

2023 – Where to from here?

The war in Ukraine initiated multiple trends in the global energy sector in 2022. Russia's effort to counter western support for Ukraine by restricting energy supplies to Europe has not been as effective as feared. A mild winter and consuming countries' mitigation measures blunted part of the impact. However, last year reminded people everywhere that energy supply remains dominated by oil and gas. Russia's actions pushed some consuming countries to find alternative hydrocarbon sources and find them quickly. Some fear the net effect will be to stall or roll back progress on GHG emission reductions.

The Economist magazine, in a February article (*War and subsidies have turbocharged the green transition*, 13 February 2023), noted that the immediate reactions in several energy consuming markets have fed this pessimism. Some governments extended the life of coal-fired generating plants and re-commissioned others that had been shuttered. A number of coal producing countries lifted production caps. India and China increased production by 11% and 8% respectively. This helped meet world demand, which increased by 1.2% over the previous year and reached a record 8 billion tonnes. Countries have also arranged long-term commitments to purchase LNG, which – if used to displace coal generation – will advance the emissions reduction agenda. But there have been other actions that sustain and move forward the energy transition.

Improved energy efficiency and increased investment in low-carbon and zero-carbon sources also grew last year. *The Economist* says that in 2022 the energy necessary to produce 1 unit of GDP in the world declined by 2%. The consultancy, McKinsey, reports that Europe used 6-8% less electricity in 2022 than in 2021. Increased consumer interest in electric vehicles and heat pumps was particularly strong. Perhaps the most surprising and significant indicator was that global investment in 2022 in solar and wind projects (USD 490 billion) surpassed investment in new and existing oil and gas wells.

In Canada, we have seen the discussion of alternative energy and mitigation technologies move out of industry conversations and into the public forum. *Carbon*

capture usage and storage (CCUS) is a term that has now become familiar to Canadians. Our considerable hydrocarbon resources could be viewed in a new light, if *CCUS* becomes a widespread, viable means of eliminating carbon emissions from production and use. Hydrogen has been in the news thanks to the interest of Germany in Canada's potential as a supplier. Indeed, Canada's potential – should hydrogen become an economical and convenient alternative fuel – is considerable. We have the means to produce the fuel in virtually all regions of the country. Canada's reputation as a leader in *small modular nuclear reactors (SMRs)* is growing. The ECC has met foreign delegations with a particular interest in Canadian *SMR* technology research and development.

The conflict in Europe has unleashed developments in the short term and the long term. The possibility of accelerating the transition of energy systems to low emission sources – as suggested by *The Economist* – is perhaps one of the least anticipated outcomes.