



Moving Water with the Wind

Innovatieve technologieën voor groene waterschappen

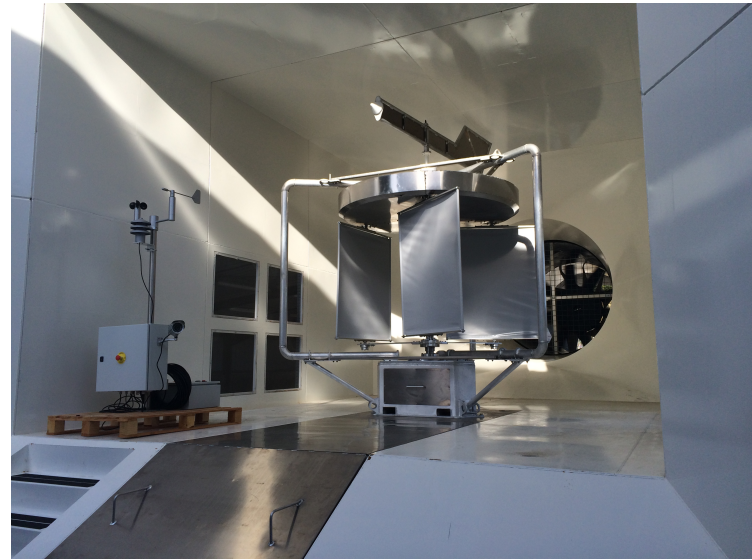
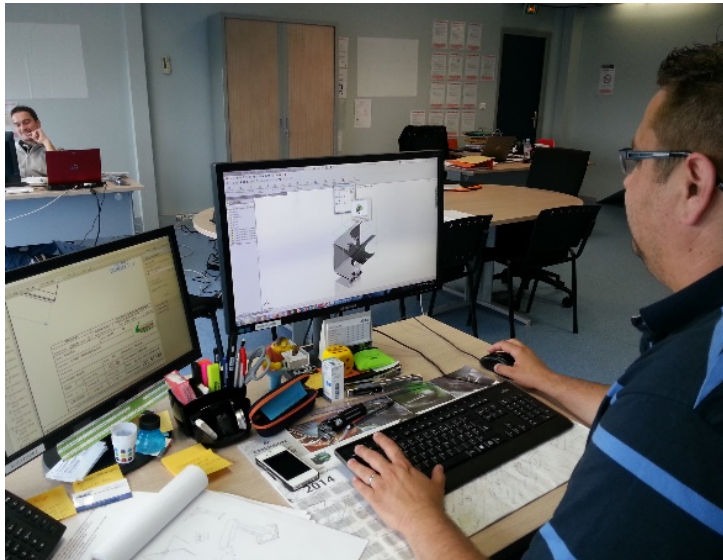
Thursday the 20th April 2017 – Amersfoort

Thierry LAMIDIEU - President INERGYS

Company introduction



- Created end of 2013 – 5 people
- Located in Limoges France - Drawing office, Plant, Wind tunnel
- Innovation, design, general assembly, test and validation
- First sales and installed customers (wind turbines producing electricity)

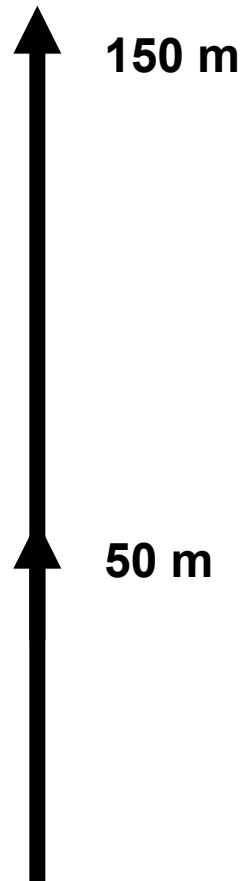


Problem to solve

Capture maximum wind energy close to the ground

- Stronger winds
- Stable direction

- Weaker winds
- Unstable direction

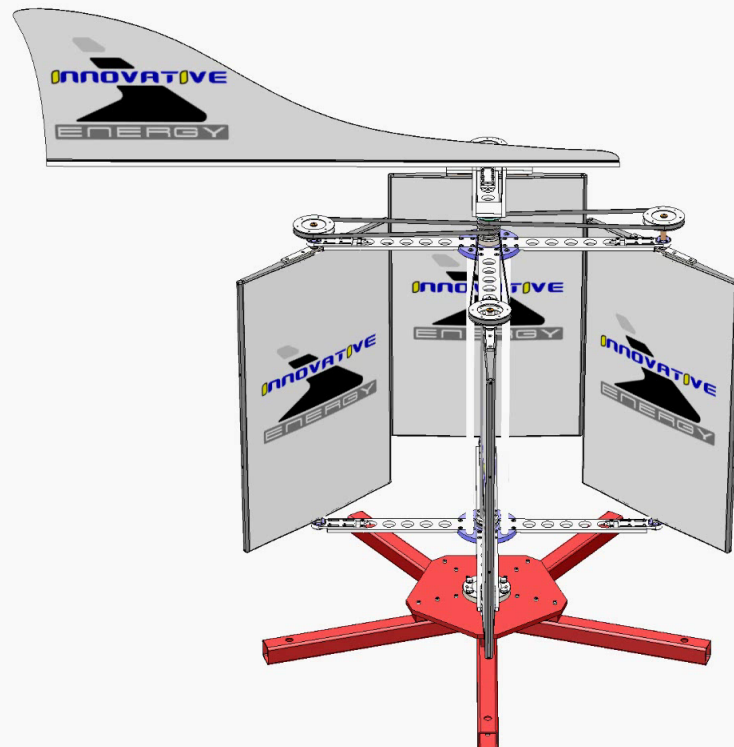


Innovative Technology



Small Wind Turbine: more energy close to the ground

- Vertical axis + Adjustable blades
- Good integration – height 3,5 m
- Security with violent winds (until 160Km/h)



Application

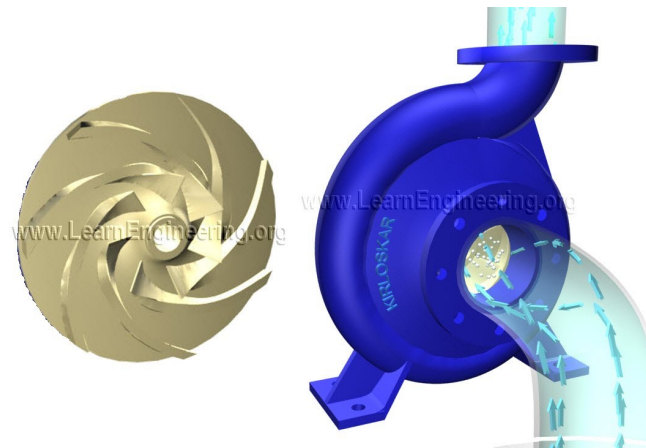
Dutch Water Authorities => Pumping Wind Turbine



Nominal power: 1,2kW
Total height about 9/10 m



Your input :
Height for moving water ?
Installation ? Pump Flow ?



Benefits of this solution:

- Completely autonomous
- Exclusively renewable energy
- Efficient where there is wind potential

Case studies



- Installed sites in France
- Pilot projects => 10 units => XXX units
- Potential projects Europe (UK,GER,DAN,PL)

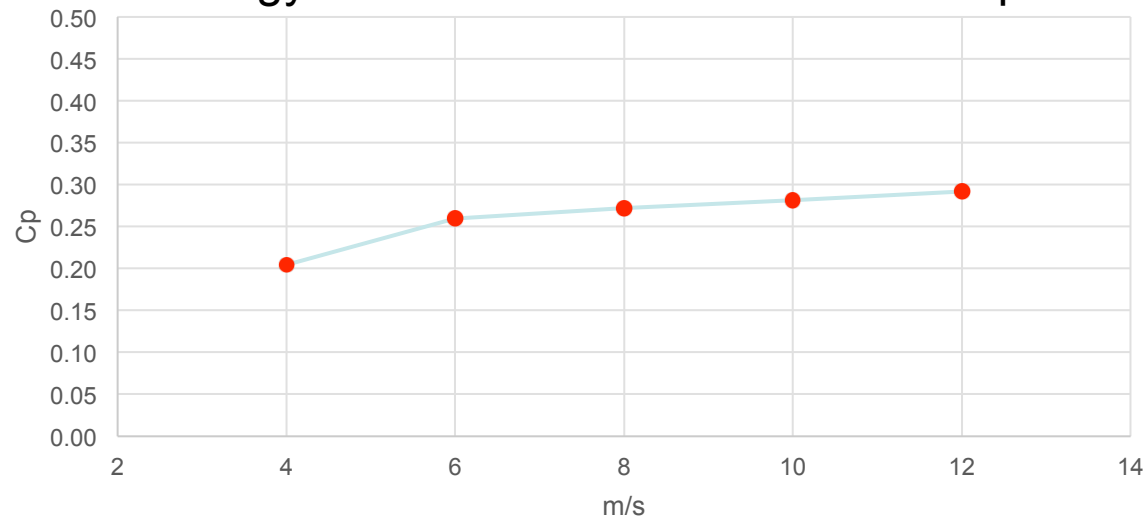


Performance

Performance coefficient:

- Theoretical maximum BETZ law 59%
- Large Wind Turbine 30%
- Typical Small Wind Turbine 18%

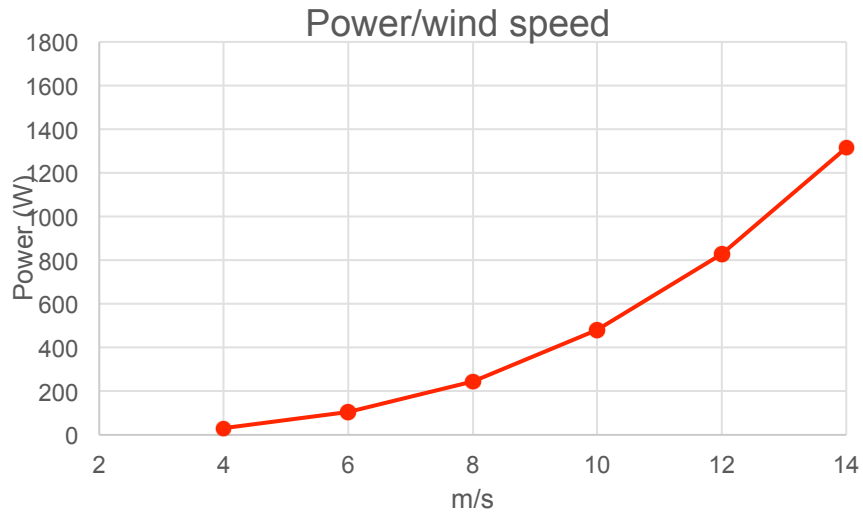
Inergys Performance coefficient/wind speed



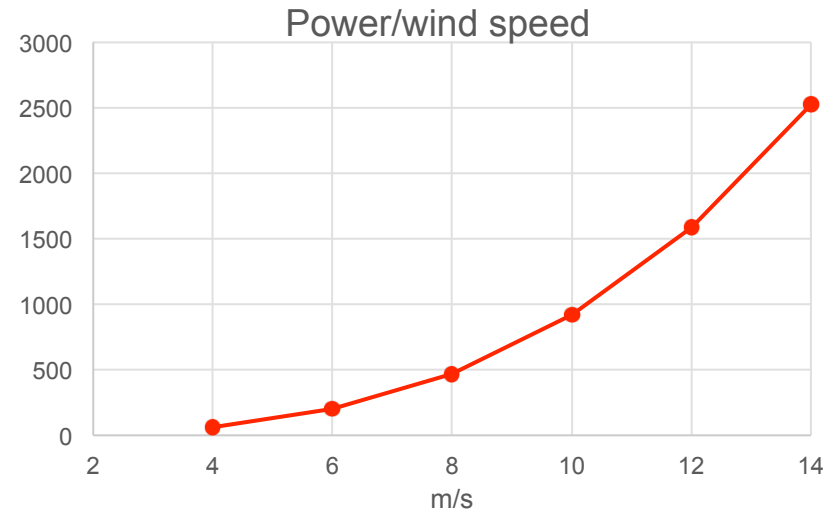
Performance



MODEL 2016







MODEL 2017



Inergys/other technologies



				
Start alone	+	+	--	+
Power production	+	-	-	+
Efficiency close to the ground	+	+	+	--

Investments



Current price for Pumping Wind Turbine => about 10/12 K€

Price optimisation with batch manufacturing processes

Additional investment => determine the precise application/installation/usage

Return on Investment:

- purchase Pumping Wind Turbine, installation, maintenance
- production of energy => good windy site => kW/h Energy production
=> saving costs (Electricity, Diesel Generators, Connection standard grid...)

Need more information from you about real site/applications

Next step with Water Authorities



Identification :

- pilots projects/installations
- needs for deployment

Looking for partners :

- installation/maintenance
- business Partners



Thank you for your attention

Contact: Thierry LAMIDIEU at INERGYS

- Address: 81 rue de l'Aéroport - 87100 LIMOGES
- Phone: +33 (0)5.55.63.92.58
- Mail: thierry.lamidieu@inergys.fr
- Web site: www.inergys.eu