

**PRESIDENT OF OLSZTYN**  
**Plac Jana Pawła II 1**

This DECISION became  
legally valid on February 29, 2016  
~~since it had not been challenged by any party~~  
~~within the specified deadline~~  
On behalf of **THE PRESIDENT OF OLSZTYN**  
**Małgorzata Jasicka**  
Office Head with the Department of Environment

244056.12.2015  
December 22, 2015

SD.6220.15.2015.MJ

### **Decision**

Pursuant to Article 71(2)(1), Article 75(1)(4), Article 82 and Article 85(1) of the Act dated October 3, 2008 *on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and on Environmental Impact Assessments* (Journal of Laws No. 2013.1235 consolidated text as amended), and § 2(1)(46) of the Regulation of the Council of Ministers dated November 9, 2010 *on projects which may significantly affect the environment* (Journal of Laws No. 213.1397 as amended), in conjunction with Article 104 of the Act dated June 14, 1960 *Code of Administrative Proceedings* (Journal of Laws No. 2013.267, consolidated text as amended), having considered the application of Mr. Stanisław Chanowski – Vice-President of the Management Board for Technical Matters, and of Ms. Wiesława Skora – Vice-President of the Management Board for Economic Matters of Miejskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o., based in Olsztyn at ul. Słoneczna 46, and having conducted proceedings for the Environmental Impact Assessment

### **I hereby establish**

#### **the environmental conditions for the project involving**

***“Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89- 25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3”, and at the same time***

#### **I. I hereby determine:**

##### **1. Project type and location:**

The planned project shall involve construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure.

The project is planned to be located in Olsztyn, at ul. Lubelska, within the plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3, which in accordance with the excerpt from the land register are owned by the Investor, i.e. Miejskie Przedsiębiorstwo Energetyki Ciepłej in Olsztyn, and are located within Warmińsko-Mazurska Specjalna Strefa Ekonomiczna [Warmia-Mazury Special Economic Zone] (WMSSE).

The project area is approx. 7.374 ha.

The site has a valid local area development plan (MPZP), passed with the Resolution No. LIII/866/14 of the City Council of Olsztyn. The local area development plan specifies the function of the site as *an area for CEO industrial development – areas intended for buildings and equipment for heat and electrical power engineering and for waste management*.

The project (referred to in abbreviation as WTE Plant – Waste-to-Energy Plant Processing Combustion Fraction, produced in municipal waste treatment process), providing energy recovery and heat supplies to the citizens of Olsztyn, including related infrastructure) has been designed to manage

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**MPEC Sp. z o.o. in Olsztyn**  
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the combustible fraction of municipal waste in the best possible way, by heat recovery for the needs of the municipal district heating network and by recovery of electrical energy, which will be fed to the new 110 kV switching station of Olsztyn CHPP. The waste-to-energy plant processing combustible fraction will produce heat intended for central heating and hot water preparation. The new plant will also produce electrical energy. It is planned that the facility will also include a peak load back-up boiler house, powered by natural gas and/or light fuel oil.

2. Conditions of using the area at the project implementation stage, with special emphasis on the necessity to protect precious natural values, natural resources and monuments, and to restrict nuisance to neighboring areas:

1. Order must be maintained on the construction site and its back-up facilities:

- roads (including haul roads) intended for transport must be kept clean,
- vehicles delivering/carrying away materials and waste must be maintained clean and in proper working order; for this purpose, in the site exit area for vehicles and heavy equipment, it is recommended to arrange a wheel cleaning station equipped with a washer, if necessary (if the washer is applied, the water used for wheel cleaning must be drained to a tight, extractable tank and provided to authorized recipients for treatment),
- in case of transporting soil mass or loose materials, covered means of transport (equipped with a canvas) must be used; the cargo box should be filled up to approx. 4/5 of the charging tank capacity,
- construction materials must be collected in designated areas, being safe for the groundwater environment, separately from waste,
- in case of high temperatures, the construction site must be sprinkled, and dust emission to the air should be limited by dampening the ground in rainless periods and by dampening loose construction materials collected in piles (e.g. sand, aggregate),
- small grain size materials, vulnerable to wind blowing, must be secured with a foil, canvas or another cover; it is recommended to store such materials in containers, e.g. big-bag containers,
- when pouring loose materials (loading and unloading), the height of falling to the cargo box must be minimized in order to limit dust emission.
- the site back-up facilities must be located far from residential development; the designated parking areas for construction equipment must be secured in order to prevent water and soil contamination with petroleum substances, by arranging a hardstanding equipped with a station with sorbent for removing possible fuel leaks in emergency situations (sorbents, sorption sleeves and mats); if machines are refueled on the construction site, a separate and permanent refueling station should be arranged and also equipped with sorbents,
- as far as possible, fuels or other substances which may contaminate the groundwater environment should not be stored; if such an event occurs, the contaminated soil should be provided to an authorized entity for disposal.

2. Construction and erection works involving significant noise emission must be carried out during the day, between 6:00 a.m. and 10:00 p.m.

3. Non-contaminated soil and other natural materials, extracted during civil works related to the project in question, must be used reasonably, i.e. first for construction purposes (e.g. for landscaping and excavation reconstruction), at the site where they were extracted, i.e. within the plot boundaries where the civil works are carried out.

4. Sites of earth works, civil works (excavations for foundations, hall construction, soil hardening) and erection works must be marked and protected against access of unauthorized persons.

5. Receiving water bodies must be protected against inflow of soil particles resulting from uncovered surface erosion.

6. If excavation dewatering is required, water from excavation must be pretreated before drainage to the tank, in order to remove slurry. In case of formation of a depression cone which goes beyond the plot to which the Investor holds a legal title, an appropriate permit must be obtained.
7. After completion of the earth works and civil works, the area and the construction site must be ordered and leveled (holes and excavation must be buried).
8. For the facility construction period, the area must be equipped with portable toilets (until the sanitary sewerage network service line is provided, sewerage should be collected in the mentioned portable sanitary devices, e.g. Toi-Tois, whose contents must be transferred to authorized entities). As an option, it is possible to use a tight septic tank which will be regularly emptied as necessary. Prevent the tank from overfilling.
9. All works producing waste must be planned in such a way that the production of waste is prevented where possible. Waste produced during the project implementation must first undergo treatment, including recovery, involving waste preparation for reuse or recycling, or neutralization in the place of their production. Only in cases where the mentioned processes are technically infeasible, or ecologically or economically unreasonable, the waste produced may undergo another recovery process or to neutralization, after separation of recoverable waste. Storage may only be applied to waste which could not be neutralized otherwise.
10. Construction waste produced during civil works must be collected in a selective way and stored in separated and marked areas (sectors).
11. Construction waste (depending on waste type and needs) must be used in the place where they were produced, i.e. on the construction site, and where it is impossible or economically unreasonable, they must be transferred to authorized recipients.
12. Hazardous waste produced during civil works must be stored in tight, marked tanks (containers) made of materials resistant to substances contained in such waste. The containers with hazardous waste must be stored in hard-paved areas, protected against precipitation, in a way preventing possible waste leaks from entering the soil.
13. Transport of hazardous waste from their production locations to points of further management (recovery or treatment) must be carried out in compliance with the provisions concerning transport of hazardous materials.
14. During civil works, the use or transformation of environmental elements must be limited to the extent necessary for project implementation.
15. Haul roads must be routed possibly far from existing trees and bushy scrubs present along the roads.
16. In the area of tree stands to be preserved, it is prohibited to carry out civil works, arrange parking areas for heavy equipment, collect construction materials (in particular loose materials in the form of gravel or sand, which limit soil permeability), or use open flame. All earthworks carried out within the range of tree head and 1 m beyond its contour must be performed manually. Root systems must be protected against drying.
17. Where tree clearance is required, it must be carried out after the bird nesting period, i.e. from September till March. The tree clearance must be compensated by new plantings, in accordance with the following requirements:
  - the number of replacement plantings must correspond to the number of removed trees (e.g. one new planting per one removed tree of >10 years of age),
  - planting locations, species and quality of material must be agreed with an authority competent for issuing the administrative decision allowing for tree removal – at the stage of issuing the application for such a decision,

– as far as possible, trees being in a good phytosanitary condition must be preserved and integrated into the project area, as greenery that isolates, protects and positively affects the landscape qualities of the surrounding.

18. In the event of detecting animal species (in particular protected amphibians or reptiles present in the analyzed area) in land depressions (e.g. in reservoirs No. 7 and 8), such animals must be trapped in a safe way, without affecting their condition and vitality, and translocated to a place appropriate for their further existence (the above works must be carried out upon agreement with the Regional Directorate for Environmental Protection – RDOŚ).

19. Reservoir No. 10 must remain intact; all works, in particular earthworks, carried out near the reservoir must be performed with due diligence, in such a way so as to avoid unauthorized interference, which will allow preservation of regional population of amphibians, other local animals and plants in a due protection status.

3. Conditions of using the area at the project operation stage, with special emphasis on the necessity to protect precious natural values, natural resources and monuments, and to restrict nuisance to neighboring areas:

1. The area where WTE Plant (waste-to-energy plant processing combustion fraction) will be operated shall be protected against access of unauthorized persons by providing permanent fencing.

2. Water and wastewater management arrangements:

- foul water shall be discharged to the municipal network,
- rainwater and thaw water (conventionally treated as "clean") from the so-called clean surfaces (roofs), shall be discharged directly to the adjacent areas within the Investor's plots of land (to the ground or to reservoir No. 10),
- "potentially contaminated" rainwater and thaw water, i.e. the ones from leaktight and paved surfaces shall be collected to a drainage system, discharged to the environment after their prior pretreatment to remove suspended matter to the level specified by legal regulations, i.e. below 100 mg/l and oil derivatives – to the level below 15 mg/l. The pretreated rainwater and thaw water shall be discharged to the ground through seepage pits located in the area of the Investor's plots (89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3); and/or to the surface drainage system (Szczęsne stream),
- the industrial wastewater shall be discharged to the municipal sewerage network, based on an applicable agreement determining the conditions of wastewater takeover, treatment and monitoring as well as the method of settlement for the performed service
- the eluates from the bunker (i.e. the waste storage ditch) shall be directed via drainage and handling system for eluates from waste stored in the waste bunkers to the internal (industrial) wastewater system the final unit of which shall be the industrial wastewater pre-treatment plant; after being treated these waters shall be used in the slag quenching process or/and directed to the sewerage network of PWiK [Przedsiębiorstwo Wodociągów i Kanalizacji Sp. z o.o. – Water Supply and Sewerage Company]; the industrial wastewater drainage system shall be equipped with an oil separator and/or a separator for the initial removal of sludge,
- the wastewater from water treatment plant shall be directed to the industrial wastewater pre-treatment plant and further to the slag quenching system or/and municipal sewerage network (in case of applying ion exchange columns the wastewater resulting from regeneration shall be neutralized in a neutralizer prior to being discharged into the sewerage network),

- floor washwater (from the unloading hall or incineration building) shall be directed to the industrial wastewater pre-treatment plant,
  - water in process circuits shall be used in closed circuit with only periodical circuit reconditioning by discharging a part of the water from the circuit,
  - where possible and justified by process reasons, apply returning and reuse of treated wastewater for the performance of further technological processes, e.g. for slag quenching,
  - water intake for household and process purposes shall be implemented from the municipal network based on the Contract with the network operator,
  - chemicals, sorbents and waste transfer areas as well as oil, sorbents and chemicals storage tanks shall be placed on tight containment trays or concrete floorings enabling discharge of leakage to the industrial wastewater drainage system,
  - the provided underlayment in waste collection and storage facilities shall be leaktight.
3. Apply a reliable weighing and monitoring system for the collected fuel in the form of waste (preferably enabling detection of radioactive matter) based on automatic weighbridges: at the entrance and at the exit, together with computer hardware and software enabling recording the weight of waste delivered to the plant and the products and waste taken out from the plant.
4. Waste intended for the WTE Plant, after passing through the unloading hall, shall be directed to the waste bunker.
5. Waste intended for thermal processing shall be stored in the bunker securing the fuel reserve for at least 5 days; transport the fuel from the bunker to the boiler tank and subsequently to the stoker-fired boiler.
6. In case of detecting metals in the furnace waste, perform ferrous and non-ferrous metals' recovery (with the use of e.g. magnetic or inductive separators).
7. To restrict odor nuisance (the main source of which will be waste collected in the bunker and unloading hall) apply:
- closing the hall each time after the vehicle delivering fuel consisting of municipal waste enters the hall,
  - properly selected under-pressure, causing suction of the air from the unloading hall and the bunker, this air shall be subsequently directed to the waste incineration process line, i.e. the boiler combustion chamber,
  - the waste bunker shall be provided with a seal preventing the odors from escaping outside the plant in case of the plant downtime,
  - provide mechanical and gravity ventilation systems in all rooms.
8. Monitor the amount of the fuel used in the stoker-fired boiler and its net calorific value on an ongoing basis.
9. Perform the incineration process in the presence of air in the stoker-fired boiler with start-up burners. Maintain the stoker-fired boiler efficiency at the level of approx. 86%.
10. During combustion ensure meeting all conditions required by legal acts in scope of performing thermal processing of waste, including in particular:
- keeping the sufficiently high temperature in the boiler combustion chamber and its holding time not shorter than 2 s (preferably exceeding 3 seconds, which enables decomposition of dioxins and furans),
  - performance of continuous measurements of: flue gas temperature, measured in the vicinity of the internal wall in a way eliminating effects of thermal radiation of the flame, oxygen content in flue gas, flue gas pressure.
11. The plant shall be monitored (depending on the requirements) continuously (e.g. with regard to sulfur dioxide, nitrogen oxides, dust, carbon oxide, hydrogen chloride, hydrogen fluoride, total carbon, oxygen content in the flue gas, flue gas flow velocity, dynamic flue gas pressure, flue gas

temperature), and periodically in the scope and frequency according to the secondary legislation to the Environment Protection Law, Water Law and Waste Act, including monitoring of the amount of pollutants emitted into the environment (substances and energy), as well as monitoring the technical parameters of the power unit, the quantities of used materials, feedstock and fuels. Heavy metals, dioxins and furans shall be monitored periodically. Flue gas monitoring shall be implemented with a flue gas monitoring plant consisting of sampling systems, pumps, coolers, sample analyzers and electronic calibration system for analyzers.

12. For flue gas desulfurization apply a semi-dry technology in a semi-dry desulfurization reactor with the usage of lime sorbent as a reducing agent for sulfur dioxide and other acid components (HF, HCl) in order to limit the emission of these pollutants to the air down to the level required by the national and European Union law (expected efficiency of the desulfurization plant – 90%). Dust, a part of dry product and unreacted sorbent shall be directed to the ash tank.

13. For limiting the emission of nitrogen oxides provide the plant with a secondary method of flue gas denitrification (SCR or SNCR) with the usage of ammonia water or carbamide solution as an emission reducing agent, in order to limit the emission of this pollutant to the level required by the national and European Union law (expected efficiency of the denitrification plant – approx. 50%).

14. In order to limit the emission, as the last stage of the flue gas cleaning process, and to limit metals, provide a high-efficiency dust removal equipment in the form of a bag filter; providing activated carbon injection shall limit the emission of dioxins, furans and mercury to the air to the level required by law.

15. Clean flue gas shall be discharged to the stack.

16. Equip:

- sorbent retention tank with a dust removal equipment, enabling keeping the dust emission at the level of approx. 20 mg/m<sup>3</sup>;
- ash retention tank with a dust removal equipment, enabling keeping the dust emission at the level of 20 mg/m<sup>3</sup>;

17. Perform noise emission measurements (once per every two years), according to the reference method of performing periodic measurements of the noise emitted to the environment by the plant, in the areas subject to acoustic protection located around the plant.

18. Waste designated with the following codes: 19 01 15\*, 19 01 13\*, 19 01 07\* shall be stored in retention tanks.

19. Slag (19 01 12) shall be stored under a shelter, on a concrete surface equipped with a system for discharge and collection of possible eluate water.

20. Boiler dust (19 01 15\*) and fly ash (19 01 13\*), waste from the flue gas cleaning plant (19-01 07\*):

- must be subject to solidification and stabilization process, and handed over to authorized entities (collection companies) having applicable permits/licenses for collection of hazardous waste, or
- must be subject to solidification and stabilization process, in order to enable their storage at hazardous waste landfill or waste landfill for waste other than hazardous and neutral, or
- must be handed over to authorized entities (collection companies) having applicable permits/licenses for collection of hazardous waste

21. Slag waste other than hazardous shall be handed over to authorized entities after undergoing seasoning (valorization) process in order to improve their properties (decreasing metal leachability and stabilization of waste) for the period of approx. 6-8 to 20 weeks or handed over to authorized entities without the seasoning process.

22. Hazardous waste, generated during operation of the plant, generated as a result of other activity aimed at keeping the whole facility with its equipment in proper technical condition, enabling its efficient operation (e.g. packagings containing residues of hazardous substances or contaminated with

them, hydraulic oils, other engine, gearbox and lubricating oils, sorbents, filtration materials, wiping fabrics contaminated with hazardous substances, oil filters, brake fluids, freezing inhibitors, worn batteries and rechargeable batteries, used devices including hazardous components and other waste from the waste catalog list), shall be collected and stored selectively in tight and marked tanks (containers, barrels) made of materials resistant to substances contained in the waste; the tanks with hazardous waste shall be stored on paved surfaces protected against soil contamination and precipitation, equipped with devices or means enabling collection of the possible leakage of the waste.

23. Provide the facility with specialist containers for battery storage. Worn batteries and rechargeable batteries shall be handed over to the entity collecting worn batteries and rechargeable batteries or running a company that recycles worn batteries and worn rechargeable batteries.

24. Areas for flammable waste storage shall be provided with fire extinguishing devices.

25. Storage areas shall be protected against access of unauthorized persons (fenced), provided with a roofing protecting against weather conditions and impermeable underlayment with leakage removal devices and a liquid separator.

26. Storage of waste, objects and substances that lost the waste status shall be performed separately.

27. Waste storage shall be performed only in the area to which the waste owner holds a legal title; waste shall be stored in accordance with the following rules:

- waste, except for waste intended for storage, may be stored if the need for storage results from the technological or organizational processes and does not exceed the timeliness justified by the application of the said processes, for a period not longer than 3 years;
- waste meant for storage may be stored only for the purposes of gathering an adequate amount of waste for transport to the landfill site, not longer than for a period of 1 year;
- waste storage periods are calculated as a total of periods for all subsequent owners of the waste.

28. The generated waste shall be handed over only to authorized entities holding waste management permits required by the Waste Act, i.e. permits for waste collection, transport, processing along with the supervision over these procedures, based on waste handover certificate (unless not required by the waste law).

29. Gas fuel and/or light fuel oil shall be used for feeding the peak load back-up boiler house and back-up/start-up burners of the waste incineration boiler. The gas fuel shall be delivered to and collected from the planned medium pressure gas station located on the premises of the WTE Plant.

30. At the stage of project decommissioning, the plant operator, prior to commencement of dismantling and demolition works is obliged to perform an assessment of contamination level for the area, with particular regard to the groundwater contamination, obtain all permits, licenses, approvals and opinions in the scope of performance of the decommissioning procedure (if required) while the procedure applicable to waste, surface and underground waters, air, protection of natural resources may not deteriorate the quality and state of the environment as a whole, and the detailed procedure will depend on the requirements of law applicable on the date of commencement of the decommissioning process.

31. Proper washing and toilet facilities for the construction teams shall be organized to ensure proper conditions for e.g. hygienic consumption of meals, storage and change of clothing and washing, considering the number of employees.

#### 4. Requirements regarding environmental protection necessary to be taken into account in the building permit design:

1. Paving of the area, sealing of the waste collection facilities and permanent fencing of the area.
2. Setting out the internal roads and parking places.
3. Designing, construction and location of the following elements:

- fuel collection and unloading point,
  - waste collection hall,
  - waste feed bunker and process feeding fuel bunker,
  - dry mechanical draft cooling tower,
  - boiler house with the stoker-fired boiler, incinerating the fuel consisting of waste,
  - flue gas cleaning plant, flue gas desulfurization plant and flue gas denitrification plant,
  - building for solidification of ash and solid waste from the flue gas cleaning system (to be designed and built or in case of adopting the project implementation with the option of direct handing over of the waste for the management by the authorized entities – to be designed with the space in the area reserved for the possible extension),
  - stack with flue gas monitoring,
  - slag valorization and storage building (shelter),
  - peak load back-up boiler house (two boilers planned), using natural gas or light fuel oil as fuel in order to generate heat and diesel oil-fired diesel generator set as a source operating only in emergency situations.
  - turbine hall, workshop hall, warehouse, site utilities, water preparation station.
4. Design a complete system for collection and treatment of wastewater from the WTE Plant, including internal industrial wastewater drainage system, including foundation and erection of tanks, oil derivatives separator (preferably integrated with a clarifier for the initial removal of suspended matter and sludge).
5. 110 kV switchgear in the WTE Plant on the side of power output to the network shall be designed as enclosed (fenced) facility which will result in meeting the requirements concerning the access of third parties to the area of field emitting equipment. The distance between 110 kV equipment (unit transformer, overhead line) and the plot boundary shall guarantee meeting the admissible values of electromagnetic radiation.
6. Specify appropriate locations of the foundation of the tanks for reacting substances for the flue gas desulfurization plant and deNO<sub>x</sub> plant.
7. Specifying the location of the light fuel oil tank (according to the legal requirements within this scope).
8. Transformers shall be designed as located on reinforced concrete foundations with railroad rails enabling their shunting (or a solution to ensure a similar functionality). Transformer stands shall be equipped with oil spill trays or containers and emergency ventilation system.
9. In order to minimize the noise generated by the WTE Plant facilities and equipment, when designing an enclosed noise source, apply appropriate solutions in scope of wall and roof structure of the individual buildings (e.g. the proposed minimum composite sound reduction index R=26 dB), if needed, and apply the absorption mufflers, if needed.
10. Provide planting of vegetation, according to the documents presented by the Investor.
11. Determine the so-called "clean" and "dirty" zones of the Plant, separate "clean" and "dirty" roads for the movement of employees wearing their own clothing and the working clothing.
12. Design a proper washing and toilet facilities in the Plant, considering the number of employees and type of performed work, in accordance with the separate regulations.
13. Take into account wash stations for the means of internal transport, circulating within the Plant premises.

4. Requirements concerning the prevention of effects of industrial failures:



The project is not qualified as a plant with higher risk or high risk of occurrence of a serious industrial failure.

#### 5. Requirements concerning the limitation of cross-border environmental impact:

Due to the location, type, size and scope of the project, as well as the distance between the project in question and the borders of the neighboring countries, no significant cross-border environmental impact is assumed; therefore carrying out the procedure concerning cross-border environmental impact is not required.

### Grounds

Mr. Stanisław Chanowski - the Vice-President of the Management Board for Technical Issues and Ms. Wiesława Skora - the Vice-President of Management Board for Economic Issues of Miejskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o. [Municipal District Heating Company] in Olsztyn, ul. Słoneczna 46, applied to the President of Olsztyn for the issue of a decision on environmental constraints for the project consisting in the ***"Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"***

The project falling under the aforementioned application, in accordance with § 2(1)(46) of the Regulation of the Council of Ministers of November 9, 2004 *on determining projects that are likely to have significant impact on the environment and detailed criteria related to qualification of the project for preparation of the environmental impact report* (Journal of Laws No. 213, item 1397, as amended) holds the status of *"projects which may always significantly affect the environment"* for which the preparation of an environmental impact report is required.

In accordance with Article 71 (2)(1) of the Act of October 3, 2008 on the provision (...) the execution of the planned project which may always affect the environment requires obtaining the decision on environmental constraints.

Acting pursuant to Article 64(2) of the Act of June 14, 1960 *Code of Administrative Procedure* (Journal of Laws of 2013, item 267, as amended), the President of Olsztyn, with letter ref. No. SD.6220.15.2053.MJ of February 17, 2015 called Miejskie Przedsiębiorstwo Energetyki Ciepłej sp. z o.o. in Olsztyn to remedy the shortcomings in the application of February 3, 2015 and to submit the environmental impact report prepared in accordance with Article 66 of the Act of October 3, 2008 on *the provision* (...).

Miejskie Przedsiębiorstwo Energetyki Ciepłej sp. z o.o. in Olsztyn submitted the application of March 2, 2015 for determination of the scope of works as defined by Article 69 of the Act of October 3, 2008 on *the provision* (...).

Acting pursuant to Article 70(1)(1) and (2), the President of Olsztyn submitted to the Regional Director of Environmental Protection in Olsztyn letter ref. No. SD.6220.15.20105.MJ of April 3, 2015 and to the State District Sanitary Inspector in Olsztyn letter ref. No. SD.6220.15.20105.MJ of April 3, 2015 requesting to determine the scope of the environmental impact report for the project consisting in the ***"Construction of a waste-to-energy plant processing combustible fraction produced in municipal***

***waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3***

On May 20, 2015 the Regional Director of Environmental Protection in Olsztyn issued a decision (ref. No. WOŚ.4240.142.2015.MT.1) in which it determined the full scope of the environmental impact report for the project consisting in ***"Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"***

On April 15, 2015 the State District Sanitary Inspector in Olsztyn issued a sanitary opinion (ref. No. ZNS.4083.20.2015), in which it determined the full scope of the environmental impact report for the project consisting in the ***"Construction of the plant for thermal treatment of combustible fraction created as a result of the processing of municipal waste along with ancillary infrastructure in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"***

The President of Olsztyn **considered the opinion of the Regional Director of Environmental Protection in Olsztyn and the State District Sanitary Inspector in Olsztyn** and it issued a decision No. SD.6220.15.2015.MJ of May 21, 2015 in which it imposed the obligation of the preparation of the environmental impact report for the project consisting in the ***"Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"*** in the full scope i.e. in accordance with Article 66 of the Act of October 3, 2008 on *the provision* (...).

Miejskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o. in Olsztyn submitted the ***"Environmental Impact Report entitled: Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, ensuring energy recovery and heat supplies for the citizens of Olsztyn including related infrastructure"***

Upon declaring the fulfillment of statutory obligations by the Party, the President of Olsztyn, in accordance with Article 77(1)(1) and (2) of the Act of October 3, 2008 *the provision of information on the environment and its protection, public participation in environmental protection and environmental impact assessments*, requested, with letter ref. No. SD.6220.15.2015.MJ of June 8, 2014, that the State District Sanitary Inspector in Olsztyn expresses its opinion on the aforementioned *"Report..."* and with letter ref. No. SD.6220.15.2015.MJ of June 8, 2015 it requested that the Regional Director of Environmental Protection in Olsztyn agrees on the conditions for the project execution.

The State District Sanitary Inspector in Olsztyn on November 12, 2015 issued a positive opinion as regards the sanitary and hygienic and health requirements (ref. No. ZNS.4083.20.2015), in which it determined the conditions for the project execution and the Regional Director of Environmental Protection in Olsztyn on August 25, 2015 issued a decision (ref. No.: WOŚ.4242.54.2015.MT16), in which it approved of the project execution and determined the conditions for the project execution.

The conditions imposed by the Regional Director of Environmental Protection in Olsztyn and the State District Sanitary Inspector in Olsztyn are included in the aforementioned decision.

The Parties concerned were notified about the possibility of familiarizing themselves with the *"Report..."* and with the evidence gathered, the possibility of raising comments and submitting

applications prior to the issue of the decision on environmental constraints for the project consisting in the *"Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"*.

The society was notified, through an *Announcement* at the announcement board of the Environmental Protection Department of Olsztyn City Office at ul. Wyzwolenia 30 and at the public information bulletin website of the authority running the proceedings, about the possibility of familiarizing themselves with the *"Report..."* and with the evidence gathered, the possibility of raising comments and submitting applications in a written, electronic and oral form, within the time limit from **November 20, 2015 to December 10, 2015** in the registered office of the Environmental Protection Department of Olsztyn City Office at ul. Wyzwolenia 30 in room No. 103 prior to the issue of decision on environmental constraints for the project consisting in the *"Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3"*.

No legal or natural person holding land within the project impact zone presented their opinion on the issue in question. Moreover, no ecological organization applied for being considered a party to the on-going proceedings.

The planned project shall involve construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure. The project is planned to be located in Olsztyn, at ul. Lubelska, within the plots cadastral Nos. 89-25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3, which in accordance with the excerpt from the land register are owned by the Investor, i.e. Miejskie Przedsiębiorstwo Energetyki Ciepłej in Olsztyn, and are located within Warmińsko-Mazurska Specjalna Strefa Ekonomiczna [Warmia-Mazury Special Economic Zone] (WMSSE). The project area is approx. 7.374 ha. The site has a valid local area development plan (MPZP), passed with Resolution No. LIII/866/14 of the City Council of Olsztyn. The local area development plan specifies the function of the site as *an area for CEO industrial development – areas intended for buildings and equipment for heat and electrical power engineering and for waste management*.

The area intended for the execution of the planned project is bordered by railway track from the west, access road to the Michelin Poland Logistics Center from the east, Michelin Poland Logistics Center from the south and the area intended for Olsztyn bypass from the north. The area is located at a distance from residential developments and NATURE 2000 areas which the project could exert direct impact on. The area intended for the development of the WTE Plant amounts to ca. 8 hectares. At the moment the area is not developed and not hardened. There are plant communities in the area, mainly birch trees at the age of 10-15 years, and in the pit with moist subsoil there are woodlots and numerous willow communities. The project (referred to in abbreviation as WTE Plant – Waste-to-Energy Plant Processing Combustion Fraction, produced in municipal waste treatment process), providing energy recovery and heat supplies to the citizens of Olsztyn, including related infrastructure) has been designed to manage the combustible fraction of municipal waste in the best possible way, by heat recovery for the needs of the municipal district heating network and by recovery of electrical energy, which will be fed to the new 110 kV switching station of Olsztyn CHPP. The waste-to-energy plant processing combustible fraction will produce heat for the purposes of central heating and hot water preparation for the city. The new plant will also produce electrical energy. It is planned that the facility will also include a peak load back-up boiler house, powered by natural gas and/or light fuel oil. A

stoker-fired boiler, burning fuel from waste and two peak load back-up boilers powered with gas or light fuel oil, with thermal power entered in fuel of ca. 38 MW<sub>t</sub> each and the efficiency of ca. 91.5, which will produce heat, will be in operation at the area of WTE Plant. Emergency power supply will be provided by *Diesel engine* fired with diesel oil. Flue gas will be discharged into the air with emission source (with the planned height  $h=5$  m and outlet diameter  $d=125$  mm). Fuel will be delivered to the plant with trucks (from Monday to Friday with ca. 40 trucks). A truck weighing station for the measurement of the amount of waste delivered by the supplier will be installed by the delivery station. The feed bunker will ensure ca. 5 days of fuel stock, fuel will be transported from the bunker to the boiler tank ensuring fuel deliveries to the boiler for half an hour.

Fuel from waste will be combusted in the stoker-fired boiler with the efficiency of ca. 86%. The major element of the designed WTE Plant is the power unit which will manage the combustible fraction of municipal waste, ensuring heat production (heating water) for the purposes of the system.

Relatively little hazardous combustion waste is generated in the adopted technology (compared to other technologies of combustion of fuel from waste e.g. combustion in the fluidized-bed boiler). In the grate technology the majority of waste is slug, non-hazardous waste, possible to be neutralized or used industrially. The application of particular flue gas cleaning methods in WTE Plant will ensure meeting emission standards for all gas and dust pollution generated during the process of combustion of fuel from waste.

The planned project comprises the construction of the following facilities:

- fuel collection and unloading point,
  - waste feed bunker and process feeding fuel bunker,
  - boiler house with waste combustion boiler,
  - flue gas cleaning system,
  - stack with flue gas monitoring,
  - furnace waste management system,
  - turbine hall,
  - external systems,
  - peak load back-up boiler house,
  - related systems, communication routes and other necessary auxiliary facilities (e.g. water preparation station) and land development elements.
- The new Plant will be a cogeneration system, so it will produce heat and electrical energy simultaneously. The process of power changes will go as follows: fuel from municipal waste will be fed from the bunker to the boiler tanks and then it will be supplied to the steam boiler combustion chamber. Combustion will take place on the grate to which air necessary for the combustion process will be supplied. The boiler will be equipped with start-up burners which will also be used for sustaining the combustion process. The flue gas generated will transfer heat to water in the preheater system, which in effect will be subject to vaporization in the vaporizer and as steam to superheating in the superheater. The generated steam will be directed to steam turbine where its thermal power will be converted into mechanical energy and then to electrical energy in the generator. The turbine will be a back-pressure turbine with heating water cooling system in the closed cooling system with a dry mechanical draft cooling tower. Steam will be condensed in the condenser, after which it will be returned to the stoker-fired boiler in the form of water. Low temperature in the combustion chamber will allow to reduce the amount of nitrogen oxides created. In addition, multi-step injection of ammonia water or carbamide will ensure keeping emission standards in the scope of nitrogen oxides. Flue gas will be desulfurized in the semi-dry desulfurization reactor. Mixing of flue gas with water sorbent solution in the form of lime or hydrated lime will take place in the reactor. Partial dedusting and removal of heavy metals will also take place here. Dust, a part of dry product and unreacted sorbent shall be directed to the ash tank. Activated carbon, which will react

with mercury, dioxins and furans will be entered into flue gas after getting out of the desulfurization plant. The last stage of flue gas cleaning will be bag filter. Dust will form a deposit on the external surface of the bags. Dust removal will be carried out periodically with compressed air impulses. Dust which will fall to the hoppers will be directed to the dust collection system. Clean flue gas shall be discharged to the stack. Flue gas cleaning system will not generate wastewater because water added to the reactor being the component of semi-dry flue gas cleaning system will vaporize and it will be evacuated to the atmosphere in the form of steam mixed with clean flue gas. Therefore, the planned project will not cause the generation of wastewater from the flue gas cleaning system.

Slag created in the boiler will be transported from the slag removal equipment with belt conveyors. Slag will be subject to valorization/seasoning process or it will be collected by entities authorized for management without valorization process. Fly ash and waste from flue gas cleaning system will be stabilized and then collected by recipients holding relevant permits or they will not be stabilized and collected directly for management by authorized entities.

The following materials and raw materials will be used in the WTE Plant:

- basic fuel - fuel from municipal waste from the Municipal Waste Management Company and Regional Municipal Waste Treatment Plant,
- auxiliary fuel - natural gas,
- reserve fuel – light fuel oil,
- raw water for production of demineralized and softened water for domestic uses, furnace waste management and washing purposes,
- - reacting substance for deNO<sub>x</sub> system - ammonia water or carbamide,
- sorbent for the Flue Gas Desulfurization Plant - burnt lime or hydrated lime or other allowing for the achievement of analogical efficiency.

The WTE Plant will be equipped with automatic monitoring of the emission of pollutants into the air. Measurements of the emission of heavy metals, dioxins and furans will be periodically carried out as well. During the operation of the WTE Plant automatic registration of the amount of water consumed and wastewater generated will be performed. During the operation of the WTE Plant the records of the amount of waste accepted for combustion will be kept. The measurement of the amount of waste delivered by particular suppliers based on the indications of the truck weighing station will be performed at the delivery station. Readouts from the weighing station will be registered in the plant computer system.

The selection of the option adopted for performance was preceded with the analysis of the remaining ones e.g. management of waste generated at the area of the province (e.g. combustion of waste in cement plants, gasification of waste, pyrolysis or plasma technologies, rotosteril technology). Technologies of fuel from waste combustion (combustion in stoker-fired boiler, combustion in fluidized-bed boiler) were also analyzed. Finally, the option consisting in the combustion of fuel from municipal waste in the stoker-fired boiler was selected for further analysis. The option consisting in the combustion of fuel from waste in fluidized-bed boiler, with the production of heat and electrical energy, was selected as reasonable alternative option.

The analysis of the environmental impact of the analyzed options showed that the option proposed by the Investor will constitute the least burden to the environment, both due to:

- emission volume of flue gas pollutants and dust into the air,
- volume and type of generated waste,
- noise and demand for water, as well as the amount of wastewater generated,
- the optimum location of the Plant i.e. compliance with the Local Area Development Plan, appropriate plot size, the lack of the vicinity of naturally valuable areas, protected areas, archaeological and architectural protection facilities, convenient hydrogeological and geotechnical soil

conditions, appropriate distance from residential developments, which guarantees minimizing the risk of social conflicts, convenient and effective communication network which guarantees the ease of access and the absence of related conflicts, the possibility of direct access to power and heat network stations;

During the operation of the WTE Plant, waste with the following codes will be generated in the stoker-fired boiler:

- 19 01 12 Slags and furnace ashes other than 19 01 11,
- 19 01 15\* Boiler dust containing hazardous substances,
- 19 01 13\* Fly ash containing hazardous substances,
- 19 01 07\* Solid waste from flue gas cleaning,

The aforementioned hazardous waste shall be stored in retention tanks. Slag will be subject to seasoning which allows for using it as an additive for asphalt production (optionally it is allowed to collect waste by specialist companies not subject to seasoning). Hazardous waste of ashes and waste from flue gas cleaning system will be subject to the process of stabilization which will change of properties of waste in such a way that it will be possible to store waste at storage areas for waste other than hazardous and neutral (optionally it is allowed to collect the waste by specialist companies which do not subject it to seasoning). Slag as non-hazardous waste will be collected by specialist companies upon subjecting it to the process of seasoning (optionally it is allowed to collect the waste by specialist companies which do not subject it to seasoning). Seasoning is aimed at the improvement of slag properties, mainly the reduction of metal leachability and stabilization of the waste. After the period of 6 - 8 weeks slag may be used as an additive to asphalt and collected with vehicle transport by recipients. Hazardous waste in the form of ash and waste from flue gas cleaning system will be subject to stabilization, during which their physical and chemical parameters will have to be subject to a change. The product occurred after stabilization is not hazardous and depending on the applied stabilization technology it may be stored at storage area for waste other than hazardous (optionally it is allowed to collect the waste by specialist companies which do not subject it to seasoning).

Waste management will be monitored on a regular basis, pursuant to legal requirements, with respect to the owners and manufacturers of waste i.e. a waste owner in accordance with the Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21, as amended) is obliged to keep quantitative and qualitative records of waste, on a regular basis, in accordance with the waste catalog (Regulation of the Minister of Environment of December 9, 2014 on waste catalog Journal of Laws of 2014, item 1923). Waste management monitoring will comprise keeping records of the kinds of generated waste, amounts of generated waste of particular kinds and methods of handling waste with the use of the following documents: waste record sheet and waste transfer note. Moreover, the Regulation of the Minister of Environment of February 27, 2014 on the lists containing information and data on the scope of the use of the environment and the amounts of fees to be paid (Journal of Laws of 2014, item 274) obliges all entities obliged to submit thereof under a sanction of penalty for the failure to meet the aforementioned obligation.

Sanitary, industrial and rain water drainage system will be in operation in the area of WTE Plant. Industrial waste will be pre-treated and then directed to a sewage balance tank and then to the municipal sewerage network. The WTE Plant water and wastewater management will be based on the collection of water from the municipal network and discharge of industrial wastewater to the municipal drainage network. The planned project will not use the surface waters or groundwaters directly. Industrial wastewater will be discharged to the network on conditions agreed upon with the network administrator. Water in process cycles will circulate in a closed system but for the correct operation of equipment it is necessary to refresh the cycle by discharging some water from the system. Wastewater from water and steam cycle desalination will be mainly discharged for the purposes of furnace waste management. The planned project will be equipped with the drainage system, the type

and parameters of which will be defined in technical conditions for connection. The quality of treated wastewater, occurring during the operation of WTE Plant, shall meet the quality requirements specified in the Regulation of the Minister of Construction of July 14, 2006 on the manner of performance of obligations of industrial wastewater suppliers and conditions for discharging wastewater into the drainage facilities.

Pre-treated industrial wastewater entered into drainage facilities will not impact the quality of surface waters and groundwaters in the area of potential impact of the planned project. Pre-treated storm and thaw water shall be the requirements specified in the Regulation of the Minister of Environment of November 18, 2014 on conditions to be fulfilled while discharging sewage to the water or ground, and on substances particularly harmful to water environment.

The facility execution area, including its operation after putting into use, is located outside the forms of nature conservation mentioned in Article 6 of the Act of April 16, 2004 on nature conservation (Journal of Laws of 2013, item 627, as amended). Nevertheless, in case of wild animal species, as well as plants and fungi subject to species conservation, aimed at ensuring the survival and proper condition of species specimen and their habitats and refuges, it is required to observe the provisions of the aforementioned Act and the aforementioned Regulations on the bans and deviations from bans with respect to the aforementioned species.

Thus, in case of finding in the place of works execution the presence of species subject to legal protection under

- the Regulation of the Minister of Environment of October 6, 2014 on protection of animal species (Journal of Laws of 2014, item 1348),
- the Regulation of the Minister of Environment of October 9, 2014 on protection of plant species (Journal of Laws of 2014, item 1409),
- the Regulation of the Minister of Environment of October 9, 2014 on protection of fungi species (Journal of Laws of 2014, item 1408),

the bans included in Article 52(1) of the Act of April 16, 2004 *on nature conservation* apply. In accordance with Article 56(1) of the aforementioned act, in case of actions violating the bans defined in Article 51(1)(1) (picking, destroying, damaging, moving and breeding plant and fungi species) and in Article 52(1)(1-2) (deliberate killing, mutilating and catching animal species; transport, gaining, storing, raising and breeding, as well as holding live animals, gathering, storing and holding species specimen) and item 11 (deliberate scaring away and disturbing) with respect to species falling under strict protection, the permit of the General Director of Environmental Protection should be obtained. And pursuant to Article 56(2) of the Act on *nature conservation*, in case of actions violating the bans defined in Article 51(1)(2-3) (destruction of habitats and refuges of plant and fungi species; making changes in water circulation patterns, the application of chemical agents, destruction of forest cover and soil in the refuges) and in Article 52(1)(3-5) (deliberate destruction of eggs, young and developing forms of animals; destruction of their habitats and refuges; destruction of their nests, anthills, dens, lairs, lodges, dams, breeding grounds, overwintering grounds and other shelters) and item 13 (movement from the locations of regular stay to other locations) in relation to species falling under strict protection and all bans indicated in Article 51(1) and Article 52(1), in relation to special falling under partial protection, a permit of the Regional Director of Environmental Protection in Olsztyn should be obtained. In accordance with Article 83(2a) of the Act of April 16, 2004 on nature conservation, the permit for the removal of trees within the public road right-of-way is issued upon the approval of the Regional Director of Environmental Protection.

The execution of the project will require the logging of trees and bushes at a part of the area. The Investor ensured in the report that within the framework of the compensation it will make new plantings, in accordance with the findings of competent authorities with respect to the selection of locations and species, making use of the function and role of greenery at the investment areas in an

optimum manner. Wildlife inventory carried out for the purposes of the planned project proved that out of three reservoirs located in the area of the planned project only one is of significant importance for the population of amphibians. For the purpose of protection of fauna habitats, it is planned to leave the biggest reservoir in an unchanged condition.

Bearing in mind the distance from the Natura 2000 site (this is Puszcza Napiwodzko-Ramucka PHL280052), that is the distance of approx. 6 km south-east from the area of the planned project and the nature of the project (a "spot" project), as well as taking into consideration the analyses included in the report, there is no risk that as a result of the execution of the project significant negative environmental impact on the protected area will occur; the operation of the Plant will not disturb the functioning of the aforementioned area. The construction of the facility will not cause the fragmentation of natural habitats either.

The area at which the project in question is planned is not located within the area of the national park, forest promotional complex, health resort protection area, there are no historic monuments entered onto the list of global heritage.

The project will not exert impact on monuments and archaeological sites subject to protection on the basis of regulations on the protection of monuments and care for monuments because the aforementioned facilities do not occur in the area of the project.

The landscape aspect in the context of landscape protection was also considered (the Act of March 20, 2015 on the amendment of some acts in connection with the strengthening of landscape protection tools). Pursuant to Article 66(1)(3a) of the Act on the provision (...), it is required to include in the report the description of the landscape in which a given project is to be located. Although it will come into force on September 11, 2015, the Investor fulfilled the requirement and carried out the analysis in this respect. The location of the facility will be within the boundaries of the city, however it should be noticed that in the already adopted Local Area Development Plan, being an act of local law, this area is intended for purposes connected with activity run within the framework of the planned project, in the surroundings of industrial landscape, therefore profound consideration of this issue at this stage is not necessary.

No collision with surface waters and groundwaters is anticipated because measures were taken for the purpose of protection, in accordance with the indications included in the Local Area Development Plan. In the area of the city of Olsztyn Homogenous Body of Surface Waters - Łyna with an affluent from Jelguń Lake to Dywita Chanel was designated. As regards groundwater, within the area of the city of Olsztyn this is the area of Pergoła river basin and it comprises Homogeneous Underground Water Body No. 20, the water region of Łyna and Węgorapa/Świeża/ Jarfa, for which the assessment of the risk of the failure to meet environmental objectives demonstrates that they are not at risk. The planned project will not be located in the area of groundwater intake protection zones.

The project will not have impact on the condition and ecological potential of surface waters and groundwaters and it will not deteriorate this condition; it will also not have impact on water protection objectives, with the consideration of water condition assessment indicators mentioned in the Regulation of the Minister of Environment of October 22, 2014 on classification method of the state of homogeneous water bodies and environmental qualitative standards for priority substances (Journal of Laws of 2014, item 1482). The actions such as the collection of all wastewater from the area into the system, pre-treatment of wastewater in the oil derivative substance separator, as well as hardening and sealing the ground and protection with sorbents will constitute the protection against contamination of groundwaters and surface waters. As a result of the execution of the project, water circulation patterns will not be subject to a change, natural water bodies, oxbows as well as water and marsh areas will not be eliminated (reservoir No. 10 to be kept and subject to protection).

In accordance with the current requirements, the report includes the analysis of the impact of the project on climate change. "Guidelines for the project managers: immunization of sensitive projects to



climate change" show that the analysis of the impact of climate change effects on the project should be carried out if the project life cycle is longer than 20 years. The analysis should include the climate change effects which may have impact on the project within its life cycle. It should be noticed that the designed WTE Plant is the source of power in fuel 48.5 MW. So it is not ranked as a large source. The most important greenhouse gas, having impact on climate change and emitted by the WTE Plant is carbon dioxide, the emission of the remaining greenhouse gases is relatively small. It should be noticed that the combustion of waste causes CO<sub>2</sub> emission, approx. 3-4 lower than the emission from the source burning coal providing the same amount of energy. It may be adopted that the potential impact of the WTE Plant on climate change will not be very significant when compared to benefits - possible to be accepted. The investor considered the following aspects mitigating measures: the selection of waste as fuel - which causes that CO<sub>2</sub> emissions will be lower than emissions from an equivalent source burning fossil fuels, planting of trees - ranked as an action compensating the emission of carbon dioxide, the use of equipment and methods of air protection with respect to emitted nitrogen oxides and sulfur dioxide.

The attached report includes the analysis of the impact on climate by means of the creation of sensitivity matrix aimed at the indication of what climate variables the planned project is the most exposed to, the risk matrix and the consequence assessment matrix. Potential effects of climate change which will exert the most significant impact on the planned project include storms, floods and the increase in temperature. It was found that the anticipated, possible to occur over long-term perspective effects of climate change do not require the implementation of special adaptation measures. Nevertheless, the building structure will be executed in such a way that it is not endangered by strong wind. The building will not be at risk of destruction as a result of being pinned down by tall facilities, overturned by gusty winds. The building will be equipped with a lightning arrester as protection during heavy storms. As regards environmental impact, the impact of odor along with the temperature increase will constitute almost the so-called certain risk with the volume of consequence defined as high.

The project environmental impact will occur both at the stage of execution and operation thereof. The stage of execution will, to a substantial extent, comprise erection works of ready-made structural elements. During the construction of facilities and systems of the combined heat and power plant there will occur fugitive emission into the air as a result of the use of mechanical construction equipment and at the pouring of earth masses. Dust emission may also occur as a result of secondary dusting of bulk material from windswept areas of storage of cement, sand, aggregate and from non-cleaned internal roads.

The execution stage also causes emission of noise, dusts and gases, as well as waste connected with the execution of construction works. Waste generated at the stage of execution, including mainly waste from group 17 - *waste from construction, repairs and disassembly of civil structures and road infrastructure (including soil and earth from contaminated areas and from group 15 - packaging waste, including paper and cardboard packages, wooden packages, plastic packages containing the remains of hazardous substances)* will be first used in the area of the construction site or transferred to authorized entities for the purpose of further management by a company rendering services in the scope of construction, repair or demolition. There will also occur waste in the form of paints and varnishes, waste of consumed engine oils, gear oils and lubricating oils.

Noise at the stage of execution will be generated mainly by means of transport and machines and equipment with adequate acoustic power. The operation of machines and equipment, as well as the vehicle traffic, being the major source of noise, will be limited to daytime (in extreme cases at later hours). The aforementioned impact will be of periodical nature and it will be defined by the date of completion of a given construction stage; all nuisance related should cease to exist at the moment of the completion of the stage of execution. During the operation the environmental impact will occur as

a result of emission of wastewater, emission of pollutants into the air, emission of waste and noise in connection with processes carried out. All waste generated as a result of operation, coming from particular sectors will be stored in a selective manner (in marked containers), in separated and designated locations, and then transferred only to authorized recipients for the purpose of further management thereof (mainly recovery and recycling, possibly neutralization) on principles defined by legal regulations. The aforementioned waste management method is in compliance with the principles and hierarchy of proceeding, defined in the Act on waste and secondary legislation to the aforementioned act.

The major sources of noise in the area of WTE Plant include:

- transformer, ID fan, outlet from the stack - spot source
- dry mechanical draft cooling tower, waste bunker, turbine hall, ash and solid waste solidification from flue gas cleaning system building, waste collection room, workshop room, storage room, boiler house with FGDP, peak load boiler house, turbine hall - building source.
- in the area of WTE Plant other potential noise sources in the form of mobile sources e.g. delivery vehicles and other means of transport will also be in operation.

The nearest residential areas include homestead housing and residential and service developments. The minimum distance of the planned project from the areas at which residential buildings are located amounts to approx. 270 m. They are not included in the valid Local Area Development Plan. Moreover, the area of the planned project and the existing residential developments are separated with a noisy road with heavy traffic, constituting acoustic background therefore the noise (including the noise from the mechanical draft cooling tower) will melt with the generated transportation-related noise.

Nevertheless, the results obtained owing to the computer simulation of the forecast of the level of noise emitted into the environment from the planned activity demonstrated that the emission of noise defined on the border thereof does not exceed admissible noise levels. The carried out calculations of noise propagation at daytime and at night, as well as the results of calculations in reception points indicate that the level of noise permeating from the WTE Plant area in the conditions of normal operation of the Plant to the areas of residential developments will not exceed permissible values. Calculations performed for particular sources of expected noise level in the environment showed that the emission of noise from the project area will not exceed the admissible values, defined by noise indicator LAeq D with respect to the time of day for areas subject to acoustic protection on the basis of legal regulations, i.e. the Regulation of the Minister of the Environment on admissible noise levels in the environment (i.e. Journal of Laws of 2014, item 112) which amount to: 45.0 dB at night and 55.0 dB at daytime. The noise level calculations carried out allowed to determine that in the project surroundings (outside the investor's plot area) the level of forecast noise will amount to approx. < 55 dB (which is indicated by the run of the equal-loudness contour depicting noise propagation).

As a result of combustion of fuel from waste in the stoker-fired boiler, pollutants in the form of gases and dusts will be emitted into the air. Sulfur dioxide, nitrogen oxides, suspended dust, heavy metals, dioxins and furans are the most significant ones. These pollutants will be reduced in high-efficiency systems with the use of sorbents: sulfur dioxide and other acid flue gas components (HF, HCl) in semi-dry flue gas desulfurization plant to which lime or hydrated lime will be dosed as sorbent; dust and heavy metals contained therein in the high-efficiency bag filter. For the purpose of restricting nitrogen oxide emission the flue gas denitrification plant using ammonia water solution or carbamide as reacting substances will be used. Between the reacting substance and the bag filter activated carbon, which will absorb mercury, dioxins and furans, will be entered into the Plant. Reactions of the reduction of the amount of harmful substances from flue gases will take place both in flue gas ducts and in the area of bag filter surface, Air protection systems will guarantee keeping emission standards defined in the Directive of the European Parliament and of the Council 2010/75/EU of November 24,

2010 on industrial emissions and the Regulation of the Minister of the Environment of November 4, 2014 on emission standards from certain plants, fuel combustion sources and waste firing or co-firing equipment (Journal of Laws of November 7, 2014, item 1546).

In the area of the WTE Plant the following sources of emission of gas and dust pollutants into the air will be in operation:

- stoker-fired boiler burning fuel from municipal waste and high-energy fraction remaining after sorting municipal waste and fraction 20 - 80 mm after composting and sieving, with thermal power introduced in fuel of approx. 48 MW<sub>t</sub>, fired with fuel from municipal waste, the flue gas of which will be discharged into to air with E-1 emission source (stack) with the height  $h \geq 60$  m and outlet diameter  $\leq 2$  m;
- two peak load back-up boilers with approx. 38 MW<sub>t</sub>, each fired with natural gas and alternatively with light fuel oil, the flue gas of which will be discharged into the air with E-2 two-duct emission source with the height  $h \geq 25$  m and outlet diameter  $\leq 1.3$  m for each duct;
- Diesel generator: a source working only in emergency situations: Diesel generator with the thermal power entered in fuel 0.85 MW<sub>t</sub>, powered with diesel oil, ensuring emergency commissioning or safe trip of the power unit devices in case of the total lack of power supply, from which flue gas will be discharged into the air with an emission source with the height  $h = 5.0$  m and diameter  $d = 125$  mm.
- sorbent storage silo (retention tank) to FGDP: conveying air will be entered into the air through a filter, emission source with the height  $h = 14$  m and diameter  $d = 0.3$  m; outlet average 0.3 m,
- fly ash storage silo (retention tank) (height 22 m; outlet average 0.4 m),
- activated carbon storage silo,
- light fuel oil tank (emission source - height 10 m)
- desulfurization: semi-dry (restriction of the emission up to a level required by domestic and EU legal regulations); anticipated desulfurization efficiency of approx. 90%,
- denitrification: primary methods and secondary methods (restriction of the emission up to a level required by domestic and EU legal regulations); anticipated denitrification efficiency of approx. 50%.
- dedusting: bag filter, efficiency of 99.98%
- reduction of dioxins, furans, mercury: absorption at activated carbon; efficiency of 97%,

Moreover, the following will be the sources of emission of gas and dust pollutants into the air:

- vehicle engines,
- secondary waste stabilization hall ventilation system.

The planned project will be designed in such a way that the volumes of emissions resulting from the Directive of the European Parliament and of the Council 2010/75/EU of November 24, 2010 on industrial emissions (IED) and the Regulation of the Minister of the Environment of November 4, 2014 on emission standards from certain plants, fuel combustion sources and waste firing or co-firing equipment (Journal of Laws of November 7, 2014, item 1546) are simultaneously met. Thus emission standards mentioned in the aforementioned Regulation will be met.

Calculated volumes of concentrations of tested pollutants in the air, generated by the operation of the WTE Plant, show that the Plant does not cause the increase in the average annual concentrations of pollutants present in the air up to the values defined by the regulations as admissible.

The WTE Plant will be a plant in constant operation. It should be emphasized that, as it was stated in the report, the current condition of air pollution (November 2014) for the area of the WTE Plant location was defined by the Province Inspector of Environmental Protection in Olsztyn (Appendix No. 9 to the Report) and it results from the aforementioned Report that in the area planned for the WTE Plant project no exceeding of admissible levels of concentration of tested pollutants in the air was found.

The requirements in the scope of the monitoring of emissions of gas and dust pollution into the air from the combustion process result from the provisions of the Regulation of the Minister of the Environment of October 30, 2014 on requirements for performing measurements of emissions and of water consumption (Journal of Laws of 2014, item 1542). Constant measurements comprise such substances as: *total dust*, SO<sub>2</sub>, NO<sub>x</sub> (converted to NO<sub>2</sub>) CO, HCL, HF, O<sub>2</sub>, *organic substances* in the form of gases and vapors expressed as Total Organic Carbon. Periodic measurements comprise such substances as: Pb, Cr, Cu, Mn, Ni, As, Cd, Hg, Tl, Sb, V, Co, dioxins and furans.

Gas and dust pollutants from the aforementioned sources will not exceed the values defined in the Regulation of the Minister of Environment of January 26, 2010 on reference values for some substances in the air (Journal of Laws No. 16, item 87). Running a plant, the functioning of which, due to the type and scale of the activity run therein, may cause significant contamination of particular nature elements or the environment as a whole, except for plants or parts thereof used only for the purpose of examination, development or testing of new products or technological processes, requires an integrated permit. It results from the data included in the report that probably the planned project is connected with the use of the plant falling under the obligation of obtaining the integrated permit pursuant to the Regulation of the Minister of Environment of August 27, 2014 on kinds of plants which may cause significant contamination of particular nature elements or environment as a whole (Journal of Laws of 2014, item 1169), thus the project environmental impact report should contain the comparison of the proposed technique with the Best Available Techniques (BAT), which was done.

The integrated permit will include precisely defined conditions for generation and methods of handling waste on general principles, defined in the provisions of the Act of December 14, 2012 on waste, as well as water intake conditions.

The planned project, in accordance with the Regulation of the Minister of Economy of October 10, 2013 on types and quantities of hazardous substances whose presence at the plant decides on its inclusion to the plant with increased or high risk of the occurrence of serious industrial failure (Journal of Laws of 2013, item 1479), will not be ranked as a plant with increased or high risk of the occurrence of serious industrial failure. The operation of the facility does not create the risk of occurrence of a serious failure in accordance with the statutory definition included in the provisions on environmental protection and secondary legislation, qualifying the plant as the plant with increased or high risk of the occurrence of serious industrial failure and the preparation of a plant safety report will not be required.

As the project environmental impact analysis presented in the report proved, the execution of the project should not cause the breach of the applicable environmental protection requirements.

During the process, the requirements of the Ordinance of the Minister of Economy dated March 21, 2002 on requirements for handling thermal treatment of waste (Journal of Laws No. 02.37.339 as amended) and of the Ordinance of the Minister of Economy dated March 19, 2010 amending the Ordinance on requirements for handling thermal treatment of waste (Journal of Laws of 2010, No. 61, item 380 2010.04.29), will be fulfilled.

The waste fuel combustion plant and the peak load boiler house shall meet the requirements of the national and European Union law, i.e. requirements, codes and standards specified by the Best Available Technique (BAT).

Measurements of emissions will be carried out in compliance with the Ordinance of the Minister of Environment dated October 30, 2014 on requirements for performing measurements of emissions and of water consumption. The measurements shall be carried out in accordance with the reference methodology for periodic measurements of noise emitted to the environment by the plant (frequency of measurements, in accordance with the abovementioned Ordinance – once every two years).

The project shall not abnormally affect the environment, and its possible nuisance shall be limited to the Investor's plot.

The use of the project should not result in excess of environment quality standards outside the area to which the plant operator holds a legal title. The data included in the report show that the emission standards, understood as permissible emission values, will not be exceeded either.

Due to the location, type, size and range of the project, as well as its distance from the borders of neighboring states, significant cross-border environmental impact is not anticipated; therefore, proceedings for cross-border impact are not required.

The documents enclosed with the files of the case, including the Environmental Impact Report for the planned project, containing an analysis of variants, prove that its implementation and operation – including the technical, technological and organizational assumptions specified in the report, as well as the conditions provided herein – will not cause any breach of the applicable environmental requirements.

In the opinion of this authority, the project information gathered at the stage of these proceedings is sufficient to approve it, as it properly presents the environmental impact at the stage of currently adopted assumptions and solutions, which allow to conclude that the project implementation will not cause adverse effects on the Natura 2000 sites and on other forms of environmental protection, and that there is no risk of impact accumulation. Therefore, the President of Olsztyn, having analyzed the criteria set forth in Article 77(5) of the Act on the Provision of Information on the Environment (...), has ascertained that the implementation of the project in question does not require another Environment Impact Assessment. Where an architecture and construction administration authority ascertains, in compliance with Article 88(1) of the Act on the Provision (...), that the building permit application contains amendments concerning the requirements specified in the environmental decision, it may decide on the need to perform the Environmental Impact Assessment and oblige the Investor, by way of a decision, to prepare the report, specifying its scope.

In view of the above, it must be stated that with due compliance with the requirements listed herein the planned project will not have significant adverse effect on the environment. Therefore, having considered the entire evidence gathered in the case, and on the basis of the provisions cited at the beginning, this authority has decided as in the conclusion.

Pursuant to Article 80(2) of the Act on the Provision (...), a competent body issues the environmental decision having ascertained the conformity of the project location with the local area development plan, if such plan has been adopted. In this case, such plan is in place. The analysis has allowed to conclude that the entire project is in accordance with the particular function provided for in the plan. The water and sewage management solutions, presented in the enclosed documentation (report), are also consistent with the provisions contained in the plan.

As regards the project compliance with other legal requirements – in particular resulting from the provisions on waste, introduced by virtue of amendment to the Act on Waste and some other acts, dated January 15, 2015 – it must be stated that the report includes the opinion of the Board of Warmia-Mazury Province, being the executive body, dated February 17, 2015, which recommends entering this plant into the Provincial Waste Management Plan (WPGO) (currently being updated) and into the prepared investment plan, constituting appendix to the plan.

By the Announcement dated December 23, 2015, pursuant to Article 38 of the Act dated October 3, 2008 *on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and on Environmental Impact Assessments* (Journal of Laws No. 2013.1235, consolidated text), the information on issuing the environmental decision for the project involving ***“Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89- 25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3”*** was published and made available. The Announcement was placed on the notice board of the Environment Department of the

Municipal Office of Olsztyn, at ul. Wyzwolenia 30, and published on the Public Information Bulletin (BIP) website of the authority conducting the proceedings. Pursuant to Article 49 of the Act dated June 14, 1960 on Code of Administrative Proceedings (Journal of Laws No. 2013.267, consolidated text), *an Announcement* shall be deemed served after fourteen days as of the date of its publishing.

The **parties** concerned were notified of the issuance of the environmental decision for the project involving *“Construction of a waste-to-energy plant processing combustible fraction produced in municipal waste treatment process, including related infrastructure, in Olsztyn at ul. Lubelska, plots cadastral Nos. 89- 25/11, 89-25/12, 89-25/3, 94-6/1, 94-6/2, 94-6/3”*.

### **Instruction**

Pursuant to Article 72(3) of the Act of October 3, 2008 *on the Provision of Information on the Environment and its Protection, Public Participation in Environmental Protection and on Environmental Impact Assessments* (Journal of Laws No. 2013.1235, consolidated text), the environmental decision shall be attached to the building permit application. Such application should be filed no later than four days after the date when the environmental decision became final and binding.

The parties may appeal against this Decision to Samorządowe Kolegium Odwoławcze w Olsztynie (Local Government Board of Appeals in Olsztyn), through the agency of the President of Olsztyn, within 14 days after the date when this Decision is served.

### Appendices:

1. Description of the planned project, in accordance with Article 82(3) of the Environment Impact Assessment Act.

### Recipients: (parties to the case):

1. Miejskie Przedsiębiorstwo Energetyki Ciepłej Sp. z o.o.  
10-710 Olsztyn, ul. Słoneczna 46
2. Generalna Dyrekcja Dróg Krajowych i Autostrad (General Directorate for National Roads and Motorways)  
10-083 Olsztyn, Al. Warszawska 89
3. Gmina Olsztyn, Wydział Geodezji i Gospodarki Nieruchomościami (Municipality of Olsztyn, Department of Geodesy and Real Estate Management)
4. Warmińsko-Mazurska Specjalna Strefa Ekonomiczna S.A., with a registered seat in Olsztyn  
10-061 Olsztyn, ul. Barczewskiego 1

### CC:

1. Państwowy Powiatowy Inspektor Sanitarny (State District Sanitary Inspector)  
10-561 Olsztyn, ul. Żołnierska 16
2. Regionalny Dyrektor Ochrony Środowiska (Regional Director for Environmental Protection)  
10-437 Olsztyn, ul. Dworcowa 60
3. to files

MUNICIPAL OFFICE OF OLSZTYN

On behalf of THE PRESIDENT OF OLSZTYN  
Małgorzata Jasięka  
Office Head with the Department of Environment

## **PRESIDENT OF OLSZTYN**

### **Plac Jana Pawła II 1**

#### **Appendix to the environmental decision dated December 22, 2015**

##### **General description of the project**

Construction of the waste-to-energy plant processing combustible fraction (WTE Plant) will last for 32-36 months from the moment when the Contractor takes over the construction site until the new plant is commissioned. The site handover to the EPC Contractor will take place upon obtaining all the necessary decisions, permits and approvals. Civil works will be commenced immediately after the site is handed over and will be completed upon the WTE Plant commissioning and hand-over for operation. During the maximum intensity of the works, 300 workers will be engaged on site. It is assumed that most of them will be workers of local companies.

The WTE Plant construction will commence with ground leveling, preparation of haul road connecting the construction site with public roads, and supply of necessary utilities.

The main WTE Plant facilities include:

- Boiler house building including flue gas cleaning and discharge systems,
- Turbine hall building housing the steam turbine with auxiliary systems and equipment,
- Peak load back-up boiler house,
- Unit control room with electric switching station,
- stack,
- fuel collection and unloading point,
- waste bunker and process fuel supply,
- furnace waste management systems.

The technical feasibility to start the execution of the facilities and process systems will depend on completing the construction site preparation and on preparing the necessary detailed designs. The construction of the abovementioned facilities, including erection of main equipment, will be carried out simultaneously for most of the project implementation period. Interfaces between the process systems, their acceptance, commissioning and hand-over for use shall be planned in the time schedule at the final stage of implementation.

The facilities and systems whose execution is less time-consuming include:

- oil management facilities,
- water preparation facilities,
- transformer stand,
- other auxiliary facilities.

The new plant construction will require the following works:

- excavations for the designed facilities,
- reinforced concrete works for the construction of foundations, strip footings, reinforced concrete structures of channels, floor surfaces, etc. for the designed facilities,
- erection of the new power unit main building structure as well as structures of related and auxiliary facilities,
- civil works, mechanical, electrical and plumbing works, as well as finishing works in the built facilities, and construction of access roads to the facilities,
- erection of process equipment and devices in the facilities,
- construction of pipe rack routes,
- construction site demobilization and ordering after the civil works are completed.

After construction completion, the WTE Plant site will be leveled using the soil from excavations for foundations of individual facilities.

#### Water intake and sewage discharge

Water for the designed plant will come from the designed Ø400 mm water main running from the WTE Plant to Piłsudskiego street. The water line route will pass the planned WTE Plant site, through plots Nos. 89-25/1 and 94-6/1. The anticipated length of the water main section will be 2,600 m. Przedsiębiorstwo Wodociągów i Kanalizacji w Olsztynie (Water and Sewerage Company in Olsztyn – PWiK) has ordered execution of the design documentation for the water main. Technical conditions for connection of the MPEC facilities may be issued after the water main design is approved.

The body receiving the sewage from the planned WTE Plant will be the Ø600 mm sanitary sewer located along Lubelska street, also on the plot No. 88-17/1. The connection requires construction of a sanitary drainage network section from the sewer to the level of the real estate. The valid long-term plan for modernization and extension of water and sewerage facilities, issued by PWiK, does not provide for construction of such network. However, PWiK is able to sign an appropriate contract for co-financing the execution of the design documentation and construction of the necessary drainage network section. Water for the new CHPP will come from the PWiK water supply network, and sewage will be discharged to the PWiK drainage network.

#### Gas supply

The City of Olsztyn is supplied with high methane natural gas of E group, by the distribution network operated by PSG. The city is not provided with the natural gas transmission network of Gaz-System.

Approximately 800 m from the site intended for the planned CHPP in Olsztyn, there is Grądek pressure reducing and metering station, supplied by the high-pressure DN 150 gas pipeline, running from Bartąg to Dobre Miasto. Additionally, apart from the existing gas pipeline, it is planned to build a new DN300 high-pressure gas pipeline MOP 5.5, connecting Nidzica, Olsztynek and Grądek.

For the purposes of supplying the gas-fired generating units in the planned CHPP in Olsztyn, it is planned to take the gas from the PSG distribution network.

The indicated place of gas fuel delivery and receipt is the designed medium-pressure gas station located on the premises of the new plant at Lubelska street in Olsztyn. The point of connection to the gas network will be the designed DN250 medium-pressure gas pipeline running from the PSG station located on the premises of the new plant at Lubelska street.

#### Power output line

The new plant will be located near the 110 kV power line connecting Olsztyn 1 and Michelin stations. The service connection requirements for the plant were issued on April 2, 2014. In accordance with the issued requirements for connection to the 110 kV power grid of Energa Operator, the power output line will be connected to the new 110 kV switching station, to which the line between Olsztyn and Michelin stations will be connected. In the new 110 kV switching station, the unit transformer of the new Olsztyn CHPP will be connected to minimum one bay.

#### Heat output

The peak thermal power output from the new plant will be approx. 90 MW<sub>th</sub>. The new CHPP will feed the areas of Pojezierza and Zatorze housing co-operatives, as well as other zones.

The WTE Plant will be connected to the Municipal District Heating System by a new DN500 district heating main, executed as a preinsulated network.

MUNICIPAL OFFICE OF OLSZTYN

On behalf of THE PRESIDENT OF OLSZTYN  
Małgorzata Jasieka  
Office Head with the Department of Environment