

# REGION PAYS DE LA LOIRE GREEN BOND FRAMEWORK

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## I- Background for the Region Pays de la Loire Green Bond

Since the second industrial revolution in the early 20<sup>th</sup> century, the world economy has relied on fossil energy resources. However, according to the International Energy Agency, the peak of oil production has probably been exceeded in recent years. Thus, this phenomenon of scarcity of resources exposes our economic model to the occurrence of recurring crises, in a context of rising fossil fuel prices. In order to ensure societies' sustainable economic development, it is essential to deeply re-examine our traditional growth model.

On top of these economic challenges is also the challenge of climate change. The manifestations of climate change are already tangible, and will worsen if no action is taken, as highlighted in the latest report of the Intergovernmental Panel on Climate Change (IPCC).

The ecological and energy transition is the great challenge of the 21<sup>st</sup> century. A new economic paradigm, termed as the third industrial revolution by Jérémy RIFKIN, is emerging. This third industrial revolution is made possible by the convergence of renewable energies and Internet, electronic and satellite technologies. It is an opportunity for growth, dubbed as green growth, because it is compatible with the fight against climate change.

Supporting the ecological and energy transition is the ambition of the Region. It has both the responsibility and the obligation to do so.

Legitimacy first : the laws of August 7, 2015 on la Nouvelle Organisation Territoriale de la République (NOTRé) and August 17, 2015 on la Transition Énergétique pour la Croissance Verte (LTECV) have redefined the competencies in terms of ecological and energy transition. The Region has been given the leadership over local authorities to coordinate energy, air and climate policies alongside the State. The Region has also become a leader in intermodality-related topics.

On the strength of these new legislative provisions, the Region intends to be a head / conductor of the ecological and energy transition and to develop tools to accelerate the implementation of concrete projects throughout the regional territory.

Obligation, second: Indeed, Région Pays de la Loire will not be spared by climate change. During the 20<sup>th</sup> century, temperatures rose by an average of 0.8 ° C and by 2030, the increase will range between 0.8 and 1.4 °C. It will also be one of the most impacted in France by the rise of the Atlantic Ocean, given the low level of the coast.

The potential impact that climate change could have on the economy, health, and ecosystems of the Région Pays de la Loire , justify the efforts of the Régionin favor of the ecological and energy transition. These efforts are implemented by Région Pays de la Loire with strong convictions:

- The need to implement a proactive policy with regards to the strong demographic growth that the region will witness (the population is expected to reach 4.4 million inhabitants in 2040, from 3.7 million in 2013),

and to the large share of the building and transportation sectors in the final energy consumption of the region (35% and 29% respectively).

- The willingness to go beyond the current status quo and promote sustainable development, turned towards the green growth model. The energy transition roadmap is at the heart of the regional economic strategy. The goal is to build in the next forty years a clean sustainable infrastructure, which will generate thousands of jobs in the region.
- The hope that each inhabitant plays a role in making this transition successful, particularly with regards to energy savings.
- The willingness to work closely with other stakeholders, primarily the French State, ADEME, the Départements, the syndicats d'énergie départementaux<sup>1</sup>, and the réseau des chambres consulaires<sup>2</sup> that has set up a new approach called Troisième Révolution Industrielle et Agricole<sup>3</sup>(TRIA).
- The willingness to rely new innovative initiatives from the local territories, and in parallel, to promote the global energy transition.
- The need for the Région itself to lead by example by promoting energy efficiency, sustainable buildings, and responsible travel policies.

Therefore, Région Pays de la Loire has taken initiative and has committed through its regional roadmap for energy transition over the period 2017-2021. This roadmap is structured around 5 thematic pillars of the Troisième Révolution Industrielle et Agricole:

- **Develop renewable energy production:** including wind, solar, marine energy, biomass, and geothermal energy. Renewable energies now account for about 8% of regional energy consumption and the goal is to triple renewable energy production by 2021.
- **Transform building stock and boost the energy efficiency of corporates:** a massive investment is needed to promote energy efficiency and energy savings in the real estate sector, including public and tertiary buildings as well as housings. The challenge is to renovate 100,000 dwellings by 2021. It is also a matter of transforming the existing housing stock into a multitude of mini-power plants producing their own renewable energy, for both their consumption and trading purposes on the network. It is also about improving the energy efficiency of industrial and agricultural processes.
- **Develop sustainable mobility:** The objective is to be the number one Region in France in terms of sustainable mobility. Given the predominance of personal vehicles and the distances traveled daily, electric vehicles are of particular importance to the Region. For freight transportation, the Region envisages the development of gas mobility, including the development of biogas production through methanisation. It is also experimenting with hydrogen-powered mobility. Finally, the Region, as a leader in the promotion of modal shift, proposes to continue the development of public and sustainable transport.

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<sup>1</sup> Departmental energy production structures

<sup>2</sup> Network of consular chambers

<sup>3</sup> Third Industrial and Agricultural Revolution

- **Store energy, sequester carbon and develop innovative usage:** intermittent by nature, and not necessarily produced when it is needed, renewable energy requires storage solutions. The Region is willing to support innovation on energy technologies and usage, to help our companies to conquer markets in these emerging sectors.
- **Build smart grids:** effectively linking multiple locations of gas and electricity production/ consumption in order to regulate them. The challenge is to make western France an example of best practice when it comes to smart grids. The SMILE project (Smart Ideas to Link Energies) is at the heart of the actions of the roadmap. Carried by Région Pays de la Loire and Région Bretagne, it will be developed, on the Loire's side, in two departments: Loire-Atlantique and Vendée. The aim of the SMILE project is to build by 2020 an exportable industrial showcase of smart grids. The projects that are being set up within SMILE concern all five thematic pillars.

On top of the 5 thematic pillars 5 additional transversal pillars:

1. raise awareness to change behavior,
2. develop and promote training courses for jobs on energy transition ,
3. accompany each territory in a concrete project through contracting policies,
4. ensure shared governance and amplify monitoring and observation tools,
5. be an exemplary regional authority.

To achieve these objectives, the Region will mobilize at least € 121 million over 2017-2021. In addition, echoing its roadmap for the energy transition, the Region, which will invest in high schools in 2018-2024 for a total amount of € 780 million, aims to dedicate 15% of the total public investment into high schools to improvements in energy efficiency, for a total amount of over 115 M €. This is more than 236 M € of projects that will be dedicated to the energy transition. In order to finance its ambition in favor of the energy transition, Région des Pays de la Loire plans to issue a Green Bond.

## II- Région Pays de la Loire's Green Bond: Alignment to the « Green Bond Principles » (GBP)

Région Pays de la Loire's Green Bond framework was designed in line with the « Green Bond Principles », of which the latest version was released in June 2018<sup>4</sup>. This Green Bond follows the success of the green OAT issued by the French Republic in 2016, and illustrates the leading role of France in implementing the ambitions of the December 2015 Paris Climate Agreement<sup>5</sup>

<sup>4</sup> [www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/](http://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/)

<sup>5</sup> [www.aft.gouv.fr/articles/l-oat-verte\\_12845\\_lng1.html](http://www.aft.gouv.fr/articles/l-oat-verte_12845_lng1.html)

## 1- Use of proceeds

In order to highlight the diversity of its environmental actions, the Region has chosen to allocate funding to "Green Projects" which contribute to the objectives of its roadmap for the energy transition.

Région Pays de la Loire 's Green Bond is intended to exclusively finance local projects located in the Region .

The projects financed by the Green Bond are as follows:

- **Renewable energy:** Projects aiming to develop local renewable energy production and / or energy recovery
- **Sustainable Buildings:** Projects to improve Energy Efficiency and Energy Savings in Buildings (Public and Private)
- **Sustainable mobility:** Projects to develop low-carbon transport modes and public rail transport

These projects are detailed in the following table:

Project categories (GBP 2017)	Sub-categories	Eligibility Criteria	Environmental and social benefits	Examples of projects
Renewable energy	The Renewable Energy Fund	<p>Renewable energy production, transmission, energy recovery, research and innovation in renewable energy</p> <p>To be eligible, the projects must concern the following energies: wind, solar, marine energy, biomass, geothermal, photovoltaic, electric, wood, biogas</p>	<p>Climate change mitigation (reduction of GHG emissions)</p> <p>Energy savings</p>	
	Renewable energy			<p>As part of territorial contracts:</p> <ul style="list-style-type: none"> <li>- Municipality of Tiercé : Connection to the photovoltaic field of 6 hectares</li> <li>- ComCom des Terres de Montaigu: Maxime Bossis sport complex - acquisition of photovoltaic panels</li> <li>- Challans Gois Communauté : Construction of an aquatic center, acquisition of photovoltaic panels and a wood boiler</li> <li>- Communauté d'agglomération des Mauges : methanation Projet</li> </ul>

	<p>Ocean energies: tidal energy, wave energy, thermal ocean energy, osmotic energy</p>			<p>European ERANET program for ocean energies: The Ocean ERA-NET Cofund project is part of the Horizon 2020 program launched by the European Union. This major program, led at the European institutions level, aims to develop innovative projects that should strengthen European competitiveness. It focuses on three priorities: scientific excellence, industrial leadership (i.e. investment in key industries for European competitiveness) and to respond to societal challenges such as global warming. The action led consists of a transnational call for projects with other partners. The European Commission will finance third of the project costs and will aim to demonstrate and validate ocean energy technologies. Laboratories and Companies based in Région Pays de la Loire will test technologies in this field.</p>
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<p><b>Sustainable buildings</b></p>	<p><b>Public buildings:</b> construction and / or thermal renovation of education, housing or sport complex public facilities contributing to respect of the environment and accessible to people with reduced mobility</p> <p><b>Private Buildings:</b> Regional Aids to energy saving / thermal renovation works</p>	<p><b>For public buildings directly managed by the Region (e.g. high schools and athletic centres))</b></p> <p>Sustainable buildings meeting the RT 2012 standard</p> <p>Sustainable buildings that meet the HQE certification of the NF standard "tertiary buildings - HQE approach" with an environmental quality profile presenting, at least, 8 stars and a minimum level of certification "VERY GOOD"</p> <p>AND/OR</p> <p>Construction projects meeting the "E+/C-Effinergie BB 2017" and "Bio-based building" labeling level 1 (18 kg / m<sup>2</sup> floor area)</p> <p><b>For public buildings not directly managed by the Region (e.g. university residences)</b></p> <p>Renovation work to reach 110 kWhep / m<sup>2</sup>.year and alignment to 4 criteria on a list of 10 sustainable development criteria</p> <p>AND/OR</p> <p>Sustainable buildings meeting the RT 2012 standard</p>	<p>Climate change mitigation (reduction of GHG emissions)</p> <p>Energy savings</p>	<p>High School construction in Nort sur Erdre</p> <p>High School construction in St Gilles Croix de Vie</p> <p>Construction of CREPS (Centre de Ressources, d'Expertise et de Performance Sportive)</p> <p>Renovation of university residences</p> <p>Grant to individuals for energy renovation of their main residence</p>
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<b>Sustainable mobility</b>	Rail transport, clean energy vehicles	Projects that include electric cars, hybrid cars , rail transport, infrastructures for clean energy vehicles	<p>Climate change mitigation (reduction of GHG emissions)</p> <p>Energy savings</p>	Modernisation of the Clisson-Cholet rail line: renewal of tracks and change of signage

With regard to the Renewable Energies Fund, the Region is committed to integrating environmental and social criteria into the fund's investment processes.



## 2- The project evaluation and selection process

### 1. Political support

During the regional session of 21, 22 and 23 December 2017, in the context of a progress report on the Région's road map for the energy transition, the President of Région Pays de la Loire announced her willingness to finance this roadmap by issuing a green bond.

During the regional assembly meeting on March 22, 2018, the President of Région des Pays de la Loire clarified the outlines of this Green Bond project and in particular the major categories of projects that could be financed by this Green Bond. 3 categories of projects were selected:

- Renewable energies
- Sustainable buildings
- Sustainable mobility

### 2. Practical implementation

The process of evaluation and selection of eligible Green Projects will be coordinated by the Direction des Finances et de la commande publique<sup>6</sup> in connection with the Sustainable Development team.

The Sustainable Development team is composed of:

- Direction des Finances et de la commande publique : Head of Finance Department, Head of Strategy, Budget and Debt Department, Head of Financial Engineering and Financial Communication Department
- La Directrice générale adjointe Transports, infrastructures, énergie, patrimoine, environnement<sup>7</sup>
- Le Directeur Transition énergétique Environnement<sup>8</sup>
- Le Directeur du patrimoine immobilier<sup>9</sup>
- La Cheffe de projets stratégie d'achat responsable<sup>10</sup>

The selection process will mobilize all the relevant operational departments.

Meetings will be organized based on relevant projects among the 3 main categories selected by the President, as well as on their integration in the multi-annual investment program of the Region, with a precise description, planned schedule, budgeted costs. A preliminary list of projects will then be proposed to a Technical Committee composed of the Finance Department, the Sustainable Development Team as well as technicians and experts from the operational departments. This Technical Committee will be responsible for determining the list of potentially eligible Green Projects with respect to the following 4 pre-selection criteria.

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<sup>6</sup> Finance and Public Order Department

<sup>7</sup> The Deputy General Director for Transport, Infrastructure, Energy, Patrimony, Environment

<sup>8</sup> The Director for Energy Transition and Environment

<sup>9</sup> The Director of Real Estate

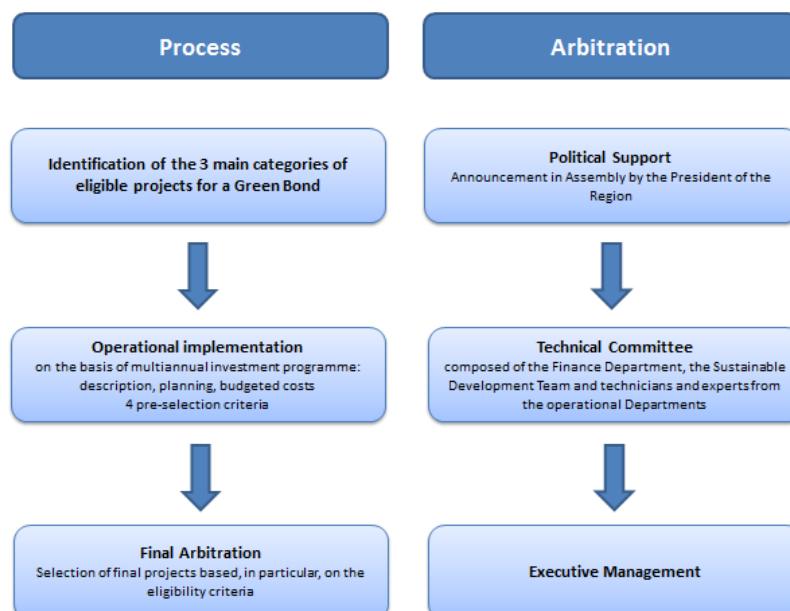
<sup>10</sup> The Project Manager in charge of responsible purchasing strategy

- ✓ **Fight against climate change / pursuit of the ecological and energy transition** of the Region's territory: The project must contribute to the reduction of greenhouse gas emissions and / or the energy transition of the regional territory, in accordance with the regional roadmap on Energy Transition
- ✓ **Sustainable and solidarity development of the territory**: the project promotes the strategy of sustainable and shared development of the territory, and contributes to improving the quality of life of Région Pays de la Loire's inhabitants.
- ✓ **Solidarity development, fight against inequalities and people's safety**: the project contributes to the fight against discrimination, the reduction of inequalities and manages risks in terms of health, working conditions and / or people's safety (users, local residents, staff).
- ✓ **Economic and responsible development of the regional territory**: the project enhances the attractiveness of the territory from a sustainable and balanced economic development perspective. Furthermore, the project must contribute to the creation or maintenance of jobs and / or sustainable economic activities in the Region.

### 3. Validation by Executive Management

The list of potentially eligible Green Projects will then be submitted to the final arbitration of the Executive Management which will validate the alignment of these projects with both the axes defined by the President and the criteria of eligibility as defined in section 1 above and, finally, with the Region's environmental policy.

Summary of the evaluation process:



### 3- Management of proceeds

The monitoring of the net proceeds of the Green Bond will be conducted as per the regulatory framework applicable to the French local authorities, which requires the deposit of their free funds in a single account in the Public Treasury (Article 26 of Loi Organique relative aux Lois de Finances du 1er août 2001<sup>11</sup>).

In order to monitor and report on projects, the Direction des Finances et de la commande publique and the relevant operational departments will be in regular dialogue. Thus, the financial staff in the operational services will be particularly vigilant with regards to the financing of the selected projects to ensure that any "double counting" of green financing towards the same project is avoided.

Semi-annual meetings will be organized between the Direction des Finances et de la commande publique and staff of the operational Departments to review selected projects.

The allocation of funds to the selected projects will be reviewed in two stages: first, through the Région's financial tool which has to match any expenditure to the relevant program authorization, and second, through the control of the Direction Régionale des Finances Publiques<sup>12</sup> (DRFiP) which verifies that the requested funds corresponds to a regularly committed, liquidated and scheduled expenditure.

This monitoring will be carried out until the total amount of the net proceeds equals the total amount of the projects and / or until the maturity date of the bond.

### 4- Reporting

On an annual basis, on the anniversary date of the issue and until the bond proceeds are fully allocated to Eligible Green Projects, the Region will publish, on its website, a progress report on the projects financed by the Green Bond. This report will be written and published with a dual purpose:

#### 1. Report on the allocation of Green Bond proceeds to Eligible Projects

Investors will be provided with the following information:

- The list and description of eligible projects and the amount allocated to each project
- For each project, the share financed by the Green Bond, with regard to the total cost of the project
- The total amount of unallocated funds
- The share of refinancing vs new financing. For information purposes, the refinancing rate may not exceed 20% of the amount issued and may not relate to expenditures prior to 2017.

#### 2. Report on the environmental impact of the projects financed by the Green Bond, based on the following performance indicators (the calculation methodologies and assumptions will be presented in the annual reporting framework):

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<sup>11</sup> The Organic Law on Finance laws of August 1, 2001

<sup>12</sup> Regional Directorate of Public Finance

Project categories (GBP 2017)	Sub-categories	Examples of indicators
Renewable energies	The Renewable Energies Fund	<ul style="list-style-type: none"> <li>• Number of projects supported</li> <li>• Ex-ante installed power (MW)</li> <li>• Ex-ante estimate of annual renewable energy produced (MWh)</li> </ul>
	Renewable energies	<ul style="list-style-type: none"> <li>• Ex-ante installed power (MW)</li> <li>• Ex-ante estimate of annual renewable energy produced (MWh)</li> <li>• Ex-ante estimate of reduced annual greenhouse gas (GHG) emissions (KGeqCO<sub>2</sub> / m<sup>2</sup>)</li> </ul>
	Ocean energies: tidal energy, wave energy, thermal ocean energy, osmotic energy	<ul style="list-style-type: none"> <li>• Number of projects supported</li> <li>• Amounts financed by project</li> </ul>
Sustainable buildings	<p><b>Public buildings:</b> construction and / or thermal renovation of public buildings (education, housing or sport complex) contributing to respect for the environment and accessible to people with reduced mobility</p> <p><b>Private Buildings:</b> Regional Aids to energy savings / thermal renovation works</p>	<p><b>For Public Buildings (High Schools + Creps) :</b></p> <ul style="list-style-type: none"> <li>• Built area (in m<sup>2</sup>)</li> <li>• Number of beneficiaries</li> <li>• Ex-ante estimate of annual energy savings (kWh / m<sup>2</sup>)</li> <li>• Ex-ante estimate of reduced annual greenhouse gas (GHG) emissions (KGeqCO<sub>2</sub> / m<sup>2</sup>)</li> <li>• Performance of the airtightness of the envelope (m<sup>3</sup> / h.m<sup>2</sup>)</li> <li>• Level of biobased material used</li> </ul> <p><b>For university residences:</b></p> <ul style="list-style-type: none"> <li>• Renovated surface (in m<sup>2</sup>)</li> <li>• Number of renovated dwellings</li> <li>• Ex-ante estimate of annual energy savings (kWh / m<sup>2</sup>)</li> <li>• Ex-ante estimate of reduced annual greenhouse gas (GHG) emissions (tCO<sub>2</sub>e)</li> </ul> <p><b>For private buildings</b></p> <ul style="list-style-type: none"> <li>• Number of renovated dwellings</li> <li>• Ex-ante estimate of annual energy savings (kWh / m<sup>2</sup>)</li> <li>• Ex-ante estimate of reduced annual greenhouse gas (GHG) emissions (tCO<sub>2</sub>e)</li> </ul>
Sustainable mobility	Rail transport, clean energy vehicles	<ul style="list-style-type: none"> <li>• Passenger kilometers (cumulative distance traveled by passengers in km)</li> <li>• Modal shift (number of additional passengers / days)</li> <li>• Ex-ante estimate of reduced annual greenhouse gas (GHG) emissions (tCO<sub>2</sub>e)</li> </ul>

The Region may select alternative or complementary indicators to those identified (quantitative or qualitative) that the Region deems appropriate to report on the performance and impacts of funded projects.