



Actor

for energy transition

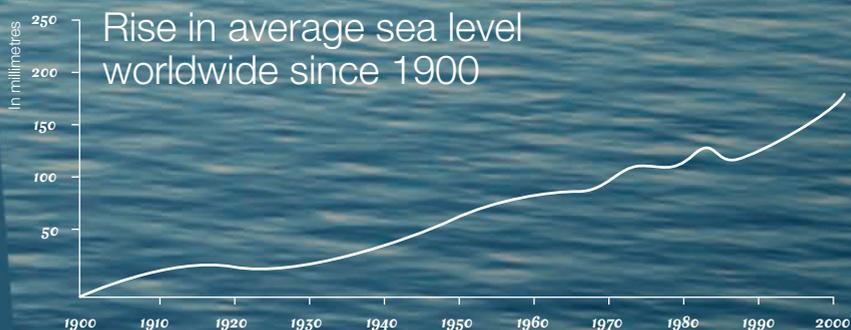
2016



CRÉDIT AGRICOLE

Climate change: the stakes

Earth's atmospheric temperature is increasing, ice reserves are declining and sea levels are rising. Human influence on climate disruption is now an established fact. Factors such as economic development (specifically the boom in industrial activity since the 19th century) and population growth are to blame. Carbon dioxide, methane and nitrous oxide—greenhouse gases (GHG) are being released into the air at levels unequalled in 800,000 years.



Source: The Ministry of Ecology, Sustainable Development and Energy 2013

COP21: a major agreement

In Paris on 12 December 2015, 196 stakeholders adopted an agreement to address climate change. The agreement focuses on:

Mitigation: this involves rapid emissions reduction to achieve the target temperature. The signatory nations have made a commitment to limit warming to "well below 2°C" and "continue their efforts" to limit warming to 1.5°C by the end of the century.

Adaptation: the challenge is helping countries cope better with climate impacts. As indicated in the agreement, 100 billion dollars in loans and donations will have to be allocated each year, starting in 2020, to fund projects that will help countries adapt to climate change (rising sea levels, drought, etc.).

The Paris climate agreement was signed by 177 stakeholders (176 countries and the European Union) members of the United Nations Framework Convention on Climate Change (UNFCCC). The signatory nations have yet to ratify the agreement. On the day the agreement was signed, some 15 nations—mostly small island states—had already ratified the text.

In 2016 Crédit Agricole joined the "Science Based Target" initiative founded by the Carbon Disclosure Project (CDP), United Nations Global Compact, World Resources Institute and WWF. Participating companies agree to set an IPCC science-based greenhouse-gas emissions reduction target to **keep overall global warming to below 2°C.**

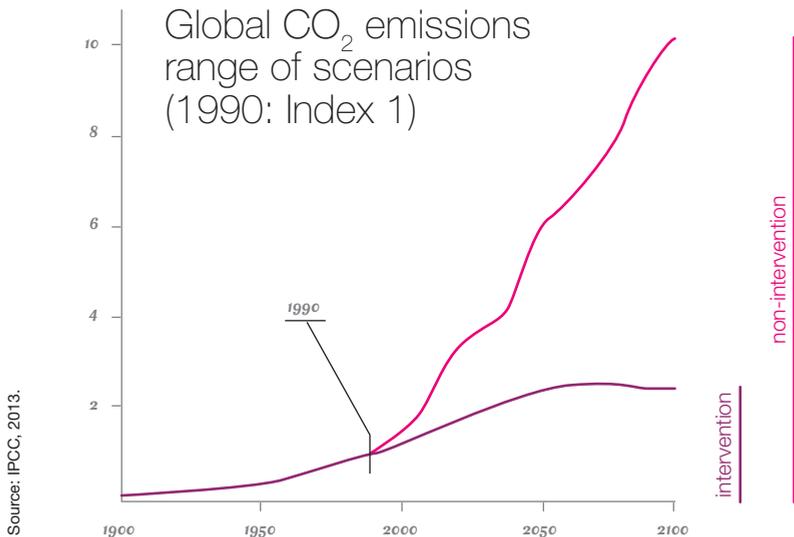
ACTION IS NECESSARY

All the provisional scenarios of the Intergovernmental Panel on Climate Change (IPCC) show that atmospheric temperature and sea levels will continue to rise.

Fortunately, it's possible to limit the scope of climate change.

"Mitigation pathways" aim to keep warming to below 2° by 2100, compared with the pre-industrial era. To do so, **a decision needs to be made worldwide** to significantly reduce GHG emissions. That is the purpose of the United Nations Conference on Climate Change (COP22), to be held in Marrakesh this year.

In addition to mitigation measures, **adapting our territories to climate change has** become a major issue in many industries (agriculture, tourism, construction, automotive, infrastructure, etc.). It calls for involvement by all players at national level.



European Union member states have set three key targets for 2020. These are the "3x20" targets:

- 20%
in GHG emissions vs 1990

20%
of all EU energy from
renewables (REN)

- 20%
energy consumed
vs 2020 projections

In France, these targets are further reinforced by the Energy Transition for Green Growth Act, which sets **out for 2030:**

- 40%
in GHG emissions vs 1990

- 30%
fossil fuel use vs 2012

Bring the percentage of REN
to **32%** for energy
consumption and to **40%**
for electricity
production

AN ECONOMY UNDER CONSTRUCTION

Many factors can help mitigate human impact on climate: changes in behaviour and consumption, governance, innovation and promotion of environmentally sound infrastructure. Renewable energy and energy efficiency—which mean reducing energy requirements and developing alternatives to fossil fuels—are the key levers of the **energy transition**.

Supporting the development, distribution and transfer of technology: demand and opportunities are plentiful and there's an entire economy to be built. **Banks are at the core of this movement.**

They can work with manufacturers, farmers, communities and individuals to help them pave the way for a low-carbon economy.

A key player in the energy transition

Crédit Agricole is aware of its role in the energy transition.

The Group's leading position, business expertise, economic clout (€30 billion GDP) and size (140,000 staff) are all good reasons for playing an active and ongoing role in financing this new economy. The Group's local presence, with Regional banks and LCL, is the "armed wing" of its action in the field and magnifies its strength.

Bertrand Corbeau

DEPUTY MANAGING DIRECTOR
CRÉDIT AGRICOLE S.A.

"The environment is the second-leading source of innovation, after digital technology. Energy and environmental changes are accelerating everywhere, and all our customers are concerned. Crédit Agricole intends to be a driving force in this transition towards a more responsible, lower-carbon economy, and to use our know-how to support all local, national and global initiatives."

Stanislas Pottier

HEAD OF SUSTAINABLE DEVELOPMENT
CRÉDIT AGRICOLE S.A.

"To address the many challenges involved in the energy transition and support each project in our established locations, the Group is mobilizing all functions and developing leading-edge expertise to serve all our business lines."

A FIELD OF EXCELLENCE

In 2010, Crédit Agricole decided to make **Energy Sources** and **Environmental Economics** one of its six growth drivers in its 2020 Medium-Term Plan—along with Housing, Agriculture & Agri-food, Health & Ageing, the Sea Sector and Tourism. Our intention is to provide economic and financial support suited to all our customers' needs. This strategic goal is the core of the Group's Corporate Social Responsibility policy and the Regional banks' Cooperative Regional Pact. Several aspects must be addressed:

- **Offer products and services** that allow customers to favour renewable energy, clean transport and lower energy consumption, and that speed up the transition to a low-carbon economy;

- **Commit** to a proactive approach for reducing CO₂ emissions caused by our financing and investments;

- **Guide** customers to help them decarbonise their investment portfolios and savings;

- **Be there for all our customers** – individuals, farmers, professionals, businesses, public bodies—and be active in all our locations to support the energy transition.

A FOUR-LINE STRATEGY

———— **Line 1** ————
Help our customers optimise
their energy use

———— **Line 2** ————
Step up our presence
in renewable energies

———— **Line 3** ————
Finance projects and services
that help the environment

———— **Line 4** ————
Become the bank of reference
for useful and responsible savings

Line 1

Help

our customers optimise their energy use

Using less energy without reducing comfort levels or economic activity—that's the energy-efficiency challenge. As a retail and investment bank, institutional investor and property developer, Crédit Agricole is at the heart of an integrated ecosystem where it serves as an Energy Efficiency Finance Consultant.



SUSTAINABLE-CITY DEVELOPER

Through its four business lines—real estate development, property management, facility management and valuation of real estate assets—Crédit Agricole Immobilier is a driving force in energy efficiency.

This Group subsidiary was one of the first signatories of the Charter for the Energy Efficiency of Tertiary Buildings, open to all private and public players who are willing to implement energy retrofit measures in their buildings.



Student residence in Noisiel.

CA Immobilier and Amundi Immobilier are members of the **BBCA** association for the development of low-carbon buildings, launched in October 2015. The association grants an approved label according to two standards (reasoned development and controlled operation) and two innovation vectors (carbon storage and circular economy). CA Immobilier has obtained BBCA labels for two projects, including a 230-unit student residence in the Paris region.

HOME UPGRADE FINANCER

Our Regional banks offer the **Calculeo online simulator**, which allows our customers to obtain the information they need about grants for energy-saving projects.

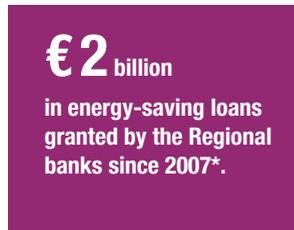
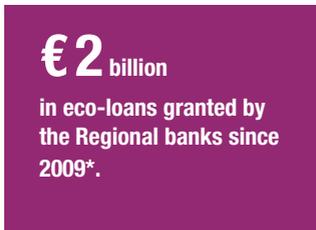
This tool provides extremely precise personalized information, as customers can calculate—in addition to national subsidies—the amount available through regional and local programs.

The simulator will soon be available for use on tablets at our branches. More information about ESCs* will soon be added to **Calculeo**, along with a simple energy audit tool.

*Energy Savings Certificates



Our Calculeo service will soon be available on tablets at our branches.



A COMMITTED ACTOR IN THE BATTLE AGAINST FUEL POVERTY

Promoting home improvements and upgrades for low-income households challenged by life events—this is the aim of **two new agreements** signed by Crédit Agricole's National Federation:

- the existing agreement between **Caisse des Dépôts and the Regional banks**, who allocate guaranteed microloans through their Passerelle programme, has been reviewed to facilitate project-funding.
- the agreement with the **Fédération "Solidaires pour l'habitat" (Soliha)*** provides for a partnership for identifying families in need of housing, working together to set up renovation projects and funding solutions and, more generally, sharing their expertise and solutions.

* The Solidarity Housing Federation carries out five actions: rehabilitation support, individual guidance, social rental management, inclusion housing development and territorial project management.



SUPPORTING BUSINESSES

"The partnership between Regional Bank of Lorraine and the Regional Council"

Whatever their situation—craft worker, SME or MMC—, most of these businesses are affected by the energy transition. The tools of their trade, production lines, storage facilities and buildings will need to be adapted in order to optimise energy consumption.

In this changing context, Crédit Agricole's Lorraine branch has established a special partnership with the Regional Council to guide businesses and cater to their needs. **Each player contributes their know-how and expertise to support the development of energy projects in their area.** **The Regional Council's** energy expert issued personalised audits to interested businesses. Crédit Agricole's Lorraine branch, for its part, tailored its funding solutions to support these local businesses whether they were customers or potential clients.

ADVISING BUSINESSES IN THEIR ENERGY-PERFORMANCE INVESTMENTS

Buildings and equipment are key issues for businesses when it comes to economic, environmental and energy strategies. **CAM Énergie, an investment fund devoted to the energy transition and a subsidiary of 14 Regional banks since 2016**, has specialised in this area to guide businesses in their investment choices, whether they are renovating or building.

Whether for energy audits, energy optimisation solutions for buildings, counselling for certification or approval labels (BREEAM, HQE, etc.) or overseeing environmentally responsible/sustainable construction, this multi-disciplinary, operational approach makes it possible to act at all stages of a building's life cycle, and in all sectors.

Step up

our presence in renewable energies

Solar power, wind power, methanisation—there are numerous alternatives to fossil fuels. But increasing the share of these green energies in overall consumption means heavy investment in R&D and infrastructure. Thanks to its network across the territory, its expert subsidiaries in the international market and its insurance business, Crédit Agricole has become a key player in the renewable energy (REN) finance sector.

RENEWABLE ENERGY FINANCE LEADER THROUGH ITS SUBSIDIARIES

Supported by its subsidiaries and Regional banks, Crédit Agricole, plays a major role in REN development.

#1

banking group
financing REN
in France

Financed
20.5 GW
of REN installed
worldwide by
end-2015

That's the equivalent
of a year's worth of
consumption for
10.1 million
French households

CAMCA: RENEWABLE ENERGY INSURANCE

To protect their construction and ensure their long-term viability, REN facilities are insured by Pacifica (Crédit Agricole Assurances) and/or CAMCA Courtage. CAMCA has developed its expertise and enhanced its insurance range in large renewable-energy projects covering areas such as property damage, business interruption and civil liability for energy suppliers.



CAM ÉNERGIE: INVESTING IN GREEN ENERGY PRODUCTION

CAM Énergie, an investment fund devoted to the energy transition, increased its capital by €24 million in 2016—with 14 of Crédit Agricole's Regional banks as shareholders—to share an effective instrument in renewable energy at Group level and secure Crédit Agricole's position in the energy transition of the regions. This dynamic offers leadership and follow-up to the Regional banks in **promoting, assessing and implementing projects adapted to each locality.**

Through this initiative, Crédit Agricole has reaffirmed both its commitment to work with local players and its position in green-growth financing.



2,800 MW
of electric power installation
financed in wind, solar
and biomass

1,250,000
French homes supplied
with electricity

UNIFERGIE: AN EXPERT IN THE REGIONS

Crédit Agricole ensures maximum involvement in a fast-growing and open-ended REN market, where monitoring investment security is one of the most important issues. Unifergie, a subsidiary specialising in energy and environmental projects for Crédit Agricole Leasing & Factoring, provides financing and advisory for the Regional banks and their customers. In addition to its efforts in energy performance, **Unifergie provided over €250 million to support solar power, wind-power, biomass and gas co-generation** projects through lease-financing and traditional credit in 2015.



CAA: INVESTOR IN RENEWABLE ENERGIES

Crédit Agricole Insurance is an institutional investor that applies extra-financial criteria in its investment decisions. This policy is coupled with a themed investment strategy. By late 2015, **CAA** had invested 148 million euros in renewable-energy programmes.

CACIB: AN INNOVATOR IN THE FINANCIAL MARKETS

The Group reaffirmed its determination to combat climate change with **new objectives announced at the COP21**:

- 60 billion euros towards new structural funding for the next three years (**green bonds**);
- Doubling the amount of funding for renewable energy in France;
- Financing energy-transition projects for a value of 5 billion euros between now and 2020, thanks to joint companies Amundi-Edf, Amundi-Agriculture Bank of China.

"Green Bonds" are bonds invested in renewable energies, energy efficiency, sustainable waste management, sustainable land use (including agriculture and forestry activities), biodiversity, water management and clean transport. Recently, CACIB was world coordinator for the issue of a €2.8-billion green bond for the Bank of China.

#1
in green and social bonds with **\$17.5 billion** in arrangements in 2015

Financed **330** wind farms for **15GW** and 57 solar farms for **2,5 GW**



Finance

projects and services that help the environment

Limiting global warming and adapting to the situation requires a comprehensive approach to lifestyles and territories. It is now possible to encourage greenhouse gas (GHG) reduction in areas as diverse as water and waste management, public buildings, heating networks, biodiversity and transport. Here again, whether for individuals, public authorities or private businesses, the Crédit Agricole Group fully plays its role as finance-consultant.

FINANCIAL EXPERT FOR ENVIRONMENTAL PROJECTS

Unifergie's core areas of expertise include **wastewater processing and waste-reclamation solutions that reduce GHG emissions** and land-use planning that promotes biodiversity and low-carbon transport. This Crédit Agricole subsidiary provides **specialised solutions and expert tools** to businesses, public authorities and farmers involved in the energy transition to help them meet their investment and equipment-renewal needs.



URBAN ENERGY PLAYER

District heating networks, public lighting and energy retrofit of buildings: cities can address energy efficiency through their infrastructure. Unifergie has funded over 65 heating networks and rehabilitated public lighting in 20 municipalities. It has funded the renovation of primary schools, middle schools and universities by allocating over 600 million euros to these facilities.

€ 600 Million
allocated by
Unifergie to urban
infrastructure

CLEAN MOBILITY SUPPORT

Our Regional banks support individuals who choose to buy low-emission vehicles. Preferential loans backed by promotional auto insurance policies are offered for "green" vehicles in proportion to their CO₂ emissions per kilometre. As active forces in the energy transition in their locality, **the Regional banks also finance a variety of infrastructure and facilities that are vital to sustainable transport, such as tramways.**

The Regional Bank of Finistère, for example, financed Bolloré Group's investment in electric buses. The Group also provided €10 million for a production factory in Brittany, where twenty-seat electric buses are manufactured for use in city centres.

The LGV Sud Europe Atlantique project is another example of the major role that the Group plays in the infrastructure facilities finance sector. The project mobilises several Crédit Agricole entities. Alongside LCL, six Regional banks helped fund the project, providing €411 million. Crédit Agricole CIB finalised the funding of the concession, for a total value of €8 billion.



"Blue Solutions" electric city bus



160 Mt
CO₂: estimate
of emissions
generated by the
Crédit Agricole S.A.
Group's financing
at end-2014.

CACIB: INITIATOR OF SECTORAL POLICIES....

Since 2011, **Crédit Agricole CIB** has been using the **P9XCA method**, developed by the Quantitative Finance and Sustainable Development chair (University of Paris Dauphine and École Polytechnique), to quantify the carbon footprint of its investment portfolios and establish a sectoral and geographical map of its carbon emissions. According to the latest estimate from 2014, the Crédit Agricole S.A. Group emits 160 million tons of CO₂.

The method has been shared with primary banks and is now **recommended in the Sectoral Approach Guide for the Financial Sector published by Ademe* and Orse****. According to the mapping results, analysis and exclusion criteria were pinpointed in the highest areas of emission: energy (oil and gas, schist gas, coal-fired power plants, hydro-power plants, nuclear plants), mining and metals, transport (maritime, air and land) and areas that call for heightened awareness such forestry and palm oil.

Sectoral policy concerning agriculture is also being established by CACIB.

* Agency for the Environment and Energy Management
** French Observatory on Corporate Social Responsibility

AND COMMITTED TO INTERNATIONAL THINKING ON GLOBAL WARMING

At COP21, Crédit Agricole CIB announced that **the four commitments made at the UN** during the "2014 Climate Summit" had been achieved. During this conference, Crédit Agricole S.A. also **confirmed its commitment to fight global warming** by supporting the proposals of the "Mainstreaming Climate Action Within Financial Institutions" initiative: "five voluntary principles" that are practical and operational and that were designed to get more financial institutions to take climate issues into account, in order to **facilitate the funding of the energy transition and of a decarbonised economy**.

Become

the bank of reference for useful
and responsible savings

The energy transition will be achieved through research, innovation, energy-efficient buildings, technology transfer... and investment. Drawing on its close ties with individual customers and institutional investors while capitalising on its financial strength internationally, Crédit Agricole is clearly the bank of reference for useful and responsible savings, serving players and their projects throughout the territories.

INNOVATIVE PARTNERSHIPS

Amundi, Crédit Agricole's asset-management subsidiary, has signed a **pioneering partnership** with EDF. The deal led to the creation of a management company capable of raising €1.5 billion from institutional and private investors. It will manage funds for third parties to finance the production of renewably sourced electricity and B2B energy savings. A similar partnership has been signed with the Agricultural Bank of China.

Crédit Agricole CIB is the first French bank and one of three commercial banks worldwide to be certified by the **Green Climate Fund**, whose aim is to facilitate and promote projects for reducing greenhouse gas emissions and adapting to the impacts of climate change in the developing world.

With this certification, Crédit Agricole CIB can now ask the Green Climate Fund to participate in its customers' green projects, in various formats.

DECARBONIZATION INVESTMENT CONSULTANT

Amundi launched **MSCI Low Carbon Leaders Indexes** in order to redirect investment to assets promoting low-carbon economic growth.

Comprising businesses that have significantly lower carbon exposure than the market average, **this is the first product line to address both aspects of carbon exposure:** carbon emissions and the use of fossil energy reserves. In all, 2.5 billion euros have been invested in these new low-carbon index funds.

ASSET MANAGEMENT SPECIALISING IN THE ENERGY TRANSITION

Offering individual and institutional investors savings products that help finance the energy transition is one of the mainstays of Crédit Agricole's contribution towards a low-carbon economy. **Amundi, a leader in socially responsible investment (SRI) with 40% market share in France**, plays a central part in this process. All SRI funds take environmental factors into account.

Amundi is keen on innovation and has launched **Amundi Green Bonds**, in a context where renewable energy and energy-efficient investments have become necessary to counter the risks posed by climate change. This FCP (mutual fund) allows institutional investors to help fund the energy and environmental transition by investing not only in **"green bonds"**, but also in debt instruments of **specialised businesses and leaders in green technology development**.

INTEGRATING ESG CRITERIA IN OWN-FUNDS PORTFOLIOS

The Regional bank in Normandy requested **Oekom**, an extra-financial rating agency, to carry out an analysis of its investment portfolio. The purpose for the Regional bank is to ensure that its investments are in line with its **CSR policy and commitments**. An initial study shows that most of the funds are invested in businesses classified as "prime" by **Oekom**, meaning they have a good ESG (Environmental, Social and Governance) performance level. The survey method is being further defined in liaison with the Ministry for the Environment and Sustainable Development. Following discussion with financial managers from the Regional banks, this study may be pursued with other banks in 2017.

€5 billion
invested in MSCI Low Carbon Leaders Indexes

€159 billion
SRI fund assets under management at end-2015

GREEN SAVINGS ADVOCATE

For investors who want to turn to the equity markets, **Amundi has created a thematic fund called Amundi Valeurs Durables.** This fund invests in European businesses that devote at least 20% of their turnover to developing "green" technologies (REN, energy efficiency, water and waste management), while excluding businesses that invest in hydrocarbon or nuclear energy.

€177^M
Amundi Valeurs Durables fund assets under management at end-March 2016

Green savings are also promoted locally, where Regional banks have the added advantages of territorial foothold and close connections with their customers. For example, Crédit Agricole's Regional banks in Anjou and Maine supported the Loué Farmer's Cooperative (CAFEL), which wanted to become energy self-sufficient by installing wind turbines and solar panels on the livestock buildings. To do so, the Regional bank created and marketed an assigned time deposit (TD) called DAT Éoloué.

Crédit Agricole's Pyrénées Gascogne Regional bank launched a campaign called **#OuvotreEpargne** ("where do your savings go"). The campaign lets customers play a part in their local economy. Private individuals, business owners and associations can invest their savings in eco-friendly projects that can be geolocated.



SOFILARO: VENTURE CAPITAL FOR GREEN PROJECTS

SOFILARO Capital Investment, a subsidiary of Crédit Agricole's Languedoc and South Mediterranean Regional banks, has been supporting the development of **the ENERFIP crowd-funding platform (private savings) for the energy transition** since December 2015. Compared with traditional savings rates, project leaders for ENERFIP offer a relatively high return on investment (between 4 and 6%).

Find us at

**[http://www.credit-agricole.com/Financer-l-economie-reelle/
Acteur-de-la-Transition-Energetique](http://www.credit-agricole.com/Financer-l-economie-reelle/Acteur-de-la-Transition-Energetique)**

Learn more about our CSR actions at

<http://www.credit-agricole.com/Responsable-et-engage>

For more information about the Cooperative Territorial Pact

http://www.creditagricole.info/fnca/ca10_1299815/pacte-cooperatif

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