



Opening Our Eyes To Climate Change

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Sometimes a crucial piece of information may look hidden, yet in reality may be right in front of our eyes. The difference between ignoring and uncovering this information is defined by how much we want to have access to that information. If we really care, it will not be difficult to figure out to be creative, and use a new set of glasses or different set of lights to uncover the data from its hidden place.

The same holds true with the data we have available on climate change. The information looks complex. It appears to have too many variables. Too many moving parts and actors involved. Impossible to accomplish without deep-pocketed investors being willing to make large investments which will take forever. Potential for complete failure unless full international cooperation is in place.

In reality, the way out depends on whether we care enough about making a difference for climate change, and if we desire to be part of the solution as opposed to being part of the burden. When we

truly care, solutions for each complex piece will be uncovered easily and there will be no doubt in our mind about how proven, serious and imminent the threat is. Then we will not hesitate to act in spite of public comments by some world leaders who still question if climate change even exists.

First challenge related to climate change is inertia. Fossil fuels have driven rising prosperity for more than 200 years and today provide 80% of human energy needs. But carbon dioxide emissions from their use threaten potentially catastrophic climate change. To avoid that we must achieve net zero emissions across the whole world by around 2060. i

Second challenge is whether governments, industry and consumers are willing to take the actions required to get there. It may not be an issue of feasibility (goal may be achievable at a certain cost) but a question if various stakeholders can work together. ii

The third challenge is to figure out how to deal with the difficulty of implementation. There are several sectors where it is much harder to see how emissions can be cut, including heavy industries such as plastics, steel, and shipping. These sectors are crucial for modern living. They depend on energy for the conversion of one form of material to a more practical useful form and getting it into the hands of the consumers. They have made our lives more comfortable than our forefathers and they are vital for global trade. It is difficult to see how to reverse this trend.

Fourth challenge is access to investors and to investment dollars. Investing in infrastructure for renewable energy is expensive. In fact less than 1.5 per cent of the global land surface area could produce all the renewable electricity the world

needs: and it is physically possible to run grids that rely on intermittent renewables for 90% of their power, while still delivering electricity whenever needed. The real challenge is to get to this endpoint fast enough: that requires us to quintuple our annual investment in renewables capacity for the next 40 years. iii And where do we get all this money?

It is easy to get discouraged by all these tests and trials. So why bother? A week ago, the US federal government has published a report on climate change and the report says: 1) “If emissions are not curbed, it is very likely that some physical and ecological impacts will be irreversible for thousands of years, while others will be permanent”. 2) “The costs of those emissions reductions could be significantly reduced, or even completely offset, by other benefits, such as improving air quality and public health, and strengthening energy security.” iv

These are two excellent reasons why we should not be disheartened. The arguments are to the point, suggesting that countries may have borders but climate change is borderless. This means when we quantify the gains, as well as the costs related to climate action, we cannot allow ourselves to think like a citizen of a specific country. We need to act like global citizens.

While the challenges are daunting, by providing the right economic incentives, governments and society can mold the desired outcome over the long run. Below are some examples of countries and enterprises that truly care and have uncovered smart and resourceful ways to cope with these challenges.

Many mining companies — from Antofagasta in Chile to Newmont Mining in the U.S. — have increased efforts to make deals with local electric grids for the supply of renewable energy. In remoter areas they use on-site generators powered by solar panels and batteries. In mining, energy can be a third of a mine’s operating expenses and therefore a significant component for cost control. Now that renewable energy has become more affordable it counts as an appealing and sustainable alternative, because renewables

also reduce the downside from unstable diesel prices.

Other companies are turning to innovation to deal with climate change. An aluminum smelter in Norway, Norsk Hydro and the government have been spending nearly half a billion euros to test-run electrolysis technology to reduce its energy needs by 15%. At first sight this may sound insignificant. Yet in a sector that spends up to 45% of its production costs on electricity, the technology could raise billions in profits for European companies.v

In China we see a similar trend. China has grown rapidly and the population consumes a lot of energy, resulting in huge pollution. Consequently, they are now switching to expensive LNG and society is ready to bear the cost.

In Europe, countries like Germany, which truly cared about climate change pioneered a renewables subsidy regime, introduced in 2000. This prioritized power from wind and solar, and guaranteed producers a fixed tariff over 20 years, at a cost of \$250bn. Over time, this dramatically altered the power demand dynamics in Europe.vi

Europe’s good example for solar energy subsequently become contagious. International solar alliance was set up and emerging markets countries are becoming part of this positive trend. “In June 2016, the international solar alliance entered into an understanding with the World Bank for accelerating mobilization of finance for solar energy. The Bank will have a major role in organizing more than US \$1000 billion in investments, necessary by 2030, to meet the goals for substantial deployment of cost-effective solar energy. So far 48 countries have signed.”vii

Finally, there is the important matter of fixing a misperception about how to reduce impact from climate change. We often assume that that driving electric cars, giving up natural gas-fired boilers and moving forward to electrified heaters is the ultimate solution to reduce emissions. However, this is incorrect information. Electrifying the world is the right method only if we pay attention to what source electricity is produced from. Higher electrification may reduce oil demand, but any reduction in emissions from electric vehicles

will be offset by the increased use of power plants to charge them. The unfortunate fact is that carbon dioxide emissions from utilities have been growing through coal-fired plants. viii Electrification will help but only if electricity comes from clean energy sources and if power sector moves rapidly towards zero emissions.

In conclusion, if we really care, it will not be difficult to see the truth about climate change. Picking the correct choice to make a difference will come naturally. If necessary, we will use our imagination to uncover the correct data or to come up with the best solution. And then we will set the right example, in our own ways and in our own capacity.

ⁱ <https://www.ft.com/content/1b56f762-eco8-11e8-89c8-d36339d835co>

ⁱⁱ <https://www.ft.com/content/1b56f762-eco8-11e8-89c8-d36339d835co>

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^{iv} <https://www.ft.com/content/216b5ed2-ef68-11e8-89c8-d36339d835co>

^v <https://www.ft.com/content/8dbc593c-bff3-11e8-84cd-9e601db069b8>

^{vi} <https://www.ft.com/content/1ce68966-bffe-11e8-95b1-d36dfef1b89a>

^{vii} https://en.wikipedia.org/wiki/International_Solar_Alliance

^{viii} <https://www.bloomberg.com/news/articles/2018-11-13/electrifying-the-world-no-panacea-for-global-warming-iea-says>