

# Accelerating → towards the energy of tomorrow

2021 INTEGRATED REPORT



# Contents

## 4 – Making people and the planet central to tomorrow's energy

- 6 – Editorial
- 8 – Our strategic ambition
- 10 – Our business model
- 12 – A company driven by a Human Project
- 14 – Our positive-impact approach
- 16 – Our performance

## 18 – Providing customized solutions to support each customer's energy transition strategy

- 20 – Accelerating energy transition for our clients
- 22 – Helping to create a more renewable energy mix
- 24 – Businesses factoring renewables into their strategy
- 26 – Development of locally-governed renewable energy projects
- 28 – The agricultural sector and energy transition

## 30 – A team of passionate, committed experts

- 32 – In-house expertise covering the whole value chain
- 34 – Skills that capitalise on our multi-country development
- 36 – Solar
- 38 – Hydroelectricity
- 39 – Biogas

## Changing → the vision of energy

**CVE was born out of the desire to help companies and public entities meet their energy requirements from sources that are compatible with their environmental objectives. The group intends to play an active role in energy transition, and to that end has chosen a model based on distributed generation: producing renewable energy close to where it is consumed, and selling that energy directly within the same region.**

CVE's entrepreneurial efforts are driven not only by economic values – aiming to create shared wealth, particularly with the Group's employees – but also by collective, human values and the desire to create environmental and social wealth. We want our activities to be socially fair, economically viable and ecologically responsible. We are therefore working for

a sustainable world where meeting our customers' energy needs does not compromise the future of the planet or its inhabitants. CVE is innovating and creating the energy models of the future, serving society and supporting the development of the men and women who are building these models.

For more information, visit [www.cvegroup.com](http://www.cvegroup.com)

# Profile

CVE is an independent French renewable energy producer that operates across multiple countries and energy sources.



### Our locations in France

- Marseille (head office)
- Bordeaux
- Lyon
- Paris
- Rennes
- Strasbourg
- Toulouse

### Our locations outside France

- Chile
- United States
- South Africa

**242**  
staff members

Capacity (under construction and in operation) in 2021:  
**528 MW**  
 comprising **449 MW** in operation  
**79 MW** under construction

Energy production in 2021:  
**898 GWh**  
 equal to the power consumed by **396,000** people,  
 comprising **88 GWh** of gas and **810 GWh** of electricity

**€50 million**  
Revenue

**660 MW**  
Secured portfolio

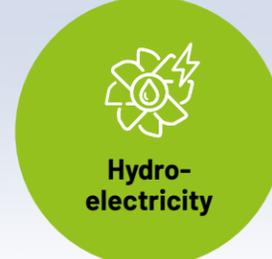
**over 114 000**  
tonnes of secured waste

**€693 million**  
invested in our assets

### 3 energy sources



Solar



Hydro-electricity



Biogas

### 5 business lines



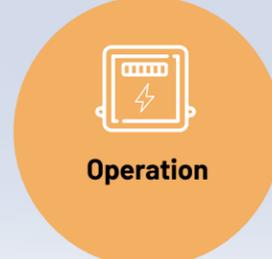
Development



Funding



Construction



Operation



Energy sales





# Making people and the planet → central to tomorrow's energy

We have always been convinced that efforts to combat climate change must go hand-in-hand with efforts to preserve biodiversity and resources, reduce inequality and build a fairer, more respectful society.

### OUR AIMS



Multiply our production capacity by a factor of **5**



Become France's **leading** independent producer of biomethane by 2030



Have more than **50%** of our capacity located outside France

# Editorial *(april 2022)*



Several major events relating to energy and the climate have taken place in recent months: COP26 in Glasgow, a series of natural catastrophes, strong growth in renewables production, a surge in electricity and gas prices, and publication of the sixth IPCC report.

The current situation is understandably characterised by some as VUCA (volatile, uncertain, complex and ambiguous). Climate change, the global Covid-19 crisis, current energy shocks and geopolitical imbalances, together with digital transition, are creating numerous uncertainties, but also opportunities. To adjust to this environment in an appropriate way, we must respond with agility and innovate while remaining true to our vision.



Pierre de Froidefond

## → PARADOX

The investment choices required to make renewables a larger part of our energy mix require a long-term view, with assets commonly having a lifetime of 30-50 years.

However, when attempting to look more than a decade ahead, the large number of variables and possible scenarios make forecasting more complex. Those variables and scenarios relate to societal expectations, the development of production and storage technologies, the decarbonisation of industry, changes in energy consumption, the transition from fossil fuel-powered mobility to electric and hydrogen mobility, the transformation of electricity and gas networks, but also the doubling of EU "green gas" production targets and the related geopolitical supply issues.

**More than ever, then, it is vital for CVE to adopt a clear strategic vision and ensure that it is shared by its teams and external stakeholders. This is the aim of the new strategic planning process that we initiated in late 2021, based on broad energy-related and social scenarios for 2030 and 2050.**

## → INNOVATION

It now appears necessary to accelerate the development of renewables to maintain and speed up the decarbonisation of our energy mix. Organisations – both French and international – have published forward-looking scenarios to shed light on major social developments and the resulting potential energy-related changes.

The aim is to define the trajectory required to become carbon-neutral by 2050. All scenarios emphasise the need for the rapid, large-scale adoption of renewables. These efforts show that we must take a long-term view in order to anticipate our energy needs, begin a debate about our future energy mix and devise suitable innovations.

**At CVE, innovation helps our clients gain a competitive edge. It must enable us to build the energy models of tomorrow, whether through new technologies, business models or optimisation of our assets, while also allowing us to limit our environmental and socio-economic impacts. In 2021, we set up a marketing department that works in close collaboration with our multi-country innovation teams to develop the solutions that best suit our clients' needs and new uses.**



Arnaud Réal del Sarte

## → SOVEREIGNTY

The aim of becoming carbon-neutral by 2050, together with the current geopolitical context, means that matters relating to energy sovereignty in France and Europe are even more pressing. Renewable energy sources are naturally decentralised and abundantly available within each country. Whether or not they are linked to storage facilities, they allow energy to be produced close to where it is needed, and can make a major contribution to energy independence.

**As a result, speeding up the development of renewables is a crucial part in meeting this need for sovereignty, at both the regional and national levels. Producing energy locally, favouring short supply chains by setting up new ones or relocating existing ones, and integrating innovative technologies such as storage are some of the day-to-day issues addressed by CVE's teams. As independent producers of renewable energy, we regard energy as a common good and seek to foster local energy projects.**

## → LOCAL FOCUS

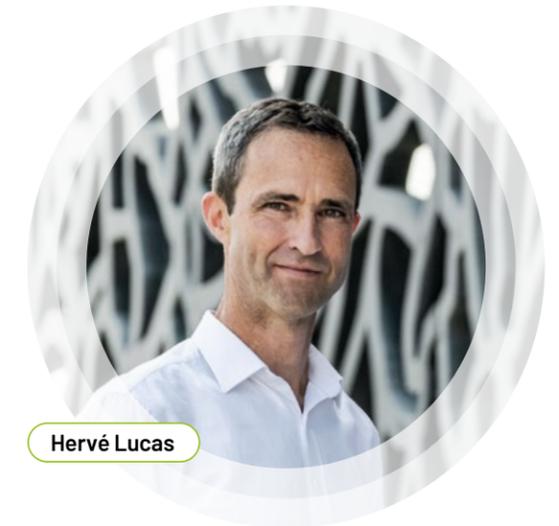
Energy transition also means the shift to a new economic and social model, which will allow France to combat climate change by focusing on sustainability. The French regions play a key role in this effort, helping to limit energy consumption and promote renewables. Our industry helps create local jobs, increase the attractiveness of the French regions, boost economic and industrial development, reduce energy poverty and increase the use of local natural resources.

**CVE is developing projects that meet regional energy transition needs, that are socially responsible, that support local jobs and that boost economic growth. As part of those efforts, we encourage local authorities to play a governance and ownership role, with the aim of building projects together.**

## → RESPONSIBILITY

More than ever, understanding and explaining the meaning of what we do is essential. From day one, CVE has asserted its role as a company that has a positive impact, acting for the common good.

**It was therefore a natural development for us, in 2021, to define environmental, social and governance (ESG) indicators for our operational projects and for the group, allowing us to measure and improve our performance. With our teams, we also worked together to devise a clearer expression of our purpose: "Making people and the planet central to tomorrow's energy". To align fully with this ambition, we are currently in the process of gaining B Corp certification, and we aim to become an "entreprise à mission" in 2022.**



Hervé Lucas

1 RTE (manager of the French power grid): "Futur énergétique 2050" - negaWatt (French association of energy specialists): "Scénario negaWatt 2022" - ADEME (French environment and energy management agency): "Transition(s)2050".

2 International Energy Agency (IEA): "World Energy Outlook 2021".



# Our strategic ambition

CVE is an independent French renewable energy producer with a decentralised regional energy model and a focus on short supply chains. Our purpose is to make people and the planet central to tomorrow's energy.

We are a multi-energy operator, producing green electricity and gas with our solar, hydroelectric and biogas activities. We are a multi-country company, with operations in France, Chile, the US and South Africa.

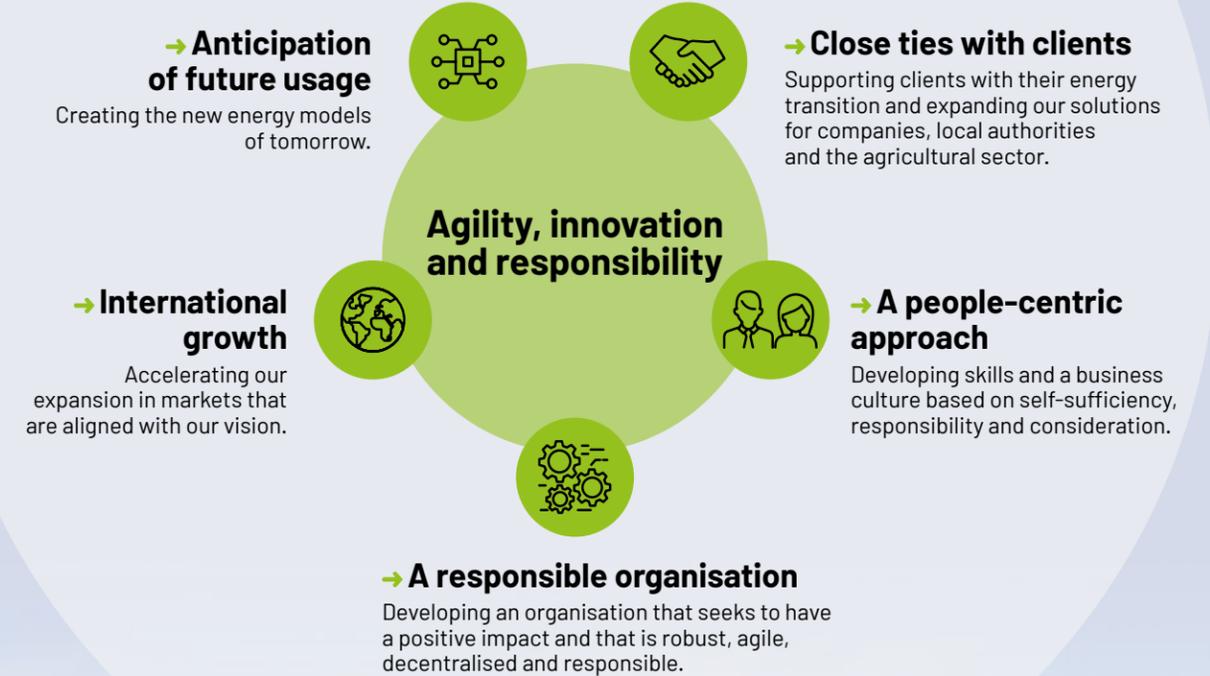
## OUR MISSION

In each project, we aim to meet the energy needs of companies, local authorities and the agricultural sector while helping to limit the impact of human activities on the climate.

## OUR AMBITIONS

- 1 By 2026, become a leading player in local green energy, **increasing our production capacity by a factor of five** to 2.3 GW, with more than 50% located outside France.
- 2 By 2030, become France's **number one** independent producer of renewable gas through our activities in the regional biogas market.
- 3 **Accelerate energy transition** while helping to develop the economies, societies and communities of the regions in which we operate.
- 4 **Develop a people-centric business model** that promotes engagement, excellence and fulfilment at the individual and collective levels.

## KEY ASPECTS OF OUR STRATEGY



# Our business model

## OUR STRENGTHS

With the commitment of our people, our robust financial position and our regional roots...

### Talent

- A multi-discipline team consisting of **242 staff members**
- More than **35 different professions**

### Finance

- **€7.5 million** of crowdfunding
- **ICG**, a minority shareholder providing long-term support
- **SWEN Capital Partners**, a minority shareholder providing long-term assistance in developing our CVE Biogaz subsidiary

### Regional and socially responsible approach

- **21** partnerships with local authorities backed up by shared project governance

### Innovation

- **5-year** R&D agreement with the CEA (French nuclear and alternative energy commission)
- Alliances with universities, research centres, start-ups and leading service providers

## OUR ACTIVITIES

... we develop, finance, build and operate decentralised renewables production units that we own ourselves or in partnership, in order to...

### Talented, committed and fulfilled staff members

- A set of people-centric founding values
- A culture of responsibility
- An environment of trust
- All initiatives driven by conviction
- A shared code of ethics

### High collective standards that foster individual excellence

- Recruitment focusing on the best talent
- Efforts to develop the skills of tomorrow
- Regular training appropriate to each staff member's career path
- Projects based on collective creativity, aimed at developing innovative ideas

### Ambitious plans in three markets of the future

- Photovoltaics
- Biogas and organic fertilisers and amendments
- Hydroelectricity

### Five areas of activity covering the whole value chain

- Development
- Funding
- Construction
- Operations and maintenance
- Energy sales

### An ecosystem based on trust

- A decentralised, agile and efficient organisation
- Environmental concerns at the heart of our processes (ISO 14001)
- Deep regional roots
- A global network of partners
- A learning organisation with a robust and unified quality model (ISO 9001)

... produce and market local energy for suppliers, businesses and local authorities.

### Local and innovative solutions suited to our customers' needs

#### Photovoltaics: ground, roofs, shade structures

- Regulated contracts
- Own consumption and PPAs
- **RESPEER** green energy by **cve**
- Community Solar in the USA



#### Biogas France

- Processing and upgrading of biowaste
- Development of biogas units
- Production and sale of biomethane
- Agronomic solutions



#### Hydro France

- Development and operation of hydroelectric plants

#### CVE Green Finance

- Project and corporate financing
- Crowdfunding

## OUR CONTRIBUTION TO VALUE CREATION

We therefore produce environmentally friendly energy...

### Production capacity **528 MW**

- **0.9 TWh** (enough to cover the consumption of 396,000 inhabitants)
- **252** solar facilities solaires
- **6** biogas plants
- **2** hydro plants

### Projects under development **1,588 MW**

- **1,513 MW** of solar projects
- **37 MW** of biogas projects
- **38 MW** of hydroelectric projects

### Clients (excluding regulated markets)

- **1,200 clients**: businesses, farmers, local authorities and energy providers

### Finance

- Revenues: **€50 million** (up 31 % vs 2020)
- EBITDA : **€34 million** (up 54 % vs 2020)

... in a way that serves the common good and the interests of all.

### Talent

- **39%** of total staff recruited in 2021
- **45 hours** of training for new employees

### Environment

- **ISO 14001** certification
- **95 000** tonnes of CO<sub>2</sub> equivalent: the amount of GHG emissions avoided through our facilities\*

### Local development

- **40** direct and indirect jobs created by our biogas facilities
- **20 300** tonnes of waste upgraded\*

### Skills-based philanthropy

- **8** non-profit organisations supported, including Apprentis d'Auteuil, Force Femmes and AAJT

\* figures currently being audited by PricewaterhouseCoopers



# A company driven by a → Human Project

Our Human Project is at the core of the Group's strategy. By prioritising the human element, we promote CVE's corporate culture and propagate its values, while embracing the challenges of growth both in France and internationally.

## Fostering long-term staff commitment in pursuit of our project

Commitment is a key component of our identity. Whether individual or collective, professional or societal, that commitment forms part of our broader, permanent quest to act in favour of the common good. At CVE, the individual development of each staff member serves a higher aim, which we can only achieve by working together.

In 2021, CVE launched its commitment platform to raise awareness among our people and provide them with training about our environmental, social and governance(ESG) approach, and to make it easier for staff members in France to take part in skills-based philanthropy, helping non-profit organisations that seek to promote equal opportunities and access to employment.

## Promoting individual and collective fulfilment

CVE's main asset consists of the women and men who embody our shared vision and drive our collective project forward every day. We regularly measure staff satisfaction, and take action based on the results. In particular, that action has focused on addressing the workforce-related implications of the Covid-19 crisis, the new ways of working that have resulted from the pandemic, and the increasing competitive pressure on renewables.

## Cultivating excellence within our teams

Excellence is a central aim in our work. This is shown by the quality of the services that CVE provides to its clients and the high standards we demand in developing our projects and operating our assets.

**"I joined CVE in 2014 as an intern, assisting the investor relations team.**

*... In 2015, I was given a permanent contract. Since then, I've held three finance-related roles, which have enabled me to develop my skills. I'm very happy that the group has continued to show its trust in me by giving me the chance to take charge of crowdfunding."*

**Thibault Charpentier**  
Head of crowdfunding



**"I was very enthusiastic about joining CVE and I felt valued in my role.**

*... As soon as I arrived, there was a warm welcome, I received a lot of information and I learnt quickly through the onboarding process. CVE's team spirit and collaborative mindset are big advantages: whenever I have a question, there's always someone who can answer it. As we take projects forward, I feel that my opinions count."*

**Marie-Sophie Armand**

PV operations and maintenance manager



Almost **100** new hires, including 15 interns

**20** people promoted or transferred

With this mindset, we develop the skills of our staff members and encourage, within our teams, initiatives of all kinds that could lead to new solutions suited to current and future energy issues.

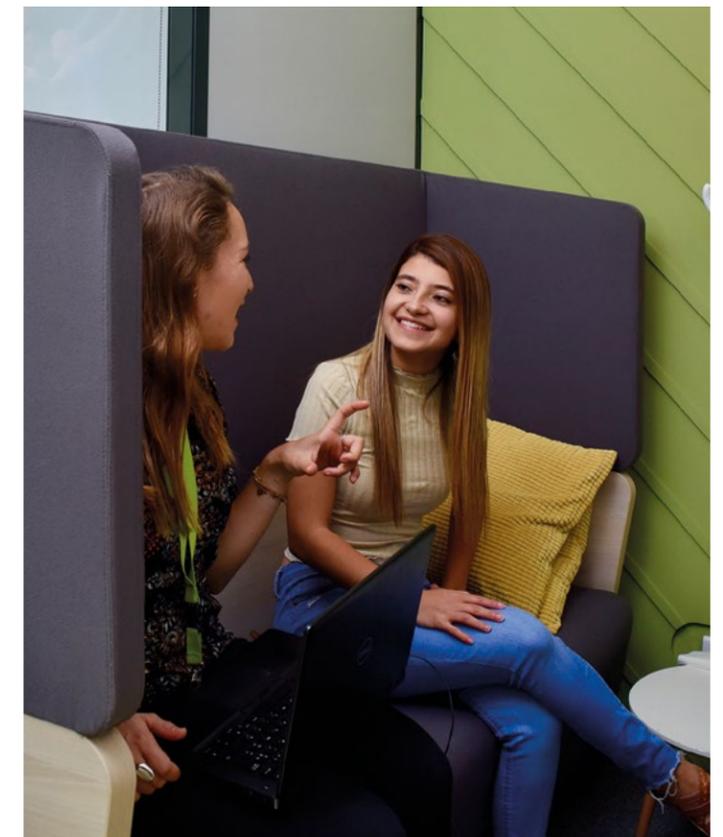
## Supporting CVE's growth and Human Project

CVE is maintaining its recruitment drive. As part of that effort, CVE strives to maintain a demanding yet sympathetic recruitment process that assesses candidates' alignment with our corporate project and values, as well as their interpersonal skills and technical competence.

To enable each staff member to grow with the company, a training programme was established in 2021, through which more than 2,600 hours of training were provided. An intra-group transfer process exists within CVE, allowing staff members to change roles or locations.

Given the rapid expansion in our workforce and to address the risk of silo-based working, we have adopted a cross-functional, inclusive initiative to consider changes to the way we work: a team of volunteers has been considering new organisational approaches that would reflect our identity, increase our impact and meet the challenges arising from our growth. These new organisational approaches will be implemented in 2022.

CVE allows its staff members to share the benefits of its growth and give them a stake in its value creation in three ways: an incentive agreement, an employee share ownership plan and bonus awards of founder share warrants.



# Our positive-impact approach

One of CVE's key ambitions is to have a positive impact. We are committed to measuring and improving our social and environmental impact.

Guided by our purpose of "making people and the planet central to tomorrow's energy", CVE is continuing to implement its impact policy.

## Identifying the most important issues for CVE by working with our stakeholders

In 2021, we held 13 meetings with external stakeholders and workshops involving 18 staff members, allowing us to formalise the group's key issues. The five key aspects of our positive-impact approach address those issues.

## Defining environmental, social and governance indicators to guide the ESG impact of our actions

Just as we measure our economic performance, we have adopted indicators to monitor the social and environmental value we create, both at the group level and in individual projects. These indicators allow us to direct our efforts more effectively.

We have defined ten non-financial key performance indicators for the group, which are measured and verified by an independent third party.

**€624,000**

of added value created by our 20 largest PV projects (4-17 MW) in France (figures currently being audited by PricewaterhouseCoopers)

**5 days**

of skills-based philanthropy per employee per year



→ Rockett Solar facility (US)

## Practical, day-to-day action

Procurement is a powerful way of increasing sustainability in our sector. As a result, CVE had adopted a "responsible purchasing charter", which acts as a shared reference framework for both our group and all our partners.

We have also developed a tool for measuring the carbon footprint of our solar projects, known as the CIR (carbon impact rate). This enables us to identify the main sources of emissions on a project-by-project basis, and to work with our partners on ways of reducing them.

As part of the onboarding process for new staff members in France, and for all CVE staff members, we have developed a training session on the subject of energy transition. This collaborative "climate overview" workshop raises awareness about the phenomena that drive climate change.

Finally, we have signed a framework agreement with non-profit organisation Apprentis d'Auteuil, setting out our mutual commitment to workforce integration by helping young people aged between 15-30 who have failed to complete their education, providing them with training through our business projects and awareness-raising initiatives.

In 2022, we are continuing to define non-financial performance targets and develop action plans in conjunction with our internal and external stakeholders. We are confident that our staff members and external stakeholders, by taking part in a project that is meaningful to them, can make CVE a company that achieves both economic and social growth while respecting the environment.



→ Chizonnet hydroelectric plant (Loire)



**LA FRESQUE DU CLIMAT**

**62%**  
of our staff members took part in our "climate overview" initiative

# Our performance

In 2021, through its financial and non-financial performance, CVE showed the solidity of its business model and its ability to invest in major new projects.

## FINANCIAL PERFORMANCE

### Revenue

CAGR 19-21: 15%



**€79 million**

Amount raised from retail distribution networks in 2021

### EBITDA

CAGR 19-21: 21%

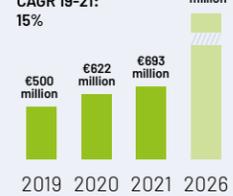


**€161 million**

Amount raised from institutional investors in 2021

### Amounts invested in our assets

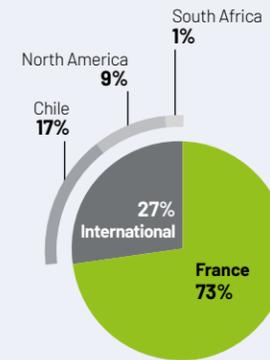
CAGR 19-21: 15%



\* including tax equity partner (TEP)

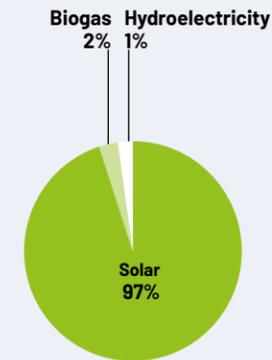
## OPERATIONAL PERFORMANCE

### Breakdown of revenue by geographical area in 2021



**1,588 MW**  
Overall portfolio

### Breakdown of revenue by energy source in 2021

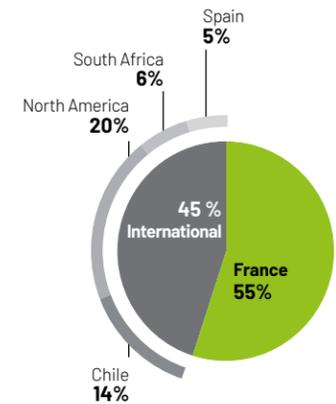


**660 MW**  
Secured portfolio

**528 MW**  
Fleet in operation and under construction

## 2026 forecasts

### Breakdown of revenue by geographical area



**2,293 MW**  
Fleet in operation and under construction

## NON-FINANCIAL PERFORMANCE

**7%**

of employees taking part in employee share ownership plans

**24 hours**

of training per staff member

**91%**

Employee satisfaction rate

**95,000\*\*** t CO<sub>2</sub> eq

the amount of GHG emissions avoided through our facilities

**11,900\*\*** t CO<sub>2</sub> eq

our GHG emissions (scopes 1, 2 and 3)

\*\* figures currently being audited by PricewaterhouseCoopers





# Providing → customized solutions to support each customer's energy transition strategy

Our customers play a central role in the energy transition. By adjusting their energy consumption, they are all helping to combat climate change. Our ambition is to help them in this transition, providing appropriate responses to all their requirements through a customized approach.



# Accelerating energy transition → for our clients

Energy is a central concern for our customers who want to limit their energy bills and improve their environmental impact. With our technical solutions, expertise and international footprint, we have developed a broad array of services.

## Understanding our customers' needs and expectations

Our strategy and solutions aim to speed up energy transition in each market segment in which we operate: businesses, farmers, local authorities and energy providers. Because each customer is different, we always start by assessing each customer's needs and seek to offer the best solutions.

In addition to meeting each customer's specific requirements, our solutions must also address the following issues:

- Renewable energy at an affordable price: significant reductions in the cost of renewable energy mean that cost-competitive green solutions are now within everyone's reach.
- A stable long-term energy supply, allowing customers to control their bills.
- Services to help customers adopt greener energy usage over time. These services include green electricity and gas and in the future will include low-carbon mobility.
- Customer service to make life easier for customers: advice at the planning stage, high-quality and on-time project delivery, and monitoring of production and billing.

## Our energy transition solutions and services

Expanding beyond our original business as an independent producer of renewable energies, we have developed a portfolio of solutions and services that focus on direct sales and local production.

This portfolio includes:

- renewable power generation through a range of technical solutions (photovoltaic facilities on the ground, on roofs and on shade structures, as well as hydroelectric plants). Now that we have diversified, we have a broader production profile;
- contracts that meet the expectations of our customers: self-consumption contracts, in which customers consume the power generated on their sites, power purchase agreements (PPAs) for businesses, local authorities and energy providers, energy guarantees for green supply contracts and Community Solar contracts in the US;
- as land access becomes more difficult, we have developed expertise in brownfield remediation, roof renovations and the construction of shade structures to produce solar power. On farmland, we aim to achieve synergies between agricultural production and energy production through agrivoltaics and biogas facilities;

- our installed base of biogas units. We are using our innovation capabilities to work on future methods of producing biogas using bioCO<sub>2</sub> and on coupling them with filling stations that use our liquid biomethane;
- upstream of our biogas units, we have developed solutions for collecting and recovering organic waste. Downstream, we produce organic fertilizers for farmers along with a range of services including spreading.



→ Team meeting in CVE's Marseille offices



→ Inauguration of the Saint-Antoine-de-Breuilh biogas production unit in the Dordogne region of France

# Helping to create a more → renewable energy mix

Selling and buying energy is a business that involves multiple skills. CVE has chosen to form partnerships with major European utilities, which work with it to structure its energy purchases and sales.

The recent surge in commodity prices will give a further boost to energy transition. In the current circumstances, our model of renewable energy production located close to where that energy is needed makes complete sense. In particular, we have seen geopolitical tension lead to a sharp increase in demand for renewable gas from industrial consumers. As a result, it is vital for our utility partners to diversify their sources of supply. For CVE, this is also generating new opportunities.

Similarly, rapidly rising electricity prices will enable us to secure long-term contracts to sell electricity outside of the subsidised framework, through PPAs. These agreements allow consumers to fix prices for a long period at a competitive rate, and therefore to avoid the risk of market volatility.

In 2018, CVE created an Energy Department in charge of managing the complex issues involved in buying and selling energy.

We have formed partnerships with major European utilities like Axpo for electricity sales, and with Endesa for renewable gas sales.

These partners are helping us to structure our energy purchases and sales, and in particular they take on inherent market risks on our behalf.

Our long-standing relationships with them allow us to work together on future plans, such as providing end clients with direct energy purchase agreements.



→ Saint-Antoine-de-Breuilh biogas production unit in the Dordogne region of France



Charles Tartier  
New Markets Manager,  
ENDESA

**"We share strong values with CVE, such as local engagement and a proactive approach in favour of energy transition at the local level..."**

... We have had a strong partnership with CVE for several years, particularly in biogas, and we have formed several biomethane purchase agreements. In 2022, our first two contracts will come into force with two CVE regional biogas production units starting production in Auvergne-Rhône-Alpes. It's strategically important for Endesa to have a long-term source of biomethane produced by professional, local biowaste upgrading facilities. This enables us to offer bioVNG and other green gas products to our clients, and therefore make a practical contribution to cutting CO<sub>2</sub> emissions."



CVE works with **4**

**major utilities** in selling electricity, and has signed contracts with them covering more than **200 GWh** of annual power generation



For biomethane, we work with **3**

**key partners,** and we have so far signed contracts amounting to **4 400 Nm<sup>3</sup>** per year



Joanna Juszcak  
Managing Director,  
Axpo France

**"Our collaboration with CVE goes back to 2016. First, we worked on simple aggregation projects, but always with a view to future developments in the market for PPAs outside of the subsidised framework..."**

... Axpo Solutions is one of the few operators in France that can take on risk over a long period, in excess of 10 years. This allows us to put together products and services that provide visibility, both to developers like CVE, but also to consumers seeking transparent ways of securing their energy supplies. Our long-standing relationship of trust with CVE means that we can work with confidence on the partnerships we need to build together in a rapidly changing energy market."

# Businesses factoring → renewables into their strategy

Given rising energy prices and consumer expectations regarding green energy, businesses are increasingly seeking to buy from renewable sources.

## Energy and the environment: central concerns for businesses

The combination of renewables' increasing competitiveness, the adoption of CSR by businesses and volatility in the energy market is speeding up growth in direct sales of renewables to private-sector buyers. According to French consultancy BNEF, renewable power purchase agreements have grown by 24% to 31.1 GW.

The pandemic has also increased expectations among employees and consumers, who want companies to take an active approach to sustainability and are paying increasing attention to their CSR commitments.

CVE believes that it is well placed to meet the needs of businesses due to its market position as an independent producer of renewable energies, along with its integrated model and its international presence. The group is strengthening its activities involving direct sales of energy and environmental services (such as organic waste collection) to businesses, placing clients at the heart of its corporate culture.

## Helping businesses source greener energy and upgrade their organic waste

Our services for industrial companies, as well as for small and medium-sized businesses, involve several models depending on the country and client expectations.

- In 2018, we launched RespeeR in France and South Africa to increase sales of green electricity either on clients' own sites (self-consumption) or through long-term supply contracts or PPAs. In 2021, we signed the first corporate PPA in France with SNCF Energie relating to the Mées facility, amounting to 5.5 MW.
- In the US, our Halo Community Solar service allows clients to save 10% on their electricity bills every month. We now have 850 clients of all sizes.
- We offer environmental services involving the collection of organic waste, which is directly upgraded in our biogas production units. In early 2022, we announced the acquisition of Ecovalim to increase our capacity for collecting and upgrading organic waste.



## SOUTH AFRICA

**Spear REIT Ltd** is one of South Africa's leading real-estate investment funds. It has adopted a plan of action to reduce its energy consumption as part of its "People, Planet, Profit" approach. The company has chosen to reduce the carbon footprint of its energy consumption by investing in solar roofs. Currently, 30% of Spear's property portfolio has solar panels.

In CVE South Africa, Spear has found an IPP\* partner capable of funding and operating photovoltaic facilities according to international standards.

For example, the two sites in Epping, Western Cape with total capacity of 2 MW came into service during the Covid shutdown and are meeting expectations in terms of power generation. Spear's ambition is to continue developing solar facilities and contributing to Cape Town's strategy to reduce both load-shedding and the impact of climate change.

\*Independent Power Producer.



Vincent Rocher

Head of organisational development and transformation, Aoste group

## A sustainable solution for processing biowaste

*Our partnership and our involvement in the CVE-Aoste regional biogas production project, working closely with local entities, fits perfectly with the Aoste group's Agir sustainability programme, which combines reducing our carbon footprint and upgrading waste at the local level with producing renewable gas and organic amendments for neighbouring farmers. We will take organic waste arising from the ham production process and have it processed by CVE's future biogas unit, located very close to our plant in Aoste in the Isère region of France.*

## FRANCE

### French attitudes to green energy

68% of French people believe that is the duty of companies whose goods and services they buy to contribute to energy transition by selecting local, green energy solutions.

Source: "Les Français et les énergies vertes en circuit court" ("The French and local green energy") - OpinionWay report for CVE, 2021



## UNITED STATES

### Northfield Mount Hermon School

For this school in Massachusetts, which is strongly committed to sustainability, it was important to use a clean, local source of energy. This is why it chose to CVE's Halo Community Solar solution.

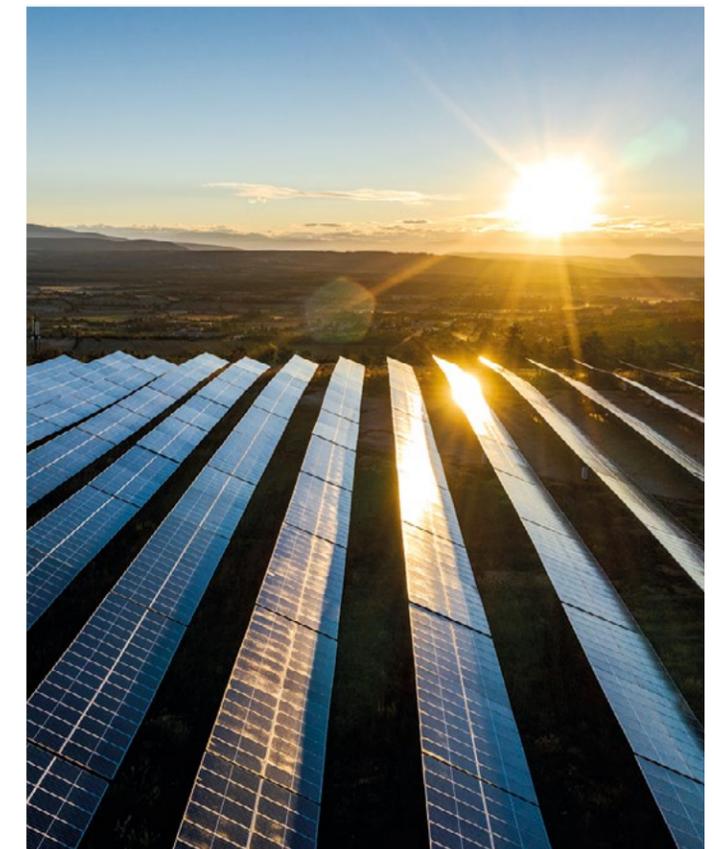
The subscription service is easy-to-use, and the billing process was clearly explained by CVE's customer service team. The results are fully in line with the school's expectations.

## FRANCE

### France's first corporate PPA at the Mées facility (5.5 MW)

The start of power generation at the Mées solar facility - which is selling its electricity directly to SNCF Energie, a subsidiary of SNCF Voyageurs, over a 20-year period - is a major milestone for CVE.

It vindicates our model of selling green energy directly to clients, and strengthens our position in the PPA market, anticipating the end of subsidised projects. In our view, the CPPA market - currently at an embryonic stage in France - has major development potential. It is an essential tool in driving energy transition forward.



# Development → of locally-governed renewable energy projects

Local authorities are leading players in developing renewable energy in their regions, sometimes taking part in the financing and governance of projects. CVE helps them, developing projects jointly and ensuring that they are firmly rooted within their regions.

France's energy transition for green growth act of 2015 has been a major turning point, since it has made it easier for local authorities and citizens to get involved in renewable energy production projects. France's energy and climate act of 2019 and climate and resilience act of August 2021, arising from France's Citizens' Convention on Climate, have led to greater momentum in that direction. They have increased the responsibilities and targets of France's communes, and have fostered a multi-participant approach, particularly through the recognition of "renewables communities" in French law, in line with the European directive of December 2018 on the promotion of the use of energy from renewable sources. As a result, local authorities are playing a leading role in combating climate change, controlling energy consumption and promoting renewable energies. They apply their energy transition skills in various ways and using various tools, either specifically relating to issues regarding the climate, air

quality and energy, or in connection with other sector themes. They are the right level of authority for planning and driving game-changing projects that support the move towards green energy that is produced and consumed locally. Heating public buildings via an urban heating network, favouring electricity, buying locally... project presentations highlight their positive impacts in terms of costs, exploitation of local resources, economic development and job creation.

Signature of  
**21**  
partnership  
agreements



**"Energie Partagée's aim is that, by 2030, 25% of renewables projects will comply with our charter..."**

*... in which citizens and local authorities are participants in the transition process, working with renewable energy producers that share our vision. Through our partnerships, CVE forms part of this effort, providing technical and financial engineering expertise. Its ability to innovate and create the regional models of tomorrow is crucial in adapting to the needs of citizen-driven projects."*

**Erwan Boumard**  
Managing Director, Energie Partagée Investissement

**"The river threshold in Saint-Martin d'Ardèche requires major work to make it safe and maintain its condition..."**

*... but there has been an impasse for more than ten years. Safeguarding the threshold and securing the river for the future are major concerns for many local people and entities. The threshold is part of the town's landscape and heritage. CVE's hydroelectric project offers a comprehensive solution that will both generate power and restore the threshold, meeting our objectives in terms of safety, ecological continuity, financial sustainability and user satisfaction."*

**Pascal Bonnetain**

Chairman of the *Établissement public territorial du bassin versant de l'Ardèche* (regional public authority in charge of the Ardèche river basin)



Despite the improved statutory framework, regulatory complexity and a lack of resources and skills at the local level mean that the proportion of renewables in the regions' energy mix remains limited. Local authorities are experiencing difficulties implementing energy transition. However, there are solutions for developing transition projects by bringing together public-sector entities, local businesses and citizens. In 2017, CVE set up a dedicated team in charge of relations with local authorities and regions, and launched bespoke services.

The aim is to work with regions to develop projects that meet local energy transition needs, that are socially and environmentally responsible and that maximise the local economic benefit. We are now moving towards an approach that seeks to integrate locally governed projects more broadly at the regional level in innovative ways, for example through increased use of initiatives to integrate local people into the workforce.



→ Saint-Antoine-de-Breuilh biogas production unit in the Dordogne region of France

# The agricultural sector and → energy transition

Producing renewable energy in the agricultural sector, whether biogas or solar power, is above all a regional development matter that must take into account the economic, environmental and social context. Through our services, we aim to develop projects that also serve the interests of farmers.

## Farmers facing numerous challenges

- The need to produce food in compliance with food sovereignty and quality requirements.
- The retirement of many farmers and difficulties replacing them with people from younger generations, affecting the ability to invest in new projects.
- Agroecological transition, intended to produce more food in a better way, while respecting the environment.
- Efforts to counter criticism of farmers and to improve their social wellbeing.

- Adjustments to climate change: finding solutions to address resource and soil depletion, manage GHG emissions, but also increase soil-based carbon sequestration.
- Efforts to combat soil sealing and land take in farmland.
- Economic challenges given the wide variation in farmers' financial positions, with large farms capable of diversifying on the one hand, and small ones with few resources on the other.
- Finally, the energy crisis, which is driving up farmers' costs, particularly by making inputs more expensive (according to INSEE, input prices increased by more than 10% in 2021).

## A win-win approach

"CVE has clearly understood the economic, environmental and social issues facing the agricultural sector. I like the win-win approach that CVE takes with farmers and the agricultural sector in general, helping them with agroecological transition."

**Patrick Billard,** farmer in Moret-Loing-et-Orvanne, member of the Equimeth fertiliser application plan



→ Equimeth biogas production unit (Seine-et-Marne)

## Farmers central to our effort to speed up energy transition at the regional level

As part of our business developing and operating biogas production units and solar facilities, CVE maintains close relations with participants in the agricultural sector. CVE's vision involves projects that are deeply rooted in their regions and that respect agricultural interests. Our expertise allows us to offer several services to farmers:

- collection of organic waste that is then upgraded in our biogas production units in a way that does not compete with food production, livestock farming or agricultural biogas projects;

- our RegeneR agronomic solutions: production of organic fertilisers (digestate) from biogas production units, fertiliser application and agronomic monitoring (soil analysis, fertilisation advice);
- development and operation of solar facilities that adapt to the needs of farmers: installations that facilitate farming activities, structures suited to varying types of livestock farming, monitoring of the impact on crops and animal welfare.



## Our services for accelerating energy transition in the agricultural sector

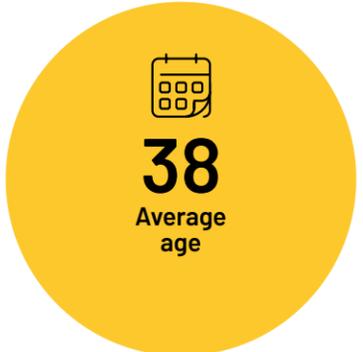
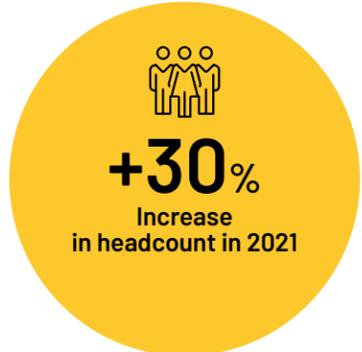


COM ENGAGEMENT  
SMESOLIDARITE  
ENCECONFIAN  
LANCEHUMOR  
EPANCSEM



## A team of passionate, → committed experts

CVE's in-house staff has the full range of skills required for developing, funding, building and operating renewable energy production units and for selling green energy. More than 35 different professions involved in the production and sale of green electricity and biogas are represented within the group, including the most complex.



# In-house expertise → covering the whole value chain

To achieve our vision based on the local production and sale of green energy, we have chosen to be a multi-energy producer with a complementary mix of green electricity (solar, hydroelectricity) and green gas (biomethane). Our teams are organised into business units by type of energy and market, backed up by multi-country cross-functional skills that are used to support our projects and clients.

In solar, with France's adoption of "supplemental remuneration agreements" and CPPAs, along with CVE's development in the United States (particularly in the Community Solar market) and in the South African market, we are moving from being a producer to being an energy provider. As a result, CVE set up an Energy Department in 2018. Its team features people specialising in energy markets, asset management and buying and selling energy.

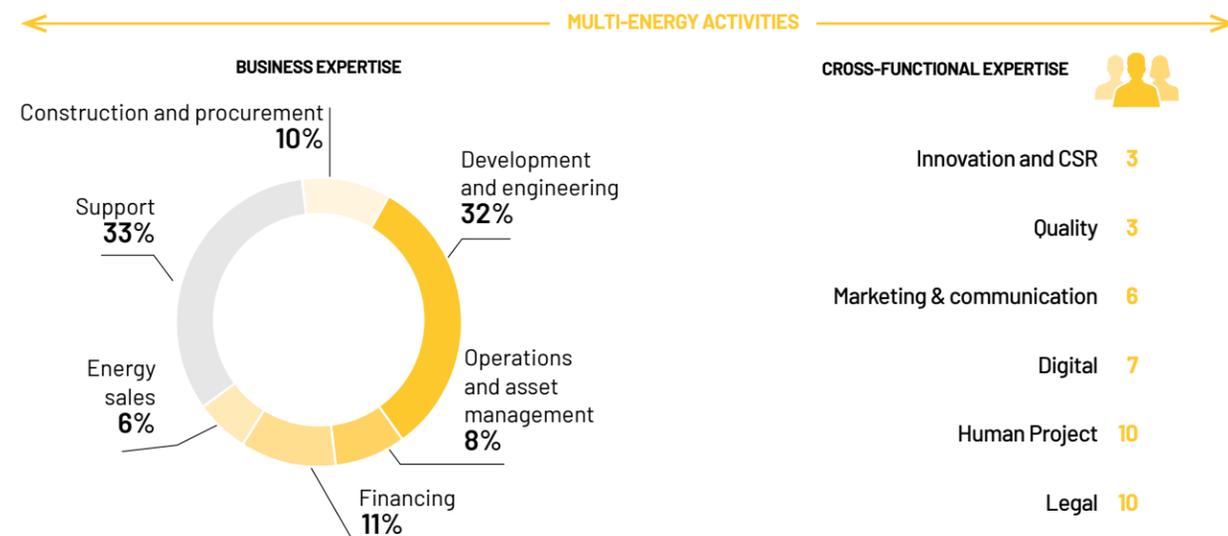
Working closely with the innovation and marketing teams and the energy business units, the Energy Department develops new energy models involving PPAs, guarantees of origin, capacity services, peak load reduction etc.

In biogas, we have also chosen to become horizontally integrated across the three main parts of the biogas value chain: in the central part, we develop, finance, build and operate biogas production units as part of an approach based on

integrated regional projects; upstream, we offer clients services to collect and upgrade their organic waste; and downstream, we offer farmers digestate-based organic fertilisation solutions.

Finally, to bolster our multi-energy development capabilities, in 2021 we set up a new team in charge of multi-energy commercial activities in France. That team supports the group's business development in three main ways: providing input regarding acquisitions led by our M&A unit; marketing our B2B solutions to large clients and via strategic partnerships; and developing and deploying our regional strategy alongside local authorities and responding to calls for expressions of interest (CEIs). The team's remit is to co-ordinate complex, innovative multi-energy projects, working closely with our other business units.

## Our skills



**Arthur Allio**  
Head of asset  
management

"The challenge: to provide information that is clear, reliable and easily accessible for our stakeholders."

CVE's rapid growth and the increasing number of companies involved in our projects have made it necessary to create an asset management business. After I came back from New York, where I was in charge of operations at our CVE North America subsidiary, I was appointed head of this business in late 2021, with the brief of building it up in order to monitor the technical and financial performance of our assets. The role involves constant interaction with the group's various teams, including management control, operations, finance and legal. The challenge is to provide information that is clear, reliable, consistent and easily accessible for our internal and external stakeholders.

"Developing trusted partnerships to take advantage of new sources of growth and differentiation."

The renewable energy market in France is growing rapidly, with increased competition and an approach increasingly focused on customer service. We therefore took the view that we needed to strengthen our partnership strategy.

This strategy aims to give us greater access to clients and a more comprehensive offering. I have been given the role of setting up and leading this business. It involves a lot of in-house interaction with our innovation and marketing teams regarding market trends, and with our energy business units. A successful partnership requires interests and objectives to be clearly aligned between our partner and ourselves, through complementary market positions and shared values.

The partnerships we form will aim to secure new projects and offer distinctive services to our clients. They will also help us to create environmental and social value: a good example of this is our workforce integration partnership with Apprentis d'Auteuil.



**Sandrine Duchaine**  
Head of strategic  
partnerships

# Skills that capitalise → on our multi-country development

Having chosen to expand into new countries that are compatible with its vision of locally produced green energy, CVE is faced with various direct-sales models.

Our operations in Chile, the United States, South Africa and Europe have enabled us to broaden our expertise in various energy models. In France, we have moved from the feed-in tariff, which provided a high level of security, to “supplemental remuneration agreements”. We have also developed in-house expertise in forming CPPAs (corporate power purchase agreements) in France with our RespeeR green energy offering. We have recently extended this offering to the South African market, where there is high demand for self-consumption solutions.



→ Westport solar facility (US)



Marion Henriët

Head of innovation

## **Making photovoltaics an integral part of regional development and usage is essential in order to boost their growth and integrate them into the grid**

At CVE, we are working on combined photovoltaic/battery storage solutions to make solar PV a more integral part of the grid, through three projects that also symbolise our multi-country position:

- an industrial project in the US, with the Acushnet facility in Massachusetts (photovoltaic/battery);
- a showcase solar micro-grid (photovoltaic power generation + battery + electric mobility) in Senegal, in the Diamniadio industrial zone close to Dakar;
- and an R&D project with the French nuclear and alternative energy commission (CEA) on the Cadarache site in the Bouches-du-Rhône region, to show the benefits that photovoltaic + storage systems can offer to the grid in France.



→ San Francisco solar facility (Chile)



Juan Rehnfeldt

Head of solar development in Chile

## **CVE Chile preparing for direct energy sales**

We are already one of the market leaders in solar PMGD<sup>1</sup> in Chile, which has a streamlined authorisation system. PMGD projects are authorised to receive remuneration for their production at stable and regulated prices. CVE Chile is not yet active in the market of direct energy sales to industrial operators, as stabilised prices in the market are higher than current solar PPA prices.

However, we are working to develop larger plants where the energy produced can be resold under CPPAs to large consumers close to our installations, under the RespeeR brand.

The experience of CVE's development and financing teams in South Africa and France will be very useful, even if we are operating in a different regulatory context.

1. A special regime in Chile involving small, distributed generation facilities for the decentralised production of renewable energy.

In Chile, renewables producers are more exposed to the market, where there is a “semi merchant” environment, supported by a system of stabilised prices that change every six months. In the Spanish market, which we decided to explore because of its solar potential and the innovation taking place there, we are finding out more about “merchant” energy models. Finally, in the US, we have specialised in Community Solar agreements via our Halo Solar brand. This is why we set up a Marketing Department in 2021 to help energy business units with their strategy of attracting more direct clients. Our marketing and innovation teams also work closely together to develop the solutions that best suit our clients' needs and new uses.

CVE has also developed advanced expertise in financing, supported by its legal and financial teams located in Marseille, New York and Santiago (Chile). That expertise allows the group to arrange competitive funding for all projects at a sufficiently advanced stage of development. CVE's financial engineering relies in particular on senior debt, for which it has established robust relationships with partner banks. The group has established long-term relationships with institutional investors for junior and bridge financing. It also raises money from individual investors to support its growth, through a network of wealth managers and financial advisors, and through crowdfunding via established platforms. In 2021, our fundraising team launched its first co-investment campaign to fund a solar facility in Chile.

## **UNITED STATES**

### **A solution for each market**

Given the large number of individual markets in the US, CVE North America is seeking to maximise additional sources of income at a time when subsidies are becoming rarer: industrial self-consumption, green certificates, grants for installing solar panels on car park shade structures and farmland energy. For example, the Apollo facility will sell electricity directly to Stop & Shop, a well-established US chain of supermarkets owned by the Ahold group. Given the market situation, CVE North America has diversified its presence by seeking to expand in three new states in addition to its long-standing presence in the states of New York and Massachusetts.

## → Solar



**Clément Heirwegh**

Head of agri-PV project development

### Development of eco-friendly dual land-use projects

The renewable energy sector faces increasing difficulties regarding access to land. However, there are innovative solutions that allow eco-friendly dual land use like agrivoltaics. This is a fast-growing segment in which CVE is a major player. I was recruited in 2021 as head of agri-PV project development, and I work closely with our innovation team. We have joined forces with SiqueSOL, a Belgian company specialising in photovoltaic structures, to develop a wooden structure for vertically arranged bifacial solar panels, enabling us to bid for our first "CRE innovation" project. This project is intended to take place on the land of a sheep farmer who also grows alfalfa in rotation with grassland for grazing, and will allow us, in partnership with INRAE, to measure how our structures reduce wind-related soil evapotranspiration.

### SOUTH AFRICA

#### CVE is focusing on selling electricity directly to businesses

South African businesses have high levels of energy demand and are connected to an unreliable grid subject to weekly load shedding. Our industrial customers are attracted by the prospect of making significant savings on their energy bills, while making their electricity supply more secure. In 2021, CVE opened its South African subsidiary and appointed a new country head along with two staff members in charge of development. They joined a solar engineer who was already working out of our new offices in Cape Town and Johannesburg. CVE supports local employment by recruiting new talents already living in South Africa. Our South African business is centred around understanding the needs of our industrial customers and local authorities, and we benefit from very strong links with CVE's international development and marketing in Marseille.



**Shadé Jaiyeola**

Head of CVE North America's Community Solar programme

### Our Community Solar Halo offering: strong roots

With our Halo offering in the US, CVE North America entered the Community Solar market after working for several years to understand the various new mechanisms emerging in this country. Halo allows consumers and businesses that cannot or do not want to install solar panels on their roofs to have the benefits of solar power without investing in their own facilities. CVE develops, finances, builds and operates Halo solar facilities, which supply green electricity to a local network of subscribers. Those subscribers receive solar credits, which are applied to their electricity bills and result in savings of up to 10% per month. Using the [www.halosolar.com](http://www.halosolar.com) digital platform, subscribers can see the amount they are saving, the amount of electricity produced by the solar panels that supply their energy, and the amount of carbon offset through their subscription.

**265 MW**

Photovoltaic capacity in operation at group level

**239**

PV facilities in operation

**3**

new states targeted by CVE North America in addition to its long-standing presence in New York and Massachusetts

Commissioning of our first greenfield project in Chile, with capacity of

**6.3 MW**



**Ons Farhat**

Data analyst

### Creating a digital twin of our energy production facilities

I work closely with the innovation, engineering and operations teams in France to improve the performance of our existing facilities. To this end we are currently developing a digital twin of our facilities in France. The algorithms are being developed using powerful machine learning techniques. The results involving the first test sites are very promising. The aim of the project is to gain greater control over our sites' performance and to have more accurate performance indicators. We are working with the OIE (observation, impact and energy) centre of MINES ParisTech - ARMINES based in Sophia Antipolis, which is monitoring our work and providing us with academic support.



→ Montéléger solar facility (Drôme)

### CROSS-FUNCTIONAL EXPERTISE

#### Improving the performance of our facilities

In 2021, CVE created a performance unit tasked with improving the efficiency of our facilities in the engineering, integration and operation phases by developing analysis methods and tools. The unit uses cross-functional resources such as our data scientists and facility managers. Initially, the unit is focusing on the group's solar photovoltaic activities. Several projects were launched in 2021, looking at the accumulation of dirt on solar panels, performance ratios, bifacial panels and digital twins. The unit also acts as an investigation centre and works with our engineering, operations and construction teams to address performance-related operational requirements.



**Franklin Reyes**

Head of project management, CVE Chile

### Bringing in house all expertise required to deliver projects

In 2021, we confirmed our strategy of having all our construction skills in-house with the commissioning of our first facility project-managed by the CVE EPC team in Chile. This strategy shows our desire to cover the whole value chain in terms of delivering photovoltaic projects, including construction. It also gives us additional technical expertise within our in-house teams and improves project quality control from a long-term investment point of view.

## → Hydroelectricity

### GREENFIELD

#### Increased in-house skills giving our projects more reliable business plans

In 2021, CVE continued its efforts to develop greenfield projects, and is aiming to have 15 MW of new ready-to-build (RTB) projects by 2026. To achieve this, we have recruited new staff members and organised the business around crucial in-house skills such as the identification of new projects and river-based measures to give our projects more reliable business plans.



Hugo Bonnefous

Head of new projects

#### High-performance tools allowing rapid response

GIS-type mapping tools, together with meticulous reconnaissance on the ground, allows us to assess the hydroelectric potential of a region's waterways.

With these essential tools, we are able to identify new projects on an ongoing basis and give local authorities rapid answers regarding their hydroelectric potential.

**15 MW**

of projects at the RTB stage and in operation in 2026



Sophie Planas

Head of project development

#### Reconciling various types of water usage is the key to hydroelectric projects

To achieve this, a project's success depends on broad consultation with all entities concerned within a region. CVE initiates consultation and conciliation processes as soon as its hydroelectric projects begin, in order to take into account the opinions of all stakeholders right from the design stage. This approach allows us to develop genuinely regional projects, and to make the best possible preparations for any public enquiry that may precede administrative authorisations.



### HYDROMETRY

#### The quality of river flows is a crucial factor

in calculating the likely output and revenue from a hydroelectric project. To ensure quality and reliability, we have decided to have in-house skills across the entire chain: acquisition and installation of sensors, measurement monitoring and production of rating curves. This organisation allows us to calculate likely output and regulatory flows more accurately, and therefore to make our projects' business plans more reliable.

**1st hydroelectric CEI\***

won by CVE (Saint-Martin-d'Ardèche)

\* Call for expression of interest.

## → Biogas

In 2021, CVE raised €30 million from SWEN Capital Partners, a major player in responsible investing focused on unlisted assets, which shares common values with the group. The aim was to speed up the development of CVE's biogas business, which was turned into a separate subsidiary as a result.

We aim to become France's leading independent player in the biomethane market based on a regional production model, with a 10% share of the French biogas market in 2030 and a leading position in upgrading organic waste.

To hit that target, we consulted our teams in 2021 about reorganising CVE Biogaz, resulting in:

- the creation of five business segments: • Development • Sales and Market Development • Engineering • Operations • International;

- a more regional biogas business with the opening of two new offices: Central France and Southern France-Mediterranean. This reorganisation of CVE Biogaz is also leading to a sharp increase in its workforce, with almost 50 new recruits expected in 2022.



Nicolas Seel Amici

Head of the biomass business

#### Biomass plays a vital role in developing the biogas business

We are involved in projects from the first phases of development, seeking and securing sources of organic material. Our efforts help to make projects viable, strengthening the business plans that are presented to banks, government entities and local authorities.

We are also developing a business as a broker of organic materials in order to provide complementary services to our regional partners.

**6**

biogas units under construction or in operation

For an operational unit:

**8,000**

tonnes of CO<sub>2</sub> avoided per year



Vincent Bourlaouen

Head of development



Audrey Lugagne

Technical officer

#### Consultation with the relevant region is an important phase of each project

Regional biogas projects have relatively long development timeframes of four to five years.

We get involved at the local level at a very early stage, identifying locations that are receptive to having one of our units. The importance we place on consultation and local acceptance of our projects, together with ensuring that their engineering is perfectly suited to specific local conditions and constraints, allows us to propose biogas projects that suit the needs and challenges of the regions in which we operate.



### LOCAL OPERATIONS

#### Strong local roots based on collaboration

The success of a biogas project depends on strong local roots based on a collaboration between agricultural, environmental and social stakeholders. CVE forms lasting partnerships with farmers by giving them an integral role in projects, sharing with them the positive externalities of biogas production as part of a win-win solution. These partnerships arise in particular via our RegeneR offering, which is a comprehensive service based on local digester spreading. It is a more effective way of addressing farmers' technical, economic and environmental needs, and allows projects to close the loop from the circular economy point of view.



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