

CLIFF POLICY BRIEF #1, March 2023

The Climate Change and Fossil Fuels (CLIFF) project studies policy challenges surrounding the energy transition

INVESTING IN RENEWABLES DOES NOT AUTOMATICALLY REPLACE FOSSIL FUELS

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Key Messages

1. Data shows that renewable energy increases in the energy mix but does not replace fossil fuels (FF)
2. For developing countries, the energy addition is inevitable, but does not need to come from FF
3. Big banks continue to heavily invest in FF compared to Renewable Energy Sources (RES)
4. Investments in RES by FF companies compared to their FF investments are a drop in the ocean
5. A focused policy on phasing out fossil fuel is needed

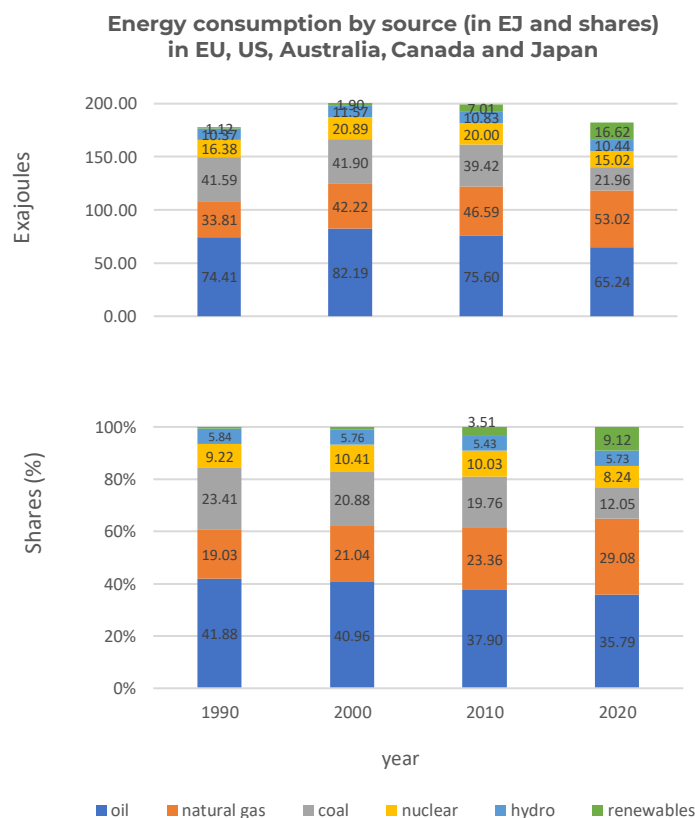
Introduction

Since the industrial revolution, fossil fuels (FF) play a major role in contributing significantly to cheap energy access, facilitating social and physical mobility, and powering the economy. However, this has come at the cost of exacerbating the climate change problem. Since the use of FF is a key cause of climate change, its use needs to be phased out and replaced by alternative clean energy sources. However, while there is growing investment in renewable energy sources (RES) and this is reflected in the energy mix, it does not appear to replace FF. Many countries have invested in RES policy development but did not include an actual FF phase-out. A focused policy on phasing out FF is needed.

1. Data shows that RES increase in the energy mix but such increase does not replace fossil fuels

Although global renewable primary energy rose by about 5.1 EJ last year (2021), FF contributed to 82% of primary energy use, down from 85% five years ago and 83% in 2019 (BP 2022). RES appears to increasingly contribute to the energy mix, but they are just boosting (or keeping constant) the overall quantity of energy generated without replacing FF (see Fig. 1). Thus, investment in RES is not enough to ensure the energy transition (King 2012; Lazaro et al. 2022), in fact it may be misleading and even counterproductive to refer to RES investments as a "transition," since it may impede a true FF phase-out (York and Bell 2019). Moreover, Norway uses more RES but exports around 70% of its FF output. So, a FF phase out is not just about decreasing FF consumption, but also decreasing FF production and export.

Figure 1. Energy consumption by source and shares



Source: own figures, data from BP (2022)

2. For developing countries, the energy addition is inevitable but does not need to come from fossil fuel

First, the global South faces a chronic energy shortage problem. This means that increasing energy provision is critical for enhancing the wellbeing of these countries. Second, since the global South has more than 80% of the remaining FF reserves within its territory, it is likely to use such FF. Third, this is especially so since financing RES is regarded as riskier than investing in FF. Hence, developing countries are investing heavily in FF infrastructure and production to address development issues such as energy poverty, access and security, and fulfilling electricity demand (Nalule 2019; La Rovere 2020, SEI et al. 2021). However, while such investments augment energy supplies and enhance expectations of increasing GDP, they also lock-in countries into a FF based economy and may leave them with stranded assets (i.e., FF infrastructure). Since developing countries have less FF infrastructure than the Global North, they may avoid such carbon lock-in by leapfrogging to RES. Dependence on FF is not inevitable (Schaffartzik and Fischer-Kowalski 2018).

3. Big banks continue to heavily invest in FF compared to RES

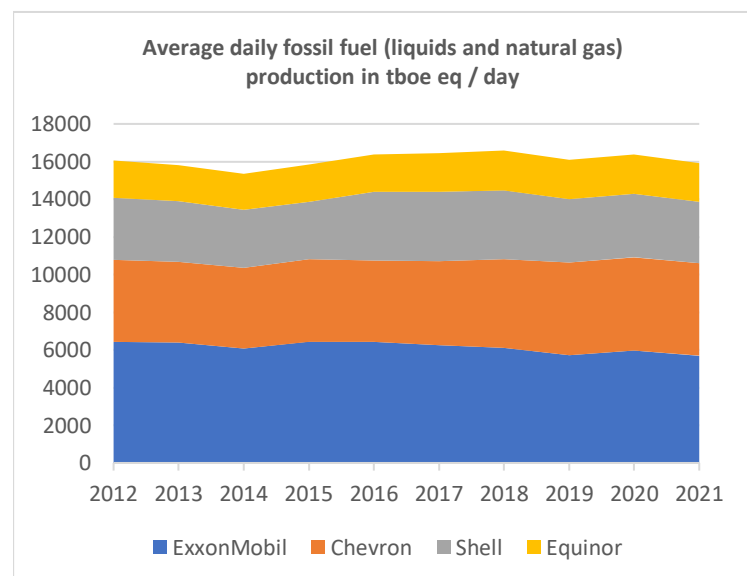
In 2020 alone, the largest 60 private banks financed FF with 750 bn USD. JPMorgan Chase contributed alone with almost 52 Bn USD (Banking on Climate Chaos 2022). In comparison, in 2020 the global RES debt market attracted only 122 bn USD from commercial banks (Climate Policy Initiative 2021) and the largest private bank financing RES was Société Générale with 3.5 Bn USD (Clean Energy Pipeline 2021). This sheer difference in “leaders” shows the difference in banks’ appetite for financing FF vs RES.

4. Investments in RES by FF companies are merely a drop in the ocean compared to their core business spendings

Clean energy investment from FF companies is seen to be the core driver of transition in the FF industry (Li et al. 2022; Hartmann et al. 2021). However, compared to their investments in core business activities, investments in clean energy alternatives are trivial. On average FF companies spend less than 1% of their CAPEX outside their core business with transition leaders spending around 5%. This includes not only investments in RES but also carbon capture and storage as well as other diversification activities (e.g., electricity distribution or electric vehicle charging) (IEA 2020).

Although sustainability reporting becomes ever more important particularly for publicly traded companies as they need to satisfy shareholder and investor demands, not all FF companies disclose information on their RES spendings. And more often than not, pledges do not meet their actual spendings and transition claims with FF companies justifying their FF activities using the arguments of necessitarianism and techno-optimism (Li et al. 2022; Green et al. 2021; Megura and Gunderson 2022; InfluenceMap 2022). Likewise, investments in RES by major FF companies has not reduced their total hydrocarbon production (see Fig. 2).

Figure 2. Average daily FF production of key companies



Source: own figure, data from annual reports

5. A focused policy on phasing out FF is needed

Instead of just focusing on RES development, a strong policy framework guiding a managed phase-out is needed. Rather than merely focusing on demand-side measures and emissions, supply-side regulations are needed. Phasing out fossil fuel requires a focused policy mix combining the removal of FF subsidies, implementation of financial instruments supporting RES, stopping investments in new FF projects, and the application of justice principles between rich and poor countries based on the principle of common but differentiated responsibilities (CBDR) and respective capabilities.

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