

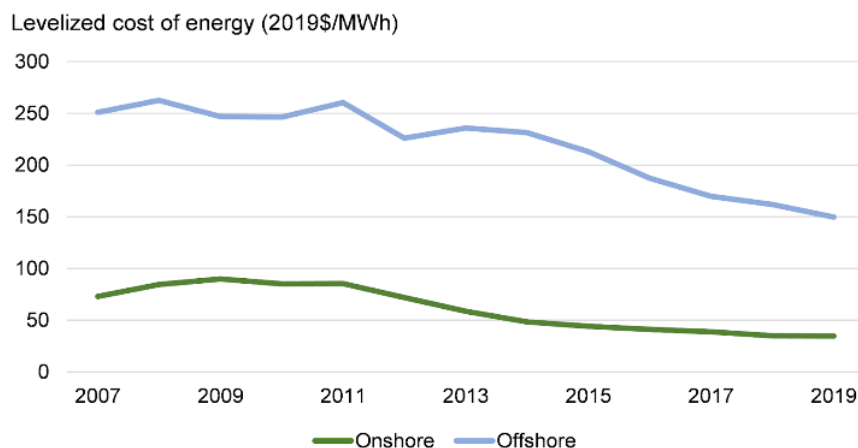
# Central banks, energy transition and controlling inflation

Matthias Kroll

"Investing in the energy transition is the best protection against inflation."

Central banks have shown their great economic power in the aftermath of the financial crisis and again during the Covid-19 pandemic. Responding to calls to use this power to address the climate emergency as well. The main objection from central banks, and in particular the European Central Bank (ECB) and conservative circles has been that their main mandate is to fight inflation and that climate protection is at most a secondary mandate that has to take a back seat immediately when mild inflation has to be fought again. On the other hand, large inflation spikes have regularly been caused by sharp increases in fossil fuel prices due to fluctuations in the rise in demand, artificial shortages of supply (OPEC), or military

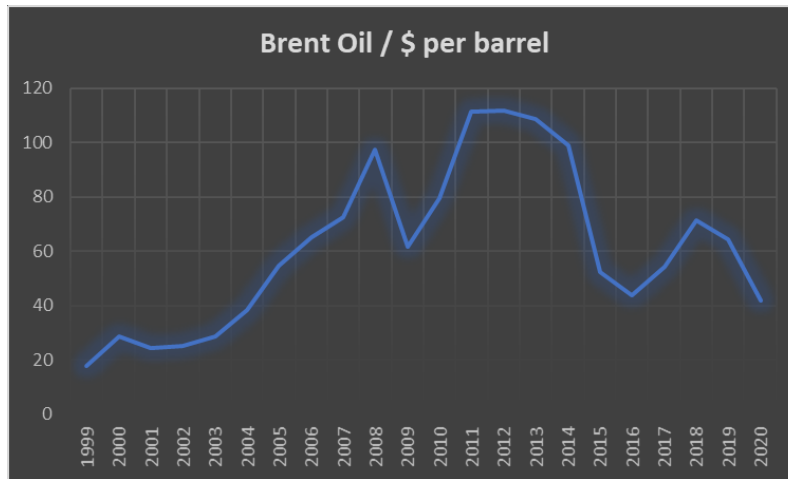
conflicts, as currently between Russia and Ukraine. Highly volatile price developments of fossil fuels are once again the main problem for central banks today when it comes to keeping prices constant. Central banks used to have no tool to counteract these disruptions of price levels. Today, however, there is an effective approach for reducing the importance of fossil fuels and thus their inflationary dangers: the accelerated transition from fossil fuels to renewable energies. Supporting the transition to renewable energy systems should no longer be seen as a secondary mandate for central banks, but as a crucial tool to achieve their first mandate, the stabilisation of price levels.



Price of wind energy  
Source: Berkeley Lab, 2021

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Price of oil

Source: BP, Statistical Review of World Energy, 2021

In addition to providing legal tender and ensuring sufficient and stable liquidity in the banking system, the most important task for central banks is to keep prices as constant as possible. The ECB currently cites two percent as a target to aim for in the medium to long term. In the public debate, it is often overlooked that it can only achieve this inflation target very indirectly. In particular, fighting inflation by raising interest rates regularly leads to negative effects on investment and employment. For central banks, therefore, a new monetary policy tool with which inflation could be contained in a direct way, without negative side effects, would be a major step forward.

Indeed, the volatility of fossil fuels is a major underlying problem in fighting inflation. Rising energy prices trigger second-round effects in the production of food and many intermediate goods, leading to rising prices in many final goods. In the end, wages must then also rise in order to maintain the purchasing power of the population. There is a risk that the trend toward further price increases will become entrenched. Studies show that an oil price increase of 10 percent leads to an average increase in the inflation rate of 0.4 percent. Here, the effect is asymmetrical, as a positive price shock has a greater impact on the price

level than a negative one.<sup>1</sup>

Until now, central banks have been exposed to these effects without a means of influencing the prices of fossil fuels. If they wanted to counteract a price increase induced by higher energy prices, they had to use rising interest rates to curb investment and thus economic output and demand, only to hope that the drop in demand would also lead to a drop in demand for energy and thus to an end to the price increase. The negative side effects on unemployment, lower tax and social security revenues have been and continue to be significant each time this path is chosen.

A transition to a renewable energy system will eliminate the risks of highly fluctuating energy prices. The price of incoming sun and blowing wind is always zero and the costs of generating energy from wind and sun are the one-time investment costs and the costs for maintenance and insurance of the plants. Owners of renewable energy plants have a strong incentive to sell every single kilowatt hour immediately to the (mostly) pre-contracted price to maximise their profits, because storage of electricity is not possible. In an advanced renewable energy system with integrated

<sup>1</sup> Sangyup Choi (et al), [Oil prices and inflation dynamics: Evidence from advanced and developing economies](#). In: *Journal of International Money and Finance*, Volume 82, April 2018, Pages 71-96.

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storage systems, the cost of supplied energy depends also on one-time investments, maintenance and insurance. Therefore a fluctuation of the supply of prices of electricity generated by renewable energy is very unlikely.

In contrast, for fossil fuel prices, small decreases of supply can induce large price increases when demand is inflexible. The producers of oil, gas or coal can limit or increase their supply to maximise their profits, because they are not dependent on the volatile sun and wind. Whereas demand is relatively inflexible and has to accept the requested prices - at least in the short run.

The faster the global energy transition is achieved, the faster these permanent inflation risks of fossil energies will disappear.

In consequence, central banks should support a swift transition towards renewable energies to fulfil their price stability mandate.

Every piece of fossil fuel infrastructure that is retired and replaced with solar and wind energy instead reduces the impact of volatile fossil fuels on price levels. Thus, investing in the energy transition is the best protection against inflation.

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Central banks can achieve the reduction of price volatility originating in fossil fuels by:

1. Ending fossil fuel finance through their own portfolios and by regulating the banking sector.<sup>2</sup>
2. Supporting renewable energy finance by purchasing (very) long term Green Climate Bonds from MDBs.<sup>3</sup>
3. Absorbing and winding down fossil assets,<sup>4</sup> for example through a bad bank approach.<sup>5</sup>
4. Transferring a significant part of their newly received Special Drawing Rights (SDRs) from the IMF to the IMF's new Resilience and Sustainability Trusts (RST).<sup>6</sup>

Through these tools, central banks can fulfil their mandate to ensure a constant price level and promote a shift to renewable energies at the same time.

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<sup>2</sup> See the ongoing efforts of the [Network for Greening the Financial System](#).

<sup>3</sup> Kroll (2018), [How to convert fossil fuel stranded assets into renewable energy investments](#). Policy Brief, World Future Council.

<sup>4</sup> Climate Bailout Working Group (2022) [Climate Bailout Overview](#). April 2022.

<sup>5</sup> Nicol (2021), [Fossil assets: the new subprimes? How funding the climate crisis can lead to a financial crisis](#). Institut Rousseau, 2021.

<sup>6</sup> Kroll and Schurig (2021) [Funding Climate Action and COVID-19 Recovery by New Special Drawing Rights – A Game Changer?](#) F20 Policy Briefing #3/2021, November 2021.

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