

ENERGY -

Notes for Emissions Reduction Plan, November 2021

Jack Santa Barbara, Our Climate Declaration

We support the plan to both reduce greenhouse gas emissions and transition to renewable energy sources. However, we feel the current plan is inadequate to accomplish either goal because;

1. It depends on an ill-designed **Emissions Trading Scheme**.
2. The notion of increasing our supply of **renewable energy** is seriously flawed.

The Emissions Trading Scheme

- Many variables can affect prices beyond that of carbon. It is complex, of limited direct impact and unfair because it will adversely affect lower income New Zealanders who rely on transportation for work.
- **Tradable Energy Quotas** (TEQs) is a system of rationing that is a fairer and more direct means of reducing emissions. It controls the availability of the actual physical resource and avoids market mechanisms.
- TEQs provides free, but declining, quotas to all adults and ensures that everyone, regardless of financial status, has energy security and can plan for a transition. Those who are able to make a transition most quickly can then sell or gift their quotas to other individuals or organizations.
- Because a Tradable Energy Quota system directly affects everyone, citizens would be motivated to make the lifestyle changes needed and to work together to do so. The ETS entirely misses this opportunity for fostering a cooperative and mutually supportive approach to reducing emissions.
- The benefits of a TEQ system would go well beyond simply reducing emissions from fossil fuels. With reduced availability, industries, including agriculture, would have to slow down and reduce their operations. It would also focus business operations on providing essential goods and services and reducing waste.
- The challenges would be to ensure employment as business activity reduced, and to maintain wellbeing. This could be achieved by government programmes to expand public goods and services, education and health care, and ecosystem regeneration.
- Ecological overshoot is a more serious problem than climate change which is but one of its many symptoms. A reduction in energy availability would go a long way to reducing NZ's excessive and destructive ecological footprint which is destroying the capacity of our natural systems to sustain us into the future.

Transitioning to Renewable Energy

- A program to reduce our energy demand is badly needed to prepare New Zealanders for the highly likely reduction in energy supply over the coming decades.
- So called “renewable” energy technologies such as wind turbines and solar panels cannot be built and installed without using fossil fuels. Furthermore, these “renewable” energy technologies require the replacement of their physical infrastructure every few decades. Even if some of the material involved can be recycled, more energy will be required. Studies have shown that the amount of fossil fuels needed to build a mostly renewable system would push the global temperature well beyond 2 degrees C. There are also real resource limitations regarding the raw materials that would need to be mined to produce the infrastructure needed.
- The RE technologies available all have a lower net energy surplus than fossil fuels. This lower energy surplus means that more of the economy will have to be devoted to simply providing energy, and less will be available for other tasks. Hence the importance of determining how much wellbeing can be derived from each unit of energy used.
- Independent research groups around the world have been signalling the alarm that RE will not be able to provide the same level of energy as we have become accustomed to with fossil fuels.
Some studies suggest that a mostly RE system would barely provide enough energy surplus to maintain complex industrial societies we now take for granted.
- There is much support for increasing the tree canopy in cities and towns, to create access to Nature, to cool the local climate, and to provide biodiversity. This will create new landscaping wastes which are idea fuels for wood gasification systems. This is a promising technology being researched locally. It has promise for heating in schools and could be reticulated for wider use in new housing developments.
- Given our high percentage of geothermal and hydro power we are in a very favourable position compared to other nations. However, lower energy availability will have profound changes on our way of life.
If we plan for a lower energy future we should be able to live well, if differently than we might currently anticipate. If we do not plan for a lower energy future and try to force maintenance of our high and wasteful current level of per capita consumption, we may succeed for a brief number of years. But the longer we wait to make a transition to a lower energy future, the more ecological destruction we will do, and the bleaker our future will be.

- The notion of a lower energy future has profound implications for NZ, and the world. Yet it is likely inevitable that it will accelerate over the coming decades.
- Consequently, every aspect of a plan to deal with the climate crisis must be considered from the perspective of a declining energy future.