

# Renewable-Energy Transformer Configurations



A project-first guide for 6/10 kV collector and grid-connection applications in solar, wind and energy-storage systems.

## START WITH THE SYSTEM ROLE

### Choose the project path before choosing the series.

Renewable projects use the same oil-immersed and dry-type transformer constructions as other networks. The configuration follows the collection voltage, grid interface, site conditions and documentation requirements.

#### Solar PV

Collector and grid-connection configurations reviewed for voltage ratio, site arrangement and equipment interface.

#### Wind Power

Oil-immersed or dry-type configurations considered against installation environment, load profile and transport limits.

#### Energy Storage

Project configuration reviewed for the conversion system, grid interface, harmonic requirements and operating profile.

## CONSTRUCTION PATHS

### Two primary constructions for renewable applications

#### Oil-immersed

A reference path for outdoor collector stations and project nodes. Cooling, tap arrangement, enclosure and final performance series are set to the approved specification.

#### Cast-resin dry-type

A reference path where an oil-free indoor or enclosed installation is required. Enclosure, cooling, insulation class and auxiliary scope are selected for the site.

# Turn a project brief into a suitable shortlist.

The following sequence keeps early discussion focused while leaving the final configuration to the approved technical specification.

01

**Define the electrical position**  
Confirm collector voltage, grid interface, rated capacity, frequency and the equipment that sits upstream and downstream.

02

**Choose the construction path**  
Review oil-immersed and dry-type options against the installation location, fire and environmental needs, space and maintenance access.

03

**Set the performance target**  
Compare applicable performance series only within the same voltage class, capacity and construction. The quotation loss schedule governs.

04

**Confirm the document path**  
Align drawings, routine-test documentation and agreed compliance evidence with the selected configuration and destination requirements.

REFERENCE COMPARISON

## Project factors that shape the configuration

| Project factor        | Early selection question                      | Confirmed at project stage                                        |
|-----------------------|-----------------------------------------------|-------------------------------------------------------------------|
| Voltage and capacity  | What are the collector and grid-side ratings? | Voltage ratio, rated capacity and connection group                |
| Installation          | Outdoor, indoor, containerised or enclosed?   | Construction, enclosure, cooling and accessories                  |
| Operating profile     | Solar, wind, storage or mixed network?        | Tap arrangement, impedance, loss schedule and harmonic provisions |
| Destination documents | What is required for approval and handover?   | Drawings, routine-test documents and agreed evidence              |

Reference guide only. Final performance figures and documentation are confirmed for the selected project configuration.

# Send the essentials. Receive a focused shortlist.

A complete brief reduces rework and lets us return the right product-family options within one business day.

- ✓ Destination country and applicable project requirements
- ✓ HV and LV system voltage, frequency and connection point
- ✓ Rated capacity, load profile and expansion allowance
- ✓ Installation environment: outdoor, indoor, containerised or enclosed
- ✓ Preferred oil-immersed or dry-type path, if already known
- ✓ Required drawings, tests and handover documents

## Document path

Public guide: early comparison and selection logic. Quotation-stage datasheet: selected configuration and commercial scope. Project document pack: approved drawings, routine-test documentation and agreed compliance evidence.

## Need a renewable-energy transformer shortlist?

Share the project brief with Hovol Power for a suitable family recommendation.

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