



DATA SHEET

THE WINDTREE

For India T.N Project

Right Renewable Tech
Chennai T.N

Founder & CEO .Amjad Baig For Right Renewable Tech LLP

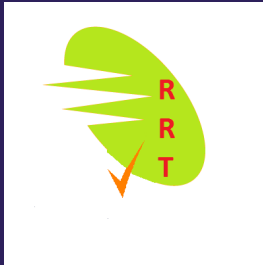


Wind Tree
Renewable Energy wind

A French Company Designed

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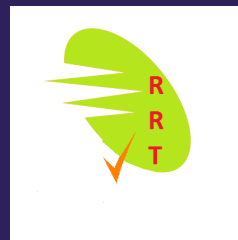


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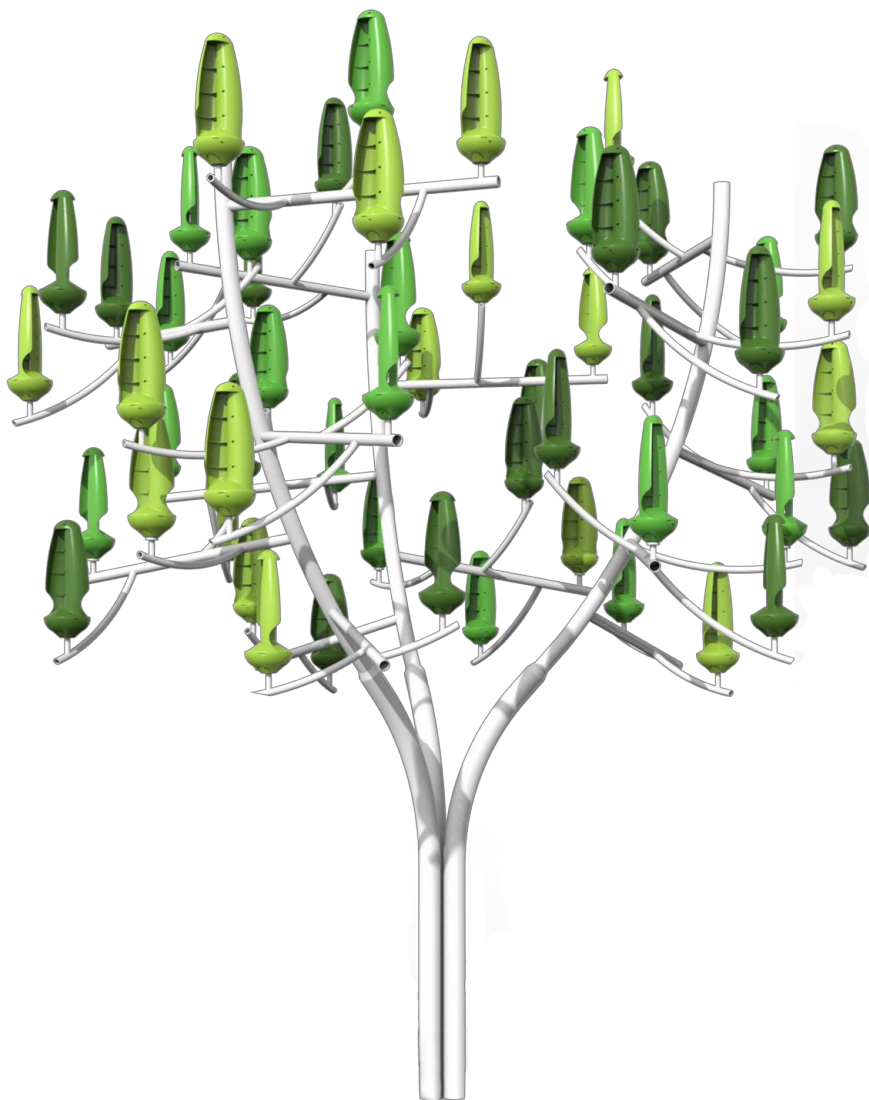
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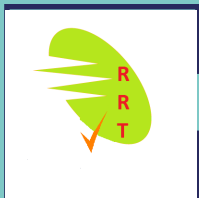


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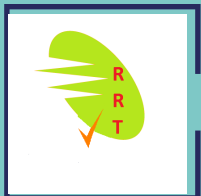
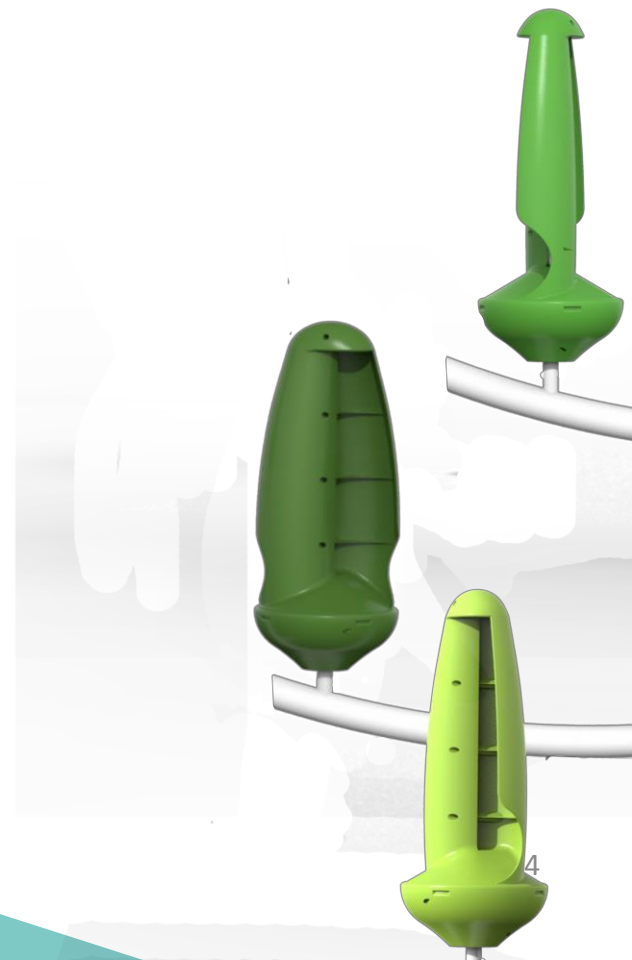


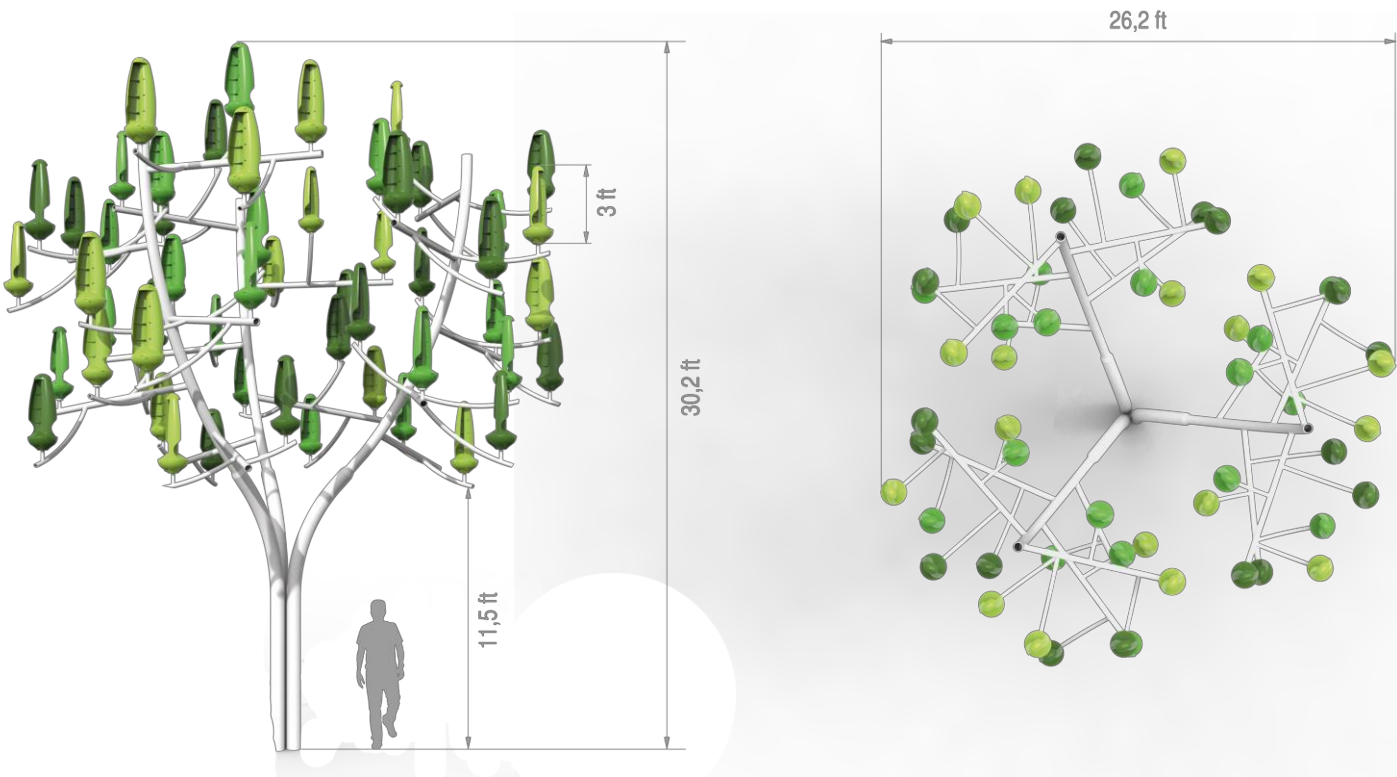
Inspired by trees, the WindTree is a complementary electrical production system, based on a small vertical axis wind turbine called Aeroleaf®. This innovation is capturing all types of wind, whether there are turbulent or laminars.



Each Aeroleaf is made of a synchronous generator with permanent magnets. The generators developed by New World Wind have a stator (copper winding linked to an electronic card) and a rotor made of two plates supporting the magnets. Simply initiated by the rotation of the blade, without any belts or gears, the magnets create a magnetic field, generating tension and alternating current (AC). To allow for the addition of each Aeroleaf power, it is switched to direct current prior to the final AC generation.

Thanks to the electronic card developed by New World Wind, the production of the current is optimized with respect to wind speed. The microcontroller on each Aeroleaf guarantees a fine regulation of the system. Every ten milliseconds a computation is performed to sent a voltage/current instruction to Aeroleaf rotational speed in order to generate the maximum power.



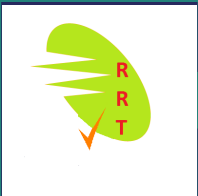


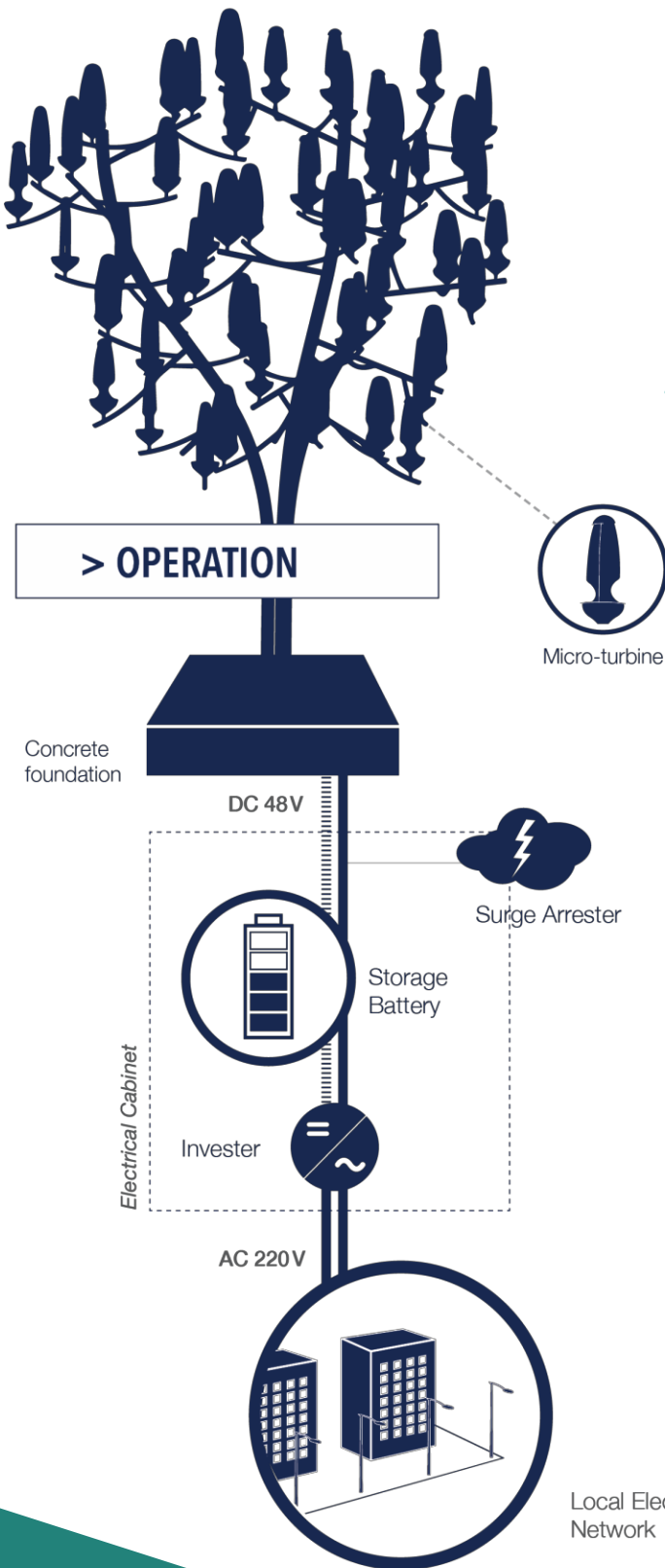
The WindTree is a steel structure (trunk and branches) on which 54 Aeroleaf® are installed.

The Aeroleaf are all independant, which facilitates both production and maintenance as each turbine can be monitored without stopping the overall production (electrical assembly in parallel) and without risk (low voltage 48V).

Aeroleaf height	3 ft
WindTree's total height	30,2 ft

WindTree's total weight (excluding base anchor)	480,3 st
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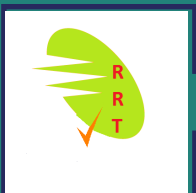
ELECTRICAL INSTALLATION SCHEMATICS

New World Wind provides an electrical cabinet compliant with the electrical standards in France/Europe. We will comply to your country requirements.

The Electrical cabinet is made of:

- A battery, allowing to temporarily regulate the electricity production to limit peaks and solely for short time needs. It is not for storage.
- The uninterruptible power supply (UPS) allows to provide the receiving equipment with an alternative voltage, directly connected to the local grid.
- All the security systems required for electrical grid connection (fuse wire, switchgears, lightning conductor and isolation switch).

As such, the electrical cabinet is readily available for connection to local network.

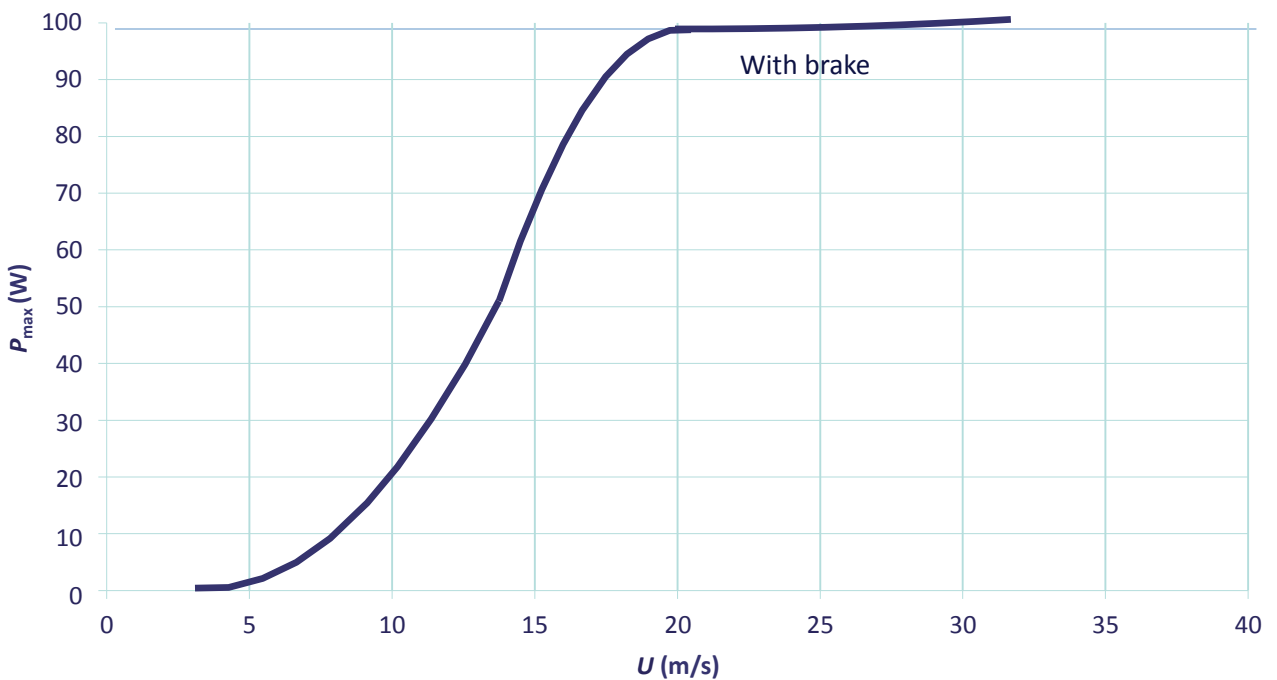


The Areoleaf aerodynamic has been optimized for the lowest wind speed, with a cut-in wind speed fixed to 2,5 m/s (wind speed minimum value from which the turbine is in operation).

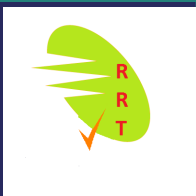
For security reasons, the Aeroleaf integrates a brake system.

The brake is activated when the wind speed exceeds 18 m / s, which corresponds to a rotational speed of 700 rpm. The power produced is therefore limited to 100W per turbine.

AEROLEAF POWER CURVE



Adaptable with a low start threshold, the technology Aeroleaf® is a small vertical axis turbine which rotates at low speed, and with no belts nor gears, thus creating no noise disturbance.



The WindTrees can be installed in various environments. NewWind is able to support its customers to define the best location, with consideration to spatial requirements and wind availability.

The customer is responsible for the realization of the tree anchorage.

The data necessary for the constructions of the concrete are provided by Right Renewable Tech upstream of the civil works. The interface between the anchor and the tree is via a reserve on template provided by Right Renewable Tech.

The following responsibilities are excluded from Right Renewable Tech scope and shall be managed by the Customer:

- Civil work of the Windtree foundation, based on the specifications provide by Right Renewable Tech
- Installation of the cable sleeve between the wind tree and the electrical panel,
- Preparation of the area allocated to the electrical cabinet (if needed),
- Electrical connection to the Customer Low Voltage panel,
- Provision of a secured site and storage area during the installation.

Right Renewable Tech can facilitate the provision of the civil works in collaboration with our local partners.

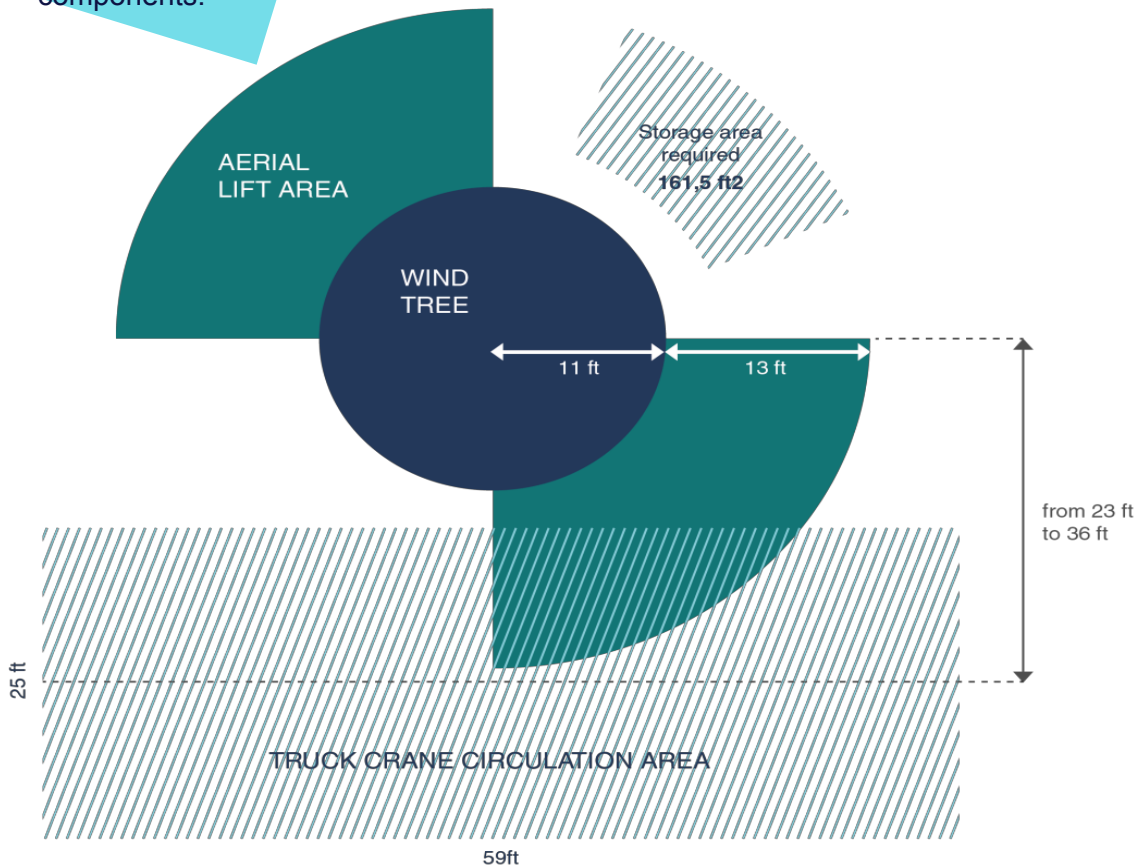


The WindTree doesn't require any administrative approval prior to conduct the work (French requirements, other countries to confirm), because it's a wind system of less 12 meters.

The site works will start upon confirmation the site readiness as per a document to be signed-off by the project owner.

The metallic structure and the Aeroleafs will be delivered and temporary stored on site.

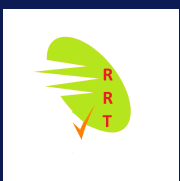
The site shall be accessible by a 12T truck to facilitate the handling and lifting of all the components.



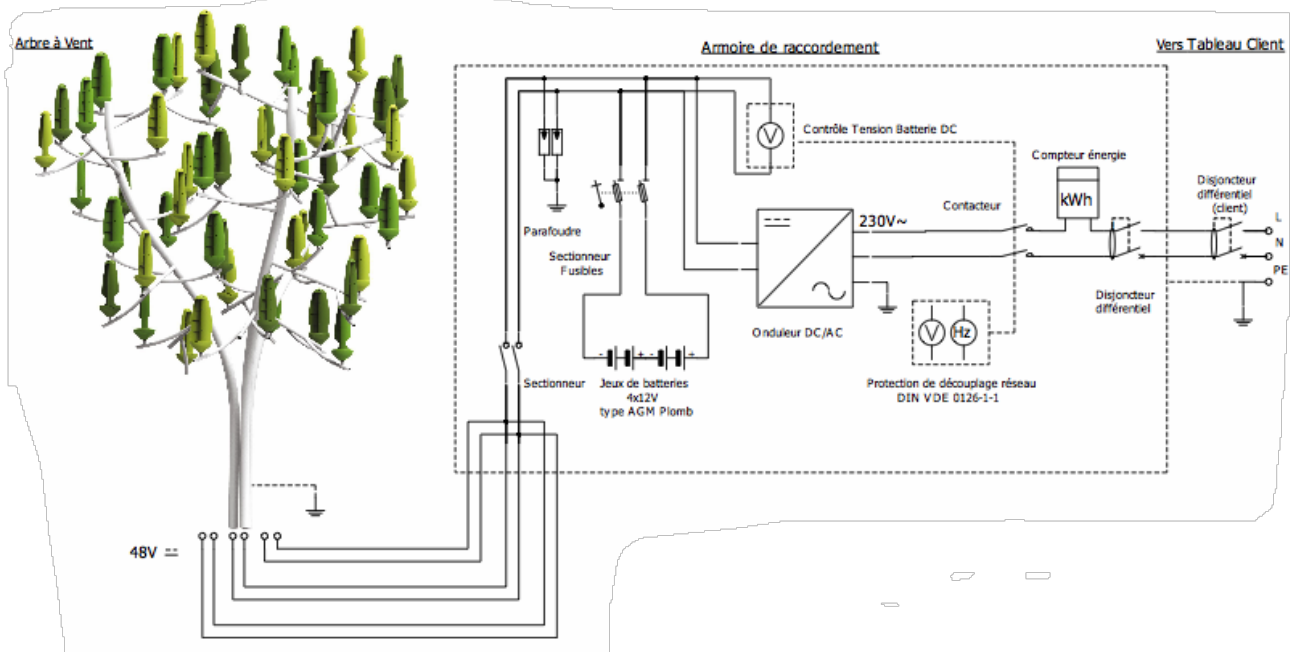
A 15m² area shall be cleared for the storage and an area for the lifting truck shall remain accessible at all times.

D1	D2	D3
Installation		Electrical connection

Site works shall last between 2 to 4 days..



The Windtree is based on the concept of on-site generation and direct consumption of the electricity in the connected building/area.



The Windtree is connected to the local grid through the Right Renewable Tech electrical cabinet. A dedicated space should be prepared for the cabinet, within a maximum distance of 50 meters. In addition to the WindTree and its electrical cabinet, Right Renewable Tech is also providing the electrical wires between the WindTree and the Cabinet.

The overall installation is compliant with the current European standards.

The electrical cables sheaths between the WindTree and the Electrical cabinet is explained in the civil engineering specifications. Similarly, any specific protection and wiring until the Electrical cabinet shall be prepared by the Customer to allow for the connection between the Electrical cabinet and the local grid. By default and to comply with the grid requirements, Right Renewable Tech has integrated a grid feeding monitoring system DIN VDE 0126-1-1.



MECHANICAL CHARACTERISTICS

WindTree's total height	30,2 ft
WindTree's diameter	26,2 ft
Aeroleaf's height	3 ft
WindTree's total weight	480,3 st
Number of Aeroleaf	54

TURBINES CHARACTERISTICS

Launch speed	2,5 m/s (9 km/h)
Wind speed limit	43 m/s (155 km/h)

ELECTRICAL CHARACTERISTICS

WindTree's Installed Capacity	5400 W
Aeroleaf Peak Power	100 W
Output Voltage of the Inverter	110 / 230 V

SITE INSTALLATION

Installation Time	2-4 days
Maximum distance between the WindTree and the Control Cabinet	164 ft
Minimal distance between the WindTree foot and the nearest building	19,7 ft



DISTRIBUTION OF WORK

Civil Engineering	Client
WindTree Installation	
Control Cabinet Installation	Right Renewable Tech
Connection of the WindTree to Control Cabinet	
Connection of the Control Cabinet to Local Network	Client

Key notes

- The Client is in charge of realising the civil engineering
- A special wind study is available upon demand in order to help you to choose your WindTree's localisation.
- The WindTree doesn't require a declaration of site works under the French standards, other local regulations would have to be respected.



Thanking You

Right Renewable Tech

AMJAD BAIG