

JUJUY ON THE PATH TO GREEN ENERGY

PROJECT'S AIM: TO TRANSMIT TWENTY YEARS OF PRACTICAL EXPERIENCE IN THE FIELD OF SOLAR ENERGY TO AN UPCOMING GENERATION OF RENEWABLE ENERGY TECHNICIANS IN JUJUY, ARGENTINA

Location:

Jujuy, Argentina

Technology:

Solar Photovoltaic

Costs:

Total: € 35,000

WISONS financial support: € 35,000

Partners Involved:

Fundación ECOANDINA

(<https://www.ecoandina.org/index.php>)

Duration:

June 2017 – January 2020



Picture: WISONS of Sustainability

EcoAndina has more than 20 years of practical experience in developing and promoting solar energy solutions for the Andean communities in the North of Argentina. In 2017, the organisation established the Environment and Energy Interpretation Centre (CEDIERA) in the province of Jujuy, Argentina, as a means of increasing their outreach. The knowledge exchange was conceived to use the valuable capacities of EcoAndina to ensure the continuous transfer of knowledge and building of local skills in the application of solar energy.

The centre includes an award-winning building that is both bio-climatic and energy-efficient, as well as a technology park featuring a variety of solar cookers, solar hot water systems, solar-powered electric bicycles and other devices on display.

EXCHANGE NEED AND OBJECTIVE(S)

The exchange concept revolved around three main objectives. Firstly, it aimed to develop and promote the educational services of

CEDIERA among students and citizens from San Salvador (the capital city of the province). The second objective focused on providing knowledge and professional advice to highland communities and their local governments about the application of solar energy solutions to respond to their specific needs and conditions. The third aim was to incorporate the extensive knowledge of the NGO into existing and upcoming energy policies and educational programmes at provincial and national levels.



Picture: WISONS of Sustainability

PARTICIPANTS & TARGET GROUP(S)

The main target groups of the exchange were students of technical education

programmes in San Salvador, the underprivileged population of smaller villages in the province of Jujuy and decision makers at local, provincial and national levels. During the project, more than 300 students received hands-on training on solar technologies at CEDIERA. Lectures were also held for a further 138 people outside the centre in other locations in San Salvador. More than 170 individuals were reached through lectures and workshops in the Andean highland communities of the Humahuaca and Abra Pampa municipalities. Finally, EcoAndina participated in different policy dialogues at national and provincial levels.

ACTIVITIES

The knowledge exchange consisted of three main activities. First, participants were offered a guided tour of the "Technology Park" at CEDIERA to systematically showcase energy technologies that were highly relevant for the region. The visit demonstrated the building's energy efficiency by highlighting its integrated solar heating system and grid-connected

photovoltaic system, as well as the solar cookers and solar collectors for warm water. During the tour, the biological wastewater treatment plant, the drip irrigation system for the garden and the bio-climatic architecture for Jujuy's climate were also explained.

The second main activity was a series of 14 lectures with corresponding materials (such as slides and handouts) on key topics and technologies for using the significant solar energy potential in the Puna region of Argentina. The topics ranged from "economic aspects of solar water heating in the Puna" to "bio-climatic and solar architecture in the Puna" and "possible works in the energy transition for a sustainable future". The methodology of the lectures varied depending on the presenters and topics, but they all adhered to a similar framework. The speakers shared their concrete experiences in the particular case of the Puna region.

An important outcome of the project was linked to increasing EcoAndina's capacity for broader dissemination and participation in policymaking debates. With WISONS funding, CEDIERA was able to appoint a communications specialist to the EcoAndina staff. This role is responsible for maintaining the centre's network of contacts and for communicating via social media, as well as for representing and promoting EcoAndina at various events. The support also enables EcoAndina to take part in important policymaking debates.

RESULTS & IMPACT

The project enabled CEDIERA to upgrade its facilities and improve its visitor services, with the result that it has become a renowned centre for education in renewable energies and environmental issues in Jujuy province. A total of 310 students visited the centre for the guided tours. It was also possible to invite visitors from the general public. A team of skilled technician learners led the tours for their junior colleagues, fostering a rich exchange of ideas and experiences.

The lectures allowed the speakers and participants to engage in highly positive

exchanges, leading to the connection of basic physical knowledge with empirical knowledge in a specific field. This combination of knowledge transfer is unique in the Northwest of Argentina and, until then, was only available for EcoAndina staff.

Despite facing certain challenges to achieving all its goals, unexpected opportunities arose during the project. For instance, there was a collaboration with the Polytechnic University of Madrid which proved fruitful. Through this collaboration, CEDIERA gained access to the "Installers for Solar Energy" course, a highly acclaimed opportunity for distance learning in the field of solar energy in the Spanish language. The course provides excellent learning materials and grants access to updated software and databases. In this way, young professionals were able to make significant contributions to the lectures that took place as part of the project.



Picture: WISONS of Sustainability

As part of the goal of translating the NGOs' experience into public renewable energy programmes, EcoAndina was invited to participate in the National Advisory Council's "Towards a Shared Vision of the Argentine Energy Transition to 2050". EcoAndina contributed to the discussion by emphasising the significance of solar thermal energy (for solar warm water, solar heating and cooling, and solar cooking) in households. Furthermore, EcoAndina engaged in discussions with the provincial Education Ministry and the National University of Jujuy to assist in the curriculum design for a recently established secondary school with a focus on renewable energy. Additionally, they were in contact with the directors of the four religious education centres in the province of Jujuy.

LESSONS LEARNED

There was great enthusiasm at the beginning of the project, which led to engagement in numerous activities and the expansion of the organisation's network by participation in various events, conferences and trade fairs. However, in hindsight, this may have spread the project's efforts too thinly. Perhaps a more selective approach to the many diverse opportunities facilitated by the project could have helped to target its limited resources more effectively.

Through their daily work, project members gained a deeper understanding of their target groups and refined their approach and presentation strategies. The project did not always follow the original plan but it strengthened the operational capacity of the Foundation. In addition, the quality of academic presentations improved. At the end of the project, EcoAndina and CEDIERA are better positioned for contributing to the dissemination of knowledge and building skills in renewable energy solutions suitable for the Puna region.

During the planning of the project in 2017/18, there was widespread optimism because promising national and provincial laws were passed that aimed to promote renewable energy investment as well as technical education. There was a belief that it would be possible to support local authorities to build pipelines of local projects for renewable energy generation (objective 2) and to establish solid alliances with public education institutions and use EcoAndina's experience to train local/provincial technicians (objective 3). However, the project's implementation coincided with an overwhelming sense of disillusionment in Jujuy, intensified by Argentina's economic struggles. Consequently, the expected transformative impact of the project fell short. However, in general the project helped to consolidate the position of EcoAndina as a key player in provincial and national energy policy processes.

Source: Final Report submitted to
WISONS by ECOANDINA