It's time to get serious

The energy sector must take a leading role in tackling carbon emissions – and it needs to act now

IN ITS latest report Mitigation of Climate Change, the Intergovernmental Panel on Climate Change (IPCC), has found that decades of foot-dragging by political leaders has propelled humanity into a critical situation, as global greenhouse-gas (GHG) emissions rise faster than ever.

The report measures the success – or otherwise – of government efforts to keep the global rise in mean surface temperatures to less than 2 degrees Celsius compared with pre-industrial times. Most climate scientists believe that ecological damage – and the collateral economic damage that it will bring – will become unmanageable if long-term average temperatures rise beyond this internationally agreed target. Yet the report's conclusions are bleak. Governments are far from hitting the target and they will fall further behind unless the energy system is fundamentally transformed.

The first decade of the 21st century was the hottest in recorded history. It will get hotter without drastic action, said the UN's panel of climate experts. But whether policy makers heed the group's advice remains to be seen.

Between 2000 and 2010, the IPCC says, GHG emissions expanded at 2.2% per year – almost twice as fast as in the previous 30 years – as more fossil fuels were burned, especially coal. Worryingly, for the first time since the early 1970s and despite investments in efficiency, as well as cleaner energy sources, the amount of carbon dioxide released per unit of energy consumed actually rose. At this pace, the report estimates, the world will pass a 2 degree Celsius temperature rise by 2030 and the increase will hit 3.7-4.8 degrees Celsius by 2100, by which time climate change will be catastrophic.

To avoid that fate, the world must cut its GHG emissions by 40-70% by 2050. This would involve a revolution in the way we produce and consume energy. Transforming the energy sector – responsible for two-thirds of global GHG emissions – would be a crucial step towards a low-carbon world.

From coal to gas

The fossil-fuel renaissance witnessed over the past decade or so, particularly the use of coal for power generation in China, India and elsewhere, must be curbed dramatically. Cleaner-burning gas could be substituted for dirtier coal, acting as a bridge towards lower-carbon power generation. Yet in energy-needy Asia alone, coal, which is cheaper than gas and responsible for as much as 44% of energy-related carbon dioxide emissions, is predicted to make up 70% of new power-generating capacity to 2030.

If countries keep stalling on tougher climate rules, trillions of dollars will be invested in the coming years in power plants, buildings and cars that use too much energy from fossil fuels, said the IPCC.

If climate targets are to be met, then the market share of low-carbon energy sources needs to triple to 80%. To do this, the IPCC estimates that investments in conventional fossil-fuel technologies for the electricity sector need to be slashed by $30 billion every year until 2029, while investment in low-carbon electricity supply – renewables, nuclear and power generation with carbon capture and storage (CCS) – needs to rise by $147 billion every year.

One of the most striking parts of the report is the weight the panel puts on CCS, but it remains unproven on a large scale.

The new report does not prescribe the actions governments need to take. But it does make clear that putting a price on carbon dioxide emissions and other GHGs should be a fundamental part of the approach, helping to redirect investment toward climate-friendly technologies.

This is sensible. The economics of climate change are no different from the economics of everything else: if we give corporations and individuals an incentive to cut GHG emissions, they will respond.

Some international oil companies, which increasingly focus their efforts on developing cleaner-burning gas reserves, agree. "Without a price on carbon we are just tinkering at the fringes," BP's chief economist, Christof Ruhl, told global leaders at an energy summit in Abu Dhabi earlier this year.

The IPCC's economic case is compelling. The cost of mitigating climate change would be negligible, it believes – just 0.06% of global GDP per year – largely reflecting the falling cost of renewable energy, especially solar power.

Yet assertive action is far from guaranteed when policy makers gather in Paris next year to thrash out a new climate treaty. Dauntingly, the IPCC finds the world has only about 15 years left in which to start bending the emissions curve downwards.

Nevertheless, divisions between wealthy nations and poorer nations that have long bedevilled international climate talks were on display yet again at the launch of the IPCC's report in Berlin.

Some developing countries insisted that charts showing the link between new emissions and economic growth be left out of an executive summary designed to inform the world's top political leaders. Developed nations removed references to historical GHG contributions, which show that rich countries bear a disproportionate responsibility for climate change.

None of this is helpful for the world's energy industry. Further procrastination will only serve to hit the sector's bottom line. Change will have to come sooner rather than later. The industry has to get serious about carbon mitigation too.

Delaying action would be a false economy. Putting off the necessary investments until 2020, when a new global climate agreement comes into force, would avoid $1.5 trillion in low-carbon investments by the end of the decade. But the energy sector would then have to spend an extra $5 trillion between 2020-35 to hit the 2 degree goal, says the International Energy Agency. If the numbers in the IPCC's report don't scare the industry into action, those ones should. The time to act is now. ●