Fossil fuel to renewable energy Subsidy swaps

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Subsidy Swaps

i. What is a subsidy swap?
ii. Why is clean energy a priority for fossil fuel subsidy reformers?
iii. Macro or micro?
iv. Subsidy swaps in practice
v. Where work is needed on swaps

Why swap subsidies from fossil fuels to clean energy?

Various observers have different objections to the impacts of fossil fuel subsidies. These include:

- The environmental degradation caused by excessive consumption of fossil fuels;
- The high costs to the public budget that could be better spent on other priorities;
- The effect of locking in increasingly expensive fossil fuels (stranded assets)
- Any interference with energy markets.

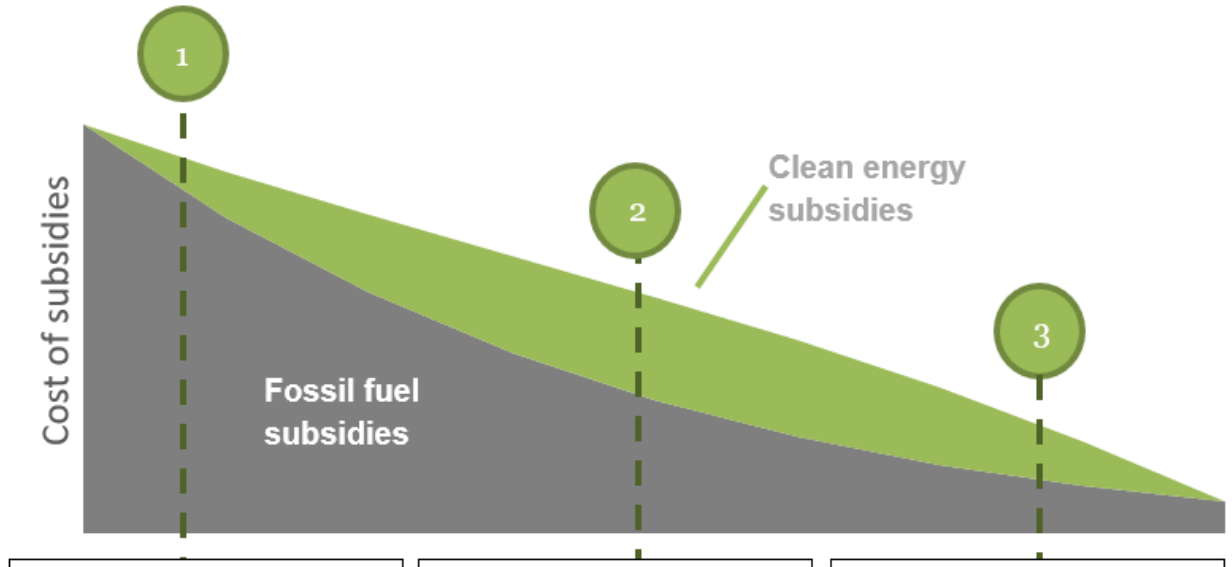
Swaps address two or three of these concerns depending on your position

What is a subsidy swap?

A subsidy swap describe a transition whereby subsidies to fossil fuels are reduced and that some of the savings are used to promote a transition to clean energy.

https://www.iisd.org/gsi/videos/introducing-subsidy-swap

Clean Energy Subsidy Swaps – the concept



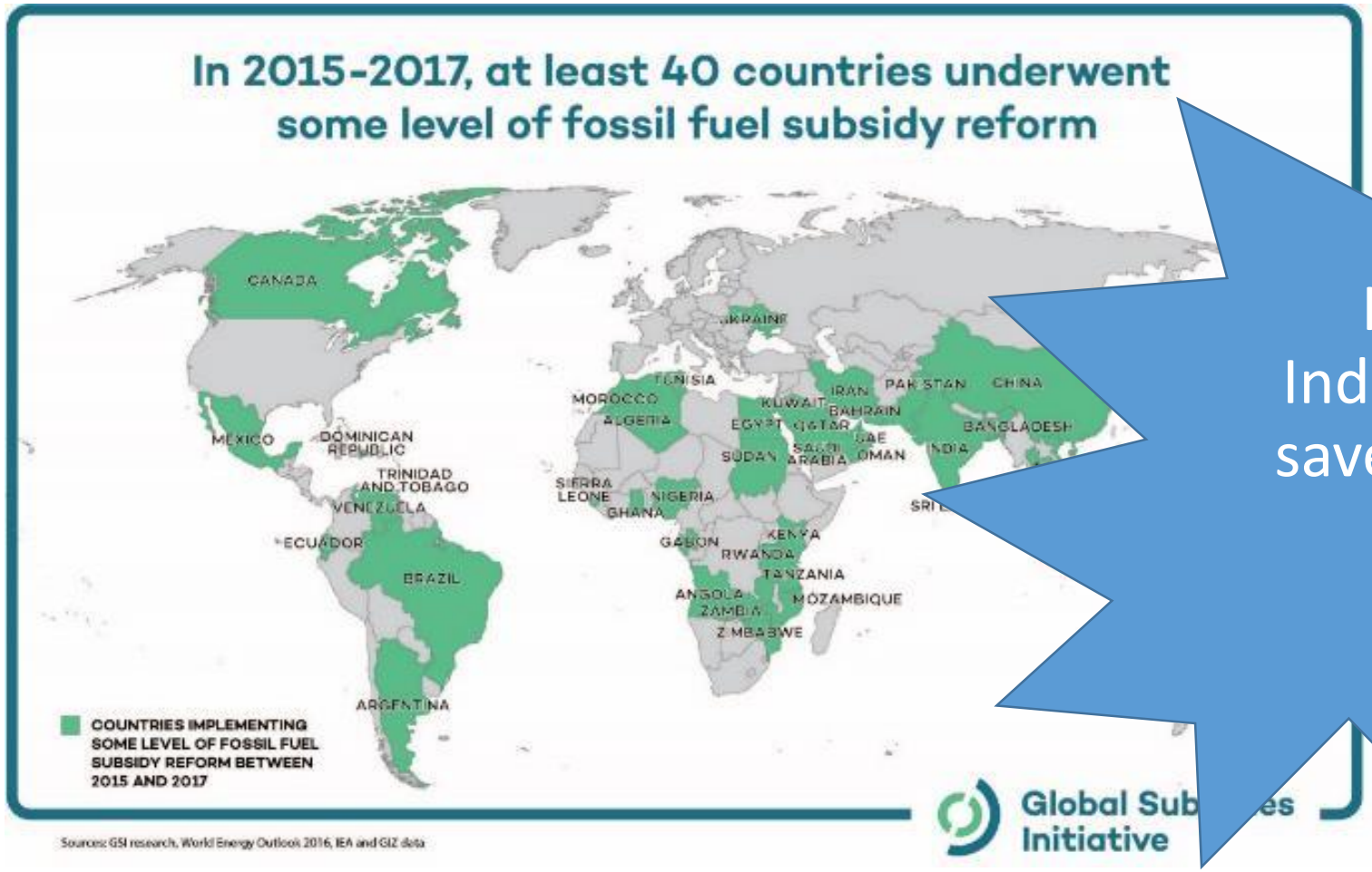
Stage 1:
Fossil fuel subsidies are in place reducing the price of fossil derived energy. Fossil fuels account for the majority of energy produced

Stage 2:
Fossil fuel subsidies are reformed. Some of the savings are used to reduce the price of renewable energy and promote energy efficiency.

Stage 3:
Total subsidies continue to reduce. Renewable cost reductions mean renewable subsidies are less necessary.

ii. Why is clean energy a priority for fossil fuel subsidy reformers?

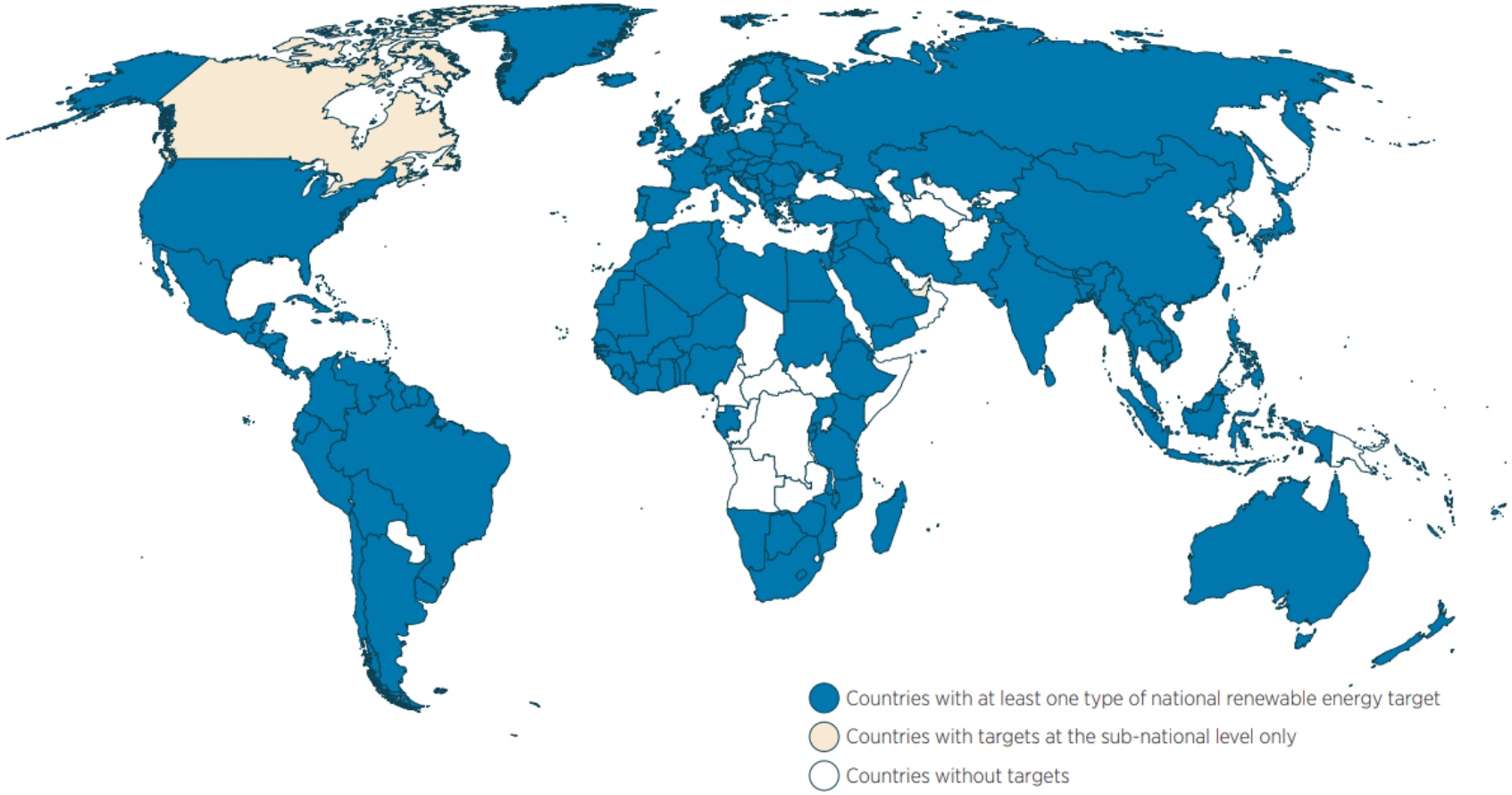
Reform of Subsidies is happening



India and Indonesia each saved $15 bn in 2014-15

164 countries have renewable energy targets

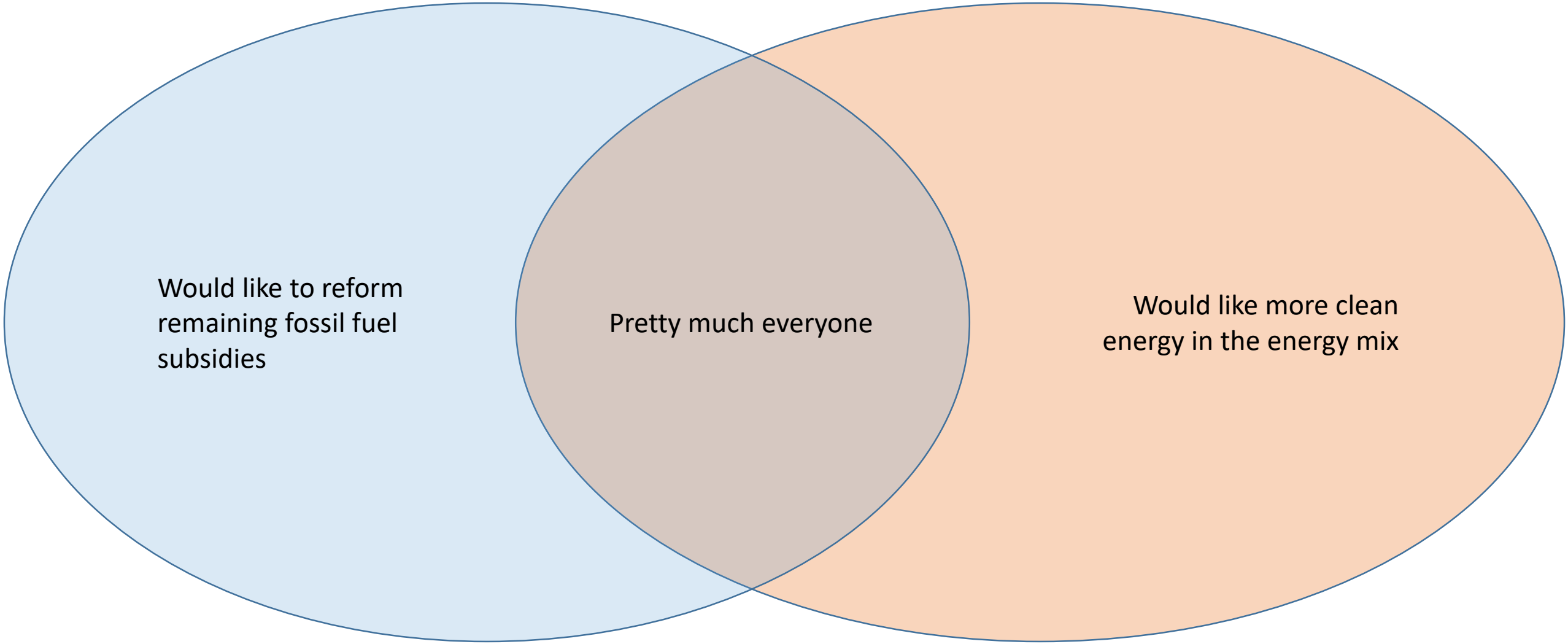
Global Map of National Renewable Energy Targets of All Types, 2015



The designations employed and the presentation of material in this map do not imply the expression of any opinion on the part of IRENA concerning the legal status of any region, country, territory, or area, or concerning the delimitation of frontiers or boundaries.

Source: IRENA (2015) *Renewable Energy Target Setting*

Clean Energy Subsidy Swaps

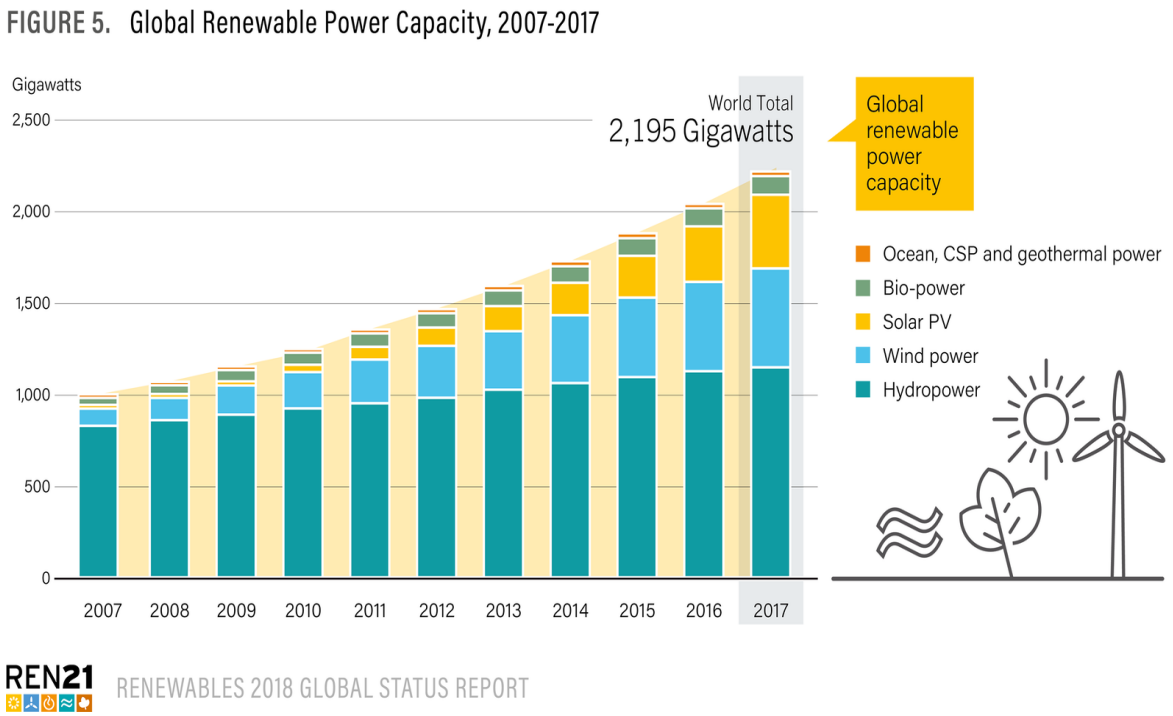


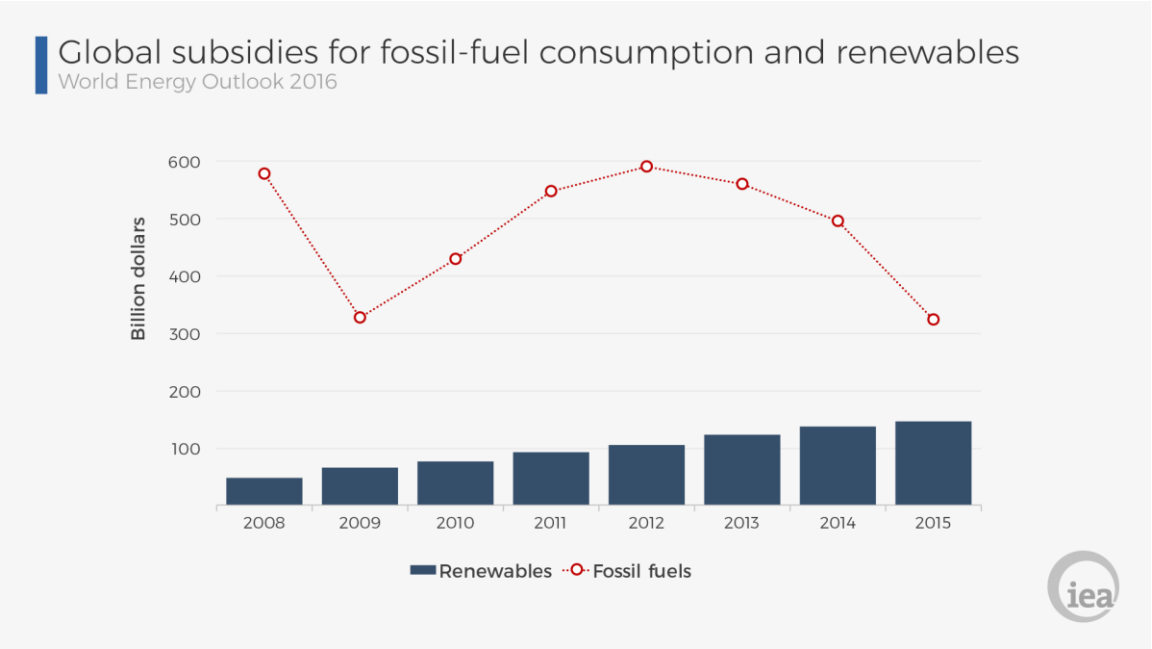
Why are reformers making this link?

- Communications
- Fossil fuel subsidies are often one of the primary policymaking tools that governments are used to
- Energy projects may not otherwise take place (public finance to drive private investment)

iii. Macro or micro?

The global clean energy transition: A macro swap





Source: REN21 (2018) Global Status Report
http://www.ren21.net/status-of-renewables/global-status-report/

Source: IEA, https://www.iea.org/newsroom/energysnapshots/estimates-for-global-fossil-fuel-consumption-subsidies.html

Micro swaps

- A policy to remove subsidies to a fossil fuel and use savings to provide subsidies to a direct renewable replacement
- E.g. kerosene to solar in India or Butane to water pumping in Morrocco

iv. Subsidy swaps in practice

A swap is already taking place in India

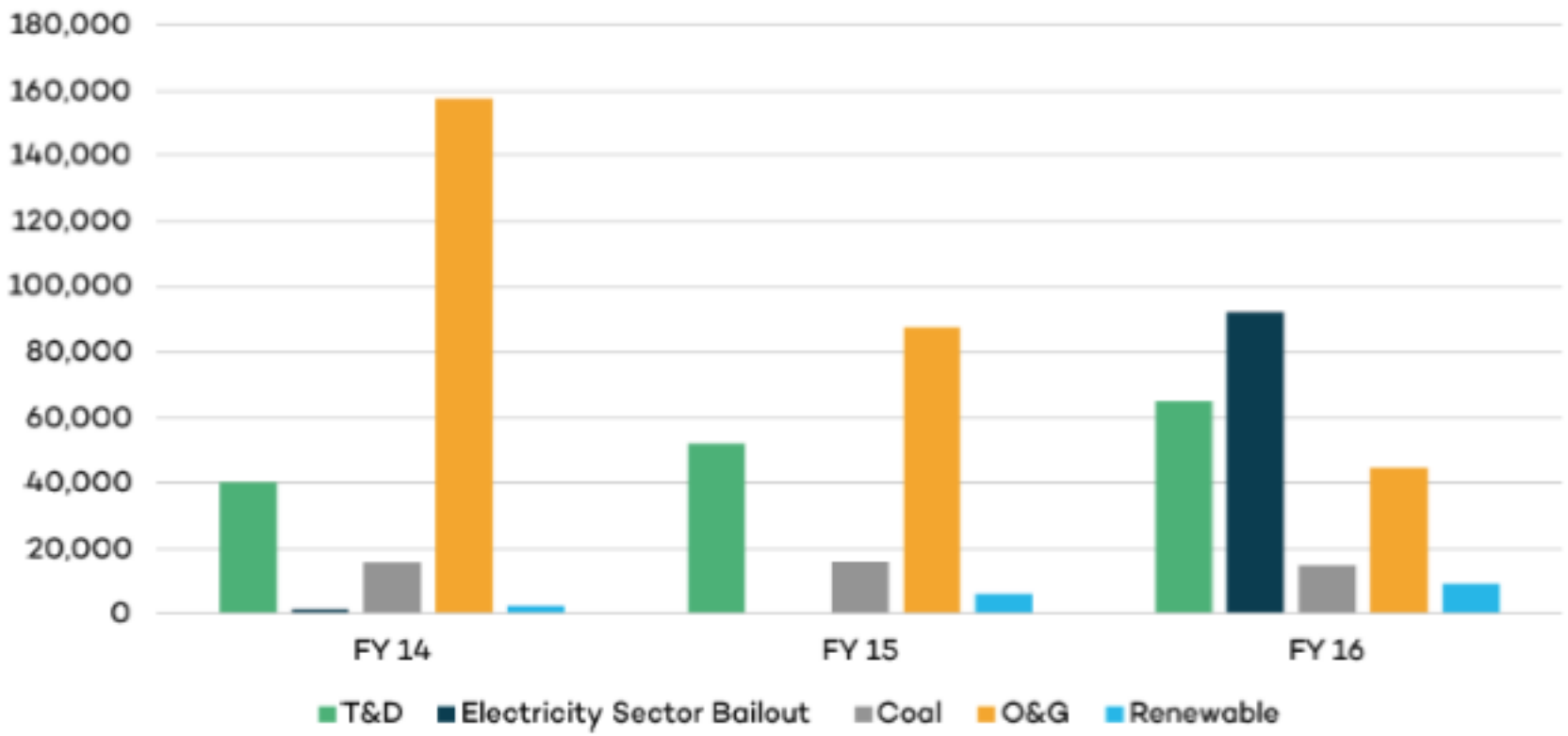


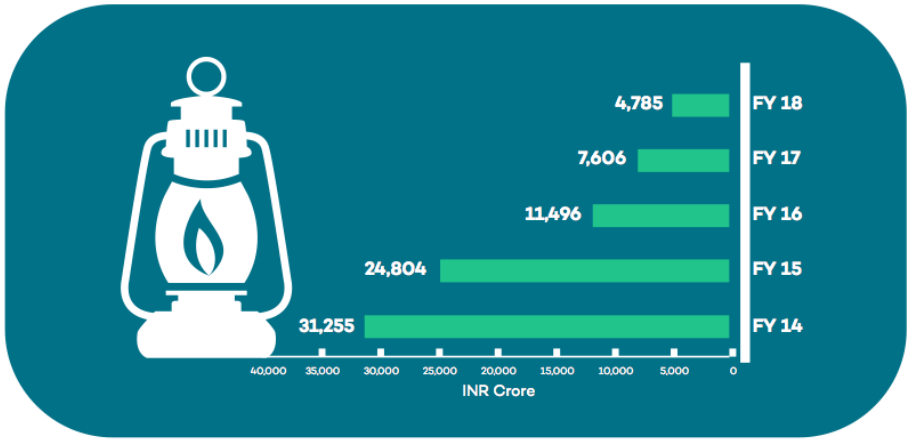
Figure ES1. Subsidies to coal, oil & gas, renewables and electricity T&D in India, FY2014–2016 (INR Crore)

Between 2014 and 2016,

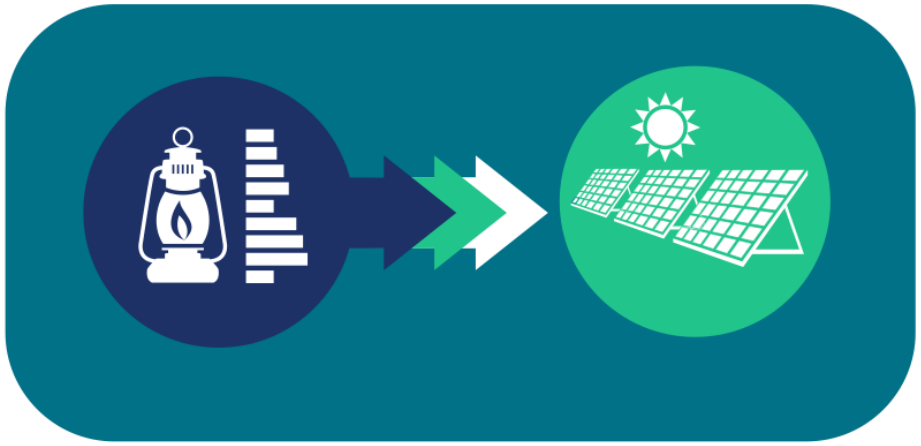
Subsidies to **oil & gas** have decreased by 72%

Subsidies to **coal** have decreased by 5%

A kerosene to solar swap is also happening



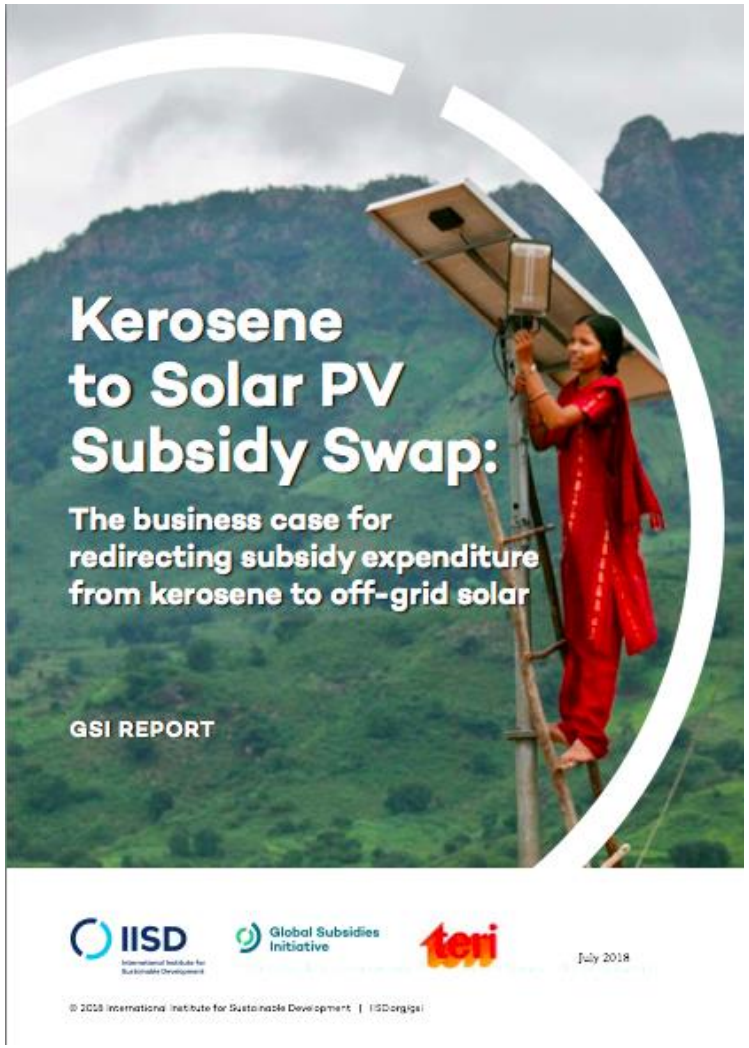
Kerosene subsidy expenditure is decreasing



Swap Kerosene Subsidy for Solar

- Since 2014-15 the government's reduction of kerosene subsidy has saved the government more than INR 26,470 crore (USD 3.7 billion)
- Savings from kerosene subsidies that can be re-invested toward off-grid solar.

Examining a swap from kerosene to pico pv solar



- Report shortlists 15 pico PV products, based on various criteria, to reliably replace kerosene at an affordable price.
- There is a wide range of business models adapted to different contexts and companies provide financing in various forms
- Distribution networks are weaker in rural areas where kerosene based lighting is more widespread but supply chains are strengthening

Options for more swaps include

- Introducing electric vehicles by balancing electricity production from renewables
  - Govt of India plans to introduce an electric vehicles (EV) policy on Sep 7 – electrify a third or half existing vehicles by 2030
  - A gradual transition to EV can help India reduce oil imports
  - However, India needs infrastructural support for charging stations
  - Currently most components of EVs are imported
  - Govt is keen to not support EVs with multiple subsidies

Butane ⇨ Solar water pumping SWAP (Morocco)

- Around US$ 260 million is spent on butane subsidies to agriculture (mainly pumping)
- In exchange for giving up butane subsidies, farmers could get access to low cost loans for solar irrigation
- Increased deployment of solar pumps is expected to bring down prices
- *Target: policy change to tip balance in favour of solar pumping*

V. Where work is needed on Swaps

Key Opportunity: show governments embarking on FFS Reform that they can transition to clean energy systems, and leverage private sector funding

- **Focus where:**
  - Countries have significant FFS, planned expansions in electricity
  - Grid access is already significant (grid-connected renewables are especially mature and competitive)
  - Large-scale schemes are possible
  - Electricity, Transport and Buildings sectors
  - Work with Industry Associations and Developers
- **Collaborate widely: CEM, P4G, DEA, IEA (CETP), REN21, IFIs, etc.**

Thank you!