

# Time to price energy right

*Ensuring that fossil-fuel prices reflect their true cost to the environment is critical for promoting the transition to greener economic growth. Can governments build on the political will shown at Paris and put energy price reform into action?*

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**E**ssentially, all countries over-consume and over-invest in fossil-fuel energy. The reason is that households and firms are not fully charged for the costs of using fossil fuels, which include both the supply costs and their environmental costs. Fossil-fuel combustion is the major cause of rising atmospheric concentrations of heat-trapping gases, as well as outdoor air pollution, which causes over three million premature deaths a year.

The extent of undercharging is quite staggering (see Figure 1). According to IMF estimates, fossil-fuel subsidies – broadly measured by the difference between prices needed to reflect combined supply and environmental costs, and current prices, multiplied by fuel use – amounted to \$5.3 trillion in 2015, or 6.5 per cent of global gross domestic product (GDP).

Undercharging for carbon emissions accounted for about a quarter of this global subsidy; undercharging for local air pollution damage about a half; the failure to fully reflect broader environmental costs of vehicle use (like road congestion and accidents) in petroleum product taxes another 12 per cent; and the failure to apply fully general consumption taxes to energy six per cent (see Figure 1).

Sometimes discussion of energy subsidies focuses on energy producers, such as those in the Middle East and North Africa, keeping domestic energy prices below international prices, but this source of underpricing energy accounted for only six per cent of the global subsidy. Energy

subsidies, moreover, are pervasive across countries and regions: advanced countries, for example, accounted for a quarter of global energy subsidies, and emerging and developing Asia about a half.

Broken down by fuel product, coal is the main culprit, accounting for about three fifths of the global subsidy, reflecting its high rates of carbon and local air emissions. Natural gas (a much cleaner fuel, especially for local air pollution) accounted for a tenth of the subsidy, and petroleum products (which are already subject to significant taxation in most countries) about three tenths of the subsidy. It is ironic that coal, the dirtiest fuel, has rarely been taxed.

Fully reflecting the supply and environmental costs in energy prices needs to be the centrepiece of efforts to address the major environmental challenges of the 21st century. The most effective way

A requirement for energy generated by renewables, by contrast, promotes only the first of these responses. Getting energy prices right also establishes the price signals that are essential for redirecting investment and financial flows towards low-emission technologies.

There are some nuances in designing energy price reform. For example, upfront taxes on coal supply need to be combined with rebates to reward downstream adoption of technologies (like sulphur dioxide scrubbers at coal plants) that reduce air pollution emission rates. Or, if administratively feasible, emissions out of the smokestack can be directly priced instead.

However the details are worked out, the environmental benefits of getting energy prices right would be huge: about a 25 per cent reduction in global carbon emissions and a 60 per cent reduction in premature deaths from fossil-fuel air pollution.

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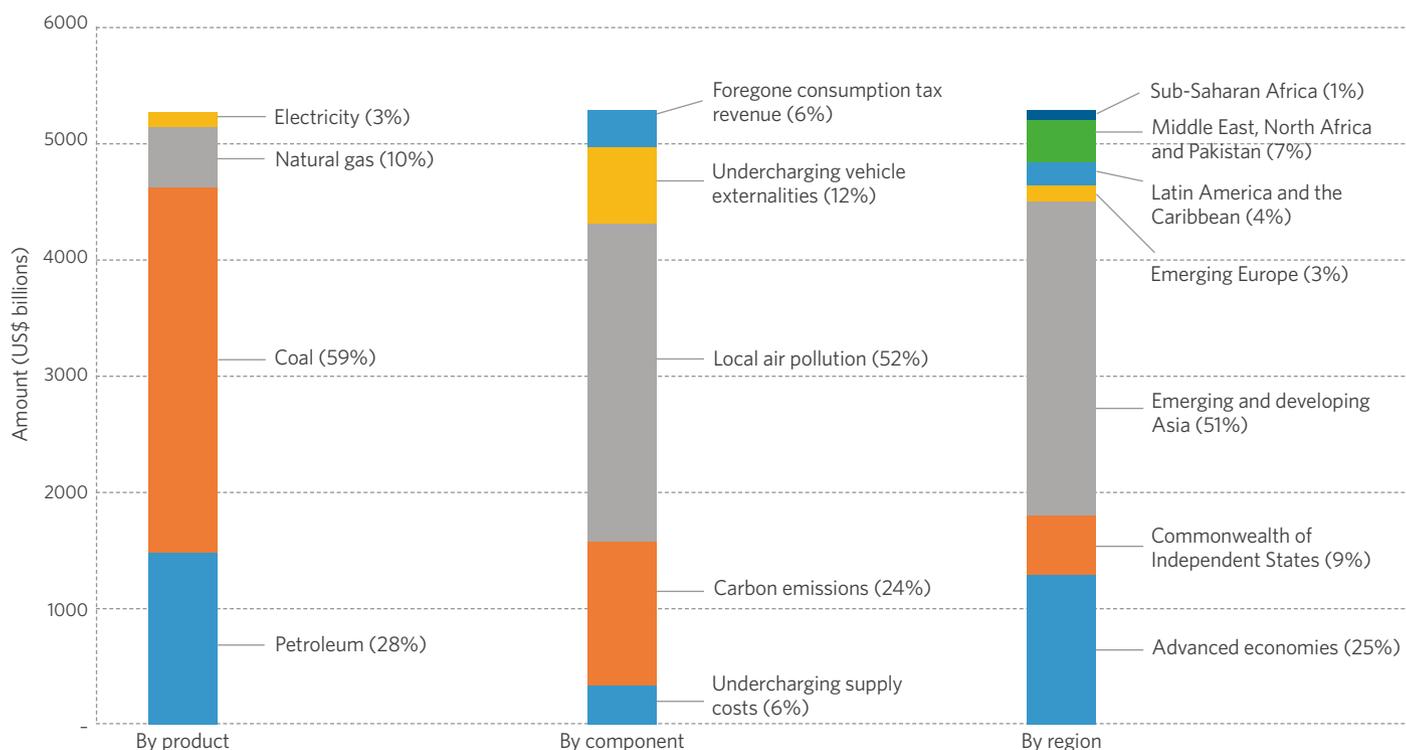
***Almost 90 per cent of global GHGs remain unpriced... reform needs to go well beyond liberalising energy prices to factoring environmental costs fully into energy taxes***

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to reduce use of a (dirty) fuel is to raise its price, as this promotes the entire range of behavioural responses for reducing it.

For example, taxing coal reduces its use by making coal-generated electricity more expensive, encouraging a switch to other forms of electricity generation such as renewables, gas and nuclear, as well as reducing overall demand for electricity. It also leads to reduced coal use in other sectors (like steel production).

The fiscal rationale for energy price reform should not be understated either. Getting energy prices right at the global level would generate an extra four per cent of GDP in new revenue – less than the amount of the energy subsidy (because fuel use falls in response to higher fuel prices) but easily enough in the average developing country (though not all of them) to pay for public health spending or to eliminate corporate income taxes. The fiscal rationale

**Figure 1: Global energy subsidies, 2015**


Source: David Coady, Ian Parry, Louis Sears and Baoping Shang. 2015. "How Large Are Global Energy Subsidies?" Working Paper 15/105. Washington, DC: International Monetary Fund

for energy taxes can be especially strong in countries where revenues from broader fiscal instruments are severely hindered, due to a large portion of economic activity occurring in the informal sector.

One argument against energy price reform is that it harms the poor. However, most of the burden (typically 90 per cent or more) of higher energy prices is borne by the non-poor. Nonetheless, price reform needs to be accompanied by measures (like strengthened social safety nets) to compensate the poor, which will use up a minor portion (around 10 per cent or less) of the new revenues.

Another argument against higher energy prices is that they can harm the competitiveness of energy-intensive, trade-exposed industries (aluminium, cement, petro-chemicals, etc). However, using energy tax revenue to cut broader taxes on labour and capital provides a general offsetting boost to competitiveness. Efficiently allocating

a country's scarce resources implies that those firms that are unable to compete with properly priced energy should eventually cease operation, but transitory measures to help the adjustment process are needed, such as worker relocation schemes.

### Policy reform

We are seeing some promising policy reforms on the ground. For example, 40 countries now have some form of carbon pricing at the national level, and China has announced it will join this group in 2017. And we are seeing energy price liberalisation in many countries such as Angola, Egypt, Haiti, India, Indonesia, Jordan, Mexico, Morocco, Saudi Arabia, UAE and Yemen, which, not long ago, seemed a remote prospect.

While welcome, these policy developments are only the start of the process. Almost 90 per cent of global greenhouse gases remain unpriced at present. Reform needs to go well beyond

liberalising energy prices to factoring environmental costs fully into energy taxes.

Nonetheless, there are grounds for further optimism. On average, around three quarters of the benefits of energy price reform are domestic rather than global – so countries can move ahead unilaterally with reform and make themselves better off, rather than needing to wait for others to act.

Countries are under significant peer pressure to demonstrate progress on emissions commitments made by 195 governments for the 2015 Paris Agreement on climate change. Finance ministers are continually on the lookout for new sources of revenue, given historically high fiscal pressures. And lower international prices for petroleum, coal and natural gas provide a window of opportunity to lock in higher energy taxes, while political opposition to reform may be weaker than in the past.

The stakes from energy price reform are huge. Now is the time to act. ●