

The International Energy Agency's World Energy Outlook 2020, released this month, [was](#) particularly interesting in its focus on green post COVID19 stimulus packages, using language similar to that of European leaders or even US Presidential candidate Joe Biden, but not that of Australia.

The discussion was about what was necessary to achieve the goals of the Paris Climate Change Agreement, and in particular what developed nations needed to do to meet the increasingly popular commitment of net carbon neutrality by 2050, again a target to which Australia has not committed. Even China, the world's largest emitter, has now committed to that target by 2060, with President Xi referring to the "historic opportunities presented by the new round of scientific and technological revolution and industrial transformation which will enable a green recovery of the world economy".

Not surprisingly, much of the IEA discussion focussed on the development of alternative technologies, but there was also considerable emphasis on the opportunities presented by behavioural change. A focus on improved energy efficiency, the demand side of the equation, was not a big part of the recently announced Australian post COVID19 energy strategy. The solution was rather, "gas-fired recovery".

The IEA said that achieving net zero emissions by mid-century will require a significant further acceleration in the deployment of clean energy technologies, "together with wide ranging behavioural changes".

Bodies, such as Australia's Energy Efficiency Council, have for years argued that energy efficiency should be equated to a fuel, the "[first fuel](#)", providing a less expensive pathway to lower emissions with incidental benefits of improved business efficiency and productivity. But its been a struggle. The choice of Australian policy makers has been to focus on the supply side.

Australia's last Energy White Paper [2015](#) did include a chapter on energy productivity, and the goal of 40% improvement in productivity by 2030 was adopted by COAG. However, from there the challenge was swallowed up by process. Many COAG working groups have been established to facilitate implementation but little has been achieved in terms of outcome.

Professor Finkel in the Independent Review into the Future Security of the National Energy Market 2017 [identified](#) the importance of demand side initiatives. He said, "using demand response to incentivise consumers to reduce their demand at peak times is often cheaper, and faster to implement, than building new generation and networks to meet the peak". In a rare success in this field, a Wholesale Demand Response Mechanism, is now due to commence on 24 October 2021.

In fact, whilst the government of Australia is not prepared to embrace the language of a green post COVID19 economy, a lot of what it is doing is not so different from others. This is illustrated by Minister Angus Taylors release last month of his Low Emissions Technology Statement [as](#) the first milestone of Australia's Technology Investment Roadmap, which is stated to be a strategy to accelerate development and commercialisation of low emissions technologies.

In fact, Minister Taylor said the government expects to invest \$18 billion in low emissions technologies over the decade to 2030, in order to drive at least \$50 billion of new investment over the next ten years. Elsewhere that might be called a green revolution!

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The government chose existing known products and services and focussed on improving their economics, rather than looking for magic solutions. The aim is “to make new technologies as cost effective as existing technologies”. Included were hydrogen production, long duration energy storage, low carbon materials, carbon capture and storage (CCS) and improving levels of soil carbon.

Certainly, the first three fit firmly within the IEA’s clean energy transition and are supported by research and investment programs in all developed countries.

The fourth, CCS, is not so much about alternative energy, but improving the emissions profile of hydrocarbon extraction. In Australian terms, the focus of CCS will probably be on support for the natural gas industry. For some it is therefore just a distraction from the challenge of moving beyond hydrocarbons, whilst in Australian government terms, it is supporting what will be a significant part of the Australian economy, including as a transitional fuel, for many years to come. Interestingly, whilst the IEA sees thermal coal as having commenced a terminal decline, it does not see gas (with about half the emissions profile of coal) in such terms.

The fifth is also not an alternative energy source as such. Improving levels of soil carbon in agricultural lands, although not widely appreciated, is not only a measure which will reduce net carbon emissions, but which brings many important co-benefits including improved productivity, water retention and biodiversity conservation. Although challenging in terms of measurement, evaluation and permanency, it presents great win/win opportunities. Australia has been a leader in the development of soil carbon protocols, which others are now taking up around the world. Only this month, the Food and Agriculture Organization in Rome [published](#) “A protocol for measurement, monitoring, reporting and verification of soil organic carbon in agriculture landscapes”. At least to this writer, its good to see Australia showing initiative, rather than just following the pack.

Minister Taylor sees the Low Emissions Roadmap as an important contribution to Australia’s Long-Term Emissions Reduction Strategy, which he will tender before COP26 later next year. So, whilst Australia might not have a long-term target, it is developing policies and measures which could ultimately support such a target. Any target will however be easier to achieve if the Australian government seriously drives an energy efficiency agenda. Within energy efficiency and human behavioural change, lies much low hanging fruit, or first fuel, which would significantly reduce the Minister’s challenge. Sometimes the obvious solutions are difficult to see!



Hon Robert Hill AC

Robert Hill was Australia’s Environment Minister from 1996-2002. He led the Australian delegation at the Kyoto climate change conference and introduced the Australia’s Renewable Energy Target. He is currently Adjunct Professor in Sustainability at the US Studies Centre at the University of Sydney and Chairman of the Cooperative Research Centre for Low Carbon Living at the University of New South Wales.