

CASE STUDY

Sofia (BG) – Sejong (KR)

IURC – Asia & Australasia



JULY 19- 2023

Thematic Network(s): Ecological Transition & Green Deal, Innovative, Sustainable & Carbon Neutral Ecosystems & Strategic Sectors

Thematic Cluster(s): Education, Jobs & Skills, Innovation Centres, Business Clusters

Cross-cutting challenge(s): Energy Transition & Climate Change, Digital Transition-Smart City

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IURC – CASE STUDY

Sofia Municipality is working with Sejong City from the Republic of Korea to conduct a joint business venture on solar panels. This pilot project is expected to develop a partnership between Bulgarian and Korean companies on renewable energy.

EXECUTIVE SUMMARY

Sejong is one of the leading Korean cities in the renewable energy field. It has implemented successfully clean energy projects including a Sejong 5-1 Living Area which is a national pilot smart city project to create a sustainable model city. Local companies are experienced in producing solar panels for commercial use. In Sofia, aluminum and metal factories are getting prepared for the energy transition by adapting their production lines to manufacture solar panels. Equipping them with the know-how from Sejong would enable Sofia companies to manufacture solar panels domestically.

During Sofia's study visit to Sejong in August 2022, both cities discussed cooperation on renewable energy. They agreed to support their local companies to develop a partnership on solar panels. An opportunity to facilitate this is the EU-funded *Recovery and Resilience Plan*, where Sofia can get initial funding to install solar panels in 10,000 houses. Since Sofia does currently not have the means to produce and install solar panel, a partnership with Sejong companies can help them to deliver hardware and software technologies to sell energy back to the grid.



The project is expected to benefit both Sofia and Sejong by creating business opportunities for both sides, providing solar energy technology and know-how at competitive prices. This would match the growing demand for renewable energy in the industrial sector of Sofia. The joint venture could also be a blueprint to be scaled up in other European Union countries.

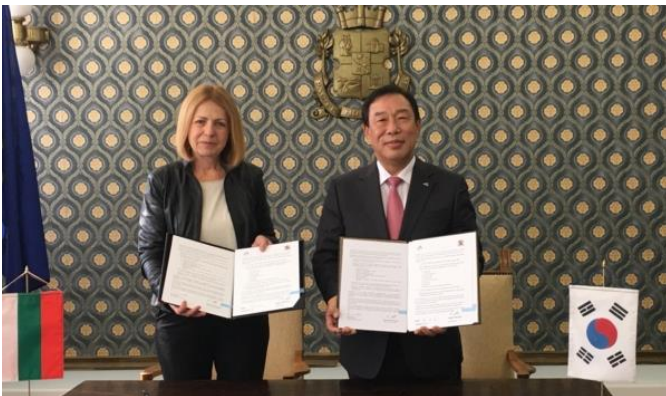
To deliver this project in a successful manner, both cities secured support from multi-level stakeholders including the Embassy of Bulgaria to Korea, Invest Sofia, Invest Bulgaria, and domestic companies from both cities. The energy company from Sejong, Prana Solution, will make a fact-finding mission to Sofia in June 2023 to assess the feasibility of the joint venture project. The plan includes the opening of a branch office in Sofia, building a connecting point between both cities.

MAIN CHALLENGE AND SOLUTION

Sofia Municipality is the 14th largest city in Europe. As the capital of Bulgaria, it is the biggest economic, political, technology, administrative, cultural and educational centre in the country. The *Digitalisation, Innovation and Economic Development Department* of Sofia Municipality (*Innovative Sofia*) focuses on improving the quality of life for all citizens via digitalization and innovation as well as facilitating the city's development as a digital, innovative, R&D, creative and start-up hub, a preferred destination for business and life.

In line with the administration's current focus, the city has an ongoing *Green Energy* project. One of the main projects is *The Green Kindergarten*, which covers about 30% of its energy demand with 30 photovoltaic panels providing 13 kW. The city has developed the *Canary System*, a child-friendly software to monitor the air quality, teaching children to be familiar with temperature, humidity, CO2 emissions. To accelerate the process of creating greener city and producing and installing solar panels in Sofia, Sejong and Sofia plan to build a joint venture on energy which will resolve the challenge on solar panel production in Sofia.

“It is meaningful to open the door for exchanges with European cities, starting with exchanges with Sofia Municipality” (Mayor Choi Min-ho, Mayor of Sejong City)



RESULTS AND IMPACT

In line with the cooperation and discussion led by the municipalities of Sejong and Sofia, private energy entities from Korea will pay several visits to Bulgaria. The goal is to establish a joint venture in Sofia and to open a local branch, ensuring a long-lasting contribution and smooth facilitation. The first visit from Prana Solution, the local energy company located in Sejong City, will be conducted in June 2023 with the support from the Embassy of Bulgaria, Sejong City, and Sofia Municipality. The management officials from Prana Solution will meet the Ministry of Economy and Energy of Bulgaria, Invest Bulgaria Agency, Sofia Municipality and potential Bulgarian business partners. To secure supports from Bulgarian authorities, the *Letter of Intent* from Prana Solution was sent to the Bulgarian Embassy in Seoul and Sofia Municipality in April 2023. This visit is expected to consolidate the foundation of renewable energy businesses with Bulgarian companies for the solar business sector. The main business scope in Bulgaria is as follow:

- Setting up a *Joint Venture* for manufacturing a *Home Solar Energy Storage System* in Bulgaria, a technology solution that could be rolled-out to the Bulgarian and European markets.
- Promoting the joint development of solar projects in Bulgaria
- Establishing a solar module distribution business in Bulgaria

This joint venture project will also be combined with introducing Sejong’s net metering system to Bulgaria for individual households to sell excess solar energy to the grid. Since Sofia has the raw materials and local companies are ready to adapt their production sites, Sejong can provide the expertise in technology. Thus, the joint venture will generate mutual benefit for both cities, contributing to achieve the green energy transition goal.

KEY FIGURES

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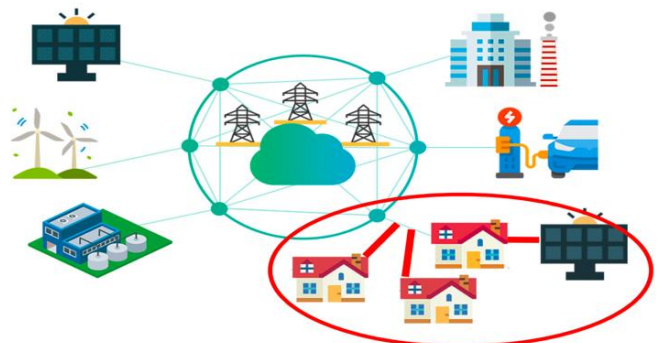
Sofia and Sejong signed a Memorandum of Cooperation and Friendship for a two-year term

9

Sofia and Sejong had 9 bilateral and multilateral meetings on cooperation actions

200

Sejong has a law where all new buildings must include solar panels on the rooftop, and there are over 200 companies that provide installation services



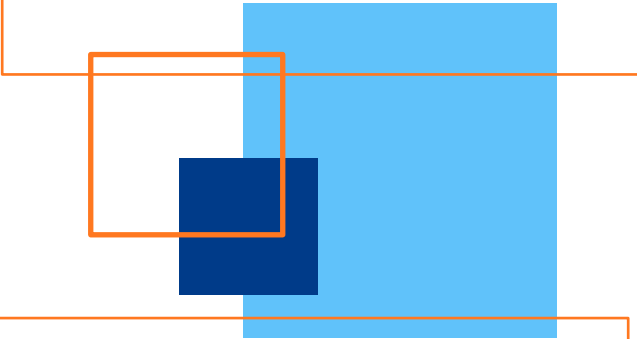
LESSONS LEARNED



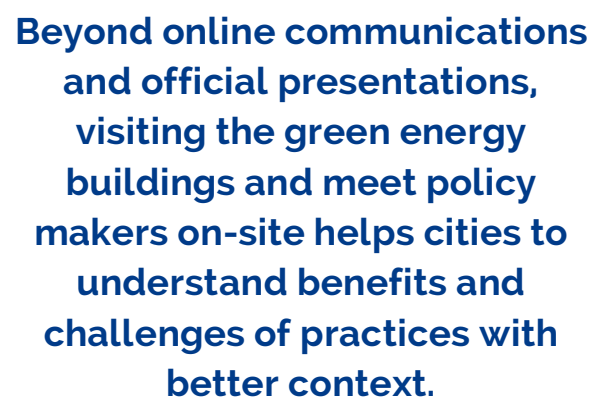
Engaging private entities to establish good trade and investment relationship and generate economic revenue in relevant cities helps to solidify long-lasting partnership.




Securing multi-lateral level of support from government offices, academic institutes, and private entities is impartial to implement joint pilot projects.



Narrowing down the focuses and interests and finding the right stakeholders who can support the project has to be prioritized the most to ensure prosperous partnership.



Beyond online communications and official presentations, visiting the green energy buildings and meet policy makers on-site helps cities to understand benefits and challenges of practices with better context.



THE IURC PROGRAMME

The International Urban and Regional Cooperation (IURC) programme enables cities in different global regions to link up and share solutions to common problems. It is part of a long-term strategy by the European Union to foster sustainable urban development in cooperation with the public and private sectors, as well as representatives of research and innovation, community groups and citizens. Through engaging in IURC, cities will have the chance to share and exchange knowledge with their international counterparts, building a greener, more prosperous future.

The IURC programme is an opportunity for local governments to learn from each other, set ambitious targets, forge lasting partnerships, test new solutions, and boost their city's international profile. Its activities will support the achievement of policy objectives as well as major international agreements on urban development and climate change, such as the EU Urban Agenda, the UN Sustainable Development Goals, and the Paris Agreement.

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Links to related outputs:

<https://www.iurc.eu/2022/09/09/sofia-and-sejong-leap-forward-in-cooperation-with-a-study-visit/>

<https://www.iurc.eu/2022/03/28/smart-utilities-sejong-sofia/>

<https://www.iurc.eu/event/innovation-precincts/>