THE ESSENTIAL
2022-2023

Energy at the heart of the territories

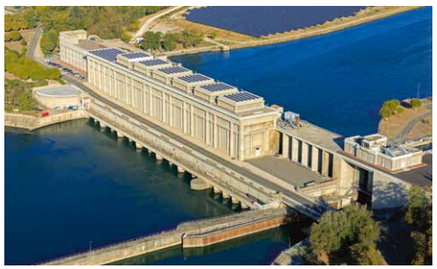
CNR, A VIRTUOUS MODEL

Founded in 1933, the Compagnie Nationale du Rhône — now called CNR — was entrusted with the concession of the River Rhone in 1934. Its DNA from the Rhone Valley is impregnated with knowledge of the territories and its actors and the environmental and societal fibre to build a more sustainable world.

A REDISTRIBUTIVE MODEL

CNR was born from a visionary idea, that of entrusting to a single operator three indissociable missions for the community in the management of the Rhone:

- **produce electricity,**
- **develop river transport,**
- **irrigate farmland.**



Thus, energy production finances the development of the river to the benefit of its multiple users and the preservation of ecosystems. As CNR exploits a natural resource that belongs to all, the territories are associated in its capital and governance and in sharing the value generated. Atypical, its status reflects this industrial and redistributive model unique in France, a joint stock company in the general interest.

A PURPOSE FOR BEING

Following the PACTE law of 22 May 2019 relating to the growth and transformation of companies, intended in particular to resituate their place in society and assert their social and environmental role, CNR included its purpose for being in its articles of association in 2021. It therefore devoted its commitment to the long-term, expressed in just a few words, demonstrating its singularity and wealth and providing it with its collective impetus:

The Rhone as origin,
The territories for partners,
Renewable energies for the future.

The producer of 100% renewable energy generated from water, wind and sun, CNR is positioned as a major actor in territorial development, adaptation to climate change, and ecological transition.

BALANCED GOVERNANCE

A mostly publicly owned company – Groupe Caisse des Dépôts and 183 local authorities – CNR's main industrial shareholder is ENGIE. Thus, it combines a strong industrial identity with strong attachment to the values of public service and the general interest.
CNR is managed by a Management Board and administered by a Supervisory Board. With an industrial group, a public investor, local elected representatives, government representatives and employees' representatives in its Supervisory Board, it benefits from collective intelligence, with each member providing their vision and expertise.

Management Board

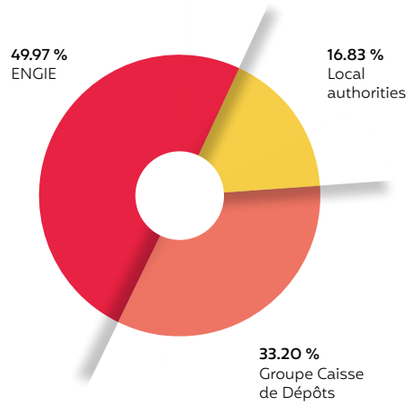
Laurence Borie-Bancel: Chairwoman.
Didier Lhuillier: Managing Director.
Julien Français: Managing Director.

Supervisory Board

An oversight body, the Supervisory Board validates the company's strategy and watches over the good management of CNR. It is chaired by Serge Bergamelli and is composed of 18 members:

- 13 shareholders' representatives,
- 2 government representatives,
- and 3 employees' representatives.

Distribution of capital



Laurence Borie-Bancel
CHAIRWOMAN

Julien Français
MANAGING DIRECTOR

Didier Lhuillier
MANAGING DIRECTOR

EXTENSION OF THE CONCESSION

Unanimously adopted by the French Parliament, the "Rhone Development" law of 28 February 2022 extends CNR's concession until 2041. It takes into account the expectations of the stakeholders and incorporates an investment programme in excess of €1 billion, situating the three community missions of CNR in the trajectory of achieving territorial ecological transition and carbon neutrality for France by 2050.

EXTENSION OF THE DOMAIN UNDER CONCESSION

Portions of the River Rhone up to now managed by VNF and the government are transferred to CNR in order to unify and further secure the management of the navigable waterway. The domain under concession is thus increased to 30,000 hectares that include 550 km of river.

DEVELOPMENT OF THE RIVER RHONE

CNR will invest €500 M over 15 years to build or optimise structures on the Rhone: the feasibility and acceptability study of a project to build a hydropower plant at Saint-Romain-de-Jalionas, the construction of six small hydropower plants and six fish passes, increasing the production capacities of the hydropower plant of Montélimar and doubling the downstream lock gates of Châteauneuf-du-Rhône and Bollène.

DEVELOPMENT OF THE RHONE VALLEY

In the extension of its missions in the general interest, CNR has committed to spending €165 M every five years in the framework of its 5Rhône Plans, long-term five-year plans formulated and monitored with its stakeholders. The projects driven or supported will contribute to make the Rhone Valley one of green energies, a leading European-scale transport corridor, a resource for sustainable agriculture, a living and biodiversity friendly river and living space shared with the territories. The goal is to develop the river and the territories on both the socioeconomic and environmental levels.

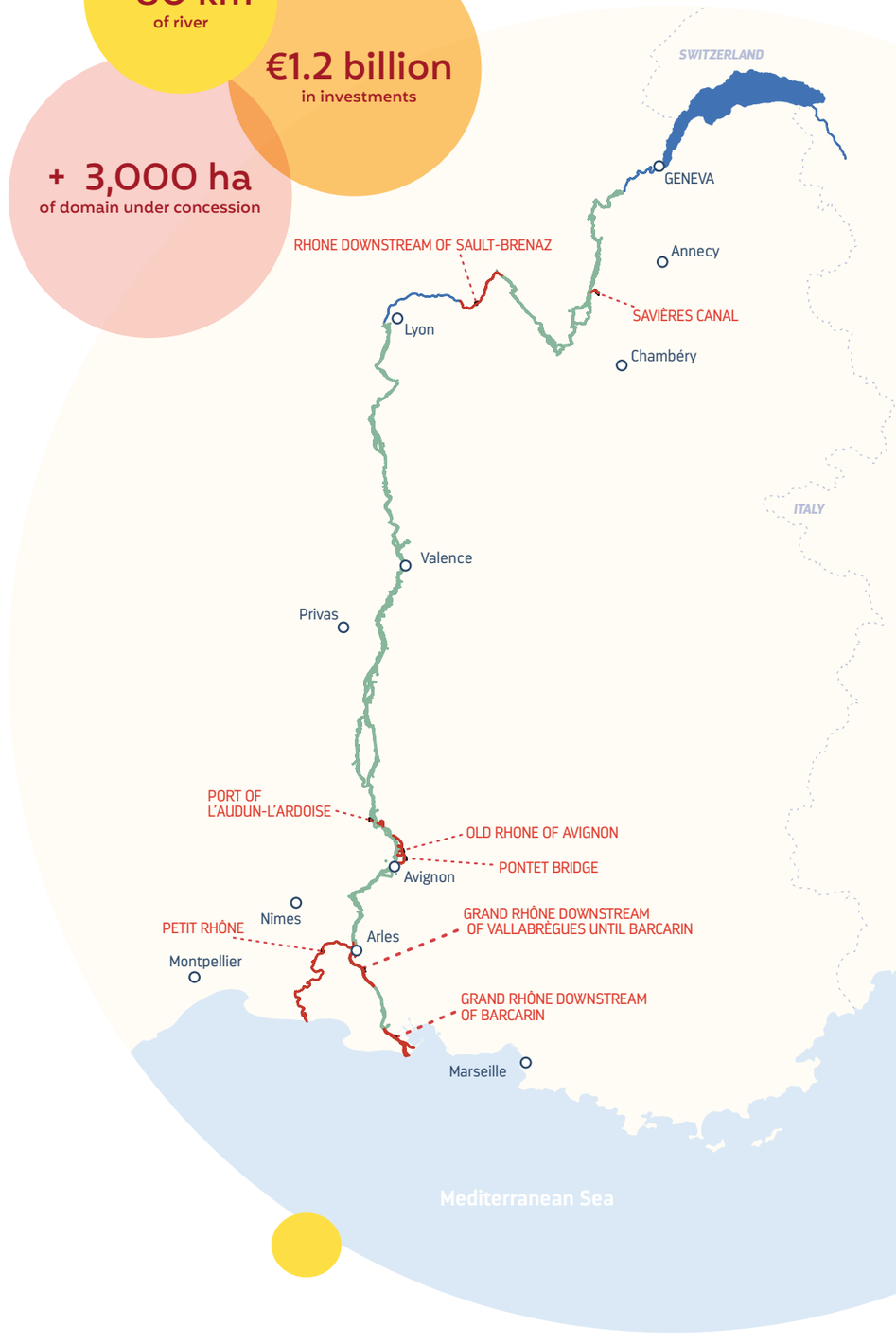
HYDRAULIC FEE CORRELATED TO THE PRICE OF ELECTRICITY

The share of the hydraulic fee linked to the receipts generated by electricity sales is henceforth fixed at a progressive rate established as a function of the price of electricity registered on the wholesale market.

+ 80 km
of river

€1.2 billion
in investments

+ 3,000 ha
of domain under concession



ROAD MAP

Closely interwoven with each other, CNR's strategy for 2030 and its corporate social responsibility (CSR) transform its purpose for being into lines of action. Both have a value of commitment in the service of energy, ecological transition and sustainable development.

5 STRATEGIC GOALS FOR 2030

In 2022, CNR reviewed its strategy for 2023 in view of the new geopolitical context and its major impacts on energy and agriculture, and its economic and social impacts. CNR 2030 now includes 5 strategic ambitions with one that crosses all the others, devoted to global performance and CSR. Thus, CNR demonstrates its reactivity and capacity to anticipate and prepare for the future by proposing concrete solutions for environmental, industrial, societal and regulatory challenges.
Re-assessed every year to ensure their consistency with a world of energy undergoing constant change, the ten-year objectives of its strategy are adapted operationally in the form of two-year plans. The second two-year plan includes 45 actions and was launched in January 2023.

GOALS FOR 2030

5,500 MW
of installed capacity

+1,550 MW
of installed capacity for wind power, solar power and small hydropower plants

200 MW
of green hydrogen electrolysers and batteries

3,700 MW
aggregated for third parties

CNR 2030

1 - Manage and develop the river as a responsible industrial company

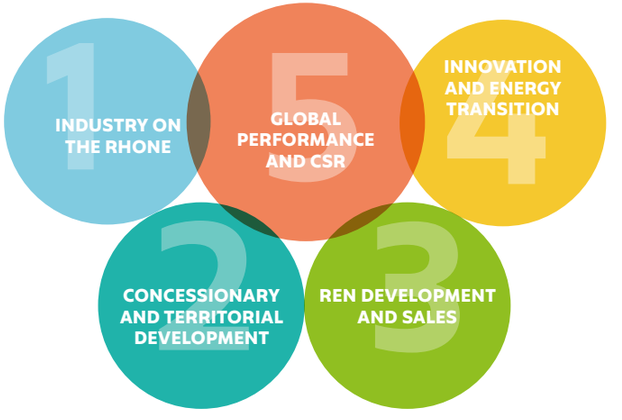
- An **efficient** and renewed industrial tool
- **Qualified** teams **trained** in industrial skills
- **Operational** and **available** assets (production, navigation, etc.)
- **Supervision** and **production** of works resulting from the extension

5 - Increase the company's global performance

- A **safety** and **security** culture shared by all
- An ambitious **CSR** policy
- The development of **skills** and the integration of **new talents**
- **Profitable** investments and controlled costs
- **Harmonised processes** and a more **fluid** organisation

4 - Innovation in the service of energy transition

- The deployment of **storage** by green hydrogen and batteries
- The development of **intermittent energy management**
- Advisability studies carried out on the **energies of the future**
- The implementation of a strategy linked to **flexibility**



2 - Act as a committed concessionary alongside the territories

- **Enhancement** of the estate under concession
- Development of **river transport** and **port sites**
- Contribution to the economic development of the **territories**
- Assistance in meeting **environmental** and **agricultural** challenges
- **A reference** for water resources

3 - Increase renewable energy production and optimise its exploitation

- The **development** of REN production resources
- A major contribution to developing **solar energy** in the Rhone Valley
- **Exploitation** of energy adapted to the new context
- The impetus of our **aggregation** policy

4 CSR ORIENTATIONS FOR A GAIN IN PERFORMANCE AND CITIZENSHIP

The basis of CNR's 2030 strategy, CSR is integrated at every level and every trade of the company. By exercising its societal responsibility, CNR acts as a corporate citizen in the service of the general interest. Faithful to its productive and redistributive model, it plays a role in economically viable, socially faire and environmentally friendly development, and contributes to reaching the 17 sustainable development goals (SDG) set by the UN.

In a context of climatic crisis, the decline of biodiversity, environmental pollutions, the depletion of natural resources and the aspiration for peace and social justice, sustainable development is the only path capable of "satisfying the needs of existing generations without jeopardising the capacity of future generations to satisfy their own". CNR's CSR policy is organised into 4 paths and 19 commitments.

18 CSR commitments

95% of CNR's purchases are made in France of which 68% in the Rhone Valley

14,500 direct and indirect jobs generated by CNR's activity

PRESERVE THE RESOURCE AND THE ENVIRONMENT

- Meet the challenge of scarcer water resources
- Reduce our carbon footprint
- Optimise the environmental performance of our industrial processes
- Act for biodiversity
- Eco-manage our wastes

ACT FOR ECOLOGICAL TRANSITION

- Accelerate our renewable energy production
- Innovate to respond to the challenges of ecological transition
- Encourage alternative modes of transport
- Communicate on the stakes of ecological transition

ASSIST TERRITORIAL DEVELOPMENT

- Favour local employment
- Act as a responsable buyer
- Assist change in agricultural practises
- Build sustainable projects with our partners

PLACE HUMAN BEINGS AT THE HEART OF THE COMPANY

- Maintain the priority given to health and safety at work
- Strengthen the development of our employees' skills
- Act for diversity, professional equality and the quality of life at work
- Support quality labour relations
- Respect business ethics and human rights

FRANCE'S LEADING PRODUCER OF 100% RENEWABLE ELECTRICITY

In 2021, CNR reached 4,000 MW of installed capacity. By accelerating the development of its "hydro-wind-solar" mix, it plays an active role in energy transition and contributes to taking up the challenge of energy independence.

AN INTEGRATED INDUSTRIAL MODEL

An expert in green electricity for almost 90 years, CNR gathers all the industrial skills linked to the production and management of weather-dependent energies: studies, designs, the operation of installations, selling production, prospecting, and developing assets. It therefore controls all the knowhow needed for its performance and its developments.

Thanks to its expertise in meteorology and its knowhow in the wholesale market, it manages the green electricity of other producers. In 2022, it aggregated the production of 252 installations, i.e. a capacity of 1,762 MW.

DEVELOPMENT IN FRANCE

In the framework of French and European policies to combat climate change, CNR and its subsidiary Vensolair are pursuing their developments in the heart of the Rhone Valley and beyond in partnership with the territories, in view to reaching "zero greenhouse gas emissions". The growth of its hydro-wind-solar assets is crucial to provide flexibility to its production management and reduce its exposure to meteorological and climatic risks in particular. More than 100 MW between 2021 and 2022 was commissioned in wind and solar power and the recent creation of Solarhona will lead to the construction of small solar power installations in the Rhone Valley. In the next decade, CNR aims to develop an additional 1,550 MW.

THE RATIONALE OF "DO TOGETHER"

Faithful to its model of sharing, CNR brings the territories to participate closely in the creation of new green electricity production facilities. Since 2017, it has made ten offers to the public and local authorities to invest in one of its projects via crowdfunding initiatives. In 2021, it innovated by proposing to the territories to participate in the capital of project companies: the company "Parc éolien de Soully d'Air" was founded to develop, build and operate four wind turbines. In 2022, the company Solarhona Invest, which groups CNR, the Banque des Territoires and the regional branches of the Crédit Agricole, was launched to invest in solar power installations developed by Solarhona in the Rhone Valley.

Solar power plant of Le Pouzin 2

13 TWh
produced 2022

25%
of French hydroelectricity comes from the Rhone

49 hydropower plants

58 wind farms

54 solar power plants

RESPECTING THE ENVIRONMENT

By applying the principle of "avoid, reduce, compensate", CNR integrates care for the environment in its hydro-, wind and solar power projects. It implements a range of measures to limit the impact of its new installations on all the elements of the environment: the population and human health, biodiversity, land, soil, water, air, the climate, material property, cultural heritage and the landscape. In addition to impact studies and regulatory monitoring, it carries out biodiversity monitoring adapted to the challenges of each site and rebuilds habitats favourable to amphibians, reptiles and flying fauna.

HYDRAULIC SAFETY UNDER STRICT SURVEILLANCE

CNR monitors and maintains the bed of the Rhone throughout the year to preserve its unimpeded flow. In synergy with the maintenance of industrial and river assets, visual observations, measures and sediment management are vital for limiting risks linked to floods, securing navigation, favouring the ecological balance of the river, and avoiding damage to dams and locks. A large number of sensors are installed along the Rhone and its tributaries and a network of 220 stations transmit data on the level of the Rhone, its discharge, rainfall, etc. A fleet of bathymetric boats regularly survey changes to the bed. They include the Frédéric Mistral, equipped with 48 depth sounders. For reasons of prevention, CNR carries out dredging in the framework of sediment management plans and manages the vegetation around the river.

The hydrographic vessel, Frédéric Mistral

MANAGEMENT OF INDUSTRIAL AND RIVER ASSETS

CNR carries out daily monitoring and maintenance of all its installations on the Rhone: dams, hydropower plants, locks and levees. It spent €106 M on maintenance, electromechanical and civil engineering operations in 2022.

Drawing most of its income from its hydropower installations on the Rhone, CNR constantly seeks to improve its yields and lower its costs, while complying with the imperatives of hydraulic safety and ensuring navigation. The probable lowering and greater variability of the discharges of the Rhone caused by climate change makes this challenge especially crucial. The goal is to optimise the use of every cubic meter of water that flows in the river as well as the costs of monitoring and maintaining the installations. To increase its performance, CNR strengthens its capacities to forecast, improve its reactivity to natural hazards, and target its interventions more precisely to optimise the rate of availability of its structures. It relies on a quality management system for which it has been awarded ISO 9001 certification.

€175,5 M **invested in 2022 to maintain the river and the industrial assets**

1,000 **employees work along the Rhone to produce energy and maintain the installations in the river and its tributaries.**

Inspection of Villebois dam

BOTH FEET IN THE FUTURE

At CNR, innovation is achieved both on a daily basis and through R&D programmes carried out in partnership with research institutions to optimise its operating and maintenance procedures, explore breakthrough technologies and assist changes in agricultural practices.

With a power of 104 kWp and a length of 350 m, the photovoltaic demonstrator of the Sablons levee commissioned in 2021, in partnership with the CEA-INES 2S and the Supergrid Institute.

INNOVATIVE PHOTOVOLTAICS

Besides the floating photovoltaics with which it is experimenting on the La Madone lake near Mornant (Rhône), CNR is testing with CEA[1] the technical-economic viability of vertical and bifacial photovoltaics, in view to deploying them along rivers, highways and railways. The first demonstrator was commissioned on the levee of Sablons (Isère) and two other projects are under study: a solar canopy of 1.5 km (1 MWc) and an industrial scale pilot installation from 10 to 20 km (20 MWp).

1. Atomic Energy and Alternative Energies Commission.

Jupiter 1000 at Fos-sur-Mer

6,000 m²
of agrivoltaics experiments at the horticultural school of Dardilly (Rhône)

20 ha **dedicated to alternative and organic techniques at Étoile-sur-Rhône.**

THE GREEN HYDROGEN SECTOR

Since 2014, CNR has explored the potential of renewable hydrogen production to both store its electricity production and decarbonise transport and industry. It is a partner of Jupiter 1000, a demonstrator that converts part of the electricity of the CNR wind farm of Fos-sur-Mer into hydrogen to then injects it into the gas network. It also develops projects for local uses. At Port de Lyon, a green hydrogen production plant to supply land vehicles is being built and another electrolyser is under study for the needs of the port. A hydrogen production plant intended for the chemical industry is also planned at Pierre-Bénite.

ASSET MANAGEMENT

CNR works on its information systems to optimise the energy management chain. It is developing an automated energy management system that incorporates its assets and those it aggregates for third parties. This tool will be adaptable at the scale of smart micro-networks for local energy management linked to territorial projects such as the pilot site of Saint-Julien en Quint (Drôme), now undergoing experimentation in the framework of the European partnership Alpgrids.

AGRICULTURAL TRANSITION

CNR is carrying out R&D with the agricultural sector to assist it to adapt to climate change. In the quest to develop synergies between renewable energy and agriculture, it is investing in agrivoltaics with the horticultural school of Dardilly (Rhône), with priority given to providing added value to farmers and reducing the hydric stress of plants. For several years, it has tested smart irrigation networks to reduce water consumption and the energy expended for its conveyance. It also encourages agroecological practices that combine environmental and economic performances.

The first agrivoltaics installation launched by CNR at the horticultural school of Écully-Lyon-Dardilly. The aim is to reproduce it on farms in the Rhone Valley in the framework of pilot projects in the service of agriculture.

PROMOTING RIVER TRANSPORT

In its role as a waterway developer and manager of locks and the activities of port sites, CNR supports the growth of river transport in the service of ecological transition and territorial industrial development.

AN ALTERNATIVE TO ROAD TRANSPORT

In comparison to road transport, river transport emits only a quarter of the CO2 per tonne transported, and is one of the alternative modes of mobility for combating climate change. It contributes to reducing the number of heavy goods trucks on the road and its development decreases the ecological footprint of logistics, road congestion and sound nuisances. Taking this development into account is all the more important since the navigation infrastructures of the River Rhone could handle four times more traffic a year without requiring a single additional euro of investment. In partnership with SNCF Réseau and VNF, CNR therefore endeavours to increase the synergy between rail and river on the Rhone-Saone corridor to build intermodal low carbon supply chains. It also supports the greening of the river fleet and is committed to making inland waterway use a reference in terms of ecological transport.

The installation of Pradier (demolition waste recycling) in Lyon and Mondragon and QCP Arles (plastics recycling) shows the attractiveness of the river for the circular economy.

THE OFFER OF PORTS WITHIN EASY REACH

CNR manages and develops 18 industrial and port sites situated only 20 kilometres apart, all the way from Lyon to the Mediterranean Sea. Logistics providers are installed alongside industrial and construction companies interested in setting up at sites linked to the waterway and railways for their supplies and shipments of products. Port de Lyon is the bridgehead of this network that accommodates 172 companies and 5,200 jobs on 930 hectares. CNR's available land has great potential for participating in the reindustrialisation of the Rhone-Soane corridor while respecting the environment.

1
tow-push convoy
of 2 barges (4,400 t)
replaces
220 trucks
on the roads

HIGH QUALITY SERVICE TO SKIPPERS

CNR's Navigation Management Centre installed at Châteauneuf-du-Rhône (Drôme) has monitored and remotely controlled the 14 wide gauge locks on the Rhone 24/7 since 2012. It therefore contributes to the safety of the river, optimises the passage through locks and provides skippers with real-time information on traffic.

GREEN URBAN LOGISTICS

Begun with a nomad waterborne waste collection vessel, then with the removal via the river of incinerated waste residues, the urban services supplied by Port de Lyon to contribute to a sustainable city are undergoing considerable development. In 2022, a green delivery service combining river transport and electric bicycles fitted with trailers was installed by Urban Logistic Solutions (ULS). It will strengthen the supply of services for the Urban Logistics Hotel scheduled to open in 2023.

18
industrial and port sites

Port de Lyon captures 90% of the container traffic on the Rhone. A doorway to the Mediterranean Sea and the world, it is linked to Fos-sur-Mer by an oil pipeline and connected to the railway network and major European highways.

FAVOURING THE ECOLOGICAL TRANSITION OF THE TERRITORIES

In the framework of extending the Rhone concession, in 2021 CNR launched the first 5Rhône Plans, designed to assist territorial projects in favour of ecological and industrial transition. These new long-term five-year plans are in line with the missions in the general interest carried out since 2004 to develop the Rhone Valley. They demonstrate the efficiency of CNR's redistributive model, based on sharing part of the income generated by harnessing the river with the territories through which it flows.

5 AREAS OF ACTION IN THE SERVICE OF THE RHONE VALLEY

Develop green energies and hydrogen to decarbonise mobility and industry, innovate and assist the territories to carry out their energy projects.

Strengthen navigation on the Rhone and the industrial and port sites, with the development of goods ports including Port de Lyon, and more environmentally friendly river tourism.

Contribute towards adapting agriculture in the Rhone Valley by optimising irrigation networks to save water, reduce the electricity consumption of farmers, and support agricultural transition.

Favour a living and dynamic corridor, with the continued restoration of the bypassed sections of the Rhone, protect terrestrial and aquatic biodiversity, and forge partnerships with the scientific world.

Support the projects pursued by the territories of the Rhone Valley through economic and industrial development, finalise the ViaRhona cycle track, and continue enhancing the banks and developing sports, tourism and cultural activities linked to the river.

CO-CONSTRUCTION AND TRANSPARENCY

The 5Rhône Plans are established in the framework of dynamic co-construction with the government and CNR's stakeholders. The concession works monitoring committee is associated with drawing them up and carrying out the yearly monitoring of their implementation. The government guarantees the good utilisation of the funds made available to them. To ensure transparency, an investment charter sets outs the principles of CBR's financial action and the project selection criteria.

Since 2021, along with VNF, CNR has coordinated a cruise club that brought together local authorities and professionals to develop sustainable tourism on the Rhone-Saone corridor, a source of economic wealth for the territories.

The study managed jointly by CNR and the DREAL made it possible to build a database on withdrawals made by farms from the Rhone — withdrawal points and the volumes withdrawn by type of crop and the surface areas cultivated.

A family on the Via Rhôna

817 km of ViaRhôna between Lake Geneva and the Mediterranean

70% of water in France is consumed by agriculture

€496 M invested by CNR in the missions in the general interest since 2004

€165 M every 5 years for the 5Rhône plans

COMMITTED TO BIODIVERSITY

The Rhone is not only a waterway, it interacts with all its surrounding ecosystems which participate in renewing it and keeping it alive. CNR works to preserve these natural habitats essential for our lives.

THE ENVIRONMENT MANAGEMENT PLAN

To reconcile the preservation of biodiversity with hydraulic safety, the safety of the surrounding population, electricity production and economic development, in 2016 CNR established a management plan for the domain under concession of which 92% is located in preserved areas. As early as 2007, it began maintaining the river banks sustainably, according to a zero-phytosanitary product policy. Moreover, it implements natural innovative processes to combat invasive exotic species.

Oxbow of Géronton

RESTORATION OF THE BYPASSED SECTIONS OF THE RHONE

Since 1999, CNR has restored the hydraulic and ecological balance of the Rhone along nearly a quarter of its length. It pursues its actions to give space back to the river, reinvigorate its sediment dynamics and favour the life of the fauna and flora in natural habitats. In 2022, the works aimed at restoring the good ecological state of the bodies of water along the bypassed sections of the Rhone at Baix-Le-Logis-Neuf in Drôme were completed. In particular, they included digging the oxbow of Géronton along 1.8 km and dismantling 1 km of spur dikes dating from the 19th century. CNR planted trees typical of alluvial forests during its bank rewilding works (willows, poplars, tamarisks, etc.) taken from its plant grafting nursery at Soyons (Ardèche), thereby following an approach using local plants.

RE-ESTABLISHING THE MIGRATION HIGHWAY

Allowing migrating fish to swim up and downstream of the Rhone, between its confluence with the Drôme and the Eyrieux on the one hand, and the Mediterranean Sea on the other, is a major objective of CNR's environmental strategy. Improving knowledge of the different species, in particular through the Vigilife programme which uses the environmental DNA technique, the construction of fish passes and the specific management of the locks are some of the actions it carries out to restore the Rhone as a migration route. In 2021, the fish pass of Villebois was filled with water. It is the first structure of its type to be built on the main channel of the Upper Rhone in France.

Fish pass of Villebois

PRESERVING FLYING FAUNA

CNR pays particular attention to birds and bats when developing its wind farms. It has sometime abandoned projects if they are too close to the vital space of protected species such as Bonelli's eagle, the red kite and the black stork. It experiments with detection and production regulation systems to preserve flying fauna during migrations. Buzzards are also monitored by drones to improve knowledge of this species.

+ than 80 species benefit from habitat preservation actions

€85 M invested since 2004 in favour of the environment

+ than 120 km of river restored in in 20 years

60 fishways on the Rhone and its tributaries

Oxbow of Servio at Champagneux (73)

EXPLOITING INDUSTRIAL EXPERTISE

As a designer, builder and operator of hydropower and river installations, CNR provides its multifaceted engineering knowhow accumulated from more than 85 years of managing the Rhone concession to its clients in France and abroad. Its integrated engineering office operates in thirty countries on hydraulic and environmental projects to assist project owners and design and construction managers, in partnership with other French and local engineering offices.

PHYSICAL AND NUMERICAL MODELLING

CNR's engineering relies on its Hydraulic Structure Behaviour Analysis Centre (CACOH), specialised in physical and numerical modelling. CACOH is capable of reproducing small scale models and mock-ups of flows, changes of riverbed morphology, the behaviour of structures, etc., as well as coupling physical and numerical models. Alone, it covers more than 25% of CNR's R&D activities. An integrated unit providing expertise and advice, CACOH ensures that CNR can guarantee the highest levels of safety and security.

RECOGNISED AND CONSOLIDATED EXPERTISE

On the one hand CNR exploits its global experience acquired from the Rhone to the benefit of its many clients in France and abroad, while on the other its operations continue to reinforce its expertise in hydropower and river engineering. Solidly rooted in a project-based culture, CNR's knowhow is fuelled by a very wide range of geographical, technical and sociocultural contexts that allow it to incorporate new methods, stay abreast of the most innovative techniques, and maintain the level of skills used by its teams to take on the projects linked to the extension of the concession with confidence.

FLAGSHIP PROJECTS 2021

In 2022, CNR pursued projects already begun such as managing the works to build navigation structures on the Red River in Vietnam, restoring the Yzeron and dredging the Durance, as well as renovating the hydropower plant of Chancy-Pougny on the Swiss Rhone. The design of a measurement network on the Mekong was completed and the commissioning phase begun. New missions were entrusted to CNR which puts to good use its knowhow as operator of hydropower plants in support of the Cameroonian public company EDC and of UEGCL In Uganda to operate and maintain developments on the White Nile (Isimba, 184 MW and Karuma, 600 MW).

In Vietnam, after several years of studies, with Egis and its Vietnamese partner VIPO, CNR is supervising works to build a canal to link two branches of the Red River, equipped with a wide gauge lock and a road viaduct.

CNR uses a physical model to assess the operation and possible adaptations of the sediment regulation structure of the Manival (Isère), one of the most active and developed torrents of the Alps.

Close to **90 years**
of expertise in designing and operating river structures

References from more than
40 countries

HUMAN BEINGS PLACED AT THE HEART OF THE COMPANY

At CNR, everyone counts as a person. Priority is given to the safety and physical and mental health of the employees and to their professional fulfilment. CNR acts in favour of diversity, professional equality and wellbeing at work. Moreover, it promotes quality labour relations and complies with business ethics and human rights.

TRAINING FOR TODAY AND TOMORROW

CNR pursues a sustained training policy to assist its employees to follow their career paths, favour their employability and inculcate a culture of sustainable development. It guarantees the adaptation of their skills to the medium and long-term progression of its trades and strengthens in-house procedures for handing on knowhow, apprenticeship and mentoring. In 2022, particular emphasis was placed on safety, which represents 38% of training, managerial skills and project management. Since the induction of young employees features among its priorities, CNR received 105 following work-study programmes and Tech'Avenir, a new work-study training programme on industrial maintenance established in partnership with the AFPI[1] of Lyon. Trade benchmarking committees have also been set up to build training programmes in the framework of forward planning.

THE QUALITY-OF-LIFE AT WORK

Generalised at the collective scale at CNR due to the health crisis, teleworking was appreciated according to a survey carried out on its employees. In 2021, an agreement was signed with all the social partners to allow its implementation while maintaining labour relations and collective dynamism. CNR was awarded the "Work of the future prize" in the framework of the "Labour Dialogue in Action" event organized jointly by the DDTE[2] and the newspaper Le Progrès.

1. Professional industrial Training Association.
2. Departmental Division of Labour, Employment and Solidarity.

820 risk inspections in 2022

105 work-training apprentices in 2022

185 trades

35 hours of training a year on average per employee

PREVENTING SEXISM

To prevent and act against sexism, CNR has conceived a programme of dedicated actions, shared with the social partners, based on training, awareness and communication as well as care for potential victims. A whistleblowing system has been set up that comprises two reference contacts to whom employees can turn.

THE CULTURE OF PERFORMANCE

In a more competitive and uncertain environment, CNR seeks performance at every level of the company to give it the means for its development. It relies on the levers of digitisation to modernise its processes and trades.

ECONOMIC PERFORMANCE

CNR is committed to an approach of continuous improvement to increase the creation of value. It is strengthening project management and purchasing, deploying asset management, generalising cost control, simplifying processes, upgrading its information system and disseminating good practices inside the company. Since 2020, the number of maintenance operations supervised by project managers has increased by 40%. The drafting of a risk guide and the replacement of equipment inside the company's network of plants and data centres feature among the advances made in 2021.

TEAM PERFORMANCE

CNR performance relies in that of the motivation and professional pride of its employees and their belief in the company. In 2021, despite a working environment impeded by the health crisis and degraded due to incomplete teams, CNR's employees showed great resilience in facing an increase in the number of maintenance operations, operating hazards, and the extreme volatility of electricity prices, while successfully concluding the project to extend the Rhone concession. In addition, the team succeeded in managing strained supply chains to build wind farm and solar power plant construction projects within the lead-times and budgets fixed.

TECHNICAL AND INDUSTRIAL PERFORMANCE

Climate change makes the profile of production charts increasingly unpredictable, causing CNR to constantly seek to improve its production units and operating and maintenance modes to draw advantage from water when present. This is done through several approaches: the standardisation of practices within the company, the implementation of solutions to increase the capacity and yield of the assets, and the flexibility and productivity of maintenance operations. In 2022, the cost of maintenance works increased by 56% in comparison with 2021. The technical condition of 92% of CNR's 25,500 electromechanical assets was analysed and a process planning department set up.

ENVIRONMENTAL PERFORMANCE

CNR performed an energy audit and assessed its greenhouse gas emissions based on a sample representative of its activity. Thus, it launched a Lifecycle Analysis on a wind farm and on a solar power plant.

25%
of French hydroelectricity comes from the River Rhone

€106 M invested in electromechanical maintenance

345 maintenance projects

KEY FIGURES 2022-2023

ECOLOGICAL TRANSITION ASSETS

The assets

49 hydropower plants
19 dams
58 wind farms
54 solar power plants

Total production of green electricity

13 TWh including:
11.4 TWh hydroelectricity (Rhone and outside Rhone)
1.3 TWh wind power
0.2 TWh solar power

Total installed capacity

4,001 MW including:
3,097 MW hydropower (Rhone and outside Rhone)
737 MW wind power
167 MWc solar power

SOCIAL

1,484 full-time employees

105 work-study contracts, 7% of the total workforce

RIVER

330 km of wide gauge waterway

3.55 M tonnes transported on the Rhone

66,819 TEU containers (Twenty Foot Equivalent) transported on the Rhone

18 industrial and port sites

ENVIRONMENT

€85 M invested since 2004 in favour of the environment

+ 120 km of river restored in 20 years

60 fishways on the Rhone and its tributaries

+ than 80 animal species benefit from CNR's actions and the preservation of their habitats

12 ha of reed beds rewilded in 8,872 hectares of wetlands

FINANCIAL

€951 M consolidated turnover for the CNR Group

€176 M hydraulic fees

TERRITORIES

30,000 ha of domain under concession

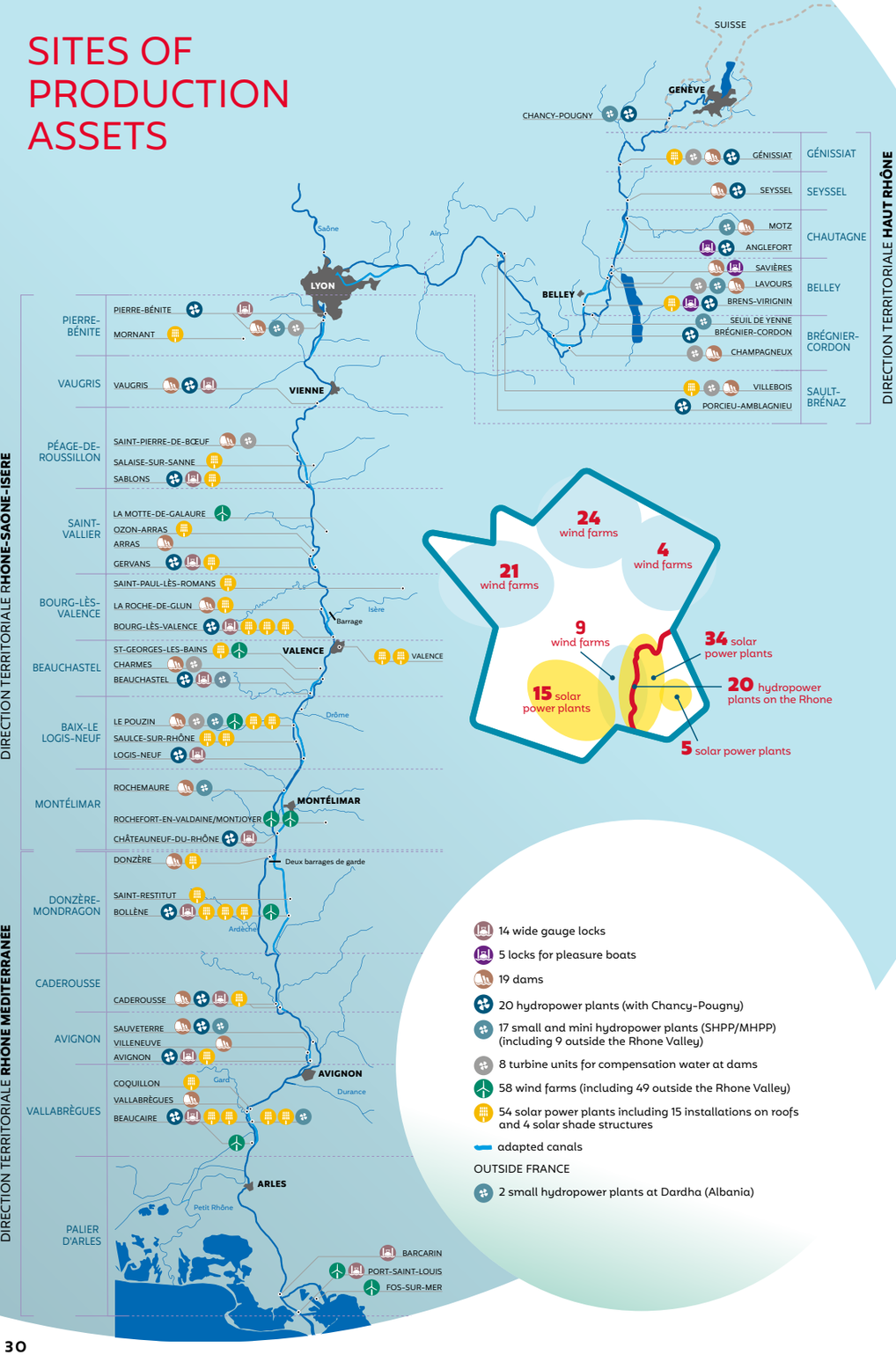
14,500 direct and indirect jobs generated by CNR's activity

€22,1 M to assist the territories

95% of CNR's purchases are made in France including 68% in the Rhone Valley

500 km of ViaRhôna co-financed by CNR

SITES OF PRODUCTION ASSETS



- 14 wide gauge locks
- 5 locks for pleasure boats
- 19 dams
- 20 hydropower plants (with Chancy-Pougny)
- 17 small and mini hydropower plants (SHPP/MHPP) (including 9 outside the Rhone Valley)
- 8 turbine units for compensation water at dams
- 58 wind farms (including 49 outside the Rhone Valley)
- 54 solar power plants including 15 installations on roofs and 4 solar shade structures
- adapted canals

OUTSIDE FRANCE

- 2 small hydropower plants at Dardha (Albania)

HEAD OFFICE

2, rue André Bonin
69316 Lyon cedex 04 - France
Tél. : 33(0)4 72 00 69 69
cnr.lyon@cnr.tm.fr

PARIS OFFICE

28, boulevard Raspail
75007 Paris - France
Tél. : 33 (0)1 45 48 76 26

TERRITORIAL MANAGEMENTS

Haut-Rhône
Chemin des soupirs
01300 Belley

Rhône-Saône-Isère
91 Route de La Roche de Glun
26500 Bourg-lès-Valence

Rhône-Méditerranée
25 Chemin des rocailles
BP194
30400 Villeneuve-lès-Avignon

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