

The year in review – 2017



Introduction

In last year's review, we noted that the wind industry started in the doldrums but with major thermal plant closures in late 2015 the electricity system was more balanced. Considering other factors such as the Paris climate change agreement and the strengthening of the ETS, the conclusion reached was that the future for renewables in NZ and globally looked very good.

In this review, we update the domestic and international outlook, provide an overview of NZWEA's activities during the past year and an overall summary of position.

The Outlook for New Wind Activity in NZ

The year (2016) started with little expectation of new wind being built in the short term. All eyes were on activity in Australia and the wish that just a little of their project activity could find its way to this side of the Tasman.

We're all aware of the reasons for the lack of new wind projects being committed in NZ including the supply / demand balance with sufficient reserve capacity, concern around demand growth, the uncertain future of the Tiwai aluminium smelter and regulatory change in transmission pricing.

As we focus forward in 2017 the general view seems to be one of increased optimism but proceeding with caution to ensure the commercial benefits from investing are there. After a few years of false starts it does seem that the planets are starting to align:

- Aluminium prices are up on the basis of increased demand so the emerging view is that the smelter will remain. Indeed some are commenting that perhaps it may be time to restart pot line number 4 which would create an additional demand of 60 -65 MW.
- Demand grew by 1.6% in 2015 but faltered in 2016 reducing 0.9% on the back of high winter temperatures and low irrigation demand. Notwithstanding 2016, ongoing population growth is proving a level of confidence around growth and this is certainly evident in MBIE Electricity Demand and Generation Scenarios published last year which have annual growth ranging from 0.4% to 1.3%.
- System security margins have fallen from pre 2015 historic levels of 25-30% to less than 17% today.
- The price of carbon is rising and this combined with rapidly reducing wind turbine costs are improving the economics of wind.
- NZ ratified the Paris Agreement and committed to a target of reducing emissions to 30% below 2005 levels by 2030.

- The prospect of more thermal plant closures and the shortening development window until existing wind farm consents lapse.

Optimism has translated into new consent activity with at least one generator indicating it is looking at several build options. So, while no one is expecting a flood of activity, the prospect of a new wind farm being announced is looking more positive.

Global Trends

The Global Wind Energy Council has recently released its 2016 Global Wind Report. In 2016 growth was 55 GW, slightly lower than in 2015, due to reduced installations in China. The Report included the below growth forecast and can be summarised in Steve Sawyer’s, GWEC’s Secretary General, comment “Overall, we have a lot of confidence in the wind power market going forward, as the technology continues to improve, prices continue to go down and the call for clean, renewable power to reduce emissions, clean our air and create new jobs and new industries only gets stronger with each passing year”.



As a result of stellar growth, we are now seeing a number of countries move well past the 20% wind penetration level with Denmark pushing 40% and several states in the USA like Iowa exceeding 31%.

NZWEA Activities

As you would expect NZWEA’s activities have been principally directed towards meeting the Association’s mission of promoting the uptake of wind energy and supporting achievement of the vision of wind energy providing 20% of NZ’s electricity requirements by 2030. In July the Board reviewed key strategies which have directed the Association’s work programme. In essence the focus has been threefold:

1. Increase climate change awareness and leverage NZ’s emission reduction target to raise awareness of the benefits of renewable electricity generation, particularly wind energy.

2. Promote domestic emission mitigation options to increase demand for electricity and support new generation build activity through the electrification of industries that are high carbon emitters.
3. Continue to raise the profile of wind energy and ensure the regulatory environment supports wind farm development.

Key areas of activity have included the following:

- **Low carbon future.** Promoting wind energy as a way to move to a low carbon economy. NZWEA was part of the “yes we can” programme and the symposium held in May 2016. The objective of the programme was to identify domestic mitigation options to meet NZ’s emissions reduction target. The programme identified 3 key opportunities in the transport area, industrial process heat and continued increase in renewable electricity generation.

The Association also participated in the Globe NZ review which assessed NZ’s climate change mitigation options.

- **NZ Energy Efficiency and Conservation Strategy (NZECS) Review.** The Association attended a workshop and submitted on the review. The key points made included greater need for support and focus on renewable electricity generation, the need to monitor the achievement of the Government’s target of 90% renewables by 2025 (which MBIE modelling suggests won’t be achieved), the setting of a balanced scorecard of targets across the wider energy sector for renewables and supporting EECA’s focus on the 3 target areas identified of business heat, transport and electricity generation.

In December MBIE issued a draft strategy titled “Unlocking our Energy Productivity and Renewable Potential” with its goal being to “Support New Zealand to be an energy efficient, productive and low emissions economy”.

The draft strategy acknowledges the level of technology transformation underway, the need to improve energy efficiency and productivity and reduce greenhouse gas emissions. Three priority areas have been confirmed as process heat in the industrial sector, reducing transport emissions by improving vehicle efficiency and encouraging use of electric cars and improving electricity efficiency and use.

- **Wind Farm Consents.** The Association submitted in support of Tararua Wind Power Ltd (formerly Trustpower) 130MW Waverley Wind Farm. Key aspects of the submission included the sustainable management of natural resources, mitigating the impact of climate change and the legislative and policy support for renewable electricity generation.

NZWEA also supported Blueskin Energy Limited in their Environment Court appeal following the consent decline decision for their 3-turbine wind farm north of Dunedin. Blueskin Energy are now proposing a single 3 MW turbine. The Association’s support was again based on the need for increased renewable energy generation to meet the 2025 target, reduce carbon emissions and highlighting the opportunity for small scale community owned wind farms in NZ.

- **Wind Positioning.** Worldwide the key focus for emission reductions had been the energy sector as this is the source of over 60% of global emissions. NZWEA has adopted a strategy of raising awareness of climate change and the role of renewable energy in mitigating impacts. Students have been a focus of this strategy and a “NZ Wind Day” competition was held in February with students asked to tell us in words or pictures what “clean energy for a better future in NZ” means to them. Following the competition support material of a student fact sheet on “climate change and renewable energy” and a lesson plan for teachers was distributed to 28,000 teachers in the Starters and Strategies term 1 teachers resource.
- **Wind Energy Conferences and AGM.** The Association’s conferences in 2016 and 2017 have been well supported and provided a fantastic opportunity to network. Over 85 attended this year’s event which was titled “Transitioning to a Low carbon Economy with Wind Energy” with speakers from the USA, India and Australia. Presentations covered a wide range of areas from international trends, NZ supply and demand balance and future outlook, latest innovations, maximising value and wind energy positioning. The workshop was on electricity supply resilience. Copies of presentations for both the conference and workshop are on the NZWEA website.

The AGM was held in November with John Carnegie from BusinessNZ as our guest speaker on NZ future energy scenarios to 2050.

- **Distributed Generation Pricing Principles (DGPP).** Transmission pricing methodology (TPM) and in particular DGPP was a key area of focus for both the Industry and the Association. NZWEA was one of over 500 submissions which contained many consistent themes. In particular, the Association was concerned with timeframes for implementation, the proposed move from regional peak coincident demand pricing and the impact this may have on peak demand and efficiency, the complexity around the area of benefit charge and the changing of connection charge rules from incremental cost to include other costs. We also noted the removal of ACOT payments combined with the change to connection charges disadvantaged distributed generation which is predominately renewal and failed to recognise the long-term nature of investment decisions.

Clearly transmission pricing has proven to be a thorny industry issue with the cost allocation of around \$1B at stake. In a positive move for members the Electricity Authority in December agreed to keep the incremental cost rule for connection in the short term and make Transpower responsible for assessing distributed generation and whether it avoided transmission costs. However we all know that after 8 years of development the uncertainty will continue at least through until mid 2018.

- **Health and Safety.** The Health and Safety Group has met regularly throughout the year in June, September, and February 2017. Association guidelines for senior management have been revised and best practice shared. Agenda topics have included statutory inspections, dropped objects, competency requirements, rope access and safety communications. Members have also had presentations from outside organisations Brake, Forest Industry Safety Council and Crane Association of NZ. It’s great to see such a high level of focus on

health and safety and support from members as we collaboratively work to ensure our people get to go home safely.

- **Training.** In conjunction with several members, NZWEA is progressing development of a new industry wide training programme for wind farm technicians. The qualification will cover electrical, mechanical and hydraulic components of wind farm maintenance and will be registered under the NZQA framework. This is an exciting initiative for the industry as it will offer a development path for technicians and positions the industry to have the skills to meet future wind farm growth.
- **Palmerston North City Council Plan Changes.** In September, the PNCC released its decision document on plan changes that effect wind farms. It was evident that the Council was not supportive of future wind farm development with an additional industry wide risk that other councils would follow PNCC's lead. New rules included a 700m setback from site boundaries rather than using NZ6808 noise contour, defining repowering of wind farms as an activity requiring a new consent and introducing a Tararua range landscape protection area that would impact the repowering of existing wind farms and potentially the utilisation of an existing consent. Four NZWEA members appealed the Council decision and NZWEA joined each appeal as an interested party. In mediation agreement has now been reached to adopt the NZ6808 noise contour which is a great outcome. Discussions continue in respect of other industry concerns.

Summary

Life in the electricity sector is always interesting. While we would all like to see the high level of activity translate into new wind farm development, so that NZ can develop scale and take advantage of its natural resources, we know this will take time.

The growing consensus of the need to tackle climate change is encouraging as is the policy development through vehicles such as the NZEECS strategy review. What we need to now ensure is that actionable plans are put in place to meet emission reduction targets which will benefit the electricity sector and have a continued focus on regulatory change to better support wind farm development. Achieving both, combined with improving technology and the continued cost benefits from economies of scale provide the best environment for members to make sound commercial decisions to invest in new wind farms. As the Association focuses on priorities in 2017 climate change mitigation and the regulatory environment will remain key areas of focus. In particular RMA reform, strengthening the National Policy Statement for Renewable Electricity Generation and progressing a National Environmental Standard for Wind Farm Noise.

In summary, the longer-term outlook for wind energy in NZ remains very positive. We know the system can support wind providing 20% of NZ's electricity requirements by 2030. We also know that we thought we would have more wind in 2017 when the target was set. To achieve 20% we need to build around 150MW each year from now. Possible, absolutely but whether achieved or not we do know that wind is going to be a significantly bigger component of NZ's generation mix than today.

As I complete my first year with the Association I want to thank board members past and present for their support. The Association would not exist without member support so above all thank you for your continued membership of NZWEA and sustaining our work programme. We hope you find value in all we do to promote wind energy in New Zealand.

Kind Regards

Grenville Gaskell