

RENEWABLE HEAT IN LYON



RENEWABLE ENERGIES

SHREC

Renewable energies, citizen involvement and participatory investment

MEETING PARTNERS IN LYON

After the last meeting in Mondragon (Spain), Auvergne-Rhône-Alpes Énergie Environnement (AURA-EE) had the pleasure to host SHREC partners in Lyon the 8th and 9th of June for a two-days-event centered around good practices in the field of renewable energies.

Twenty five partners and 6 stakeholders from 7 European countries took part in the visits and workshops proposed, forming a heterogeneous group which allowed for real exchange and sharing of knowledge among European regions. Sixteen speakers took the floor during the two days and covered a broad range of topics, varying from local energy communities and citizen associations to the eco-friendly solutions to produce green energy for ancient buildings as the XII century Benedictine convent that houses the Museum of Fine Arts situated in the heart of Lyon.

During the first morning, partners and stakeholders were hosted at the ALEC premises, Lyon's local Climate and Energy Agency.

The Director himself, Alex Dellong together with Lucas Venosino from the development team introduced their mission and how they carry out the energy transition at local level through, for instance, an eco-heating subsidy for the Lyon Metropolitan area. The agency has already supported 80 projects for a total production of 4300 MWh from renewable sources and they established the objective to increase it up to 9500 MWh by 2023.

The Vice President of the Metropolis Philippe Guelpa-Bonaro (EELV), delegate for climate, energy and the reduction of advertisement, detailed the 2030 Guidelines of the PCAET of the Metropolis of Lyon which consists of a 2200 GWh increase of renewable energy production and an objective of 17% of renewable energy consumption on the territory by 2030.

Pierre Magdinier from Toits en Transition presented the main mission of his non-profit organization : to allow inhabitants from the Metropolis of Lyon to take part in an economical model destined to foster the development of renewable energies, namely through the installation of solar panels. The association financed and carried out five photovoltaic installation projects in 2022, two of which will be finalized by the end of the year (sites between 36 and 100 kWp).

At the end of the morning, Timothée Romier presented the CoopaWatt association. They develop local energy communities by managing and supporting local participatory initiatives in order to make territories more resilient.



The afternoon followed with 3 site visits around Lyon's city center, showcasing the initiatives which promote the use of renewable energies in an urban context.

The first visit led the partners to a modern residential building situated in an old industrial neighborhood, turned into a residential area where solar panels were installed to produce domestic hot water. The system is connected to the grid in case of a back-up solution if the production isn't sufficient for the building's needs.



For the next stop, participants were welcomed in Grand Hôtel-Dieu, a UNESCO World Heritage historical building situated on the west bank of the Rhône river - dating back to medieval times and with great cultural significance for the city. Here, Edouard Tissier, project manager at Antea Group, brought to the attention of the visitors the geographical conformation and challenges that Lyon city had to face when rethinking the restructuring of the old center with clean energy sources, such as the high flood risk in this area.

The groundwater geothermal exploitation project provides 100% of the air conditioning and heating needs of the 22,547 m² building (production of 4,300 MW/year in heating and 3,200 MW/year in cooling).

The device takes water from underground and discharges it into the Rhône river via the buried network to limit the use of the Grand Lyon sanitation network, which is already in high demand. Four boreholes 20 meters deep were planned for this purpose.



Furthermore, Edouard Tissier accompanied the participants to the final visit which took place in the Fine Arts Museum. These visits allowed participants to understand the role that clean geothermal power plants can play in the heating and cooling of buildings with specific needs, such as those containing vast collections of works of art. For this building, two-25m-boreholes draw water from the Rhône river water table. Heating and cooling is therefore provided by 4 ground source heat pumps.

The geothermal installations provided by the City of Lyon for the heating and air conditioning of the premises of the Grand Hôtel Dieu and the Museum of Fine Arts constitute a project in line with the objectives of the Regional Plan Climat Air Energie project which sought to increase the share of renewable energy up to 23% of the final energy consumed before 2020.

After a fruitful day fully spent in Lyon, the partners headed for the mountains, more specifically in the Isère French department. This second day was a dissemination event that, on the one hand, paved the way to the encounter of 16 regional partners from AURACLE network with the SHREC partners and, on the other hand, allowed the latter to discover the types of renewable energies initiatives in a rural environment.

For the first visit partners were greeted by the Notre-Dame de L'Osier Mayor, Alex Brichet-Billet, at the heating plant that increased the attractiveness of the 500-inhabitant-village. This project was initiated by a group of citizens who wanted a renewable energy solution for their village and searched for financing sources and partners to launch it. The project manager of the company which is running the project, ForestEner, explained the utility of the wood-energy heating network that supplies hot water and heating for a nursing home, a school and a social housing building nearby with a heat production of 550 MWh of heat per year, resulting in a 100 tons of CO2 reduction on a yearly basis.



Then participants headed to the Préau des Colibris residency situated in Voiron. Here, in 2015 five people got involved in the construction of a condominium close to public transportation, schools, the market and various places for leisure activities.

This construction was thought around shared areas, in fact there is a common room with a courtyard, several guest bedrooms, a laundry room, a garden and a workshop.



The Préau des Colibris condominium is a participatory housing project. The shared habitat was built using eco-materials and owners also opted for renewable energies by installing a set of photovoltaic and thermal solar panels on the roof. This is the first citizen solar thermal project in France and it is recognized at European level as a “good practice”. To do this, the inhabitants called on a cooperative society for the production of renewable energy to benefit from third-party financing : Buxia Energies. This was a first for them, as they usually carry out photovoltaic installation projects for the production of electricity; for this project they took the challenge of integrating a solar thermal installation for the production of heat, which turned out to be successful.

The afternoon followed suit with two main presentations on the topic of citizens' implication in the production of energy.



Nicolas Lepin from ERE43 presented an overview of citizens' initiatives for the production of renewable heat through several cooperative companies. He made a comparative analysis of the different territorial operators for energy, among them we could mention Energie Partagée, Chaleur Bois et Territoire et ERE43. Their main activity concerns the development, implementation and exploitation of heat power plants and wood-fired heating networks. They produce and sell heating, to be used by collective buildings and public facilities with multiple users. He delivered an insightful analysis of the operators and their own specificities,

including the local context, the area's geography, the types of financing and how governance is being managed within such organizations, as well the risks that come along the way.

The dissemination day concluded with a presentation given by Nibal El Alam from KAIROS Ingénierie, a consultancy firm specialized in the creation and development of renewable heat networks. As a part of the SHREC project, they carried out a legal-economic study on the development of citizen renewable thermal energy projects. More specifically, it aims at exploring the legal and economic modalities to promote citizens' participation in renewable thermal energy projects.



These two-days study allowed SHREC partners and stakeholders to discover innovative citizens' energy projects and to take in the challenges faced in the Auvergne-Rhône-Alpes region in terms of economical, social and geographical barriers that hinder these types of initiatives. Nevertheless, there is a strong potential for the emergence of heat networks/district heating projects in this area and as a consequence, a great deal of opportunities to be seized. The different sessions favored constructive dialogue and sharing of knowledge and practices from different European regions, enriching each partner's perspective on these topics.

This event marked the end of Phase 1 of the Interreg Europe project, thus the beginning of Phase 2 which focuses on the implementation of the action plans for each partner and we are eager to follow them in their respective regions and bring to light the ways in which SHREC events enabled them to discover the plethora of solutions European regions find for common problems.



**CONTACT IN
AUVERGNE-RHÔNE-ALPES**

Étienne Viennot, Project manager
Auvergne-Rhône-Alpes Énergie Environnement
etienne.viennot@auvergnerhonealpes-ee.fr