320
Public finance	47	1,001	1,310	60	0	0	0	2418
Domestic and EU	0	160	0	0	0	0	0	160
International	47	840	1,310	60	0	0	0	2257
State-owned enterprise investments*	0	0	0	0	0	0	0	0

Source: Europe's fossil fuel subsidies report by [Gençsü](#) and [Zerzawy](#), (2017)

On the production side, coal receives the highest subsidies. This is because Germany is the largest producer of coal in the EU region and the largest lignite/brown coal producer in the world. Thus, to phase-out coal subsidies the amended Hard Coal Funding, Act, 2011 has been put in place. This Act regulates coal subsidies e.g. the Federal Government and the Land of North Rhine-Westphalia (NRW) coal subsidies for the period between 2014 and 2019 are as shown in table 2 below.

Table 2: Hard coal subsidies for the period between 2014 and 2019 in million Euros

	2014	2015	2016	2017	2018	2019
Federal government	1284.8	1332	1053.6	1020.3	939.5	794.4
Land of North Rhine-Westphalia (NRW)	363.8	171.4	170.9	161.2	151.5	220.6

Source: Federal Ministry for Economic Affairs and Energy, (2016)

As such, the coal mining support for the period between 2014 and 2016 was about €2.7 billion per year and about 76% of this amount was used to support energy transition from coal to ease the phase-out process. The process of phasing out coal subsidies require financial support. For instance, in 2007, a 10 year-hard coal phase-out package was introduced in the North Rhine-Westphalia state ([Gençsü](#) and [Zerzawy](#), 2017).

Figures in table 2 above show that by 2019 Germany will still be providing coal subsidies. It intends to phase-out its fossil fuel subsidies by 2025 as per its commitment to the Paris Agreement and to the EU. As a result, it may be difficult to meet the subsidies phase-out deadline unless drastic measures

are undertaken. For instance, increase renewable energy subsidies and investments to reach the 80 % renewable energy targets by 2050. Germany should also set a clear date on when to exit from coal mining as intended in its Climate Action Plan, 2050.

Learn More

<http://www.caneurope.org/docman/fossil-fuel-subsidies-1/3174-germany-brief-phase-out-2020-monitoring-europe-s-fossil-fuel-subsidies-pdf/file>
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India---US\$20.4 billion in 2016

The total value of energy subsidies from the central government of India, quantified in a latest inventory, has declined substantially between 2014 and 2016, from 35.8 billion USD to 20.4 billion USD. The same report points out that 18 subsidies are provided by the central government to both coal mining and coal consumption, predominantly in power generation. But financial information was not publicly available for six of these subsidies, which thus remained unquantified. According to the inventory covered in this report, total subsidies for the coal mining sector have decreased in India from 2.6 billion USD in 2014 to 2.3 billion USD in 2016. Subsidies are largely provided through tax breaks (government revenue foregone), with concessional duties and taxes making up around 90 per cent of total coal subsidies. Budgetary transfers only account for 10 per cent of the total subsidy amount over the review period. However, the report points out that it was difficult to exactly calculate the subsidies to coal and coal fired power generation because of lack of data. The Inventory showed that in one coal bearing state there has been an increase in subsidies.

Coal-fired electricity generation benefits from subsidies such as income tax exemptions and access to land at preferential rates, says the report, adding, measures of support to coal consumption in India include the overall coal pricing regime and concessional import duty on coal.

Money Life reported on another research study by the International Institute for Sustainable Development (IISD) on fossil fuels which reveals that on an average over the years 2013 and 2014, India provided \$103 million per year in national subsidies to oil, gas and coal producers. In particular, capital outlay targeting the extraction and production of crude oil, natural gas, coal and the development of fossil-fueled power projects constituted the largest share of India's national subsidies to fossil fuel production,

averaging \$64 million per year across 2013 and 2014. Other support in the form of tax breaks for coal excise duties and fossil fuel transport infrastructure also contributed to this total with an average of \$40 million each in 2013 and 2014.

The IISD 2017 report finds that subsidies in the oil and gas sector reduced significantly from 26 billion USD in 2014 to 6.8 billion in 2016 mainly in the consumption sphere, partially due to India's reforms and partially due to the decrease in the world price for oil. Subsidies to electricity T&D increased from 6.7 billion USD in 2014 to 9.9 billion USD in 2016. The total subsidies to coal however remained relatively stable at about 2.3 billion USD over the period in review.

Overall, the scale of support to fossil fuels (coal, oil and gas) has remained more significant than subsidies to renewables through the entire review period.

Policies and Programmes in Place

As a member of the G20 nations, India in 2009 committed to "phase out inefficient fossil fuel subsidies that encourage wasteful consumption while providing targeted support for the poorest." The government has been reducing the subsidies on natural gas for the larger section of the population. While there is not much information available about the scale of reduction strategies of fossil fuel subsidies in production, the government seems to be taking up some important measures in targeting the subsidies at the consumers' level. The government is also trying to increase the subsidies on renewables. They are targeting to enhance clean cooking options and improved chullahs through various schemes. However, overall, the scale of support to fossil fuels (coal, oil and gas) has remained more significant than subsidies to renewables through the entire reviewed period.

Kirk Smith, in an article in the Hindustan Times says, "India has attempted quite strongly to reform household energy for the benefit of health, through its new national LPG (Liquefied Petroleum Gas) programmes. LPG burns far cleaner than biomass (which is relied on by nearly 700 million rural Indian households), causes much less localized air pollution and contributes less black carbon, which has recently emerged as a leading driver of climate change". While the government has been asking existing LPG consumers to give up subsidies if they can afford to buy non-subsidized LPG, it has also promoted a scheme called the "PM Ujjwala Yojana" (PMUY) that aims at meeting the target of achieving universal clean cooking coverage.

In India, household electrification and provision of clean cooking fuel have been twin challenges, with the former having received priority over the latter. This has resulted in nearly 40% of our population being without access to clean cooking fuel. The situation in rural areas, with a significant section of the populace below the poverty line, is grim, and is changing quite slowly. The PMUY is expected to overcome this. Kerosene serves as cooking fuel for only 1% and 6% of the total rural and urban households, respectively. To address this grim picture, the National Energy Policy (NEP) plans to make this one of its most significant priorities so that it can suggest a robust strategy forward to provide clean cooking fuel for all in the quickest timeframe.

Kerosene contributes to lighting solutions in about 26% of rural households and for 4% of urban

households. About 304 million Indians are still without access to electricity and the government of India thinks it would provide 100 per cent electricity to all rural people by 2019 through a scheme called Deen Dayal Gram Jyoti Yojana (DDUGJY) and to all people by 2022. However, there is still no clear strategy to address how fossil fuel subsidies will end because India's reliance on coal fired power plants is not going to end soon.

On the oil and natural gas front as well, the government has ambitious plans to continue exploring those. Given India's growing energy demands, reliance on imports and limited domestic fossil fuel resources, the country has ambitious plans to increase domestic oil & gas production and to exploit all possible forms of this energy to the fullest. Our Honorable Prime Minister has urged all stakeholders to increase the domestic production of oil and gas to reduce import dependence from 77 % to 67% by the year 2022.

Kirk Smith, in the above referred article (ref 5) argues that while there is some government financial support for LPG, it may be dwarfed today by how much public money is being spent to subsidize the other fossil fuels that are a big part of the dirty air epidemic. Smith further argues that the Indian government is paying twice for fuels that help pollute air: on the front end for the subsidies themselves, and then again for the litany of costs in terms of public health deterioration.

Way Ahead

India has miles to travel with regard to phasing out fossil fuel subsidies. In fact, it seems nearly impossible in the near future. The government sees LPG as a cleaner fuel. But with a substantial part of India still out of the ambit of electricity connections, things will certainly take time. However, the government should come up with a concrete plan to phase out fossil fuels that is missing now. Such a plan should not only have a single window information system on all the subsidies being provided to both explorers/producers and consumers, but also incorporate the inter-linking of policies and programs that are aimed towards providing and/or ending subsidies. The current information system is lacking.

The health impacts of fossil fuel subsidies are slowly being realized by the government as more and more studies are coming forth. The government should therefore lay out a road map for ending fossil fuel subsidies linking them to renewable energy provisions and subsidies. Shelagh Whitley of the Overseas Development Institute, and co-author of the IISD-ODI-ICF study mentioned above in this report (ref. 3) highlights another important point about lack of transparency. According to Whitley, "though there have been significant positive changes in terms of a decline in India's subsidies to oil and gas consumption, there is still very limited transparency in terms of subsidies provided to the energy sector. The road map to end fossil fuel subsidies needs to be transparent and needs to address equity issues. End of subsidies should not be done at the cost of the poor, marginalized and excluded communities of the country."

Learn More

Global Subsidies Initiative Report: 'India's Energy Transition: Mapping subsidies to fossil fuels and clean energy in India'. International Institute for Sustainable Development (IISD), 2017.

<http://www.moneylife.in/article/india-provided-103-million-per-year-in-national-subsidies-to-oil-gas-and-coal-producers/44075.html>

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INDONESIA

Submitted by Climate Scorecard Country Manager
TRISTAN GRUPP

Indonesia---8 billion USD in 2015/ 4 billion US in 2016

In 2015, \$22.1 billion was initially allocated to fuel subsidies. In that year, major reforms in energy subsidies were implemented. Indonesia's energy subsidies, especially for fossil fuel, have been a drain on the state budget. In 2013, 17% of government expenditure went to energy subsidies. Since becoming a net fossil fuel importing country in 2004, especially in oil, Indonesia's energy subsidies have become a burden on the country's current account. In 2014 and 2015, major reforms were implemented to take advantage of lower gas prices. Domestic fuel prices were allowed to float according to global market prices. Indonesia phased out subsidies on gasoline and set a fixed diesel subsidy. From the 2015 reforms, the removal of major energy subsidies decreased subsidy spending to \$8 billion (under RSB-2105) from the initial budget of \$22.1 billion. In 2016, this number fell to \$4 billion. Other electricity and petroleum fuel subsidies remain. Fossil fuel subsidies amounted to 3% of GDP in 2014. In 2016, this spending has fallen to 1% of GDP.

The government, however, shifted the cost of gasoline subsidies to the state-owned oil company Pertamina which now must pay for the difference between the subsidy price and the global price of gasoline. The reforms have simply moved the deficit the government was running onto Pertamina, which it must eventually refund. To more truly implement fossil fuel subsidy reform, price controls must be removed entirely. The government still offsets distribution costs for provinces outside Java-Madura-Bali. This subsidy is important to provide energy in less developed provinces. Much of the state budget savings that came out of energy reform went to building new infrastructure and to the budgets of the ministries to increase growth and fight poverty. Most of the fossil fuel subsidy reform has come from the president. Subsidies to fuel distributors are approved or removed by parliament. There is fear of public resistance to rising fuel costs that stalls government action to further reduce subsidies until fossil fuels have another period of low global prices.

The policy to reduce fossil fuel subsidies will encourage the development of and investment in renewables, decrease air pollution in urban areas, shift people away from cars towards public transportation and active transport, and reduce emissions from the extraction and importation of

fossil fuels. Expenditures on subsidies can also be shifted to infrastructure that could decrease fossil fuel consumption, such as in transportation and more updated, more energy efficient infrastructure. The decrease in CO2 emissions from the end of fossil fuel subsidies was estimated at 5-7% for 2015. MARKAL projects that there will be a 9% reduction by 2030, driven mostly from a decline in energy consumption and growth in alternatives.

These fossil fuel subsidies will be easier to phase out when the price of alternative fuels drops. This will occur as investment in renewables increases, aided by government policies (such as a Feed-in-Tariff--FiT). However, Indonesia remains the largest exporter of coal in the world and expects to see an increase in coal's percent of the energy mix from 23% to 30% by 2025. Although this plan includes increases in renewable sources such as geothermal and biofuels, the increase in coal extraction and use is of concern. Currently, Indonesia does not subsidize coal. The shift to a decarbonized Indonesian economy will take more than the removal of fossil fuel subsidies, coal and other dirty fuels must be disincentivized. There needs to be a greater push for renewables.


Learn More

<http://www.iisd.org/sites/default/files/publications/financing-development-with-fossil-fuel-subsidies-indonesia.pdf>

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ITALY

Submitted by Climate Scorecard Country Manager
MARTA MORELLO



Italy---14.6 billion Euros in 2016

Italy directly and indirectly subsidized fossil fuels for 14.8 billion Euros in 2016, and 13.2 billion Euros in 2015. Subsidies are given to both production and consumption, which include exemption from paying excises, discounts and discounted financing. The top sector receiving subsidies is transportation.

For the first time, the Italian government proposed an environmental component to evaluate and revise excise taxes as part of the 2012 tax reform. This was a major turning point in the country's environmental policy because such a tool has enormous potential not only in reducing greenhouse gases (GHG) emissions as well as accelerating the shift to a greener energy supply. With article 15 of the 2012 tax reform, the Italian government proposed a revision of accise –or excise- on energy products on the basis of environmental criteria. The idea was to introduce new rates, proportional to generated emissions, which curb the use of dirtier energy sources while incentivizing the use of renewables. This is a very important policy area for Italy because energy production and consumption

account for about 60% of all GHG emissions

In March 2014, the law was finally approved and mandated the fiscal revision of excise. A roundtable of experts started in 2015 and in late 2016 the Italian Minister for the Environment, Land and Sea published a report with a detailed description and evaluation of the current environmental impact of each subsidy/excise rate. At last, this catalogue provides some clarity into a very complex and confusing domain. This report is essential because it establishes a baseline of what is currently working and what is not: previously the environmental impact of such subsidies and excises was unknown. Unfortunately, the law has not been implemented yet and fossil fuel subsidies live on.

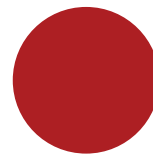
As part of the European Union and the G20 framework, the Italian government committed to the total phase out of inefficient fossil fuel subsidies by 2025. In fact, the EU repeatedly solicited Italy to report on and reduce fossil fuel subsidies by 2020. A harsher request from the EU might convince the Italian government to act.

Learn More

https://www.legambiente.it/sites/default/files/docs/stop_sussidi_fonti_fossili_2016.pdf
https://www.legambiente.it/sites/default/files/docs/phaseout2020_italia.pdf

JAPAN

Submitted by Climate Scorecard Country Manager
KENTA MATSUMOTO



Japan---US\$376 million

With scarce and rapidly dwindling fossil fuel resources of its own, Japan engages in only a small amount of domestic oil and gas exploration. It relies heavily on fossil fuel imports to meet its energy needs, particularly since the accelerated phase-out of nuclear power following the Fukushima disaster in March 2011. So while Japan does not invest in domestic fossil fuel subsidies, it makes large investments in the development of oil and gas resources abroad (another form of fossil fuel subsidies). The Japanese government is actively involved in promoting oil, gas, and coal exploration and extraction overseas to secure energy resources. In 2014, Japan was the third largest net importer of oil, and is the world's top importer of liquid natural gas. Japan provides major national subsidies to promote oil and gas production by Japanese companies overseas and, to a smaller extent, domestically. These subsidies currently total \$736 million.

Much of Japan's subsidies focus on exploration for new fossil fuel reserves. Japan's largest single subsidy to fossil fuel production is the supply of risk capital to JOGMEC, which supports the acquisition of natural gas rights, with the aim of diversifying Japan's supplies of natural gas. This subsidy is valued

at \$458 million per year, but is not included in the national subsidies total, to avoid double-counting. Due to Japan's limited fossil fuel resource base, much of the remaining national subsidies for fossil fuel production are targeted towards oil refining. These include the subsidy for oil refining technology programs (\$118 million annually) and the oil refining rationalization subsidy (\$148 million annually), both of which provided support for research and development of advanced oil refining technologies (OECD, 2015).

The Japanese government provides additional support for oil refining and marketing in the form of the subsidy for structural reform measures (\$104 million annually), which provides assistance to oil distributors for business diversification, as well as the oil product quality assurance subsidy (\$16 million annually) (OECD, 2015).


The Japanese government funds the large-scale oil disaster prevention subsidy (\$8 million annually), which provides upstream producers with oil fences to contain potential oil spills (OECD, 2015).

Learn More

<https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9965.pdf>

MEXICO

Submitted by Climate Scorecard Country Manager
RAIZA PILATOWSKY GRUNER



Mexico--220 billion Mexican pesos spent in subsidies in 2012, 1.4% of Mexico's GDP

For a long time, talks against fossil fuel subsidies in Mexico were common in political and academic circles, as well as in several newspapers. For many, subsidies symbolized a national budgetary expenditure that could be better used for other social programs (according to official sources, 220 billion Mexican pesos were spent in fossil fuel subsidies in 2012, 1.4% of Mexico's GDP); and for a few, they also meant a continuous promotion of greenhouse-gas emission and atmospheric pollution. With the Energy Reform of 2012, a ray of hope emerged as the Reform promised not only increased market competition and efficiency with the introduction of private enterprises, but also, the gradual elimination of fossil fuel subsidies. With this plan, fuel prices were to be fixed by the government and subsidies were to be liberalized during 2017.

Nevertheless, this has meant a new type of subsidy, as the federal government, in an effort to quickly establish a competitive environment, allowed tax deductions to those new companies entering the oil and gas sector, ranging from 10% to even a 100% tax exemption for exploration expenditures. Moreover, although subsidies for consumers have been gradually reduced in recent years, the intention to liberalize the price of fuel have been deferred until 2018. The Secretary of Finance had to reduce

taxes for gasoline and diesel by 20% at the beginning of the year when the price of fuel skyrocketed to its highest levels in 20 years. This led to unrest from the population in the form of protests, blockage of roads, and confrontations.

As some authors highlight, this is part of an underlying political issue that relates to the way subsidies affect the population. Every time the national government has tried to eliminate fossil fuel subsidies, the decision has caused backlash and unpopularity for those authorities. That is because subsidies have helped those with lower incomes by regulating the slowly increasing prices of food and public transport, while wages remain significantly low. As a result, Mexico is the second country in the world with the highest percentage of worker's salary used for fuel.

Low wages are a trademark for Mexico. In 2016, the average monthly income of a US worker was \$3,328 USD, while in Mexico it was only \$318 USD. With the North American Free Trade Agreement (NAFTA) renegotiations taking place, representatives from Canada and United States have highlighted the huge contrast between the salary of Mexican workers and their counterparts from the North, pressuring Mexican authorities to establish fairer conditions for all the members of the treaty. If Mexico agrees to incorporate measures that increase wages for Mexican workers, it could also mean a reduction of the dependence on fossil fuels subsidies, allowing the national government to finally get rid of them.

Learn More

Fossil fuel subsidies in Mexico:

G20 subsidies to oil, gas and coal production:

<https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9967.pdf>

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"Myths" around fuel subsidies (Spanish):

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<http://www.dw.com/es/m%C3%A9xico-de-la-reforma-energ%C3%A9tica-al-gasolinazo/a-37082680>

Wages in Mexico

Relationship between food and fuel prices and wages in Mexico (Spanish):

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"Canada PM talks wages on Mexico visit, amid NAFTA talks"-ABC News

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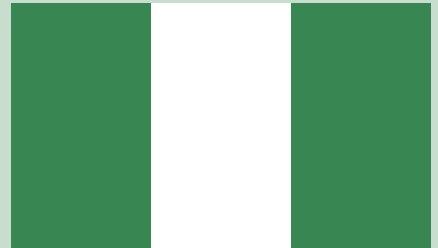
Renegotiation of NAFTA, wages and income distribution in Mexico (Spanish):

<http://www.cronica.com.mx/notas/2017/1034635.html>

NIGERIA

Submitted by Climate Scorecard Country Manager

CHIUDO EHRIM



Nigeria---\$160 million USD in 2017

Nigeria introduced petroleum subsidies in the 1960s with the aim of strengthening its local industry and improving product affordability and domestic consumption (Akinyemi and others, 2015). A report published by the Council on Foreign Relations estimates that the Federal Government of Nigeria spent about \$20 billion on fuel subsidy in 2013 (CFR, 2016).

The subsidy was removed in May 2016 amid falling crude oil price and an economic recession. However, more than \$160 million was spent on subsidy in early 2017 as the national oil company absorbed costs due to an increase in crude oil price from about \$20 per barrel in 2015 to about \$50 per barrel for most of 2017 (Vanguard, 2017). The short duration of the subsidy removal makes it difficult to assess its effect on carbon emissions reduction.

The collapse in crude oil price in recent times was an important factor that led the Federal Government to remove fuel subsidies. It also was felt that an enduring global shift in focus from fossil fuels to renewables (available at an affordable price) would drive down petroleum prices and naturally incentivize the government to remove subsidies. In the meantime, local production and supply of petroleum products by existing and new refineries would eliminate much of the costs subsidized by the government (CPPA, 2015).

Learn More

A research paper on fuel subsidy reform and environmental quality in Nigeria is available at: http://www.academia.edu/27122604/Fuel_Subsidy_Reform_and_Environmental_Quality_in_Nigeria

The Council on Foreign Relations report is available here: https://www.cfr.org/sites/default/files/pdf/2016/10/Discussion_Paper_Sivaram_Harris_Subsidies_OR.pdf

A news article on 2017 fuel subsidy in Nigeria is available at: <https://www.vanguardngr.com/2017/06/fuel-subsidy-returns-nnpc-records-n50bn-shortage/>

A discourse on Nigeria's fuel subsidy can be found here: http://cpparesearch.org/wp-content/uploads/2015/01/Fuel-Subsidy_Study-Report_2011.pdf

RUSSIA

Submitted by Climate Scorecard Country Manager
VERONIKA KOZLOVA



Russia--\$14.4 billion in 2010

Generally, the federal government's fossil fuel subsidies in Russia are complex and not transparent. Five years ago, an extensive research report "Government subsidies to oil and gas: at what costs?" was published with support of WWF and International Institute of Sustainable Development. This research summarized the possible subsidies schemes for oil and gas industries in Russia.

This research identified 30 schemes for granting subsidies to oil and gas producers in Russia at the federal level. These schemes included: direct support (state targeted financing, state loans on preferential terms, etc.), and indirect support—for example, the state's acceptance of liability for compensation for damage as a result of accidents or the provision of public infrastructure facilities on preferential terms.

The study quantified 17 subsidy systems which amounted to a total of \$8.1 billion in 2009 and to \$14.4 billion in 2010. The ten largest federal subsidies for oil and gas production in Russia were as follows:

- Temporary benefits for export customs duty for oil produced on new deposits of Eastern Siberia (approximately \$4 billion);
- Tax holidays for the mining tax for new deposits of Eastern Siberia (approximately \$2 billion);
- Exemption from property tax for main oil and gas pipelines (approximately \$1.9 billion);
- Tax holidays for mining tax for new oil fields in the territory of Nenets Autonomous Okrug and on the Yamal Peninsula in the Yamal-Nenets Autonomous District (approximately \$1.5 billion);
- Subsidized tariff for transportation of oil through the Eastern Pipeline System Siberia - Pacific Ocean (approximately \$1.1 billion);
- Lowering coefficient to the rate of mining tax for oil of depleted deposits (approximately \$1 billion);
- Temporary exemption from export customs duty for gas exported to Turkey through the Blue Stream pipeline (approximately \$0.8 billion);
- Accounting for exploration costs and R & D for the purpose of calculating income tax (at least

\$0.6 billion);

- Accelerated depreciation charges (at least \$ 0.6 billion);
- State financing of geological exploration for hydrocarbon raw materials (\$284 million).

For the moment, no significant actions regarding reducing governmental subsidies to fossil fuels has been implemented. The problem that goes along with significant subsidies to fossil fuels is that it affects tariffs, lowering them and making, for example, renewable energy development not profitable.

After discovering these aspects of the government paying subsidies, it appears to me that this issue raises more questions than answers.

SAUDI ARABIA

Submitted by Climate Scorecard Country Manager
ABEER ABDULKAREEM



Saudi Arabia--\$60.9 billion in 2011

Diesel and gasoline sold in Saudi Arabia are about 12% and 30% of international reference prices, respectively. Saudis enjoy the second lowest domestic fossil fuel prices in the world, behind only Venezuela. In 2009, the Kingdom spent a total of \$32.5 billion on fossil fuel subsidies. In 2010, this figure increased to \$43.6 billion. In 2011, it ballooned to \$60.9 billion. Of its total subsidy spending in 2011, 76 percent went to subsidizing oil, while 24 percent went to electricity, which is also derived from oil. Riyadh is currently the second highest spender on fossil fuel subsidies in the world. In fact, the Kingdom spent more on fossil fuel subsidies (10.6% of GDP) than on health (about 3% of GDP) and education (about 6% of GDP) combined. Saudi Arabia is the second-leading subsidizer of end-use fossil fuel prices, providing 61% of its \$48.6 billion in fossil fuel consumption subsidies to oil, 26% to electricity, and 14% to natural gas in 2015.

Saudi Arabia recently scaled back some fossil fuel consumption subsidies that artificially lowered the price of fuel for its citizens, increasing its country's gasoline prices by 50 percent. Saudi Arabia's government also started a policy to reduce fossil fuel subsidies in 2015 when the kingdom raised the price of 95 Octane gasoline from 0.60 to 0.90 riyal. Currently, the government is considering the details of a plan to phase out subsidies for gasoline and jet fuel. This could result in a hike of about 80% for octane-91 grade gasoline to about 1.35 riyals per liter (0.36 cents), one person said on condition of anonymity. The government plans to delay increases in other energy prices until early 2018. The plan would also include a cash handouts transfer program for low and middle-incomes families to help them cope with the impact.

The government wants to make a carefully balanced move as removing energy subsidies is politically sensitive issue for the nationals who are accustomed to low energy prices. Therefore, it seeks to review

the impact on economic activities and the burden on its citizens to avoid political backlash. A person with knowledge of the matter stated that gasoline and jet fuel would undergo immediate, one-time increases under the Saudi plan, while the government would raise prices of other fuels gradually between 2018 and 2021.

Learn More

Saudi Arabia fossil fuel subsidies: Understanding the Problem by Fuadi Pitsuwan January 24, 2014
<http://hksjmepp.com/saudi-arabias-fossil-fuel-subsidies-understanding-the-problem/>

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SOUTH KOREA

Submitted by Climate Scorecard Country Manager
EUNJUNG LIM



South Korea--\$667 million in 2013-2014 counting domestic subsidies and subsidies for overseas oil and gas exploration

According to a report, "G20 subsidies to oil, gas and coal production: Republic of Korea", that was published in 2015, South Korea's subsidies for fossil fuels can be summarized as follows:

Table 1: Korea's national subsidies to fossil fuel production, 2013–2014 (\$ million)

Subsidy	Subsidy Type	Targeted Energy Source	Stage	2013 Estimate	2014 Estimate	Estimated Annual Average Amount
Coal mining and capital facilities	Direct Spending	Coal	Extraction and production	6.5	6.5	6,5
Coal mining inherited social liabilities	Direct Spending	Coal	Field decommissioning	68.1	65.4	66.7
Support for coal briquette production	Direct Spending	Coal	Production	128.6	151.1	139.9
R&D - funding for resource technologies	Direct Spending	Gas	Exploration	2.3	2.3	2.3
R&D - funding for 'renewable energy'	Direct Spending	Coal	Plant planning and construction	1.2	1.2	1.2
Other national subsidies				0.2	0.2	0.2
Total (\$ mil)						217

As the table above shows, the majority of South Korea's subsidies have been used for supporting coal production, and the largest subsidy went to the production of coal briquettes. This is related to South Korea's energy market structure. In South Korea, major energy industries are still publicly owned.

For example, Korea National Oil Corporation (KNOC) is responsible for exploration, development and production of oil and natural gas within and outside of the country as well as strategic reserves. Likewise, the coal industry is also largely dependent on state ownership. Three out of eight major domestic anthracite mines are run by Korea Coal Corporation (KCC), which is state-owned.

South Korea has the highest level of support for overseas coal power plant projects through export credit agencies among OECD countries. Also, Korea ranked first in terms of the size of the export credit institutions that were supported by foreign export credit institutions in the overseas coal-fired power plant projects that were done by Korea's Exports Bank and Korea's Trade Insurance Corporation. Their total support amounted to \$4.345 billion from 2003 to 2013. Japan ranked second with \$ 3.27 billion, and Germany third with \$2 billion.

Learn More

Alex Doukas, "G20 subsidies to oil, gas and coal production: Republic of Korea" (Overseas Development Institute, 2015). <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9984.pdf>

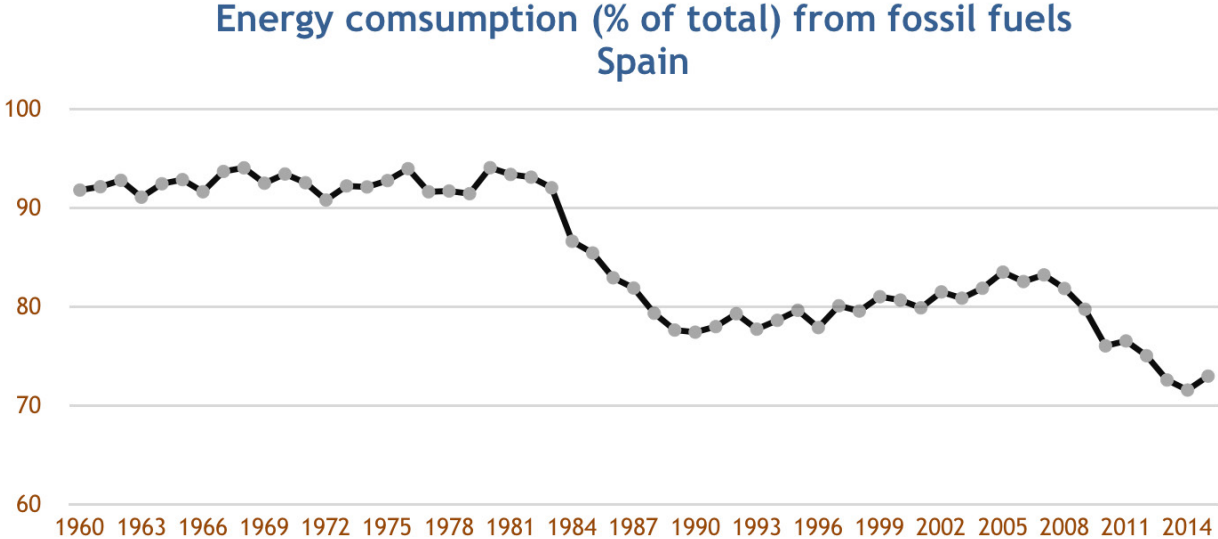
SPAIN

Submitted by Climate Scorecard Country Manager
ESTEBAN SANCHEZ-GARCIA



Spain--1,177 million Euros between 2014 and 2016

Spain is a country that has been fossil fuel dependent and that is still far from being a significant producer of renewable energy. According to data from the World Bank Group on Energy Consumption, in 2015, 72.9% of the energy consumed in Spain was from fossil fuels.



*Data provided by World Bank Group. Graph by author.

The Overseas Development Institute (ODI) and the Climate Action Network (CAN) released the results of the study called Monitoring Europe's Fossil Fuel Subsidies in September 2017. This study highlights that "Spain's transparency and reporting on fossil fuel subsidies is relatively poor. - . . . - The fossil fuel estimates (in this study) are therefore likely to be underestimates." It estimates that between 2014 and 2016, Spain's subsidies to fossil fuel production and consumption was an average of 1,711 million euros per year.

The study mentions that the extent of Spain's subsidies goes beyond its borders. Through the country's export credit agency, Spain has supported oil and gas projects in Angola, Costa Rica, Kenya, Romania and Turkey worth an average of 56 million euros per year between 2014 and 2016. A part of the study says that "Spain, as part of the European Union (EU), has repeated its commitment to phase out the fossil fuel subsidies every year since 2009."

The Framework Plan for Coal Mines and Mining Communities 2013-2018, was set in October 2013, and states that because of the intermittent character of the renewable energy (meaning the dependency on meteorological conditions), it is necessary to preserve energy sources that guarantee the energy supply under any kind of circumstances. In the case of Spain, the main source would be coal and its exploitation would only be possible if it ensures a set of standards that mitigates the impact in the environment. One of the objectives of this plan is to ease the closure of mines that under the conditions proposed to preserve the environment are not able to be financially efficient. In accordance with this scenario, the plan to help the affected communities in the transition to other ways of employment involves several subsidies and requires the use of at least 7.5% of autochthonous coal in the generation of energy.

The time frame of the current policy will come to an end soon and the achievement of its objectives is still unclear. The future of this subject is primarily unclear as it is with, basically, all the plans needed to achieve the goals of the Paris Agreement in the short and long term. Spain will need to develop a well-integrated program when preparing its next plan to reduce its greenhouse emissions. This plan will include changes in tax policies for the different industries and preserving the environment while growing the economy. Businesses will need to find another way to produce and consume energy.

Learn More

<https://datos.bancomundial.org/indicador/EG.USE.COMM.FO.ZS?view=chart>

<https://www.odi.org/sites/odi.org.uk/files/resource-documents/11785.pdf>

<https://www.irmc.es/Noticias/common/Nuevo-Marco-2013-2018.pdf>

THAILAND

Submitted by Climate Scorecard Country Manager
NEEBIR BANERJEE



Q 16 Thailand--\$.438 billion spent on fossil fuel subsidies in 2016

Increased awareness by the government about the revenue drain caused by fossil fuel subsidies has helped spark a decline since 2011 in subsidy spending. A 2014 news report by the Asian Correspondent revealed Thailand's fossil fuel subsidy allocations. To reflect upon the annual subsidy allocations for 2011, 2012 and 2013; former Energy Minister of Thailand Piyasvasti Amranand argues, "Thailand's junta should remove fuel subsidies that have cost \$15.6 billion over the past three years to free up funds for crucial infrastructure projects." Piyasvasti Amranand also emphasized the increased government spending on fossil fuel subsidies like diesel and LPG. With respect to the annual spending trends for diesel subsidies, Amranand suggests, "Diesel subsidies have led to a loss of over 100 billion baht in annual revenue. Data from OECD and other sources highlights that in 2013, oil subsidies were around USD \$2160.7 billion, electricity subsidies were USD 326.1 billion, Natural Gas subsidies were USD 627.9 billion, coal subsidies were USD 160.8 billion and total subsidies were USD 3275.5 billion. In 2014, fossil fuel subsidies were on a decline as oil subsidies were USD 1601.7 billion, natural gas subsidies were USD 363.4 billion, coal subsidies were USD 77.7 billion and total subsidies were USD 2042.8 billion. In 2015, fossil fuel subsidies decreased even further as oil subsidies were USD 708.3 billion, natural gas subsidies were USD 188.0 billion and total subsidies were USD 896.3 billion.

The decrease in fossil fuel subsidies from 2013 to 2015 is the result of policy reforms. One such reform was established on December 3, 2014, when the Energy Policy Administration Committee of Thailand approved the removal of a seven-year LPG subsidy. Another key reform the Thailand government implemented was the removal of Certified Natural Gas (CNG) subsidies as CNG was heavily subsidized. During 2014 and 2015, the government raised the price of CNG by around 4% to 10% and eventually floated the price in 2016. As an outcome, the CNG price is at par with the market price, which fell to around 12.55 baht or USD 0.36 in January 2017. Finally, to reduce Natural Gas for Vehicles (NGV) subsidies, NGV prices were raised in October 2014, which increased from 1 baht per kg to around 11.5 baht per kg.

From the above paragraphs, it is evident that in recent years Thailand is moving towards the right direction in terms of reducing fossil fuel subsidies. However, long-term policies for phasing-out fossil fuel subsidies are yet to be adopted.

Learn More

To learn more about the expenditures for fossil fuel subsidies in 2014 please visit:
<https://asiancorrespondent.com/2014/07/not-all-are-energy-subsidies-are-equal/#4AUdpjipBzLKqb7F.97>

To learn more about the 2017 IEA and OECD Data about annual fossil fuel subsidies in Thailand from 2013, 2014 and 2015 please visit:

<https://www.iea.org/media/statistics/Subsidies20132015.xlsx>

To learn more about the removal of the 7-year subsidy on LPG and CNG subsidy removal please visit:

<https://www.iea.org/publications/insights/insightpublications/TrackingFossilFuelSubsidiesinAPECEconomies.pdf>

To learn more about fossil fuel subsidy reforms in Thailand please visit the report by Asian Development Bank at: <https://www.adb.org/sites/default/files/publication/175455/fossil-fuel-subsidies-thailand.pdf>

TURKEY

Submitted by Climate Scorecard Country Manager
OZLEM DUYAN



Turkey--Exact amount not available, estimated between US \$ 300 million and \$ US 1.6 billion

It is difficult to record the actual amount that Turkey spends on fossil fuel subsidies. According to a report published by Oil Change International and 350.org in 2015; Turkish government provides an estimated US\$300 million to US\$1.6 billion (TRY 683 million to TRY 3.6 billion) per year in fossil fuel producer subsidies. Given the number of subsidies for which data is not available, this estimate is likely highly conservative.

In 2013, Turkey provided some US\$500 million in public funding specifically for fossil fuel exploration. In addition, the government provided between \$250 and \$400 million in support to hard coal enterprises. Turkey's government-funded coal exploration program has increased coal reserves by over 50% since 2005, opening up 5.8 billion tons of new coal to be mined.

Turkey also receives international public finance to support fossil fuel operations. Between 2007-2015, fossil fuel projects in Turkey have received more than US\$5 billion (TRY 11.38 billion). Of this total, over US\$1.5 billion (TRY 3.4 billion) went to coal projects.

The 2012 New Investment Incentives Regime provided a higher level of subsidies to oil and coal investments than to renewable energy – encouraging carbon-intensive infrastructure projects over clean energy sources. The elevated incentives represent a potential subsidy for coal alone of US\$11.6 billion (TRY 26.4 billion) based on a planned new lignite coal power plant capacity of 14.5 GW for 2012 to 2030.

Government guarantees for loans and power purchase agreements involving fossil fuels represent

significant contingent liabilities for the central budget. Such liabilities can ultimately threaten the country's credit rating and, hence, cost of borrowing.

In fact, the problematic area in Turkey in terms of climate change is not fossil fuel production, it is fossil fuel consumption. While the contribution of Turkey to world fossil fuel production was 1.7%, the consumption share approached 1%. Its share in world oil consumption is 0.8%, in natural gas consumption it is 1.2%.

If Turkey wants to make a contribution in the area of climate change, it should focus on consumption, not only fossil fuel production. However, the cost of increasing energy efficiency is not lower than the incentives given to research and production. The extent to which developed countries will assume responsibility for the aid of developing countries in meeting these costs is still in the bargaining process.

Parallel to this assistance, steps to be taken by Turkey are:

- To end government-funded fossil fuel exploration activities
- Eliminate tax exemptions for exploration activities
- Exclude coal exploration from the Mining Fund's below-market rate loans
- Exclude fossil fuel projects from government guarantees
- Set a timeline to phase out all producer fossil fuel subsidies starting with coal. A strategic transition is a must by ensuring new employment opportunities for miners.

Learn More

Acar S., Kitson L. "Türkiye'de Kömür ve Yenilenebilir Enerji Teşvikleri" International Institute for Sustainable Development, 2015

WWF Turkey and Istanbul Policy Center "Low Carbon Development Pathways and Priorities for Turkey", 2015

Oil Change International and 350.org, "The Cost of Subsidizing Fossil Fuel Production in Turkey: Why Turkey Should Implement the G20 Commitment to Phase Out Fossil Fuel Subsidies" 2015

UNITED KINGDOM

Submitted by Climate Scorecard Country Manager
ADAM BARNETT



United Kingdom--6 billion GBP every year

Fossil fuel subsidies are a contentious issue for the UK. Over the past 5 years, The UK has become the only G7 nation to increase its' support for the production of fossil fuels--despite earlier pledges to phase

them out entirely— and it is now the fifth largest global subsidizer with an estimated £6 billion given in subsidies to the fossil fuel industry every year. Most of this is in the form of tax breaks to help boost declining North Sea oil production (which has included figures such as £551 million being given to the Total, £131 million to Apache and £267 million to Statoil). In addition, in 2016 the UK introduced a new North Sea tax break which is estimated to be worth an additional £1.7 billion over the next five years.

This runs contrary to declarations made by the government itself. For example, then-Prime Minister David Cameron told a UN climate-change conference in September 2014 that ‘we need to give business the certainty it needs to invest in low carbon. That means fighting against the economically and environmentally perverse fossil-fuel subsidies’. Government departments have gone further—using a different, stricter definition of ‘subsidy’ to involve only ‘government action that lowers the pre-tax price to consumers to below international-market levels’ to argue that the UK does not actually provide any fossil fuel subsidies at all. This is because reducing the usual rate of tax paid in a certain sector (which is the form of subsidy the UK government favors, and which is at a rate that is still higher than the ‘normal’ rate other sectors pay) would not fit within this definition.

The UK government’s use of fossil fuel subsidies does not look to be abating any time soon, and recent cuts to offshore wind and solar subsidies appears only to reinforce this.

UNITED STATES

Submitted by Climate Scorecard Country Manager
STEPHANIE GAGNON



United States--\$8.157 billion in 2015

The US Federal Government paid a total of USD 4.757 billion in 2015 subsidies to the fossil fuel industry, as well as USD 3.4 billion to the Low-Income Home Energy Assistance Program (LIHEAP) to subsidize fossil fuels in the residential sector. According to a G20 report in 2016, “Fossil-fuel subsidies are also often granted in order to avoid producers shutting down operating wells in response to sudden price drops.” However, the report continues, “Hedging producers against market-price volatility, however, reduces incentives to innovate and develop productivity-enhancing technologies.” Reliable, comparable statistics are not available for the amount paid in fossil fuel subsidies in 2010, but reports indicate a trend of decreasing subsidies over time as the US aims to meet the G20 goal of eliminating fossil fuel subsidies by 2025. Any change in subsidies to the industry will need to be passed by Congress, which currently leans toward supporting fossil fuels more than reducing subsidies to them. US energy-related carbon emissions have been falling gradually over time due to the expanded use of natural gas over oil and coal.

Under the current administration, and President Trump's continued assertions that he will "bring back coal," it is unlikely that fossil fuel subsidies will be reduced over the next three years. However, with decreasing costs of natural gas and increased technological capabilities to extract it, it is likely that fossil fuel-related emissions will continue to fall gradually due to the reduced emissions of natural gas relative to oil and coal.

Learn More

OECD (2016): "A report on the G20 peer review of inefficient fossil-fuel subsidies that encourage wasteful consumption in the United States"

https://www.oecd.org/site/tadffss/publication/United%20States%20Peer%20review_G20_FFS_Review_final_of_20160902.pdf

U.S. Energy Information Administration's report on carbon emissions in 2016:

<https://www.eia.gov/todayinenergy/detail.php?id=30712>

White House "An America First Energy Plan"

<https://www.whitehouse.gov/america-first-energy>

ABOUT

Climate Scorecard is a participatory, transparent, and open data effort to engage all concerned citizens in supporting the implementation of the new 2015 Global Climate Agreement.

Background

Over 190 countries endorsed a new global climate agreement in December 2015 at a United Nations meeting in Paris (known as COP21). The Paris Agreement is designed to stabilize the earth's climate and prevent our atmosphere from heating-up above a global warming tipping point of 2 degrees Celsius, beyond which scientists warn extreme ecological disasters will occur. The success of the new agreement is contingent on the efforts all countries, as well as non-state actors, must make to increase and honor their commitments to reduce greenhouse gas emissions.

In 2015, in preparation for COP 21, most countries submitted pledges, also known as Intended Nationally Determined Contributions (INDCs), to reduce their greenhouse gas emissions by 2030 or earlier. The Paris Agreement recognizes that these pledges, while good starting points, are insufficient to avoid having the planet warm beyond 2 degrees Celsius. Therefore, all countries are encouraged to revisit and strengthen their pledges before the agreement goes into effect in 2020.

Climate Scorecard is a mechanism for supporting efforts needed to implement the new Paris Agreement. Such efforts include encouraging countries to increase their emission reduction pledges, tracking efforts to strengthen pre-Paris INDCs, making sure that countries put in place policies and programs to achieve their reduction targets, and holding nation-states accountable for fulfilling the promise of the Paris Agreement.

HOW IT WORKS

The Climate Scorecard team has established a website - www.climatescorecard.org - where everyone – citizens, organizations, businesses, researchers, members of governments, journalists – can share information related to emission reduction efforts in the top 25 greenhouse gas-emitting countries. Each of the 25 top greenhouse gas emitting countries has a page on our website where concerned stakeholders can post information related to the status of their country's pledge. Climate Scorecard's website also provides a set of 6 targeted results (see below) that we believe each country needs to achieve by 2020 in order to successfully implement the new Paris Agreement. These results are based on recommendations from the agreement itself, benchmark country emission reduction pledges, and our own research that has identified goals that all countries need to reach. Our targeted results provide a framework for tracking progress made by the top 25 greenhouse gas-emitting countries.

Results for the Top 25 Greenhouse Gas-Emitting Countries to Achieve by 2020

- Strengthens its 2015 agreement pledge, or adheres to a pledge that meets Result 3 in the Framework
- Agrees and implements measures to reach the target of 20% unconditional emission reduction by 2020
- Agrees and implements measures to reach the target of 30% unconditional emission reduction by 2025
- Adopts the UN suggested baseline year of 2010 from which to calculate future reductions
- Agrees to and implements policies that achieve 100% renewable energy by 2050
- Make all aspects of its emission reduction process, including policy development and implementation, transparent and inclusive

WHO WE ARE

An outstanding team of organizations and individuals is implementing Climate Scorecard. Coordination of our effort is through a partnership between The Global Citizens' Initiative (TGCI) and EarthAction- non-profit organizations with missions focused on environmental protection and citizen engagement. TGCI and EarthAction worked together to successfully implement last year's Citizens' Campaign for a 2015 Global Climate Agreement (www.climateagreementcampaign.org).

TGCI and Earth Action have recruited a team of 25 environmental graduate students and young professionals who serve as Country Managers, building and supporting networks of organizations and people to contribute and share information related to the post-Paris progress of each of the top 25 greenhouse gas-emitting countries.

In addition, university-based experts provide quality control and address technical questions related to documents that are proposed for posting on the Climate Scorecard website.

For further information about Climate Scorecard please contact Ron Israel, Executive Director, The Global Citizens' Initiative (roncisrael@gmail.com) or Lois Barber, Executive Director, EarthAction (lois@earthaction.org).