



## SUMMARY FOR POLICY-MAKERS

# Fossil Fuel Subsidy Reform and the Just Transition: Integrating approaches for complementary outcomes

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## Introduction

This paper articulates how fossil fuel subsidy reform (FFSR) can contribute to a just transition, and how FFSR can be more successful under a just transition framework. The report explores a number of reasons for a framework, including alignment of the objectives of FFSR and just transition and, very importantly, FFSR's ability to unlock revenues for implementing just transition.

According to the *Guidelines for a Just Transition Towards Environmentally Sustainable Economics and Societies for All*, transitions to environmentally and socially sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication (International Labour Organization, 2015). The specific guidelines for just transition include:

- Employment-centred macroeconomic and growth policies
- Environmental regulations in targeted industries and sectors
- Creating an enabling environment for sustainable and greener enterprises
- Social protection policies to enhance resilience and safeguard workers from the negative impacts of climate change, economic restructuring and resource constraints
- Labour market policies that actively pursue job creation, limit job loss and ensure that adjustments related to greening policies are well managed
- Occupational safety and health policies to protect workers from occupational hazards and risks
- Skills development to ensure adequate skills at all levels to promote the greening of the economy
- The establishment of mechanisms for social dialogue throughout policy-making processes at all levels
- Policy coherence and institutional arrangements for the mainstreaming of sustainable development and ensuring stakeholder dialogue and coordination between policy fields

## Promoting Sustainability through Just Transition and FFSR

These subsidies also exacerbate greenhouse gas emissions, which contribute to climate change: "Research estimates that the removal of global fossil fuel subsidies to fossil fuel consumption would lead to a global decrease in carbon emissions of between 6.4 and 8.2 per cent by 2050" (Merrill, et al., 2017). In addition, a removal of global subsidies to fossil fuel production would save 37 Gt of carbon dioxide emissions over the same timeline (Gerasimchuk, Bassi, Ordonez, Doukas, & Merrill, 2017). Thus, the elimination of all subsidies to fossil fuel production and consumption globally will reduce emissions by roughly 10 per cent.



Fossil fuel subsidies act against sustainable development, and therefore their reform—understood to include both phase-out and better targeting to vulnerable groups—can be a useful tool in advancing both just transition and transition to a green economy

The paper goes into detail about the various ways in which FFSR can be consistent with just transition. The scale of current fossil fuel subsidies in the world coupled with the massive financial needs for transition are early indicators of the benefits of approaching FFSR with just transition in mind. Leveraging this misspent finance to support just transition is just one of many ways in which these issues can coalesce.

## The Economic Dynamics of Just Transition and FFSR

From an environmental standpoint, fossil fuel subsidies support activities that promote the combustion of these fuels. Current global estimates value these subsidies at at least USD 425 billion per year (Gerasimchuk, Wooders, Merrill, & Sanchez, 2017). The International Energy Agency (IEA) provides 2015 subsidy estimates for countries around the world. The top fossil fuel subsidies are paid out by Iran and Saudi Arabia, which spend an estimated USD 52.400 billion and USD 48.650 billion, respectively (IEA, 2016). Outside of the Organization of the Petroleum Exporting Countries, Russia, China and India have the largest fossil fuel subsidies, amounting to an estimated USD 30.333 billion, USD 19.240 billion, USD 19.210 billion, respectively (IEA, 2016).

The cost of just transition is estimated to be very high according to recent estimates. A just transition framework for U.S. workers involved in fossil fuel production alone is estimated at USD 600 million per year for supports for workers facing retrenchments, guaranteeing pensions for workers in affected industries and mounting transition programs for affected communities (Pollin & Callaci, 2016). Another example of a transition from the Netherlands for mining workers was estimated to cost approximately EUR 11.6 billion in national subsidies for supporting coal prices and regional reconversion (Caldecott, Sartor, & Spencer, 2017). One estimate of the Dutch case estimated the re-investment in new economic activities at EUR 300,000–400,000 per long-term job created (Caldecott, Sartor, & Spencer, 2017)

## The Dimensions of FFSR and its Relation to Just Transition

Approaching just transition through FFSR requires an understanding of what FFSR can achieve and how this reform can be successful and long lasting. Fossil fuel subsidies are a barrier to just transition and green economies because they are often socially regressive—failing to help the poor and propping up sectors that would otherwise become non-competitive rather than focusing on long-term economic and employment planning. In 2010, a review of developing countries by the International Monetary Fund indicated that 92 per cent of fossil fuel consumption subsidies were actually realized by the top four quintiles of society (Friends of Fossil Fuel Subsidy Reform, 2015). This same study found that the distribution of subsidy benefits was actually weighted to the top quintile for all fuels studied (Arze del Granado, Coady, & Gillingham, 2010). One of the main justifications for subsidies are the benefits to the poor, but in reality it is not the poor who receive most of the benefits. Even if the aforementioned environmental and economic arguments for reform are set aside, in most cases studies, these fossil fuel subsidies fail in terms of even their social justification for existence. If reformed, programming, financial supports and other benefits could be much better targeted to workers in fossil fuel sectors and the poor, who need these supports the most.

Three core elements for successful fossil fuel subsidy reform have been identified in the Global Subsidies Initiative (GSI) publication *A Guidebook to Fossil-Fuel Subsidy Reform for Policy-Makers in Southeast Asia* (Beaton et al., 2013). These include:

- Getting the prices right
- Managing impacts
- Building support

These three elements serve as useful guidance for approaching just transition through FFSR.



## Addressing Pricing Challenges and Fixing Distorted Markets through a Just Transition Framework

When fossil fuels are subsidized, these subsidies “do not reduce the cost of energy, they just move it onto the population in a different way” (Beaton et al., 2013). This means that these subsidies still have to be accounted for either through increased taxes (to fund public expenditures on subsidies), foregone expenditures (e.g., in employment supports or the social safety net), foregone revenues (that could be invested in just transition), public deficits and a lack of investment in other infrastructure that could be beneficial to workers, families and communities. These issues do not even take into account the energy market distortion that these subsidies can create, stunting growth in energy sectors that could produce green and decent jobs.

Relating to the wider market distortion issue that is inherent in fossil fuel subsidies, these subsidies can create competitive advantages for fossil fuels that also act as competitive disadvantages for non-fossil fuel energy sources. This distortion alone hinders structural transformation for sectors and workers in those sectors more consistent with the green economies that will form the basis of sustainable employment in the longer term. By making fossil fuel technologies cheaper to use, these subsidies also make it more difficult for greener and more transition-friendly technologies to emerge, stunting transition.

Getting the prices right entails focusing on the fundamentals of supply and demand. There are two components to good fossil fuel pricing structures (Beaton et al., 2013):

1. Market-based prices for fossil fuels
2. Creating and enforcing a competitive and efficient fossil energy market (by avoiding false price indicators through subsidies)

However, in the context of just transition, and even just within achievement of successful FFSR, there is recognition that these transitions cannot occur overnight without significant impacts on the economy, industry, workers and people who use fossil fuels. The risk to FFSR on its own is that unsustainable implementation efforts can lead to repeal of reform efforts, the re-imposition of subsidies and sector instability.

For the just transition, there are also very real concerns about getting the prices right. While the goal is moving to market-based prices, transitions have to consider the impact on workers and communities that are used to subsidized energy prices, threats to energy access from price spikes and fluctuations in energy prices. Industrial sectors and communities have long been used to stabilize below-market price energy access. Impacts on the economy from shifts in energy prices from subsidized, below-market rates to international market prices can also cause competitiveness impacts for energy-intensive industries, which can lead to job losses and economic retrenchment in certain sectors unless efforts are made to adjust.

There are tools for ensuring that countries get to the right prices in sustainable ways. These can include temporary adjustment mechanisms that transition to market prices over time, but in a measured and predictable way. To ensure fiscal sustainability while minimizing fluctuation and volatility, mechanisms are needed that both allow fuel prices to stay close to market rates and that can protect consumers from shocks that have negative social impacts.

Subsidy reform can also entail targeted subsidies for supporting employment, such as in the Philippines where targeted supports were put in place to assist Jeepney drivers through price controls, a move that not only assisted drivers but helped retain a popular form of public transit for locals (Beaton et al., 2013). In these cases, a form of subsidy remained after overall fuel subsidy reform, but it was much more targeted than the previous subsidies for the purpose of assisting a key public service and exposed workers.

Industry and large-scale employers also give us examples of how reform can be beneficial. A GSI study of Vietnam, found that foreign investors were not seriously concerned about the prospect of gradually higher power prices as subsidies were reformed, provided supply investments were secure. Vietnam Electricity ran at a loss and there was a need to raise prices to secure reliability and supply. In fact, rather than increased rates, industry was much more concerned about inadequacy of power supply and prospects for diminishing reliability rather than higher prices



(Garg, Bridle, & Clarke, 2015). The point is that if subsidies are reformed (in an effective manner considerate of impacts) and subsidy revenue is reinvested into infrastructure that supports industry, some benefits can help support industrial development and economic growth from getting the prices right.

Working with employers and employees through the policy design process can also help to get the prices right during the adjustment while focusing on retaining competitive markets. Transparent and planned price adjustments as well as investing subsidy savings, at least partially, in lower-carbon development can help industrial sectors to adjust to cleaner energy sources and maintain industrial competitiveness. These types of investments can also lead to employment that is more prepared for green economies.

It is very important to get the prices right through FFSR strategies, moving to market prices in a manner that considers impacts. Sudden shifts can create shocks to the economy and citizens, while gradual approaches have risks related to hoarding fuels to profit from adjustments, as well as a need for sustained political capital. The situation in each country is different, as are the economic dynamics. However, moving to market rates in a sustainable manner and creating effective and competitive markets for fossil fuels are essential to FFSR, and can contribute to creating the type of economic climate consistent with goal of just transition, provided the ways that this shift takes place is consistent with just transition guidelines.

## **Managing Impacts and Avoiding Unintended Consequences of FFSR**

Common potential impacts of reform include inflation, changes in energy access and potential exacerbation of poverty impacts for low-income households. When FFSRs are enacted, the changes that they make to markets cause reactions among enterprises. Employment can commonly become an area of concern as well. If subsidy reforms lead to increases in energy prices, users may also switch to fuels that are more negative in terms of their environmental, social or health impacts. These impacts are significant enough to warrant managing the impact of reform, and potential response measures, as outlined in the following section.

### *Managing Impacts of Reform*

Unintended negative impacts may come with reforms that are aimed at improving economic, environmental and social prosperity, including inflation and reduced energy access. There are ways, however, to anticipate and manage these impacts and avoid or mitigate their ability to detract from the objectives of just transition.

Projection and estimation of impacts is the first step in this process. Concerning just transition, estimating the impacts of FFSR would entail mapping out the extended impacts of the proposed reforms on employers and workers in multiple sectors. The principles for just transition entail the development of coherent policies across the economic, environmental, social, education/training and labour portfolios. With this in mind, consideration of impacts would have to cross these multiple issues. Developing a set of indicators that can be qualitatively and quantitatively measured is a good first step and can be done by engagement across government, and then verified in parallel to the engagement process for policy design. Examples of issues considered in just transition that could be considered for indicators include labour force participation, skills training and education availability, in addition to more standard indicators such as GDP, inflation and greenhouse gas emissions (International Labour Organization, 2013; Cruz, n.d.). The overall set of indicators is likely to be unique to each country based on individual goals, impacts and the makeup of the economy.

When considering impacts, both direct and indirect impacts must be taken into account. Indirect impacts can be large and are made up of things like higher prices for goods and services consumed by households. The prices of these goods are higher because of the increased production costs that result in higher consumer prices (Arze del Granado et al., 2010).

By demonstrating and communicating actions to mitigate the impacts, governments pushing these mechanisms in partnership with key stakeholders can help address concerns and develop more positive outcomes. It is also essential that employers' and workers' engagement is a part of both managing impacts and impact assessment for FFSR. Involvement of these two groups of stakeholders and credible integration of their concerns into negative impact mitigation measures are key to building support for the response measures.





Communicating the benefits of FFSR and just transition for all of society is key not only to keeping a positive perspective on transition, but this is also central to building the case for reform. This can be particularly important for workers who are subject to messages from the opponents of FFSR that claim that it will lead to job losses for workers.

### *Avoiding Specific Unintended Consequences*

There are many ways to avoid some of the unintended consequences of FFSR, while also leveraging greater outcomes consistent with just transition. Some of the common approaches include:

- **Utilizing Created Budget Space from FFSR:** Utilizing budget space from removed subsidies could be as simple as cash transfers to low-income householders, or other approaches such as broader-scale tax reforms. In Indonesia, the savings from FFSR were reinvested in regional transfers, growth and poverty programs and infrastructure. These measures all help to address some areas of need and provide benefits that help offset impacts of subsidy reform, while also indicating the long-term benefits of eliminating subsidies.
- **Smooth Implementation Plans:** Implementation plans that are well planned, with long lead times, transparent approaches, understandable processes and necessary regular review and adjustment will go a long way in helping to avoid unintended consequences. Phased implementation over a period of time, rather than sudden changes, can also be beneficial. Germany has an example of how FFSR implementation has been structured in a way that is consistent with concern for employment impacts. The Hard Coal Financing Act was adopted in 2007, stipulating the phase-out of production subsidies through 2018. Social acceptability was a key aspect of this reform and, as subsidies were reformed and removed, those that remained were designated to early-retirement schemes as an attempt to compensate for the unemployment caused by the phase-outs due to subsidy reform (Whitley & van der Burg, 2015).
- **Supports for Workers:** It is well understood that the types of economic shifts that are consistent with FFSR and green economy transitions will come with job losses, particularly in “brown” sectors that see jobs replaced by greener sectors (Kruse, Dellink, Chateau, & Agra, 2017). While the overall size of job turnover is predicted to be small, the ease of transition will be tied closely to the transferability of skills across sectors. The Organisation for Economic Co-operation and Development (OECD) has already noted the critical role of skills development for workers and that specifically targeted programs for regions with a high share of the labourer force in affected sectors could help alleviate some employment pressures (Kruse et al., 2017). Wage supports for expanding sectors and investment in unemployment benefits for transitioning workers have also been touted to mitigate job losses at modest costs (Whitley & van der Burg, 2015).
- **Supports for Energy Consumers:** For lower-income households and poor communities, the impacts of FFSR can be just as disruptive. Ensuring energy access for consumers to cleaner fuels is an essential part of any reform. Options include targeting subsidies only for the poorest households, technological assistance (e.g., cleaner cookstoves) or other forms of financial supports (e.g., supports for food, investment in renewable energy or even cash transfers) that do not take the form of subsidies for energy fossil fuels.
- **Employment Potential of the Renewable Energy Sector:** One of the ways to address job losses is through a focus on employment opportunities in the renewable energy sector. By restructuring and removing fossil fuel subsidies, government can create a more level playing field for clean energy technologies. The renewable energy sector is also shown to be more labour-intensive than fossil fuels. One study projected the average number of jobs per megawatt of capacity of solar photovoltaic to be between seven and 11 times that of coal and natural gas (Table 1) (ILO, 2011).



**Table 1. Average employment (jobs per megawatt of average capacity) over facility life (ILO, 2011)**

	Manufacturing, construction, installation	Operating & maintenance / fuel processing	Total
Solar photovoltaic	5.76-6.21	1.20-4.80	6.96-11.01
Wind power	0.43-2.51	0.27	0.7-2.78
Biomass	0.4	0.38-2.44	0.78-2.84
Coal fired	0.27	0.74	1.01
Natural gas fired	0.25	0.70	0.95

## Building Support for Subsidy Reform

Building support for reform “is about creating the political space that makes reform possible” (Beaton et al., 2013). Elements of this include internal coordination across governments, ensuring that government is speaking with one voice. Certainly if the issue is subsidy reform, coordination with financial and energy ministries is needed, as well as political leadership. Internal coordination must also include integration of environmentally and socially focused bodies of government, including ministries representing health, poverty, gender, education, employment and environmental issues.

Being inclusive of all of the internal government bodies can help ensure that the just transition guiding principles are respected through the policy design process. In terms of building support and the case for FFSR that is supportive of the objectives of just transition, this would mean that the voices within government that represent gender, workers’ rights and other important issues have an important role in the reform process. This ensures reform is inclusive of the viewpoints, concerns, opportunities and challenges that may arise. FFSR may not be able to address all of these issues, but with a strong intergovernmental dialogue and a suite of complementary policies, the design and implementation process can at least ensure inclusivity and buy-in from across government.

Anabella Rosemburg (2017) of the International Trade Union Confederation discusses what will be required to build worker support for just transition in the areas of macroeconomic, sectoral and enterprise policies; rights and occupational safety and health; social protection; active labour market policies; skills development; social dialogue and tripartism; community renewal/economic diversification; and comprehensiveness. She offers guidance on building worker support for economic transitions that can be informative for FFSR, paraphrased here (Rosemburg, 2017):

- **Macroeconomic, Sectoral, and Enterprise Policies:** New jobs created in sectors where growth is needed under the new model, sectoral policies with long-term targets for emissions and social progress, and supportive public sector policies such as procurement are key for fighting the jobs-versus-environment narrative
- **Rights and Occupational Safety and Health:** Ensuring that jobs in green sectors are appealing to workers, with decent incomes and safe work conditions, to support transition.
- **Social Protection:** Social security/insurance schemes; this also means looking to minimize job losses and provide income and employability supports to workers.
- **Active Labour Market Policies:** Focusing on workers at risk of unemployment and improving their employability, delivering employment services.
- **Skills Development:** Helping workers through skills development to obtain better and more sustainable jobs.
- **Social Dialogue and Tripartism:** Processes of discussion between workers, employers and governments, with resources to design responses to challenges.
- **Community Renewal/Economic Diversification:** Anticipating losses in revenue from declining sectors in dependent communities and empowering communities so that investments are oriented to options supported by the community.
- **Comprehensiveness:** Bringing this all together in a simultaneous transition.



The Just Transition Centre has looked at the issue of building support with companies and investors, highlighting their need to be involved in social dialogue. Several case studies are provided in the report *Just Transition: A Report to the OECD* (Smith, 2017). For example, the Danish transition from coal to wind starting in the 1970s highlights the transition benefits for industry, as Denmark's industrial policy for the wind sector “created a virtuous cycle of jobs in wind, wind power production, and investment in wind” (Smith, 2017). Industrial strategies to support the development of the wind power sector were seen as critical to the success of transition, in addition to a strong social dialogue between key stakeholders. In this example and others, clear and coherent government policies and effective stakeholder dialogue processes are seen as critical for building support from all stakeholders, including workers and employers. Effective FFSR reforms are built upon an understanding of how stakeholders feel about reforms, the options for reforms and how they will react to changes (Beaton et al., 2013).

Given the employment impacts of FFSR and just transition, special attention must be paid to including employers and employees as “core partners” (Smith, 2017) in stakeholder engagement. In parallel to steps highlighting likely impacts and consulting stakeholders on reform plans, various stakeholders representing diverse views (e.g., gender, poverty, labour, climate change, etc.) would each have an opportunity to suggest approaches and complementary policies that could achieve the ultimate objectives for just transition. These approaches and policies would then be considered and analyzed by government before any firm decisions are made in terms of approach.

## Creating the Budgetary Space Required for Just Transition Through Subsidy Reform

There is much focus on the need for directing public and private investment to low-carbon and sustainable outcomes, and also the significant requirements for climate change. OECD has projected the scaling up of developed country pledges for climate finance to total as much as USD 67 billion by 2020, which still only represents two thirds of the required USD 100 billion goal (OECD, 2016), with uncertainty about the potential for private finance. Compounding this is that this commitment is *only* for addressing climate change, with no guarantee that this finance will also support objectives of just transitions (although this is certainly the hope of many countries). Individual country estimates for just transition have also reached into the billions of dollars, but lack clarity on how much of this is infrastructure and how much is for worker supports.

Regardless, we know three things:

1. The scale of finance required is not known but is expected to be in the order of many billions of dollars.
2. Developed country contributions to international climate finance, even when coupled with private investment, are not guaranteed to provide the scale or targeted supports required to support just transition.
3. As mentioned earlier, fossil fuel subsidies total at least USD 425 billion per year, which, if removed could go a long way to financing just transition.

This is why FFSR can be such a fundamental tool for financing just transition. At a time of austerity in many regions of the world, the budgetary space required for investments in worker supports, education, health and social programming can place pressure on public budgets and strain the political economy and public support for just transition if the financing is not in place to achieve the desired objectives.

Removing direct public subsidies for fossil fuel energy production and consumption can free public funding for more targeted investments in just transition. At the same time, removing subsidies in the form of uncollected public revenues (e.g., elimination of tax breaks for fossil fuel production) generates new finance for just transition. These newfound domestic sources for finance can also be leveraged to attract private and international climate financing sources (e.g., Global Environmental Facility, Green Climate Fund, etc.) by demonstrating domestic commitments to transition that can help indicate a country's motivation for achieving its goals with respect to just transition and creating a more attractive investment climate for other investors.



## Conclusions: Lessons and Additional Thoughts on Achieving Development Goals

This paper contains several examples of how sectors can transition, and how, at least in theory, it can be conducted using methods that are simultaneously considerate of green economies and just transition. We have also looked at how FFSR can be a simultaneous process that contributes to the objectives of green economies and just transition.

What the case studies present is a history of FFSR processes that have, to varying degrees, sought to include a focus on economic reform, employment and workers through the transition process. In some cases, an employment focus was at the forefront of the reforms (e.g., The Netherlands), while in others it was a reaction to how the FFSR process unfolded (e.g., Mexico). In some examples, these FFSR processes have also had economic arguments for FFSR at the forefront (Mexico, Indonesia, Argentina), while for another a great motivator was environmental (Morocco), and for one, worker transition was the overall goal (the Netherlands). Lastly, we have also seen varying degrees of success, with some processes running very smoothly (e.g., Indonesia), while others were much rockier (e.g., Mexico). Despite these differences, we do identify some key lessons and consistent themes.

Some of the key takeaways of this exercise include:

- While none of the governments undertaking FFSR processes explicitly addressed the issue of just transition and the green economy as an objective, in looking at their motivations, it is clear that it is an underlying theme, even if it is implicit as opposed to explicit or framed in alternative terminology. The transition in the Netherlands for instance adopted key themes about protection of workers and ensuring stable transition for them 40 years before the idea of just transition gained international prominence. In other countries such as Mexico, engaging representatives of workers proved critical to successful implementation.
- What we find in several of the countries is that restructuring of FFSR is not only beneficial to a just transition, it is critical, and vice versa. For several of these countries, including Mexico, Argentina and Indonesia, subsidies to the fossil fuel industry were becoming an ever-increasing burden on the public purse, to the point in some that FFSR was as much a necessity as it was a desire. Without the burden of fossil fuel subsidies, some of these governments were able to avoid having to cut government services, while in others, such as Indonesia and Morocco, reform of subsidies is directly tied to investments in the social safety net and clean energy industries. Without public funds tied up in unsustainable price controls or subsidies to promote struggling sectors, spending could be done in a way that is much more consistent with the objectives and principles of just transition.
- We also find that stakeholder engagement and public communication are key to successful implementation. In Indonesia, President Joko Widodo made it a priority to communicate the necessity and benefits of reforms. In the Netherlands, (then Minister) Joop den Uyl spoke to the need for transition to focus on the benefit to workers and to bring labour and employers to the table together to plan and implement transition. In Mexico, it was only after they were engaged as stakeholders that some of the initial protests from workers' groups started to abate.
- We also find that FFSR is important for both consumption and production subsidies. We learn that, even for consumption subsidies targeted at supporting the poor, many of the benefits are often realized by the upper income groups in society. We also see that, even where subsidies were retained in the short term to assist in keeping a sector stable while transition occurs, such as in the Netherlands, they were always intended to be in place to support worker transition, and ultimately reformed when no longer necessary to support that specific facet of transition.
- Critically, we also see that FFSR can be a key funder for just transition. In 2015, global subsidies to both consumption and production of fossil fuels were at least USD 425 billion. At the same time, the cost of just transition will be significant. Reforming fossil fuel subsidies will contribute to the transition to green economies by removing supports for fossil fuel sectors that harm the environment; utilizing the revenue raised from reform can go a long way to supporting the policies, programs and infrastructure that are required for just transition. Several case studies identified the ability for FFSR to help stabilize budgets in crisis (Argentina, Mexico) or create much needed investment revenues for national priorities (Indonesia).





## **Linkages to Nationally Determined Contributions and Sustainable Development Goals**

Integrating just transition and FFSR is a complicated exercise, but there are benefits in that they work towards the same objectives. It is also worth considering that there are natural linkages to the Nationally Determined Contributions (NDCs) of the Paris Agreement and the Sustainable Development Goals (SDGs). Some countries are already taking the step of linking FFSR to NDCs, such as Morocco, for which FFSR can deliver roughly 6 per cent of the NDC contribution on greenhouse gas mitigation (Terton, Gass, Merrill, Wagner, & Meyer, 2015). The link between SDGs and FFSR is also inherent in SDG 12 on sustainable consumption and production, which contains an indicator on fossil fuel subsidy reform (Inter-Agency and Expert Group on Sustainable Development Goal Indicators, 2017). Developing a comprehensive, integrated process would be complicated for any country, but should be a strong consideration to avoid duplicative and parallel processes that can be inefficient uses of precious resources. An examination of the ways to integrate all of these concepts would be an intriguing exercise given the obvious linkages, but, given the complexity of the exercise in this study, it is not a small task.

What is revealed in the case studies is that the outcomes of the FFSR process have co-benefits in terms of meeting NDCs and SDGs, such as reduced greenhouse gas emissions from removal of fossil fuel subsidies, in addition to implications for just transition and the green economy. Identifying and quantifying these benefits is a good starting point, even if full integration is a much more difficult task.



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The IISD Global Subsidies Initiative (GSI) supports international processes, national governments and civil society organizations to align subsidies with sustainable development. GSI does this by promoting transparency on the nature and size of subsidies; evaluating the economic, social and environmental impacts of subsidies; and, where necessary, advising on how inefficient and wasteful subsidies can best be reformed. GSI is headquartered in Geneva, Switzerland, and works with partners located around the world.

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