



THINKSPACE

GIC MEETS

Al Gore on the Future of Sustainability

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This article presents takeaways from a session at GIC Insights LIVE 2020, where we were privileged to have Al Gore, Former Vice President of the United States, and Chairman of Generation Investment Management, share his rich perspectives on the future of sustainability.

GIC Insights is our annual flagship event that gathers a select group of prominent business leaders to deliberate over long-term issues pertinent to the international business and investment community.

TURNING POINT SEEN IN THE BATTLE AGAINST CLIMATE CHANGE

Climate change has accelerated and intensified in the last decade. At this point, 2020 could likely be the world's hottest year ever measured with instruments. The five hottest years ever measured have been in the last five years¹; 19 of the 20 hottest years have occurred since 2001². Clear examples of climate-related extreme weather events include the forest fires in California and the melting icebergs in Antarctica and Greenland.

But the solutions to the crisis are now also here, along with greater acceptance of the reality and severity of the problem, and the resolve to address it.

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MOTHER NATURE IS NOW DRIVING THIS DEBATE. WE HAVE TO UNDERSTAND WHAT MOTHER NATURE IS TELLING US, AND EACH OF US IN FINANCE, IN THE INVESTMENT COMMUNITY, IN BUSINESS, AND IN OUR ROLE AS CITIZENS OF COUNTRIES WHERE DECISIONS AFFECT THE FUTURE WHEN THEY ARE MADE COLLECTIVELY — WE NEED TO ALL SPEAK UP.**

THE LINK BETWEEN THE CLIMATE CRISIS AND COVID-19

Comparing the climate crisis to another major crisis confronting the world — COVID-19 — reveals similarities and interconnections. Both crises have highlighted the importance of listening to scientists and other experts, who had warned of the risks of a global pandemic as well as the even more serious consequences of climate change. In many countries, both crises have brought urgent problems such as rising inequality to the fore, given their disproportionate impact on the poor.

Reliance on fossil fuels has worsened the impact of the pandemic. A recent study by the Harvard T.H. Chan School of Public Health revealed that people with COVID-19 who live in US regions with high levels of air pollution are more likely to die from the disease than people who live in less polluted areas³. We should also take into account the fact that the continued encroachment on previously wild areas and destabilisation of ecosystems are resulting in the emergence of new viruses, such as the SARS-CoV-2 virus which causes COVID-19.

Given these multiple connections, solutions to the climate crisis can contribute to mitigating the negative effects of current and future pandemics. Additionally, while the economy has had to be dampened in order to solve the pandemic, the solutions to the climate crisis present significant job creation opportunities that will be greatly needed as we come out of the pandemic. This is also true for the inequality crisis — the Oxford Review of Economic Policy recently reported that dollars invested in sustainability actually reduced

¹ NOAA (15 January 2020), 2019 was 2nd hottest year on record for Earth say NOAA, NASA, <https://www.noaa.gov/news/2019-was-2nd-hottest-year-on-record-for-earth-say-noaa-nasa>

² NASA Global Climate Change (2019), Global Climate Change: Vital Signs of the Planet, <https://climate.nasa.gov/vital-signs/global-temperature/>

³ Harvard University (18 September 2020), COVID-19 PM2.5: A national study on long-term exposure to air pollution and COVID-19 mortality in the United States, <https://projects.iq.harvard.edu/covid-pm>

inequality and created more jobs, as compared to dollars continually invested in the fossil fuel economy⁴.

“IT IS NOT AS IF THERE IS A COMPETITION FOR MINDSHARE BETWEEN THE PANDEMIC, THE PROBLEM OF INEQUALITY AND THE CLIMATE CRISIS. THEY ARE ALL INTERLINKED.”

We are already seeing the outlines of a plan that will enable us to solve the climate crisis – development of clean energy sources, acceleration in the adoption of electric vehicles, sustainable forestry, regenerative agriculture, circular manufacturing, retrofitting of more efficient buildings, as well as the push towards sustainable investing by businesses and investors around the world.

FALLING COST OF RENEWABLE ENERGY SOURCES

Alternative energy sources have become increasingly popular around the world. In 2019, renewables accounted for 80% of new electricity-generating capacity installed worldwide⁵.

This is linked to falling costs – five years ago, electricity from renewable sources was cheaper than electricity from new fossil sources in only 1% of the world. Today, this is true in more than two-thirds of the world. Five years from now, electricity from solar and wind energy is expected to be cheaper than burning gas, coal or oil in almost all of the world.

NEXT SET OF TECHNOLOGIES TO ENABLE A NET-ZERO ECONOMY

AI for hyper-efficiency

A major trend that will enable us to achieve a net-zero economy is the application of artificial intelligence (AI) and machine learning to achieve hyper-efficiency in processes. With these new tools, we are experiencing the ability to enhance energy efficiency and conservation far beyond what many had thought possible.

For example, Google reduced energy consumption at its data centres by 40%⁶ by applying machine learning technology developed by DeepMind, a UK-based company it acquired in 2014. They were able to reduce energy use without any new hardware, instead learning how to utilise the same process in a far more efficient way with the use of new technologies.

Surge of interest in “green” hydrogen

It was previously impractical to extract hydrogen from water because of the amount of energy required. The dramatic expansion of the amount of wind and solar electricity, which is zero marginal cost renewable electricity, has made it now possible to create hydrogen sources, or “green” hydrogen, economically, and at scale. Hydrogen can then be burnt to produce extremely high temperatures, and applied to processes such as steelmaking and other high-temperature use cases. Germany has already begun subsidising the accelerated development of green hydrogen, and the European Union is following its lead.

Growth of carbon markets worldwide

While the idea of carbon taxes has been largely controversial, we have seen the emergence of indirect carbon pricing through emissions trading schemes in markets like China, the European Union, and US states like California, New York, Oregon and Washington. Markets in need of

⁴Hepburn, C., O’Callaghan, B., Stern, N., Stiglitz, J. & Zenghelis, D. (2020), Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?, *Oxford Review of Economic Policy*, 36(1), 359-381, <https://doi.org/10.1093/oxrep/gra015>

⁵Frankfurt School-UNEP Centre/BNEF (2020), *Global Trends in Renewable Energy Investment 2020*, https://www.fs-unep-centre.org/wp-content/uploads/2020/06/GTR_2020.pdf

⁶DeepMind (20 July 2016), *DeepMind AI Reduces Google Data Centre Cooling Bill by 40%*, <https://deepmind.com/blog/article/deepmind-ai-reduces-google-data-centre-cooling-bill-40>

revenue can benefit from this as under the international treaties, prices on carbon are treated like value-added taxes collected at the border from countries that do not have them, and rebated to domestic exporters when they are being used in export.

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ONE OF THE SOLUTIONS TO THE CLIMATE CRISIS IS TO STOP SUBSIDISING THE DESTRUCTION OF HUMANITY’S FUTURE, AND INSTEAD GIVE MORE ENCOURAGEMENT TO A FASTER TRANSITION TO RENEWABLE ENERGY, TO ELECTRIC MOBILITY, TO CIRCULAR MANUFACTURING, TO SUSTAINABLE FORESTRY AND TO REGENERATIVE AGRICULTURE.

REFORM OF METRICS NEEDED

There is now considerable evidence to show that investors and companies that are fully integrating ESG into their portfolios and business plans are performing better over time.

However, to effectively change the detrimental aspects of the current way of managing the global economy, and to draw the link between real economy issues and the investment world, we need to reform the system of metrics. Factors that are often left out, such as inequality, must be included. Reviewing how and what we measure as “value” is crucial to spur greater change.

For example, the Gross Domestic Product (GDP) system leaves out four important aspects:

- **Negative externalities** – Pollution is a key example of an externality that should be, but has not been included in the accounting system.
- **Positive externalities** – Investment in public goods like healthcare, education and family services which bring longer term benefits, are instead counted as expenses.
- **Depletion of crucial resources** – This includes topsoil, underground water aquifers and biodiversity.
- **Distribution of wealth** – Hyper-inequality has reached levels that threaten public support in many countries for capitalism and democracy. The capture of the policy process by the wealthy elites also needs to be re-examined.

We need to take advantage of what modern information theory tells us. This will allow us to tap on the wisdom of crowds, and find ways for all aspects of societies to better understand and hence participate in the benefits of solving these challenges, for a brighter future.