

BLACK SEA – PODIȘOR

TRANSGAZ' project for Romania and Europe



INFORMATION LEAFLET

for the Project

”Black Sea shore — Podișor (RO) pipeline for taking over the Black sea gas”

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1. PROJECT DESCRIPTION AND PROJECT SCOPE

Considering the European Union's increasing dependence on gas imports, based on the constant increase of the gas demand and the decrease of the domestic production, the security of gas supplies represents a necessity.

Taking into account the perspective of new projects aimed to diversify gas transmission routes from the Caspian region to Central Europe, as well as the new off-shore gas sources in the Black Sea, Transgaz aims to construct a new gas transmission route to assure the capitalization of the gas volumes from such offshore sources on the Romanian and European markets.

The Project *"Black Sea shore – Podișor (RO) pipeline for taking over the Black Sea gas"* (hereinafter referred to as „the Project”) consists of the construction of new gas transmission pipeline sections to connect the Black Sea shore to the Technological Node Podișor on the direction Black Sea shore – Amzacea – Vlașin - Podișor.

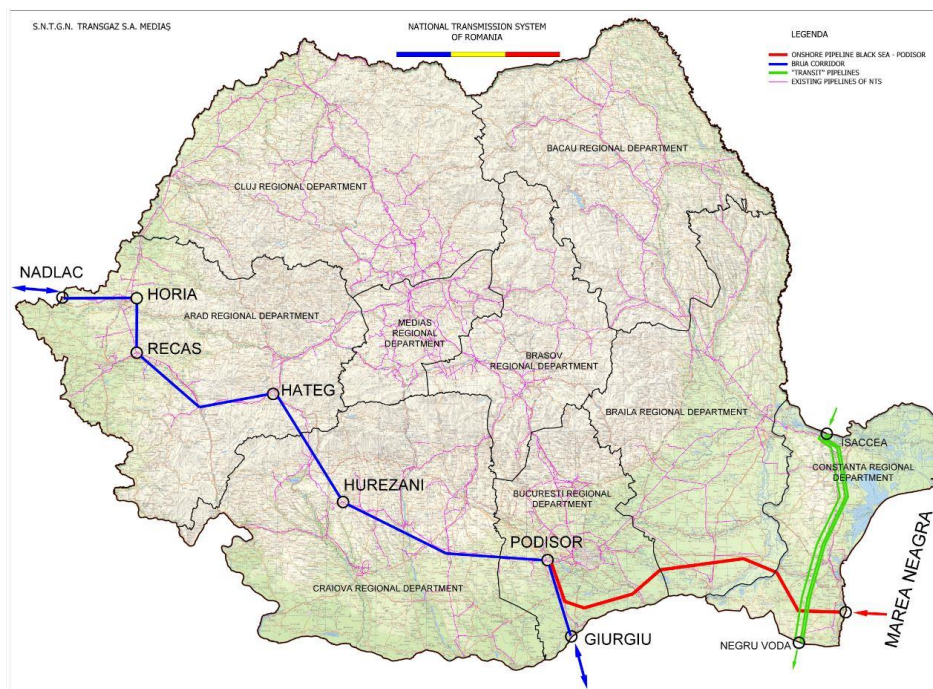


Figure 1 –Black Sea Shore – Podișor pipeline route

The approximately 308.3 km long pipeline is a telescopic pipeline, Ø48" (Dn 1200) and Ø40" (Dn 1000) diameter, and designed to transport gas at a pressure of 63 bar.

The implementation of the Project implies the performance of the following investment works:

- Black Sea – Amzacea section 32.7 km/Dn 1200;
- Amzacea - Podișor section 275.6 km/Dn 1000;
- Pig launching-trap station in the area of Amzacea;
- Technological Node (TN) for Interconnection to Transit T1;
- Technological Node for Interconnection to NTS in the area of Vlașin;
- Interconnection to Podișor Gas Compressor Station.

In the Gas Compressor Station Podișor, the pipeline Black Sea Shore - Podișor is connected to the pipeline Dn 800 x 63 bar Podișor - Corbu, pipeline to be part of the gas transmission corridor Bulgaria-Romania-Hungary-Austria.

By implementing the Project the following objectives will be attained:

- diversification of gas supply sources for consumers in Romania, by ensuring access to the gas volumes in the Black Sea;
- the development of a transmission capacity that would allow in the future the interconnection with the pipelines with potential liquefied gas supply sources at the Black Sea Shore (AGRI Project);
- facilitation of the means to allow transmission to the Central European markets of the Black Sea gas by introducing the possibility to connect with Bulgaria – Romania – Hungary – Austria pipeline (BRUA Project);
- the security of gas supply to Romania and Central European markets by access to new gas sources;
- decrease the dependency on gas imports from a single source, by covering the constant and predictable increase tendencies of the consumption in the European countries against the background of gradually gaining the market to lead to a constant medium and long term decrease of the gas deliveries from the area of the Russian Federation.

Thus the Project meets the specific criteria provided in Regulation (EU) no 347/2013:

- **Market integration** as a result of the decrease in the congestion of the energy infrastructure and the increase in interoperability and flexibility of the system;
- **Security of supply and competition** by ensuring the proper interconnections, by the diversification of supply sources, transmission routes and stakeholders thus reducing the market concentration;
- **Sustainability** by reducing emissions due to the replacement of pollutant fuels with natural gas issuing less carbon dioxide per delivered energy unit.

According to the provisions of the Technical Norms for Design and Execution of Gas Transmission Pipelines, the width of the working strip for pipeline arrangement is 24 m for the pipeline Dn 1200 and 22 m for the pipeline Dn 1000 in agricultural land, grass land, hayfields and non-productive land and for the forested areas, orchards and difficult areas the working strip will be reduced to 16 m for the pipeline Dn 1200, respectively 15 m for the pipeline Dn 1000.

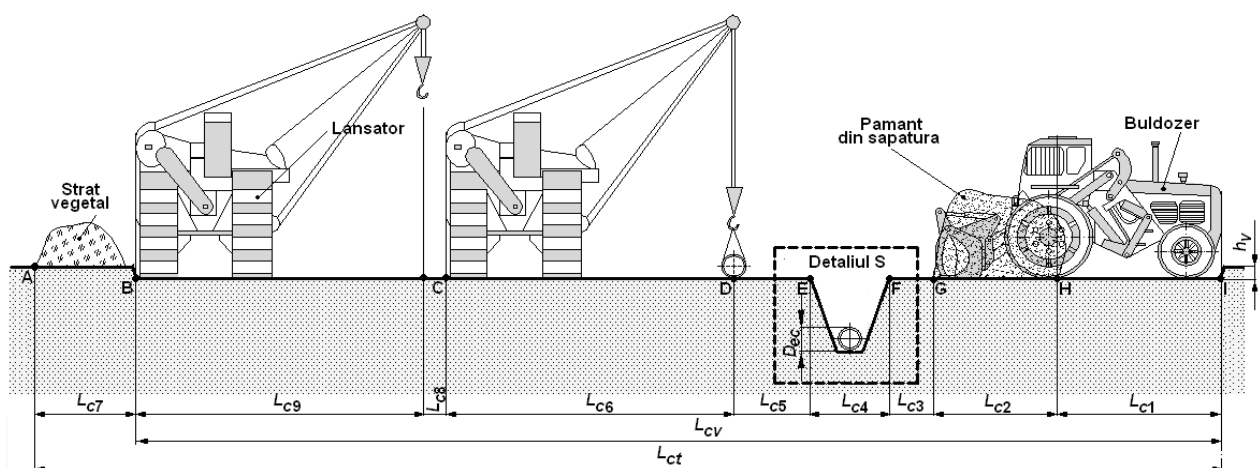


Figure 2 – Organization of the working strip

The total surface to be covered by the works for the construction of the investment objective is approximately 690 ha, of which the temporary occupied land surface is approximately 688.2 ha, and the permanently occupied land surface is approximately 1.8 ha.

Along the route, in the 3 counties, the pipeline crosses the following obstacles: access ways (national roads, county roads, country roads, railways), water bodies that are registered in the land register or not, valleys and channels, oil, gas and water pipelines, telecom networks (fibre optic) and forest areas.

Pipeline route

The pipeline is located in the South Eastern area of the country and its route goes from SE towards W crossing the counties of Constanța, Călărași and Giurgiu.

On the pipeline route there will also be 21 line valve stations as well as 10 cathode protection stations.

2. THE NATIONAL DEVELOPMENT PLAN

The Project is included in the second list of Projects of Common Interest adopted by the European Commission in November 2015 at the position:

✓ **6.24.8 „Black Sea shore -Podișor (RO) for taking over gas from the Black Sea”**

and is part of the National Gas Transmission Development Plan 2014-2023 approved by the National Energy Regulatory Authority, at the position 7.2 „The Development on the Romanian territory of the Southern Transmission Corridor for taking over gas from the Black Sea shore”.

Link:

http://www.transgaz.ro/sites/default/files/uploads/users/admin/development_plan_for_the_national_gas_transmission_system_2014-2023.pdf



3. IMPACT ON THE ENVIRONMENT

3.1. CROSSING PROTECTED AREAS

According to art. 28 under Government Emergency Ordinance no. 57/2007 on the regime of protected natural areas, the preservation of natural habitats, wild flora and fauna as further amended and supplemented, the pipeline crosses the following Natura 2000 protected areas:

✓ Natura 2000 protected areas:

- *ROSPA0039 Dunăre-Ostroave*. The length of the overlapped section is approximately 1.5 km (the pipeline undercrossing this protected area by horizontal directional drilling);
- *ROSCI0022 Danube Canarale*. The length of the overlapped section is approximately 1.5 km (the pipeline undercrossing this protected area by horizontal directional drilling);

- *ROSPA0012 Borcea Branch*. The length of the overlapped section is approximately 3 km (in this area the pipeline will partially undercross the protected area by horizontal directional drilling);
- *ROSCI0319 Fetești Swamp*. The length of the overlapped section is approximately 3 km (in this area the pipeline will partially undercross the protected area by horizontal directional drilling);
- *ROSPA0105 Mostiștea Valley*. The length of the overlapped section is approximately 1.13 km;
- *ROSCI0131 Oltenița-Mostiștea-Chiciu*. The length of the overlapped section is approximately 1.24 km;
- *ROSCI0043 Comana*. The length of the overlapped section is approximately 8.5 km;
- *ROSPA0022 Comana*. The length of the overlapped section is approximately 6.8 km.

✓ Protected areas of national interest:

- *The Natural Park Comana*. The length of the overlapped section is approximately 6.8 km.

✓ Protected areas of international interest – wetlands of international importance (RAMSAR sites) proposed to be assigned:

- *Danube's Eyots-Bugeac-Iortmac*. The length of the overlapped section is approximately 1.5 km (the pipeline undercrossing this protected area by horizontal directional drilling);
- *Borcea Branch*. The length of the overlapped section is approximately 8.5 km (in this area the pipeline will partially undercross the protected area by horizontal directional drilling);
- *Comana*. The length of the overlapped section is approximately 6.8 km.

At the same time the pipeline passes **near** the following natural protected areas:

✓ Natura 2000 protected areas:

- *ROSCI0353 Deleni Cave* – the pipeline passes at a distance of approximately 0.09 km of the site of community importance. ROSCI0353 overlaps in this area the RAMSAR site proposed to be assigned Danube's Eyots-Bugeac-Iortmac;
- *ROSCI0343 The forests of the Sylvosteppe of Mostiștea* - the pipeline passes at a distance of approximately 0.045 km from the site of community importance (point of maximum proximity);
- *ROSCI0138 Bolintin Forest* - the pipeline passes at a distance of approximately 0.003 km of the site of community importance.



3.2. ALTERNATE ROUTES

Within the pre-feasibility study the following alternate routes were considered:

Option 1 (endorsed):

The location of the gas transmission pipeline on the route Black Sea Shore - Vlaşin - TN Podişor.

Option 2:

The location of the gas transmission pipeline on the route Black Sea Shore – Izvoarele –TN Podişor.

In view of the optimization and selection of the final route the following aspects were taken into account:

- minimum impact on agricultural lands;
- avoidance of landslide areas;
- necessity of minimum land improvement as compared to other possible alternatives;
- technical, economical and construction related considerations, and the possibilities to monitor the pipeline during operation;
- minimum impact on the environment (and on all environmental aspects);
- assurance of conditions for mechanical digging and construction-mounting works;
- safety of operation;
- observance of safety distances to nearby objectives;
- minimum social impact.

3.3. CHARACTERISTICS OF POTENTIAL PROJECT IMPACT

Impact on population and human health

The impact on population and human health is insignificant because the construction-mounting works will be mainly performed outside town limits.

Due to the fact that the works execution team will observe the labour health and safety security, the possibility of technical or human accidents is reduced to minimum.

The potential impact on population and on human health may be caused by the following factors:

- Loss of income source following the permanent occupation of the land (direct, long term, permanent negative impact);
- Loss of income source following the temporary occupation of the land (direct, medium term, temporary, negative impact);
- Possible deterioration of local roads because of the construction site traffic (direct, short term, temporary, negative impact);
- Noise and vibrations caused by the construction site traffic (direct, short term, temporary, negative impact);
- Use of local work force (direct impact, during the construction works, temporary, positive).

Impact on fauna and flora

The potential impact on fauna is caused by the presence of devices and labour force in the working area and by the construction-mounting works. The following factors may have an impact:

- Sound pollution in the working area (direct, short term, temporary, negative impact);
- Disruption of access to feeding and drinking areas (direct, short term, temporary, negative impact).

The impact on flora is caused by:

- Loss of habitat because of the permanent occupation of land (direct, long term, permanent negative impact);
- Loss of habitat because of the temporary occupation of land (direct, medium term, temporary, negative impact);
- Preparation of land surface for the construction-mounting works, where the topsoil needs to be removed before the digging and pipe laying works.

Impact on soil and on land use

The technical design provides for the separate removal of the topsoil on the working strip of the pipeline, so that after the completion of the works the land to be restored to its initial state.

The potential impact on the soil may be generated by the following factors:

- Soil pollution because of the inadequate waste disposal, because of pipeline cleaning that leaves dust and metal oxides on the soil, and because of fuel and lubricant leakage during the operation and maintenance of the devices (direct, short term, temporary, negative impact);
- Alteration of soil structure that may lead to lower soil fertility because of the digging works needed for pipeline laying (direct, short term, temporary, negative impact).

Works will be performed with observance of the project execution stages, of the technological discipline during the construction-mounting works, of adequate waste storage and land reinstatement as specified in FEED. Impact on soil will thus be reduced.

The impact on land use may be caused by the following factors:

- permanent land removal from the Agricultural Land Reserve for arrangement of aboveground facilities (direct, long term, permanent, negative impact);
- temporary land removal from the Agricultural Land Reserve / Forestry Land Reserve for the entire route of the pipeline, in the working strip and in the site management areas (direct, medium term, temporary, negative impact).



Impact on water quality and quantity regime

The impact on some water bodies is caused by the undercrossing works.

Water undercrossing works will be carried out as follows:

- Pipeline lowered in to the open ditch;

- by horizontal directional drilling.

The potential impact on water quality and quantity regime may be caused by the following factors:

- increased water turbidity because of the ditches executed to lay the pipeline (direct, short term, temporary, negative impact);
- bentonite contamination in case of drill string failure (direct, short term, temporary, negative impact);
- accidental spilling of fuels and lubricants from the undercrossing works devices (direct, short term, temporary, negative impact).

The execution works are supposed not to affect water quality in the working area, and the physical-chemical, biological and bacteriological quality parameters are supposed to remain within admissible limits.

As one may notice, the impact on surface waters is temporary during Project execution stage, and when works are completed shores will be rehabilitated.

Impact on air quality and on climate

During pipeline mounting works the air pollution sources are represented by the engines of vehicles and machines, as well as the welding works for pipeline sections and paint coating protection works for fittings.

Under these circumstances the potential impact on air and climate is caused by the following factors:

- pollutants caused by burning emissions (exhaust gas) from engines (direct, short term, temporary, negative impact);
- emissions of volatile organic compounds caused by paint coating operations (direct, short term, temporary, negative impact).

Devices at working points will work intermittently and, as a result, engines emissions will be punctiform and instantaneous, which makes the impact on air insignificant.

Paint coated surfaces will also be reduced

Impact of noise and vibrations

The sources of noise and vibrations are represented by the equipment needed to dig and cover the ditch, needed to transport and handle the pipeline, to transport staff during works execution and to operate the gas compressor stations after commissioning.

Since the devices and equipment used must be homologated, the noise and vibrations are considered to be within admissible limits and the impact is considered to be insignificant, namely within the admissible limits.

In order to comply with the maximum noise level for inhabited areas, as set by Order 119/2014 on the approval of the public hygiene and public health regarding the population's way of life, namely 55/40 dB day/night, the Project's design will provide for adequate measures.

Impact on landscape and scenery

The impact on landscape is caused by the following factors:

- change of use of land during the pipeline mounting works (direct, medium term, temporary, negative impact);
- deforestation of forest areas on the working strip (direct, long term, negative impact for the entire period pipeline is in operation);
- the aboveground facilities of the gas transmission system (direct, long term, permanent, negative impact).

At the end of the pipeline construction-mounting works land will be reinstated to its initial use, the deforested area will be reforested, save for the 6m area to the left and to the right of the pipeline generatrix where no trees, bushes, neither vineyards may be planted.

Impact on the interaction between environment components

Taking into account all the activities necessary to carry out the project we believe there is no impact on the interaction of such components.

Cross-border impact

There was no environmental cross-border impact identified.

3.4. MEASURES TO AVOID AND REDUCE THE SIGNIFICANT IMPACT ON THE ENVIRONMENT

Measures to reduce the impact on population and on human health

Taking into account the potential impact on population and on human health, we propose the following measures to reduce the impact:

- compensation of affected land owners in line with the laws in force;
- rehabilitation of infrastructure affected by heavy traffic;
- reduction, to the minimum necessary, of running time for devices;
- reduction of speed for moving the devices on access roads to the working space in order to diminish dust emissions during draught times.

Measures to reduce the impact on fauna and flora

Considering the impact on flora and fauna, we propose the following measures to reduce the impact:

- avoid placing aboveground facilities in protected areas;
- placing of above ground facilities as much as possible in areas that have lost their ecological functions;
- assurance of legal limits for noise emissions of devices and correct maintenance thereof;
- observance of technical norms on design and execution of gas transmission pipelines with regards to the preparation of the land surface for the construction-mounting works;
- trees will be cut down in forest areas by directing the fall of the trees along the working strip to avoid damages to the trees in the neighbouring area;
- deforestation will be performed with observance of the exploitation technical norms and the surface will be cleaned of branches and vegetable waste;
- the exploitation technology will be the technology that causes minimal damage to soil and vegetation in the neighbouring area of the deforested perimeter;
- save for the surfaces of land that have permanently changed their initial use, the surfaces of land that are temporary affected will be brought back to their initial state when works are completed.

Measures to diminish the impact on soil and on land use

During the execution stage control is recommended by execution phases, and adequate storage of topsoil is recommended in order to reinstate land quality by ploughing, braking and fertilizing operations.

In order to avoid soil pollution the following measures will be taken:

- there will be no dumping, no burning, no storage on soil and no burying of garbage or other type of waste (used tires, oil filters, cloths, paint recipients, etc.);
- waste will be stored separately, by categories (paper, metal, plastic and glass, polyethylene packing, metals, etc.) in specially designed recipients or containers;

- any spilling of used oils or fuels is forbidden;
- only pre-set access ways and parking areas will be used for devices;
- any storage of tubing outside the working strip is forbidden.

During the pipeline execution works the following works are envisaged for soil/subsoil protection:

- digging operations for pipeline mounting will be executed in correlation with the general flow of the pipeline mounting works so as to reduce the time when ditch is kept open and to avoid caving, water filling, infiltrations in lower layers, landslides;
- topsoil will be stored to be later used for soil reinstatement when works are completed;
- after pipeline is laid, ditch is to be filled and adequately compacted so as to avoid rain water infiltrations through the sandy ground of the pipeline ditch.

In case of permanent and temporary removal from the Agricultural Land Reserve / Forestry Land Reserve the following measures are proposed to reduce the impact:

- sizing of the works to the minimum necessary surface;
- strict delineation of the working strip.



Measures to diminish the impact on water quality and quantity regime

For safe exploitation of the pipeline under-crossings, geotechnical and hydrological studies have been performed to determine the maximum levels for the calculation and control of water bodies and of general scouring.

Storage of materials, of waste, and stationing of devices in the river beds are forbidden.

After the execution of the works the affected shores will be reinstated to their initial state.

During works execution the constructor and the beneficiary are bound to assure free flow of water.

Taking into account the potential specific impact on water quality and quantity regime the following measures are proposed to reduce the impact:

- in case of increased water turbidity, temporary shutdown of water supply is recommended, or a longer decanting time if there are upstream water supply sources;
- the use of viable materials for water crossings by horizontal drilling so as to avoid bentonite leaks;
- proper maintenance of devices used for undercrossing works.

Measures to reduce the impact on air and climate quality

During the construction-mounting works the impact on air is represented by the flue gas from engines and devices, by insignificant emissions of volatile organic compounds from valves and fittings painting jobs.

In order to reduce flue gas emissions devices and/or vehicles will be stopped during the breaks.

To reduce the impact on the air we propose rigorous checking of vehicles engines and devices used for project works.

Measures to reduce the impact of noise and vibrations

The undertakers have the following obligations:

- to assure the adequate quality of their own quality system designed and created by own staff, with certified technical staff;
- to use the products and equipment specified in the project for works execution;
- to observe the execution details as specified in the project.

Construction control and quality are performed by investors through their site supervisors or through expert consultants.

For observance of the maximum noise level at inhabited dwellings, as set by Order no.119/2014 on the approval of the public hygiene and public health regarding the population's way of life, namely 55/40 dB day/night, the Project's design will provide for adequate measures.

Measures to reduce the impact on landscape and visual environment

Considering the potential impact on landscape and visual environment the proposed measure to reduce the impact is the restoration of the temporary occupied land to its initial state upon the completion of the works related to the Project.

4. PROJECT PRELIMINARY SCHEDULE

Development and implementation stages	Period
Prefeasibility study	Complete
Feasibility study	Complete
Environmental Impact assessment	2016 – 2017
FEED and permitting documentation for the construction permit	2016 – 2017
Construction of pipeline	2018 – 2020
Technological probes and commissioning	2020
Start of operation	2020

Note: The schedule is only indicative, the actual implementation depends upon the development of the Black Sea offshore blocks.

5. SUMMARY ON PROJECT STATUS

The feasibility study was completed. Within such study the pipeline route was selected and the following specialty studies were prepared: topographical studies, geotechnical studies and hydrological studies.

The activity related to the identification of land owners affected by the Project execution works is ongoing, and so is the procedure for the permitting of the construction works, namely the granting of the Town Planning Certificates.

The environmental impact assessment was initiated in line with Order no.135/76/84/1284 of 10 February 2010 on the approval of the Methodology for the application of the environmental impact assessment for public and private projects. In this respect notifications were submitted on the intention to achieve the Project to the three County Environmental Protection Agencies (Constanța, Călărași and Giurgiu); the presentation report was drawn up and the National Environment Protection Agency issued the screening decision. At the same time, the procedure related to the procurement of the environmental impact assessment services and granting of the environmental permit was completed, and the contract with the environmental consultant was signed.

On 24.02.2017 the **Notification for the initiation of the procedure prior to the submission of the candidature** was submitted to the Competent Authority for Projects of Common Interest; the Competent Authority approved the Notification by issuing the **Letter of approval of the Notification for the initiation of the procedure prior to the submission of the candidature**.

6. PUBLIC CONSULTATIONS

According to the provisions of Art. 9 (7) under “Regulation (EU) 347/2013 of the European Parliament and European Council, dated April 17th, 2013 on the guidelines for trans-European energy infrastructure and repealing Decision no. 1364/2006/CE and amending Regulations (EC) No.713/2009, (EC) No. 714/2009 and (EC) No. 715/2009”, S.N.T.G.N. Transgaz S.A. invites the interested public to take part in the public consultations. The times and locations for such consultations will be published on the company’s webpage.

The interested public may get additional information on the Project from the following contact:

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7. OTHER RELEVANT INFORMATION

The Page of the Project:

<http://www.transgaz.ro/en/informatii-clienti/black-sea-shore-podisor-ro-pipeline-taking-over-black-sea-gas>

For information on PCIs access the following link:

<https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest>

The manual of procedures for the permit granting process applicable to PCIs and elaborated according to Regulation EU no. 347/2013 has been published for public consultation purposes by the Competent Authority for PCIs and may be found on the Ministry of Energy webpage:

<http://energie.gov.ro/wp-content/uploads/2016/09/Manual-procedura-PCI-intreg.pdf>