DATA SHEET

HYBRID WINDBUSH 12A

Micro-wind + photovoltaic structure

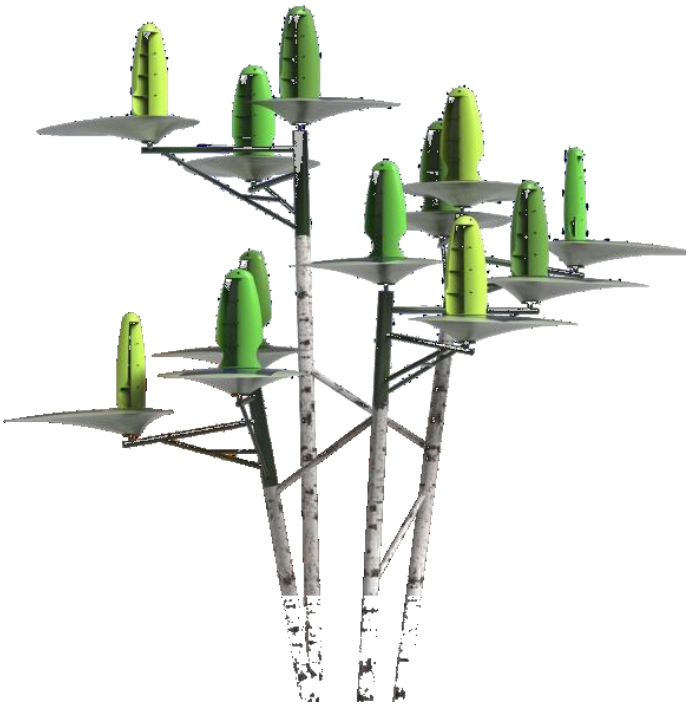
Updated technical product sheet | Rev. 2026.06

12 Aeroleafs

16 PV Petals

4.2 kW installed peak capacity

48 V DC collection bus



Compact hybrid structure for proximity energy production

5.80 m	5.65 m	~980 kg
height	diameter	weight

1 PRODUCT OVERVIEW

One consolidated technical snapshot to reduce repetition

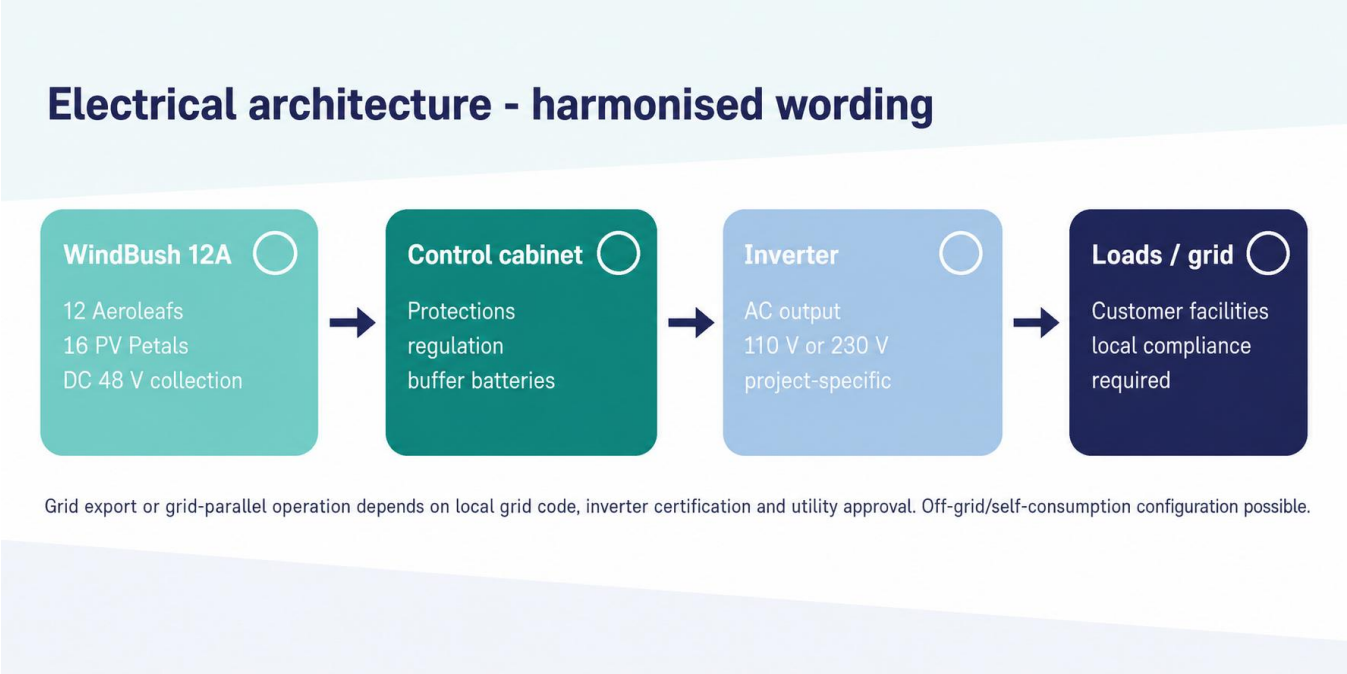
The Hybrid WindBush 12A combines 12 Aeroleafs and 16 photovoltaic Petals on four interconnected trunks. It is designed for local energy production where visual integration, compact footprint and hybrid generation are required.

Actual production remains site-dependent. Wind distribution, turbulence, solar irradiation and shading must be assessed before any energy-yield commitment.

12 Aeroleafs	**16** PV Petals	**4.2 kW** installed peak capacity	**48 V DC** collection bus
5.80 m height	**5.65 m** overall diameter	**0.95 m** Aeroleaf height	**~980 kg** total weight

2 HYBRID ARCHITECTURE

Wind generation, photovoltaic contribution and protected electrical collection



Wind subsystem

- 12 Aeroleafs on the WindBush branches
- 300 W reference value per Aeroleaf
- 2.5 m/s starting speed, subject to conditions

Photovoltaic subsystem

- 16 PV Petals around the Aeroleafs
- 36 Wc reference value per Petal
- 576 Wc total photovoltaic capacity

Control and output

- 48 V DC collection to cabinet
- Protections, regulation and buffer batteries
- 110 V or 230 V AC output depending on inverter

Grid export or grid-parallel operation depends on local grid code, inverter certification and utility approval. Off-grid/self-consumption configurations remain project-specific.

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AEROLEAF AND PV PETAL

Reference values without overstated performance claims

AEROLEAF REFERENCE

Parameter	Value
Technology	Proprietary vertical-axis micro-wind turbine with embedded electronic regulation.
Quantity	12 Aeroleafs per WindBush 12A.
Starting speed	2.5 m/s, subject to installation and turbulence.
Power reference	300 W per Aeroleaf under high-wind/bench reference conditions.
High-wind behaviour	Protection and braking strategy integrated; validation required for site wind zone.

PV Petal reference

36 Wc Power per Petal	**576 Wc** Total PV capacity	**~0.30 m²** Area per Petal
~4.8 m² Total PV area	**~0.8 kg** PV film weight	**~6.5 kg** Support + PV assembly

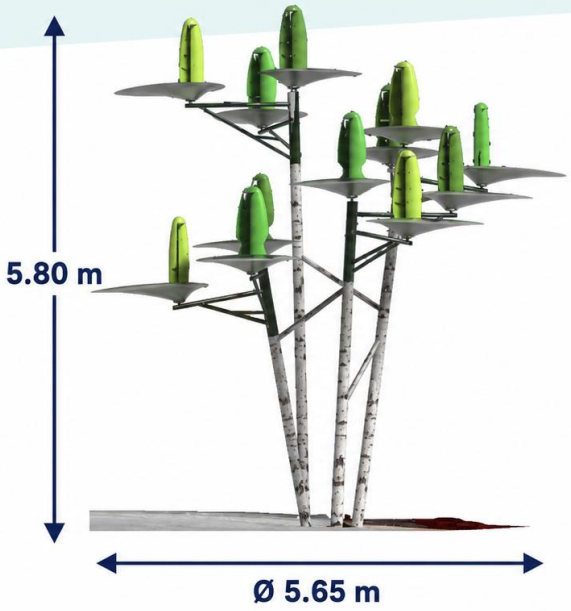
Performance wording

The Petal is treated as both a photovoltaic support and an aerodynamic integration element. Any airflow-guidance effect depends on final geometry and site conditions; no unconditional percentage-gain claim is retained.

4 DIMENSIONS AND SITE ENVELOPE

Harmonised dimensions and clearance envelope

Dimensions and site envelope



Height	5.80 m
Overall diameter	5.65 m
Aeroleaf height	0.95 m
Approx. total weight	1,200 kg

The previous 4.60 m figure is not retained for the hybrid version.

MECHANICAL DATA RETAINED IN THIS VERSION

Parameter	Value
Overall height	5.80 m
Overall diameter / clearance envelope	5.65 m for the hybrid WindBush with photovoltaic Petals.
Aeroleaf height	0.95 m
Approx. total weight	980 kg, excluding foundation works and external cabinet base.
Structure	4 interconnected trunks.
Foundation	According to NWW civil-engineering guidelines, soil conditions and project constraints must be fixed by builder

5 CONCRETE ANCHORING AND SITE PREPARATION

The WindBush is fixed to the ground through an anchoring basket cast into the concrete block. **The anchor basket is supplied by New World Wind**; the concrete block, sleeves, reinforcement and earthing preparation are part of the civil works to be completed before installation.

Important: these values describe a baseline principle drawing. The final foundation, reinforcement and concrete specification must be confirmed by the civil works company or structural engineer according to soil conditions, local rules and site wind exposure.

Minimum baseline block

1.50 x 1.50 x 0.30 m

with central reservation for the anchor plate, cable collection and sleeves

Anchor basket

NWW supply

cast into the concrete block

Threaded rods

12 x M12

according to NWW basket

Sleeve to cabinet

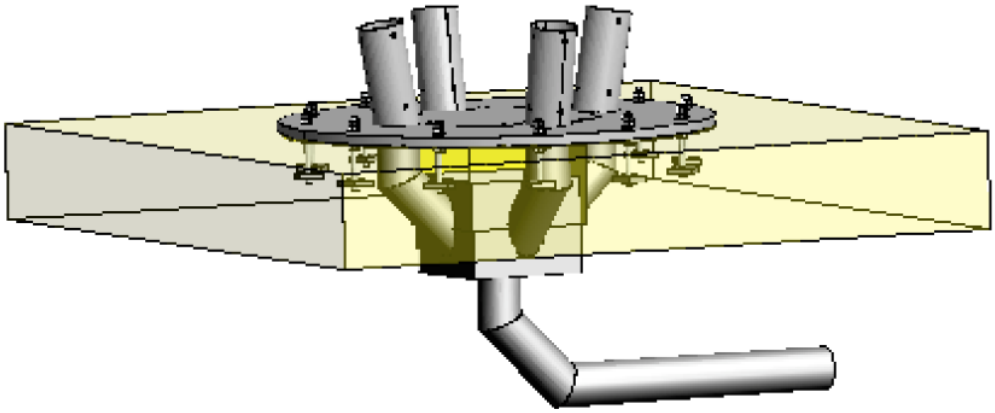
Ø90 mm

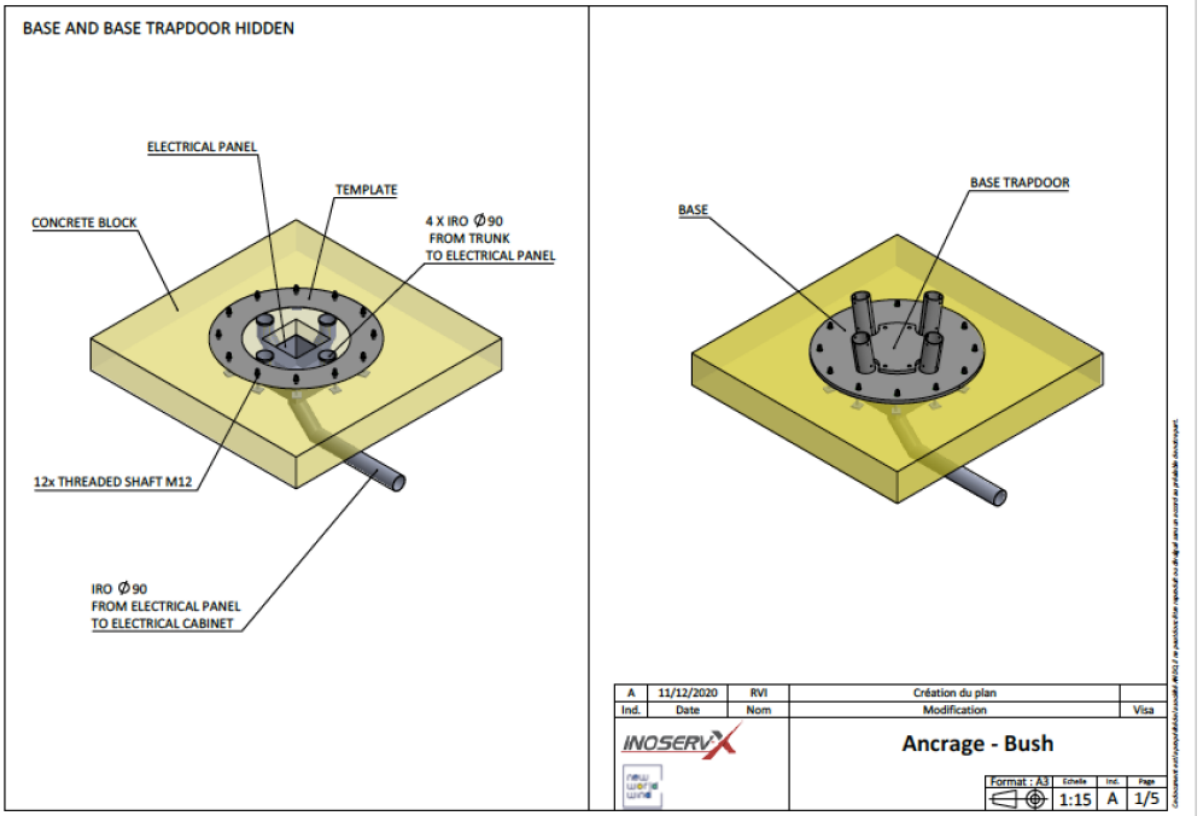
10 m max baseline

Earthing

25 mm^2

earth cable to basket + ground bar




BASE AND BASE TRAPDOOR HIDDEN
ELECTRICAL PANEL
TEMPLATE
CONCRETE BLOCK
4 X IRO Ø90
FROM TRUNK
TO ELECTRICAL PANEL
12x THREADED SHAFT M12
IRO Ø90
FROM ELECTRICAL PANEL
TO ELECTRICAL CABINET
BASE TRAPDOOR
BASE
A | 11/12/2020 | RVI | Création du plan
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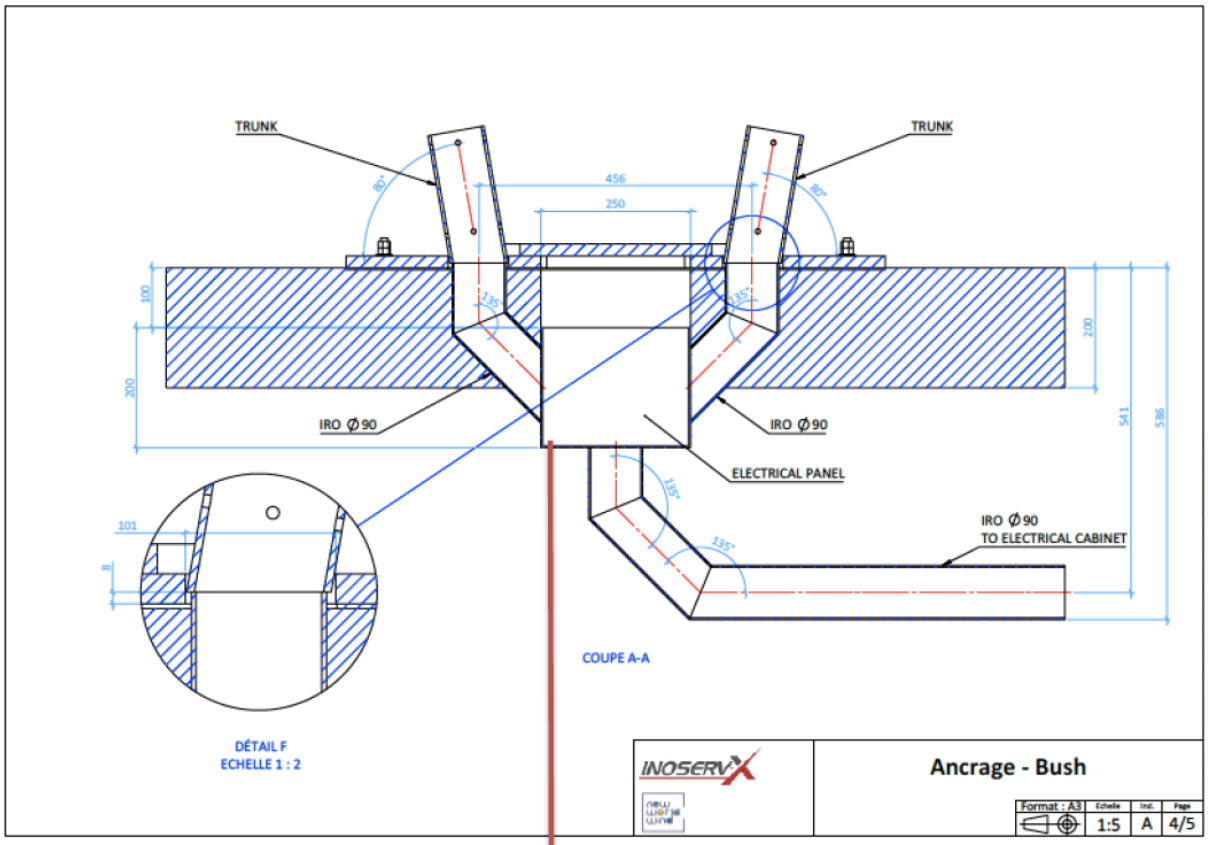
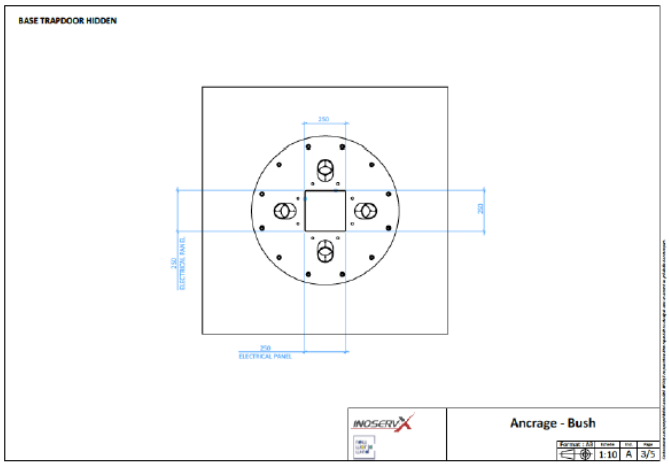
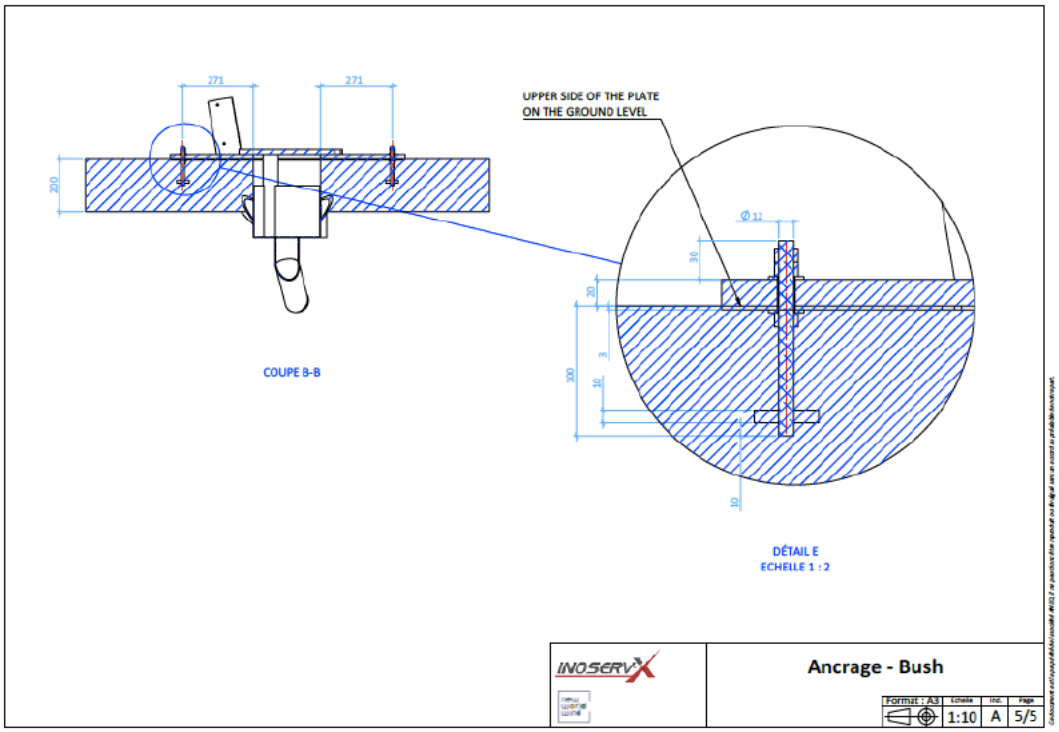


Important: install a bar for ground connection





SITE PREPARATION REQUIREMENTS

Minimum civil works to be completed before WindBush installation

Item	Minimum requirement / wording for product sheet
Earthworks and excavation	Prepare the excavation and level base according to the validated civil-engineering plan.
Formwork, reinforcement and concrete	Build the foundation block on the baseline envelope of 1.50 m x 1.50 m x 0.30 m, unless the civil engineer requires a larger or reinforced solution.
Anchor basket positioning	Install and cast the NWW-supplied anchor basket accurately before pouring, keeping the base plate position and central reservation aligned.
Sleeves / conduits	Install the Ø90 mm sleeve from the WindBush base toward the NWW electrical cabinet. Baseline maximum distance: 10 m for the WindBush unless project-specific cable sizing validates otherwise.
Earthing / grounding	Install the earth connection at the bottom of the excavation with a 25 mm^2 earth cable attached to the anchor basket and provide the ground connection bar.
Concrete curing lead time	Prepare the anchor block 3 to 4 weeks before WindBush installation, or according to the curing time validated by the civil works company.

Scope split for this anchorage section

Client / local contractor

- Earthworks, formwork, reinforcement and concrete block
- Anchor basket positioning during civil works
- Sleeves/conduits, earthing cable and ground connection bar
- Soil validation, local civil-engineering approval and any required adaptations

New World Wind

- Supply of the anchoring basket when included in the project scope
- Provision of the anchorage principle drawing and installation recommendations
- WindBush assembly after site readiness confirmation
- Technical interface with the NWW electrical cabinet and supplied architecture

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ELECTRICAL AND INSTALLATION REQUIREMENTS

Operational requirements grouped in one section

Installation flow

Electrical architecture

- 48 V DC collection from WindBush to electrical cabinet.
- Buffer battery for regulation / short-duration needs only unless storage is specifically sized.
- Disconnector, surge protection, fuses/breakers, earthing and required safety devices according to project architecture.
- Grid connection subject to local code, inverter certification and utility approval.

Installation conditions

- Approx. 12 m lifting reach / MEWP required for standard assembly.
- Approx. 8 m clear working area during lifting and assembly.
- 10 m recommended cabinet distance; up to 20 m possible only after cable sizing and site review.
- Typical assembly and electrical connection: approx. 2 working days after site readiness.

Important limitation

The WindBush is not presented as a universal replacement for a building power supply. For autonomy, critical loads or grid export, battery capacity, inverter sizing and complementary energy sources must be calculated from the real load profile and local climate data.

7 RESPONSIBILITIES AND COMPLIANCE

Client-facing matrix with internal revision notes removed

Responsibility matrix

Item	Standard responsibility	Notes
Underground sleeves / conduits	Client	Prepared before installation according to NWW civil-engineering guidance.
Earthworks and foundation	Client	Foundation dimensions and reinforcement to be validated by project drawings and site/soil conditions.
WindBush assembly	NWW or approved installer	Subject to supply scope and local installation agreement.
Aeroleaf and PV Petal installation	NWW or approved installer	Mounted according to NWW recommendations.
Electrical cabinet installation	NWW or approved installer	When cabinet is included in the NWW scope.
Connection WindBush to cabinet	NWW or approved installer	Cable distance and sizing checked for each project.
Connection cabinet to customer facilities	Client / local electrician	Must comply with local electrical code and facility rules.
Permits / grid approval	Client with local specialists	Planning and grid requirements vary by country and municipality.