

If I was the Government I would use the \$700 million a year that they are putting into the super fund and turn that money into a green fund to invest in renewables its costing the taxpayer no extra money but could benefit them. This should give use the funds to push for the projects we need to make any real difference. Renewable energy has a good return but the sooner we change to a carbon neutral economy the more opportunities we will have. If people believe going to 100% renewable is going to harm the economy needs to look at Iceland.

I would also change the ETS I would allow companies to offset their emissions by investing into the same green fund we need the money for research and investment so why not from the emitters its pro business, good for the environment and diversify business. You would only be able to invest part of your emission maybe a half or a third the rest would go into research on climate change solutions and the rest should go into DOC budget to buy back low productive land like the hill country of East Cape or King Country and put it back into bush it would create more permanent carbon sinks, improve water quality and create more native areas for tourists.

With the money from the green fund I would invest in the power companies in New Zealand but I would Strategic Invest in them so I will give you this much money but only if you fund these projects. My strategy for the future of New Zealand power would be instead of building big power stations around the country I would look at places that can be taken off the grid by turning them into mini power stations so we don't have to spend billions always upgrading our transmission lines also with climate change more power lines can make us more vulnerable to the changing weather. I would look at the hospitals and school first government owned but serves the communities if we could drop the fixed costs of electricity off their budgets it frees up more money to make them more efficient which benefits the communities and takes the pressure off the government to fund them. I first thought about covering the roofs in solar panels but thought the roofs might have to be reinforced and have workmen coming and going through a hospital so after looking at Kew Hospital down here at Invercargill I came to realize the best approach would be to target the carparks and cover them in solar panels like the charging stations over in California. This would not only give you a power station but also give the hospital a covered car park for no cost in return which also benefits the sick people trying to get to the hospital. From there I would design the covered the roof with low impact vertical axis wind turbines acting as the pillars to hold up the roof so you gain more power and offset the time solar doesn't work. I would do something similar to school targeting areas in school that could be turned into shelter the other thing I would do for schools to cut their costs is buy a fleet of electric buses that can be charged at schools and lease it back to the schools so it encourages them to use them, cut fuel costs and means the schools don't have to raise hugh money to buy them this could all be done from the investment from the green fund.

We could also look at the methane recovery project and instead of collecting the gas for running the shed what if we put a big compressed gas tank on the end of it collect the gas and sell it for domestic gas use. The reality is the South Island if you think about is already at or near 100% renewable electricity so by turning gas into power isn't going to greatly improve or emissions and you maybe able to achieve good results from wind turbines and solar panels but the south island doesn't have any natural gas so if we replace the natural gas from the North Island with methane capture from dairy sheds we have created a renewable gas source, cut down our transport needs and create a energy industry in Southland. With the government announcement about cutting the oil exploration permits I believe the timings for going this way is perfect as they will be looking for an alternative that helps the regions so it could be a good opportunity for Southland if we act and like you said sometimes you have to create your own opportunities.

I also heard you guys mention different things you a trailing to improve the intake of methane. The straw or wood chip left over in the calf sheds could be a good fuel source. Another one could be food scraps left over from supermarkets and places like Mcdonalds it would be better than putting in the dump and could collect methane and return nutrients back into the ground. You also said that it makes the effluent better for the soils. When I did my level 5 production course we went out to Alfons Zeestraten farm at Winton where he uses an umbilical effluent system to inject the effluent into the soil and claimed he didn't have to put any phosphate and potassium I have also read the Dutch have done research and it cuts emissions by about 20% compared to other way. This with your methane recovery combined could improve soils, cut costs and cut emissions I would like to see a system where the effluent is put in underground into the soils but haven't seen any system.

You also mentioned about the Hydro lakes when they struggle to keep up in the dry. What you could do is look at the small streams and creeks that run into the hydro system and build artificial wetlands next to them basically when a flood event happens or the rivers get too high they flood into a prepared wetland which then slowly releases the water back into the river system so you try and catch the rain in the spring and slowly release it in the summer so it keeps our rivers at a more constant level and is a build in natural

fail safe. The wetland can then act as multiple tasks such as a carbon sink, improve water quality and an area for recreation. Its to try and migrate against the worst Climate Change can do to use with floods and low river levels due to droughts.

Thank You for reading.

Kind Regards