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PHASING OUT FOSSIL-FUEL SUBSIDIES IN THE G20

A PROGRESS UPDATE

BY DOUG KOPLOW



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EXECUTIVE SUMMARY

It has been nearly three years since the G20 member states, representing the largest economies in the world, committed to “rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption.” The move represented the strongest coordinated action to date focused on removing environmentally harmful subsidies. It had a number of potential benefits to member states as well:

- **Fiscal savings.** Reform could help stem the massive financial cost of fuel subsidies to consumers in many of the member states, a cost that was surging with rising global prices for oil and crowding out spending on social programs. In theory, these savings could be redirected towards programs of greater benefit to economic development and poverty reduction, and to instruments with less “leakage” to middle- and upper-classes than the fuel subsidies had.
- **Alignment with environmental goals.** Subsidy reform could more effectively align government spending with the environmental priorities of the countries and any existing commitments to address climate change.
- **Reduce trade distortions.** The reforms could also reduce trade distortions, as targeted subsidies to energy-intensive industries would be removed, allowing more efficient products and producers to gain market share.

In this, our second review of progress in meeting this phase out commitment (an [earlier review](#) was published in November 2010), we reviewed formal submittals by member countries to the G20 and the WTO, reached out individually to staff from each member country, and reviewed third-party assessments of fossil fuel subsidies.

We conclude that most of the potential benefits from the G20 fossil fuel phase out remain untapped, and that tangible progress towards reform has thus far been quite limited.

G-20 nations are changing their definitions, not their subsidy policies. The vague definition fossil fuel subsidies in the G20 commitment has allowed many countries to “opt-out” even of reporting on their fossil fuel supports. The general language in the original commitment, combined with strategic interpretation of that language, has resulted in wide divergence in what different countries count as being a “subsidy,” an “inefficient subsidy,” and a subsidy that is both “inefficient” and “encourage[s] wasteful consumption.” The absence of an oversight mechanism for reporting under the G20 agreement or any penalty for inaccurate or incomplete data has led most

member countries to minimize their reporting on fossil fuel subsidies. Non-reporting is growing. The number of countries opting out of reporting entirely tripled from two in 2010 to six in 2011. It is expected to increase further in the 2012 reporting cycle.

Self-reporting of subsidies is failing. Transparency on support policies to fossil fuels is a pre-requisite for any further analysis or reform. Whether or not an individual country considers a particular support as subject to phase out under the wording of the G20 commitment, those policies need to be visible to others so that the assumptions of the national governments can be seen and potentially challenged. Mirroring the gaps and delays found in subsidy reporting to the WTO, the scope and quality of public reporting by members on fossil fuel subsidies to the G20 is well below any reasonable minimum needed for real reforms to take hold.

No subsidies have actually been eliminated as a result of the G-20 commitment. The failure of the G20 reliance on self-reporting can be seen not only through the growing numbers of member states providing no information at all, but also by the very small number of subsidies reported by the other members and by the lack of growth in identified policy interventions since the first progress report submitted by members in June of 2010. *As with our last review, we were again unable to identify a single fossil fuel subsidy reform that was driven by the G20 phase out commitment.*

Subsidy estimates from third-parties continue to be much larger than those reported to the G20 by member governments. A final indication of the failure of self-reporting is the continued divergence between self-reported subsidy figures to the G20, and the much larger values reported by third parties. Strong research mandates within the IEA, OECD, World Bank, IMF, and UN over the past couple of years have allowed these institutions, as well as non-governmental organizations, to expand the number of countries and the types of supports on which data on fossil fuel subsidies has been collected. This data, while certainly not complete, nonetheless provides a critical leverage point for global action on fossil fuel reforms. It is instructive to note that all six countries opting out of subsidy reporting to the G20 in the 2011 reporting cycle, do have subsidies based on this third party research, and that those subsidies are large — generally billions of USD per year.

The growth of independent data on fossil fuel subsidies is an important support for the G20 phase out initiative, and should continue. However, it cannot be the full solution, as these outside organizations generally have more limited access to information on important subsidy types and their fiscal cost than do the governments themselves. Thus, government buy-in

and active participation in the G20 subsidy phase out process remains on the critical path for successful reform.

Structural reforms suggested in our 2010 report continue to be needed to increase the likelihood of the phase out being successful. These include:

- Separating subsidy reporting from reform, in order to build transparency while bypassing potential conflicts on the scope and timing of subsidy elimination.
- Establishing an oversight and review board for reporting to review submittals for accuracy and coverage, with the ability to go back to the member state to fill in gaps.
- Standardizing the submittal process for subsidy information as well as requiring standardized reporting on the claimed justifications for keeping particular subsidies outside the purview of the G20 phase out.
- Establishing a technical committee of independent experts to discuss and resolve common reporting challenges.
- Initiating discussion and research on an appropriate secretariat to oversee reform efforts.

In sum, it is clear that more of the same will not lead to success. Rather, self-reporting must be replaced by a new institution or institutional role that facilitates the collection, analysis, and fully transparent publication of fossil fuel subsidy data when the countries themselves fail to deliver. This is the single most important step needed if fossil fuel subsidy reform is to succeed.

1. OVERVIEW

In September 2009, the G20 member states, comprising the largest economies in the world, made a bold commitment to phase out inefficient subsidies to fossil fuels. Although individual countries had previously proposed — and in a few cases actually implemented — fossil-fuel subsidy reform, the G20 statement was the clearest multinational commitment to date. The path was a promising one, as subsidies to oil in particular had been growing dramatically with surging global oil prices, threatening the fiscal health of many countries around the world. Further, subsidy removal would more effectively align fiscal policies with stated environmental goals of many of the members.

This paper provides an update on how the phase out has been going, a follow-on to an earlier report, *G20 Fossil-Fuel Subsidy Phase Out: A Review of Current Gaps and Needed Changes to Achieve Success*, released in November 2010. The paper assesses trends and coverage in G20 member country self-reporting on fossil fuel subsidy and subsidy reform, compares self-reported subsidy data with estimates by other parties, and summarizes input from participants on the remaining barriers to reform.

In our last examination of how the fossil fuel phase out had been translated into actual elimination of fossil fuel subsidies, we found that:

- No country had initiated a subsidy reform specifically in response to the G20. Where specific policies had been targeted for elimination, these pre-dated the G20 or were still in proposal stages.
- G20 reporting of fossil fuel subsidies was inconsistent and full of gaps.
- Reported subsidies under the G20 commitment were often dramatically smaller than what third parties had found evaluating the same country.
- Member states often claimed they did not need to report, though the justifications provided usually broke down under scrutiny.
- There were few to no hard deadlines for progress.

Unfortunately, little has changed. Tangible progress on subsidy elimination remains elusive. Where price reforms have occurred, they have generally been by non-G20 members (e.g., Iran and Nigeria) or in-process prior to the G20 commitment (e.g., Indonesia and Mexico). In all of these cases, the reform process has been challenging, and at best only partially successful.

Self-reporting, both to the G20 specifically on fossil-fuel subsidies, and to the World Trade Organization (WTO) for all subsidies, remains weak. The number of G20 countries that opted out of even submitting a progress report under the G20 phase out commitment tripled between 2010 and 2011; indications are that the 2012 reporting cycle may be even worse. Reforms we noted in our November 2010 review as under discussion for the most part remain so today, with implementation still in the future. Because filling the reporting gaps is among the first steps needed if the commitment to phasing out inefficient fossil fuels is to have any chance of success, this continued reporting deficit is worrying.

Not all of the trends are negative, and the positive developments also warrant mention. Although formal reporting has remained weak, people involved with the initiative note that engagement among countries on fossil-fuel subsidies has continued to grow. There has been increased activity “behind the scenes,” largely focused on building national capabilities for identifying and quantifying fossil fuel subsidies, and mapping out potential reform strategies that would be politically viable. The Friends of Fossil Fuel Subsidy Reform (FFSR), a group of countries led by New Zealand, has continued to add members and to work diligently with G20 states on the practical and political aspects of subsidy reform – though FFSR members have not formally committed to fossil fuel subsidy reform through that affiliation (Lang 2012).¹ A number of international organizations have adopted commitments in some form to phase out fossil fuel subsidies. In addition to the G20, members of the Asia-Pacific Economic Cooperation (APEC) forum have adopted identical language to the G20, and the a large number of Parties to the UN Framework Convention on Climate Change (UNFCCC) have also supported fossil fuel subsidy reform in official submissions and presentations. Although the stringency of the commitments is not identical in all groupings, roughly 135 countries are now covered by at least one of them (Turnbull 2012).²

1. FFSR participants who have not formally committed to phase out their own fossil fuel subsidies are Norway, Switzerland, Costa Rica, and Ethiopia. Other countries within the FFSR have committed to the phase out as part of their membership in other groupings, such as the G20, APEC, or the EU.

2. Analysis by David Turnbull (2012) of Oil Change International estimates that 135 countries have now been included in official statements or submissions that have called for the phase out or at least reduction of fossil fuel subsidies. This includes the UNFCCC, G8, G20, APEC, and FFSR, with some countries appearing in multiple groups, and with the EU being counted as a separate entity given that it is an official UNFCCC party and has a distinct seat in the G20. He notes that although parties to the UNFCCC have not yet formally endorsed fossil fuel subsidy reform, they have indicated support in that direction with respect to the new “mitigation ambition workplan” under the Durban Platform on Enhanced Action.

Further, the research mandates to track and quantify subsidies have remained strong in key global institutions including the International Energy Agency (IEA), the Organisation for Economic Co-operation and Development (OECD), the World Bank, the United Nations (UN), and the International Monetary Fund (IMF). While global coverage continues to be spotty in some important areas, the strong research mandates have helped to reduce these gaps. Data on fossil-fuel subsidies now covers more types of subsidies, more countries, and in more accessible formats for outside researchers than was the case even two years ago. Finally, and perhaps most importantly, key elements of the fossil-fuel subsidy problem now seem to be a firm part of the climate-change and fiscal restructuring agendas. Critical elements of this shift include the view that:

- Many fossil fuel subsidies do not make sense fiscally or environmentally.
- Funds saved from subsidy reform may be significant and can be used to transition to more effective policies to achieve the stated goals of the original subsidies (e.g., job creation or poverty reduction) without environmental downsides.
- Even in countries with low production costs and large domestic endowments of fossil fuels, continued sales of energy products below their global opportunity cost makes little sense and causes domestic problems over the medium term.

While this shift in perceptions on the fossil fuel subsidy issue is important, there is no guarantee that higher levels of “buzz” are easily translated into actual policy changes. Thus far, there have been very few real reforms, and it is these concrete changes in policy that will ultimately determine whether the phase out commitment was successful or not.

At present, it is equally plausible that the heightened level of activity and interest by member countries are not earnest and necessary steps on the path to subsidy elimination, but rather political maneuvering to create the perception of progress without putting domestic policy objectives at risk. Too many subsidy reform proposals over the past twenty years have unfortunately been the latter.

2. MEMBER COUNTRY REPORTING ON FOSSIL FUELS REMAINS WEAK

Fossil fuel subsidies do not disappear into thin air; they flow to people, to firms, to countries and provinces, states and municipalities.³ The recipients of this financial support rarely wish to see the subsidies stop – even if they could survive just fine without the money, or society would be better off directing funds in a different direction. That the politics of removing subsidies can be fierce is well known. What attracts less attention is that reasonable information on who gets subsidies and how much they are worth is an absolute pre-requisite for having any type of intelligent discussion on more efficient and effective use of government resources in the energy sector. It is perhaps in the area of subsidy transparency that the G20 phase out commitment has most fallen short.

In our first review nearly two years ago, we noted that member-country reporting of their fossil fuel subsidies was insufficient. In addition to various justifications for excluding subsidy policies, we noted that member countries seemed to have adopted the view that there was a first-mover *disadvantage* to subsidy transparency and reporting. Specifically, although early disclosure could create adverse attention and political pressure both on the individual government official and on the country reporting, there was no penalty at all for “not going beyond mere symbolic compliance with the Communiqué ...” (Koplow and Kretzmann 2010: 4).⁴

This worldview seems to remain a significant behavioral driver in 2012. Table 1 provides a summary of progress through the October 2011 reporting cycle. Efforts to supplement this information through direct contacts with individuals involved in the G20 reform process were met with quite limited success. Information that was provided by country representatives, or by others involved with the phase out process, was generally available only on a background, not-for-attribution basis. The reluctance to speak publicly about any aspect of country reporting, political challenges and concerns, or the longer-term objectives of reform underscore the political sensitivity that remains a central element of the fossil-fuel subsidy issue.

This section assesses three main sources of self-reporting on subsidy reform: periodic progress reports to the G20; definitional sleights of hand to mitigate reporting pressure; and potential capture of fossil fuel subsidy data through reporting already required by the Agreement on Subsidies and Countervailing Measures (SCM), overseen by the WTO. A fourth potential source of subsidy data, APEC, is also discussed.

2.1 MEMBER COUNTRY PROGRESS REPORTS TO THE G20 REMAIN WEAK

There have been two progress reports to G20 leaders since the Pittsburgh Communiqué in 2009 – the first in June 2010 and a follow-up in October of 2011. A third report is pending, and likely will be released at, or soon after, the G20 meeting in Mexico in June 2012. However, advance copies of that report were not available, limiting our review to the prior two. Although the progress updates are not very detailed, a number of important themes were evident:

- **More countries opting out of reporting.** In the June 2010 reporting cycle, only Japan and the United Kingdom provided no information at all on fossil-fuel subsidies. A number of other countries provided at least some basic explanations on why they believed they were not subject to reporting. Many even listed fossil-fuel support policies that, according to their interpretation of what the phase out required, were beyond the scope of G20 reform. Although Japan and the United Kingdom again opted out of reporting in October 2011, they were joined by four additional countries: Australia, France, Saudi Arabia, and South Africa. This means that nearly one-third of G20 member countries have now determined they have no requirement at all to report. And, as there continues to be no penalty for under-reporting, it is reasonable to expect the number of countries “going silent” will continue to increase.

Were this opting out reflective of having no fossil-fuel subsidies, it would not be a significant problem. However, it is notable that all six of the opt-out nations do have subsidies – generally in the range of billions of dollars per

3. The ultimate funding source for subsidies is always taxpayers, but the distribution of this support is wide ranging: from general taxpayers to a specific industry; from a federal government to state or local governments; even from one country to another, such as through bilateral support or international institutions such as the World Bank that pool funds from multiple countries for redistribution.

4. A March 2010 leaked memo from Michael Horgan (Horgan 2010) to the Canadian Minister of Finance elucidates this risk well: “Like removal of trade impediments, this type of exercise involves some risk that Canada would make a commitment and honour it, but others would not. For example, it is quite conceivable that the U.S. administration will not find enough Congressional support for its oil and gas tax reform proposals. Many Canadian reforms may be beneficial, even if undertaken unilaterally. Where unilateral action raises competitiveness concerns, or Canadian gains could be enhanced through similar action by other countries, the process could be staged so that Canada’s obligation to implement is conditional on actions by others.”

year – as cataloged by the OECD or IEA. Further, a successful Freedom of Information Act request by Greenpeace resulted in exposure of some of the political considerations behind what Australia would report.⁵

- **Additional time to research policies has not resulted in additional subsidies being targeted.** Subsidies to energy are complex, and it is reasonable to expect (and, indeed, has been the experience of this author) that a longer review period and a chance to look at sub-national policy as well, would lead to flagging more subsidies of concern that are subject to the phase out commitment. This has not happened. In fact, of all G20 members, only Canada added a new subsidy reform target relative to its report in 2010 – and even this item (a plan to match the depreciation schedule for tar sands capital equipment to that for conventional oil and gas wells) seems to reflect a proposal going back at least to 2007 (PWC 2008: 8). All other reporting countries retained their original few subsidy items, but had no additions. Even the United States, which submitted the longest subsidy listing of all member countries, continued its overly narrow focus on tax breaks to fossil-fuels, as though no other mechanisms of subsidy transfer were relevant.
- **Reform timelines remain slow or undefined.** Despite not adding new subsidies tagged for reform, it would be possible for countries to establish a formal timeline to remove the fossil-fuel subsidies already listed, or to accelerate removal if a prior timeline had existed. This does not seem to be happening. Both China and Russia, for example, have submitted short and quite vague descriptions of their subsidy policies, providing little in the way of subsidy reform specifics or timelines. Germany, Indonesia, and

India all continued with previously announced subsidy phase outs on specific targeted policies, though at a previously-set pace. India's reforms appear to be somewhat tactical, as the government retains the prerogative to re-establish consumer subsidies in the future if doing so were needed to address particular domestic problems. In fact, in December of 2011, the Indian government withheld its approval for planned increases in gasoline prices; and pricing reforms on diesel have made even less progress. Indonesia has faced political challenges in trying to move from price reform planning to implementation (Lang, 2012). Argentina, Brazil, and Mexico all expect that in-process market adjustments or infrastructure investments will reduce or eliminate existing subsidies without further policy intervention, though Mexico has intervened to freeze previously planned price adjustments.

Aside from the United States (where Congressional approval is needed for reforms to go through), the progress reports provide no explanation on for why countries have not moved to accelerate change. Background conversations suggest that key decision makers are wary of the political cost of reforms. This is particularly the case with consumer subsidies that benefit, at least in part, the poor. Efforts to bring fossil-fuel pricing closer to world levels have triggered civil unrest and rioting in Egypt, Tunisia, and Nigeria, no doubt making political leaders in other countries particularly sensitive to the political costs of reform attempts. Advance planning to replace lost purchasing power through direct payments to the poor in Iran did enable significant pricing reforms in the country. Nonetheless, Iranian petrol prices are still well below world levels and problems are starting to emerge even with that reform effort.⁶

5. Selected documents retrieved under this freedom of information request can be accessed at this link: <http://www.treasury.gov.au/Freedom-of-Information/DisclosureLog/2012/G20-commitments-on-fossil-fuel-subsidies>. However, these documents have been redacted, and did not contain any correspondence between industry and the government (such correspondence with industry is often part of FOI releases in the US and would be expected to exist in Australia as well). Individuals involved in the FOI request also noted that some of the documents obtained in the first round of the FOI process were not posted online by the Australian Treasury (Tager 2012).

6. Narwani (2012: 21) notes that original efforts to provide financial support to highly affected sectors (the poor and energy-intensive industry) has morphed into a uniform transfer program to most citizens. The costs have risen such that the payments must be supplemented through other revenue sources (including export earnings on oil sales). Demand for both transport fuels and natural gas have declined as intended, but many citizens have also stopped paying gas bills entirely.

TABLE 1: SELF-REPORTING TO G20 REMAINS WEAK; MORE COUNTRIES OPTING OUT

Implementation Strategy Included in G20 Annex Report <i>(Text shown is verbatim from Oct. 2011 "Progress Report to G20 Leaders," Annex 1)</i>	Commentary on G20 Self-Reporting	Reported:				Submission Trend, 2011 vs. 2010
		1. Actionable Subsidies Under G20 Phase Out?	2. Subsidy Items Even if Deemed "Efficient"?	3. Reforms Already in Process?	4. Accelerated or New Reform Plans?	
Argentina - Proposing a natural gas pipeline project, currently at tender process, that will in the future allow the country to begin reducing butane and LPG subsidies.	No items added since 2010 reporting cycle; removed subsidy items "deemed" efficient.	Yes	No	Yes (3 items)	No	↓ 5 to 2 pages
Australia	Earlier reporting included related policies. No submission at all for current cycle.	Did not report	n/a	n/a	n/a	↓ 3 to 0 pages
Brazil - No inefficient fossil fuel subsidies. Projects that an expansion of the national electricity grid to remote regions should be substantially completed by 2012, reducing in coming years the annual cost of benefits for remote consumers.	No change in items reported.	No	Yes (3 items)	No	No	↑ 1 to 1.5 pages
Canada - Published final regulations this year implementing a phase out by 2015 of accelerated capital cost allowance for investment in oil sands assets. Proposes to pursue new regulations that would better align deduction rates for intangible costs in the oil sands sector with rates in the conventional oil and gas sector.	New item slows depreciation of oil sands capital expenses to match standard (though still accelerated relative to actual service life) oil and gas investments; appears to date back at least to 2007.	Yes (2 items)	No	Yes (1 item)	No	3 pages in both reports
China - No inefficient fossil fuel subsidies. Doing research on adjusting the urban land use tax relief to fossil fuel producers as appropriate.	Preferential tax rate on fossil-fuel producers using urban land deemed excludible by China since they claim it has no effect on consumption.	No	Yes (1 item)	Yes (1 item)	No	↑ 1/4 to 1/2 page

TABLE 1 (CONTINUED)

Implementation Strategy Included in G20 Annex Report <i>(Text shown is verbatim from Oct. 2011 "Progress Report to G20 Leaders," Annex 1)</i>	Commentary on G20 Self-Reporting	Reported:				Submission Trend, 2011 vs. 2010
		1. Actionable Subsidies Under G20 Phase Out?	2. Subsidy Items Even if Deemed "Efficient"?	3. Reforms Already in Process?	4. Accelerated or New Reform Plans?	
Germany - Has taken recent steps to close some mines and reduce state aid. Projects continual further reductions in state aid through 2018.	Hard coal reforms in 2011 were broken out in more detail than in 2010 report, but core policy is unchanged. Policies support producers but increase rather than decrease the price to consumers.	Yes	Yes (4 items)	Yes (4 items)	No	↑ 2 to 4 pages
India - Decided in 2010 to make the prices of gasoline and diesel market-determined at both the refinery gate and retail level, although the increase in diesel prices will be staggered over time. Continues to provide subsidies for kerosene and LPG, as well as natural gas in some regions.	Same 4 items listed; no timeline for price reform, though plans to stagger to reduce impact on poor. Little progress on diesel price reforms; gasoline prices are more deregulated but still not market-based. Tactical reforms rather than permanent: government retains right to intervene if fuel prices spike up.	Yes (4 items)	No; these have been removed.	Unclear	Reform pace appears slower than in 2010	↑ 1.5 to 5 pages
Indonesia - Proposes to pursue a number of policies that will reduce and/or better target subsidies. The medium term budget plan is projected to decrease subsidies from around IDR 195 trillion in 2011 to around IDR 108 trillion in 2014.	General phase out of subsidies to gasoline, kerosene, and diesel predates the G20 commitment. Frequent updates to reform plans, though little tangible progress.	Yes (3 items)	No	Yes	All appear to be pre-existing.	↑ 1.5 to 3 pages
Italy - Has begun implementation of its plans to gradually eliminate ahead of time previously conceded feed-in tariffs for certain cogeneration facilities by pursuing voluntary agreements with private operators.	Industry-specific tax breaks ignored because overall tax rates on fuels high.	Yes (1 item)	No longer listed	Yes	No	↓ 3.5 pages to 2 pages
Japan	One of only two countries that made no submission in 2010 either.	Did not report	n/a	n/a	n/a	No submittal in either report
Korea - Has completely phased out a subsidy for coal production. Proposes to gradually phase out a subsidy for briquette production by 2020.	Prior reform schedule for one has been implemented. Briquette subsidy remains under discussion.	Yes (2 items)	No	Yes (2 items)	No	↑ 1 to 2 pages
Mexico - Implementing policies currently that raise the price of fuels on a monthly basis. Expects to eliminate subsidies for gasoline and diesel over the medium term contingent on market conditions.	As in 2010, country expects current policies will result in price adjustments for gasoline and diesel to reach market levels with no additional intervention. Planned price adjustments have sometimes been frozen due to political concerns.	Yes (2 items)	Mitigating measures for price reforms discussed only generally	Yes (2 items)	All appear to be pre-existing.	↑ 1 to 6 pages

TABLE 1 (CONTINUED)

Implementation Strategy Included in G20 Annex Report <i>(Text shown is verbatim from Oct. 2011 "Progress Report to G20 Leaders," Annex 1)</i>	Commentary on G20 Self-Reporting	Reported:				Submission Trend, 2011 vs. 2010
		1. Actionable Subsidies Under G20 Phase Out?	2. Subsidy Items Even if Deemed "Efficient"?	3. Reforms Already in Process?	4. Accelerated or New Reform Plans?	
Russia - No inefficient fossil fuel subsidies. Working to gradually develop market pricing principles in the natural gas market and has proposed the preparation of initiatives to implement transition by 2015 from state regulation of wholesale gas prices to state of regulation of tariffs for gas transportation services.	Focus on reducing energy intensity of economy to world levels; little detail on specific subsidy policies provided in G20 reporting.	No	Yes; focus on market regulation and shift to adjustable price mechanisms.	n/a	Market reforms may be subsequent to G20 commitment	↑ 1/2 to 2 pages
Saudi Arabia	Earlier reporting noted below-market pricing as not a subsidy so long as higher than production costs.	Did not report	n/a	n/a	n/a	↓ 1/2 to 0 pages
South Africa	Earlier report stated the country had no inefficient fossil-fuel subsidies.	Did not report	n/a	n/a	n/a	↓ 1/2 to 0 pages
Spain* - National plan for strategic coal reserves envisages significant reductions in coal production by 2012. Further restructuring to be considered next year.	Only policy listed in 2011 is hard coal support, a reduction from listings in 2010.	No	Yes (1 item)	No	No	↓ 3 to 1.5 pages
Turkey - Will soon begin work with the state-owned coal mining company to develop a restructuring plan that will rationalize/phase out the subsidies the company has received through capital injections from the state budget	Restatement of 2010 report; progress in achieving objective is not evident.	Yes (1 item)	No	Proposed (1 item)	No	1 page in both reports
United Kingdom	One of only two countries that made no submission in 2010 either.	Did not report	n/a	n/a	n/a	No submittal in either report
United States - Needs to pass legislation to eliminate twelve preferential tax provisions related to the production of coal, oil, and natural gas.	Inefficient subsidies include only tax expenditures. The most detailed submittal of all G20 countries, but still quite spotty in subsidies captured.	Yes (12 items)	Yes (1 item)	Proposed (12 items)	No	↑ 8 to 11 pages

*Not a formal G20 member, but has participated in all meetings to date.
n/a = not applicable, since the country made no report to the G20.

Sources: G20 (2010) and G20 (2011)

2.2 SELECTIVE DEFINITIONS OF G20 SUBSIDY REQUIREMENT FACILITATE OPT-OUTS

Member countries continue to select definitions for what counts as a fossil-fuel subsidy and whether such a subsidy is “inefficient” (and therefore subject to the phase out commitment) that support their desired commitment to policy reform. Small differences in how they have worded their definitions can result in quite large variation in reporting and reform.

- **Ignoring opportunity cost.** A group of countries, including large exporter Saudi Arabia, but also South Korea and Turkey, have excluded the sale of domestically-produced fuels at below-market prices from their definition of subsidies so long as direct production costs are covered. This often results in smuggling and domestic shortages as people use too much fuel or try to sell inexpensive domestic supplies abroad at a profit. Long-lived capital infrastructure is often built with insufficient attention to energy efficiency as well.
- **Excluding targeted subsidies so long as average fuel taxes stay high.** Italy has most clearly defined this approach, arguing that because national prices remained above world levels, variation in incremental fuel taxes above that base were not subsidies. It is likely that all EU countries are using this approach. Relative to a domestic baseline, however, the differential subsidies by industry create distortions in investment patterns and returns, and replace economic signals with political ones.

- **Selective coverage of policy types included within country definitions.** The IEA definition of subsidies has been adopted verbatim by a large number of G20 member countries. Yet, aside from possibly ignoring risk transfers that affect return volatility though do not immediately affect costs or revenues to producers (e.g., from capping liability), the IEA definition is quite inclusive. Any government measure is included, not just tax breaks and grants. Further, measures are considered relevant based not on their *intent*, but on their *impact*. Under the IEA definition, support policies via grants, credit markets, insurance, purchase mandates or other regulations, and direct government ownership of energy-related product or service companies should all be included. G20 members using the IEA definition, however, have primarily focused on a handful of tax breaks. Sub-national policies have also generally been ignored – though they are required to be reported on under the WTO’s Agreement on Subsidies and Countervailing Measures.
- **No formal definition.** Avoiding a formal commitment to a specific definition of subsidies gives countries more flexibility to omit without mention particular policy interventions. Definitional gaps are evident in reporting by key countries such as Russia and China. The US submittal does not include an accepted definition either, yet focuses almost exclusively on a narrow set of tax breaks to the fossil-fuels industry.

Table 2 below lists verbatim definitions from country reporting, with emphasis added in order to highlight the parts of the definition that create reporting gaps. These potential data gaps are summarized in the second column.

TABLE 2: SUBSIDY DEFINITIONS VARY BY COUNTRY, LEAD TO GAPS IN REPORTING AND REFORM COMMITMENTS

Country Definition of Subsidies Subject to Phase Out (Emphasis Added)	Potential Gaps
<p>European Union “For the purposes of the exercise launched by the G20 Pittsburgh summit, the EU and its Member States have chosen to take as a working definition of fossil fuel subsidies the following, <i>based on</i> the approach of the International Energy Agency:</p> <p>‘A fossil-fuel subsidy is <i>any government measure or program with the objective or direct consequence</i> of reducing below world-market prices, including all costs of transport, refining and distribution, the effective cost of fossil fuels paid by final consumers, or of reducing the costs or increasing the revenues of fossil-fuel producing companies’.”</p>	<ul style="list-style-type: none"> • Definition is actually fairly broad, in theory capturing any type of government program, regardless of intent, that either modifies energy prices or changes revenues or costs for producers. In practice, though, most of the countries have picked up only taxes and a few direct expenditures. • As noted below with Italy, the definition seems to focus on national average levels, missing sector-specific tax breaks (e.g., reduced taxation of fuels used by fishing fleets). • Risk transfers may also not be well captured by this definition, particularly if the connection to costs or revenues is not immediate, but through changes in the <i>expected</i> returns (lower volatility returns) in a particular sector.

Country Definition of Subsidies Subject to Phase Out (Emphasis Added)	Potential Gaps
<p>Australia “Australia does not have measures related to the production of fossil fuels that fall within the scope of the G20 commitments.”</p> <p>“Australian Government budgetary support for fossil fuel production is limited to measures that are <i>intended</i> to support production of <i>clean energy</i>.”</p> <p>“Australia does not have any sector-specific tax expenditures for fossil fuel production (although fossil fuel producers are able to access general measures that apply across the economy or across the mining and quarrying sectors as a whole).”</p>	<ul style="list-style-type: none"> • Subsidies to less polluting forms of fossil-fuels (e.g., clean coal or pollution controls) even though they may still be “dirtier” than renewable alternatives. • Policies that have the effect, though not the intent, of subsidizing fossil-fuels seem to be excluded. • Special tax breaks for extractive industries (e.g., percentage depletion) that are generally viewed as subsidies in most other countries in the world.
<p>Canada “There are two broad possible approaches that Canada could take to this commitment: 1) Use the commitment as an opportunity to undertake selective rationalization of Canadian measures (which we recommend), or 2) If Canada is not prepared to undertake any substantive reforms, minimize the obligation so that Canada can still position itself as meeting the commitment “ (Horgan 2010).</p>	<ul style="list-style-type: none"> • This leaked memo illustrates the political aspects of subsidy definitions in how a country’s response to the G20 commitment is framed. • The limited items reported illustrate the country chose the second option.
<p>India “It was decided that all the countries would provide their own definition of inefficient subsidies. Accordingly, following [sic] definition of subsidies has been adopted by India:</p> <p>‘A fossil fuel subsidy is any Government measure or budgetary support that has a consequence of reducing the effective cost for fossil fuel paid by consumer, (after accounting for taxes on these fuels) or of reducing the costs or increasing the revenue of fossil fuel producing companies.’”</p>	<ul style="list-style-type: none"> • Adjustments for taxes may mask important user subsidies to fuel sector (e.g., roads or other transport infrastructure, tank cleanups). • India’s own 2010 progress report submission illustrates what they believe is excluded from reform: “It may be mentioned that this list does not include the indirect subsidy provided for energy services like tax benefits on profits derived from commercial production and refining of mineral oils and natural gas; investment linked incentives for expenses on new pipelines; sales tax concessions by State/local government etc.”
<p>Indonesia “According to the Indonesian Budget Law, fuel subsidy defined [sic] as a budgetary allocation given to a company or institution that produces and/ or sells the oil fuel and Liquefied Petroleum Gas (LPG), with the purpose of providing access to energy at an affordable price for consumers.”</p>	<ul style="list-style-type: none"> • Non-budgetary transfer approaches (e.g., tax, credit, insurance subsidies). • Programs that subsidize costs for reasons other than providing energy access at an “affordable price”.
<p>Italy “Italy considers favorably the International Energy Agency’s (IEA) definition of fossil fuel subsidies as: ‘any government measure or program with the objective or direct consequence of reducing below world-market prices, including all costs of transport, refining and distribution, the effective cost for fossil fuels paid by final consumers, or of reducing the costs or increasing the revenues of fossil-fuel producing companies.’</p> <p>“However, and according to this definition, <i>Italy as much as most other EU member states does not have subsidies that lower the price of fossil fuels below international market price levels</i>. Furthermore, State aid within the EU is clearly limited by the Treaty on the Functioning of the European Union (TFEU), which forbids any public support not compatible with the TFEU.”</p>	<ul style="list-style-type: none"> • Although Italy generally adopted the same subsidy definition as other EU members, the country added the clarification on taxes that other members seemed also to have applied, though did not state. • As a result, any situation where specific sectors are receiving higher subsidies (or tax reductions) than others may be missed. Even if overall tax rate results in prices above EU minimums, there can be inter-sectoral distortions and these can cause important environmental problems.
<p>South Korea “Korea defines fossil fuel subsidy as a government measure with the objective or direct consequence of <i>reducing below production costs – for net importers, world price instead or production cost – the effective cost</i> for fossil fuels paid by end consumers, or reducing the costs or increasing the revenues of fossil fuel producing companies.”</p>	<ul style="list-style-type: none"> • South Korea has adopted the OPEC viewpoint that selling above production costs but below world prices is not a subsidy. The opportunity cost of these programs can be large, and the allocation of windfalls via political means often results in corruption, black markets, and shortages.

Country Definition of Subsidies Subject to Phase Out (Emphasis Added)	Potential Gaps
<p>Mexico “While current policies in Mexico are consistent with the goals of the G20 commitment, we believe that in order to make a stronger commitment regarding the phase out of our fossil-fuel subsidies, <i>it would be necessary for all countries to agree on a uniform methodology for calculating subsidies.</i> Using such a common methodology, peer monitoring would be an effective tool to gauge progress across countries in removing fossil fuel subsidies in an objective and clear manner.”</p>	<ul style="list-style-type: none"> • No specific definition of what counts as a subsidy to Mexico; only a recognition that absent a formal process for establishing a common standard there are likely to be problems.
<p>Russia No clear definition of subsidies has been put forth by Russia, though there is recognition that reform of consumer prices for energy would be included.</p>	<ul style="list-style-type: none"> • While the provision of a working definition does not ensure all important subsidies will be captured, the absence of a working definition means exclusions are even more likely.
<p>Saudi Arabia “Saudi Arabia has considered a definition of inefficient subsidies on the basis that <i>there is no cost to the Government that outweighs the social and economic benefits of the pricing mechanism, leading to wasteful rather than natural growth in consumption, and that these benefits, including in the form of economic diversification, cannot be provided by equally effective ways or by the use of available alternative sources of energy.</i></p> <p>“Based on these criteria, the Government would like to articulate that while domestic fossil fuel prices in Saudi Arabia could be below international prices, these prices reflect the country’s comparative advantage in oil production and are above the production costs. Indeed, the Government is not paying any fossil fuels-related subsidy from the treasury. Therefore, Saudi Arabia is not implementing any measures that fit the criteria for inefficient fossil fuel subsidies. The G20 proposal for phasing out inefficient fossil fuel subsidies does not therefore apply to Saudi Arabia.”</p>	<ul style="list-style-type: none"> • Large opportunity cost of selling fuel domestically at an artificially low price is not being recognized. NGO assessments of Saudi Arabia have indicated that the underpricing has resulted in a wide array of problems regarding over-consumption, inefficiency, and poor investment decisions. • There seems to be little data on producer subsidies within the Kingdom, such as via credit support, subsidized insurance, or post-operational cleanup and closure of drilling sites.
<p>Turkey “The appropriate definition for ‘Inefficient Fossil Fuel Subsidy’ is stated below:</p> <p>‘A fossil-fuel subsidy is any government measure or program with <i>the objective of reducing, below production cost, the effective cost for fossil fuels paid by consumers or of reducing the costs or increasing the revenues of fossil-fuel producing companies through measures other than efficiency improvement measures and/or measures for the penetration of new technologies (e.g., clean coal technologies).</i>”</p>	<ul style="list-style-type: none"> • Any subsidy to a “new technology” would not meet the definition of an inefficient subsidy according to Turkey. • Consumer subsidies exempted as well so long as prices remain above production cost. • Unlike the standard IEA definition, Turkey has excluded government measures that have the “direct consequence” of distorting markets, even if that end was not an intent of the policy.
<p>United States “There are a number of tax preferences, described below, available in the United States to producers of fossil fuels. The preferences below are all permanent provisions in the tax code.”</p>	<ul style="list-style-type: none"> • Subsidy mechanisms other than tax breaks. • Subsidy quantification based on single source (Treasury), though estimates from other parts of government often disagree.

Sources: Earth Track Analysis of G20 (2010) and G20 (2011); Horgan 2010.

2.3 WTO REPORTING A GOOD SOURCE FOR FOSSIL-FUEL SUBSIDY DATA IN PRINCIPLE, BUT NOT IN PRACTICE

Under Article 25 of the Agreement on Subsidies and Countervailing Measures (SCM), all member states of the World Trade Organization must notify the WTO about subsidies not later than June 30th of each year. In theory, fossil-fuel subsidies are merely a sub-set of the broader data on subsidies that member countries are required to report to the WTO. Unfortunately, reporting to the WTO is at least as problematic as reporting to the G20. Although the percentage of countries reporting to the WTO that they have no subsidies has dropped significantly between 1995 and 2011 (from 20% to only 7%), more than half of the member countries did not submit timely subsidy reports (WTO, 2012). As with reporting on fossil-fuel subsidies to the G20, the percentage not reporting at all has risen over time. This trend may be linked to the fact that there have been no penalties for incomplete or late reporting.⁷

Although subsidy reporting to the WTO was somewhat better for G20 member states than for the average WTO member, important gaps remained. As shown by the shaded cells in Table 4, five members were behind on required submittals, in one case (Indonesia) by more than fifteen years. Russia, a member of the G20, is not yet a member of the WTO, and therefore has no reporting requirements to that body. Five members (including two countries that have been submitting timely subsidy reports) were called to task by other WTO members for

incomplete or inaccurate reports. For two of these (India and China), the United States actually submitted subsidy counter-notifications (WTO 2011a, WTO 2011b) highlighting many (in the case of China, about 200) policies the countries themselves had left out. The counter-notification for China included numerous subsidies to wind and solar power, likely researched due to ongoing trade cases in the area. While fossil-fuels were not singled out in the counter-notification, prior analysis of potential data sources on Chinese fossil-fuel subsidies (Koplow *et al.* 2010) suggests that a wide array of subsidies to fossil-fuels also exist. The India counter-notification listed fewer measures, though did include some related to subsidies to power used at industrial facilities.

Although the United States tends to provide more detail on subsidies to the WTO than most other G20 member states, there are significant gaps even in the US reporting. This fact underscores the limitations of relying on the WTO data set for robust information on fossil-fuel subsidies. A review by this author of fossil-fuel subsidies in five US states found hundreds of millions of dollars of subsidies that had not been picked up in the United States' subsidy notifications to the WTO (Koplow and Lin, forthcoming).

A combination of delayed and incomplete reporting on subsidies by most WTO members, along with little or no enforcement capability by the Secretariat for correcting these problems, precludes reliance on the WTO as a source of systematic data on fossil-fuel subsidies. These problems seem politically insoluble in the near- to mid-term.

TABLE 3: MORE THAN HALF THE MEMBER STATES DO NOT MEET WTO SUBSIDY REPORTING REQUIREMENTS ON A TIMELY BASIS

New and full subsidy notification	Percentage in the total figure*							
	1995	1998	2001	2003	2005	2007	2009	2011
Members that made the required new and full notification	44%	39%	41%	42%	45%	44%	45%	41%
Members that made a "nil" notification	20%	13%	13%	10%	9%	6%	11%	7%
Members that did not make any notification	36%	48%	46%	48%	46%	50%	44%	53%

*The number of WTO Members was 112 as of the end of 1995, and had increased to 153 in 2012.
Source: WTO 2012: 4.

7. In addition to Article 25 relating to actionable subsidies, Article 8.3 of the SCM Agreement required the notification of non-actionable subsidies, though is no longer applicable. Ostensibly this requirement would have allowed third parties to see the full range of supports and to make an independent assessment of whether a subsidy was a trade problem. Interestingly, however, the WTO noted that even when Article 8 was in force, no notification of non-actionable subsidies had been provided by member states (WTO 2012: 6).

TABLE 4: BASIC GAPS IN WTO REPORTING EVEN FOR G20 MEMBERS

Member	Periods Covered in Most Recent WTO Submittal	2011	2009	2007	2005	2003	2001
Argentina*	2008-2010	X	X	X	X	X	X
Australia*	07/10-06/11	X	X	X	X	X	X
Brazil	2009-2010	X	X	X	X	X	X
Canada	2008-2010	X	X	X	X	X	None
China*	2007-2008	None	X	X	X	None	n.a.
EU	2009-2010	X					
France	2009-2010	X	X	X	X	X	X
Germany	2009-2010	X	X	X	X	X	X
India*	2008-2009	None	X	X	X	X	X
Indonesia	1995	None	None	None	None	None	None
Italy	2009-2010	X	X	X	X	X	X
Japan	04/09-03/10	X	X	X	X	X	X
Kingdom of Saudi Arabia	2011	X	X	X	n.a.		
Korea	2009-2010	X	X	X	X	X	X
Mexico	2009-2010	X	X	X	X	X	None
Russia	Not in WTO	Not in WTO	Not in WTO	Not in WTO	Not in WTO	Not in WTO	Not in WTO
South Africa*	2001-2002	None	None	None	None	N	None
Turkey	2010-2011	X	X	X	X	X	X
United Kingdom	2009-2010	X	X	X	X	X	X
United States	10/08-09/10	X	X	X	X	X	X

Source: WTO 2012: 13-18, 26.

Key

“N” - Member has indicated to the WTO that it maintains no notifiable subsidies.

“X” - Member notified subsidies, though provides no information on completeness of submittal.

“None” - No notification was submitted to WTO.

“n.a.” - At the time when the notification was due to be submitted, the status of WTO Member had not yet been acquired.

* - SCM submittals had been deemed inadequate by another member and clarification or expansion was requested.

2.4 APEC COULD PROVIDE LEVERAGE TO G20 PHASE OUT, THOUGH STILL IN EARLY STAGES

Less than two months after the G20 committed to phase out inefficient fossil-fuel subsidies, a similar commitment was made at the APEC Leaders' Summit, extending the phase out pledge to an additional 11 countries. According to Lang (2011: 15),

The APEC forum is taking a different approach to implementation than the G20, as it has a formal secretariat and working group through which it can advance research and develop best practice. The APEC Energy Working Group will undertake research on fossil-fuel subsidies within its member countries to better inform medium term reform efforts.

This focus on capacity building can be seen in APEC's own timeline, issued in June 2011 (Figure 1, below). According to people familiar with the APEC process, most of the milestones have been met. In November of 2011, the APEC leaders agreed to:

Rationalize and phase out inefficient fossil-fuel subsidies that encourage wasteful consumption, while recognizing the importance of providing those in need with essential energy services, and set up a voluntary reporting mechanism on progress, which we will review annually (APEC 2011b).

The commitment to voluntary reporting on subsidies with an annual review is new, and could provide an additional source of data on fossil-fuel subsidies going forward. However, there has been no data submitted to date, and the voluntary nature of reporting may result in some of the same issues cropping up that have impeded G20 and WTO subsidy reporting to date.

FIGURE 1: TIMELINE FOR APEC'S ANALYSIS OF FOSSIL-FUEL SUBSIDIES

- Leaders' directives – November 2009, November 2010
- Energy Ministerial Directive – June 2010
- Concept Note approved – September 2010
- Meeting of IEA and APERC on analysis – March 2010
- Request for proposals on best practices study – February 2011
- EWG agreement on next steps to end subsidies – May 2011
- Workshop for senior officials – September 2011 (SOM 3)
- Completion of IEA/APERC analysis – October 2011
- Workshop for EWG and technical experts – October 2011
- Agreement on monitoring and reporting – October 2011
- Completion of best-practices analysis – early 2012
- First capacity-building outreach workshop – early 2012

Source: APEC 2011a

3. THIRD-PARTY REPORTING REMAINS CRITICAL IN FILLING GAPS WITH SELF-REPORTED DATA

A review of subsidy self-reporting indicates that there remain significant deficits in reporting frequency and coverage both under the G20 and the WTO subsidy transparency initiatives. APEC data has not yet started to come on line, but the voluntary nature of its reporting as well suggests that similar problems are likely to arise. Further, a review of subsidy definitions adopted by G20 member countries, along with other statements made by government officials, indicate additional ambiguity in reported data from intentional or incidental differences in what each country deems includible under their 2009 phase out commitment.

The availability of subsidy data from independent sources is therefore critical in providing a clearer picture of how governments actually intervene in energy markets and the fiscal impact of those interventions. Third-party data has continued to improve, and this data universally pegs country-specific fossil-fuel subsidies at levels substantially higher than what the countries themselves acknowledge.

This section provides a number of comparative benchmarks. The first compares self-reported subsidy data to the G20 with independent estimates of subsidies to consumers and producers developed by the IEA, the OECD, and non-governmental organizations. The second looks at trends in gasoline prices (inclusive of taxes) relative to a world benchmark, a concise indicator of price signals seen by consumers for key fossil-fuel commodities. The third metric presents empirical data on the “pass-through” of changes in world fuel prices into particular domestic markets. Calculations of price-gap subsidies (the difference between world and domestic prices calculated in IEA’s energy subsidy figures) can vary greatly year-to-year as world prices change. Declines in consumer subsidies often occur when global prices for energy fall simply because they are configured to provide payments above a pre-set threshold. Pass-through assessments can help highlight any structural change in the energy markets that would result in more accurate tracking of world prices going forward.

3.1 FOSSIL-FUEL SUBSIDIES REPORTED BY THIRD PARTIES REMAIN DRAMATICALLY HIGHER THAN WHAT IS SELF-REPORTED BY MOST G20 COUNTRIES

Table 5 illustrates the limitation of relying on subsidy self-reporting. The first two columns highlight self-reporting trends: whether a member state reported subsidies subject to the fossil-fuel phase out commitment, and whether they had announced any new reform efforts as a result of the G20 initiative. Only half of the 20 members (including the EU) reported subsidies subject to the phase out commitment, and none appear to have new reforms triggered by the G20 phase out.⁸

Against this very low level of self-reported subsidization, subsequent columns assess fossil-fuel subsidies from a variety of sources: producer subsidies tabulated by OECD, consumer subsidies calculated by IEA, and a variety of third-party NGOs and other institutions with country-specific work.⁹ An average of the 2008-10 producer subsidies is used in order to level off some of the year-to-year volatility in the estimates. For the consumer subsidies, we present the most recent data available (2010), as well as what percent the 2010 estimate is of the peak subsidy year between 2007 and 2010 in order to illustrate whether the consumer subsidies are higher or lower than in the past.

All six “opt-out” nations had fossil-fuel subsidies. All of the countries that did not provide any 2011 progress update to the G20 on the grounds that they had no subsidies subject to the phase out commitment do, in fact, have material subsidies to fossil-fuels according to data from other parties. This includes more than US\$43 billion in consumer subsidies in Saudi Arabia; the Kingdom deems the supports are exempt because the selling price is above its base cost of production. Similarly, Australian subsidies to producers exceeded US\$7 billion per year, though were excluded based on the country’s decision that special tax breaks for mining were not subsidies because some non-fuel minerals also received them.¹⁰

Consumer subsidies seem to be trending down. In all cases, 2010 consumer subsidies were less than those in the peak

8. The only new reform indicated in progress reports to the G20 is a Canadian initiative to slow depreciation rules for tar sands to match conventional oil and gas; however, even this seems to have been proposed back in 2007, and post-reform will still allow the write-off of oil and gas assets from taxes far faster than the actual service life of the investment.

9. It is important to keep in mind a few key aspects about these comparables: OECD’s inventory of subsidies to producers doesn’t capture all subsidy types; neither OECD nor IEA data sets cover all countries; and valuation methodologies may differ between outside research institutes and those used by OECD and IEA.

10. Many of these same policies (e.g., percentage depletion) were included on the US listing of subsidies subject to phase out, though in the US as in Australia, non-fuel minerals are also eligible for the subsidies.

subsidy year between 2007 and 2010 – in some cases much less. Much of this trend is likely a byproduct of lower world prices (reducing the gap between market prices and pre-set administrative prices inside the country). However, the reductions varied across countries, suggesting a variety of factors were at play. As shown in Table 6, however, the trends in tax-inclusive prices to consumers are less clear.

Subsidy figures from OECD and IEA are a lower-bound estimate of actual fossil-fuel subsidies. IEA's price gap approach measures subsidies only if they result in changes in domestic equilibrium prices.¹¹ Many subsidies (e.g., to prop up domestic producers so they can compete with imports) do not alter market prices. However, even policies that may not affect domestic prices are often fiscally expensive and can distort the energy mix in a country and its associated emissions profile. Further, although the OECD's inventory of supports to producers is more extensive than what has been attempted before, so far it has limited or no coverage for important categories of subsidies, including credit, insurance, and state-owned enterprises.¹² OECD did include some sub-national supports and plans to greatly enlarge the number of sub-national jurisdictions in the 2012 edition of its *Inventory*; nonetheless, current coverage is spotty." In addition, OECD has indicated that, over time, it hopes to expand the policy coverage. Despite these limitations, the availability of such a large set of producer subsidy data marks a significant improvement over our last assessment.

Although Russia and China were not clear on subsidy definitions or subsidy phase out targets, both provide significant support to fossil-fuels. Consumer subsidies were US\$39 billion and US\$21 billion, respectively, in 2010. Producer subsidies in both countries are believed to be large as well (Koplow *et al.* 2010; Gerasimchuk 2012).

G20 nations dominate the top five nations with the highest subsidies to fossil-fuel consumers. Four of the five countries with the largest consumer subsidies in 2010 were G20 member states (Saudi Arabia, Russia, India and China). In total, G20 nations were responsible for 39% of the consumer subsidies to fossil-fuels worldwide (IEA 2011).

Germany and the United States provided the largest producer subsidies according to OECD, at US\$10 billion and US\$12 billion, respectively. OECD estimates were higher than those submitted to the G20 team by the United States, though were still only a fraction of the estimates done by this author, which incorporated more tax breaks, power subsidies, security for oil shipments, and subsidized transport infrastructure to move bulk fossil-fuels.

South African subsidies are believed to be much larger than recognized. Communications with a variety of NGOs doing work in South Africa detailed a complex, though often secret, set of below-market power tariffs to selected energy-intensive industries. It is not clear whether all of this support has been captured in IEA's consumer subsidy estimates. Further, there appears to be significant shifting of liabilities and worker health protection from private producers to the public in the mining sector, an industry grouping that includes both coal and non-fuel minerals.

Conflicting information on consumer subsidies in Brazil. IEA price gap estimates in 2007 pegged Brazilian consumer subsidies at US\$1 billion per year, but the country did not show up in their most recent assessment. Other researchers have indicated consumer subsidies remain, particularly with respect to LPG. IEA is in the process of preparing its 2011 estimates of fossil-fuel consumption subsidies and as part of this process will be reviewing the presence of subsidies in all countries, including Brazil.

11. For more detail on how the price gap is calculated and its limitations as a metric for assessing total subsidies and related market distortions, see Koplow, 2009.

12. OECD documents refer to policies that intervene in fossil fuel markets for the benefit of industry players as "supports" rather than "subsidies." This approach is "deliberately broad, and is broader than some conceptions of 'subsidy'" (OECD 2011: 17). Practically, this distinction allows OECD to bypass some of the complex and contentious political debates on whether a particular policy generates subsidies, and whether such subsidies would be trade-distorting or otherwise subject to corrective action. Instead, researchers are able to focus on broadening the transparency on policies relevant to, and supporting, the fossil fuel sector.

TABLE 5: THIRD-PARTY DATA INDICATE MUCH LARGER FOSSIL-FUEL SUBSIDIES THAN APPARENT IN SELF-REPORTING

Country	Self-Reporting: G20 Annex Submittals October 2011		Reported by Other Parties (Millions of USD)		Note	IEA Consumer Subsidy Estimates	
	Subsidies Subject to Phase Out	New Reforms Pursuant to G20?	OECD Inventory, Annual Average, 2008-10	Other Sources		Fossil-fuel Subsidies, 2010 (Millions of USD)	Trend: 2010 Value/ Peak Year 2007-10
Argentina	Yes	No	-	9,000 to 16,000	(1)	6,494	36%
Australia	Did not report	n/a	7,370	12,538	(2)	n/e	
Brazil	No	No	-		(3)	1,000 (oil - 2007)	
Canada	Yes (2 items)	No	1,200	2,986	(4)	n/e	
China	No	No		NQ but large	(5)	21,326	48%
France	Did not report	n/a	3,348			n/e	
Germany	Yes	No	10,379	Significant credit support to power sector not picked up by OECD.	(5)	n/e	
India	Yes (4 items)	Reform pace appears slower than in 2010		~20,444 for power, petrol products	(6)	22,282	51%
Indonesia	Yes (3 items)	All appear to be pre-existing.		14,638	(7)	15,943	84%
Italy	Yes (1 item)	No	2,052			n/e	
Japan	Did not report	n/a	466			n/e	
Korea	Yes (2 items)	No	1,981			180	18%
Mexico	Yes (2 items)	All appear to be pre-existing.	5,781			9,497	42%
Russia	No	Market reforms may be subsequent to G20 commitment		14,400	(8)	39,214	76%
Saudi Arabia	Did not report	n/a				43,517	90%
South Africa	Did not report	n/a				2,120	37%
Spain	No	No	3,051			n/e	
Turkey	Yes (1 item)	No		IEA data suggests producer subsidies	(9)	n/e	
United Kingdom	Did not report	n/a	5,269			n/e	
United States	Yes (12 items)	No	12,482	52,000	(10)	n/e	

n/e = not estimated; n/a = not applicable because country didn't report.

Notes and Sources

1. Planned cuts would save only \$130m per year (GSI 2012).
2. Includes some transport and rebates of fuel taxes on off-road use (Australian Conservation Foundation 2011).
3. More recent price gap calculations do not list consumer subsidies for Brazil, though data suggests they may remain (IEA 2008, IEA 2011).
4. Estimates for 2008 (Sawyer and Steiber 2010).
5. Koplou *et al.*, 2010.
6. TERI and IISD 2012.
7. Consumer subsidies averaged 124.8 trillion rupiahs between 2008-10 (US\$12.8 billion), with an additional US\$ 1.8 billion in producer subsidies. (Braithwaite *et al.* 2010: 10; IISD 2012: 5).
8. Gerasimchuk 2012.
9. IEA 2009.
10. Koplou 2007, adjusted for inflation.

3.2 TAX-INCLUSIVE PRICES TO CONSUMERS INDICATE MIXED SUBSIDY TRENDS

When the IEA tracks consumer subsidies, it nets out the impact of taxation. While difficult to implement perfectly, one could imagine a situation in which a country with subsidized fuel prices adds a very high fuel tax on top of the base price. Ignoring that such a system may result in a large black market for fuel, if the full tax *were* to be paid by consumers, the combined price may be high enough to prevent subsidy-related over-consumption. This is the general argument that a number of EU countries have put forth against phasing out existing tax preferences for certain end users of fossil-fuels.

One way to look at this dynamic is to compare tax-inclusive prices with a reference baseline in order to flag countries with artificially low end-prices to consumers. The retail prices in the United States are often used as a benchmark, though like all such metrics, this one has some weaknesses as a reference price. Specifically, the approach assumes tax-inclusive prices in the US are a strong global reference for “free market” pricing, yet US producer subsidies to all fossil-fuels (not just petrol) may be more than \$50 billion per year (Koplow 2007). Further, although most of the tax receipts from gasoline and diesel are used to finance and repair related interstate highways,¹³ the ability of these receipts to cover actual federal spending has been declining consistently since the US highway program began in the 1950s. By 2007, user fees of all types (of which fuel taxes are the most important) covered only about half of total spending, with shortfalls on the order of \$70 billion per year (Pew SubsidyScope 2009).

Eliminating producer subsidies and increasing fuel taxes to cover full infrastructure costs would both drive up fuel prices to consumers, and more countries would end up being below the US-reference price than shown in the data below. This limitation aside, price surveys for gasoline and diesel fuel have been conducted for many years by Deutsche Gesellschaft für Internationale Zusammenarbeit, or GIZ, and the data provide some useful insights.¹⁴ Table 6 summarizes GIZ data for G20 countries, supplemented with current-year data compiled by Bloomberg. Consumers in most G20 countries face prices higher than US consumers; retail prices for gasoline and diesel fuel in many EU countries are at least double corresponding

U.S. prices. However, five countries price one or both fuels below US prices even on a tax-inclusive basis. The largest disparity is within Saudi Arabia.

The trend data are particularly interesting. These columns look at how closely pricing within a particular country maps to the reference case over time, and whether domestic prices are a larger or a smaller share of the reference price now than in the past. Negative values in these last three columns mean that domestic prices are a lower share of the US benchmark than in the past. Summary statistics across the G20 are shown at the bottom of the table.

- For gasoline, most countries have reduced domestic prices relative to US reference prices between 2008 and 2012. For diesel fuel, the opposite trend holds.
- Although Indonesian diesel prices remain below US levels, data for both fuels shows domestic prices as a share of US reference prices rising in recent years. This may be a data anomaly however, as the country last increased the prices of subsidized gasoline in 2008 and diesel in 2009 (Lang 2012). Instead, the trends could reflect different markets based on fuel grade (higher grades of gasoline sell at prices closer to international levels) or general reductions in consumer subsidies when prices fall from peaks. Mexico has argued that current policies will reduce and ultimately eliminate fuel subsidies without further required government action. This impetus is not yet visible in pricing data, which indicates an opposite trend. One potential explanation is that despite a policy aimed at international price levels for fuels, the government has periodically frozen price adjustments in recent years and this shows up in the comparative prices to end users.
- Many countries show a much larger erosion in domestic prices as a share of the US reference for gasoline over the 2008-12 time period than for the shorter 2008-10 period. The reason for this is not clear. A relaxation of efforts to increase fuel prices may be behind the trend, part of a stimulus package to pull out of the global recession. However, the data source and the grade of gasoline were both different for the 2012 pricing data, so part of the observed variance may be due to methodological issues as well.

13. Funds also finance waterborne and air transit systems, and some mass transit.

14. Prior to January 2011, the pricing surveys were done by the GTZ division (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH).

TABLE 6: ONE QUARTER OF G20 HAS TAX-INCLUSIVE GAS AND DIESEL PRICES BELOW US REFERENCE PRICES; PRICES IN MANY COUNTRIES HAVE BEEN TRENDING DOWNWARD RELATIVE TO US

Country	2008 (note 2)		2010 (note 3)		May 2012 (note 4)	Domestic Pricing Trend		
	Diesel	Gasoline	Diesel	Gasoline	Premium Gasoline	Diesel, 2008-10	Gasoline, 2008-10	Gasoline, 2008-12
	Domestic tax inclusive price/ US tax inclusive price					Percentage Point Increase (Decrease) Relative to US Benchmark		
Argentina	74%	139%	125%	126%	130%	51%	-13%	-9%
Australia	121%	132%	146%	167%	161%	26%	35%	29%
Brazil	132%	225%	136%	208%	153%	4%	-17%	-72%
Canada	115%	136%	129%	159%	137%	13%	23%	2%
China	129%	177%	124%	146%	127%	-6%	-31%	-50%
France	186%	271%	205%	261%	208%	19%	-11%	-63%
Germany	200%	279%	200%	250%	204%	0%	-29%	-74%
India	90%	195%	98%	151%	145%	8%	-43%	-50%
Indonesia	54%	89%	61%	104%	98%	7%	15%	9%
Italy	209%	280%	201%	246%	223%	-8%	-34%	-57%
Japan	167%	254%	163%	211%	181%	-4%	-43%	-73%
Korea	179%	270%	161%	200%	181%	-19%	-70%	-89%
Mexico	69%	132%	86%	107%	76%	16%	-26%	-56%
Russia	110%	159%	86%	111%	89%	-25%	-48%	-70%
Saudi Arabia	12%	29%	8%	21%	15%	-4%	-8%	-14%
South Africa	122%	155%	136%	157%	137%	14%	1%	-19%
Spain *	164%	220%	175%	205%	180%	11%	-14%	-39%
Turkey	209%	334%	242%	332%	no data	33%	-2%	
United Kingdom	212%	257%	236%	253%	211%	24%	-5%	-46%
United States	100%	100%	100%	100%	100%	0%	0%	0%

Number of G20 Countries with Increasing Prices Relative to US Reference Price	12	4	3
Number of G20 Countries with Decreasing Prices Relative to US Reference Price	6	15	15
Number of G20 Countries with No Relative Change in Prices	2	1	1

*Spain participates in all G20 meetings, but is not an official member.

Sources and Notes:

(1) Cents/litre within country compared to benchmark prices in the United States. US prices are often used as a minimum benchmark for unsubsidized world prices (see GTZ 2007). Pricing data from GTZ 2009: 62, 63.

(2) Prices as of mid-November 2010, from Wagner 2011.

(3) Capital cities or national averages; prices for regular (GIZ 2012).

(4) Randall 2012.

3.3 PASS-THROUGH OF PRICE SPIKES TO CONSUMERS ALSO INDICATES FUEL SUBSIDIES REMAIN IN MOST OF THE WORLD

The final metric to assess how much progress is being made to remove fossil-fuel subsidies is data on price “pass-through”. In a competitive market, changes in commodity prices are reflected quickly in new contracts or purchases. By contrast, markets with significant government interventions may demonstrate price shifts that are much smaller than the actual movement in price of the commodity. If global prices per gasoline rise US\$1, but prices to consumers within country “x” rise only by US\$0.50, the pass-through would be half.

Comprehensive data on fuel price pass-through has been assembled by staff at both the IMF and the World Bank (Kojima 2009), though at present the IMF data set is the most recent. The trends should be viewed as indicative rather than precise for two

reasons. First, the information is presented only for categories of countries rather than for each individual one. Second, although new work is currently underway, the most recent available data on pass-through covers up only through 2008.¹⁵ Both factors limit how precisely the results can be applied to G20 members, and to whether members have improved price pass-through or not since their 2009 commitment to phase out inefficient fossil-fuel subsidies.

As shown in Table 7, however, the majority of countries in the world do not pass through the full price increases to consumers. Median pass-through was significantly lower for countries with fuel subsidies to consumers, low fuel taxes, and for oil exporting countries. Also of note is that the pass-through levels varied tremendously by country (-81 to 331% for oil-importing countries), an indication that specific country data are more important than group medians in mapping out a reform strategy.

TABLE 7. MEDIAN PASS-THROUGH, END-2003 TO MID-2008

	<i>Gasoline</i>	<i>Diesel</i>	<i>Kerosene</i>
	<i>Passthrough in percent</i>		
All countries	85	95	53
Advanced	102	120	...
Emerging	57	70	19
Developing	77	78	59
By oil trade: Importer 1/	96	106	79
Exporter	35	46	11
By tax level (per liter), 2003: With tax greater than US\$ 0.30	99	119	111
With tax less than US\$ 0.30	65	90	64
With subsidy	42	58	48
	<i>Number of countries</i>		
Total	155	135	63
Passthrough less than 1.0	102	71	49
Passthrough less than 0.75	65	54	40
Passthrough less than 0.5	33	31	28
% of countries less than 1.0	66%	53%	78%
% of countries less than 0.5	21%	23%	44%
<small>Data Sources: OECD, IEA, U.S. EIA, and IMF staff estimates. Note: These products account for a combined 75 percent of total refined petroleum product consumption, and the country sample accounts for 98 percent of total petroleum product consumption. 1/ For oil importers, pass-through estimates vary between -81 and 331 percent for gasoline, between -15 and 292 percent for diesel, and between 2 and 130 percent for kerosene.</small>			

Source for Table: Coady et al. 2010

15. Updated assessments of price pass-through by both the World Bank and the IMF are expected later this year. The analyses will cover pass-through data in more recent years (Kojima 2012; Coady 2012).

4. CONCLUSIONS: G20 REFORM EFFORT WILL NOT WORK WITHOUT ADDITIONAL SUPPORT

Although the G20 commitment to phase out inefficient fossil-fuel subsidies was ambitious and potentially far reaching when first announced in 2009, additional action is needed to keep this initiative from foundering.

Self-reporting on subsidy data is failing. While self-reporting is an efficient mechanism for data aggregation, and can work in theory, it requires an established (and mutually-monitored) system of data expectations, as well as an ability to independently audit reported information and take action if submitted information is insufficient or inaccurate. All of these conditions exist with financial reporting in developed markets; they do not exist with respect to fossil-fuel subsidy reporting. Many G20 member countries continue to view subsidy-reporting as a net negative for them, most report as little information as possible, and all of them under-report their subsidies.

Non-reporting is growing. The number of countries providing no information at all on fossil-fuel subsidies tripled between the 2010 and 2011 progress reports, and now comprises nearly 1/3 of the countries in the G20. There are early indications that the number of countries not reporting will increase even further in the 2012 reporting cycle.

Personalizing subsidy definitions allows low impact “compliance.” Each country has interpreted the definition of “inefficient subsidies” in its own way. Regardless of whether one attributes a formal objective of evading reporting through definitional sleight-of-hand, it is clear that what is currently being reported is but a slice of total subsidies to fossil-fuels within member countries. This conclusion is supported by a variety of metrics, including subsidy data developed by third parties, comparative price data on gasoline and diesel, and the many countries that were not fully passing on fuel price increases to end consumers.

The G20 fossil-fuel phase out has not yet triggered visible increases in subsidy transparency or reform. There is little public evidence that the G20 commitment to phase out fossil-fuel subsidies has resulted in new initiatives to identify and remove these subsidies, or that it has accelerated previously existing reform efforts. There is anecdotal evidence of more active contacts among countries on the subsidy reform issue; it is impossible to gauge how likely or how quickly such activity is to be converted into actual changes.

Collection and assembly of fossil-fuel subsidy data needs to be formalized. A formal coordination body to review and expand on individual country reports is needed if the fossil-fuel subsidy reform process is to have any chance of success. Such a body would require a mandate to collect data on all government interventions into fossil-fuel markets whether or not they fit the country's own definition of a subsidy. With no group tasked to do this, nor the power to carry it out, member countries will continue to use differing definitions and minimize the subsidy policies on which they report.

Continued research on subsidies by NGOs should be strongly encouraged. Third-party work on subsidy identification, documentation, and valuation has been invaluable over the past two years, and formed the primary base for new information on fossil-fuel subsidies. This work should continue, particularly during the near- and mid-term while a formal review and enforcement mechanism is being constructed.

The lack of progress in reporting and reform since November 2010 mean that the detailed recommendations from our earlier report largely stand. These have been included as Appendix 1. Appendix 2 is a fossil fuel subsidy reform petition launched by non-governmental organizations in May of 2012.

APPENDIX 1: RECOMMENDATIONS FROM THE NOVEMBER 2010 EARTH TRACK/OIL CHANGE REVIEW OF G20 FOSSIL-FUEL SUBSIDY PHASE OUT

A number of important recommendations come out of this review. Implementing these changes can dramatically increase the likelihood of success in phasing out fossil-fuel subsidies.

The recommendations follow a logical sequence. First, given the political challenges of subsidy reform and the concurrent need for increased transparency, it makes sense to separate reporting from more contentious reform. Second, that reporting must be mandatory and enforceable if it is to have any impact on policy practice. Third, without establishing some standard rules for reporting subsidies, there is a great risk of reported information being of varying or suspect quality; and impossible to aggregate or compare. Fourth, disagreements over definitions and reporting are inevitable. A technically-skilled group operating independently of national governments is needed to address these disagreements in a systematic and transparent way. Finally, a set of rules and expectations on how reporting moves to actual reform and repeal is needed. These are addressed in turn.

A1.1 SEPARATE REPORTING FROM REFORM

The IGO-4 notes correctly (2010: paragraph 102) that “[i]ncreasing the availability and transparency of energy subsidies data is essential in overcoming some of the challenges related to reform.” However, there is an inherent conflict between extending broad discretion in how to interpret the G20 Communiqué in what a country submits and obtaining the increased transparency needed to make the intent of the Communiqué achievable.

One way to begin to get around this impasse is to separate subsidy reporting from subsidy reform. Reporting of subsidies should be mandatory; and should include all policies that fit under an existing, agreed subsidy definition¹⁶, regardless of whether a member country has a rationale for not including it among the subsidies slated for phase out. Broad discretion can be left on the reform side, reflective of real differences across countries in industrial structure and policy trade-offs.

A1.2 ESTABLISH AN OVERSIGHT AND REVIEW MECHANISM FOR REPORTING

It is useful to remember that reporting of a large subset of industrial subsidies is already mandatory under the World Trade Organization’s Agreement on Subsidies and Countervailing Measures (the “SCM Agreement”). The SCM Agreement does provide an oversight and review mechanism, under Article 25.8 of the Agreement, which states¹⁷:

Any Member may, at any time, make a written request for information on the nature and extent of any subsidy granted or maintained by another Member (including any subsidy referred to in Part IV), or for an explanation of the reasons for which a specific measure has been considered as not subject to the requirement of notification.

But this right is not exercised frequently (Collins-Williams and Wolfe, 2010). The IGO-4 itself concluded that:

The practical applicability of the WTO definition in generating data on energy subsidies has proven to be limited. Many factors contribute to this, including lack of commitment and transparency of countries in reporting energy subsidies. In addition, energy subsidies other than direct subsidies are difficult to estimate, hence to monitor on a cross-country, large-scale basis. (IGO-4 2010: paragraph 10).

For the G20 phase out to end differently, reporting needs to be a disciplined process, generating robust, verifiable, and timely information. We recommend these elements to effective reporting.

- **Phase-in reporting by subsidy categories.** The coverage of reports is tiered over a three-year period to expand requirements in steps from the status quo (no reporting) to comprehensive reporting of all subsidy types in a relatively short amount of time.
- **Supplement reporting phase-in with technical guidance.** Regardless of the initial staged requirements, as specific guidance and rules from the technical advisory board (see Section 5.4 below) are released, they are adopted into the standard reporting requirements.

16. Options for defining and measuring subsidies are well discussed in the Global Subsidies Initiative brief “*Defining Fossil-Fuel Subsidies for the G-20: Which Approach is Best?*,” March 2010, http://www.globalsubsidies.org/files/assets/pb5_defining.pdf

17. The agreement is accessible at http://www.wto.org/english/docs_e/legal_e/24-scm_03_e.htm#articleXXV

- **Require third-party certification of data.** Just as accounting firms certify compliance with financial reporting standards, such firms could certify compliance with subsidy standards as well. As with financial reporting, the accounting firm certification would be public. Firms would be open to suit if their certification were given inappropriately, and would suffer reputationally as well. Another option for oversight and review would be to include subsidy reform policies as part of National Communications Reporting already required of all members under the United Nations Framework Convention on Climate Change (UNFCCC).

An example of a potential enforcement mechanism could be that member states with no reporting, or reporting that has not been certified as comprehensive and accurate by the independent auditor, would not be eligible to participate in any financial incentive plans that might exist to help finance subsidy phase out.

A1.3 ESTABLISH STANDARDIZED SUBMITTAL PROCESS FOR SUBSIDY INFORMATION, INCLUDING A FORMAL JUSTIFICATION FOR POLICIES COUNTRIES WISH TO EXCLUDE FROM PHASE OUT REQUIREMENTS

The limited data that have been reported to the WTO on subsidies relies on non-standard formats across countries. Reporting formats have sometimes varied over time even within a single country. This makes aggregation and comparisons practically impossible.

Similar issues also affect G20 fossil-fuel phase out commitments. The voluntary nature of the initiative, protecting national sovereignty, and differing policy tradeoffs across countries all support giving member countries the right to exclude particular policies from removal. However, for a phase out to be credible, such claims must be supportable based on data and review rather than mere statements by government officials.

The G20 should therefore develop a number of standardized submittal formats. For all policies, a standard template covering the policy, policy history, stated intent, and valuation would be developed. Supporting numerical data would be submitted in such a form as to allow easy comparison across member countries and over time. For example, such a template has been proposed by the GSI for national reporting of subsidies

to the WTO under the SCM Agreement (Steenblik and Simón 2007).

A separate report, ideally less than five pages long for each policy, would detail member-country rationale and data to support *excluding* any particular subsidy policy from the phase out. The World Bank approach for screening policies within the IGO-4 report may be a good starting point for how this submittal would be structured. This document would adopt a cost-benefit approach; evaluate alternative means to achieve the same or similar policy end-points; evaluate whether the current policy is actually meeting its stated social policy objectives; and be publicly available for others to assess. Because options change over time, exclusions would need to be renewed at least every three years.

A1.4 ESTABLISH EXTERNAL COMMITTEE TO ADDRESS RECURRING SUBSIDY DEFINITION, VALUATION, OR IMPACT ISSUES

Conflicts between member states over subsidy definitions, valuation, and efficacy; as well as regarding the impacts of reform and alternatives are inevitable. There needs to be some processes for promulgating accounting standards and resolve disputes. Ideally, the world would benefit from the creation of an independent International Subsidy Accounting Standards Board, modeled along the lines of the International Accounting Standards Board, which sets standards for corporate financial accounting (Halle 2010; Koplow 2010). Until such a body is created, however, the G20 will need to provide guidance to its members (and other countries, such as those who have associated themselves with “Friends of Fossil-Fuel Subsidy Reform¹⁸”) on fossil-fuel subsidy identification, estimation, and reporting. Such a process would need to be informed by a Committee of Technical Experts (CTE) who could supply opinions on questions of both reporting and implementation of reforms.

Such a committee would need to be:

- Technical in nature.
- External to the G20 process such that it can achieve an independence from the interests of specific countries;
- Composed of a workable number of members, each of whom has have a proven track record in the issues under consideration and independent of any personal financial linkage to the fossil-fuel industry;

18. Friends of Fossil Fuel Subsidy Reform was launched by New Zealand in June 2010. <http://www.globalsubsidies.org/research/event-gsi-presents-latest-fossil-fuel-subsidy-research-nz-launches-friends-reform-group>

- Appointed by an independent body agreed to by a majority of members;
- Empowered to issue opinions, which would be summarized in a majority report. Dissenters would have an option to write a minority viewpoint as well, thereby conveying valuable information on the scope and severity of disagreement.
- Funded by member governments, through global climate finance, or some other mechanism in order to adequately staff and support the CTE, though in such a manner as to retain the CTE's independence.
- Transparent. Both majority and minority reports and all supporting documents would be publicly available.

The specific governance structure would require detailed analysis to set up. However, Table 3 provides an overview of existing institutions that may have characteristics adaptable to fossil-fuel subsidy reporting. Institutions listed with an asterisk may also have an important role to play in subsidy reform. Laan (2010: 31) highlights a number of additional criteria for consideration. These include the organizational competence in fossil-fuel subsidy transparency, comprehensive membership or international reach, option for a strong research role for the secretariat, likely country buy-in, access to necessary financial resources, and speed of data collection.

A1.5 ENSURING SUBSIDY REFORM ACTUALLY HAPPENS

Just as subsidy reporting is already required under the WTO, reducing fossil-fuel subsidies is already a goal of an international treaty. Specifically, Article 2.1 of the *Kyoto Protocol* requires Annex I countries¹⁹ to implement “policies and measures” to achieve their emission limitation and reduction commitments. While Article 2.1 does not *require* these countries to undertake any specific policy or measure, it lists a range of potential actions that they *could* decide to implement, including:

- (v) Progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors that run counter to the objective of the Convention and application of market instruments;

At the 11th Conference of the Parties (COP 11) to the United Nations Framework Convention on Climate Change (UNFCCC) in Montreal, in 2005, the Parties to the Protocol strengthened

and prioritized this provision. They agreed that Annex II countries, and Annex I countries “in a position to do so”, should *give priority* to reducing these market distortions, and to “[r]emoving subsidies associated with the use of environmentally unsound and unsafe technologies.”

As with the WTO requirements, the lack of either an incentive to report (in fact a perception of a first-mover *disadvantage* for disclosing subsidy policies) or a mechanism to enforce it, have resulted in little if any action. The institutional challenges for subsidy reform are likely even more significant than those for subsidy reporting, and the discussion in Table 3 and below represents merely a starting point for further debate rather.

Because subsidy reform provides both financial flows and emission reductions —two key issues at the UNFCCC — the UNFCCC is a potential institutional fit for any energy-subsidy reform effort. UNFCCC has many years of experience in collecting and monitoring multi-country greenhouse gas inventories, skills that could be effectively expanded to handle fossil-fuel subsidy data as well. In addition, no matter what institutional arrangement is settled on by the UNFCCC for the provision of climate finance, it is clear that redirecting fossil-fuel subsidies is already being considered as one of the “innovative sources” that Parties will look towards to provide needed funding

The WTO has not been successful to-date ensuring countries properly report subsidies or enforcing against them. However, its existing rules and agreements, binding to more than 150 countries comprising in excess of 95% of world trade, are a potentially solid foundation on which to build any subsidy reduction strategy. It may be possible to address the problems within the WTO structure to enable its existing enforcement mechanisms to function more effectively.

Alternatively, structural or political limitations in the existing institutions may suggest a new organization with a clearer and stronger mandate to organize and enforce subsidy reform holds the greatest chance of success. The institutional options, requirements, and impediments should become clearer as more effective reporting better delineates the terrain of subsidy policy and impacts.

19. Annex I countries are developed and transition countries that have taken on emission limitation or reduction commitments under the Protocol.

POSSIBLE INSTITUTIONAL MODELS FOR FOSSIL-FUEL SUBSIDY TRANSPARENCY AND REFORM

Institution and Function	Useful Attributes	Limitations
<p>International Accounting Standards Board</p> <p><i>Sets standards for international corporate financial reporting. Independent, funded largely by a levy on corporations.</i></p>	<ul style="list-style-type: none"> -Focus on establishing technical rules of corporate data transparency and consistency, similar in nature to the technical issues associated with standardized subsidy reporting. -Demonstrated success in maintaining technical and institutional independence from the affected parties to reach unbiased technical requirements. 	<ul style="list-style-type: none"> -Binding nature of IASB decisions can be reinforced by government support and adoption of the recommendations. For subsidy reform, states are more likely to undermine rulings deemed adverse than to support the authority and logic of the decisions themselves.
<p>International Organisation for Standardization</p> <p><i>Sets technical standards for a variety of processes that are often adopted at the firm level.</i></p>	<ul style="list-style-type: none"> -Highly successful voluntary opt-in model to implement complicated institution-wide changes in participating entities. -Strong focus on measurement and reporting. 	<ul style="list-style-type: none"> ISO participation has a market advantage for supply chain relationships that supports the opt-in approach. Similar benefits may not exist for subsidy reporting.
<p>UN Framework Convention on Climate Change*</p> <p><i>Umbrella organization to manage and oversee implementation of global agreements on climate change</i></p>	<ul style="list-style-type: none"> -Comprehensive membership and a well-established secretariat and schedule of meetings; climate change is one of the key rationales for fossil-fuel subsidy reform. -Robust mechanism for national reporting and technical review of reporting, with separate requirements and procedures differ for developed and developing countries. -Inclusion in UNFCCC could offer incentives for reporting and reform. 	<ul style="list-style-type: none"> -Post 2012 architecture is unclear. Historically poor compliance and enforcement of reform measures. -Limited success to date with effective financing of climate change reduction initiatives.
<p>World Trade Organization*</p> <p><i>Implementing body for multilateral global trading system</i></p>	<ul style="list-style-type: none"> -Internationally-focused entity already heavily involved with issues of government subsidies. 	<ul style="list-style-type: none"> Historically has lacked enforcement mechanism on reporting, resulting in very limited data in critical areas. Power to enforce trade rules rests with member countries; the institution itself can't act unilaterally.
<p>World Bank, Organisation for Economic Cooperation and Development, International Energy Agency, or United Nations Environment Programme</p> <p><i>While objectives vary across institutions, all provide international policy evaluations in areas of concern, including evaluation, reform, and implementation aspects.</i></p>	<ul style="list-style-type: none"> -Strong technical capabilities, including expertise in trade, development and energy. -Demonstrated skills in discerning similarities or differences across diverse countries for a specific topic area. 	<ul style="list-style-type: none"> Member countries exert substantial power over research agenda and policy trajectory. Political nature of subsidy phase outs suggests the current institutional structures would be unable to move the process along.

*Institutional structure has potential role in both subsidy measurement and subsidy reform.

APPENDIX 2: IMPLEMENTING LETTER FROM NON-GOVERNMENTAL ORGANIZATIONS ON PHASING OUT FOSSIL-FUEL SUBSIDIES

May 2012

NO TIME TO WASTE: IMPLEMENTING LEADER PLEDGES TO PHASE OUT FOSSIL FUEL SUBSIDIES

Recent estimates of global fossil fuel subsidies for production and consumption are staggering, putting the total at US\$730 billion annually²⁰ or higher. In a time of economic hardship, dangerous climate change, and growing demand for reliable and cleaner sources of energy²¹, these fossil fuel subsidies represent a reckless and irrational use of taxpayer money and government investments.

Indeed, in 2009, G20 leaders recognized this recklessness, and committed to “phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest.” A similar commitment was agreed at a subsequent APEC Leaders meeting, which brings the total number of countries with such a commitment to more than fifty. Our organizations applauded the G20 commitment by leaders at the time, although we have been concerned that progress in meeting this commitment has been slow.

More recently, the UN Secretary General’s High Level Panel on Global Sustainability (GSP) unequivocally called for the removal of these subsidies in their consensus report, “Resilient People Resilient Planet: A Future Worth Choosing.” Co-chaired by the presidents of Finland and South Africa, the panel was comprised of major policy makers from 20 nations, including the European Union, United States, Brazil, India and China, the Russian Federation and others. The report recommends to “*phase out fossil fuel subsidies and reduce other perverse or trade distorting subsidies by 2020.*”²²

It is time for governments to turn their talk into action. The

upcoming G20 Summit and Rio+20 Conference on Sustainable Development in June present key opportunities for world leaders to build on political commitments by taking concrete action on this important issue. *As environmental, faith, development, trade, indigenous peoples, youth, and health organizations representing millions of citizens worldwide, we call on world leaders to seize these opportunities and fulfill their promises to eliminate these wasteful and dangerous subsidies as soon as possible, and instead put that money to work in creating a more sustainable future.*

There are four key steps that governments should take at the G20 and Rio+20 Summits to translate these commitments into concrete action to eliminate fossil fuel subsidies:

1) Define Plans to Phase out Fossil Fuel Subsidies by 2015

In Pittsburgh in September 2009, G20 leaders pledged to “phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest.” Progress however has been slow. In order to fulfill this historic commitment, leaders should immediately establish a timeline for this process. Countries should agree to eliminate fossil fuel subsidies by 2015.

2) Increase Transparency and Consistency in Reporting of Subsidies

An obvious first step to removing subsidies is to catalog *all* existing fossil fuel subsidies. Reporting and reform should be separate processes. Up to now, the disclosure of producer subsidies in particular has been lacking in many countries. It is imperative that governments commit to fully and fairly disclosing the existence and value of all fossil fuel subsidies in order to allow for informed, robust plans for reform.

3) Incorporate assistance and safeguards to developing countries, as well as poor and vulnerable groups:

Fossil fuel subsidy removal, particularly consumption subsidies, will only be successful by incorporating safeguards for poor and vulnerable groups, and by assisting with financial, technical and capacity building in developing countries, where needed.

20. Fatih Birol, chief economist at the IEA, estimated that consumption subsidies in 2012 would be \$630 billion, <http://www.iea.org/weo/quotes.asp>. An additional estimate of \$100 billion in annual production subsidies is cited in the report commissioned by the G20 and prepared by OECD, OPEC, World Bank and IEA Study November 2010. Report available at: <http://www.oecd.org/dataoecd/8/43/46575783.pdf>

21. Although renewable energy can greatly reduce the environment impacts of power production, subsidies to these technologies are but a fraction of global subsidization of conventional fossil fuels; IEA, World Energy Outlook 2011, p. 530

22. Resilient People Resilient Planet: A Future Worth Choosing, Recommendation 27f., page 18, available at <http://www.un.org/gsp/The GSP>.

4) **Establish or identify an international body to facilitate and support Fossil Fuel Subsidy Reform**

An international body should be created or identified to support the global effort to phase-out fossil fuel subsidies. This body, wherever it is housed, should be transparent, inclusive of civil society, balanced to include representation from developed and developing countries, and sufficiently empowered to assess commitments by countries.

The body would be tasked to define and review proper and regular reporting by all countries. This reporting should include all fossil fuel subsidy types as well as the actions and expenditures taken by countries to reduce subsidies, and be subject to independent measurement and verification.

When you're in a hole, stop digging! The time is now to strengthen political commitments with action to begin the transition from dirty fossil fuels to a cleaner energy economy. Continuing to subsidize fossil fuels makes no sense given the need to greatly reduce our collective reliance on fossil fuels that are contributing to global warming. The steps above represent critical initial, overdue elements of that transition, and we stand at the ready to support government efforts to implement deadlines for phase out, reporting and international support for effective fossil fuel subsidy removal.

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REFERENCES

- APEC, 2011a. "Phasing Out Fossil Fuel Subsidies in the Asia Pacific," 9th Senior Finance Officials' Meeting Washington, D.C., 21 June 2011 SFOM9/023, Session 4. Accessed 22 May 2012. aimp.apec.org/Documents/2011/FMP/SFOM9/11_sfom9_023.pdf
- APEC, 2011b. "2011 Leaders' Declaration: The Honolulu Declaration - *Toward a Seamless Regional Economy*," The 19th APEC Economic Leaders' Meeting, Honolulu, Hawaii, 12-13 November 2011. Accessed 30 May 2012 at http://www.apec.org/Meeting-Papers/Leaders-Declarations/2011/2011_aelm.aspx
- Australian Conservation Foundation, 2011. "Climate Expenditures and Subsidies," March. Accessed at http://www.acfonline.org.au/sites/default/files/resources/climate_expenditure_and_subsidies.pdf
- Braithwaite, David, et al. 2010. *Fossil Fuels – At What Cost? Government support for upstream oil and gas activities in Indonesia*. (Geneva: Global Subsidies Initiative of the International Institute for Sustainable Development).
- Coady et al. 2010. *Petroleum Product Subsidies: Costly, Inequitable, and Rising*. (Washington, DC: International Monetary Fund).
- Coady, David. 2012. International Monetary Fund. E-mail communication with Doug Koplow, Earth Track, Inc., 21 May.
- Collins-Williams, Terry and Robert Wolfe. 2010. "Transparency as a Trade Policy Tool: The WTO's Cloudy Windows," *World Trade Review* 9:4. http://journals.cambridge.org/repo_A793e218
- Economist, 21 April 2012. "Argentina's energy industry: Fill 'er up," pp. 49-50.
- G20. 2010. *Progress Report to G20 Leaders on the Commitment to Rationalize and Phase Out Inefficient Fossil Fuel Subsidies*, Annexes, June 2010.
- G20. 2011. *Progress Report to G20 Leaders on the Commitment to Rationalize and Phase Out Inefficient Fossil Fuel Subsidies*, Annexes, October 2011.
- Gerasimchuk, Ivetta. 2012. *Fossil Fuels – At What Cost? Government support for upstream oil and gas activities in Russia*, Global Subsidies Initiative and WWF-Russia, February.
- GIZ. 2012. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. "Flash Survey - Gasoline Prices," January.
- GSI. 2012. Global Subsidies Initiative. "Argentina Cuts Energy and Water Subsidies to Businesses and High-Income Neighborhoods," 12 January. Accessed at <http://www.iisd.org/gsi/news/argentina-cuts-energy-and-water-subsidies-businesses-and-high-income-neighborhoods>
- GTZ. 2007. Deutsche Gesellschaft für Technische Zusammenarbeit, *International Fuel Prices 2007*, summary flyer. Accessed at <http://www.gtz.de/de/dokumente/en-flyer-international-fuelprices-2007.pdf> on September 20
- GTZ. 2009. Deutsche Gesellschaft für Technische Zusammenarbeit, *International Fuel Prices 2009*, December. Accessed at <http://www.giz.de/Themen/en/dokumente/gtz2009-en-ifp-full-version.pdf>
- Halle, Mark. 2010. "Towards creating international standards for subsidy accounting," *Subsidy Watch*, Issue 40. Available at <http://www.globalsubsidies.org/subsidy-watch/commentary/towards-creating-international-standards-subsidy-accounting>
- Horgan, Michael. "G20 Commitment – Fossil-Fuel Subsidies," secret memorandum to Canada's Minister of Finance, March 18, 2010.
- IEA, OPEC, OECD, World Bank. 2011. "Joint Report by IEA, OPEC, OECD and World Bank on fossil-fuel and other energy subsidies: An update of the G20 Pittsburgh and Toronto Commitments," prepared for the G20 Meeting of Finance Ministers and Central Bank Governors (Paris, 14-15 October 2011) and the G20 Summit (Cannes, 3-4 November 2011).
- IEA. 2008. International Energy Agency, *World Energy Outlook 2008* (Paris, France: IEA).
- IEA. 2009. *Energy Policies of IEA Countries - Turkey- 2009 Review*, OECD Publications, Paris.
- IEA. 2011. *World Energy Outlook 2011*, OECD Publications, Paris.
- IGO-4. 2010. *Analysis of the Scope of Energy Subsidies and Suggestions for the G-20 Initiative*, (Paris, Vienna and Washington, D.C.: IEA, OPEC, OECD, and World Bank) 16 June.
- International Institute for Sustainable Development. 2012. *A Citizens Guide to Fossil Fuel Subsidies In Indonesia*.
- Kojima, Masami. 2009. *Changes in End-User Petroleum Product Prices: A Comparison of 48 Countries*. (Washington DC: World Bank).
- Kojima, Masami. 2012. World Bank. E-mail communication with Doug Koplow, Earth Track, Inc., 24 May.
- Koplow, Doug and Kretzmann, Steve. 2010. *G20 Fossil-Fuel Subsidy Phase Out: A Review of Current Gaps and Needed Changes to Achieve Success*, Earth Track Inc. and Oil Change International, November.

- Koplow, Doug and Lin, Cynthia. Forthcoming. *A Review of Fossil Fuel Subsidies in Colorado, Kentucky, Louisiana, Oklahoma, and Wyoming*. (Cambridge, MA: Earth Track, Inc.).
- Koplow, Doug, Cynthia Lin, Anna Jung, Michael Thone, Lucky Lontoh and Chris Charles. 2010. *Mapping the Characteristics of Producer Subsidies: A review of pilot country studies*. (Geneva: Global Subsidies Initiative), August.
- Koplow, Doug. 2009. *Measuring Energy Subsidies Using the Price-Gap Approach: What does it leave out?* (Geneva: Global Subsidies Initiative of the International Institute for Sustainable Development), August.
- Koplow, Doug. 2010. "How accurate are EIA subsidy numbers, and what should global subsidy reform look like?" Earth Track Blog, March 17. Accessed at <http://earthtrack.net/blog/how-good-are-eia-subsidy-numbers-and-what-should-global-subsidy-reform-look>.
- Koplow, Doug. 2007. "Subsidies in the US Energy Sector: Magnitude, Causes, and Options for Reform," in *Subsidy Reform and Sustainable Development: Political Economy Aspects*, (OECD: Paris).
- Laan, Tara. 2010. *Gaining Traction: The importance of transparency in accelerating the reform of fossil-fuel subsidies* (Geneva: Global Subsidies Initiative), April.
- Lahn, Gloria and Stevens, Paul. *Burning Oil to Keep Cool: The Hidden Energy Crisis in Saudi Arabia*, Chatham House, December 2011.
- Lang, Kerry. 2012. IISD-Global Subsidy Initiative, e-mail communication with Doug Koplow, Earth Track, 9 June 2012.
- Lang, Kerry. 2011. The First Year of the G20 Commitment on Fossil-Fuel Subsidies: A commentary on lessons learned and the path forward. (Geneva: Global Subsidies Initiative).
- Narwani, Shirin. "Iran's Energy Subsidy Reform: lessons – and a predicament," *Oxford Energy Forum*, May 2012.
- Organisation for Economic Co-operation and Development. 2011. *Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil Fuels in OECD Countries*, OECD Publications, Paris.
- Pew Subsidyscope. 2009. "Analysis Finds Shifting Trends in Highway Funding: User Fees Make Up Decreasing Share," updated 29 November. Accessed at <http://subsidyscope.com/transportation/highways/funding/> on 11 June 2012.
- PWC. 2008. Price Waterhouse Coopers Canada, *Conventional and Beyond: Oil and Gas Taxation in Canada*, accessed at <http://www.pwc.com/ca/en/energy.../oil-gas-taxation-2008-06-en.pdf> on 11 June 2012.
- Randall, Tom. 2012. "Highest & Cheapest Gas Prices by Country," *Bloomberg*, 12 May. Accessed at <http://www.bloomberg.com/slideshow/2012-05-12/highest-cheapest-gas-prices-by-country.html#slide56> on 17 May 2012.
- Sawyer, David and Steibert, Seton. 2010. *Fossil Fuels - At What Cost? Government support for upstream oil activities in three Canadian Provinces: Alberta Saskatchewan, and Newfoundland and Labrador*, Global Subsidies Initiative of the International Institute for Sustainable Development. Accessed 22 May at http://www.globalsubsidies.org/files/assets/ffs_aws_3canprovinces.pdf
- Segal, Paul. 2012. "Oil Subsidies in Mexico," Oxford Energy Forum, May.
- Steenblik, Ronald and Juan Simón. 2007. *A new template for notifying subsidies to the WTO* (Geneva: Global Subsidies Initiative).
- Tager, Jeremy. 2012. E-mail communication with Doug Koplow, Earth Track, 2 May.
- TERI and IISD, 2012. The Energy Resources Institute and the International Institute for Sustainable Development, *A Citizens' Guide to Energy Subsidies in India*. March. Accessed at http://www.iisd.org/gsi/sites/default/files/ffs_india_czguide.pdf.
- Turnbull, David. Oil Change International. E-mail communications with Doug Koplow, Earth Track, 24 May 2012.
- Wagner, Armin. 2011. "International Fuel Prices 2010/2011: Data Preview," January. Accessed at <http://www.gtz.de/fuelprices>.
- Wooders, Peter, Kerry Lang, and Chris Charles. Global Subsidies Initiative. *Tax and royalty-related subsidies to oil extraction: A study of Brazil, Canada, Mexico, United Kingdom and the United States*. November 2010.
- WTO. 2011a. World Trade Organization, Committee on Subsidies and Countervailing Measures, "Request from the United States to China Pursuant to Article 25.10 of the Agreement," 11 October. G/SCM/Q2/CNH/42.
- WTO. 2011b. World Trade Organization, Committee on Subsidies and Countervailing Measures, "Request from the United States to India Pursuant to Article 25.10 of the Agreement," 10 October. G/SCM/Q2/IND/20.
- WTO. 2012. World Trade Organization, Committee on Subsidies and Countervailing Measures. *Notification Requirements Under the Agreement on Subsidies and Countervailing Measures*, Background Note by the Secretariat, 12 April. G/SCM/W/546/Rev.3.

