

13-14 of June 2018, City of Katowice

2nd study visit in Katowice



MOLOC partners, local stakeholders and Mariusz SKIBA deputy mayor of Katowice - 14/06/2018

MOLOC project – INTERREG Europe



G Ł O W N Y
I N S T Y T U T
G O R N I C T W A

➤ Participants

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- **LILLE**

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- **HAMBURG**

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- **ENERGY CITIES**

Stéphane Dupas



Katowice main square (City of Lille)

➤ Context and summary

MOLOC is a European cooperation project co-financed by the Interreg Europe programme. It gathers the cities of Lille (coordinator), Hamburg, Torino, Suceava, the Central Mining Institute together with the City of Katowice and the European Network Energy Cities.

MOLOC aims to develop a new city building approach, associating quality of life and energy efficiency. MOLOC stands for MORphologies Low Carbon: the project will explore the brakes that limit the impact of local policies and actions in their ambitions to change current urban morphologies in the light of sustainable urban development. All partners cities have until 2019 to co-develop an action plan with their local stakeholders, before implementing it in 2020-2021.

In 2017, the MOLOC project has been launched. The partners gathered for the 1st time in Lille for the kick-off. After that, two interregional meetings have been organised in Suceava and Hamburg, to exchange best practices. During the interregional meetings, Energy Cities organised two workshops to write a joint territorial analysis framework for the identification of breaks to a low-carbon city.

In 2018, five study visits will be organised in the five partner cities to exchange with local partners on the implementation of initiatives for a low-carbon city. A first study visit in Torino took place in May 2018. The second study visit in Katowice, 13-14 of June, was a great opportunity to gather all partners and see the transformation of the city.

The study visit focused on one hand on energy transition. The energy context in Poland has been explained, focusing on the place that coal plays in the economy still nowadays. At the **national level**, the introduction of **clean and efficient energy** was outlined in the energy mix. Therefore, at the **local level**, the **Low-Carbon Economy Plan** of Katowice (policy instrument addressed within MOLOC) was presented, highlighting the transformation of the city. **Actions and projects against air pollution** have been underlined. Strategies at national and local level were translated on the ground. **Management of energy** and the **revitalization of post-industrial areas** have been explained during site visits.

On the other hand, the transformation of **Katowice transport system** has been shown, illustrated by the visit of the new passenger transfer centre in the district of Ligota.

Along the study visit, MOLOC partners took the opportunity to exchange on the progress of the project, especially about the local analysis being currently carried out.

➤ Energy transition and actions against air pollution

Venue: Clean Coal Technology Centre, Central Mining Institute

The meeting kicked-off with an official welcome, by Professor Krzysztof STAŃCZYK, the Head of the Department of Energy Saving and Air Protection of the Central Mining Institute. He stressed out the necessity for a transition towards a cleaner and a more efficient energy mix and mentioned the role of the Central Mining Institute into the energy transition.

✓ Official welcome

By Professor Krzysztof STAŃCZYK, Head of the Department of Energy Saving and Air Protection, Central Mining Institute

The Central Mining Institute has been established in 1995 and was, first of all, dedicated to safety in mining. In the 60-70's, the centre had 2500 employees, decreasing to 400 employees today. From a mining institute, it became a clean coal technology centre, due to the transformation of the industry and the issues raised by climate change. The centre runs technological projects financed by different programmes (from local to European funds) such as underground coal gasification or biomass.

In the Department of Energy Saving and Air Protection, the focus is more on energy efficiency in buildings (energy auditing of buildings) and air protection.

✓ Presentation of stakeholder group members

- **Silesian Union:** it represents and protects local government interests of Silesia. Within the MOLOC project, the Union promotes ideas and conclusions of the project through local energy committees.
Today, in Poland, coal represents 100 000 jobs. Moreover, the use of coal gives to Poland an energy independence from the Russian gas. Therefore, the energy mix has to change gradually, step by step. The impact of coal on labour market is still too high to reduce drastically coal energy. By 2030, the objective is to reach 50% of coal in the energy mix. The other half will be produce by nuclear, gas and renewable energy. The new energy mix is still in debate in these days, especially the financing part.
- **Silesia Voidvoiship – Marshall Office** represents 167 municipalities. It develops different actions for energy efficiency:
 - Anti-smog resolution: how to replace individual heating?
 - Air protection: financial support from ERDF to municipalities
 - Educating public and local municipalities
- **Silesian University of Technology:** courses on energy efficiency, environmental engineering. The University developed different projects with students such as:
 - District heating: combined heat power plant from renewable sources. A website has been set up with the aim of building your own energy system (www.enry.pl). The website allows seeing the predicted energy consumption in your home and comparing the possibilities of energy supply.

A general overview about energy in Poland was given to participants, with the presentation of the Polish energy policy. National policy has been translated at the local level into the Low-Carbon Economy Plan of the City of Katowice, which is the policy instrument addressed by MOLOC project. Later, partners went on site to visit good practices about energy efficiency.

✓ Energy efficiency actions in Poland and in Silesia – switch from an economy based on coal to clean and efficient energy

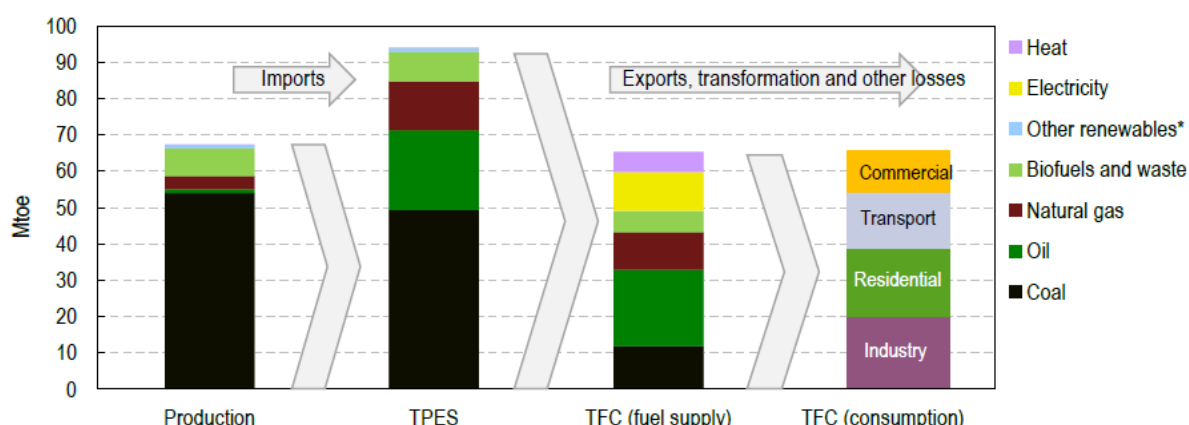
By Szymon LISZKA, President of Polish Foundation for Energy Efficiency

According to the International Energy Agency (IEA), “Poland is less supportive of this “energy system transformation” (i.e. decarbonisation of the energy mix) and foresees fossil fuel as a fundamental element of its energy system over the long term. Nonetheless, the government has placed a strong emphasis on reducing greenhouse gas emission and air pollution, increasing energy efficiency, meeting its renewable energy targets, decarbonising its transport system and introducing nuclear power.” (Energy Policies of IEA Countries, Poland, 2016)

Today, the main source of energy in Poland remains coal. In 2015, it covered 79% of energy production and 51% of total primary energy supply. The majority of the coal is used for heat and power generation and coal provides 81% of the electricity and 86% of the heat in Poland (International Energy Agency, 2016). Mining directly employs almost 100 000 people, and around 300 000 in indirect employment. Any measure affecting the sector has a large social impact and as a result is politically sensitive.

Oil is the second largest source of energy with 24% of total primary energy supply and the biggest in terms of total final consumption with 32%.

Natural gas is the third largest source of energy with a share of 15% of total primary energy supply (one third is produced within Poland and the rest is imported).



* Other renewables constitutes small shares of wind, hydro, solar and geothermal.

Note: Mtoe = million tonnes of oil-equivalent.

Source: IEA (2016a), *Energy Balances of OECD Countries 2016*, www.iea.org/statistics/.

Overview of energy production, total primary energy supply (TPES) and total final consumption (TFC) in 2014 in Poland

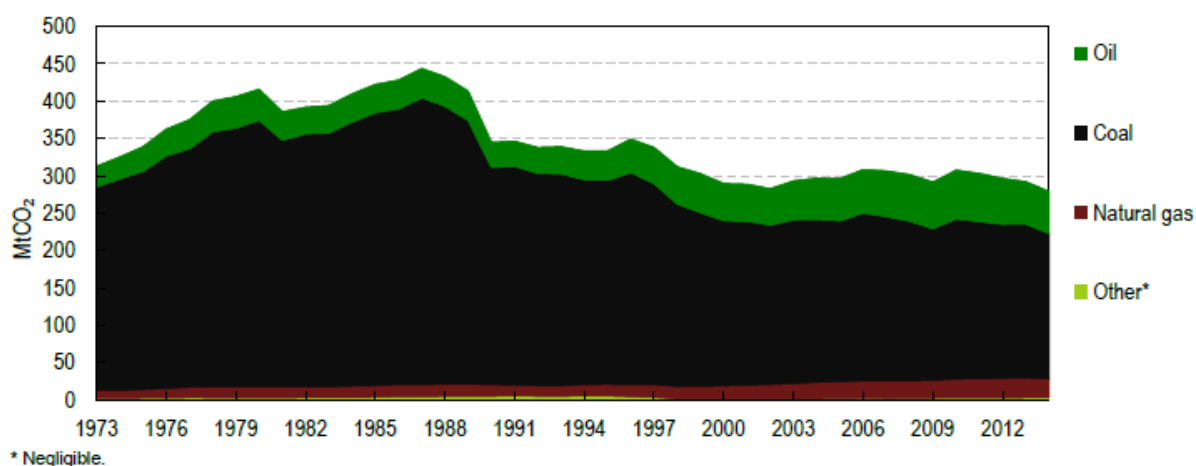
Even if the country has the largest share of coal in production, the country has started a slow transition from coal towards more oil, gas and renewable energy. Today, the largest renewable energy source is biofuel and waste, covering 88% of the energy supply.

Despite the transition, the government expects coal to remain the main source of energy in the mid-term. A fuel and technological diversification is on-going in order to reduce the major place of the coal. The development of cleaner technologies and the building of at least two nuclear power plants are examples of the national strategy;

Another objective of the government is to reduce the dependence on Russia for energy imports. In 2015, 88% of oil imports and 72% of natural gas imports came from Russia. Poland is working to reduce its dependence and diversify its energy sources and supply routes.

Regarding the energy context in Poland, air quality remains a major problem. The main source of CO₂ emissions is fossil fuel combustion in the energy sector (including transport). It represents 81% of greenhouse gas emission in 2014. (Energy Policies of IEA Countries, Poland, 2016)

Power and heat production represents over half of CO₂ emissions. Ageing and low-efficiency of combustion in heating units, and to a lesser extent, the behaviour of household consumers are the key factors of this situation. The following figure shows the role of coal in CO₂ emissions in Poland and the necessity for a transition.



Source of CO₂ emissions (IEA, 2016, CO₂ emissions from fuel combustion)

Even if important improvements have been made to modernize the Polish energy infrastructure, significant investments are still needed to ensure a sustainable supply of energy. The strategy of the government is to replace existing, low-efficiency generation units with new efficiency plants. Local air pollution is one of the largest environmental problems in Poland today. Household heating is a major source of local air pollution.

“Coal is the dominant source of emissions in Poland. Projections show that coal is expected to continue to play a large role in Poland’s energy mix in the long term. This necessitates that measures aimed at reducing emissions from the energy sector are developed and supported in order for Poland to be able to achieve a low-emission economy. Energy supply will be diversified, including introduction of nuclear power, increasing the shares of renewable energy and natural gas. In regards to the future role of coal, technologies with carbon capture and storage (CCS) and carbon capture and utilisation (CCU) will be pursued further in order for Poland to ensure a high degree of energy security through reliance on coal while focusing on mitigation of climate change.” (Energy Policies of IEA Countries, Poland, 2016)

After giving an overview of the energy transition in Poland, energy efficiency actions in Silesia and Katowice were presented.

Szymon LISZKA, President of Polish Foundation for Energy Efficiency stressed out the priority for renovation in buildings for greater energy efficiency. For over 20 years, programmes for thermo modernization are running, financed by public funds. Renovation in buildings is a key sector and has the highest CO₂ mitigation potential according to the Polish Foundation. (See figure below)

	Group of user / technology	CO ₂ mitigation potential, mln tones CO ₂ /y
1.	Households (appliances + lighting)	9,35
2.	Electric drives	12,07
3.	Street/squares, workshops lighting	2,95
4.	Reduction of transmission and distribution losses of electricity	1,5
5.	Buildings (thermal retrofitting, boilers replacement, heat recovery, solar collectors)	47,91
6.	Local boiler plants	0,55
7.	District (HOB) boiler plants	1,49
8.	Reduction of heat losses in transmission and distribution	1,7
	Analyzed technologies, total:	77,52

The CO₂ emission potential for the analyzed technologies of energy use (City of Katowice)

Polish Foundation for Energy Efficiency focuses on different **objectives** of energy efficiency in buildings:

- Modernization of public buildings
- Thermo modernization of residential buildings
- Low-emission mitigation
- Support for renewable energy sources
- New buildings –buildings codes
- Energy efficiency in industry

The objectives of the Foundation were illustrated by **projects implemented throughout Poland and gave different results:**

- Energy efficiency technologies became a market technologies as well as some renewable technologies
- Improvement of the standard of buildings
- Improvement of quality of living, learning and working
- Energy audit becoming a standard
- Inclusion of commercial banks in financing energy efficiency projects

However, different **challenges** appeared during the process:

- No planning of the action (no long-term vision): Do we really planning energy efficiency activities?
- No measurement of energy saving: Do we really know how much energy/money we are saving?
- Buildings codes: too high expectations for constructors (financial issue)

The role of the Foundation is to support ideas in term of energy efficiency. They don't provide money to energy efficiency actions. Projects are financed through banks, regional or national programme.

A last and short introduction on Silesia as leader in energy efficiency in Poland was presented. Before speaking about the Low-Carbon Economy Plan of Katowice, Szymon LISZKA stressed out the efficient management of energy in municipalities and low-emission mitigation programmes in Silesia.

✓ **Presentation of the Low-Carbon Economy Plan of the city of Katowice**

By Daniel WOLNY – Head of the Energy Management Office, Environment Department, Katowice City Hall

There are two current energy plan and low emissions strategies in the City of Katowice:

- **The Energy Plan**, a document mandatory in Poland. It assesses the current and future changes in the demand for heat, electricity and gas. It rationalizes the use of energy, using existing surpluses and local fuels. Moreover, the document gives the general strategy of energy transition in cities.
- **Low-Carbon Economy Plan (LCEP)** for the City of Katowice.

The elaboration of the document is not enforced by the law. It is a decision of the local government and local community, aware of the benefits of having such document. However, the National Fund for Environmental Protection and Water Management organised a competition supporting local measures for the implementation of climate and energy package through financial assistance in creating LCEP. The National Fund subsidizes 85% of eligible expenditure related to the elaboration of LCEP. Katowice was among the municipalities supported by the National Fund.

Low-carbon Economy Plan for the City of Katowice 2014-2020 was adopted by the City Council in 2014. The Plan comprises strategy and action plan related to sustainable, climate friendly economic growth, including the national and the European climate policy conditions as well as the local factors, specific for the city.

Specific **objectives** are:

1. Implementation of the idea of the model role of the public sector in the area of energy saving management,
2. Increasing energy and fuel efficiency in buildings,
3. Raising citizens' awareness of their impact on the local community eco-energy economy and air quality,
4. Promote friendly supply systems for fuel and energy,
5. Increase the use of renewable energy sources available in the area of city,
6. Promote and implement the idea of energy efficient buildings,
7. Promotion of energy-efficient lighting,
8. Promotion and realization of the vision of sustainable transport – including public, individual and bicycle transport.

It is assumed that the City is able to achieve a reduction of 7% of CO₂ emissions by 2020 compared to the forecast for 2020, and 4.3% reduction in emissions compared to base year 2012 by carrying out the activities contained in this LCEP.

According to the analysis, to achieve the CO₂ emission reduction target by 2020, emissions should reached the level of 2 0270 42 MgCO₂, and therefore decrease by 15 199 MgCO₂. LCEP for the City of Katowice contains projects planned for submission to the Regional Operational Program 2014-2020 (ROP) by the authority and it is an integral part of the ROP.

Key objectives were translated into **operational measures**, such as:

1. Implementation of functional green public procurement system,
2. Thermo-modernization of public buildings, residential and service buildings, implementation of media consumption management and monitoring system of energy and water, use of renewable energy sources (RES),
3. Supporting thermo-modernization processes in multi-dwelling buildings. Continuation of subsidies to change the way heating (from coal to gas) and for the application of RES for individual buildings,
4. Modernization/extension of power grids, modernization of energy sources, use of cogeneration,

5. Organization of social campaigns/campaigns, reconstruction thematic website and organization of information point on energy efficiency, information campaigns for residents,
6. Promoting energy-efficient building solutions, good designs, assistance in finding sources of financing, construction of low-energy or passive commercial facilities. Training for entrepreneurs,
7. Street lighting system, replacing lighting for more efficient use, implementation of intelligent lighting systems,
8. Public transport: purchase of new, efficient buses, trams, construction of transfer hubs, construction of bicycle paths with the infrastructure.

In term of budget, the programme was partly funded from the City of Katowice, the National Fund and EU funds. The cost of implementation of LCEP by 2020 will be around 523 million euros (33 million euros financed by the City).

According to the City of Katowice, barriers and challenges for developing LCEP are important. Involving the available financial resources regarding budget cuts and lack of staff is difficult. Furthermore, implementation works requires developing **tools for assessment and monitoring of low carbon investment**, better organization, education and building capacity, as well as cross-sectorial approach.

Within the MOLOC project, **improvement of LCEP through changes in management, introduction of new approaches to monitoring and assessment of tasks in order to increase their efficiency** is planned. Energy saving investments in public buildings is complex due to the following points: public procurement procedures, selection of the investment projects, monitoring systems and financial settlement of the results of performed tasks as well as the accessibility of the investment funds.

In this context, **development of a model system for assessment and monitoring of implementation of the LCEP Katowice is planned**, where the secondary result of the analyses will be guidelines necessary for the elaboration of a **coherent concept of energy management system in the public buildings including a noticeable ecological effect of the performed tasks**.

✓ Actions and projects against air pollution

By Jakub KUŁACH – Junior Inspector in the Energy Management Office, Environment Department, Katowice City Hall

Most polluted cities and towns in the EU

Annual average PM_{2.5} level (ug/m³)



World Health Organization, 2015

In 2015, Katowice was ranked 19th among the most polluted cities and towns in the EU by the World Health Organisation.

To fight against air pollution, the City of Katowice developed a strategy:

1. Support the poorest citizens: increase subsidy from 450 PLN to 900 PLN to help citizens in heating.

2. Implementation of new regulations: Inspection of Municipal police in private houses in search for garbage or prohibited types of fuel combustion in local heating installations.

3. Investments in municipal objects: - **291 million PLN** for thermo modernization of municipal multifamily buildings including new heating sources or connecting them to local heating network.

- **284 million PLN** for thermo modernization of public buildings including new heating sources, connecting to local heating network, LED lighting, small solar and photovoltaic plants with energy management system.

4. Subsidies for citizens: 234 million PLN for citizens for improving heating systems and installations, building new solar and photovoltaic installations.

5. Pro-ecological education: Regular meetings with citizens during occasional events like “Ecoresponsible event” or “Katowice Energy Days”.

Apart from the investments, the city elaborated a “short-time action plan”, containing instructions about informing citizens on current air quality and severe air pollution episodes. Information is distributed through different media (internet, radio, newspaper, television). Operational activities such as free public transport are taking

place to decrease CO₂ emissions.

The City of Katowice is part of several European projects, such as Urban Transitions Alliance or Awarir focusing on the improvement of air quality in cities.

Last but not least, Katowice is currently working on an adaptation plan to climate change. The main objective of the document is to identify main threats of climate change and will focus on ways to deal with them. The result of the document will be the evaluation of the most vulnerable area of the city to climate change and recommendations on public health, transport and water management.

✓ On-site study visits

To illustrate the morning discussions, partners went on site to discover and exchange with local partners on energy efficiency actions and the revitalization of post-industrial areas.

- **Presentation of Eco-Patrol – Central Mining Institute**

On the basis of high air pollution in the European Union and most of all in Katowice, measuring and monitoring air quality providing data is important issue to develop efficient solutions in cities. Measurement of air quality allows developing efficient actions against pollution.

In response of that, the Central Mining Institute, with Nissan, developed a mobile unit monitoring the emission of CO₂ and a drone to map the emission coming from chimneys. With these tools, they can produce a pollution map, which is the most valuable tool for efficient actions.

The objective of the map is to build awareness and inform people about low-quality air to replace energy system.



Eko Patrol GIG - City of Lille, June 2018

- **GPP Business Park: energy efficiency actions**

Given the fact that 270 billion euros is lost due to a lack of energy efficiency in the EU and that 40% of the energy is used in buildings in Poland, a private investor started a project in 2004. The idea was to transform post-industrial areas into a zone of modern business activities and innovation that is focused on technological development. The park is an energy efficient complex build with high-environmental standards, renting office spaces to companies.

All four buildings are using tri-generation technologies, meeting the standards for buildings that will be applicable in the European Union after 2020. It is a tri-generation natural gas fuelled system used for the production of electricity, heat and cold. It is able to produce 1500 MWh of electricity annually, enough to satisfy the building's demand. The production of 1MWh from coal emits 850 kg of CO₂ whereas 1MWh from gas emits 360 kg of CO₂. This is why they use tri-generation natural gas fuelled.

Other solutions have been implemented in the project to meet high energy efficiency buildings:

- Building management system
- Sensors
- Highly-efficient heat recovery system
- Air-conditioning systems based on heating and cooling beams
- Window and facade systems with high thermal insulation
- Advanced system of facades with automatically controlled blinds integrated with the light intensity control system
- Energy-efficient lighting system with light intensity sensors – minimum 40% energy savings
- Quick and energy-efficient lifts
- Rainwater recycling and secondary utilisation system



GPP Business Park – trigeneration system (City of Lille)



GPP Business Park - <http://www.katowice.pro/na-razie-nie-bedzie-rozszerzenia-aranic-ksse-w-katowicach/>

In 2012, one of the building has been certified BREEAM (Building Research Establishment Environmental Assessment Method = method of assessing, rating, and certifying the sustainability of buildings). The building is not only environmentally friendly but also cost-effective. Energy consumption in building is about 40-50 % less than in typical A class office buildings.

The primary energy demand is about 92,6 KWh/m²/year for GPP buildings. In comparison, in Poland, the primary energy demand is about 180 KWh/m²/year for a regular building.

The 7,800 m² building took 18 months to build. The cost of the project, including a 3,000 m² underground parking and landscaping, was about PLN 39 million (less than 10 million euros). It was 20% more expensive than regular building, but the investment return is about 1 year and a half.

The company, GPP Business Park is also partner of the first Polish Cluster of Passive and Energy Saving Construction.

Find out more information about GPP Business Park: <http://www.swegonairacademy.com/wp-content/uploads/2014/02/GPP-Business-Park.pdf>

And about trigeneration system: <https://www.clarke-energy.com/gas-engines/trigeneration/>

- ***Technology Park Euro-Centre: energy efficiency actions***

The Euro-Centrum Science and Technology Park is focused on the development of energy efficient technologies and energy saving in buildings. The park offers laboratories, research equipments, training and consulting services. Additionally, the park financially supports the establishment of technological companies, researches innovative ideas. It also coordinates the activities of the Cluster of Energy Saving Technology.

The park is built on energy efficiency principles. One of the building is an innovative passive building, which has been honoured with a Green Building Award. It sets an example of successful implementation of energy-saving systems and renewable energy sources in buildings. The 16 buildings of the park are located in a post-industrial site.

Instead of using natural gas for electricity or heating, the park uses renewable energy such as solar panels. The final energy consumption is about 32 MWh/m²/year for buildings in the park. The low energy consumption is due to high-insulation. Water is heated through solar collector and ceiling panels are connected to a heat pump system.



Technology Park Euro-Centrum - City of Lille, June 2018

One of the biggest challenge was to find constructors able to provide efficient technologies such as 300 KWh photovoltaic panels.

The project was co-financed by the European Union of up to 60%.

➤ Transformation of Katowice transport system

Venue: Katowice City Hall

✓ Transformation of Katowice transport system

By Adriana KAMINSKA-FLAK - Chief Specialist, Investor Service Department, Katowice City Hall

In Katowice, the modal share is divided as such: 62.5 % for individual car, 35.4 % for public transport, 2% for bicycle and 3.1 % for motorcycle, taxi and train.

Transport is the second largest emitting sector after power and heat production, accounting for 15, 7 % of total CO2 emissions. Compared to 2014, CO2 emissions due to transport increase by 36%.

In Poland, the Metropolis has the competence for transport. Two main objectives have been identified: price and comfortability.

In response of the pollution, the Metropolis took actions to **increase the use of public transport**: common single-use tickets, common periodic tickets, free trips for children and adolescents up to 16 years old, free public transport in days with smog, management board of metropolitan transport, bus from airport to several cities, ticket integration with Silesia railways.

Moreover, different projects are about to be developed: construction of **new tram lines**, system of integrated transport hubs in Katowice, development of bicycle infrastructure (52 bicycle rental points by the end of 2018). One of the biggest projects is transport hubs trough the city. Participants had the opportunity to visit the **passenger transfer centre**, still under construction.

✓ On site study visit: the passenger transfer centre in Katowice in the district Ligota (under construction)

“Ligota” transport hub is part of the four transport hubs, planned in the City of Katowice. The objective of the hub is to improve the use of public railway and bus transport and facilitate the flow of private car and bicycle transport.



City of Katowice, 2018

➤ Joint exchanges and discussions on the overall project

To end the study visit, partners exchanged and discussed on the progress of the project. The first year was dedicated to discovering partners and workshops led by Energy Cities. This year, in 2018, is dedicated to study visits in partner cities. Study visits show best practice solutions and lead to exchange on obstacles that partners are facing to the implementation of a low-carbon model. Exchanges, study visits and best practices will help each partner in the elaboration of three main documents:

- Comparative analysis on obstacles and solutions to a low-carbon model (Energy Cities);
- Deliverable of best practices
- Action plans for each partner city

From 2020, MOLOC project will come into a new phase of implementation. Action plans will be implemented during two years in partner cities to deliver operational projects.

Partners presented their progress regarding the local analysis and MOLOC project:

- **Katowice** defined the policy instrument addressed in the MOLOC project i.e. LCEP of the City of Katowice. One obstacle over ten will be completed soon. They manage to have a large and motivated local stakeholder group, helping them in the elaboration of local analysis. They have a good collaboration and very good practice on engagement of stakeholders (more than 20 active people in stakeholder group). One of the issues for Katowice is a matter of political vision about the LCEP priorities’.
- **Hamburg** is starting. They are trying to delegate several obstacles of the analysis. First part of the study will be ready by the end of June. One of the issues for Hamburg is to bring together and work with several partners in the local stakeholder group. It is difficult to convince local stakeholders to work on the project.
- **Lille** completed the selection of consultant for the local analysis. Finding a clear angle for the MOLOC project is needed. There is a need to focus on specific target/policy instrument. So far, Lille did not focus on a specific policy instrument, excepted the ERDF regional operational programme. Three priorities have been identified in Lille: energy efficiency in public buildings, sustainable urban planning and the place of nature in the city. There is a great local stakeholder involvement.
- **Torino** is going well. MOLOC has been clearly integrated to the revision of the Master Plan of the City, which is the policy instrument addressed by the project. They signed as well an agreement with Politecnico di Torino about a tool for urban development and energy planning. MOLOC was the final push to give another dimension to Energy Centre and bring it to the forefront.
- **Suceava** : the first electric bus has been delivered. Local analysis will be completed on time.

Feedbacks from Katowice study visit were outlined:

- Contextualisation of study visit has been improved and remains important to give a framework and a general overview of projects. A need for an overall approach would be a great with the mapping of stakeholders for example.
- Study tour is not only about showing good practices. It is also about showing obstacles and issues and what are the solutions developed. The objective is to focus on the way and the path of implementation instead of the results.
- An idea about delegating study visit to stakeholder group partner was raised.

**Finally, participants of Katowice study visit were asked to answer to the following questions:
What did you learn from Katowice? What did you like the most?**

- Actions to raise awareness about air pollution, educating people on climate change
- Getting positive on projects – strategic global change of the city
- Assuming the history of the city
- Cooperation between stakeholders about energy issues and the forecast of air pollution
- Projects respecting the history of the city
- Showcase project about energy efficiency: a good idea to illustrate the strategy of the city
- Inhabitants proud of their city
- Linking air quality and energy efficiency actions

In September, MOLOC partners will head to Hamburg, for the third study visit. See you in Hamburg!

22/06/2018 – City of Lille



MOLOC partners (GIG, 14/06/18)