



Fossil Fuel Subsidy Reforms and Effective Carbon Pricing

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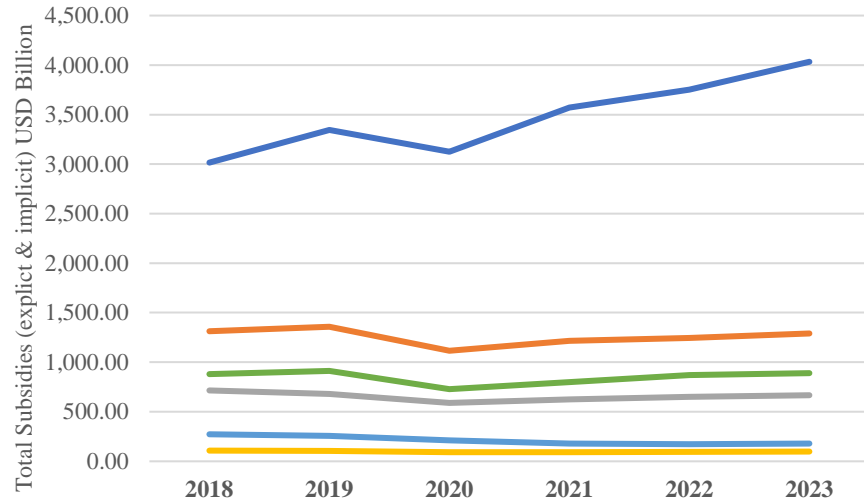
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Globally colossal amounts are spent on fuel subsidies

- According to IMF: Overall FFS globally amounted to USD 5.9 trillion in 2020 (or 6.8 percent of global GDP) and are expected to rise to 7.4 percent of GDP by 2025.
- Less than 10 percent of subsidies globally reflect lack of cost recovery (i.e. prices set below supply costs or direct subsidies) while over 90 percent reflect vast negative externalities stemming from excessive consumption of fossil fuels spurred by subsidies (i.e. indirect subsidies)

Global and ECA fossil fuel subsidies

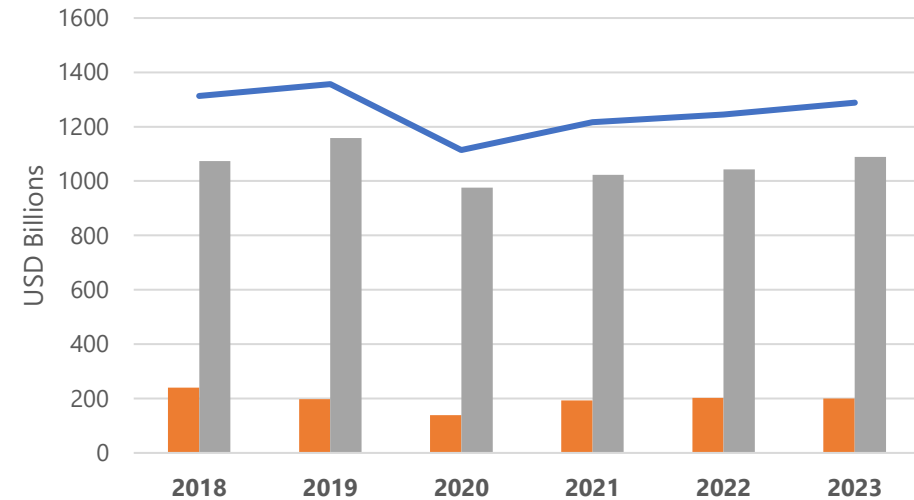
Global Fossil Fuel Subsidies



- Asia & Pacific
- Europe and Central Asia
- Middle East & North Africa
- Sub Saharan Africa
- Latin America and Caribbean
- North America

IMF, 2021 (Projections from 2021 does not include effects of

ECA Subsidies 2018-23



- Direct (explicit)
- Indirect (implicit)
- Total

IMF, 2021 (Projections from 2021 does not include effects of global energy crisis)

Fossil fuel subsidy reforms are often seen as comprising of two parts:

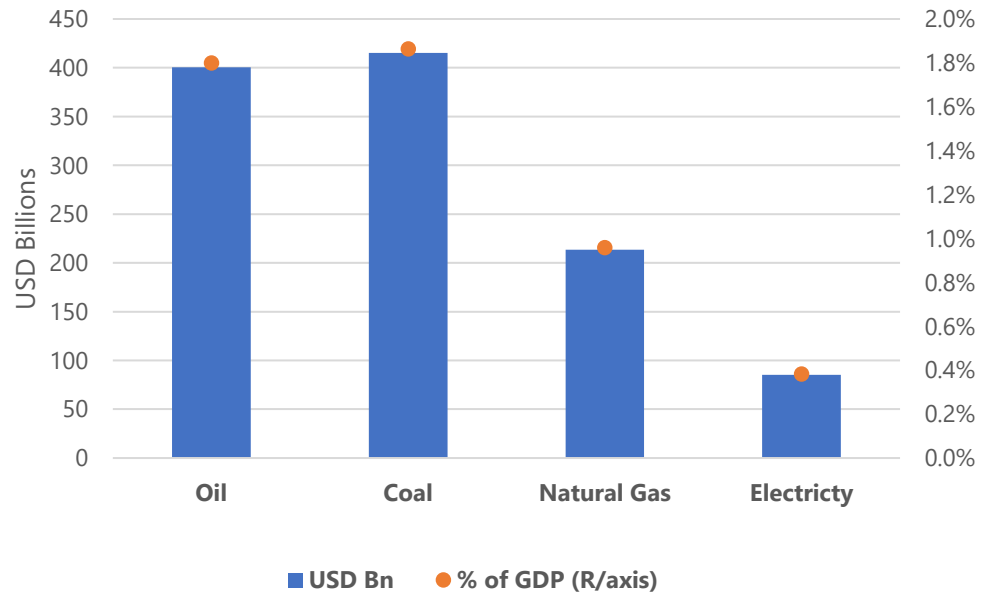
- First order reforms that seeks to right price energy prices so that they reflect *market-based* supply cost.
- The second order reforms that aims to bring energy prices to fully reflect its negative externalities.
- Carbon pricing is largely a consideration of the latter.

Why energy subsidy reforms important

- Fossil fuel subsidies **aggravate fiscal imbalances**, crowd-out priority public spending and for energy importers **aggravates balance of payments** pressures.
- It also distort resource allocation by **encouraging excessive energy consumption**, **reducing incentives for investment in renewable energy**, and accelerating the depletion of natural resources.
- It's one of the main causes of **increased CO2 and emissions**, causing pollution, pre-mature deaths and leading to other negative externalities such as urban congestions and biodiversity loss.
- Most importantly, FFS are proven to be **highly regressive**: most subsidy benefits accrue to higher-income households, reinforcing inequality

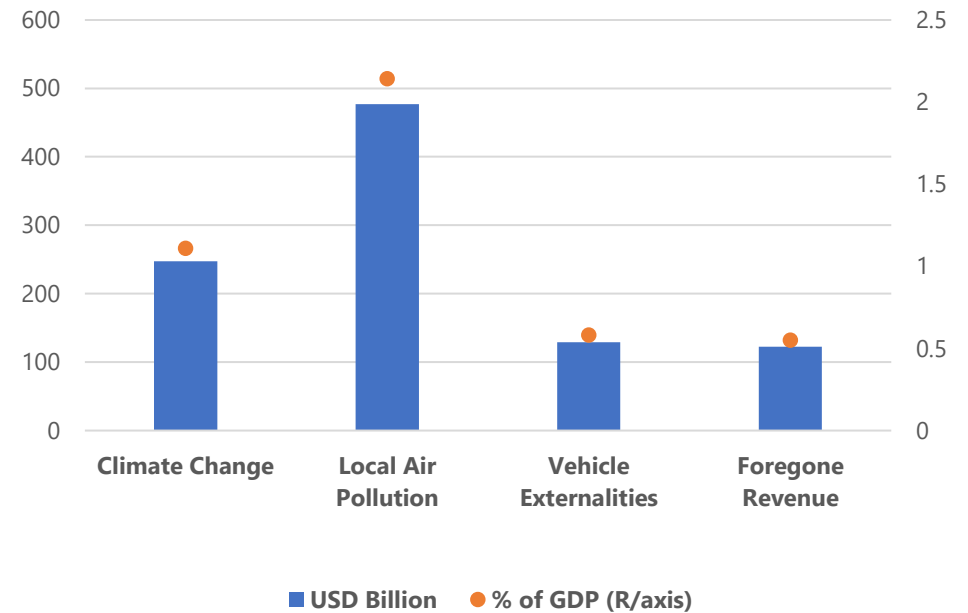
Fossil Fuel Subsidies in ECA

ECA Subsidies by energy type 2020



Source: IMF, 2021

ECA Implicit Subsidies 2020



Source: IMF, 2021

Undertaking first order reforms

- Subsidy reform, in any country is a challenging consideration. Political economy factors more than technical considerations underpin the challenges.
- However, as experience shows, successful reform initiatives could be carried out, when adequate consideration is given to the important factors:
 - A thorough understanding of economic, poverty and social impacts
 - A thorough understanding of governance and institutional factors (winners and losers of reforms and resistance from latter faction)
 - Stakeholder consultations
 - Careful planning and sequencing of reforms
 - Measures to protect the vulnerable
 - Measures to de-politicise the reforms for long term sustainability of reform efforts
 - Process underpinned by strong communication and transparency.

Undertaking effective carbon pricing

In essence what pricing policies aims to do is to target lower emissions.

There are different pathways:

1. **Explicit Carbon Prices:** Set through either carbon taxes, or through ETS mechanism or combination of both
2. **Feebates:** a fiscal instrument which combines subsidies (taxes) on households or firms below (above) some emissions intensity threshold.
3. **Regulations:** such as energy efficiency standards
4. **Feed in Tariffs (FIT's):** to encourage low emission energy production (such as for example RE)
5. **Capital Subsidies** for targeted low emission energy technologies.



CARBON PRICING

COMBINED WITH FOSSIL FUEL SUBSIDY REFORM

SUMMARY FEATURES OF DIFFERENT MITIGATION POLICY INSTRUMENTS

CARBON PRICING MEASURES WILL BE ESSENTIAL TO LIMITING CLIMATE CHANGE. IT CAN ALSO RAISE FISCAL REVENUES THAT COULD SUPPORT BROADER SOCIO-ECONOMIC DEVELOPMENT AND HELP GOVERNMENTS MEET THEIR SUSTAINABLE DEVELOPMENT GOALS.

THE CURRENT CARBON MARKET COVERS ONLY 20% OF GLOBAL GREENHOUSE GAS EMISSIONS, AND MAJORITY OF EMISSIONS ARE PRICED AT LESS THAN US\$10 PER TONNE OF CO2. THIS PRICE MUST INCREASE AT LEAST TEN-FOLD THIS DECADE TO MEET THE TARGETS OF THE PARIS AGREEMENT.

EFFECTIVE PRICING REFORM STRATEGY

A "feebate" is a hybrid fiscal instrument which combines subsidies (taxes) on households or firms below (above) some emissions intensity threshold

1 UNDERSTANDING THE DISTRIBUTIONAL IMPACTS

2 TARGETED COMPENSATION OF ADVERSELY IMPACTED & VULNERABLE STAKEHOLDERS

3 A GRADUAL & SEQUENCED APPROACH TO PRICE REFORM

4 A WELL-COMMUNICATED & COORDINATED POLICY IMPLEMENTATION



CARBON PRICE/ ENERGY SUBSIDY REFORM

- 😊 LOW-COST ABATEMENT
- 😊 REVENUE OPPORTUNITIES
- 😞 INCREASES ENERGY COSTS TO CONSUMERS
- 😞 POTENTIALLY POLITICALLY UNPOPULAR

FEEBATE

- 😊 AVOIDS ENERGY PRICE INCREASES
- 😊 CREATES INCENTIVES FOR MITIGATION BY INEFFICIENT CONSUMERS OR PRODUCERS
- 😞 NO FISCAL REVENUE
- 😞 NOT FULLY EFFICIENT

REGULATIONS (ENERGY EFFICIENCY REGULATIONS)

- 😊 OVERCOME SOME MARKET FAILURES & BARRIERS
- 😊 CREATE SCALE MARKETS
- 😞 TECHNICALLY CHALLENGING TO SET OR MEASURE PERFORMANCE STANDARDS
- 😞 RISK OF REGULATORY CAPTURE
- 😞 NO FISCAL REVENUE

FEED-IN TARIFFS

- 😊 EFFECTIVE AT STIMULATING INVESTMENT
- 😊 CAN BE DIRECTED AT SPECIFIC TECHNOLOGIES
- 😞 HIGH COST
- 😞 INCREASE ENERGY COSTS TO CONSUMERS
- 😞 INFLEXIBLE LONG-TERM PAYMENTS
- 😞 NEGATIVE IMPACT ON ETS PRICES
- 😞 NO FISCAL REVENUE

CAPITAL SUBSIDIES

- 😊 EFFECTIVE AT STIMULATING INVESTMENT
- 😊 CAN BE DIRECTED AT SPECIFIC TECHNOLOGIES
- 😞 FISCALLY EXPENSIVE
- 😞 RISK OF FREE-RIDING
- 😞 NEGATIVE IMPACT ON ETS PRICES



Explicit Carbon Pricing

- Explicit carbon pricing policies are particularly attractive given their low-cost nature and potential to support government financing
- Policy options for imposing an explicit carbon price include: carbon taxes, an ETS or measures combining features of both
- However, carbon taxes are generally preferable to ETS from an efficiency perspective.
- Carbon taxes in many jurisdictions could be easily implemented using existing tax statutes.
- In contrast, ETS system suffers from several challenges:
 - ETS prices tends to be uncertain and unstable inhibiting its potency as a tool for emissions reduction.
 - ETS establishment entail significant upfront costs and new institutional mechanisms that must be built (posing a particular challenge in developing countries).
- However, imposition of carbon taxes needs to *progressive*: based on twin consideration of who **should** pay (i.e. based on considerations of emissions and/or other externalities) and who **could** pay (i.e. based on consideration if there is the means to pay)

Conclusions

- Fossil fuel subsidy reform comprising of both first order and second order initiatives holds considerable promise to lower emissions and help transition towards net zero.
- In addition to other benefits such as improved health outcomes, reduced inequality curtailing bio-diversity loss it would also provide considerable fiscal space for governments, that could be used for:
 - Strengthened social protection
 - Support RE generation
 - Invigorate economic growth through increased job creation, entrepreneurial development and infrastructure development
- However, subsidy reforms is highly sensitive. Miscuing both first order and second order reforms could face significant social upheaval.
- For concerted drive towards subsidy reforms, partnerships would be important: partnerships developed at local level and effectively integrated at regional and global level.



References:

A guide to carbon pricing and fossil fuel subsidy reforms:
<https://www.undp.org/publications/guide-carbon-pricing-and-fossil-fuel-subsidy-reform>

Fossil Fuel Subsidy Reforms: Lessons and Opportunities
<https://www.undp.org/publications/fossil-fuel-subsidy-reform-lessons-and-opportunities>

Alternative uses of pre-tax fossil-fuel subsidies per year
<https://www.undp.org/publications/alternative-uses-pre-tax-fossil-fuel-subsidies-year>