



■ **Opposing crises
or opportunities
for change**

Climate change and energy
security – can these two
problems be solved at once?



This month Müge Tuna, Clairfield's executive director in Turkey and high advisory council member of the Turkish Investor Relations Association (TUYID), shared her thoughts and some current expert thinking about the energy crisis as an opportunity to accelerate change. The below is an excerpt from Müge's article, which was published in TUYID's monthly bulletin.

Problem shared, problem solved?

Most economies are facing mounting energy problems. We have all noticed this summer that the world is getting hotter due to climate change, while global supply disruption, higher energy prices, and geopolitical turmoil have caused the energy crisis to escalate. Utilizing sustainable energy sources and lowering energy consumption is essential in tackling both problems. Fatih Birol, president of the International Energy Agency, indicates that the world does not need to choose between solving the energy security and climate crises since there are available technologies and policies to solve both at once.

In 2022, record temperatures were reached around the globe, but most significantly in June, July and August in the UK, France, Spain and Portugal. According to NASA data, global temperatures were around 2 degrees Fahrenheit higher than average June in the late 1800s. In August this year, the European Commission Joint Research Centre (EC-JRC) warned that the current drought could be the worst experienced in the last 500 years and has also predicted that this will worsen across Europe, potentially reaching 47% of the continent.

In the United States, the legislation known as the Inflation Reduction Act (IRA) of 2022 has been secured as the largest-ever investment to tackle climate change, with roughly USD 370 billion dedicated to curbing harmful emissions and promoting green technology. These investments will yield extensive returns since the costs of climate-driven events (high temperatures, tornadoes, wildfires, droughts, floods) will reduce our standard of living even more than today's inflation.

The energy crisis is an opportunity to make this a “historic turning point toward a cleaner, more affordable, and more secure energy system.” (Fatih Birol, Fortune, September 6, 2022)

Though we are experiencing a global energy crisis, disruption in the energy markets is not a new phenomenon. The energy crises in the '70s, the '80s and the early aughts were all challenging in their own ways but combined with current other emergencies, namely climate change, a global pandemic, and Russia's invasion of Ukraine, have made things much more difficult. Professor Stiglitz, the Nobel prize-winning economist and former chief economist at the World Bank, recently reiterated his warnings of 15 years ago that enhancing energy security has become essential since energy interdependencies come with serious risks. Even though weather may be variable, fossil-fuel sources under the control of authoritarian leaders are unreliable and dangerous.

The demand for renewables is growing, but the concern is that oil and gas consumption is also rising.

Daniel Yergin, vice chairman of S&P Global, writer and Pulitzer prize-winner, discusses the global energy markets within the context of political economy, economic history, and geopolitics in his latest book *The New Map: Energy, Climate and the Clash of Nations*. He looks at where today's energy markets are headed and the geopolitics of an energy transition from hydrocarbons to renewable energy.

Yergin points out that although the costs of wind and solar have come down in the last ten years due to government and investor support, it's only now that they have become competitive options. However, the world still uses about 80% hydrocarbons, thus proving that displacing it as a primary source will be an uphill road.

The need for minerals is set to soar.

Yet with the production of electric cars comes the issue of their high requirement for copper. Two and a half times more copper is needed to produce an electric vehicle than a conventional one. Similarly, even though wind and solar are free, they require enormous quantities of rare earths and minerals to make the tools to harness them. Hence there comes the conclusion that the demand for minerals is going to be much greater than people would imagine. With 2050 goals for net zero and decarbonization, it is anticipated that new geopolitics will emerge around minerals. As mining is a highly energy-intensive activity, Yergin states in *The New Map* that we will move from a world of big oil to a world of big shovels.

Problems present a challenge to think again.

This June, at the G7 Summit in Germany, the leaders of the G7 countries highlighted their concern about the burden of energy price increases and energy

market instability, which aggravate inequalities nationally and internationally and threaten our shared prosperity. In his speech to the G7 leaders, Dr Birol stated, "we had oil crises in the 1970s, but then there was only the oil crisis. We are faced with serious problems with oil, natural gas, coal, and electricity. If we look at those oil crises, there was a severe increase in inflation. Now we can see this again.

The second thing is a recession. I think we are slowly getting there now. But the oil crisis of the 1970s didn't just cause recessions and inflation; new issues such as energy savings and security came to the fore. It was a reaction that suddenly changed the entire automotive industry. The second reaction developed by countries against the oil shocks was the nuclear industry. Of the nuclear power plants currently in use worldwide, 40% were built as a result of the last energy crisis."

"We cannot afford to ignore either today's global energy crisis or the climate crisis, but the good news is that we do not need to choose between them - we can tackle both at the same time," said IEA executive director Fatih Birol.

As per the IEA data, solar PV represents nearly half of the new investment in renewables-based power generation. Energy efficiency advancements are another key growth area, driven by higher fuel prices



and government incentives. The buildings' efficiency investment worldwide showed strong growth, with an increase of 16% in 2021. IEA also reports that spending on solar PV, batteries, and electric vehicles is growing at rates consistent with reaching global net-zero emissions by 2050, while battery energy storage investments show strong growth to more than double to reach almost USD20 billion in 2022. There is also rapid investment in some emerging technologies, notably low-emissions hydrogen and carbon capture utilization and storage (CCUS). However, the overall investment in clean energy remains less than what is needed for a more clean and secure energy future.

After winter, then comes spring – looking to a brighter future.

Within the context of crisis presenting opportunities, it is important to note that a significant portion of the regulations and international law have been the products of conflicts, not the products of cooperation. Similarly, we might expect the disruptions caused by the pandemics followed by the Ukrainian war to have longer-term consequences, especially concerning health, energy security, trade and the supply chain of essential products. Disruptions and crises can create new and practical business models to deliver quick solutions due to urgent needs, including climate change and securing sufficient energy to meet demands. ■

