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Addressing fossil fuel lock-ins critical for stabilizing the climate

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Abstract

This policy brief argues that to stabilize climate change, it is not enough to just promote renewable energy; it is critical to unlock ten fossil fuel lock-ins that most societies and economies face. This will support both energy (SDG 7) and water goals (SDG 6), but also all other SDGs. Unlocking these lock-ins requires focused policy processes, as they will not happen autonomously at the speed required.

Introduction

The global community stands at the brink of crossing the 1.5ºC objective of the Paris Agreement[1], increasing chances of crossing tipping points exponentially.[2] Mitigating impacts on the hydrological cycle (SDG 6) and meeting energy needs sustainably (SDG 7) while stabilizing the climate (SDG 13) requires shifting from fossil fuels to alternative energy sources. However, merely investing in renewables is unlikely to be more than 'additive' to the existing energy mix;[3] this is because of the ten fossil fuel lock-ins explored below.[4]

Fossil fuel lock-ins

Most countries are locked into processes of fossil fuel production, distribution and use.

(1) *Profitability lock-in:* Fossil fuels are highly profitable for investors encouraging increasing investment.[5] This is because of the increasing demand from the global South, the growing defence and AI industry[6], but notoriously also due to the high subsidies this sector receives.[7]

(2) *Discursive lock-in:* This profitability is enabled by dominant narratives including "overshoot", "net zero", "energy security", "loss of competitiveness", "resource nationalism" and "the right to development". Fossil fuel companies use narratives to deny and delay climate action.[8]

(3) *Legal lock-in:* Companies and countries are locked-into the fossil fuel production, distribution and consumption contracts which protect – through national contract law and/or bilateral/multilateral investment agreements – the extractor, producer, or distributor. For example, Shell is suing the Government of the Netherlands for closing down the Groningen gas field following local earthquakes. [9]

(4) *Investment lock-in:* Borrowers/shareholders are locked into fossil fuel projects since intermediary cancellation is expensive and borrowers cannot pay back; since divestment creates new vested interests; since engagement may not work when fossil fuel companies cannot morph into something else; and especially since such investments are (in)directly encouraged by government export credit.[10]

(5) *Fiscal/economic lock-in:* States develop fossil fuel-dependency through tax income from the fossil fuel sector, needed for financing of other government activities. Many developing states used fossil fuel income to pay back their growing international debt.[11]

(6) *Infrastructural lock-in:* Dismantling the huge fossil fuel infrastructure is very expensive, leading to stranded assets[12] and discouraging governments from taking action.

(7) *Labour lock-in:* Millions are employed (in)directly in the fossil fuel sector[13] and will resist the closure of this sector as it impacts their livelihoods and identity.[14] Moreover, policymakers may be reluctant because of the (in)direct impacts of such unemployment.

(8) *Behavioural lock-in:* Consumers, ranging from the very poor to the rich are very dependent on fossil fuel.[15] Policymakers often argue that reducing energy demand implies 'sacrifice' to the middle and upper classes who are not willing to accept this.[16]

(9) *Political lock-in:* Politicians often receive campaign funding from fossil fuel companies affecting their willingness to target this sector. Short political cycles cause politicians to postpone difficult decisions (such as addressing the fossil fuel lock-ins) to future politicians.

(10) *Professional lock-in:* Professionals often explain that although they acknowledge the climate problem, climate policy is 'beyond their mandate' aggravating collective apathy and complicity in climate inaction.

Hence, effective climate policy requires addressing the fossil fuel lock-ins systematically.

Recommendations

1. Remove profitability through demanding True pricing/Social Cost of Carbon (SCC).[17]
2. Establish counter-dominant narratives and hold actors accountable for disinformation.
3. Interpret fossil fuel contracts in light of human rights and the climate change treaty regime.
4. Highlight investor, and not just borrower, responsibility for scope 1-3 emissions in new fossil fuel investments.
5. Research and untangle fiscal/economic lock-in.
6. Repurpose and recycle fossil infrastructure as a government steered collective action.
7. Secure a just labour transition.[18]
8. Ensure that consumers assume civic responsibility in terms of fossil fuel dependence.[19] For those facing energy poverty, ensure alternative energy at affordable prices.
9. Adopt rules on campaign finance and political accountability for failure to make science-based policy.
10. Adopt rules to ensure that professionals take action based on their own civic sense and/or morality.

Unlocking the ten lock-ins is not easy. But if we do not understand the lock-ins and take measures to unlock these lock-ins, we may find ourselves unable to even achieve the 2ºC target.

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