

ENERGY
TRANSITION

UIA cities: Energy Transition in action!

Report from a day of meeting
between the three Urban
Innovative Actions projects
approved under the Energy
Transition topic





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Foreword – UIA at the European Sustainable Energy Week

As part of the [European Sustainable Energy Week 2018](#), the Urban Innovative Actions organised a day of exchanges between the three Urban Innovative Actions approved under the Energy transition topic.

The exchanges were articulated around two main moments:

1. A technical meeting between the three projects and their respective UIA Experts¹ to get to know each other and discuss the main challenges of implementation so far;
2. A joint public workshop² with the [EU Urban Agenda partnership for Energy transition](#) to showcase the three projects and disseminate their first results to a larger audience of energy actors across Europe.

This day is part of a broader exercise that the UIA initiative is taking to showcase and disseminate the first results stemming from the implementation of the first projects approved in 2016. Halfway through their implementation, the three municipalities leading UIA Energy transition projects (Gothenburg, Paris and Viladecans) are now at full speed of the delivery of their bold solutions, confronted by challenges related to their innovative character but also with already rich lessons to draw and learn from.

This report aims at capturing the main identified knowledge transfer opportunities between the projects. We hope this document can also be an inspiration for other cities while driving their local energy transition.

¹ Each Project approved under the Urban Innovative Actions is supported by a dedicated Expert, whose main role is to follow-up the project delivery in order to provide support and advice as well as to capture the knowledge stemming from the implementation of the Project.

² All workshop materials can be found on this page: <https://eusew.eu/energy-transition-action-eu-cities-partnership-and-urban-innovative-projects>

1. Introducing the three UIA Energy Transition projects

Out of the 113 applications submitted in 2016 under the Energy transition topic, three projects were selected for funding by UIA authorities. They look at different but complementary elements of Energy transition in urban areas: **energy governance, community participation, smart energy systems, energy efficiency renovations, renewable energy** etc.

Main Urban Authority	Project title (and link to their description)	ERDF budget
Gothenburg (Sweden)	Fossil Free Energy Districts (FED)	€ 4,654,800.00
Paris (France)	Co-Responsibility in District Energy Efficiency & Sustainability (CoRDEES)	€ 4,364,796.48
Viladecans (Spain)	Innovative local public-private-citizen partnership for energy governance (Vilawatt)	€ 4,269,862.80

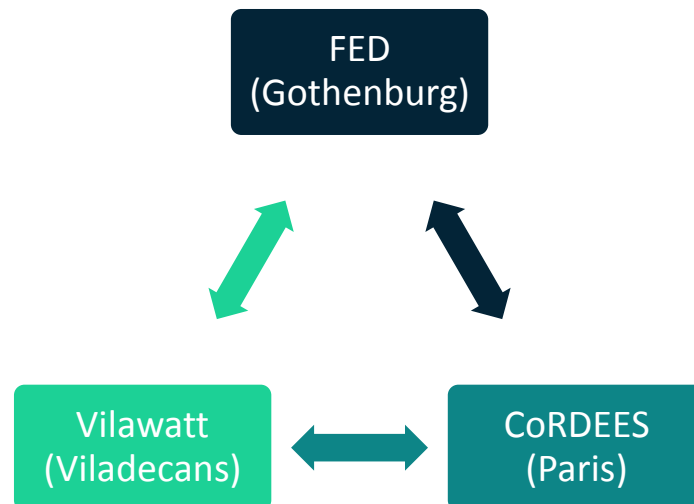
It is important to note that projects have very different urban and implementation contexts. The Clichy-Batignolles district in **Paris** where the **CoRDEES** project takes place is a new large scale urban development, where an old railway infrastructure is being converted into a new eco-district, with new buildings, green areas and shared community spaces. The **FED district in Gothenburg** is an already existing university campus and is well equipped for the purpose of the project, whereas the Montserratina district in **Viladecans** is an existing old residential district (with a vast majority of the housing stock built before the 70s), inhabited by a community with zero or very low energy education.

Further to the general presentation of the projects, the Journals produced by the UIA Experts (see links below) provide the most up-to-date information about project implementation and the main challenges faced so far.

Main Urban Authority	Dedicated UIA Expert	Latest Journal published
Gothenburg (Sweden)	Zeno Winkels	Link
Paris (France)	Juan R. de las Cuevas	Link
Viladecans (Spain)	Lucia Fuselli	Link

2. In which area(s) can the projects learn from each other?

Despite different urban contexts and focuses in the energy transition process, it became evident from the discussions that all three projects can learn from each other. In this section, the three UIA Experts have identified a non-exhaustive list of areas and project elements that could benefit one or both of the other projects.



Elements from Vilawatt (Viladecans)

- ➔ The entire **engagement strategy and related tools** (incl. [gamification approach](#) and knowledge sharing groups) developed by the project as part of its energy retrofitting programme could be of great interest for the CoRDEES project to engage with the broad variety of profiles involved in the Urban Energy New Deal process.
- ➔ All the research carried out and the solutions found for the **cooperative energy purchase communities** would be interesting to feed-in the development of the billing formulas in the CoRDEES project.
- ➔ The **Vilawatt virtual currency** – developed notably in cooperation with the Spanish national bank – **and the associated deployment strategy** (including payment arrangements (e.g. local taxes, subsidies to local associations), engagement with business community) could be a useful model for the FED Project to see how different energy sources are converted into a unique token for use and exchange within the FED district.
- ➔ The **Local Energy Operator**, one of the key components of the Public Private Citizen Partnership, could be an interesting model to look at for the FED project while exploring upscaling possibilities to other districts in Gothenburg.

Elements from CoRDEES (Paris)

- ➔ The **energy commitments and the contractual, financial and regulatory conditions** to be signed by the CoRDEES project with the different stakeholders (as part of the Urban Energy New Deal) could inspire the Vilawatt project with the signature of energy contracts.
- ➔ The definition of **energy performance indicators** could also be interesting for the Vilawatt project as part of the individual savings assessment.
- ➔ The **engagement strategy** (notably of large energy users/suppliers) as developed in view of the Urban Energy New Deal could be beneficial for the Vilawatt project, when looking at possible replication.
- ➔ The developments associated with the **Community Energy Management Platform**, notably in terms of data visualisation for end-users, could be a valuable example for the FED project while considering households' participation in the FED solution.
- ➔ The development of **innovative digital services** based on the Community Energy Management Platform could be a source of inspiration for the FED project's external innovative engagements to identify new business models and services (and vice-versa).
- ➔ The project implementation in a regulated area (under French energy laws and conditions) could be used by the FED project (implemented in a campus test lab exempted from the law of concession for electricity distribution in Sweden) to assess and reflect on potential **obstacles to upscaling/transfer** of the FED system.

Elements from FED (Gothenburg)

- ➔ The unique **integration of different energy vectors** (electricity, district heating and district cooling) in the FED system could be an interesting example to consider for both CoRDEES and Vilawatt projects in view of future upscaling opportunities.
- ➔ The **district management strategies** used in Gothenburg for the upscaling of the model developed (to make the FED approach extended to neighbourhood districts, and up to the whole city potentially) while adding more elements to it (energy balance among buildings and the consideration of prosumers) is a model that could be applied in Viladecans through the community energy initiatives by the Local Energy Operator.
- ➔ The **FED market place** concept could be an interesting development to consider for CoRDEES' Community Energy Management Platform.
- ➔ The **3rd party integration activities** developed in FED (such as innovation competitions, hackathons and research challenges aimed at SMEs, students and researchers) to identify new business models and services could be a good example for the CoRDEES project when looking at the development of their innovative digital services.

3. Synergies and contribution to the Urban Agenda for the EU Partnership on Energy Transition

As highlighted in the Pact of Amsterdam, the Urban Innovative Actions initiative is meant to contribute to EU Urban Agenda by supporting innovative concrete solutions under the 12 identified topics.

As part of the design of the Partnership's action plan (for which public consultation is foreseen by the end of the year), the three UIA projects provide good concrete and tangible illustrations that can inspire and act as good practices for the Partnership.

During the joint workshop, the Partnership coordinators emphasized the very strong contribution of the three projects to the different elements of the **Smart integrated Energy System** approach promoted in the Action Plan in the following areas:

- **Energy Sources, Production and Storage** - FED and Vilawatt projects
- **Energy Distribution Networks** - FED project
- **Smart Data Platforms, Controls and Energy Management** - CoRDEES project
- **Energy Consumers and Consumption** - CoRDEES and Vilawatt projects

4. Next steps

Although this is not the core objective of the UIA initiative, this day of fruitful exchanges has shown a clear interest and demand for further joint working between the three projects.

A suggested idea is to organise site visits in the different cities in the coming months to get to know more the three project contexts and concrete solutions. Bilateral discussions and visits could also be held to further explore the specific elements identified in section 2 above.

Feel free to contact the UIA Permanent Secretariat for more information: info@uia-initiative.eu.



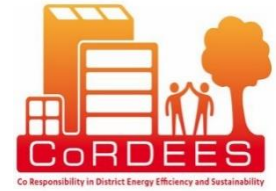
*The three project managers during the EUSEW session in Brussels (June, 5th 2018)
Credits @ViladecansEU*

5. Annex

Project descriptions

5.1. The CORDEES project

The **CoRDEES** project aims at designing and demonstrating innovative and smart solutions to achieve optimal energy performance at district scale (Clichy-Batignolles area). CORDEES will combine three main solutions in an integrated approach to reach its energy efficiency objective (50 kWh/m² and reduce by 90% CO₂ emissions). The project will first set up a new multi-stakeholder participative energy governance system which will define energy commitments as well as contractual, financial and regulatory conditions. It will develop a Community Energy Management Platform to monitor, consolidate and analyse energy data for all buildings and public facilities in real time. Building owners and operators, energy companies and end-user representatives will be supported by an Energy Support Service (the Urban Sustainable Trustee Facilitator) in the achievement of their energy performance targets. Beyond its partnership, the project will engage with a large number of stakeholders which will be empowered to achieve their energy efficiency goals.



Partnership:

- Ville de Paris
- Une Autre Ville (UAV) – Private Company
- Paris Batignolles Aménagement (PBA) – Public/Private Company
- ARMINES - Research Centre
- EMBIX – Private Company

5.2. The FED project



The **FED** project seeks to drastically decrease the use of fossil fuel energy and increase security of supply. It aims at significantly reducing peak loads and the use of primary energy from fossil fuels. The project will develop and test a novel district level energy system, integrating electric power as well as heating and cooling. A full-scale demonstration will be implemented at Chalmers' university campus in Gothenburg including 15000 end-users. FED will establish a connected and integrated local energy system and market integrating demand and supply along with business modelling aspects. A local energy market and trading system will be established to enable stakeholders to exchange temporary energy excess and needs. Beyond its partnership, FED will engage with other private landlords in the neighbourhood, private companies and citizens.

Partnership:

- Göteborg Stad
- Johanneberg Science Park AB - Public/Private Company
- Göteborg Energi AB - Public Company
- Business Region Göteborg AB - Public Company
- Chalmersfastigheter AB - Private Company
- Akademiska hus AB - Private Company
- Chalmers – Research Centre
- Rise Research Institutes of Sweden AB – Research Centre
- Ericsson AB - Private Company

5.3. The Villawatt project



The **VILAWATT** project seeks to secure a stable energy transition process through deep energy renovation of residential buildings in one of the most deprived districts of Viladecans, helping the city tackle fuel poverty. The project will create an innovative Public-Private-Citizen governance Partnership (PPCP), structured around 3 main pillars. First, a Local Energy Operator will be established to act as a local energy supplier and renewable energy producer. An Energy Savings Company, offering renovation and energy saving services to its members (the municipality, businesses and citizens) will be created. Finally, a financial mechanism to capitalise the energy savings (generated through contracts with households having benefited from initial investments) will be used by the new entity to further invest in deep energy renovations in the municipality. A new energy currency linked to the savings will work as an incentive for energy efficiency and as a mechanism to increase the economic capacity of vulnerable groups. The project will involve regional stakeholders active in the fields of ethical banking, community management, social innovation, renewable energy and energy efficiency.

Partnership:

- Ajuntament de Viladecans
- Agència d'ecologia urbana de Barcelona - Public agency
- UBIQUAT TECHNOLOGIES S.L. - Private company
- ICAEN - Institut Català de l'Energia - Research Centre
- Associació LIMA - Low Impact Mediterranean Architecture - Private Company
- CERCLE GESPROMAT S.L. - Private Company
- EGM – Private Company
- VIGEM - Viladecans Grup d'Empreses Municipals, S.L. - Municipally-owned company
- VIDEM - Viladecans Grup d'Empreses Municipals, S.L. - Municipally-owned company
- CICLICA SCCL - Cooperative



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Urban Innovative Actions (UIA) is an Initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. Based on article 8 of ERDF, the Initiative has a total ERDF budget of EUR 372 million for 2014-2020.

UIA projects will produce a wealth of knowledge stemming from the implementation of the innovative solutions for sustainable urban development that are of interest for city practitioners and stakeholders across the EU. This report aims at capturing the main identified knowledge transfer opportunities between the projects. We hope this document can also be an inspiration for other cities while driving their local energy transition.