	<p align="center">Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p align="right">Page 1/25</p>
---	---	------------------------------------


SUMMARY OF THE NON-TECHNICAL PART OF THE REPORT ON THE ENVIRONMENTAL IMPACT OF THE PLANNED CONSTRUCTION OF A BEŁCHATÓW TO TRĘBACZEW 400 kV OVERHEAD ELECTRICITY TRANSMISSION LINE

TRANSMISSION OF ELECTRIC ENERGY FROM THE 858MW POWER GENERATION UNIT AT THE BOT
ELEKTROWNIA BEŁCHATÓW S.A. TO THE TRĘBACZEW SYSTEM SWITCHING STATION

**Investor's Name and
Address:** BOT Elektrownia Bełchatów S.A.
Rogowiec, ul. Energetyczna 7
97-406 Bełchatów 5


**Design Office's Name and
Address::** Energoprojekt – Kraków SA
ul. Mazowiecka 21,
30-019 Kraków

Developed by: **Wiesław Kurbiel, Eng.**
Lidia Baster
Piotr Cyran M.Sc. Eng

	Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station	Page 2/25
---	---	--------------

Contents

1	BACKGROUND.....	3
2	DESCRIPTION OF THE PROJECT.....	3
3	ALTERNATIVE SCENARIOS FOR THE CONSIDERED PROJECT.....	4
4	CHOICE OF THE ROUTE OF THE OVERHEAD LINE	4
5	DESCRIPTION OF THE NATURAL ENVIRONMENT IN WHICH THE PROJECT WILL BE LOCATED....	5
6	ENVIRONMENTAL IMPACT	8
7	IMPACT ON HUMAN HEALTH AND ENVIRONMENT	12
8	LAND USE AND INFRASTRUCTURE ASPECTS	14
9	PROPERTY ASPECTS AND PUBLIC ACCEPTANCE ISSUES	15
10	LEGAL ACTS AND OTHER REFERENCE DOCUMENTS USED FOR THE ESTIMATION PURPOSES	16
11	DRAWINGS	18
11.1	THE 400 kV POWER SYSTEM WITH THE PLANNED LINE	19
11.2	PROFILE OF THE STRAIGHT-LINE PYLON.....	20
11.3	PROFILE OF THE STRAIGHT-LINE PYLON FOR FOREST APPLICATIONS.....	21
11.4	PROFILE OF THE HEAVY-DUTY PYLON.....	22
11.5	TOPOGRAPHICAL MAPS	23
11.5.1	<i>1:50 000 topographical map, Part 1</i>	<i>23</i>
11.5.2	<i>1:50 000 topographical map, Part 2</i>	<i>24</i>
11.5.3	<i>1:50 000 topographical map, Part 3</i>	<i>25</i>

	Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station	<i>Page 3/25</i>
---	---	----------------------

1 Background

A 400 kV Bełchatów to Trębaczew single circuit overhead power transmission line will consist a section of the national electricity transmission system. The line will be necessary to feed out the power from the newly build Power Generation Unit at the BOT Elektrownia Bełchatów S.A.

2 Description of the Project

The 400 kV single circuit power transmission line will be 42, 5 km long. It will be arranged over the farming and forest land of 8 gminas (communes) belonging to the Bełchatów and Pajęczno Poviats (districts) of the Łódź Voivodeship (Province). These are the following gminas:

gmina of Kleszczów (pylons 1-5)

gmina of Kluki (pylons 6-30)

gmina of Szczerców (pylons 31-44)

gmina of Rzaśnia (pylons 45, 46, 48, 51, 52)

gmina of Rusiec (pylons 47, 49, 50, 53-56)


gmina of Kiełczyglów (pylons 57-78)

gmina of Siemkowice (pylons 79-99)

gmina of Działoszyn (pylons 100-103)

The line will be suspended on innovative steel pylons (suspension towers) of OB33 type. Their working conductors composed of three AFL-8 350 mm² wires will be hung on strings of heavy-duty porcelain long rod insulators. The turrets of the pylons will accommodate two protective earthing conductors; one of them will carry communication fibre optical cables. All pylons will be earthed, and their conductors will be provided with antivibration guards.

All components of the Project have been designed on the basis of the innovative and well-proven Polish and worldwide solutions and to meet the requirements of the Polish standards.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 4/25</p>
---	--	----------------------

3 Alternative scenarios for the considered Project

Growing demand for electric energy was the reason behind the decision to build a new Power Generation Unit at the Elektrownia Bełchatów. It was found from the analysis of the national electric energy system that the transmission of power from this Power Generation Unit southwards, to supply electricity to the regions characterised by a large economic development potential would be the optimal option.

Two alternative scenarios for power transmission are to consider, namely:

- construction of a 400 kV overhead power transmission line
- construction of a 400 kV cable-type transmission line

A 400 kV cable is practically unrealistic because of its length. Currently in Poland there is no 400 kV cable line, and also these solution is very rarely used worldwide (for short sections in municipal areas only). Both the technical and economic considerations speak for the rejection of such alternative.

Unrealistic would also be to abandon the idea of constructing the line as this would make impossible to transmit electricity from the new Power Generation Unit of the Bełchatów power station.


The only technically and economically viable option is to construct an overhead 400 kV.

4 Choice of the route of the overhead line

Many consultations, first of all with municipal authorities, the Directorate of State Forests as well as with the Investor were made at the step of the choice of the route of the planned line. It was found from the analysis of various route options that to avoid conflicts with the local communities and considering existing land limitations, the best solution would be to run the new line just in the vicinity of the existing 400 kV Rogowiec - Trębaczew.

The existing 400 kV Rogowiec - Trębaczew overhead double circuit line is well integrated in the natural, and cultural and social environment of the communities and is included in the zoning-related documents of the gminas, in which the line is planned to be located.

The planned "parallel" line will be located on the territories of the gminas of Szczerców, Rzaśnia, Rusiec, Kielczygłów, Siemkowice and Działoszyn. The ultimate location of the line

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 5/25</p>
---	--	----------------------

on the territories of the gminas of Kleszczów and Kluki has been chosen on the basis of the detailed analysis of the passage through the forests and of the route options resulting from the zoning plans.

There were considered, *inter alia*, the existing Elektrownia Bełchatów's settling ponds, the Szczerców Bay, water reservoirs as well as the development density.


After negative assessments of several different routes of the new 400 kV Bełchatów-Trębaczew overhead line, an option presented below was chosen taking into consideration the following reasons:

- the line will be located sufficiently away from the existing housing developments (except of several single sites)
- the line will be located in the close to the existing 400kV line,
- possible social conflicts will be minimised,
- landscape impact will be I minimised,
- the technical and structural parameters of the line will be most advantageous.

The route of the line will be run to locate it possibly far away from the existing residential buildings.

5 Description of the natural environment in which the Project will be located

The Łódź Voivodeship spreads on the border between the Central European Depression and the Polish Uplands. In geologic terms, it covers the territories of several formations, being Łódź Trough and the Cuiavian-Pomeranian Ridge the most important ones. The northern and central parts of the Voivodeship are mainly flat, while its southern flank is hummocky. Particularly important areas include: Warsaw-Berlin Pravalley with the valley of river Bzura; the edge of the Łódź Hills descending northward; and the valley of the rivers Warta and Pilica. Because of their specific configurations, these areas play an important role in the land development of the Voivodeship, but they are just far away from the planned line.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 6/25</p>
---	--	----------------------

Geological structure and topographic profile

Given the surface geological structure of the Voivodeship, construction raw materials i.e. glacial (moraine) clays, silt raw materials, sands and gravels are important to local economy. This large Voivodeship is characterized by a variable topography - from flat low-lying lands to the North to undulated hummocky areas in the southern and central parts, across which the planned line will pass.

Soils


Soils on the territory of the Voivodeship are generally poor. Soil quality is a decisive factor for the development of the agriculture. Very good soil conditions occur in the northern part of the Voivodeship, and they stimulate the development of farming, while the poorest soils occur throughout the southern and southern - eastern parts, and these areas are suitable for afforestation and leisure purposes. Degraded and damaged lands occupy a considerable area of the Voivodeship (approx. 4000 ha). This large degradation is due the expanding residential development, extraction of fossil raw materials and chemical contamination, including contamination with heavy metals. There are parts of the Voivodeship very badly contaminated, particularly due to crowded transportation routes and dense population. Transport-related contaminations levels are still growing. Large sources of contamination of soils are also waste dumps, particularly illegal ones.

The territory on which the planned line would run is a southern part of the Voivodeship, i.e. it is considered degraded (due to the operations of the power station and the lignite open pit mine).

Vegetation cover

The Łódź Voivodeship belongs to the areas of highly modified vegetable cover. Croplands account for a large percentage of the land cover (68.7%). Grassland systems currently account for 8%, while the area of forests and forestlands is to 20.4 %.

The layout of the future line was chosen so to restrict felling of trees for the construction purposes as much has possible. The line will pas well away from the edge of large forest complexes, or along their edges if unavoidable.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 7/25</p>
---	--	----------------------

Surface, standing and underground water


The Voivodeship suffers from severe scarcity of surface water since it is situated on the main watershed of the Vistula and Oder rivers. The central part of the Region is a seepage spring area of the Warta and Pilica inflows (Bzura and Ner to name a few). Except for two large rivers (Warta and Pilica), most of the province is traversed by many small water-courses that may partly or completely dry up. In consequence, the whole drainage basin suffers from water deficit impacting on agriculture.

The previous very bad situation with the natural bodies of standing water has been somewhat improved after two large artificial waterbodies Jeziorsko and Sulejów have been constructed. Nevertheless, water scarcity is a problem felt by the entire Łódź Voivodeship. Construction of the power line will not provoke disturbances or changes in the water system across the territory. It will traverse water-courses (e.g. three times in case of the river Zabłocie) so relevant water permits will be necessary. The line will cross the following water-courses:

- Struga Żłobnicka at km 2+300;
- Zabłocia River at km 1+750, km 5+150, km 9+000;
- Krasowa River at km 11+500;
- Nieciecz River at km 27+000;
- Kanał Obrowski River at km 5+100;
- Wierznica River at km 19+000;

The climate

The Łódź Voivodeship has a lowland climate. Its mean annual air temperature is 7.6 to 8.0°C. The average annual prevailing winds in the Region are to the west and southwest, at different speeds depending upon the local topography. Due to low rainfall and low moisture holding capacity, soil dries and steppization problems is a growing challenge because the value of the most precious agricultural land constantly drops.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 8/25</p>
---	--	----------------------

Description of the natural values of the Łódź Voivodeship and the protected areas.

All forms of the legal protection occur on the territory of the Łódź Voivodeship. These are: the enclave of the Kampinos National Park (Smardzewice forest district), 88 nature reserves, 7 areas of outstanding natural beauty (of these, four are wholly situated within the Voivodeship), 21 landscape protection areas, 648 ecological uses, 3 documentary sites, 21 nature and landscape complex and 2176 nature monuments.

There is a landscape protection area named Warta River Meander near Załęcze (**Załęczański Łuk Warty**) distanced approx. 6km from the planned line in the region of the Trębaczew Switching Station, included in the Natura 2000 network under the site number **PLH10000**

The Warta River Meander near Załęcze's forests is home for interesting species of birds. The following birds are nesting here: black stork, hazel grouse, honey buzzard, Eurasian hobby, grey-headed woodpecker and black woodpecker. The riverside birds include European kingfisher, common tern and little tern, while meadows provide habitat for spotted crane. Also, black grouse can be seen occasionally. Some of the more common mammals that inhabit rivers include the otter and the beaver. There are 24 caves on the area under consideration, where numerous populations of bats hibernate here with: greater mouse-eared bat, long-eared bats: brown and gray, serotonin bat and rare Bechstein's bat.


6 Environmental impact

Geological structure and topographic profile

The project will not affect the topography or geology of the area.

Soils

During the construction of the line there will be needed to occupy temporarily considerable portions of the site along the route of the overhead line to allow access for the heavy transportation and construction equipment and to carry out necessary diggings for the foundations of the pylons. All possible damages associated with the diggings will be remedied just after the completion of the work. The site will be restored to its original

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 9/25</p>
---	--	----------------------

condition. The soil excavated for the pylon foundations will be carefully levelled and all damaged slopes will be repaired.

At the completion of works, all soil compacted by wheel traffic will be broken down by scarification.

Surface and underground water

During the construction of the line there will be needed to carry out several metre deep excavations for the foundations of the new pylons and to drain water, where necessary, during the foundation works. Therefore, temporary changes in the local distribution of subsoil water could be experienced in the areas of high level of underground water. These changes, however, will not affect the local and regional water balance.

Cold bituminous anti-moisture insulation will be applied to the pylon foundations. All insulation layers will be made using preparations specially designed for this purpose. These preparations, that really do not react with aggressive water, are intended to protect the foundation concrete against penetration of underground water. Due to their characteristics, they do not cause worsening of the quality of the underground water.

All steel supporting structures will be galvanized and painted with environment friendly waterproof protective coatings specially intended to this purpose.

So, the negative permanent environmental impact of the Project on the quality of the underground and superficial water during the construction phase will be insignificant.


The climate

The planned transmission line will have no impact on the local climate.

Flora and fauna

Due to their large height, electricity pylons of the overhead line may provide convenient resting and observation perches for birds. It is known that many species of birds from time to time build their nests on these support structures. If necessary, special bird deterrents will be installed.

Electrocutions typically occur while birds collide with the conductors and therefore it is recommended to not built overhead electricity lines in the proximity to known areas of bird

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 10/25</p>
---	--	-----------------------

concentration or nesting sites (particularly of protected birds), while the overhead electricity lines situated in major bird migration corridors should be provided with additional bird deterrent systems such as wire marking (coloured plastic spirals) that may increase guy wire visibility thereby reducing the collision risk for some birds. A low whistling sound the wind made as it passed through the spirals helps to scare birds away.

Once the relevant institutions have identified the bird migration corridors, suitable measures will be implemented.

The minimum distances from the tree crowns will be established based on the current sizes of the crowns with regard to a 5-year stand increment corresponding to the tree species, and habitat conditions. This distance will be enlarged at least by 1 m in reasonable cases, e.g. for the trees to be trimmed, chopped etc. being the length of the working tool taken into account.

Because the proposed line will rarely pass over wooded land, tree felling will be carried out on a small-scale only.


All diggings in proximity /directly to the forest stands and shrubs not subject to felling will be carried out so as to minimize disturbance to the root systems and trunks of trees adjacent to site activity.

Impact on landscape

The planned line will not run over parks or landscape protection areas. Moreover, the existing 400 kV Rogowiec - Trębaczew overhead double circuit line is well integrated in the natural, and cultural and social environment of the communities and hence its potential impact on the surrounding landscape is rather insignificant.

Preservation of historic and nature monuments

The preservation of historic monuments and nature monuments was one of the key requirements that have been considered during the choice of the route of the line under analysis.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 11/25</p>
---	--	-----------------------

Historic monuments

The following historic monuments are situated near the proposed line route:

The Gmina of Działoszyn: • mid 17 th. century palace; Rococo church from 1787 in Działoszyn; architectural complex of old barns in Działoszyn; old hydroelectric power station on the River near Działoszyn

The Gmina of Siemkowice: • manor and park; 15-th century church tower; 2nd half 19th century brick parish church; late 18th wooden and brick manor in Radoszewice; 18 th. century Immaculate Conception parish church in Radoszewice,

The Gmina of Rzaśnia: Saint John the Baptist wooden church of 1584 in Biała; St. 18 th. century Casimir and Joseph wooden church in Stróża; 19th century manor in Stróża.

The Gmina of Kaszewice: a church built during the Renaissance.


The distance between the planned line and the a/m structures of historical value will be sufficiently large (more than 50m).

Protected natural areas

There are rather little protected natural areas or other natural landscapes across the Łódź Voivodeship. The planned line will run far away from nature reserves or nature monuments.

Archaeological sites

The planned line will run across some archaeological sites. Any possible conflict between the 400 kV line and the archaeological sites will be limited to the locations of the pylons (to be considered during the designing phase). In case of a potential conflict of interest, all construction work will be carried out in compliance to the instructions and under supervision of the Łódź Voivodeship Conservator of Historic monuments.

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 12/25</p>
---	--	-----------------------

7 Impact on human health and environment

Electric field

A measure of the exposure to 50 Hz electric field on human health and environment is the value of the intensity determined at the height of 2 m above the ground or other surface on which people may stand (e.g. roofs, terraces, balconies).

Pursuant to the Polish regulations, the admissible intensity of the 50 Hz electric field (reference exposure) is:

- 10 kV/m - for the public;
- 1 kV/m - for residential environments.


Accordingly, the areas on which the electric field intensity is 1-10 kV/m may be classified by local authorities as the areas of limited use i.e. that need to establish a technical zone to be left free.

In order to estimate the effect of the 50 Hz electric field produced by the planned line, there were made calculations of the distribution of the value of the field intensity at the height of 2 m above the ground or other surface in transverse section for all three types (P, M, PL) of the OB33 pylons. Calculations were made for the minimum clearance of 8 - 30 m to the ground, using a computer programme

It was found from the calculations that the greatest values of the electric field intensity associated with the planned line were 9 - 10 kV/m for all three types of pylons (P, M and PL) at the clearance to the ground below 9 m except for the pylon of type M (8.5 m).

Under the line route, the admissible value of the electric field intensity of 10 kV/m at the above mentioned clearances to the ground will not be exceeded.

There will be limited instead the continuous exposure value for the public within the zone characterised by the electric field intensity above 1 kV/m. It is estimated that this zone will have the width of less than 31.8 m as measured from the line centreline for pylons of type P. There has been established a 64 m wide technical belt under the line route (i.e. 32 from the line centreline at both sides).

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 13/25</p>
---	--	-----------------------

Magnetic field

In Poland, the reference exposure to magnetic fields for the public is 60 A/m, what corresponds to the value of the magnetic induction of approx. 75 μ T (microtesla).

In order to estimate the value of the magnetic field strength produced by the planned line, there were made calculations of the distribution of the value of the magnetic field intensity at the current of 1500 A (for the same points as used in the calculations of the electric field intensity). It was found from the calculations that the greatest values of the magnetic field strength associated with the planned line were approx. 32 A/m for pylons of type M, 30.3 A/m for pylons of type P and 28.1 A/m for pylons of type PL. These values of the magnetic field strength do not exceed the admissible limits and do not create risk for people and environment.

Noise exposure


The phenomena associated with the operation of a power transmission line include corona discharge around overhead wiring and fixtures, being the source of audible noise. The intensity of the corona discharge, and thereby of the noise, depends mainly from the line voltage, weather conditions, and the technical arrangement of the line.

There are only four farmsteads located in the proximity to the route of the planned line (at the lowest distance of 56 m from the line centreline). Other farmsteads are situated at greater distances.

In Poland, ambient noise standards in terms of L_{eq} for electricity transmission lines are as follows:

- residential areas: 55 dB for day time and 45 dB for night time
- protected land: 45 dB for day time and 40 dB for night time

In order to mitigate corona discharge and the associated noise, the three-wire three-phase conductors of the Bełchatów to Trębaczew 400 kV overhead power transmission line will be arranged in the form of an equilateral triangle with each side 40 cm long. Measurements show, that level of noise produced by a power transmission line with three-

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 14/25</p>
---	--	-----------------------

wire conductors is approx. 6 dB lower than that produced by a double-wire arrangement (in common use in 400 kV power transmission lines to date).

It was found from the calculations and measurements relating to the existing 400 kV power transmission lines that the noise produced by the planned line would be within 32 m from the line centreline (the boundary of the technical zone), will not exceed the noise standards for single- and multi-family dwellings, farmsteads or cluster developments during the day time and night time, irrespectively of the weather conditions.

Radio interference noise

Corona discharge around conductors and fixtures is also a source of electromagnetic interference (EMI) that interferes with radio signals, causing diminished reception quality. The admissible EMI level measured within 20 m from the vertical projection of the extreme line conductor at the frequency 500 ± 10 kHz is 57.5 dB ($750 \mu\text{V}/\text{m}$)


As it can be seen from calculations, this requirement for the line under analysis will be met, because the generated EMI will not exceed 43 dB.

After completion of the line, but before its commissioning, the Investor will be obliged to carry out the measurement of the generated EMI and to compare the results with the reference standards. Any possible interference to the radio/television reception will be eliminated by the installation of suitable receiving antennas.

8 Land use and infrastructure aspects

All existing and planned zoning and land uses on the territory to be affected by the planned 400 kV line will not be altered, and particularly:

- the Project (in terms of the location of the pylons) will not interfere with the existing agricultural use;
- the Project will not interfere with the existing road and railway networks;
- the Project will not interfere with the existing surface and underground infrastructure;
- there will be possible to locate enclosed structures and not-residential buildings (in compliance with the applicable standards), except for the land crossed by the lines;

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 15/25</p>
---	--	-----------------------

- there will be possible to install overhead and underground water-main networks and their associated technical infrastructure (if in compliance with the applicable standards);
- there will be possible to built road networks (if in compliance with the applicable standards);

The Project under analysis will not fall into the category of waste-generating projects, neither during the construction nor during the operation phase.


During the construction phase, emphasis should be placed to minimize crop damage resulting from construction activities with the use of heavy equipment operating on the site. A good way to achieve this is to ensure proper work organization i.e. to carry out the most critical work before the sowing or after harvesting the crop. Every effort will be taken to minimise land damage by using advanced techniques for putting up the pylons and hanging the wires on. Such organization of work will also help to mitigate, to the extent possible, landowner impacts.

All new technical solutions incorporated in the BEŁCHATÓW to TRĘBACZEW 400 kV overhead power transmission line are considered innovative and environment-friendly ones. Similar approaches have been used in the routing practice in technologically advanced countries, what ensures minimum impact on the environment, in the phase of construction, operation and decommissioning.

9 Property aspects and public acceptance issues

During the design stage, there has been chosen a scenario to minimize conflicts with local residents and to mitigate the visual impact of overhead lines.

On the design stage, efforts were made to integrate the new 400 kV line into local Zoning Plans through consultations with all landowners concerned. At present, there are right-of-use agreements with some 80% of landowners permitting the construction work. Most of landowners are natural persons (private owners). Considering the previous rounds of talks

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 16/25</p>
---	--	-----------------------

and the agreements they produced, and also the procedure of the integration into local Zoning Plans of the line, no public protest is expected.

There will be made a notarial deed for right of use with each owner of land situated within the zone at each side distanced 32m from the line centreline establish the rights for easement of land on which the 400kV line is to be built. This fact will be registered into real estate registers to avoid future conflicts regarding the operation of the planned line.

The area to be crossed by the planned 400 kV line is an industrial area, on which operate lignite open pits, power stations, power lines and includes large industrial zones within the administrative boundaries of the gmina of Kleszczów. The local community is aware of the work relating to the Project and generally accepts it.

A lot of properties along the planned route of the line have still an uncertain legal status: not entered into the Real Estate Registers; unknown and uncertain heirs; or uncertain owner's residence status. All these matters will be handled by the Contractor (on Investor's behalf) at its own cost.

Now acceptance procedures are being discussed with other landowners i.e. municipal authorities, State Treasury, or businesses.

In order to avoid conflicts with local communities, some modifications have been made to the original route at the stage of the route selection and initial arrangements. These modifications regarded mainly the requirements on the clearance from residential buildings.


The modifications of the route have been made in the localities Tatar, Stanisławów and Łukomierz.

Two farm buildings situated within the line technical zone (32m from the line centreline) will be bought and demolished at the Investor's expense. All other buildings (residential ones) are situated within at least 50 m from the line centreline.

10 Legal acts and other reference documents used for the estimation purposes

1. **Act** of 27 April 2001 - Environmental Protection Law (Journal of Law No. 62, item 627, with subsequent amendments till the Journal of Law No. 88, item 587 of 26 April 2007.

2. **Regulation of the Council of Ministers** of November 9, 2004 defining types of undertakings that might significantly affect the environment and detailed criteria related to classifying undertakings for the needs of report on the influence on environment (Journal of Law 2004, No. 257, item 2573 as amended on 10 May 2005 (Journal of Law No. 92, item 769).
3. **REGULATION OF THE MINISTER FOR THE ENVIRONMENT** of 30 October 2003 on the admissible levels of electromagnetic fields in the environment and methods of checking adherence to these levels (Journal of Law No. 192, item 1883).
4. **REGULATION OF THE MINISTER FOR THE ENVIRONMENT** of 14 June 2007 on the admissible noise levels in the environment. (Journal of Law No. 120 item 826).
5. **Law** of 18 May 2005 on the Amendment in Environmental Protection Act and in Certain Other Acts (Official Journal No. 113, Item 954)
6. **Regulation of the Minister of Labour and Social Policy** of November 29, 2002 on the highest admissible level of concentration and intensity of hazardous factors at work (Journal of Law 2002, No. 217, of 18 December 2002);
7. **PN-E-05 115 - 2002** AC Power Installations of the Voltage Higher than 1 kV.
8. **PN-EN 50341-1** August 2005 Overhead electrical lines exceeding AC 45 kV. Part 1: General requirements. Common specifications. Part 3 National Normative Aspects. Polish National Normative Aspects.
9. **PN-77/E-05118** Man-made electromagnetic interference. High voltage power lines and stations. The admissible interference level. General requirements and field tests.
10. **Champs électrique et magnétique de très basse fréquence.** Perspectives scientifiques.” EdF. Paris 1998.
11. **Council recommendation** of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)”,

	<p>Construction of a 400 kV electricity transmission line between the 858 MW Power Generation Unit at the BOT Elektrownia Bełchatów and the Trębaczew switching station</p>	<p>Page 18/25</p>
---	--	-----------------------

1999/519/EC, Brussels 1999). Practical Guide. Safety standards and rules in the electrical engineering (as of August 1999). Section 3.6, item 3.6.7.2, **WEKA** Fachverlag für technische Führungskräfte.

12. **Polish Standard PN-N-01339. Noise:** method for the measurement and evaluation of audible noise from high-voltage overhead transmission lines.

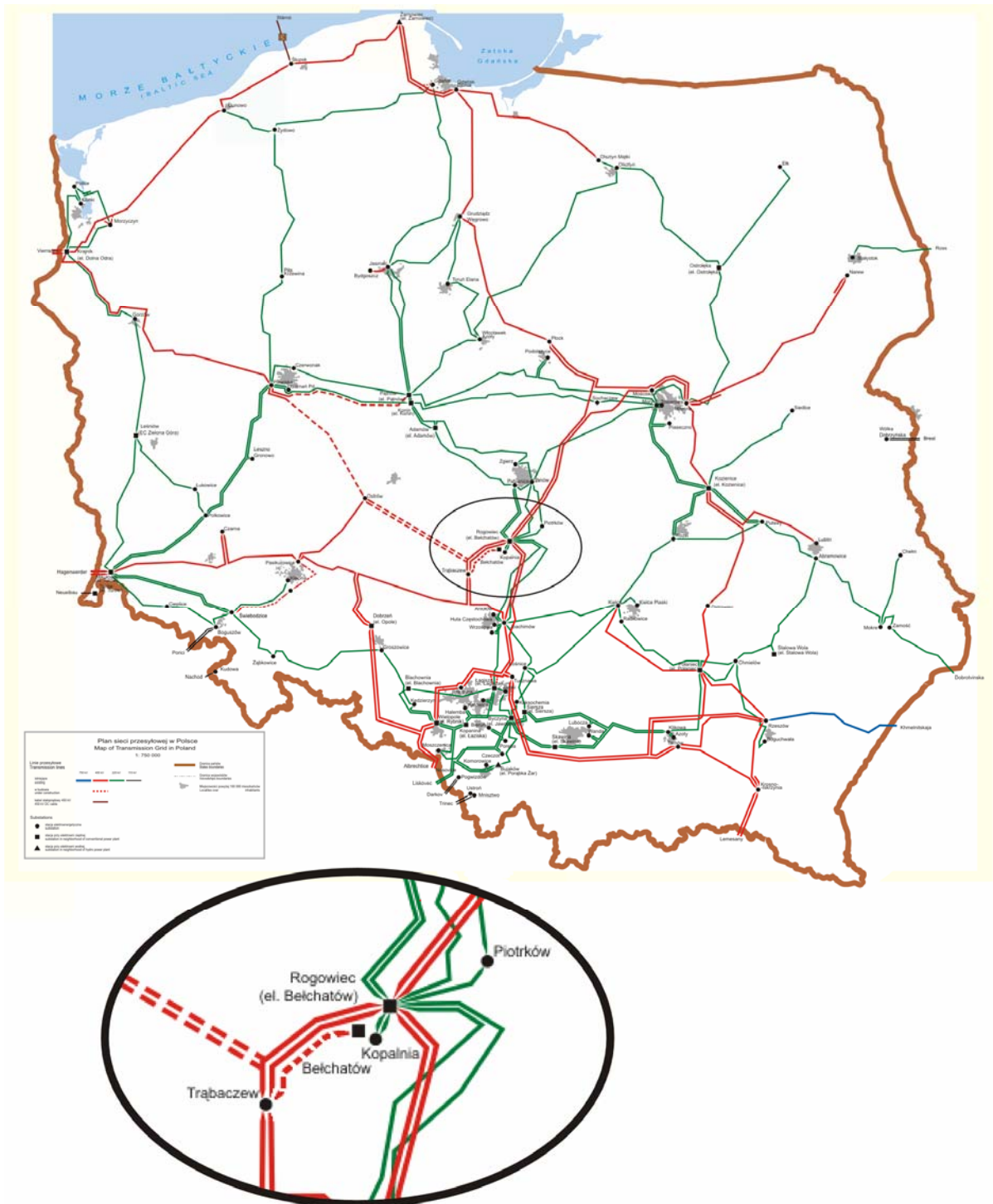
13. The **Law** of 23 July, 2003 on the protection of monuments and the guardianship of monuments.

14. The data obtained from the **Office for Land Use Planning** of the Łódź Voivodeship.

15. **The Natura 2000** - Data Form. Annex and Directives 92/43/EC. Polish Nature.

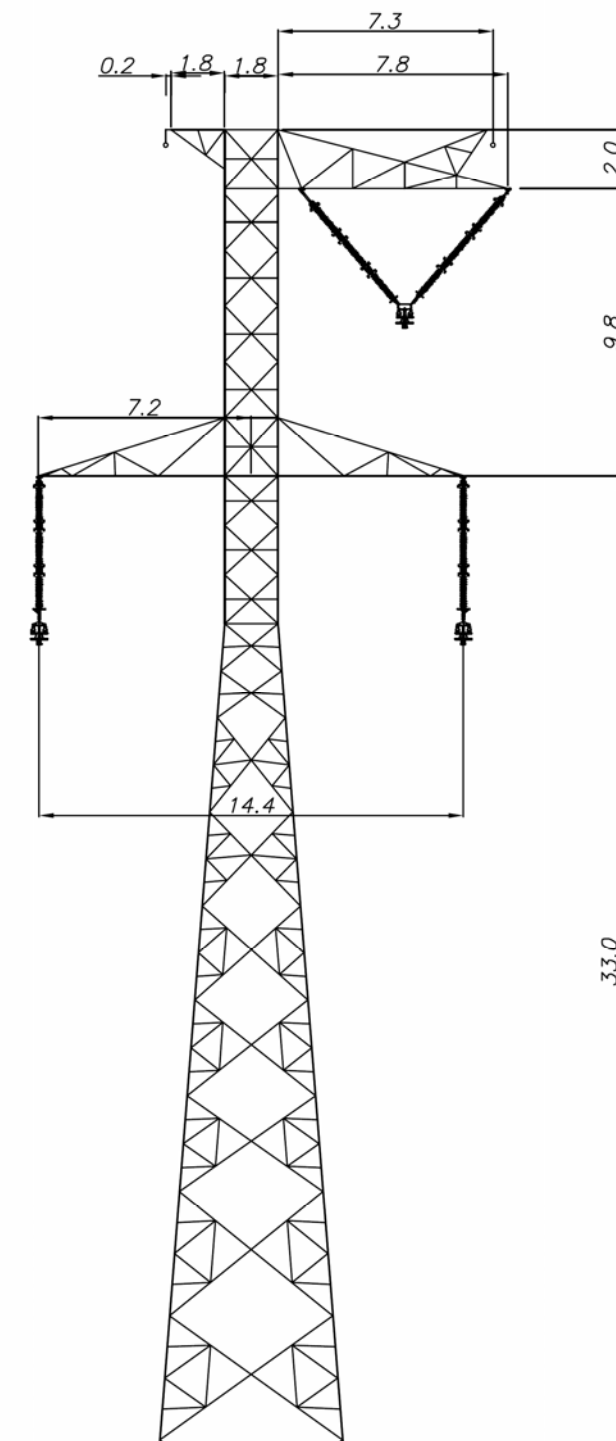
11 Drawings

11.1 The 400 kV power system with the planned line



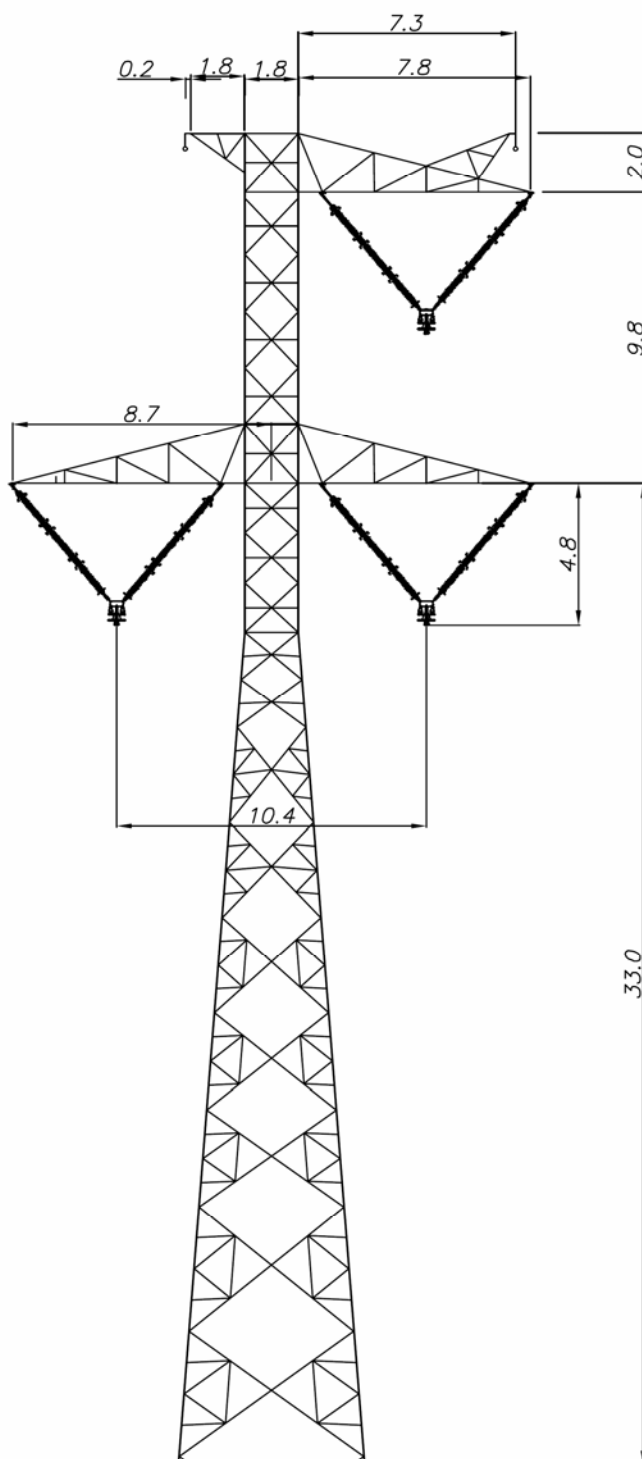
11.2 Profile of the straight-line pylon

Słup typu P serii OB33



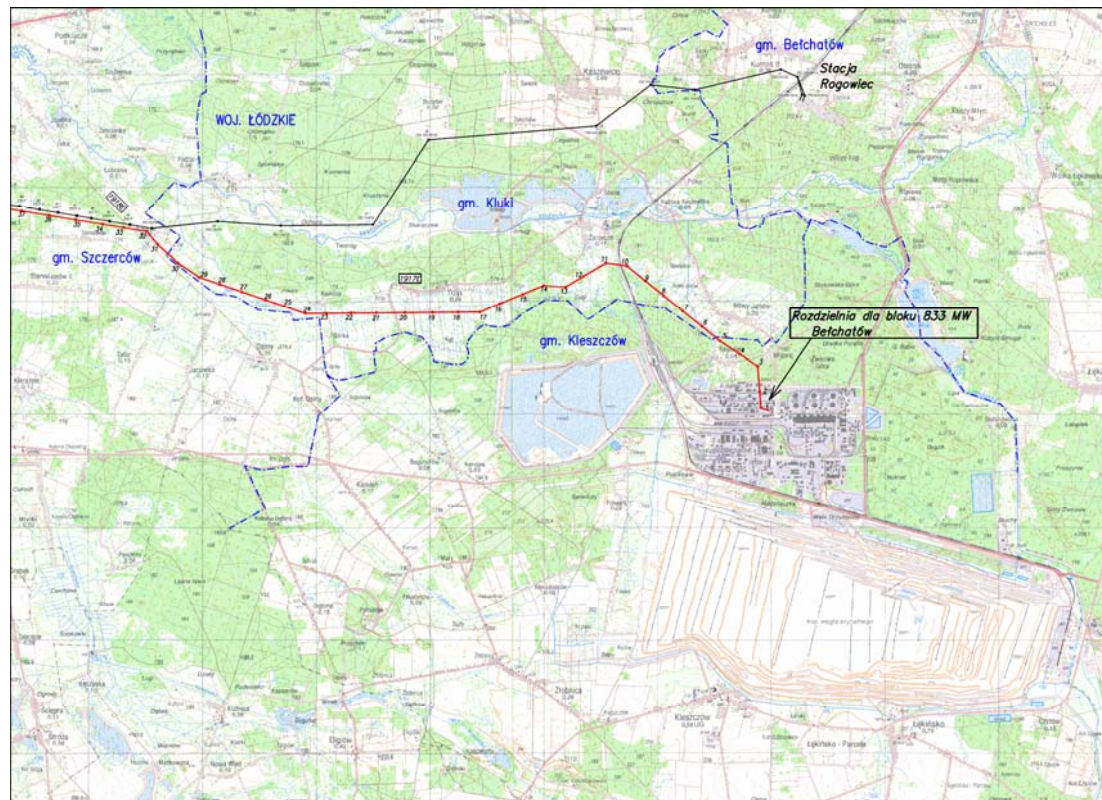
11.3 Profile of the straight-line pylon for forest applications

Słup typu PL serii OB33

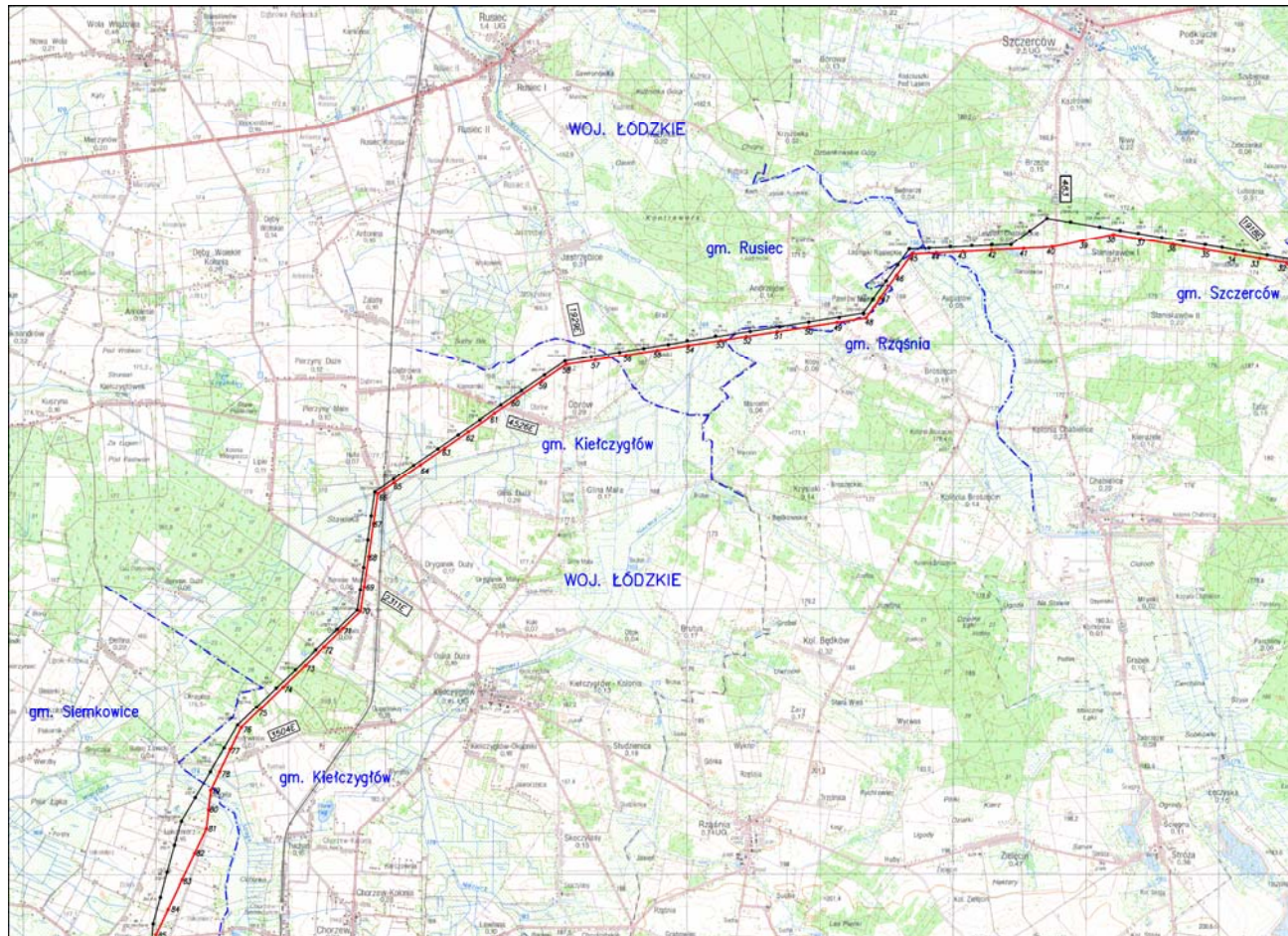


11.5 Topographical maps

11.5.1 1:50 000 topographical map, Part 1



11.5.2 1:50 000 topographical map, Part 2



11.5.3 1:50 000 topographical map, Part 3

