

Friday, March 10th 2017
Phillip Mack
(On the Road to Auckland)

Hydropower Potential and Utilization on the South Island

Our last full day in New Zealand was primarily spent traveling from New Plymouth on the west coast, up to the capital Auckland. We about midway through our drive north we stopped to discuss the general future of New Zealand Energy production, and the methods that they would use to produce them. Jorge led a discussion on the possibility of tidal current power production in the Cook Strait, and current plans in place to develop that resource. Phil B. lead a discussion on the importance of New Zealand Geographical location, above the Alpine Fault and how that effected the development of Geothermal power in the country. We then discussed the future of Geothermal power in the region, and how it could help New Zealand reach its goal of 90% of electricity coming from renewals by 2025. I then led a discussion on the potential for future hydroelectric power projects on the South Island.

As we learned on our trip, there is some tension between the North and South when it comes to power production and usage. The south island tends to resent the fact that so much of their power is “shipped” to the north island due to the higher usage. The South Island is largely unpopulated and has a large, untapped, potential for hydroelectricity power. Even with the unused potential, more than half of the hydroelectricity in the country comes from the South Island, and is transmitted across the Cook Strait. There are currently 16 hydropower facilities with a 10MW capacity or greater located on the south island.

The Citizens who live on the south island are reluctant to allow the development of new facilities on the south island for several reasons. First, they do not want to impact the ecosystem on the south island. Hydroelectricity can drastically alter the path and size of river and lakes. They also do not like sending all of their power to the north island, as they feel it is unfair. So despite the large potential, many projects on the South Island have been put on hold for the moment.

After my presentation, the group discussed the south islands stance on further hydroelectricity and other possible methods the country could take to increase their renewable energy usage. Personally I found the idea of marine based hydroelectricity on the south island coasts to be very promising. One benefit of marine based hydroelectricity in that it does not have the same large scale impacts on the surrounding ecosystem.

After our discussion we got back on the road and arrived in Auckland in the late afternoon. We spent the evening exploring the city and enjoying our last night in New Zealand.