

CASE STUDY: MIKKEL NOERTOFT (RURAL HOUSE AND BUSINESS)

PRIMARY OBJECTIVE: **SELF-SUFFICIENCY**

“ It was important for me to be self-sufficient, in control of my costs and clear in my conscience when investing a new gadget. I choose a Gaia-Wind Small Wind Turbine ”

**Mikkel Noertoft,
Small Wind Turbine Owner, Uldum**



BACKGROUND

On a cold day in December 2007 Mikkel Noertoft had his wind turbine erected on his 1700m² property in Uldum, Denmark, where his home and business is based (www.skovlykke-fritidshuse.dk).

Before Mikkel installed his own wind turbine he was already familiar with environmentally efficient and energy saving investments for his home and business. He had already installed his private water system and a fully automatic woodchip furnace and now his latest edition - a Gaia-Wind small wind turbine.

Mikkel Noertoft likes the idea of being self-sufficient and in control of all his costs. But he is also aware that his "gadgets" must serve a purpose. For example his small Jora plane is used for customer visits when travel by car is too unpractical and with his small wind turbine he now knows what his future costs of electricity and heating will be.

SITE CONDITIONS

The wind turbine has a tubular tower and stands in a slight valley with some windbreaks and large trees around it. The wind comes mainly from a WNW direction and has an average speed of 4-5 metres per second. "Conditions may not be optimal but it turns happily away and both my neighbours and I favoured the tubular tower rather than the lattice tower", says Mikkel.

TURBINE PERFORMANCE

The Noertoft's have 3 children and an annual electricity consumption of approx 24,000kWh for both their home and Mikkel's building business. Despite the less than perfect location of his wind turbine it still produces about 21,000kWh a year. The Noertoft's small wind turbine is extremely productive for the site conditions and has proven to be a sound investment. At the same time they have also prepaid their electricity bills for the next 20 years at a known and fixed price.



ABOUT GAIA-WIND

Gaia-Wind manufactures wind turbines for light industrial, agricultural, commercial, municipal and residential use. Our clients include working farms, educational institutions, large home owners, offices and other commercial premises. To date, there are over 200 worldwide Gaia-Wind installations, representing over 1000 years of combined operational history.

Our wind turbines incorporate over 20 years of Danish wind industry design experience and offer the performance and safety features that are usually only found in larger, utility scale turbines. Our oversized rotor design allows the turbine to deliver up to 80% more energy than other similarly rated equipment, enhancing project economics and maximizing the return on your investment, whilst ensuring optimum performance in low to moderate wind speed regimes (10-12mph).

A Gaia-Wind turbine generating around 30,000 kWh of green electricity per year, will offset around 17 tonnes of CO₂ emissions from existing energy generation. This is sufficient to bring the carbon footprint of the average four person household back to zero (household energy use + car + air travel).