

WIND ENERGY

The pillar of a forward-looking company.

VSB énergies nouvelles brings together all the expertise required to develop power plants producing electricity from integrated renewable energy sources, from prospecting to commissioning. Capitalising on our sense of responsibility and our flexibility, our teams provide support and care in the production of green energy to local authorities, their elected representatives, their inhabitants, as well as state departments and landowners.



WITH WIND POWER, VSB DEVELOPS A CLEAN, NATURAL AND UNLIMITED SOURCE OF ENERGY TO PRODUCE ELECTRICITY LOCALLY AND FIGHT GLOBAL WARMING.

KEY DATA.



40 wind power construction permits obtained for a capacity of 400 MW.



over 300 wind turbines installed.



60 projects under development representing 1,000 MW.

VSB'S VIEW ON WIND POWER: A CLEAN, SECURE, UNLIMITED AND GROWTH-GENERATING SOURCE OF ENERGY.

With over 900 MW worth of permits obtained since 2001, VSB is now a key player in the development of your wind energy project. Our expertise is undeniable, with strong values and building from shared experience with elected representatives and administrations.

The key is communicating with all stakeholders, particularly with elected representatives and local residents. Our method for achieving the energy transition at the heart of territories is raising awareness to encourage support.

Through co-development, partnerships and crowdfunding with communities and residents, VSB encourages all stakeholders to make these sustainable projects their own.

THE MAIN STAGES OF A WIND ENERGY PROJECT.



Feasibility analysis.

Constraint analysis, presentation of the project to the Municipal Council, agreements with land owners.
- at least 6 months -



Studying potential impacts.

Environmental, human, natural, landscape, acoustic, wind measurement.
- 12 to 24 months -

REQUEST FOR AUTHORISATION



Examining the application for authorisation.

Information, dialogue, public enquiry, consultancy (DREAL, SDAP, DDT), Prefect authorisation.
- 9 to 12 months -

PREFECT'S AGREEMENT



Realization of the park

- 12 to 18 months -



Operation and dismantling.

- 20 to 30 years -

WHY YOU SHOULD ENTRUST US WITH YOUR PROJECT.

→ A territory operator as your **single point of contact**. As the contact person for local authorities, elected representatives, citizens and landowners, he stands alongside every stakeholder throughout every step of the project.

→ A **development coordinator** in charge of studies and the design of the Environmental Authorisation File (in its entirety).

→ An expert **financial engineering** unit to ensure that the financial and legal arrangements are adapted to the project specificities.

→ An **integrated design office**: monitoring and analysis of wind studies, project mapping using Geographic Information Systems and project definition according to constraints, project design using specific software.

→ **Transparent communication**: project presentation, consultation and acceptance and frequent exchanges with the development stakeholders to ensure fluidity and guarantee success.

→ **Local actions**: farm visits, exhibitions, school workshops, public meetings.

→ **Economic benefits** for communities and their citizens.

LOCAL AND CITIZEN ANCHORING

#1

Local green electricity supply offers

Residents who subscribe to this offer can benefit from cheaper, locally produced green electricity.

#2

Crowdfunding

Local residents and communities can invest using a short-term loan at fixed interest rates.

#3

Opening up the capital

As part of citizen projects, or as part of a partnership with energy unions or local authorities.

SOLAR POWER

Solar radiation energy.

VSB énergies nouvelles, with its 360° expertise, develops photovoltaic production plants integrated into their environment, from prospecting to commissioning.

Capitalising on a range of experience, our teams work on every step of your project.



AN UNLIMITED, GLOBALLY AVAILABLE SOURCE OF ENERGY.

KEY DATA.



400 MWp
under development.



60 MWp
won in national tenders (CRE winner).



160,000 modules
installed every year.

THERE ARE MANY LOCATIONS YOU CAN DISCUSS WITH US:

- Derelict lands (>3 hectares).
- Natural areas (>3 hectares).
- Greenhouse crops (>3 hectares).
- Bodies of water / floating plants (>3 hectares).
- Field crops (>3 hectares).
- Large roofs (>3,000 sqm).
- Car park shelters (+ 150 spaces).



SOLAR ENERGY IN 7 STEPS.



Feasibility study.
- approx. 6 months -



Study of potential impacts.
- 3 to 18 months -



Instruction of the application for urban planning licence.
- 3 to 12 months -



Securing the feed-in tariff:
Open window, bidding, CRE calls for tenders, over-the-counter market, European market.
- 3 to 12 months -



Financing and construction of the plant.
- 10 to 24 months -



Plant operation and maintenance.
- 30 years -



Dismantling / Repowering.

VSB DEVELOPS PROJECTS WITH:



LOCAL AUTHORITIES



FARMERS



LOGISTICS SPECIALISTS



INDUSTRIALISTS & COMPANIES

WHY YOU SHOULD ENTRUST US WITH YOUR PROJECT.



VSB's design office is responsive and creative and commits to meeting your expectations in the current regulatory and pricing context.

VSB's engineers support its development division in orchestrating technical studies: estimating production capacity, solar farm layout throughout the development stages. The company ensures optimum performance.

VSB énergies nouvelles also offers its clients a range of services (design office, project owner support, project management contracts, general contracting) that complete the electricity production value chain.

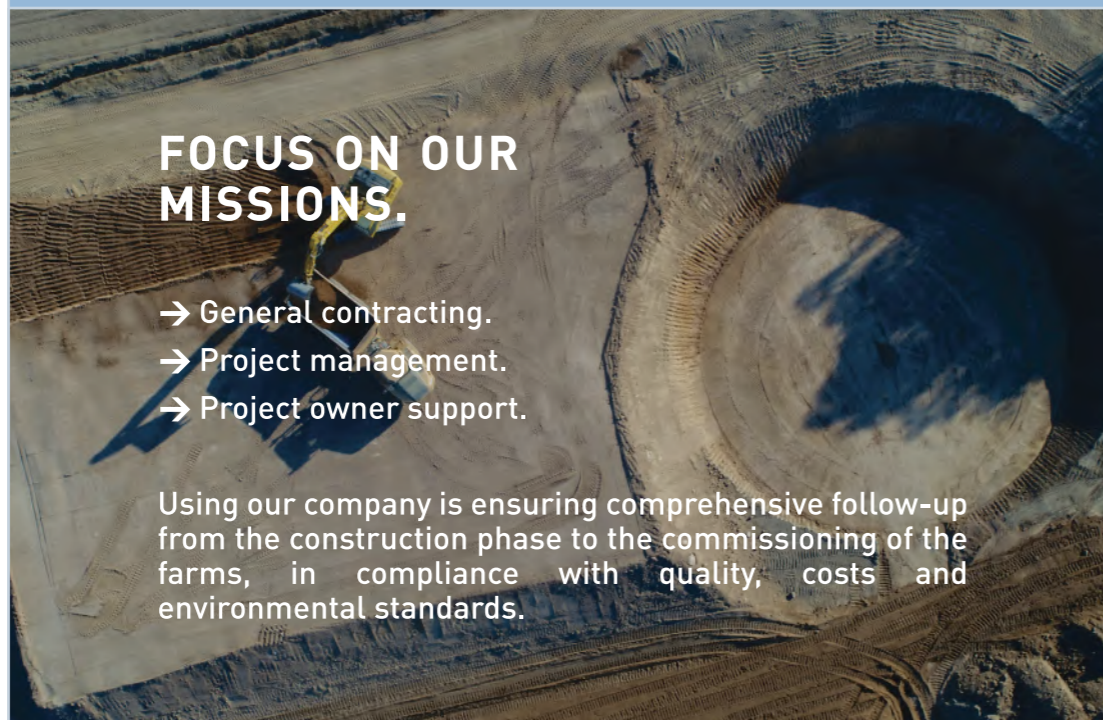
CONSTRUCTION

Recognised expertise.

CONSTRUCTION EXPERT -

At VSB we put all our energy into developing your projects. VSB offers its expertise during every step of a project's construction:

- 1 Audit, conception and design.
- 2 Carrying out the works.
- 3 Commissioning and installation launching.



FOCUS ON OUR MISSIONS.

- General contracting.
- Project management.
- Project owner support.

Using our company is ensuring comprehensive follow-up from the construction phase to the commissioning of the farms, in compliance with quality, costs and environmental standards.

WHY YOU SHOULD ENTRUST US WITH YOUR PROJECT.

Thanks to our integrated design office, the company ensures power plants are technically designed at the best cost. Our expertise in electrical engineering means we can optimise all connections to the electricity network for solar power plants, wind farms and hydroelectric power plants.

KEY DATA.



150 MW
built per year.



10%
of the French wind farm
construction.



OUR SKILLS AT YOUR SERVICE

#1

Audit, conception and design

- Analysing the various administrative files (authorisation, ICPE (classified installation for environmental protection), land clearing).
- Checking and finalising agreements with land owners.
- Drawing up detailed construction and execution plans.
- Checking accesses and submitting optimisation suggestions.

#2

Carrying out the works

- Turnkey general contractor: earthworks, civil engineering, electrical networks, electrical substations.
- Project owner support: orchestrating site meetings, general site management, managing the Quality Control Plan (QCP), monitoring and assembling wind turbines.
- Development work: request for authorisation from the authorities, development work to ensure the passage of special convoys.

#3

Commissioning and installation launching

- Coordinating site supply logistics (transport, customs clearance).
- Quality control of main components (wind turbines, PV panels, inverters, delivery substations).
- Creating, monitoring and lifting reservations.

VSB IS COMMITTED TO RESPECTING THE ENVIRONMENT FIRST AND FOREMOST.

Since 2018, VSB Energies Nouvelles has signed the "Green Worksites Charter", committing the company, project owners and project managers to strict compliance with environmental standards during the works. In December 2019, VSB Energies Nouvelles showed this commitment at the regional level in Occitania by signing the CEMATER cluster's "Charter of best practices for biodiversity preservation". In 2020, the approach was completed by the "Zero Accident Worksite" charter including various commitments designed to ensure worksites are free of occupational accidents and diseases.

Thanks to a triple ISO 9001 - ISO 14001 - ISO 45001 certification, VSB is recognised for its best practices in terms of service quality and employee and third party health and safety. Its positive impact on the environment has also been highlighted.



ASSET MANAGEMENT

Optimisation, performance and customer service.



A SUSTAINABLE SERVICE OFFER.

The company takes care of every technical and administrative parameter and pays specific attention to upgrading energy use (intermittent operation, monitoring, production/consumption balance).



VSB KEEPS AN OVERVIEW OF YOUR ASSETS TO ENSURE GUARANTEED RETURNS BY COMMUNICATING REGULARLY AND IN A TRANSPARENT WAY.

KEY DATA.



900 MWC
worth of asset tracking.



55 wind farms
operating.



190 solar farms
in operation and
maintenance.



WHY YOU SHOULD ENTRUST US WITH YOUR PROJECT.

- We take care of your technical and administrative parameters.
- We give value to your electricity by selling it.
- We provide administrative delegation and assistance for your audits and transactions.
- We manage and optimise your facilities.



OUR OFFERS



ADMINISTRATIVE AND COMMERCIAL MANAGEMENT.

VSB fully assumes its role as administrative delegate.

→ **Day-to-day management of companies:** invoicing monitoring and control, cash flow and payment management, property and maintenance contract management, account and taxation monitoring.

→ **Controlling and reporting:** regular reporting according to client requirements, cash flow management and profit and loss forecasting, investment control and supervision.

→ **Advice and support:** monitoring and analysis of asset performance, setting up data rooms, support for the sale and/or purchase of projects, legal assistance.



TECHNICAL MANAGEMENT AND VALUATION.

VSB takes care of every technical parameter of your wind and solar farms. We provide in-house maintenance of your solar installations with the most modern equipment on the market (thermal camera, drone, etc.).

→ **Operation:** monitoring installations and availability, optimising production capacity, teams available 24/7.

→ **Maintenance:** management of maintenance operations for wind farms, in-house maintenance of solar farms and hydroelectric plants.

→ **Consulting:** due diligence and expertise, development of action plans to optimise production resources, technical support for the negotiation of warranty contracts, technical training of intervention teams.

→ **Adding value:** communicating monthly production results (REMIT, CRE), managing and promoting guarantees (production capacity and renewable origin), managing and optimising electricity sale (sale on the free market, integration into the electricity network, interactions with aggregators, production optimisation).



IN ORDER TO MAKE THE MOST OF THE ELECTRICITY PRODUCED, WE ENSURE IT IS SOLD UNDER A PURCHASE CONTRACT OR UNDER A REMUNERATION SUPPLEMENT.

REPOWERING

Upgrade your farms and plants to enhance production!

By capitalising on its all-round expertise, the company provides technical and economic solutions for repowering your power stations reaching the end of their life cycle.



WE PROVIDE FULL SUPPORT TO ACHIEVE YOUR REPOWERING PROJECT: FROM AUDITING TO THE TECHNICAL MANAGEMENT OF THE NEW PLANT.

KEY DATA.



160 MW
audited.



100 MW
developed (or in progress).



80 MW
having received authorisation
(or in progress).

WHAT IS REPOWERING?

When a farm reaches the end of its life cycle (20 to 30 years of operation for wind farms), questions arise regarding its future. There are two options: dismantling the farm and returning the land to its natural state, or carrying out a repowering process.

The latter consists in dismantling the farm in order to renew it. This usually means installing more powerful and quieter turbines, as well as optimising production (with at least 20 years' worth of hindsight regarding production data and wind intensity). With new regulations adding further constraints to wind energy development, repowering is an effective solution to achieving national energy transition goals.

THE BENEFITS OF REPOWERING:

- Increasing the amount of energy generated by the farm.
- Reducing maintenance costs with more advanced technologies.
- Quieter wind turbines.
- A very low cost price: an even more competitive source of energy.



OUR REPOWERING OFFER

#1

Technical-economic auditing

VSB offers you advice and analyses the options available to sustain and optimise electrical energy production:

- Identifying issues and easements and studying the wind or solar potential.
- Design and production simulations.
- Technical audit of existing installations.
- Economic analysis of the various scenarios for "Revamping" the installations.

#2

Development and implementation

VSB carries out the administrative procedures and studies to get the necessary authorisations for the repowering of your site.

#3

Dismantling and construction

VSB deals with the dismantling of existing installations and the construction of the "new farm" for you.

- Ensuring accesses and platforms are compliant.
- Dismantling the turbines and the delivery station.
- Recycling, reusing, transport.
- Dismantling foundations, platforms and power cables for site restoration.
- Building the new farm.

#4

Technical management of the new farm.

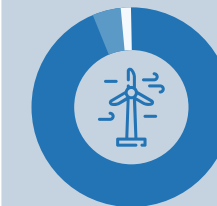
DID YOU KNOW? A WIND TURBINE IS 96% RECYCLABLE!

What type of waste is generated by dismantling?

- Concrete.
- Scrap (steel, cast iron) 80% of the wind turbine.
- WEEE (waste from electrical and electronic equipment).
- CIW (common industrial waste).
- Oil.
- Miscellaneous waste (aerosols, grease, construction waste).
- Composite materials (glass/epoxy) 15% of the wind turbine.
- Copper.

All of this waste is currently processed through conventional channels and is close to 100% recycled/reused (except for final CIW). (Sources: ORTEC, ADEME, CEMATER).

Recyclable material balance (with blades).



1% Material disposed of
3% Material reused
96% Recycled
(Source: CEMATER)

What do we do with the blades?

Composite materials are recycled and used for new applications such as boat hulls, kayaks, sailboards, aeronautical parts, etc.

Several solutions are used:

- Shredding and use as a fuel in place of fossil fuels.
- Manufacture of new composite materials.
- Reuse in street furniture.

SELF CONSUMPTION

Become your own producer and lower your energy bill!

Do you have a rooftop or a carpark available? Choose self-consumption energy to save money, produce and consume green and local energy!



SELF-CONSUMPTION IS PRODUCING A PART OF YOUR ELECTRICITY REQUIREMENTS ON YOUR CONSUMPTION SITE AND SOMETIMES RESELL THE NON CONSUMED PRODUCTION TO THE ELECTRICITY GRID.



Reduce your bill

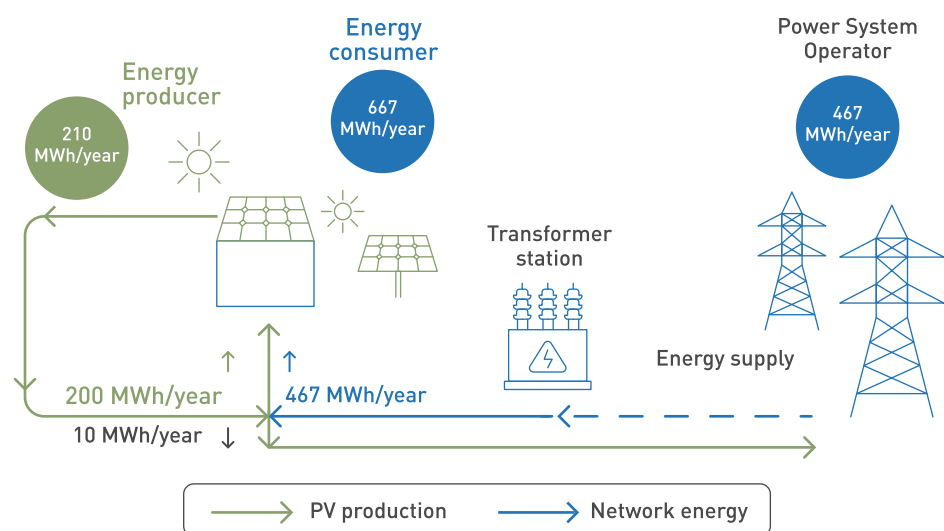


Enhance your image



Consume green and local

Exemple of a project:



Self-consumption rate: 95% - Self-generation rate: 30%

A response to energy challenges:

- Maintain affordable prices for electricity.
- Limit greenhouse gas emissions.
- Consume less and better electricity.
- Promote a local and renewable resource.

DID YOU KNOW?

Since 2007, the price of electricity has increased by 50%.

[Source : INSEE « Les dépenses des français depuis 1960 » - 04/04/2019].



VSB OFFER

Parking shelters – rooftop – ground-based installation

Your self-consumption system without initial investment on your part.

VSB assures you:

- A full service to make you benefit from electricity at a reduced cost.
- Diagnosis and sizing.
- Financing, construction and commissioning of the plant.
- Operation and maintenance.
- Installation of electric charging stations (on demand).

Benefits:

- Simplicity:
 - VSB takes care of everything: financing, construction, maintenance of the facility.
- Comfort:
 - Shaded parking facilities for your customers in summer and covered in winter.
- Security:
 - Variability of the costs of electricity supply under control over 25 years.
 - No expense.
- Savings:
 - Reduction of your electricity bill (between 15% and 30%).
 - Valuation of your real estate asset.
- Responsibility:
 - CSR approach.
 - Green and local consumption.

ZOOM ON PARTNERSHIPS OF CONFIDENCE.



Commerçants autrement

VSB, a national player listed by System U central purchasing office - 4 projects - 800 kWp (2021).



Construction of 1,9 MWp (2021).

