

# NON-TECHNICAL SUMMARY

## OLSZTYN WASTE MANAGEMENT PPP



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## WHAT IS MPEC AND THE PROJECT

Miejskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o. (the Company, MPEC) via a public-private partnership is developing a heating plant (the Project) located in the city of Olsztyn, northern Poland.

MPEC is a municipal company wholly owned by the city of Olsztyn operating the 'Kortowo' municipal heating plant and district heating network of a total length of approximately 155 km. MPEC distributes heat and domestic hot water to approximately 60% of apartments and public buildings in the city of Olsztyn.

The Olsztyn Waste Management PPP Project is planned to be developed by MPEC in order to provide heat supply for residents of the city of Olsztyn. Moreover, realization of the Project contributes in providing an effective management of energy fraction of municipal waste and alternative fuel generated in the Warmia-Mazury voivodship. The Project is expected to be finished in 2020. Financing of the Project is provided by the public-private partnership created by MPEC and a private partner, whose selection is currently ongoing. The private partner provides a substantial capital contribution. In addition MPEC has approached the European Bank for Reconstruction and Development (EBRD) to provide a financing (loan) towards the project development.

The Project is developed by MPEC with very strong commitment to follow the highest environmental and social standards. Moreover, involvement of international financing institutions secure that the Project will be developed in line with applicable national and EU regulations and the best industry practice.

The Project was categories A in line with the EBRD Environmental and Social Policy and therefore requiring an Environmental and Social Impact Assessment (ESIA) to the standards of international lenders (EBRD).

As part of the detailed review of the Project and Project planning activities against EBRD Performance Requirements, a Gap Analysis Report has been prepared by Ramboll Environ and it identified that to meet EBRD Requirements the national EIA should be supplemented with independent studies regarding:

- BAT Assessment;
- Impacts related to the project associated facilities;
- Social impacts;
- Stakeholders engagement activities;
- Existing environmental and social management system
- Emission of carbon dioxide.

Additional review of the Project, its technical documentation and planning activities undertaken to date covering the above topics is presented in this Supplementary Environmental and Social Analysis Report, prepared by Ramboll Environ. This document is a non-technical summary (NTS) of the Supplementary Environmental and Social Analysis Report (SESAR) conducted for Project to the standards of international Lenders (EBRD). The NTS outlines the findings of the SESAR in a non-technical language, together with the mitigation measures proposed by MPEC for the management of the Projects environmental and social issues.

In addition to Supplementary E&S Analysis Report, the Stakeholder Engagement Plan, Non-technical Summary and Environmental and Social Action Plan were prepared and will be part of the public disclosure package.

## WHY THE CITY OF OLSZTYN NEEDS HEAT

Currently, district heating network of the city of Olsztyn is supplied by two major sources, which are:

- 'Kortowo' municipal heating plant, owned and operated by MPEC; and
- Combined heat and power (CHP) plant, owned and operated by Michelin Polska S.A. (Michelin).

Remaining demand for heat in the city is covered with local boiler houses fueled with heating oil or hard coal and individual heating sources or household furnaces mainly fueled with hard coal. Domestic hot water is also supplied with the use of solar panels.

During heating season, 'Kortowo' municipal heating plant with the capacity of 140-150 MWt (after modernization the capacity will increase to 150-175 MWt) is able to generate approximately 1-1.4 TJ of heat annually, which covers approximately 60% of the needs for heat in the city of Olsztyn. Remaining approximately 40% is covered with operation of the Michelin CHP plant with the capacity of 90 MWt, which generates approximately 0.8-1 TJ of heat annually.

In 2011, Michelin has decided on termination of the operation of the CHP plant which will result in a deficit of heat supply to residents and public offices of the city of Olsztyn. It was agreed that the operation of the Michelin CHP plant will be terminated by the end of 2019. The capacity of the operated by MPEC 'Kortowo' municipal heating plant will not be sufficient to cover total heat demand in the city after 2020. Therefore, there is a need to develop a new heating source in the city.

The selection of the proposed configuration of the Central Heating Plant in Olsztyn was preceded with a number of different feasibility studies, which analyzed various configurations taking into account such criteria as possible locations and technical solutions, the latter including different fuels and boilers technologies. Planned heating plant will generate heat, hot water and electricity and will be a modern installation fueled with energy fraction of municipal waste and alternative fuel (*Refuse-Derived Fuel*, RDF) of a capacity sufficient to produce approximately 0.7-0.8 TJ of heat, which cover approximately 40% of heat demand in the city. In addition, during renovations and the coldest days in a year, heat will be also generated by two reserve-peak boilers fueled with natural gas or heating oil.

## LEGISLATIVE CONTEXT OF THE PROJECT

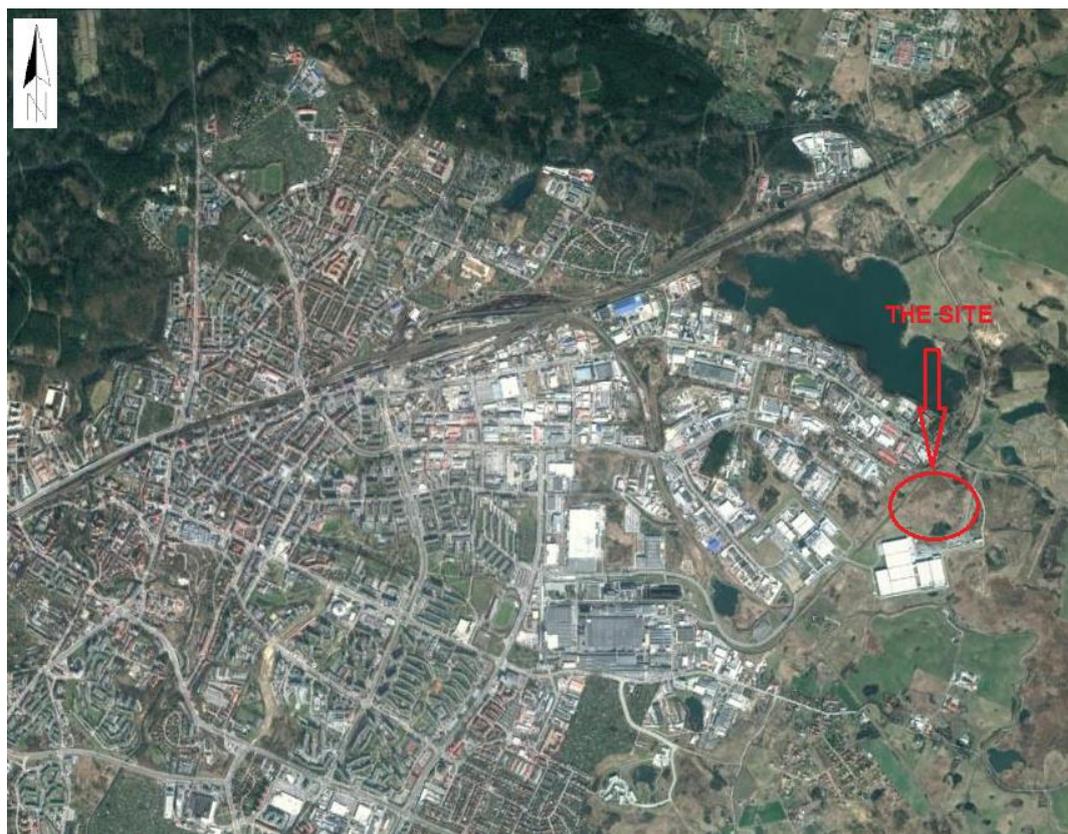
The planned heating plant classified as a thermal treatment installation is as an investment, which may have a significant impact on the environment and therefore performance of the environmental impact assessment (the EIA procedure) was required prior the procedure for obtaining the building permit. The environmental decision was issued with Decision No. SD.6220.15.2015.MJ on December 22, 2015 by the President of the City of Olsztyn. The EIA procedure was conducted in accordance with the Act on Environmental Information Disclosure and Environment Protection, Public Participation in Environment Protection and on Environmental Impact Assessments (the EIA Act) of October 3, 2008 (with further amendments) which fully adopts EU directive on environmental impact assessment. Following requirements of the EIA Act, an EIA report was prepared by an independent environmental consultant („ENERGOPROJEKT-KATOWICE" SA). The report fully met legal requirements and addressed all environmental issues at the stage of construction, operation and dismantling of the planned installation. No adverse impacts have been identified. The EIA procedure was open to public. The issued environmental decision defined environmental constraints and mitigation measures to be incorporated into the detail design, construction and operational phases of the Project.

Moreover, the Project was included in the Waste Management Plan of the Warmia-Mazury voivodship for the years 2016-2022 (the WMP) adopted by the Parliament of the Warmia-Mazury voivodship on December 28, 2016 with the Resolution No. XXIII/523/16, as a thermal treatment installation of municipal waste and residues after mechanical treatment of municipal waste (classified under waste codes: 19 12 10 and 19 12 12). No other thermal treatment installations were listed in the WMP. The planned capacity of the installation is 50,000 t/y in 2020 and 110,000 t/y in 2022. The WMP is a major strategic document in the Voivodship compliant with the National Waste Management Plan adopted with the Resolution No. 88 by the Council of Minister on July 1, 2016 (Polish Journal of Law: MP 2016 No. 88 item 784). The WMP forms the frames of the waste management in the Voivodship in order to fulfill recycling and re-use targets as well as decrease the amounts of waste directed for disposal to landfills, as required by the EU Directives.

According to the WMP, 57,731 tons of waste code 19 12 12 (residues after mechanical treatment of municipal waste) of calorific value exceeding 6 MJ/kg and 56,086.45 tons of waste code 19 12 10 (RDF, i.e. alternative fuel) was generated in the region in 2014. Due to last changes in the national waste legislation, these waste are considered to be an important source for thermal conversion. Since 2016, landfilling of high-energy fraction of waste is banned in Poland. Alternative fuel generated from waste is widely applied in cement plants and used in the process of co-incineration during production of cement. However, due to lack of thermal treatment installation of municipal waste in the voivodship, generated alternative fuel is mainly used for energy purposes outside Warmia-Mazury voivodship.

## PROJECT LOCATION AND PRESENTATION

The planned heating plant will be located at 48 Lubelska Street in the eastern portion of the city of Olsztyn, Warmia-Mazury Voivodship, northern Poland. Location of the planned facility (the site) is presented on the figures below:



**Figure 1.** Location of the planned heating plant (the site). Source Google Earth, map dated October 2015.



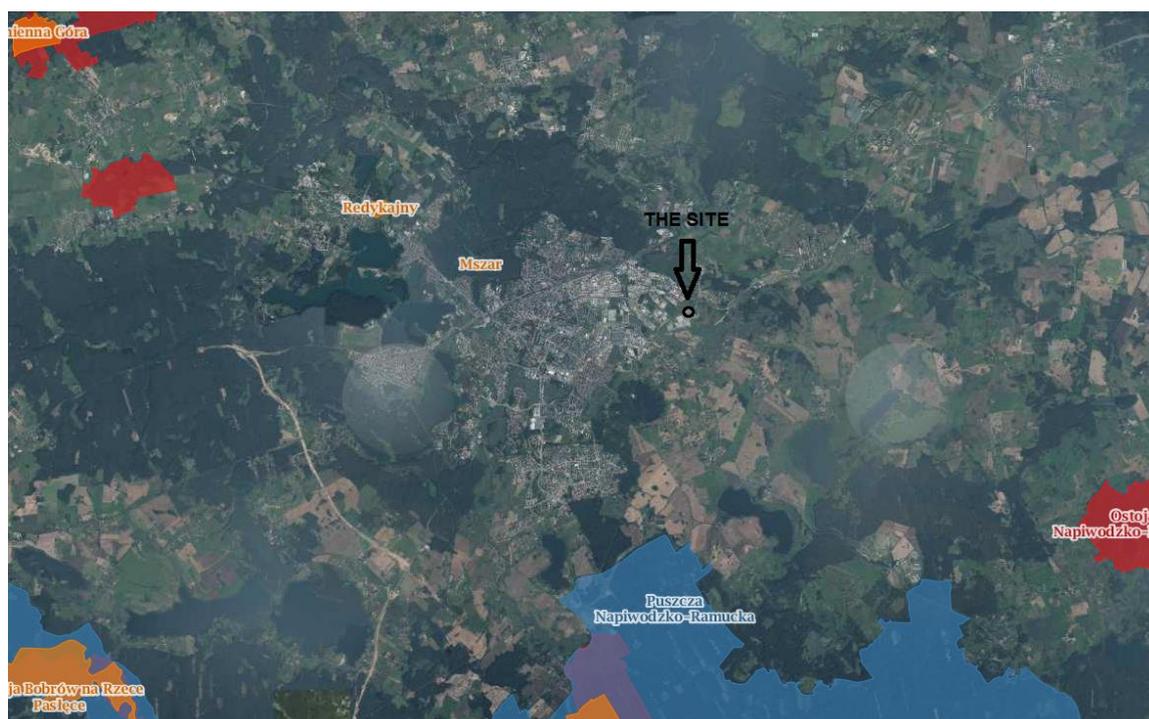
**Figure 2.** Location of the planned heating plant (marked in red). *Source: The Environmental Impact Assessment Report prepared by the Company of Energoprojekt-Katowice SA in April 2015.*

The site comprises land plots No. 25/1, 25/2, 25/3, 6/1, 6/2 and 6/3 of a total area of approximately 8 hectares (ha), which are owned by MPEC. The site is located within the Warmia-Mazury Special Economic Zone.

The nearest located nature protection areas are as follows:

- 1) Natura 2000 area established pursuant to Habitats and Birds Directives:
  - a) Ostoja Napiwodzko-Ramucka (PLH280052) - located approximately 8.9 km to the southeast of the site;
  - b) Puszcza Napiwodzko-Ramucka (PLB280007) - located approximately 6.1 km to the south of the site.
- 2) Landscape protected areas:
  - a) Dolina Środkowej Łyny located approximately 4 km to the north of the site;
  - b) Ostoja Puszczy Napiwodzko-Ramuckiej – located approximately 4.3 km to the south of the site;
  - c) Obszar Chronionego Krajobrazu Pojezierza Olsztyńskiego – located approximately 4.4 km to the east of the site.
- 3) Nature reserves:
  - a) Mszar - located approximately 5.6 km to the northwest of the site;
  - b) Redykajny - located approximately 8.4 km to the northwest of the site;
  - c) Las Warmiński im prof. Benona Polakowskiego - located approximately 10.6 km to the south of the site;
  - d) Jezioro Kośno - located approximately 14.8 km to the southeast of the site;
  - e) Ostoja Bobrów na Rzece Pasłęce – located approximately 18 km to the southwest of the site;
  - f) Kamienna Góra - located approximately 18.4 km to the northwest of the site.

The nearest located nature protection areas are presented on the figure below:



**Figure 3.** The nearest located nature protection areas. Source: Geoserwis - Website of the Chief Environmental Protection Directorate (available on the Internet: <http://geoserwis.gdos.gov.pl/mapy/>, access: April 2017).

The site is surrounded by railway lines (from the west), access road to the Michelin logistic center (from the east), Michelin logistic center (from the south) and area designated for the planned ring road of the city of Olsztyn (from the north). The site is not located in the close vicinity of nature protection areas. The nearest residential development is located in a distance of approximately 300 m to the northwest of the site. The subject site is an undeveloped idle land covered with vegetation of a non-anthropogenic character, including grasses and weeds. The subject site is not used for agricultural purposes.

On the basis of the open to public competition conducted by MPEC in 2015, the architectural concept of the Project has been chosen. The concept prepared by the architectural office of Mr. Maciej Powązka is presented on the figures below:



**Figure 4.** Architectural concept of the Project. Source: Webiste devoted to the Project developed by MPEC (avaialbe on the Internet: <http://ec.olsztyn.pl/plebiscyt>, access: April 2017).



**Figure 5.** Architectural concept of the Project. Source: Webiste devoted to the Project developed by MPEC (avaialbe on the Internet: <http://ec.olsztyn.pl/plebiscyt>, access: April 2017).



**Figure 6.** Architectural concept of the Project. *Source: Webiste devoted to the Project developed by MPEC (avaialbe on the Internet: <http://ec.olsztyn.pl/plebiscyt>, access: April 2017).*

Construction of the heating plant fueled with alternative fuel is a modern solution, which allows to provide heat supply for residents of the city of Olsztyn without use of fossil fuels and positively contributes in providing the effective management of energy fraction of municipal waste and alternative fuel generated in the region. For realization of the Project, MPEC has already obtained the environmental decision and currently the Project is in a design phase.

## HOW THE HEATING PLANT WILL BE OPERATED

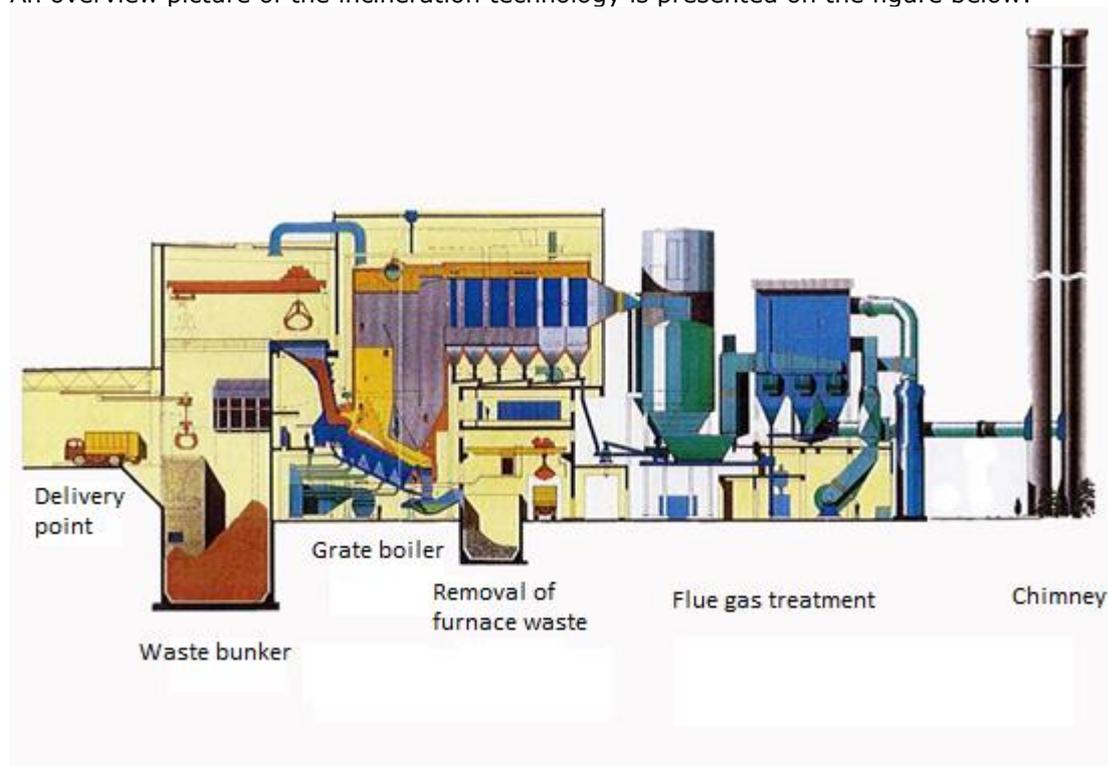
The planned heating plant will comprise of:

- point of fuel acceptance and unloading;
- waste bunker for fuel delivery to the process;
- boiler room with grate RDF-fired incineration boiler with thermal power of 48 MWt;
- flue gas cleaning (treatment) system;
- chimney with exhaust monitoring system;
- installation for furnace waste management;
- engine room;
- external installations;
- ancillary installations, including management of auxiliary fuel (light heating oil), process water pre-treatment plant, sorbent and ammonia (or urea) management installations;
- two reserve-peak boilers fired by natural gas or heating oil with a power of 38 MW each.

To guarantee power internal supply during blackouts, a diesel emergency power generator with a power of 0.85 MW has been also anticipated.

The planned facility will be fueled with alternative fuel generated in mechanical-biological treatment installation located in Olsztyn and operated by a limited liability company Zakład Gospodarki Odpadami Komunalnymi (ZGOK), high-energy fraction generated after mechanical and biological treatment of municipal waste and other types of waste with similar parameters. Total capacity of the planned installation is 110,000 tons per year.

An overview picture of the incineration technology is presented on the figure below:



**Figure 7.** An overview picture of the incineration technology. *Source: The Environmental Impact Assessment Report prepared by the Company of Energoprojekt-Katowice SA in April 2015.*

The new heat source will be operated in cogeneration and will produce heat for the heat net, hot water and electricity. The basic element of the planned Project will be the thermal treatment installation using grate incineration technology, powered by combustible fraction of municipal waste. The grate boiler will produce steam which will power a steam turbine. A heat exchanger will recover the heat from the turbine exhaust, delivering it to the district heating network. The turbine will drive a generator producing energy delivered to the new 110 kV switchgear. Backup power for own needs will be supplied from a 15 kV power network.

Regarding the flue gas treatment a semi-dry method will be used, with quicklime or hydrated lime for acid gases reduction, selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) with the use of ammonia (or urea) for nitrogen oxides reduction and activated carbon for heavy metals and dioxins reduction. Particulate matter will be removed by bag filters.

## PROJECT CONSEQUENCES FOR THE ENVIRONMENT

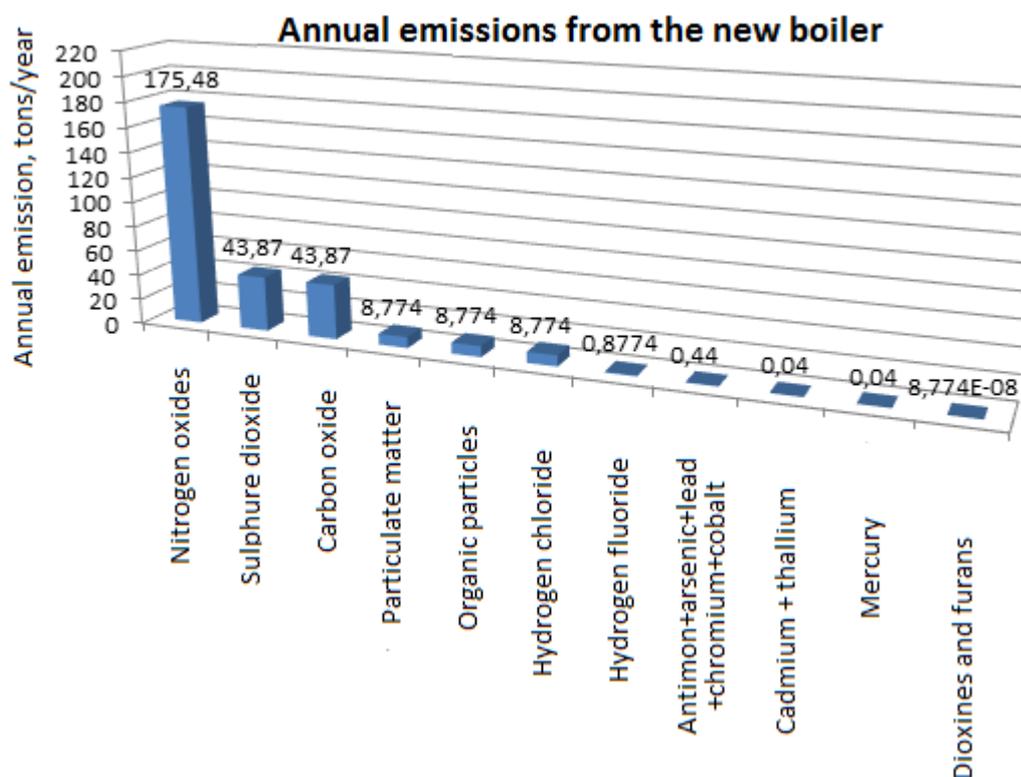
The Project was subject to environmental impact assessment conducted by the competent authorities in the city of Olsztyn. The assessment was done based on the prepared EIA Report, which included all aspects required by the national and EU legislation. The EIA Report analyzed different alternatives of localization and technology adopted for the Project and indicated option the most favorable for the environment and also preferred by the developer. Non-project alternative was analyzed and was found unfavorable for the environment and the city of Olsztyn as well as the whole Voivodeship.

The main impacts on the environment of the Project are associated with air emission, noise emission, waste generation (including hazardous waste) and wastewater management. The EIA

report addressed all environmental issues connected with the Project at the stage of construction, operation and dismantling. No adverse impacts have been identified.

The planned heating plant will be operated in accordance with applicable national and EU regulations. Use of the grate boiler will minimize the amounts of hazardous waste generated.

Emissions of pollutants to the air will be reduced to the lowest possible levels, compliant with strict emission standards, thanks to the operation of the adopted flue gas treatment technology. Maximum annual emission calculated on the basis of the applicable emission standards and time of operation of the planned facility is presented the chart below:



**Figure 8.** Annual air emission from the new boiler calculated on the basis of the emission standards and time of operation. Source: *The Environmental Impcat Assessment Report prepared by the Company of Energoprojekt-Katowice SA in April 2015.*

Modelling results of noise propagation in the environment proved that noise emissions from the operation of the heating plant will not cause any breaches of permissible values as specified noise protected areas such as residential development. Moreover, generated due to operation of the heating plant furnace non-hazardous waste will be used as additives in the production of asphalt. Wastewater will be collected and pre-treated prior discharging to the municipal sewage system. Storage of waste, sorbents and other chemicals will be conducted in a way preventing soil and groundwater contamination. Storage areas will be hardened and equipped with drainage collection systems and tanks additionally will be equipped with secondary containments preventing spillages to the ground.

Realization of the Project allows for consistent and ecological implementation of two objectives: maintain continuity of heat supply in the city of Olsztyn without the use of fossil fuels and the efficient management of energy fraction of municipal waste and alternative fuel delivered from Warmia-Mazury voivodship.

## PROJECT COMPLIANCE WITH EU AND LENDERS REQUIREMENTS

The national EIA report prepared by Energoprojekt Katowice in April 2015 and approved by the competent authorities resulting in Environmental Decision (environmental permit) issued in 2016 was independently reviewed by Ramboll Environ on behalf of the EBRD and found to be in line with the EU EIA Directive, Habitat Directive, IED Directive and other relevant European Legislation.

Additional assessment of the Project were undertaken against EBRD Performance Requirements and brought the following conclusions presented below.

### **BEST AVAILABLE TECHNIQUE (BAT) Assessment**

The adopted technological solutions are in line with Best Available Technique (BAT) requirements, as outlined currently binding 2006 BREF (BAT reference document) and in the working draft of BREF for waste incineration was published by the European IPPC Bureau in May 2017. Resulting from the assessment against the 2017 draft BREF on waste incineration, the Project which will utilize the well-known technology and adopt the best industry practice is fully capable to meet the requirements stipulated by the 2017 draft BREF. The current Project design is already in vast extend compliant with the 2017 draft and a full compliance will require limited technical additions, such as e.g. installation of the continuous monitoring system for mercury. This requirement is addressed in the Environmental and Social Action Plan for the Project. The organizational aspects, including environmental and social management system and appropriate procedures and management plans, will be prepared, implemented and maintained during the Project lifetime, as committed in the Environmental and Social Action Plan (ESAP), which will form integral part of the legal financing agreement with EBRD.

A need for project assessment versus BAT, EU and national regulations during the project lifetime is directly related to EIA procedure as well as IPPC permitting and committed in the ESAP. By the time the project is implemented it is expected that final revisions to the 2017 draft BREF will be published and binding for the new projects.

The Project will be subject to ongoing monitoring by the regional and national environmental authorities and by the Lenders.

### **CUMULATIVE AIR EMISSIONS IMPACTS**

Olsztyn has no air quality issues related to the emissions from large combustion plants, however it has localised problems related to road traffic and seasonal heating from local residential boilers. Moreover, it is expected that the situation in respect to air quality will improve after shut-down of the Michelin CHP, planned for 2020.

The implementation of the Project will result with reduction of total air emissions for SO<sub>2</sub> and PM and increase of emission of NO<sub>2</sub>. However, in order to meet the emission standards after 2020 the Kortowo CHP will install de-NO<sub>x</sub> installations on all boilers, therefore further reduction of NO<sub>x</sub> will occur.

Based on the EIA Report, the new facility will incinerate RDF in an amount equivalent to 1350.7 TJ/a of energy. Apart from RDF, the new facility will also use peak boilers fired either with fuel oil or natural gas. Based on the energy production data estimation of the current emission

from both Michelin CHP and Kortowo CHP and predicted emission from new CHP and Kortowo CHP has been completed. Total reduction of CO<sub>2</sub> emission will be 2 thousand tons per year (195 versus 193 thousand tons), however, 59 thousand tons originating from biogenic RDF incineration is considered neutral for the environment, hence the actual reduction of CO<sub>2</sub> emission is 61 thousand tons per year which corresponds to reduction by 31%.

## **SOURCES and TRANSPORTATION OF ALTERNATIVE FUEL**

The facility will be fuelled with RDF which will be delivered mainly from the nearby municipal waste treatment facility operated by Zakład Gospodarki Odpadami Komunalnymi (ZGOK). Based on horizontal and commercial agreements, the facility can be also supplied with fuel from:

- Ekologiczny Związek Gmin „Działdowszczyzna” in Działdowo
- Przedsiębiorstwo Gospodarki Odpadami „Eko-MAZURY” Sp. z o.o. in Siedliska
- Zakład Unieszkodliwiania Odpadów Komunalnych Spytkowo Sp. z o.o.
- Zakład Utylizacji Odpadów Sp. z o.o. in Elbląg
- Novago Sp. z o.o. in Mława

ZGOK is a municipal company owned by the local authorities of 37 municipalities located in Warmia-Mazury voivodship. Since August 2015 ZGOK operates a mechanical-biological treatment (MBT) installation of municipal waste located at 53 Lubelska Street in the city of Olsztyn. The installation has the capacity of approximately 342.5 tons per day (i.e. approx. 125,000 tons per year) and is operated 365 days per year on three shifts. For operation of the IPPC installation ZGOK has obtained the Integrated Permit (further referred as IPPC permit).

The review of the facility, undertaken as part of the Projects supply chain review, suggests that it has been designed and currently operates in line with environmental standards, local regulations and best international industry practice, thus environmental and social issues related to supply chain of the waste to the Project are considered appropriately mitigated.

From the perspective of the Project, transport of wastes may generate impacts during delivery of wastes to ZGOK and then during delivery from ZGOK to the facility. Municipal waste collected from 37 municipalities that belong to the Central waste management region are transported to one of the nearest located transfer stations, each equipped with compacting machines in order to decrease the volume of transported waste prior to transport to the MBT installation in Olsztyn. Waste collected in the municipalities are transported by garbage trucks owned and operated by local waste collection companies to the transfer stations, that are situated at the locations previously occupied by landfills, thus not generating additional traffic at these routes. The average capacity of garbage trucks varies between 10 m<sup>3</sup> and 24 m<sup>3</sup>. Location of the transfer stations at the sites previously used as landfills secures that the waste transport does not expose other groups of people than previously.

Operation of the MBT installation with the capacity of 342.5 tons of municipal waste per day requires of at least 18 container vehicles with approximate load of 20 tons of municipal waste to be delivered to the facility daily. The containers are tight which protects from losing their load underway as well as limits odor nuisance. As reported by the ZGOG personnel, no complaints with respect to transport of wastes to ZGOK have been submitted.

After processing in ZGOK, the alternative fuel will be delivered to the CHP with use of a truck transport. The planned delivery road passes mostly on the access roads from the road No. 16 to ZGOK and from the road No. 16 to the CHP, of a total approximate length of 1550m. Only approx. 50 m of the route passes on the road No. 16. Delivery of 110 thousand tons of fuel will, according to EIA report require approximately 40 trips every working day. Further, fuel will be delivered in dedicated trucks so will be protected from atmospheric precipitation and losing load on the way.

The total number of truck trips per day is negligible to the current traffic on the road No. 16 and as such should not generate any negative social issues.

## **SOCIAL IMPACTS**

The impacts generated during construction and dismantling phase will be mainly associated with nuisances for the local society, risks related to increased traffic and H&S risk for the construction workers and drivers. Mitigation of such impacts will be achieved by proper impacts' management by SPV and MPEC.

The nuisances to the local society will be limited by proper organization of the construction\dismantling works, such as:

- Conducting delivery of equipment and building materials during the day hours only, unless delivery at night is necessary due to technological reasons (e.g. construction of concrete floors or foundations) or legal requirements (e.g. delivery of oversize cargo). Further, delivery of materials to the construction site should be properly planned by meaning of a Delivery Management Plan which will optimize delivery routes to reduce impact on residential areas, avoiding increased impact on traffic jams and improving road safety;
- Conducting the works during day hours only, unless such works must be conducted at night due to technological requirements. Such action would prevent to some extent emissions of noise that might be detrimental to health and comfort of people residing in the nearby area, as well as:
- Maintaining the Stakeholders Engagement Plan and informing in advance the local society about planned works on the district heating network so the people are aware of the upcoming shortage in heat supply and possible streets exclusions from normal traffic.

The impacts to the local society during the operational phase of the Project will be mitigated by:

- Monitoring of the facility environmental performance, in particular air and noise emission and consequently securing the quality of citizens' life and exposure to air quality related diseases and noise nuisance. The continuous emission monitoring system will be installed for certain pollutants and for other pollutants periodical measurements will be conducted in line with the IED and the environmental management system procedures, which will secure that the overall performance of the facility will comply with BAT, IED and good industry practice. Undisturbed and controlled operations of the plant will secure that the air quality standards will not be exceeded so the people will not be exposed to risks related with polluted air. The air quality monitoring system is not planned for the facility as such in Poland is maintained by Inspectorates of Environment Protection which assures the same quality of measurements and unified methodology of observations for the entire country. The nearest monitoring station is located at Puzzkina 10 Str., approximately 4.5 km to the north-west of the site.
- MPEC and SPV will maintain a Stakeholders Engagement Plan and grievance mechanism to secure appropriate exchange of information with all the stakeholders, including local society, and properly address all situations assessed by individuals or organizations as the issues of concern.

The mitigation of impacts to the internal stakeholders, i.e. own workers and supply chain will be achieved by implementation of the following measures:

- MPEC and the SPV will comply with all Polish labor and health and safety regulations, specifically Labor Code and EBRD PR 2 requirements including Core ILO conventions during all phases of the project. Worker health and safety management systems are currently in place for the operation of the Kortowo CHP and relevant management systems and operating procedures will be developed for operations of the Waste to Energy Facility.

- MPEC via SPV will develop a Labour Management Plan, which will apply to SPV and its contractors during construction and operation of the Project, and will outline procedures and requirements to ensure that SPV and its Contractors respect and protect the fundamental principles and rights of workers through promoting personal respect and a safe work place. This will include, despite of the nationality of workers:
  - fair treatment;
  - non-discrimination and equal opportunities for all workers;
  - establishing, maintaining and improving a sound worker-management relationship;
  - compliance with applicable national labour and employment laws;
  - protecting and promoting the safety and health of workers, especially by promoting safe and healthy working conditions;
  - preventing the use of forced labour and child labour (as defined by the ILO and Polish legislation).
- MPEC via SPV will monitor employee standards of its contractors throughout the lifetime of the Project through regular labour and OHS audits.
- MPEC via SPV will develop an Emergency Response Plan, which will provide the process and procedures for the Operator to follow, together with local emergency service organisations, in the event of an occupational safety or environment incident during the life of the Project.
- Requirement imposed by the draft contract for the construction works to follow all applicable H&S standards and regulations, which means that the employees as a minimum will be:
  - provided with H&S training appropriate for the type of executed works;
  - sufficiently skilled and experienced and will possess necessary authorizations;
  - equipped with appropriate PPE;
  - Implementation of the H&S plan prepared as a part of the building design.

## HOW WILL THE PROJECT MANAGE ITS ENVIRONMENTAL AND SOCIAL RISKS

MPEC operations are ruled by an integrated management system which adopts and is certified by independent auditors to ISO 9001, ISO 14001, and PN-N 18001 standards.

It was agreed under the Environmental and Social Action Plan for the project which will form part of the legal financing agreement with the EBRD that MPEC via Special Purpose Vehicle (the Company formed with the Private Partner for construction and operation of the Project) will develop a suite of detailed Environmental and Social Management Plans which will form part of its Environmental and Social Management System. The Management Plans will describe how MPEC via SPV and the Operator will ensure that environmental and social risks identified in the national EIA and Supplementary Environmental and Social Analysis Report are managed and how relevant mitigation measures are implemented. The SPV will establish, maintain and strengthen, as necessary, an organizational structure that defines roles, responsibilities and authority to implement the ESMS for ensuring ongoing compliance with relevant national regulatory requirements, and the PRs. Specific personnel, including management representative, will be designated with clear lines of responsibility and authority to maintain and implement the ESMS. The SPV will secure appropriate resources, including financing, to maintain an appropriate system maintenance and improvements.

Management of Environmental and Social Impacts will be carried out through development of the following Management Plans:

- Environmental and Social Management System- Framework

- Air Quality Management Plan
- Noise and Vibration Management Plan
- Community Health and Safety Plan
- Contractor Management Plan
- Emergency Response Plan
- Hazardous Materials Management Plan
- Supply Chain Management Plan
- Waste Management Plan
- Waste Water Management Plan
- Traffic and Road Safety Plan
- Human Resource Management Plan
- Employees Grievance Mechanism
- Security Management Plan
- Occupational Health and Safety Plan
- Updated Stakeholder Engagement Plan
- External Grievance Mechanism
- Labor Management Plan
- Other than Normal Operation Management Plan

In line with requirements of the national EIA, the Environmental Decision and this Supplementary Environmental and Social Report and the accompanying Environmental and Social Action Plan the MPEC via SPV will developed and implement detailed monitoring measures to ensure that it can check that environmental and social management measures and commitments are working and that it is fulfilling its regulatory requirements and other commitments. The detailed monitoring measures will be listed in each Environmental and Social Management Plan, and will include a description of what needs to be monitored, how it is monitored, how often, and who is responsible for the monitoring.

Further, the ESAP requires that SPV:

- SPV monitor environmental and social performance of the alternative fuel suppliers as well as the issues related to waste and fuel transportation;
- for the construction period the works contractor will strictly follow all respective H&S rules, including these related to provision of appropriate PPE, training and medical examinations of the workers and supervision on this obligations will be ruled by the Management Plans listed above;
- In order to properly address the need for resources efficiency and pollution prevention and control the SPV will need to apply for integrated permit. The operations of the CHP will follow all provisions of the permit, including these related to monitoring of environmental impacts and use of energy and substances.
- the designing of the plant will take into account all provisions of IED and BREF (including 2017 draft BREF) for waste incineration, including advanced control system and continuous emission monitoring system to secure safe and environmental friendly performance of the plant at the operational stage;
- Install at all emission sources a continuous monitoring system (CMS) to control emissions in line with the environmental permit, BREF, IED and BAT Conclusions for Large Combustion Plants as well as to control other parameters necessary for effective and optimized process. Prepare for installation of a continuous mercury monitoring from the grate boiler or install appropriate equipment if Draft BREF is already adopted by the European Commission.
- undertake independent BAT assessment of detailed design before application for construction permit and the second one of as built facility;
- in order to confirm findings of the biodiversity assessment, the Contractor, following the ESAP provisions, will be obliged to carry out biodiversity inventory on site prior to commencement of construction works;
- if the pre-construction archaeological investigations give a positive result, the full archaeological research will be undertaken at the site prior to commencement of the construction works.

- Implement Stakeholder Engagement Plan and maintain a functional external grievance mechanism for the life of the Project.

## ADDITIONAL INFORMATION AND PUBLIC CONSULTATIONS

Since 2011 MPEC together with the city government is conducting an intensive dialogue and public consultation process with all stakeholders of the Project, including citizens of the city of Olsztyn.

The Project commenced in 2011 when the owner of the second largest heating source (Michelin) decided to terminate its operations in the future and when the Olsztyn City Council adopted "Assumptions for the heat, electricity and gas fuels for the City of Olsztyn". The first phase of the Project development related to development of strategy for energy supply for Olsztyn was concentrated on a wide range of public consultations between 2011 and 2016 including meetings with City Council members, Housing Cooperatives, citizens, labour unions, Marshal of the Voivodeship.. MPES organized a number of Project workshops with local citizens where the participants could ask questions related to the Project to the experts on heat generation, renewable energy, environment protection and waste management.

In parallel to the consultation process, the company worked on selection of a private development partner. The procedure has been conducted in line with the Public Procurement Act, namely in a concurrent dialogue mode of proceeding.

In May 2012 MPEC has established a website devoted to the Project (available on the Internet: [www.ec.olsztyn.pl](http://www.ec.olsztyn.pl)), which presents all details related to the planned investment and enable submission of Project related comments and questions by all interested stakeholders

The Project was disclosed to the public by mean of an informational campaign managed by the Company as well as during the formal administrative proceeding, when the EIA Report was available for public review and any interested individual or non-governmental organization could raise questions or comments.

On December 22, 2015 the Project was granted by the President of Olsztyn environmental decision No. SD.6220.15.2015.MJ. The decision was granted based on a full scope environmental impact assessment of the Project. Prior to this decision the participation of the local communities and stakeholders was secured in line with the law in force. As a part of the EIA procedure a disclosure of project related information and securing of public participation in the procedure was maintained by the commune authorities, which is Olsztyn City Hall. The EIA procedure was conducted in line with the environmental law; in particular the EIA report and other documents were available for review by interested stakeholders who had also a right to submit their concerns. The Olsztyn City Hall disclosed information to the stakeholders by posting appropriate notifications on their website (Biuletyn Informacji Publicznej in Polish, available on the Internet: [www.bip.olsztyn.eu](http://www.bip.olsztyn.eu)) as well as on the information board of the Environmental Department of the Olsztyn City Hall. Moreover, information related to the EIA procedure was published on the website dedicated for the project, i.e. <http://www.ec.olsztyn.pl>. During the EIA procedure, no applications and grievances from ecological organizations, stakeholders and local residents were submitted to the local authorities. After issuing the environmental decision, appeal from the ecological organization was submitted to the Local Governmental Appeals Board in Olsztyn. The appeal was dismissed by the Voivodeship Administrative Court in Olsztyn.

The consultations with the identified stakeholders are currently conducted on standard day-to-day basis and use a number of internet platforms, printed materials (leaflets and information in local press) , stands at regional and national events, open days and project dedicate meetings with citizens, regular Management meetings with labour force and various organizations.

All stakeholders' engagement actions undertaken by the company were assessed as significantly exceeding Polish standards and meeting objectives of meaningful consultation.

Stakeholder Engagement Plan was developed for the Project to facilitate further Project communications activities and will be implemented by MPEC, their PP partner and the General Contractor.