

Katowice Energy >>> Innovation Challenge

Challenge Brief



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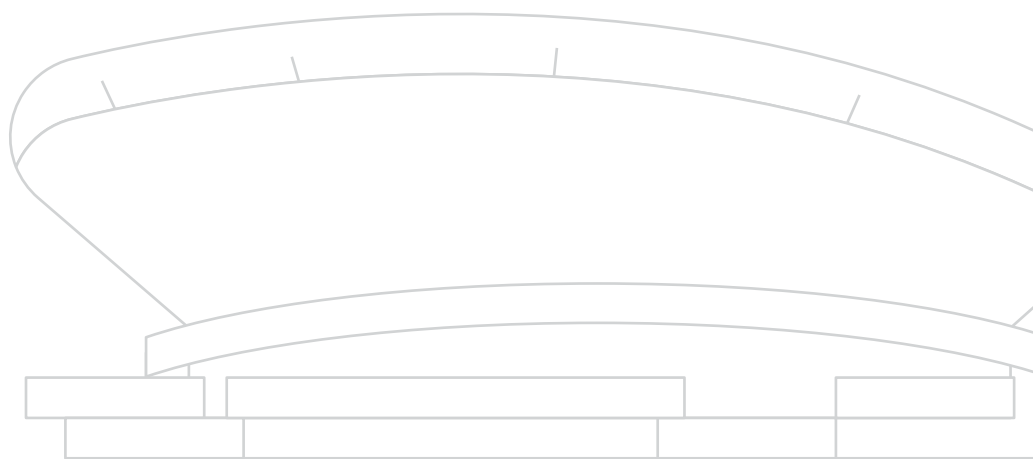
City of Katowice, Poland
UN Habitat

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FOR A BETTER URBAN FUTURE

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**SUSTAINABLE
DEVELOPMENT
GOALS**



1. The Challenge

In its fight to mitigate climate change, the city of Katowice, Poland is rapidly transitioning from coal-dependent to clean and renewable energy systems. However, efforts to support this transition at the business and household level, through access to technology, financial incentives, and awareness campaigns, are disaggregated and have demonstrated limited results.

Call to Action

We are looking for digital information management and communication solutions that will help and empower the city of Katowice, including the local government, residents, and businesses, embrace a transition to clean and renewable energy systems.

We're looking for solutions that:

- **Provide simplified consolidated information and build awareness** on available renewable energy technologies, the benefits of transitioning to clean and renewable energy, and the local, regional, and national government incentives and subsidies that support the transition
- **Enable informed decision making** by residents and businesses, on transitioning to clean and renewable energy sources, and adopting energy conserving behaviours
- **Optimize energy generation, distribution, and use**, at the local level, in a distributed fashion to accommodate for prosumers, and varying demand during different times of the day and seasons in the year
- **Monitor indicators and communicate impact** of transitioning to clean and renewable energy on pollution levels, climate change, economic prosperity, health, wellbeing, and other indicators
- **Foster dialogue and collaboration** between different stakeholders in the city to collectively transition to clean and renewable energy systems



2. The City of Katowice

In recent years Katowice has undergone a transformation. The capital city of the Silesian Voivodeship in southern Poland, Katowice has long been known for heavy industry, coal, and steel. For years, the landmark welcoming visitors to the capital of Silesia, was the winding tower of the coal mine. Decades of mining and heavy industry also influenced the unique city scape of Katowice, characterised by red brick housing estates. Today, the decline of coal mines and factories have given rise to a flourishing capital of a metropolitan area with 2 million inhabitants, a dynamic center of commerce, business, transportation and culture.

Visitors to Katowice today are still welcomed by the winding tower of the historical coal mine, but the "Warszawa II" tower, is now an observation deck with a view over the colourful and modern city. Looking upon the city, visitors will see an equally important symbol of Katowice is the Spodek, a sports and entertainment hall referring to the shape of a spacecraft. Katowice is home to the Polish National Symphony of the Polish Radio, a slew of gaming and entertainment events, and the newly developed Culture Zone, where one can find the Silesian Museum and the International Congress Centre. Katowice is the host of the Habita 11th World Urban Forum to be held in June 2022.



3. Energy management in Katowice

Katowice's rich coal history plagues its current climate and energy challenges. Along with Greenhouse Gas emissions, Katowice also battles PM2 and PM10 emissions. Embracing a transition to clean and renewable energy sources, the City of Katowice has made several strides forward over the last few years.

- In 2015, the City of Katowice was ranked 48th on the list of European cities with most air pollution. By 2017, it ranked 15th.
- In 2019 the City of Katowice became a member of the Covenant of Mayors. In the following months the Katowice City Hall initiated a Sustainable Energy and Climate Action Plan (SECAP) to be passed by the end of May 2022.
- In 2020, the permissible value of 35 days with the exceedance of the 24-hour concentration of PM10 suspended dust per year was met for the first time since the introduction of this standard, since 2002.
- With the Department of Energy Management leading many of these efforts, the Mayor has also appointed a climate in-charge.

3.1 Laws, Plans and Policies

Energy Plan & Low Carbon Economy Plan

On the 25th of January 2018, the City of Katowice adopted two energy-related resolutions the “Assumptions for a plan of supply with heat, electricity and gas fuels for the city of Katowice” and the “Low-emission Management Plan for the city of Katowice”. The former necessitates the monitoring of the supply of and demand for heat, electricity and gaseous fuels in the city, analysis of development plans prepared by power utilities and power supply companies, period reporting to the Commission for Infrastructure and Environment Committee of the City of Katowice. The Mayor of the City of Katowice is entrusted with the execution of both resolutions.

Climate Action Plan

In September 2019, the Katowice City Council adopted the “Katowice City Adaptation Plan to Climate Change by 2030”. The Plan presents a vision, goals and objectives related to four critical sectors of the city, public health / vulnerable groups, undeveloped areas with green structure, transport and water management. Connected to climate change commitments at the community, regional and international levels, the Adaptation Plan is an agreement between the City of Katowice and the Ministry of the Environment. Further, the Adaptation Plan was developed with full participation of stakeholders and residents.

The Adaptation Plan describes climatic phenomena and their derivatives affecting the city (such as heat, frost, rainfall, flood, drought, wind, air quality, etc.), assesses the city's sensitivity to these phenomena and

the city's ability to deal with their consequences and the risk they pose to the city. In response to the risks identified, the Adaptation Plan includes three types of responsive measures Informational and educational, Organisational, and Technical. The Adaptation Plan also sets out the rules for the implementation of adaptation measures including, responsible entities, financing framework, monitoring indicators, assumptions for evaluation and updating of the document.

3.2 Current Initiatives

Municipal Energy Center: The Municipal Energy Center in Katowice is an information point and website where residents can obtain information, among other things, on saving energy, replacing heating systems and related municipal support programs, when you should replace your old coal-fired boiler, learn how various installations work, including those based on renewable energy sources, find out what the anti-smog resolution is and what fuels can be used for heating homes. The Center hosts exhibitions, workshops and meetings on topics related to improving air quality in Katowice and increasing household energy efficiency. Consultants at the Center also advise visitors on city, regional and national support programmes including. Katowice's city programs include:

- **Subsidies for Citizens:** Residents can avail subsidies for improving heating systems and installations, building new solar and PV installations. Between 2011-2021, almost 7,500 high-emission heating systems were replaced with subsidies amounting to 13,3 million EUR; while 1 358 renewable energy sources were installed with subsidies amounting to 1,7 million EUR.
- **Support for the Poorest Citizens:** Increasing costs of heating due to the 'Anti-smog Policy' and rising coal prices are mitigated through one of the highest subsidies in the region.
- **Enforcement of New Regulations:** Municipal police and drone technologies are being employed to monitor and measure the use of prohibited types of fuel combustion in local heating installations. Between 2011-2021, almost 20.9 thousand inspections were carried out.
- **Purchase of Low-emission buses:** Of the 135 buses purchased between 2015-2020, 115 were low and zero-emission buses, contributing to protecting Katowice's air purity by reducing exhaust emissions.
- **Investments in Municipal Objects:** Thermomodernization of public buildings including new heating sources, connectivity to local heating networks, LED lighting systems, small solar and PV plants with energy management systems.

Pro-ecological Education: Through events such as "Eco responsible event", "Katowice Energy Days", "How to warm up the flat Eco responsibly?" or mobile information point like the SMOGOBUS, the Municipal Energy Center educates residents on low-emission energy transition and climate change mitigation.

