



**Humphrey and Jennifer Price-Jones face the prospect of becoming neighbours to 80 wind turbines, each as tall as a 45-storey building. Picture: Vanessa Hunter Source: The Australian**

<http://www.theaustralian.com.au/national-affairs/the-great-wind-rush/story-fn59niix-1225961297137>

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## The Great Wind Rush

Graham Lloyd, Environment editor

As wind turbines sprout across the country, turbulence is building over their cost, health effects and aesthetics

IN a world obsessed with climate change, Humphrey Price-Jones believes wind turbines have become the crucifix of a new religion, a towering, unmistakable symbol of good intent. They feature in almost every glossy brochure and television commercial promoting clean energy, turning silently somewhere in an empty paddock, doing the right thing for the environment.

But as wind turbines continue to grow in size and spread like triffids on the windy ridges and plains across the nation, turbulence is building.

Clean energy campaigners insist wind power is still the best renewable option available. As a result, wind power is at the early stages of a government-stimulated lift-off that could lead to the number of towers -- at present 1052, generating 1.5 per cent of the nation's power needs -- increasing tenfold during the next decade.

And as [the wind farm footprint grows](#), so do questions about cost, [reliability](#), [health effects](#) and the methods being used by wind-tower spruikers [to propagate what has become a modern-day wind rush](#).

Price-Jones is an imposing figure of Irish descent, "born with clenched fists", he says, who together with his wife, Jennifer, has spent the past decade tilting at windmills. A wildlife artist of international repute, Price-Jones has a \$1000-a-night suite named in his honour at Broome's Cable Beach Club, complete with his drawings of birds of prey, alongside suites named after Sidney Nolan and Elizabeth Durack.

Price-Jones can see irony but no humour in the fact windmills threaten not only the visual and

potentially the health amenity of his NSW southern tablelands grazing property and studio at Crookwell, about 170km southwest of Sydney, but also the survival of the birds on which he has relied for a living by capturing them on canvas.

Where Price-Jones sees the windmill as a crucifix, his near neighbour, ABC chairman Maurice Newman, favours the analogy that wind turbines will turn out to be for power generation what the zeppelin was for air transportation: it looked promising but was not the answer.

Newman made waves recently when he criticised the media's group-think on climate change, declaring the science had yet to be settled. He bought a property at Crookwell six years ago and is concerned the local council may "very well live to regret the support it has given to wind farms" by embracing the notion that the area could become what boosters like to call the "wind power capital of Australia".

Newman holds a view common in Western Australia, South Australia, Victoria and almost everywhere in the world that wind turbines are being installed: that this is an expensive, unsightly and sub-optimal means of generating power.

Family First's Steve Fielding last month successfully established a Senate inquiry to investigate the health impacts of living near windmills, and the submissions have started to roll in.

The inquiry will examine any adverse health effects for people living in close proximity to wind farms; concerns over excessive noise and vibrations; the effect of rural wind farms on property values; and the interface between commonwealth, state and local planning laws as they pertain to wind farms.

Reg Brownell of Australian Landscape Guardians in Victoria -- a body "committed to achieving better outcomes for natural and cultural landscape protection through the planning process" -- says electricity from wind is four times as expensive as from coal.

The cost of carbon saved, he says, is \$500 a tonne compared with \$15 a tonne by switching from coal to gas.

Vicki Mitchell from South Australia says the state government has overridden council by-laws on industrial development in the Flinders Ranges in the north of the state and is set to "rape and pillage our country in order to satisfy a popular political agenda".

Diana Laube of the Eyre Peninsula Local Government Association, representing 11 member councils based in the west of South Australia, has called for "a national planning system that provides a consistent approach to planning for wind farms that offers protection to rural residents from the well-documented negative effects of these massive industrial developments".

If there is a common theme it is the belief that city politicians are happy to destroy rural communities in the quest for urban votes.

Newman tells Inquirer: "In an area such as the southern tablelands there are many attractive and environmentally sustainable industries that could be introduced based on amenity. The proliferation of wind turbines has a detrimental impact on land values and general property."

Jennifer Price-Jones says it is all about public perception.

"Wind towers are big, so you cannot miss them," she says. "They are in country areas, so people who are jumping up and down saying wind energy is wonderful don't have to have them in their back yard and don't have to look at them.

"They look ideal to the green urban voter but they don't want it on Bondi Beach, they don't want it offshore where they can see it. They want it somewhere else."

If the Gullen Range project goes ahead in Crookwell, the Price-Joneses will be able to see all 80 of the proposed turbines.

Each is as tall as a 45-storey building, with 50m blades that cover 2ha of sky and create enough turbulence to tear apart any bird that strays too close.

There is a common misconception that birds are sliced up by wind turbine blades, which appear to be spinning slowly but are actually travelling at speeds of up to 200km at the tip. In fact, birds die when they encounter the windshear and pressure changes caused by banks of wind turbines churning up the air. They literally pop and fall out of the sky. This is why there is a ban on wind farms being built near airfields, lest light aircraft pilots meet the same fate.

Equally unsettling has been the way state governments have redrawn the rules to favour potential developments, giving them critical infrastructure status to remove court challenges and, in NSW, explicitly removing the noise generated by wind turbines from oversight by the Department of Environment.

That power has been given to local councils, which lack the resources or will to undertake it.

Another common complaint has been the methods used by small companies seeking to sign agreements with landholders for sites for wind turbines that then can be sold to someone else with money for development.

Landholder agreements are secret but can be \$10,000 a year for each wind turbine. Absentee landholders, or those with large properties, are selling permission for turbines that are lucrative and out of their sight but clearly visible from neighbouring properties.

And there are persistent claims of conflict of interest relating to councillors with family members who stand to profit from a pro-wind-farm development stance.

"Any chance I had of having a reasonable approach to this was lost on the basis of these shonks selling them up," says former Maritime Union of Australia national secretary John Coombs, another Crookwell resident.

"I am very confident that I would never, ever sign on for one of those knowing I was going to destroy the lifestyle of the people next door irrespective of whether I knew them or talked to them or had anything to do with them.

"What it has shown is that this great bush community, where everyone helps their mate, is no different to anywhere else when the money is on the table."

Ironically, after a career spent stopping the shipment of nuclear waste at the Australian waterfront, Coombs says nuclear energy is the future and wind turbines are nothing more than expensive political window-dressing. "I am very much a political person," he says. "I have been in the Labor Party all my life and it is abundantly clear in many things there is a political basis to why things happen. I really think there has been an attempt to be seen to be doing something."

For Queensland Nationals senator Ron Boswell, wind farms are another example of how electricity users are being forced to pay the price for misguided federal government policy.

In a speech to the Senate this week, Boswell said: "The government is attempting to engage in massive subsidisation of wind. The subsidy it is trying to implement is off the budget, but if it is successful it will be on consumers' power bills."

The subsidy works through the way the rules are being changed to help increase the price of renewable energy certificates for the large-scale renewables sector.

In a bid to make it easier to raise finance for big projects such as wind farms, the renewable energy certificates system has been split into two: small projects and large projects.

This is partly because certificates from small, rooftop-scale solar installations have swamped the system because of generous state government feed-in tariffs and increasingly generous commonwealth subsidies as the cost of rooftop solar installations falls.

>From next year, only certificates issued by large-scale renewable projects will be eligible to offset the emissions of electricity providers and heavy electricity users.

Power providers and big energy users are forced to buy renewable energy certificates to account for the government's renewable energy target of 20 per cent by 2020.

It is estimated that about 40 per cent of the renewable energy target will come from wind farms. That means the government is targeting about 18,000 gigawatt hours of wind.

There are at present 1052 wind turbines in 52 wind farms in Australia, almost half of them located in South Australia.. Together they are capable of generating 1879 megawatts of electricity.

In 2008-09, wind power produced about 1.5 per cent of Australia's electricity, enough to power about 770,000 homes.

To satisfy the government's 2020 renewable energy target, turbines capable of generating more than 16,000GWh will have to be built between now and 2020, an almost tenfold increase.

Boswell says at \$2.4 million per kilowatt hour, the construction cost for wind is about 2.5 times that of coal or gas.

"Why would anyone in their right mind, given the other pressures on power prices, force householders to pay more than twice the going rate for power?" he asks.

He says there are three big factors that make wind expensive.

"First, there is the high capital cost. Second, there is the need for fossil fuel-based back-up power to keep the lights on when the wind drops or does not blow.

"Third, there is the high cost of connecting remote and often small wind farms into the transmission infrastructure."

The additional overcapacity and infrastructure costs, according to industry experts such as Origin Energy managing director Grant King and commentator Keith Orchison, have been estimated to be as high as \$22 billion.

Given the amount of concrete and steel used in their construction and the fact wind turbines produce only 30 per cent of their rated capacity in a year because they rely on the correct wind conditions, there are also tough questions about how much carbon emissions they actually save anyway.

Retired engineer Peter Lang, who has 40 years of experience in the energy business, says the cost of wind energy with open-cycle gas back-up is \$126 a megawatt hour compared with \$51 a megawatt hour for closed-cycle gas.

The cost of avoiding each tonne of carbon emissions using wind with gas turbine back-up generation is calculated at \$1149. This compares with a figure of \$56 a tonne for coal with carbon capture and storage, \$33 for a more efficient combined cycle gas turbine and \$22 for nuclear energy.

But for Clean Energy Council chief executive Matthew Warren, wind remains the lowest cost large-scale renewable option available. He says the real misconception lies in the belief that the energy world of tomorrow will be the same as that of today.

"The frustrating thing about much of the narrative on renewable energy is that the easiest way to marginalise renewable technologies is to compare them with what we have at the moment," Warren tells Inquirer. "They are different technologies. You can't build a carbon-based energy market using renewables. If we are to [decarbonise] the economy, we have to have some flexibility in the way we use energy.

"The way we currently supply energy is that whatever the market wants, it gets. It is a dysfunctional system. We ultimately need to send bigger price signals to electricity users to let the market shift demand around."

This means higher electricity prices generally and potentially exorbitant electricity prices during times of high peak demand.

Warren acknowledges there are social issues regarding wind. "The major one is that landholders who agree to host wind turbines get a fee but their neighbours do not," he says.

But wind, he says, is the pace-setter for alternative energy.

"It is industrial scale and it works. Wind will deploy to the extent that other technologies can't beat it."

However, none of this makes sense to Humphrey Price-Jones.

"Wind must be the only technology where you can prove inefficiency and people say, 'We'll have to build two of them or three of them or four,' " he says. "You can't sell anybody any other piece of equipment and say to them, 'We don't know if it is going to work. Sometimes it will work really well, sometimes it won't work at all and other times it will work a bit.' You just couldn't do it. That is why as soon as there is an alternative to wind, people have stopped using it."

## **Danes losing their faith in turbine farms**

DENMARK, the wind power capital of the world, has found itself in the eye of a renewable energy storm. After reaching political consensus during 2008 to lift its renewable energy target to 50 per cent by 2025, the Danes have been rapidly falling out of love with wind.

To avoid public opposition to new towers, nearly the whole of the expansion of wind power in Denmark will now come from offshore wind farms, mostly out of sight "over the horizon". The decision to go offshore will compound the financial shortcomings and inefficiencies of wind power identified in a controversial assessment of the renewable energy program by Danish think tank the Centre for Political Studies.

The assessment gives the lie to claims that Denmark is supplying 20 per cent of its energy needs from wind sources.

In reality it is subsidising the electricity costs of neighbouring countries Norway and Sweden that provide significant amounts of fast, short-term balancing reserve hydro power to even out the unpredictable performance of wind turbines.

Up to half of Denmark's wind electricity is exported but paid for at high cost by Danish power consumers.

The wind power exported from Denmark saves neither fossil fuel consumption nor CO2 emissions in Denmark, where it is all paid for.

And, by necessity, wind power exported to Norway and Sweden supplants largely carbon neutral hydro-electricity in the Nordic countries.

Graham Lloyd

## **Wind farm stats**



Cape Jervis, SA

DEAN MARTIN

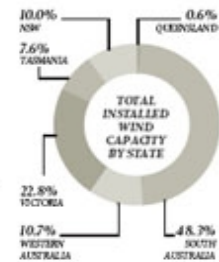
**WIND FARMS IN AUSTRALIA\***

In 2008-09, wind power produced 15 per cent of Australia's electricity – enough to power 770,000 homes



\*More than 30000

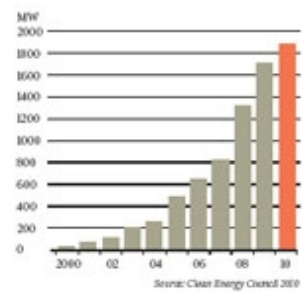
**TOTAL INSTALLED WIND CAPACITY BY STATE**



**STATE BREAKDOWN**

State	Installed Capacity (MW)	No. of turbines	No. of Projects	Installed capacity penetration in state (%)
SA	907	435	13	19.4
VIC	428	267	9	4.3
WA	202	142	14	1.2
NSW	187	116	7	1
TAS	143	68	6	4.7
QLD	12	22	2	0.1
NT	0	0	0	-
ACT	0	0	0	-
Australian Antarctic Territory	1	2	1	-
<b>Total</b>	<b>1880</b>	<b>1052</b>	<b>52</b>	

**GROWTH OF WIND CAPACITY**



Source: Clean Energy Council 2010

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 Source: Supplied