PROJECTS FINANCED BY THE GREEN AND SUSTAINABILITY BOND

2023

600 M€

ISIN : FR001400FG43

Région îledeFrance

POUR GAGNER ensemble

EDITO

Valérie Pécresse,
President of the
Île-de-France Region

Long convinced of the climate emergency that obliges us, the Île-de-France Region has made the fight against global warming one of the priorities of regional action since 2016. It is continuing its efforts to combat climate change with a strategy that will provide structure over the long term. This is why our community's policies are increasingly considering environmental and social issues, year after year. The Île-de-France Region and its teams are keen to take into account all the concerns of its residents and the issues they face. The Region's investments in this area make it a major issue for the future.

In 2023, The region continued to pursue the regional commitment to exclusively green and responsible financing, a guideline that was initiated and strengthened in 2019, with a clear decision by the Executive to exclusively use this type of financing. The Region is thus perpetuating its position as a European leader in sustainable financing, with the completion in 2023 of a sustainable bond issue in the amount of €600 million. At the end of 2023, 91% of the Region's total outstanding debt was green and responsible, and we should achieve 100% within three years.

The 2021 March Green, Social and Sustainable Emissions Framework, which governs this Allocation and Impact Report, incorporates the UN Sustainable Development Goals (SDGs) as well as the most ambitious Environmental, Social and Governance (ESG) criteria. Through this framework, the most stringent standards on the market are considered, like European taxonomy, starting with investments in the low-carbon transport sector, which are therefore subject to full alignment.

Once again this year, the care taken in selecting projects allows us to present achievements combining both environmental, social and economic issues. The renovation of the Pierre de Coubertin Lycée in Meaux attests to this multitude of challenges. The project will reduce CO_2 emissions, support the local economy and provide a good teaching environment for developing careers in the aviation industry. The completeness of the projects presented in this impact report is a guiding principle for the region.

This new allocation and impact report details the regional eligibility criteria for each selected project in order to illustrate their environmental and social dimension. This thus contributes to the Region's desire to maintain transparent communication on all its investments.

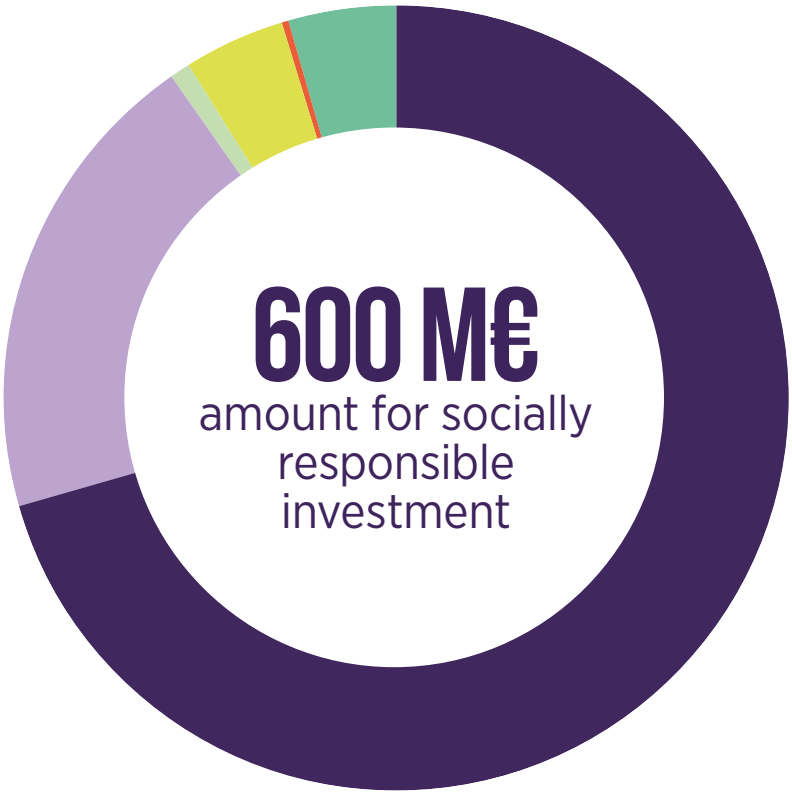
It should be noted that the Region's commitments to green and responsible finance once again were awarded prizes in 2023 and 2024. These prizes awarded to the Region's teams highlight the effectiveness and quality of the Region's sustainable finance policy:

- Award for "Sustainable bond issue of the year by a local authority", and award for "Innovation in the use of bond issue funds", presented by *Environmental Finance* in 2023, illustrating the work carried out within the framework of regional bond issues;
- "Best Thought Leadership Team in Green Bonds (Global)" and "Best Bond Issuer in its Class (Global)", awarded by *Capital Finance International* in April 2024;

The repeated support and confidence of many investors in the Region since its first sustainable bond issue confirms the choice that public action committed to environmental and social issues is a choice for the future. I would therefore like to thank them once again for their commitment to projects that are helping to make the Île-de-France Region an ambitious local authority when it comes to promoting ecological and energy transition.

SUMMARY

2023 GREEN AND SUSTAINABILITY BOND



91.3%
green projects

8.7%
social projects

423.57 M€
clean transportation
or **70.6%**

118.29 M€
green buildings
or **19.7%**

6.12 M€
renewable energies
or **1%**

25.03 M€
access to essential services: education
or **4.2%**

1.09 M€
affordable housing
or **0.2%**

25.9 M€
affordable basic infrastructures
or **4.3%**

PROJECTS FINANCED BY THE 2023 ISSUANCE

	ALLOCATION RATE 2023	% ALIGNMENT TO THE 1ST OBJECTIVE OF THE EUROPEAN TAXONOMY	AMOUNT (€M)	
	100.0%	70.6%	600.00	
Green projects categories	**91.3%**	**70.6%**	**547.978**	
Green buildings	**19.7%**		**118.289**	**p. 25**
New secondary school and boarding school construction projects	**1.1%**		**6.403**	
New high school in Vincennes (94)			6.403	p. 26
Secondary school renovation project	**14.1%**		**84.934**	
Marianne high school in Villeneuve-le-Roi (94)			12.602	p. 28
Pierre Mendès-France high school in Villiers-le-Bel (95)*			12.158	p. 30
Marcel Cachin high school in Saint-Ouen-sur-Seine (93)			15.329	p. 32
Henri Sellier high school in Livry-Gargan (93)*			14.622	p. 34
Jules Ferry high school in Versailles (78)			14.911	p. 36
Pierre de Coubertin high school in Meaux (77)*			3.425	p. 38
Evariste Galois high school in Sartrouville (78)*			11.887	p. 40
Higher education construction project	**4.5%**		**26.952**	
Conservatoire national des arts et métiers (CNAM) – Synergie 2 in Saint-Denis – Aubervilliers (93)			9.851	p. 42
Conservatoire national des arts et métiers (CNAM) – Landy 2 in Saint-Denis – Aubervilliers			15.698	p. 44
"Mathstic" building in Saint-Denis – Aubervilliers (93)			1.403	p. 46
Clean transportation	**70.6%**	**70.6%**	**423.569**	**p. 49**
Projects: subways	**15.1%**	**15.1%**	**90.651**	
Subway line 11			88.738	p. 50
Subway line 14			1.913	p. 52
Projects: tramways	**14.4%**	**14.4%**	**86.294**	
Tramway line 10			42.657	p. 54
Tramway line 12			28.497	p. 56
Tramway line 13 express			15.140	p. 58
Projects: railway links	**39.9%**	**39.9%**	**239.372**	
EOLE			239.372	p. 60
Projects: Development for buses on own sites and layout of roadways	**1.2%**	**1.2%**	**7.252**	
TZEN 4			7.252	p. 62
Renewable energies	**1%**		**6.120**	**p. 65**
Geothermal networks	**1%**		**6.120**	
Pleyel geothermal network in Saint-Denis (93)			0.796	p. 66
Renewable Heat AAP project at Évry-Courcouronnes (91)			2.577	p. 68
Renewable Heat AAP project in Champigny-sur-Marne (94)			2.747	p. 70
Social projects categories	**8.7%**		**52.022**	
Access to essential services: education	**4.2%**		**25.031**	**p. 73**
Louise Michel high school in Champigny-sur-Marne (94)			15.659	p. 74
Nicolas-Joseph Cugnot high school in Neuilly-sur-Marne (93)			9.372	p. 76
Affordable housing	**0.2%**		**1.086**	**p. 79**
Construction of a student residence in Palaiseau (91)			0.676	p. 80
Construction of a family residence in the 20th district in Paris (75)			0.410	p. 82
Affordable basic infrastructures	**4.3%**		**25.905**	**p. 85**
CREPS Île-de-France			25.905	p. 86

* These renovation projects also involve construction and extension work

PRESENTATION OF THE ILE-DE-FRANCE REGION

As a leading regional authority, the Ile-de-France Region manages a budget of over €6billion, the highest among the French regions, half of which is dedicated to long-term investment to promote the vitality and attractiveness of the region. The Region therefore plays a pivotal role in sustainable development. It is the competent authority for defining strategic guidelines for local public action in the region: regional development, transport (with Ile-de-France Mobilités), economic development, research and innovation, climate and energy, biodiversity and waste management. Over the period 2020-2024, the Region is spending almost €10 billion on the environment as part of its plan to mobilise for ecological transformation. As the spearhead of the foundation of a sustainable regional ecosystem, capital expenditure is a priority

AN AMBITIOUS ENVIRONMENTAL ROAD MAP

As part of its actions, the Region has established a cross-cutting environmental roadmap that is resolutely geared towards the regions and permeates all regional policies:

- Presentation in 2023 July of a new **Ile-de-France - Environmental Region Master Plan (the SDRIF becomes SDRIF-E)** "2040 objectives", which was approved by the Regional Council for vote on 11 September 2024. This strategic document with a regulatory scope directly influences the development of the region (to control urban and demographic growth), housing, mobility and the environment. It is largely based on sovereignty and sustainability objectives, focusing on adopting a trajectory of sovereignty, creating and sanctifying natural spaces and limiting soil artificialisation;

- **Regional Climate Change Adaptation Plan**, launched in 2022. The plan, estimated to cost €1 billion, is based on a three-pronged strategy: "Protect Ile-de-France residents, especially the most fragile"; "Protect ecosystems"; "Protect the economic fabric of France". It aims to address all the consequences of climate change;

- Establishment of the **Ile-de-France regional GREC**, the Group for studies on climate change and its environmental impacts. The role of this working group is to scientifically explain ongoing climate change in Île-de-France, anticipate future climate changes and help the Region to derive the consequences thereof. The Île-de-France Region is committed to implementing an environmental impact assessment of regional expenditure, also known as the "Green Budget", in view of the six climate and environmental issues arising from the European Taxonomy. An initial presentation of this assessment was made during the vote on the 2024 initial budget, in December of 2023.

- Environmental objective of **reducing greenhouse gas emissions** linked **to transport and mobility**. In March 2024, the Region voted for its draft Île-de-France Mobility Plan, which aims to meet the travel needs of Île-de-France residents by 2030 and put mobility in the region on the road to "zero carbon". This plan sets out the principles governing the organisation of the mobility of people and the transport of goods, traffic and parking for the period 2020-2030. It succeeds the Ile-de-France Urban Travel Plan (PDUIF) 2010-2020;

- New **regional economic development strategy "Impact 2028"** for 2022-2028, which integrates the environmental issue (axis 4) among its major challenges as part of its objective to support the French economy in terms of business, employment and innovation;

- Repositioning support for the **themed research networks** (major interest areas), mainly by targeting the major challenges in terms of climate, energy and resources. The AI Challenge for the Energy Transition, which encourages the development of decision-making tools relating to the energy transition, illustrates this dynamic;

- **High environmental standards**, with the adoption of various plans, strategies, schemes and mechanisms over the last four years, such as the "New Air for Paris Region" plan, the regional waste prevention and management plan, the "Energy-Climate" plan, which focuses on innovation and the development of renewable energies, and the "Solar", "Hydrogen" and "Methane" plans, as well as the "Green" plan (and the implementation of the

192 proposals put forward at the first Paris Region COP), the "Anti-traffic jams" and "Cycling" plans, and the development, in consultation with local stakeholders, of the Regional Biodiversity Strategy 2020-2030; **Support for organic farming** in the Ile-de-France region and short distribution channels, with the adoption in 2017 of the "Regional strategy for forestry and wood", the "Regional strategy for the development of bio-sourced materials and products" in 2018 and the "Regional plan for local, sustainable and inclusive nutrition" in 2021.

In addition, regardless of the area of intervention, the Region makes sure that all its guidelines are coherent and that sustainable development and social responsibility are central to its action. Thus, the Region aims to be an exemplary authority in terms of the institution's operation.

SEVERAL EXEMPLARY ACTIONS UNDERTAKEN BY THE REGION

- The Region affirms its commitment to the future of Île-de-France residents by setting up **youth as a major regional priority for 2023**. The aim is to improve accommodation and study environments for secondary schools and educational communities, by stepping up its emergency plan with a record budget of €2 billion intended to speed up renovation work in particular. In October 2017, in order to encourage trade union involvement by **recognising the skills of trade union representatives**, the Region, together with five out of seven trade union organisations (representing 72% of the Region's staff), signed a Charter recognising the trade union career path as part of career development and professional advancement.

  The Île-de-France Region has embarked on a certification process with AFNOR and has been awarded the "Gender Equality in the Workplace" label, which recognises its good practice and attests to its exemplary approach in this area. As part of its **active policy to promote gender equality and combat violence against women** (designated a Major Regional Cause in 2017), the Region has also signed a framework agreement on gender equality in the workplace with five trade unions. It should also be noted that the Region has put in place a second action plan on "equality in employment between women and men" for the 2024/2026 period. In March 2019, the Region also adopted a framework agreement to improve public service efficiency through the quality of life at work, autonomy and responsibility. By continuing to modernise, the Region has committed through several schemes to encourage freedom in the organisation of work (working from home, flexible working hours), whilst remaining anxious to protect its staff and by becoming a pioneering administration in recognising the right to disconnect.

- Beyond that, to make public procurement contracts more sustainable and accessible, the Region wanted to overhaul its purchasing policy as early as 2016, having taken part in creating the Maximilien platform assembling all Ile-de-France public procurement contracts. In 2018, the Region had already signed a "Responsible Purchasing and Supplier Relationships" charter as part of a drive to improve relations with its suppliers, particularly companies in the social economy.

A COMMITMENT CONFIRMED BY EXTERNAL ASSESSMENTS

The Region benefits from excellent credit quality, equivalent to that of the French State, which enables it to invest in its area under the best possible conditions over the long term. It is currently rated Aa2, with stable outlook, by Moody's and AA-, stable outlook, by Fitch.
The extra-financial environmental, social and governance (ESG) performance of the Ile-de-France Region is also recognised. In 2021, the Vigeo Eiris agency, which has been assessing the Region since 2009, scored the Region's performances as 63/100 overall, which are qualified as "advanced". The agency is thus acknowledging the sustainable performance of the Ile-de-France Region by placing it third out of the 29 European local authorities assessed.

A REGULAR PLAYER IN THE GREEN AND SUSTAINABLE BOND MARKET

The Ile-de-France Region is a frequent and regular issuer in the green bond market. It raised more than €5.8 billion with its green and sustainable issues between 2012 and 2023, through nine financing transactions including six benchmark public issues. Green and sustainable financing accounts for 91% of the total outstanding regional debt at the end of 2023.

The green and sustainable transactions launched by the Region are consistent with the Sustainability Bond Guidelines and thus governed by both the Green Bond Principles and the Social Bond Principles. They aim to implement best practices, for example through the use of a third-party opinion on the 2015 reporting, or by requesting an update of the second opinion on the Region's commitments in the context of its activities in 2021. The framework established by the Region on the green and sustainable issues is described on the next page.

HISTORY OF GREEN AND SUSTAINABLE BORROWING BY THE REGION AND THE COMMITMENTS MADE

	2012	2014	2015*	2016
	€350 million (2012-2024)	**€600 million** (2014-2026)	**€625 million** [1]	**€650 million** (2016-2025)
In compliance with: The Green Bond Principles	Yes — Before the creation of the green bond principles	Yes	Yes	Yes
Commitment to report on fund use	Published on anniversary date	Published on anniversary date	Published on anniversary date	Published on anniversary date
"Second opinion"	—	VE	Renewal of 2014 opinion	VE
External and independent attestation	—	—	Deloitte.	—

Key:

* **Public issue** €500 m (2015-2027)
Private investment €100 m (2015-2021)
Tap €25 m (2015-2024)

[1] Cumulative amount

Recent awards

The Ile-de-France Region has been awarded several prizes in recent years for its green and sustainable financial strategy, in particular:

- **Best Global Green Bond Leadership Team Awarded to the Île-de-France Region by *Capital Finance International* in 2023 and 2024**
- **Award for "Best-in-Class Global Bond Issuer"**

  In April 2024, Capital Finance International (CFI) awarded the Île-de-France Region the prize for the "best sustainable bond issuer in France" in connection with the €800 million bond issue in 2024. This award recognises the Region's pioneering commitment to environmentally friendly and socially responsible investment practices.
- ***Environmental Finance's* annual award for the best sustainable development bond issue of a local authority and Innovation Award for its sustainable bond issues in April 2023**

  These two awards highlight the efforts initiated by the Region in favour of integrating the requirements of the European Taxonomy regulation. The awards recognise the innovative nature of the Ile-de-France Region's green, social and sustainable emissions cadre, particularly in regards to the inclusion of biodiversity criteria and the normative exclusions established by the framework.
- **"Business Partner" Award**

  The award was presented to the region in April 2022 at the Digital Finance Awards, highlighting the work carried out by the Finance division with the region's operational departments to steer regional finances towards ever more responsible financing and to consider emerging international regulations in this area (Sustainable Development Goals, European taxonomy, ICMA, etc.).

2017	2018	2020	2021	2022	2023
€500 million (2017-2029)	€500 million (2018-2033)	€800 million (2020-2030 & 2040)	€500 million (2021-2028)	€700 million (2022-2032)	€600 million (2023-2031)
Yes	Yes	Yes	Yes	Yes	Yes
Published on anniversary date	Published on anniversary date	Published on anniversary date	Published in 2022	Publication by end of 2023	Publication by end of 2024
Renewal of 2016 opinion	Renewal of 2016 opinion	Update of the second 2016 opinion	VE	Renewal of 2021 opinion	Renewal of 2021 opinion
—	—	—	—	—	—

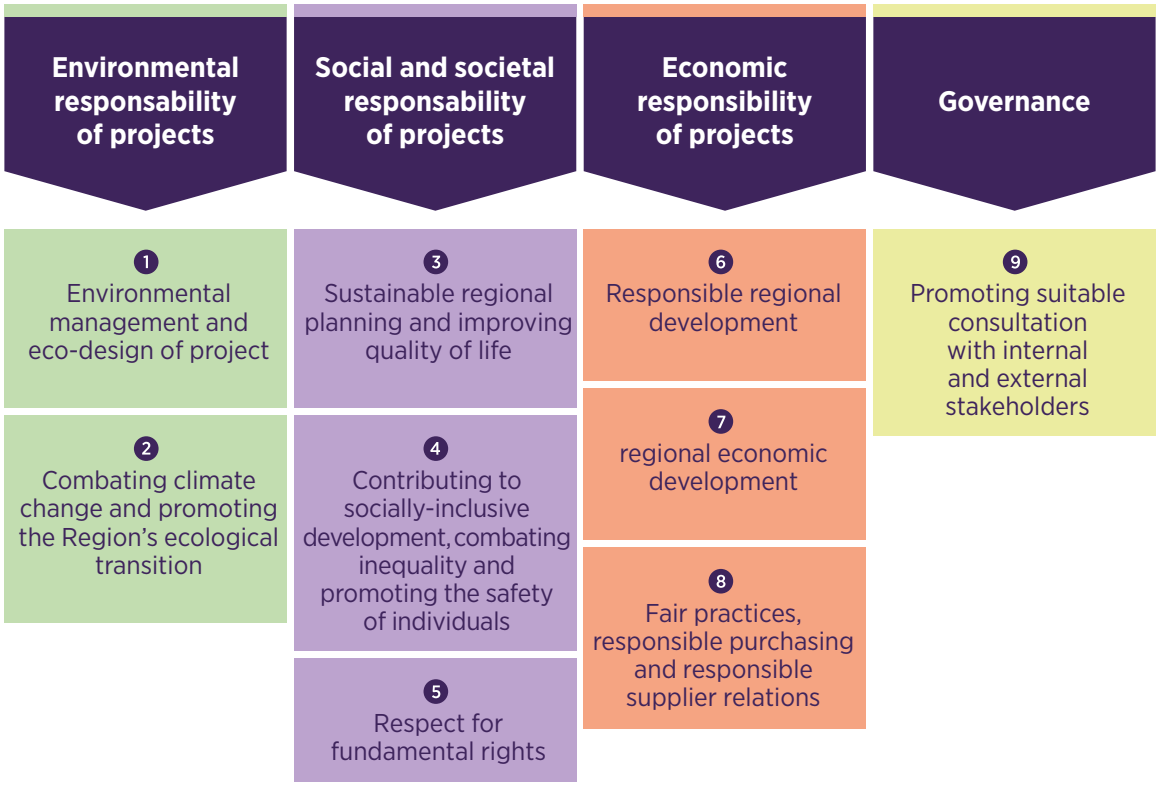
THE REGION'S GREEN & SUSTAINABILITY FRAMEWORK

The green and sustainable operations launched by the Ile-de-France Region comply with the major Green Bond Principles and Social Bond Principles; they aim to implement the best practices in place.

Allocation of funds to four categories of green projects and six categories of social projects emblematic of regional action

GREEN PROJECTS CATEGORIES	
Sustainable buildings	Construction and renovation of buildings using a sustainable development approach, contributing to protection of the environment.
Low-carbon transport	Construction of public rail transport infrastructures and low-carbon road transport infrastructures dedicated to public passenger transport.
Renewable energy	Projects that contribute to the development of renewable energy and energy efficiency.
Terrestrial and aquatic biodiversity conservation	Restoration and rehabilitation of ecosystems, sustainable forest management, investment in protected areas.
SOCIAL PROJECT CATEGORIES	
Access to essential services: education	Provide access to quality education infrastructures (public secondary education, public higher education).
Access to essential services: health	Projects that contribute to the development of health infrastructures and the purchase of healthcare equipment, research and development projects in terms of health and projects related to the setting up of any emergency infrastructures required in an exceptional crisis.
Access to essential services: social inclusion	Development of accommodation capacity for vulnerable populations, of medical educational centres, projects to improve the accessibility of buildings and infrastructures.
Affordable housing	Projects designed to develop and renovate the social housing stock, in line with environmental and social requirements and increasing access to housing and improving comfort.
Affordable basic infrastructure (transport, energy, green spaces and sporting facilities)	Construction of public transport infrastructures for better access to the entire region, projects to improve the comfort and safety of infrastructures for transport users and residents, development of basic infrastructure in terms of local renewable energy and energy efficiency; in terms of green spaces, preservation of the natural environments and biodiversity, development of sporting facilities.
Support for job creation, prevention and fight against unemployment related to crises (including by financing measures for SMEs and micro-companies (MIC)	Projects that contribute to creating or maintaining local jobs, through supporting regional SME & MIC, and projects in the social and socially-inclusive economy, support for research and innovation by SME & MIC and the development of the region's attractiveness.

NINE ELIGIBILITY CRITERIA ON THE PURPOSE AND MANAGEMENT OF PROJECTS



In some cases, especially for projects for emergency measures in a crisis, not all the eligibility criteria may be fully covered.

Publication of a report on the use of funds (by the end of year n+1)

Reports published by the Region illustrate compliance with commitments made at the time of issue relating to the allocation of funds, compliance with the eligibility criteria for each project/scheme financed and presentation of cross-cutting impact indicators for projects. Schemes involving a multitude of small projects are reported on one or two project examples which are presented for each scheme funded.

Transparency on management of funds and the allocation and selection process

1. Management of funds

In terms of financial flows, the funds from the borrowing are fungible in the regional treasury. French authorities are obliged to deposit their cash balance in a single account at the French Treasury.
From a budgetary and accounting viewpoint, borrowings are entered as investment earnings and cover the investment expenses for the year. This principle of budgetary annuality guarantees investors that the funds raised by the green and sustainable loans will be used in the year the loan is raised to finance the Region's investment projects.
The Regional Department of Public Finances (DRFiP) controls the regularity of the expenditure mandated by the Region and makes the payment. In his capacity as the designated public accountant for the Île-de-France Region, the Regional Director of Public Finances for the Ile-de-France Region and Paris certifies that the expenses listed on the statement produced have been paid.

2. Project allocation and selection process

This process starts after the end of the year in which the loan in question was raised, when the Region has a perfect view of the level of investment expenditure for each project.
The Finance Division, which coordinates the preparation of the report, requires each operational division in the Region to select a certain number of investment projects:

- On one hand, the operational divisions must identify projects corresponding to an amount of expenses recorded in the year and which meet the eligibility criteria for green and sustainability loans from the most exemplary in this respect. In some cases, especially for projects for emergency measures in a crisis, some eligibility criteria may not be fully covered. The Region's divisions that sponsor the projects are the best placed to select the most illustrative projects in their portfolio.

- The information obtained by each division is then centralised within the finance division, which consolidates the document and verifies the overall consistency.

- On the other hand, the management control and financial decision department verifies the amount of expenses for each project in conjunction with the division in question. The finance division then distributes the funds raised by the loan on the basis of the proposed projects, the sustainable finance committee (SFC) approves the final selection.

The document is then sent to the communications division for modelling and printing, before being published on the Region's finance portal.
The Ile-de-France Region has a "reasonable" insurance level (the best) from Vigeo-Eiris on the credibility of the sustainable development framework (SPO 03/2021)

INTRODUCTORY ASPECTS OF THE 2023 REPORT

Like the 2022 report, this document includes:

- A table summarising the allocation of funds to the projects/schemes submitted;

- A map showing the geographical distribution of projects in the Region;

- A table summarising the three potentially cross-cutting project impact indicators identified: jobs supported by the project (in the construction and operation phases), CO_2 emissions avoided by the project and the number of project beneficiaries, by including a methodological note presenting each methodology used to calculate the impact indicators;

- A fact sheet on each project/scheme presented, describing the purpose of the project and updating the life of the project if necessary; a table showing the compatibility of the project with the Region's objectives; a summary table illustrating with evidence how each project meets each eligibility criterion; each fact sheet header giving essential information on the project and, where applicable, the amounts allocated to the project from previous green and responsible loans made by the Region since 2014;

- An evaluation, where possible, of the project's alignment with the first objective (Mitigating climate change) of the European green taxonomy.

As last year, this is one of the most exemplary projects presented for each funded scheme.

- A review of green and responsible borrowing projects financed in 2023 fromthe perspective of the United Nations Sustainable Development Goals:

    → The targets of the Sustainable Development Goals to which each project responds are identified as such in the header of each project sheet;

    → A summary table is presented to provide an overview of the contribution of each project to each of the goals; the approach used to construct this table is presented in the methodological note. The table also links to the impact indicators referred to in the project sheets;

→ This approach shows that, on average, each project makes a direct positive contribution to eight of the United Nations' sustainable development objectives, compared with a subset of eleven sustainable development objectives that could potentially apply directly to regional investment projects financed by green and responsible borrowing in 2023[1].

2023 REPORT PREPARATION PROCESS	
18 January 2023	• Launch of the allocation and project selection process at the Sustainable Finance Committee (SFC)
April-May 2024	• Verification of the amount of expenses on each project by the management control and financial decision department
May-June 2024	• Each division involved prepares the report on the projects identified, illustrating how each project and scheme meets the eligibility criteria and filling in an impact indicator grid, mainly focusing on information on the methodology used
June 2024	• First provisional project selection by the finance division Consolidation, standardisation and consistency check by the finance division of all information produced
27 June 2024	• Sustainable Finance Committee (SFC) meeting definitively selecting the projects
July-August 2024	• Formatting and translation of the report
Before the end of 2024	• Publication of the finalised report

58%
Proportion of projects and schemes renewed this year compared to last year

11
New projects and schemes benefiting from funds raised in 2023

26
projects and schemes benefiting from funds raised in 2023

8.4
Average number of UN Sustainable Development Goals to which each financed project or scheme directly contributes

1. See methodological note.

EVALUATION OF THE CONSISTENCY OF PROJECTS WITH THE EUROPEAN TAXONOMY

All the projects were **selected in accordance with the regional eligibility criteria** set out in the Île-de-France Region's Green, Social and Sustainable Emissions Framework.
Where possible, projects have been legally evaluated in terms of their compliance with the first goal of the European taxonomy **"Mitigation of climate change"**. The table below lists all the projects financed by 2023 borrowing in line with the objective.

LOW-CARBON TRANSPORT						
European taxonomy activity	**Technical criteria of economic activity**	**DNSH criteria**				
		Adapting to climate change	**Sustainable use and protection of water and marine resources**	**Transition to a circular economy**	**Pollution prevention and control**	**Protection and restoration of biodiversity and ecosystems**
6.14. Rail transport infrastructures						
Metro projects						
Metro Line 11	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Metro Line 14	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Tram projects						
Tram T10	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Tram T12	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
T13 Express tramway	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
Rail link projects						
EOLE	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned
6.15. Infrastructures favourable to road transport and low-carbon public transport						
Scheme: Development of exclusive bus lanes and road improvements						
TZEN 4	Aligned	Aligned	Aligned	Aligned	Aligned	Aligned

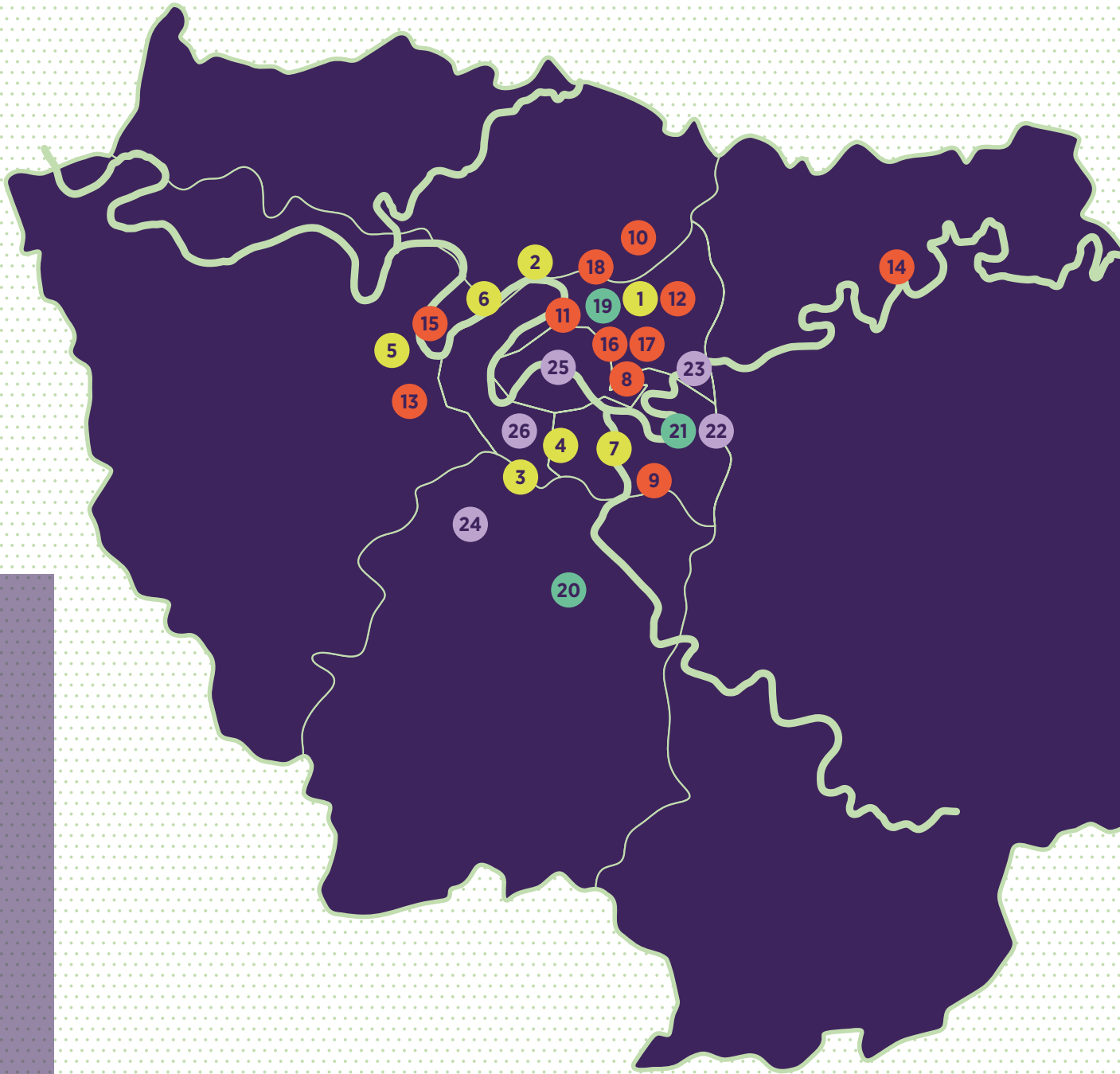
It is noted that France has implemented sufficient policies, regulations and structures to bring itself into line with the **minimum social guarantees** of European taxonomy. Significant measures are being taken by the le-de-France Region in addition to the national framework to ensure its alignment with the minimum safeguards of the European taxonomy, as reflected under the Region's bond issues.

All the data relating to the alignment of the projects with regard to the regional eligibility criteria and the European taxonomy are available on the **Region's finance portal**: https://www.iledefrance.fr/financement-region

Dedicated website link
https://www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

ACCESS TO ESSENTIAL SERVICES: EDUCATION	**Sustainable buildings**		
	New secondary schools	• New high school in Vincennes (94)	• Vincennes 94300
	Secondary school renovation project	• Marianne high school in Villeneuve-le-Roi (94)	• Villeneuve-le-Roi 94290
		• Pierre Mendès-France high school in Villiers-le-Bel (95)	• Villiers-le-Bel 95400 ●
		• Marcel Cachin high school in Saint-Ouen-sur-Seine (93)	• Saint-Ouen-sur-Seine 93400
		• Henri Sellier high school in Livry-Gargan (93)*	• Livry-Gargan 93190 ●
		• Jules Ferry high school in Versailles (78)	• Versailles 78000 ●
		• Pierre de Coubertin high school in Meaux (77)*	• Meaux 77100 ●
		• Evariste Galois high school in Sartrouville (78)*	• Sartrouville 78500 ●
	Construction project in higher education	• Conservatoire national des arts et métiers (CNAM) - Synergie 2 in Saint-Denis - Aubervilliers (93)	• Saint-Denis 93200
		• Conservatoire national des arts et métiers (CNAM) - Landy 2 in Saint-Denis - Aubervilliers (93)	• Saint-Denis 93200
		• "Mathstic" building in Saint-Denis - Aubervilliers (93)	• Villetaneuse 93430
	Clean transportation		
	Subway	• Subway line 11	• Paris, Les Lilas, Romainville, Noisy-le-Sec, Rosny-sous-Bois
		• Subway line 14	• Paris, Clichy, Saint-Ouen-sur-Seine
	Tramway	• Tramway T10	• Antony, Châtenay-Malabry, le Plessis-Robinson, Clamart
		• Tramway T12	• Massy, Palaiseau, Champlan, Longjumeau, Chilly-Mazarin, Épinay-sur-Orge, Savigny-sur-Orge, Morsang-sur-Orge, Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Évry
		• Tramway T13 Express	• Saint-Cyr-l'École, Versailles, Bailly, Noisy-le-Roi, l'Étang-la-Ville, Mareil-Marly, Saint-Germain-en-Laye
	Railway Links	• EOLE	• Paris, Courbevoie, Nanterre, Houilles, Carrières-sur-Seine, Poissy, Villennes-sur-Seine, Les Mureaux, Aubergenville, Epône, Mézières, Mantes-la-Jolie
	Buses	• TZEN 4	• Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Évry, Corbeil-Essonnes
	Renewable energies		
	Geothermal networks	• Pleyel geothermal network in Saint-Denis (93)	• Saint-Denis 93200 ●
		• Renewable Heat AAP project at Évry-Courcouronnes (91)	• Evry-Courcouronnes 91000 ●
		• Renewable Heat AAP project in Champigny-sur-Marne (94)	• Champigny-sur-Marne 94500 ●
SOCIAL PROJECTS	**Access to essential services: education**		
	Secondary school renovation project	• Louise Michel high school in Champigny-sur-Marne (94)	• Thiais 94320
		• Nicolas-Joseph Cugnot high school in Neuilly-sur-Marne (93)	• Neuilly-sur-Marne 93330 ●
	Affordable housing		
	Student residence	• Construction of a student residence in Palaiseau (91)	• Palaiseau 91120 ●
	Family residence	• Construction of a family residence in the 20th district in Paris (75)	• Paris 75020 ●
	Affordable basic infrastructures		
	Family residence	• CREPS Île-de-France	• Chatenay Malabry 92290

● New project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CLEAN TRANSPORTATION

1. **Line 11:** Paris, Les Lilas, Romainville, Noisy-le-Sec, Rosny-sous-Bois (75)
2. **Line 14:** Paris, Clichy, Saint-Ouen-sur-Seine (93)
3. **Tramway T10:** Antony, Châtenay-Malabry, le Plessis-Robinson, Clamart
4. **Tramway T12:** Massy, Palaiseau, Champlan, Longjumeau, Chilly-Mazarin, Epinay-sur-Orge, Savigny-sur-Orge, Morsang-sur-Orge, Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Evry
5. **Tramway T13 Express:** Saint-Cyr-l'Ecole, Versailles, Bailly, Noisy-le-Roi, l'Etang-la-Ville, Mareil-Marly, Saint-Germain-en-Laye
6. **Eole:** Paris, Courbevoie, Nanterre, Houilles, Carrières-sur-Seine, Poissy, Villennes-sur-Seine, Les Mureaux, Aubergenville, Epône, Mézières, Mantes-la-Jolie
7. **Tzen 4:** Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Evry, Corbeil-Essonnes

SUSTAINABLE BUILDINGS

8. High school in Vincennes (94)
9. Marianne high school in Villeneuve-le-Roi (94)
10. Pierre Mendès-France high school in Villiers-le-Bel (95)
11. Marcel Cachin high school in Saint-Ouen-sur-Seine (93)
12. Henri Sellier high school in Livry-Gargan (93)
13. Jules Ferry high school in Versailles (78)
14. Pierre de Coubertin high school in Meaux (77)
15. Evariste Galois high school in Sartrouville (78)
16. Conservatoire national des arts et métiers (CNAM) - Synergie 2 in Saint-Denis - Aubervilliers (93)
17. Conservatoire national des arts et métiers (CNAM) - Landy 2 in Saint-Denis - Aubervilliers (93)
18. "Mathstic" building in Saint-Denis - Aubervilliers (93)

RENEWABLE ENERGIES

19. Pleyel geothermal network in Saint-Denis (93)
20. Renewable Heat AAP project at Évry-Courcouronnes (91)
21. Renewable Heat AAP project in Champigny-sur-Marne (94)

SOCIAL PROJECTS

22. Louise Michel high school in Champigny-sur-Marne (94)
23. Nicolas-Joseph Cugnot high school in Neuilly-sur-Marne (93)
24. Construction of a student residence in Palaiseau (91)
25. Construction of a family residence in the 20th district in Paris (75)
26. CREPS Île-de-France, Chantenay Malabry (92)

Summary of the impact of projects and footprint of the 2023 green and sustainable bond

		PROJECT PURPOSE
GREEN PROJECTS	**GREEN BUILDINGS**	
	New secondary school and boarding school construction projects	
	New high school in Vincennes (94)	Construction of a 1,050-seat high school with 30 divisions
	Secondary school renovation project	
	Marianne high shcool in Villeneuve-le-Roi (94)	Overall restructuring and extension of the high shcool
	Pierre Mendès-France high school in Villiers-le-Bel (95) ●	Overall renovation and extension
	Marcel Cachin high school in Saint-Ouen-sur-Seine (93)	On-site reconstruction
	Henri Sellier high school in Livry-Gargan (93) ●	Creation of new buildings and overall restructuring
	Jules Ferry high school in Versailles (78) ●	Restructuring
	Pierre de Coubertin high shcool in Meaux (77) ●	Overall renovation and extension
	Evariste Galois high school in Sartrouville (78) ●	Overall renovation and extension of capacity by 250 places
	Construction project in higher education	
	Conservatoire national des arts et métiers (CNAM) - Synergie 2 in Saint-Denis - Aubervilliers (93)	New construction for higher education
	Conservatoire national des arts et métiers (CNAM) - Landy 2 in Saint-Denis - Aubervilliers (93)	New construction for higher education
	"Mathstic" building in Saint-Denis in Villetaneuse (93)	New construction for higher education
	PROJECTS: SUBWAYS	
	Projects: subways	
	Subway line 11	Extension to Rosny-Bois-Perrier
	Subway line 14	Extension to Saint-Ouen City Hall
	Projects: tramways	
	Tramway line 10	New line between Antony and Châtenay-Malabry
	Tramway line 12	T12 between Massy-Palaiseau and Evry Courcouronnes
	Tramway line 13 Express	T13 on the Great Belt West to the north and south
	Projects: railway links	
	Eole	Extension of the RER E westwards
	Scheme: Development for buses on own sites and layout of roadways	
	TZEN 4	New bus line between Viry-Châtillon and Corbeil-Essonnes
	RENEWABLE ENERGIES	
	Geothermal networks	
	Pleyel geothermal network in Saint-Denis (93) ●	Surface geothermal operation and extension of the heating network
	Renewable Heat AAP project at Évry-Courcouronnes (91) ●	Development of the geothermal heating network
	Renewable Heat AAP project in Champigny-sur-Marne (94) ●	Development of the geothermal heating network
SOCIAL PROJECTS	**ACCESS TO ESSENTIAL SERVICES: EDUCATION**	
	Louise Michel high school in Champigny-sur-Marne (94)	Louise Michel and Langevin-Wallon high schools global restructuring
	Nicolas-Joseph Cugnot high school in Neuilly-sur-Marne (93) ●	Overall restructuring and an increase of 400 places
	AFFORDABLE HOUSING	
	Construction of a student residence in Palaiseau (91) ●	Building a 192-unit subsidised student residence
	Construction of a family residence in the 20th district in Paris (75) ●	Pension construction of 25 PLAI housing units
	INFRASTRUCTURES DE BASE ABORDABLES	
	CREPS d'Île-de-France	Construction and restructuring of sports infrastructure
		Green projects categories total
		Social projects categories total
		Overall total

* Sum of site FTEs and operating FTEs, including integration FTEs where applicable.

● New project

IMPACT OF PROJECTS AND SCHEMES SUBMITTED				FOOTPRINT OF THE 2023 GREEN AND SUSTAINABLE BOND (PROJECT IMPACT WEIGHTED BY THE WEIGHT OF THE LOAN IN THE PROJECT FINANCING)			
TOTAL PROJECT COST IN € MILLION (1)	CO_2 EMISSIONS (TEQ/ YEAR) AVOIDED BY THE PROJECT	FTES SUPPORTED BY THE PROJECT*	NUMBER OF PROJECT BENEFICIARIES	AMOUNT OF 2023 GREEN AND SUSTAINABLE BORROWING ALLOCATED TO THE PROJECT IN € MILLION (2)	WEIGHT (2) / (1)	CO_2 EMISSIONS (TEQ/YEAR) AVOIDED BY THE PROJECT	FTES SUPPORTED
51.50	31	512	1,050	6.40	12.4%	4	64
69.40	10	370	1,200	12.60	18.2%	2	67
27.98	11	190	1,200	12.16	43.5%	5	83
62.40	34	365	1,200	15.33	24.6%	8	90
25.70	27	178	1,593	14.62	56.9%	15	101
23.70	4	260	1,700	14.91	62.9%	2	164
114.10	37	769	2,330	3.43	3.0%	1.1	23
85.50	86	549	2,170	11.89	13.9%	12	76
19.00	19	57.13	181	9.85	51.8%	10	32
38.80	10	101	801	15.70	40.5%	4	46
9.10	14	66	414	1.41	21%	3	14
1,298.00	3,255	9,216	331,000	88.74	6.8%	223	630
1,380.00	7,310	9,798	176,000	1.91	0.1%	10	14
351.00	31,237		170,000	42.66	12.1%	3,788	-
526.00	2,534	4,095	40,000	28.50	5.4%	137	222
434.80	1,116	2,178	21,000	15.14	3.5%	39	76
5,429.00	8,040	26,554	1,400,000	245.49	4.4%	354	1,171
124.00		880	47,000	7.25	5.8%	-	51
17.83	4,500	40	4,548	0.80	4.5%	201	2
19.52	11,000	32	8,500	2.58	13.2%	1,452	4
38.22	9,243	6	12,761	2.75	7.2%	664	0.43
61.42	13	350	2,300	15.66	25.5%	3	89
51.30	17	329	1,200	9.37	18.3%	3	60
19.02		135	282	0.68	3.6%	-	5
3.19		23	58	0.41	12.9%	-	3
37.00	689	5.63	320	25.9	70.0%	482	6
-	78,518	56.155	2,224,648	548	-	6,935	2,922.8
-	689	10.158	660	52	-	489	162.76
-	79.207	66.313	2,225,308	600	-	7,424	3,085.6

Reading funded projects from the point of view of UN Sustainable Development Goals

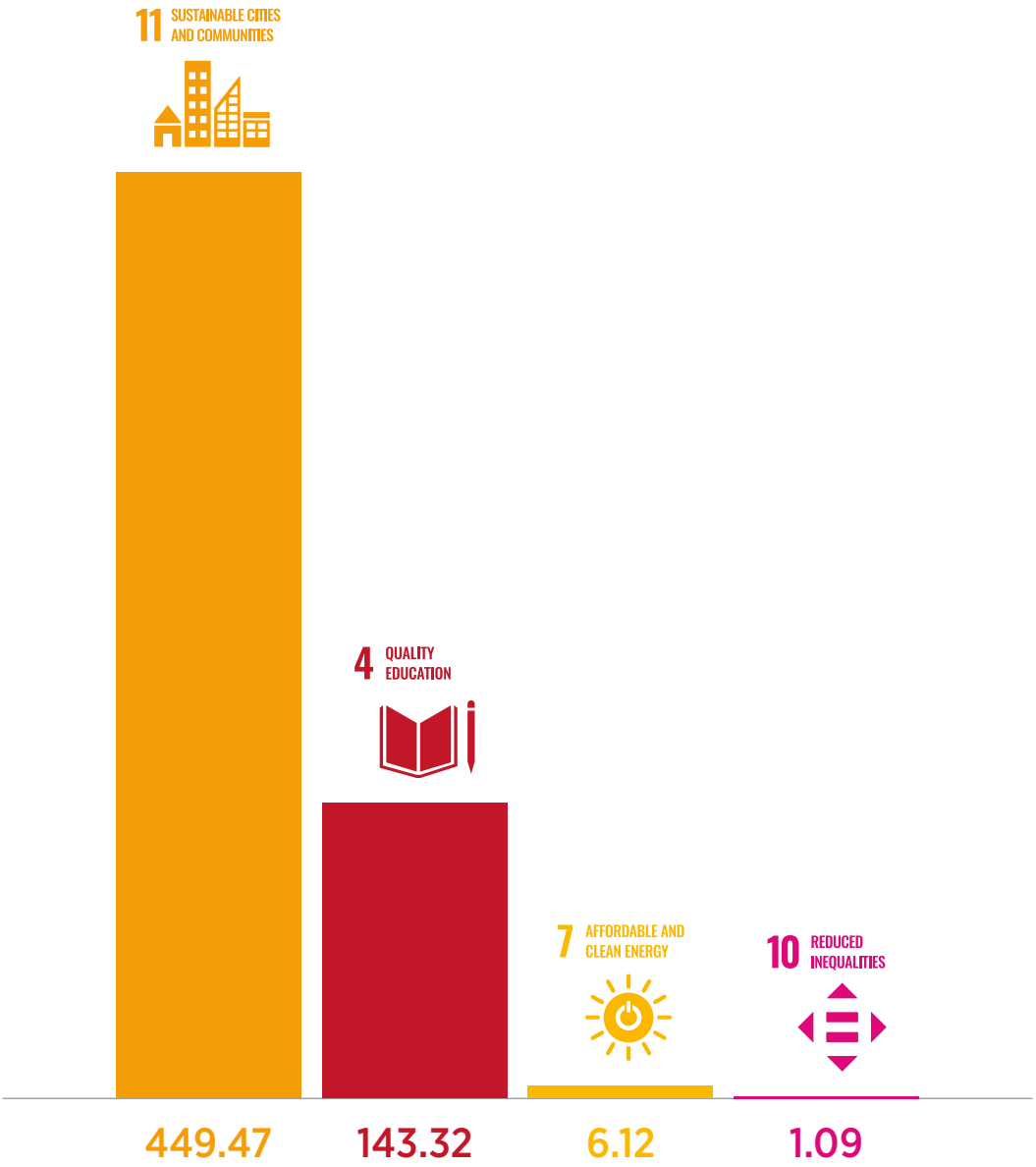
			1 NO POVERTY	4 QUALITY EDUCATION	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY
GREEN PROJECTS	Green buildings	New high school in Vincennes (94)		4.1	6.4	
		Marianne high school in Villeneuve-le-Roi (94)		4.1	6.4	
		Pierre Mendès-France high school in Villiers-le-Bel (95)		4.1	6.4	
		Marcel Cachin high school in Saint-Ouen-sur-Seine (93)		4.1	6.4	
		Henri Sellier high school in Livry-Gargan (93)		4.1	6.4	
		Jules Ferry high school in Versailles (78)		4.1	6.4	
		Pierre de Coubertin high school in Meaux (77)		4.1	6.4	
		Evariste Galois high school in Sartrouville (78)		4.1	6.4	
		Conservatoire national des arts et métiers (CNAM) – Synergie 2 in Saint-Denis – Aubervilliers (93)		4.3		
		Conservatoire national des arts et métiers (CNAM) – Landy 2 in Saint-Denis – Aubervilliers (93)		4.3	6.4	
		"Mathstic" building in Saint-Denis – Villetaneuse (93)		4.3	6.4	
	Clean transportation	Subway line 11	1.b			
		Subway line 14	1.b			
		Tramway line 10	1.b			
		Tramway line 12	1.b		6.4	
		Tramway line T13 express	1.b			
		EOLE	1.b			
		TZEN	1.b			
	Renewable energies	Pleyel geothermal network in Saint-Denis (93)				7.2
		Renewable Heat AAP project in Evry-Courcouronnes (91)				7.2
		Renewable heat AAP project in Champigny-sur-Marne (94)				7.2
SOCIAL PROJECTS	Access to essential services: education	Louise Michel high school in Champigny-sur-Marne (94)		4.1	6.4	
		Nicolas-Joseph Cugnot high school in Neuilly-sur-Marne (93)		4.1	6.4	
	Affordable housing	Student residence in Palaiseau (91)	1.b			7.2
		Family residence in Paris 20th district (75)	1.b			
	Affordable basic infrastructures	CREPS Île-de-France			6.4	7.2

Main SDG

8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	15 LIFE ON LAND	IMPACT INDICATOR OF THE MAIN SDG	PAGE
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 26
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 28
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 30
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 32
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 34
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 36
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 38
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 40
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 42
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 44
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 46
8.3	9.1	10.2	11.2	12.7	13.2		CO_2 emissions avoided by the project	p. 50
8.3	9.1	10.2	11.2	12.7	13.2		CO_2 emissions avoided by the project	p. 52
8.3	9.1	10.2	11.2	12.7	13.2	15.1	CO_2 emissions avoided by the project	p. 54
8.3	9.1	10.2	11.2	12.7	13.2		CO_2 emissions avoided by the project	p. 56
8.3	9.1	10.2	11.2	12.7	13.2	15.1	CO_2 emissions avoided by the project	p. 58
8.3	9.1	10.2	11.2	12.7	13.2		CO_2 emissions avoided by the project	p. 60
8.3	9.1	10.2	11.2	12.7	13.2	15.1	CO_2 emissions avoided by the project	p. 62
8.6	9.1	10.2	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 66
8.6							Number of beneficiaries	p. 68
8.6							Number of beneficiaries	p. 70
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 74
8.6	9.1	10.3	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 76
8.5	9.1	10.3	11.b	12.7	13.2	15.1	Number of beneficiaries	p. 80
8.5	9.1	10.3	11.b	12.7	13.2	15.1	Number of beneficiaries	p. 82
	9.1	10.2	11.3	12.7	13.2	15.1	Number of beneficiaries	p. 86

Reading funded projects from the point of view of UN Sustainable Development Goals

- The next table compiles the contribution made by each project to the United Nations Sustainable Development Goals (SDG). This is assessed individually based on the specific features of each project as described in the sheets accompanying this report.
- For each project, the main Sustainable Development Goal is identified by highlighting colour.
- The projects have been assessed with respect to eleven goals out of seventeen (see Appendix 1.2 of this report [page 94]).
- The graph opposite indicates the scale of financing the main SDG by projects presented within in this report. It also highlights that financing allocated to SDG 11 “Sustainable cities and communities” dominates, which is consistent with both the nature of the Île-de-France Region as a regional authority and its predominantly urban character.



SUSTAINABLE BUILDINGS

Construction and renovation of buildings according to a sustainable development approach, contributing to respect for the environment and accessibility for persons with reduced mobility

The region has adopted a new provisional investment programme in 2017 for secondary schools in consultation with the local education authorities and communities in the Île-de-France region. Through this plan, revised in 2021, there will be a doubling of resources for secondary education, in order to reflect demographic changes and new school dynamics: an additional 90,000 secondary school pupils are expected in Île-de-France between 2012 and 2030, reflecting the region's growth.

For the 90,000 new needed places, around 68,400 will be absorbed by vacant places or places being created. This means that 21,600 new places will need to be built between now and 2030.

- **Development of sector-specific technical guidelines for sustainable development**, which constitute regional guides for integrating sustainable development concerns into projects.
- **Region's powers/responsibilities: Mandatory for secondary schools, higher-education projects forming part of state-region relations.**
- **Types of actions:**
  → **Secondary schools:** Contracting authority with representative (construction and renovation projects);
  → **Higher education:** Subsidy or direct contracting authority.
- **Target public:** Secondary school students, university students, teachers, researchers.

CONSTRUCTION OF A NEW SECONDARY SCHOOL IN VINCENNES (94)

NEW SECONDARY SCHOOL AND BOARDING SCHOOL CONSTRUCTION PROJECTS

PURPOSE

Construction of a new secondary school with 1,050 spots for general education in 30 classes

LOCATION

Vincennes (94)

KEY DATES

Notification of the global public performance contract: 29/12/2020
Start of work: 05/11/2021
End of work: December 2023
Environmental clean-up and monitoring campaign: 2023-2024
Opening scheduled for the start of the 2024 school year

TOTAL PROJECT COST

51.50 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

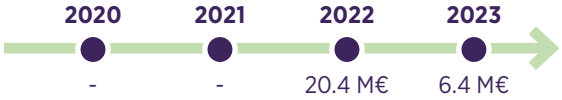
100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

6.40 M€

HISTORY OF PROJECT FINANCING

by the Region's previous green and sustainable bonds



QUALITATIVE PRESENTATION OF THE PROJECT

- The construction of the new secondary school, located east of the municipality of Vincennes, should alleviate the crowding in the existing Hector-Berlioz secondary school. This new establishment will have a total capacity of **1,050 spots** for general education courses divided into **30 classes** (10 classes for each of the years from Year 11 to Year 13).
- The project is part of an effort to make the school **more energy efficient** and **reduce its carbon footprint** by aiming to achieve levels E3C1 (school) and E3C2 (housing) of the E+C- benchmark. The project is **adapted to climate change** with a design that guarantees the comfort of the occupants during the summer.
- The project is located on a 4,895 m² plot previously occupied by abandoned industrial buildings. The municipalities of Vincennes and Fontenay-sous-Bois performed **major soil decontamination work before** the start of construction.
- The project complies with the Seine-Normandie Design and Water Management Scheme (SDAGE) for rainwater management with the provision of specific reservoirs and the **reuse of rainwater** to supply the sanitary facilities and irrigate the patio. The site's sealing is limited to 65%.
- The project is part of an approach to promoting **biodiversity**, in conjunction with the neighbourhood: 400 sq.m of untouched land, 50 sq.m educational garden, 38% of green roof area, etc.
- In order to **preserve air quality**, all materials used and in contact with the indoor air will have A+ eco-labels. Furthermore, filtration by G4 + F8 filters will be applied to the double flow ventilation to ensure that the building has good indoor air quality when it is in use.
- The programme provides for the use of bio-based materials up to **level 1 of the bio-based label**, i.e. 18 kg/m² SDP.

PROJECT LIFECYCLE

- Work on the building was completed at the end of 2023.
- Remediation work is underway to immediately treat the soil gases. At the end of this work, a permanent 'venting' solution will be put in place during the summer of 2024 to secure the site for the long term.
- At the end of the works, the project's global public performance contract (MPGP) provides for a period of operation/maintenance by the winning consortium for 10 years.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	512 FTEs (410 construction FTEs and 102 FTEs operation)	A–3 and C–2
Number of project beneficiaries	1,050 students	D–1
CO_2 emissions avoided by the project	31.45 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach and contributing to respect for the environment **All secondary schools starting from 2017: energy consumption level required < -40% compared to RT2012 (equivalent level E3C1 of the E+C- label)**	• The primary energy consumption of the project (high school and housing) is estimated at 31.7 kWhep/m²/year, i.e. 52% less than the maximum Cep_max consumption calculated by RT2012 (66.7 kWh/m²/year).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• **All the environmental aspects of the project were taken into account**: bioclimatic design, biodiversity, water management, soil pollution, nuisances, health, etc.
Combating of climate change and promotion of the region's ecological transition	• The project is part of an effort to **reduce its carbon footprint**, with an analysis performed on its complete lifecycle. The bioclimatic needs of the building Bbio are reduced by 30% compared to the Bbio_max of RT2012.
Contribution to sustainable regional planning and improvement to the quality of life	• Rainwater management on the plot (green roofing, recovery tank). The maximum leakage rate of the SDAGE is respected. • The aim of the project is to reduce crowding in the existing Hector-Berlioz secondary school.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The project provides for **20,000 hours of social integration** that will be carried out as part of the global performance contract during the construction and/or operation phase of the contract. • The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The new school was designed **to benefit student learning conditions** (acoustic and thermal comfort, capacity of adapted spaces, etc.). It is therefore part of the development of a quality educational offer in the region.
Regional economic development	• The construction site and **the school's operations generate jobs** (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, lifecycle analysis, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • The municipalities of Vincennes and Fontenay-sous-Bois are also stakeholders in the project (provision of the building site, etc.).

Dedicated website
www.vincennes.fr/nouveau-lycee

RESTRUCTURING OF MARIANNE SECONDARY SCHOOL IN VILLENEUVE-LE-ROI

SECONDARY SCHOOL RENOVATION PROJECTS

PURPOSE

Comprehensive restructuring and extension of the secondary school

LOCATION

Villeneuve-le-Roi (94)

KEY DATES

Project management bidding competition: 2018
Studies: 2019
Start of demolition work: mid-2019
Start of reconstruction work: early 2021
Acceptance scheduled for the 2025 start of the school year

TOTAL PROJECT COST

69.4 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

12.60 M€

HISTORY OF PROJECT FINANCING

by the Region's previous green and sustainable bonds

QUALITATIVE PRESENTATION OF THE PROJECT

- The Marianne regional school complex located in Villeneuve-le-Roi was constructed in the 1960s. It is located on the edge of a business area.
- The mixed Marianne complex was composed of 5 buildings (administration/accommodation, secondary school, college, half-board facility/information and documentation centre and sports hall). These buildings were showing severe deterioration and had many non-conformities. That is why it was decided to completely redevelop the site. The major objective underlying this **total restructuring of the site** is to split the college and the secondary school and **create two autonomous and independent schools**.
- The objective is to create a secondary school with the capacity for **1,200 students**, a half-board facilities, the extension of the sports hall and outdoor sports facilities.
- This operation therefore includes:
  - → The demolition of building A "administration/accommodation" with a net floor area of approximately 1,621 m² which will be completely cleaned of asbestos before it is demolished
  - → The construction of several extensions with a total surface area of nearly 6,000 m²
  - → The complete restructuring of certain elements
- The desired environmental objectives are based on the regional planning tools (green plan, Let's Change the Air plan, etc.) and on the regulations in force.
- The **energy 2 and carbon E2C1 level will be achieved**, as will level 1 for the bio-based building label, built on an **overall environmental approach** focused on water management, energy, air quality, acoustics and maintenance.
- Finally, as the building is located in a noise zone linked to Orly airport, a **covered courtyard** was built with acoustic insulation to provide a relaxation area isolated from noise pollution.

PROJECT LIFECYCLE

- The former structure was demolished between mid-2019 and 2021 with reconstruction starting after that.
- The new teaching facilities were handed over in May 2023.
- The new accommodation was handed over in March 2024.
- Only the sports facilities are still under construction. Handover is scheduled for the start of the 2025 school year.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	370 FTEs	A–2
Number of project beneficiaries	1,200 students	D–1
CO_2 emissions avoided by the project	10.2 teq CO_2/year	E–1

REGIONAL ELIGIBILITY CRITERIA

Reduction in primary energy consumption (PEC) of at least 30% **All secondary schools starting from 2017: energy consumption level required < -40% compared to RT2012 (equivalent level E3C1 of the E+C- label)**	• Renovated buildings (teaching): the primary energy consumption (70.5 kWhep/m²/year) is reduced by 34% compared to the initial consumption (107 kWhep/m²/year). • The new buildings (reception, half-board facilities, gym and housing) show gains compared to the PEC_max of RT2012 of 20%, 28%, 22% and 32% respectively. It should be noted that these buildings replace existing buildings and offer a significant improvement in energy performance. With overall primary energy consumption for the new buildings estimated at 70.5 kWh/m²/year, the gain over the existing buildings is also in excess of 30% (assuming similar consumption for all the original buildings).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• Specification defining the **environmental requirements**. • **"Minimal nuisance worksite"** charter: many objectives for limiting nuisances in the environment, with in particular waste traceability and a minimum recovery requirement of 70% by mass (demolition + construction). • Environmental monitoring of each phase by a specialist assistant to the contracting authority.
Combating of climate change and promotion of the region's ecological transition	• Achievement of **low energy consumption targets** (see above). • Installation of a thermodynamic balloons. • Rainwater from the roof of the reception building is directed to a 40 m³ rainwater collection tank which can be used to supply a large part of the sanitary requirements (WC and urinals). • **Green roofs** for the most part, in order to be integrated as much as possible in the heavily revegetated context. • Use of **bio-based materials** (level 1 of the bio-based building label: 18kg/m² is achieved). • Nearly 10% of the soil excavated is reused on site.
Contribution to sustainable regional planning and improvement to the quality of life	• **Rainwater management on the plot** (presence of swales, retention basin and infiltration basin) The maximum leakage rate of 2 L/s/ha is complied with. • The fact that the operation is carried out on partially flood-prone land is taken into account. • Improved soil permeability with a **10% reduction in the sealing coefficient** compared with its initial condition. • Completion of a four-season flora/fauna study that identified the lack of protected species on the site.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• Accessibility for persons with disabilities to all establishments open to the public.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• Programmes contributing to **provide diversified and quality education** in the region.
Regional economic development	• Support for employment during construction, support for integration employment and recruitment of reception, maintenance, catering and accommodation staff within the school.
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Requirements on the choice of construction products and equipment (to save on natural resources, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
https://www.idf-constructiondurable.fr/information-transversale/actualites/nouvelle-etape-sur-le-chantier-de-restructuration-du-lycee-georges-brassens-a-villeneuve-le-roi-661

EXTENSION OF THE PIERRE MENDÈS-FRANCE LYCÉE IN VILLIERS-LE-BEL (95)

LYCÉE BUILDING CONSTRUCTION AND RENOVATION • NEW PROJECT

PURPOSE

Capacity expansion of 600 spots through the construction of a new teaching building and the restructuring of the existing one

LOCATION

Villiers-le-Bel (95)

KEY DATES

Notification of award to the project manager: 19/03/2020
Analyses: 2020-2021
Construction began in 2021
Handover of the new building on November 1st of 2023
Handover of the restructured building scheduled for the start of the 2024 school year

TOTAL PROJECT COST

27.98 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

12.16 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The aim of this project is to transform this vocational secondary school into a **multi-purpose secondary school**: the programme includes extending the school's capacity by **600 students** with the **construction of a new building** (C) comprising classrooms and a new day-students facility, the **restructuring of part of existing Building A** and the redevelopment of the sports ground and outdoor areas.
- The project is part of an effort to make the school more energy efficient and reduce its carbon footprint by aiming to achieve level E3C1 of the E+C- benchmark for the extension. The project is adapted **to climate change** with a design that guarantees hygrothermal comfort for the occupants.
- The new building is **connected to the district heating network**, which is 51% powered by renewable energies (geothermal). Compared to a gas boiler room, this system makes it possible to **halve the CO_2 emissions released by heating**.
- The project is part of maximising green spaces, with **51% of spaces in free biodiversity** (i.e. 4,287 sq.m). The project also includes the installation of numerous **green roofs**, a 1,000 sq.m educational square and a wooded park. The car parks have grass-covered joints.
- The design of the project complies the **limitation of the discharge of rainwater** to 0.7 litres/sec/hectare for a five-year rain event: this is managed on the plot thanks to vegetation. A 40 m^3 **water recovery tank** covers 71% of sanitary needs.
- A 20 sq.m composting area was integrated into the project for the treatment of biowaste.
- In order to preserve air quality, all materials used and in contact with the indoor air will have A+ eco-labels.

PROJECT LIFECYCLE

- **The work started in June of 2021** with the relocation of the lodge. Construction of the new Building C began in October 2021.
- The **new Building C was handed over** during the 2023 All Saints' Day holidays. It was inaugurated by the President of the Region in January of 2024.
- Building **An is undergoing restructuring**. Handover is scheduled for the start of the 2024 school year.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	190 FTEs	A–2
Number of project beneficiaries	1,200 students	D–1
CO_2 emissions avoided by the project	10.87 teq CO_2/year	E-4 (new building)

REGIONAL ELIGIBILITY CRITERIA

Renovation: Reduction in primary energy consumption (PEC) of at least 30%

Construction: Required energy consumption level < -40% compared with RT 2012 (equivalent to level E3C1 of the E+C- Label)

- In the new Building C, primary energy consumption is estimated at 41.30 kWhep/sq.m/year, i.e. 41.75% less than the maximum Cep_max consumption standard calculated by RT2012 regulations (70.90 kWhep/sq.m/year).
- As the restructuring of Building A is not subject to the Global regulation, it has only been assessed on an element-by-element basis.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, harmful substances, health, etc. (see above).
Combating climate change and promotion of the region's ecological transition	• The project is part of an approach to **reducing its carbon footprint, with the reduction of** energy consumption in the renovated Building A and achievement of ambitious carbon targets for the new building (level E3C1). The project uses **bio-based materials** on the new building at 5.56 kg/sq.m of surface area. • Finally, the heating of the new building and a large part of its DHW production will be provided by **the city's heating network**, making it possible to halve CO_2 emissions compared to gas production.
Contribution to sustainable regional planning and improvement to the quality of life	• **Management of rainwater at the plot level** (green roofs, recovery of rainwater for use in sanitary facilities, etc.). Water waste is limited to 0.7 litres/sec/hectare for a 10-year rainfall return period. • **Biodiversity** is being developed with a large proportion of areas of free biodiversity and the establishment of an educational square.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The building has been designed to provide the best possible learning and living environments for students, in terms of acoustic and thermal comfort, lighting, appropriate space capacity, etc. It is therefore part of the development of a quality educational offering in the region, particularly in the **aviation professions**.
Regional economic development	• The construction site and the project's operations **generate jobs** (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Requirements on the choice of construction and equipment materials including bio-based materials, resource saving, reuse, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/realisations/liste-des-realisations/lycee-pierre-mendes-france-a-villiers-le-bel-185

COMPLETE RESTRUCTURING OF MARCEL CACHIN SECONDARY SCHOOL IN SAINT-OUEN (93)

SECONDARY SCHOOL RENOVATION PROJECTS

PURPOSE

Reconstruction on Marcel Cachin Secondary School site

LOCATION

Saint-Ouen (93)

KEY DATES

Call for bids on the Global Performance Public Contract: 2018-2019
Start of construction: 2020
Building handover for the 2023 start of the school year

TOTAL PROJECT COST

62.40 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

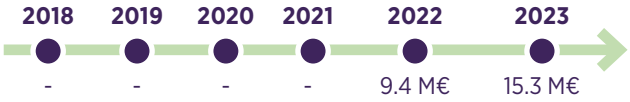
100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

15.33 M€

HISTORY OF PROJECT FINANCING

by the Region's previous green and sustainable bonds



QUALITATIVE PRESENTATION OF THE PROJECT

- The operation consists of **rebuilding all the general and professional teaching premises**, common areas, science hub, workshops on a usable area of about 11,600 sq.m with the aim to integrate a **campus dedicated to sports professions**.
- The operation will also provide a **comfortable life** at the establishment with the creation of a documentation and information centre, unlike the initial school, and a multi-purpose hall with 150 spots, the development of school living spaces for teachers and students, and the expansion of the catering service.
- The project includes the **reuse of materials** from the demolition of the former school and the use of 18 kg/m²SDP of **bio-sourced materials** (particularly for the housing made from a wooden structure).
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is **adapted to climate change** with a design that guarantees the comfort of the occupants during the summer.
- The design of the project respects the principle of **zero waste for a 10-year rainfall return period**. This rainfall is managed on site using **green roofs**, a porous concrete courtyard, car parks with a cobblestone/grass surface and a **rainwater reuse tank**.
- The landscaping includes many green spaces, with many green roofs in particular, and **trees play a central role in the design**.
- The project provides **optimal indoor air quality** through the use of certified materials and the installation of hygienic ventilation with filtration.
- The **acoustic comfort of users** is integrated into the "basic" HQE design.

PROJECT LIFECYCLE

- The works were handed over at the start of the 2023 school year.
- The school is now in operation.
- The project's global performance public contract provides for an operating/maintenance period by the owning group for 10 years.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	365 FTEs	A–3
Number of project beneficiaries	1,200 students	D–1
CO_2 emissions avoided by the project	33.93 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA

Renovation of buildings according to a sustainable development approach, contributing to respect for the environment **Reduction in primary energy consumption (PEC) of at least 30%**	• For the secondary school, workshop and housing, primary energy consumption is estimated at 42.2 kWhep/m²/year, 23.1 kWh/m²/year and 25.4 kWh/m²/year respectively, i.e. 49%, 62% and 61% less than the maximum consumption calculated by RT2012 (82.4, 60.5 and 65.6 kWhep/m²/year respectively).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• **All the environmental aspects of the project were taken into account**: bioclimatic design, biodiversity, water management, disturbances, health, etc. (see above).
Combating of climate change and promotion of the region's ecological transition	• The project is part of an effort to **reduce its carbon footprint**, with a significant reduction in the energy consumption of the buildings in comparison with the standard and the former school.
Contribution to sustainable regional planning and improvement to the quality of life	• Rainwater management on the plot (green roofing, recovery tank). The **zero-waste initiative** is respected for a 10-year rainfall return period. • The site's biodiversity and trees are emphasised in the landscaping project.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The new building was designed to **benefit student learning and living conditions** (acoustic and thermal comfort, capacity of adapted spaces, etc.). It is therefore part of the development of a quality educational offer in the region.
Regional economic development	• The construction site and the project's operations **generate jobs** (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, resource saving, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/information-transversale/actualites/la-reconstruction-du-lycee-marcel-cachin-a-st-ouen-acceleree-par-la-dynamique-des-jo-2024-251#:~:text=Un%20projet%20acc%C3%A9l%C3%A9r%C3%A9%20par%20la,sport%20et%20des%20JO%202024

EXTENSION OF CAPACITY AT LYCÉE HENRI SELLIER IN LIVRY-GARGAN (93)

LYCÉE BUILDING CONSTRUCTION AND EXPANSION • NEW PROJECT

PURPOSE

New buildings, restructuring of the half-board system and reorganization of the existing Lycée Henri Sellier building

LOCATION

Livry-Gargan (93)

KEY DATES

Notification of award of the global performance public contract: 08/06/2021
Start of work: 20/06/2022
Acceptance of work on the half-board building: 30/08/2023 (opening on 11/09/2023)
Handover of building D (academics): 16/11/2023 (opening on 08/01/2024)
Handover of Building B (Sport): 31/03/2024 (opening in September 2024)
Handover of existing Building A scheduled for 2024 July

TOTAL PROJECT COST

25.70 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

14.62 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The project **involves extending** the secondary school's capacity by **400 students** to accommodate a general and technological section in addition to the existing vocational sections. The work is to be carried out on a functioning environment site.
- The project involves the construction of a new 4,100 sq. metre, 3-storey wing (Building D), mainly dedicated to teaching, and the extension of Building B, the catering building, to enlarge the half-board facilities and create student accommodation and a sports centre on the upper floor. The current teaching building A is being remodelled to convert the rooms to new uses by modifying the space organization. Existing buildings A and B are also being taken over (lighting, heating network, AHU) to improve their energy performance.
- The project also includes **landscaping** for the forecourt, courtyard and car park. An educational garden will be created. These developments will aim to **promote biodiversity** on the site (green roofs on new buildings, shelters for wildlife, etc.) and **reduce** permanent coveringof the soil surface (pervious concrete, permeable surfaces in the car park, 88% of open spaces are in the open, etc.).
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint** by aiming to achieve level E3C1 of the E+C- benchmark for the extension. The project is **adapted to climate change**, with a design that guarantees hygrothermal comfort.
- All heating production in the new buildings will be carried out by air to water **heat pumps**.
- The project provides for the **management of storm water runoff on the plot and the regulation of discharges** up to a ten-year rainfall event via roofs covered with greenery on new buildings and retention ponds.
- In order to ensure **indoor air quality**, the AHUs of new buildings will be equipped with filters.

PROJECT LIFECYCLE

- The works were carried out within the deadlines set out above.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	178 FTEs	A–2
Number of project beneficiaries	1,593 students	D–1
CO_2 emissions avoided by the project	26.7 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA

Renovation: Reduction in primary energy consumption (PEC) of at least 30% **Construction: Required energy consumption level < -40% compared with RT 2012 (equivalent to level E3C1 of the E+C- Label)**	• In new buildings (building D and extension of building B), primary energy consumption is estimated at 33.7 and 25.5 kWhep/sqm/year, respectively, i.e. 44.3% and 57.9% less than the maximum primary energy consumption coefficient (PEK value) calculated by RT2012 (60.5 kWhep/sqm/year for the 2 buildings). • For renovated buildings (A and B), the primary energy consumption after the project is estimated to be 63.2 kWhep/sqm/year overall, i.e. a reduction of 49% compared to the initial consumption (123.9 kWhep/sqm/year).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• Bioclimatic design, biodiversity, integration of bio-sourced materials, water management, composting, occupant comfort, etc. (see above).
Combating climate change and promotion of the region's ecological transition	• The project is part of an approach to **reducing its carbon footprint**, with an analysis carried out over its entire life cycle and compliance of new buildings with the C1 threshold of the E+C- baseline. The project provides for the implementation of **bio-based materials** on the two new buildings. Attic framing will be done in wood. Finally, all heating in the new buildings will be furnished by **heat pumps**.
Contribution to sustainable regional planning and improvement to the quality of life	• **Rainwater management on a plot scale** (green roofs, parking lot swales, diffusion, and retention ponds). Runoff rate is regulated up to a ten-year rainfall event. • Landscaping outdoor spaces promotes biodiversity and reduces impervious surfaces through the choice of permeable materials.
Contribution to socially inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational, and regional inequalities.
Responsible regional development	• The design of the new Secondary school has been thought out to promote **good learning environments** for students, to include acoustic and thermal comfort, appropriate space capacity, etc. It is therefore part of the development of a quality educational offer in the region.
Regional economic development	• The construction and operation of the new Secondary school will create jobs, a substantial proportion of which will be local.
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, lifecycle analysis, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
https://nordfranceconstructions.fayat.com/decouvrir-nos-realisations/lycee-henri-sellier-a-livry-gargan-93

RESTRUCTURING OF THE CATERING SERVICE AND WORKSHOPS AT THE JULES FERRY LYCÉE IN VERSAILLES (78)

RENOVATION OF LYCÉES' BUILDINGS • NEW PROJECT

PURPOSE

Restructuring of the day students facilities and the vocational training workshops at the Jules Ferry Lycée

LOCATION

Versailles (78)

KEY DATES

Preliminary analyses: 2014-2015
Notification of the Preliminary Declaration (DP) by the project manager: November 2015
Project Manager Notification - Workshops: November 2020
Preliminary Declaration analyses and Workshops: 2020-2022
Works: 2022-2024

TOTAL PROJECT COST

23.70 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

14.91 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- Building C "Catering" is being completely restructured inside, in order to **improve the flows within** the food preparation areas and the restaurant on the ground floor. The programme also includes the fitting out of **sports areas** within the building (weight training, gymnastics).
- The lower ground floor of the teaching building has been restructured to **accommodate the majority of vocational training courses**. To solve smoke extraction problems, the existing courtyard will be broken up to create a patio on the basement level.
- The **landscaped areas** around and in front of the restaurant building have been redesigned to provide a privileged pathway for users, accompanied by a garden, away from the parking spaces that have been reallocated to the north of the site.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The catering building is connected to the city's heating network, which provides heating and domestic hot water production.
- The design of the project to restructure the half-board building complies with the **limitation of rainwater discharge** to 1 litre/sec/hectare for a 100-year rainfall event: this water is managed by means of an underground retention basin and landscaping.
- As the secondary school is located in the immediate vicinity of some of the most outstanding sites in the grounds of the Château de Versailles (the *pièce d'eau des Suisses*, the *potager du Roi* and the Parc Balbi), the project was designed in collaboration with the *Architecte des Bâtiments de France* to ensure that it **blends in with the site's architecture**.

PROJECT LIFECYCLE

- Work began in 2022 for the workshops and early 2023 for the catering building.
- The workshops were handed over in the spring of 2024.
- The new half-board facility will be in service at the start of the 2024 school year.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	260 FTEs	A–3
Number of project beneficiaries	1,700 students	D–1
CO_2 emissions avoided by the project	3.75 teq CO_2/year	E–4 (only on the catering building)

REGIONAL ELIGIBILITY CRITERIA

Renovation: Reduction in primary energy consumption (PEC) of at least 30%	• For the catering building, primary energy consumption after renovation is estimated at 170.2 kWhep/sq.m/year, i.e. a reduction of 36% compared with initial consumption (265.7 kWhep/sq.m/year). • As the workshops are not subject to the RT Globale regulation, they have only been assessed on an element-by-element basis.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management andeco-design of projects	• **The main environmental aspects of the project were taken into account:** energy efficiency, biodiversity for the landscape, water management, low-impact construction site, etc.
Combating climate change and promotion of the region's ecological transition	• The project is part of a drive to reduce the buildings' carbon footprint, with a significant reduction in the energy consumption of the renovated buildings compared with the existing ones (see above).
Contribution to sustainable regional planning and improvement to the quality of life	• Management of rainwater at the plot level (retention basins and reducing impervious surfaces around the catering building). Water run-off is limited to 1 litre/sec/hectare for a 10-year rainfall return period. • **Biodiversity** is being enhanced through a landscape design project that addresses the issues at stake on the site. • The design of the projects is in keeping with the historic value of the sites adjacent to the grounds of the Château de Versailles, thanks to collaborative work with the ABF (French Architectural Authority).
Contribution to socially inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations. In particular, the work on the workshops resulted in **bringing their smoke extraction levels to standard**.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The site has been designed to provide the **best possible learning and living environments** for students in terms of acoustic and thermal comfort, capacity, etc. The project improves the **functional organisation** of the site.
Regional economic development	• The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Requirements on the choice of construction and equipment materials including bio-based materials, resource saving, reuse, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/information-transversale/actualites/lycee-jules-ferry-a-versailles-demarrage-des-premiers-travaux-852

OVERALL RENOVATION WITH EXTENSION OF THE PIERRE DE COUBERTIN LYCÉE IN MEAUX (77)

LYCÉE BUILDING CONSTRUCTION AND RENOVATION • NEW PROJECT

PURPOSE

Overall renovation and extension of the Pierre de Coubertin secondary school, including the development of the aviation professions centre

LOCATION

Meaux (77)

KEY DATES

Analyses: 2020-2023 **(building V) to 2024** (other new buildings)
Building V works (avionics hall): 2023-2024
Work on other new buildings: 2025-2027
Building A renovation work: 2027-2028
Reception building V: RS2024; and other buildings: RS2028 (subject to asbestos and structure diagnostics)

TOTAL PROJECT COST

114.1 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

3.43 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The aims of the project are to **improve the functional organization of the school's facilities**, with the creation of teaching premises adapted to the training courses on offer, to eventually **accommodate 2,330 students, and to develop the aviation professions section**.
- The project includes the demolition of several obsolete buildings, the construction of an avionics hall (building V), half board and boarding school facilities (building I), a building for staff housing (building L), a gymnasium (building G) as well as the overall renovation of building A dedicated to teaching and its extension (building A+).
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is adapted **to climate change** with a design that guarantees hygrothermal comfort for the occupants.
- A large number of **bio-based materials** are used, including wood certified "Bois de France". A minimum of 40 kg/sqm of bio-based materials in a given surface area is targeted for new construction and 30 kg/sqm for renovated areas.
- The design of the project complies with the **limitation on rainwater discharge** of to 2 litres/second/hectare for a thirty-year rainfall event: rainfall is managed on the plot using retention basins and swales.
- The program calls for establishing **23,943 sq.m of open-ground areas** to enhance biodiversity. This development will enhance the **ecological continuum** in which the secondary school is located, by creating shelters for wildlife and choosing appropriate local plant species.
- In order to preserve air quality, all materials used and in contact with the indoor air will have A+ eco-labels. In addition, **M5+F7+F9 filtration is installed on the double-flow AHUs** to improve the quality of handled air.

PROJECT LIFECYCLE

- Construction of the avionics hall began in 2023. This building will be handed over in the summer of 2024.
- Preparation of the temporary buildings is planned for the third quarter of 2024.
- Demolition of the obsolete buildings and construction of the new ones will start in 2025, with handover at the beginning of the 2028 school year, subject to asbestos and structural defects diagnoses.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	769 FTEs	A–2
Number of project beneficiaries	2,330 students	D–1
CO_2 emissions avoided by the project	36.82 teq CO_2/year	E–4 (excluding renovation of building A, data not available at the APD (final design) stage)

REGIONAL ELIGIBILITY CRITERIA

Renovation: Reduction in primary energy consumption (PEC) of at least 30% **Construction: Required energy consumption level < -40% compared with RT 2012 (equivalent to level E3C1 of the E+C- Label)**	• The primary energy consumption of some buildings (A+ and L) was assessed according to the RE2020 baseline and for others (V, G and I) according to the RT2012 baseline. It is therefore not possible to give an overall RT2012 value for the project. Nevertheless, all new buildings have been assessed according to the E+C standard. They all attain the E3 level. • On building A, the renovation works reduce primary energy consumption by 154.8 kWhep/sqm/year initially to 57.19 kWhep/sqm/year after renovation, i.e. a 63% gain.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, harmful substances, health, etc. (see above).
Combating climate change and promotion of the region's ecological transition	• The project is part of an effort to **reduce the carbon footprint of the facility**, with a significant reduction in the energy consumption of a renovated Building A and achieving ambitious carbon targets for new buildings. The project also complies with the Fibois Pact Gold level with the use of 40 kg/sqm of surface area for **bio-based materials** on new buildings.
Contribution to sustainable regional planning and improvement to the quality of life	• Rainwater management on the plot to include retention ponds and swales. Water waste is limited to 2 litres/sec/hectare for a 30-year rainfall return period. • **Biodiversity** has been enhanced by the creation of specific areas to reinforce the ecological continuum in which the secondary school is situated.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The building has been designed to provide students with the **best possible learning and living environment** (acoustic and thermal comfort, suitable space capacity, etc.). It is therefore part of the development of a quality educational offering in the region, particularly in the **aviation professions**. • The construction of a new **boarding school** facility on the site will also favour broad geographical recruitment.
Regional economic development	• The construction site and the project's operations **generate jobs** (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Demanding choice of building products and equipment to include bio-sourced materials, resource conservation, **reusability**, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.amenagement77.fr/projet/lycee-pierre-de-coubertin

GENERAL RENOVATION AND ADDITIONS TO THE EVARISTE GALOIS LYCÉE IN SARTROUVILLE (78)

LYCÉE BUILDING CONSTRUCTION AND RENOVATION • NEW PROJECT

PURPOSE

General renovation of the facilites with new capacity for an additional 250 students at the Evariste Galois secondary school

LOCATION

Sartrouville (78)

KEY DATES

Preliminary analyses: 2019
Notification of award to the project manager: 27 January 2022
Analyses: 2021-2022
Works: 2023-2026

TOTAL PROJECT COST

85.5 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

11.89 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The aim of the project is to **improve the operational organisation** of the school, by providing teaching facilities suited to the teaching on offer (including a half-board facility, science centre, library and courtyard), and to **accommodate the high population density in the area** by increasing the school's capacity by 250 students.
- In addition to demolishing the prefabricated buildings, the project will involve **restructuring the existing buildings** to provide disabled access, ensure fire safety and improve thermal insulation. It will also involve rebuilding a theatre/multi-purpose hall with multiple access for other schools, associations and the local community and will include a redesign of the entrance area.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is adapted **to climate change** with a design that guarantees hygrothermal comfort for the occupants.
- The new buildings will be **constructed from timber**, meeting a target of 23.79 kg/sq.m of surface area using biobased materials.
- The project is subject to an on-site (mainly furniture) and off-site **re-use strategy** based on a circular economy programme.
- The project has been designed to **limit rainwater run-off** to 5 litres/sec/hectare for a 20-year rainfall event: this water will be managed using retention/infiltration ponds and green roofs.
- In order to **preserve air quality**, all materials used and in contact with the indoor air shall be labelled A+ and the air filtration used must achieve an indoor air quality level of SUP 2.
- The project has **been landscaped to take account of the fauna and flora issues identified** on the site by an ecologist. The planting carried out will bear the "local plant" label.

PROJECT LIFECYCLE

- Work began in January of 2023.
- The **new day-students** facility will be commissioned at the start of the 2024 school year.
- The **new North wing of the teaching building** was handed over at the end of 2023.
- In October 2023, work began on enlarging and **renovating the West wing of the teaching building** and **refurbishing the East and South wings of the teaching building** using a phased approach to keep the wings not under construction operational, supplemented by the addition of modular buildings.
- **Work on Teaching Building E, the reception building, the sports hall and the renovation of Building A will be completed and handed over in the summer of 2025**, and there will also be interim project deliveries.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	549 FTEs	A–2
Number of project beneficiaries	2,170 students	D–1
CO_2 emissions avoided by the project	86.39 teq CO_2/year	E–4 (references: Cep_max RT 2012 energy regulations for new buildings and Cep_initial regulations for renovated buildings)

REGIONAL ELIGIBILITY CRITERIA

Renovation: Reduction in primary energy consumption (PEC) of at least 30% **Construction: Required energy consumption level < -40% compared with RT 2012 (equivalent to level E3C1 of the E+C- Label)**	• For Building A (administration and housing, renovation only), primary energy consumption after renovation is estimated at 100.4 kWhep/sq.m/year, i.e. a reduction of 34% compared to initial consumption (152.8 kWhep/sq.m/year). • For building D (half board, renovation and extension), the primary energy consumption of the renovated part is estimated at 106.4 kWhep/sq.m/year, i.e. a reduction of 45% compared to the initial consumption (193.1 kWhep/sq.m/year). Primary energy consumption in the new section is estimated at 84.0 kWhep/sq.m/year, i.e. 58% less than the maximum consumption calculated under RT2012 standards (198 kWhep/sq.m/year). • For building E (teaching, renovation and extension), the primary energy consumption of the renovated part is estimated at 39.8 kWhep/sq.m/year, a reduction of 61% compared with the initial consumption (101.4 kWhep/sq.m/year). For the new part, primary energy consumption is estimated at 26.6 kWhep/sq.m/year, i.e. 56% less than the maximum consumption calculated by RT2012 regulations (61.7 kWhep/sq.m/year). • For building J (reception, new building), primary energy consumption is estimated at 25.7 kWhep/sq.m/year, i.e. 58% less than the maximum consumption calculated by RT2012 regulations (60.5 kWhep/sq.m/year). • For building K (sports, new building), primary energy consumption is estimated at 53.3 kWhep/sq.m/year, i.e. 50% less than the maximum consumption calculated by RT2012 regulations (106.5 kWhep/sq.m/year).

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, harmful substances, health, etc. (see above).
Combating climate change and promotion of the region's ecological transition	• The project is part of an effort to reduce the carbon footprint of the facility, with a significant reduction in the energy consumption of new and renovated buildings. The project includes significant proportions of **bio-based materials** in its design, especially for new buildings that will feature a wooden structure.
Contribution to sustainable regional planning and improvement to the quality of life	• Management of rainwater at the plot level through retention/infiltration basins and green roofs. Water waste is limited to 5 litres/sec/hectare for a 10-year rainfall return period. • **Biodiversity** is being developed through a landscaping project that addresses the requirements of the site and is based on the **"local plant" label**.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and regional inequalities.
Responsible regional development	• The site has been designed to provide the **best possible learning and living environments** for students in terms of acoustic and thermal comfort, capacity, etc. The project will **improve the functional organisation** of the site, based on a global approach.
Regional economic development	• The construction site and the project's operations **generate jobs** (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Demanding choice of building products and equipment to include bio-sourced materials, resource conservation, **reusability**, etc.
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/information-transversale/actualites/le-projet-de-restructuration-du-lycee-evariste-galois-a-sartrouville-se-dessine-642

CONSERVATOIRE NATIONAL DES ARTS ET METIERS (CNAM) – SYNERGIE 2

HIGHER EDUCATION AND RESEARCH CONSTRUCTION PROJECT

PURPOSE
New building

LOCATION
Saint Denis – Aubervilliers

KEY DATES
Construction phase started in September 2021
Building Handover during the 4th quarter of 2023

TOTAL PROJECT COST
19.00 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
90%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND
9.85 M€

HISTORY OF PROJECT FINANCING
by the Region's previous green and sustainable bonds

QUALITATIVE PRESENTATION OF THE PROJECT
- The construction of the building is supported by the Île-de-France region which is the contracting authority and provides financing, with a 10% contribution from the CNAM.
- The GM Architecture agency (Jean Guervilly and Françoise Mauffret) has been appointed as authorised project manager for conducting the studies and monitoring this operation. The building is located on land that was previously fully developed and provides a vegetated space to the south of the plot. The building has four floors.
- The project provides accommodation for the CNAM's biology laboratories, currently located in unsuitable and dilapidated premises and teaching rooms. The building's architecture is simple, compact and functional. It satisfies the important technical requirements related to the activity of the busy laboratories and promotes the pooling of spaces and equipment.

PROJECT LIFECYCLE
- At this stage:
  → Building handover took place in October 2023;
  → The Safety Commission issued a favourable opinion in November 2023.
- Forthcoming:
  → The lifting of reservations and the Completion Guarantee are scheduled for 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	57.13 FTEs (52 site FTEs and 5.13 insertion FTEs)	A–1
Number of project beneficiaries	181	D–11
CO_2 emissions avoided by the project	19.09 teq CO_2/year	E–2

REGIONAL ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach, contributing to respect for the environment

All higher education buildings starting from 2017: energy consumption level required < -20% compared to RT 2012 (equivalent level E3C1 of the E+C- label)

- Project designed on the basis of the "Sustainable Design and Construction Guide" drawn up by the region in the area of university and research real estate.
- The project aims at the Effinergie+ level, i.e. PEC RT2012 -20%, and reaches the E2 level at the project planning stage, i.e. 81.5 kWhep/m²/year (in ACV (E+C-)) established by TERAO at the project planning stage.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• Assistance to the contracting authority to develop and monitor the environmental programme from planning up to 1 year after the handover of the building. • Environmental programme prioritising energy efficiency, maintenance and durability of structures. • Green construction site charter limiting sources of nuisance (biodegradable oil, prefabricated elements, recycling of site waste, etc.).
Combating of climate change and promotion of the region's ecological transition	• Energy ambition surpassing the regulatory requirements, amounting to a 20%/RT 2012 reduction in consumption Limiting coolant consumption. • Performance of a LCA (Life Cycle Analysis) for the project and its carbon impact The level achieved at PRO stage is E2C1. Internal wood carpentry. • Plant presence with a green roof used for effectively combating heat islands. • The project is served by public transport. A covered bike shelter is created with 18 parking spaces.
Contribution to sustainable regional planning and improvement to the quality of life	• Regional rebalancing of the research and education offer. • Reduction of the region's paving with a open, undeveloped space.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• Creation of professional insertion hours, in connection with the integration developers of Plaine Commune. • Allocation of works contracts facilitating access to public procurement for SMEs-VSEs.
Respect for fundamental rights	• Improved working conditions for students and researchers.
Responsible regional development	• The project will enable the development of 6 CNAM laboratories, in terms of both student capacity and accommodating new equipment. It therefore strengthens the research capacities in Île-de-France and more specifically in Seine-Saint-Denis. • Through its education component, the project is intended to improve the qualifications of the region's communities.
Regional economic development	• The operation represents 52 jobs for the construction phase. The project is divided into many different lots so that local companies and even insertion companies providing jobs for the unemployed can contribute to its execution. • Implementation of professional integration jobs.
Fair practices, responsible purchasing and responsible supplier relations	• Requirements on the choice of construction products (reduction in use of natural resources, CO_2 emissions, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• Ongoing consultation with future users (CNAM) and the regional authority.

Dedicated website
www.oteis.fr/project/construction-du-batiment-synergie-2-pour-le-cnam-a-saint-denis-93

CONSERVATOIRE NATIONAL DES ARTS ET METIERS (CNAM) – LANDY 2

HIGHER EDUCATION CONSTRUCTION PROJECT

PURPOSE
New building

LOCATION
Saint-Denis – Aubervilliers

KEY DATES
Building handover: January 2024

TOTAL PROJECT COST
38.8 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
79.4%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND
15.70 M€

HISTORY OF PROJECT FINANCING
by the Region's previous green and sustainable bonds

QUALITATIVE PRESENTATION OF THE PROJECT
- The construction of the building is supported by the Île-de-France region which is the contracting authority and provides 80% of the financing.
- The TANK architecture agency was appointed as authorised project manager for conducting the studies and monitoring this operation. The building has a mixed wood-concrete frame and three floors. An indoor garden is created along with two green links to the existing building.
- The project is used to develop the existing apprentice training centre (CFA), which it will eventually be an extension of, so it can accommodate over 1,000 trainees. In addition to the educational areas, a library and documentation centre, a 400-seats restaurant, administrative offices and server hosting are planned.

PROJECT LIFECYCLE
- The project was launched on March 22nd 2021, with earthworks delayed due to unforeseen circumstances, and elevations starting in July 2022.
- The building delivery took place in January 2024.
- The users moved into the new building in January 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	101 FTEs (89 site FTEs and 12 insertion FTEs)	A–1 and B
Number of project beneficiaries	801	D–11
CO_2 emissions avoided by the project	10 teq CO_2/year	E–2

REGIONAL ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach, contributing to respect for the environment **All higher education buildings starting from 2017: energy consumption level required < -20% compared to RT 2012 (equivalent level E3C1 of the E+C- label)**	• RT-30%. CO_2 emissions avoided by the project 10 teq CO_2/year. • Assistance to the contracting authority to develop and monitor the environmental programme from planning up to six months after the handover of the building.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Assistance to the contracting authority to develop and monitor the environmental programme from planning up to six months after the handover of the building. • Environmental programme prioritising energy efficiency, maintenance and durability of the structures. • Green site charter limiting nuisances.
Combating of climate change and promotion of the region's ecological transition	• Energy ambition surpassing the regulatory requirements, amounting to a 30% reduction in consumption. • Natural nocturnal ventilation and absence of air conditioning. • Substantial plant presence with the development of an indoor garden and a green roof used for effectively combating heat islands. • Four parking spaces are reserved for electric vehicles, with charging points. • A secure, covered bike shelter. • Alternative rainwater management using ditches and a retention basin recovery for watering green spaces.
Contribution to sustainable regional planning and improvement to the quality of life	• Regional rebalancing of the education offer.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• Creation of professional integration hours. • Allocation of works contracts facilitating access to public procurement for SMEs-VSEs.
Respect for fundamental rights	• Improved working conditions for trainees by offering them dedicated spaces.
Responsible regional development	• The project will enable the development of the CNAM apprenticeship training centre (CFA), in terms of both student capacity and new proposed curriculums. Given the institution's strong local roots, local populations, in particular young people, will be the first to benefit from this project. • The project is therefore intended to reinforce the qualifications of the region's populations. It also meets the skills requirements of local businesses.
Regional economic development	• The operation represents 89 jobs for the construction phase. • Implementation of professional integration jobs.
Fair practices, responsible purchasing and responsible supplier relations	• Requirements on the choice of construction products (reduction in use of natural resources, CO_2 emissions, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• Ongoing consultation with future users (CNAM) and the regional authority.

Dedicated website
cnam-idf.fr

MATHSTIC BUILDING

HIGHER EDUCATION AND RESEARCH CONSTRUCTION PROJECT

PURPOSE
New building

LOCATION
Saint Denis Aubervilliers (93)

KEY DATES
Foundation stone: 10 April 2023
Acceptance of work: April 2024

TOTAL PROJECT COST
9.10 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
76.6%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND
1.40 M€

HISTORY OF PROJECT FINANCING
by the Region's previous green and sustainable bonds

QUALITATIVE PRESENTATION OF THE PROJECT

- The construction of a building for the MATHSTIC laboratories is being carried out by the University of Paris 13 on the Villetaneuse campus (93) in order to create a research centre in the fields of mathematics, science and information and communication technology in the north of the Île-de-France region. This involves the grouping of the 3 laboratories LAGA, LIPN and L2TI. It is a flagship project in the development of the university's digital strategy in order to foster mixed research and innovation.
- The jury in charge of selecting the project manager for phase 1 of the project met in November 2019 and selected the VIB Architecture as project manager for the performance of the studies and the oversight of this operation.
- The project owner opted for an ambitious environmental approach with the "Bâtiments Durables Franciliens" initiative (Sustainable Île-de-France Buildings), which offers 4 levels of performance rewarded with medals. For the project, the goal was to reach the Silver level. The "Design" commission made it possible to achieve this level, and the level must be confirmed during the Operation phase.
- The region has also set ambitious environmental goals as part of its "Sustainable Design and Construction" regional guide, which is mandatory for the real estate projects that it finances or executes in the academic field. To date, 28 objectives are applicable to the project, with 8 achieved at the "minimum" level, 10 at the "demanding" level and 7 at the "exemplary" level. That amounts to 25 out of 28 objectives achieved.
- Examples of objectives achieved as part of the project:
  → Introduction of alternative, landscaped rainwater management;
  → Achievement of lighting autonomy ≥ 50% in more than 80% of the premises;
  → Combining natural ventilation with mechanical ventilation, thereby guaranteeing a higher flow rate than required by regulations and improved comfort, particularly during the summer months.

PROJECT LIFECYCLE

- Work is under way, with handover scheduled for autumn 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	66 FTEs	A–1
Number of project beneficiaries	414	D–8
CO_2 emissions avoided by the project	13.51 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA

Construction of buildings according to a sustainable development approach, contributing to respect for the environment

All higher education buildings starting from 2017: energy consumption level required < -20% compared to RT 2012 (equivalent level E3C1 of the E+C- label)

- PEC =58.7 kWhep/m²/year, i.e. a 27.7% gain compared to the maximum PEC (PEC RT2012 – 27.7%).
- CO_2 emissions avoided by the project: 13.51 teq CO_2/year.
- Environmental programme prioritising energy efficiency, maintenance and durability of engineered structures.
- Assistance to the contracting authority to develop and monitor the environmental programme, from programming to six months after the handover of the building.
- Green site charter limiting nuisances.
- Ambition in the energy field beyond the regulatory requirements, which is a 30% reduction in consumption.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Assistance to the contracting authority to develop and monitor the environmental programme. • Competent project management in a sustainable environment. • Environmental programme prioritising a passive approach to meet needs naturally. • Commitment to a "Île-de-France Sustainable Building" approach and achievement of the Silver standard at the design stage.
Combating of climate change and promotion of the region's ecological transition	• Thermal optimisation systems through bioclimatic design: cylindrical-shaped building, insulation with high-performance products, integrated sun protection in the façade, low-carbon wood and concrete structures. • Insulation with high-performance products that limit thermal bridges and air permeability. • Solar protection integrated into the façade to limit overheating in summer: horizontal caps and vertical slats in solid wood. • Low-carbon wood and concrete structures to enhance the building's thermal inertia and durability, while reducing greenhouse gas emissions. • Suitable ventilation with flow rate above regulatory level Materials in contact with indoor air class A+ Natural ventilation to remove calories Adiabatic module cooling. • Exemplary BBC E2/C1 low energy consumption level, in anticipation of future RE2020 regulations. • Low Consumption Level example BBC E2/C1 Primary energy consumption of the project: Project PEC = PEC max RT – 25.7% • Limitation of the district heat island by installing an indoor green patio, which can be irrigated with collected rainwater. The building has a waste heat recovery potential for heating and DHW, which avoids heat being dissipated into the air and thus contributing to the heat island. • Cooling by adiabatic module. • Green construction site charter limiting sources of nuisance and overall assessment at the end of the operation Circular economy: setting up a platform to recycle construction site waste. • Landscape rainwater management The depaving factor of the plot is 54%. Excess rainwater will be channelled to the reservoirs, such as the 13 m^3 landscaped swale and the 58 m^3 underground basin.
Contribution to sustainable regional planning and improvement to the quality of life	• Regional rebalancing of the research and higher education offer in the field of mathematics and computer sciences. • Option of walking through the premises and priority given to pedestrian paths. • Preferred local supply chains for materials. • Project very well served by 2 public transports Tram line no. 8 and the new "Tangentielle Nord" train station Planned bicycle parking spaces.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• PRM regulations taken into account. • Safety study conducted.
Respect for fundamental rights	• Improved working conditions for PhD students and researchers by offering them efficient work spaces and uniting the teams from the 3 labs.
Responsible regional development	• Implementation of professional integration jobs in the operational phase.
Regional economic development	• 80% of the companies involved in the project are based locally (department where project is located and neighbouring departments). • Creation of a childcare centre and an inter-company restaurant promoting local services.
Fair practices, responsible purchasing and responsible supplier relations	• Requirements on the choice of construction products (reduction in use of natural resources, CO_2 emissions, etc.). • Requirements on the source of materials (limitation of grey energy).
Promotion of a suitable consultation procedure with internal and external stakeholders	• Consultation with laboratories for program validation: Personal notebook, user awareness, eco-gestures.

Dedicated website
www.vincennes.fr/nouveau-lycee


Véhicule hybride
ÎledeFrance
mobilités

CLEAN TRANSPORTATION

Development of the public transport supply as an alternative to using the automobile, contributing to sustainable mobility and to the fight against climate change, and projects to improve the comfort, accessibility and safety of public transport users and of people living nearby the infrastructures

- **As the leading partner of transport policies in Ile-de-France**, Region Île-de-France participates in defining the transport organisation schemes with Ile-de-France Mobilités. The latter is the authority responsible for the organisation of public transportation in Ile-de-France, which co-finances large investment projects with its partners (such as State and General Councils).
- **The extension of the subway 11 (Rosny-Bois-Perrier) et 14 (Saint-Ouen)**, financed by the green and sustainability bonds, is part of the network Greater Paris Express project.
- **The extension of the line EOLE**, which prolongates RER E to the west of Île-de-France, is another emblematic, major project. It provides for a new east-west connection for the region, passing through La Défense and Saint-Lazare train station in Paris.
- **The development and/or improvement of buses on own sites**, also financed by the green and sustainability bonds, make a substantial contribution to the desaturation of roads.
- **Region's jurisdiction:** mandatory.
- **Form of intervention:** subsidies to the contracting authorities (Île-de-France Mobilités, RATP, SNCF, General Councils).
- **Target:** all of the Île-de-France inhabitants.

SUBWAY LINE 11

CLEAN TRANSPORTATION/SUBWAY

PURPOSE

Extension to Rosny-Bois-Perrier

LOCATION

Paris, Les Lilas, Romainville, Noisy-le-Sec, Rosny-sous-Bois

KEY DATES

Start of preparatory work: 2016
Provisional commissioning: June 2024, before the 24 Olympic Games.

TOTAL PROJECT COST

1,298.0 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

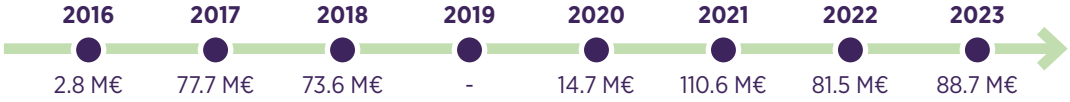
42.9%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

88.74 M€

HISTORY OF PROJECT FINANCING

of the project by previous green and responsible loans of the Region



QUALITATIVE PRESENTATION OF THE PROJECT

- The eastern extension of the metro line 11 includes the completion of **6 km of railways and the creation of 6 stations** through to the station of Rosny-Bois-Perrier.
- The **number of users switching from private cars** to the line 11 is estimated at around 7%, or 1.33 million fewer private car journeys per year. The project will thus help **to relieve road congestion and reduce pollution caused by private car transport**.
- The project is part of a global vision of the **development of the territories** served and allows users to choose a **more environmentally friendly** mode of public transport.
- Partners involved: joint owners (RATP and Ile-de-France Mobilités) and other funders (State, Société du Grand Paris, City of Paris and Department of Seine-Saint-Denis).

PROJECT LIFECYCLE

- Several projects are underway between Châtelet and Rosny-Bois-Perrier, both on the adaptation of existing stations and on that of extension works. The work is nearing completion.
- RATP has officially announced that the extension to line 11 will be brought into service in June 2024, before the 24 Olympic Games.
- On July 16, 2021, the SOFIA tunnel boring machine arrived at its terminus, Serge Gainsbourg in Les Lilas, and completed its last drilling for the extension of line 11.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	9,216 FTEs	A–2
Number of project beneficiaries	331,000	D–4
CO_2 emissions avoided by the project	3,255 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• Extension of metro line 11 to Rosny-Bois-Perrier. • Electrified infrastructure on the ground.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• RATP, the project owner, is involved in its sustainable development policy by managing the environmental risks of its industrial sites (e.g. on the future site of maintenance and storage: treatment of polluted land) and the infrastructure It operates, through the eco-design of the infrastructure, systems, and equipment, which it specifies or designs, and through the purchases it makes.
Combating climate change, and promoting the Region's environmental transition	• The number of users switching transport modes from private cars to the line 11 is estimated at around 7%, or 1.33 million fewer private car journeys per year. The project will thus help to relieve road congestion. • Expected reduction of greenhouse gases of 3,255 CO_2 teq/year.
Sustainable regional planning and improving quality of life	• General average time saved for current transit users estimated at 10 minutes per trip, representing a total time savings of 3.6 million hours per year. • In total, considering the time saved by other users and that due to the better station accessibility, the annual time savings amount to 4 million hours per year.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• New stations accessible to people with disabilities: the paths in the station between the roads and the platforms will be accessible by elevators for the main access route. The platforms will always be in aligned for easy access to the trains. • Integration of the project with the pricing in force in Île-de-France, set by Ile-de-France Mobilités and involving a social rate financed by the Region to guarantee the poorest have access to mobility and public transport.
Respect for fundamental rights	• Respect for the fundamental rights of workers who work on the site, by ensuring their safety and by respecting the legislation for the health protection.
Responsible regional development	• The project will serve 68,000 inhabitants and 14,500 jobs. • The project supports several development sectors (ZAC Boissière-Acacia in Montreuil, ZAC Centre -Ville in Lilas, ANRU sectors). • Communities and developers are involved throughout the project's development and implementation to ensure its consistency and relevance in terms of economic development and the areas to be served in priority.
Regional economic development	• Estimated creation of 9,216 FTEs on-site. • Around the metro stations, the new services represent an opportunity for businesses and economic activities. • The project will make it easier to access jobs in the sector and, for the residents near the stations, access to jobs and places of study in Ile-de-France.
Fair practices, responsible purchasing, and responsible supplier relations	• Within the framework of the projects supported by the Region, the grants awarded to the contracting authorities (the RATP for this project) are subject to the Public Procurement Code.
Consultation with stakeholders	• Regular information given to residents on the evolution of the stages of the site. • Specific information campaigns will also be put in place among elected representatives, associations, residents near the building site and passengers of the metro and bus networks. • Local agents accompany the construction site on the field, liaising between residents, elected representatives and construction companies (office hours in a dedicated space, "site info" phone number). • A dedicated online portal will be put in place.

Dedicated website
www.ratp.fr/groupe-ratp/metro-ferre/prolongement-de-la-ligne-11-a-rosny-bois-perrier

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

SUBWAY LINE 14

CLEAN TRANSPORTATION/SUBWAY

PURPOSE

Extension to Mairie de Saint-Ouen

LOCATION

Paris, Clichy, Saint-Ouen-sur-Seine

KEY DATES

Start of work: July 2013
Partial commissioning: 14/12/2020
Full commissioning: 28/01/2021
The rest of the line's southern and northern extensions will be brought into service in June 2024, before the JOP24

TOTAL PROJECT COST

1,380.0 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

13.6%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

1.91 M€

HISTORY OF THE FINANCING

of the project by previous green and responsible loans of the Region

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
39.0 M€	23.1 M€	73.1 M€	30.1 M€	19.5 M€	-	3.6 M€	-	2.7 M€	1.91 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- First link in the **Grand Paris Express network**.
- Project integrated into a **global vision of the development of the territories** served.
- Objective of desaturating line 13: traffic studies have shown that the discharge rate of line 13 thanks to the extension of line 14 is more than 23% on the common trunk and more than 19% on the branches, thus **improving the travel conditions of public transport users**.
- The completion of the Line 14 extension project will result in a transfer of 33,686,400 vehicle.km/year of car or motorized two-wheeler users to public transport.
- Partners involved: joint project owners (RATP and Île-de-France Mobilités) and other funders (State, Société du Grand Paris, City of Paris and Hauts-de-Seine and Seine-Saint-Denis departments).

PROJECT LIFECYCLE

- The project was commissioned on 14/12/2020, except for the Porte de Clichy station, and the overall commissioning was carried out on 28/01/2021.
- It was then the first section of the Grand Paris Express to enter service, foreshadowing the radial axis crossing Paris and eventually linking Saint-Denis Pleyel to Orly airport.
- Even if it was still marked by the health crisis, a satisfaction survey carried out at the end of 2021 showed a significant discharge effect and at the top of the objectives for the busiest sectors of the line 13.
- In addition, users who now use the extended line 14 benefit fully from the time and comfort savings provided by this new link, which contributes to the attractiveness of public transit in Île-de-France.
- The rest of the line's southern and northern extensions will be brought into service in June 2024, before the JOP24.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	9,798 FTEs	A–2
Number of project beneficiaries	176,000	D–4
CO_2 emissions avoided by the project	7,310 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• Extension line 14 of the metro to Mairie de Saint-Ouen. • Electrified infrastructure on the ground.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• Since 2001, RATP has been committed to continuous progress by controlling and anticipating all aspects that fall within its responsibilities in terms of resource use or impacts on the natural environment and residents. This initiative resulted in the ISO 14001 certification of several metro lines (e.g. 1, 8, 14) and various maintenance workshops.
Combating climate change, and promoting the Region's environmental transition	• Modal shift expected from users of cars or motorized two-wheelers to public transport of véh.km/an 33,686,400, which will be evaluated in the medium term, after the health crisis. • Expected reduction in greenhouse gas emissions of 7,310 teq.CO_2/year.
Sustainable regional planning and improving quality of life	• Overall average time savings for current public transit users estimated at 6 minutes per trip thanks to the extension of line 14, which for a total of 162,000 trips per day corresponds to a total time saving of 4.7 million hours per year. • The time savings of current car users who will now use line 14 are considered equal to half the gain of former public transit users, or 3 minutes per trip.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• New stations accessible to People with Reduced Mobility (PRM): paths in the station between the road and platforms accessible by elevators for the main access route; The platforms are in straight alignment to allow level access to trains. • Integration of the project into the pricing system in place in Île-de-France, set by Île-de-France Mobilités and which includes social pricing financed by the Region to guarantee the poorest people access to mobility and public transport.
Respect for fundamental rights	• Respect for the fundamental rights of the workers who have worked on the site, in particular by ensuring their safety and respecting the legislation for the protection of health.
Responsible regional development	• Positive economic impact by facilitating access to jobs in the sector and for residents living near the stations to facilitate access to jobs and study sites on Île-de-France: the project will ultimately serve 96,100 inhabitants and 72,000 jobs. • Project that supports the development of developing sectors (ZAC des Docks, ZAC Victor Hugo, etc. in Saint-Ouen; ZAC Morel-Sanzillon, etc. in Clichy; Batignolles sector, ZAC Clichy-Batignolles, etc. in Paris).
Regional economic development	• Estimated creation of 9,798 FTEs on site.
Fair practices, responsible purchasing and responsible supplier relations	• Subsidies from the Region granted to project owners themselves subject to the Public Procurement Code (Visa in financing agreement - Law No. 85-704 amended of 12 July 1985 on public project management and its relationship with private project management).
Consultation with stakeholders	• Public inquiry from January to February 2012, and DUP in October 2012. • Regular information for local residents implementation on the progress of the stages of the work, holding of public information meetings, signage, and targeted newsletters. • Proximity agents to make the link between residents, elected officials and construction companies, with permanence in a dedicated room located near the site provided by the proximity agent. He was also reachable on a telephone number "site info". • A specific Internet portal has been set up. • Communities and developers involved throughout the development and implementation of the metro project within the framework of specific meetings (technical committee, monitoring committees, etc.).

Dedicated website
www.ratp.fr/plans-lignes/metro/14

Dedicated website
https://prolongement ligne14-orly.fr/gares/mairie -de-saint-ouen-132

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

TRAMWAY T10

CLEAN TRANSPORTATION / TRAMWAY

PURPOSE

Construction of a new tramway line between Antony and Châtenay-Malabry

LOCATION

Antony, Châtenay-Malabry, le Plessis-Robinson, Clamart

KEY DATES

Declaration of public utility: 2016
Preparatory work and diversion of networks: 2017-2020
Tramway works: 2019-2022
End of testing: 2023

TOTAL PROJECT COST

351 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

49%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

42.66 M€

HISTORY OF PROJECT FINANCING

by the Region's previous green and sustainable bonds

2016	2017	2018	2019	2020	2021	2022	2023
-	-	-	-	-	-	49.6 M€	42.66 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The T10 creates a new tramway-type link between Antony (Croix de Berny) and Clamart (Jardin Parisien). This new line, 6.8 km long, has 13 stations.
- The T10 facilitates the daily mobility of some 175,000 inhabitants and 65,000 employees in the four municipalities served.
- The T10 provides connections with the RER B, the T6 tram, the Trans-Val-de-Marne bus (TVM). Stations and intersections are designed to ensure that the transition from one mode of transport to another is quick and safe.
- Partners involved: the project owners (Île-de-France Mobilités and the Hauts-de-Seine departmental council) and the other co-financiers (State).

PROJECT LIFECYCLE

- The Tram T10 entered service on June 24th of 2023.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
Number of project beneficiaries	170,000	D–5
CO_2 emissions avoided by the project	31,237 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• Tramway T10: creation of a new tram line between Antony and Clamart. • Electrified infrastructure on the ground.

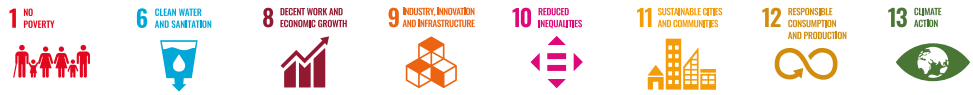
JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design	• The T10 tramway will run mainly on existing tracks to preserve the environment (natural habitats, fauna and flora). • An ecologist ensures an environmental follow-up of the site. • The T10 tramway platform is mostly vegetated, and more than 1,000 alignment trees are planted along the route.
Combating climate change, and promoting the Region's environmental transition	• By ensuring a good connection with the RER B, the T6 tramway and the Trans-Val-de-Marne, the T10 tramway creates favourable conditions for a modal shift from the private car to the new tram line. • Secure bicycle hoops and parking are accessible, facilitating the TC/bike combination.
Sustainable regional planning and improving quality of life	• To offset the inevitable impacts: – reforestation actions are planned: about 19,000 trees were planted in early 2019 in Seine-et-Marne; – a contribution to the Strategic Timber and Forest Fund has beenpaid to support forest restocking; – forest restoration work is planned on about 9.5 hectares in the forest of Verrières, in order to create better habitat and reproduction conditions for animal species.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• The T10 tramway multiplies the travel opportunities of Ile-de-France residents, with many possible connections. • With its floors and low platforms, the trains are accessible to all.
Respect for fundamental rights	• The T10 tram meets the mobility needs of users. • The T 10 tramway respected the fundamental rights of the workers who worked on the site by ensuring their safety and respecting the legislation in force.
Responsible regional development	• Thanks to its connections with other public transport lines (RER B, Tramway T6, bus), the T10 tramway will promote public transport travel for the assets of the municipalities crossed as well as for workers residing outside this territory.
Regional economic development	• The project will contribute to the development of the area, by opening up poorly connected neighbourhoods and boosting the attractiveness of the municipalities affected by the project, some 44,000 inhabitants and 29,900 jobs are located within 500 metres of a tramway station.
Fair practices, responsible purchasing and responsible supplier relations	• As part of this project, the Region awards grants to the project owners, Île-de-France Mobilités and the Hauts-de-Seine Departmental Council, which are subject to the Marchés Publics Cooperative.
Consultation with stakeholders	• The preliminary consultation was organised in 2013. • The public inquiry took place from October 5, 2015, to November 6, 2015. The project was declared of public utility by the Prefect of Hauts-de-Seine on October 11, 2016. • Information tools for residents, residents and traders have been set up to monitor the work: booklets and information brochures, dedicated website.

Dedicated website
https://tram-t10.iledefrance-mobilites.fr

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

TRAMWAY T12

CLEAN TRANSPORTATION / TRAMWAY



PURPOSE

T12 between Massy-Palaiseau and Evry-Courcouronnes

LOCATION

Massy, Palaiseau, Champlan, Longjumeau, Chilly-Mazarin, Epinay-sur-Orge, Savigny-sur-Orge, Morsang-sur-Orge, Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Evry

KEY DATES

Start of work: 2017
Commercial commissioning: December 10, 2023

TOTAL PROJECT COST

526.0 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

55.8%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

28.50 M€

HISTORY OF THE FINANCING

of the project by previous green and responsible loans of the Region

2016	2017	2018	2019	2020	2021	2022	2023
7.4 M€	11.3 M€	14.8 M€	-	59.8 M€	58.2 M€	73.5 M€	28.5 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The project consists of creating a new link between the cities of Massy and Evry in the form of a tram-train. It is structured in two sections: a railway section between Massy-Palaiseau and Epinay-sur-Orge where it will replace the existing branch of the RER C over 10.1 km and an urban section passing through the creation of a new tramway over 10.6 km between Epinay-sur-Orge and Evry-Courcouronnes.
- The T12 Express project covers the north of the department of Essonne, which is affected by economic development issues and offers transfers to RER lines B, C and D.
- The project reinforces the offer of transport in a ring crossing through the south of Ile-de-France, connecting to the existing (RER, Transilien) and coming (Greater Paris) transport networks. It is integrated into a global vision of the development of the territories concerned and offers an attractive alternative to the private car.
- The partners involved: the project owners (SNCF Réseau, SNCF Mobilité), Ile-de-France Mobilités and other funders (the State, Department of Essonne).

PROJECT LIFECYCLE

- Start of work: 2017.
- Resumption of trainset deliveries: March 2023.
- Start of dynamic testing: end of April 2023.
- Commercial commissioning: December 10, 2023.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	4,095 FTEs	A–2
Number of project beneficiaries	40,000	D–5
CO_2 emissions avoided by the project	2,534 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• T12: creation of a new tramway line between the municipalities of Massy-Palaiseau and Evry-Courcouronnes. • Electrified infrastructure on the ground.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design	• The SNCF, the project owner, is committed to social responsibility and aims in particular to reduce the environmental impacts of its projects. • Particular attention was paid to the insertion of the T12 Express garage workshop (greenery to improve the landscape quality of the site for the residents, the HQE building in a wooden structure, the green roof of the workshop and custodian facilities to improve the insulation of buildings, rainwater harvesting). • The facilities along the route incorporate cycling facilities ensuring the best possible continuity with existing bike routes.
Combating climate change, and promoting the Region's environmental transition	• The project will help reduce pollution with savings estimated of around 2,534 teqCO_2 per year.
Sustainable regional planning and improving quality of life	• The new line will improve the quality of life of users in the Ile-de-France region: the average time saved for a public transport user is estimated at 6 minutes per trip.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• The project helps open up districts that are located near the T12 express. • In terms of solidarity, the new T12 Express line will be integrated with the pricing in force in Île-de-France, set by Ile-de-France Mobilités and involving a social rate financed by the Region to guarantee the poorest have access to mobility and public transport.
Respect for fundamental rights	• As part of its implementation, the project respects the fundamental rights of workers who work on the site, in particular by ensuring their safety and by respecting the legislation for the health protection.
Responsible regional development	• The project will enhance the attractiveness of the territory in an area with great needs in terms of transport infrastructure. The project will notably link up clusters of activities, without going through Paris (Massy and Evry). • The T12 will encourage public transport for workers from the municipalities served (51,000 workers), of whom only 19% of those who work in this territory use this mode of transport. It will also make it possible for residents outside of this area to use public transport via a mesh network to other lines (RER B, C and D).
Regional economic development	• Based on current estimates, the project will create 4,095 FTEs on site.
Fair practices, responsible purchasing and responsible supplier relations	• In the framework of this project, the Region allocated subsidies to project owners Ile-de-France Mobilités, SNCF Voyageurs and SNCF Réseau, who are subject to the Public Procurement Code.
Consultation with stakeholders	• Prior consultation was organised between May and July 2009. • The public inquiry took place between 7 January and 11 February 2013 and the Decision on Public Utility, covering the entire project, was published on 22 August 2013. • Information tools for neighbours, residents and shopkeepers have been set up for the follow-up of the work: information brochures and a dedicated website.

Dedicated website
www.iledefrance-mobilites.fr/le-reseau/projets/tram-12-nouvelle-ligne-de-tram-massy-evry-courcouronnes

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

TRAMWAY T13 EXPRESS (PHASE 1)

CLEAN TRANSPORTATION / TRAMWAY

PURPOSE

T13 on the Great Western Belt to the north and south

LOCATION

Saint-Cyr-l'Ecole, Versailles, Bailly, Noisy-le-Roi, l'Etang-la-Ville, Mareil-Marly, Saint-Germain-en-Laye

KEY DATES

Commissioning: July 2022

TOTAL PROJECT COST

434.80 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

52.3%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

15.14 M€

HISTORY OF THE FINANCING

of the project by previous green and responsible loans of the Region

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
-	-	-	-	-	-	43.2 M€	-	36.7 M€	15.14 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- Various studies were carried out from 2003 to 2005 on solutions for extending the Grande Ceinture Ouest (GCO) – in service since 2004 – to the RER A in the north (Achères, Poissy, Saint-Germain-en-Laye) and to the RER C and the Transilien N and U lines in the south (Saint-Cyr-l'Ecole, Versailles). These studies have shown a strong interest in reaching the city center of Saint-Germain-en-Laye which is a sought-after pole of activities and where the closest network with the RER A significantly reinforces the attractiveness of the link. The most realistic solution, given the current configuration of the site, is tram-train operation.
- One of the major objectives of the project is therefore to improve the network of public transport by extending the Grande Ceinture Ouest in order to ensure efficient connections with the existing railway lines: the RER A in Saint-Germain-en-Laye and Achères, the RER C and the Transilien U and N lines in Saint-Cyr-L'Ecole, and the Transilien L in Saint-Nom-la-Bretèche and Achères. The Tram 13 express, a fast bypass project, will facilitate travel between business hubs by avoiding transit through Paris.
- The Tram 13 express project consists, in phase 1, of linking Saint-Germain-en-Laye RER to the north, and Saint-Cyr RER to the south (T13 phase 1).
- Partners involved: the project owners (SNCF Réseau, SNCF Voyageurs, SNCF Gares & Connexions, Île-de-France Mobilités, RATP) and other funders (State, Department of Yvelines).

PROJECT LIFECYCLE

- Phase 1 of the T13 between Saint-Cyr and St Germain-en-Laye was inaugurated on July 6, 2022.
- The work has been completed, with the exception of some finishing work, and the tram has been in service since the inauguration.
- A second phase between Saint-Germain-en-Laye and Archères, passing through Poissy, will be launched with a view to bringing the service into service by 2028.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	2,178 FTEs	A–2
Number of project beneficiaries	21,000	D–5
CO_2 emissions avoided by the project	1,116 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• T13: extension of the Great Western Belt to the north and south, connecting municipalities. • Electrified infrastructure on the ground.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design	• In general, the insertion of the platform and stations is the subject of particular attention given the landscape and heritage sensitivity of the sites crossed (forest massif, castles of Versailles and Saint-Germain-en-Laye). • In accordance with the project's environmental policy and in line with the approach aimed at avoiding, reducing, and compensating for the impacts of the works, for each square meter of forest impacted by the construction of Tram 13 express, 4 sq.m are subject to reforestation in the Saint-Germain massif. In total, forest compensation covers more than 17 ha. • In addition, ecological compensation operations for protected species have been carried out in the Bois de la Duchesse in Bonnelles. • The edge of the forest of Saint-Germain corresponds to the edge of the forest and is a strategic space, which marks the passage from the forest to the city. It plays an essential role in the preservation of biodiversity and the proper functioning of the ecosystem it shelters. Île-de-France Mobilités is working in partnership with the National Forestry Office to carry out so-called "re-flooring" work in this sector. • The Maintenance and Storage site for Sailors is subject to a declaration procedure under the Classified Installations for the Protection of the Environment (ICPE). • The facilities along the route incorporate cycling facilities that ensure continuity with existing cycle routes as much as possible.
Combating climate change, and promoting the Region's environmental transition	• The project will reduce pollution, with estimated savings of 1,116 teqCO_2 per year.
Sustainable regional planning and improving quality of life	• T13 Phase 1 saves time for transit users and provides increased accessibility to and from the study area. For former public transport users who switch to T13, the time saved per user is estimated at 11 minutes. The monetized annual time saving amounts to €24.2 million. • The gains related to the modal shift from private cars to public transport are valued at €2.5 million for the first year of operation.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• The project contributes to the opening of neighbourhoods that are located near the T13 Express. • In terms of solidarity, the new T13 Express line will be integrated into the pricing in force in Île-de-France, set by Île-de-France Mobilités and which includes social pricing financed by the Region to guarantee the poorest access to mobility and public transport.
Respect for fundamental rights	• As part of its implementation, the project respects the fundamental rights of workers working on the site, by ensuring their safety and respecting legislation for the protection of health.
Responsible regional development	• The project will strengthen the attractiveness of the territory in an area where transport infrastructure needs are important. The project will make it possible to connect poles of activity, without going through Paris. • The T13 will promote travel by public transport for the assets of the municipalities crossed (nearly 77,000 jobs). It will also allow workers living outside this territory to use public transport thanks to a mesh network with other lines (RER A and C, Transilien lines N, U and L).
Regional economic development	• Based on current estimates, the project is expected to create 2,178 FTEs on site.
Fair practices, responsible purchasing and responsible supplier relations	• As part of this project, the Region awards subsidies to the project owners, Île-de-France Mobilités, SNCF Voyageurs, SNCF Réseau, SNCF Gares & Connexions and RATP, which are subject to the Public Procurement Code.
Consultation with stakeholders	• The preliminary consultation was held in September and October 2008. • The public inquiry took place from June to September 2013. The project was declared of public utility by the prefect of Yvelines on February 3, 2014. • Information tools for residents, residents and traders have been set up to monitor the work: brochures and information brochures, dedicated website.

Dedicated website
www.tram13-express.fr

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

EOLE

CLEAN TRANSPORTATION/RAILWAY LINKS

PURPOSE

West extension of the RER E

LOCATION

Paris, Courbevoie, Nanterre, Houilles, Carrières-sur-Seine, Poissy, Villennes-sur-Seine, Les Mureaux, Aubergenville, Epône, Mézières, Mantes-la-Jolie

KEY DATES

Start of work: 2017
Commissioning up to Nanterre-La-Folie: mid-2023
Full commissioning to Mantes-La-Jolie: 2024

TOTAL PROJECT COST

5,429.0 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

28.3%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

245.49 M€

HISTORY OF THE FINANCING

of the project by previous green and responsible loans of the Region

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
-	-	32.0 M€	12.8 M€	34.3 M€	-	102.8 M€	123.7 M€	273.0 M€	245.49 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- RER line E west extension, from Haussmann - Saint-Lazare station to Mantes-la-Jolie station.
- The project is 55 km long, with the construction of a new underground infrastructure of about 8 km, the redevelopment of the existing line over 47 km and the creation of three new stations: Porte Maillot, La Défense and Nanterre La Folie. It also provides for new trains.
- An innovative project with a new Nexteo operating system (it will make it possible to run more trains on a single line faster) and operating in redundancy (two self-sufficient branches will operate in parallel on the central section from Nanterre-la-Folie to Rosa Parks; this will make it so that one branch is not impacted should the other branch encounter delays).
- The Eole project is committed to introducing employment clauses in its contracts that reserve 7% of the hours worked for professional integration. After one year of construction, 124,127 hours of professional work was completed in January 2018, out of the 345,898 hours corresponding to the contracts that have started.
- Involved partners and public co-financiers: the project owners (SNCF Réseau, SNCF Mobilité, Ile-de-France Mobilités) other funders (The State, Greater Paris, City of Paris, Departmental Council of Hauts-de-Seine, Departmental Council of Yvelines).

PROJECT LIFECYCLE

- End of tunnelling between Courbevoie and Haussmann Saint-Lazare. The tunnel boring machine has been evacuated from Porte Maillot.
- Completion of civil engineering work on the La Défense, Porte Maillot and Nanterre La Folie stations. Finishing touches are being put to the finishing touches.
- The Porte Maillot site will be vacated in June 2023.
- Continuation of work on the existing section: work on the Bezons viaduct, Mantes triangle, 3rd track, existing stations (Haussmann St Lazare, Magenta, Epône-Mézières and Les Mureaux).
- Commercial service scheduled to begin in May 2024, before the Olympic Games 24.
- The extension to Mantes la Jolie station is scheduled for December 2026.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	26,554 FTEs	A–2
Number of project beneficiaries	1,400,000	D–4
CO_2 emissions avoided by the project	8,040 teq CO_2/year	E–3

REGIONAL ELIGIBILITY CRITERIA

Construction of rail transport infrastructure meeting the following criterion: trackside electrified infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling and trackside control-command and signalling subsystems	• Extension of the RER E line between Paris and Mantes-la-Jolie. • Electrified infrastructure on the ground.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design	• Site eco-design logic: management of construction waste, discharge of pollutants, limitation of nuisances caused by the site (noise, pollution, vibration, lighting, transport of dangerous materials...).
Combating climate change, and promoting the Region's environmental transition	• Shift in transport modes estimated at 67 million veh.km in 2020, with annual growth of 1%. • The net modal transfer rate is around 3% of RER E users, the share of induced traffic is 2 to 4% depending on the model. • Estimated savings, due to the modal shift from road to rail, of 8,040 teqCO_2 per year.
Sustainable regional planning and improving quality of life	• Decrease in the number of trains on the busiest section of the RER A between Châtelet-les-Halles and Auber of 12% during rush hour compared to a 2020 situation without extensions to the RER E. • Yearly time saved: on average 6 minutes, equal to 18 million hours per year.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• Promotes the opening up of the territory and is fully in line with a desire to fight against inequalities between territories. • Project management requires companies to entrust a minimum number of working hours to people who are far from employment, to train and support them in order to promote their access to sustainable employment and reintegrate them permanently into the job market. • 1,385,000 hours of professional integration between 2016 and March 2023.
Respect for fundamental rights	• By promoting intermodality and better service in the region, this project promotes the right to come and go.
Responsible regional development	• The project participates in the development and dynamization of the region, and promotes the urban rehabilitation and urban development of Seine Aval. • Access to jobs will be significantly improved. It may result in more than 250,000 additional jobs in less than an hour for those who reside in the east and north of Paris, in the central part of Hauts-de-Seine and in Seine Aval.
Regional economic development	• Estimated job creation at 26,554 FTEs. • The project should encourage the implementation of businesses or strengthen the existing activity in the Seine valley and in Paris, in La Défense, by improving access. • In addition, the extension will result in the creation of jobs for transport agents.
Fair practices, responsible purchasing and responsible supplier relations	• Subsidies from the Region granted to the Contracting Authorities, themselves subject to the Public Procurement Code.
Consultation with stakeholders	• Public debate: autumn 2010. • Public inquiry: from January 16th to February 18th 2012 and the Decision on Public Utility published on 31 January 2013. • Implementation of information tools for neighbours, residents and shopkeepers have been set up for the follow-up of the work: information brochures and a dedicated website.

Dedicated website
www.rer-eole.fr

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

TZEN 4

CLEAN TRANSPORTATION

PURPOSE

New bus line between Viry-Châtillon and Corbeil-Essonnes

LOCATION

Viry-Châtillon, Grigny, Ris-Orangis, Courcouronnes, Evry, Corbeil-Essonnes

KEY DATES

Work started in 2021

TOTAL PROJECT COST

124.0 M€

FINANCING BY THE REGION IN THE TOTAL AMOUNT OF THE PROJECT

49%

2023 FINANCING BY THE GREEN AND SUSTAINABILITY BOND

7.25 M€

HISTORY OF THE FINANCING

of the project by previous green and responsible loans of the Region

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
-	-	-	-	4.0 M€	-	1.9 M€	1.8 M€	3.8 M€	7.25 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The TZEN 4 project consists in creating a public transport infrastructure on a clean site between Viry-Châtillon and Corbeil-Essonnes. It will replace the current 402 line on the section between “La Treille” at Viry-Châtillon and the RER D station at Corbeil-Essonnes, mainly by integrating the existing section. The infrastructure will extend on about 14,3 km and serve 30 stations with a frequency of 4 minutes during rush hours.
- When commissioned, the TZEN 4 will also borrow clean site sections constructed as part of the urban projects crossed (Grande Borne and ZAC Centre-Ville at Grigny and ZAC de la Montagne des Glaises at Corbeil-Essonnes).
- The TZEN 4 will also be part of the urban projects of the priority neighbourhoods identified in the New National Urban Renewal Program (NPNRU). Several districts of national or regional interest will be served directly by the TZEN 4 (Tarterêts at Corbeil-Essonnes, Pyramides at Evry, Plateau at Ris-Orangis, Grigny 2 and La Grande Borne at Grigny, Plateau at Viry-Châtillon) thus contributing to limiting their isolation from the territory and its economic dynamics. The success of the TZEN 4 project in these neighbourhoods is a priority for the Region. It has chosen to invest specifically in the project through a framework policy, which was passed on 26 January 2017 (CR n°2017-06).
- For the TZEN 4, Île-de-France Mobilités has chosen 24-metre long buses that are fully electric and 100% accessible to people with reduced mobility. However, the purchase of the buses will be covered by Île-de-France Mobilités, while the Île-de-France Region finances the maintenance and storage site and its equipment with electric charging stations.
- Partners involved: Île-de-France Mobilités project management and other funders (State and Department of Essonne).

PROJECT LIFECYCLE

- The work on routing the concessionaires has been completed.
- Work on the platform began in January 2023 and work on the first stations began in March 2023. Completion is scheduled for January to the first semester of 2024.
- Work on the maintenance and storage facility (SMR) began in September 2021 and was handed over in June 2023.
- Commissioning is scheduled for the second half of 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	880 FTEs	A–2
Number of project beneficiaries	47,000	D–6

REGIONAL ELIGIBILITY CRITERIA

Category eligibiity criteria **Construction of infrastructure enabling low-carbon road transport dedicated to public passenger transport**	• Creation of a new bus line between Viry-Châtillon and Corbeil-Essonnes. On 11/10/2021, the Board of Directors of IDFM presented the choice validated in CAD: the TZEN 4 buses will be articulated vehicles of 24m, 100% electric. • Infrastructure enabling low-carbon road transport.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design	• Consideration for environmental issues (noise, air, water, biodiversity), e.g. restitution of impacted trees.
Combating climate change, and promoting the Region's environmental transition	• The project promotes the continuity of soft mobility. Thanks to its own sites, it also frees itself from the constraints of traffic congestion responsible for major irregularity issues so that it provides a real alternative to the use of the car. • The TZEN 4 project requires only very limited consumption of natural areas likely to house protected species. The impact study of the project concludes that there is no residual impact on the natural environment, after the implementation of avoidance and reduction measures. • No wetlands in the project area. • The bus acquired by Ile-de-France Mobilités will be electric.
Sustainable regional planning and improving quality of life	• The layout of the TZEN 4 crosses a dense and heterogeneous urban fabric, not only considering the typology of constructions but also with regard to their quality. The project is an opportunity to renew aging plant structures, restore a more human-scale urban language, restore fringes and enhance perspectives. • Setting up of comfortable public spaces, which favour the soft and pedestrian mode: pedestrian continuity, large pavements, restitution of plantations and parking.
Socially inclusive development, combating inequality, and promoting the safety of individuals	• This project promotes the opening up of the territory and fully subscribes to an effort to fight against inequalities between territories. Île-de-France Mobilités has selected 24-metre-long buses, which will have full disabled access.
Respect for fundamental rights	• By promoting intermodality and a better coverage of the territory, this project promotes the right to come and go.
Responsible regional development	• Strengthening the attractiveness of this sector promotes its economic development. • Upgrade the 402 line towards a more efficient mode between the "La Treille" station at Viry-Châtillon and the Corbeil-Essonnes RER station. • Consolidate and develop intermodality with existing (RER D, TZEN 1) and planned (Tram-Train 12 Express) transport lines.
Regional economic development	• The project is a catalyst for the development of the sector, by opening up poorly connected neighbourhoods and increasing the attractiveness of the served corridor, and more broadly to all municipalities concerned by the project. • Support for works-related jobs.
Fair practices, responsible purchasing and responsible supplier relations	• Subsidies from the Region granted to the actual project owners subject to the Code des Marchés Publics (public procurement code).
Consultation with stakeholders	• Prior consultation from October 17th 2010 to December 2nd 2011, which defined the insertion according to the layout and location of the Maintenance and Storage Site (SMR). • Public survey from May 30th to July 4th 2016. • Statement of public utility on December 8th 2016. • Numerous exchanges with the local players as part of the project management, which made it possible to develop the project (layout, stations, SMR, etc.).

Dedicated website
www.iledefrance-mobilites.fr/le-reseau/projets/tzen4

Dedicated website
www.iledefrance.fr/sites/default/files/2024-06/REPORTING2023_TRANSPORTS_taxonomie_FR.pdf

RENEWABLE ENERGY

Projects contributing to the development of renewable energy and energy efficiency

With a view to strengthening its action for the energy transition, the Region voted in the Energy-Climate Plan in 2018 and intends to play fully its role as leader in energy, air and climate. The Region is seeking to halve dependence on fossil and nuclear energy in Ile-de-France from 2030 and strive towards a totally renewable energy and zero carbon region by 2050, by reducing regional energy consumption by 40% and increasing fourfold the amount of renewable energy produced in the Ile-de-France region.

This strategy highlights several sources of renewable energy with huge development potential in Ile-de-France, especially the heat networks, solar power, hydrogen and methanisation. It is determinedly pursuing this course by accelerating the development of hydrogen mobility, photovoltaic solar power and methanisation under ambitious and operational plans adopted in late 2019 (solar, hydrogen and methanisation plans). The Region is also relying on a cost-saving and highly exploitable renewable energy source in Ile-de-France, geothermal energy, which it can use to supply more than 150,000 equivalent housing units (i.e. 330,000 people).

- **Region's jurisdiction:** shared with all public actors across the region.
- **Form of interventions:** territorial-based actions designed to integrate environmental policies into regional development projects; subsidies to local authorities sponsoring the projects.
- **Target audience:** all Ile de France residents.

PLEYEL GEOTHERMAL NETWORK IN SAINT-DENIS (93)

RENEWABLE ENERGY • NEW PROJECT

PURPOSE
Surface geothermal energy project on groundwater

LOCATION
Quartier Pleyel, Saint-Denis (93)

KEY DATES
Drilling of wells: January 2021 to August 2021
Construction of the plant: 2022
Testing and commissioning: 2023

TOTAL PROJECT COST
17.83 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
8.69%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND
7.96 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The project involves a surface geothermal operation and an extension of SMIREC's heating network in the Pleyel district of Saint-Denis, which will be home to the Olympic and Paralympic Village in the summer of 2024.
- The project involves the drilling of 11 surface geothermal wells on groundwater associated with thermo-frigo-pumps (reversible heat pumps) and the extension of the existing heating network by 10 km. This geothermal operation will supply 30 MWh/year of heat and 10 MWh/year of cold to the Olympic and Paralympic Village, the future Pleyel mixed development zone and the Pleyel Tower, which has now been converted into a hotel. A total of 609,000 m^2 of buildings will eventually be connected, representing 1,952 housing equivalents.
- The surface geothermal system is connected to the SMIREC heating network, managed by Plaine Commune Energie (a subsidiary of ENGIE Solutions).
- Ultimately, this operation will enable these buildings to be supplied with 68% renewable energy, and avoid the emission of 4,500 tonnes of CO_2 per year. The remaining 32% of the heating and cooling will be produced using natural gas.
- The stakeholders: The Syndicat mixte des réseaux d'énergies calorifiques (SMIREC) provides a public service for the production and distribution of heating and cooling in the areas of La Courneuve, Saint-Denis, Stains, Pierrefitte-sur-Seine, L'Ile-Saint-Denis, Epinay-sur-Seine and Villetaneuse, alongside the housing associations Plaine Commune Habitat and Seine-Saint-Denis Habitat, as well as the local authority Plaine Commune. With the 2nd largest heating network in the IDF, covering almost 100km, SMIREC supplies heat to almost 60,000 equivalent housing units. Since 2011, the network has been powered mainly by biomass (biomass heating plants in Saint-Denis and Stains).

PROJECT LIFECYCLE

- Drilling of wells: January 2021 to August 2021.
- Construction of the plant: 2022.
- Testing and commissioning: 2023.
- The geothermal plant was commissioned at the end of June/beginning of July 2023, and will be fully operational by 31 December 2023.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	40 FTEs (including 12 worksite)	A–2 and C–3
Number of project beneficiaries	4,548 inhabitants (14,000 athletes for the Olympic Games)	D–7
CO_2 emissions avoided by the project	4,500 teq CO_2/year	E–5

REGIONAL ELIGIBILITY CRITERIA	
Heat/cold production from geothermal energy	• Renewable heating and cooling for the Olympic and Paralympic Village, the future ZAC Pleyel and the Pleyel Tower, now converted into a hotel. 609,000 sq.m of buildings will eventually be connected, representing 1,952 housing equivalents. During the Olympic Games, the Olympic Village will be home to more than 14,000 athletes, who will be the first to benefit from this renewable energy. • Pooling the production and distribution of renewable heating and cooling thanks to the creation of a heating network, 68% of which will be powered by geothermal energy. • Reducing CO_2 emissions by 4,500 tonnes compared with a natural gas network. • The public funding provided by the Region and ADEME will have a direct impact on the energy bills of future users, enabling subscribers to benefit from a price of €110 incl. VAT/MWh and €350 incl. VAT/MWh for cooling (based on the price of electricity in 2023) with the subsidy requested. By way of comparison, during the same period, the cost of a gas solution would have been in excess of €800 incl. VAT/MWh (exceptional peak), falling to between €96 and €118 incl. VAT/MWh in December 2023. The geothermal solution enables the project to considerably reduce the impact of volatile fossil fuel prices on the energy bills of future users.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Use of RGE-qualified design offices recognised by ADEME (OPQIBI 20.13 and OPQIBI 10.07) to carry out engineering studies (subsurface and surface studies). • In 2019, SMIREC was awarded the "eco-heating network" label by AMORCE, recognising the environmental, economic and social performance of the La Courneuve network. • Optimisation of the heating network: insulation to prevent heat loss, lower network return temperatures, adaptation of pipe sizing, etc. • Optimised management of the network with the introduction of advanced network control and management systems (remote supervision).
Combating climate change and promotion of the region's ecological transition	• Substitution of fossil fuels and reduction of greenhouse gas emissions: 30 MWh/year of renewable heat and 10 MWh/year of renewable cooling. • Reversibility of heat pumps (thermofrigopompes) for simultaneous production of renewable heating and cooling, as part of a strategy to adapt to increasing heat waves. • Pooling energy production and distribution facilities. • Improving air quality through a solution that does not emit micro-particles.
Contribution to sustainable regional planning and improvement to the quality of life	• Secure heating and cooling installations and supplies, and offer great flexibility to subscribers and users. • Project exploiting a local, stable, invisible resource, with a limited land footprint.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• Secure heating and cooling installations and supplies, and offer great flexibility to subscribers and users. • Project exploiting a local, stable, invisible resource, with a limited land footprint.
Respect for fundamental rights	• Promotes access to renewable energy, supporting households' standard of living and constantly improving their living conditions.
Responsible regional development	• A project that contributes to strengthening the role of renewable energies in the Ile-de-France region, and surface geothermal energy in particular.
Regional economic development	• Support for the development of renewable energies in the region. • Reducing dependence on imported fossil fuels. • Surface geothermal energy creates new activities that cannot be relocated.
Fair practices, responsible purchasing and responsible supplier relations	• Qualified design offices. • Underground drilling carried out in accordance with mining regulations issued by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	• Implementation of an upstream master plan, a medium- and long-term network management tool. • Regular user committees.

Dedicated website
www.smirec.fr/actualites/vie-du-reseau/inauguration-de-la-centrale-geothermique-du-quartier-pleyel-a-ville-de-saint-denis-et-du-futur-villatge-des-athletes.html

AAP RENEWABLE HEAT 2020
EVRY GEO

RENEWABLE ENERGY • NEW PROJECT

PURPOSE
Developing the Evry-Courcouronnes geothermal heating network

LOCATION
Evry-Courcouronnes (91)

KEY DATES
Inauguration of geothermal wells: May 2023

TOTAL PROJECT COST
19.52 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
16.50%

2023 FINANCING OF THE PROJECT THORUGH THE GREEN AND SUSTAINABLE BOND
2.58 M€

QUALITATIVE PRESENTATION OF THE PROJECT
- As part of a public service delegation contract for the production and distribution of heating for the Communauté d'Agglomération du Grand Paris Sud Seine Essonne Sénart (CAGPS), the delegatee Grand Paris Sud Energie Positive (GPSEP), a subsidiary of Dalkia Île-de-France, plans to deploy a deep Dogger geothermal power plant and develop the associated heating network in Evry.
- The Evry district heating network will be supplied from the waste-to-energy plant at the Vert Le Grand treatment centre, which is already in operation, and from the geothermal heat generated by the new deep geothermal doublet.
- Simulations of the use of the geothermal resource show that geothermal energy will enable GPSEP to supply the heating network with at least 55% recycled energy in the short term, then 77% recycled and renewable energy in the medium term via the use of recycled energy from the CITD Vert Grand (Integrated Waste Treatment Centre) and renewable energy supplied by geothermal energy by 2021-2022.
- The deployment of deep geothermal energy is the subject of a specific project that includes the creation of a geothermal doublet with its geothermal loop, the installation of a heat pump (PAC) associated with the geothermal exchanger and the construction of a building dedicated to the installation of a heat pump (PAC).
- Geothermal energy represents a production of 95,000 MWh/year.
- This new energy covers around a quarter of the identified needs and heats 8,500 equivalent homes. The drilling work carried out in 2021 has increased capacity to 12 MW and raised the proportion of renewable energy in the heating network from 55% to 77%.
- The end users of geothermal heat are 33% social housing, 27% private homes and 20% school and local authority buildings.

PROJECT LIFECYCLE
- Drilling work began in May 2020, with geothermal energy due to come on stream in July 2023.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	32 FTEs (including 30 worksite)	A–2 and C–3
Number of project beneficiaries	8,500 inhabitants	D–7
CO_2 emissions avoided by the project	11,000 teq CO_2/year	E–5

REGIONAL ELIGIBILITY CRITERIA

Heat/cold production from geothermal energy	• Local, low-carbon production of renewable heat thanks to the installation of a deep geothermal power station. • The production of 95 GWhENRR/year to supply more than 8,500 housing equivalents. • 11,000 tonnes of CO_2 avoided per year compared with a natural gas solution. • Ensuring energy security for future network subscribers (mainly social housing and public buildings), as part of a fair climate approach.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Use of RGE-qualified design offices recognised by ADEME (OPQIBI 20.13 and OPQIBI 10.07) to carry out engineering studies (subsurface and surface studies). • Optimisation of the network by reducing network return temperatures, enabling greater use to be made of geothermal energy, and by insulating the network with pre-insulated insulation to prevent heat loss. Optimising the distribution efficiency of the heating network. • Optimised network management with the installation of advanced network control and management systems (remote supervision).
Combating climate change and promotion of the region's ecological transition	• Production of renewable heat to replace fossil fuels, resulting in a significant reduction in CO_2 emissions. • Pooling of energy production and distribution resources.
Contribution to sustainable regional planning and improvement to the quality of life	• Greening the existing heating network. • Securing the supply of heat to customers.
Contribution to socially inclusive development, combating of inequality and promotion of the safety of individuals	• Delivering renewable heat at a controlled cost over time. • One third of end users are in social housing.
Respect for fundamental rights	• Access to sustainable, local, low-carbon energy on a long-term basis.
Responsible regional development	• Local energy production.
Regional economic development	• Involvement of local companies in the project (drilling, civil engineering, engineers, design offices).
Fair practices, responsible purchasing, and responsible supplier relations	• Compliance with current mining regulations, issue of a mining permit by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	• Drawing up a master plan prior to the project. • Steering committee and presentation of the project to future subscribers and the local community.

Dedicated website
https://evrycourcouronnes.fr/la-geothermie-pour-chauffer-evry-courcouronnes

RENEWABLE HEAT CALL FOR TENDERS - PUBLIC GEOTHERMAL ENERGY ESTABLISHMENT - CHAMPIGNY-SUR-MARNE

RENEWABLE ENERGY • NEW PROJECT

PURPOSE

Creation of a heating network and deep geothermal energy

LOCATION

Champigny sur Marne (94)

KEY DATES

End of drilling: 2023
Thermal generation: 2024

TOTAL PROJECT COST

38.22 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

13.08%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

2.75 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- In order to continue the energy transition in its area, the City of Champigny-sur-Marne has decided to carry out a new deep geothermal operation and create a second associated heating network.
- The project involves the creation of a 9.2 km geothermal heating network in Champigny-sur-Marne, with 51 connected substations, and the drilling of a geothermal doublet in the Dogger aquifer.
- The project is managed by the Établissement Public Campinois de Géothermie (EPCG), the contracting authority. The network is operated by the Coriance Group under a delegated public service contract.
- The facility will produce 43,533 MWh of renewable energy per year, of which 40,193 MWh will come directly from deep geothermal energy and 3,340 MWh from the associated geothermal heat pump. The end users of the geothermal heat are 54% public residential buildings, 18% educational buildings, 9% sports, cultural and social facilities and 14% private residential buildings.
- This project will:
  → supply more than 5,477 housing equivalents in Champigny-sur-Marne with renewable heat, replacing natural gas;
  → pool the production and distribution of renewable heat by creating a heating network 75.4% supplied by geothermal energy;
  → avoid emissions of 9,243 tonnes of CO_2 compared with a natural gas network.
- The public funding provided by the Region and ADEME will have a direct impact on the energy bills of future users, enabling subscribers to benefit from a heating price of €74.42 incl. VAT/MWh with the subsidy applied for, compared with €92.35 incl. VAT/MWh without the subsidy.

PROJECT LIFECYCLE

- Start of drilling operation: February 2023.
- End of drilling: June 2023.
- Drilling depth: 1,840 m.
- Start of thermal production on the network: 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	5.7 FTEs	A–2 and C–3
Number of project beneficiaries	12,761 inhabitants	D–7
CO_2 emissions avoided by the project	9,243 teq CO_2/year	E–5

REGIONAL ELIGIBILITY CRITERIA	
Heat/cold production from geothermal energy	• Drilling a geothermal doublet to a depth of 1,840 metres to harness heat from the Dogger aquifer. • Creation of a geothermal power station and recovery of renewable heat through a new heating network in Champigny-sur-Marne. • This facility will produce 43,533 MWh of renewable energy per year, of which 40,193 MWh will come directly from deep geothermal energy and 3,340 MWh from the associated geothermal heat pump.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Use of RGE-qualified design offices recognised by ADEME (OPQIBI 20.13 and OPQIBI 10.07) to carry out engineering studies (subsurface and surface studies). • In 2019, SMIREC was awarded the "eco-heating network" label by AMORCE, recognising the environmental, economic and social performance of the La Courneuve network. • Optimisation of the heating network: insulation to prevent heat loss, lower network return temperatures, adaptation of pipe sizing, etc. • Optimised management of the network with the installation of advanced network control and management systems (remote supervision).
Combating climate change and promotion of the region's ecological transition	• Substitution of fossil fuels and reduction in greenhouse gas emissions: 43.5 GWh of renewable energy per year. • Pooling of energy production and distribution facilities. • Improved air quality through a solution that does not emit micro-particles.
Contribution to sustainable regional planning and improvement to the quality of life	• The location of the heating network enables the city to control the costs associated with operating and maintaining the network, to secure the installations and heat supplies, and to offer a high degree of flexibility to subscribers and users. • Project using a local, stable, invisible resource with a limited land area (deep geothermal energy).
Contribution to socially inclusive development, combating of inequality and promotion of the safety of individuals	• Pooling of needs, ensuring a stable and fair price for heat between prospective customers, while making it possible for connected households to be energy self-sufficient.
Respect for fundamental rights	• Promotes access to renewable energy, supporting the standard of living of households and constantly improving their living conditions.
Responsible regional development	• A project that will help to boost the importance of renewable energies in the Paris Region, and geothermal energy in particular, which is a speciality of the region, as it is Europe's leading region in terms of geothermal installations.
Regional economic development	• Support for the development of renewable energies in the region. • Reducing dependence on imported fossil fuels. • By using local energies such as wood energy and geothermal energy, heating networks create new activities that cannot be relocated.
Fair practices, responsible purchasing and responsible supplier relations	• Application of the public procurement code by the project leader. • Subsoil drilling carried out in accordance with mining regulations issued by the DRIEAT.
Promotion of a suitable consultation procedure with internal and external stakeholders	• Implementation of an upstream master plan, a medium- and long-term network management tool. • Regular user committees.

Dedicated website
https://champigny-reseau-geothermie.fr

ACCESS TO ESSENTIAL SERVICES: EDUCATION

Projects to improve access to quality educational infrastructure (public secondary education, public higher education), through an increase in the capacity of existing infrastructures to offer educational elements or the improvement of their quality

In 2017, upon observing the state of disrepair of certain secondary schools and the sometimes inadequate distribution of educational offerings across France, the region committed to improve access to education by guaranteeing a new or renovated high shcool for all 530,000 students in the Île-de-France region by 2028. Thus, the emergency plan for French secondary schools, updated in 2021, includes plans to develop sports equipment, install infrastructure that benefit students with disabilities and improve the buildings of all French secondary schools. In this context, an emergency plan for the renovation of sanitary facilities affecting 125 secondary schools has been adopted for 2019.

There are also a number of specific plans to complete this undertaking: a half-board plan, a sports equipment plan and a documentation and information centre plan. Through all these actions, the region is committed to working for the success of everyone.

- **Region's powers/responsibilities:** Mandatory for secondary schools, higher-education projects forming part of state-region relations.
- **Types of actions:**
  → **secondary schools:** Contracting authority with representative;
  → **higher education:** Subsidy or direct contracting authority.
- **Target public:** Secondary school students, university students, teachers, researchers.

LANGEVIN-WALLON SECONDARY SCHOOL IN CHAMPIGNY-SUR-MARNE (94)

SECONDARY SCHOOL RENOVATION PROJECTS

PURPOSE

Comprehensive restructuring of Louise Michel secondary school with a targeted operation for Langevin-Wallon secondary school

LOCATION

Champigny-sur-Marne (94)

KEY DATES

Studies: 2017-2021
Construction began in 2021
Handover scheduled for the end of 2024

TOTAL PROJECT COST

61.42 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

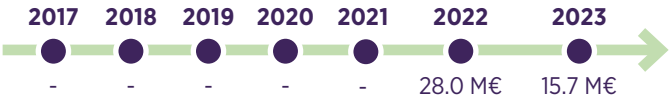
100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

15.66 M€

HISTORY OF PROJECT FINANCING

by the Region's previous green and sustainable bonds



QUALITATIVE PRESENTATION OF THE PROJECT

- This project concerns the 2 adjoining Louise Michel and Langevin Wallon secondary schools, located to the south-west of Champigny-sur-Marne, which were suffering from functional problems. It involves:
  - → for the Louise Michel secondary school: the demolition/reconstruction of the teaching and administration building and accommodation, as well as the creation of sports facilities on the ground floor of the existing E half-board building;
  - → for the Langevin Wallon secondary school: the construction of a building at the entrance to the site, which will house a reception hall, school life, the lodge and the multi-purpose room, as well as the partial restructuring of the administrative buildings and the creation of a FabLab within the vocational training building.
- The project is part of an approach to energy efficiency and reducing its environmental footprint. The project is adapted to climate change, with a design that guarantees hygrothermal comfort for occupants.
- The design of the project respects the limitation of rainwater discharge to 2 l/s/ha for a ten-year rainfall: this is managed on the plot thanks to retention basins and a reuse tank. The project will increase the permeability of the site (green spaces, permeable car parks, etc.).
- The landscaping will feature non-allergenic species adapted to the site, with the central courtyard laid out in terraces to facilitate rainwater management. The site has a biotope coefficient of 0.35.
- In order to preserve air quality, all the materials used and in contact with the indoor air have been awarded the appropriate eco-labels.
- Particular attention has been paid to the visual and acoustic comfort of users, by modelling lighting and noise levels according to the materials used.

PROJECT LIFECYCLE

- Work began on the 2 buildings in June 2021.
- Langevin Wallon: completion of the construction phase at the start of the 2023 school year.
- Louise Michel:
  - → Completion of the construction phase: March 2024 (opening on 22/04/2024)
  - → Demolition of the current building: Summer 2024
  - → Restructuring of building E into a sports hall: Summer 2024
  - → Completion of external works: December 2024

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	350 FTEs	A–3
Number of project beneficiaries	2,300 students	D–1
CO_2 emissions avoided by the project	12.52 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA	
Improve the quality of existing infrastructure and equipment for public secondary education and higher education	• The aim of this project is to resolve the failings encountered in the 2 secondary schools by creating more coherent modern buildings. • It therefore contributes to improving the quality of existing infrastructures and equipment intended for secondary education.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, disturbances, health, etc. (see above).
Combating of climate change and promotion of the region's ecological transition	• All the environmental aspects of the project were taken into account: bioclimatic design, biodiversity, water management, disturbances, health, etc. (see above).
Contribution to sustainable regional planning and improvement to the quality of life	• Rainwater management on the plot: site depaving, retention and collection basins for watering green spaces. • The project corrects the functional failings of the 2 secondary schools by constructing new buildings or renovating existing buildings for greater coherence. Green spaces are developed in a specific landscape plan.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The new organisation of the 2 secondary schools implemented in this project has been designed to benefit student learning and living conditions (acoustic and thermal comfort, capacity of adapted spaces, etc.). It is therefore part of the development of a quality educational offer in the region.
Regional economic development	• The construction site and the project's operations generate jobs (including a substantial part of local jobs).
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, resource saving, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/realisations/liste-des-realisations/lycee-langevin-wallon-et-louise-michel-a-champigny-sur-marne-297

OVERALL RESTRUCTURING OF THE NICOLAS-JOSEPH CUGNOT LYCÉE IN NEUILLY-SUR-MARNE (93)

RENOVATION AND EXPANSION OF LYCÉE BUILDINGS • NEW PROJECT

PURPOSE

Restructuring of the Nicolas-Joseph Cugnot Lycée and increase of its capacity by 400 students.

LOCATION

Neuilly-sur-Marne (93)

KEY DATES

Notification of the project management contract: 12/06/2017
Analyses: 2017-2021
Start of Housing and High School works: June 2022
Final handover scheduled for spring 2025

TOTAL PROJECT COST

51.30 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

9.37 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- The Lycée Cugnot is a multi-purpose school training students for careers in the automotive industry. The renovation of the school is required to meet the need to accommodate the area's increasing population growth. As such, the project is designed to steer the school **towards greater versatility**, with the construction of a general education centre and an increase in capacity of 400 students.
- The project involves restructuring and extending general education building A, demolishing the existing accommodation units and rebuilding them from scratch, as well as demolishing the site's modular buildings and restructuring the outside areas (forecourt, car park and green spaces). No changes will be made to building B, which houses the workshops.
- The project is part of an effort to make the school more **energy efficient** and **reduce its carbon footprint**. The project is **adapted to climate change** with a design that guarantees the comfort of the occupants during the summer.
- The design of the project will limit stormwater discharge into the network by **reducing the extent of impervious surfaces on the site** compared with existing conditions: the project includes landscaped swales, green roofs and evergreen car parks. Part of the rainwater will also be recovered.
- Investigations carried out as part of a pollution diagnosis to heavy metals and sulphated soils in the project areas. The management plan put in place has **ensured that the project is compatible with the condition of the environment**.
- In order to **preserve air quality**, all materials used and in contact with the indoor air will have A+ eco-labels. All insulation materials will be certified.
- Several locations have been set aside to facilitate waste management and sorting. In particular, an outdoor **composting** area has been planned, near to where kitchen waste is stored.

PROJECT LIFECYCLE

- Work began in mid-2021.
- The **new housing units** were handed over in June 2022 and the move from the old units (which will be demolished) has been completed.
- The **extension of Building A** was accepted in 2024 April.
- **Building A (restructuring)** will be handed over in May 2025.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	329 FTEs	A–2
Number of project beneficiaries	1,200 students	D–1 (Effective by 2025)
CO_2 emissions avoided by the project	16.91 teq CO_2/year	E–4

REGIONAL ELIGIBILITY CRITERIA

Increasing educational capacity through the construction or extension of infrastructure for public secondary and higher education

Improve the quality of existing infrastructure and equipment for public secondary education and higher education

- The aim of this project is to improve the multi-purpose potential of the site, and in particular to restructure and extend the general education building to replace dilapidated buildings, some of which are modular. The project will contribute to improving the quality of existing infrastructure and facilities for secondary education.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA

Environmental management and eco-design of projects	• **All environmental aspects of the project were taken into account:** bioclimatic design, biodiversity, use of bio-based materials, air quality, water management, composting, occupant comfort, etc. (see above).
Combating climate change and promotion of the region's ecological transition	• The project is part of a drive to reduce the facility's carbon footprint, with an assessment of CO_2 emissions after the works have been completed. In particular, the project provides for **individual solar production** on the roof for the domestic hot water, which will reduce the CO_2 impact related to energy use. • A **significant amount of wood** is used in the wood/aluminium joinery, the waterproof decking on some terraces, wood cladding and other interior joinery (skirting boards, door units, etc.). • The high thermal inertia of the building ensures summer comfort for the occupants. In the event of very hot weather, the equipment in place will allow **night-time mechanical ventilation** for free-cooling at daytime flow rates. The building also features solar protection on all facades and mobile protection for the windows.
Contribution to sustainable regional planning and improvement to the quality of life	• Despite low permeability levels on the site and a groundwater level close to the ground surface, the project includes an ambitious rainwater management programme with a reduction in site impermeability, **green roofs, infiltration swales and rainwater recovery**. • The landscaping of green spaces and planted terraces is specified in a **landscaping guide**. The species on offer are selected from hardy plants that take account of the natural conditions of the site, so that maintenance and water requirements are considerably reduced.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• The facility is accessible to persons with disabilities. It complies with fire safety regulations.
Respect for fundamental rights	• Combating social, educational and territorial inequalities.
Responsible regional development	• The design of the new secondary school has been thought out to promote **good learning environments** for students, to include acoustic and thermal comfort, appropriate space capacity, etc. It is therefore part of the development of a quality educational offer in the region.
Regional economic development	• The construction and operation of the new secondary school will create jobs, a substantial proportion of which will be local.
Fair practices, responsible purchasing and responsible supplier relations	• Compliance with the criteria/rules of the region and the public procurement code. • Strict standards on the choice of construction products and equipment (bio-based materials, lifecycle analysis, etc.).
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project is part of the Provisional Secondary School Programme, which is drawn up in consultation between the rectorate and the region. • Before voting on the project, the secondary school board of directors (under the authority of the headmaster) and the mayor of the municipality are informed by official letter of the regional intention to launch studies in anticipation for carrying out renovations or construction. This opens up a period of dialogue with the school community in order to fine-tune the needs and define the programme's main directions.

Dedicated website
www.idf-constructiondurable.fr/realisations/liste-des-realisations/lycee-cugnot-a-neuilly sur-marne-328

AFFORDABLE HOUSING

Projects to develop the social housing stock for families, young people and students, meeting environmental and social requirements and contributing to a reduction in the region's social divides

In addition to supporting the creation of new social housing for families, young people and students, the regional policy implemented since 2016 also aims to grant aid for intermediate housing for the middle classes, providing a complementary response to the housing crisis. This involves overcoming the difficulties encountered by the middle classes in finding somewhere to live in the Île-de-France region and working towards greater social diversity. The region, by extending the Regional Plan for Higher Education, Research and Innovation (SRESRI) over the period 2023 to 2028, is also committed to developing a "general regional policy to improve the living conditions of students".

- **Region's powers/responsibilities:** optional.
- **Types of actions:** Subsidies to social contracting authorities, mixed ownership construction companies, associations and bodies approved under the integration contracting authority, regional authorities and their groups and local public companies.
- **Target public:** Students, households where the income is eligible to apply for intermediary or social housing.

CONSTRUCTION OF A STUDENT RESIDENCE

AFFORDABLE HOUSING • NEW PROJECT

PURPOSE

Construction of a 192 PLUS and PLS student residence for 282 students

LOCATION

Retail Park of the Ecole Polytechnique district in Palaiseau (91)

KEY DATES

Deliberation on report PC 2017-458 dated 18 October 2017

TOTAL PROJECT COST

19.02 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

8.54%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

0.68 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- Created by 1001 *Vies Habitats*, in partnership with the *Association Logement Jeunes Travailleurs* (ALJT), this residence is located in the heart of the École Polytechnique district, along Boulevard Monge, near shops and the future station of line 18 of the Grand Paris Express.
- 282 students can live in 192 apartments (96 PLUS units - 96 PLS units) in 4-floor buildings. There are 138 studio apartments for single students, 18 studio apartments for couples and 36 four-room flat share apartments. Seven percent of the accommodation is equipped to accommodate people with reduced mobility.
- The residence is integrated into the one-stop shop managed by CROUS, so all students in the region may access it, regardless of their learning institution.
- The programme, featuring 6 floors and 2 basement levels, also includes a commercial area of 245 sq.m (owned by 1001 Vies Habitat), a public car park with 425 spaces and a mobility room dedicated to the repair of two-wheeled vehicles, which will be managed by the town of Palaiseau.
- The U-shaped building opens onto a large indoor garden of 1,224 sq.m, visible from the exterior due to the total transparency of the ground floor. The architects worked to restore the building to its initial condition, with the potential transformation of the first and second car park levels into tertiary premises or housing in the future. This operation won the Habitat de l'Equerre d'Argent award in 2020.
- The residence is NF Habitat HQE certified and certified RT 2012-20% Effinergie +. It is tied into the district's heating and cooling network for hot water and heating, and 120 sq.m of photovoltaic panels have been integrated into its roof.

PROJECT LIFECYCLE

- State approval on 22/12/2016.
- Building permit issued on 06/06/2017.
- Region Grant Allocation on 18/10/2017.
- Completion on 04/01/2021.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	134.62 FTEs	A–3
Number of project beneficiaries	282	D–2

REGIONAL ELIGIBILITY CRITERIA

Increased social housing capacity through the construction of new housing or the conversion of existing buildings	• Development of a subsidised **student residence** aimed at scholarship holders in particular, with regulated charges (rent + service charges), implementing a certified sustainable development approach with an ambitious energy label, higher than the legal minimum of the time. The project features **photovoltaic panels that are connected to the local geothermal network**. The contract includes professional training hours.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• Highly efficient NF Habitat HQE environmental certification. • These NF-branded certifications guarantee the overall quality and performance of the housing. The NF Habitat HQE certification focuses on three main areas to measure the overall quality of a home, namely: energy performance optimisation, respect for the environment and quality of life.
Combating climate change and promotion of the region's ecological transition	• Effinergie + label: this label offers a number of improvements compared with the RT 2012 regulations in force at the time the project was implemented. • Very high performing HQE (14 targets). • Program connected to the local geothermal heating network that features photovoltaic panels. • The heat and cold exchange network of Paris-Saclay is supplied by the Albian groundwater system, which is at a constant and inexhaustible temperature of 30°C. • EPA Paris-Saclay has set the objective of using local energy on the urban campus, which is over 60% renewable and releases four times fewer CO_2 pollutants than a traditional, low-carbon solution.
Contribution to sustainable regional planning and improvement to the quality of life	• The programme includes a landscaped area in the heart of an island. • Many common spaces can be used by students such as workrooms, a gym, laundry room or a multi-purpose room. • The architects worked on the reversibility of the building, offering the possibility of transforming the 1st and 2nd floors of the car park into tertiary premises or housing. • This programme offers residents a quality and affordable living environment by creating a campus that promotes exchanges.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• Low-income students on scholarships, shared accommodation to encourage exchange and diversity. • Conventional residence with managed rents and expenses administered by an association specialising in youth and student housing. • The residence is part of the one-stop shop managed by the CROUS, making it accessible to all students in the region.
Respect for fundamental rights	• Consultation with the general public (public consultations and meetings, revision of the PLU (Local Town Planning) subject to enquiry, etc.). • Provides better access to higher education for scholarship students. • Seven percent of the accommodation is equipped to accommodate people with reduced mobility.
Responsible regional development	• This project is part of the ZAC (mixed development zone) for the Ecole Polytechnique district, which covers an area of 232 hectares. The development of the neighbourhood is based on the opening of the polytechnic school campus, its expansion and its densification. In the centre of the neighbourhood, the Palaiseau station on line 18 of the Grand Paris Express will form the centre of the activities in the district. • Construction of low-carbon buildings; development of renewable and local energies (photovoltaics, geothermal energy); deployment of low-impact mobility solutions (network of charging stations, car sharing, intelligent parking, etc.); green spaces and rainwater management tools.
Regional economic development	• The project is involved in supporting and creating jobs. According to an employment impact ratio of the Ministry of Sustainable Development, €1 million in works for new construction = 11.6 FTEs.
Fair practices, responsible purchasing and responsible supplier relations	• Implementation of professional insertion clauses on the project (8,627 hours worked). • Transparent processing with clearly explained eligibility criteria in a framework deliberation accessible by all.
Promotion of a suitable consultation procedure with internal and external stakeholders	• The consultation implemented as part of the creation of the ZAC mixed development zone, in accordance with Article L.300-2 of the Urban Planning Code, conducted by the Paris-Saclay Public Development Establishment, the ZAC developer: contacts with citizens and associations, press publications and social networks, public meetings, etc. • Submission of the package and the allocation proposal to the thematic committee, vote by the standing committee.

Dedicated website
www.aljt.com/residence/palaiseau-saclay

MAKING A FAMILY HOTEL

AFFORDABLE HOUSING • NEW PROJECT

PURPOSE
Building a family hotel of 25 social housing units

LOCATION
Paris 20th arrondissement

KEY DATES
CP2018-110 dated March 16th of 2028

TOTAL PROJECT COST
3.19 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT
20.28%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND
0.41 M€

QUALITATIVE PRESENTATION OF THE PROJECT

- Family hotels are institutions intended for collective residence, as main residence and for an unlimited period of time, in buildings comprising both furnished and unfurnished private premises and communal premises used for collective living.
- This is an alternative to housing for people with low incomes, who are isolated or socially marginalized, most of whom have repeatedly frequented temporary accommodation structures, and whose social and psychological situation makes it difficult for them to access ordinary housing. Small in size, these residences offer a host or a couple of hosts to assist with daily living.
- The residence covered by this form is located in the 20th arrondissement of Paris, at 64 rue des Maraichers, on a plot previously occupied by a building owned by FREHA that has been demolished. The building is well integrated into the existing urban fabric, with numerous shops nearby.
- FREHA, which is the project owner and manager of this residence, is a non-profit association incorporated under Law 1901 approved by the State as an association project owner. This organisation offers social housing and collective housing, as well as social support services.
- This residence is **certified NF Habitat HQE RT 2012 excellent level with an Effinergie + label** and implements a collective gas solution for heating and domestic hot water production, using a high-performance, low-consumption boiler. In addition, the **roof** has been **greened**.

PROJECT LIFECYCLE

- Delegated approval of building subsidy: 30/12/2016.
- The building permit was issued on 28/09/2017.
- Region grant allocation: 16/03/2018.
- The project was delivered in mid-2024 February.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	23.43 FTEs	A–3
Number of project beneficiaries	58	D–7

REGIONAL ELIGIBILITY CRITERIA

Increased social housing capacity through the construction of new housing or the conversion of existing buildings	• Construction of a highly social project (family hotel) by a social integration contractor (FREHA) for people on low incomes who are isolated or socially marginalised. Operation certified to RT 2012 NF habitat HQE regulations (excellent level) with an Effinergie + label. Green roofs. Demolition-reconstruction programme that does not involve additional soil artificialisation.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• NF Habitat HQE certification (RT 2012 regulations), excellent level. • These NF-branded certifications guarantee the overall quality and performance of the housing. Issued by an independent body (Cerqual), they commit to complying with very strict specifications. • The HQE mark relates to an assessment of structures in accordance with criteria defined from the sustainable building reference framework of the HQE-GBC Alliance.
Combating climate change and promotion of the region's ecological transition	• Effinergie + label: this label brings a number of improvements compared with the RT 2012 regulations in force at the time the scheme was built, including improvements to the ventilation system, the building's energy performance and its airtightness; the obligation to carry out an assessment of consumption by equipment (household appliances, media, etc.); information for users, etc.
Contribution to sustainable regional planning and improvement to the quality of life	• Vegetation on the roof helps to retain rainwater and cool the urban environment through evapotranspiration, reducing reflection and thermal or solar radiation, and trapping dust. These roofs also provide insulation and encourage biodiversity. • **Collective spaces:** multi-purpose room, collective kitchen, library, outdoor space with shared garden space. • This programme offers residents a quality and affordable living environment with a **socio-educational team** implementing enhanced social monitoring.
Contribution to socially-inclusive development, combating of inequality and promotion of the safety of individuals	• A home for low-income residents living in isolation or social exclusion in a town-centre development that promotes a **social mix**. • A subsidised residence with controlled rents and charges managed by an association with rental intermediation and social rental management accreditation. • Specific and reinforced support for residents by a couple of hosts, with stable accommodation enabling them to rebuild their lives psychologically and socially.
Respect for fundamental rights	• This programme contributes to housing law, which is a fundamental right recognised by several national and international texts. • Guest support for access to social services providing minimum income, universal health coverage, etc., budget management and collective project initiation. • Two units are specifically adapted for people with disabilities, while23 others can be easily adapted with minor adjustments.
Responsible regional development	• The project reflects the "net zero artificial development" approach. This building is to occupy the space of another building that had been demolished.
Regional economic development	• The project is involved in supporting and creating jobs. According to an employment impact ratio of the Ministry of Sustainable Development, €1 million in works for new construction = 11.6 FTEs.
Fair practices, responsible purchasing and responsible supplier relations	• Transparent processing with clearly explained eligibility criteria in a framework deliberation accessible by all.
Promotion of a suitable consultation procedure with internal and external stakeholders	• This project was carried out in consultation with the municipality in which the residence is located and all the co-funders, and details of the project were provided to local residents. • Submission of the package and the allocation proposal to the thematic committee, vote by the standing committee.

Dedicated website
www.freha.fr/creation-dune-pension-de-famille-premiere-pierre-rue-des-maraichers-a-paris

AFFORDABLE BASIC INFRASTRUCTURES

(TRANSPORT, ENERGY, GREEN SPACES AND SPORTING FACILITIES)

Development, construction and renovation of basic infrastructures enabling all human beings to thrive, including a sustainable development approach

The Region works to develop basic infrastructures in terms of local renewable energies and energy efficiency, green spaces, the preservation of natural environments and biodiversity and the development of sports facilities.

By investing in the best infrastructures, the Region wants to improve the comfort of users and residents, particularly in the context of welcoming the sporting delegations for the Olympic and Paralympic Games in Paris in 2024. The Region's leisure islands, set across 3,000 hectares of nature in total, offer the opportunity to escape and relax, but also to practice many sporting, leisure and cultural activities.

- **Forms of interventions:**
  → **sporting facilities:** subsidy or direct contracting authority;
  → **leisure islands:** direct contracting authority (regional properties).

- **Target audience:** residents, amateur and professional athletes.

CREPS CHATENAY-MALABRY

AFFORDABLE BASIC INFRASTRUCTURES

PURPOSE

Reconstruction and restructuring of the Regional Physical and Sports Education Centre site

LOCATION

Chatenay-Malabry (92)

KEY DATES

Procedure launched in 2020
Delivery first quarter 2024

TOTAL PROJECT COST

37.00 M€

REGION'S SHARE (%) IN THE TOTAL AMOUNT OF THE PROJECT

100%

2023 FINANCING OF THE PROJECT THROUGH THE GREEN AND SUSTAINABLE BOND

25.90 M€

HISTORY OF PROJECT FINANCING

by the region's previous green and sustainable bonds

QUALITATIVE PRESENTATION OF THE PROJECT

- This operation is part of an overall project initiative for this site and has the following objectives: development of the CREPS as part of **welcoming the sporting delegations under the Olympic and Paralympic Games in Paris in 2024**, improving the reception conditions for elite athletes and making the different site functions consistent, reshaping the CREPS boundaries which involves three buildings at the East of the site being released from all activity and transferred to the West of the site (reception, administration, catering and training rooms) and hosting additional sports centres, in addition to the six top-level sports centres and the ten Espoirs centres currently located on the Ile-de-France CREPS site.
- The project also provides for producing additional sports facilities, creating a small community (8) housing units and redeveloping outdoor spaces following the structuring of the site's functions.

PROJECT LIFECYCLE

- The overall budget for the operation was voted on during the Standing Committees (SC) on November 20th 2019 and January 21st 2021.
- The procedure was launched by publishing a call for competition sent on December 4th 2019.
- The first selection panel met on February 26th and March 11th 2020 and the proposed winner panel met on March 22nd 2021. The contract was awarded at the Tenders Commission meeting on April 9th 2021.
- Commencement of work: September 2022.
- End of work: first quarter 2024.

IMPACT INDICATORS RELATING TO THE PROJECT

Indicator	Impact	Methodological note
FTEs supported by the project	5.63 FTEs	B
Number of project beneficiaries	320	D–8
CO_2 emissions avoided by the project	689 teq CO_2/year	E–9

REGIONAL ELIGIBILITY CRITERIA

Development and extension of sports facilities	• Development of the CREPS in the context of hosting sports delegations for the Paris Olympic and Paralympic Games in 2024, improving conditions for high-level athletes.

JUSTIFICATION OF THE ELIGIBILITY OF THE PROJECT FOR EACH CRITERIA	
Environmental management and eco-design of projects	• The group includes INCET for environment- and energy-related tasks. • The candidate has committed to energy consumption performances and obligations of means and results for air quality and summer comfort. • A commissioning process is planned for the project (a commissioning agent is involved in the project in the operating phase). • The energy performance contract is twofold, through an intrinsic energy performance guarantee up to acceptance of the buildings and the definition and monitoring of actual energy targets during the operating phase, by setting up a Measurement and Verification Plan.
Combating climate change and promoting the Region's green transition	• Limiting energy consumption by achieving level E3 overall (achieved by using 23 kWp of photovoltaic solar panels) and by controlling consumption in operation (energy performance commitment). • Limiting carbon emissions by achieving level C1 overall and using bio-based materials (18 kg/m^2 of floor area achieved due to the wooden framework of the sports building in particular). • Limiting water consumption through rainwater recovery for watering. • Limiting sealing/enhancing biodiversity/combating the effect of urban heat by using permeable parking spaces (grassed or gravelled concrete hollow-core slabs) and through 36% green roofs.
Contributing to the Region's sustainable development and the improvement in quality of life	• Performance-related objectives relating to indoor air quality, summer comfort and expected service levels. • Inclusion of energy objectives in the programme. • Materials requirements (limiting the carbon impact, bio-based sector). • Environmental requirements relating to rain water collection, limiting the sealing and green roofs.
Contributing to socially-inclusive development, combating inequality and promoting the safety of individuals	• Bringing the site up to standard to provide access for people with disabilities. • Preventing health risks for site personnel, who will be provided with appropriate personal protective equipment (ear and eye protection, helmets, gloves, protective trousers and shoes, etc.) listed in the company's Special Safety and Health Protection Plan (PPSPS). • Mandatory professional integration hours for the group.
Respect for fundamental rights	• Respect for fundamental rights established under public procurement contracts.
Responsible regional development	• Project encouraging access by soft modes (pedestrians, bicycles and public transport) tram stop in front of the site. • Landscape redevelopment of part of the site into a pedestrian area.
Regional economic development	• Receiving international sporting delegations. • Promoting French sports teams worldwide.
Fair practices, responsible purchasing and responsible supplier relations	• This process is conducted as part of an Environmental Quality approach in accordance with the Region's objectives and is subject to specific specifications.
Promoting suitable consultation with internal and external stakeholders	• Consultation of all project stakeholders (management, teachers, service personnel, sports movement, associations) on the various definition phases of the development project and throughout its execution.

Dedicated website
www.creps-idf.fr

APPENDICES

APPENDIX 1: METHODOLOGICAL NOTE

1. Amounts displayed in the reporting (€ million)

a. Total project cost

For operations of construction, renovation, infrastructure, the amount is calculated by the contracting authority(ies) of the project or its delegate(s), after a projected cost estimate to perform the entirety of the operation.

For the scheme presented, the amount represents the totality of 2023 expenditures which took place for each of the schemes (cf. b below for the methodology).

b. 2023 financing by the green and sustainability bond

The amount shows corresponds with 2023 expenditures related to the corresponding project/scheme. One exception, an amount less than total 2023 expenditures was selected for the project "Subway line 11", category "Clean transportation".

The amount of expenditures attributable to each project/scheme was controlled by the Control of Management and Systems service (CGSI), within the Pole of Finances of the Ile-de-France Region and by the public accountant.

To do this, the CGSI recovered credits from payouts related to each project/scheme, in the fiscal year corresponding with the reporting year. The identification of the credit payments in question are done through data retrieval tables in the computer of the Institute of International and Strategic Relations (Institut de Relations Internationales et Stratégiques – IRIS). The development of these tables requires selecting a search specific to the project/scheme at the level of: a chapter; a function; a program or budget code; an operation; a scheme; a file; a project.

Once the tables are filled, they are cross-checked with the CORIOLIS financial management tool, and then checked with all the departments related to the reporting, to ensure consistency with the amounts financed by each project.

2. Methodology for reading each project under the lens of the United Nations Sustainable Development Goals

The process followed has been formalized as follows:

On the one hand, the projects were assessed against twelve objectives out of seventeen. Indeed, **goals N°2, 3, 5, 16 and 17** ("Zero Hunger", "Gender Equality", "Good health and well-being", "Peace, Justice and Strong Institutions" and "Partnerships for the Goals") focus more on the social responsibility of the Region as an institution, than on the nature of the investment projects financed under the green and sustainable bond issue program. Given the geographical situation of Île-de-France, **goal N°14** "Life below water - conserving and sustainably exploiting oceans, seas and marine resources" does not concern any project in the Paris region (the preservation and restoration of fresh water and wetland ecosystems fall within the scope of goal N°15.

On the other hand, some sustainable development goals apply uniformly to all projects eligible for green and sustainable bond, given the project eligibility criteria grid that has been established by the Region (green columns). Thus, each eligible project contributes to the reduction of inequalities and therefore to the struggle against poverty (**goals N°1 and 10**), sustainable development of cities and territories (**goal N°11**), responsible production (**goal N°12**), and the fight against climate change (**goal N°13**).

The contribution of each project to the remaining goals is evaluated on a case by case basis, according to the specificity of each project as described in the sheets accompanying this reporting.

The list of targets for each Sustainable Development Goal is available on the International Labour Organization website: https://www.ilo.org/global/topics/dw4sd/theme-by-sdg-targets/WCMS_558153/lang--en/index.htm

3. Methodologies relative to the impact indicators for the project presented

A, B and C: FTEs supported by the project

a. Worksite FTEs supported by the project

- **A-1:** Value of Call for Tenders Excluding Taxes x 43% (BT01 TCE Index) / number of hours worked throughout the construction period.
- With 1 hour worked = €30 excl. tax and 1,650 hours worked per year.
- **A-2:** Method of the National Federation of Public Works: € 1 million invested in the public works sector generates 7.1 direct jobs. This ratio is applied to the total amount of the project and thus concerns the entire duration of the project.
- **A-3:** Usage of the employment impact ratio of the Ministry of Sustainable Development (11.6 FTEs for € 1 million for works for new construction; 14.2 FTEs for € 1 million for renovation works) applied to the cost of the project as a share of the construction works.
- **A-4:** Calculation on the basis of the contract amount exclusive of tax, multiplied by the payroll index, divided by the unit price of the payroll (with 230 days worked on a year of work).
- **A-5:** Usage of the study conducted by the Territories Bank in November 2021: creation or retention of 2.4 FTEs in the construction sector for the new construction of one social housing (1.2 direct FTE and 1.2 indirect FTE); creation or retention of 0.5 FTE for the restoration of a social housing (0.4 direct FTE and 0.1 indirect FTE).

b. Integration FTEs supported by the project

This is the objective for the hours of integration in the specifications of contracts with businesses.

Number of hours of integration =
[Size of market Excluding Taxes × share of workers from the State (from 25% to 60%)
× Integration rate (from 5% to 7% depending on the facilitator)] / average hourly cost

The number of hours of integration is then converted into Full Time Equivalents (FTEs) based on the number of days worked in the last year (230 days) and the duration of the works.

When the Region is involved in the project as the contracting authority, the monitoring of following these integration clauses is led by the unit of legal affairs and public markets of the Region. The Ile-de-France Region is supported by facilitators to calculate the hours of integration up to 31/12/2014. Since 1 January 2015, the Region has included in its performing the calculation of hours of integration upstream of the operation in order to have consistency of the calculation across Ile-de-France. The theoretical calculation done by the Region is adjusted with the local facilitator in order to account for the offer of integration across the region. The facilitator effectively follows the integration clauses.

When the Region is involved in the project by providing a subsidy, the contracting authority is responsible for calculating the integration clauses and following their proper application in accordance with the specifications made with the contracting authorities.

c. Operation FTEs consecutive to the project

- **C-1:** Estimation of the annual hourly amount of work for maintenance, regulatory checks and cleaning.
- **C-2:** estimation or the annual quantity of hours of work for the functioning of the new parts of the project. This estimation is based on the cost of the total wages needed for the functioning of the new parts of the projects, with a total average gross salary of € 45 k (average weighted cost of personnel).
- **C-3:** Number of people working in the facility at 31/12/2017.

d. Number of beneficiaries of the project

- **D-1:** Number of students who will entirely benefit from the project (capacities).
- **D-2:** Number of places per accommodation: for the student residence = 1 per unit; for the social residence = 2 for the 11 T1 bis studios and 1 for the 50 T1 studios.
- **D-3:** Number of annual visits to the site counted - Source: Study of number of visits (MICA Research).
- **D-4:** Estimation of the number of visits using the traffic modelling (GLOBAL model for RATP and ANTONIN 2 for Ile-de-France Mobilités).
- **D-5:** Estimation of usage by model of traffic forecasting model (Transport Union of Ile-de-France (Ile-de-France Mobilités): ANTONIN 2 (Analysis of Transport and Organization of New Infrastructure - Analyse des Transports et de l'Organisation des Nouvelles Infrastructure), based on transportation behaviour observed by the General Transportation Survey carried out in 2001-2002 with 10,500 Ile-de-France households.
- **D-6:** Population of the cities concerned.
- **D-7:** Number of housing units or equivalent-units supported by the project, multiplied by the average household size in Ile-de-France (2.33 per housing unit, source INSEE).
- **D-8:** Capacity of the facility (number of places).
- **D-9:** number of winning businesses for the scheme in 2017.
- **D-10:** number of businesses and public research establishments having benefitted from a credit allocation in 2017.
- **D-11:** capacity in cumulated totals.
- **D-12:** Number of users of the P line (Paris-Provins via Longueville section) and TER Grand-Est.
- **D-13:** Measure of actual attendance, adjusted for growth forecasts on employment and population.
- **D-14:** Product of the number of dwellings supported on the project, by the number of tenants according to the typology of housing (assignment standards practiced by the lessors, minimum averages observed: 1.5 people for a 2-room unit; 2.5 people for a 3-room unit; 3.5 people for a 4-room unit and 4.5 people for a 5-room unit).

e. CO_2 avoided (teq/year) by the project

- **E-1:** implementation of the methodology of the THCE rules on French thermal regulations. The method consists in simulating, in the design stage, the energy consumption of the construction accounting for its performance characteristics, and comparing to a reference scenario. To do this, the final maximum energy is specified for each regulatory item (heating, cooling, hot water, lighting, auxiliaries), prorated for the primary real energy consumption of each project. They are then converted into final energy, following the regulatory conversion ratios, as a function of the type of energy used (Decree of 8 February 2012 modifying the Decree of 15 September 2006).
- As high school projects, the calculation is contractually performed in two stages: on the one hand a forecast of the design study performed by the contracting authority, on the other a final figure produced at the end of the construction by the businesses.
- **E-2:** This is the savings in tonnes of CO_2 averted on an annual basis due to the use of renewable energies for this construction. For the calculation, the kWh produced by renewable energies used in the construction are 71,057 kWh which includes production of 103,704 kWh of solar thermic for photovoltaics. (Source: Study of overall cost - PRO File - ANMA/CPR/October 2013).
- **E-3:** Subtraction between the emissions of CO_2 forecast in the sector in the reference scenario and emissions of CO_2 forecast in the scenario with implementation of a project for public transportation.
- **E-4:** Theoretical emissions (reference and project) related to the consumption of the regulatory positions of the 2012 thermal regulations (heating, cooling, DHW, lighting, venting auxiliaries, hydraulic auxiliaries).
- The values for the project come from the PRO phase RT2012 calculation. The reference value is taken according to the maximums authorized by the thermal regulation (Cepmax). CO_2 emissions by type of energy are taken according to ADEME data.

- **E-5:** Comparison between the project that was done (geothermal + hot water pump + gas) and a 100% natural gas solution. Using coefficients of emissions of different sources of energy, the quantity of CO_2 averted is the difference between the 2 solutions.
- **E-6:** Estimation based on the carbon balance methodologies of ADEME and SNCF-Réseau.
- **E-7:** Information communicated by the project manager.
- **E-8:** According to the ADEME methodology, which estimates 4.8 teqCO_2/ha/year as "the CO_2 equivalent of the net atmospheric carbon absorbed by the forest (corresponding to the balance between photosynthesis and tree respiration), from which are subtracted the emissions associated with tree mortality and wood removal (the carbon corresponding to the volumes of dead or removed wood being considered as immediately being emitted back into the atmosphere as CO_2)." - https://www.territoires-climat.ademe.fr/ressource/435-152
- **E-9:** Assessment established by the E+C- label: Positive energy and carbon reduction

APPENDIX 2: ADDITIONAL DEFINITIONS AND POSSIBLE ILLUSTRATIONS OF THE ELIGIBILITY CRITERIA

ENVIRONMENTAL MANAGEMENT AND ECO-DESIGN

***Vigeo 2016* definition**	• *"The project is implemented in accordance with an eco-design (or eco-construction) approach, and/or an approach aimed at managing its environmental impact (pollution, nuisance, resources, and biodiversity, etc.)."*
Additional definition	• The eco-design consists of accounting for the environment from the design of a product or service through all stages of its life cycle. In the context of operations financed by the Region, the eco-design can be understood as accounting for the environment in the scheme falling within the scope of the project, as well as in the operations of the construction when it is an eco-construction. • The environmental management designates the policy and/or methods of management put in places in order to account for the environmental impact resulting from implementation of the project, to evaluate this impact and also to reduce this impact and to also reduce it in relation to the project construction as well as during its operations.
Possible illustrations	• Process for environmental certifications (BEPOS, HQE, ISO, etc.). • Accounting for environmental impacts in the management of the construction site (e.g.: charters, low nuisance sites, green sites, etc.). • Integration of environmental concerns in the specifications. • Recourse to support for the contracting authority devoted to environmental management of the project. • Explanation of accounting for environmental aspects within the scheme relating to the project.

COMBATING CLIMATE CHANGE, AND PROMOTING THE REGION'S ENVIRONMENTAL TRANSITION

***Vigeo 2016* definition**	• *"The project contributes to reducing greenhouse gas emissions, in compliance with the Region's Climate Plan, and/or to the regional environmental transition process, as part of the Regional Economic Development and Innovation Strategy".*
Additional definition	• The project promotes the ecologically-friendly transition of the region by enabling, for example, a reduction in CO_2 emissions, savings in natural resources (energy, water, waste, etc.), by promoting the adaptations in consideration of future climate change, by participating in the protection of biodiversity.
Possible illustrations	• Expected objective to reduce CO_2 enabled by the project (with respect to an initial situation observed in the case of renovation or with respect to a reference scenario in the case of a newly constructed building). • Use of renewable energies. • Recovery of rainwater and/or grey water. • Project design respectful of neighbouring biodiversity.

SUSTAINABLE REGIONAL PLANNING AND IMPROVING QUALITY OF LIFE

***Vigeo 2016* definition**	• *"The project is in keeping with the regional sustainable planning strategy, and contributes to improving the quality of life for its users and/or staff".*
Additional definition	• Sustainable planning: the project was conceived with an interest to be qualitatively involved in the region, for example by looking out for good integration of landscaping, balanced density of housing, respect for urban fronts... It can also promote the continuity of quiet modes of transportation and incorporate corrective measures linked to nuisances even of the project. • Improving quality of life: the project makes it possible to propose a service/product that was not accessible or easily available, or to facilitate the usage of this service/product by residents/users. The project can also be involved in directly improving the well-being of residents/users.
Possible illustrations	• Integration of the project in the region (planting greenery, presence of green spaces, integration of the building into the urban fabric, etc.). • Improvement of quality of life targeted by the project: gains in transportation time, reduction of local nuisances (pollution, noise...), well-being (quality of landscaping, dignified housing...). • Accessibility of a population to a new service. • Opening a service to a new population (which did not previously have access).

SOCIALLY INCLUSIVE DEVELOPMENT, COMBATING INEQUALITY, AND PROMOTING THE SAFETY OF INDIVIDUALS	
***Vigeo 2016* definition**	• *"The project contributes to combating social exclusion, to reducing inequality, or to preventing risks relating to health, working conditions, and/or individuals' safety (users, neighbouring residents, and staff)".*
Additional definition	The project may promote: • Accessibility of places to all of the public (deaf, blind, handicapped, etc.), • Integration of disadvantaged persons (distant from employment, schooling, access to new information and communications technologies, etc.), • Personal security on the site (video surveillance, security personnel, fire safety measures, etc.), • Participation in development of leisure tourism for all.
Possible illustrations	• Equipment planned to promote accessibility and/or security. • Integration of the project in the renovation/opening up of a district. • Health benefits of the project for the persons concerned. • Taking into account of social criteria (different rates, fight against exclusion, etc.). • Definition of a pedagogical program working towards better social integration.

RESPECT FOR FUNDAMENTAL RIGHTS	
***Vigeo 2016* definition**	• *"The project is implemented in a way that respects fundamental rights".*
Additional definition	• Projects in the Region are carried out in compliance with fundamental rights and existing legislation. Each project can participate in improving practices with regard to one or many fundamental rights in respect of the objectives of generalized interests set by the law or the following texts: • Universal Declaration of Human Rights (1948), • Covenant on Civil and Political Rights (1969), • Covenant on Economic, Social and Cultural Rights (1969), • The fundamental rights at work as identified by the International Labour Organization.
Possible illustrations	• Security and health of persons, workers on construction sites. • Right to come and go. • Right to education. • Equal rights and opportunities.

RESPONSIBLE REGIONAL DEVELOPMENT	
***Vigeo 2016* definition**	• *"The project increases the Region's attractiveness in keeping with sustainable and balanced economic development".*
Additional definition	• The project participates in the development of dynamization of the region from a long-term perspective, responding to a need, or anticipating the creation of new needs, or accompanying the urban development of a sector.
Possible illustrations	• Needs in terms of transportation, employment, the supply of tourism, green spaces, etc. • Integration into a development zone. • Innovative projects participating in the dynamization of the territory. • Projects directly supporting economic activity in disadvantaged areas.

REGIONAL ECONOMIC DEVELOPMENT	
***Vigeo 2016* definition**	• *"The project contributes to creating or maintaining jobs and/or sustainable business activities in the Region".*
Additional definition	• The project may sustain employment, on a construction site and in operational phase, or accompanying SME projects with growth prospects, or by supporting innovative processes and research, a source of dynamism and potential long-term job prospects, or also by maintaining an economic activity in certain areas.
Possible illustrations	• Creation/support to FTEs.

FAIR PRACTICES, RESPONSIBLE PURCHASING AND RESPONSIBLE SUPPLIER RELATIONS	
Vigeo 2016 **definition**	• *"The project is implemented in compliance with fair practice principles (combating corruption, fair competition, respect for labour laws, and equal treatment, etc.). Environmental and social factors are included in the purchase of products and services relating to the project. The purchasing practices relating to the project enable the interests of suppliers and sub-contractors to be respected (payment terms, managing dependency, and equality of access to orders, etc.)".*
Additional definition	• The different service providers acting on the project have been selected in the framework of a transparent procedure, in respect of the principle of equal treatment and of competition. Environmental and/or social requirements are provided for in the specifications and regulations of the subsidy.
Possible illustrations	• Application of the Public Procurement Code, transparency of the investigation process in the context of subsidies. • Elements of the "Responsible public procurement" of the Region applicable to the project. • Choice of materials which are respectful of the environment, hours of social integration.

CONSULTATION WITH STAKEHOLDERS	
Vigeo 2016 **definition**	• *"The project is subject to an appropriate consultation process, both internally and/or with the external stakeholders concerned (information meetings, steering committee, meetings with voluntary organisations, and representation of elected officials, etc.), whose expressed requirements are taken into account".*
Additional definition	• The project was implemented in a context of consultation aiming to account for the needs of stakeholders without distorting the object of the project.
Possible illustrations	• Dialogue and consultation with the stakeholders. • Description of public surveys. • Description of the consultation of the process of evaluating subsidies and/or financial sheets on the project.

GLOSSARY

ABF
Architecte des Bâtiments de France (Aarchitectural Review Board).

ADEME
French Environment and Energy Management Agency (Agence de l'environnement et de la maîtrise de l'énergie).

ILE-DE-FRANCE GREEN SPACES AGENCY (AEV)
In the design and implementation of development projects for Ile-de-France's natural areas, the AEV links these regional policies and tools with a more local and partnership-based approach via the Regional Land Intervention Areas (PRIF).

INTERIOR AIR A+
According to the regulation dated 1 September 2013, indoor construction products must be labelled for indoor emissions of pollutants. There are four classes: A+; A; B; C. Here, A+ corresponds to formaldehyde emissions of less than 10 µg/m^3.

ANRU
National Agency for Urban Renewal.

SUSTAINABLE BUILDINGS IN THE ILE-DE-FRANCE REGION
Assessment of the Ekopolis resource centre based on a collaborative and scalable method under the aegis of local professionals for sustainable buildings.

BEPOS building (called "positive energy")
Building that has very low energy consumption. Its primary energy consumption must be less than the amount of renewable energy it produces via its equipment.

CARNET DE VIE
Document describing the infrastructures concerned, principal equipment, advice on how to operate this equipment and indicators of good environmental practice in order to save water and energy.

Certification BEPOS Effinergie 2013
A pilot certification that can be awarded in the short term; it builds on the 2012 thermal regulations and the Effinergie+ certification. Above all, the building must respect the criteria of the Effinergie+ certification and must also be the subject of an evaluation of the grey energy and the potential of eco-mobility.

Certifications FSC and PEFC
These certifications are defining forest sustainable management rules, in compliance with international standards. They are based on the FSC (Forest Stewardship Council) or PEFC (Pan European Forest Certification) references.

CFA
Apprenticeship Training Centre.

CSRPN
The Regional Scientific Council for Natural Heritage (CSRPN) is a body of specialists under the authority of the regional prefect and the president of the regional council which may be consulted on questions on the knowledge, conservation and management of the regional natural heritage.

AHU
Air handling unit.

Certification NF High Environmental Quality (HQE) Tertiary Buildings
Enables to discern between buildings where the environmental and energy performance corresponds with best existing practices. It concerns the phases of the programming, the conception and delivery for new and renovated housing units.

Certification Patrimoine Habitat
Values a rehabilitation program committed to by a contracting authority by setting the level of performance to achieve. It accounts for the quality of the budget and the community parties, the comfort and performance of housing, fire safety and health of occupants.

Competitiveness clusters
Created in 2005 in the framework of the launch of a new industrial policy in France, the competitiveness clusters are defined as the combination in the same territory of businesses, higher education establishments, and public or private research organizations which have the vocation to work in synergy to implement economic development projects for innovation. Competitiveness clusters promote the development of relationships between businesses/research laboratories, or SMEs/Large groups in Ile-de-France but also internationally with partner clusters and with the knowledge of their ecosystem to assist a business, a laboratory to identify the skills/know-how needed to complete their project. They accompany the businesses, and primarily SMEs to improve their project by calling upon a network of experts among their members.

DUP
Statement of public interest (Déclaration d'Utilité Publique).

Eco-mobility potential (for a building or dwelling)
Corresponds to the energy consumption generated by the journeys of the users of that building or dwelling. When assessing the energy performance of a building or a dwelling, these consumptions are also taken into account.

DHW
Domestic hot water.

M5/F7/F9 FILTER CLASSES
Classification of air filters. M stands for medium filters and F for fine filters.

FREE COOLING
Cooling mechanism consisting of using outside air to cool a room and equipment.

Grey energy
Corresponds to the total consumed energy expenditure throughout the life cycle of a material, its extraction and recycling, and including its transformation.

INCET
Building contractor responsible for technical analyses for all trades, construction economics and environmental expertise.

"Label Effinergie +"
Label targeting 20% decrease in maximum energy usage linked to five regulation-related building uses (heating, hot water, lighting...) compared to the level in the 2012 french thermal regulation (RT 2012); this label aims to go further than the BBC label in terms of the construction of new buildings. It plan to go from 50 to 40 kWhep/m^2/year for housing with an intermediate level of 45 kWhep/m^2/year until 2014. "Effinergie" + also requires a Bbio (bioclimatic needs)) 20% lower than the BBio set by the 2012 RT The requirement in terms of air permeability are also higher than the BBC label.

BEPOS EFFINERGIE 2013 LABEL
The pilot label, applicable in the short term, is based on the RT 2012 regulations and the Effinergie+ label. Above all, the building must meet the criteria of the Effinergie+ label and must also be subject to an assessment of grey energy and eco-mobility potential.

"Label BBC Effinergie" for renovation
This label concerns renovated residential buildings, with an objective of a maximum primary fixed energy consumption of 80 kWh/m^2.year, adjusted for the climatic zone and altitude. In Ile-de-France, a coefficient of 1.3 must be applied to this objective.

Modal shift
Allows users to benefit from an alternative to a car by choosing a mode of collective transportation which is more environmentally friendly.

MPGP
Global public performance contract is a new contractual tool available to project owners since 1 April 2016, the date on which the new texts governing public procurement in French law came into force. As such, the MPGP forms part of the 'palette' of existing contractual arrangements (traditional works contracts, partnership contracts, concessions, etc.) or 'toolbox' desired by the government and legislature at the time of the public procurement reform.

PLI
Rental bridge loan. Targeted at individuals whose income is too high to qualify for HLM (moderate rent housing), but too low to access the private market.

PLU
Local town planning plan.

PLUS
Rental loan for social purposes. Intended for individuals eligible for HLM accommodation (moderate rent housing).

PLS
Rental bridge loan. Targeted at individuals whose income is too high to qualify for HLM (moderate rent housing), but too low to access the private market. The PLS differs from the PLI by the area in which the loaned home is located.

SDAGE
Water development and management master plan.

SURFACE AREA
Floor surface area of a building.

SHON
Net non-usable surface areas.

Evergreen Parking
Alternative parking space with integrated rainwater management: it drains and limits surface run-off.

SUP 2
WHO Recommendations Standard 16 798-3. SUP 2 corresponds to a $PM_{2.5}$ particle concentration level below 5 µg/m^3 and a PM_{10} particle concentration below 10 µg/m^3.

TCSP
Public transport on own site.

Vehicle mileage
Unit of measurement of traffic corresponding to the movement of a motor road vehicle over a kilometre. The distance taken into account is the length of road actually travelled. The vehicle kilometre is an indicator of the occupancy rate of a road network. It makes it possible to make comparisons between networks and monitor overall changes in traffic.

ZAC
Concerted development zone.

Région îledeFrance

POUR GAGNER *ensemble*

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