

Chapter 6 Norfolk Island interview results

6.1 Introduction

In this chapter, I present the results from the semi-structured face-to-face interviews I conducted on Norfolk Island in February and March of 2006. I begin by presenting results on participants' general attitudes to established energy options and potential alternatives. I then present participants' opinions on energy development according to four avenues for energy development that emerged from the combined interview data. I present participants' views in relation to a wide range of subjects ranging from the Island's political and administrative systems to its relationship with the Australian Government, consultants, and businesspeople.

6.2 Definition of terms

Table 16 shows the terms I use in this chapter to quantify the portion of participants who held a certain view or expressed a certain opinion. Each term represents a percentage band. I also use more specific terms such as "a third of participants".

Table 17 Terms used to quantify participant's views and responses

Term	Portion of participants
"A minority"	Less than 9%
"A small number"	10-24%
"Some"	25-49%
"Many"	50-75%
"Most"	Greater than 75%

6.3 General attitudes to energy options

There was a dichotomy of fundamental opinion amongst interview participants regarding energy development. Roughly a third of participants viewed established energy options as the most appropriate, and believed alternative technologies were not yet at a stage of development where they were technically or economically viable.

There was an explicit expectation that when it is proven they are “better” than current systems, they will be adopted. The remaining two thirds of participants believed that alternative energy options were more appropriate than the established energy options, but their adoption was prevented by dysfunctional social and political systems on the Island. All participants were characterized by one of these two standpoints, and it shaped much of the discussion during interviews.

6.4 Established energy options

6.4.1 Electricity

Most of the interview participants, whether in favour of diesel fired electricity production or not, held the opinion that the current system was reliable, and consistently fulfilled its requirement to provide electricity. There was a general understanding that maintaining quality of supply on a small grid was difficult, and that the Electricity Service had improved the service from what it was a few years ago when blackouts were far more common.

Perceptions of cost appeared to be the most significant dividing factor between those in favour of the current system, and those opposed to it. Most of those in favour of diesel production perceived it to be the cheapest option, and used this as justification for the continued use of diesel fuel. Some added that if the cost of alternatives was reduced to a competitive level, then there could be a case for change. Those who perceived the cost of alternatives to be less than the cost of diesel were highly critical

of the government continuing to pursue diesel production when there were perceived cost savings to be made along with environmental benefits. The most common view was that the cost of diesel was escalating, and alternatives should be introduced. One participant explained:

The technology and the financial costs now have sort of come to a level of sophistication whereby the Island really would be remiss if, as a community, and with local government support we did not do something in the next five years about getting something on the ground. While it might not be able to take the full load, it could certainly share the load and reduce the necessity to burn diesel.

A minority of participants were highly supportive of the established electricity supply system. They valued the reliability of diesel production and its ability to generate electricity independent of environmental conditions such as the availability of wind or sunshine. A small number of participants were highly critical of the system, primarily for being expensive, inefficient, using old technology, and for creating noise, vibration and air pollution. Many participants believed the global price of oil and the local electricity price would continue to rise in the future. Referring to electricity, one participant made this comment:

It's an essential commodity, an essential resource that is obviously needed for the lifestyle and economic development of the Island and it's just going to always continue, using the current method burning diesel fuel, continue to be outrageously expensive I mean it's already \$.44 a unit [February 2006]. I'd be prepared to bet \$1000 that it will be certainly \$.50 a unit by Christmas [2006] and the price of oil, while it might have peaks and troughs, the trend will always be upwards so as a consequence, we are directly proportional to that in our power costs because we burn petroleum products.

When asked what they thought of the current system of electricity production, some participants gave answers based on the context of diesel power stations in general, and made positive comments about the way the Norfolk Island Powerhouse was run in

comparison to, for example, power stations on other islands in the Pacific. A senior Public Servant expressed the following opinion:

I'd say - and I guess it comes down to everything in life to me is relative, and it depends who you compare us to - I'd say if you visited most South Pacific islands it would be extremely good as far as our power house, as far as the quality of the reticulation around the Island and certainly probably the under-grounding in particular for an Island like this... So I think relative to other South Pacific islands we're far in excess of the sort of infrastructure and quality.

Some participants gave answers in the context of different methods of generation, such as gas, wind, solar, or biomass. They cited examples of installations in other countries where alternatives were being successfully implemented, and were critical of diesel as a way of producing electricity in comparison to these.

Some participants made judgments based on selected elements of energy options rather than the option as a whole. For example, some made positive comments based on technical merit, and were then critical of other factors such as cost and future suitability. A senior public servant outlined:

"Well I think the current system is pretty good as a general comment. And that is without talking about the costs and the future of it."

6.4.2 Gas and solar hot water

Many participants reported that the market share of solar hot water systems was diminishing and they were being replaced by instantaneous gas, and gas storage heating systems. Whilst some participants were strongly in favour of using solar hot water systems, many participants felt that gas was 'better' way of heating water. There was a common perception that although gas systems required ongoing purchases of bottled gas, their capital cost was low, and overall they held financial parity with solar

systems, or were cheaper. Many participants believed that solar hot water systems did not provide reliable hot water due to restrictions on boosting times and durations or factors relating to the technology itself. There was also a perception that they are not durable and suffer from corrosion in the humid and salty Norfolk Island environment.

6.5 Alternative systems

6.5.1 Wind

Many participants were supportive of wind power in general, and cited it as a viable alternative to diesel generation. The visual impacts of wind turbines appeared to be the strongest factor shaping participant's thinking on wind energy, and was the most often talked about subject during interviews. Many stated that they found them visually appealing, visually acceptable, or felt that the visual impact could be managed by siting them in locations away from populous areas. A small number of participants felt they were visually unacceptable, and would not support wind development for this reason. These participants felt there were no locations on the Island where a wind turbine could be hidden from view. Noise pollution and bird kills were respectively the second and third most common arguments against the introduction of wind turbines. A small number of participants spoke of concerns of logistical difficulties regarding transporting and installing wind towers and turbines on the Island. They were unsure whether or not it would be physically possible to establish the technology. Some participants had concerns that the technology would require specialized expertise to manage and maintain the turbines, and this would have to be brought in from outside the Island. A small number of participants felt that wind installations would be vulnerable to harsh weather conditions, and cyclones that occasionally affect the Island.

Some participants, whether supportive of wind power or not, were hesitant that the entire community would be accepting of its introduction. One participant expressed his opinion:

You'd think that if push comes to shove, and if you polled the people about putting windmills on the coastline, you wouldn't get a positive response. That is my gut feeling.

A small number of participants spoke of the example of rock crushing on the Island, where a small group of vocal residents prevented rock crushing activities through complaints about noise and vibration. Regardless of the validity of these complaints, this was a prominent example in the community of how a small group of opponents prevented the operation of a service that would benefit the community as a whole.

Most participants in favour of wind energy had seen examples of, or sourced information on, wind farms on mainland Australia, Europe, America or the Pacific, and used these cases to justify the development of wind turbines on Norfolk Island. Some were aware of small domestic size turbines and favoured this as a method of development. Wind turbines appeared to be a more easily understood technology than other alternatives, and it was familiar to many participants:

Wind appeals to me much more, because I understand it better. I understand that it is just a small mechanical prop, and there is something appealing about that. Just to put three or four or five turbines, just like they've got on yachts. They seem to have really got that technology down pat. If they can put it on a yacht for a yacht for god's sake, then it has got to be pretty good. I can see how I can do that.

Those knowledgeable about wind energy saw it as a mature technology that has proven to be reliable, and predictable, and therefore was viewed as an attractive energy option. One participant explained:

Wind technology you know is going to work. Past performance tells you that you will get this and it will cost you this much and that's what you will get it for and it's

almost a guaranteed return, so it's like yes, there are better technologies out there, but they're so immature that you can't guarantee what you're going to end up paying in the long run. With the wind technology you can.

A small number of participants believed that the wind resource on the Island was unreliable, and that this would cause problems for a wind generation system. They thought that a wind system would not be suitable because the wind does not blow constantly throughout the day, and there were times when it is calm for several consecutive days. A small number of participants were familiar with concepts of storing electricity in battery systems, but viewed this option as technically difficult, and financially unattractive.

6.5.2 Solar

Many participants viewed solar energy as a favourable energy option. There was some degree of ambiguity and confusion between solar photovoltaic and solar thermal systems, and the mechanism by which they produce electricity or hot water. However, many participants were aware that solar photovoltaic systems produce electricity. Some thought the prevalence of solar hot water heaters on the Island has made this technology more familiar and accessible to the community:

The fact that people use a lot of solar power for hot water over here, I think my gut would tell me that they would probably have a greater affinity towards [PV]. They would feel more comfortable; they know what it is about, it is a technology that they understand.

Many participants believed solar photovoltaic energy was a low impact, robust and environmentally friendly alternative energy option. Some participants were concerned about the area of land required to generate a substantial amount of electricity from solar photovoltaics or the suitability of panels on shade affected rooftops. The aesthetics of a solar farm in a field or on houses was of concern to some. Some

participants were concerned about the storage of solar energy, and many raised issues relating to the inability of solar systems to provide energy at night. Some were also concerned about the effectiveness of modules under low light conditions and cloudy days. Knowledge of the cost of solar appeared to be low, and many assumed the price of electricity from solar photovoltaics would be similar to the cost of electricity from other alternatives.

6.5.3 Biomass

Roughly half of the participants stated they believe the Island should recover energy from municipal solid waste. Of these participants, many were uncertain of specific aspects of the technology, but the concept of removing waste and generating electricity in the same process was well supported. Many of these participants felt waste management was a problem on the Island, and felt energy recovery from waste was 'killing two birds with one stone'. Some had reservations in relation to the labour required to collect, sort and run such a facility, the availability of feedstock throughout the year, and possible emissions from the combustion of toxic materials. Some participants were opposed to using biomass to generate electricity as they felt that the soils on Norfolk Island were depleted of nutrients and organic material, and that organic waste should be mulched and returned to the soils.

A small number of participants were supportive of domestic size units to harvest energy from waste. Ideas included collecting gas from septic tanks and providing small-scale home burner units for cooking or heating water.

6.5.4 Marine Technologies

Most participants cited the ocean as an abundant, untapped, renewable source energy. They reported that living in close proximity to the ocean gave people an understanding and a constant reminder of the nature of the energy of the ocean. One participant explained:

I really believe that we are surrounded by the sea and it is usually fairly stirred up, so there is long-term potential for wave energy.

There was much confusion regarding differences between wave, tidal, and ocean current technologies. A minority of participants were familiar with the technologies and were generally opposed to their development because of concerns regarding the durability of installations in rough seas, maintenance of installations, the impact they may have in terms of development of the coastline, and the maturity of the technology in general. These participants believed that if the technology ever develops to the stage where a robust, reliable device is proven, there would be huge potential for its use on the Island. Harvesting tidal energy was seen by some as a promising idea due to fluctuations in the tide both day and night, and the ability to forecast and predict tides. A small number of participants held the view that installations could be established relatively easily, and could provide the Island with more than its energy requirements. Many of these participants believed it would be possible to establish a causeway between the main Island and outlying Islands to harvest energy from tidal currents well known to fishermen and Islanders in general.

6.6 Sources of information on energy options

Participants had built their knowledge of energy options from a range of sources. Most participants said they learned about energy options through informal inter-personal contact with other members of the community. Many participants had heard about and discussed various aspects of the current system of diesel generation and the investigation of alternative energy options on the Island by word of mouth. Some participants were familiar with the current energy options through their dealings with the powerhouse and its staff. A small number of participants had learnt about energy options from reading reports and proposals, and some had attended public meetings held for particular studies. Many participants were aware of the history of investigation

of alternatives through reading articles in the local newspaper. Many participants formed views on alternatives by accessing television programs and newspaper and magazine articles.

6.7 Avenues for energy development

All participants either explicitly stated or implied that they expected energy development to be initiated through one, or combinations of four mechanisms. They were:

1. Action from the Norfolk Island Government
2. Community pressure on the Norfolk Island Government to act
3. Pressure from the Australian Commonwealth on the Norfolk Island Government to act
4. Individuals establishing their own systems

When asked why there had been little change in the way energy was produced and consumed on the Island, participants in favour of the current systems mostly discussed the nature of the established system, and the perceived benefits of diesel production in relation to their knowledge of alternatives. Those in favour of alternatives described how at least one, but usually combinations of the four mechanisms described above had significant failures that had prevented the development of alternative energy options. Discussion and exploration of these failures and surrounding issues formed the basis of most of the interviews.

Participants described how instigating change on the Island was very difficult, and alternative energy was not the only issue where there has been considerable investigation, debate and activity, and very little change. Other examples include unsuccessful proposals for the establishment of a deep-sea harbour, an offshore finance centre, an online gaming industry, a quarantine station and numerous others. There were many examples of Island development that had been handled poorly in the eyes of the community, and these also served to hinder development in other areas. One participant exclaimed:

“if they jump at all, invariably it's at the wrong time and nine times out of 10 in the wrong direction”

Consistent failure by the community, and its political system in particular, to instigate change was considered normal to many participants. It was explained by an interaction of politics, social networks, systems of consultation and communication, and ultimately cultural values. In the remainder of this chapter I unpack this perceived inability of the community to instigate change on the Island.

6.8 Action from the Norfolk Island Government

At the time of writing, the Norfolk Island Government consisted of a legislative assembly of nine locally elected Ministers, a Speaker and a Clerk, and had the power to pass laws for the Island. The Administration of Norfolk Island was the public sector agency of the Norfolk Island Government. It provided a range of government and public utility services. It comprised around 200 individuals, and was responsible for gathering information, and conducting analyses, which were then delivered to the Legislative Assembly to assist in decision-making. It also comprised staff who managed and operated the Government Business Enterprises such as the Electricity Service. A fuller explanation of the Norfolk Island political system can be found in Appendix 29.

Almost half the participants were currently employed or had previously been employed by the Administration of Norfolk Island (hereinafter referred to as ANI) or the Norfolk Island Government (hereinafter referred to as the NIG). The majority of these participants held the opinion that alternative energy development had not progressed due to limitations in the dysfunctional political system extant on the Island. The most common view was that alternative energy development was not regarded as an urgent matter that required urgent attention, and there was simply not the financial and managerial capacity to adequately address the issues. Many of the interview participants had lost confidence in the NIG and the ANI, and spoke of long standing failures in the systems ability to effectively govern, and manage the affairs of the Island. In this chapter, I refer to various institutions within the Norfolk Island political system. Please refer to Appendix 29 for a summary of this system and diagrams of organisation structures.

6.8.1 Importance of the issue

Most interview participants from the ANI and NIG felt that alternative energy development was not a high priority for the Island. This was largely because although

the current system of electricity supply was expensive, it was functional. Other issues on the Island such as water shortages did not have solutions as administratively easy as raising a tariff, and hence received a higher priority:

Question: Does energy figure highly in the ranking of priorities?

Answer: No it doesn't because we have a system that works now, I'd say. And if it ain't broke don't fix it, but also, while that's working it's fine let's get on with these things aren't working and concentrate on fixing them.

6.8.2 Capacity of the Administration of Norfolk Island and the Norfolk Island Government

6.8.2.1 Members of the Legislative Assembly (MLAs)

Many participants felt that alternative energy development, and development in other areas has been hindered by the lack of MLAs who were able to effectively make decisions. They felt there was a limited choice of candidates running for office, and admitting to voting for candidates who they did not believe to be good leaders simply because they were better than the alternatives. Some participants were concerned that MLAs often entered the job without any political training or background to prepare them for the political environment into which they enter:

You have to understand that by and large, the majority of people who go and get elected to go down there are people who come from ordinary working lives. They don't have a party background to fine-tune their political skills, or they haven't been to university to study political science. And this is a totally new arena. It is a very big responsibility, and you are mindful that you are making decisions that affect the lives of people living there. It is a very serious consideration, and you can't blame people who don't have the expertise or who are not born politicians to hesitate about decisions.

A small number of participants described how being a politician on the Island was often a difficult, tiring and unrewarding job, due mainly to under resourcing and having to deal with a demanding small community electorate where there are very few barriers between MLAs and the general public. One ex politician described the situation:

But big-ticket items are quite difficult to deal with here. The electorate is very close and if you are politically involved and there is a steaming issue around, as an elected person you can't go for a walk, go to a restaurant, play golf without confronting the electorate all the time. In fact, as an elector, you can drive to Kingston, walk straight in the door and sit down in the office of a Minister. There is nowhere else that you can do that. So, you are confronted by it head-on right when it happens, there is no hiding because if you turn your back on it they will hound you. So that makes it difficult.

MLAs serving at the time of interview, and past MLAs explained that if there was seen to be a failing on a particular issue, they bore the brunt of the community's reaction, and therefore felt obliged to be responsible for the management of current issues. Most of these participants believed the information supplied to MLAs by the ANI on issues such as energy supply was poor, and consequently MLAs needed to devote portions of their time to gathering information and conducting analyses themselves. MLAs complained of having to make phone calls to individuals within the community to establish what events that had taken place, having to deal with complaints from the community, and managing issues very much on a day-to-day level. This meant that they had less time to devote to gaining a fuller understanding of any particular set of issues.

The financial remuneration for being a minister was reported to be low (between AUD \$34,000 and \$38,000 per annum), and many participants believed that if MLAs were paid larger salaries, higher calibre candidates would be attracted to the positions.

Given that the salaries were low, participants felt the only reasons people would run for

office were if they were virtuous and motivated by a desire to act for the common good, or if they had vested interests and wanted use the political arena to further those interests. Most participants viewed the political environment as relatively hostile and ruthless, and surmised that those with virtuous intentions would not be able to survive.

6.8.2.2 *The Norfolk Island Voting system*

At the time of interviews, voting on the Island was compulsory for residents over the age of eighteen. The voting system was the Illinois voting system: each member of the electoral roll was able to cast nine votes, and these could be allocated to candidates singly, or grouped in pairs, threes, or fours. The system was designed to allow minority groups to elect candidates into office. Many participants believed this system brought about a situation where ANI employees and their related families comprised more than 50% of the electorate. They believed by hedging their votes members of the ANI were able to vote MLAs into power who were sympathetic to the ANI. Many participants were despondent about the voting system and felt that no matter how they voted, the “same old faces” would retain power, and retain the status quo in government. One participant who felt members of the ANI were opposed to the development of alternative energy technologies made the following comments:

Admin [ANI] is around about 200 strong, and if you take them plus their families, they are more than 50% of the electorate. So politicians are incredibly conscious of the Admin vote, as against the private enterprise vote, which is less than half of their constituents. Now, that is a total reversal of what you have got on the [Australian] mainland. So these guys who are heads of those departments have got huge power. And if they don't want to bring in new technology then they just put up every barrier possible and say, no, we shouldn't do that. Pure and simple.

Participants cited examples of MLAs who had been elected and then attempted to instigate change within their term in government. These MLAs were allegedly voted out the next term by the majority of voters who did not want to disturb the status quo.

6.8.2.3 Party politics

There were no official political parties on the Island, and most participants felt that as a result, it was very difficult to maintain consistency in decision-making in government. To gain approval from the Legislative Assembly, a majority of Ministers needed to vote in favour of any proposal. Current and previous MLAs described situations where often good ideas would be presented to the Legislative Assembly and there would be general support for a particular proposal. However, throughout the investigation process, and ensuing discussion, problems and conflicts would emerge, and what looked to be something everyone agreed on was no longer supported by the majority:

The basic reason why you don't get things done downtown is because the political system simply doesn't work - nine independents pushing in different directions. Essentially they are a group of lay people who are either ill informed or operating industries themselves that are so diverse and separate from each other that they have no common views about things. And that might sound a bit broad, but essentially, that is how it is. So to get agreement on something for change is very, very hard.

6.8.2.4 Scope of responsibility

The NIG's responsibilities encompassed local council, state and federal responsibilities. Those responsible for negotiating independence in 1979 reported that they grossly underestimated the amount of work involved in running a government with that range of responsibility. Interviews with MLAs from subsequent governments all mentioned that the number of issues they had to deal with at any one particular time was enormous, and the amount of resources available to invest in each of those issues was constantly limited. They described a routine where issues requiring urgent attention arise almost on a daily basis, and they would spend much of their time attending to small urgent matters rather than dealing with long-term strategic issues

such as energy planning. Several MLAs and senior public servants used the phrase "the squeaky wheel gets the oil", to describe the situation:

I mean, the notion and the idea and the push typically on Norfolk Island David, it's the squeaky wheel thing - something else comes up, that is more important. They see alternative energy options as something that is long-term, someone else will be working on that and I will focus on what is important right now.

6.8.3 The Administration of Norfolk Island

Many participants viewed the ANI as a dysfunctional organisation, lacking in competence and efficiency. It was blamed by these participants for many of the Island's failings, particularly in relation to the financial problems facing the Island at the time of writing. Most participants felt it was the responsibility of the ANI to manage energy issues such as electricity supply, and there had been very little development of the electricity system due to failings within the organisation.

6.8.3.1 The role of the Administration of Norfolk Island

Some participants felt that the ANI was more dominant than the Legislative Assembly and MLAs followed the direction shown by the ANI. Some participants reported that attempts to reform the ANI have met with significant resistance, and had been abandoned because the level of entrenchment and the voting power of the organisation protected the status quo. Some previous MLAs described situations where members of the Administration had acted like they were the "boss", and expected MLAs to do as they were told or else face ramifications at the next election. Often they were seen to be more dominant because they were longstanding in their positions and had better knowledge of the intricacies of their particular area of responsibility. The ANI was charged with implementing policy generated by the Legislative Assembly and MLAs complained that policy formulation was useless unless the Administration supported it.

A small number of participants were highly critical of the ANI. They felt that the organisation was entrenched, and within the ANI there was a culture of mild laziness, exploitation, nepotism and protectionism. This was not described as extreme in any case - more like an organisation where standards were not maintained, the rules were not always adhered to, and if things became too difficult a lower performance standard was accepted. A small number of participants described a process where over many years, staff had gained senior positions within the organisation through attrition. These participants described situations where talented professionals, often on secondment from the mainland, would arrive in the organization with the intention of performing at a high standard, and instigating change. These new employees would come up against resistance from a majority in favour of maintaining the status quo and eventually would leave. Then, in the absence of a particular employee, existing members of the administration would rise up the chain of command, and further entrench the system with those unlikely to change the status quo. This participant explained:

They get good intelligent people down there, and of course they get exasperated by the system, so they leave. And of course the dead heads that sit underneath them slowly float up the chain of command to the extent where now they are actually running the place. Where they are absolutely not qualified, they are as corrupt as hell, because they just know how to make the system work to their benefit, they have been doing it for years, and they are extremely good at it.

Some participants spoke of attempts by the ANI to introduce business managers to the government business enterprises, including the Electricity Service. The intention was to reform the enterprises by employing people with both a technical understanding of the systems and a sense of business. These participants felt these attempts had failed for various reasons, primarily because those brought in with intentions of instigating

change were viewed as “outsiders”, and faced an entrenched system where change was resisted at many levels.

A Corporate Management Group was established some years ago to provide a solid structure within the ANI. Managers were established for key areas, and they were obliged to report to the Chief Executive Officer. However, a small number of participants reported that this structure is often abandoned and members of the ANI circumvent managers, going to higher levels within the organisation, the Corporate Management Group, or directly to MLAs. A senior public servant described this phenomena:

Traditionally, Norfolk people jump lines of authority and they talk to people directly, even from Executive government, all the way down to this level without going through the CEO, the Director and the manager. So that the lines of communication, while they look reasonably structured, they can be very fluid.

Participants reported that the tendency to jump lines of authority often created problems where the flow of communication was disrupted, and internal politics were allowed to develop. This was reportedly true of the Electricity Service, but also many other parts of the organisation.

Many participants felt the ANI suffered from a lack of longevity in senior public servant positions. There was criticism that the appointments of members of the Corporate Management Group did not coincide with ministerial appointments, and therefore changes in key personnel often disrupted issues requiring longer term effort and commitment. One ex senior public servant made this comment:

ever since they brought in that CMG [Corporate Management Group], they got rid of that longevity in people at the top levels of the administration

6.8.3.2 Transparency and accountability

Many participants felt the Administration had not been open and transparent, and has been “personality based”. That is, there is not uniformity in decision-making, and different rules are followed according depending on informal relationships. One participant explained:

The more open an administration is, the better: the more it has to follow rules. It is something we have never done, we have always had a personality-based community, and I think the move towards black-and-white rules, especially as far as governance goes, and administration is a good move. I don't like personality-based decisions at all.

Many participants felt the ANI should be more accountable and expected the public service to have a system of performance appraisal in order to prevent poor performance, as this was seen to be common in business sectors.

First of all I would have made people in public jobs accountable. They would have to earn their money. Why can't we have assessments?... 20 years ago no-one wanted to work for Admin. Now everybody wants to work for Admin because you have got a guaranteed income and you don't have to work. Not everyone. I am saying that as a general rule - but if you did not work, you wouldn't get any less money for it.

Participants were also despondent that the ANI consumed large amounts of revenue in the form of wages and salaries and they did not see the benefits of this expenditure:

It's a cost, it's a cost... I think somebody said in the last few weeks that most municipal councils would spend 10 to 15% of their income on wages and salaries, and we spend 45 to 50%. And then how do we justify it? People say do we have to justify it? I used to think well you know we don't need all those people and they said well, it is working. For all these years we have been carrying these people. Now if we carried them and made them work, wouldn't the

place look like... wouldn't the place be shiny if everybody did put in the effort that their wages were asking for? You would be a lot further down the track to making things work.

6.8.3.3 Staff training, exposure and rotation

There is a reported trend that after finishing school, young people with ambition and drive leave the Island to further their education, gain skills, and obtain professions. There were reportedly few opportunities on the Island to work in any capacity other than in the areas of tourism, farming, or the management of the Island government. Consequently it was common for a portion of the community to establish their lives on the Australian mainland or elsewhere to pursue their careers or relationships. Some return once they have retired. There was a perception that those left on the Island were often poorly trained, and less capable, motivated, driven and ambitious. Some participants felt that these were the people who were employed with the ANI, and who ultimately were involved in shaping the Island's future, and this explains many aspects of the organisation's dysfunction. One participant explained:

I think there is better expertise elsewhere. That is the sort of easy way of putting it, but yes I think the incentives attract a better person elsewhere than here. The incentives are not great, you can't go any further than you can within the Island in the structure that is operating, you just can't go any further, and that is it. If you want to do any better than that, you get on your horse and you go.

There was a perception amongst many members of the ANI and the community that ANI staff were not adequately trained or experienced to effectively perform at their roles, and this was one of the main failings of the organisation in general. One participant explained:

People would hopefully be better trained, or they will get some training, but it doesn't happen now. People are still doing things the way they did in the 1960s...

I think most people would have got their qualifications many, many years ago, and there has been no updating or investment in professional development. You always struggle to get any of that into your contract, or into the budgets - it is very difficult, it is very costly if you want to do it well. You have to virtually go to Australia for six months, and if you are going to have professional supervision, and that is what you would have to do. That is not feasible.

There was a perception that training programs are too expensive, and beyond the scope of most budgets because they require a physical presence on the mainland for lengthy periods of time and have associated costs of transport, accommodation, living expenses. Consequently members of the ANI felt training was often neglected, and ANI staff had very little exposure to systems other than what was present on Norfolk Island. For example the power station managers do not go and visit other power stations to observe and learn from other operations.

Members of the ANI described how many of the senior managers within the organisation did not have qualifications for their positions, and if they were required to apply for their own jobs in a competitive field, they would not be awarded the positions. Evidently this situation had arisen because many staff members including those in the Electricity Service have “grown up” with the positions, and have learnt how to run their operations through many years of doing the job. In this sense, there was respect for the long term commitment made by these members of staff, but criticism laid at their inability to see outside the current systems, and to look for opportunities for improvement.

Some participants believed physical contact with “real world” systems was an important part of learning to people on the Island, as many people had come from practical “hands on” backgrounds where seeing something in action aids in understanding a system. They felt this tangible experience was also needed for some people to be

convinced of an alternative's efficacy as opposed to, say, reading a consultants report. One participant made these comments:

It is just that I think our guys don't know really nothing about it - that is the problem. They might have read something about it, they might have been to an alternative energy conference about 10 years ago or more. And ignorance is bliss sort of thing, they don't know what the go is. And the impact is we might lose our little empire or something. Do you know what I mean? That's another problem, it's just a human concern that they are going to lose their jobs... I feel as though they need to get some experience with alternate's before we will get anything off the ground. It is all just a bit too hard, you know.

Some participants were concerned about the duration that some members of ANI staff had held their positions, and felt that rotation of staff positions would assist in preventing stagnation in decision-making. Many saw it as unhealthy that some members of staff were allowed to run their area of responsibility with little accountability, and to create "empires" for themselves. Referring to the position of the Manager of the Electricity Service, one participant explained:

it's an extraordinarily powerful position that has been allowed to develop over the years. It is unheard of in a lot of other utilities that one person on the payroll should have that amount of authority. But that has been left to go.

6.8.3.4 Advice and Expertise

As with many small diesel-powered grids, the electricity system on Norfolk Island was a relatively complicated interaction between electricity generation, transmission, distribution and consumption. There was a high degree of interdependence in these elements, and therefore discussing a change to the electricity system in any way required a thorough understanding of the interplay between them. Many participants claimed there is very little knowledge about the system apart from that held by the Electricity Service staff. It was clear from many interviews that high-level public

servants in positions of responsibility for decision-making on alternative energy options did not have a good understanding of key energy concepts and findings from energy related reports, and relied heavily on advice from the Electricity Service. There was reported to be very little documentation about how the electricity system functioned and performed, and very little expertise on the Island from which to glean alternative opinions.

A small number of participants reported that alternative energy reports containing technical information were often interpreted by the electricity service staff, who have a good technical understanding of the electricity system on the Island. By doing this, they felt information was being related to decision-makers through a small number of people intimately involved with the current system of electricity generation. Many participants felt this process did not give adequate consideration to alternative forms of generation. For these reasons, these participants felt the advice base of the Administration on matters relating to electricity was very narrow, and vulnerable to exploitation.

Many participants reported a lack of expertise on the Island and within the ANI to interpret information provided by consultants thereby making it difficult to make judgments and decisions on recommendations:

And there's another thing, and this is what I think is happening here... not all, but most consultants come here and the people that talk to him don't know about their subject. All they know is what they want to hear. So he tells them what they want to hear, they feel happy, he gets his money, he is happy, and then there is nothing done. So I think that is our problem we don't know enough about what we are getting consultants for, so we can't really consult with the consultants.

Some laid the blame more on consultants for not delivering information to the Administration in forms that were not easily comprehensible:

Often when reports are called for and then eventually provided and often at great cost there isn't enough expertise permanently on the Island to really go through those reports and filter out and glean from it what is required for the community's ongoing sustenance and development. And I think that applies whether it be energy, telecommunications, the requirements to feed and grow the economy as a whole, even our sort of constitutional position with the Federal government, which of course is the hot topic at the moment again. There just isn't enough expert advice available in plain English that the community can digest in the... sort of in a practical way.

6.8.4 Financial capacity

Most participants, whether in favour of the current system of electricity generation or not, cited the limited financial capacity of the NIG as one of the greatest impediments to the development of alternative energy options. The Norfolk Island is heavily dependent on tourism, and it was reported by participants that the NIG's financial management has been poor for many years, leading to significant financial problems. Refer to Appendix 30 for a historical record of tourist numbers. Many participants reported that during periods of high tourist visitation, the Island economy is buoyed, and the government receives adequate revenue to perform its functions. However, during depressions in tourist numbers, there is insufficient financial capacity to perform basic functions of government. Many participants criticised the government for not being able to sufficiently plan for and manage depressions in tourist numbers, or to plan effectively for the future.

The NIG was legally unable to borrow money from sources other than the Australian Federal Treasury, and many participants discussed previous loans and the Government's recurring inability to service debts. Examples included loans for resurfacing the airport runway and the cliff stabilization at Cascade. These participants reported a trend where the Government incurs increasing debt without recovering costs from anticipated revenue streams. Although modelling for some of the alternative

energy systems in previous reports included cash flow models that accounted for repayments of loans, many participants were not confident in the financial or managerial skills of the Government to direct revenue generated from the electricity service into servicing loan repayments.

Some participants felt the Island faced financial difficulty, and was unable to service loans from the Australian government or afford expenditure on major infrastructure because of the ANI's accounting system. For many years the ANI was run on a system of cash accounting. In the late 1990s, a shift was made to accrual accounting in line with changes made on the Australian mainland. Participants reported that accrual accounting was not correctly utilized by the ANI, and commonly funds allocated for specific purposes were accessed to pay for costs in other areas within the organisation. Some participants reported that increased financial pressures on the Norfolk economy and the ANI in the preceding few years had led to a situation where money set aside to account for depreciation of assets had been spent. The powerhouse appeared to be in a situation where there was no money available to replace aged or damaged equipment, and therefore the Electricity Service was required to maintain the existing plant.

6.8.5 Ambiguous and complicated planning environment

The minority of participants familiar with the regulations and legislation relevant to planning on the islands believed they were not favourable for the development of certain alternative energy options. In particular, the impacts of the installation of wind turbines on the local environment were unclear, and some participants reported planning permission was difficult to obtain. There was little precedent for such development on the Island, and uncertainty regarding factors such as potential impacts such as, noise, visibility, aesthetic impact, shadowing, impact on the current systems of generation and distribution, interference with radio signals and telecommunications,

impacts on avian fauna, and obstacle limitation surfaces near airports. Until recently, there were no Australian Standards guiding the installation or operation of wind turbines²⁹. Thus planners had to navigate a complicated planning environment equipped with no standards, little or no precedent, and much uncertainty.

²⁹ Several Australian Standards have recently been released governing aspects of wind turbine design and operation. These are AS 61400.2(Int)-2006 : Wind turbines - Design requirements for small wind turbines; AS 61400.21-2006 : Wind turbines - Measurement and assessment of power quality characteristics of grid connected wind turbines; DR 07153 CP : Acoustics - Measurement, prediction and assessment of noise from wind turbine generators (draft).

6.9 Community pressure on the Norfolk Government

Many interview participants felt the Norfolk Government would only act on energy options if there was significant support and pressure from the community. One participant explained:

If you can get the community to back your idea and push the government, that is the way, because if the community is pushing hard, it forces a decision out of them down there. If you rely on the decision coming from the top down and you've got political instability, then it doesn't happen. It goes round and round and round and round, and finally is overtaken by some other crises that has come along, and it gets forgotten and in a couple of months, it never appears again.

Many participants spoke despondently of political decision-making processes on the Island, and framed their argument with a sense of disempowerment. Many appeared to have given up on the idea of energy development along with many other issues facing the Island. Some described how they felt they “could either get upset with things, or get on with life and just accept it”. Many had decided to “just accept it”, and did not take an active role in the politics of the Island. In this section I describe different factors that appeared to motivate the community to pressure the Norfolk government into taking action on issues relating to energy options, as well as factors that have resulted in a stifled community debate on the issues, and a disempowered community.

6.9.1 Motivating factors

6.9.1.1 The cost of diesel

A strong motivating factor for most participants on the issue of energy development is the cost of the current system of electricity generation. It was widely recognised that the cost was much higher on the Island than in other locations in Australia or elsewhere. There was also recognition that the high cost of diesel had wide ranging affects on the cost of living on the Island in general, and that most goods and services

contained a component of cost relating to energy. Many participants felt that the cost of electricity was too high, and that it was one of the factors causing a general increase in the cost of living on the Island:

But we have to look at trying to cut our cost of living down on the Island and electricity is the dearest in all of Australasia.

Many participants felt that most members of the community did not have strong views on the methods by which electricity was produced, but were concerned with the cost of it. When asked if the way electricity was produced was important, one participant responded with the following:

It is important to me, but I think a lot of people couldn't care less. They probably have no idea what volume of fuel is consumed every day in production. So I would say it is not a general concern, how it is produced. Just how much it costs is a far more controversial issue.

Many participants reported that one of the motivations for the discussion about energy options in the community was the issuing of bills. Bills were issued quarterly, and participants reported that they could amount to large sums of money. Many participants felt that the community responded to the 'shock' of receiving electricity bills by complaining about the current system of electricity production, moderating their consumption of electricity in the proceeding few weeks, and then resigning themselves to the fact that it is just one of the costs of living on the Island. In the recent past the electricity tariff (and hence bills) had been increasing. Some participants described how the community has become more accepting of increasing bills, and a general rise in the cost of living. It was seen by some as simply unavoidable, and that there is little point complaining about it.

6.9.1.2 Scarcity of world oil

Many participants were motivated to pressure the Government into investigating alternative energy options due to concerns about the scarcity of world oil reserves. Whether in favour of diesel production or not, there was a general consensus amongst participants that the world's resources of oil were finite and diminishing, and that as they became more scarce, the price would increase. This was seen as strong impetus to reduce or eliminate the Island's dependency on diesel fuel. One participant who viewed alternatives as cheaper than diesel production made these comments:

I guess the big thing to make at your mind about is with any of these things, is it inevitable? Well if something is inevitable the sooner you make a decision, the better... Well, if it is inevitable, if a situation is there if it is like a ticking time bomb - we need electricity, we get electricity by burning diesel fuel, the diesel fuel is going to go up almost exponentially over the next 20 were 30 years. Hello, can't you see there is a problem there? That problem is inevitable. The gap will only widen and widen and widen. So the sooner we do something about it the better. But not everyone in the community takes that view. I don't know why, they just don't. I take more of a business view, more of an entrepreneurial view, if there is a problem, fix it now. Because it is only going to cost you more if you ignore it - In both social cost and financially. So if it is truly a problem, fix it now. If it isn't a problem, don't worry about it.

6.9.1.3 System reliability

Many participants were happy with the reliability of the system of electricity supply. However, some participants living in outlying areas of the electricity grid where supply was reportedly less reliable were motivated to investigate alternative energy options due to power cuts on their particular power line. One participant explained:

I live out at [an outlying area], and sometimes we might get five power cuts a day. Sometimes we get none, but sometimes it is really bad and you think the pressure on that system could be alleviated by looking at some alternatives.

6.9.2 The community debate on energy options

6.9.2.1 *Knowledge and understanding of energy options*

The general knowledge and understanding of basic elements of the established energy options among participants was high. Most participants were aware that the Island produced electricity from the combustion of diesel fuel in generators and this was distributed across the Island via an electricity grid. The powerhouse was located in a prominent position on the Island, and was well known to interview participants. Many participants were familiar with choices relating to energy options, for example heating water with different forms of energy such as solar, electric boosting or gas. Most participants were familiar with the costs of forms of energy currently in use.

Most participants' knowledge and understanding of technical or functional aspects of energy options was low. There was little knowledge or understanding of different types of alternative energy systems, the level of technical development of different technologies, the cost of energy from different systems, the physical nature of energy installations, concepts of centralized versus distributed generation, capabilities of hybrid systems, and different models of financing and ownership. Much of this information is specialized, and it would be unusual to find a community with a good knowledge and understanding of these aspects of energy options. However, it was interesting to note that the many participants expressed opinions based on limited understanding, and the community debate appeared to revolve around issues that were poorly understood. For example, some participants were asked to describe what they envisaged when they talked about wind turbines. Descriptions varied from very large generators, several megawatts in size, sited on prominent hills and landmarks around the Island to small domestic systems that could be hidden from general view. It

was evident that much of the debate surrounding energy options was not based on a common understanding of the issues.

Many of those in favour of diesel production had a poor understanding of alternative systems, and supported diesel production because they believed that there were no other forms of electricity production that were 'better'. Most participants were unsure on concepts intrinsic to alternative energy options such as how to provide consistent supply from intermittent sources, and therefore concluded that diesel generation was the best solution. The predominant perception amongst supporters of the diesel generation system was that it was fully functional, reliable, and the alternatives were difficult to implement and more expensive.

Some members of the community appeared to be active in campaigning for alternative energy technologies without having a good understanding of technical issues involved with their development. Some participants reported that these people were passionate about their views, and had gained unrealistic perceptions of alternative energy systems from watching television, reading print media articles, or from word of mouth. For example, one participant reported several members of the community advocating immature technologies that had been marketed as energy panaceas without adequate testing:

There seems to be a fear of changing things but there doesn't seem to be a fear of the untried and people do seem to jump onto technologies that are untried, unimplemented, aren't used anywhere else on any realistic scale, have only been used for five years, and so have massive teething problems.

A small number of participants believed that introducing alternative energy options was cheap and simple, and that the ANI and the Electricity Service were to blame for preventing their development. It appeared that efforts by people with these opinions

had stifled discussions with the ANI and the Electricity Service, and an adversarial relationship had been established.

6.9.2.2 *Historical context of energy development*

Some participants viewed the current issues surrounding energy options in the context of development of energy options since the 1970s. Before the 1970s there were relatively few of the services and utilities that existed on the Island at the time of interviews. For example, telecommunication services were virtually non-existent, medical services were poor, sanitation was basic, there was very little mechanisation of machinery or transport, the importation of food was not common, and there was very little contact, interaction or support from the Australian mainland or other countries.

One participant recounted:

when I arrived into this house when I was 16 [circa 1970], it had no running water, no electricity, a long drop as a toilet, and we used the copper for washing our clothes and boiling water for the bath tub, and I had a stove to cook on, a kerosene refrigerator, and lanterns. So in one generation I have seen enormous change on the Island

Energy services were basic, and participants recounted using kerosene lighting, wood for heating, hot water and cooking, and farm animals for transport and farming.

Kerosene refrigeration was introduced, followed by diesel generators for individual houses or farms, then small electricity networks, and eventually a centralized powerhouse that grew from a system used to power lights and telecommunications at the airport. This context appeared to fundamentally underpin some participant's thinking on the development of energy options. For example, in regard to electricity, some participants were supportive of the powerhouse and viewed it in the historical context of many individual diesel generators and the local noise and air pollution they produced. There was an attitude that although the current system of electricity production was expensive, the benefits it provided were enormous, and therefore one

shouldn't criticize it or seek to change it while it is functioning well, and providing good service. One resident explained:

Okay, the system works. I think we are paying four times the price of electricity on the mainland, but basically, it is electricity, and it is bloody nice to have, and I'm grateful for it. So they run a pretty good service.

6.9.2.3 *Technology panacea*

The concept of a technology panacea was reasonably widespread in the community. Some participants believed that the technology was improving from year to year, and that eventually if they waited long enough, a technologically advanced solution would arrive that would fulfil their power requirements at minimal cost. There is an implicit understanding that although the diesel generation system was inefficient and expensive, a time would come when power would be abundant and cheap, and therefore there was no problem waiting until that time came.

Some participants, particularly those in decision-making positions, believed that studies that had been completed in the previous few years would be outdated due to technological development. These participants felt there was a need to receive the very latest information on energy options to enable them to make decisions on energy options, and used this reason to justify further investigation of alternative energy options.

6.9.2.4 *Perceived Reliability*

Many participants reported that the reliability of the electricity system had improved considerably in the previous few years. A few years prior to these interviews being conducted, blackouts and plant failures were relatively common, and there were problems with the distribution network, resulting in poor power quality to those connected to peripheral powerlines. Many of the problems experienced in the

powerhouse were exacerbated by the remoteness of the Island, and the lengthy delivery times of shipping parts. The Electricity Service staff described misunderstandings between the service provider and themselves that resulted in parts being shipped back and forth before a solution could be found. The Electricity Service developed a reputation within the community for being able to operate under difficult conditions, and provide a service that was reliable. Considering that the system had been running reliably for a few years, some participants were hesitant to introduce new elements to the system that could result in a return to poor service. Some participants felt that if the current system was working well, and there was a degree of uncertainty regarding the alternatives, it was much “easier” to maintain the current system. Several used the phrase “If it aint broke, don't fix it”.

6.9.2.5 Importance of electricity

Most participants acknowledged the essential role electricity played in life on the Island. They acknowledged the need for electricity for telecommunications and banking, for the tourism industry, and also for their day-to-day lives to provide lighting, hot water boosting, refrigeration, appliances, computing, entertainment, and many other aspects of "modern" life. There was recognition among most participants that electricity was an essential service for “modern” life. In this respect, the community opposed any proposed change to the system that was perceived to be a threat to its reliability. Some participants felt that this was a vulnerability that was sometimes exploited by exaggerating the threat to reliability in order to further political agendas. A small number of participants described situations where if the Electricity Service staff were not in favour of proposed changes to the existing system, politicians or other decision-makers were reluctant to enforce changes, because responsibility for the continued reliability of the system would then rest with them. This created a sense of disempowerment amongst many participants, and a sense that the electricity system was “untouchable”, and unlikely to change.

6.9.2.6 *Perceptions of the Electricity Service*

The electricity service is formally part of the Administration of Norfolk Island.

Supporters of the diesel generation system were generally supportive of the Electricity Service, and viewed the operation as a well managed system open to improvement. However, many participants felt disempowered by a perception that the Electricity Service held and exercised a disproportionate amount of power over the discourse relating to energy options, and prevented the introduction of alternatives.

There was an element of “loyalty” to the current system of electricity supply amongst supporters of diesel power. Some participants described how many problems had been overcome in the past to establish the system in its current form. These included: the development of the grid and under-grounding of power lines; soundproofing of the powerhouse after the introduction of new and noisier generators; the extraction of very long lifetimes out of generators due to increased maintenance and repair; and the high level of labour and long hours required to run the system manually. Participants viewed the dedication and commitment of the Electricity Service staff as a reason to keep the system as the staff saw best.

Many participants acknowledged and valued the personal commitment made by Electricity Service personnel in running the powerhouse. Many participants were aware that staff members visited the powerhouse throughout the day and night to switch generators on or off. It was generally recognised that the staff took great care over the system, and put a great deal of effort into providing a reliable the service for the Island. Some participants were critical of the staff for not making strategic decisions for a better electricity service on the Island, and protecting their own interests in relation to existing power structures and divisions of labour. Efforts made to resist automation of the powerhouse, and overtime pay made to staff for making “call outs” to the powerhouse every night to switch generators on or off were seen by many as rorts of

the system. Many participants did not believe the Electricity Service staff had sufficient exposure or experience with alternatives to diesel generation, and therefore had a very diesel-centric view on providing electricity.

The electricity service was a Government Business Enterprise, and all profits made from the service re-entered government revenue streams. Some participants held the perception that the Electricity Service was profiteering from the sale of electricity, and using profits to support other areas of government activity. Most who held this view were not familiar with the publicly available accounts showing consistently modest profit margins from the Electricity Service, whilst others claimed that these figures have been altered to show politically acceptable figures. Some participants felt government ownership was adversely affecting the development of energy systems on the Island. They felt that while the government was making a profit, there was no significant incentive to improve the service. Many residents felt there was no imperative for the government to encourage increases in energy-efficiency, as this would only reduce their own revenue.

In contrast to those who valued the Electricity Service personnel, some participants felt intimidated by the Electricity Service, and perceived a threat of being cut off the grid if they spoke out or acted against the Electricity Service in relation to issues such as how much electric current they could draw, what appliances they could use, grid maintenance, or how much it would cost to extend the grid to their property. They held the view that the Electricity Service had assumed a level of power where there was no real reporting system and they were not accountable to the Administration so they “run their own show”.

There have been cases in the past where alternative energy systems have been gifted to the ANI, and two participants spoke of how they personally offered funding for

community scale installations of solar and wind. One of these proposals to establish a solar photovoltaic system for the school was mentioned by several participants. It was reported to be well promoted at the time of the proposal and reasonably well known within the community. The offer was rejected by the ANI, and this led a small number of participants to believe there was a conspiracy against alternative energy, led by the Electricity Service.

6.9.3 Broader aspects of community decision-making

Many interviews on topics relating to alternative energy broadened into discussions about general issues concerning the community. Whilst broad in nature, many of these discussions provided the context in which energy options are considered, and underpin many of the outcomes of discussion, debate and decision-making on energy options.

6.9.3.1 Consultation and communication

Attendance at consultation events and public meetings on the Island was reported to be consistently very low. Events and meetings were usually populated by either a core group of people interested in many matters or those directly affected by a particular proposal. Community action groups such as the Norfolk Action Group were keen to lobby government, but many participants felt they did not hold enough power to successfully negotiate any significant change. A public meeting held for this study was attended by twenty-two people, most of whom had been interview participants. It was reported that there were consistently low attendances at these events because of a historical divide between the government and the community, and a tradition of little public participation in governance. In the context of a discussion about public participation in public processes, one participant said:

I don't think there is a generally recognised understanding of the power of the community here.

A theme that emerged from many discussions was a perceived lack of effective consultation and communication on behalf of the government on matters affecting the community. This led to a sentiment among many participants that the government is not always an open and transparent institution acting in their best interests, but rather it avoids communication and involvement with the community in order to minimise potential criticism:

Question: "Do you think the community is adequately consulted on issues that affect the Island?"

Answer: Probably not. We are not informed, either, of issues that come up and confront the Island. One of the problems that the government has, and the community has, is that the government here does not communicate as well as it could, and doesn't have the structure their to-do press releases on a regular basis. They keep a lot of information to themselves for so-called commercial in confidence reasons, but I don't necessarily think that that is a good idea. Most deals that are done should be public knowledge. Almost everything is kept secret. And there may be reasons for that, but to me the community has very little information about what is happening down there at Kingston, and after a while I think people don't bother. I think that is mainly the structure, and also the politicians after a while of being there, are probably very comfortable with that structure because they can go about their own business and not have to justify everything to everybody - only to the few people that they really need to.

Some participants felt as though they were being "kept in the dark" about alternative energy options, and thereby unable to participate or contribute to the debate in any meaningful way.

Several interview participants from the ANI who had been involved in a recent consultation processes held the opinion that the Administration has an open door policy, and in a small community, there was more opportunity than in most communities to voice opinions directly to the people conducting the work.

Some participants reported that in recent years, Norfolk Government has made attempts to consult with the community on issues affecting the Island. These processes appear to have had mixed success, some being effective, and encouraging constructive criticism, whilst others have generated conflict within the community, and exacerbated pre-existing tensions. The ANI was criticised by some participants for approaching consultation having already chosen a course of action, and simply going through the process of consultation as a formality. Members of the community were criticized by some participants for expecting their individual opinions to all be adopted and integrated into a course of action, and over reacting against the ANI when this did not occur. It appeared the process of consultation was not well understood in general, and there was not agreement on the purpose of the exercise, the actual process, and acceptable outcomes.

6.9.3.2 Effect of social networks on public debate

Norfolk Island was different from many mainland communities by virtue of its social networks. Some interview participants reported having a large number of network associates with weak ties, and very few with strong ties. When questioned, participants explained the factors that led to this phenomenon. A common narrative was that the Island population was relatively static due to a combination of strict immigration regulations, and geographic remoteness and related travel costs. There was an understanding that “getting along well” with the general community was imperative to the functioning of the society. One participant explained:

What comes around goes around. You never ever pick a fight with anyone, and hold a grudge, ever. Because the person, you just fought with is the butcher, or the policeman, or the fireman, or the plumber, and you need him tomorrow. The golden rule - you can have your fight, you can have your barney, you can have your argument but that is it. It stops there because of the interdependence. There is a tremendous amount of interdependence on the Island. That would be the

Norfolk way. People genuinely care about others here, they have to - he is the plumber. It is as simple as that.

Participants reported that there was a large degree of intermarrying between families of Pitcairn Island descent, and due to the immigration regulations, many people from Australia, New Zealand and elsewhere are married to those of Pitcairn descent. This results in a present-day population where most people are highly connected to others by kinship ties. Participants also described how often on matters of public debate, such as energy supply, discussion or criticism frequently leads to implications on a personal level. One participant expressed this sentiment:

a lot of people here - especially the ones who have come from Norfolk and have been born and raised on Norfolk - they have a great connection with the place and they have a lot of pride in the place and rightly so. But I won't say all of the people, but a significant number, probably the majority, have such a pride and connection with Norfolk Island as a place and the whole identity of Norfolk Island that if you propose any significant change, that automatically means because you are suggesting a change in the way things are done that means you are highly critical of the way things are done now, which might not necessarily be the case. You might say it's okay now but we should cater for future growth and development and we should maybe go down a different path in the future - that is always taken, well nearly always taken as being a criticism of the way things are being done now, and the way things were done in the past, and ultimately a criticism of the community and perhaps them as individuals because they comprise the community. See there is that sort of highly connective nature where you say one thing and it automatically runs back to the individual. It's like trying to push water uphill with a shovel you get up and it just runs back down to the personal level all the time. And as a result of that it's very, very difficult to get the right answer. So power generation, or whatever it really requires a superhuman effort, a high level of tenacity in sticking to your guns, high levels of personal energy to sort of keep it going because it takes years and years to often win people over, and as a result a lot of these reports and things don't go the distance and never come to anything.

Participants spoke of a gossip and rumour network, which can be particularly misguided and damaging. The network was given a specific term in the Norfolk language, “Dem Tull”, which originates from the English “them tell”. The ramifications of having one’s reputation damaged on Dem Tull can be severe and result in social ostracization. There was a fear that one’s opinion on a particular topic may be contrary to the consensus opinion, deemed offensive, misconstrued, and end up on the network. There was a phenomenon described by some participants whereby highly speculative rumours would spread on the network as a means of extracting information out from people within the community. There appeared to be a “guilty unless proven innocent” assumption and unless proven otherwise, the rumours were assumed to be true.

Some participants told how although social network connections within the community were many and varied, this did not result in what could be described as higher social capital. It resulted in the development of exterior personalities, and smaller inner circles of trust. This meant that most people were friendly, communicative, and social amongst the general community. However, when it came to important issues in their lives, and expressing their key values and concerns, people only spoke to a very small network of close friends. People explained that if they had larger circle of friends to which they extended this network of trust, it was too risky for what they said to be taken out of context, and for rumours to develop.

This combination of factors - a high level of interconnectivity, a tendency for criticism to be interpreted on a personal level, and the potential consequences of having one’s reputation damaged - led many participants to be hesitant about voicing their opinions on issues facing the Island, particularly if they knew their opinion was contrary to the consensus. Consequently, they believed that public debate was impaired, and this has prevented change on the Island.

6.9.3.3 *Perceived class system*

Some participants reported that there were relatively distinct social groups on the Island. A small number of participants perceived the immigration system on the Island to be unfair, and believed it contributed to divisions within the community. Temporary Entry Permit holders complained of not being able to integrate into the community, and feeling as if they were a low social class. Some participants describe a distinct hierarchy with “Islanders” (see below) at the top of the ladder, followed by Residents, General Entry Permit holders, Temporary Entry Permit holders, and tourists at the bottom. They reported that this class system was well established, and members of the community were aware of each other's status, and treat each other accordingly. Participants belonging to “lower classes” were frustrated with their perceived status, and felt their views and opinions, were not adequately considered in forms of public debate.

Many participants perceived people of Pitcairn Island descent to be the dominant social group within the community. These members of the community were seen to be the “true” Islanders who set the social norms and values. They referred to themselves and were referred to as “Islanders”. They were an exclusive group, and many within it held the opinion that unless you are born into this group and have Pitcairn heritage, you are unable to become a member. Others had more moderated views, and believed that some long-term residents of the Island of non Pitcairn Island descent had a social status on par with Islanders. The Islanders were protective of their identity, and there was demarcation of this identity through language, social groups, and cultural events. The ANI has traditionally been seen as an organisation comprised of Islanders, and some services such as the prestigious lighterage service only employ Islanders.

6.9.3.4 Cultural identity

Almost all participants acknowledged that instigating change on the Island was very difficult. Many did not know why and offered no explanation. Partially due to such a long history of failed attempts at instigating change, many participants felt it was inevitable that instigating change in any form is generally very difficult. Some were accepting of the trend, and rather than getting frustrated, simply acknowledged it as the “Norfolk Way”.

There was an attitude amongst many participants that the Island was a unique and special place because it was independent and removed from the “hustle and bustle” of modern life on mainland Australia and elsewhere. It was also perceived to be free of the bureaucratic burden of modern society, and a place where common sense is valued rather than having cumbersome systems in place to guide and regulate behaviour. Many non-Islanders were very grateful for the contribution that the Pitcairn Islanders had made to the community, and saw their independent nature and disrespect for authority as factors that had shaped the community to its present form. Some interview participants described how one of the things they enjoyed about living on Norfolk Island was being able to escape from the pace of modern living. One participant described how he felt:

I think that whatever [the Pitcairn Islanders] are, they have definitely made the Island what it is. And given everybody else, people like me a feeling of independence, away from bureaucracy, away from red tape. Because of whatever they haven't set up in the past with huge amounts of red tape. So people who do come here and decide to stay here and live, they just love it because of that. It is one of the fundamental things, the lack of stress, the lack of bureaucracy.

This attitude appeared to extend further to aspects of development on the Island, and there was an attitude that if something wasn't the most efficient, or the most advanced, that was not necessarily a bad thing. Some participants acknowledged that sometimes a higher price had to be paid for systems that were less efficient, however protecting the "Norfolk Way" was worth this cost.

Norfolk is a fairly unique place, as you obviously know. I think it might be something to do with the attitude is that money isn't god here. It's not all about making a buck or even saving a buck. I mean, that sounds facetious, but there is a lot of truth in it. People aren't overly concerned about making money.

This appeared to have relevance to the debate on energy options, and in this context, it appeared finding the cheapest or most efficient forms of energy generation was not necessarily a high priority.

The Norfolk population had historically resisted attempts at being controlled by the Australian mainland and successfully fought for its independent status in 1979. Participants reported not only strong elements of independence and sovereignty in the collective consciousness of the community, but a survivalist mentality born from the Island's history as a remote and isolated place where external help was not readily available. Some participants reported that this cultural influence runs through the present day community, and often affects the way the community perceives external intervention in the Island's affairs. One participant made these comments:

It has always been the "we are a self-sufficient society, we don't need anyone else" and that sort of permeates through the whole community. They have had to be like that. You can understand why that attitude has developed, because it was a survival thing here. You couldn't rely on the outside world. So when people come in, it is always with a grain of suspicion about who they are, why they are here, and what they are doing? "How will it affect us?" kind of thing

Some participants went further to suggest that ideas and assistance from sources external to Norfolk Island were not readily accepted by the community because there was a natural preference for change to be both instigated and executed internally by the community:

I think there is probably a desire by most to have the change happen internally. There is probably a bit of a "not invented here syndrome". And I think that is probably okay except in a world that we have got today. It is very global, the world won't let you stand still, in fact they try to impose it on you and you spend a lot of energy trying to stop it, because you want to do it yourself. And I think that is probably unfortunate, but probably understandable. Where the true Norfolk Islanders have come from, it was all up to them. It was all about their creativity, their innovation, and their timeframe, and their need. And a lot of those things are being challenged by a world that is demanding more of them, and a tourist and a customer who is much more discerning about where they spend their dollars, and expecting more.

The health of the economy was directly related to the tourist market. When the tourist market was buoyant, the local Island economy was prosperous, and because the taxation regime focused on tourism, the generation of revenue for government activity was high. The tourist market had always fluctuated since it began in the late 1970s and early 1980s, and participants reported that there had been several periods when the tourist market has been depressed, and the community had experienced financial hardship. Each downturn in the tourist market had been accompanied by a resurgence, and this has led to an attitude amongst the community that good times and bad times were simply a part of life. There was an attitude that rather than taking a proactive role in instigating change on the Island, it was possible to "wait out" times of hardship, and eventually "things would get better". This led to conservative attitudes in regards to instigating change.

Some participants reported a degree of rivalry between groups on the Island, and described a phenomenon where if an individual or group of individuals was seen to benefit from a particular scenario, others would make efforts to minimise that benefit. They described it as a sort of egalitarian way of ensuring that nobody was much better off than everybody else in the community. It appeared to work in the reverse as well, where, if individuals or groups were threatened by a particular scenario, others would make efforts to ensure these people were given a 'fair go' and were not disadvantaged in any significant manner. Some participants felt that most forms of change will always involve a degree of advantage or disadvantage to groups or individuals, and change in general was inhibited by this phenomenon.

6.10 External influence on the Norfolk Government

Some participants felt that development of energy options would not occur from the Norfolk Government alone, nor would or could the community pressure the government into taking action. They believed external influence from external consultants, business enterprises, or the Australian Government would be the avenue by which change would be instigated, or that it would play a significant role in the process of change. One participant felt that only the Australian Government could make any significant form of change:

So we could be paying a \$1.80 a unit, we could be paying \$3.80 a unit for electricity in 25 years and it would be pretty well generated the way it is now. Unless of course, the [Australian] Federal Government came in and said here is the funding to do this. If the local government had to make a contribution or do most of the legwork or research to make it happen, it wouldn't happen.

Whilst some participants stressed the need for external involvement in the affairs of the Island in order to instigate change, others felt that certain factions of the community would not readily accept it. They reported that there is considerable resistance to actions perceived by parts of the community to be interventionist. Many participants saw this as one of the main reasons why energy development has not occurred on the Island.

6.10.1 External consultants

For many years the Island had been the subject of outside involvement from private companies, research organisations and the Australian Government. Studies had been conducted on many different aspects of the Island and the community, but mostly focused on its economy and infrastructure. Some participants reported that there is a degree of resentment within government and the community to outside involvement, and expert consultants in particular. This reportedly stemmed from perceptions that

often studies were conducted quickly and without adequate understanding of the context of Norfolk Island, they were conducted without an appreciation for the Island and “how it works”. There were also perceptions that sometimes their outcomes were pre-ordained by those conducting the study to fit into broader agendas such as the Island’s relationship with mainland Australia. These perceptions appear to have developed over a long period of time, and been reinforced by many reports suffering the same criticism. As a result, some participants reported the community and Administration have become antipathetic of consultants telling them what to do and how to run the Island, and often their work is not adequately considered. An ex Norfolk government Minister explained:

“We get a lot of so-called experts here, and I’m not criticizing any of the wind turbine people, but every now and then you pick up the local paper, and people are telling us all the things we need to do to make the Island perfect. As if it was just a matter of waving a magic wand and doing it. And we get that a little bit on the technical side of things, like I said, not so much with electricity, but particularly on the financial side where people are saying things like we should be an offshore finance centre, we should have Internet gaming, we should do this, that and the other, but they don’t know anything about it. And they tend to taint all people, all people who are received tend to be painted with the same brush. So there is some automatic rejection built into any proposal before it is even considered...It is not untypical for reports to hit the deck and disappear. A lot of them do so because there is no way that you can write a report about Norfolk Island in three days time. There is a lot about Norfolk Island and the way it works that takes a lot longer to understand. And a lot of these reports come in, and there has been a quick visit, a rush around to talk to a few people, grab the files, copy some material, look at a few web sites and bang, out it comes. The local people can see through those, and you read it, and down they go.”

Participants described cases relating specifically to alternative energy projects where consultant’s recommendations had been ignored, and cases where advice from ANI employees was held in higher regard than that given by consultants. For many participants, there was a higher value placed on the knowledge of personnel running

systems on the Island rather than external consultants. There was a belief that the systems on the Island were complicated, unique, and take a long time to fully comprehend, and therefore consultants were likely to have made mistakes. There was a reasonably widespread opinion that consultants were not motivated to act in the best interests of the broader community. This was partly because they did not personally invest anything in the community, and did not have to live with the consequences of their recommendations. There was an assumption among some participants that those who have not lived on the Island do not fully understand and appreciate the nature of the Island in a holistic sense, and therefore their recommendations are sometimes inappropriate.

6.10.2 Marketing of alternative energy technologies

The history of reports on alternative energy options on Norfolk Island goes back to the early 1980s. Investigations appear to have been instigated by external organisations, and the ANI appears to have taken a reactive role in dealing with these matters.

Private companies that have approached the Island selling a product appear to have promulgated information that supports the particular technology they are selling, and in some cases denigrates competing technologies.

The Island has attracted several proposals to build systems from companies aiming to take advantage of comparatively high electricity costs, and the high media profile of the Island to showcase their product. Administration employees reported that several wave, wind and solar energy companies had marketed their products to the Island with pledges of high returns and reliable service. Many interview participants had developed a degree of cynicism and mistrust of proposals such as these for several reasons. Some proposals were for unproven technologies requiring significant capital input from the Island. There was a perception that companies were eager to approach the Island to sell them a technology for testing purposes, and in the past the community have been treated as “guinea pigs”. There was also an attitude that private companies are

fundamentally driven by a profit motive, and this ultimately conflicts with wellbeing of the Island.

Many participants felt that the control and ownership of any alternative energy system must remain with the Island. It was reported that previous proposals for companies to install and manage systems independently and sell electricity to the ANI without transferring any skills or expertise to the community had failed for this reason. One participant explained:

Oh look I think if it was quite clearly shown to be economic, and everyone at the power station for instance, that was required to be trained, was professionally trained so that they could understand and manage the new technologies, and it is approached in that manner, yes. But if you have a company that comes over and just says we are going to put these wind generators in here, we are going to do it at this price, we are going to be able to sell it to you from this price, and you leave the expertise with the people that are supplying it and don't provide the expertise to the people here that are going to be perhaps servicing and maintaining what is required on a day-to-day basis, then you will not be successful.

There was reported to be a reasonably widespread opinion within the community that if there is money to be made out of a particular proposal, the Norfolk Island government could be making a profit rather than allowing a third-party to do so. It was reported that several alternative energy proposals that would have been financially advantageous for the ANI were knocked back for this reason.

6.10.3 Relationship with the Commonwealth of Australia

Many participants described Norfolk Island's relationship with Commonwealth of Australia as "problematic". There was a spectrum of opinion regarding the role of the Commonwealth government in the affairs of Norfolk Island. One end of the spectrum believed that Norfolk Island should be more closely integrated into the Australian

mainland system because there are inadequate resources and expertise for the Island to maintain its independence. The other end believed that Norfolk Island is a sovereign entity. These people believe it has always been deserving of independence due to its geographic remoteness, the composition of Pitcairn Islanders who settled on the Island after it was abandoned as a penal colony, and the historical and legal events proceeding settlement. They were anti-interventionist and believe that the Island should be entirely left alone to manage its own affairs. The most common view on the Island was that Norfolk Island was a 'dependency', and was deserving of funding and other forms of assistance such as consultation from the Australian government for key items of infrastructure. However, many participants believed the Island should be able to make decisions on most other matters relating to the Islands affairs.

Some participants held the opinion that the role of the Australian government should be far more integrated into the activities of the Island to assist with matters such as energy development. They felt there was insufficient knowledge expertise or resources to manage this issue independently. With particular reference to the Electricity Service, some participants believed Norfolk Island did not have the capacity to adopt alternative energy options, and funding and support should be sought from the Australian government. Those less keen on independence were happy to accept Australian government assistance to establish and operate alternative energy systems. However, they believed ultimate control must be retained by the Island. Several interview participants felt that Norfolk Island would be a good showcase for alternative energy, and welcomed Australian government assistance to set up such a system on the Island. Participants with strong views on retaining independence for the Island simply did not want Australian intervention into matters relating to energy development.

For much of the Island's history since settlement by the Pitcariners in 1856, it has been under mainland Australian control. In 1979, the Norfolk Island Act was passed, giving

executive and legislative power to an Island elected Legislative Assembly, and the Norfolk Island Government was formed. Certain powers were restricted such as the ability to mint currency and run a police force, but for most practical purposes the Island was considered independent. A small number of interview participants believed that the NIG was set up by the Australian mainland in order to fail. These participants believed that Norfolk Island had always been a difficult place for Australia to manage due to perceived uncertainty regarding its constitutional status, geographical remoteness, historical context and cultural differences as compared to mainland Australia. These participants felt Norfolk was "a round peg being made to fit into a square hole". Some participants felt the Australian Government had deliberately hindered the Island's financial sustainability by preventing the development of the offshore gaming and finance industries, Greenwich University, and other proposals. They felt the Australian government inquiries into the affairs of the Island through the Joint Standing Committee on the National Capital and External Territories had been sensationalist, bias and non-representative of the community. These people believe that these inquiries accessed views from a small minority of disaffected individuals within the community, and did not gain a balanced view of the community. They argue the Australian Government was sympathetic to this view because it aligns with the same view that the Australian Government departments and Ministers would like to take, and therefore was promoted as being valid.

Some participants believed that when self-governance was given to the Island in 1979, Island infrastructure was deteriorating, and the Australian Government had full knowledge that significant sums of money would be required to maintain this infrastructure. There was considerable opposition to integration into forms of Australian mainland governance leading up to the 1979 decision, and an eventual deterioration of infrastructure was perceived to be a way of the Australian Government ensuring failure of an independent Norfolk. Examples of the perceived negligence of the Australian

Government were the abandonment of scheduled financial reporting and review processes.

A small number of participants believed that there was a large oil shale deposit roughly the size of the North Sea oil reserves between Norfolk Island and New Caledonia.

They had formed this opinion through a rumour of a geological investigation conducted in the area. However, the actual investigation did not promise such large reserves, and described the deep sea geology surrounding Norfolk Island as an area “where significant thicknesses of sediment appear to be present, and where potential hydrocarbon plays can be envisaged” (Willcox and Symonds 1997, p.209).

Nevertheless, there was a belief among a small number of participants that the technology was not yet available to extract oil economically, and it was being safeguarded for the future. They believed that the Commonwealth government's intention was to resume powers over Norfolk Island such that it retained control over these oil reserves. Some believed that the Australian Government was willing to lend large sums of money to the NIG in order to retain some level of control over the Island. Some also believed that Norfolk Island is a key strategic outpost in the Pacific, which holds military significance. They believed that this was part of the ulterior motive that had led to the push by the Australian Government to reform governance on the Island.

6.11 Individuals or groups establishing their own systems

Some participants felt alternative development would occur only through individual members of the community or groups establishing their own systems. Others thought that demonstration systems would need to be set up by individuals or groups and these would sway public opinion into adopting alternative energy systems on a broader scale. They had little confidence that other avenues for development would result in any change. In this section I summarise community views on establishing alternative energy options independent of the Electricity System.

6.11.1 Grid connected distributed micro-generation

Many interview participants were supportive of distributed micro-generation, and were keen to install small wind, solar or biomass systems on their properties. Many felt it would be beneficial for the Island to have distributed generation. One participant explained:

I have learnt a little bit about the German system of each individual having their own form of power supply, and you can sell it back to the grid, you can do whatever you like, encouraging people towards their own sources of energy has got to be a good thing.

At the time of interviews, the main impediment to individuals or groups establishing their own systems was the *Norfolk Island Government Electricity Supply Act, 1985*, which legislates against distributed electricity generation unless approved by the manager of the Electricity service. The installation of one grid connected photovoltaic system on the Island was permitted under the auspices of an experimental system. All other attempts to install grid connected wind, solar or biomass systems have been rejected. The argument used by the ANI and the Electricity Service against allowing the use of distributed generators has been twofold. Firstly, wind and solar generators are intermittent sources of generation, and there was a fear that if people were allowed to

install them, the percentage of power coming from intermittent sources at any particular time would be uncontrollable. This would have ramifications at the powerhouse where there would need to be an automated control system that could integrate input from external sources and run spinning reserve on the diesel generators to accommodate sharp declines in production from intermittent sources. Secondly, there is a fear of Islanding where maintenance personnel could be at risk working on a line that was being fed into by distributed sources of generation.

Many participants spoke of an unwritten rule in the community relating to grid connection. The rule was that if you were connected to the grid, you do as told by the Electricity Service and don't interfere. Also, if you are not connected to the grid, you cease to have involvement with the Electricity Service, and are "on your own". There was a concern amongst many participants that there were limited support services for stand-alone systems, and they were dependent on local electricians for technical support. There was also a concern that there were not readily available sources of spare parts or repair facilities for components of systems on the Island. Many participants were hesitant to install stand-alone systems of micro-generation because they did not want to be in a position where their system malfunctioned and there was no one on the island who could help them.

Participants from the ANI were concerned that consumers feeding electricity into the grid would be utilizing the services of the grid without paying for its upkeep through the electricity tariff. They were also concerned that consumers would want to be paid for the amount they export. The introduction of a system of net metering on houses could easily quantify how much electricity is being produced, as well as import and export levels. If necessary, net exporters could be charged a fee for the use of the grid which could be deducted from financial remuneration for exported electricity. Several participants stated that if given permission to install grid connected systems, they had

no desire to receive compensation for net exports. They wanted to be connected to the grid to avoid having to store electricity, and to ensure against failure in their system, or prolonged periods of poor energy production due to weather conditions. One participant reported:

We would be perfectly happy to just provide for our own, and any excess could be used for other purposes. Surely that would be a very sensible thing to do for the Island's economy.

6.11.2 Stand alone systems

There is currently no restriction on the Island to stand alone power systems that have no interaction with the grid. Several people on the Island who had built houses on blocks of land remote from the power grid faced a choice of whether to pay for a grid extension and possibly a transformer upgrade or to buy stand alone power systems. Many participants faced with this choice reported not having sufficient confidence in the technical reliability of stand alone systems, and so paid for grid extensions. However, two members of the community had recently established stand alone systems – one solar and one solar wind hybrid. This had generated a degree of interest within the community. Owners of these systems reported being asked questions on topics such as the systems' general capabilities, performance and ability to provide power and run appliances, the cost, the system of storage, and the response from the Electricity Service and the ANI. Some participants reported feeling encouraged to have their own stand-alone systems by the demonstration of others, but felt the cost was prohibitive for most people on the Island.