

POLICY *Brief*

Building Fossil-Fuel Subsidy Reform: Have we got all the blocks?

**MAPPING THE
CHARACTERISTICS OF
FOSSIL-FUEL
SUBSIDIES**

**ASSESSING THE
IMPACTS OF FOSSIL-
FUEL SUBSIDIES**

**THE POLITICS OF
FOSSIL-FUEL
SUBSIDIES**

**STRATEGIES FOR
REFORMING FOSSIL-
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**IMPROVING THE
TRANSPARENCY OF
SUBSIDIES TO
FOSSIL FUELS**

**WHERE COULD AN
INTERNATIONAL
AGREEMENT BE
HOUSED?**

INTRODUCTION

Over the last three months, calls for the phasing-out of fossil-fuel subsidies by the G-20 and Asia-Pacific Economic Cooperation (APEC) have garnered widespread support.¹ It is increasingly recognized that most fossil-fuel subsidies are inefficient at best and perverse at worst. They divert money from other social priorities, such as health care, water and sanitation or renewable energy. They also encourage greater production and consumption of fossil fuels, with all the consequences for local pollution and the global climate that implies.

Now policy-reformers face the challenge: how should a political call for reform be transformed into coherent action?

Some of the building blocks needed to implement a multilateral program for fossil fuel subsidy reform—intergovernmental organizations with expertise in the estimation and analysis of subsidies, and multilateral development banks to help developing countries manage the transition away from subsidized fossil fuels—exist already. Meanwhile, a diverse group of non-governmental actors are carving out those that are missing. But these efforts need to be coordinated.

This *GSI Policy Brief* presents an overview of the status of the six blocks needed to undertake the reform of fossil-fuel subsidies at a global scale, with reference to the GSI's research in this area, now one year into its three-year program. The program's first set of outputs are being collected into one volume under the title, *Untold Billions: Fossil-fuel subsidies, their impacts and the path to reform*.



¹ See, for example, the letter of the Green Economy Coalition—a group of organizations in the environment, development, business, labour and consumer sectors—to the G-20 Finance Ministers' meeting in St. Andrews, November 6–7, 2009 (http://www.globalsubsidies.org/files/assets/gec_letter_to_g-20.pdf).

Mapping the Characteristics

UNTOLD BILLIONS, CHAPTER 1: MAPPING THE CHARACTERISTICS OF FOSSIL-FUEL SUBSIDIES

Consumer subsidies are relatively easy to identify: mainly used in developing countries, they typically subsidize fuels such as petroleum-based transport fuels and natural gas for electric power generation. The International Energy Agency's (IEA) estimate of \$310 billion US per year² is based on consumer subsidies to fossil fuels and electricity in 20, mostly developing, countries in 2007. Whilst more regular, comprehensive data series would be useful, this is not considered a major barrier to reform.

A lot less is understood about *producer subsidies*. Here, lack of information is an impediment to reform. In Chapter 1 of *Untold Billions*, the GSI reveals the results of detailed country-level surveys of subsidies conducted by internationally recognized energy-subsidy expert Doug Koplow, together with a team of local researchers in five countries: the United States, China, Germany, Indonesia and Nigeria. The types of subsidies provided by each government are classified, and the availability and quality of data analyzed. Annex 1 gives a sneak peek of the U.S. Report, which will become available January 2010.

In order to produce comprehensive and internationally comparable data, an agreed-upon methodology for defining and calculating subsidies is needed. The GSI's *Subsidy Manual*, to be released January 2010, provides a compendium of methodologies as a starting point for that process.

United States: Subsidy Data Survey: Key findings

- Data availability is much more transparent at the federal level than state and local levels.
- Data are not detailed or consistent for many subsidies (e.g., tax expenditure, credit subsidies).
- Subsidies related to ensuring the security of energy supplies appear to be large but are poorly characterized.
- Ancillary services (e.g., government-provided facilities at ports and harbours) can provide large additional subsidies.
- New support measures (e.g., research funding for carbon capture and storage) benefitting fossil fuels could lead to larger economic transfers than are being currently reported.

2 IEA, *World Energy Outlook 2008* (Paris: IEA, 2008).



China: Subsidy Data Survey: Key findings

- The general availability of data on fossil-fuel subsidies is limited.
- Securing supplies of fossil fuels is a key element in Chinese foreign policy. For example China appears to be using foreign aid as a way to gain access to foreign energy resources.
- Many energy prices are still controlled; this has encouraged corruption.
- China's 2008 economic stimulus package included large subsidies to encourage state-owned oil companies to expand upstream investments abroad, increase downstream refining capacity and to build stockpiles of crude and oil products.



Assessing the Impacts

UNTOLD BILLIONS, CHAPTER 2: ASSESSING THE IMPACTS OF FOSSIL-FUEL SUBSIDIES

Understanding the impacts of subsidies is a crucial plank in their reform. Given that estimations of the scale of fossil-fuel subsidies has so far been incomplete and produced on an ad hoc basis, it is unsurprising that what we know about their impacts is also far from complete.

Chapter 2 of the report provides a detailed literature review of previous work on subsidies, conducted by Jennifer Ellis. The six studies in the last 20 years that have attempted to analyze global impacts for all fuels mostly considered effects on greenhouse-gas emissions and gross domestic product (GDP): very little of the work considered other environmental impacts or social impacts.

The benefits of subsidy reform: Highlights

- Economic:** GDP in developed and developing countries would increase, by up to 0.7 per cent in 2050.
- Climate:** Removing the \$310 billion US in consumer subsidies to energy in 20 countries would reduce global carbon dioxide emissions by 13 per cent in 2050.³
- Social:** Subsidies divert government money that could be more effectively directed to social programs, but more research and policy guidance is needed, notably in developing countries.

³ Burniaux, et al., *The Economics of Climate Change Mitigation: How to Build the Necessary Global Action in a Cost-Effective Manner* (Paris: OECD, 2009) is the latest study assessing global impacts.





Understanding
the Politics

UNTOLD BILLIONS, CHAPTER 3: THE POLITICS OF FOSSIL-FUEL SUBSIDIES

CHAPTER RELEASED: See www.globalsubsidies.org/en/research/political-economy.

In Chapter 3, David Victor, director of International Law and Regulation at the School of International Relations and Pacific Studies, considers the differences in the political logic driving the two main types of subsidies. Consumer subsidies are often broad-based, overt, transparent and can be difficult to reform without provoking civil unrest. Producer subsidies are more often indirect and less transparent; interest groups that receive subsidies are usually well organized and aware of their interest in retaining the subsidy policy, and therefore better poised to block reform. Taxpayers are often unaware of the cost they are paying, making it difficult to pursue an informed debate over the purposes of the subsidy.

On the supply side, the entities providing the subsidy often do so for political advantage, such as to gain voters' favour or secure donations for political campaigns. Subsidies exist, not simply due to demand for them, but because the supply mechanisms require little administrative capability and policy-makers the world over find them politically difficult to resist.

Two key lessons for subsidy reformers:

1. Any reform strategy must either compensate powerful interests for consenting to a change in policy, or find a way to inoculate policy reforms against strong opposition.
2. An effective political strategy usually benefits from informing the public about the cost of the subsidy and the benefits of reform, so as to facilitate informed debate.





UNTOLD BILLIONS, CHAPTER 4: STRATEGIES FOR REFORMING FOSSIL-FUEL SUBSIDIES

Many national governments have attempted to reform their fossil-fuel subsidies, with varying degrees of success. There is no set formula or model for developing national strategies for subsidy reform, although experience provides important guidance for other policy-makers. Chapter 4 of *Untold Billions* develops a set of common features of successful subsidy reform based on case studies on reform of petroleum products in Ghana, liquefied petroleum gas in Senegal and coal in France.⁴

Common features of successful subsidy reform combine:

1. Research on the subsidy's original objectives, the rationale for and likely impacts of reform;
2. Communication strategies to inform the public of the rationale for and benefits of reform;
3. Consultation with affected stakeholders to address concerns and build support for reform;
4. Mitigation measures to reduce the negative impacts of reform on effected groups; and
5. Clear time frames to progress the subsidy phase out and to prevent transitional support from becoming entrenched.
6. Monitoring of progress to ensure the reform is having its intended affects and to check for unintended consequences.



UNTOLD BILLIONS, CHAPTER 5: IMPROVING THE TRANSPARENCY OF SUBSIDIES TO FOSSIL FUELS

In the absence of an effective international framework, data collection and reporting on subsidies to fossil fuels remains dismal. The IEA's estimates of consumer subsidies to fossil fuels have covered only 20 countries, though work is underway to expand that number. Reporting of other types of subsidies, including through comprehensive country analysis, is fragmented, incomplete and inconsistent. With limited data available, awareness of the size, extent and effects of subsidies to fossil fuels cannot be adequately appreciated by policy-makers.

Untold Billions analyzes the main subsidy reporting mechanisms used by national governments, international and regional governmental organizations, and non-governmental organizations to provide recommendations for improving transparency of information.

⁴ The GSI will also publish case studies for Brazil, Indonesia, India and Poland as separate research papers. They are available as of December 2009. See the GSI's website: <http://www.globalsubsidies.org/en/research/fossil-fuel-subsidies>.



WHERE COULD AN INTERNATIONAL AGREEMENT BE HOUSED?

An international agreement on energy subsidies could provide the basis for establishing the necessary reporting and monitoring framework for fossil-fuel subsidies, bind governments into subsidy-reduction commitments, and address concerns of international competitiveness. The GSI is preparing a report that explores three channels through which an international agreement could be progressed.

The WTO offers a flexible negotiating forum supported by technical assistance programs, subsidy disciplines and reporting mechanisms, and a dispute settlement process; but its trade-focused mandate makes addressing consumer subsidies difficult, and the political appetite to address energy subsidies in the forum is lacking. The United Nations Framework Convention on Climate Change (UNFCCC) offers a broad criterion for reform: whether or not the subsidy contributes to greenhouse gas emissions. But the UNFCCC has so far shied away from specifying what policies and measures nations should undertake and it remains split into developed and developing country groups. The third alternative is a quicker, less formal, coordinated response by the international community, guided by the G-20 process and its specific political commitments to phase out subsidies to fossil fuels.

CONCLUSIONS

The blocks needed to build subsidy reform are in varying stages of development. There is enough evidence to show that removing subsidies to fossil fuels has clear economic and environmental benefits, and with carefully developed strategies, social benefits too. There is more understanding of the political challenges facing policy-makers with good advice on how to overcome these challenges. There is also a growing body of research on how to design effective reform strategies, with measures to protect the poor.

To lay a solid foundation for reform, national governments and international organizations need to: establish a framework, with an agreed-upon methodology, for regularly reporting and monitoring subsidies to fossil fuels; set clear targets and implementation plans for removing subsidies; and continue to develop the body of research on the impacts of subsidies and best practice for reform.

The GSI remains the only independent, non-governmental organization dedicated to researching the characteristics of subsidies, raising awareness about their impacts and providing policy guidance for reform. The GSI welcomes the opportunity to forge new partnerships with national governments, organizations and researchers.



ANNEX 1: CLASSIFICATION OF SUBSIDIES TO FOSSIL FUELS IN THE UNITED STATES

The following annex is an excerpt of the U.S. Data Summary Table. The Country Summary Tables serve as an adaptable tool to help researchers organize and classify prevalent subsidy types to fossil fuels. The table has additional columns that identify the importance of the policy in different contexts (e.g., fuel type, type of country, etc). The full table consists of twelve different subsidy interventions into which various subsidy policies can be classified and seven different horizontal categories containing additional information. Completing the Country Summary Tables provide a starting point for researchers wishing to undertake further detailed country-level research.

Government Interventions in Fossil Energy Markets: Draft Summary of Data Sources for the United States

A	B	C	D	E	F	G
	Type of Intervention	Importance of Policy Type (H, M, L)	National Level - Overview, Data Sources	State/Provincial/Local Level - Overview, Data Sources	Review of Attributes Variation in Importance by Fuel	Web Links 1
1	General resources on energy policy, industry structure, prices					Energy Information Administration - EIA - Official Energy Statistics from the U.S. Government
	Energy policy	n/a	"-IEA Annual Energy Outlook contains a detailed summary of policy assumptions. This is a useful overview of government activities in the fossil fuel (and other) sector (Web Link 1). -IEA detailed country reviews are also a useful resource. The most recent review of U.S. policies was completed for CY2007 (Web Link 2)."			EIA - Assumptions to the Annual Energy Outlook 2009
	Energy Industry structure	n/a	"-EIA industry surveys; trade magazines. Regulatory impact assessments for any major rules affecting the energy industry can also be helpful if they are relatively recent."	"-California Energy Commission produces a periodic assessments comparing the future levelized cost of energy from various resources (Web Link 1)"		http://www.energy.ca.gov/2007publications/CEC-200-2007-011/CEC-200-2007--011-SD.PDF
	Energy price data: clean data on wholesale and retail prices, and on taxes, can be used to calculate price gap subsidy measures.	n/a	"-Fairly good pricing data from the Energy Information Administration and the International Energy Agency."			
2	Government-owned energy minerals	High. Government-owned fuel resources account for about 35 per cent of production. Fraction could rise with oil shale production. Sites also potentially important for CO ₂ injection.				
	A) Standard process for mineral leasing: auctions for larger sites; sole-source for many smaller sites	Moderate. Basic regulations governing access to resources on public lands are well established. Corruption or looting issues are not significant risks within the United States; however, poorly structured policy and royalty oversight has cost the U.S. Treasury billions of dollars per year.	"-Land assays primarily by the U.S. Geological Survey. -The Minerals Management Service (Web Link 1) is the primary source of data on leasing statistics. The Bureau of Land Management and the Forest Service also have some involvement for leases they control. -Data on auction competitiveness and overall returns on the leasing activity generally require more detailed analysis/literature review. -Reviews of policy efficacy are often available from GAO or the Inspector General's office within the relevant agency."	"-State-level royalty relief is common, especially for oil and gas. -Some data is compiled by trade associations such as the Interstate oil and Gas Compact Commission (Web Link 2). This tends to focus on royalty rates, not on systematic data analysis."	Procedures for shale extraction are much less formal and at higher risk of abuse.	http://www.gomr.mms.gov/homepg/lseale/lseale.html



FURTHER DETAILS AND CONTACT INFORMATION

The GSI is an initiative of the International Institute for Sustainable Development (IISD). Established in 1990, the IISD is a Canadian-based not-for-profit organization with a diverse team of more than 150 people located in more than 30 countries. The GSI is headquartered in Geneva, Switzerland, and works with partners located around the world. Its principal funders have included the governments of Denmark, the Netherlands, New Zealand, Sweden and the United Kingdom. The William and Flora Hewlett Foundation have also contributed to funding GSI research and communications activities.

For further information:

See the GSI's *Subsidy Primer* for a plain-language guide to subsidies on www.globalsubsidies.org.

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