European Commission DG REGIO

Quick appraisal of major project application:

"Αναβάθμιση τερματικού σταθμού Υγροποιημένου Φυσικού Αέριου στη Ρεβυθούσα"

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CCI no 2010GR16UPR003

Liquefied Natural Gas (LNG) Terminal Upgrade at Revithoussa

Quick Appraisal carried out under Framework contract N°CCI 2009CE160AT090for the provision of technical assistance services for the preparation, appraisal, monitoring, and closure of projects receiving assistance from the ERDF, Cohesion Fund and IPA, and for the audit of these projects by the European Court of Auditors (ECA) - Lot 3: industry, energy, ICT and knowledge economy investments



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1 Project overview

The project appraised, namely "Natural Liquefied Natural Gas (LNG) Terminal Upgrade at Revithoussa" plans to construct a 13 MW Power Integration Station located at LNG Terminal, in Revithoussa island.

The station consists of two (2) medium speed Gas Engines Generator Sets, each set having nominal electric output 6,530 kW at 50Hz-pf o.8 and thermal heat output 6,135 kW, complete with their auxiliary equipment and facilities that are necessary to recover the exhaust gas heat from the Gas Engine Cycle.

The electric power produced from the Gas Engines Generator Sets will be used to cover the total power demands of the upgraded Revithoussa LNG Terminal. The heat produced from the Gas Engines Generator Sets will be utilized to produce hot water for the LNG evaporation processed in the two SCVs of the Terminal.

The investment program will reach approximately € 9.7 million (including VAT) and will be funded among other via a considerable share of financing national funds (598,400 €) and private equity at national level (€ 4.6 million). The requested EU contribution reaches € 2.9 million.

Overall, the project is in line with the national Operational Program «Competitiveness and Entrepreneurship» (OPCE II) of the Period 2007 – 2013 and specifically with the operational objective "Completion of the National Energy System and Enhancement of Sustainability". Moreover, the project is consistent with the objectives of the "Europe 2020: A resource-efficient Europe".

2 Appraisal approach

The main objective of the "Quick Appraisal" of this large project applying for EU co-financing is to verify how well the projects has been planned and whether the application submitted to the Commission is compliant with the requirements established in the relevant regulations governing the use of EU funds.

The "Quick Appraisal" was performed through a desk-based analysis and the assessment of the project application dossier. The appraisal approach is based on the following criteria:

- 1. The completeness of the application documentation submitted to the Commission, based on the set of requirements set in the relevant EU and local regulations;
- 2. The quality of the application submitted and of the project itself, based on an in-depth analysis of the project application dossier; among other things this quality assessment should verify the compliance of the application as well as its consistency with relevant regulatory requirements and guidance established by the Commission and local authorities.

The "Quick Appraisal" Report aims to support the European Commission in assessing:

- The quality of the received application dossier;
- The value of the proposed project;
- Its consistency with EU policies and priorities;
- Its capacity to support the achievement of priorities and objectives of the Operational Programme.

Based on this report the European Commission should be able to verify whether:

- The project objectives are well defined and the project is technically sound;
- The project is worth co-financing;
- The public contribution is justified;
- The project is consistent with other EU policies.

Whenever possible the report suggests possible improvements to the application dossier or the project itself.

3 Completeness assessment

The completeness assessment consists in checking whether the information provided in the project application dossier match the requirements set by the European Commission. The outcome of this assessment is presented in the completeness assessment checklist in Appendix 1.

The application dossier submitted to the European Commission regarding the Liquefied Natural Gas (LNG) Terminal Upgrade at Revithoussa construction is quite complete. However some elements are missing:

- Further information is required to prove the extent of the energy to be saved in terms of the MW figure (82,500MWh per year) that it is claimed to be essential.
- The application dossier does not provide a detailed analysis of the project benefits regarding the regional economy, both for businesses and households. The analysis provided mentions only the CO2 emission reduction.
- A detailed analysis of the cost of alternative options (with respect to technology and by giving further
 economical and environmental implications) so as to be able to understand the main points that lead to
 the final selected option amongst the alternatives.
- A more detailed description of the operating cost structure calculation and a more detailed presentation of the assumptions, especially regarding the treatment of personnel cost.
- An analysis of the assumptions based on which the investment residual value was determined.
- An analysis of the timeline related to the loan inflows and outflows, as well as relevant interest payments. These are necessary to perform a sustainability analysis.

4 Quality assessment

This section of the "Quick Appraisal" aims to evaluate the quality of key elements of the application dossier submitted to the European Commission. It also involves checking the compliance of the application dossier with relevant regulatory requirements and its alignment with relevant guidance established by the Commission. The outcome of this quality assessment is presented in the quality assessment checklist provided in Appendix 2.

Based on the evaluation performed, the following elements need to be outlined:

4.1 Context and project objectives

Reliability of the analysis of the project's context, outcomes and benefits

Section B.5 of the application dossier provides a concise description of the project context, outcomes and benefits at regional and national level. The project relates to the creation of a new combined heat and power cogeneration power plant, which will cover all the needs of the Revithoussa installation and will promote a further usage of the natural gas due to the existence of LNG transformation back to gaseous state.

Indeed promoting the use of natural gas-fired electrical generation over coal-fired power can result in reduced greenhouse gas emissions. Moreover a larger installation that can cover its own needs and take advantage of the natural gas emissions may reduce the country's dependence on oil whilst enabling savings regarding fuel consumption given that the natural gas appears to achieve higher efficiency with respect to conventional fuels. This may further contribute to lowering greenhouse gas emissions and especially CO2 emissions that affect the greenhouse phenomenon.

During the last ten years, the gas as source of power seems to gain ground against electricity. With this project, the gas' infiltration in the energy sector will be significant and will provide a more secure, trustworthy and safer for the environment source of energy for the consumers.

Moreover the project will be proven beneficial for the usage of gas, since the Revithoussa instalment will be able to handle and transform significantly larger quantities of LNG, than it used to in the past, keeping a secure stock in cases of emergency, since the pipelines that connect the country with natural gas are only two and the local authorities wish a larger independence from external parties. At the same time according to the application, the project will enhance the regional business competitiveness and will result in the creation of new workplaces during the construction of the project as well as will promote the penetration of natural gas in regional households. A deeper analysis of these attributes would be beneficial as a means to further contextualize the initiative and to consider more in detail the respective benefits.

The application includes physical and socio –economic indicators to quantify the expected relevant project parameters realisation, e.g. the expected annual reduction of CO2 emissions, the annual natural gas conversion from LNG.

4.2 Project identification

Identification of the relevant project parameters

The project is well described and the application provides insight into the output produced, the technologies applied, the foreseen management model and the value added chain.

As part of a larger investment in the Revithoussa island (which is not inhabited and consists of natural gas installments), the project plans to ameliorate the existing establishment by making it viable towards its energy needs. At the same time, the main target is to diminish the CO2 emissions by using different sources of energy

to cover the installations needs and at the same time provide any remaining of the energy produced to the electricity transmission system. The technology that was used in order to construct the project is well defined and detailed, giving a thorough insight to the projects technical artifacts.

Moreover, an analytical presentation of the production values after the completion of the project is taking place and also a deeper analysis of the effect on sales and environment.

4.3 Project timetable and maturity

A project timetable is part of the Appendix of the application dossier in Section B. The timetable is complete and presents clearly all the phases of the development and the construction of the project, while the realisation phases are well explained and the timeframe appears to be realistic and reasonable.

The timetable refers to the main construction milestones of the project, most of which have already been accomplished since the project is ready since 2009. Nevertheless, as part of the main body of the application dossier and more specifically in Section D.1, there is an updated timetable where the main milestones of the project are presented while cost-benefit analysis and the construction phase (details concerning the contract agreement) are updated to the end of November 2011.

4.4 Feasibility and options analysis

The application dossier provides most of the information needed in order to identify the potential constraints and related solutions with respect to technical, economic, regulatory and managerial aspects. More specifically as part of the application dossier are presented elements such as a demand analysis, a quick view of the available technology of the company, all the personnel requirements during the implementation phase and while the project is operational, the project's scale, location, physical inputs, timing and implementation, phases of expansion and financial planning and all the relevant environmental aspects.

Moreover, since the project is already implemented and constructed then the basic elements of the feasibility analysis have already been proved as correct.

In the section C.1 of the application dossier the author presents three different scenarios that were evaluated and examined before coming up with the best case scenario. Nevertheless, besides a brief mention and description of the relevant scenarios, the other options needed to be better detailed to validate the selected project setup since no financial or qualitative data are used in order to support the final decision. Additionally, a do-nothing scenario has not been considered.

4.5 Financial analysis

Main financial performance indicators

The methodology used to determine the FNPV and FRR was the Discounted Cash Flow approach. The financial analysis presented in the application dossier shows a negative FNPV with and without EU funding as follows:

FNPV (C)= -4,434,109.27 FRR (C)= -2.13%

FNPV (K)= -725,169.57 FRR (K)= 3.11%

Both the time horizon (25 years) and the discount rate applied (5%), which is expressed in real terms, is consistent with the DG REGIO guidance. Nevertheless, taking into account the economic turmoil of Greece it has to be considered whether such a discount rate is appropriate given the country' specific circumstances.

Compensation is regulated and monitored by the Regulatory Authority of Energy while the methodology and assumptions for setting out the tariffs is set in the ministerial decision 4955/2006.

The recalculations performed based on the data included in the application dossier confirmed the negative FNPV (C) and the FRR (C). It has to be mentioned that the indicator was calculated including contingencies. If no contingencies were included then the indicators would increase by: FNPV (C) = -1.2 mil, FRR (C) = 1.4%.

Additionally, the revenue rationale has been tested. Overall, and taking into consideration the operating model of Transmission Operators, it should be noted the Operating Expenses seem to be netted off by the Revenue side, whereas no depreciation appears to have been incorporated in the analysis.

Personnel cost has been also incremental although it is stated in another section of the application that no new hires will be necessary for the plant's operation. Overall, no rationale for operating costs has been provided. However, taking into consideration the operating model of Transmission Operators, we would expect that the same amount is at the revenue side, thus total operating expenses would be netted of.

Concerning the residual value of the investment, the net present value provided in the application dossier matches the recalculations performed. There is no information provided in the application dossier regarding the assumptions for its determination and hence it was not possible to assess the reliability of the amounts presented.

In addition, the reliability of the financial sustainability of the project is weakened by the lack of information concerning the financial costs related to loan reimbursement and interest payments.

The approach adopted in the calculation of FNPV (K) and FRR (K) differs from the approach suggested by the European Commission for assessing co –financing projects. Particularly, there is no information regarding the loans' schedule, interest expenses and repayment schedules. The calculations seem to have been performed, compared to FNPV (C) by deducting EU contributions from the Investment Cost. Due to lack of information, the exact value of FRR (K) cannot be verified. Overall a breakdown of the FNPV (K) and FRR (K) calculation is necessary in order to be able to assess the consistency and reliability of the indicators provided. The impossibility to recalculate the return on national capital and in particular the expected return of the private equity provider could leads to the risk of over-financing and allowing extra return to the private investors.

Sources of Funding

The sources of funding are presented in section H.2 of the application dossier. The total investment amounts to €9,736,089.71. The EU contribution being equal to €2,917,463.98 covers 30% of the investment cost. At the same time 54% is funded by Private Investors €4,665,723.95 and National Resources €598,400.06. The balance is covered recoverable VAT of €1,554,501.72.

The calculation of the percentage of 45.27% as a means to determine the EU contribution appears to be based on the net present value of the project that does not take into account contingencies. Applying this rate to the undiscounted Cost of Investment and then the EU co − financing ratio of 82.98%, the EU contribution would reach €2.57 million.

According to the application dossier, contingencies are less than 10%, if the total cost of the power plant is considered, € 15,950,000.

4.6 Economic analysis

The economic performance indicators included in the analysis are as follows:

ENPV = € 4,522,000

ERR= 10,01%

B/C = 1.38

These indicators correspond to the recalculations performed. Nevertheless the reference discount rate (5%) is not consistent with the DG REGIO guidance where a 5.5% discount rate is suggested for countries eligible for the Cohesion Fund. However, it can be estimated that the effect of using a lower interest rate will not be substantial.

In order for the project to acquire a positive economic NPV, the author mentions and quantifies two different sources of income that arise due to the socio-economic impact of the project.

First, through the implementation of the power plant, total Regulatory Asset Base will be decreased and thus will extenuate consumers the burden from increased energy tariffs. This saving applies to the wholeness of the society, by making a natural resource more accessible by financial means.

Moreover, DESFA, by constructing the power plant manages to diminish to a significant degree average cost per MWh consumed (from 63 €/MWh to 51 €/MWh). By claiming that this saving will apply not only to the 11,184 MWh used prior to the plant's construction, but to 82,500 MWh that are now required, a saving of approximately €413,000 is achieved per year for the whole plant's duration.

Nevertheless, in order to measure the validity of the aforementioned assumption, and thus the positive Economic NPV, further information is required to prove the extent of the energy to be saved in terms of the MW figure (82,500MWh per year) that it is claimed to be essential.

Additionally, the author doesn't consider the financial impact of the decrease of CO2 emissions, a figure that can be quantified and produce even better results in the economic analysis indicators. The effect of the CO2 emissions can cause the ENPV to be even higher, a fact that further points out the importance of the project from a socioeconomic point of view.

4.7 Risk assessment

The risk assessment of the project seems to be well structured, while the author by conducting a sensitivity analysis (the variables that were used are the investment cost and the net income) chooses as critical variables the demand for natural gas and the investment cost of the project. The sensitivity analysis is described in section 2.7.c of the "Χρηματοοικονομική ανάλυση" in the application dossier. The analysis was conducted by using modern statistical tools.

The application dossier presents the impact on the financial and economic value indicators as a result of a 10% increase in investment cost and a 10% reduction in revenue as well as a combination of both.

From the results of the risk assessment, it seems that in order for the project to be viable and burden to the least possible the Greek consumers, needs to be financed by the European Union.

It is critical to mention that during the phase when the feasibility report was conducted, a number of possible other variables could have been taken into account such as variations in economic growth or fluctuations at the operational costs.

Finally, due to the nature of the calculation of the tariffs that the consumers are obliged to pay, the possible risk of an increase in the development cost can be absorbed based on the increased regulated asset base.

The application dossier should demonstrate that this approach will not affect the funding gap calculation. Indeed, in case of increased tariffs the realisation of extra returns might trigger the reimbursement of part of the funds according to the ex-post recalculation of the eligible EU grant.

4.8 Consistency with EU policies and law

The project is coherent with EU policies and laws. The application dossier states that the priority axis relevant for the project is "Completion of the National Energy System and Enhancement of Sustainability" of the Operational Program «Competitiveness and Entrepreneurship» (OPCE II) of the Period 2007 – 2013. Moreover the project is consistent with the objectives of the "Europe 2020: A resource-efficient Europe". Additionally, the project is consistent with the European policies against climate change, as it is mentioned in section F.1 of the application dossier.

5 Overall project appraisal

5.1 Are the project's objectives well defined and is the project technically sound?

The project overall is well defined. The main objective is to upgrade the Liquefied Natural Gas (LNG) Terminal at Revithoussa by constructing a new power plant to cover the terminal's energy needs.

Since the project is already completed, the main milestones have been accomplished and the technical parts of the construction have already been tested for their reliability. The project addresses environmental issues by covering its energy needs with more climate friendly resources such as natural gas, causing less effect in the environment due to the reduction of CO2 emissions.

The project is based on a technical solution that is appropriate bearing in mind market and technological developments; though the figures concerning the future demand of energy should be reviewed since they are based on different assumptions made for the evolution of the Greek economy and may differ from the realistic targets concerning the demand of natural gas.

From what is presented in the application dossier (the details given for the two alternative projects that were rejected are not adequate to give an accurate opinion) the project chosen had the most advantageous economic effect for the company, bearing in mind also the environmental effect that might cause.

However, further information is required to prove the extent of the energy to be saved in terms of the MW figure (82,500MWh per year) that it is claimed to be essential.

5.2 Is the project worth co-financing?

The project at a first glance is worth co-financing as it contributes to key objectives of the EU regional policy. It is notably consistent with the "Completion of the National Energy System and Enhancement of Sustainability" and also the "20 - 20 - 20 Energy target".

Moreover, even if the FNPV of the project is negative, when considering the ENPV due to its impact on the development of the area concerned and the effect on the environment, the project seems to have positive performance indicators, reflecting unambiguous benefits for the society, the region and the environment. Indeed, through the implementation of the power plant, total Regulatory Asset Base will be decreased and thus will extenuate consumers the burden from increased energy tariffs. This saving applies to the wholeness of the society, by making a natural resource more accessible by financial means.

5.3 Is the public contribution justified?

Construction cost of the above mentioned infrastructure is very high and there is no possibility for an execution of these investments by the transmissions operator's (DESFA SA) own resources. This is why a public cofinancing is needed so as to eliminate adverse effects of tariff increase due to the inclusion of investment cost to the Regulated Asset Base (RAB) of DESFA SA. Consequently, public co-financing will benefit all consumers since network tariffs will not raise.

The negative financial NPV and the low FRR provided in the financial analysis point out that the EU financial support is necessary as to implement the project. Therefore EU finding could accelerate the project implementation.

5.4 Is the project consistent with other EU policies?

The project is consistent with relevant EU policies and regulations in the fiend of sustainable development and environmental protection. The initiative will contribute to the objectives of "Europe 2020: A resource-efficient Europe" Flagship particularly among other to fighting against climate change and limit the environmental impact of resource use.

The project will also contribute to reaching the "20 - 20 - 20 target" defined in the "EU climate and energy package" related to reducing EU greenhouse gas emissions of at least 20% below 1990 levels.

It is critical to mention that the project is consistent with the 3rd Energy Package (natural gas sector) since its implementation will lead DESFA, the Gas System Operator to be able to cover the increasing energy needs on the Greek territory and at the same time be able to fulfil its tasks as an Independent Transmission Operator, as they are described in the 3rd Energy Package.

6 Recommendations

6.1 Recommendations for the organisation responsible for project implementation

Some important recommendations to the organisation responsible for the project implementation can be formulated as follows:

- Further information is required to prove the extent of the energy to be saved in terms of the MW figure (82,500MWh per year) that it is claimed to be essential.
- A more detailed description of the operating cost structure calculation and a more detailed presentation of the assumptions, especially regarding the treatment of personnel cost.
- Additional details should be provided concerning the personnel cost after the installation of the facility.
 The personnel information included in the application dossier is inconsequent with the relevant information in the financial analysis Annex.
- A breakdown of the calculations, including the details of the approach adopted for the determination of the indicators of return on national resources (K) as a means to assess whether the calculations are in line with EU guidance.
- Details on the determination of the investment's residual value.
- A more analytical sensitivity analysis should have been performed, including more variables that should have been tested in order for the analysis to be accurate.
- Additional details for the other options that were tested are needed in order to support the factors that lead to the final decision on the implementation of the project.

6.2 Recommendations for the European Commission

The project is eligible to be granted EU funds as it is consistent with state aid rules and coherent with the Greek and European legal and regulatory framework. Moreover there is an alignment with the objectives of the National Operational Programme.

The construction of the power plant is towards the path of diminishing the cost of energy tariffs due to the introduction of natural gas as means of production. Additionally, by covering its own needs through the power plant DESFA reduces to a significant degree the average cost per MWh consumed. The construction of the project will also contribute to safeguarding the environmental sustainability though reducing CO2 emissions.

Furthermore, the financial indicators of the financial analysis, compared with the economic analysis, seem to support the idea of a worth-funding project that can be proven beneficial for the local and Greek society as a whole.

As a result it can be said that the implementation of the project is of great importance both at a regional and national level. Moreover, granting EU contribution adds to the maximising of the benefits for the consumer. In light of these elements and given that the project is consistent with EU and national relevant initiatives; we

believe that there is justification for the European Commission to grant the support after addressing the issues mentioned in the previous sections.

7 Appendix: Quick Appraisal Checklists

7.1 Appendix 1: Completeness assessment checklist

APPLICATION SECTION	ASSESSMENT	COMMENTS/REFERENCES
ADDRESSES AND REFERENCES		
Authority responsible for the application	Y⊠ N□ N/A□	Section A1. of the application dossier
Organisation responsible for project implementation	Y⊠ N□ N/A□	Section A2. of the application dossier
PROJECT PRESENTATION	•	
Title of project / project phase	Y⊠ N□ N/A□	Section B1. of the application dossier
Categorisation of project activity	Y⊠ N□ N/A□	Section B2. of the application dossier
Compatibility and coherence with the Operational Programme	Y⊠ N□ N/A□	Section B3. of the application dossier
Project description	Y⊠ N□ N/A□	Section B4. of the application dossier
Project objectives (and location)	Y⊠ N□ N/A□	Section B5. of the application dossier (Not mentioning the location)
PROJET FEASIBILITY		
Demand analysis	Y⊠ N□ N/A□	Section C1.1. of the application dossier
Options considered	Y⊠ N□ N/A□	Section C1. of the application dossier
Summary of feasibility studies conclusions	Y⊠ N□ N/A□	Section C1. of the application dossier
Capacity considerations	Y⊠ N□ N/A□	Section C1. of the application dossier
TIMETABLE		
Project timetable	Y⊠ N□ N/A□	Section D1. of the application dossier
Project maturity	Y⊠ N□ N/A□	Section D2. of the application dossier
COST-BENEFIT ANALYSIS	'	•
Financial analysis	Y⊠ N□ N/A□	Section E1. of the application dossier
Socio-economic analysis	Y⊠ N□ N/A□	Section E2. of the application dossier
Risk and sensitivity analysis	Y⊠ N□ N/A□	Section E3. of the application dossier
ANALYSIS OF ENVIRONMENTAL IMPACT	1	ı
Contribution to/respect of environmental sustainability	Y⊠ N□ N/A□	Section F1. of the application dossier

Consultation of environmental authorities	Y⊠ N□ N/A□	Section F2. of the application dossier
Environmental Impact Assessment	Y □ N □ N/A □	Section F3. of the application dossier (missing the Annex)
Assessment of effects on NATURA 2000/sites of nature conservation importance	Y⊠ N□ N/A□	Section F.4 of the application dossier
Additional environmental integration measures	Y ⊠ N □ N/A □	Section F5. of the application dossier
Cost of measures taken for correcting negative environmental impacts	Y□ N⊠ N/A□	Although it is mentioned that such measures are taken, the relevant costs have not been included
Consistency with sectoral/integrated plan and programme (in case of projects in the areas of water, waste water and solid waste).	Y□ N□ N/A⊠	N/A as project is not relevant to areas of water, waste water and solid waste
JUSTIFICATION FOR THE PUBLIC CONTRIBU	JTION	
Competition	Y □ N □ N/A ⊠	Not applicable due to monopoly
Impact of EU assistance on project implementation	Y⊠ N□ N/A□	Section G2. Of the application dossier
FINANCING PLAN	•	
Cost breakdown	Y⊠ N□ N/A□	Section H1. of the application dossier
Total planned resources and planned contribution from EU funds	Y⊠ N□ N/A□	Section H2. of the application dossier
Annual financing plan of EU contribution	Y⊠ N□ N/A□	Section H3. of the application dossier
COMPATIBILITY WITH EU POLICIES AND LA	W	
Other EU financing sources	Y⊠ N□ N/A□	Section I.1 of the application dossier
IFI financing	Y □ N □ N/A ⊠	N/A since not applying for IPA funds
Existence of legal procedure for non-compliance with EU legislation	Y⊠ N□ N/A□	Section I.2 of the application dossier (no legal procedure)
Publicity measures	Y⊠ N□ N/A□	Section I3. of the application dossier
Involvement of JASPERS in project preparation	Y⊠ N□ N/A□	Section I.4 of the application dossier (JASPERS not involved in project preparation)
Public procurement	Y⊠ N□ N/A□	Section I5. of the application dossier-
Previous history of the recovery of assistance	Y □ N ⊠ N/A □	This section is not included in the application dossier
ENDORSEMENT OF COMPETENT NATIONAL	AUTHORITY	
Signed endorsement	Y□ N⊠ N/A□	Missing the signature
ANNEXES		
Declaration by authority responsible for monitoring Natura 2000 sites/sites of nature conservation importance	Y⊠ N□ N/A□	Annex " Δήλωση της αρχής που είναι αρμόδια για την παρακολούθηση των τόπων NATURA 2000"
Cost-Benefit Analysis	Y⊠ N□ N/A□	Annex "Χρηματοοικονομική Ανάλυση"
Technical sheets	Y⊠ N□ N/A□	Annex "Δημοσιεύσεις Προκηρύξεων Συμβάσεων"
Feasibility study (summary)	Y⊠ N□ N/A□	Annex "Χρηματοοικονομική Ανάλυση"

EIA non technical summary	Y⊠ N□ N/A□	Annex I "Environmental terms"
Copies of relevant decisions permits & other documents	Y⊠ N□ N/A□	Documents with reference numbers 02, 03, 04, 05, 06, 07, 08, 09 attached to the application dossier and Documents C,D,E,Z in Annex I
Maps	Y⊠ N□ N/A□	Annex "Προσάρτημα Ι_ΧΑΡΤΗΣ 1 50000", Annex "Προσάρτημα Ι_ΧΑΡΤΗΣ 1 750"
Others (please provide detail)	Y⊠ N□ N/A□	Publications regarding call for tenders (Documents attached in file H in Annex I)
		Publications regarding contracts awarded (Documents attached in file H in Annex I)
		Copies of relevant contracts
		(Documents attached in file I in Annex I)

7.2 Appendix 2: Quality assessment checklist

ASSESSMENT QUESTIONS	ASSESSMENT	COMMENTS/REFERENCES
CONTEXT AND PROJECT OBJECTIVES		
The social, institutional and economic contexts of the project are clearly described	Y⊠ N□ N/A□	The application includes a clear description of the social, institutional and economic parameters of the project.
The project objectives are clearly defined	Y⊠ N□ N/A□	
The expected project benefits are indentified and clearly defined in terms of socio-economic indicators	Y⊠ N□ N/A□	The project benefits that are identified in the project are clearly defined and consist of the following: • Energy cost reduction per MWh.
		Social benefits due to lower tariffs.
The foreseen socio-economic benefits are likely to be attainable with the implementation of the project	Y⊠ N□ N/A□	Further information is required
All the most important socio-economic effects of the project have been considered in the context of the region, sector or country concerned	Y□ N⊠ N/A□	There is no reference to the effect that the installation will have to the local development. Additionally, in the "Χρηματοοικονομική Ανάλυση" section of the Annex the author calculates incremental income from the personnel that will be hired in the facilities, while in the application dossier is stated that no new hires will join the company.
The project is coherent with the EU objectives of the Funds? (Art. 3 and Art. 4 Reg. 1083/2006 for the ERDF and CF, Art. 1 and Art. 2 Reg. 1084/2006 for the CF; Art. 1 and Art. 2 Reg. 1085/2006 for the IPA)	Y⊠ N□ N/A□	
The project is coherent with the overarching national strategy and priorities defined in the national strategic reference frameworks and the operational programmes (Art. 27 and Art. 37 Reg. 1083/2006 for the ERDF and CF, Art. 12 Reg. 1080/2006 for the ERDF)	Y⊠ N□ N/A□	
The means of measuring the attainment of objectives is indicated, and their relationship, if any, with the targets of the Operational Programmes is defined.	Y⊠ N□ N/A□	Section B.5.3 of the application dossier
PROJECT IDENTIFICATION		
The project constitute a clearly identified self-sufficient unit of analysis	Y⊠ N□ N/A□	
The project is defined with appropriate quantified indicators	Y⊠ N□ N/A□	The application includes the quantified result indicator for the most relevant parameters namely:
		Increase of the installed capacity of the facility
		These figures are measurable.

The project's concept, outputs and capacity increase to the baseline are meaningful	Y⊠ N□ N/A□	
The indirect effects of the project been properly considered (or excluded if appropriate shadow prices are used)	Y⊠ N□ N/A□	The author mostly concentrates on the CO2 emissions' reduction.
The network effects of the project have been considered	Y□ N□ N/A⊠	
The economic welfare calculation is based on a consideration of costs and benefits for all potentially affected parties	Y□ N⊠ N/A□	The economic welfare calculation focuses on the following: • Energy cost reduction per MWh.
		Social benefits due to lower tariffs.
PROJECT TIMETABLE AND MATURITY		
The project phases have been clearly and correctly identified	Y⊠ N□ N/A□	Most of the project's milestones have already been completed.
The maturity of the project has been correctly assessed	Y⊠ N□ N/A□	The assumption based on which the maturity is assessed is under normal market standards.
The project implementation timeframe is realistic and reasonable	Y⊠ N□ N/A□	Since the project has finished then the timeframe is realistic and reasonable.
Dependencies and constraints have been properly taken into account in the project timetable	Y□ N□ N/A⊠	Since the project is already completed then any obstacles that might have arisen were over passed.
FEASIBILITY AND OPTIONS ANALYSIS		
The application dossier contains sufficient evidence of the project's feasibility (from an economic, engineering, institutional, management, implementation, environmentalpoint of view)	Y⊠ N□ N/A□	The application dossier together with the Annex «Χρηματοοικονομική Ανάλυση" provide enough evidence concerning the project's feasibility, based on most of the factors mentioned.
The do-nothing scenario ('business as usual') has been analysed to compare the situations with and without the project	Y□ N⊠ N/A□	The analysis of the do-nothing scenario is almost insignificant, giving a brief description of the costs that would occur if the power plant project wasn't executed.
Other alternative feasible options have been adequately considered (in terms of dominimum and a small number of dosomething options)	Y□ N⊠ N/A□	In order to come to the final outcome the author analysed three different projects, though the analysis of the two projects that were rejected is almost insignificant, with a brief mention that were producing worse financial results than the one chosen at the end.
The chosen technical solution(s) is/are appropriate and sustainable according to market and technological developments, future demand and capacity constraints, etc.	Y⊠ N□ N/A□	Detailed technical analysis has been incorporated in the application dossier.
Demand for the project outputs has been properly analysed and is and/or will be adequate and significant (long run forecasts)	Y⊠ N□ N/A□	A reference is provided to DESFA "10-year development plan of the Hellenic gas transmission system where an analysis of demand is provided.
The location of the investment is suitable and the local context is favourable to the project (i.e. there are no physical, social or institutional binding constraints that could	Y⊠ N□ N/A□	Since the project is located in a complex of installations that are associated with the natural gas sector and also the power plant is a significant addition for the settlements

threaten the project feasibility)		autonomy.
Appropriate technology is available for the project implementation	Y⊠ N□ N/A□	Since the project was successfully completed then the technology needed was available for the implementers.
In the case of productive investments/R&D/energy, the relevance and impact on public infrastructures have been properly considered, e.g. necessary links to transport network (air, road/rail connections, etc.), links to other utilities, public sector responsibilities to provide "new services", etc.	Y⊠ N□ N/A□	Due to its nature (the production of electricity) the project will be connected with the electricity transmission system in order to provide any energy remaining.
The incentive effect of the requested aid has been assessed and found to be significant (i.e. the proposed aid is necessary to produce a real incentive effect to undertake investments which would not otherwise be made in the area, or to ensure that the beneficiary undertakes (additional) investment in the region concerned)	Y⊠ N□ N/A□	The EU contribution appears to be necessary as to undertake the investment
FINANCIAL ANALYSIS		
Depreciation, reserves, and other accounting items which do not correspond to actual flows have been eliminated in the analysis	Y⊠ N□ N/A□	Contingencies have been included in the calculation of the financial indicators, however due to the fact that these are less than 10% of the total investment cost without contingencies then these could be considered eligible.
The determination of cash flows has been made in accordance with an incremental approach	Y⊠ N□ N/A□	The personnel cost is also incremental although it is stated in another section of the application that no new hires will be necessary for the plant's operation.
The choice of discount rate is consistent with the Commission's or Member States' guidance	Y⊠ N□ N/A□	
The choice of the project's time horizon is consistent with the values recommended per sector for the 2007-2013 period ¹	Y⊠ N□ N/A□	
The residual value of the investment has been calculated	Y⊠ N□ N/A□	The residual value of the project is given as a figure, without providing detailed calculations on how the actual figure accrued.
A nominal financial discount rate been employed (in the case of using current prices)	Y □ N □ N/A ⊠	The analysis has been performed in real terms.
The main financial performance indicators have been calculated (FNPV(C), FRR(C), FNPV(K), FRR(K)) considering the right cash-flow categories	Y□ N⊠ N/A□	The approach adopted for the calculation of FNPV (K) and FRR (K) seems not to be coherent with the DG REGIO guidance. More information is needed to assess the reliability of the indicators and whether the right cash flow categories have been considered.
The project's calculated financial rate of return is at an appropriate level to justify a	Y⊠ N□ N/A□	The FRR (C) is lower than the applied discount rate of 5%.

 $^{^{1}}$ 25 years for Energy, 30 years for Water and environment, 30 years for Railways, 25 years for Roads, 25 years for Ports and airports, 15 years for Telecommunications, 10 years for Industry, 15 years for Other services.

potential EU contribution		
Private partners in the project are expected to earn normal profits as compared with some financial benchmarks (if applicable)	Y□ N⊠ N/A□	Private funds are used in order to complete the project, though there is no information concerning their financial benefits.
If the project does not benefit from any form of state aid, the financial analysis demonstrates the existence of a funding gap and the need for EU assistance in order to make the project financially viable	Y⊠ N□ N/A□	The project is not subject to state aid
If the project benefits from state aid, the requested EU grant has been properly calculated (the EU contribution may not exceed the maximum state aid allowed for a project)	Y□ N□ N/A⊠	
If the project is a revenue generating project ² , the amount to which the EU cofinancing rate applies has been identified in accordance with EU regulations (Art. 55 Reg. 1083/2006) ³	Y⊠ N□ N/A□	
ECONOMIC ANALYSIS		
The cost-benefit analysis (CBA) demonstrates that the project yields a positive economic net present value considering its impact on the development of the area where it is to be implemented.	Y⊠ N□ N/A□	Due to the energy cost savings and the decreased energy tariffs (social benefit), the negative FNPV turns into positive ENPV.
The prices of inputs and outputs have been considered net of VAT and of other indirect taxes	Y⊠ N□ N/A□	Prices inputs and outputs are referring to VAT exclusive calculations.
The prices of inputs, including labour, have been considered gross of direct taxes	Y □ N □ N/A ⊠	No information is provided.
Subsidies and pure transfer payments have been excluded from the analysis	Y □ N □ N/A ⊠	
Externalities have been included in the analysis, including environmental externalities (e.g. application of the polluter pays principle and assessment of effects on NATURA 2000 sites)	Y□ N□ N/A⊠	No significant negative externalities are identified in the application dossier. Qualitative impact has been performed regarding CO2 emissions. As mentioned in the application dossier the project does not trigger application of the polluter pays principle as well as does not
		have an effect on NATURA 2000 sites.
Shadow prices have been used to reflect the social opportunity cost of the resources employed	Y□ N⊠ N/A□	No shadow prices have been included in the project's economic analysis.
Sector-specific conversion factors been applied (in the case of major non-traded items)	Y□ N⊠ N/A□	

² A revenue-generating project means any operation involving an investment in infrastructure the use of which is subject to charges borne directly by users or any operation involving the sale or rent of land or buildings or any other provision of services against payment (Article 55 of Council Regulation 1083/2006).

³ For revenue-generating projects, the maximum eligible expenditure is identified by Article 55(2) Regulation (EC) N. 1083/2006 as the amount "that shall not exceed the current value of the investment cost less the current value of the net revenue from the investment over a specific reference period". Such identification of the eligible expenditure aims at ensuring enough financial resources for project implementation, avoiding, at the same time, the granting of an undue advantage to the recipient of the aid (over-financing).

	The appropriate shadow wages have been chosen in accordance with the nature of the local labour market	Y□ N□ N/A⊠	
	The chosen social discount rate is consistent with the Commission's or Member States' guidance	Y□ N⊠ N/A□	The chosen social discount rate is 5%. This is not consistent with the EC Working Document No4 where the reference social discount for countries eligible for the Cohesion Fund is 5.5%. Nevertheless given that the ERR is 10.01% it is expected that if a social discount rate of 5.5% is applied, the ENPV is still expected to be significantly positive.
	The main economic performance indicators have been calculated (ENPV, ERR and B/C ratio)	Y⊠ N□ N/A□	The main economic performance indicators are calculated: ENPV: € 4.522.000 ERR: 10.01%
ı			B/C: 1.38
	If the economic net present value of the project is negative, there important non-monetised benefits to be considered	Y□ N□ N/A⊠	The Economic Net Present Value is positive.
	RISK ASSESSMENT		
	The choice of the critical project variables is consistent with the elasticity threshold proposed	Y□ N⊠ N/A□	Sensitivity, breakeven and Monte Carlo analysis has been performed for key variables. However, this has not been performed on the elasticity threshold guideline and methodology.
	The sensitivity analysis has been carried out variable by variable and possibly using switching values	Y⊠ N□ N/A□	
	The expected value criterion has been used to evaluate the project performance	Y⊠ N□ N/A□	
	Ways to minimise the level of optimism bias have been considered	Y□ N⊠ N/A□	The optimism bias is not considered in the application dossier.
	Risk mitigation measures have been identified and are adequate	Y⊠ N□ N/A□	Overall risk is reduced as the investment will be included in the Company's regulated asset base.
	OTHER EVALUATION APPROACHES		
	If the project has been shown to have important effects that are difficult to assess in monetary terms, the opportunity to carry out an additional analysis, such as CEA or MCA, has been considered	Y□ N□ N/A⊠	
	The choice of the additional analysis is suitable with the fields of application of CEA and MCA	Y□ N□ N/A⊠	
	If a CEA has been performed, incremental cost-effectiveness ratios have been calculated to exclude 'dominated' alternatives	Y□ N□ N/A⊠	
	If an MCA has been performed, the weights applied are consistent with the relative	Y□ N□ N/A⊠	

importance of the projects effects on society		
If the project is likely to have a significant macroeconomic impact, the opportunity to carry out an Economic Impact Analysis has been considered	Y□ N□ N/A⊠	
CONSISTENSY WITH EU POLICIES AND LAW	<i>I</i>	
The project is consistent with relevant EU policies and law in the field of sustainable development, protection and improvement of the environment.	Y⊠ N□ N/A□	The CO2 emissions related to natural gas are lower with respect to conventional fuels (e.g. oil). The investment is not only compliant with the policy and the regulations but it actively contributes to achieving the EU goals in the field of sustainable development and environment improvement.
The project is consistent with EU competition policy and regulations and is not likely to generate competition distortions	Y□ N□ N/A⊠	DESFA is a monopoly.
The project is consistent with EU public procurement regulations	Y⊠ N□ N/A□	All the call for tenders included in the Annex of the application dossier, comply with the relevant legal framework and the EU regulations.
The project is consistent with gender equality and anti-discrimination EU policies	Y□ N□ N/A⊠	
If the project is in the field of industry, the project is in line with the objectives of the Europe 2020 Flagship Initiative "An Integrated Industrial Policy for the Globalisation Era" and may contribute to their achievement	Y□ N□ N/A⊠	
If the project is in the field of energy, the project is in line with the objectives of the Europe 2020 Flagship Initiative "A resource-efficient Europe" and may contribute to their achievement	Y⊠ N□ N/A□	The project is in the field of energy and complies to the following Directives: • 96/61/EC concerning integrated pollution prevention and control. • 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants
If the project is in the field of ICT, the project is in line with the objectives of the Europe 2020 Flagship Initiative "A Digital Agenda for Europe" and may contribute to their achievement	Y□ N□ N/A⊠	
If the project is in the field of the knowledge economy, the project is in line with the objectives of the Europe 2020 Flagship Initiative "Innovation Union" and may contribute to their achievement	Y□ N□ N/A⊠	

7.3 Appendix 3: Project Team

