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**Subject: State Aid SA.55100 (2019/N) – Poland
Aid for the construction of the municipal waste thermal treatment
plant in Gdańsk**

Sir,

1. PROCEDURE

- (1) By the submission registered on 2 August 2019, Poland notified the above-mentioned measure to the Commission pursuant to Article 108(3) of the Treaty on the Functioning of the European Union (“TFEU”). Upon request of the Commission on 10 September 2019, Poland provided additional information on 25 September 2019.
- (2) On 25 September, the Polish authorities waived its right under Article 342 TFEU in conjunction with Article 3 of Regulation (EEC) No 1/1958 to have the decision be adopted in English.

2. DETAILED DESCRIPTION OF THE AID

2.1. Objectives of the aid

- (3) This notification concerns the construction of a municipal waste thermal treatment facility in the city of Gdańsk. It will be a high-efficient waste-to-energy combined heat and power facility (“the Gdańsk CHP”) which will treat up to 160,000 tonnes of residual municipal waste per year. In addition, it will produce heat and electricity, with a maximum thermal and electrical capacity of 45 MW and 16.9 MW, respectively.

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- (4) The main objective of the plant is to treat residual municipal waste in the North, West and East regions (a project area) of the Pomorskie voivodeship in line with the Waste Framework Directive (2008/98/EC) with a parallel energy recovery from the waste. The plant will improve energy efficiency due to combined electricity and heat production, i.e. primary energy savings (“PES”) at a level of 22.85% compared to a separate electricity and heat production.
- (5) As a second objective, the plant will also contribute to reducing use of fossil fuels. It is estimated that as a result of the project, 52,800 tons of hard coal and 47,200 tons lignite per year will be saved.
- (6) As a third objective, the plant will also help reduce CO₂ emissions compared to separate electricity and heat production. In accordance with the methodology for the assessment of greenhouse gas emissions and emission variations of the European Investment Bank (“EIB”), it is assumed that generation of energy in cogeneration emits much less CO₂ than generation of the same amount of energy separately. The Polish authorities claim that in case of heat and electricity generation in high-efficient cogeneration from municipal waste, the CO₂ emissions are 164,000 tons per year lower than in the case of heat generation based on fossil fuels.
- (7) Finally, fourth objective of the plant is reducing municipal waste disposal in landfills (see also recital (20)). By incinerating waste that is currently landfilled, the operation of the Gdańsk CHP will result in a reduction in emissions of 1,840,000 m³ per year of landfill gas¹ to the atmosphere.

2.2. Background

Heat, electricity and waste markets in Gdańsk

- (8) The total demand for thermal energy (heat) of the city of Gdańsk is about 1.855 MW – 78% from buildings (houses, apartment blocks, office buildings and public buildings) and 22% from industry. This corresponds to approximately 14 267 TJ of heat consumed annually. Gdańsk’s heat needs are covered by the municipal heating network (823 MW or 44%²), local boiler houses (116 MW or 6%), industrial sources (367 or 20%) and individual heat sources (549 MW or 29%).
- (9) Currently, the only source of heating in the municipal heating network is the Gdańsk Power Plant - Elektrociepłownia Gdańska - owned and operated by PGE Energia Ciepła S.A, a subsidiary of the PGE Polska Grupa Energetyczna S.A. (“PGE”).
- (10) Poland submitted that an increase in demand for heat in Gdańsk is expected and triggers the need for additional source of heat produced by the planned facility. According to Poland’s estimates, in 2030, demand for the network heat (922 MW) will exceed the available heating capacity (736.2 MW) not taking into account the Gdańsk CHP.

¹ Landfill gas composes mostly of methane (45-58%), CO₂ (32-45%) and nitrogen (0-5%).

² Calculated peak power. The actual power ordered by the operator of the municipal heating network (GPEC) from the source - Polska Grupa Energetyczna – is at the level of 736.2 MW.

- (11) On the electricity market, Poland submitted that the total installed electricity production capacity in Poland in 2016 was 41,396 MW, with 162,626 GWh of electricity produced during the year of 2016.
- (12) With regard to the waste market, there are currently twelve mechanical and biological waste processing (“MBP”) facilities operating in the project area (Northern Eastern and Western Region) producing annually over 300,000 tons of residual municipal waste that could be subject to thermal treatment.
- (13) In accordance with the Waste Management Plan of the Pomeranian Voivodeship 2022, the demand for thermal conversion of municipal residual waste from MBR, after taking into account all goals for circular economy (including recycling of municipal waste at 65% since 2030)³, has been estimated at the level of 203,500 tons/year.

2.3. The beneficiary of the aid measure

- (14) The beneficiary of the notified measure is Port Czystej Energii Sp. Z o.o. (“PCE”), a limited liability company owned by the City of Gdańsk and specifically established for the purpose of implementing the Gdańsk CHP plant. PCE will be the owner of the constructed facility.

2.4. Scope of the aid measure

The Gdańsk CHP project

- (15) The scope of the Gdańsk CHP aid measure includes the financing of the project consisting of a construction of a high-efficient waste-to-energy cogeneration plant of a thermal capacity of approximately 45 MW and electric capacity of approximately 16.9 MW.

Table 1 - Planned output of the CHP plant

	Unit	Value
Thermal capacity	MW _t	45
Heat production	TJ/year	444
Electricity capacity	MW _e	16.9
Electricity production	GWh/year	123

- (16) The Gdańsk CHP project will be organised in a form of a private-public partnership (“PPP”) between the beneficiary and a contractor (private partner) which was selected by the beneficiary through a procedure in accordance with the requirements of both EU and national rules concerning the award of public contracts⁴. The contractor will be a consortium of Astaldi S.p.A., T.M.E. S.p.A.

³ The objectives regarding, inter alia, recycling levels were introduced as part of Directive (EU) 2018/851 of the European Parliament and the Council of 30 May 2018 amending Directive 2008/98/EC on waste.

⁴ Polish Public Procurement Law implemented in the Polish legal system the provisions of Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC.

Termomeccanica Ecologia and T.I.R.U. S.A. who will build and operate the facility. The contractor will receive remuneration for the execution of construction works and for the maintenance and operation of installations in accordance with the PPP contract.

- (17) The beneficiary is fully responsible for the financing of the project during the investment period and the operations. The private partner is obliged to incinerate all waste delivered by the beneficiary up to 160,000 tons per year, ensuring heat and electricity production at the level guaranteed in the offer, in relation to the volume of waste and its caloric value.
- (18) The completion of the construction of the Gdańsk CHP is planned for 2022.

Fuel used by the Gdańsk CHP plant

- (19) The 160,000 tons of waste that be will be incinerated per year in the Gdańsk CHP will originate from three regional installations for the processing of municipal waste (“RIPOKs”) of Szadółki, Tczew and Gliwa Mała. In the future, PCE will sign delivery agreements with other RIPOKs in the region.
- (20) According to Poland, the plant will use only the waste that remains after exhausting all other ways of waste management and cannot be treated in any other way. This is due to i) the ban on landfilling of the municipal residual waste stemming from Landfill Directive (1999/31/EC) and the obligation to treat it with a high level of energy efficiency (Waste Framework Directive (2008/98/EC); ii) a lack of a possibility to use it in other ways than incineration given no room for increase in cement kilns capacity; and iii) an insufficient throughput capacity of incineration services at acceptable cost throughout Poland.

2.5. Form of aid, eligible costs and aid intensity

- (21) The envisaged aid is provided in the form of a direct non-reimbursable grant stemming from the EU structural funds⁵ and a capital injection from the City of Gdańsk. The remaining part of financing will be provided by commercial lenders.
- (22) Eligible costs are calculated as the difference between the baseline scenario investment and the counterfactual scenario investment, the latter being the construction of a gas-fired boiler facility with an equivalent heat output to the proposed CHP plant. Estimates for the investment costs are derived from an independent study.⁶
- (23) The total investment costs are estimated at PLN 506,907,108.00 out of which PLN 7,087,716.00 cannot be considered eligible for aid.
- (24) The Polish authorities estimate that the investment cost for the reference gas fired facility is PLN 10,350,000.00, i.e. PLN 230,000 per MW of thermal output.

⁵ Infrastructure and Environment 2014-2020 Operational Programme, Measure 2.2 “Municipal waste management”; https://www.funduszeuropejskie.gov.pl/media/10900/P0iS_2014-2020_04112015.pdf.

⁶ The costs were estimated based on the following 2016 study: <https://www.tgpe.pl/pl/a/analiza-w-zakresie-instalacji-referencyjnych-dla-oze-i-wysokosprawnej-kogeneracji-juz-dostepna>.

- (25) Based on the cost estimations in recitals (23) and (24), the costs eligible for aid amount to PLN 489,469,391.00 nominal and PLN 472,394,324.00 discounted. A breakdown of the costs is shown in the following table.

No	Description (facilities, activities, operations, purchases)	Item type (total/eligible costs)	Amount
			[PLN]
1.	<i>Construction of the facility, of which:</i>	total	499,819,392.00
		eligible	499,819,392.00
1.1.	Management of the investment process, including construction supervision	total	11,069,911.00
		eligible	11,069,911.00
1.2.	Construction of facility	total	463,749,481.00
		eligible	463,749,481.00
1.3.	Construction of heating network connection	total	17,000,000.00
		eligible	17,000,000.00
1.4.	Reserve	total	8,000,000.00
		eligible	8,000,000.00
2.	<i>Project promotion, costs incurred before application submission</i>	total	7,087,716.00
		eligible	-
TOTAL - total cost			506,907,108.00
TOTAL – eligible costs			499,819,392.00
TOTAL – eligible costs (discounted)			472,394,324.00
Cost of constructing the reference facility			10,350,000.00
TOTAL - eligible costs (discounted) minus cost of constructing the reference facility			462,044,324.00

- (26) According to the documents provided by the Polish authorities, the required rate of return for investments in cogeneration of thermal waste conversion installations can vary between 7 and over 10 % in real terms after tax, depending on the specific risks connected with a given investment and the structure of the financing. Poland also referred to an earlier State aid case concerning the construction of a biomass and waste CHP plant in Vilnius, whereby it was indicated that the rate of return on investment should not be lower than 9%, while for most investors the acceptable level of return on equity should be 17.55-18,55%⁷. In the case of the Gdańsk installation, however, Poland assumed a much lower required return due to the fact that the City of Gdańsk is primarily interested in maintaining the lowest possible cost of managing the residual fraction of waste, and not maximizing the return on its capital.
- (27) Consequently, the business plan displays the internal rate of return (“IRR”) of 1.43% in real terms, post-tax and the Net Present Value (“NPV”) of – PLN 3.2 million.

2.6. Budget and financing

- (28) According to Poland’s submission, the State aid financing the project will consist of:

⁷ EUROPEAN COMMISSION C(2016) 5943 final - State Aid SA.41539 (2016/N) – Lithuania Investment aid for high-efficiency cogeneration power plant in Vilnius, UAB Vilnius kogeneracinė įėgainė.

- (a) The EU grant in the amount of nominally PLN 270,696,804.83 which translates into the discounted aid amount of PLN 259,521,594.62, and
- (b) The equity injection of the City of Gdańsk of PLN 17,705,000.

As a result, the total investment aid for the project amounts to PLN 277,226,594.62, i.e. 60% of the discounted eligible costs.

2.7. Legal basis

- (29) The national legal basis is set out in the Act of 11 July 2014 on the implementation of cohesion policy programmes financed in the period of 2014-2020 (Journal of Laws of 2014, item 1146, as amended), and the implementing provisions.

2.8. Cumulation and transparency

- (30) The Polish authorities confirmed that no cumulation with other investment aid will take place. The beneficiary could potentially apply for operating aid for the production of electricity from renewable energy sources (“RES”) under the support scheme approved by the Commission in 2017⁸ and for a cogeneration premium for the production of energy from high-efficiency CHP installations under the support scheme approved by the Commission in 2019⁹. However, as stated in Article 39 of the Act of 20 February 2015 on Renewable Energy¹⁰ (“the RES Act”), which is the legal basis for the RES scheme, any investment aid will be deducted from operating aid. Also, the Act on the promotion of electricity from high-efficiency cogeneration (“the CHP Act”)¹¹ requires to reduce the cogeneration premium by the investment aid received.
- (31) Poland confirmed that all transparency requirements set out in points 104-106 of the Commission Guidelines on State aid for environmental protection and energy 2014 (“EEAG”)¹² as corrected by the corrigendum adopted by the Commission¹³ will be complied with.

3. ASSESSMENT OF THE AID

3.1. Existence of aid

- (32) Article 107(1) TFEU provides that *"any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market"*. The application of these cumulative conditions is examined below.

⁸ SA.43697 Polish support scheme for RES and relief for energy-intensive users.

⁹ SA.51192 CHP support and State aid.

¹⁰ Journal of Laws 2015, item 478, as amended.

¹¹ Journal of Laws 2019, item 42.

¹² OJ C 200, 28.06.2014, p.1.

¹³ OJ C 290, 10.08.2016, p.11.

- (33) The aid stems from EU Structural Funds (see footnote 5) and the capital injection from the City of Gdańsk used to finance the project. Poland has notified the injection as State aid as it is not granted under normal market conditions which would require a higher rate of return. The Commission concurs with this view. Therefore, the Commission considers that the aid is granted from State resources within the meaning of Article 107(1) TFEU.
- (34) The aid is only granted to PCE and provides the beneficiary with funding that would otherwise not be available on the market. The measures are granted only for the construction of the Gdańsk CHP. The Commission therefore concludes that the measure gives an advantage to PCE and that this advantage is of a selective nature.
- (35) The producers of energy compete with each other in an open market to obtain customers. Energy can be sold and transported from one Member State to another. The measure is therefore liable to distort competition and affect the conditions of trade between Member States.
- (36) The Commission therefore concludes that the notified measure constitutes State aid within the meaning of Article 107(1) TFEU. It is thus necessary to consider whether the aid measure is compatible with the internal market.

3.2. Legality of the aid measure

- (37) Poland has fulfilled its obligation according to Article 108(3) TFEU by notifying the investment aid before putting it into effect.

3.3. Compatibility

- (38) The objective of the notified measure is to promote high-efficiency CHP production, since the production in such CHP installations creates primary energy savings compared to separate production of heat and electricity. Consequently, this aid measure falls within the scope of the EEAG.
- (39) The Commission has assessed the compatibility of the aid measure on the basis of the EEAG, in particular the general compatibility conditions in Section 3.2 and the rules on energy efficiency including CHP in Section 3.4.

3.3.1. Objective of common interest

- (40) The aim of the aid measure is to achieve primary energy savings through electricity production in a high-efficient CHP plant. As laid down in Directive 2012/27/EU on energy efficiency¹⁴, the EU set the objective of saving 20% of the Union's primary energy consumption by 2020. Moreover, paragraph 108 EEAG recalls that the EEAG should prepare the ground for achieving Union environmental objectives beyond 2030. An indicative energy efficiency target for the EU for 2030 of 32.5% savings has been established. The Commission therefore interprets EEAG points 107 and 116 as covering not only the achievement of the EU's 2020 targets for renewable energy but also to the new 2030 target.

¹⁴ Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on Energy efficiency, amending Directive 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).

- (41) Poland confirmed that the Gdańsk CHP meets the criteria of high-efficient CHP within the meaning of Directive 2012/27/EU.
- (42) With regard to the requirement of paragraph 140 EEAG, Poland confirms that the Gdańsk CHP will burn waste in compliance with the waste hierarchy principles set out in Directive 2008/98/EC.
- (43) In addition, the Commission considers as positive other objectives of the project, namely the contribution to the reduction of i) the use of fossil fuels (see recital (5)), ii) CO₂ emissions (see recital (6)) and iii) municipal waste disposal in landfills (see recital (7)).
- (44) The Commission therefore considers that the individual aid to the Gdańsk CHP is aimed at an objective of common interest in improving energy efficiency in energy generation beyond 2020 (see paragraph 139 EEAG).

3.3.2. Need for State intervention and appropriateness of the aid

- (45) As recognised in paragraph 142 EEAG, energy-efficiency measures target negative externalities by creating individual incentives to attain environmental targets for energy-efficiency and for the reduction of greenhouse gas emissions.
- (46) Undertakings do not have sufficient incentives to invest into expensive and complex projects such as waste-to-energy cogeneration installations and would, without public support, construct a heating plant fired with conventional fuels such as natural gas or hard coal. For this reason, public support is needed to attain environmental objectives. Moreover, PCE would not be in a position to cover investment and operational costs of the project merely through revenues from the sale of heat and electricity, and the fees paid by the citizens to treat municipal waste. To that end, Poland demonstrated that without support the project would not be profitable.¹⁵
- (47) Finally, paragraph 145 EEAG states that State aid may be considered an appropriate instrument to finance energy efficiency measures independently of the form in which it is granted.
- (48) The Commission therefore concludes that the notified aid measures to PCE for construction of the Gdańsk CHP is necessary and that it is an appropriate instrument to address objective of common interest.

3.3.3. Incentive effect

- (49) The incentive effect is present if the aid changes the beneficiary's behaviour towards reaching the objective of common interest, a change in behaviour which it would not undertake without the aid.

¹⁵ According to Poland, the profitability of the project is very low and does not correspond to the minimum requirements of a prudent investor. Without the aid, the financial net present value of the project would be negative, calculated at a level below PLN - 203 million and the IRR would amount to -0.32%., i.e. below any reasonable investment expectations.

- (50) Moreover, according to paragraph 50 EEAG, aid does not present an incentive effect in all cases where work on the project had already started prior to the aid application by the beneficiary to the national authorities.
- (51) Paragraph 60 EEAG states that the incentive effect is to be identified through the counterfactual scenario analysis, comparing the levels of intended activity with aid and without the aid.
- (52) The beneficiary applied for the EU Funds support in December 2016 and signed a contract with the financing conditions with the Polish authorities in April 2018. In May 2018, it signed a contract with the contractor with the option to terminate the contract in case of absence of the EU funding. The Polish authorities confirmed that until now the contractor has been realising only preparatory activities with regard to the preparation of the project. The construction of the Gdańsk CHP will take place only after the State aid approval.
- (53) For the conclusion of financial profitability of an investment, two main financial performance indicators are calculated: i) the NPV the investments and ii) the IRR on investments. In the case when the project does not get financial support in the form of a direct grant, the Gdańsk CHP generates a negative NPV of PLN -203 million and an IRR of -0.32%. The Commission considers that the calculations submitted by the Polish authorities are consistent with market practices and accepts arguments that, given the levels of NPV and IRR, the investment at hand is not economically viable and without the aid the municipality would not carry out the project.
- (54) In addition, even with the aid, the Gdańsk CHP generates a negative NPV of – 3.6 million and a low IRR of 1.43%. According to the Polish authorities, the project developers are ready to accept such low profitability because the aim of the project is not to maximise the returns but to maintain the lowest possible cost of managing the residual fraction of waste without excessive increase in the waste collections fees for the citizens.
- (55) The Commission therefore concludes that, in the light of the beneficiary's mission to manage waste at socially affordable prices and its operating constraints, the aid provides an incentive effect so as to reach the objective of common interest.

3.3.4. Proportionality

- (56) As stated in Section 3.2.5.1 EEAG, aid is considered to be proportionate if it is limited to the minimum needed to achieve the common objective. Where the costs of achieving the common interest objective cannot be identified in the total investment costs as a separate investment, the aid is considered to be limited to the minimum necessary if it corresponds to the net extra costs necessary to meet the objective, compared to the counterfactual scenario in the absence of aid.
- (57) Poland submitted documents calculating eligible costs (those needed to achieve energy efficiency and environmental protection measures) based on the counterfactual scenario of a construction of a gas-fired boiler facility with an equivalent heat output (cf. recital (24) above). Against this counterfactual, the aid

intensity will comply with the 60% threshold set out in EEAG for a CHP project in a NUTS level 2 region (cf. recital (28) above)¹⁶.

- (58) As for the profitability, the Commission notes that the NPV of the project achieved with the aid is negative (- PLN 3.2 million) and the IRR of the project is low (1.43%) compared to normal market rates. The reason is that the City of Gdańsk accepts to undertake this investment in the light of the mission of managing the residual fraction of waste. It follows that the beneficiary is not likely to obtain excessive profits from the construction and operation of the aided project.
- (59) The Commission therefore concludes that the notified aid measure is proportionate.

3.3.5. *Distortion of competition and balancing test*

- (60) Paragraph 88 EEAG recalls that for aid to be found compatible with the internal market, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest.
- (61) Paragraph 90 EEAG explains that the Commission considers that aid for environmental purposes will by its very nature tend to favour environmentally friendly products and technologies at the expense of other, more polluting ones. Moreover, the effect of the aid will in principle not be viewed as an undue distortion of competition since it is inherently linked to its very objective.
- (62) The Commission notes that the market for district heating is local since the district heating would only be delivered to the customers connected to the municipal heat distribution network in Gdańsk. The connection of the Gdańsk CHP to the network impacts the current heat producer, the Gdańsk Power Plant. However, the heat demand seems to be increasing and is estimated to surpass the capacity of the Gdańsk Power Plant by the time of the completion of the Gdańsk CHP. Moreover, the heat prices are regulated i.e. the municipal heating network company can purchase heat from the Gdańsk CHP only in the amount and at such price that would not lead to an increase in charges for the citizens. Therefore, the business of the other heat producer should not be strongly affected.
- (63) As concerns the electricity market, the electric capacity of Gdańsk CHP will be 16.9 MW and electricity production approximately 123 GWh per year. Therefore, the installed capacity of Gdańsk CHP will account for only 0.04% of the installed capacity and the volume of electricity produced will account for only 0.075% of the total annual electricity production in Poland. The Commission concludes that Gdańsk CHP will therefore have no significant impact on the electricity generation and wholesale supply market.
- (64) In view of the above, the Commission concludes that the measure is not expected to lead to undue distortions in any market concerned by Gdańsk CHP.

¹⁶ Cf. Annex I of the EEAG setting aid intensity applied for district heating at 45%, increased by a bonus of 15% points for regions covered by Article 107(3)(a) TFEU.

3.3.6. *Transparency of aid*

(65) Poland has committed to comply with the transparency requirements set out in section 3.2.7 EEAG.

4. AUTHENTIC LANGUAGE

(66) As mentioned under section 1 above, the Polish authorities has accepted to have the decision adopted in English. The authentic language will therefore be English.

5. CONCLUSION

The Commission has accordingly decided not to raise objections to the aid on the grounds that it is compatible with the internal market pursuant to Article 107(3) c) of the Treaty on the Functioning of the European Union

If this letter contains confidential information which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt. If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site: <http://ec.europa.eu/competition/elojade/isef/index.cfm>.

Your request should be sent electronically to the following address:

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Yours faithfully
For the Commission

Margrethe VESTAGER
Member of the Commission

