

## Community Updates

Any member of the community can stay informed on the status of the Kyoto Energy Park by **subscribing** to this newsletter, viewing our website below or contacting us directly. We encourage any feedback from local or interested residents and will endeavor to return your enquiry as soon as possible.

## Contact Us

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**Project Website:**  
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## Key Facts

- Kyoto Energy Park utilises free energy from nature's resources
- Keeping the Hunter clean and green. Renewable alternatives to conventional forms of electricity production such as coal and gas
- Development and deployment of more efficient wind turbine technology
- 10MW of solar PV installation
- Solar PV output will suit peak local demand, reducing reliance on traditional coal-fired generation
- The Kyoto Energy Park utilises drought proof integrated renewable technologies, for rural and regional incomes
- No water consumption. Reduction in water consumption in the Hunter Area by approximately 550 million litres of potable water per annum (~10 Olympic Swimming Pools every day!
- Development of Australian IP for innovative Integrated renewable grid supply
- Reinforcing the Hunter and Greater Newcastle region as Australia's Energy Centre and creating economic growth
- An opportunity to create new skills and job sectors within the mining and energy dominated Hunter region
- Opportunities for transitional jobs from the coal mining industry (AC motor engineers, electricians, civil works, BOP electrical engineering)
- Strong support from research and educational institutions including the UNSW, CSIRO and NSW TAFE
- Creation of 183 direct construction jobs over 2 years
- Creation of 12 ongoing jobs with multiplier effects for the NSW economy contributing \$91.2million throughout construction
- New tourism potential to the Upper Hunter Valley region.
- Visitors and Education Centre for on-site system testing, educational research, and Indigenous Heritage. The Visitor's and Education Centre would also be used for tourism purposes and as a lookout with distant views to the Valley's Power Stations and mines.
- Approximately 8 million tonnes of CO<sub>2</sub> would be avoided over the project life
- Generation of enough Green Electricity to power 47,000 homes
- Moving Australia towards meeting its 20% renewable energy target by 2020

[www.cleanenergycouncil.org.au](http://www.cleanenergycouncil.org.au)  
[www.kyotoenergypark.com.au](http://www.kyotoenergypark.com.au)  
[www.environment.nsw.gov.au/climatechange/reprecinctresources.htm](http://www.environment.nsw.gov.au/climatechange/reprecinctresources.htm)  
[www.industry.nsw.gov.au/energy/sustainable/renewable](http://www.industry.nsw.gov.au/energy/sustainable/renewable)



## Kyotoenergypark Newsletter

October 2010

## About the Kyoto Energy Park

Kyoto Energy Park is a proposed renewable energy facility located 12km west of Scone in the Upper Hunter Valley. The Energy Park will create clean and renewable power for the Hunter Valley from renewable sun, wind and water.

The Kyoto Energy Park is located across two sites and seeks to create 102MW of Wind power, 10MW Photovoltaic (Solar PV) power and 1MW of power from a closed loop hydro system. Once fully operational it is expected the Energy Park will create enough renewable energy to power 47,000 homes across the Hunter Valley.



## History of Kyoto Energy Park

In 1998 the NSW Sustainable Energy Development Authority identified the Kyoto Energy Park site as having a high wind resource suitable for a wind farm development. The site has been confirmed a strong wind site with over 10 years of climatic data. In 2005 Pamada identified positive developments in the efficiency and price of Solar PV panels. Technical studies proved that Solar PV and a closed loop hydro system would have a positive impact to the overall energy output and benefit the project.

### Why the "Kyoto Energy Park"

When Pamada became involved in 2005, the concept of an Energy Park was created. With strong wind speeds and a drought-affected area, the concept was created for combined generation for reliable green energy output.

The Kyoto Energy Park is the green energy solution.

Prior to Australia signing the Kyoto Protocol there was little political recognition of the dangers of climate change. The name "Kyoto Energy Park" was a cheeky reminder to the political leaders of the time that Australians were prepared to take their own action.

### Who is Pamada?

Pamada is a discrete property advisory and services company based in Sydney. 100% Australian owned and for the last 24 years pamada has quietly assisted the development of many large scale projects across Australia. Pamada focuses on renewable energy projects as well as large scale residential and community developments

## Project Status

### Kyoto enters the design stages ahead of announcing turbine model and total output

With the changes in Canberra, the failure of the Copenhagen talks and general overhang of the GFC, the project is running slightly behind its schedule. The impact of market uncertainty and a result of adjustments required to federal level renewable energy policy. With new amendments passed by the Senate in June this year however, the Kyoto Energy Park is on track to progress with technical design and connection phases.

### Resource Monitoring

Understanding the wind resource requires extensive wind data. This data is taken from monitoring towers with specific instrumentation designed to record the energy available in the wind. It is important to be able to measure wind speed, direction, air density and temperature to make accurate calculations on potential power output. The Kyoto Energy Park has long term wind data in two locations on the site. Additional monitoring towers and instruments will be established in the short term to continue data collection across of the site to give greater certainty to the data already collected. Data for the proposed Solar PV array has been calculated using NASA satellite data. This data provides the total amount of sunlight hours and the energy contained in the light per square meter. Devices known as Pyrometers will be used to cross check satellite data already collected.

### Connecting to the Transmission Network

Producing renewable power is good at reducing dependence on fossil fuel generation only if it is connected into a strong electricity transmission network. The Kyoto Energy Park is fortunate in its location within the heart of Australia's energy industry. The Upper Hunter is both strong with electricity infrastructure and with demand for the electricity being produced. A priority for the Kyoto Energy Park is to ensure the Hunter Valley continues to receive reliable and quality electricity supply. To ensure this supply of electricity can be met with renewable electricity a technical and lengthy connection study needs to be undertaken. This study ensures all green energy generation from the Kyoto Energy Park makes its way into the homes and businesses of the Hunter Valley. This stage of the project could take as long as a year.



Courtesy of GE Energy

### Technology Selection

Selecting technologies for the Energy Park will be completed in stages. Pamada have had discussions with most international solar PV manufacturers and appropriate solar technologies have been identified. Both traditional crystalline as well as less efficient but lower cost thin film modules are being considered for the Energy Park. Final Wind turbine selection is expected by the end of 2010. Before a turbine is selected its suitability needs to be assessed in fine detail. The turbine model needs to suit the wind regime on site as well ensuring the renewable electricity can be integrated to strict electricity network requirements. GE Energy are supporting the Kyoto Energy Park technically to investigate the suitability of their 1.6MW and 2.5MW wind turbines as an option for the Kyoto Energy Park. GE Energy is the second largest wind turbine manufacturer in the world with more than 13,500 turbines installed throughout USA, Europe and Asia.

## NSW Solar FiT

The NSW Government has announced a review to the Feed-in-Tariff due to popular acceptance and over 30,000 installations across NSW. The FiT paid residents and businesses 60c for every kWh of electricity produced from solar PV cells. An amended scheme is likely to be announced shortly and will take into account the drop in costs associated with installing a solar system. Pamada have launched a service to cater exclusively to homes and businesses in the Hunter Valley. Pamada aim to provide benefits from the Kyoto Energy Park project to those installing solar in their homes or businesses.

## Conditions of Approval

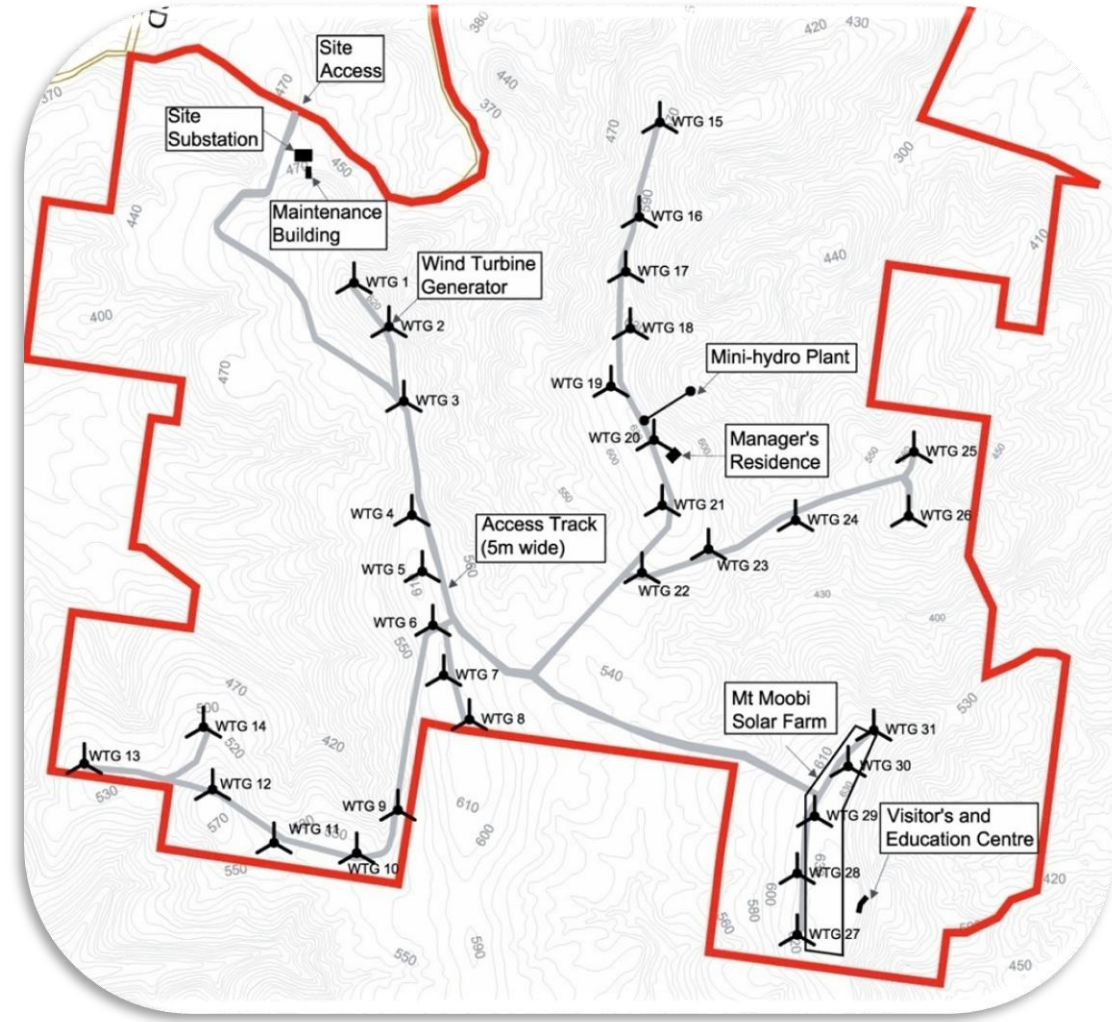
### What do the 67 conditions of approval mean?

In January 2010 Kyoto Energy Park was granted planning approval by the NSW Government. The approval contains 67 conditions ensuring ongoing community consultation, environmental assessment and detailed technical studies are completed. Conditions of approval are important as a control mechanism to monitor development progress. The strict state planning code ensures potential impacts are considered in detail.

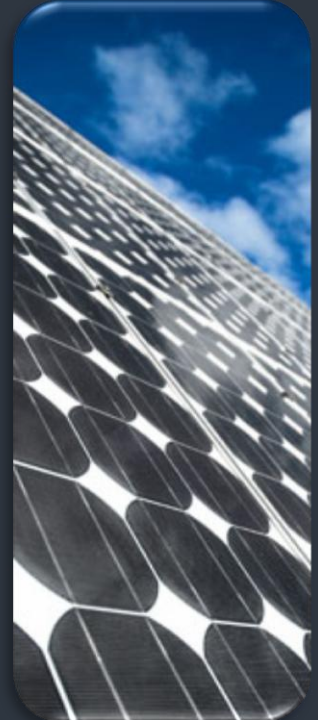
Prior to construction Pamada will work to fulfill the following conditions:

- A detailed noise compliance report is prepared prior to commissioning based on final design and turbine selection
- A Bird and Bat Adaptive Management Program is put in place prior to construction
- Construction and Operation Environmental Management Plans are implemented prior to construction and operation of the Energy Park
- Consultation with all required authorities with regard to final design layout

The NSW Government Approval with all conditions can be viewed at any time on the Government Website at [www.planning.gov.au](http://www.planning.gov.au) or on the project website at [www.kyotoenergypark.com](http://www.kyotoenergypark.com) Once operational Kyoto Energy Park will create a Community Enhancement Fund, called the Mt Moobi Fund. Each year the administrators that are selected from the community will determine eligible programs to receive financial assistance.



For **Understanding Solar** - visit [www.kyotoenergypark.com.au/solarenergy](http://www.kyotoenergypark.com.au/solarenergy) or call us on **02 9969 3608**



### Solar Energy for your home or business

### Kyoto Energy moves to satisfy local demand for solar exclusively in the Hunter Valley

Pamada are in a great position to assist in providing a cost effective and quality solar solution to households and businesses in the Hunter Valley. The Kyoto Energy Park will be the largest installation of solar PV in Australia and Pamada are in a great position to offer lower cost systems to local residents and businesses. Pamada's expertise in designing highest efficiency renewable energy will improve the payback of your new solar system. Pamada can assist in arranging finance for your solar system with low upfront costs.