
Impact Report 2021

THE EUROPEAN ENERGY EFFICIENCY FUND

ADVANCING SUSTAINABLE ENERGY FOR EUROPE

European Energy Efficiency Fund Highlights



140

*million euros
current committed capital*

175

*million euros committed
by the eeef since inception*



15

active investments



Investments
into

9

member states

8

*signed eeef TAF
projects in three
member states*

2

*matured
investments*

847,549

*megawatt hours
cumulative primary energy savings
from fund inception to Q4 2021*



52

*public and municipal
authorities involved
since fund inception*



605,312

*tonnes carbon dioxide equivalents
cumulative carbon savings from
fund inception to Q4 2021*

Did you know?

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‘We set up the eeef some 10 years ago to become a sustainable business model. I am happy to see the eeef developments, which have been achieved in the last decade on that from the start, where everything just happened from one idea.’

*Ralf Goldmann,
EIB Head of Energy Efficiency and Energy Advisory Division*



Introduction letter from the European Energy Efficiency Fund

Dear Reader,

Over the past ten years, the European Energy Efficiency Fund (the eeef), in line with European Union (EU) objectives, continued to support EU's climate goals and promote a sustainable energy environment by leveraging private and public funds into energy efficiency, renewable energy and clean urban transport measures in the Member States of the European Union. eeef qualifies, within the SFDR Product Category, as a Dark Green Fund with environmentally sustainable investments which take into account the EU criteria for environmentally sustainable economic activities pursuant to Article 3 of the EU Taxonomy Regulation. eeef's stakeholders can closely monitor economic activities of the Fund and follow the progress of eeef in achieving climate goals in the Fund's Impact Report, which was previously known as Annual Report. We have decided to share more details on impact of our projects in the future and will target to incorporate additional information every year. Through the end of 2021, eeef achieved total accumulated savings of 605,312 tCO₂e and 847,549 MWh of primary energy savings compared to baseline.

A highlight of 2021 was the closing of a EUR 10 million transaction together with the Public Investment Development Agency (VIPA) of Lithuania. VIPA and eeef agreed to set up a "Sustainable Resources Development" platform, which focuses on the financing of sustainable investments contributing to the direct effects of climate change mitigation. The objective of the platform is to finance renewable energy and energy efficiency projects, with projects in the public and private sectors eligible for funding. The platform will have a significant impact on both primary energy and carbon savings with the projects generating at least 30% of primary energy savings and/or CO₂ emission savings compared to the baseline. The platform plans to raise funding up to EUR 37 million. It is likely to deliver ca. 6,590 tCO₂e reduction in CO₂ emissions as per preliminary estimates which should represent approx. 78.7% savings compared to current baseline, once fully deployed in projects. More information about this investment can be found on page 8.

In October 2021, two public energy redevelopment projects entered Illuminated Cities, a Joint Venture (JV) of eeef and Siram Veolia. The JV allows new small municipalities to attract private expertise and capital to finance, implement and manage works of public interest. With these investments, Illuminated Cities becomes a partner of the Municipalities of Nogara and Concordia Sagittaria, in the province of Verona and Venice respectively. They join the Municipality of Rozzano, in the province of Milan, which is an active project in the joint venture's portfolio. The investments aim at the adoption of high added-value technologies, ranging from the upgrading of obsolete electrical, and thermal systems in public buildings to the production of energy from renewable sources, the installation of LED street lighting and street furniture, remote control systems, remote management and electric mobility services. Based on total investment of approximately 6 million euros, the authorities will achieve savings in the energy consumption and energy bill, with a consequent dual reduction,



of the environmental impact as well as the energy expenses. In total, two new redevelopment projects will generate an estimated amount of 4,971 MWh of primary energy savings and 746 tCO₂e of carbon savings per year in comparison to the baseline. The characteristics of Illuminated Cities make it possible to finance even small-scale initiatives on a single project basis, which the traditional approach of project finance typically excludes, as well as significantly reducing the costs of structuring operations.

Through the course of 2021, eeef also completed the first collaborative project with the European Investment Bank (EIB) in the frame of the eeef's Technical Assistance Facility (TAF). TAF was set up at the end of 2016 to support public authorities in preparing sustainable energy investment programmes and received funding from both eeef and the European Local Energy Assistance Facility (ELENA) managed by the EIB on behalf of the European Union. Between 2017 and 2021 eight public beneficiaries across Spain, Italy and Lithuania worked with eeef under this facility. Over EUR 125.6 million of commercially viable investments have been successfully identified and some of these already started implementation. In total, these eight projects will result in estimated primary energy savings of 49,439 MWh (45.3%) and a reduction in CO₂ emissions of 15,522 tCO₂e (46.8%) compared to baseline. The fund will therefore further apply for new funding programmes from EIB and continue its activities with the European cities and regions to develop interventions in energy efficiency, public transportation and renewable energy consistent with the EU Taxonomy.

To provide an independent and transparent assessment of the eeef's impact strategy, third-party verification by BlueMark was conducted, which reviewed the alignment of the eeef's portfolio and investment practices with the Operating Principles for Impact Management. The Principles were launched in 2019 by a group of signatories including the International Finance Corporation as one of the founders, part of the World Bank Group. The verification report is accessible to all stakeholders from the eeef website and shows the pathway to keep up the fund's investment policies to the highest recognized industry standards.

"On behalf of the eeef Board of Directors, we want to put eeef at the service of the European goals for the energy transition. We believe that the fund, which combines public and private resources, represents a key player in support of energy efficiency investments in Europe, which are increasingly needed in this crucial time" says Giorgio Chiarion Casoni, Chairman of the Board of Directors. The Fund will continue to intensify partnerships with municipalities, cities, regional authorities to enable projects to come to fruition to ensure that climate change projects receive the priority that they require for Europe to achieve ambitions of sustainability agendas, specifically greenhouse gas emission reduction goals. The Fund will ensure that all of its impact activities as well as do not significant harm activities are reported in accordance with the regulatory requirements defined by the European Union going forward.

The eef **IN 2021**

1

The Public Investment Development Agency (VIPA) of Lithuania and eeef agreed to set up “Sustainable Resources Development” platform, which focuses on the financing of sustainable investments.

Siram Veolia and eeef partnership acquired two new public energy redevelopment projects in the Municipalities of Nogara and Concordia Sagittaria.

2

3

eeef Technical Assistance Facility successfully completed its commitments towards ELENA for funding Project Development Services (PDS) under the ELENA Contract.

eeef’s impact management system was independently verified by Blue-Mark, a leading provider of impact verification services in the impact investing market.

4



Joining forces to promote sustainable projects in Lithuania

During the 2nd half of 2021, the European Energy Efficiency Fund (eeef) and Lithuanian National Promotional Institution and Public Investment Development Agency, Viesuju Investiciju Pletros Agentura (VIPA), signed a EUR 12 million equity deal for a term ending March 2034 to support Lithuania's Investment Platform Tvarių Išteklių Plėtros Skatinimas (TIPS) focused on promoting Sustainable Resource Development.

TIPS will receive EUR 10 million in equity from the eeef and, the remaining, EUR 2 million from VIPA's own capital. Additionally, TIPS plans to attract lenders for ca. EUR 25 million, thereby, raising EUR 37 million in total. The funding will benefit small to medium scale investments in public and private projects in the field of energy efficiency and renewable energy across Lithuania.

Since inception, the eeef has been supportive of EU's climate goals of promoting sustainable energy market and fostering climate protection in a collaborative approach – contributing to climate change mitigation and combining private and public capital for climate-related investments.

Engagement with VIPA on TIPS is yet another example of this approach where eeef contributes with a decade-long experience in financing energy efficiency and renewable energy projects across EU member states whereas VIPA drives the Investment Platform with a strong grip on the local needs and an extensive network of stakeholders who believe in creating a more sustainable future.

Furthermore, TIPS is a unique initiative as it is dedicated to the promotion of a wide range of sustainable investments at the public level, where the interests of VIPA and eeef are aligned to facilitate and speed up the energy transition in Lithuania. Moreover, This approach allows to aggregate smaller loans into a sizable portfolio. Accordingly, TIPS is engaged in an aggressive modus operandi and is planning targeting to showcase a portfolio of strong sustainable investments by end of 2023.

It is envisaged that the portfolio will comprise of projects contributing to energy transition and to the renovation of the existing infrastructure. Additionally, the investment criteria will include, among others, Primary energy savings $\geq 30\%$ (for energy efficiency projects) and CO₂ emission reduction $\geq 30\%$. Each individual project will be of small to medium scale and TIPS will catalyze developers to co-financing 20% of the investment value.



To give a few examples, TIPS is offering loans of 10-year tenure for up to 80% of the investment value for projects concerning the installation of solar power plants for own use. Likewise, similar loans are available for the development of solar farms for sale to “prosumers”, for the implementation of various energy-saving solutions such as lighting network projects and for the renovation of public buildings.

Till date, TIPS received a strong traction from the market with a pipeline of projects covering solar and wind energy, energy efficiency in street lighting and industry and renovation in public and multi-apartment buildings. TIPS Investment Committed has already approved financing of over EUR 6 million to 6 projects. Together, these projects will deliver ca. 10.29MWp of power output along with reducing annual emission by 1,212 tCO₂e for producing the same amount of electricity, and thus will contribute to eliminating the effects of climate change. When EUR 37 million are fully deployed in projects, TIPS is likely to deliver ca. 6,590 tCO₂e reduction in CO₂ emissions as per preliminary estimates which should represent approx. 78.7% savings compared to current baseline.

“The fact that our funded projects are gaining continuity shows that sustainable investment is attractive and that services provided by solar farms are in demand. We have been increasing energy efficiency together with developers, individuals and entrepreneurs who choose green energy, thus creating a more sustainable future”, says Asta Gladkauskien, Head of VIPA’s Private Customer Department.

With this lighthouse investment in TIPS, the eeef is not only looking to develop a sustainable investment portfolio in Lithuania but also to demonstrate a framework for public-private collaboration to support EU’s climate goals at the European level.

VIPA is a national promotional institution established by the Government of the Republic of Lithuania, which operates in the fields of development of urbanized or urbanizing areas, housing and renovation and development of public or public interest infrastructure, and promotion of energy efficiency.

EU Taxonomy Regulation and Sustainable Finance Disclosure Regulation

The EU Sustainable Finance Action Plan paves the way for a stringent regulatory environment, with creation of new regulations and amendments to current directives. Regulation 2020/852 (**“the Taxonomy Regulation”**) and Sustainable Finance Disclosure Regulation (**“SFDR”**) are important pillars of the Action Plan and are tasked to increase transparency for all financial market participants and financial advisors, while at the same time promoting sustainable finance products in the EU. The next passages will extensively cover what is entailed in both the EU Taxonomy and the SFDR. Then, the article will delve deep into the symbiotic relationship between the two Regulations and the challenges in their implementation.

EU Taxonomy provides a classification of economic activities, and this paragraph will explain how it came into effect, and its content thereof. The European Council together with the European Parliament reached a milestone agreement on a bill of a proposed Regulation on the establishment of a Framework to facilitate sustainable investment. This was later known in common terms as **the Taxonomy Regulation**. The Taxonomy Regulation was published in the Official Journal of the EU on June 22, 2020, following its adoption by the European Parliament on June 18, 2020, and came into force on July 12, 2020.¹ It provides laid down guidelines to investors and businesses to identify what economic activities can be considered environmentally sustainable. It seeks to *“provide clarity and transparency on environmental sustainability to investors, financial institutions, companies and issuers thereby enabling informed decision-making in order to foster investments in environmentally sustainable activities.”*² It is the first step of a very ambitious project of the EU, aiming to establish a full classification of sustainable economic activities based on standards endorsed by regulation. The project started with the classification of environmental sustainability, focusing on two environmental objectives: climate change mitigation and adaptation. Others included in the Taxonomy are (i) “do no significant harm” (DNSH) – the principle of which considers the investment to be ‘sustainable’ if it contributes to an environmental or social objective and does not significantly harm any other environmental or social objective as set out in the Regulation; (ii) avoiding violation of minimum “social safeguards”; (iii) compliance with technical “screening criteria”.³ EU’s regulatory body has set a quantitative threshold for every activity listed. Each activity is checked whether it has environmental objectives and is taxonomy-aligned only if it performs the threshold. The Regulation contemplates a phased implementation, with certain rules set to apply from different dates.⁴

The Taxonomy is connected to and will support disclosure requirements under the **Sustainable Finance Disclosure (SFDR) regulation**. SFDR regulations came into force in March 2021 and created a system, where every offered financial product in the EU must publish qualitative and quantitative information about the impact of their investments on sustainability. It plays a very pivotal role in the EU’s quest to regulate sustainable finance. This regulation is applicable to every asset manager that offers financial products in the EU. Fund managers subject to it must disclose in their reports and websites how they tackle sustainability risk and the Principal Adverse Impacts (PAIs) of their investments on sustainability factors. Extensive disclosures are mandated at the product level. Under SFDR, financial products can be labelled either as Article 6, 8 or 9. **Article 6**, covers conventional financial products, which do not pursue sustainability as their primary goal but nevertheless, they must disclose how sustainability risks are integrated into their decision-making in investment and their PAIs on sustainability factors. **Article 8**, defined as “Light Green” products that promote environmental and/or social characteristics amongst other characteristics with the companies in which the investments are made have good governance practices. **Article 9**, referred to “Dark Green” products with sustainable investment as their core objective and is directly connected with the EU Taxonomy with *“sustainable investment as its objective”*.⁵ Sustainable funds must adhere to the regulation of investment in economic activities



that contribute to environmental objectives.⁶ There must be detailed information on how these objectives will be met, including methodology, measurement and monitoring of a sustainable investment. Furthermore, the investment in this area should seek to cause no significant harm to the environment and must align to at least one of the criteria outlined in the EU Taxonomy Regulation. The EU commission specified that Article 9 funds may also include investment in hedging or liquidity provided they meet the bare minimum requirement towards environmental and social safeguards.⁷ By doing this, they will be in tandem with the sustainable investment objective. In a nutshell, the EU Taxonomy Regulation provides a classification of economic activities, while the SFDR defines Environmental, Social and Governance (ESG) reporting obligations for financial market participants.

Although SFDR is in its second year of implementation, a lot remains to be done because the desired and intended objective is yet to be fully met. One can, however, not dispute the fact that it has helped investors understand and compare sustainability attributes of investment funds, but what remains limited is data needed for compliance. It is not just the availability of data that is proving to be a hindrance but also the costs associated with acquiring such data to comply with the SFDR requirements. Another factor that is proving to be a hindrance is the incomplete implementation of SFDR and sustainable finance rules, especially those that touch on ESG reporting. EU commission has often postponed rules touching on the implementation of SFDR disclosure, the uncertainty of which has been due to its application and interpretation. However, this is expected to change positively because January 1st, 2023, has now been set as the beginning of the application of the SFDR implementing rules. This will provide fund managers with more legal certainty on the disclosure requirements.⁸

In summary, proper implementation of SFDR will be paramount in transitioning the EU to low carbon and more sustainable future. The Taxonomy can be of greater help for fund managers to ascertain, which activities an SFDR titled fund can invest in. It provides laid groundwork as to which activities are best fit for funds, aimed at promoting environmental attributes. Furthermore, disclosures in a fund's prospectus, by referring to Article 9 and Article 8 will go a long way to dispel the notion that funds are greenwashed. Only investing in eligible activities will not suffice as fund managers must use Taxonomy criteria in assessing the alignment of their sustainable investment, especially in Article 9 funds. Nevertheless, the EU's Taxonomy alignment is going to be the cardinal point in ascertaining whether activities and products are indeed within the spectrum of sustainability. To conclude, it is important to note that disclosure obligations can only go that far, of utmost importance will be the political goodwill within the EU to fully champion a transition to a sustainable economy.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0852> (access on 23rd August 2022)

² https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/sustainable-finance-taxonomy-spotlight_en.pdf

³ <https://www.aima.org/article/overview-of-the-eu-taxonomy-regulation.html#:~:text=The%20Taxonomy%20Regulation%20establishes%20an%20EU-wide%20classification%20system,degree%20economic%20activities%20can%20be%20considered%20environmentally%20sustainable>

⁴ Taxonomy Regulation, Article 27 "Entry into force and application"

⁵ <https://www.mdpi.com/2071-1050/13/21/12316/htm>

⁶ <https://www.gresb.com/nl-en/eu-regulatory-environment-changes-sfdr-eu-taxonomy/>

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&from=EN>

⁸ <https://paperjam.lu/article/the-eu-sfdr-one-year-on> (access on 23rd August 2022)

Now or Never

By Rahul Pratap Singh

Such was the reaction of the UN Secretary-General, António Guterres, on 4th April 2022, at the release of the latest report “Climate Change 2022: Mitigation of Climate Change” by the Intergovernmental Panel on Climate Change (IPCC).

Climate change is the result of over a century of unsustainable energy and land use and of patterns of unsustainable consumption and production. Every day, the atmosphere is being doped with high GHG emissions which is leading to increased frequency, intensity and duration of extreme events that are reigning down blows on billions of people and threatening economies for trillions of Euros in losses. So, kicking the can down the road on climate change and adaptation will not help. In fact, it will drive our precious ecosystems towards extinction and the planet towards a climate disaster.

Continuing the status quo

The average annual GHG emission in 2019 stood at 54 % above than emissions in 1990 – the highest level ever in the human history. Adjusting for global policies that were implemented by Dec-2020, it could be extrapolated that without strengthening mitigation efforts, GHG emissions are projected to lead to warming of 3.2 °C.

If the global economies must keep their promise of a sustainable planet and keeping the global temperature rise to 1.5 °C, a clear pathway for each nation and concentrated efforts are a pre-requisite. Each country with their SDGs needs to decrease emissions for several years at consistent rates. Cities need net-zero emission targets and work towards net-zero energy infrastructure. Furthermore, the political will needs to be reinforced with policies to enhance energy efficiency and deployment of renewable energy.

Defining of the objective

In the scenario of limiting warming to 1.5 °C, IPCC’s assessment is that GHG emission should peak before 2025, at the latest, and be reduced by 43 % by 2030. And, even if we do this, it is almost inevitable that we will at least temporarily exceed 1.5 °C warming, but we could return below these levels by the end of the century. Furthermore, the temperature will stabilize when we reach net-zero CO₂ emissions. So, to limit warming to 1.5 °C, requires reaching net zero CO₂ emission in the early 2050.

Contribution from sectors

Many sectors offer possibilities to lower emissions by 2030 while respecting to limiting warming to 1.5 °C. The energy sector, for example, accounts for about 1/3 of all global emissions. Major transitions in this sector would require substantial reduction in fossil fuel use, low carbon energy systems, widespread electrification, use of alternative fuels, use of carbon capture, deployment of energy efficiency and adoption of digital technologies.

If we look at the transport sector, significant reduction in emissions can be achieved by lowering demand and adopting low carbon technologies. Electric vehicles, for example, offer the greatest potential to lower emissions when combined with low carbon electricity sources. Furthermore, advances in battery technologies can assist in electrification of trucks and buses, which could complement conventional electric rail systems.

Not to forget that our cities account for more than 2/3 of global emissions and there is significant potential for emission reduction. It is necessary to move towards sustainable consumption and production of goods and services, electrification, and improving carbon uptake and storage. If buildings are to reach net zero emission by 2050, the seed needs to be sown now. This would involve retrofitting building at

“This is not fiction or exaggeration. It is what science tells us will result from our current energy policies. We are on a pathway to global warming of more than double the 1.5-degree limit” that was agreed in Paris in 2015. ... If you care about justice, and our children’s future, I am appealing directly to you: Demand that renewable energy is introduced now – at speed and at scale. Demand an end to coal-fired power. Demand an end to all fossil fuel subsidies.”



faster rates, using new mitigation technologies and incorporating efficient building designs to combine space, energy, material and renewables.

When it comes to reducing emissions in industry, material and energy should be used efficiently along with reusing and recycling products and minimizing waste. The sector accounts for 1/4 of global emissions and achieving net zero will be challenging. It will require new production processes, low emission electricity, carbon capturing, storage, among others. Low GHG production process for basic materials and chemicals should emerge and achieve commercial success.

Agriculture, forestry and other land use can provide large scale emissions reductions plus store CO₂. The solution is simple – protecting and restoring natural ecosystems such as forests and natural green cover. Land can only do so much but cannot cross compensate for delayed emission reduction in other sectors.

Regulatory, economic instruments and policies

Regulatory, economic instruments and policies play a critical role in strengthening the response to climate change. The measures range from standards for vehicle efficiencies, building codes, to policies for industrial decarbonization to taxation on carbon and emission trading system. Such measures have already proved effective in reducing emission. It is important to bear in mind that rather than individual policy instrument, policy packages and economy wide packages are better able to achieve systematic change. Effective mitigation requires coordination across governments and implementing strategies based on consensus among stakeholders – societies, citizens, professional bodies and businesses.

Investment in-flows

While climate and clean energy commitments are strengthened, public budgets are ever constraints. Thus, investors should be prepared to offer the leverage effect to demonstrate support for sustainable energy financing and reinforces investments that helps protect our climate and bringing economic benefits.

Climate mitigation offers investment opportunities within these sectors. The support from the financial sector needs to be increased 6 folds by 2030 and there is sufficient global capital and liquidity to close this gap. Decrease in emissions is dependent on the interplay of investments in energy efficiency improvements and low-carbon technology deployment.

With rising attention from the investor community, significant inroads have been accomplished in the energy efficiency and renewable energy sector. For example, since the turn of the century, market cost per unit of technologies have decreased steadily and the prices have fallen below those of fossil fuels.

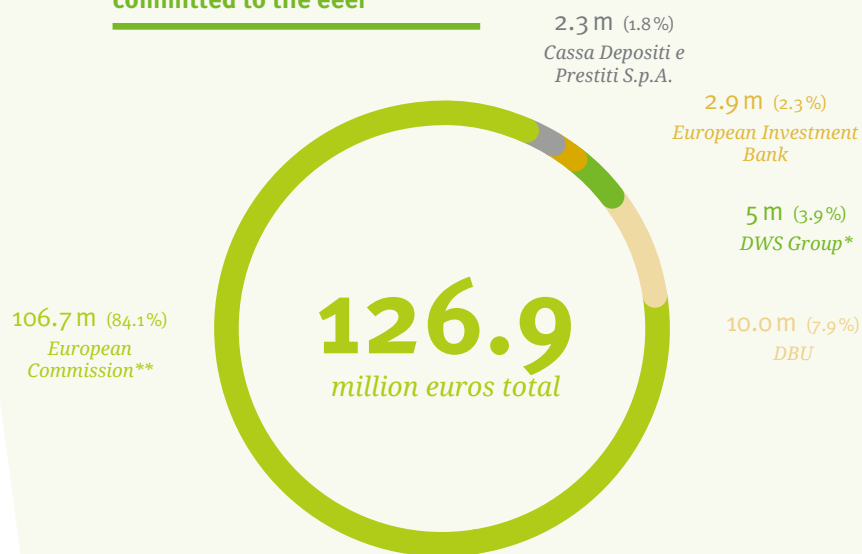
Conclusion

There should be no astonishment that unchecked unsustainable development practices have increased exposure of people and ecosystems to climate change. At the present rate of GHG emissions, the planet may soon arrive at a point of no return for centuries. So, it is our moral responsibility to act now while we have an opportunity window available to us. Political resolve, sectorial contributions and investment in-flows have to synchronize to ensure that we can proudly handover this planet to the future generations.



Fund Overview

Current division of investments committed to the eeef



Shareholder structure based on called amounts, excluding repayments and capitalised dividends

150.1
million euros total



97.0 m (64.6%)
European
Commission (EC)



21.2 m (14.1%)
European Investment
Bank (EIB)



16.9 m (11.3%)
Cassa Depositi e
Prestiti S.p.A. (CDP)



5.0 m (3.3%)
DWS Group*

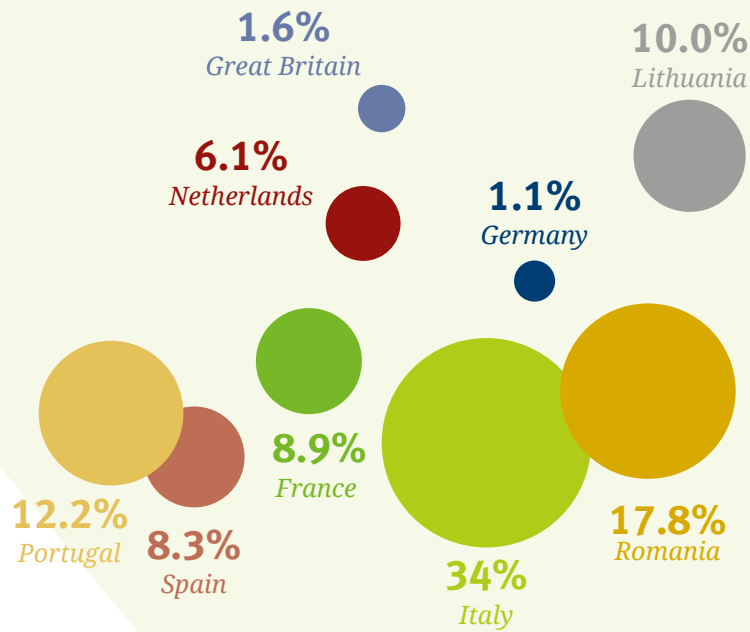


10.0 m (6.7%)
DBU

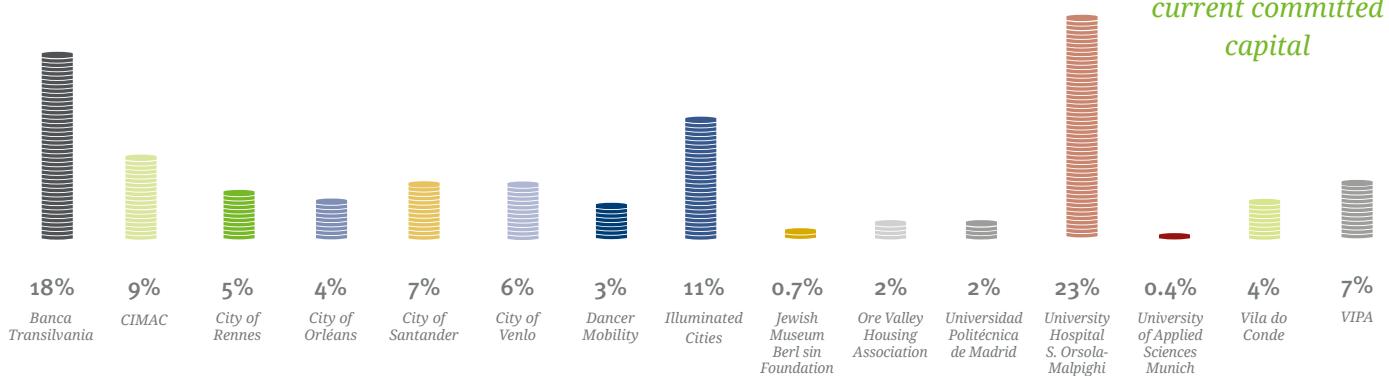
* The shares belong to WEPLA Beteiligungsgesellschaft mbH – an investment company holding investments in funds that are managed by DWS Group GmbH & Co. KGaA (DWS).

** Including capitalised dividends for C Shares as of 31.12.2021

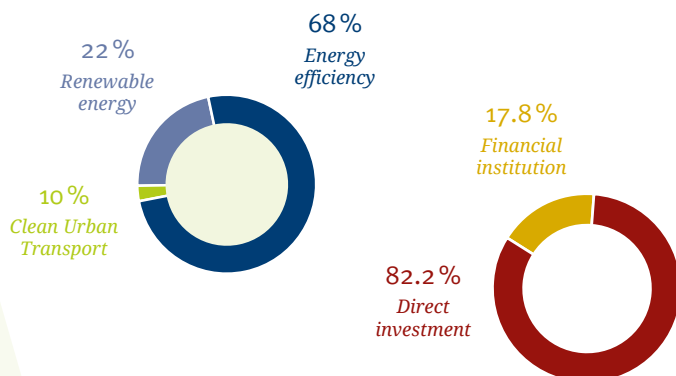
Investments by Country *



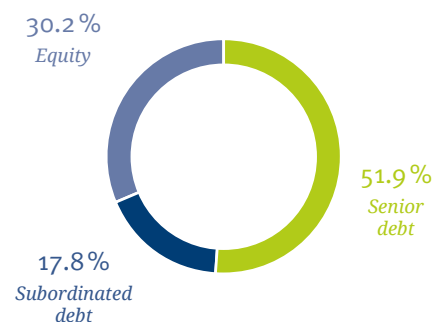
Investments by Partner Institution *



Investments by Sector *



Investments by Financial Instrument *



* Based on commitments signed to projects, not including repayments or accrued interest. Matured investments not included. Any discrepancy is due to rounding. The financing facility with Wattosun and Smart Hospitals and Universities were closed during the beginning of 2021. Projects' implementations had substantial delays in reaching the milestones. Hence, all financial commitment of a binding nature were released.

Activities report: the eeef's investments

Since its inception, the eeef has committed a total of EUR 175 m in 17 partner institutions, of which EUR 153 m have so far been disbursed.

Germany (*Berlin, Munich*)

€1.6 m

- **€1.0 m** forfeiting loan to the Jewish Museum Berlin Foundation via the ESCO of Johnson Controls
- **€0.6 m** forfeiting loan to the University of Applied Sciences via the ESCO of Johnson Controls

Italy (*Northern Italy*)

€46.2 m

- **€31.8 m** senior loan and VAT facility to Progetto ISOM for the upgrade of the University Hospital S. Orsola-Malpighi
- **€16.0 m** equity investment in the JV Illuminated Cities with Siram by Veolia for a portfolio of investments (EE: smart public lighting)

Spain (*Madrid, Santander*)

€11.7 m

- **€2.5 m** forfeiting loan to the Universidad Politécnica de Madrid via Enertika
- **€9.2 m** forfeiting loan to the city of Santander to upgrade existing street lighting

France (*Orléans, Rennes, Paris, Lyon, Bordeaux, Rhône-Alpes*)

€47.0 m

- **€5.1 m** shareholder loan and equity for the city of Orléans' CHP plant
- **€6.9 m** shareholder loan and equity for the city of Rennes' CHP plant

€30.0 m senior debt to Bolloré (matured)

€5.0 m senior debt to the Société Publique Locale d'Efficacité Énergétique (SPL) in the Région Rhône-Alpes (matured)

Romania (*various locations incl. Cluj-Napoca, Bucharest, Magurele, Alba Iulia*)

€25.0 m

- Subordinated loan to Banca Transilvania for on-lending into energy efficiency and renewable energy projects

United Kingdom (*Cardenden, Scotland*)

€2.2 m

- **€2.2 m** senior debt facility to the Ore Valley Housing Association via the SPV Cardenden Heat and Power

Portugal (*Alentejo region, Vila do Conde*)

€17.2 m

- **€12.1 m** forfeiting facility to CIMAC I-Quatro to upgrade existing street lighting
- **€5.1 m** forfeiting facility to Vila do Conde I-Quatro to upgrade existing street lighting

Netherlands (*Venlo*)

€8.5 m

- Senior debt facility to the city of Venlo for smart public lighting

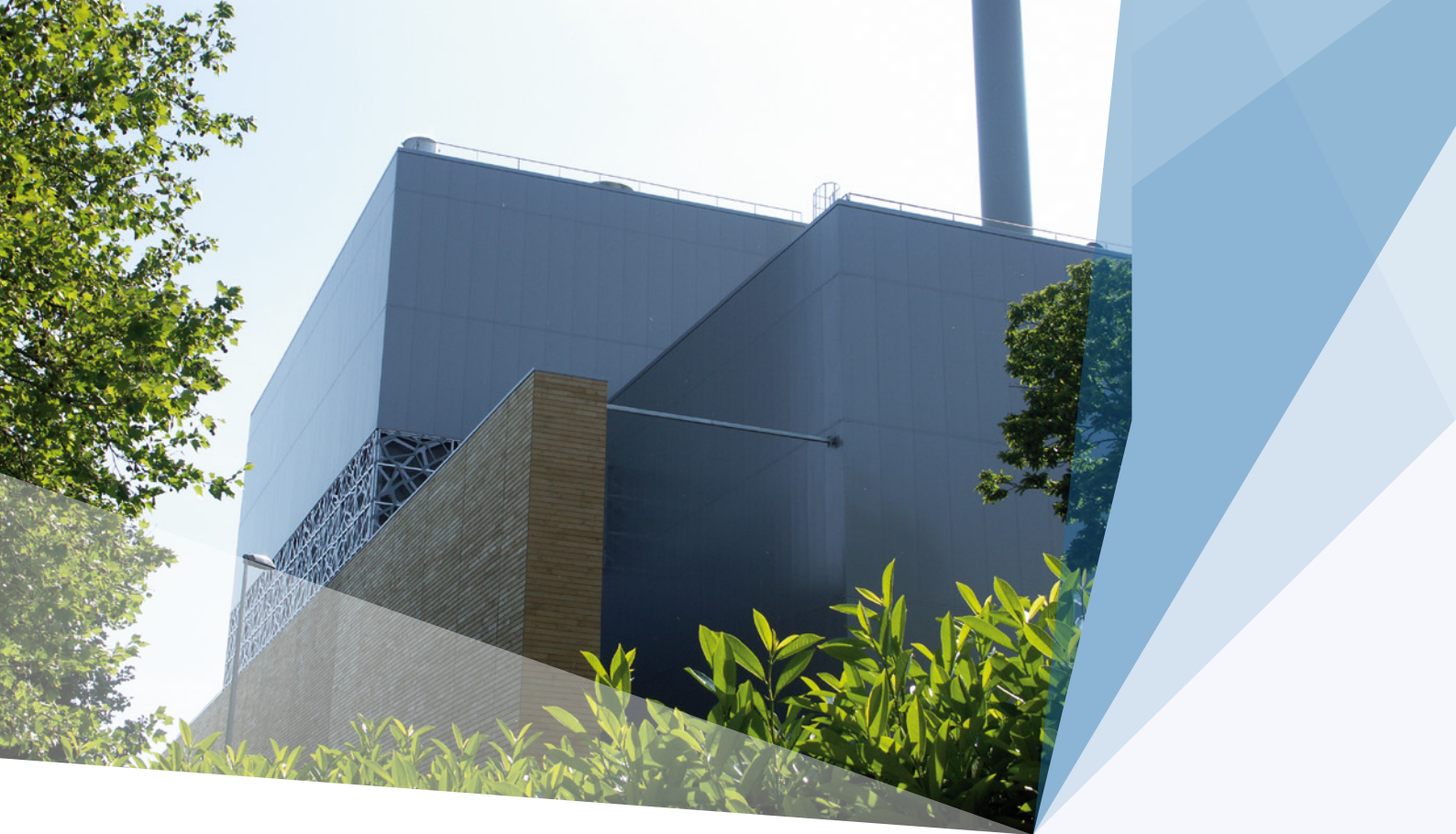
Lithuania (*Klaipėda*)

€14.0 m

- **€4.0 m** shareholder loan and equity investment in the JV "Dancer Mobility" with Lithuanian electric bus manufacture "Dancer"
- **€10 m** equity investment in the Investment Platform with the Public Investment Development Agency VIPA

Investment locations





France City of Orléans

The operating combined heat and power (CHP) plant has an installed capacity of 7.5 MW in electricity and 17 MW in thermal heat. The plant supplies heat to the city of Orléans and sells electricity via a power purchase agreement (PPA) to Électricité de France (EDF). Orléans Biomasse Énergie, the project's special purpose vehicle (SPV), is majority owned by the eeef (purchase of 84.4% of its shares). This project was the first equity investment by the Fund.

The project enables a decentralised energy supply for the city of Orléans using an existing district heating network. The plant, which is fired

by wood biomass from a regional source, allows 15,000 households in the city to achieve annual savings of around EUR 200 each with the new energy source and increases the environmental sustainability.

Sector:

*Renewable energy/
biomass CHP*



Key figures

Type of investment:	Total project size (€m):	36.0	Maturity	19 years
Equity and shareholder loan	eeef investment size (€m):	5.1	Observed tCO ₂ e emission savings (p.a.):	18,386
Financial close:	12.03.2013			

France City of Rennes

Following a bid for tenders launched by the French Commission de Régulation de l'Énergie (CRE3) for the production of green energy using a biomass cogeneration plant, Rennes Biomasse Énergie SAS was authorised to build and operate a combined heat and power facility with an electrical output of 10.4 MW and a thermal output of 22 MW for the next 20 years. Rennes Biomasse Énergie, the project SPV, is majority owned by the eeef (purchase of 85 % of its shares). This was the second equity investment signed by the eeef.

The project enables a decentralised energy supply for the city of Rennes using an existing district network. The plant enables 21,000 households in the city both to save money with the new energy source and to increase their environmental sustainability. The project generates sustainable heat aligned with offtake requirements and, due to the biomass fuel, achieves significant carbon savings compared to baseline.

Key figures

Type of investment:	Total project size (€m):	47.6	Maturity	20 years
Equity and shareholder loan	eeef investment size (€m):	6.9	Observed tCO ₂ e emission savings (p.a.):	13,365
Financial close:	12.12.2013			



Sector:
*Renewable energy/
biomass CHP*



Germany

Jewish Museum Berlin Foundation

The Jewish Museum Berlin and the energy service company (ESCO) Johnson Controls entered into an energy performance contract (EPC) for the museum buildings in 2012. The eef's initial investment totalled EUR 1.7 m. In 2015, the project scope was revised and consequently the eef's investment size was reduced to EUR 1.0 m.

The project includes a number of energy efficiency measures, including the optimisation of the heating, ventilation and air conditioning and an efficient energy management system. The first energy audit for the project was completed in 2017 and the annual primary energy savings for 2021 equated to 13,010 MWh.



Sector:
*Energy efficiency/
building retrofit*



Key figures

Type of investment:	Forfeiting loan	Total project size (€m):	1.4	Maturity	13 years
Financial close:	20.03.2012	eef investment size (€m):	0.9	Observed tCO ₂ e emission savings (p.a.):	2,941

Germany

University of Applied Sciences Munich

The University of Applied Sciences Munich and the energy service company (ESCO) Johnson Controls entered into an energy performance contract (EPC) for both of the buildings on the university's campus in Munich-Pasing, with a total EPC volume of EUR 1.1 m.

The ESCO and the university agreed to energy efficiency measures composed of the optimisation of the heating, lighting, metering, building management and pumping systems, as well as the installation of a 49.5 kW combined heat and power (CHP) plant. The project was implemented in 2013 and continues to achieve savings aligned with projections. In 2021, it achieved 2,235 MWh of primary energy savings compared to baseline, which is equivalent to 38%.

Sector:
*Energy efficiency/
building retrofit/
CHP plant*



Key figures

Type of investment:	Forfeiting loan	Total project size (€m):	1.1	Maturity	10 years
Financial close:	15.11.2012	eef investment size (€m):	0.6	Observed tCO ₂ e* emission savings (p.a.):	186

* The University of Applied Sciences purchases a renewable energy electricity blend, impacting the actual observed carbon savings.

Netherlands City of Venlo

► [Project video City of Venlo here](#)

The city of Venlo and the eef signed a long-term financing contract for EUR 8.5 m. The city's existing public lighting is the biggest consumer of electricity on its electricity bill. The city therefore prioritised upgrading its street lighting in order to reduce its energy consumption and CO₂e emissions as well as to save costs for the public budget. By the end of 2021, 1,674 lighting poles were replaced and 17.270 luminaires were replaced with LED technology. The project is further proof of the city's commitment to achieving environmental sustainability.

This street lighting project is linked to preparation works resulting from technical assistance. Venlo benefitted from funding from the European Commission

Technical Assistance Facility (EC TAF). This enabled the city to tender and select the equipment manufacturer for the provision of the LED equipment.

Sector:
*Energy efficiency/
street lighting*



Key figures

Type of investment:	Senior debt	Total project size (€m):	8.6	Maturity	15 years
Financial close:	03.04.2014	eef investment size (€m):	8.5	Observed tCO ₂ e emission savings (p.a.):	771

Italy

University Hospital S. Orsola-Malpighi

► [Project video University Hospital S. Orsola-Malpighi here](#)

The project entity Progetto ISOM signed a concession agreement with the University Hospital S. Orsola-Malpighi, one of the biggest hospitals in Italy (1,758 beds). The eeef provided a project and VAT bond facility of EUR 31.8m.

The project comprises a number of initiatives, which improve the energy efficiency of the entire fluid production and distribution system and reduce energy consumption. Such measures include the adoption of energy-efficient equipment such as centrifugal chillers and absorbers, the reconstruction of the heat distribution networks, the

renovation of heat exchange substations and the inclusion of an underground tri-generation plant for the combined production of cooling, heat and power (CCHP), based on the energy consumption of the hospital facility, which is fuelled by methane gas.

In 2021, carbon savings were 32% compared to baseline, and primary energy savings were at 29%.

This upgrade of the entire energy system of the university hospital has been the biggest energy efficiency upgrade in Italy completed as part of a PPP.

Key figures

Type of investment:	Senior debt	Total project size (€m):	41.0	Maturity	20 years
Financial close:	08.05.2013	eeef investment size (€m):	31.8	Observed t CO ₂ e emission savings (p.a.):	16,190

* Numbers based on contracted conversion factors.



Sector:
*Energy efficiency/upgrade
of entire energy system*

Italy

Illuminated Cities

Città Illuminate S.r.l. (Illuminated Cities) is the holding company for the joint venture (JV) between the eef and Siram by Veolia, targeting a portfolio of street lighting projects in Italy, mainly benefitting small to medium-sized municipalities. The newly established joint venture will enable public entities to implement technically advanced solutions known as smart lampposts and enable the integration of multiple services within the street lighting infrastructure. These projects will enhance public infrastructure whilst reducing public energy consumption. This is thanks to measures including the instalment of LEDs, management systems, video, Wi-Fi and charging stations for electric vehicles. The eef is the main investor in the JV, while Siram acts as the industrial partner and full contractor for each project's commissioning and operation.

The JV realized its first investment in the municipality of Rozzano, Milan Province, where 5,250 lighting points have been upgraded to LED technology. The renewed infrastructure delivered not only more efficient and better lighting quality, but also integrated equipment to enable mul-

tiple services, such as video surveillance, park management and pollution control. This project perfectly embodies the JV spirit, showing how also a small town of 42,500 inhabitants can become a smart city.

In 2021, the JV acquired two new public energy redevelopment projects with the Municipalities of Nogara and Concordia Sagittaria, in the province of Verona and Venice. The investments aim at the adoption of high added-value technologies, ranging from the upgrading of obsolete electrical and thermal systems in public buildings, to the production of energy from renewable sources, the installation of LED street lighting and street furniture, remote control systems, remote management and electric mobility services. Thanks to a total investment of approximately 6 million euros, in addition to all the improvements and benefits mentioned so far, the authorities will achieve savings in the energy consumption and energy bill, with a consequent dual reduction, of the environmental impact as well as of the energy expenses.

Key figures

Type of investment: Junior funds	Total project size (€m): 20.0	Maturity 12 years
(equity and shareholder loan)	eef investment size (€m): 16.0	Estimated tCO ₂ e emission savings (p.a.): 2,795
Financial close: 27.09.2018		

Sector:
Street lighting



Portugal CIMAC

In December 2018, the eef signed the 12-year forfeiting facility of EUR 12.14 m with I-Quatro LDA (an ESCO company) to implement its first aggregated street lightning infrastructure transaction, with the mission to upgrade over 56,000 luminaires within 14 municipalities, including the UNESCO World Heritage site of Évora, represented by Comunidade Intermunicipal do Alentejo Central (CIMAC).

On April 30, 2020, the officials of CIMAC inspected the works and the implementation of measures to improve energy efficiency in the Public lighting infrastructure of the 14 municipalities that constitute the Inter-municipal Community of the Alentejo Central region. CIMAC certified that the

works are executed in harmony with the stipulated clauses and the approved execution project. With that, the installation phase officially concluded and the service phase of the energy efficiency measures were approved to being on the same date. In addition, approximately 650 special luminaires have been identified by CIMAC that need to be assembled during the service phase.

In 2021, The project realised 77 % in primary energy (of 42,718 MWh) and carbon savings (of 4,753 t CO₂e) annually compared to baseline consumption. Furthermore, it will result in EUR 7.1 m in economic savings for the municipalities over the 12-year concession.

Key figures

Type of investment:	Forfeiting facility	Total project size (€m):	16.6	Maturity	12 years
Financial close:	27.12.2018	eef investment size (€m):	12.1	Estimated tCO ₂ e emission savings (p.a.):	4,753

Sector: *Street lighting*





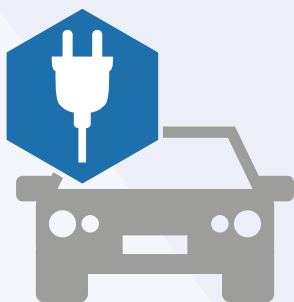
Portugal Vila do Conde

On December 30th 2020, eef signed a forfailing facility of EUR 5.1 million to finance renovation of the street lighting infrastructure in the municipality of Vila do Conde in Portugal. The signing of this agreement illustrates successful replication of eef's forfailing facility to other project in Portugal, the first one being CIMAC, an inter-municipal community constituted in the Central Alentejo region, comprising of 14 municipalities.

This upgrade is expected to realize 66.4 % in primary energy and CO₂ savings annually compared to baseline, representing 16,517 MWh and 2,799 tCO₂e, respectively. In addition, the project will also generate ca. € 3.2 million of monetary benefits for the municipality over a 12-year period of concession.

Key figures

Type of investment:	Forfailing facility	Total project size (€m):	7.7	Maturity	12 years
Financial close:	30.12.2020	eef investment size (€m):	5.1	Estimated tCO ₂ e emission savings (p.a.):	2,799



Sector:
Clean urban transport



Lithuania Dancer Mobility

eeef invested together with UAB “Vejo Projektai”, a Lithuanian manufacturer of electric Dancer buses. The Fund and Dancer have established the company “Dancer Mobility” to provide all-inclusive operational lease services of electric buses manufactured in Lithuania to public authorities.

Dancer Mobility will finance the purchase of e-buses and their operation, in the frame of all-inclusive operational leases provided by the company to public authorities and covering the bus usage, charging infrastructure, green energy supply and full maintenance.

Key figures

Type of investment:	Total project size (€m):	5.0	Maturity	up to 10 years
Equity and shareholder loan	eeef investment size (€m):	4.0	Estimated tCO ₂ e emission savings (p.a.):	1,344
Financial close:	23.02.2020			



Sector:
*Energy efficiency/
renewable energy*



Lithuania VIPA

The Public Investment Development Agency (VIPA) of Lithuania, together with the eeef, agreed to set up Sustainable Resources Investment Development platform (IP), which focuses on the financing of sustainable investments contributing to the direct effects of climate change mitigation.

The IP is targeting to finance “green” investments that generate, among others, energy savings, reduce CO₂ emissions, and promote renewable energy use in Lithuania. With that objective, the IP intends to fully give out the funds mobilized as loans and, thus aggregate on its balance sheet, a portfolio of loans linked to climate change mitigation projects.

Key figures

Type of investment:	Equity	Total project size (€m):	37	Maturity	up to 12 years
Financial close:	28.10.2021	eeef investment size (€m):	10	Estimated tCO ₂ e emission savings (p.a.):	6,590

Romania Banca Transilvania

The eeef provided Banca Transilvania (BT), one of the largest banks in Romania in terms of assets, a facility for a green on-lending programme to support energy efficiency and renewable energy investment, by the public sector in Romania. Via this investment, the eeef has gained a strong local partner with a history of financing several energy efficiency projects and which has a solid footprint in financing SMEs. This cooperation is helping to strengthen the Romanian banking sector by providing financing to energy efficiency and small-scale renewable energy projects. BT is using eeef funding to give financial support to public and private building owners, homeowner/condominium associations, municipalities, public sector entities and private sector companies acting on behalf of the public sector.

It is the first cooperation between the eeef and a financial institution as well as being the first investment into Eastern Europe. The eeef is supporting

Sector:

*Energy efficiency/
renewable energy/
clean urban transport*

BT in sourcing and evaluating underlying projects where needed, and the latter ensures that the financed projects comply with the eeef's requirements with respect to a CO₂e emission/primary energy consumption reduction of at least 30%. Furthermore, the eeef can jointly finance projects with BT if larger financing amounts are required. At the end of 2021, BT had financed and enabled 10 projects. The to-date cumulative savings of the projects are 373,692 MWh in primary energy.



Key figures

Type of investment: Subordinated debt	Total project size (€m):	25.0	Maturity	10 years
Financial close: 26.09.2013	eeef investment size (€m):	25.0	Estimated tCO ₂ e emission savings (p.a.):	5,692

BANCA BT TRANSILVANIA®

Portfolio facts



47,8

*million euros total volume
financed through the facility*



14

*different
project locations
reached*

87,506

*tons of cumulative
CO₂e savings*

10

*subprojects
funded*

3

*technologies
funded*



373,692

*megawatt hours of
cumulative primary
energy savings*



Spain

Universidad Politécnica de Madrid

Following directive 2012/27/UE of the European Parliament, in June 2015, Universidad Politécnica de Madrid (UPM) invited energy service companies (ESCOs) to present their proposals to improve the heat and water supply systems across the campus and to reduce CO₂e emissions by switching to a cleaner fuel source. In August 2015, the project was awarded to Enertika (Ingeniería y Servicios de Eficiencia Energética S.L.), an engineering company specialising in energy generation, energy efficiency and remote management services.

The project replaced 63 gas oil boilers, consuming on average 946,479 litres of gas oil per year, with 66 natural gas boilers in all 32 campus buildings.

The recent 2021 annual energy audit validated that carbon savings were above 30% compared to baseline.



Sector:
Energy efficiency/building retrofit

Key figures

Type of investment:	Forfaiting loan	Total project size (€m):	2.5	Maturity	9 years
Financial close:	18.11.2015	eeef investment size (€m):	2.5	Observed tCO ₂ e emission savings (p.a.):	1,042

Spain Municipality of Santander

The municipality of Santander benefitted from funding from the European Commission Technical Assistance Facility (EC TAF) managed by the eeef in order to conduct feasibility studies and, subsequently, launch the ESCO tender for the renovation works. The tender was awarded to Elecnor S.A.

The eeef provided a forfaiting facility to Elecnor S.A., where the latter received EUR 9.2 m to finance the works. The facility will be fully repaid within the 15 years of concession period.

The project is to upgrade 22,700 lighting points to LED luminaires. Each luminaire will also have wireless connectivity to the municipality's digital communication network and control system. In addition, it will result in EUR 5.4 m in monetary

benefits for the municipality over the period of concession. The official acceptance of the renovation works was signed in December 2018. At the end of 2021, the project realized annual primary energy savings of 39,773 MWh.



Sector:
Street lighting

Key figures

Type of investment:	Forfaiting facility	Total project size (€m):	9.2	Maturity	14 years
Financial close:	18.08.2017	eeef investment size (€m):	9.2	Observed tCO ₂ e emission savings (p.a.):	3,397



United Kingdom

Ore Valley Housing Association

► [Project video Ore Valley Housing Association here](#)

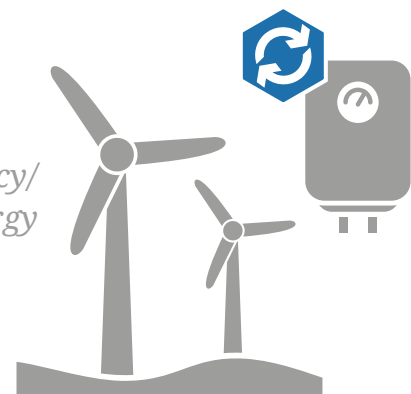
The eeef has closed its first community-based transaction in the UK in cooperation with Cardenden Heat and Power (CHAP), a subsidiary of the Ore Valley Housing Association (OVHA), which received funding from two external financing parties for their small-scale renewable energy and building retrofit project. The eeef co-financed the project alongside the Scottish Investment Bank, the investment arm of Scottish Enterprise, through their Renewable Energy Investment Fund.

The project (total volume EUR 5.5 m) is a combination of a small-sized on-shore wind turbine and boiler replacements in social housing. The wind turbine is located at Cardenden close to the housing association's main office sites in Fife and was provided by market leader Enercon. Operations commenced during 2017 and the project secured a guaranteed feed-in tariff for 20 years from the Office of Gas and Electricity Markets (Ofgem); however, to increase project returns, the CHAP entered into a two-year power purchase agreement with EDF to secure a better tariff than the feed-in tariff for electricity sale to the national grid.

The OVHA was one of the first technical assistance (TA) beneficiaries under the eeef European Commission TA Facility. Since deploying TA funds, the eeef has worked closely with the OVHA by providing guidance to support project development to realise investments. The eeef supported the OVHA in the development of a new project scope for a on-shore wind turbine and the replacement of over 170 outdated gas boilers in residential buildings owned by the housing association in the Fife council area in Scotland.

Sector:

*Energy efficiency/
renewable energy*



Key figures

Type of investment:	Senior debt	Total project size (€m):	4.3	Maturity	16 years
Financial close:	04.11.2016	eeef investment size (€m):	2.2	Observed tCO ₂ e emission savings (p.a.):	403

The eeef's matured investments

France Bolloré

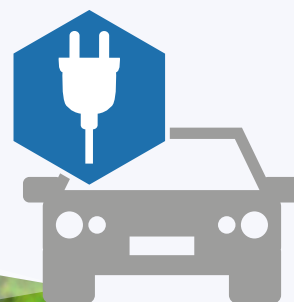
The French company Bolloré, a provider of car-sharing services for electric cars, signed a bond agreement worth EUR 30m with the eeef in 2013. The investment financed electric cars and the infrastructure (i.e. charging stations, rental places, etc.) required for Bolloré's European electric car rental concessions.

The project, which provides cities with environmentally friendly electric cars, started in Paris and has subsequently been extended to Lyon and Bordeaux. The eeef's bond has mainly been utilised in these regions. At the end of 2018, Bolloré had 4,000 cars and 6,500 charging stations installed across the locations where the eeef's funding was utilised.

Key figures

Type of investment:	Senior debt	Total project size (€m):	30.0	Maturity	5 years
Financial close:	23.12.2013	eeef investment size (€m):	30.0	Estimated tCO ₂ e emission savings (p.a.):	8,658

Sector:
Clean urban transport



La Région Auvergne-Rhône-Alpes



France SPL – Région Rhône-Alpes

► [Project video University Hospital SPL – Région Rhône-Alpes here](#)

The Société Publique Locale d'Efficacité Énergétique (SPL) benefitted from funding from the European Commission Technical Assistance Facility (EC TAF) managed by the eef for the initial preparation works and the finalisation of the project scope. Subsequently, the SPL signed a loan agreement of EUR 5.0m to manage the short-term financing needs to refurbish public buildings during their construction phase and to pave the way for raising further long-term financing.

In 2018, The SPL repaid their debt facility as all 10 building retrofit projects were fully completed and commissioned, fulfilling the purpose of the project. On the one hand, the project continues to contribute to the eef's carbon balance aligning with carbon accounting standards until the end of economic maturity; on the other hand, according to the vice president of high schools in the Auvergne-Rhône-Alpes region, Béatrice Berthoux, the SPL project supports the essential movement to sustainable development of the region as well as helps raising the awareness of sustainability among the school pupils, which has longer-term effect.

As shared by Éric Fournier, the vice president of the regional council in the delegate for Environment, sustainable development, energy and regional nature parks, the eef which supported SPL project, has set an effective example of public private partnership (PPP) in upgrading the public building energy efficiency and showcases eef's crucial role in the start-up phase in terms of construction financing and TAF. The region intends to progressively upgrade all their public school building in the coming years. SPL OSER – of which the region Auvergne – Rhône-Alpes is the majority shareholder, is a main regional actor in its mission to upgrade the public building efficiency refurbishment projects and renewable energy installation in public buildings. The valuable lessons from the success story of the SPL project will pave way for SPL and Rhône-Alpes region to achieve long-term objectives of energy savings and greenhouse gas reduction.



Sector:
*Energy efficiency/
building retrofit*

Key figures

Type of investment:	Senior debt	Total project size (€m):	25.0	Maturity	5 years
Financial close:	03.04.2014	eef investment size (€m):	5.0	Estimated tCO ₂ e emission savings (p.a.):	992
Repayment:	12.02.2018				

CARBON, ENVIRONMENT & IMPACT **MANAGEMENT**



***Fund criteria:** for all projects to save at least 30% CO₂e and/or primary energy compared to baseline*

Project assessment and monitoring

Eligible projects

The eeef can invest in a range of energy efficiency, clean urban transport and small-scale renewable energy technologies, providing the carbon or primary energy savings investment criteria are met. Each project must achieve at least 30% primary energy and/or carbon savings compared to baseline. The Fund may only invest when savings and other investment criteria are fulfilled.

Project Assessment and Monitoring

As the eeef can finance a variety of technologies, the initial technical assessment and ongoing monitoring of investments must strike the correct balance between accuracy and practicality of implementation.

How the eeef evaluates technical eligibility is based on the project's technology and loan size; for example, small standard (e.g. street lighting) project savings can be calculated using validated calculations from the Investment Manager's carbon environment impact management (CEIM) tool, greenstem™ (greenstem). For projects with higher investment volumes and/or more complex technologies, detailed energy analyses are required in the form of third-party validated reports.

As part of the Fund's due diligence process and for the duration of the loan, the eeef evaluates and monitors the project's savings performance in alignment with the International Performance Monitoring and Verification Protocol (IPMVP), which requires every project to establish a baseline energy consumption and then conduct a post-project implementation assessment.

The Investment Manager's CEIM team reviews the technical details of all eeef investments and works with project managers to enter relevant data points into greenstem. The Fund provides guidance to project partners on how to conduct project analysis via third-party validated annual audit templates. This ensures the entire portfolio reports using a consistent methodology.

greenstem™

All of the eeef portfolio reported impact indicators are tracked in greenstem™, a proprietary web-based tool from the Investment Manager which automatically and consistently calculates anticipated and realised energy, primary energy and carbon savings. For small loans and standard technologies, greenstem™ completes calculations based on project-specific data inputs and project location/technology conversion factors. The tool stores up-to-date energy and emission conversion factors to ensure a consistent reporting approach across the portfolio. Factor sources include the Chartered Institution of Building Services Engineers for technology benchmark data and the Intergovernmental Panel on Climate Change for the conversion of energy data into greenhouse gas emissions. Electricity emission factors are sourced from the International Energy Agency and are updated annually in line with ISO 14064-2, the carbon accounting standard followed. All calculations and data sources used within the tool have been validated by a third-party engineering company.

greenstem™ provides comprehensive, timely and accurate reporting charts and dashboards that have been configured specifically for eeef user groups. The tool is flexible and can be customised to include additional technologies in the portfolio.

Social and environmental management system (SEMS)

The eeef aims to conduct its operations in line with the highest expectations regarding social and environmental responsibility. The eeef's social and environmental management system (SEMS) defines the respective roles and responsibilities of the Fund and its partner institutions in promoting social and environmental sustainability.

In general, these are in accordance with the European Investment Bank Statement on Environmental and Social Principles and Standards. For both types of investments – direct and financial-institution investments – the eeef SEMS has specific performance requirements and procedures which are applied.

Compliance with these is assessed during the due diligence process and monitored later on throughout the lifetime of the project.

The environmental and social (E&S) screening checks areas such as the following, as well as other E&S issues and reputational risk:

1. *General environmental and social issues:*

EU policy, legal context and compliance, environmental impact assessment process, E&S principles and standards



2. *Environment, biodiversity and climate change:*

Environmental/transboundary impacts, protected areas, critical habitats, biodiversity, forestry, cultural heritage, vulnerability to climate change, climate change mitigation



3. *Social:*

Social assessment, involuntary resettlement, vulnerable groups, indigenous people, labour standards, etc.



Primary energy and greenhouse gas emissions savings 2021

The eeef's projects aim to achieve at least 30% primary energy savings on an annual basis (higher for the building sector) and a 30% reduction of CO₂ equivalents for transport and renewable energy projects. The quality of the methodology used to calculate the expected savings of projects is crucial. This allows the eeef to ensure its projects satisfy international standards regarding CO₂e and primary-energy-saving reporting. Due to the wide variety of technologies included in the eeef's portfolio, the Investment Manager has developed a standardised approach to calculating the project energy, primary energy and carbon savings for the eeef's most common project technologies.

Carbon emission savings and primary energy savings were reported for the entire portfolio of 16 investments/signed commitments for a range of energy efficiency and renewable technologies including CHP biomass, small-scale wind and electric vehicles. Once a project has been in operation for a full year, the eeef receives annual audits stating its actual energy consumption.

Year-on-year consumption variances are expected due to a number of factors, such as weather advances in static data, and therefore project savings can change annually. As shown below, these projects achieved total accumulated savings of 605,312t CO₂e and 847,549 MWh of primary energy savings through the end of 2021.

Key technologies

currently included in the portfolio:



Building upgrades



Street lighting



Wind and solar



Combined heat and power



Electric cars

Project Name	Reporting as of Q4 2021 ¹⁻⁶			
	Cumulative Primary Energy Savings (MWh)	Primary Energy Savings (%)	Cumulative CO ₂ e savings (t CO ₂ e)	Carbon Savings (%)
Banca Transilvania*	373.692	50	87.506	50
Bolloré	34.167	15	47.540	93
CIMAC	134.190	77	18.691	77
City of Orléans	-289.247	-28	151.127	66
City of Rennes	-385.858	-33	114.260	52
City of Venlo	36.699	60	6.998	60
Dancer Mobility	18.184	92	2.688	100
Illuminated Cities	78.330	56	10.673	56
Jewish Museum Berlin Foundation	95.524	79	21.634	82
Municipality of Santander	178.442	80	19.447	80
Ore Valley Housing Association	25.578	99	2.960	96
SPL Région Rhône-Alpes	16.628	42	3.968	58
Universidad Politécnica de Madrid	11.826	15	6.213	36
University Hospital S. Orsola Malpighi	462.964	29	107.022	32
University of Applied Sciences Munich	18.447	38	1.048	22
Vila do Conde	11.149	66	1.889	66
VIPA	26.834	78	1.648	79
Total (all projects)	847,549	48	605,312	65
Total (EE & CUT only)	1,522,654	58		

¹ All project savings are calculated following international protocols, including the International Performance Measurement and Verification Protocol (IPMVP) for energy accounting and ISO 14064 for carbon accounting. All methodologies used by the eef are validated by a global engineering company. Currently, all projects with concrete data are reporting in alignment with these guidelines, and all new projects are aligned with these frameworks. Project savings represent total project investment volumes. The eef uses up-to-date and project-specific conversion factors from sources including the International Energy Agency and the Greenhouse Gas Protocol. For some projects within the portfolio, factors cannot be updated due to project specifics, so they continue to report on factors issued within the loan documentation. All cumulative numbers are based on investments loan maturity. EE means Energy Efficiency, CUT means clean urban Transport, RE means renewable energy. The entire projects cover EE, CUT and RE projects.

² The cumulative BT savings represent 10 subprojects. The portfolio's percentage savings are calculated based on all subproject savings. Projects contribute to cumulative savings until the subloan has matured from the portfolio – i. e. at loan maturity.

³ For carbon, cumulative and percentage savings are based on the entire portfolio, percentage savings use the average. For primary energy, cumulative and percentages saving are presented for projects from the portfolio which provide primary energy savings, ie. energy efficiency and clean urban transport projects. For the sake of completeness, the cumulative and percentage primary energy savings are also provided for all projects. Matured investments are included within the total.

⁴ Cumulative data include calculations from financial close to loan maturity, based on estimations for projects under construction and with less than one year of operations and actual data for projects which have been in operation for over one year. Savings are for total project investment volume (ie. eef and non-eef investments).

⁵ Dancer Mobility is based on signed commitments. Illuminated Cities are partly based on signed commitments as the construction for one sub-project has already completed. The savings for these three projects are based on estimates.

⁶ SPL matured in Q1 2018. Bolloré matured in Q1 2019. Catfoss did not reached required agreements/conditions in accordance with the financing facility to proceed with its implementation. The funds were transferred back to eef's account in Q4 2021. Wattosun has been terminated as it was not progressing as agreed. In light of the pandemic and the substantial delays caused to the project implementation, JV SmartH&U amended the existing agreement and released financial commitments in a binding nature.

investments/signed commitments achieved CO₂e and primary energy savings



Taxonomy alignment

eeef qualifies, within the SFDR Product Category, as a Dark Green Fund. The Investments are environmentally sustainable and take into account the EU criteria for environmentally sustainable economic activities pursuant to Article 3 of the EU Taxonomy Regulation.

eeef carries out energy saving, renewable energy and energy efficiency project activities which: contribute substantially to the Environmental Objective of **climate change mitigation**: the Fund contributes with a layered risk/return structure to enhance energy efficiency and foster renewable energy in the form of a targeted private public partnership, primarily through the provision of dedicated financing via direct finance and partnering with FIs.

Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplemented Regulation (EU) 2020/852 of the European Parliament and of the

Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation. The EU Taxonomy is a classification system laid down in Regulation (EU) 2020/852, establishing a list of environmentally sustainable economic activities. The way to establish the EU Taxonomy categorization is described in the EU Taxonomy Compass tool https://ec.europa.eu/sustainable-finance-taxonomy/tool/index_en.htm and according to this we have reviewed the investments eeef has made and are in its portfolio.

Project Name	Alignment with the EU Taxonomy categorization according to Annex I 'technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation and for determining whether that economic activity causes no significant harm to any of the other environmental objective'
Banca Transilvania	<p>4.1: Electricity generation using solar photovoltaic technologies. The economic activities could be associated with NACE codes** D35 and F42.</p> <p>6.3: Urban and suburban transport, road passenger transport. The economic activity could be associated with the NACE code H49.</p> <p>7.2: Renovation of existing buildings. The economic activity could be associated with the NACE code F42 and F43.</p> <p>7.4: Installation, maintenance and repair of charging stations for electric vehicles. The economic activity could be associated with the NACE codes F42, F43, M71, C25, C27, C28.</p>
CIMAC	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activity could be associated with the NACE code F43.
City of Orléans	4.2: Cogeneration of heat/cool and power from bioenergy. The economic activity could be associated with the NACE code D35.
City of Rennes	4.2: Cogeneration of heat/cool and power from bioenergy. The economic activity could be associated with the NACE code D35.
City of Venlo	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activity associated with the NACE code F43.
Dancer Mobility	<p>6.15: Infrastructure enabling low carbon road transport and public transport. The economic activity could be associated with the NACE codes F42 and F71.</p> <p>6.3: Urban and suburban transport, road passenger transport. The economic activity could be associated with the NACE code H49.</p>
Illuminated Cities	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activity could be associated with the NACE code F43.
Jewish Museum Berlin Foundation	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activities in this category could be associated with several NACE codes, in particular F42, F43.
Municipality of Santander	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activity could be associated with the NACE code F43.
Ore Valley Housing Association	4.3: Electricity generation from wind power. The economic activity could be associated with the NACE codes F35 and F42.
Universidad Politécnica de Madrid	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activities in this category could be associated with several NACE codes, in particular F42, F43.
University Hospital S.Orsola Malpighi	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activities in this category could be associated with several NACE codes, in particular F42, F43, C27, C28, C33.
University of Applied Sciences Munich	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activities in this category could be associated with several NACE codes, in particular F42, F43.
Vila do Conde	7.3: Installation, maintenance and repair of energy efficiency equipment. The economic activity associated with the NACE code F43.
VIPA	Not relevant yet.

* This information has been prepared by the Investment Manager based on technical advisors' reports of each investment and has not yet been validated by any third party.

** Established by Regulation (EC) No 1893/2006.

BlueMark verification

In 2020, eeef has engaged in the annual public disclosure of its alignment with Operating Principles for Impact Management (Impact Principles). Impact Principles support the development of the impact investing industry by establishing a common discipline around the management of impact investments and promote transparency and credibility by requiring annual disclosures of impact management processes with independent verification. In 2021, eeef's impact management system is independently verified by BlueMark, a leading provider of impact verification services in the impact investing market. BlueMark was

incubated and launched in January 2020 by Tide-line, a leading women-owned impact investing consultancy, with a mission to strengthen trust in impact investing and to help bring more accountability to the impact investment process. Going forward, the Fund is committed to bring its impact management process to close to the best practice and most recognisable industry standards. With the independent assessment from BlueMark, eeef is eager to improve its impact management in the coming year. The chart below summarizes findings using four rating: advanced, high, moderate and low.

	OPERATING PRINCIPLES FOR IMPACT MANAGEMENT	ALIGNMENT*
Strategic Intent	1. Define strategic impact objective(s), consistent with the investment strategy	HIGH
	2. Manage strategic impact on a portfolio basis	HIGH
Origination & Structuring	3. Establish the Manager's contribution to the achievement of impact	MODERATE
	4. Assess the expected impact of each investment, based on a systematic approach	HIGH
	5. Assess, address, monitor, and manage potential negative impacts of each investment	ADVANCED
Portfolio Management	6. Monitor the progress of each investment in achieving impact against expectations and respond appropriately	HIGH
Impact at Exit	7. Conduct exits considering the effect on sustained impact	LOW
	8. Review, document, and improve decisions and processes based on the achievement of impact and lessons learned	MODERATE

* Advanced – Limited need for enhancement at present
 High – A few opportunities for enhancement
 Moderate – Several opportunities for enhancement
 Low – Substantial enhancement required



eeef contribution to Sustainable Development Goals

The European Energy Efficiency Fund work actively to contribute to the internationally recognized United Nations (UN) goals for sustainable development, the so-called Sustainable Development Goals (SDGs). The fund registered its partnership for UN SDGs and mapped its impact against the following SDGs 7, 11, 13 in the beginning of 2020. The sustainable progress of each goal is now measured with eeef defined indicators which are closely aligned to SDGs framework.

7 AFFORDABLE AND CLEAN ENERGY



Amount of eeef renewable energy & energy efficiency projects¹ contributing to doubling the global rate of improvement in energy efficiency

12 projects
in Energy Efficiency

2 projects
in Renewable Energy

1 projects
in Clean Urban Transport

11 SUSTAINABLE CITIES AND COMMUNITIES



Annual number of people reached² through all eeef investments:

~6.7 million people
through eeef
investments

~1.6 million people
through TA
projects

304 EUR/person
Investment
intensity³

13 CLIMATE ACTION



Number of countries and public authorities, in which eeef is engaged via its projects since inception (all eligible due to public link)

9 Countries⁴
44 public authorities

¹ Only active projects. OVHA, Banca Transilvania and VIPA are included under EE with a portfolio-mix of EE and RE investments

² Number of population reached is calculated based on the estimation considered for each individual project. For eeef investment projects, estimation of people reached is based on the percentage amount of the population of the city or region achieved through eeef investments (e.g. calculation number of staff, students, professors, patients, etc.) For the TA projects, beneficiary population is calculated based on the city population where the TA projects takes place.

³ Investment intensity measures total investment realized via eeef investments divided over the number of total population reached.

⁴ 8 Member States and the UK

Population reached through eeef investment activities

eeef investment projects	City/region	Annual population reached	Notes on population reached
ACTIVE			
Jewish Museum Berlin	Berlin	700,000	Average number of visitors per year who visit the Jewish Museum Berlin since its opening in 2001.
University of Applied Sciences Munich	Munich	19,592	The total number of students, academic and non-academic staff as of 2019.
City of Orléans	Orleans	57,120	Part of population benefiting from either heat or power of the CHP project in the City of Orleans.
University Hospital S. Orsola-Malpighi	Bologna	20,000	The total number of academic staff (professors, lectures), students, patients and non-academic staff.
Banca Transilvania (BT)	Multiple cities in Romania	4,857,343	The population in the city or region which has benefitted from the sub-loan funding of BT.
City of Rennes	Rennes	85,680	Part of population benefiting from either heat or power of the CHP project in the City of Rennes.
City of Venlo	Venlo	100,536	The total population of city of Venlo (census 2015) is considered as reached population.
Universidad Politécnica de Madrid	Madrid	46,000	The total number of students, academic and non-academic staff working at campus of UPM.
Ore Valley Housing Association	Cardenden	6,533	The total number of residents and tenants who live in the project area (based on the reported figures from OVHA).
City of Santander	Santander	572,044	The total population of city of Santander including average number of tourists visiting the city of Santander each year.
Illuminated Cities	Rozzano	42,557	The total population living in the municipality included in pipeline at closing date.
CIMAC Portugal	CIMAC Region	167,000	The total population living in 14 municipalities (census 2011) that are located in the Alentejo Central Region in Portugal where upgrade of luminaries would be perform.
Dancer Mobility	Klaipėda	0	People reached will be estimated based on number of population using public transport. The project seek to replace 10 diesel buses in Klaipėda. There are no busses used from the project yet.
Vila do Conde	Vila do Conde	79,533	The total population of Vila do Conde as of census 2011.
VIPA	Multiple regions in Lithuania	1,033	The first project approved by the Investment Platform has reached 474 number of households. To reach the number of beneficiary people, this number has been multiplied by the average household size of 2.18 persons.*
MATURED			
Bolloré France	Paris	n.a.	Bolloré terminated car sharing project in France in 2020. The population reached is thus unavailable.
Région Rhône-Alpes	Région Rhône-Alpes	3,579	Total estimated number of teachers, personnel of refurbished public buildings including 12 schools.
Total		6,751,550	

* Source: Oficialiosios statistikos portalas

Population reached through eeef Technical Assistance (TA) Facility activities

eeef TA projects	City/region	Annual population reached	Notes on population reached
ACTIVE			
City of Gijón	Gijón	271,780	Population reached through eeef Technical Assistance (TA) projects is calculated based on the population of a city/region where the TA projects take place.
Province of Ferrara	Ferrara	345,691	
Ducal Palace of Modena	Modena	186,741	
Kaunas District Municipal Administration	Kaunas	96,441	
Autonomous Province of Bolzano	Bolzano	533,373	
Ukmergė District Municipality Administration	Ukmergė	33,471	
Administration of Silute District Municipality	Silute	14,968	
Klaipėda University Hospital	Klaipėda	162,690	
Total		1,645,155	

The population reached, for both eeef investment activities and eeef Technical Assistance Facility projects, is annualised number and is estimated with a prudent approach.

Number of reached population through eeef investment activities is calculated based on the estimation considered for each individual project as reported in the investment committee proposal.

For eeef investment projects, estimation of people reached is based on amount of the population of the city and/or the region achieved through eeef project activities (e.g., calculation number of staff, students, professors, patients, etc.)

For the TA projects, beneficiary population is calculated based on the city population where the TA projects takes place.



TECHNICAL ASSISTANCE FACILITY

Strong presence of the eeef's TAF in the Baltics-Eastern Europe. eeef is currently supporting four ambitious TA programmes in Lithuania (The District Municipalities of Kaunas, Silute and Ukmergė, and the Klaipėda University Hospital), facilitating the energy transition for Green Recovery and enabling the growth of sustainable and smart cities.

In October 2021, the Ukmergė District Municipality published the tender, moving one step further to improving energy efficiency in public buildings and achieving its plan of action for sustainable energy.

The Ukmergė TA Programme

The eeef's technical assistance facility

- ▶ EUR 389,500 approved to Ferrara Province
- ▶ EUR 400,000 approved to the City of Gijón
- ▶ EUR 340,000 approved to the Italian Ministry of Defense
- ▶ EUR 180,000 approved to Kaunas District Municipality

- ▶ EUR 400,000 approved to the Autonomous Province of Bolzano
- ▶ EUR 160,000 approved to Ukmergė District Municipality
- ▶ EUR 195,000 approved to Šilutė District Municipality
- ▶ EUR 195,000 approved to the Klaipėda University Hospital

Following the European Commission TA Facility managed by the eeef, the Fund set up the eeef TAF to support ambitious public beneficiaries in developing bankable sustainable energy investment programmes. These projects shall relate to the energy efficiency sector, renewable energy and/or public urban transport. The eeef TAF aims to bridge the gap between sustainable energy plans and real investments by supporting all activities necessary to prepare investments into sustainable energy projects. Eligible applicants are regions, city councils, universities, public hospitals, public-owned water companies and other public entities located in the member states of the European Union.

On average, the development of an energy efficiency project in the public sector requires around 4.5 years from the conceptual phase to implementation. The eeef TAF efficiently reduces this time frame to 1.5–2 years by directly allocating consultancy services to the TA beneficiaries (tender of these consultancy services completed by the eeef). This means that the eeef selects appropriate experts with the required know-how and expertise via a tender process (completed entirely by the eeef) and assigns them to the relevant investment programmes. The TA beneficiaries can use the consultant services to, for example, carry out feasibility studies, energy audits and evaluate the economic and financial viability of their investments. Legal support for the investment programmes to draft the PPP tender documents is also included in the TA, while costs can be covered by the eeef.

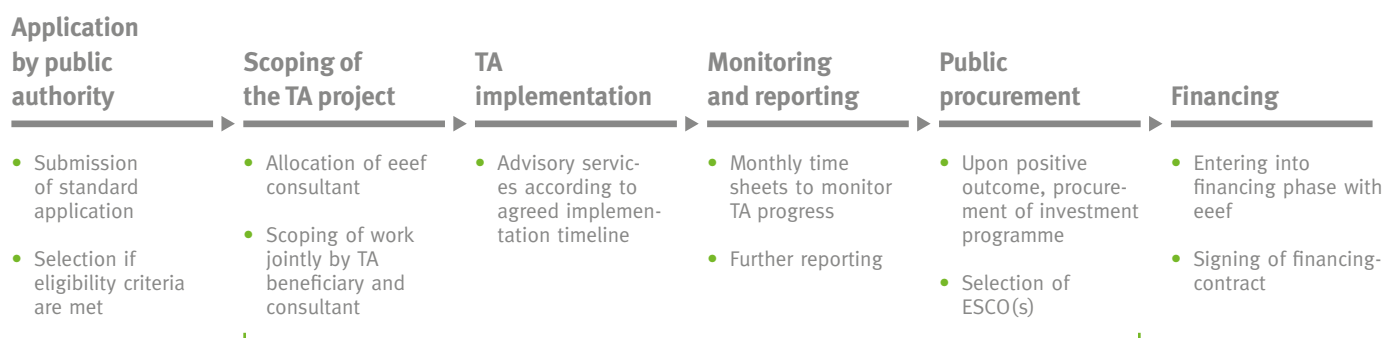
From the TA Facility inception to date, the eeef has contributed a total of EUR 1.9m (including the reimbursement for the Ferrara TA project of EUR 408,975), which were supplemented by the European Investment Bank (“EIB”) – European Local Energy Assistance (“ELENA”) TA Facility under the Horizon 2020 Programme of the European Union by EUR 1.3m (up to Q4/2021). The remaining amount of EUR 470,895 is expected to be disbursed by Q1/2022, which will add up the total funding of EUR 1.8m from the ELENA contributions. The eeef's

Facility available for projects has a total reached over EUR 3.3m by Q4/2021, from which EUR 2.3m are already committed to eight signed projects, and ca. EUR 600 to other fees and eeef cost (e.g. external experts, TA management fees, etc) leading to ca. of EUR 400 funds available for new projects.

The first call for proposals of the eeef TAF was successfully closed on 1 March 2017. It attracted interest among various public authorities within the EU. Afterward, the eeef received further applications from public authorities in Lithuania. By the end of 2019, eeef published an open call for proposals to allocate consultant services required for the projects, subject to the availability of funds. The new call for proposals was closed on 04 December 2019.

From the call for proposals, the eeef selected a pool of consultants who will work closely with the public authorities during the preparatory phases, from feasibility studies to energy audits to assistance in the public tender processes.

So far, eight public beneficiaries have been selected across Spain, Italy and Lithuania to participate in the TA programme. Likewise, five projects (Ferrara Province, Modena, Kaunas, Gijón and Ukmergė) have already published the tender by Q4/2021.



Maximum two years

Eligibility criteria and application procedure

A request for technical assistance has to meet the following eligibility criteria:

- Beneficiary has to be a public authority (municipal, local, regional or national) or a public-owned company
- Primary energy savings of at least 30% on an annual basis (30% reduction of CO₂ equivalents for certain other technologies, i.e. renewable energy)
- Minimum leverage factor of 20 (final investment volume of the project divided by TA support amount)
- Financing of the project to be provided by the eeef (EUR 5 – EUR 25 m)

The first call for proposals for TA beneficiaries planning sustainable investment programmes was initiated by the end of 2016 and successfully closed in Q1/2017. The newly launched facility attracted interest among various public authorities seeking support to develop their sustainable project plans. The remaining funding is available on a first come, first served basis by applying directly to the Fund.

During 2019, the eeef TAF has received applications of several TA beneficiaries from Lithuania. Therefore, the eeef published a new open call for proposals in November 2019 to search for consultants to assess potential projects in the country. The call for proposals was closed on 04 December 2019.

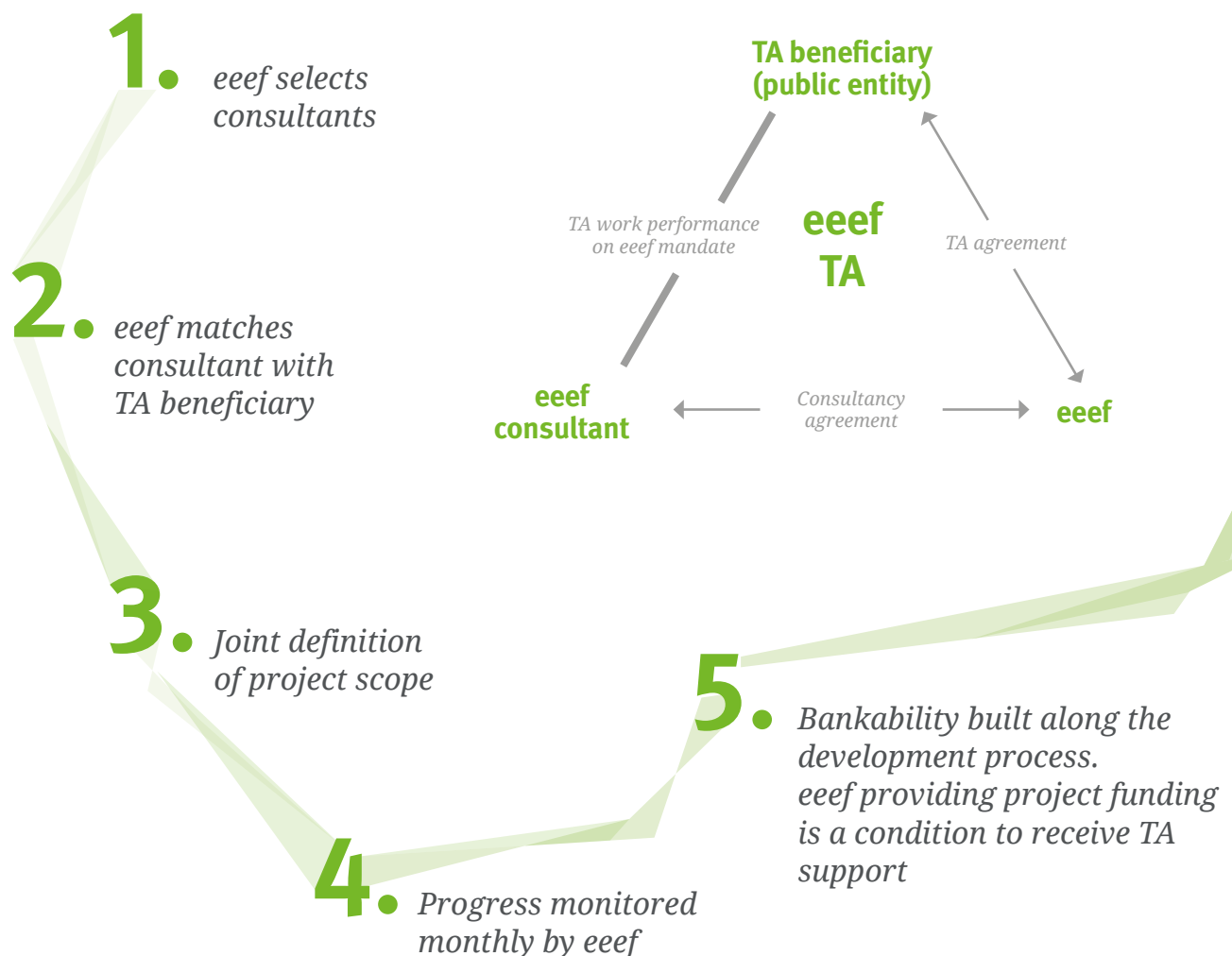
Up to now, eight public beneficiaries have been selected under this facility. The eeef is currently reviewing new TA applications, e.g., from Latvia and Spain (País Vasco). eeef expects to achieve contractual closing with both public authorities by Q1/2022. Additionally, eeef is in preliminary discussions with further public authorities in Italy and Lithuania.

New applications can be submitted to:

technical_assistance@eeef.eu

Further details:

<https://www.eeef.lu/eeef-ta-facility.html>



Gijón is the first city to join the eeef to collaborate on the new eeef Technical Assistance Facility

Ayuntamiento de Gijón was the first public authority to participate in the new eeef Technical Assistance Facility.

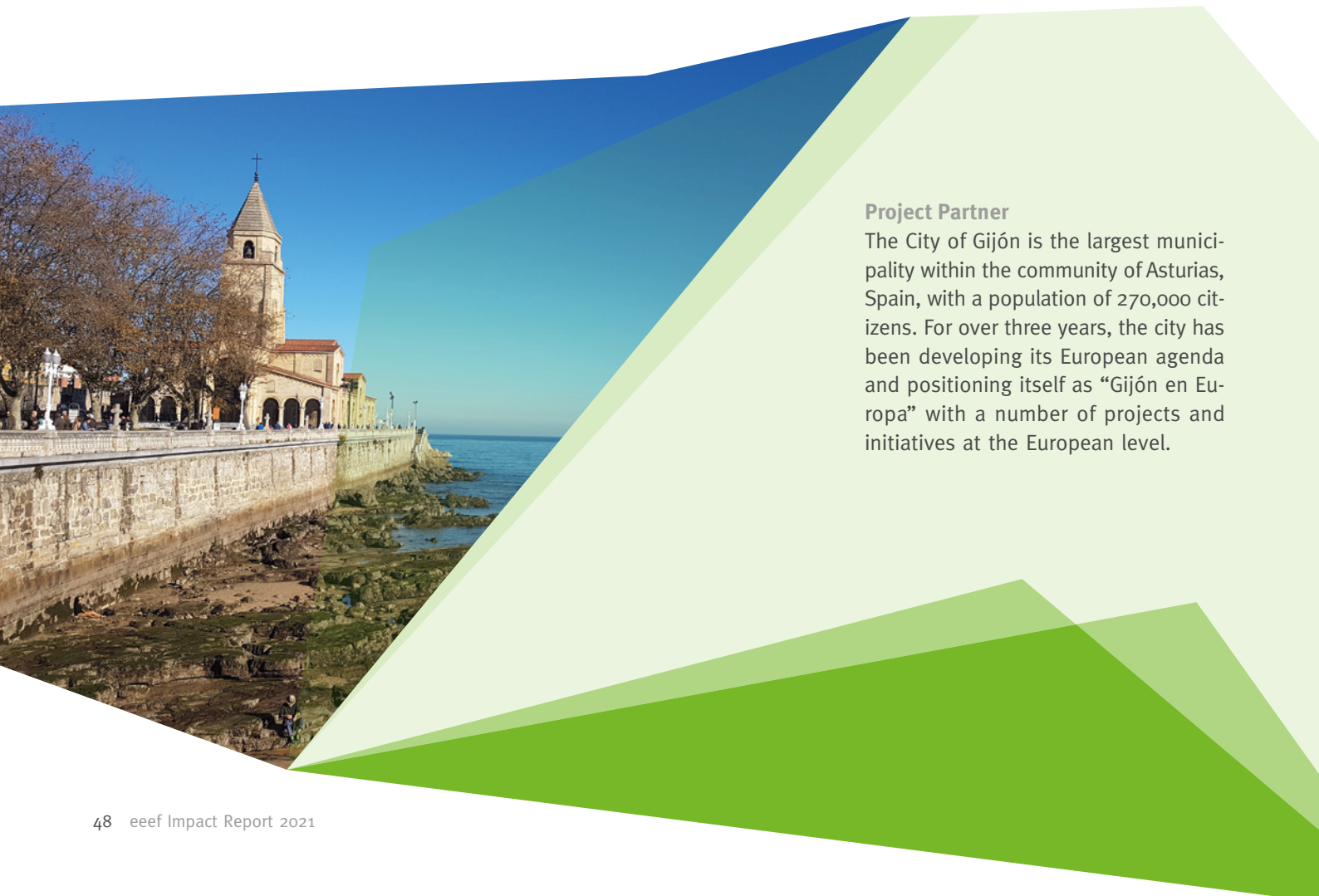
With the full commitment of its mayoress, the City of Gijón embarked on an ambitious journey to finalise the comprehensive and intelligent management of electricity and thermal supply of street lighting, municipal buildings and facilities, identifying a set of energy efficiency and/or renewable energy related interventions as well as publishing the tendering documentation to launch a EUR 23 m investment programme in renovation works and selecting an ESCO company to realise the measures within a two-year time frame. The eeef has been accompanying the city during the whole process by collaborating with the management team proposed by the city.

By mid-2019, the TA works have been completed. In May 2019, Spain went through local elections and a new authority was appointed in the

City of Gijón. Due to political changes, the project was delayed over one year in its implementation.

Recent developments

In August 2020, eeef extended the TA contract with the TA beneficiary with an updated milestone plan in place. On 20 December 2020, the tender was published on the [City of Gijón website](#) and the [Spanish State Contracting Platform](#). Six proposals were received and in August 2021, a provisional awarded ESCO was selected. Before awarding the contract, a mandatory term is established by law for exercising legal remedies. The City of Gijón awarded the service to a winner ESCO and signed the respective contract in Q4/2021.



Project Partner

The City of Gijón is the largest municipality within the community of Asturias, Spain, with a population of 270,000 citizens. For over three years, the city has been developing its European agenda and positioning itself as “Gijón en Europa” with a number of projects and initiatives at the European level.



*Street
lighting*



*Building
upgrades*

The Province of Ferrara is the second public authority to join the eef to collaborate on the new eef Technical Assistance Facility

The Province of Ferrara is located in the Emilia-Romagna region in Italy. It has a total of 354,000 inhabitants living throughout its 24 municipalities. 22 of its municipalities have adopted sustainable energy action plans (SEAPs) and are in need of support to boost the implementation of their projects.

Joining forces with SIPRO (Agenzia Provinciale per lo Sviluppo) – a development agency – the circa EUR 31m investment programme of the Province of Ferrara is aimed at addressing the implementation of energy efficiency measures in several municipalities to reduce energy consumption and heat loss going forward. Municipalities directly involved in this TA project are Ferrara, Cento, Mesola and Voghiera. These municipalities are leading the way and encouraging further public authorities to pursue their sustainable investment paths.

The investment programme includes deep energy retrofitting measures (in 12 buildings such as schools, offices, town halls and sports facilities) in the municipalities of Mesola, Ferrara and Cento and the replacement of over 27,616 public lighting points with LED technology in the cities of Ferrara and Voghiera.

The tender for the LED replacement in Ferrara was launched in March 2018. The contract was awarded to an ESCO in July 2019. The Municipality of Voguiera did not launch any tender, as it needed to involve a contracting authority and cover relevant costs for the tender process necessary for refurbishing the lighting systems.

The tenders for the public buildings projects in Mesola and Ferrara were published in April and December 2018, respectively. In Mesola, the service was awarded to an ESCO, while Ferrara did not receive any offer in the first call. The Municipality of Cento decided not to publish a tender since the political framework changed and the new government has other priorities.

Recent developments

By the end of 2020, the Province of Ferrara TA works have been completed and the TA Programme has reached Closing.

Project Partner

SIPRO is a development agency with a 40-year track record deeply rooted in the Province of Ferrara and experienced in the promotion of local development, in particular with a focus on:

- I) sustainable development,
- II) external investment attraction and
- III) identification of incentives and financing instruments.

SIPRO, as the TA beneficiary, has managed the whole development phase of the involved municipalities and collaborated with the consultant team to perform the TA works.





*Building
upgrades*

The Italian Ministry of Defence is the third public authority to join the eeef to collaborate on the new eeef Technical Assistance Facility

The Ducal Palace in Modena (Italy) is owned by the Italian government and is currently used by the Italian Ministry of Defence (MoD). The Ducal Palace houses the headquarters of the Military Academy, where military students are trained. Additionally, part of the Eastern Tower of the palace houses the University of Modena and Reggio Emilia's (UNIMORE) geophysical/meteorological observatory, and the first floor is used as a museum where guided tours are offered by the Municipality of Modena.



The MoD is the beneficiary of the eeef. The technical assistance facility (TAF) set up a task force to elaborate on energy efficiency and renewable energy measures for retrofitting the palace under an EPC model.

The total project volume is circa EUR 9m, which includes EUR 5.2m to upgrade thermal systems and EUR 3.8m to renovate the building's envelope. Planned measures include the following:

- **Upgrade of the thermal system:**

Installation of new pipes for the network distribution plus improvements to existing ones, installation of advanced climate control systems, replacement of old radiators, installation of high efficiency boilers, retrofitting of the entire hot water system by disconnecting it from the central plant through new heat pumps.

- **Building envelope:**

Reducing thermal losses from the building envelope by installing thermal insulation in internal opaque walls with innovative materials and reducing the amount of air infiltration by improving window fittings.

The project site is in the city of Modena in the Italian region of Emilia-Romagna. The Ducal Palace of Modena is one of the most important historical buildings in Italy. The palace was the residence of the Este dukes of Modena for more than two centuries.

The eeef TAF provided consultancy services to complete fully fledged feasibility studies within the palace to clearly identify the current infrastructure and propose appropriate improvement measures within a building of such historical value. All of the recommendations have been in compliance with the architectural constraints required by law to protect the historical heritage of the palace. The proposed measures will help to maintain one of the most historical buildings in Italy according to the latest energy standards and promote energy efficiency.

Recent developments

With the TA works already completed and tender documents finalised, the tender was published in May 2020. The deadline for the submission of offers was extended until September 2020 due to numerous requests for extension (business operators sought to be more prepared to face the pandemic risks). Four bidders participated in the call for proposals and were eligible. The awarded ESCO was announced in October 2021.





The Kaunas District Municipality Administration is the fourth public authority to join the eeef to collaborate on the new eeef Technical Assistance Facility

The Kaunas District Municipality Administration, Lithuania, is planning the implementation of an ambitious investment programme to enhance the energy efficiency of the public street lighting infrastructure in several elderships. There is a total of 25 elderships directly involved in this project, including Akademija, Alšėnai, Babtai, Batniava, Čekiškė, Domeikava, Ežerėlis, Garliava, Garlia parish, Kačerginė, Karmėlava, Kulautuva, Lapės, Linksmakalnis, Neveronys, Raudondvaris, Ringaudai, Rokai, Samylai, Taurakiemis, Užliedžiai, Vandžiogala, Vilkija, Vilkija parish and Zapyškis.

This project supports the Kaunas District Municipality Administration through their eldership structure to initiate a multitude of smaller projects, which all fall under the same financing umbrella and benefit from reduced investment cost.

The project site is located in the Kaunas District Municipality, one of Lithuania's biggest and most densely inhabited municipalities with nearly 100,000 people. One of the 60 district municipalities in the country, it seeks to become an attractive centre for business, citizens, tourists and infrastructure. The Kaunas District Municipality has identified that renovating the current public lighting infrastructure would support the transition towards a more desirable community whilst improving public energy consumption.

The envisaged total project volume is EUR 4.2 m. The final project design is one deliverable by the eeef TAF.

Recent developments

TA works have been finalised. Initially, the tender was published in August 2020, however, the tender was relaunched on 5 October 2020 due to the municipality's interest in including some specifications regarding the bidder requirements. The new tender was published on the Lithuanian Central Procurement website. A winner ESCO was selected in October 2021. A legal period to present claims and requests regarding qualifications applies. Clarifications were presented and inquiries were absolved. The definitive winner ESCO is expected to be announced by Q1/2022.

The Autonomous Province of Bolzano is the fifth public authority to join the eef to collaborate on the new eef Technical Assistance Facility

The Autonomous Province of Bolzano (PBA) in Italy is planning the implementation of an ambitious investment programme for the renovation of up to 263 public buildings. The initial technical assistance activities will identify a representative sample of buildings from 27, which have been pre-selected.

The Province has a population of nearly 530,000 inhabitants with a surface of almost 7,400 km. The project site is located in the north of Italy, particularly in the cities of Bolzano, Brunico, Bressanone and Merano (buildings location), which are four of the main towns in the Province.

The project volume for the pilot programme is EUR 38.5 m. The aim is to develop a large pilot project to verify the overall feasibility of the retrofit model, to expand it to all 263 eligible buildings whilst minimising costs and risks for investors. The buildings owned by the Province are expected to consume less energy. Planned measures are the following:

- Public buildings upgrades including room and façade insulation, installation of new windows and condensing boilers.
- Installation of photovoltaic systems and efficient lighting.

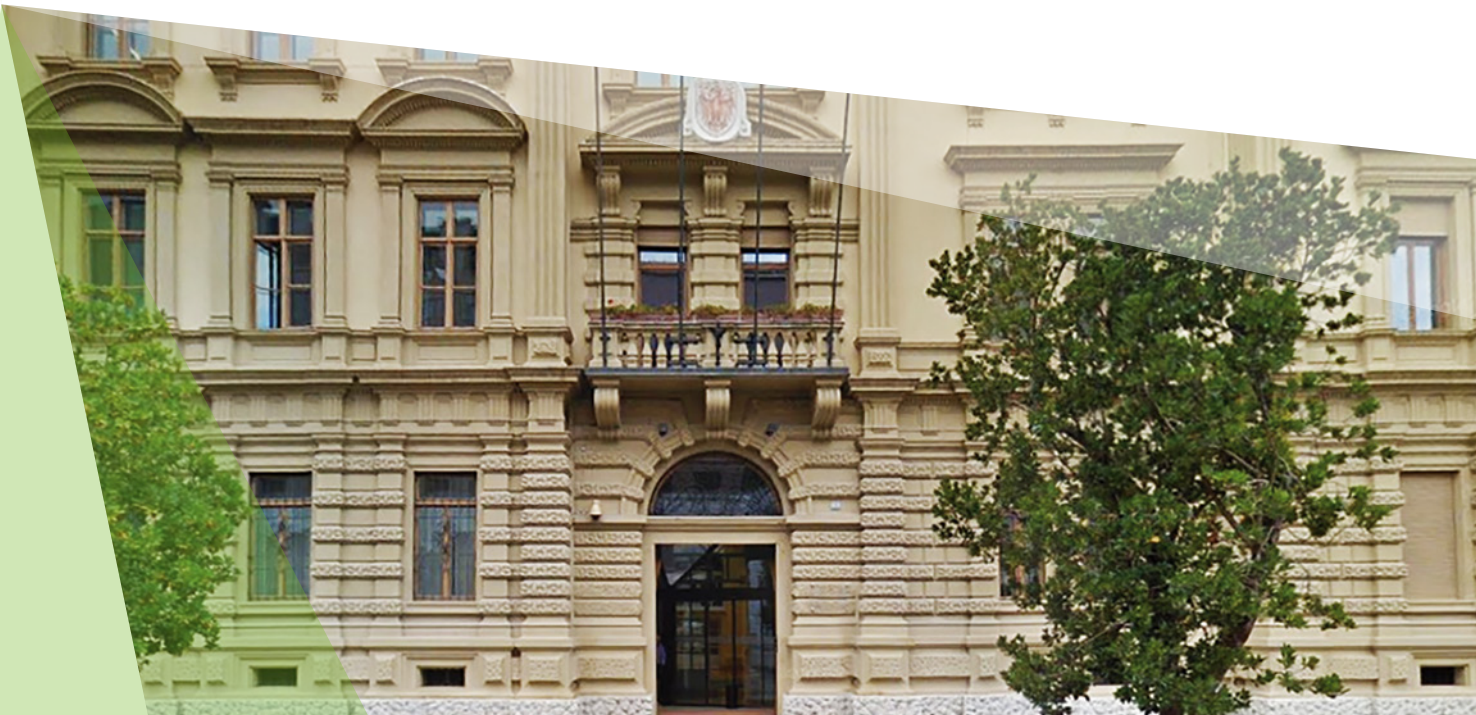
Recent Developments

TA works have been finalised. In March 2020, the market consultation process ended. Two procedures were analysed for the publication of the tender:

(I) Open public initiative procedure: the TA beneficiary provides the preliminary planning and related documents to select a private partner.

(II) Private proposal of the PPP procedure: each private partner, based on the Province's guidelines, participates in a first tender process and proposes a preliminary plan. A Project Promoter will be selected. Then an open tender will be initiated, based on the Promoter proposal.

The PBA has chosen the private proposal of the PPP procedure. The notice for tender to select the Project Promoter was published in August 2020 and four proposals were received. A Promoter was identified by September 2021 and is under evaluation by the PBA before declaring the feasibility of its proposal. A definitive Promoter is expected to be announced by Q1/2022. The final tender is expected to be published by Q2/2022.





The Ukmergė District Municipality Administration is the sixth public authority to join the eeef to collaborate on the new eeef Technical Assistance Facility

The Ukmergė District Municipality Administration is the second public authority from Lithuania that will benefit from the eeef's Technical Assistance programme. The capital of the municipality is Ukmergė, which is considered the largest settlement in the municipality. It is situated in Vilnius County and has 34,000 inhabitants. Currently, there are 12 elderships in the district: Deltuva, Lyduokiai, Pabaiski, Pivonia, Siesikai, Sesuoliai, Taujenai, Ukmergė, Vepriu, Vidiskes, Zelva, Zemaitkiemis, 10 towns, 508 villages, 104 communes

The project site is in Vilnius County, Lithuania. In September 2019, the eeef signed a TA Agreement with Ukmergė District Municipality Administration, to help them preparing and implementing an ambitious investment program for the renovation of five municipal public buildings: Ukmergė Dukstynos Primary School, Ukmergė District Taujenai Gymnasium, Ukmergė District Vidiskes Basic School, Ukmergė children's nursery "Eglutė" and the Ukmergė Uzupis Primary School.

This project aims to improve the buildings energy efficiency and ensure that they meet the national energy performance requirements to facilitate a positive contribution to the national strategic objectives in energy efficiency.

A preliminary assessment identified an estimated investment volume of EUR 3.9 m. The TA services, provided by experienced local consultants, will support the efforts of the Administration's employees to prepare the investment project. Supported services include the preparation of energy audits, evaluating the economic viability of each investment, and structuring the tender documents to align with the PPP/ESCO model.

Recent developments

TA works were completed. The tender documents were published in October 2021. Three bidders presented offers. The awarded ESCO is expected to be announced by Q2/2022.

The Administration of Šilutė District Municipality is the seventh public authority to join the eef to collaborate on the new eef Technical Assistance Facility

The Šilutė District Municipality is the third public authority from Lithuania that will benefit from the eef's Technical Assistance programme. It is situated in the southern part of Klaipėda County, one of the most developing regions of the country. This is mainly determined by the Klaipėda port, which is the only northernmost ice-free port in the Eastern part of the Baltic Sea. It has 37,641 inhabitants and an area of 1706 km². It is divided into 11 elderships (Gardamo, Juknaiciu, Katyciu, Kintu, Rusnes, Saugu, Šilutės, Sveksnos, Usenu, Vainuto, Zemaiciu Naumiescio), seven towns and 311 villages.

On 10 July 2020, the eef and the Šilutė District Municipality signed a TA agreement to prepare an ambitious investment program that will improve the energy efficiency of municipal public buildings and ensure that they meet the national strategic objectives and energy efficiency requirements. The project aims to modernise 11 public buildings, which are the following: (I) Rusnes Culture House, (II) Šilutė nursery "Azuoliukas", (III) Šilutė Pamario Primary School, (IV) Šilutė nursery "Gintarelis", (V) Kintai Primary School, (VI) Saugai Jurgis Miksas Primary School, (VII) Šilutė District Municipality Sveksnos nursery, (VIII) Usenai Primary School, (XI) Šilutė District Municipality building, (X) Šilutė Hospital and (XI) Vilkyciai School.

The project volume for the programme is circa EUR 8.8m. It is expected to be distributed over a three year period (2022–2024).

The TA Consultants appointed by eef will provide energy audits and technical consultations, evaluation of the economic viability of each investment, including financial analysis, and structuring the tender documents to align with the PPP/ESCO model. Legal advisory services concerning these tasks will be provided.

Recent Developments

Audits and studies have been completed. Initially, the investment study (IP) was finalised and reviewed by the respective authorities in February 2021. However, after deep consideration, the municipality decided to include additional measures. The newly updated IP was approved by the municipality in April 2021 and by the CPMA in June 2021. The tender documents were completed in December 2021 and are expected to be published by Q1/2022.





The Klaipėda University Hospital is the eighth public authority to join the eeef to collaborate on the new eeef Technical Assistance Facility

The Klaipėda University Hospital (KUH) is located in the Klaipėda City Municipality, near the Baltic Sea and the Curonian Lagoon, one of the country's most developing municipalities due to the Klaipėda seaport. The KUH is one of the largest and most important medical institutions in Lithuania, with circa 1,000 beds, 1,775 employees and an area of approximately 60,000 sq. m. The Hospital is engaged in academic activities allowing medicine students to perform their practice and activities of scientific research.

The Klaipėda University Hospital (KUH) is an independent legal entity – public institution, founded and incorporated by the Council of Klaipėda City Municipality. It is well known for its highest quality services, modern medical equipment and highly qualified staff. Also, it provides multi-profile medical services to the inhabitants of Klaipėda and Lithuania. On 22 October 2020, the eeef and the Klaipėda University Hospital signed a TA agreement.

The project volume for the programme is EUR 7.2 m. The aim is to develop an ambitious investment program that will enhance energy efficiency by upgrading three of its four hospital buildings and increasing high-quality microclimate conditions for patients and hospital personnel.

This will facilitate the KUH to reach the required renovation and energy levels to contribute to the local strategic objectives in energy efficiency and national targets.

The three hospital buildings falling under the scope of the project are the following: (I) central building, (II) oncology building and the outpatient consultation department, and (III) the infectious disease building.

Recent developments

TA works have been finalised. The tender documents were completed and approved by the municipality in December 2021. The tender is expected to be published by Q2/2022.

The eeef's Technical Assistance Facility

An overview

The eeef Technical Assistance Facility (eeef TAF) was set up to catalyse investments for public entities within the energy efficiency and small-scale renewable sectors.

To date, the eeef has approved eight public beneficiaries, which are currently receiving consultancy services in various forms with the common aim of bringing the projects to fruition. Five of the eeef TAF programmes have already published tender (Ferrara Province TA, Modena TA, Kaunas TA, Gijón TA, and Ukmergė TA). Even though the TAF's scope of work ends once the public beneficiary has launched the tender, the Fund's support is not limited to provide technical assistance services; it also targets to reach closing and provide project financing through various financial instruments to ensure that the projects materialise. It is the eeef's intention that the TAF remains active for the foreseeable future, with the mission to turn public sector climate mitigation projects into reality.



125

million euros

*envisaged total project investment volume
supported by the eeef TAF*



55.04

*potential total
leverage factor
(weighted average)*



49,439

*MWh per year
estimated primary
energy savings*

15,522

*tCO₂e per year
estimated carbon equivalent
emission savings*

3

*countries
involved*



13

*public and municipal
authorities involved*

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