



## APEC Fossil Fuel Subsidy Reform Capacity-Building Workshop Effective Pricing Mechanisms and Mitigation Strategies

ENERGY WORKING GROUP

### SUMMARY REPORT

*July 10-11, 2017  
Jakarta, Indonesia*

The United States<sup>1</sup> hosted an APEC Fossil Fuel Subsidy Reform Capacity Building Workshop (EWG 12 2016A) in Jakarta, Indonesia from July 10-12, 2017. The two-day workshop convened APEC officials from energy and finance ministries, and representatives from international organizations, NGOs, and academia to exchange perspectives on effective pricing mechanisms and mitigation strategies for implementing sustainable fossil fuel subsidy reforms. Through case studies from both APEC



economies (Indonesia, The Philippines, Chinese Taipei, Thailand, and Viet Nam) and non-APEC members (Armenia and India), participants shared lessons learned and highlighted successful strategies for designing and implementing reforms while providing effective services to vulnerable populations. Key recommendations resulting from the workshop are noted below.

### Background

Since 2009, APEC and G20 Leaders have committed to rationalize and phase out inefficient fossil fuel subsidies that encourage wasteful consumption, recognizing that such subsidies are regressive and often fail to adequately provide essential energy services to the most vulnerable populations. Inefficient subsidies are a fiscal drain on government budgets that can hinder sustainable economic growth and limit investments in other potential public policy priority areas. Reforming these subsidies not only could reduce wasteful energy consumption but also generate savings that could be redirected to targeted alternative priorities such as providing energy access to vulnerable populations – a particularly acute need in the APEC region where over 100 million people still lack access to electricity<sup>2</sup>.

<sup>1</sup> Hosted by the U.S. Department of Energy with support from the US-APEC Technical Assistance to Advance Regional Integration (US-ATAARI) activity

<sup>2</sup> IEA (2017). *Tracking Fossil Fuel Subsidies in APEC Economies, Toward a Sustained Subsidy Reform*. Paris, OECD/IEA. <https://www.iea.org/publications/insights/insightpublications/TrackingFossilFuelSubsidiesinAPECeconomies.pdf>

APEC economies account for 60 percent of global energy demand, with significant energy demand growth expected in the coming decades. The corresponding cost of subsidies will likely also increase, underscoring the benefit of rationalizing fossil fuel subsidies. APEC economies have made progress on subsidy reform in recent years; the International Energy Agency (IEA) estimates that APEC economies have decreased their fossil fuel consumption subsidies by 50 percent since 2011, to around USD 70 billion in 2015, both due to the decline in international prices and government policy reforms. However, the potential for international oil price increases in the future may test the long-term durability of reforms.

### **Common Challenges**

There are a variety of common challenges to implementing reforms, including a general lack of understanding about the size and drawbacks of fossil fuel subsidies and their impacts on public spending, including for poverty alleviation. The public may also distrust the government's ability to implement such reforms in a way that minimizes the impact, particularly if there are weak macroeconomic conditions (e.g., high inflation and currency depreciation). Governments also face opposition from influential groups who benefit the most from subsidies and may seek to block reforms. Below are three primary challenges highlighted in the workshop: establishing effective pricing mechanisms, ensuring successful mitigation strategies and implementing a far-reaching communication strategy to gain support for reforms.

### **Effective Pricing Mechanisms**

Participants discussed approaches to effectively transition toward market-based pricing, prepare for potential significant fuel price increases, and mitigate impacts on the most vulnerable populations. Experts reviewed various fuel pricing mechanisms to transition toward market-based pricing, assessed their fiscal sustainability and the degree to which they minimize price fluctuations and fiscal volatility.

Experts concluded that gradual yet frequent price adjustments through an automatic pricing mechanism based on international prices have often been most successful. A transparent adjustment formula that is widely published, and the establishment of independent agencies to administer the adjustments and audit their implementation have also helped provide predictability and depoliticize reforms, thus enhancing their durability. Participants also cited the importance of establishing contingency plans for significant fuel price increases (differing by fuel type), and simultaneously investing in areas such as energy efficiency, clean energy subsidy swaps and investments in social programs, which can help offset the effects of price increases.

### **Managing Impacts of Reform**

Several presenters stressed that effective reforms require tailored mitigation strategies for the most vulnerable. They noted the importance of clearly identifying those most affected and of understanding the impacts, including gender impacts of reform. However, identifying "vulnerable" groups based solely on income or strictly on energy consumption can miss key considerations; different income groups rely on different energy types and various factors can determine vulnerability and exposure to income shocks. Contributors recommended that policy-makers and planners consider income levels, location, energy access and other factors in identifying vulnerable populations and designing mitigation measures. Linking subsidies to

established social assistance programs may help better target those in need. Cash transfers are often the preferred approach for mitigation. However, where cash transfers are not feasible, subsidies can be implemented through benefits such as education, health care and public works.

Mitigation measures may have unintended consequences. For example, some governments have found that certain delivery mechanisms can make it difficult for rural or remote populations to obtain the benefit. Another unintended consequence can be environmental degradation (e.g., deforestation, dirtier fuels) if a primary energy source becomes unaffordable and people must turn to other less sustainable energy sources. Some presenters recommended that governments also consider populations near the poverty line that could fall into poverty if reforms do not include appropriate compensation. In devising mitigation efforts, some suggested the importance of monitoring and reassessing programs during implementation to ensure the measures are properly targeted. For example, one case study described how fuel cylinders sold at a subsidized price led to black market trade. The government changed the program to sell the fuel cylinder at market prices and provided direct transfers of the subsidy to those in need, thereby targeting the subsidies and minimizing diversion.

Reform measures can also put pressure on firms, particularly small- and micro-firms that can be forced out of the market. Firms can be affected directly through increased energy input costs, or indirectly as rising energy costs are passed along the supply chain to non-energy inputs (e.g., materials, capital and labor). To address this impact, governments can provide short-term support to small- and micro-firms and/or energy-intensive sectors to allow time for adjustment with the goal of improving energy efficiency and investments in energy-saving technologies. Generally, transparency and policy certainty during the reform process will also help firms adjust.

### **Communication Strategy**

Participants agreed that effective reform measures require extensive coordination across the government, industry, media, NGOs, academia, other influential groups (e.g., unions, ethnic or religious leaders), and those most impacted by reforms. Since reforms are politically sensitive and can have economic and social impacts, reform implementation requires sustained public support with clear and sufficient information. Effective messaging is critical to justify the need for reform and communicate complex subsidy policy and pricing to provide sufficient clarity.

Experts advised development of a far-reaching communication strategy and pursuing transparency and inclusivity throughout the process, including public discussions to address concerns. Effective strategies include knowing your audience and how they will receive the message and conveying the message through the most appropriate medium. Social media will play a significant role in the roll out of reforms, particularly for some segments of the population. Presenters recommended that governments track and communicate progress during reform implementation by posting information online and through public outreach.

Some participants suggested that governments can also promote transparency by participating in international peer reviews and employing widely available tools and resources such as the OECD Inventory of Support Measures. One expert noted that the peer review process itself can be useful as it requires interagency coordination and helps an economy reconsider the rationale of subsidies and whether they are still relevant and effective.

## **WORKSHOP RECOMMENDATIONS**

Experts agreed that subsidy removal, when part of a larger policy agenda, can bring multiple gains, including more efficient energy use and improved environmental performance in addition to fiscal gains. Key recommendations from the discussions are noted below.

### **Planning/Pricing:**

- Develop comprehensive reform plan with clearly defined objectives & long-term goals
  - Include contingency plans for significant price increases (by fuel type)
- Implement gradual price increases with transparency around adjustments
  - Provides predictability, and shows reforms are part of a broader strategy
- Improve efficiency of state owned enterprises and strengthen governance to eliminate inefficiencies
- Provide temporary support for energy intensive sectors and/or small- and micro- firms that could otherwise be driven out of the market
- Depoliticize fuel pricing
  - Automatic pricing mechanisms with price smoothing can be most effective
  - Establish independent body to administer adjustments and/or conduct audits
- Implement parallel activities such as investments in energy saving technologies and energy efficiency improvements to reduce wasteful consumption

### **Mitigation measures:**

- Understand how reforms would affect various groups, including gender impacts
  - Consider income, energy use, energy supply, location and other factors to identify “vulnerable” groups
- Assess adequacy of social safety net and utilize existing social programs where possible
- Target subsidies to those most affected and through effective delivery mechanisms
- Reassess mitigation measures along the way to address unintended consequences
- Consider impacts on small-/micro-firms and provide short-term assistance as needed
- Investing in social services (e.g. health, education, transport, clean energy) can help mitigate impacts

### **Communication/Transparency:**

- Implement far-reaching communication strategy with ongoing engagement
  - Engage policymakers, critical interest groups, industry, civil society, vulnerable populations, key opposition groups
- Provide clear message on the need for reform and how savings will be used
- Consider cultural, social, generational aspects in messaging and most effective media
- Deliver extensive information and transparency throughout implementation process
- Take advantage of previous experience, other case studies, and international tools to build the case for reform, benefit from lessons learned and implement best practices.

## Appendix. Workshop Agenda

\*Presentations can be accessed at: <https://tinyurl.com/APEC-FFSR-Workshop>

### Agenda

APEC Fossil Fuel Subsidy Reform (FFSR):

Workshop on Effective Pricing Mechanisms and Mitigation Strategies

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10 - 11 July 2017

The Westin Jakarta

Jakarta, Indonesia

Day 1	10 July 2017
8.30 – 9.00 am	<b>Arrival and Registration</b>
9.00 – 9.30 am	<p><b>WELCOME/OVERVIEW OF THE WORKSHOP</b></p> <p><u>Ms. Elena Thomas-Kerr</u>, Senior Advisor, Office of International Affairs, U.S. Department of Energy</p> <p><u>Ms. Nunuk Wiryawan</u>, Deputy Director of Downstream Oil &amp; Gas, Directorate General of Oil &amp; Gas, Ministry of Energy and Mineral Resources, Indonesia</p> <p><u>Mr. Rofyanto Kurniawan</u>, Director, Center for Budget Policy, Fiscal Policy Agency, Ministry of Finance, Indonesia</p>
9.30 – 9.45 am <b>Session 1</b>	<p><b>STATUS OF FOSSIL FUEL SUBSIDIES IN THE APEC REGION: INTERNATIONAL ENERGY AGENCY (IEA) STUDY</b></p> <p><b>Tracking Fossil Fuel Subsidies in APEC Economies</b> <u>Mr. Toshiyuki Shirai</u>, Senior Energy Analyst, IEA (presented by Ms. Elena Thomas-Kerr)</p>
9.45 – 11.00 am <b>Session 2</b>	<p><b>EFFECTIVE PRICING MECHANISMS</b></p> <p><b>Moderator:</b> <u>Mr. Jun Rentschler</u>, UCL/OIES</p> <p><b>Fuel Price Subsidy Reforms: Policy Challenges and Key Ingredients for Success</b> <u>Mr. Kamil Dybczak</u>, Economist, Fiscal Affairs Department, International Monetary Fund (IMF)</p> <p><b>Automatic Pricing Mechanisms: What to Do When Prices Go Up</b> <u>Mr. Peter Wooders</u>, Group Director, Energy and Programme Leader, Global Subsidies Initiative (GSI) International Institute for Sustainable Development (IISD)</p> <p><i>Question and Answer</i></p>
11.00 – 11.30 am	<b>Coffee Break</b>

<p>11.30 – 1.00 pm <b>Session 3</b></p>	<p><b>MITIGATION: STRATEGIES FOR MANAGING IMPACTS OF REFORMS</b></p> <p><b>Moderator:</b> <u>Mr. Peter Wooders</u>, IISD/GSI</p> <p><b>Understanding Impacts on Most Vulnerable Populations and Properly Targeting Assistance</b> <u>Dr. Bansari Saha</u>, Senior Manager, ICF/US-ATAARI (presented by Ms. Elena Thomas-Kerr)</p> <p><b>Understanding Gender Impacts and Properly Targeting Assistance</b> <u>Ms. Niken Kusumawardhani</u>, Researcher, SMERU Research Institute</p> <p><b>What Determines the Impacts of Subsidy Reform on Poverty? Evidence from Nigeria</b> <u>Mr. Jun Rentschler</u>, Researcher, University College London; Research Fellow, Oxford Institute for Energy Studies &amp; Graduate Institute for Policy Studies Tokyo</p> <p><i>Question and Answer</i></p>
<p>1.00 – 2.30 pm</p>	<p><b>Lunch</b></p>
<p>2.30 – 3.00 pm <b>Session 4</b></p>	<p><b>MITIGATION: STRATEGIES FOR MANAGING IMPACTS OF REFORMS (Cont.)</b></p> <p><b>Impacts of Fossil Fuel Subsidy Reforms on Firm Performance: Evidence from Indonesia</b> <u>Mr. Martin Kornejew</u>, Researcher, Institute for Sustainable Resources, University College London, Kiel University</p> <p><i>Question and Answer</i></p>
<p>3.00 – 4.00 pm <b>Session 5</b></p>	<p><b>APEC CASE STUDIES AND BEST PRACTICES – PART 1</b></p> <p><b>Moderator:</b> <u>Mr. Kamil Dybczak</u>, IMF</p> <p><b>Fossil Fuel Subsidies Reform in Viet Nam</b> <u>Mr. Vinh Do Thanh</u>, International Cooperation Department, General Directorate of Energy, Ministry of Industry and Trade, Viet Nam</p> <p><b>Moving Towards Energy Transition: Peer Review on Fossil Fuel Subsidies in Chinese Taipei</b> <u>Dr. Ming-Chih Chuang</u>, Deputy Director, Bureau of Energy, Ministry of Economic Affairs, Chinese Taipei</p> <p><i>Question and Answer</i></p>
<p>4.00 – 4.30 pm</p>	<p><b>Coffee Break</b></p>
<p>4.30 – 5.00 pm</p>	<p><b>APEC CASE STUDIES AND BEST PRACTICES – PART 1 (Cont.)</b></p>



	<p><b>Petroleum Excise Reform Experience in The Philippines</b>  <u>Mr. Arvin Quinones</u>, Strategy, Economics, and Results Group, Department of Finance, The Philippines</p> <p><i>Question and Answer</i></p>
5.00 – 5.30 pm	<p><b>DAY 1 WRAP UP</b>  <u>Ms. Elena Thomas-Kerr</u>, U.S. Department of Energy</p>
<b>Day 2</b>	<b>11 July 2017</b>
8.30 – 9.00 am	<b>Arrival and Registration</b>
9.00 – 10.30 am Session 6	<p><b>TRANSPARENCY/COMMUNICATION: ENGAGING STAKEHOLDERS, TRACKING IMPLEMENTATION AND CONVEYING PROGRESS TO THE PUBLIC</b></p> <p><b>Moderator:</b> <u>Mr. Jun Rentschler</u>, UCL/OIES</p> <p><b>Public Communication in Delivering Fossil Fuel Subsidy Reform: Indonesia Fossil Fuel Subsidy Reform Experience</b>  <u>Mr. Lucky Lontoh</u>, Associate, Global Subsidies Initiative (GSI) International Institute for Sustainable Development (IISD)</p> <p><b>Inter-Ministerial Coordination for Indonesia’s Fiscal Policy Development in Energy Sector: A Non-Governmental Perspective and Experience</b>  <u>Dr. Aidy Halimanjaya</u>, Research Associate, Center for Sustainable Development Goals</p> <p><b>Tracking Implementation and Monitoring Mitigation Measures to Ensure Progress</b>  <u>Ms. Assia Elgouacem</u>, Trade Analyst, Trade and Agriculture Directorate, OECD</p> <p><i>Question and Answer</i></p>
10.30 – 11.00 am	<b>Coffee Break</b>
11.00 – 12.30 pm Session 7	<p><b>APEC CASE STUDIES AND BEST PRACTICES – PART 2</b></p> <p><b>Moderator:</b> <u>Mr. Kamil Dybczak</u>, IMF</p> <p><b>Subsidy Reform in Indonesia</b>  <u>Mr. Rofyanto Kurniawan</u>, Director for Budget Policy, Ministry of Finance, Indonesia</p> <p><b>Reform’s Impact on Poverty Reduction in Indonesia</b>  <u>Dr. Elan Satriawan</u>, Chief of Policy Working Group, TNP2K</p> <p><b>Fossil Fuel Subsidy Reform in Thailand: The Case of LPG</b>  <u>Ms. Maythiwan Kiatgrajai</u>, Energy Policy and Planning Office, Ministry of Energy, Thailand</p>

	<i>Question and Answer</i>
<b>12.30 – 2.00 pm</b>	<b>Lunch</b>
2.00 – 3.00 pm <b>Session 8</b>	<p><b>NON-APEC CASE STUDIES</b></p> <p><b>Moderator:</b> <u>Mr. Lucky Lontoh</u>, IISD/GSI</p> <p><b>Tariff and Subsidy Policy of Energy Sector in the Republic of Armenia</b> <u>Dr. Anna Avanesyan</u>, Chief Expert at the Financial Analysis Department, Public Services Regulatory Commission of the Republic of Armenia</p> <p><b>Subsidy Reform Experience in India</b> <u>Mr. Mohanakumar Rahul</u>, Assistant Director, Ministry of Finance, India</p> <p><i>Question and Answer</i></p>
<b>3.00 – 3.30 pm</b>	<b>Coffee Break</b>
3.30 – 4.00 pm	<p><b>NON-APEC CASE STUDIES (Cont.)</b></p> <p><b>G20 Peer Reviews and Lessons Learned</b> <u>Ms. Assia Elgouacem</u>, Trade Analyst, Trade and Agriculture Directorate, OECD</p> <p><i>Question and Answer</i></p>
4.00 – 4.30 pm	<b>Q&amp;A/GENERAL DISCUSSION</b>
4.30 – 5.00 pm	<p><b>DAY 2 WRAP UP AND EVALUATIONS</b></p> <p><u>Ms. Elena Thomas-Kerr</u>, U.S. Department of Energy</p>