



Gdańsk,

16.05.2014 r.

**REGIONAL DIRECTOR FOR  
ENVIRONMENTAL PROTECTION  
IN GDAŃSK**

RDOŚ-Gd-WOO.4211.12.2014.ER.8

zpo

**DECISION**

Pursuant to Article 75 item 1 point 1. c), item 7 in connection with Article 71 item 1 and item 2 point 1), Article 82 of the Act of October 3, 2008 concerning disclosure of information about the environment and its protection, public participation in environmental protection, as well as environmental impact assessments (i.e. Journal of Laws of 2013 item 1235, as amended) - hereinafter referred to as the EIA Act, and § 2 item 1 point 24 the Council of Ministers regulation of November 9, 2010 on projects likely to have the significant impact on the environment (Journal of Laws No. 213, item 1397 as amended Journal of Laws of 2013 item 817) and Article 104 of the Act of June 14, 1960. Administrative Procedure Code (i.e. Journal of Laws of 2013 item 267 as amended), after considering *Baltic Gas Sp. z o. o. i wspólnicy spółka komandytowa [Baltic Gas Ltd. and partners limited partnership]* in Gdańsk application of March 31, 2014, acting on the basis of:

- 1) Environmental Impact Assessment Report concerned with natural gas production from B4 and B6 reservoirs on the offshore areas of the Republic of Poland - the authors of EKO-KONSULT Design and Consulting Office Andrzej Tyszecki in Gdańsk, Gdańsk March 2014,
  - 2) opinion of the Director of Maritime Office in Gdynia, expressed in the resolution, ref. No. INZ1.1-AM- 8103-50-1/14 of May 7, 2014,
- after performing the environmental impact assessment for the project,

**I HEREBY DECIDE**

**I. Determine for the project entitled:**

***"Production of the natural gas from undersea B4 and B6 hydrocarbon reservoirs, as well as its transmission to the systems within the area of CHPP in Władysławowo",***

implemented to the marine waters, as well as plots with cadastral number 1/4 and 1/8, precinct Władysławowo 10,

**the following environmental conditions of the project implementation:**

**1. Type and location of the project**

The B4 and B6 natural gas reservoirs are located in the Baltic Sea, in the eastern part of the Polish exclusive economic zone. The sea basin in this area reports administratively to the Maritime Office in Gdynia. The B4 reservoir is located at distance of approximately 90 km, northbound from the coastline and was identified by means of three boreholes. The B6 reservoir is located at a distance of approximately 75 km northwards from the coastline and was identified by means of boreholes. The project covers construction of gas pipeline, reservoir drilling and borehole production of natural gas from B4 and B6 offshore reservoirs in offshore areas of the Republic of Poland, transport of extracted gas into the production system on the production rig, and then transported by undersea gas pipeline to the hydrocarbon conversion system at the Energobaltic-owned Władysławowo Combined Heat and Power Plant. The planned project will be executed using a phased-out approach in 2 phases: The first is planned for drilling up to 4 production boreholes and development of B6 reservoir, as well as construction of the DN 250 undersea gas pipeline with the length of about 85 km to the

Energobaltic system in Władysławowo. The second is planned for drilling up to 4 production boreholes and development of B4 reservoir, as well as construction of the DN 150 undersea gas pipeline with the length of about 33 km to the main production rig on B6 reservoir.

Gas mining will be controlled using production platforms and supervised from control station located at Energobaltic-owned Władysławowo Combined Heat and Power Plant. No on-board gas treatment equipment is planned at the rigs. The overall hydrocarbon treatment process will be performed onshore in the installations of Energobaltic CHPP. The battery limits between the project covered by this decision and the Energobaltic systems is the receiving station of the cleaning pig on CHPP site.

## **2. Conditions of the land use during the implementation and production phase with the particular consideration of the necessity concerning the natural value, natural resources, natural and built heritage conservation, as well as nuisance constrains for the neighboring areas**

Referring to the implementation of the planned project and the production activity there should be carried out the actions enabling the reduction of the detrimental impact on the marine environment regarding the construction of the drilling rig, gas pipeline and the hydrocarbons production. To make the B4 and B6 reservoirs suitable for natural gas production drilling of maximum 4 boreholes is planned (vertical and horizontal) for each reservoir with the maximum length of vertical and horizontal sections reaching approximately 3000 m for the B4 reservoir and approximately 3100 m for the B6 reservoir. Taking into account the necessity concerning the natural values conservation, as well as marine waters quality, the investor shall be imposed the following duties:

- a) The works should be performed according to the principles laid down in the provisions in force regarding navigation safety; rigs should be marked according to the ordinance of the Minister of Transport, Construction and Maritime Economy of December 4, 2012 regarding the buoyage system of the Polish marine areas (Journal of Laws of 2013, item 57).
- b) There should be implemented the continuous monitoring of operating parameters concerning each device, automatic alarm operating during appearance of the dangerous deviations from the planned regimes.
- c) The rig should be equipped with the measures against the potential spills, as well as permanent monitoring of the naval systems in the respect of their protection against the sea pollution.
- d) The marine waters and bottom sediments shall have the monitoring implemented in the surrounding of the drilling and production rig.
- e) Drilling mud shall be the subject of pretreatment and reuse. Old drilling mud shall be collected in the tank after the works are finished. Discharge of the drilling mud to the marine waters is excluded.
- f) The so-called dredged spoil coming from III<sup>0</sup> of the treatment (meaning the finest) shall be collected in the tank and transported onshore to the competent entity for processing.
- g) Domestic sewage coming from the rigs shall be the subject of pretreatment before discharging to the marine waters.
- h) Oiled water coming from the rigs shall be transported onshore and in the emergency - the waters shall be the subject of pretreatment before discharging to the sea.
- i) Gas pipeline should be laid at the depth ensuring the navigation and fishing safety.
- j) Works related to the construction of the gas pipeline shall not be performed during the spawning period of the ichthyofaunal species occurring permanently or swimming for the spawning through the zone of the planned investment.
- k) Onshore works shall be performed beyond the birds' nesting season which lasts from March 1 to August 31.
- l) Dredged spoil from the steerable directional drilling should be managed according to the provisions of the law in force.
- m) Technical protections shall be applied and the parameters of the produced and transmitted gas, monitored.
- n) Water used for the hydrostatic resistance test and leak-tightness test cannot be discharged to the sea.
- o) There should be carried the suitable management of the wastes, including the hazardous,

occurring at the drilling and production rigs, including their quantity minimizing, selective collection in the separated and adjusted locations in the conditions protecting against permeating of the hazardous substances to the environment, as well as ensuring their receipt by the authorized entities.

- p) Waste coming from the rigs and ships should be dealt pursuant to regulations of the International Convention for the Prevention of Pollution From Ships - MARPOL 73/78.
- q) Any possible damages resulting from the project shall be removed.

### **3. Environmental requirements necessary for including in the documentation draft, required for obtaining the decision enabling the project implementation.**

- a) Designing the gas pipeline route and the bases of the rigs structure shall be preceded by the seafloor research for the presence of underwater objects or possible obstacles.
- b) There shall be performed the design of marine waters and bottom sediments monitoring in the surrounding of the drilling and production rig for the presence of hydrocarbons and heavy metals inter alia.

The monitoring design shall include the environmental research providing the data of planned investment impact before implementation, during production and after its completion, including:

- water quality (e.g. biogenic compounds, BOD5, COD, organic matter, heavy metals),
  - quality of bottom sediments (e.g. biogenic substances, heavy metals, oil hydrocarbons, aromatic hydrocarbons (PAHs) polychlorinated biphenyls (PCBs)),
  - macrophytes: identification of occurrence of plant clusters on the sea bottom,
  - zoobenthos.
- c) Usage of the suitable technologies, and procedures related minerals extraction shall be planned, including the ones contained in the "Plan for combating the oil spills that occurred as the result of the production works".
  - d) Blowout spill preventers, both management and technical, including the continuous monitoring of the drilling parameters are to be planned for fast detection of the initial signs showing media flows from the reservoir rocks, as well as automatic shutdown of equipment and closing of valves (gates) stopping the flow.
  - e) The control of the production installation and monitoring of the carried works for the assessment of the performed production impact to the marine environment shall be conducted and in case of any deviations the intervention activities implemented.

### **4. Requirements of the prevention concerning the industrial accident consequences, relating to the projects classified as plants of possible major accident hazard.**

As the planned project is not classified as the plant of possible major industrial failure, the requirements of the prevention concerning the major industrial failure are not determined. Principles of the "Plan for combating the oil spills" shall apply in case of the major accident, resulting in oil spills. Works shall be performed according to the approved drilling research plans, the principles of dealing with the chemical materials and substances used in the geological works shall be applied, as well as required safety zones determined pursuant to the regulations concerning Articles 115 and 120 of the Act of June 9, 2011 shall be retained. Geological and mining law (Journal of Laws No. 163 item 981 as amended), ensuring the geological works performance in the manner safe for the humans and environment.

Operation of the project is not expected to cause the major accidents with the humans health or environment impact.

### **5. Requirements of reducing the transboundary environmental impact in relation to the projects with the performed proceeding concerning transboundary environmental impact.**

Project has local character, limited to the nearest neighborhood, place of works. Risk of causing transboundary environmental impact was assessed as highly unlikely. Preventers system limits the

possibility of wider contamination to the border of the Polish territorial waters.

Due to the aforementioned, there was no need to carry out the proceeding concerning the transboundary environmental impact.

## **II. To impose on the applicant the following duties:**

In the area of preventing, reducing and monitoring environmental impact of the project:

- a) Environmental protection equipment shall be maintained in the proper condition.
- b) Planned monitoring of the marine waters and bottom sediments shall be performed to enable the issue of the report concerning the impact of work on the environment.
- c) Clock hours of production surveillance shall be performed during the rig operation time with the particular consideration of the ecological safety of the marine environment.

## **III. Do not state the necessity of re-performing the Environmental Impact Assessment.**

Due to the sufficient for complete assessment of impacts (including cumulative), currently available information on the implemented solutions and technical measures of the environment protection, as well as usage of the possible mitigation measures, whereas including the circumstances mentioned in Article 82 item 2 the EIA Act, hereby it is stated that there is no necessity of re-performing the Environmental Impact Assessment in the proceeding concerning the planned change of the license.

## **IV. Do not state the necessity of establishing the limited use area**

Concerned project does not belong to the type of projects referred to in Article 135 item 1 Act of April 27, 2001. Environmental Protection Law (i.e. Journal of Laws of 2013 item 1232, as amended), for which the limited use area is allowed for establishing.

## **V. Make "The description of the project" as the annex to this decision and the integral part herein.**

### **FOUNDATIONS**

Baltic Gas sp. z o.o. i wspólnicy Sp. k. [Baltic Gas Ltd. and partners limited partnership] in Gdańsk submitted the application of March 31, 2014. (received on April 2, 2014) for the environmental decision concerning the production of the natural gas from the undersea hydrocarbon reservoirs B4 and B6 located on the offshore area of the Republic of Poland, as well as its transmission to the systems within the area of CHPP in Władysławowo. Application of the applicant after the addition of April 7, 2014 included, inter alia:

- Environmental Impact Assessment Report concerned with natural gas production from B4 and B6 reservoirs on the offshore areas of the Republic of Poland - the authors of EKO-KONSULT Design and Consulting Office Andrzej Tyszecki in Gdańsk, Gdańsk March 2014, (hereinafter called EIA report),
- copy of the cadastral map including the planned area of the project, as well as area supposed to impact,
- extract of the cadastral survey including the planned area of the project, as well as area supposed to impact,
- map extract and extent of the local spatial development plan.

By notice of April 8, 2014 the Parties were informed about the initiation of the administrative procedure and possibility to read the documents and submit comments and requests, if any. Information about application were placed in the publicly available data list *Ekoportal* ([www.ekoportal.pl](http://www.ekoportal.pl)) the number 132/2014. The project covered by this application consists in production of natural gas from B4 and B6 reservoirs located in the Polish exclusive economic zone in the area of the so-called Central Baltic, and transmission of the produced gas by a pipeline to the Combined Heat and Power Plant located in Władysławowo.

Pursuant to the ordinance of the Council of Ministers of November 9, 2010 *on projects likely to have*

*the significant impact on the environment* (Journal of Laws No. 213, item 1397 as amended, Journal of Laws of 2013, item 817) the project is classified as:

- a) project which may always have a significant impact on the environment: §2 item 1 point 24) *"production of gas, petroleum and its natural derivatives from the reservoir or their processing, in the amount exceeding 500,000 m<sup>3</sup> per day in case of gas or 500 t per day in case of petroleum and its natural derivatives, and production or processing of petroleum, its natural derivatives and gas on offshore areas of the Republic of Poland, the performance of which requires environmental impact assessment for which the preparation of Environmental Impact Assessment Report is obligatory.*
- b) project likely to have a significant impact on the environment: §3 point 33) *"gas transmission systems other than specified in § 2 item 1 point 21 and the accompanying gas compressor stations or gas pressure reducing stations, excluding pipelines with pressure not exceeding 0.5 MPa and service connections; and the gas compressor stations or gas pressure reducing stations constructed, erected or redeveloped by the existing transmission systems are not considered as projects likely to have a significant impact on the environment, for which the obligation to perform environmental impact assessment and to prepare the Environmental Impact Assessment Report may be imposed by way of decision.*

Pursuant to the Environmental Impact Assessment Act (Article 3, item 1, point 13) the projects that have technological ties are qualified as a single project. For the project a single decision on environmental constraints is issued also when more than one decision is required from the list of decisions referred to in Article 72 of the Act or when the applicant has obtained separate decisions for various project implementation phases (Article 72, item 5).

Pursuant to Article 75 item 1 point 1) c) and item 7 of the EIA Act, Regional Director for Environmental Protection in Gdańsk is the competent authority to issue a decision on the environmental conditions for the concerned project.

Pursuant to the content of article 59 item 1 point 1 of the aforementioned Act, the implementation of the planned project likely to always have the significant environmental impact, requires mandatory performance of the environmental impact assessment.

Under article 77 item 1 point 1) of the EIA Act the said case requires the approval of a maritime office director. Pursuant to Article 6 of the aforementioned Act, the requirement for approval or providing opinion does not apply if the authority in charge of the procedure is also the approving authority or authority providing the opinion. Decision on the environmental constraints occurs prior to obtaining the (license/change of the license), as referred to in Article 72 items 1 and 1a of the EIA Act.

Regional Director for Environmental Protection in Gdańsk announced to the public information about submission of the application and the environmental impact assessment report, along with information about the rights to submit comments and proposals in the seat of the Regional Directorate for Environmental Protection in Gdańsk within 21 days, i.e. from April 15, 2014 to May 5, 2014. Announcement was published on the website of the authority ([www.rdos.gdansk.gov.pl](http://www.rdos.gdansk.gov.pl)) bulletin boards in the authority seat, Maritime Office in Gdynia, as well as Municipal Office in Władysławowo. No comments or requests were received during the proceeding involving the public in the specified time period.

In the course of proceedings the local authority has set forth and paid attention to, as follows:

The planned project involves production of natural gas from two undersea B4 and B6 reservoirs, using unmanned production rigs and transport of gas via undersea gas pipeline to onshore location in Władysławowo.

The B4 reservoir is located at distance of approximately 90 km, northbound from the coastline. occurs at the depth of about 1100 m below the sea level. The B6 reservoir is located at a distance of approximately 75 km, northbound from the coastline. B6 gas-condensate reservoir occurs at the depth of about 1450 m below the sea level.

B4 reservoir is covered by License No. 6/2007 of the Minister of Environment for the extraction of gasoline natural gas from "B4" reservoir located in the area of the Polish exclusive economic zone

of the Baltic Sea, dated May 11, 2007, amended by decision No. DGiKGe-4770-51/5164/08/MO, issued by the Minister of Environment on August 14, 2008. License No. 2/2006 of the Minister of the Environment for the production of natural gas (gas condensate) from "B6" reservoir located within the area of the Polish exclusive economic zone of the Baltic Sea of November 7, 2006 amended by decision No. DGiKGe-4770-52/5363/08/MO of August 29, 2008.

The planned changes in production licenses involve adjustment of production system sites for B4 and B6 reservoirs, which means movement of the B4 rig (by 1.13 km in south-eastern direction towards B6 rig) and movement of B6 rig (by 1.3 km southwards and in south-western direction) as well as modification of the route and diameter of gas transport pipelines. The production of B4 reservoir will be performed using unmanned rig, whereas the extracted gas will be transported using DN 150 gas pipeline leading from B4 rig to the central production rig. Meanwhile the production of B6 reservoir is planned with the use of unmanned central production rig, natural gas will be transported by DN 250 gas pipeline leading from B6 central production rig to the Energobaltic-owned system, located in Wladyslawowo. Hydrocarbons produced from B4 and B6 reservoirs will be transported using gas pipeline from B6 reservoir. Hydrocarbons will be blended by B6 production center.

Applications for amending production licenses for the B4 and B6 reservoirs will also contain proposal to extend the period of reservoir development and postponement of the start date of production activities.

The project will be executed using a phased-out approach in 2 phases: Phase One with the planned production start in 2018 will comprise the following:

- making economic use of the B6 reservoir through foundation of unmanned production rig and drilling maximum four production boreholes,
- construction of DN 250 undersea gas pipeline, approximately 85 km long, leading to the Energobaltic system in Wladyslawowo.

Phase Two - most probably it will take place between 2022 and 2027 will comprise the following:

- making economic use of the B4 reservoir using unmanned rig and drilling maximum 4 production boreholes;
- connection of the B4 reservoir with the main production rig working on the B6 reservoir by means of DN 150 undersea gas pipeline with the length of approximately 33 km.

Gas mining will be controlled using production platforms and supervised from control station located at Energobaltic-owned Wladyslawowo Combined Heat and Power Plant. No on-board gas treatment equipment is planned at the rigs. The overall hydrocarbon treatment process will be performed onshore in the installations of Energobaltic CHPP. The battery limits between the project covered by this decision and the Energobaltic systems is the receiving station of the cleaning pig on CHPP site. Undersea gas pipelines will be laid in excavations in the sea bottom and backfilled with sediments, everywhere where they can be vulnerable to potential damage. The depth of gas pipeline foundation will depend on the sea bottom depth and on conditions of shipping and fishing. It will range from 1 to 3 m. In the inshore zone and in the beach area a rebore will be made using directional horizontal drilling technique, drilled seawards from the Energobaltic site at a distance of approximately 500 m from the coastline. The gas pipeline will be connected to the pig receiver located 50 m inwards of the site owned by Energobaltic, at a distance of approximately 200 m from the shore.

The planned project is to a large extent located in the offshore area, which is not covered by the local spatial development plan. The Investor has filed a request to consider this project in the draft spatial development plan for the Polish offshore areas.

The onshore part of the planned project is situated on cadastral plots No. 1/4, 1/8, precinct Wladyslawowo 10, on the territory of which there is no applicable local spatial development plan. Cadastral plot No. 1/4 covers beach area where rebore will be made using horizontal drilling technique, whereas cadastral plot No. 1/8 where beach valve will be installed, pig receiving station and processing system are operated by Energobaltic Sp. z o.o.

At present in the Polish exclusive economic zone hydrocarbons are produced from the B3 reservoir, located more than 30 km away from the planned production rig on the B6 reservoir and undersea gas pipeline is operated that transports hydrocarbons from the B3 reservoir to the CHPP in Wladyslawowo. The B8 reservoir, situated over 60 km from the B6 reservoir, is also planned to be

developed along with the construction of gas pipeline to Wladyslawowo. Due to significant distance between B8, B4 and B6 reservoirs and different timing of works, no accumulated impact is expected during the construction of undersea gas pipelines. In the Central Baltic Sea area the hydrocarbon prospecting and exploration activities have been carried out for many years now. In the territory covered by neighboring exploratory licenses in the Central Baltic Sea 2D seismic survey as well as max. 6 prospecting and exploratory boreholes for hydrocarbon reservoirs have been planned. Since the planned boreholes will be drilled one by one by the same drilling rig, no accumulated impact is expected from the execution of planned production boreholes on B4 and B6 reservoirs and from prospecting and exploratory drillings on neighboring lands covered by exploratory licenses. The Investor's activities at the sea have to be agreed with the Director of Maritime Office in Gdynia and with the Navy Hydrographic Office.

The planned production of the B4 and B6 reservoirs is located 55 km and 80 km away from the Natura 2000 sites called Coastal Waters of the Baltic Sea PLB990002. The planned gas pipeline in the sea/marine area will cut through the aforementioned Natura 2000 sites, and in the onshore part will run in the vicinity of Natura 2000 sites the Bay of Puck and Hel Peninsula PLH220032 and the Bay of Puck PLB220005. The planned gas pipeline in the onshore part will be located in the buffer zone of the Coastal Landscape Park.

Pursuant to the results of the EIA, undersea noise emitted in connection with the planned works will not exceed the background parameters. The impact on avifauna will be related mainly to the machinery work during the construction phase in the onshore part. Therefore the onshore works shall be performed beyond the birds' nesting season. Impact on ichthyofauna will consist of the local and periodic water turbidity during the excavations execution and the gas pipeline backfilling that may impact more on the individuals in the early development stage. Therefore it is justified to refrain from the works performance in the close season, i.e. during the spawning period of the ichthyofaunal species occurring permanently or swimming for the spawning through the zone of the planned research. Adverse impact of the planned works on the marine mammals is not expected due to the fact that the probability of occurrence regarding the aforementioned animals (rare in the Baltic Sea) is very small in the area of the planned works.

Additionally, the planned investment does not violate the provisions of Nature Conservation Act of April 16, 2004 (i.e. Journal of Laws of 2013, item 627 as amended)

Due to the aforementioned it is not possible that the project implementation could result in the lost or fragmentation of the natural habitats or the habitats of plants and animals species for the protection of which they were designated. Thus it is not necessary to carry out the assessment pursuant to Article 6.3 of the Habitats Directive.

Regional Director for Environmental Protection in Gdańsk applied in the aforementioned case for the approval to the Maritime Office Director in Gdynia and received the position of the authority in the resolution, ref. No. INZ1.1-AM-8103-50-1/14 of May 7, 2014. Aforementioned position was included in the decision herein.

Pursuant to the requirements of Article 77 item 1 point 2 and article 78 item 2 of the EIA Act, Regional Director for Environmental Protection in Gdańsk applied with the letter ref. No. RDOŚ-Gd-WOO.4211.12.2014.ER.5 of April 8, 2014 for the opinion of the State Border Sanitary Inspector in City of Gdynia. Sanitary authority has not taken a position on the statutory time period.

In the opinion of the local authority submitted environmental impact report corresponds with Article 66 of the EIA Act, and the findings contained herein are logical and convincing.

There were determined impacts and potential environmental risks connected with the operation of the project basing on the analyses carried out in the submitted EIA. The carried out analysis have made possible to propose preventive, as well as minimizing measures of the potential adverse impact.

In the course of the carried out environmental impact assessment procedure, having the regard to the whole evidence compiled in the case, the local authority has set forth for the process implementation and operation of the project, as shown below.

In the construction phase of gas pipelines and reservoir drilling potential marine environment might be contaminated with a varied risks of pollutant release and contamination. During production rig operation and gas transport via undersea gas pipelines a pollution risk is minimal.

There is fresh water for the crew domestic uses, fuel and electrical power produced on the platform consumed on the gas rig. There can appear the following types and groups of potential environment pollution: sanitary sewage, domestic waste, oil waste, scrap metal, the exhaust gases from diesel engines installed on the platform, noise. There will appear the following types of emissions and waste connected with the drilling works and boreholes sampling: used drilling fluid including the drilling mud, cuttings coming from drilling, as well as lowering the casing string, flaring gas fumes appearing during the boreholes cleaning.

There will be used the following substances during laying the gas pipeline on the ships laying the pipeline and delivering materials: fresh water for the crew domestic uses, diesel oil to supply the various motors used to ship work and pipe laying, the electrical power produced on ships.

Construction of the pipeline in the marine area will be accompanied by: the exhaust gases from the engines supplying the pipeline laying machines, the exhaust gas from the engines powering pipeline laying ship and auxiliary equipment, the noise arising from the ship work, as well as the works connected with the horizontal drilling and periodic disturbance in the structure of the seafloor and bottom sediments.

During phase of hydrocarbons offshore production, demand for materials and pollution emissions will be at the level typical for gas extraction rates under conventional regimes at sea. The gas pipeline operation does not generate any pollution and does not produce any waste.

During production of the natural gas in the offshore areas the pollution sources may include chemical compounds for injection to the drilling equipment in order to ensure the flow of reservoir fluids and corrosion prevention. Gas production from B4 and B6 reservoirs will not produce oiled waters as a waste from separation of mined gas, because B4 and B6 reservoirs contain dry gas and no formation waters will be extracted. Production rigs will be unmanned.

The diagnosed impacts connected with natural gas production from undersea B4 and B6 reservoirs and its transport onshore via pipeline are local and possible risks are not very likely.

There will be carried out two types of activities connected with the planned production activity, that will reduce the adverse impact of the hydrocarbons production on the marine environment: prevention and intervention related to the occurrence of the potential accident conditions. The process of production will be monitored continuously by control and measurement instrumentation. Any deviations form the basis of the crew interventions. Monitoring of the marine environment in the vicinity of the activity, will be implemented in the phase of drilling and preliminary works.

The production of hydrocarbons in offshore fields will mainly involve periodic servicing of production rigs.

Around production rigs a safety zone will be established where a ban on fishing and anchoring will be effective. Rigs will be equipped with the navigation warning equipment, fog warning horns, identification and warning electronic systems.

The implementation of the planned activities is not followed by the occurrence of hazardous substances in quantities classified as ZZR (Lower Tier Establishment) or even more as ZZR (Upper Tier Establishment). Implementation or operation of the project is not expected to cause the major accidents with the humans health or environment impact.

After analyzing the EIA report and taking into account the specificity of the investment location, the authority has determined in this decision the conditions to apply at the phase of implementation and operation of the project.

Due to the distance from the Polish borders, nature of the project and limitation of its impact to the location of the project and time of survey, the project will not have cross-border environmental impact from the territory of Republic of Poland.



The obligations referred to in point II of the Decision imposed pursuant to Article 82 item 1 and item .2 of the EIA Act. These obligations also arise from the recommendations of the performed environmental impact assessment report.

Implementation of the investment, pursuant to the conditions determined in the decision hereby, does not release the investor, notwithstanding the provisions of the decision hereby from the obligation to:

- obtain permits, opinions and approvals required by the law.
- implement the obligations arising directly from the provisions of the law. Obligations such as existing and binding by law, are not subject to the re-imposition in the decision.

Therefore, the decision should be as aforementioned herein.  
The information on this decision is subject to announcement on publicly accessible data list.

This decision may be appealed against to the General Environmental Protection Director through the Regional Environmental Protection Director in Gdańsk within 14 days following its receipt pursuant to articles 127 and 129 of the Code of Administrative Procedure.

### INSTRUCTION

Environmental decision shall be attached to the application for the decision referred to in Article 72 of the EIA Act. The application should be filed within four years from the day on which the decision on environmental constraints became final. The time limit may be extended by two years if the planned project which can have a significant impact on the environment is implemented in stages and the conditions specified in the decision on environmental constraints have not changed and if the party received a decision from the competent body confirming the above circumstances. Regulations concerning the issue of the decision on environmental constraints apply accordingly to any changes in the decision on environmental constraints.

**Payment of issuing this decision on March 25, 2014 was made with the stamp duty in the amount of 205 PLN, pursuant to Article 6 item 1, point 1, Article 8 item 1 of the Act of November 16, 2006, concerning the stamp duty (Journal of Laws No. 225, item. 1635 as amended) and pursuant to section 1.1.1945 of the Annex to the aforementioned Act.**

To be received by:

1. Tyszecki Andrzej - EkoKonsult, ul. Kościarska 5, 80-328 Gdańsk-as agent of the Baltic Gas Sp. z o.o. i wspólnicy spółka komandytowa w Gdańsku [Baltic Gas Ltd. and partners limited partnership in Gdańsk]
2. Urząd Morski w Gdyni [Maritime Office in Gdynia], ul. Chrzanowskiego 10, 81-338 Gdynia
3. Energobaltic Sp. z o.o., ul. Starowiejska 41, 84-120 Władysławowo
4. Polskie Koleje Państwowe SA w Warszawie [Polish Railways in Warsaw], ul. Dyrekcyjna 2-4, 80-958 Gdańsk
5. aa-2507/kpa

For the attention of:

6. Minister of Environment, ul. Wawelska 52/54, 00-922 Warszawa
7. Minister of Infrastructure, ul. Chałubińskiego 4/6, 00-928 Warszawa



**REGIONAL DIRECTOR  
FOR ENVIRONMENTAL  
PROTECTION in GDAŃSK**

**APPENDIX**

to decision No. RDOŚ-Gd-WOO.4211.12.2014.ER.8

*(pursuant to the provision of Article 82 item 3 of the act of October 3, 2008 on providing information about environment and its protection, participation of the general public in the environmental protection and about environmental impact assessments (consolidated text, Journal of Laws of 2013 item 1235 as amended)*

**CHARACTERISTICS OF THE PROJECT**

**"Natural gas production from undersea B4 and B6 hydrocarbon reservoirs and its transport to the systems located on the premises of the Combined Heat and Power Plant in Władysławowo",**

performed on sea waters and cadastral plots located onshore No. 1/4 and 1/8, precinct 10 in Władysławowo.

The B4 and B6 natural gas reservoirs are located in the Baltic Sea, in the eastern part of the Polish exclusive economic zone. Previously they belonged to the area covered by License No. 35/2001/p Gas North for exploration and prospecting of oil and natural gas reservoirs. At present they are covered by the relevant natural gas production licenses. The sea basin in this area reports administratively to the Maritime Office in Gdynia.

Both reservoirs were discovered in 1981-1982 during exploratory efforts taken at that time by then international "Petrobaltic" Joint Organisation for Oil Exploration based in Gdansk. The B4 reservoir is located at a distance of approximately 90 km northwards from the coastline, in the area of License blocks No. E28/E29. For the B4 reservoir the "Lubiatowo" Mining Area was designated with the total area of 60 734 917 m<sup>2</sup> and the mining site, overlapping with the boundaries of the Mining Area and production license, designated by the lines linking points with the coordinates specified below:

*Location of the "Lubiatowo" Mining Area*

Point	Latitude			Longitude		
	o	'	''	o	'	''
1	55	37	8.89	17	54	26.54
2	55	39	51.52	17	54	8.31
3	55	42	22.25	17	54	42.98
4	55	43	38.46	17	56	11.90
5	55	44	56.12	17	59	30.42
6	55	43	19.77	18	2	9.13
7	55	42	26.16	18	2	16.41
8	55	42	14.09	18	0	36.36
9	55	41	33.51	17	59	59.71
10	55	41	24.19	17	58	20.80
11	55	37	52.95	17	57	9.16
12	55	37	8.46	17	55	52.53

*Source: License No. 6/2007*

The reservoir was identified by means of three boreholes. Two of them were made in the central part

(Borehole B4-1/81, B4-2A/2002), and the third borehole (B4-N1/2001) was made within the area of flat northern culmination, separated from the central part by a local morphological lowering of the reservoir roof level.

The B6 reservoir is located at a distance of approximately 75 km northwards from the coastline, in the area of License block No. E48. For the B6 reservoir the "Smoldzino" Mining Area was designated with the total area of 13,857,216 m<sup>2</sup> and the mining area is designated by the lines linking points with the coordinates specified below. The mining terrain overlaps with the boundaries of the mining area and production license.

#### **Location of "Smoldzino" mining area**

Point	Latitude			Longitude		
	o	'	''	o	'	''
1	55	23	21.22	17	45	54.15
2	55	23	50.56	17	45	28.41
3	55	24	53.32	17	45	39.11
4	55	27	09.70	17	47	21.21
5	55	27	09.08	17	48	33.25
6	55	26	02.19	17	48	43.69
7	55	23	52.43	17	47	10.50
8	55	23	21.31	17	46	27.44

*Source: License No. 2/2006*

To date the reservoir has been identified by means of two boreholes. One of them (B6-1/82), identified the central part of the reservoir, the other one – southern culmination (B6-3 drilled in 2002).

To make the B4 and B6 reservoirs suitable for natural gas production drilling of maximum 4 boreholes is planned (vertical and horizontal) for each reservoir with the maximum length of vertical and horizontal sections reaching approximately 3000 m for the B4 reservoir and 3100 m for the B6 reservoir.

The boreholes are expected to be drilled by means of Lotos Petrobaltic jack-up rig, owned by Lotos Petrobaltic S.A. The drilling rig will be founded on the sea bottom using variable length legs, which allows for precise location of its planned position. The rig will be towed to the planned position by means of tug boats. The drilling rig will drill and complete production boreholes for production rig. The rigs will be equipped with wellheads designated for the support of uninterrupted extraction of hydrocarbons from the B4 and B6 reservoirs. During regular operation the production rigs will be service-free and unmanned pieces of equipment and as such they will have minimum back-up facilities. The back-up facilities will comprise premises for periodic stay of 8-person service crew. No gas processing equipment is envisaged for the installation on the rigs, since the entire process of hydrocarbon processing will be carried out onshore. Despite that the rigs will be equipped with machinery and equipment for securing both flow and service safety, for protection of natural environment and integrity of a battery of equipment. The battery of equipment will consist of tanks for glycol and other chemicals as well as of devices for pumping in, a set of devices to handle gaseous fuel, a set of measuring instruments for monitoring of production process, safety valve, gas flare system, fire and gas leakage detection and prevention system, control system for potential leakages from pipelines, heli deck and equipment for helicopter refuelling, boat mooring devices, a set of navigation devices and light signalling, communication system with the Baltic Beta rig located on the B3 reservoir, and also with the control stand and Energobaltic-operated CHPP in Wladyslawowo. Additionally the rig will be equipped with service cranes and other devices such as evacuation system, rescue system and for the search of castaways as well as other devices and systems necessary to support production operations and to secure safety at sea (SOLAS) pursuant to the requirements set forth by the International Maritime Organization (IMO).

Gas production will be controlled from production rigs and supervised from the control stand located at the Energobaltic CHPP in Wladyslawowo. The control stand will control production parameters and will monitor continuously the condition of all pieces of equipment vital to maintain correct and safe gas production. The CHPP's control station will allow both to activate and to shutdown all mining systems at both rigs and pipelines. The control stand at the Energobaltic CHPP will control and supervise gas production safety via data control and collection system (SCADA) based on telemetric devices installed on the rigs.

The mining parameters will be monitored and controlled by a set of analogue and digital, electronic and pneumatic control devices. The measurement data and control signals from the rigs to the CHPP's control stand and vice-versa will be transmitted by telemetric system. All alarms, connections and switch off required for safe production will be provided by that signaling and control system.

Rig-installed separator will take a small volume of mined gas and adapt it with the aim of supplying to pneumatic and control devices. Relatively small volume of gas extracted from the B4 and B6 reservoirs will be used as fuel to supply rigs. That gas will be used to generate energy required to supply motors as well as a source of pure gas for medium pressure pneumatic devices and as pneumatic power transmitter for small devices operated with pumps dosing chemicals.

The gas pipeline planned in the offshore part will be laid underneath sea bottom in the territorial waters and in the Polish exclusive economic zone. The DN150 pipeline between the B4 and B6 reservoirs will be approximately 33 km long. The DN250 pipeline between the B6 reservoir and the Energobaltic onshore systems will be approximately 85 km long. In both cases the crow-fly distance will be smaller and will total 30 km and 78 km accordingly, however, 10% tolerance was assumed to bypass potential obstacles. The run of the planned gas pipelines is defined by the following geographic coordinates:

#### **Geographic coordinates defining the location of the planned gas pipeline in its offshore part**

<b>Point name</b>	$\varphi$	$\lambda$
<b>B4 rig</b>	55°40'02.53"	17°56'09.12"
<b>B6 rig</b>	55°25'20.35"	17°46'32.42"
<b>KP-0</b>	55°25'41.45"	17°47'10.16"
<b>KP-B6a</b>	54°51'54.2177"	18°28'34.9434"
<b>KP-B6b</b>	54°49'05.2305"	18°27'11.8254"
<b>KP-B6c</b>	54°48'34.9967"	18°27'29.7284"
<b>KP-HDDIL (inlet)</b>	54°47'53.23"	18°27'48.08"

*Source: Materials of Baltic Gas*

It is assumed that gas pipeline will be laid up to the place situated in Wladyslawowo, at ul. Starowiejska 41 where the systems of Energobaltic Sp. z o.o. are installed. The site where works are planned is located in cadastral plots No. 1/4 (passage controlled by horizontal drilling technique) and No. 1/8 (CHPP with the outlet of rebore and receiver of a pig) in Wladyslawowo, within Precinct No. 10.

The offshore section of gas pipeline will be laid in excavations made in the sea bottom and covered with sediments, everywhere where it can be exposed to impact and possible damage caused by third party activities. Gas pipeline foundation depth will vary and will depend on the depth of sea bottom as well as shipping and fishing conditions. In high seas the gas pipeline will be covered with protective layer with approximate thickness of 1 m. Approaching the land, everywhere where sea depth is below 20 m, the thickness of protective layer will grow up to approximately 3 m This is expected at a distance of approximately 1 km from coastline.

In the coastal zone, horizontal direct drilling (HDD) is planned through the beach. The HDD will be made starting from CHPP site and heading for the sea at a distance of approximately 500 m from the coastline. The gas pipeline will be connected to the receiver of a pig located 50 m inwards of the site owned by Energobaltic, at a distance of approximately 200 m from the shore.

Once the pipeline laying has been completed, the crown block (along with the receiver of cleaning pig) has been installed, then measuring and submerging pigs will be activated from onshore side.

Then a hydrostatic test of submerged pipeline will be performed in order to test pressure parameters. Consequently a rigid sleeve will be installed between pipeline and riser. It is suggested to apply driver intervention as opposed to the application of remotely controlled equipment. At the end leak-tightness test will be performed, with the direction being from the rig towards shore, in order to verify integrity of all joints.

Before the gas pipeline is handed over for operation, a resistance hydraulic test and pneumatic leak-proof test will be performed using sea water or freshwater (4,200 m<sup>3</sup>).

To secure operational safety the gas pipeline will be equipped with the system of automatically closed safety valves located both at the DN 150 section at the place of B4 rig leaving, at the end of riser, at the place of DN 150 section connection to the B6 rig at the top of riser, at the DN 250 section at the place of leaving B6 rig at the top of riser, at the place where the DN 250 section comes close to the land (beach valve). The valve system will isolate individual sections from the rigs and from one another but also from the onshore equipment and will cut off gas flow in case of pipeline or its constituent failure. The valve can be closed manually and automatically, but opened only manually. Final inspection before gas pipeline commissioning will aim at checking the correctness and operational safety of all valves and their ability to respond to the close command.

#### *Expected types of pollution:*

Basic emissions and waste will be generated during borehole drilling, gas pipeline laying and making a rebores using horizontal drilling technique. The emissions and waste involved will be typical for rig operation and pipelaying vessels (domestic waste, sanitary sewage, emissions from combusted fuels) as well as drilling fluid, drillings and water from leak-proof tests. The production of gas reservoirs will not result in generation of significant pollution and waste.

By-products of borehole performance will be drilling fluid and drillings. Low toxicity drilling fluid will be used. Drilling fluid will be treated onboard in a closed cycle. Cuttings carried by the drilling fluid to the surface will be eliminated from the drilling fluid by means of the treatment system and removed from the drilling rig. 1<sup>st</sup> and 2<sup>nd</sup> purity class cuttings will be discharged into the sea subject to an approval of marine administration. 3<sup>rd</sup> purity class cuttings will be transported onshore.

With relation to the execution of the horizontal drilling, small amounts of the drillings will be generated, which will be disposed of on the premises of Energobaltic or otherwise, pursuant to the applicable provisions of law. Moreover, a potential source of the pollution during construction works will be sea water used to perform the resistance and leak-proof tests. Water applied during tests will be used onshore – no water will be discharged into the sea.

During offshore field hydrocarbon production phase using unmanned rigs, material demand and pollution emission will be minimal. The operation of the gas pipeline will not result in generation of pollution and waste.

#### *Activities related to closure of B4 and B6 reservoirs*

Upon completion of production and disassembly of the downhole equipment, boreholes will be closed by way of performing cement plugs. Onboard process systems will be stripped down, and the rig will be towed away. The gas pipeline, laid down between rigs, main operational center and coastal horizontal rebores will be closed with plugs and will remain in excavations.

The resources remaining in the reservoir after the end of production do not require any special protection. No land reclamation works will be required.