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G20 FOSSIL-FUEL SUBSIDY PHASE OUT

**A REVIEW OF CURRENT GAPS AND
NEEDED CHANGES TO ACHIEVE SUCCESS**

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1. EXECUTIVE SUMMARY

In its September 2009 Communiqué from Pittsburgh, the G20 nations (“Group of Twenty” nations that include 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 G20 commitment was a positive step in reforming policies that subsidize the oil, gas and coal industries at a time when the world is concurrently trying to scale back emissions that contribute to climate change. The benefits could be substantial: International Energy Agency (IEA) and Organisation for Economic Cooperation and Development (OECD) modeling, even using incomplete data, estimated that phasing out fossil-fuel consumption subsidies would reduce greenhouse-gas (GHG) emissions 10 percent globally by 2050 relative to a business-as-usual scenario (IGO-4 2010; 5). Additional benefits from phasing out production subsidies in the United States and elsewhere were not modeled, but could also be substantial.

This brief highlights a variety of issues that illustrate immediate and future challenges with making the phase out work. The authors evaluated the reporting and reform efforts of the G20, using official documents that were submitted by the members. The purpose of this evaluation was to assess the coverage of existing reporting, identify patterns in arguments countries put forth to exclude policies from reform, and discuss options to increase the chance of the reform effort being successful. The brief’s key findings include:

No country has initiated a subsidy reform specifically in response to the G20. Although half of the member countries reported at least one policy supporting fossil fuels that they have targeted for reduction or elimination, all actions appear to be programs or changes that were already in-process prior to the G20 Communiqué, and rely on previously established timelines as well. Further, some of the reported (pre-existing) reforms involve initiatives still in the proposal stage rather than existing statute or regulation, making their ultimate implementation uncertain.

G20 reporting of fossil fuel subsidies remains spotty. Of the 20 member countries, eight stated that they have no fossil-fuel subsidies at all subject to phase out, of which two (United Kingdom and Japan) provided no information at all. Only one of the twelve countries (the United States) reported more than ten subsidies subject to reform. Three countries discussed energy subsidies in a general sense without listing any specific subsidy policies (Indonesia, Russia, and Mexico).

Comparing G20 reports with other information on fossil fuel subsidies highlights the reporting deficits. Comparisons with third party studies of consumer and producer subsidies found that some of the countries reporting very little in the way of subsidies to the G20 had tens of billions in subsidies in the other assessments.

Common reasons members give for excluding subsidies from reform efforts often break down under scrutiny. These include subsidizing fuels with a lower carbon content than what is being replaced; assuming specific programs are part of the tax “baseline” rather than targeted subsidies; supporting objectives such as job creation or rural development that are deemed more important than subsidy reform; arguing that even with the subsidies, the prices are still higher than the reference price and therefore don’t distort behavior; and asserting that so long as the domestic price is higher than production costs, no subsidy exists. Country arguments require careful evaluation to ensure alternatives with lower environmental and fiscal costs are properly compared, and that similar issues are dealt with in similar ways across the G20.

A number of structural reforms would increase the likelihood of the phase out being successful. These include:

- Separating reporting from reform.
- Establishing an oversight and review board for reporting to review submittals for accuracy and coverage, with the ability to go back to member to fill in gaps.
- Standardizing the submittal process for subsidy information as well as requiring standardized reporting of 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 independent reporting issues.
- Initiating discussion and research on an appropriate secretariat to oversee reform efforts.

Fossil fuel subsidy reform makes sense from the standpoints of both fiscal management and environmental protection. In this brief, we have evaluated the specific progress and technical issues surrounding the G20 effort. Ultimately though, the barriers to successfully reforming and eliminating fossil fuel subsidies are not just technical, but are political as well. Overcoming these political challenges will require dedication by G20 leaders, if they are to fulfill their pledge and successfully reform and eliminate fossil fuel subsidies.

2. REVIEW OF REPORTING AND REFORM COMMITMENTS BY G20 MEMBER COUNTRIES

In its September 2009 Communiqué from Pittsburgh, the G20 (“Group of Twenty” nations that include the largest economies in the world) committed to “*rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption.*”

Despite enjoying support from a diverse set of actors across the political spectrum, success of the initiative is by no means assured. The pledge contains a number of vague elements:

- How long is the “medium term”?
- How does a country define an energy “subsidy” in general, and an “inefficient subsidy” in particular?
- What is considered “wasteful consumption” and how is it measured?
- Is there any recourse if a G20 member country does not address its fossil-fuel subsidies, or views its participation as entirely voluntary?

The first detailed information on how the G20 countries themselves viewed their commitments to fossil fuel subsidy reform was publicly released in August 2010.¹ Two separate documents are examined here. The first is a summary report prepared by four international governmental agencies (referred to as “IGO-4”) – the International Energy Agency (IEA), the Organisation of Oil Exporting Countries (OPEC), the Organisation for Economic Co-operation and Development (OECD), and the World Bank. This report addressed key policy issues regarding subsidy definitions, levels, benefits of reform, and reform implementation. The second is a related Annex (referred to here as the “Annex Report”) summarizing the action plans of each G20 member country with regard to fossil-fuel subsidy reform. The Annex Report also included brief descriptions of country-selected policies believed relevant to fossil-fuel markets.

Table 1 provides a summary of G20 member-country action plans for subsidy reform. The first column includes verbatim

information from the Annex Report on planned country actions. The subsequent columns assess whether the member country:

- acknowledges that it has subsidies to fossil fuels covered under its interpretation of the G20 commitment;
- provides at least some information on policies supporting fossil-fuel use or production, even if members determine such policies would not need to be reformed under their commitment to the G20;
- has proposed any policies to reduce subsidies to fossil fuels;
- has proposed *new* policies due to the G20 commitment (e.g., a faster phase out or targeting of subsidies not previously targeted) rather than merely reporting on initiatives that were ongoing anyway.

This summary information is a striking indicator of how challenging engagement in reform will be. Of the 20 member countries, eight state that they have no fossil-fuel subsidies at all subject to phase out under the September 2009 Communiqué. The other twelve countries did supply at least some information on policies in place supportive of fossil-fuel production or consumption, even if they determined such policies were not subject to any phase out (see Table 1, column 1). As shown in column 2, roughly one quarter of the member countries either provided no information at all (the United Kingdom and Japan); or merely discussed energy subsidies in a general sense without listing any specific subsidy policies (Indonesia, Russia, and Mexico).

The remaining countries generally provided quite limited policy information. Based on the authors’ experience working on detailed subsidy reviews for a number of these countries, it is clear that the vast majority of policies supporting fossil fuels were not mentioned in any form within the Annex Report. For example, Turkey was the only reporting country to note subsidies to government-owned energy assets – though public ownership of energy assets and service organizations remains common across the G20, including even within market economies such as the United States.

Some of the stated reasons for reporting gaps are discussed in Section 4. However, the participants appear also to be engaging in a general cost/benefit assessment on reporting.

1. This information was originally intended for release in Toronto at the G20 Summit in June 2010. A draft obtained by the media noted that the paper was “Not for distribution until the Toronto Summit”, yet nothing was presented at the Summit. The documents were officially posted online on or about August 2nd, with no accompanying press release.

It is clear from discussions with participants in the process that there is a strongly perceived first-mover *disadvantage* to subsidy transparency and reporting: early disclosure can create adverse attention and political pressure both on the individual and the country reporting, while there is no penalty at all for not going beyond mere symbolic compliance with the Communiqué at this point in time.

Mexico's submittal to the Annex Report made this issue explicit, noting that the country would not make a stronger commitment to phase out until all countries "agree on a uniform methodology for calculating subsidies" (Annex Report 2010: 28). A review of a number of efforts to facilitate international reporting of country-specific data by the Global Subsidies Initiative (GSI) noted that "the suppliers of information (national governments) must feel they can benefit from the improved information, thus 'buy in' to the process" (Laan, 2010: 25). GSI further notes that countries have widely adopted International Monetary Fund standards for macro-economic statistics because it helps to improve their financial rating and attract more foreign investment (Laan, 2010: 25).

Note that while the Annex Report clearly illustrates a bias towards underreporting, our discussions with individuals

involved with the process indicated that even within countries there is not always agreement on which policies to classify as subsidies and how many to report to the G20.² A common conflict seemed to be between representatives focused on an economic development or energy-security agenda (favoring less disclosure and fewer policies characterized as inefficient or wasteful) and those focused on fiscal savings or environmental concerns (supporting a more inclusive approach).

Nonetheless, the problem of under-reporting will need to be addressed in order for the G20 process to be successful. As noted in Table 1, half of the member countries reported at least one policy supporting fossil fuels that they have targeted for reduction or elimination (column 3). Yet, no country had initiated a subsidy reform specifically in response to the Communiqué (column 4). In all cases, subsidy reforms mentioned in the Annex Report are programs or changes that were already in-process prior to the G20 process, and rely on previously established timelines as well. Furthermore, some of the reported (pre-existing) reforms involve initiatives still in the proposal stage (budget proposals by the executive branch, for example) rather than existing statute or regulation. The risk of these proposals failing prior to enactment is high.

2. A leaked memo from Canada earlier this year, outlining a range of possible levels of engagement with the subsidy reform process, is a good illustration of this tension. See Horgan (2010).

TABLE 1: NO G20 COUNTRIES MODIFYING STATUS QUO IN FACE OF G20 PHASE-OUT COMMITMENTS

Implementation Strategy Included in G20 Annex Report (Text shown is verbatim from country submittals)	1. Reported Actionable Subsidies Under G20 Phase-Out?	2. Reported Subsidy Items Even if Deemed “Efficient”?	3. Reported Reforms Already in Process?	4. Accelerated or New Reform Plans?
Argentina - Proposes to reduce household subsidy for propane gas consumption as natural gas access is expanded.	Yes	Yes (3 items)*	No	No
Australia - No inefficient fossil fuel subsidies.	No	Yes (5 items)	Yes (1 item)	No
Brazil - No inefficient fossil fuel subsidies. Lists several government measures in the energy sector related to the production or consumption of fossil fuels	No	Yes (3 items)	No	No
Canada - Proposes to implement recently released draft legislation to phase out the accelerated capital cost allowance for oil sands assets over the 2011-15 period. Previously phased out other tax preferences applying to fossil fuel producers.	Yes	Yes (1 item)	Yes (1 item)	No
China - Proposes to gradually reduce the urban land use tax relief for fossil fuel producers.	No	Yes (1 item)	Yes (1 item)	No
France - No inefficient fossil fuel subsidies. Previously reformed subsidies for hard coal mining.	Yes	Yes (1 item)	No	No
Germany - Proposes to discontinue subsidized coal mining in a socially acceptable manner by the end of 2018.	Yes	Yes (2 items)	Yes (2 items)	No
India - Proposes to work out implementation strategies and timetables for rationalizing and phasing out inefficient fossil fuel subsidies based on the recommendation of the Empowered Group of Ministers that has been constituted.	Yes	Yes (4 items)	No	No
Indonesia - Proposes to phase out inefficient fossil fuel subsidies in a gradual manner in parallel through managing the demand side by adopting measures that will reduce fossil fuel energy consumption and by gradually narrowing the gap between domestic and international prices.	Yes	Mentioned, but no detail	Yes (~4 items)	No
Italy - Proposes to continue with planned expiration of subsidy for certain cogeneration plants, and negotiate on a voluntary basis with private operators of these plants on the timing of their recess from the subsidy scheme.	Yes	Yes (7 items)	No	No
Japan - No inefficient fossil fuel subsidies.	No	No Submittal at all	No	N/A
Korea - Proposes to phase out subsidies to anthracite coal and briquette producers.	Yes	Yes (2 items)	Yes (2 items)	No
Mexico - By continuing current policies and based on current market conditions, subsidies to gasoline, diesel and LP gas are expected to disappear in the medium term.	Yes	Acknowledged, but no detail	Yes (2 items)	No
Russia - Proposes to implement the commitment to rationalize and phase out inefficient fossil fuel subsidies through national economic and energy policy, within the framework of its Energy Strategy 2030 and the Concept of Long-Term Social and Economic Development, as well as in the context of its joining the WTO.	Yes	Acknowledged, but no detail	No	No
Saudi Arabia - No inefficient fossil fuel subsidies. Saudi Arabia has a long-standing energy policy to improve the utilization of economic resources with emphasis on rationalization.	No	Noted below-world price fossil fuels; did not characterize as a subsidy.	No	No
South Africa - No inefficient fossil fuel subsidies. Noting recently introduced electricity tax that applies to electricity generated from non-renewables as well as other relevant tax measures and incentives to reduce wasteful consumption and encourage clean energy development.	No	No	No	No
Spain - Proposes to implement current coal industry restructuring plan until 2012 when further restructuring will be considered.	No	Yes (5 items)	Yes (~1 item)	No
Turkey - Proposes to work on a restructuring plan to rationalize the inefficient producer subsidies transferred to a stated-owned hard coal producing enterprise.	Yes	Yes (1 item)	Proposed (1 item)	No
United Kingdom - No inefficient fossil fuel subsidies. Previously reformed subsidies for hard coal mining.	No	No submittal at all	No	No
United States - Proposes to pass legislation to eliminate twelve preferential tax provisions related to the production of coal, oil, and natural gas.	Yes	Yes (13 items)	Proposed (2 items)	No

Source: Annex Report (2010)

*Includes increased subsidies to natural gas as part of its subsidy reform strategy.

3. FOSSIL-FUEL SUBSIDY DATA FROM OTHER SOURCES OFTEN CONFLICTS WITH POSITIONS TAKEN IN THE G20 ANNEX REPORT

Member countries had wide discretion in how much information they reported on domestic fossil-fuel subsidies within the Annex Report. The IGO-4 walked gingerly around this issue, likely reflecting the tensions amongst G20 members:

Identifying which specific fossil-fuel subsidies are 'inefficient' and 'encourage wasteful consumption' requires understanding the circumstances of each country, and the impact of the different subsidies in use. As such it remains in the remit of sovereign decision making. Acknowledging that a particular energy subsidy affects the production or consumption of a fossil fuel does not automatically mean that it is inefficient or leads to wasteful consumption. How a subsidy is designed and administered, and especially how it interacts with other government policies, determines to what extent they are socially and environmental[ly] harmful and the urgency to phase it out. (IGO-4, paragraph 16).

Despite this weak language on reform, the IGO-4 report did nonetheless incorporate a fairly robust definition of what they viewed as subsidies. This definition properly included many of the ancillary policy instruments such as credit support and loan guarantees – instruments that were almost totally absent from the country submittals to the Annex Report. In addition, the IGO-4 report included quite detailed and useful guidelines developed by the World Bank (IGO-4, paragraph 90 *et seq.*) to assess whether a particular policy should be eliminated or not.

It was up to each member country, however, as to which policies it reported in the Annex Report and how they were characterized. Often, the rationale for policy inclusion or exclusion was not explained. One approach to gauge potential problems with how the countries interpreted their reporting requirements is to compare their self-definition of

reform-ready subsidies as stated in the Annex Report to other information on fossil-fuel subsidies within the reporting country. This comparison is summarized in Table 2.

Two main data sources have been used: IEA consumer subsidies, the latest of which were released in 2008 using 2007 data;³ and direct comparisons between in-country prices for diesel and gasoline fuels with United States reference prices prepared by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), a research organization owned by the German government. As noted by GTZ, the US fuel price “may be considered as the international minimum benchmark for a non-subsidised road transport policy” (GTZ 2007). In fact, even the after-tax US price may be on the low side, as there are significant residual subsidies to petrol in the US.⁴

Although it does not assess all G20 countries, the IEA dataset is useful because it incorporates multiple forms of energy, including electricity. In all of the G20 countries assessed by the IEA, fossil fuels remain the largest source of electrical power – in some cases supplying 100 percent. While the GTZ data do cover all member countries (indeed, for 170 countries worldwide), they do so only for the retail sector and for two fuels.

Neither dataset captures subsidies targeting producers. This is a major limitation, as not only can producer subsidies affect end-user prices (especially for harder to trade fuels such as natural gas or electrical power), but they can alter the competitive positions of domestic suppliers in ways that boost overall GHG emissions or marginalize emerging (but less politically powerful) forms of energy. Because the IEA and GTZ values provide only a partial view of fossil-fuel subsidies within the assessed countries, they should be viewed as low-end estimates. In a handful of situations, at least some information on producer subsidies was available, and is included on Table 2. Even where numbers are included, though, they do not capture the full range of support to producers. For example, figures shown for Germany and Spain include only support for coal production; no other subsidy policies are reported.⁵

Although the subsidy data in Table 2 is incomplete and can be considered lower-bound estimates, it nonetheless shows that some of the G20 members who claimed that no reform

3. In its 2010 World Energy Outlook, the IEA has updated consumer subsidy estimates for these and more countries. However, release of the final document will not take place until November 2010 and the preliminary numbers cannot yet be cited. Given trends in world energy prices, updated price gap values are expected to be lower than those for CY2007.

4. A recent analysis by Pew's Subsidyscope project indicated that user fees (primarily gasoline taxes) covered only 51 percent of the cost to build and maintain highways in the United States. Data since the inception of the Interstate Highway System in 1957 indicate that user fees have never covered more than 75 percent of system costs (Subsidyscope 2009).

5. As illustrated in a case study on fossil fuel subsidy data in Germany (Koplow *et al.*, 2010), there are numerous other fossil fuel subsidies in place.

was needed in their countries also have very large fossil-fuel subsidies according to other data sources. Some important examples follow:

- **All Members.** None of the G20 members reported on support for fossil fuels via international financial institutions such as the regional development banks or the World Bank. Recent NGO research shows that fossil-fuel funding by the World Bank Group for FY2010 hit a new record high of \$6.3 billion (Mainhardt-Gibbs, 2010). In addition, no member reported support for fossil-fuel projects via export credit agencies (ECAs). ECA funding, based on preliminary research by Oil Change International, likely exceeds \$10 billion annually, although the lack of transparency at most of these institutions hinders precise accounting.
 - **Russia**, which mentioned subsidies only very generally in the Annex Report, had the world's second-largest consumer subsidies to energy according to the IEA (only Iran was larger). Total support in 2007 of more than \$50 billion primarily supported natural gas and electricity (nearly 70% of which is derived from fossil fuels).
 - **China** submitted only a single paragraph in the Annex Report, which listed just one potential subsidy to oil and gas. Yet IEA data indicate the country had \$38 billion in consumer subsidies in 2007, primarily to oil and electricity. In the power sector, fossil energy again dominated with an 83% share. A recent case study of sources for data on Chinese fossil-fuel subsidies (Koplow *et al.*, 2010) indicated that producer subsidies to fossil fuels in China are also pervasive, though difficult to quantify.⁶ Interventions include a wide array of tax breaks, substantial government ownership of all sorts of fossil-fuel related entities, widespread credit subsidies, and concerted support (including financial) for developing fossil-fuel resources outside of China.
 - Although the IEA did not estimate consumer subsidies for **Indonesia** in its 2008 analysis, they are large. Diesel prices within the country were only slightly more than half the reference price benchmark; gasoline prices about 90%. Koplow *et al.* (2010) highlight the many subsidies on both the consumer and producer sides of the market, including a national objective — supported by subsidies — to improve energy security by boosting electric-power production from coal.
 - **Saudi Arabia** has among the lowest fuel prices in the world, with diesel prices roughly 12% of the reference price, and gasoline prices less than 30% of the reference price. Although the country, along with the rest of OPEC, has steadfastly maintained that it incurs no subsidies unless it sells below its cost of production, the Kingdom's domestic pricing policies represent an enormous opportunity cost. This comes in part through high fiscal costs and lost foreign-currency revenues (\$23 billion in consumer subsidies for oil and electricity, with all electricity derived from fossil fuels), and in part through the protection of energy-inefficient industries and infrastructure that harm the long-term competitive position of the Kingdom.
- There is some indication that Saudi Arabia recognizes this problem privately, despite its public posture. If so, this would be a useful step for many reasons. First, even their benchmark metric of cost of production can be difficult to measure accurately once ancillary government services, extension of sovereign credit and risk management services, and other similar costs must be accounted for (they are too often ignored). The costing problem is particularly challenging in economies with more limited disclosure, audit, and liability traditions. Second, simply incorporating a cost/benefit review in existing decisions to sell fuel below world prices would be helpful. The process could ensure there are no better strategies to promote industrial development with lower fiscal and environmental costs, and could greatly improve the decisions being made in the country. Finally, approaches adopted by Saudi Arabia, a key member of OPEC, with respect to subsidy evaluation will likely be replicated in other countries as well.
- **India** acknowledged its fossil-fuel subsidies but provided little detail on the policies or timeline for reform. Its consumer subsidies were similar to Saudi Arabia's at \$23 billion for 2008 — among the highest in the world. Domestic prices for diesel fuel are well below the world reference price, though those for gasoline are significantly above it. Subsidy reductions for diesel in June 2010 sparked widespread protests that shut down the country for a day (Timmons and Kumar, 2010), indicative of the social challenge that reform can bring.

6. Estimate by Earth Track, based on Koplow (2007) and adjusted for inflation.

TABLE 2: FOSSIL FUEL SUBSIDIES LARGE IN G20 COUNTRIES PLANNING NO REFORMS

	G20 Annex Submittals		Producer Subsidies	IEA Consumer Subsidy Estimates		Fuel Underpricing 2008, % of US Reference Price	
	Subsidies subject to phase-out ¹	New reforms pursuant to G20? ¹		Approximate Subsidies, 2007 ²	Fuel composition of power sector, 2007 ³	Diesel ⁴	Gasoline ⁴
Argentina	Yes	No		N/E		74%	139%
Australia	No	No		N/E		121%	132%
Brazil	No	No		\$1 Billion (oil)		132%	225%
Canada	Yes	No	At least C\$2 billion	N/E		115%	136%
China	Yes	No		\$38 billion (mostly oil, then electricity)	81% coal; 2% O&G	129%	177%
France	No	No		N/E		186%	271%
Germany	Yes	No	At least €1.7 billion ⁵	N/E		200%	279%
India	Yes	No		\$23 billion (mostly oil, then electricity)	68% coal; 12% O&G	90%	195%
Indonesia	Yes	No		N/E		54%	89%
Italy	Yes	No		N/E		209%	280%
Japan	No	No		N/E		167%	254%
Korea	Yes	No		N/E		179%	270%
Mexico	Yes	No		\$51 billion (gas, electricity)		69%	132%
Russia	Yes	No		\$23 billion (oil, electricity)	17% coal; 50% O&G	110%	159%
Saudi Arabia	No	No		\$8.5 billion (mostly electricity)	0% coal; 100% O&G	12%	29%
South Africa	No	No		N/E	94% coal; 0% O&G	122%	155%
Spain	No	No	At least €1 billion ⁵	N/E		164%	220%
Turkey	Yes	No		N/E		209%	334%
United Kingdom	No	No		N/E		212%	257%
United States	Yes	No	\$52 billion ⁶	N/E		100%	100%
European Union			€8 billion ⁷				

n/e = not estimated

Notes and Sources:

- (1) Based on Annex Report and Table 1.
- (2) Approximations from graphical data in IEA 2008: 62. Includes industrial and power sectors, which are not picked up in the GTZ data. Due to declines in world energy prices during 2009 and 2010, current values are likely lower.
- (3) Fuel share of domestic gWh of generation in 2007, from IEA energy statistics, accessed 9/1/10 at http://www.iea.org/stats/electricitydata.asp?COUNTRY_CODE=IN
- (4) 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.
- (5) Coal subsidies only, as reported by countries in Annex Report 2010: 17, 32. DG Competition reported slightly lower values for Spain (€0.8b) and slightly higher for Germany (€2.2b).
- (6) Estimate by Earth Track, based on Koplrow (2007) and adjusted for inflation.
- (7) Energy tax reductions below the EU harmonized level (Annex Report 2010: 48).

- **South Africa** claimed that it had no inefficient fossil-fuel subsidies, though the IEA had estimated more than \$8 billion in consumer subsidies, primarily to coal-fired electricity. While funding for low-income purchases of electricity may be part of this cost, the discrepancy is a red flag that more disclosure is needed.
- While neither the IEA nor GTZ has found consumer subsidies to fossil energy in the **United States**, Koplw

(2004 and 2007) has documented tens of billions in subsidies to producers. The US submittal in the Annex Report was among the most comprehensive, highlighting billions of dollars in support to the oil and gas sector. However, even here, much was left out, including support of bulk-fuel transport, oil security, royalty subsidies, subsidized export credit, and a variety of tax breaks of great (but not sole) benefit to fossil fuels (see Koplw 2010a).

4. COMMON JUSTIFICATIONS

The policies included in the Annex Report, as well as other statements made by member countries, provide important insights into how they view their commitments under the Communiqué and what rationales they believe support excluding subsidy policies from having to be phased out.

A few general conclusions are warranted. First, not every country categorizes similar policies in similar ways. For example, Australia explicitly states that any tax breaks to fossil fuels that are also available broadly to the mining and quarrying industry do not meet the G20 criteria for reform. In contrast, special percentage depletion allowances in the United States are available to a wide array of mined resources, but were included by the United States in its chapter to the Annex Report, and indeed have been included in virtually every energy-subsidy assessment done in the United States to date.

A second general conclusion is that while some policies have been reported to the G20 even if they are deemed to be beyond the scope of G20 action, the majority of the support policies have not been mentioned at all. Countries have pre-emptively excluded programs, making it quite difficult to ensure that any phase out is implemented in a systematic, consistent, and unbiased way.

Because the phase out is a voluntary initiative, countries can easily identify a reason for not reporting or reforming their subsidy policies. Identifying the reasons they have given to date helps to frame the challenges that G20 members themselves need to address and reconcile in an overt manner so they can establish a standardized set of expectations over time. Common exclusion rationales are discussed below.

4.1 Subsidies support lower-carbon substitutes

Overview. If support policies flow to energy resources with a lower carbon intensity than the current dominant energy resources, some member countries have argued that the subsidies are not inefficient, and therefore not subject to any change under the Communiqué. This line of reasoning has been used even if the lower-carbon fuels are also fossil fuels.

Examples. Australia excludes excise-tax exemptions to LPG, CNG and LNG from consideration because the fuels are aimed

at replacing petroleum and diesel. Indonesia subsidizes LPG to encourage a shift from kerosene. Argentina excludes subsidies to natural-gas pipelines on the grounds that these policies will over time let them reduce existing subsidies to piped and bottled LPG — a potential fiscal savings, though unlikely to achieve much in the way of GHG reductions. Argentina is also subsidizing domestic natural gas production, though the intent is to “increase the share of domestic demand for natural gas that is met by domestic production and therefore reduc[es] the reliance on imports” (Annex Report 2010: 4). The United States and others have explicitly excluded subsidies to carbon capture and storage (CCS) technologies related to coal-fired power using a similar logic: that the subsidized replacement technology will have a lower carbon footprint than the status quo.⁷

Impacts. This general exclusion ignores that even if more benign than the status quo, the substitutes continue to have associated environmental impacts — in some cases quite substantial ones. Even so-called “clean-coal” technology is likely to have a higher GHG-intensity per unit power delivered than many renewable-energy technologies. Further, the chosen substitutes are selected through a political process that may not necessarily weigh tradeoffs equally across resources (as a carbon tax or similar instrument would do). In fact, even cleaner substitutes (efficiency, electric cars, or renewable electricity) may be economically disadvantaged by the subsidies to the “cleaner” fossil fuels.

4.2 Subsidies are not unique to the fossil fuels sector

Overview. A common challenge with subsidy measurement throughout the world is differentiating what is in the policy “baseline” from what is a targeted subsidy. If a policy forms part of the baseline, some argue it should be ignored since all industries get the same break, and it is therefore not distorting market behavior within a country.

Examples. The Australian example of excluding tax expenditures that apply “across the mining and quarrying sector as a whole” is one illustration. The United States excluded a range of subsidies to fossil-fuel production (e.g., accelerated-depreciation benefits and tax-exempt pollution control bonds heavily used by the coal-fired power sector) on a similar basis. (See Koplou 2010b for a more detailed critique of the US government’s subsidy estimation methodology.) Canada flags adjustments to its cost-recovery rules favorable

7. Various US officials have said directly and indirectly in multiple forums that the G20 pledge would not apply to so-called “clean-coal” technologies.

to oil sands production relative to conventional oil and gas as a subsidy reform; however, it excludes the fact that even the baseline rules for oil and gas create a highly favorable write-off of fossil-fuel related capital.

Impacts. Baseline issues have two major facets. For one quite large set of subsidies, a more careful review of domestic rules will clearly illustrate the policies do create distortions among energy-sector options. Accelerated-depreciation, for example, is available in the United States for all capital investment. However, sector-specific rules mean the value of the subsidy varies widely across asset classes; and the rules in general provide benefits to capital investment relative to demand-side options such as improved efficiency. In Australia, whether or not all mining industries receive particular subsidies is not relevant if (as is the case) energy services have widely divergent demands for mined materials per unit energy produced. For this class of policies, there is little justification for excluding them from the G20 phase out process.

More complicated are policies that really are a neutral part of the policy baseline country-wide, but differ widely across the world. A national sales or value-added tax, which is common in many countries of the world but does not exist in the United States, is an example. So, too, would be differing controls on carbon. The treatment of these types of issues should be addressed in a formal way by G20 member countries so that all participants in the phase out handle them consistently.

4.3 Subsidies may increase use of fossil fuels, but support more important domestic policy objectives, such as rural development, energy access, energy security, or poverty reduction

Overview. Most policies have multiple effects in an economy. Though a program may subsidize fossil-fuel production or use, increasing environmental problems, it may also boost regional opportunities, create jobs, or reduce poverty. In some cases, the subsidized fossil-fuel prices themselves are actually the policy instrument to achieve these other goals. G-20 member countries argue that these programs are not covered under the Communiqué because they are neither inefficient nor wasteful, but merely targeting a different objective. Countries may be able to point to studies that show general welfare will decline if subsidies are removed. These are important trade-offs, and have been recognized centrally in the IGO-4 report in its deferral to sovereign decision-making on reform. The impacts on poverty levels were noted with particular attention: “[t]he proportional adverse impact of inefficient energy subsidy removal can be

greatest for the poor, even though the rich receive most of the total value of the subsidy.” (IGO-4 2010: paragraph 67).

Examples. Indonesia provides domestic subsidies to selected fuels, and notes that “[a]s a developing country, fossil-fuel subsidies are viewed as important to ensure the purchasing power of poor people” (Annex Report 2010: 21). India, Italy, the United States, and likely many of the other countries provide fuels at below-market prices (or subsidies to purchase fuels at market prices) to poor or otherwise vulnerable populations. Brazil subsidizes small-scale fossil-fueled generating capacity in remote regions such that power tariffs equal those in large, centralized hydro-electric systems; and subsidizes the extension of the grid into remote parts of the country. Argentina is underwriting the cost of expanding both natural-gas pipelines and mains throughout the country. Saudi Arabia sells domestic fossil fuels to strategic industries at well below world prices in order to develop downstream, value-adding industries. India subsidizes the transport of diesel and domestic LPG to reduce the price impacts of transport costs on “far flung areas”, and China has similar policies for coal. The World Bank, as well, justifies much of its continued financing of fossil-fuel infrastructure throughout the world on the basis that these projects can promote energy access for the poor.

Impacts. The challenge on all of these policies is to move beyond a theoretical benefit into a more objective evaluation of alternative options. There are three elements to this issue.

First, are there existing alternatives that can achieve the same social policy objectives, but at a lower fiscal cost than the current subsidy regime; or even at a comparable fiscal cost, but with lower environmental costs?

Second, do the subsidies to support economic development inadvertently create long-term weaknesses in the economy by encouraging investment that is ill-suited for globally competitive markets should the subsidy regime change in the future? Large subsidies to energy-intensive industries such as chemicals or cement can cause this problem. Similarly, even if the justification for implementing a subsidy program passed muster at one point in time, shifts in technology and the structure of economies over time can alter policy trade-offs and, with them, the appropriate policy path. It is important that a country mandates a periodic re-justification of subsidy policies to ensure the options and trade-offs that drove the original support remain valid.

Finally, many of the regional-development policies in particular seek to mask real price differentials in energy services across the country. This is a vital mistake. The higher-price regions

often create market niches in which newer technologies can compete, allowing a country to innovate and test new ways to meet energy demand. Over time, the experimentation to serve these differentiated market segments can spur the growth of substantial new industries.

For example, if power in remote regions was much more expensive due to the high costs of transmission and distribution infrastructure, many off-grid technologies could become competitive and could support the growth of industries linked to meeting that need. Country-wide sales of power at average prices to everybody destroys these opportunities. Even if subsidies to rural development are maintained in some form, it is critical that countries have accurate data on the differential costs of service so they can choose among a wider array of solutions to meeting regional needs.

A country or multilateral institution needs to have a process in place to evaluate alternative ways to meet the policy goals of the energy subsidies, and to re-evaluate these tradeoffs every five years or so. Without this requirement, and the capability to carry it out, energy-subsidy policies can become large contributors to environmental and fiscal damage while contributing little of their claimed social benefits.

For example, while supporting expanded energy access for the poor may be judged by some a more important priority than phasing out fossil-fuel subsidies, there is rarely only one way to reach this goal. Data on subsidies are needed to evaluate alternatives that may offer a comparable fiscal cost but with a better environmental profile.

4.4 The subsidies do not matter because they do not affect market prices; or because even if they subsidize particular sectors domestic prices still exceed world reference prices

Overview. A number of G20 respondents noted that particular subsidies they had in place for fossil fuels did not lead to wasteful consumption because they had no impact on world prices. In some cases, countries argued further that, even with the subsidies, their domestic prices (including domestic taxes) were well above world reference prices.

Examples. France has a variety of exemptions from excise taxes (data on which were distributed to G20 members, though not

published in the Annex Report⁸), but argues that residual tax levels are above the EU-mandated minimums⁹ and that the price to end-users remains above the European reference price (which France defines as the European average price without value added tax and excise duty). Italy similarly argues that its State Aid is limited by its agreements as an EU member; and that high fuel taxes result in prices to that are “well above the world price plus industrial costs plus the minimum level of taxation.” Whether there are some user segments well below this level is not clear. Brazil provides diesel fuel rebates to its fishing boats, but argues that the average price of diesel to the fishing sector is still above world-market prices.

Impacts. Issues relevant to these claims include inter-sectoral distortions within a single country; and aggregative effects that may be larger than the individual subsidy under consideration. Thus, although French or Italian industries may still pay an above-market fee for fuel (however the country has benchmarked that price), their policies to subsidize a sub-set of industries create competitive disadvantages for the non-subsidized industries, and may exacerbate other environmental problems (e.g., overfishing in the Brazilian example). Distortions can arise regardless of the form of the subsidy, and can be significant. Reform of coal subsidies in the UK, for example, resulted in widespread replacement of coal-fired capital with natural gas plants – with substantial reductions in pollution (see Steenblik and Coroyannakis, 2005).

Further, as noted in the IGO-4 report (paragraph 23):

[A]lthough the effect of subsidizing one high-cost producer of, say, coal, may have negligible effect on the world price, the effects of many countries subsidizing their high-cost coal producers may be to depress the world price, thus stimulating consumption elsewhere.

Since the intent of the G20 phaseout is global, and not national, in nature, these combined effects of reform should be given central attention.

Finally, as was the case with subsidies targeting other policy objectives, preferential sectoral support via low-cost energy should be regularly and rigorously evaluated against other options to build strong industries, but at a lower fiscal and environmental cost.

8. Much of the information contained in this document is also available on the internet within official government budget documents under the line item “taxe intérieure de consommation sur les produits énergétiques”.

9. The European Union sets a minimum tax levy on the use of natural gas, oil, and coal when used for motor or heating fuels, or for electricity. There is also a separate minimum tax levy for electricity. See Europa, 2007.

4.5 The subsidies are transitional policies

Overview. Countries have excluded some fossil fuel subsidies on the grounds that they are transitional, and therefore will be eliminated anyway. Thus, they don't need to be part of the formal G-20 process.

Examples. Brazil has favorable pass-through of coal costs to end-users due to pre-existing contracts. Both Germany and Spain have subsidies to hard coal mining that are being phased out gradually over time.

Impacts. Transitional policies raise two important questions. First, are there many other transitional subsidies to fossil-fuel sectors that were not reported at all in the Annex Report? Second, over what period will the existing phase out occur, and how certain is it to be completed? The longer it lasts, and the less certain the phase out, the more important it is to include the programs in any subsidy phase out reports. For example, Germany will review its phase out schedule in 2012 to assess “whether the agreement to end subsidised coal mining should be maintained” (Annex Report, 2010: 18). Both Spain and Germany face some internal opposition to the phase out that could delay its full implementation.

4.6 Subsidies exist only if pricing is below production costs

Overview. The standard method for evaluating consumer subsidies is to compare domestic prices to world reference prices for specific fuels (the “price gap”). Where domestic prices are well below world norms, fuel subsidies exist that are expected to artificially increase the demand for the subsidized fuel. Because oil, and increasingly coal and natural gas as well, are global commodities with robust demand, domestic underpricing also results in a large opportunity cost to the subsidizing country in the form of foregone export earnings.

OPEC, one of the four organizations tasked with preparing the IGO-4 report, took a strongly dissenting position on this issue:

However, it is worth noting that the price-gap methodology has shortcomings. OPEC is of the opinion that the benchmark price to be used in the case of energy resource well-endowed countries should be the cost of production. Consequently, OPEC could not associate itself with the above estimation of fossil-fuel-related consumption subsidies. (IGO-4 2010: 4)

Examples. Saudi Arabia has the best articulation of this argument. They note that the costs of the subsidies are less than the social and economic benefits the country receives from the subsidies; that below-world prices represent a comparative advantage in global oil production rather than a subsidy; and that there are no direct cash outlays from the Treasury to cover the prices of domestic sales. As a result, Saudi Arabia does not have policies “that fit the criteria for inefficient fossil fuel subsidies. The G20 proposal for phasing out inefficient fossil fuel subsidies does not therefore apply to Saudia Arabia” (Annex Report 2010: 30).

The issue was summarized more generally by the IGO-4 (2010: paragraph 62):

In several countries with large endowments of fossil fuels, governments have promoted development through policies that encourage adding value to local resource production. This typically involves supplying energy to energy-intensive industries (e.g., petrochemicals, aluminum) at a price lower than the world price, to support regional or national employment or income. Even though it is a sovereign decision, using subsidies to diversify economic activity beyond supplying mainly raw materials – i.e., to create value-adding activities based on those materials – may help in the transition to a more sustainable path of growth, but at a cost of reduced raw-material supplies in the future.

There is also concern within OPEC that social impacts of subsidy reform are being marginalized, and that OPEC members – which for the past 40 years have consumed far less energy per capita than the United States and Western Europe – are unfairly bearing the brunt of reform (OPEC, 2010).

Impacts. The IGO-4 statement above focuses on the temporal issue of natural resource development: that perhaps accelerating the depletion path via subsidies is not the optimal extraction path. In addition, however, is the very large fiscal cost of this strategy (as indicated in Table 2); the environmental impacts of additional consumption, and often very old and inefficient energy consuming capital; and long-term competitive impacts as in-country production fails to incorporate energy market realities into capital purchase and operating decisions.

The domestic support can be monetized, and the government can weigh the efficacy of a dollar of support to industry or a consumer via subsidized fuel, versus selling the fuel on export markets and investing the gains with many more options into the poverty reduction or industrial development goals of the country.

5. RECOMMENDATIONS

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.

5.1 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 definition¹⁰, 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.

5.2 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 states¹¹:

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 o[n] 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.

10. 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

11. The agreement is accessible at http://www.wto.org/english/docs_e/legal_e/24-scm_o3_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.

5.3 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.

5.4 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 process for promulgating accounting standards and resolving 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; Koplów, 2010c). 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 Reform¹²”) 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

12. 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>

whom has have a proven track record in the issues under consideration and independent of any personal financial linkage to the fossil fuel industry.

- 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.

5.5 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 countries¹³ 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.

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 in 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.

13. Annex I countries are developed and transition countries that have taken on emission limitation or reduction commitments under the Protocol. Annex 2 countries are Annex 1 without the economies in transition (former Soviet Union).

TABLE 3: POSSIBLE INSTITUTIONAL MODELS FOR FOSSIL FUEL SUBSIDY TRANSPARENCY AND REFORM

INSTITUTION AND FUNCTION	USEFUL ATTRIBUTES	LIMITATIONS
<p>International Accounting Standards Board (IASB)</p> <p><i>Sets standards for international corporate financial reporting. Independent, funded largely by a levy on corporations.</i></p>	<p>Focus on establishing technical rules of corporate data transparency and consistency, similar in nature to the technical issues associated with standardized subsidy reporting.</p> <p>Demonstrated success in maintaining technical and institutional independence from the affected parties to reach unbiased technical requirements.</p>	<p>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>
<p>International Organisation for Standardization (ISO)</p> <p><i>Sets technical standards for a variety of processes that are often adopted at the firm level.</i></p>	<p>Highly successful voluntary opt-in model to implement complicated institution-wide changes in participating entities.</p> <p>Strong focus on measurement and reporting.</p>	<p>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>
<p>UN Framework Convention on Climate Change* (UNFCCC)</p> <p><i>Umbrella organization to manage and oversee implementation of global agreements on climate change</i></p>	<p>Comprehensive membership and a well-established secretariat and schedule of meetings; climate change is one of the key rationales for fossil-fuel subsidy reform.</p> <p>Robust mechanism for national reporting and technical review of reporting, with separate requirements and procedures differ for developed and developing countries.</p> <p>Inclusion in UNFCCC could offer incentives for reporting and reform.</p>	<p>Post 2012 architecture is unclear. Historically poor compliance and enforcement of reform measures.</p> <p>Limited success to date with effective financing of climate change reduction initiatives.</p>
<p>World Trade Organization* (WTO)</p> <p><i>Implementing body for multilateral global trading system</i></p>	<p>Internationally-focused entity already heavily involved with issues of government subsidies.</p>	<p>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>
<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>	<p>Strong technical capabilities, including expertise in trade, development and energy.</p> <p>Demonstrated skills in discerning similarities or differences across diverse countries for a specific topic area.</p>	<p>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</p>

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

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