

The team of the *Regional Energy Service Company, LTD* and the *Regional Council of Entrepreneurs, NGO* deals with energy conservation and environmental protection, and focuses on improving energy efficiency in the housing sector and introducing renewable energy sources.

Experience of International Cooperation in the Field of Energy Efficiency

1. In 2008–2014, our team operated as a Ukrainian partner of Norwegian company *REINERTSEN AS* within the project ***Energy Efficiency and Environmental Improvements in the Housing Sector of Ukraine***. The project was aimed at improving energy efficiency in the housing and building industry, and introduction of environmental improvements through capacity building of local authorities in organization and implementation of energy saving measures. Project activities covered both the **local level** (individual projects as well as implementation of energy efficiency measures in the housing sector and to the particular facilities of the social infrastructure) and the **national level** (training programs, workshops and seminars, exchange of information on the best practices). Project results are available on the link: <http://energycluster.com.ua/Programma-Energoeffektivnost-i-ekologicheskije-uluchsheniya-v-ZhKH-Ukrainy>
2. In 2009, *GIZ* ordered an energy audit of a residential building in the city of Myrgorod within the ***Energy Efficiency in Buildings*** project. The project financed participation of Mr. Fedir Barulin, a Leading Expert of the *Regional Energy Service Company, LTD* and the Chairman of the Board of the *Regional Council of Entrepreneurs, NGO*, in the international conference on energy services in Eslinher.
3. In 2010–2011, on request of *GIZ Energy-Efficient Pilot Project*, our team conducted energy monitoring of 10 residential houses built in Kherson after 2005.
4. In 2010–2012, we were among the participants of the project on the public and private partnership in Ukraine entitled ***Energy Saving Retrofitting Manager***. The project was implemented by the *Housing Initiative for Eastern Europe (IWO)*, Berlin. The Leading Expert of the *Regional Energy Service Company, LTD* and the Chairman of the Board of the *Regional Council of Entrepreneurs, NGO*, Mr. Fedir Barulin took part in two-week training in Berlin. Project results are available on the link: <http://www.energodom.org/proekt>
5. ***Resource Centre for Condominiums Promotion*** was established in Kherson in 2011, under the donor assistance of the *USAID Municipal Energy Reform Project in Ukraine*. The budget of the project amounted to UAH 220,000, including UAH 110,000 received as a grant. Project results are available on the link: <http://energycluster.com.ua/Resursniy-centr>
6. In 2012–2015, we became partners of the German-Ukrainian project ***Energy Efficient Sanitation of Residential Buildings***. The project was funded by the *Friedrich Naumann Foundation for Freedom*, Germany. Project results are available on the link: <http://www.energodom.org/proekt>
7. In 2012–2013, we implemented the project ***Reforming Communal Economy by Providing Transfer Local Area Condominiums*** under the donor assistance of *USAID UNITER Project, International Renaissance Foundation* and *East Europe Foundation (EEF)*. The project budget equalled to UAH 150,000, including UAH 110,000 received as a grant. Project results are available on the link: <http://energycluster.com.ua/%C2%ABReformirovanie-zhilischno-kommunal-nogo-hozyaystva>
8. In 2014–2016, we became partners of the German-Ukrainian project ***Sustainable Housing in Ukraine: promoting local development and the role of non-state actors***. The project was implemented by the *Department of Economic and Regional Development and Trade of the Kherson Regional State Administration* together with the *Regional Council of Entrepreneurs, NGO*. The project was partially financed by the European Union. With the participation of international partners, we developed the *Strategy of Sustainable Development of Gola Prystan* and lobbied the mechanism of "revolving" financing for energy efficiency projects from the *Energy Efficiency Fund created in Ukraine*. Three members of our team were trained in Germany. Results can be found on the link: <http://energycluster.com.ua/Ustoychivoe-razvitie-ZhKH>

9. In 2015–2018, project application for *Introduction of an Economically Feasible Model for Heating Sustainable Energy Development by the Example of a Heating District in the City of Gola Prystan*, submitted under the call for proposals *Supporting the Eastern Partnership Cities in the implementation of Sustainable Energy Action Plans (SEAPs)* received support of the European Union. Implementation of the project started in April, 2015.

Project activities:

- Conduction of energy audits
- Development of design estimates
- Thermal modernisation of school No. 1 in Gola Prystan
- Energy saving activities in kindergarten No. 1
- Reconstruction of the boiler-house No. 7 proving for switch from natural gas to biofuel heating
- Promotion of the energy management structure according to ISO 50001
- Arrangement of conferences, workshops, trainings and Energy Days
- Dissemination of information on project results at the national level
- Monitoring of project results.

Project budget amounted to EUR 881,863, including EUR 700,000 received as a grant.

Project results are available on the link: <http://energycluster.com.ua/Proekt-ES-2015>

10. In 2016, under the contract with the *Nordic Environment Financial Corporation (NEFCO)* we developed feasibility study of the two energy-saving projects for schools in the city of Ugledar, Donetsk region; and two energy-saving projects for kindergartens in the city Kreminna, Lugansk region. The contract was implemented with financial support from the *Nordic Partnership Initiative*.
11. In 2016, we have become the regional partner of the Polish-Ukrainian project *Our Self-Government as the Common Cause. Civil Dialogue in South-Eastern Ukraine*. The project is partially funded by the *International Solidarity Fund*; and involves non-governmental organizations and local authorities from Zaporizhia, Mykolayiv and Kherson regions. Information on the project is available on the link: <http://energycluster.com.ua/%C2%ABNashe-samoupravlenie-%E2%80%93-obschee-delo.-Grazhdanskiy-dialog-v-yugo-vostochnoy-Ukraine%C2%BB>

The Most Successful Projects Implying “Hard” Measures

1. Project *Introduction of Energy Saving Measures* in kindergarten No. 71 of Kherson City Council was implemented in 2007–2008 under the donor assistance of Norwegian company *REINERTSEN AS*.

Project activities:

- Conduction of energy audit
- Replacement of incandescent light bulbs with energy saving lamps
- Replacement of wooden windows with reinforced plastic windows
- Replacement of the emergency exit door with reinforced plastic door
- Replacement of outdated water faucets in washbasins with modern fuel-efficient faucets
- Replacement of obsolete storage tanks in toilets with modern efficient tanks
- Thermal insulation of heating pipes in the basement
- Installation of solar thermal collectors for hot water supply
- Installation of heat recovery ventilation systems
- Introduction of a local energy monitoring system

Project budget amounted to EUR 12,642, including EUR 9,600 granted. During the project, our experts conducted field and technical project supervision. We monitored results of the project, available on the link: <http://energycluster.com.ua/Detskii-sad>

2. Project ***Energy Efficient Reconstruction of the Water Supply System*** in Oleksandrivka village of Bilozerskyi rayon, Kherson region was implemented in 2009 under the donor support of the Royal Norwegian Embassy in Kiev.

Project activities:

- Conduction of energy audit
- Reconstruction of the internal communications of water towers
- Reconstruction of the water supply system of external communications
- Sanitization and painting of water towers
- Installation of a new automated system to control pumps with radio signals
- Monitoring of project results.

Project budget equalled to USD 12,857, including USD 10,000 received as a grant. Project results are available on the link: <http://energycluster.com.ua/Rekonstruktsia>

3. Project ***Energy Efficient Lighting Upgrade*** in eight classrooms of Physical-Technical Lyceum of Kherson City became implemented in 2009 under the donor support of *NORGES NATURVERNFORBUND* within *SPARE-Ukraine* program.

Project activities:

- Conduction of energy audit
- Modernization of lighting in the eight classrooms with EFix luminaires and new generation fluorescent lamps of T5 840 type
- Installation of electricity meters and lighting level sensors in each classroom
- Introduction of a local energy monitoring system.

Project budget amounted to UAH 52,324, including UAH 49,124 received as a grant. Project results are available on the link: <http://energycluster.com.ua/Modernizatsia>

4. In 2011, under the donor support of Norwegian company *REINERTSEN AS*, we implemented another project ***Improvement of Energy Efficiency of Windows for a Condominium*** by their restoration with modern materials. The budget of the project amounted to UAH 52,430, including UAH 41,430 granted.
5. In 2012–2013, we implemented the project on ***Insulation of Facade and Ceiling, and Replacement of Windows for Energy Saving in the Kindergarten Located in Oleksandrivka Village, Bilozerskyi Rayon, Kherson Region*** under the financial support of the *State Environmental Investment Agency of Ukraine*. Project budget was UAH 780,000. Project results are available on the link: <http://energycluster.com.ua/Det.-sad-s.-Aleksandrovka>
6. During 2012–2013, at the support of the *State Environmental Investment Agency of Ukraine* our team was implementing another project entitled ***Insulation of Facade and Ceiling, and Replacement of Windows for Energy Saving in Kindergarten No. 1 “Olympiets” in Gola Prystan***. Project budget amounted to UAH 2,380,000. Project results are available on the link: <http://energycluster.com.ua/Detskiy-sadik-%E2%84%961-Gopry>
7. In 2012 – 2013, we received funding from the European Union, represented by *the Delegation of the European Union to Ukraine*, following the results of the competition *Supporting Energy Efficiency Measures in Small Towns of Ukraine*, in order to implement the project ***Introduction of Energy Saving Technologies in Kindergartens of Gola Prystan City***.

Project activities:

- Conducting energy audits
- Replacement of incandescent light bulbs with energy-saving lamps

- Restoration of wooden windows with modern materials and technologies
- Replacement of wooden windows with reinforced plastic windows
- Replacement of doors with reinforced plastic doors
- Replacement of outdated water faucets used in washbasins for modern efficient faucets
- Replacement of obsolete toilet storage tanks for modern efficient toilet tanks
- Thermal insulation of heating pipes in the basement
- Installation of solar thermal collectors for hot water supply
- Installation of heat recovery ventilation systems
- Development of design estimates for construction of a biofuel boiler plant for the kindergarten
- Introduction of a local energy monitoring system.

The budget of the project amounted to EUR 235,464, including EUR 176,000 obtained as granted money.

During the project, our experts conducted field and technical supervision. Results of the project are now available on the link: <http://energycluster.com.ua/Proekt-ES>.

8. In 2013–2014, at the financial support of the Royal Norwegian Ministry of Foreign Affairs, we implemented the project *Introduction of the Heat Pump for the Needs of the Kindergarten Heating System in Oleksandrivka Village, Bilozerskyi Rayon, Kherson Region*. Project budget amounted to UAH 237,358, including UAH 170,000 granted. During the project, our experts conducted its field and technical supervision. The results are available on the link: <http://energycluster.com.ua/Det.-sad-s.-Aleksandrovka>
9. In 2015, supported by *NORGES NATURVERNFORBUND* within the *Simple Energy Efficient Restoration Measures of Damages in Schools* project we worked on *Heat Insulation of Windows and Doors in Chervona Mayachka Secondary School of I-III Stages, located in Beryslav Rayon of Kherson region*. The budget of the project amounted to UAH 65,358, including the sum of the grant UAH 53,399.
10. In 2015–2016, we implemented a demonstration project on *Construction of a Solar Power Plant to Provide Electricity to Residential Buildings* within the German-Ukrainian project *Sustainable Housing in Ukraine: Promoting Local Development and the Role of NGOs*. Total cost of the project amounted to EUR 15,574, including EUR 8,550 granted. The results are available on the link: <http://energycluster.com.ua/%C2%ABStroitel-stvo-solnechnoy-elektrostantsii-dlya-obespecheniya-elektroenergiy-zhilogo-doma%C2%BB>

During implementation of the projects, we began forming the *Energycluster* uniting both national and foreign participants, government agencies, NGOs, educational institutions and other maintenance and service organizations, whose presence is seen as cornerstone for strengthening of the Cluster. Basic principles of invitation to participate in joint ventures remain the following: qualification, competence, reliability and integrity. More information on the *Energycluster* is available here: <http://energycluster.com.ua>

Participation in the European Initiative Covenant of Mayors

Following the adoption of the EU climate and energy package in 2008, the European Commission initiated the *Covenant of Mayors* in order to encourage and support efforts undertaken by local authorities to design and implement the sustainable energy development policy.

In fact, local governments play a crucial role in mitigation of climate change, especially in view of the fact that 80% of energy consumption and CO₂ emissions come from urban activity.

Due to the *Covenant of Mayors*, the EU institutions took an unprecedented step towards the direct involvement of local and regional authorities, thus, recognizing their important role in achieving ambitious targets related to energy conservation and climate protection.

In order to continue political commitments with real actions and projects, signatories of the *Covenant*, in particular, undertook to prepare the Baseline emission inventory after the development of local sustainable energy policies and the corresponding capacity in energy management, and to submit the *Action Plan for Sustainable Energy Development* describing the main measures that they are planning to resort, within one year after signing.

The initiative also benefits from the European Commission, receiving its full institutional support, given, in particular, by the *Committee of the Regions*, which supported the initiative from the outset; by the *European Parliament*, hosting the annual signing ceremony, as well as by the *European Investment Bank* that helps local authorities to disclose their investment potential.

Upon initiative and support of the *Regional Council of Entrepreneurs, NGO*, in 2009 the city of Kherson joined the *Covenant of Mayors*. However, the city turned out to be not ready for this step and all activities in this direction stopped. The work gained an impetus in 2014, when Kherson was selected within the *USAID Municipal Energy Reform Project* to receive assistance in capacity building for planning, management and financing of municipal energy systems (SEAP).

Despite the importance of this initiative, even today, not everyone knows about it. Our company is deeply engaged in promotion of the *Covenant of Mayors* and its basic ideas in the modern Ukrainian space. This work resulted into the fact that the Kherson Regional State Administration joined the *Covenant of Mayors* in September, 2013 as a regional coordinator; and in February, 2014 Gola Prystan City followed the example and joined the European Initiative too.

Regional Energy Service Company, LTD developed the Sustainable Energy Action Plan for the city of Gola Prystan. Development of this document was supported by the Association *Energy Efficient Cities of Ukraine (EECU)* and the Office of the *Covenant of Mayors – East*, located in the city of Lviv. The SEAP of Gola Prystan is available on the official website of the *Covenant of Mayors*, or on the following link: http://www.uhodameriv.eu/about/signatories_uk.html?city_id=6707&seap

During 2015–2016, with the support of our team, the *Covenant of Mayors* admitted Velyka Oleksandrivka, Novoraysk, Skadovsk, Vasylivka and Schaslyvtsevo as new signatories.

Regional Energy Service Company, LTD is professionally engaged in developing SEAPs and receives orders not only from Kherson, though from other Ukrainian regions too.