



*Smart Wind Ltd.*

# New Generation of Wind Turbines

Dr. Rami Masri, CEO

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Green Technological Incubator Ltd.



# Wind Turbines

## Horizontal Axis (HAWT)

- Large blades, high speed, efficient
- Higher noise, vibration levels
- Sensitive to wind direction



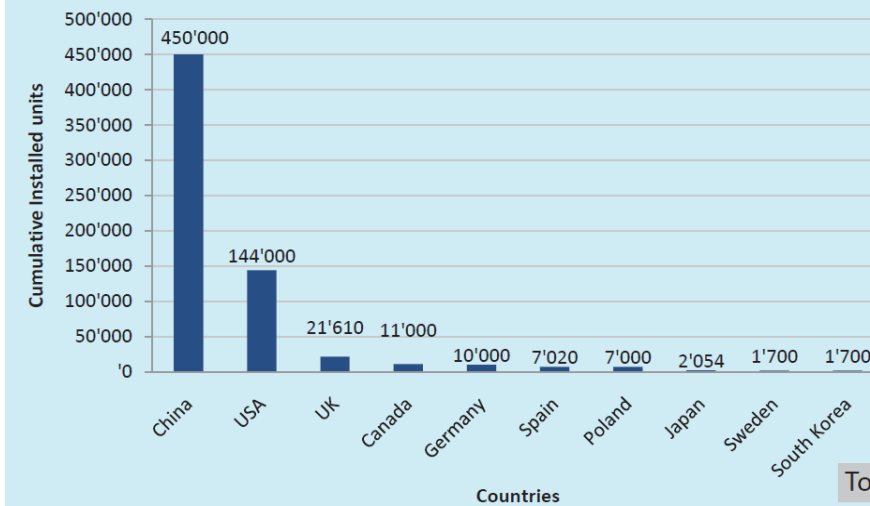
## Vertical Axis (VAWT)

- Not sensitive to wind direction
- Safer, more compact, less noise
- Appropriate for more populated areas



# Small Wind Turbines (up to 100kW)

Total Cumulative Installed Units As of the End of 2010

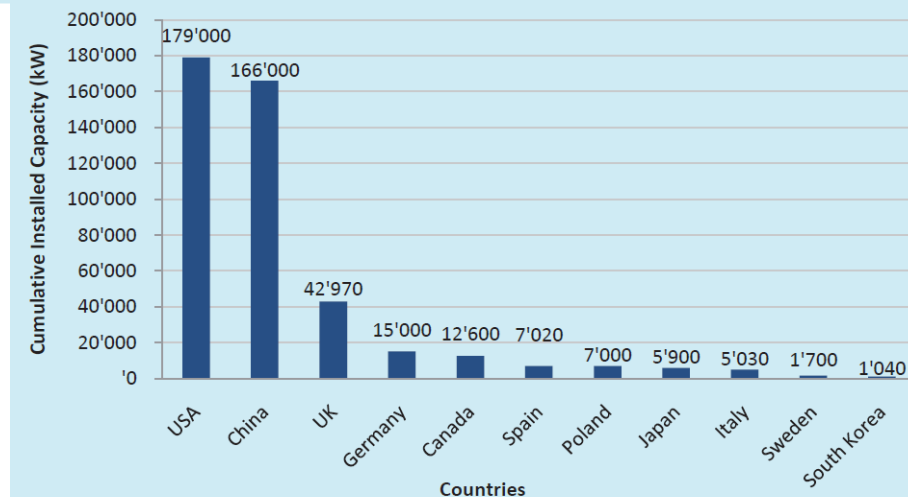


Global installed capacity of **SWT** < 0.5GW

Most of installations are in US, China and UK

From the 2012 Small Wind World Report – World Wind Energy Association (WWEA)

Total Cumulative Installed Capacity As of the End of 2010



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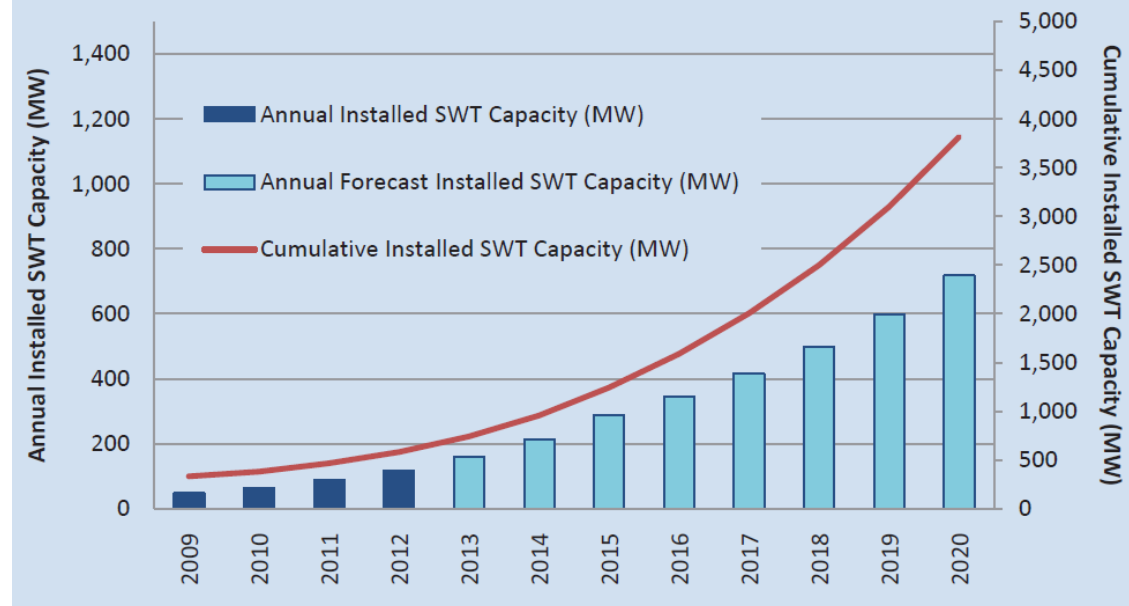


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# Small Wind Turbines - Market Potential

- Potential of **SWT** on landed homes in US > **13 million**
- In UK the potential is **over 600,000 SWT**
- Growth in developing countries expands the potential

SWT Installed Capacity World Market Forecast 2020




Expected market size in 2020

**\$24 Billion**

From the 2012 Small Wind World Report (WWEA)

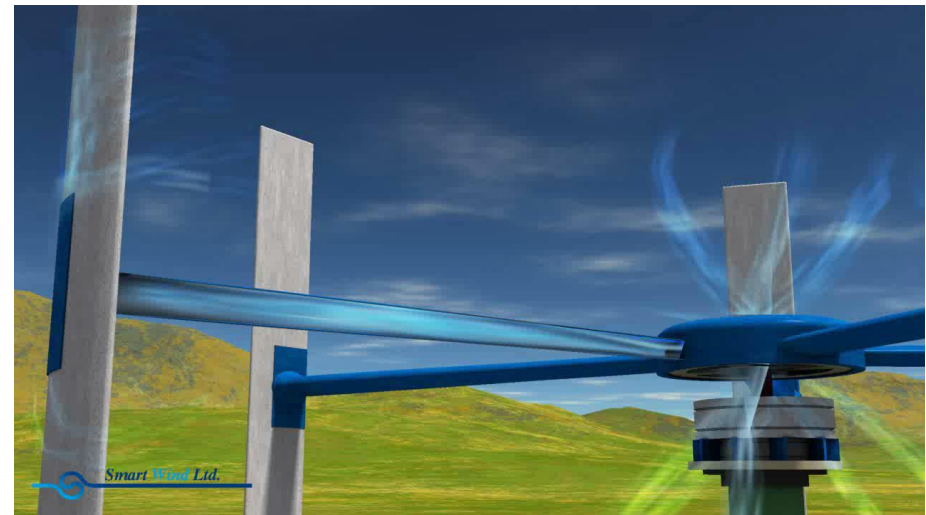
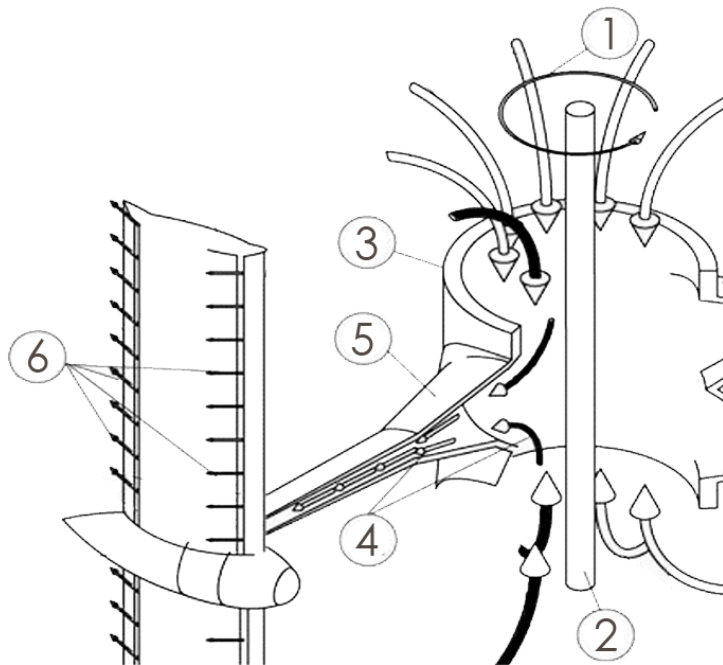
# About Smart Wind

- Established May 2009 in  Green Technological Incubator Ltd.
- Developing vertical axis wind turbines (VAWT)
- First products:
  - VAWT for residential settings (1-10 kW)
- Future markets:
  - commercial (10-100 kW)
  - implementing technology to VAWT above 100kW

# Core Technology

Specific use of active flow control (AFC) aerodynamic technology for increasing air circulation around the blades

- US patent application (10/2010)
- PCT application (10/2011)



# Previous Test Model Configurations





# Comparison Experiments (#5)



Smart Wind's  
test model



Conventional HAWT



Conventional VAWT



# Comparison Experiments (#5)

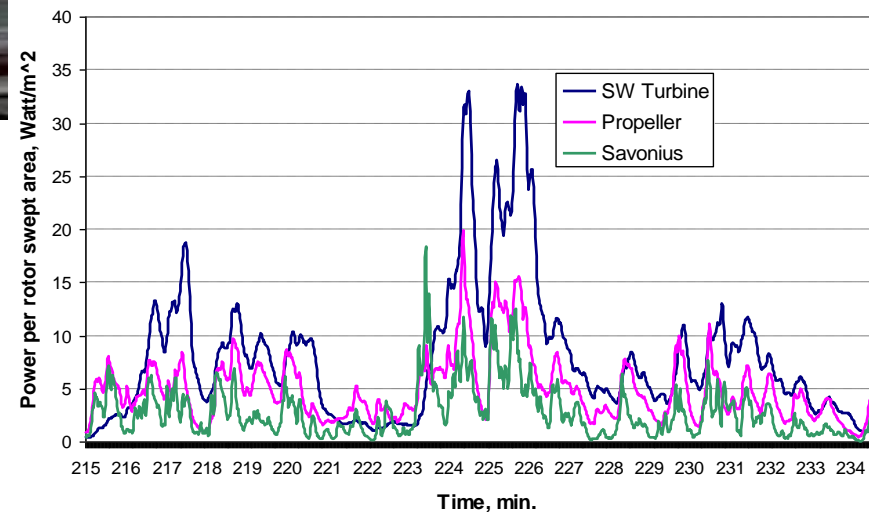


Smart Wind's  
test model

Conventional  
HAWT

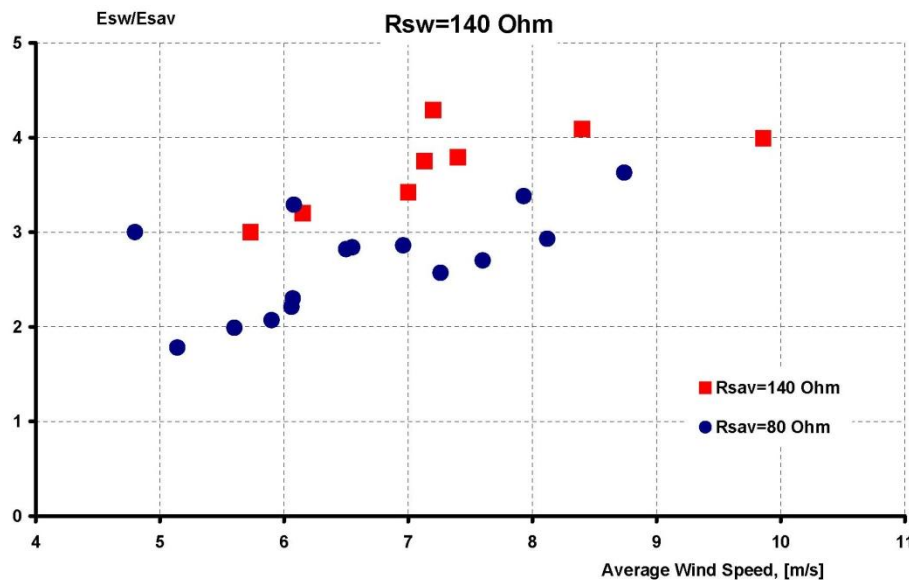
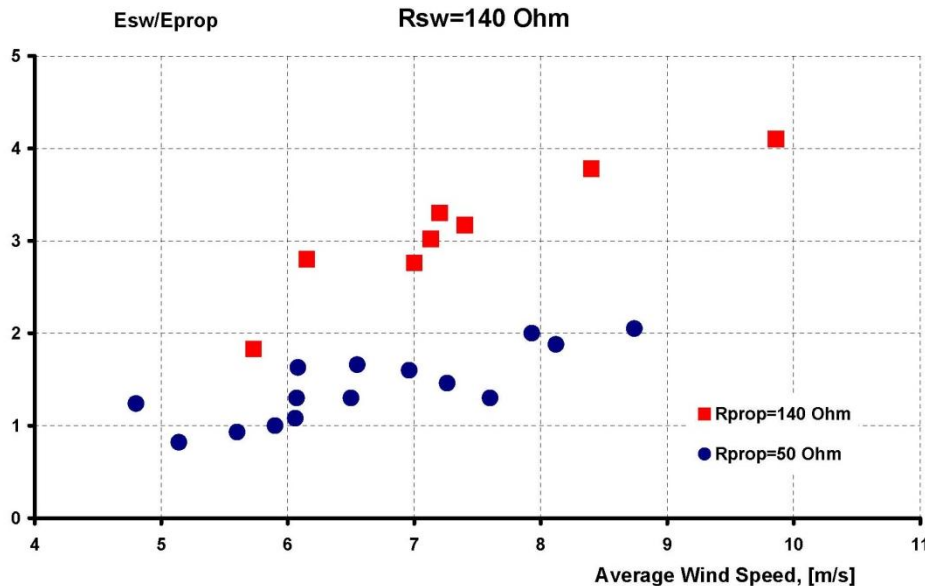
Conventional  
VAWT (Savonius)

Power per rotor swept area



# Comparison Experiments (#5)

More energy per swept area of rotors



# Value Proposition

Smart Wind Turbine Generates

# More than 2 Times Energy

Per Rotor Swept Area

*Increased Performance*

*Solution to variable wind conditions*

*Minimal noise and vibration*

*Low maintenance*



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כנפית  
KANFIT



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# Business Strategy and Potential

- Strategic partner  KANFIT
- The Company is now in a process to manufacture and test the first commercial model of about 1kW
- Initial sales are planned to be in Israel and in Eastern Europe (potential customers: Romania, Ukraine, etc.)
- Next, the Company intends to enter the US and European markets with larger turbines for residential settings
- Besides installations of domestic turbines Smart Wind suggests projects of **SWT** farms



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# Funding

Seeking to raise 2M\$ for

- Entering local and international markets with the first commercial model (about 1kW)
- Expanding to larger wind turbines
- Working with the Small Wind Certification Council (SWCC) in US



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***NEW GENERATION  
OF WIND  
TURBINES***

*We Turn Energy Consumers  
Into Energy Producers*



**The Company  
will take control  
of more than 5%  
of the wind  
energy market  
in 10 years!**

**Thank You**

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