



# A GUIDEBOOK TO FOSSIL-FUEL SUBSIDY REFORM FOR POLICY-MAKERS IN SOUTHEAST ASIA

## EXECUTIVE SUMMARY



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# EXECUTIVE SUMMARY: A GUIDE TO FOSSIL-FUEL SUBSIDY REFORM

## *Purpose of this Guide*

There is no one-size-fits-all strategy for fossil-fuel subsidy reform—but there are a set of planning stages that are generic, along with many common issues, challenges and potential solutions. The purpose of this guide is to advise countries on the **process** for formulating an effective reform strategy that will fit their individual objectives and circumstances. It is aimed at policy-makers who have committed to reform and are exploring “how?” It is intended to have particular relevance for policy-makers in Southeast Asia, but much of its guidance could apply to any region. Its scope includes all subsidies that reduce the price of fossil fuels for consumers, with a special focus on petroleum products. It does not include guidance on subsidies for other types of energy (such as renewable electricity, biofuels or nuclear power) or for producers of fossil fuels. For research on these issues, see the GSI website: [www.iisd.org/gsi](http://www.iisd.org/gsi).

## *Key Messages*

**In reviewing international experience with fossil-fuel subsidy reform, one message stands out above all others: be prepared.** This may seem obvious. But all too often countries implement reform because of a sudden crisis or opportunity, and find themselves missing the internal coordination and research and external support that would allow for effective and decisive change. Preparation is essential.

**Fossil-fuel subsidies are usually a long-term, structural problem—and they need structural solutions.** Many countries formulate effective plans to reduce one subsidy but neglect the broader problem. Why do fossil-fuel subsidies exist and how can they be permanently removed? Reform can be thought of as one step in a larger transition from a basic, inefficient economic and social assistance system, to a more strategic, targeted and sophisticated one. If reform is not pursued within this larger context, subsidies can return again and again, driven by the same forces that caused them in the first place.

**Politics matter.** The biggest barrier to reform in most countries is political, so building support is vital. This includes efforts to improve credibility and trust in government. Strategies are available to help reform be understood and accepted by the general public, while allowing government officials to remain politically neutral. Strong leadership from heads of government and ministers is often required.

**Articulate a positive objective.** Reform should not be the *goal*. People are not inspired by dry, economic ideas like fossil-fuel subsidy reform. They want to achieve things that will improve their lives in tangible, meaningful ways. Reform should be the *means* by which concrete social and economic improvements are achieved. These improvements can be clearly articulated and targeted by reform plans.

**Governments have developed a great deal of good practice in preparing for fossil-fuel subsidy reform—but are often unaware of one another’s innovations.** This guide draws together this experience. It provides guidance on **the pacing of reform**. It also identifies good practice across three core elements that should form part of any reform plan:

- **Getting the prices right:** how to change pricing systems for fossil fuels
- **Managing impacts:** estimating effects of reform and mitigating unwanted impacts
- **Building support:** internal organization and external consultation and communication

## Pacing: A Gradual Approach or a “Big Bang”?

A strategy to raise subsidized fossil-fuel prices is often categorized in one of two approaches: gradual or “big bang.” What this means depends on how these approaches are defined. There are two main ways reform can range from a more “gradual” pace to a more sudden “big bang”:

- The size and frequency of the price increases
- The proportion of consumers who will no longer be eligible for subsidies

**The GSI recommends a gradual approach where possible.** The key advantage is that this allows strategies to adapt based on the outcome of each successive subsidy reduction. However, there are pros and cons to each approach, and the GSI recognizes that countries with very large subsidies or intractable political opposition may have no choice but to plan large reforms. The features of “gradual” and “big bang” reform—summarized in Table ES1—should be reviewed in determining the approach in any given country. Case studies suggest that **a fast move to market-based pricing is more likely to succeed if it is part of much bigger political and economic transformations.**

**If several fossil fuels are being subsidized, the GSI recommends reforming them one by one, starting with the most regressive.** Gasoline, for example, is typically most important to high-income consumers, who can absorb the shock of a “big bang.” Fuels that are important to low-income households—such as kerosene or fuels that contribute to low electricity prices—often require a slower pace. **It is not, however, recommended to leave a long gap between reforming subsidies for different fuels.** Large price differentials can cause new and damaging economic distortions of their own.

**There are good times to reform.** The most advantageous timing is usually to change a subsidy mechanism when market-based fossil-fuel prices are falling. This is particularly true for “big bang” reform, as price shocks are minimized. Aiming for periods of relative political “good will,” such as post-election or at seasonal periods when living costs are lower, can also be effective.

TABLE ES1 | COMPARISON OF “BIG BANG” AND GRADUAL TIMING APPROACHES

Performance criteria	Gradual	“Big bang”
<b>Macroeconomic</b>		
Reduction of costs	Gradual	Instantaneous
Impact on inflation and GDP	Low with each price increase, but risk of creating long-term expectations of inflation—“anticipatory inflation.”	High, but over a short period.
<b>Microeconomic and social</b>		
Negative social impacts on households and businesses	Low to moderate. Easy to manage by adapting reform plan. Households and businesses have longer to adjust.	High. May lack capacity to promptly change reform strategy. No time for households and businesses to adjust.
<b>Political</b>		
Added risk of political instability	Low, but gives opposition time to organize against reforms.	High.
Use of political capital	High. Each price increase requires political capital. Increases risk of deferrals.	Medium. Only one price increase, but at the cost of a large economic shock.
<b>Administrative</b>		
Added risk of poorly designed reform strategy	Low to moderate. Actual impacts can feed into subsequent plans.	High. It is difficult to predict the impact of large economic shocks.
Added risk of poor implementation	Low. Allows for ongoing adjustment of reform strategy.	High. Requires very good projections of impacts and preparations.
<b>Energy markets</b>		
Reduced energy demand	Gradual	Instantaneous
Added risk of hoarding	High. Varies if schedule of price increases is known in advance.	Low. Varies if date of price increase is known in advance.

## The Core Elements: Pricing, Managing Impacts and Building Support

### 1. Getting the Prices Right

**Subsidies do not reduce the cost of energy, they just move it onto the population in a different way.**

Someone still pays—but through taxes, foregone expenditure, foregone revenue or lack of investment in energy infrastructure. And the inefficiency of subsidies actually increases the cost burden on society. There is only one way to truly reduce fossil energy prices: by focusing on the fundamentals of supply and demand.

**Raising prices on an ad hoc basis is not enough.** Good fossil energy pricing consists of two components:

1. **Market-based prices** for fossil fuels
2. Creating and enforcing a **competitive and efficient** fossil energy market

Petroleum product pricing mechanisms can vary along four dimensions, summarized in Table ES2. **The GSI recommends that a good pricing mechanism should: involve no subsidies, fully and automatically reflect international price fluctuations, be fully transparent and be well enforced.**

TABLE ES2 | DIMENSIONS OF PETROLEUM PRODUCT PRICING MECHANISMS

	Good practice
1. <b>Subsidies:</b> degree to which subsidies reduce the end-price of fossil fuels by shifting costs onto the government, energy companies or other actors	No subsidies
2. <b>Pass-through:</b> degree to which domestic pricing fluctuations match international price changes	Full and automatic pass-through
3. <b>Transparency:</b> degree to which composition and regulation of energy prices is open and transparent	Fully transparent
4. <b>Enforcement:</b> degree to which fuel pricing in real life actually follows officially adopted energy pricing arrangements	Full enforcement

**Few countries succeed in an overnight change to market-based prices.** Instead, most transition through one or more intermediate pricing policies intended to smooth price fluctuations. This helps households and businesses get used to price volatility. It also helps dissociate price changes from government decision-making. Generally speaking, **a formula-based automatic pricing mechanism seems to be a useful bridge towards market-based pricing.** It allows for an immediate transition to full transparency and a controlled transition towards no subsidies and domestic prices that fully reflect international price fluctuations. By contrast, **price stabilization funds often end up overspending when prices are high and undertaxing when prices are low—essentially subsidizing fossil fuels once again.**

**Countries should look at options to reduce prices that focus on the fundamentals of energy supply and demand.** A fundamental part of this picture is the **promotion of intense competition** in a market with a level playing field. Other avenues for reducing energy costs might include: improved efficiency of distribution channels; incentivizing the exploration and exploitation of new, non-exportable energy sources; reducing wasteful energy consumption; the installation of efficient and competitive energy-producing capacity within national borders; and better enforcement of anti-collusion rules.

## 2. Managing Impacts

**Improved economic, social and environmental prosperity is the entire rationale for reform—but within the larger picture of overall gains, there may be unwanted negative impacts.** Poor and vulnerable groups may struggle to cope with the increased cost of living and doing business. Rising prices also mean rising inflation. And reforms can affect energy access and the types of energy that people use, with social and environmental consequences.

**The first step in managing impacts is to estimate impacts.** This allows unwanted consequences to be identified and mitigation measures designed. **It is important to estimate both direct and indirect impacts**, as indirect impacts are often large. Where governments have resources, time and good data, **the GSI recommends a comprehensive analysis, including simple static analysis of direct impacts, assessment of indirect and induced impacts and a full dynamic macroeconomic analysis that estimates feedback throughout an economy.** Where resources, time and data are limited, the GSI recommends that, **as a minimum, it is good practice to conduct a Poverty and Social Impact Assessment and review literature on past and projected reforms.** Generally, **a mix of quantitative and qualitative methods is advised**, as statistical modelling will not capture all impacts.

**Where possible, involve stakeholders in estimating impacts and choosing mitigation measures.** This ensures that reform plans draw on stakeholder knowledge and respond to their concerns. It also raises awareness and creates stakeholder buy-in. There may be practical limits to the extent of stakeholder inclusion in countries where reform is particularly controversial and divisive.

**Mitigation measures fall into three broad categories: how reform is implemented, responses to impacts and efforts to counteract price rises.** Specific measures will be spread differently over time. Some forms of social and economic assistance will need to be short term only, phased out following an initial price shock. Others might represent a permanent alternative to subsidization and be ongoing. The precise mix of measures that are adopted will usually reflect a mixture of technocratic concerns, stakeholder preferences and what is politically possible. See the end of this Executive Summary for a checklist of impacts and mitigation measures often associated with fossil-fuel subsidy reform.

FIGURE ES1 | TYPES OF MITIGATION MEASURES FOR FOSSIL-FUEL SUBSIDY REFORM



**Build credibility concerns into the design of mitigation measures.** Stakeholders may view plans skeptically, particularly if accountability and transparency are thought to be poor. Transparent preparation and the pre-emptive introduction of mitigation measures—before price rises take place—can build trust.

**Accentuate the positive.** Managing impacts should not become a negative story. Once mitigation measures have been designed, it should be possible to re-estimate the impacts of reform and show clearly and convincingly how it is in the interests of the majority, and will not harm the poor and vulnerable.

### 3. Building Support

Building support is about creating the political space that makes reform possible.

**Subsidy reform can have far-reaching impacts and therefore requires a whole-of-government approach.**

A wide range of government portfolios, authorities and jurisdictions will hold information relevant to reform and have a legitimate interest in the process. Involving these bodies from the outset will increase the strength of the reform strategy and ensure the government speaks with one voice, despite the possibility of divergent views internally. **Internal coordination is a vital first step.**

**Good communicators listen before talking.** Effective reform plans are founded on an understanding of how stakeholders perceive reform and the options for change. Where resources and political sensitivities allow, **the GSI holds good practice to be consultation that engages with and responds to stakeholders directly, including public inquiries, roadshows, discussion groups and workshops.** Though resource-intensive, this helps build the legitimacy of reform plans and ensures they are well-informed. Tools such as survey research and web-based forums are also effective, though place less emphasis on interaction. Where resources are low or political sensitivity is high, **the GSI advises at a minimum that governments should gauge stakeholder views by systematically reviewing literature and media reports and talking with energy experts and stakeholder representatives.**

**Good communications focus on simple and varied messages, targeted at specific stakeholder groups.**

Messages can be framed in different ways, as problems or opportunities. In many cases, a narrative of change will combine both. Messages drawn from country case studies are summarized in Table ES3. **Communications should use media that will best reach their target audiences.** This might include political announcements, radio, television, newspapers, leaflets, debates and websites. Some governments have used “no subsidy” days and published subsidy costs at retailers and on energy bills.

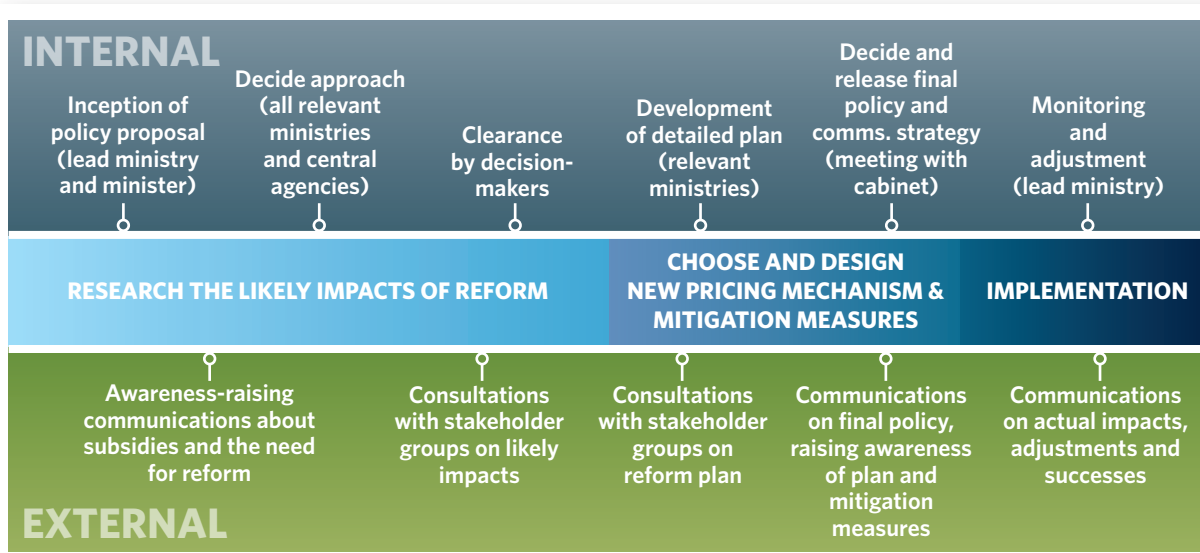
**TABLE ES3 | NEGATIVE AND POSITIVE COMMUNICATIONS MESSAGES ABOUT FOSSIL-FUEL SUBSIDY REFORM**

	Raise awareness of subsidy problems	Neutralize opposition	Raise awareness of gains from reform	Raise awareness of reform plans
Example focus of messages	Costs, inefficiencies, comparison with other countries, impacts on the poor and the environment.	Identifying smuggling and corruption, countering misconceptions.	Savings, target aid to the poor, more social spending, better standard of living.	Explaining reforms and mitigation, showing relevance to stakeholder needs, noting successes.

**Measures to build support will be most effective if they are integrated throughout the reform process.**

This means that internal organization, consultation and communication are not something that happens at the “end” of planning (see Figure ES2 below).

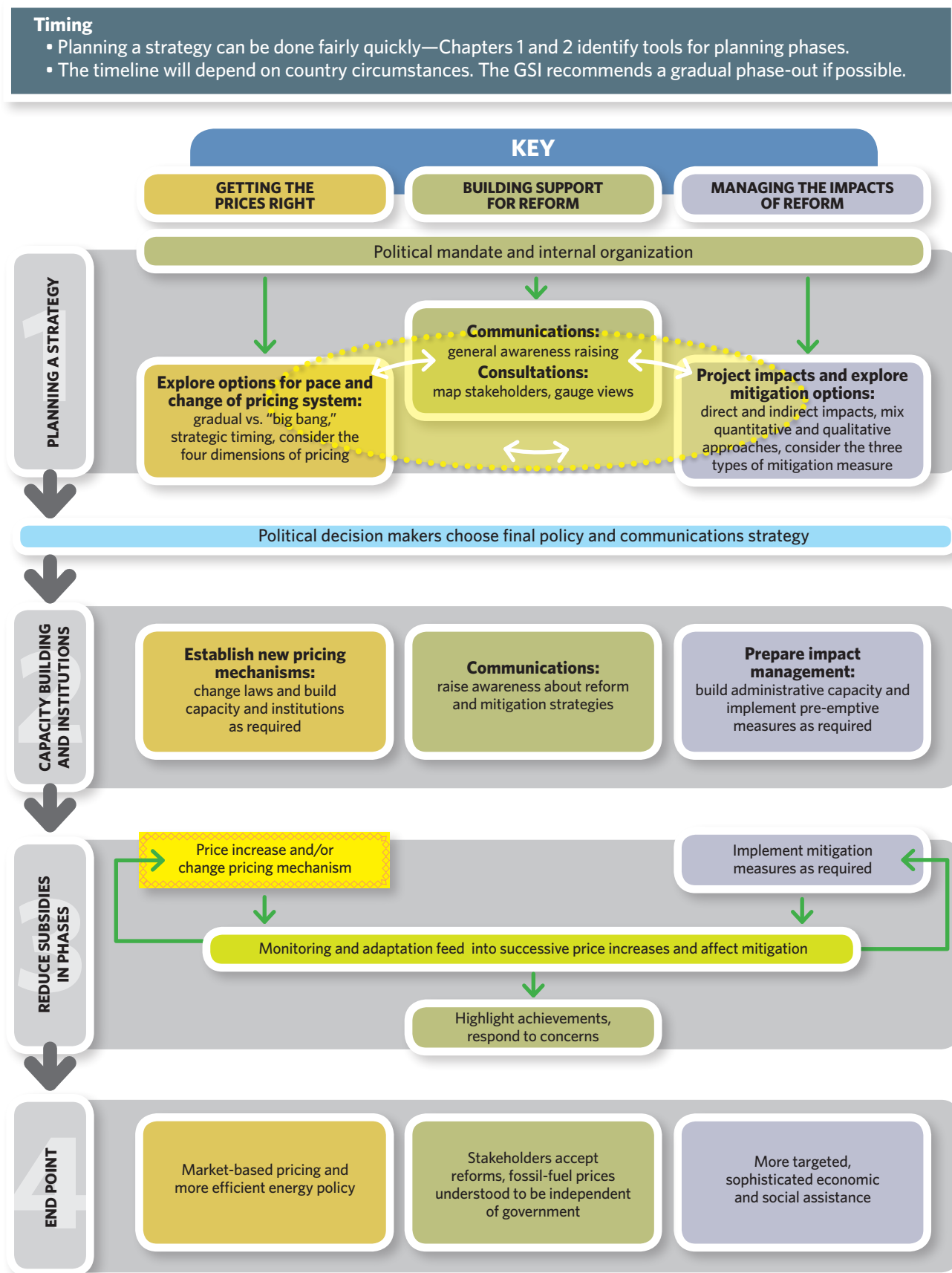
**FIGURE ES2 | MODEL POLICY CYCLE SHOWING STRATEGIC POINTS FOR INTERNAL AND EXTERNAL SUPPORT BUILDING**



## The Big Picture: A Holistic Approach to Reform

**Plans for fossil-fuel subsidy reform should be approached holistically.** This guide sets out three core elements that should form a part of any plan—but, in reality, each is not discrete from one another, and all three must be combined into one single process. The interconnectedness of an ideal reform process is illustrated below.

FIGURE ES3 | THE INTERCONNECTIONS IN AN IDEAL REFORM PROCESS





## Implications for Southeast Asia

**Southeast Asian countries have a wealth of experience in reducing and reforming fossil-fuel subsidies, but most are still struggling to find long-term solutions.** Policy dialogues and the publication of case studies would help replicate the successes and share lessons learned.

**Key challenges in every country have included mitigating the negative impacts of reform and building support for reform.** Many countries lack good alternatives to subsidization and are concerned about how to manage the inflationary impacts of price increases. High political resistance has made planning very politically sensitive in most countries, from conducting adequate consultations with affected groups to passing reform through parliamentary processes. Technical research, better administrative capacity and improved communications would go a long way to improving the chances of success.

**Country needs differ greatly, depending on starting points and background circumstances.** The Philippines, for example, is well on the way to market-based pricing, with the only price intervention being preferential taxes for some petroleum products and a few targeted compensation schemes aimed at the transport sector. Meanwhile, Indonesia has low, government-set fuel prices and Thailand has price caps on petroleum products. Malaysia has established a comprehensive subsidy rationalization plan, but, due to political sensitivity, has not made it public and has kept fuel prices frozen since 2010. In Vietnam, fuel subsidies must be tackled amid broader reforms of the electricity sector and state-owned enterprises.

**With good preparation, change is possible, and good opportunities will arise.** These opportunities might be external factors, such as when international oil prices are falling or are high enough to cause serious fiscal pressure. They could also be internal, such as the pressure of failing energy infrastructure, good will following an election or dwindling national energy reserves. **Having a roadmap in place allows for an effective and decisive transition to more effective fossil-fuel pricing, with mitigation measures ready to roll-out and a strong public awareness about subsidies and the benefits of reform.**

## THOUGHTS AND FEEDBACK

The Global Subsidies Initiative (GSI) of the International Institute for Sustainable Development is an entirely independent, research-driven initiative that investigates how subsidies contribute to or undermine sustainable development. Where subsidies are found to be perverse, the GSI aims to bring about transformative change in the implementation of subsidy reform, through technical analysis, policy dialogues and communication with stakeholders.

The policy advice in this publication represents the accumulation of knowledge built up by the GSI over the course of more than five years of research on fossil-fuel subsidies. It also draws on discussions with Southeast Asian policy-makers at an IISD-GSI forum on this issue in November 2012: <http://www.iisd.org/gsi/news/iisd-gsi-forum-south-east-asia>

**This guide is intended to be a living document that is updated as the GSI's research program continues to develop. All thoughts and feedback are highly welcome and should be directed to [info@globalsubsidies.org](mailto:info@globalsubsidies.org)**

TABLE ES4 | ASSUMING **NO MITIGATION**: COMMON NEGATIVE AND POSITIVE IMPACTS OF SUBSIDY REFORM

Fiscal		
<b>Negative</b>		<b>Positive</b> <ul style="list-style-type: none"> <li>▪ Reduced expenditure, more “fiscal space”</li> <li>▪ Debt reduction</li> <li>▪ Higher income for state energy companies</li> </ul>
Macroeconomic		
<b>Negative</b> <ul style="list-style-type: none"> <li>▪ Short-term shock to GDP</li> <li>▪ Short- or medium-term rise in inflation</li> <li>▪ Increased vulnerability to volatility</li> </ul>	...but → ...but → ...but →	<b>Positive</b> <ul style="list-style-type: none"> <li>▪ Fiscal savings</li> <li>▪ Better trade balance and current account</li> <li>▪ Higher GDP growth in medium term</li> <li>▪ Prices fall by the medium term</li> <li>▪ Decreased demand for fuels</li> </ul>
Governance		
<b>Negative</b> <ul style="list-style-type: none"> <li>▪ Risk of anti-competitive practices and insufficient competition in new fuel pricing market</li> </ul>		<b>Positive</b> <ul style="list-style-type: none"> <li>▪ Increased energy security: decreased demand and more incentives for investment</li> <li>▪ Reduced opportunities for corruption</li> <li>▪ Reduced incentive for fuel smuggling</li> </ul>
Businesses and economic sectors		
<b>Negative</b> <ul style="list-style-type: none"> <li>▪ Reduced international competitiveness of fuel-consuming sectors, e.g.: <ul style="list-style-type: none"> <li>- Agriculture and fisheries</li> <li>- Energy-intensive industries</li> <li>- Transport services</li> </ul> </li> </ul>		<b>Positive</b> <ul style="list-style-type: none"> <li>▪ More stable energy supply, due to: <ul style="list-style-type: none"> <li>- More level playing field</li> <li>- Improved finances of energy companies</li> <li>- Increased incentive to invest in energy production and infrastructure</li> <li>- Better incentives for energy efficiency</li> </ul> </li> </ul>
Households and social welfare		
<b>Negative</b> <ul style="list-style-type: none"> <li>▪ Overall regressive impact, if most subsidy benefits previously went to poor</li> <li>▪ Reduction in household incomes</li> <li>▪ Unemployment associated with affected business sectors</li> <li>▪ Increase in poverty</li> <li>▪ Risk of reduced energy access</li> </ul>	...OR...	<b>Positive</b> <ul style="list-style-type: none"> <li>▪ Overall progressive impact, if most subsidy benefits previously went to rich</li> </ul>
Environment		
<b>Negative</b> <ul style="list-style-type: none"> <li>▪ Increased greenhouse gas emissions, assuming fuel-switching to more polluting fuels, despite efficiency improvements</li> <li>▪ Increased local air pollution, assuming switch to more polluting fuels</li> <li>▪ Increased pressure on forest resources, assuming switch to biomass</li> </ul>	...OR...  ...OR...	<b>Positive</b> <ul style="list-style-type: none"> <li>▪ Reduced greenhouse gas emissions, assuming fuel-switching to less polluting fuels and energy efficiency improvements</li> <li>▪ Reduced local air pollution, assuming switch to less polluting fuels</li> <li>▪ Increased use of renewable energy as it becomes more competitive</li> </ul>

TABLE ES5 | COMMON MITIGATION MEASURES: ADDRESSING UNWANTED IMPACTS OF REFORM

Fiscal	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Redirect a proportion of subsidy savings into measures that can mitigate impacts</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Depends on focus of expenditure: see examples below</li> </ul>
Macroeconomic	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Gradual phase-out approach</li> <li>“Big bang” reform approach</li> <li>Temporary reduction in fees and taxes on fuel</li> <li>Reform during periods of low seasonal inflation</li> <li>Fuel price stabilization mechanisms</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Dampens GDP and inflationary shock</li> <li>High shock but reduces risk of anticipatory inflation</li> <li>Counteracts price increase, dampens inflation</li> <li>Minimizes absolute level of inflation after reform</li> <li>Smoothens volatility</li> </ul>
Governance	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Introduce or strengthen competition law</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Drives down market-based prices, no cartel pricing</li> </ul>
Businesses and economic sectors	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Gradual phase-out</li> <li>Relax other price controls (e.g., food, transport)</li> <li>Short-term compensation for key sectors</li> <li>Support energy-efficiency audits</li> <li>Extend and increase access to credit facilities, favourable loans, micro-credit schemes</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Industries can adapt, less shock for exporting sectors</li> <li>Lets producers pass on price increases to consumers</li> <li>Helps cope with price increase, gives time to adapt</li> <li>Help identify energy efficiency opportunities</li> <li>Helps businesses spread shock over a longer period or pay for energy efficiency investments</li> </ul>
Households and social welfare	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Increase budgets of agencies or funds with purview over social assistance and energy access</li> <li>Health and education assistance (e.g., facilities and programs, supplies, improve access)</li> <li>Infrastructure programs (e.g., expand electrification, invest in energy access, water purification centres, water distribution, build or improve roads, expand public transport, etc.)</li> <li>Welfare transfers: increase non-taxable income, minimum wage, cash transfers (conditional and unconditional), in-kind transfers (food, water, etc.), subsidize certain socially important goods</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Addresses social impacts using existing capacity, scales up existing mechanisms</li> <li>Lowers living cost; improves health-related welfare and economic prospects in medium to long term</li> <li>Improves welfare by: i) increasing access and reducing costs of other goods or services; ii) promoting general economic prosperity, related to infrastructure; and iii) providing employment associated with construction.</li> <li>Reduces impacts on cost of living by supplementing household incomes with cash (directly or indirectly) or other goods, or by lowering the costs of other goods.</li> </ul>
Environment	
<b>Mechanism</b> <ul style="list-style-type: none"> <li>Invest in enforcement of existing regulations</li> <li>Programs to foster sustainable fuel wood</li> <li>Investments in clean energy technologies and applications</li> </ul>	<b>Desired impact</b> <ul style="list-style-type: none"> <li>Sustainable exploitation of natural resources</li> <li>Sustainable biomass production</li> <li>Reduce or prevent negative impacts of fuel switching</li> </ul>

**Source:** Tables ES4 and ES5 based on a review of literature on reforms covering over 21 countries, including GSI (2012) and Aramide et al. (2012); Beaton & Lontoh (2010); Breisinger, Engelke & Ecker (2011); Burniaux et al., (2009); Clements, Jung & Gupta (2003); Coady et al., (2010); Coady & Newhouse (2006); El Said & Leigh (2006); Ellis (2010); del Granado, Coady, & Gillingham (2012); assanzadeh (2012); IMF (2008); IMF (2012); Kojima (2009); Laan (2011); Mendoza (forthcoming); OECD (2011); de Oliveira (2010); Solanko (2011); Soni, Chatterjee & Bandyopadhyay (2012); Suwala (2010); Yusuf et al. (2010).



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