



A Forum for South East Asian Policy-makers Fossil-Fuel Subsidy Reform: Challenges and opportunities

November 20–21, 2012
Mercury Resort Sanur, Bali, Indonesia

Meeting Report

Introduction: Peter Wooders, Global Subsidies Initiative, International Institute for Sustainable Development (IISD)

There is no denying that fossil-fuel subsidies are a critical issue for economic, social and environmental development, or that all the indications are that the costs of energy are likely to increase, in absolute levels and in terms of volatility. International Energy Agency (IEA) estimates show subsidies to consumers in almost 40 countries have increased by US\$200 billion in 2011, as increases in world energy prices more than offset progress many countries were able to make in reforming their energy pricing policies.

The scale and impacts of energy subsidies are widely accepted. This workshop has the primary objective of facilitating open dialogue and information sharing amongst Southeast Asian policy-makers and international experts. IISD-GSI also aims to support a holistic and cooperative approach to developing and implementing national subsidy reform plans.

IISD-GSI has developed a *Guidebook for Policy-Makers* which collates international best practice, policy tools and case studies on fossil-fuel subsidy reform. The *Guidebook* develops a policy framework for developing and implementing reform plans based on three key pillars:

1. Getting the energy prices right
2. Managing the impacts of reform
3. Building support for reform

These three pillars provide the themes for this Forum's program and will be discussed in more detail over the coming two days.



Session 1: Context Setting

(moderated by Xunpeng Shi, Economic Research Institute for ASEAN and East Asia)

Overview of Fossil-Fuel Subsidies in Southeast Asia: Chris Beaton, Global Subsidies Initiative, IISD

IISD-GSI adopts a common definition of “subsidy” agreed in the World Trade Organization under the Agreement on Subsidies and Countervailing Measures, which lists four categories of subsidy: i) direct transfer of funds or liabilities, ii) revenue foregone or not collected, iii) provision of below-cost goods or services and iv) provision of income or price support. Beaton also noted that fossil-fuel subsidies are often split into two categories: producer subsidies for upstream activities like exploration and production, and consumer subsidies. The focus of discussions in this forum would largely be on consumer subsidies.

The International Energy Agency produces estimates for fossil-fuel consumption subsidies using the “Price-Gap” Approach. Although there are some limitations to the method, it does provide internationally comparable “ball-park” estimates:

	TOTAL FOSSIL-FUEL SUBSIDIES IN 2011	TOTAL AS SHARE OF GDP
Indonesia	US\$21.3 billion	2.5%
Malaysia	US\$7.2 billion	2.6%
Philippines	US\$1.5 billion	0.7%
Thailand	US\$10.3 billion	3.0%
Vietnam	US\$4.1 billion	3.4%

Source: WEO, 2012.

Looking at trends over the last decade, Southeast Asian countries have increased diesel and gasoline prices over time, but fuel subsidies have also increased. This suggests that, although countries are making progress, they are not increasing domestic prices at the same rate that international prices are increasing.

Some typical problems with subsidies are that they are a fiscal burden, they tend to be an ineffective and inefficient policy tool for meeting government objectives, they are regressive, they undermine energy efficiency initiatives, they can reduce investments in the energy sector and have negative environmental impacts.

Vietnam’s Green Growth Strategy: Tran Thi Mai Phuong, Ministry of Planning and Investment, Vietnam

Vietnam’s Green Growth Strategy has three key objectives:

1. Restructure the economy and increase competitiveness through the efficient use of resources and by reducing environmental degradation.
2. Assess and promote the use of technology to increase efficiency in natural resource use, reduce greenhouse gas emissions intensity and respond to climate change.
3. Improve green employment, sustainable lifestyles, green infrastructure and buildings, and restore natural capital.



The Strategy identifies specific targets to be met by 2020, 2030 and 2050, including:

- Targets for 2020:
 - Double GDP per capita compared to 2010.
 - Reduce energy consumption per unit of GDP by 1 to 1.5 per cent per year.
 - Reduce greenhouse gas emissions from energy activities by 10 to 20 per cent compared to business as usual.
 - Reduce intensity of greenhouse gas emissions by 8 to 10 per cent as compared to 2010 levels.
- Targets for 2030:
 - Reduce total greenhouse gas emissions by at least 2 per cent per year.
 - Address environmental degradation, improve natural capital, establish basic standards for clean and green technology.
- 2050: Mainstream Green Economic Development.

Fossil-fuel subsidy reform has been identified as an important element of the Green Growth Strategy because i) the subsidies are costly, ii) they drive energy demand and greenhouse gas emissions, and iii) they are regressive, with few of the benefits reaching the poor. Phasing out subsidies and phasing in taxation to discourage carbon consumption makes the alternatives more financially attractive. A shift towards energy-efficiency measures and renewable energy production, such as wind and solar, requires technological innovation and modernization, infrastructure and improved energy management which, in turn, can have positive effects for Vietnam's GDP growth.

The Philippines' Experience with Fossil-Fuel Subsidy Reform: Zenaida Monsada, Department of Energy, the Philippines

The Philippines deregulated its downstream oil sector in 1998 to "ensure a truly competitive market under a regime of fair prices, adequate and continuous supply of environmentally clean and high quality petroleum products." The reforms were part of a package of regulations aimed at improving fuel quality and supply, including regulations on clean air, biofuels, renewable energy, and emissions standards. Petroleum products in the Philippines are now subject to taxes including a uniform 12 per cent value-added tax.

The reforms helped diversify the Philippines' energy mix, with increased supply of renewable energies including geothermal, hydro, wind, and biomass. Oil accounts for 31 per cent of the primary energy mix and is predominantly used for the transport sector. Within the transport sector, jeepney drivers (privately-owned/operated public transport carriers) were identified as a vulnerable group in need of targeted assistance to cope with the increase in fuel prices. The Public Transport Assistance Program established a smart card system that could be used to discount fuel bills at filling stations. The government has distributed 1.22 million smart cards to jeepney and tricycle drivers (this program is discussed in more detail in Session 2).

Since the success of the 1998 reforms, the government continues to face pressure to protect consumers from rising fuel prices. The government closely monitors international prices to determine their impact on domestic prices, and regularly posts oil pricing formulas on the Department of Energy's website. The government also undertakes a number of mitigation measures including regular meetings with transport leaders to discuss price movements,



government programs and the need for assistance. In addition, the Department of Energy runs a number of programs focused on improving energy efficiency and conservation, developing alternative fuels, developing renewable energies and increasing exploration and development activities.

Indonesia's Experience With Fossil-Fuel Subsidy Reform: Yusep Kartiwa Caryana, Directorate-General of Oil and Gas, Ministry of Energy and Mineral Resources, Indonesia

Indonesia subsidizes low-grade gasoline (RON 88) and diesel by setting low retail prices and reimbursing the national oil company for its losses. Subsidized fuel prices in Indonesia are the lowest among ASEAN countries. Even countries such as Cambodia and Laos, whose income per capita is below Indonesia's, do not subsidize fuel. Indonesia's subsidized fuel prices are comparable to other major oil exporters like Saudi Arabia and Kuwait, but Indonesia is no longer a net oil exporter.

The cost of these subsidies are on an upward trend as Indonesia's gasoline consumption grows by 8 per cent a year, driven by demand of the one million new four-wheel vehicles and eight to nine million motorcycles being added to the roads each year. In addition, the increasing prices of non-subsidized gasoline, and the growing gap between the prices of subsidized and non-subsidized fuel, have increased consumption of the lower-grade, subsidized fuel.

The government has a number of initiatives underway to reduce consumption of subsidized fuel, including i) banning the use of subsidized fuel by central and local government vehicles in the Java-Bali region, ii) accelerating the deployment of compressed natural gas (CNG) for vehicles, iii) banning the use of subsidized diesel by plantation and mining companies, iv) banning new power plants that run on oil and increasing electricity generation based on coal, natural gas, geothermal, hydro and biogas, and v) improving energy efficiency of government buildings. Some of these measures require stronger monitoring and enforcement capacity such as including a ban on the use of subsidized fuel in mining contracts with cooperation of local government to monitor fuel consumption.

Even with these measures in place, fuel subsidies are expected to increase in 2013. The government faces strong political opposition to increasing prices and reducing subsidies and questions how much longer it can maintain a rising subsidy bill.

Discussion

A number of issues were raised during discussions, including how the Philippines overcame the political economy challenges to reform its subsidies, whether Vietnam had considered using electric vehicles to help it meet its green growth targets, whether energy pricing should factor in externalities and differing emissions intensity of fuels, and how to address the issues faced by state-owned enterprises if they cannot be directly compensated.



Session 2: Options for Managing the Political Economy Challenges (moderated by Alex Chandra, IISD)

Strategies for Developing Sustainable Reform Plans: Kerry Lang, Global Subsidies Initiative, IISD

The IISD's *Guidebook for Policy-Makers in Southeast Asia* outlines a policy framework and tools for developing sustainable subsidy reform plans. The starting point for the GSI's approach is that simply increasing energy prices is not enough to remove subsidies because they will re-emerge (for example, when oil prices rise). The ultimate aim of subsidy reform should be decontrolled energy prices, coupled with more effective poverty reduction and economic growth strategies.

The policy framework identifies three pillars of a successful reform strategy: i) getting the prices right, ii) managing the impacts of reform, and iii) building support for reform in order to overcome the political economy challenges. Addressing the third pillar, IISD's *Guidebook* outlines seven steps for developing a communications and consultation strategy: 1) identify key stakeholders; 2) undertake impact assessments and mapping exercises to understand how each group will be affected; 3) identify desired changes in behavior or attitudes; 4) establish mechanisms for consultation; 5) tailor messaging to target audiences; 6) identify channels of communication; and 7) monitor and adjust the communications strategy to take account of shifts in public sentiment and political dynamics. IISD's *Guidebook* outlines more detailed examples, case studies and tools that policy-makers can use to help them develop each step of the process.

Malaysia's Subsidy Rationalization Lab: Aziyah Bahauddin, Performance Management Delivery Unit, Malaysia

In 2009, Malaysia's fossil-fuel subsidies totaled RM21.9 billion (approximately US\$6.2 billion):¹ of this, fuel (petrol, diesel and liquefied petroleum gas [LPG]) accounted for RM9.9 billion (approximately 2.8 billion) and natural gas RM12 billion (approximately US\$3.4 billion). To develop a roadmap for rationalizing subsidies, the Prime Minister established a policy lab, inviting 70 experts from a range of fields to work in the lab for a six-week period from March to April 2010. The final output was a detailed rationalization roadmap.

During the process, lab members consulted with cabinet ministers via workshop to receive their feedback on the roadmap. In addition, the government undertook a number of different initiatives to engage the public, including:

- An Open Day (May 27, 2010) to showcase the key findings of the lab and to invite feedback from the public. More than 1,200 people attended.
- A public forum on fossil-fuel subsidies inviting members of parliament, leading academics, business leaders and representatives of consumer groups to address the key issues.
- A public survey asking two simple questions:
 1. Malaysia spent RM74 billion on subsidies in 2009 causing a fiscal deficit. Should subsidies be reduced? (Yes/No)
 2. If Malaysia reduces its subsidies, should it be done:
 - In one year?
 - Over three years?
 - Over five years?

¹ Malaysian *ringgit*: Using an average exchange rate of US\$1 = -MYR3.5 for 2009.



The survey was conducted via SMS polls, feedback forms at the Open Day and online on PEMANDU's website and a news website. In total, it collected 216,770 responses.

Before the Open Day, early results of the survey showed that 60 per cent of respondents agreed that "yes," subsidies should be reduced; this number increased to 90 per cent after the Open Day. In total, 146,446 Malaysians (67.5 per cent) responded that subsidies should be reduced over three to five years. The government is planning to implement subsidy rationalization in small steps to ensure that the impact is minimal.



MALAYSIA'S SUBSIDY RATIONALIZATION LAB OPEN DAY

Source: PEMANDU.

In addition, the government is continuing to implement a public communications plan, which involves:

- Youtube videos explaining basic information about fuel subsidies (<http://www.youtube.com/watch?v=8BfJcD3tEto>).
- Twitter account to make announcements and answer questions from the public on subsidy-related issues.
- Engaging public figures to write about subsidy-related issues in the media.
- Monitoring press and Internet media coverage of the issue.



The Philippines' Public Transport Assistance Program: Jose Layug, Department of Energy, The Philippines

The Philippines relies on imported oil to meet over 33 per cent of its energy needs, much of which (over 80 per cent) is imported from the Middle East. As a result, fuel prices in the Philippines are vulnerable to geopolitics and oil price volatility. Every time fuel prices increase, the government faces strong public and political pressure to shield consumers from the impacts of rising energy prices.

The government has identified three particularly vulnerable groups:

1. Transport groups, including jeepney drivers, who earn on average US\$6 per day net income. Public utility jeep (PUJ) fares are regulated and there is no automatic adjustment when fuel prices increase.
2. Working-class citizens, who will be impacted by fare increases as there are no transport subsidies.
3. Farmers and fishermen who use petrol-run machinery and equipment and do not receive any government support.

The government is implementing a range of mitigation measures including:

- Short-term measures: Weekly meetings with public transport leaders, nationwide fuel discounts at 300 filling stations, corporate social responsibility programs of oil companies, the public transport assistance program and continuing campaigns on energy conservation and efficiency.
- Medium-term measures: Including an alternative fuel program.
- Long-term measures: To increase renewable energy utilization and petroleum exploration.

The Public Transport Assistance Program provided smart cards to jeepney operator/drivers and tricycle operators with a pre-loaded amount of credit that can be used to discount the beneficiary's bill at filling stations. The first phase of the program cost PHP450 million (US\$11 million), with PHP 1,050 (US\$25) granted to 220,000 jeepney drivers and PHP 150 (US\$3.60) granted to 1 million tricycle operators.

BENEFICIARY	NUMBER OF BENEFICIARIES	ASSISTANCE/UNIT	TOTAL COST
Jeepneys	220,000	PHP1,050	PHP300 million
Tricycles	1,000,000	PHP150	PHP150 million
TOTAL	1,220,000		PHP450 million

The smart cards are designed to be easy to use and can be swiped like a credit card at any filling station. The cards are registered to the beneficiary's vehicle licence plate for simple monitoring and enforcement. The government cooperated closely with oil companies, who funded and installed the required technology in filling stations. Oil companies undertook this as part of their corporate social responsibility and also used it as a public relations exercise in response to the public outcry over increasing fuel prices.

Implementation of the program was successful in providing targeted assistance to jeepney and tricycle drivers. For one year after its implementation, there were no public rallies in response to increasing fuel prices. Although the program was designed as a one-off payment, the government granted an addition PHP 1,200 to each jeepney driver and is considering continuing the program to provide additional support when fuel prices increase.



Political Economy Challenges of Subsidy Reform: Experience from across Asia: Shikha Jha, Asia Development Bank

Asia's energy needs are driven by high growth and poverty. Asia has the fastest growth in demand, especially for fossil fuels, accounting for 25 per cent of global energy demand (of which China accounts for half). But approximately 20 per cent of the population (700 million people) do not have access to basic electricity services and over 44 per cent (1.6 billion people) rely on traditional biomass.

Across Asia, there is a wide range of complex energy pricing systems. A 2006 IMF review of gasoline pricing mechanisms in 44 countries showed that 34 per cent of countries have liberalized, market-determined prices; 18 per cent have automatic, formula-based price adjustments; and 48 per cent impose price controls where administered prices are adjusted on an ad hoc basis.

The key challenges to subsidy reform in Asia include the influence of interest groups, in particular, the lack of support from vested interests and the political dynamics of vote banks. In addition, many subsidies are off-budget (such as free electricity to farmers in India), tax rebates and exemptions on fuel consumptions (such as cheaper kerosene in Bhutan, India and Indonesia), tax breaks to the mining and quarrying industry (in Australia), waiver of import duties (in Indonesia). There are also logistical difficulties related to reform that require strong coordination across many ministries and responsible offices. Consumers are organized differently and government ability to deal with interest groups varies. For example, consumer groups representing the poor tend to lack a voice, whereas production industries tend to be well organized, resourceful and influential. Lastly, it can also be difficult for governments to develop instruments to compensate low-income households for price changes.

Discussion

Questions were raised about the preparation required to run Malaysia's Subsidy Rationalization Lab and the administrative capacity and enforcement required to implement the Philippines Public Transport Assistance Program.

Case Study: Recent Experience From Iran's Energy Subsidy Reforms: Dominique Guillaume, IMF

In December 2010, Iran undertook what it termed "grand economic surgery" and increased domestic energy and agriculture prices by up to 20 times, becoming the first major oil exporter to significantly reform its energy subsidies. The IMF's case study *Iran - the Chronicles of the Subsidy Reform*² outlines how the reform plan was designed and implemented.

The government's primary objective was to reduce energy waste and rationalize consumption. It also intended to improve social equity in the distribution of Iran's hydrocarbon wealth. The subsidy reforms were well planned and included a number of success factors:

- **Preparations to reduce inflation:** The government coordinated with the Central Bank to limit inflationary trends to stabilize the exchange rate, and administrative policies (such as price freezes and government stockpiles of basic goods) were used to further stabilize prices.

² The case study is available on IMF's website: <http://www.imf.org/external/pubs/ft/wp/2011/wp11167.pdf>. IISD-GSI has also published a follow-on paper looking at the impacts of the reforms, available on GSI's website: <http://www.iisd.org/gsi/recent-developments-irans-energy-subsidy-reforms>.



- **Direct cash transfers for households:** The Reform Act allocated 50 per cent of the revenues raised from reform for compensating households. The government established a direct cash-transfer scheme, whereby 80 per cent of the population received cash payments in specially created bank accounts. One of the unique features of the scheme was that it transferred the payments in advance of the reforms, but beneficiaries were unable to access the money until the reforms were implemented. This transparency helped improve public acceptance of the reforms.
- **Targeted assistance for enterprises:** The Reform Act allocated 30 per cent of the revenues raised from reform for compensating enterprises. The government surveyed more than 12,000 companies to assess how the reforms would affect them. Of those, 7,000 were selected to receive some form of targeted assistance. Various support packages included subsidized loans for energy-efficiency technologies, new credit lines, reduced fees and taxes for exports, and limited quantities of fuel at discount rates.
- **An extensive public relations campaign:** The government appointed a spokesperson to coordinate all public relations, including media activities and public seminars to educate the public about subsidies. Leading public figures were mobilized to speak in favour of reform. Households were also exposed to new energy prices through, such things as statements on their electricity bills in advance of the reforms.

Session 3: Establishing New Pricing Mechanisms for Reform (moderated by Ami Indriyanto, Indonesian Institute for Energy Economics)

Getting the Prices Right: Peter Wooders, Global Subsidies Initiative, IISD

The IISD's *Guidebook for Policy-Makers in Southeast Asia* outlines four dimensions required to reform subsidies and get energy prices right:

1. Budget transfers, levels taxation and the degree to which full costs are passed through to final consumers.
2. Pricing mechanism: Ad hoc price adjustments; automatic, formula-based pricing sometimes coupled with a price stabilization fund; or free, market-based.
3. Transparency of energy policies and price composition.
4. Enforcement of pricing policies.

The *Guidebook* illustrates various pathways that countries can take to improve their energy prices across all four dimensions. The reform pathway and the time it takes will be different for each country and for each fuel type, depending on a number of variables. Some of the reforms can be rapid, such as reducing budgetary transfers, increasing taxation, or switching fuel pricing mechanisms between ad hoc to automatic to market-based pricing. However, other reforms will take time, such as increasing transparency of energy prices and improving enforcement.

Energy price reforms are also more likely to be successful if they are part of larger, structural reforms and if other options to reduce energy prices are considered. The reforms should address the fundamental components of the marginal cost of energy supply such as the costs of energy production, transportation and distribution, as well as taxes.



Mr. Wooders also reported back on some of the key issues discussed with fuel price regulators at a joint GIZ-IISD workshop held in Eschborn, Germany on November 8–9, 2012. During the workshop, regulators identified common issues they face, including making the market run properly; dieselization of the transport fleet and economy, global refining imbalance and increasing production margins, and exploring alternatives to non-oil transport fuels. On the topic of subsidy reform, regulators noted they face challenges in stabilizing or smoothing prices for consumers and setting taxation levels.

The Philippines' Oil Stabilization Fund (1984–1998): Gil Beltran, Ministry of Finance, The Philippines

The Philippines created an Oil Price Stabilization Fund in 1984 with the objective of minimizing fluctuations in domestic petroleum prices. In simple terms, the Fund operated so that producers could draw from the Fund when landing costs were high, but they would contribute back to the Fund when landing costs were low. In an ideal case, the drawdowns would be equivalent to the contributions and no subsidies would be required from the Government.

The Fund was administered by the Department of Energy, although petroleum product prices were set bimonthly by the Energy Regulatory Board. Prices were supposed to be based on landing costs (import price with exchange rate movements) and the Board would hold public hearings prior to each price adjustment. In reality, however, there was much political interference in the pricing policies, particularly during times of high inflation (price adjustments were informally approved by the President) and public hearings were confrontational (e.g., between producers, consumers and the government). As a result, price adjustments were usually too late and too small.

The Fund became depleted during times of high oil prices and required PHP17.6 billion (approximately US\$650 million)³ in government subsidies between 1990 and 1997. The subsidies were equivalent to 0.2 per cent of GDP or 0.8 per cent of central government expenditure and had significant impact on public sector deficit. The subsidies displaced more important government expenditure equivalent to:

- Free rice for 17.6 months to the poorest 30 per cent of the population who were living below the poverty line.
- 62,241 school houses.
- 5,280 kilometres of rural roads.
- 146,080 deep wells for drinking water, or
- Two light rail transit lines.

The subsidies had a host of negative impacts. They were regressive, with 92.8 per cent of the benefits going to the high- and middle-income groups with cars and air conditioning, compared to only 7.2 per cent of the benefits going to the lowest quintile. The poorest of the poor, who walked to work, received no direct benefits. Between 1991 and 1995, the low fuel prices contributed:

- 26 per cent of the 60 per cent rise in traffic, resulting in heavy congestion in Manila.
- An additional 78,000 tons of carbon dioxide emissions annually and 1,100 tonnes of nitrogen oxide emissions annually.

³ Philippine peso: Using an average exchange rate of US\$1 = -PHP42 for the period 1990–1997.



In 1995, the low fuel prices inflated the volume of crude oil imported by 15 per cent, equivalent to an estimated 7 million barrels worth US\$100 million—expenditure which could have been used to purchase capital goods for new factories that would have created 34,650 new jobs.

In 1998, the government deregulated the downstream petroleum industry and abolished all petroleum product subsidies (discussed in more detail in Session 1). More recently, since 2010 the government has granted targeted, temporary subsidies whenever there are steep increases (of 50 per cent or more) in petroleum prices (discussed in more detail in Session 2).

Based on the Philippine experience, the first-best solution for energy pricing is deregulation. The 1998 reforms and market-based fuel pricing have had a positive impact on energy conservation, development of alternative fuels, and environmental protection. An oil stabilization fund could be a second-best solution for countries with wide exchange rate fluctuations. However, for the fund to function well, there should be no political interference in price setting: regulators should be independent and try to establish an automatic formula for break-even pricing.

Electricity Sector Reform in Vietnam: Nguyen Manh Hai, Central Institute for Economic Management, Vietnam

Demand for electricity in Vietnam has grown at a rate of 12 to 13 per cent per year for the last 20 years. Demand is driven by economic growth as well as social and demographic developments. Vietnam now has almost universal electricity access, with 98.4 per cent of the population connected to the grid.

The Vietnam Power Development Plan for 2011–2020 and vision to 2030 sets objectives for increasing electricity generation from coal, nuclear and renewable energies:

SUPPLY SOURCES	2010 (%)	2020 (%)	2030 (%)
Hydro	38	19.6	9.3
Coal-fired	21	46.8	56.4
Gas-fired	34	24	14.4
Renewable energy	3.5	4.5	6
Nuclear	0	2.1	10.1
Imported electricity	3.5	3	3.8

The drivers for electricity sector reform include increasing demand for electricity, the need for large-scale investments, limited transparency and energy security issues (e.g., Vietnam is soon to become a net importer of coal). The electricity sector is also dominated by state-owned enterprises which limit market competitiveness and reduce the attraction of foreign investment.

The government subsidizes the electricity sector through a range of instruments including regulated prices, cross-energy price subsidies, preferential loans, tax treatment and investment in infrastructure. State-owned enterprises also incur significant losses. However the scale of these subsidies is unclear.



Vietnam has “Ladder” retail prices for households, including a lifeline tariff for the poor:

NO.	ELECTRICITY HOUSEHOLD CONSUMPTION PER MONTH	PRICE (VND/KWH) *
1	For the first 50 kWh (for poor and low-income households)	993
2	For kWh 0 – 100 (for normal households)	1,284
3	For kWh 101 – 150	1,457
4	For kWh 151 – 200	1,843
5	For kWh 201 – 300	1,997
6	For kWh 301 – 400	2,137
7	For kWh 401 and over	2,192

* At time of writing, US\$1 = -VND12,291. Thus the lifeline electricity tariff for poor households equals approximately 8 cents per kWh.

The Electricity Sector Reform Roadmap plans to establish competitive electricity sector markets in three phases:

- Phase I (2005–2014): Establishment of a competitive electricity generation market
- Phase II (2015–2022): Competitive wholesale market
- Phase III (after 2022): Competitive retail market

In 2009, the government announced that electricity tariffs should move towards full cost recovery and market-based pricing. While the lifeline tariff is retained, price increases can now be more regular and automatic, with commercial users paying the highest rate. These need to be considered alongside pricing reforms for other energy sources. There is also a need to raise public awareness and build consensus on electricity pricing reforms through improved transparency, particularly on financial performance of state-owned enterprises.

Discussion

Questions were raised about how the Philippines Oil Price Stabilization Fund was set up. There was also discussion of short- and long-term opportunities for undertaking reforms, with participants noting that policy-makers often have only a short time to prepare when subsidy reform is driven by financial crisis or a budget revision. This can make it difficult for policy-makers to link subsidy reform to wider issues that also need to be addressed like corruption (Nigeria), taxation (India) or wider electricity sector reforms (Vietnam). It also raises the question of whether reforms need to be sequenced or progressed in parallel.

Interactive Exercise: The US\$50 oil price shock

In order to better understand the nature and role of various fuel pricing schemes, as well as political, regulatory and public reactions, the participants completed an exercise whereby they considered how their country’s pricing mechanism would react to a sudden price increase of US\$50 /barrel.

Participants were asked to illustrate “before” and “after” scenarios⁴ in response to the question: how will the pricing scheme in your country respond to this price increase? (see Appendix I for a more detailed description of the exercise).

⁴ Note that this was a hypothetical exercise, and the illustrations do not necessarily accurately reflect the pricing policies of the relevant countries.



All photos courtesy IISD-GSI.

	<p>India</p> <p>Before:</p> <ul style="list-style-type: none"> • Has ad hoc pricing for LPG, kerosene & diesel • On-budget subsidies, some preferential taxation • No pass through of costs • Little transparency of pricing policies <p>After:</p> <ul style="list-style-type: none"> • Shift to automatic, formula-based pricing • Increased pass through of costs • Some enforcement of pricing policies • Some subsidies for LPG retained • Complementary policies, including cash transfer, transport subsidies, biofuel and renewable energy programs
	<p>The Philippines</p> <p>Before:</p> <ul style="list-style-type: none"> • Market-based pricing • Small, targeted on-budget subsidies, some preferential taxation • Full pass through of costs • Partially transparent (Mean of Platts Singapore (MOPS) needs improvement) • Fully enforced <p>After:</p> <ul style="list-style-type: none"> • Market-based pricing • Retain targeted subsidies and tax preferences • In addition, remove value-added tax for diesel, provide targeted support for truck drivers and farmers • Increase public transport fares • Pricing continues to be transparent & enforced
	<p>Malaysia</p> <p>Before:</p> <ul style="list-style-type: none"> • Automatic, formula-based pricing • On-budget subsidies (temporary depending on the pricing formula) and preferential taxation • Partial pass through of costs • Transparent and partially enforced <p>After:</p> <ul style="list-style-type: none"> • Maintain automatic, formula-based pricing • Increased on-budget subsidies, preferential taxation • Increased pass through of costs • Less transparent and still partially enforced



	<p>Indonesia</p> <p>Before:</p> <ul style="list-style-type: none"> • Ad hoc price adjustments • Large on-budget subsidies • No pass through of costs • Fully enforced <p>After:</p> <ul style="list-style-type: none"> • Price increase but still on ad hoc basis • Large on-budget subsidies • Partial pass through of costs • Fully enforced
	<p>Vietnam</p> <p>Before:</p> <ul style="list-style-type: none"> • Automatic, formula-based pricing with an oil stabilization fund • Some preferential taxation • Pass through of costs • Partially transparent and enforced <p>After:</p> <ul style="list-style-type: none"> • Automatic, formula-based pricing and stabilization fund retained • Remove tax preferences • Full pass through of costs • With targeted subsidies for the poor • Partially transparent • Relaxation of enforcement

Session 4: Managing the Impacts of Subsidy Reform (moderated by Mark George, U.K. Climate Change Unit, Indonesia)

Managing the Impacts of Reform: Chris Beaton, Global Subsidies Initiative, IISD

IISD's *Guidebook for Policy-Makers in Southeast Asia* outlines best practice and tools for managing the impacts of subsidy reform, the objectives of which should be to protect vulnerable groups and address political opposition to reforms. In the longer term, the objectives of developing support measures should be to address the underlying reasons why subsidies exist and transition to more sophisticated economic and social assistance mechanisms.

The *Guidebook* outlines a process for assessing and managing the impacts of reform: 1) assess the impacts using qualitative and quantitative tools; 2) identify mitigation needs for each affected group; 3) assess the costs, benefits and impacts of potential mitigation measures; 4) select and implement the policies; and 5) monitor and adjust to ensure policies operate as intended and report successes. The *Guidebook* highlights tools and resources available to help policy-makers with each step; for example, it includes a checklist of the typical negative and positive impacts of subsidy reform.



The *Guidebook* recommends three types of measures that can be used to mitigate the negative impacts of subsidy reform:

1. How reform policies are implemented, including timing, magnitude and frequency of price adjustments and sequencing of reforms for different fuels.
2. Measures that counteract price rises, such as policies to promote competition, address energy distribution problems or a temporary reduction in taxes and fees.
3. Measures that provide economic or social assistance in response to negative impacts, such as targeted assistance to affected businesses or households, or programs to increase energy access.

Any new mitigation measures should also be assessed for effectiveness, efficiency and any unintended impacts to which they may give rise. The reforms plans also need to be credible. For example, when Nigeria reformed its subsidies in 2011 it announced that the savings would be used for the “SURE-P” program, which included:

- Maternal and child health services, including a conditional cash transfer for pregnant women, more basic equipment and supplies, and more midwives.
- Public works programs.
- Vocational training schemes.
- A Niger Delta development project.
- Road and rail infrastructure projects.
- Water and agriculture projects, including irrigation and urban water supply.
- Power projects, focused on hydroelectric and coal power.
- Petroleum projects, to restore and improve domestic refining, and to build three new refineries.
- ICT projects.

Despite this comprehensive plan, the public protested strongly in response to the government’s reforms because the public had no trust in the government to actually implement the programs. The SURE-P program was touted as a “bogus document” because many of its projects had been planned for some time and were already included in ministry budgets.

India’s Experience Managing the Impacts of Subsidy Reform: Suresh Sharma, Planning Commission, India

India provides universal subsidies to keep retail prices of LPG and diesel low. In addition, the government provides subsidized kerosene for low-income families through the public distribution system. However, there are no subsidies provided for natural gas or coal.

Since 2009, global oil prices have increased by 80 per cent, making it difficult to pass on the full cost to consumers. The majority of India’s poor cannot afford to absorb high price increases, so the government shields the poor from oil price volatility. India’s dependence on imported oil is growing, and its import bill now accounts for about 6 per cent of GDP. The increasing import bill and rupee devaluation is resulting in high subsidies. As a result, despite progress in removing subsidies for gasoline, India’s total subsidy bill remains high:



SENSITIVE PETROLEUM PRODUCTS	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Petrol	615.1	447.7	1,822.1	1,128.5	1,086.3	488.7	0.0
Diesel	2,856.8	4,146.6	8,739.1	11,388.8	1,956.7	7,616.0	16,943.3
Domestic LPG	2,314.4	2,363.3	3,857.5	3,833.5	3,006.6	4,777.8	6,259.8
PDS Kerosene	3,249.2	3,949.4	4,746.9	6,148.0	3,661.7	4,275.7	5,707.9
Total	9,035	10,907	19,166	22,499	9,711	17,158	28,911
Exchange Rate Rs to US\$	44.27	45.28	40.24	45.91	47.42	45.57	47.92

These subsidies are resulting in under-recoveries for national oil companies that supply the subsidized diesel, LPG and kerosene. Prior to 2009, these oil companies were compensated for their losses by government bonds and contributions from upstream oil companies.

In June 2009, the government reformed its pricing policies and took the following decisions:

- That prices of gasoline and diesel would be market-determined.
- That the price of LPG will be raised periodically in line with the growth in per capita agricultural GDP at a nominal price.
- That the price of kerosene would be revised based on an increase in paying capacity in the rising per capita income.
- That gas prices would be revised for national oil companies
- That the cost-sharing mechanism would be:

Upstream sector contribution	33 - 38%
Losses absorbed by national oil companies	0 - 12%
Cash assistance from Government	50 - 67%

Since 2009, the government has revised the prices of gasoline, diesel, and kerosene four times; however, the under-recoveries continue to increase.

In September 2012, the government again revised its pricing policies to:

- Increase the prices of gasoline and diesel.
- Restrict the allocation of subsidized LPG cylinders to six cylinders per household, per year.
- Gradually reduce the kerosene quota by 7 to 8 per cent per year.

Even with these revisions, the under-recoveries are expected to continue increasing as a result of rising global oil prices and currency fluctuations.

These subsidies and under-recoveries are affecting India's GDP growth. The formerly large private sector retail market and infrastructure for gasoline and diesel has been almost closed down. There is large-scale diversion of subsidized fuels: diesel is being used by non-transport sectors, in particular industry; subsidized LPG cylinders are also being diverted for commercial and transport use; kerosene is going to industrial consumers and is being used to adulterate diesel.



The government is in the process of designing a system for targeted, direct cash transfers for poor families. The cash transfer will be used to replace fuel subsidies, which will reduce the many negative impacts, such as fuel diversion.

Best Practice for Managing Inflation During Energy Price Rises: Faya Hayati, World Bank Indonesia

Why are people worried about inflation? A survey of people in the U.S., Germany and Brazil found that respondents thought inflation should be the number one priority of government because it erodes the standard of living, is caused by the greed and incompetence of business and public officials, and lowers national prestige.

Inflation is usually measured by an independent statistical agency using a consumer price index, which is the most accurate measure. On the whole, the measure will try to capture inflation for the average household, but this will not be representative where there is a wide range of inequality and it does not cover rural households. For example, the average poor household is likely to be impacted by increasing food prices to a much greater extent than the inflation rate will show, but to a lesser extent on other expenditure items like clothing or transport. Inflation rates also do not take into account changes in consumption in response to price changes and therefore tend to overstate the inflationary impact.

Governments can design their reform plans and use mitigation policies to help reduce the inflationary impacts of subsidy reform. Countries such as China, Qatar, Mozambique, Indonesia (in 2002), Jordan (in 2005) and Ghana have taken a gradual approach to subsidy reform. A gradual phase out allows inflation and the GDP impact to be smoothed over time; it gives poor and vulnerable households longer to adjust to the shock; it requires less political will and reduces opposition to reforms; and gives businesses and industry a longer timeframe to improve competitiveness to deal with higher input costs. However, a gradual approach can result in anticipatory inflation to creep in on multiple occasions; results in a longer period of inflation; gives opposition time to stop future reform attempts; and can result in fuel hoarding and shortages.

Other countries such as Iran, Nigeria, Malaysia, Indonesia (in 2005) and Jordan (in 2006) have taken the “big bang” approach to reform. Large price increases need to be carefully planned and executed to have any chance of being effective. The “big bang” approach results in a shorter period of overall inflation but a longer period of peak inflation. Governments can also plan their reforms to be implemented at times of low seasonal inflation or low oil prices to reduce the inflationary impact.

In addition, governments policies can help mitigate the negative impacts of inflation. These could include short-term social protection measures targeted for the poor; pro-poor public expenditure such as health, education and infrastructure; and the provision of industrial support such as discounted loans for energy efficiency measures, temporary and targeted compensation. If a cash transfer scheme will be used to compensate low-income groups for rising energy prices, a temporary and targeted scheme will have less impact on inflation.

Administrative controls can also be used to help reduce the inflationary impact. These could include price distortions such as raising export duties, introducing export restrictions, controlling market prices for businesses and agriculture subsidies; or free-market mechanisms such as removing existing distortion, reducing taxes on fuels and industries, reducing import duties and restrictions on food, increasing domestic supply conditions. Ideally, governments will use more free-market measures to reduce distortions and avoid creating longer-term problems.



ADMINISTRATIVE CONTROLS DURING 2008 PRICE SHOCK	CAMBODIA	CHINA	INDIA	SOUTH KOREA	MALAYSIA	THE PHILIPPINES	SINGAPORE	TAIWAN	THAILAND	VIETNAM	TOTAL
Reduce import duties		✓	✓	✓		✓		✓			5
Increase supply using reserves	✓	✓	✓	✓					✓		5
Build reserves/stockpiles	✓				✓	✓	✓		✓	✓	6
Increase imports/relax restrictions	✓		✓		✓	✓			✓	✓	6
Raise export duties		✓	✓								2
Export restrictions	✓	✓								✓	3
Price controls/consumer subsidies	✓	✓	✓	✓	✓	✓		✓	✓	✓	9
Minimum support prices		✓				✓					2
Minimum export prices										✓	1
Assistance to farmers		✓				✓					2
Promote self-sufficiency		✓		✓	✓	✓					4
Action against/appeals to profiteers	✓	✓				✓			✓		4
Cash Transfer		✓					✓				2
Food stamps			✓			✓					2
Total	6	10	6	4	4	9	2	2	5	5	

Improving public transport services is also an important consideration for subsidy reform plans. The Armstrong Wright maxim says that if more than 10 per cent of households spend more than 15 per cent of household incomes on work journeys, then that is discriminatory. Governments need innovative solutions to address these challenges.

Case examples of international experience:

- Chile:** Following a nationwide truckers' strike, the government of Chile in July 2008 implemented a one-year policy whereby the rebate on the diesel excise tax available to trucking companies was raised from 25 per cent to 80 per cent.
- Thailand:** Implemented a six-point set of measures in the second half of 2008 which offered, among other items, free electricity and water (up to a ceiling) and free transport on non-air-conditioned public buses and third-class trains. This policy also dampened inflationary impacts, as higher fuel prices did not result in higher ticket prices for those services.
- China:** Beijing has provided a fuel subsidy to its taxi drivers since 2005. After the November 2007 fuel price increase, it supplemented this with an additional Y110 (US\$15) a month, which it then increased to a temporary monthly subsidy of Y525 (US\$77) following the June 2008 increase, which saw the largest jump in fuel prices in a decade. Additionally, following the November 2007 price increase, the ministry provided subsidies to fishing and farming industries, road transport operators in rural areas, urban public transport providers, and low-income communities.
- Iran:** In September 2010, the President called on the Central Bank of Iran to appreciate the rial. Retailers were prevented from raising prices in anticipation of the reform. Businesses found violating the instructions were fined and made to reverse the price increases. The government built stockpiles of consumer goods to ensure that any hoarding of goods before the price increase did not lead to supply shortages and therefore contribute to inflation. Authorities developed plans to distribute staple goods directly to the public to counter hoarding and panic buying.



- **Malaysia:** In 2008, Malaysia introduced annual cash rebates for vehicle owners amounting to RM 625 (US\$192) for private cars with engines up to 2 litres and pickup trucks and jeeps with engines up to 2.5 litres, RM 150 (US\$46) for private motorcycles with engines up to 0.25 litres, and lower amounts for vehicles with large engines. Cash compensation to offset a portion of the difference between the old and new diesel prices to fishermen and vessel owners in the form of RM 200 (US\$61) monthly cash payments to every owner and crew member of Malaysian-owned vessels registered with the Fisheries Department and incentive payments to vessel owners of RM 0.1 (US\$0.03) per kilogram of fish landed by approved fishing vessels at fish landing centres in Malaysia.
- **Vietnam:** The government of Vietnam announced in March 2008 that fishing vessels would be given cash compensation of between D15 and D24 million (US\$833–US\$1,413)—depending on the vessel's engine capacity—to offset higher fuel prices.

Bangladesh's Power Sector Subsidies: Muhammad Bellal Hossain, Power Sector Development Board, Bangladesh

Bangladesh has a 53 per cent electrification rate (60 per cent if including off-grid) with a steady annual growth rate which is expected to reach 12 per cent for the fiscal year 2012. The current energy mix for electricity generation is made up of natural gas (79 per cent), furnace oil (12 per cent), diesel (4 per cent), coal (3 per cent) and hydro (2 per cent). Primary fuel supply options for meeting future demand include:

- **Gas:** Only 16 trillion cubic feet of proven reserve; no significant gas discovery in recent years; depleting gas reserve restricts gas-based generation expansion.
- **Hydro:** Present capacity is 230 megawatts with an average energy generation of 800 gigawatt hours per year; no further significant potential.
- **Coal:** Total of 3.2 billion tonne reserve in five mines; near-term option, both indigenous and imported for base-load.
- **Oil:** Volatile market; high price; for peak duty only.
- **Liquefied natural gas:** Necessary to ensure secure and reliable gas supply.
- **Nuclear:** Safe technology; no pollution; future base-load option.
- **Renewable:** Present capacity only 70 megawatts; still high cost.

To meet demand in the short term, petroleum products are increasingly used to generate electricity. Sale of petroleum products to the power sector has risen from 254,000 tonnes in 2006–2007 to 932,000 tonnes in 2010–2011, now accounting for nearly 20 per cent of all petroleum product sales. The biggest increase in sales has been in furnace oil (over 300 per cent since 2007–2008) and diesel. The cost increase has resulted in increasing losses for the Bangladesh Power Company, reaching a high of BDT105⁵ billion (approximately US\$1.3 billion) in 2012.

The government is providing fiscal subsidies and discounted loans to the power sector, totaling about BDT3 billion (approximately US\$37 million), equivalent to 4 per cent of GDP.

The government has been taking gradual steps to increase energy prices since 2009. The government regularly increased the price of furnace oil from BDT30/litre in 2009 to BDT60/litre in 2012 and diesel from BDT42.71/litre in 2009 to BDT61/litre in 2012. It has also regularly increased bulk and retail electricity tariffs.

⁵ Bangladeshi *taka*: using an average exchange rate of US\$1 = ~BDT81 for 2012



	BULK TARIFF INCREASES	RETAIL TARIFF INCREASE
February 2011	11%	5%
August 2011	6%	--
December 2011	16%	13%
February 2012	14%	7%
March 2012	7%	7%
September 2012	17%	15%

The government has announced a reform plan which includes:

- Adopting an automatic fuel pricing formula.
- Providing direct subsidies for irrigation.
- Introducing a lifeline electricity tariff for poor households (75kWh).
- Introducing low electricity tariffs for irrigation.
- Introducing higher electricity tariffs for high-volume electricity consumers.
- Establishing a natural gas development fund to increase exploration activities.
- Establishing a maintenance fund for power stations.
- Linking the automatic fuel pricing mechanisms to electricity tariffs.
- Undertaking initiatives to improve efficiency.

The challenges facing the government include developing the necessary regulations and policies, sourcing the large amount of investment required, improving transparency, creating a competitive market for electricity generation and distribution, raising public awareness and addressing political issues.

Vietnam’s Lifeline Tariffs for Low-Income Households: Nguyen Thang, Centre for Analysis and Forecasting, Vietnamese Academy of Social Sciences

Under Vietnam’s 10-year Socio-Economic Strategy (2011–2020), the government is undertaking electricity tariff reforms as part of a broader plan to shift towards a market-based economy. In 2009, the government implemented Vietnam’s Incremental Block Tariff structure for residential consumers. This reform narrowed the band of consumers that receive a preferential rate (lifeline tariff) from 100 kWh to 50 kWh per month. It also increased the retail price of electricity for all consumers.

Under the new pricing structure, the lowest tariff band, targeted to those that consumer under 50 kWh, recovers approximately 40 per cent of the economic cost of supply (without profit). The next band, 51–100 kWh, is priced at the economic cost of supply, also without profit. Profits for power companies are covered by residential tariffs in higher blocks as well as cross subsidies from other tariff categories, mainly industrial and commercial users.

Moving to a lower lifeline threshold reduces leakages and thereby the fiscal burden. The scheme is also an effective instrument for protecting the poor, as Vietnam has a high electrification rate (over 98 per cent) with lower-income households consuming low levels of electricity. The tariff scheme is not regressive with relatively equal share across expenditure deciles.



EXPENDITURE DECILE	2004	2006	2008
Poorest 10%	3.2	3.2	2.9
Decile 2	3.3	3.1	3.1
Decile 3	3.3	3.3	3.2
Decile 4	3.3	3.3	3.1
Decile 5	3.5	3.3	3.2
Decile 6	3.4	3.3	3.1
Decile 7	3.5	3.4	2.9
Decile 8	3.6	3.3	3.2
Decile 9	4.0	3.8	3.3
Richest 10%	4.6	4.0	3.6
All Vietnam	3.6	3.4	3.2

In addition, the government provides direct cash payments to assist poor households. From March 2011, the government provides VND30,000 (US\$1.50) per poor household per month. The scheme is implemented by the Ministry of Labour, Invalids and Social Affairs based on a list of poor households in each commune, which is updated every year. Poor, low-use (50kWh) households also have to register with their electricity provider to get assistance.

One of the main challenges of the scheme is coverage of urban poor. Low-income migrant workers and temporary residents are difficult to include in the scheme, which has impacts on rural poverty because they provide remittances for rural households.

Impacts of High and Volatile Oil Prices and Policy Choices: Shikha Jha, Asia Development Bank

Based on the net commodity export position of selected countries, the Asia Development Bank (ADB) has analyzed who would be the winners and losers of global food and oil price fluctuations.

	CORN	WHEAT	SOY	RICE	OIL	GAS	COAL	RUBBER	PALM	TOTAL
China	0.0	0.0	-0.4	0.0	-2.0	-0.2	-0.2	-0.1	-0.1	-3.0
Hong Kong	0.0	0.0	0.0	-0.1	-6.1	-0.5	-0.5	0.0	0.0	-7.2
India	0.0	0.0	0.0	0.2	-2.3	0.0	-0.8	0.0	0.0	-2.9
Indonesia	-0.1	-0.3	-0.1	-0.2	-1.0	2.5	3.0	1.4	2.0	7.2
South Korea	-0.2	-0.1	-0.1	0.0	-6.1	-2.7	-1.6	-0.2	0.0	-11.1
Malaysia	-0.3	-0.2	-0.1	-0.2	1.8	6.1	-0.8	0.7	5.4	12.4
The Philippines	0.0	-0.4	0.0	-0.2	-3.7	-0.2	-0.2	0.0	0.0	-4.7
Singapore	0.0	0.0	0.0	-0.1	-3.4	-1.8	0.0	0.0	-0.2	-5.5
Taiwan	0.0	0.0	0.0	-0.5	-5.1	-2.0	-2.0	0.1	-0.1	-9.5
Thailand	0.0	-0.1	-0.3	1.9	-9.1	-1.4	-0.4	3.8	0.1	-5.5

Energy carries a large weight within the Consumer Price Index (CPI) meaning that higher energy prices increase inflation—with both first- and second-round effects. Countries that have high subsidies for petroleum products tend to run higher fiscal deficits, which are associated with higher public debt.



Nearly two-thirds of the world's poor (defined as those living below US\$1.25 a day) live in Asia. The poor spend a larger percentage of their income on energy and are therefore disproportionately affected by energy price shocks, compared to the rich. Costlier heating and cooking can result in reduced fuel consumption and changes in energy composition (e.g., more traditional fuel sources), both of which have direct impacts on the poor's standard of living, particularly that of women and children. Higher household expenditure on energy can also reduce purchasing power and spending on health and education.

Governments can use policy choices to reduce the trade deficit, such as setting domestic prices properly to create demand response, seeking local sources of energy and improving energy efficiency.

Policy choices to reduce fiscal deficits include reducing unproductive expenditures which reduce the impacts of fiscal measures (minimize waste, inefficiency, pilferage and leakage) and establishing a debt-stabilization program. Off-budget subsidies should be integrated into the budget process to make the fiscal risks transparent.

Policy choices to reduce the social cost including targeting fuel subsidies for the poor (e.g., through coupons or voucher schemes), introducing direct income support (e.g., by extending existing conditional cash-transfer schemes or developing new ones), and strengthening automatic stabilizers (such as unemployment benefits, state transfers and taxes).

Discussion

The issue of how to set the value of cash transfer payments was discussed with reference to the Brazilian and Mexican examples. Expert advice suggests that the payments should be just enough to cover the losses of poor households, and not more to reduce the inflationary impact of cash transfers. However, it was recognized that political economy issues play a role in determining the payment amounts and the level of acceptance of the cash transfer program.

There was also discussion of how to measure the gender impacts of subsidy reform. It is known that increasing the prices of petroleum products may cause some poor households to resort to traditional fuels for cooking. This can have direct impacts on women and children because more time is required to collect fuel. It can also have negative health impacts. However, measuring these impacts can be difficult. One participant suggested using household-level data to analyze consumption patterns. More detailed analysis suggests that women are the stabilizers in a household and tend to change their own consumption patterns more than other household members.

One participant asked whether reducing taxes is a good way of easing the transition to higher energy prices without increasing inflation. There is no simple answer to this question as it depends on the how the country's market operates and which taxes are reduced. This option should be considered carefully by policy-makers because, in the worst case, it can have zero impact on inflation but serve to reduce government revenues. Also, if the purpose of subsidy reform is to reduce fiscal deficits but the savings from subsidy reform are offset by losses in tax revenue, the reforms will not serve their purpose. One country participant also commented that retailers will always take the opportunity to increase prices, despite the tax reduction, so the gains will not necessarily be passed on to the consumer. Direct assistance to service providers or temporary protection for consumers tends to be a better option.

Lastly, participants discussed what tools are available for assessing the inflationary impacts of proposed reforms. There are two basic approaches: 1) partial equilibrium analysis and 2) general equilibrium analysis (e.g., using computable general equilibrium (CGE) models). The IISD-GSI's *Guidebook for Policy-Makers* explains the two approaches and discusses the advantages and disadvantages of each.



Breakout Group Discussions: Future trends and opportunities for collaboration

Roundtable on Future Trends:

During the roundtable discussion, participants were asked to comment on what they saw as the future trends in fuel pricing over the next five years, including drivers of reform or the key challenges.

Bangladesh: The government's policy is to remove fuel subsidies, so these will be reduced over the coming few years. However, one key challenge will be increasing the deployment of renewable energy technologies. Subsidies for renewables may be one policy tool the government considers.

India: Subsidies will be phased out and replaced with a cash transfer scheme. Diesel subsidies, which account for 70 per cent of the total subsidy cost, will be the most difficult to remove. Subsidized LPG and kerosene quotas are already being reduced. Increasing electrification and LPG use in rural areas will be a challenge. The government may also consider using subsidies to increase the uptake of renewable energy technologies to meet its goals of 15 to 20 per cent share in India's energy mix.

Indonesia: With elections in just over a year, fuel and electricity subsidy reforms will be difficult. Indonesia's constitution declares that the fiscal deficit cannot rise above 3 per cent. The current deficit is around 2 per cent, but with subsidies increasing fiscal pressure this could become a driver for reform, particularly if there is a sharp rise in international oil prices. The main challenge for Indonesia is meeting increasing energy demand while facing declining oil production levels.

Malaysia: With Malaysia also facing upcoming elections, it is difficult to know if subsidies will be reduced or not. The opposition party has stated they will increase subsidies. One emerging issue is the cost of the government's new assistance program as it will potentially cost more than the savings expected from fossil-fuel subsidy reform.

The Philippines: The targeted subsidies for jeepney drivers will likely continue in the medium term. The emerging issue for the Philippines is increasing the deployment of alternative and renewable energies and whether subsidies could be used to meet the government's objectives.

Vietnam: Subsidy reductions can be expected as part of the government's reform plans; however, progress is more likely to be seen in a few years. The driver for these reforms will be increased public awareness of the costs and impacts of subsidies. Key challenges include managing inflation, improving efficiency of state-owned enterprises and opposition from middle-income groups who use more electricity. An emerging issue for Vietnam is environmental taxation.

Opportunities for Bilateral Cooperation: Mark George, U.K.'s Climate Change Unit, Indonesia

Climate change is a key priority for the U.K. government's bilateral cooperation programs. The Department for International Development (DFID) funds large, strategic programs with the aim of managing the transition to low-carbon, high-growth economies. DFID's bilateral cooperation programs provide strategic analysis and capacity building, and facilitate dialogue among all relevant departments. In addition, the Foreign and Commonwealth Office (FCO) provides smaller amounts of funding for targeted projects. The U.K. government welcomes the opportunity to discuss potential new areas of cooperation, such as fossil-fuel subsidy reform, with other governments in Southeast Asia.



Breakout Group 1: Opportunities for international cooperation on energy pricing

Group 1 identified the key issue for policy-makers as whether to plan for complete deregulation of energy prices and, if so, what mechanisms can be used to transition to market-based pricing. The group identified the following activities that policy-makers may seek assistance with:

- Undertaking surveys: To better understand who currently benefits from subsidies and who needs targeted assistance if subsidies are reformed.
- Developing regional policy networks and commitments on fuel pricing.
- Technical assistance: For example, to undertake financial modeling or bring in more specialist expertise.
- Improving infrastructure to support transformations in the energy market.
- Raising public awareness about subsidies and how fuel prices should be set.

Breakout Group 2: Opportunities for international cooperation on managing the impacts of reform

Group 2 noted that it is useful to share information with other policy-makers to learn from their experience and to discuss topics like the pros and cons of assessment tools and targeted support schemes.

When planning for reform, the group identified a number of activities that would be useful for policy-makers:

- Asking experts to present a high-level overview of all the policy choices that can be considered.
- Technical and financial assistance with such things as undertaking impact assessments, developing data sets and registries for targeted support schemes.

Policy-makers could also usefully cooperate with others to create an informed public debate on reform options. For example, government officials can invite representatives from opposition parties to discuss the reform plans. Also, it was noted that inviting external research and sharing information helps add credibility to the government's reform plans.

The group also identified some specific issues on which policy-makers could use technical input, including:

- Oil price volatility: Guidance and international experience on how to cope with fluctuating oil prices.
- Energy diversification: Technology transfer (e.g., shale gas will have a transformative impact on energy markets); international forum on nuclear energy (policy-makers and stakeholders need to ensure that public dialogues are well-informed); assistance to encourage investment in renewable energy technologies.

Breakout Group 3: Opportunities for international cooperation on political economy challenges

Group 3 considered the difficulties of addressing political economy issues and noted that from one perspective, everyone except government loses from subsidy reform. Trade and investment competitiveness is of particular concern. To overcome these, three challenges were identified:

1. How to gain support from the middle-classes (the swing voters).
2. How to build public trust in the government's plans.
3. How to improve transparency in both the decision-making process and in the financial management of state-owned enterprises.



The group identified opportunities for international collaboration to address these challenges, including:

- Signing up to international commitments: Peer pressure from forums such as the G-20, APEC, WTO, or from strong trade partners can help put pressure on governments to implement reforms. It also provides an additional rationale for the government to explain why reform is necessary to key stakeholders.
- Sharing more country experience especially from across Asia would be useful for policy-makers.
- More research studies, particularly from organisations like the ADB: It was noted that policy-makers are cautious about assistance from the IMF or World Bank as there are often strings attached. Independent studies can be useful because policy-makers can either ignore the recommendations or use them to strengthen support for their reform plans.
- Communications tools: Need tailored messaging for target audiences that expands upon the typical fiscal deficit rationale for reform, also need to identify winners and losers to determine what messages are required. Specific examples of how the savings can be reinvested are useful (e.g., number of hospitals or 'x' kilometers of roads).

Closing Remarks and Next Steps (Peter Wooders, IISD-GSI)

In summary, a number of key issues were raised and discussed throughout the workshop, including:

Session 1: Context setting

- Reform of subsidies should be linked to wider reforms, like green growth.
- Some smoothing of prices is possible through revision of tax policies.

Session 2: Options for managing the political economy challenges

- It is challenging to control volumes of subsidized fuel sales.
- Government consultation is important and can change political will.
- Targeting can work if it is well-prepared, although the risk is that targeted subsidies can also become an entitlement.
- Two of the key challenges are diversity in interest groups and lack of coordination within government.

Case study on Iran: Household compensation was a critical success factor in the reforms

Session 3: Establishing new pricing mechanisms:

- There is a big question over whether stabilization funds can actually work well in practice.
- Electricity sector reform may be necessary for electricity price reforms.

Interactive exercise: the US\$50 oil price shock

- Pricing policies and mechanisms will likely not change in response to such a large shock.
- Governments face an inability to pass through costs fully—but how long can countries support prices?



Session 4: Managing the impacts of subsidy reform:

- Preferential diesel pricing has led to diversion and unintended uses.
- Macroeconomic priorities and conditions need to be taken into account.
- Electricity sector is creating significant debt in many countries.
- Lifeline electricity tariff can be an effective pro-poor policy.

IISD-GSI encouraged all participants to review and provide feedback on the *Guidebook for Policy-Makers*, which will be finalized and published in March 2013.

Copies of all the PowerPoint presentations delivered during the workshop are available on the GSI's website:
<http://www.iisd.org/gsi/news/iisd-gsi-forum-south-east-asia>



Appendix I: Interactive exercise: The US\$50 oil price shock

In order to better understand the nature and role of various fuel pricing schemes, as well as political, regulatory and public reactions, we take the volatility of price changes to an extreme case: a sudden price increase of US\$50/barrel.

In breaking news . . .

OPEC has officially confirmed the WikiLeaks announcement that Saudi Arabia's recoverable oil reserves have been overstated by 40 per cent: <http://www.youtube.com/watch?v=UL61zYKvWq0>

We assume that it is unclear how long the higher price level will prevail, i.e., regulators are required to act within a given time frame (doing nothing is not considered an option).

The exercise is to identify how different pricing systems can react to such a situation, what are the difficulties associated with certain regulations and what are the opportunities.

Q: How will the pricing scheme in your country respond to this price increase?

Use pin cards to show transition from:

- "Before": the current pricing mechanism in your country
- "After": how you think your country could respond to the price shock

Pin cards: we use Chernoff Faces⁶ as visual representations of different energy markets.

- Start by choosing the pricing mechanism:
 - Oil stabilization fund (cushion)
 - Price formula (tie)
 - Ad hoc price (scarf) – x 2 in cases where one ad hoc system is replaced with another

Then add the four dimensions of pricing:

1. Degree to which energy subsidies drain government budgets:
 - Budget transfer (gift box)
 - Preferential taxation (sign)
2. Degree to which governments pass through the full costs of price fluctuations:
 - No pass through (stop sign)
 - Pass through (go sign)

⁶ In 1973, American scientist Herman Chernoff introduced a new technique to represent multidimensional data using human faces. His "Chernoff Faces" have proved especially effective because they relate complex information to facial features, something which people are used to differentiating (Chernoff, 1973).



3. Degree of transparency:
 - Fully transparent (no dark glasses)
 - Partially transparent (dark glasses half over the eyes)
 - Not transparent (dark glasses on)
4. Degree of enforcement:
 - Fully enforced (cap on straight)
 - Partially enforced (cap on lop-sided)

For example:



A pricing mechanism with:

- Ad hoc pricing (scarf)
- Resulting in no pass through of price fluctuations (stop sign)
- Requiring government expenditure (hand-outs)
- With no transparency (dark glasses) and
- Only partially enforced (lop-sided cap)

A system with:

- Liberalized pricing (no tie or scarf)
- No subsidies (no gift box)
- Full pass through of price fluctuations
- Transparent prices (no dark glasses) and
- Fully enforced (cap on straight)

Timing:

- 30 minutes in breakout groups to complete the exercise
- 30 minutes report back

Each breakout group is to nominate one person to present their results back to the main group.



GSI Global
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About GSI

GSI is an initiative of the International Institute for Sustainable Development (IISD). GSI puts a spotlight on subsidies—transfers of public money to private interests—and how they impact efforts to put the world economy on a path toward sustainable development. In cooperation with a growing international network of research and media partners, GSI seeks to lay bare just what good or harm public subsidies are doing; to encourage public debate and awareness of the options that are available for reform; and to provide policy-makers with the tools they need to secure sustainable outcomes for our societies and our planet.

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