



LIBERALISATION OF THE ELECTRICITY MARKET IN GREECE:

Identification of distortions
and proposals to address them

Requirements for the
harmonation of the national
legislation with community
regulations

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01

Introduction

The day on which man discovered fire – the very first form of energy – was the day on which mankind came out of the darkness forever to enter a new era. This new era saw evolution and progress happening at rapid rates compared to the past, due to man's exploitation of that very first source of energy.

Over the centuries, man continued to discover more and more exploitable energy sources, thus accelerating even more his evolutionary progress. At the same time, however, man's dependence on these energy sources was also increasing, to the point where today we have reached a stage where the capability to use what is perhaps the most basic form of energy, electricity, is a precondition for more than just decent living conditions for each and every one of us and, in this way, a social good.

Additionally, electrical power is crucial in boosting competition and economic growth in all countries. The production and exploitation of electrical power on competitive terms is sure to lead to economic flourishing. However, a key prerequisite in order for this to happen in the current globalised economic environment, is to ensure free competition across the corresponding production, transmission and distribution processes, both nationally and internationally.

The Mytilineos Group, operating in this sensitive sector for the last decade, was quick to realise the particular significance of electrical power as a valuable social good and its beneficial effect as leverage for growth and progress.

Thus, and with a view to consolidating the nature of electrical power as a social good freely accessible by all and to furthering its exploitation as a tool for growth, the Group has put together the present report, which highlights the current legal and institutional obstacles that hinder the achievement of these two goals. The report also puts forward proposals to address these obstacles for consideration by the political leadership, the scientific community and the independent regulatory authorities, by international organisations and bodies, as well as by all other interested parties.

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02

Scope

- To present the most important and commonly observed distortions in the electricity market (licensing, construction and operation of infrastructures, access to infrastructures, supply, consumption).
- To identify areas where the harmonisation of the Greek legislation with the Community legislation is lagging behind (existing rules which should have been and/or must be transposed to Greek law).
- To identify differences between the Greek electricity market and the (commonly accepted) correct practices currently applicable in the rest of the EU Member States.
- To demonstrate the need for re-examination of the key regulatory measures and rules governing the operation of the wholesale electricity market in Greece.
- To identify deficiencies in control mechanisms or in the imposition of measures and strict fines on violators of the market operation rules.

03 RES plants - Licensing and DSTS

03.1

Legal issues

A. Development Policy

A comprehensive legislative framework on electricity production from RES should take into account the development opportunities in the fields of equipment procurement and services in connection with the installation and operation of RES plants.

Proposals:

- (i) Formulation of a Government policy for development in line with the successful example of Portugal (imposed the domestic production of wind turbines).
- (ii) Development of synergies/collaborations between the companies active in the field of RES. Consultation for the new Investment Incentives Law is expected.

B. Failure to meet or lack of response times of Authorities

Competent authorities do not meet the foreseen maximum or even reasonable response times or are not even obliged by law to keep a specific time schedule (e.g. response by HTSO and PPC concerning connection terms), resulting in time-consuming licensing of projects.

Proposal: Imposition of specific and strict deadlines for responding to requests to all authorities and bodies involved (although adherence to them is doubtful), accompanied by fines imposed in cases where these deadlines are unreasonably violated.

C. Lack of Forest and Land Registries

This lack leads to long bureaucratic procedures for issuing land designation acts and intervention approvals for RES installations in forest land. Additional problems caused include objections by competitors or civilians claiming to be the owners of the land in question, and the blackmailing of investors.

Proposal: Completion of the land and forest registries with emphasis on areas of high interest for RES projects development. Use of existing private land surveyor databases for faster completion of forest and land registry maps.

D. Potential problems due to the application of the provisions of Law 3581/2010 (see following table)

Since the liberalisation of the electricity market in Greece began, consecutive legislation changes were effected to this day without taking into account cost, time, the business risk to investors and the financial situation. As a result, thousands of applications for electricity production licenses are pending at various stages of development of the RES projects concerned, due to the complex and unclear legislative framework. Moreover, many of the authorities involved issue contradictory opinions, thus creating delays of many months, few installed systems have been completed, and the situation in licensing authorities and services is chaotic. There is an urgent need for codification of the entire legislative framework on licensing, construction and operation of RES projects, as the consecutive amendments of the legislation lead to conflicts between regulations and create legal uncertainty.

Provisions of Law 3851/2010 on RES plants and potential risks

	Issues / Provisions	Potential problems/Risks
1.	Finalisation of the National Action Plan to determine the breakdown of installed capacity targets between the various technologies and their respective implementation schedules.	<ul style="list-style-type: none"> • Market manipulation for the domination of one technology over another (in terms of total installed capacity percentages). • Market manipulation by setting capacity limits per technology (e.g. HTSO: has set a ceiling of 5500MW total capacity for wind farms). • Market manipulation by setting time limits for completion (or time development scheduling) of projects . • Market manipulation and revision of all the above with the possibility of abortion of the licensing process through a ministerial decision. • Electric transmission system stability analysis (involving different technologies development scenarios) is not foreseen to be taken into account.
2.	Acceleration of the environmental licensing procedure for issuing power generation licences.	<p>Given the number of applications to be processed:</p> <ul style="list-style-type: none"> • It is unknown how closely RAE will be able to follow the time schedule for the issue of so many power generation licences. • The delay in the evaluation of the pending applications by RAE is also not predictable.
3.	Acceleration of the environmental licensing procedure for issuing electricity network connection terms.	<ul style="list-style-type: none"> • It is unknown how efficiently HTSO and PPC will be able to respond to the high workload and to the time schedule for the issuance of so many offers for connection terms. • Probable arbitrary delays by HTSO and PPC in coping with the increased workload (connection terms must be issued within 4 months of the completion of the application file).
4.	Acceleration of the environmental licensing procedure for issuing installation permits.	<ul style="list-style-type: none"> • It is unknown how efficiently the competent EPD and SAE will be able to deal with the increased workload and the time schedule for the issuance of so many EIAs. • Probable arbitrary delays by EPD and SAE in coping with the high workload (EIA must be issued within 4 months of the completion of the application file).
5.	New applications - amendments.	Not clear when RAE will publish the new Regulation on RES Generation Licences.

03.2

Licensing issues

A. Bureaucratic and complicated licensing procedures

Licensing procedure becomes unjustifiably time-consuming, lasting from 3 to 5 years. This is further deteriorated by the involvement of numerous authorities consecutively and not in parallel (RAE, forest authorities, town planning authorities etc).

Proposal: A drastic reduction of the typical time for completion of the licensing procedure to 18 months is imposed by the new Law (Law 3851/2010). According to the new licensing organisation scheme, any deviation/ amendment from/to the initial RES project planning will cause delays of many months, eliminating the main advantage of the new Law.

B. Disputed implementation of Law 3851/2010

Changes to the licensing procedure (possibility of simultaneous submission of requests for opinions) originally resulted in the issuance of circulars or instructions by individual authorities or bodies involved, which applied the law according to their understanding and point of view (e.g. circular by the Forestry Division of the Region of Central Greece and communications of PPC, HTSO).

Proposal: A guide/circular with clarifications regarding the implementation of the new Law must be issued by a central body (RAE or Min.EECH), as was also done in the case of Law 3468/06.

C. Existence of simultaneous funding (Investment Incentives Law and feed-in tariff).

The choice made by Law 3581/2010, which increases the feed-in tariff for energy produced by RES units, excluding PVs, when no use is made of funding under incentive schemes, is considered to be positive.

Proposal: An increase in the feed-in tariff is preferable to State subsidies granted through the Investment Incentives Law, as the latter may increase the illegal trading of licences and cause over-pricing of cost materials.

03.3

Public Administration practices

A. Incomplete knowledge of the RES regulatory framework,

by the competent personnel of local authorities (Regions, Forest Authorities, Municipalities), resulting in the issue of incorrect and insufficiently justified opinions and decisions that delay the licensing procedure.

Proposals:

- (i) Transfer of RES experience from the competent central authorities to the regional ones.
- (ii) Provision of centrally coordinated information aimed at ensuring correct and swift assessment of the investors' applications.

B. Unreasonably strict interpretation of the law and erroneous implementation of applicable provisions, e.g.:

- (a) Refusal of further licensing unless all existing licences are modified, if the name of the applicant has changed;
- (b) Requests by RAE/ Min. EECH for the submission of evidence of the entire financial capability of the license holder or of the individuals on whose financial ability the licence holder relies, even in cases of minor changes;

- (c) Refusal of RAE/ Min. EECH to approve the financial capability of an applicant for a generation license based on the financial capability of its shareholders/partners and/or third parties, if the applicant concerned has not a minimum of three (3) full financial years.

Proposal: Greater flexibility in the interpretation of the law and correct implementation of applicable provisions.

C. Bureaucracy

Pointless and time-consuming bureaucracy during the licensing procedure, causing many months of delays and very high costs to developers.

Proposal: Creation of helpdesks for developers at the various authorities. These helpdesks will respond to queries within a short time and in writing (including by e-mail). Written responses assure transparency, consistency and accountability, provided of course that they are completed within a reasonable time. .

D. Local reactions and petty politics interests:

Need for training and actions to inform local communities to ensure acceptance of RES, given that local reactions raise obstacles to the progress of any licensing procedure. Social organisations must be provided with prompt and accurate – rather than distorted – information regarding RES applications.

Proposals:

- (i) Immediate development of actions in areas with strong RES development potential, through information workshops and visits of representatives from the local communities to existing RES facilities.
- (ii) Recommendation to developers and to the Min.EECH to periodically brief local communities through presentations etc.

E. Financial Disincentives

Despite the incentives provided to attract foreign and domestic investors in RES projects, the expected results were not accomplished. This led to the need for increasing the price of electricity for competitions at very favourable terms, for securing compensation of capacity and for guaranteeing the increase of SMP, however without any positive outcome. The time-consuming licensing procedure, which lasts for many years, allows the administration of the competent Ministries to change and/or cancel previous decisions, an approach which results directly in the limitation or cancellation of projects, as their viability is limited.

Πρόταση: Immediate assessment of the funding requests already submitted. Clear and stable policy from now on regarding the development of RES projects, based on the directions of the new RES Law (3851/2010) and of the forthcoming Investment Incentives Law.

F. Lack of technical background for assessing RES potential

No criteria and parameters are used to assess objectively and to determine accurately the installed carrying capacity of RES projects in Greece.

Proposal: Imposition of new technical, financial, and environmental criteria for determining the aforementioned capacity and the rational development of RES projects throughout Greece.

G. Insufficient staffing and know-how in the competent central and regional authorities

Due to the frequent congestion of RES licensing applications (Min.EECH, RAE, HTSO, PPC, SAE, regional EPDs), central authorities constantly face high workloads and are unable to respond to investors in time and in accordance with deadlines prescribed by the law.

Proposals:

- (i) Staffing of services with experienced personnel.
- (ii) Proposal to the Min.EECH and to the Ministry of the Interior, Decentralisation and e-Governance for a centralised coordinated action for information to ensure equitable and objective assessment of applications.
- (iii) Improvement of the staffing of regional authorities by assigning to them suitably trained officers.

H. Meritocratic control and proper supervision of candidate investors

Meritocratic handling of RES projects may contribute to the possibility of completing and exploiting such projects soundly.

Proposal: Revocation of the production license for projects which are not realised within a reasonable time frame for no good reason, and which take up useful electricity capacity for a long period of time at the expense of other mature investments.

I. Perennial lack of spatial planning

Development of Special Planning Framework for RES in November 2008 which however needs further specialisation.

Proposal: Redefinition of “exclusion areas and incompatibility zones” after completion of the land and forest registries, and clear definition of protected areas.

03.4

DSTS issues

A. Lack of electricity transmission network infrastructures

in areas such as Crete, the Dodecanese and Cyclades (non-interconnected islands), Evia, the Peloponnese, Thrace and South Ionian (saturated network), with high wind energy potential. Further strengthening and expansion of the national transmission system is necessary.

Proposal: Continuous strategic planning of the transmission network development projects by HTSO with the assistance of RAE and the Min.EECH, focusing on regions with high RES development potential.

B. Development of transmission and distribution infrastructures

The rational and efficient development of the transmission and distribution network infrastructures is hindered by the time-consuming procedures of PPC which acts in a double capacity – as competitor and as the owner of the electricity transmission and distribution infrastructures. Actual and realistic strategic planning of electricity transmission projects is required, with investors participating in their implementation.

Proposal: Acceleration of the development of the transmission and distribution infrastructures with possibility for interested private investors to participate in such development.

03.5

Issues of judicial protections

Petitions for annulment and suspension are constantly filed before the Council of State based on legislative gaps that put at risk the investments in RES:

Proposals:

- (i) Establishment of a high application fee for the submission of such petitions, so as to prevent various groups seemingly operating as environmental organisations from taking recourse to the Council of State.
- (ii) Establishment of a substantial compensation payable by the persons filing such petitions in case of defeat.

03.6

RES plants - Proposals for immediate action (summary)

	Distortion	Proposals	Bodies/Authorities concerned
1.	Lack of Forest and Land Registries	Use of private surveyor and forest expert/forester databases for faster preparation of forest and land maps.	Min.EECH Ministry of Agricultural Development
2.	Lack of electricity transmission network infrastructures	Acceleration of the development of the transmission system infrastructures with possibility for participation of interested private investors.	Min.EECH, REA, HTSO
3.	Lack of electricity distribution network infrastructures	Acceleration of the development of the distribution network infrastructures with possibility for participation of interested private investors. Provision of training to the staff of the competent authorities.	Min.EECH, REA, HTSO
4.	Lack of knowledge of the RES regulatory framework by the various authorities involved	Organisation of centralised actions or information to ensure equitable and objective assessment of applications. Staffing of regional authorities with experienced specialised personnel.	Min.EECH
5.	Lack of information and know-how by regional authorities	Organisation of centralised actions for information to ensure equitable and objective assessment of applications. Provision of training to the staff of the competent authorities.	Min.EECH, Ministry of the Interior, Decentralisation and e-Governance
6.	Insufficient staffing and know-how of the competent central services	Organisation of centralised actions for information to ensure equitable and objective assessment of applications.	Min.EECH, Ministry of the Interior, Decentralisation and e-Governance
7.	Local reactions and petty politics interests	Periodic briefing of local communities through presentations etc.	Developers and Min.EECH
8.	Non-meritocratic control and insufficient supervision of prospective investors	Revocation of generation licence for projects which are not realised within a reasonable time frame without justification and occupy useful electricity capacity for a long period of time.	RAE, Min.EECH, HTSO, Ministry of Finance and Ministry of Economy Competitiveness and Shipping
9.	Suspensions and annulments of mature investments by the Council of State	Establishment of substantial application fee for the submission of annulment and suspension petitions and of significant compensation payable by the applicant in case of defeat.	Min.EECH, Ministry of Justice

04 Thermals - Licensing and DSTS

04.1

Legal issues

A. Non-application of relevant legislative provisions

Delays in issuing opinions by competent authorities beyond the deadlines prescribed by law, while no “deemed automatic consent” is in force (e.g. in the case of archaeological authorities).

B. Discrepancies and contradictions among applicable legislative provisions

The definition of the testing period of a power station is not the same in the electricity generation legislation or in the NG legislation or even in the contracts of the private investors with PPC, HTSO, DEPA and DESFA for the needs of such power stations.

Proposal: To harmonise the provisions of the legislation and of the contracts to be signed by private investors, so that the definition of the testing period is reasonable and meets the actual testing requirements of the relevant installations, as well as the requirement for repairing the damages that frequently appear during this period.

C. Lack of legislative framework

(a) Lack of secondary legislative framework in the field of natural gas (recent issue of a number of acts by the Min.EECH and RAE is expected to significantly improve the situation).

Proposal: The relevant legislation must be supplemented.

(b) Approval of active fire-protection study for natural gas facilities with pressure greater than 16 bar.

Proposal: Immediate approval of the relevant study.

(c) Lack of forest and land registries.

Proposal: Immediate launching of the procedures for the preparation of forest and land registry maps for the entire country.

D. Existence of unclear and outdated legislative framework

(a) Despite the magnitude of investments for thermal power plants, their licensing extends to the level of Ministries, Regions and Prefectures, which results in great delays.

Proposal: Simplification of the procedure and concentration of the decision-making and opinion functions to one body, especially after the implementation of “Kallikratis” (local government reform).

- (b) Minor modifications to the project planning or implementation or changes in the licence holder (e.g. change of the company's name) result in multiple time delays in the flow of information and licensing..

Proposal: To be dealt with as in the case of the recent law 3851/2010 on RES; rationalisation of the interpretation of the relevant provisions, in order to simplify and accelerate the relevant procedures.

- (c) After the competent authorities issue their opinions and the body text of the relevant decision is formulated, the decision is then circulated to the previous authorities so that they confirm the integration of their respective opinions (e.g. issue of a decision for approval of environmental terms and approval of intervention for a 400 kV transmission line).

Proposal: The only competent authority for the matter in question should be the requesting authority, and the approval decision should also be issued by it.

- (d) The long licensing procedure for the use of sea shore and beach leads to less beneficial solutions for society (e.g. installation of air-cooled condenser instead of a directly water-cooled one, resulting in decreased power and overall performance of the unit).

Proposal: Simplification of the relevant licensing procedure.

- (e) The tripartite agreement between the independent power producer, HTSO and PPC is the sole official document determining a number of matters (mainly technical, legal and financial) regarding the electrical interconnection of the power station with the System. In addition, the unavoidable delays in its execution create huge problems in the smooth progress of the investment. Furthermore, many terms of the tripartite agreement are either not described at all or are insufficiently described, thus leading to interpretation problems. A negative aspect of this agreement is also that HTSO assigns almost all its obligations to PPC, which has its own actions matrix and time schedule that are not described anywhere, whilst for many individual issues there are no technical specifications.

Proposals:

- (i) The template for the tripartite agreement should be revised after consultation with the private investors, so that some missing aspects are completed and some unclear points are clarified.
- (ii) The communication between PPC and HTSO, as well as internally between their competent departments, should be improved for faster and more effective resolution of the relevant issues.
- (f) Prevention of a second intervention approval in areas for which an intervention approval for some other purpose has already been granted, even if there are common interests or if the second approval may co-exist with the first one.

Proposal: To amend the relevant rules.

- (g) The licensing procedure should be simplified through the adoption of minor changes in legislation (e.g. an amendment in the power generation licence should not be required when non-essential provisions thereof are modified).

Πρόταση: The power generation licence issued should state only the absolutely necessary data in a way that provides flexibility. Modifications of the license should be avoided if the installed capacity changes within a reasonable range, following an amendment of the detailed study of the plant or a modification of the plant boundaries. An amendment of the power generation licence should also not be required when the size of the site is reduced.

- (h) The electricity transmission network owner becomes the owner of the property or land areas on which the facilities for connection of new plants to the Power Grid are installed, when existence of easement rights or leasing of the property would be sufficient provided that no charges by the property owner are allowed. Even if the transfer of the ownership of the property in question to the system owner is considered necessary, this should be made under two conditions: (a) the system owner should use the property in question only for the installation and operation of system expansion works, and (b) if for any reason the

system owner ceases to use the property in question for the purpose state above, he should be obliged to transfer the property back to its initial owner.

Proposal: To amend accordingly the Electric Power Grid and Exchange Code (EPGEC).

(i) Approvals by archaeological authorities. The approvals granted during the phase of ETAD do not cover the owner during the project's construction phase.

Proposal: Approvals at the ETAD phase to be considered as final.

(j) As regards height deviations in projects, usually the regional authorities are not able to issue a decision within a specific reasonable period of time

Proposal: To provide the possibility of licensing also by the central CPSE, when regional authorities are not able to come up with a solution.

(k) Need for back up fuel: No such need exists any more, placing all PPC units in cold reserve and compensating them for this service.

Proposal: To introduce a relevant legal provision.

(l) Approvals by forest authorities.

Proposal: Simplification of land designation procedures, according to the precedent of RES projects set out by law 3851/2010.

(m) Approvals for HVTLs are granted per point and not within the easement zone; as a result, any changes (e.g. in the event of technical difficulties) must be licensed.

Proposal: To amend the relevant rules.

(n) The installation permit for thermal stations is issued for a very short term. Instead of 2+2 years (as in force currently, even for RES projects with an implementation-construction time of 6 months), a minimum 4+2 years period should be foreseen for thermal projects.

Proposal: To amend the relevant rules.

04.2

Public Administration practices

A. Lack of a clear spatial planning framework for thermal power plants

Proposal: Addition to the spatial planning framework for industry of areas for the installation of thermal power plants and other energy industrial investments (e.g. LNG terminals).

B. Synergies with neighbouring industrial facilities

Proposal: To introduce appropriate legislative provisions to facilitate synergies with neighbouring industrial facilities, as the current legislation discourages them.

05

Market issues and dysfunctions

05.1

Legal issues

A. PPC holds 49% of HTSO's share capital

The initial provision under Law 2773/1999 was that this percentage would decrease proportionally to the entry of new companies in the electricity market. However by virtue of Law 3426/2005 this provision was abolished. As a result PPC remains the only HTSO shareholder other than the State (Law 3426/2005, Article 31).

Proposal: Introduction of legislative provisions which will enable the participation of independent producers (e.g. HAIPC) in the shareholding structure and the management of HTSO.

B. Many HTSO officers are still on the payroll of PPC S.A.

Proposal: Introduction of legislative provisions leading to the substantial independence of HTSO from PPC.

05.2

EPGEC issues

A. The fuel purchase invoices of power stations are not checked by HTSO or RAE

As a result the accuracy of offers from the respective plants cannot be monitored (EPGEC, Article 46 par. 3).

Proposal: From the Fifth Reference Day, producers should be obliged to submit to RAE on a quarterly basis a statutory declaration of their legal representative about the actual fuel costs of each of their plants. This declaration should be accompanied by a report, verifying the plant's actual fuel costs and other variable cost items on the basis of official records, as well as the relevant consumption curves and the opportunity cost of CO₂ emission allowances, so that the costs used in the offers are sufficiently justified (also proposed by the Hellenic Association of Independent Power Companies – HAIPC).

B. The techno-economic declaration data does not include the cost of purchase of CO₂ emission allowances

As a result, the offers from the plants do not reflect the plants' total variable cost (EPGEC, Article 44, par. 1).

Πρόταση: Table B of article 44.1 of the EPGEC to be amended so as to explicitly include the opportunity cost of CO₂ emission allowances. A corresponding provision should also be incorporated in the relevant Manual (also proposed by HAIPC).

C. Neither HTSO nor RAE check the useful capacity declared by units when participating in the DAES

Thus, lignite units systematically declare in the DAES a higher useful capacity than actually produced on the next day. As a result the ex ante SMP is lower than the ex post SMP. Consequently, after the Fifth Reference Day the (single) SMP will be calculated ex ante and will be lower than it should be (EPGEC, Article 44, par. 1).

Proposal: Any element of the injection offer or of the availability declaration which is modified after the submission deadline must be justified by the submission to HTSO and to RAE of sufficient evidence regarding the reasons for which the change was unavoidable and sudden (for example proof of a sudden unit malfunction or of fuel supply interruption). Such changes should be performed in a transparent way and for this reason they should be published (for example on the HTSO web site) with a maximum delay of one day. The development of a relevant web site on the HTSO web platform, where the relevant declarations, amendments etc. could be submitted to ensure that they are accessible in real time by all participants, would constitute evidence of transparency (also proposed by HAIPC).

D. RAE and HTSO do not check thoroughly the water resources management declarations submitted by PPC for the hydropower stations

(a) As a result of the lack of checks, more than 90% of the energy produced by the hydropower stations is offered to DAES as mandatory waters. Consequently, this quantity does not set an SMP and significantly reduces the calculated SMP (EPGEC, Article 28).

Proposals:

- (i) Primary data concerning the obligations for water supply, irrigation, overflow prevention and environment-friendly supply should be submitted by PPC to HTSO at the beginning of each week and should be published. This data should not be submitted as hourly generation schedules, as is the current practice. Instead, they should be submitted as water volumes – and should include the maximum time periods during which the Regions (or whichever other authority is responsible) impose the release of the respective quantities (e.g. 1000 cubic metres from dam X in days A, B or C). Any changes should be published as soon as PPC is informed that the situation has changed. These changes should include the revised water volumes and the maximum time periods, and be accompanied by evidence of the approval of the relevant changes
- (ii) For every hour during which hydroelectric plants are used for the generation of electricity (whether compulsorily or not), as well as for the provision of reserves, the electricity generation price for the respective hour must be at least the value of the variable cost of hydroelectric plants, as calculated by RAE based on Article 44 par. 4 of the EPGEC (both for the calculation of the SMP in DAES and for the calculation of the Marginal Price of Deviations, as specified in the EPGEC). This rule must be expressed as follows:
 - (b) The SMP after the Fifth Reference Day should be defined as the maximum between:
 1. The SMP, as calculated on the basis of the EPGEC, as in force (i.e. in accordance with the rules in force regarding the submission of offers, the planning of hydroelectric plants and the solution of DAES), and
 2. The value of the variable cost of hydroelectric plants determined by RAE (based on Article 44 par. 4 of the EPGEC).

Proposal: This rule should be applied until the best international practice for the pricing of hydroelectric plants is adopted (also proposed by HAIPC).

E. The solution of DAES is essentially the simultaneous solution of three markets

Energy market, primary reserve market and secondary reserve market. In this way, for many hours every day the SMP is not set to the minimum of 53 €/MWh (minimum administratively set offer for energy from non-mandatory waters), even though non-mandatory waters are used. This happens because non-mandatory waters are used during these hours in order for the respective hydroelectric plants to be able to provide secondary reserve services. Consequently, the SMP is calculated at lower levels (EPGEC, Article 56, par. 1, case B).

Proposals:

- (i) Separate solution of energy market and reserve markets.
- (ii) The restriction of the Technically Minimum Production, as defined in the EPGEC, to the solution of DAES should not be considered (proposal of HAIPC).

F. EPGEC, Article 59, par. 2, case B.3

When the de-synchronisation cost of a plant is taken into account in a 24-hour optimisation (such as DAES), this often helps avoid the exclusion of lignite plants (because of their high de-synchronisation cost).

Proposal: Corresponding amendment of the EPGEC.

G. EPGEC, Article 77, par. 2, case B

The high deviations observed between DAES and dispatch imply that HTSO does not minimise the expenses for energy and reserve in preparing the Distribution Schedule.

Proposal: Corresponding amendment of the EPGEC..

H. EPGEC, Article 125, par. 1

Although the primary reserve is automatically offered by all plants, HTSO pays (after the Fifth Reference Day) only the plants selected by DAES for primary reserve.

Proposal: As already noted by RAE, the creation of an ancillary services market is an immediate priority (also [proposed by HAIPC).

I. EPGEC, Article 57

Contrary to what happens with primary reserve, tertiary reserve is not included as a product in the solution of DAES and its provision is not paid for.

Proposal: As already noted by RAE, the creation of an ancillary service market is an immediate priority (proposal of HAIPC).

J. EPGEC, Article 223, par. 7

When the Installed Capacity Adequacy Factor (as defined by the EPGEC) is lower than one (1), then the value of CAC held by producers essentially decreases.

Proposal: Creation of a new mechanism to ensure power adequacy.

K. Ministerial Decision Δ5/ΗΛ/Β/Φ1/1574, Government Gazette 130/Β/2006

The price of a single CAC in the transitional power adequacy mechanism was arbitrarily set to 35,000 €/MW annually. This value has not been updated since 2006.

Proposal: Creation of a new mechanism to ensure power adequacy.

L. EPGEC, Article 275

No reference is made to the technical characteristics of the cogeneration plants.

Proposal: Amendment of the EPGEC in the context of European and national legislation for the recognition of the cogeneration technology.

M. EPGEC, Articles 284 and 285

The modification of the maintenance schedule of a plant is handled with considerable laxity and may be used to manipulate the market.

Proposal: Stricter control by HTSO in the preparation and change of maintenance schedules by producers. HTSO to publish the justification when there is a change in the maintenance schedule.

N. EPGEC, Article 212, par. 4 and Article 313, par. 5

There is no transparency in the management of HTSO's revenues from auctions. No reports are published on the management of this income.

Proposal: Control by RAE and Min. EECH of the management of these revenues. By no means should these be returned to any of the companies participating in the auctions, because that would distort competition in auctions for transmission rights.

O. EPGEC, Article 315

Exemptions and the explanatory statement accompanying them should be directly accessible by market participants (e.g. via the HTSO platform).

P. EPGEC, Article 27, par. 1

Injection offers for electricity imports may be made at zero price. In that way they have priority over offers by generation plants.

Proposal: Establishment of an administratively set minimum price other than zero for offers from imports. This price should either be linked with an index or reflect an opportunity cost. In any case the matter of the price in import offers is quite complicated, since in addition to its determination, the cost also includes the dispatching procedure to at least 2 countries.

Q. EPGEC, Articles 202, 203, 206 and 207

After the Fifth Reference Day, exports will be charged with the previously unknown cost of surcharge bills.

Proposal: Exports should remain exempt from the cost of surcharge bills after the Fifth Reference Day.

Final RAE proposals concerning the re-examination of the key regulatory measures and rules governing the operation of the wholesale electricity market.

RAE invited the participants in the wholesale electricity market in a two-stage public consultation involving the submission of proposals on the following three (3) issues:

- (1) The minimum energy offer limit to DAES;
- (2) The incentives and/or counter-incentives imposed on the participants as motivation for the submission of accurate injection offers and load declarations;
- (3) Measures regarding the management of water resources.

After completion of the public consultation and the processing of the proposals from the participating bodies, on 29/07/2010 RAE announced its final proposals, which are in line with the submitted ones. The relevant decision by the Min.EECH which will amend the EPGEC was signed on 29/09/2010.

06

Supply and distribution infrastructure issues / Separation of activities

06.1

Distribution network

A. The independent Operator of the Distribution Network as provided by the law

(articles 13-15 and 17 of Directive 2003/54/EC; article 22 (and 22a) of Law 2773/1999, as amended by article 12 of Law 3426/2005) **has not yet been established**. More specifically, according to the provisions of the national legislation HTSO should by 1.7.2007 have undertaken the functions of network operator, having been renamed "Hellenic Transmission and Distribution System Operator S.A. (HTDSO)" and having obtained a relevant permit from the competent Ministry.

B. The duties of the Distribution HTDSO Operator are still exercised by PPC S.A. (General Distribution Division).

Within the 3rd liberalisation package (in particular see Directive 2009/72/EC), the major problem regarding the completion of the "effective" (as described in the new Directive) separation of networks from the activities of generation and from supply activities is acknowledged not to have been appropriately handled by the provisions of the repealed Directive. To this end, a new regulatory framework is established. Taking into account the need to restructure the relevant undertakings, it is stressed that Member States "that decide to implement ownership unbundling should be granted additional time to apply the relevant provisions". Article 9 of the said Directive sets 3rd March 2012 as a milestone for the (actual) implementation of the relevant regulations.

C. Neither the Distribution Network Code nor the Ethics Codes

(of the Distribution Network Operator and the Transmission System Operator), which aim to ensure the independence of the Transmission System Operator, **have been adopted yet**. A draft of the Distribution Network Code (DNC) was prepared by RAE and put in public consultation in July 2008. The main reasons which have not yet allowed the separation of the Network Operator and the preparation of a DNC, as recognised by PPC and RAE, are summarised as follows:

- (a) Diffusion of responsibility among the network entities regarding the critical distribution functions. "HTDSO" does not have under its direct control the development, maintenance and everyday operation of the Network (this is the responsibility of the Owner of the Network).
- (b) Increase of bureaucracy and additional operating cost for the network entities, due to the need for the Network Operators to supervise and control the activities of the Owner, and taking also into account the provision for the conclusion of relevant contracts among them. The distribution activity has specific particularities compared with the transmission activity, as it is very dispersed geographically, a large number of people are engaged by it (7,400 employees compared with the 220 HTSO employees, something that would necessitate the transfer of a significant number of staff from the Network Owner to the Operator), and includes a great variety of individual activities and technologies. Consequently, this situation makes it practically impossible for the

Transmission Network Owner to provide sufficient information to the Transmission Network Operator, and for the latter to exercise supervision effectively. Furthermore, the duality of the model chosen was considered to introduce additional bureaucracy and complexity, as well as additional unnecessary costs, in the handling of day-to-day cases.

(c) Imbalance between the incentives provided to the Owner and to the Network Operators, as well as between the criteria on the basis of which these entities adopt decisions and operate.

D. Obstruction of the implementation of actual functional separation, of the development of a mentality befitting an independent undertaking, as well as of achieving independence from a monopolistic network activity.

Proposal: Completion by RAE and the Min.EECH of the procedure to issue the Distribution Network Code that had started in July 2008.

E. Obligation to keep separate accounts.

As regards the obligation to keep separate accounts, in accordance with the provisions of article 30 of Law 2773/1999, **RAE has approved the methodology for the preparation of separate financial statements for PPC** (RAE Decision 86/2007). The separate financial statements of PPC are published since 2007 and include separate Balance Sheets and Profit & Loss Accounts for the operation of the distribution network, which is temporarily exercised by PPC, for the operation of the interconnected network and for the operation of the network of non-interconnected islands. In reality the separation that has taken place is only virtual; as a result, cross-subsidisation phenomena remain between the generation, transmission, distribution and supply activities

F. No Network Code for Non-Interconnected Islands yet in place

RAE launched of the public consultation on the Network Code for Non-Interconnected Islands on 06/08/2010.

G. The Distribution Network Operator is the Distribution Division of PPC

The Distribution Division has not yet become functionally independent from PPC, so as to provide equal access to all interested parties.

Proposal: Functional and legal separation of the network operation from PPC.

06.2

Supply issues

A. The main problem in the supply sector are still the regulated (or implicitly regulated) tariffs of PPC, which until today continues to hold a predominant position in this sector

In addition to the established public service obligations addressing residents of Non-Interconnected Islands, on the one hand, and families with more than three children, on the other hand, various other population groups (and undertakings) pay electricity bills which do not reflect the actual electricity generation, transmission and distribution cost. These tariffs do not follow the fluctuations of electricity generation costs and, consequently, the fluctuations in the wholesale electricity market (DAES). At the European level, the control of regulated tariffs by the European Commission has initially focused on regulated tariffs for undertakings rather than on domestic tariffs.

B. Ministerial Decision Δ5/ΗΛ/ΒΦ29/23860/30.11.2007

Government Gazette 2332/B/7.12.07), which describes the method to be used by PPC for the calculation of tariffs for end users and the respective upper limits per MWh for all non-domestic customers with have medium and low voltage connections, **provides that customers connected at high voltage may negotiate their tariffs with PPC, as they can obviously also do with other suppliers.** Moreover, high voltage customers may, as every other customer, buy directly from the wholesale market, if they consider this to be beneficial for them. The wholesale market standard adopted provides for the mandatory participation of both producers and suppliers in DAEP, in what regards the physical delivery of the product. In any case, transactions having a financial content, without a commitment for physical delivery, may be concluded freely between producers and suppliers, under terms and conditions to be agreed by them. In reality the above provisions are not applied.

C. RAE has launched the public consultation process on the draft Supply Code (SC).

The SC draft does not include any provisions for the last resort or references to the quality of supply services rendered.

D. Monopolistic charges do exist

E. The PPC tariffs remain regulated and do not reflect the actual electricity generation, transmission and distribution cost

These tariffs do not follow the fluctuations of the electricity generation cost and, consequently, the fluctuations in the wholesale electricity market (DAES).

Proposal: Establishment of PPC tariffs which at least reflect cost, in all customer categories.

F. EPGEC, Article 163, par. 1, case C

The representation of a meter by a supplier using different representation percentages for every hour of the 24-hour day period is not allowed.

Proposal: Abolishment of the restriction for the representation percentage during the 24-hour day period for all customers equipped with an hourly meter with telemetering capability.

G. EPGEC, Article 223

The cost for CACs is known to suppliers only in retrospect, after the end of each Reliability Year.

Proposal: Change of the mechanism in order to ensure power adequacy.

H. EP GEC, Article 307

The method use to calculate the system use charge does not allocate the cost during the year and may lead to disproportionate charges to the supplier representing the meter in summer and/or winter peak hours.

Proposal: Change of the method used to calculate the system use charge. The new method should allocate the cost of use at least in monthly periods.

07

Issues relating to emissions allocation from Thermals

07.1

Legal issues/ Legislative framework

A. Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 (L 275/25.10.03) establishing a scheme for greenhouse gas emission allowance trading within the Community

Joint Ministerial Decision 54409/2632/2004 (Government Gazette 1931B) transposed Directive 2003/87/EC to the national law and laid down the operation of the system in Greece. According to the Joint Ministerial Decision, the Min.EECH and, in particular, the Emission Trading Office (ETO), is designated as the competent authority for the implementation of the system.

B. Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC,

so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (to be applied after 2013).

C. Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC,

establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms. This Directive was transposed to the national law by Joint Ministerial Decision 9267/468/2007 (Government Gazette 286/B).

D. Joint Ministerial Decision 54409/2632/2004 (Government Gazette 1931/B)

Greenhouse gas emission allowance trading scheme in compliance with the provisions of Directive 2003/87/EC "establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC" and other provisions.

07.2

Identification of potential distortions/problems and proposals

A. The exact method to be used for calculating emission allowances per installation in the period 2008-2012 is unclear.

In the National Allocation Plan, the Min.EECH presents a mathematical equation without clarifying the method

used to calculate the allocation of allowances by activity. It is also doubtful whether an implementation circular has been issued by the Min.EECH.

Proposal: Even if the Emission Trading System is already in effect for the period 2008-2012, it is important to point out these deficiencies to the Min.EECH and to request clarifications regarding the calculation method of emission allowances.

B. The allocation of emission allowances during the period 2008-2012 is carried out on a “first come first served” basis for new entrant installations

Moreover, the exact number of emission allowances available in the New Entrant Reserve is not known, considering that from the year 2008 and until now new installations have been introduced in the Emissions Trading System.

Proposal: Considering the competition, adequate allowances must be ensured for the new thermal plants expected to enter the system before the end of 2012.

C. The National Allocation Plan does not specify the allocation method for new entrants that will operate on a continuous basis,

whilst for new entrants in power generation the calculation of the free emission allowances is carried out using a special mathematical formula, assuming an annual operation of 5,000 hours under full load conditions and without taking account of the actual operating hours.

Proposal: Considering the absence of an implementation circular for new entrant installations, clarifications and guidelines must be provided concerning the regime governing plants operating on a continuous basis.

D. Delays in the issue of the relevant implementation circular and in the penetration of the flexible mechanisms of the Kyoto Protocol in Greece

Whilst **Directive 2004/101/EC** on the introduction of flexible mechanisms of the Kyoto Protocol (Joint Implementation Mechanism, Clean Development Mechanism) has been transposed to national law through the issue of a Joint Ministerial Decision, it is pointed out that the implementation circular regarding these mechanisms has not been issued yet.

Considering the beneficial character of these mechanisms for undertakings which are obliged to purchase allowances, **the delayed penetration of the mechanisms in Greece and the lack of relevant experience on their implementation deprives such undertakings of the possibility to acquire additional emission allowances due to the implementation of emission reduction projects.**

Proposal: Issue of the implementation circular for the relevant flexible mechanisms by the Min.EECH, and implementation of a framework for the promotion of pollution control projects and of investments for the reduction of emissions, carried out by undertakings with a view to acquiring emission allowances.

E. No national policy and strategy exists for providing incentives to installations which save primary energy and correspondingly contribute to the reduction of CO₂ emissions at the national level.

Proposal: In view of the transposition to the national law of Directive 2009/29/EC for the implementation of the emission allowance trading mechanism for the period 2013-2020, and considering the substantial expenses that undertakings will be obliged to incur for purchasing allowances, the preparation and implementation of national actions and strategies aimed at providing incentives to power generation installations and activities emerges as important. These actions and strategies will bring about significant reductions in pollutant emissions, as well as substantial primary energy savings (incentivation).

Impact of 3rd legislative package on the liberalisation of the electricity market

08.1

Legal issues/Legislative framework

A. Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC

B. Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning the common rules for the internal gas market in natural gas and repealing Directive 2003/55/EC.

C. Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators..

D. Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13th July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003.

E. Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005

08.2

Regulatory issues

A. Separation of Transmission System

First solution: Full ownership unbundling

- Owner and System operator are not allowed to control directly or indirectly undertakings of generation and/or supply (or be controlled by them).
- Simultaneous participation in the operator and in a generation and/or supply company is allowed provided there is no issue of control.
- The solution of ownership unbundling is established so as not to allow natural or legal persons to exercise control on producers or suppliers and at the same time participate in the share capital of a transmission system company and vice versa: the controller of the system company is not allowed to participate in the capital of a producer or supplier.

Alternative solution: Independent System Operator (ISO) model

- The choice of the Independent operator provides for the possibility of the vertically integrated company to maintain ownership of the system, without however controlling its operation.

- The new operation company (ISO) – certified subject to strict conditions and **subject** to constant supervision - makes independent commercial and investment decisions.
- The independent operator is fully and exclusively competent for the operation of the system, in technical and commercial terms, as well as competent to decide for investments in the system, on the basis of a 10-year investment plan to be approved by the regulator.

Third solution: Independent Transmission Operator (ITO) model

- Ownership of the fixed assets of transmission, as well as competence to operate the system, is transferred to a new company (ITO), which remains part of the corporate scheme of the parent company.
- The new company ought to meet strict criteria of independence and autonomy, particularly as regards its fixed assets, staff and financial functioning. .

B. Strengthening of National Regulatory Authorities

Strengthening of the independence and of the powers of the national regulatory authorities, including functions at the regional/community level..

Specifically, Member States should strictly ensure administrative independence, independence of decision making and the financial independence of independent Authorities. The term of office of their members is set to five to seven years, with the option to be renewed once. It is explicitly provided that the Authorities should enjoy independence not only with respect to market participants but also with respect to governments.

C. Retail market and Consumer Protection

Framework of provisions on Consumer Protection / Emphasis on the organisation and operation of the retail market so as to achieve:

- Provision of improved services
- Real possibility to exercise the right to the choice of supplier

The new rules on public services and consumer protection are included in the amended article 3 as well as in Annex I to every Directive. The objective targets, the duties and the powers of the regulatory authorities concerning the protection of consumers, the organisation of the retail markets and the control of their operation are specified in articles 36 [General Objectives of the Regulatory Authorities, and in particular subparagraphs (a), (d), (f), (g) and (h)] and 37 [Duties and Powers of the Regulatory Authorities, and also in subparagraphs 1.(a), (b), (h) to (q), and paragraphs 6, 7, 8, 10, 11] of Directive 2009/72 (Electricity) and, respectively, in articles 40 and 41 of Directive 2009/73 (Natural Gas). Finally, article 41 of Directive 2009/72 (Electricity) and, respectively, article 45 of Directive 2009/73 (Natural Gas) specify the rules that should govern the contractual relationships of operators with users and of suppliers with their customers.

National borders as regards the choice of supplier are abolished. A customer is therefore allowed to choose its supplier irrespective of the Member State in which the supplier is licensed/registered (article 3 par. 4 of Directive 2009/72 [Electricity] and, respectively, article 3 par. 5 of Directive 2009/73 [Natural Gas]). This provision also contributes to the consolidation of the markets in the EU.

The new rules ensure that the change of supplier is made through a short and simple procedure at no cost to the customer (article 3 par. 5 Directive 2009/72 [Electricity] and, respectively, article 3 par. 6 of Directive 2009/73 [Natural Gas]).

08.3

Transposition deadlines

- 3 March 2011: For the majority of the provisions
- March 2012 : Implementation of Ownership Unbundling
- 3 March 2013 : Provisions on the conditions for activity of non-EU legal persons in the EU energy market

Measures under the MoU that concern the Energy sector (Business Environment)

Κατηγορία	Υποκατηγορία	Περιγραφή μέτρου	Περίοδος
Business Environment	Energy	Completion of the Presidential Decree on the liberation of the wholesale electricity market.	September 2010
Business Environment	Energy	Abolishment of regulated electricity tariffs for all consumers other than households and small enterprises. Implementation of a mechanism to ensure that the electricity tariffs gradually reflect the wholesale market prices, with the exception of vulnerable consumer groups.	June 2011 June 2013
Business Environment	Energy	Adoption of liberalisation legislation and separation of electricity and natural gas activities, including implementation measures	March 2011
Business Environment	Energy	Implementation of a plan to open lignite-based energy generation to third parties. Submission of the plan for approval.	March 2011 December 2010
Business Environment	Energy	Adoption of measures to ensure full independence of electricity transmission system operators (HTSO) and natural gas transmission system operators (HGTSO). Ensuring the creation of an independent operator for the electricity distribution system.	March 2012
Business Environment	Energy	Management of water energy reserves (HE Projects) by an independent organisation or the HTSO.	March 2011
Business Environment	Energy	Adoption of measures to strengthen the independence and the powers of the Regulatory Authority for Energy. Adoption of measures to promote transparent criteria and procedures for selection of the President and members of RAE.	March 2011

10

Definitions - Abbreviations

- CAC (Capacity Availability Certificates - "ΑΔΙ")
- CoS (Council of State - "ΣτΕ")
- CPSE (Council for Land Planning, Settlement and the Environment - "ΣΧΟΠ")
- CRES (Centre for Renewable Energy Sources and Saving - "ΚΑΠΕ")
- DAES (Day-Ahead Energy Schedule - "ΗΕΠ")
- DAET: Decision for approval of environmental terms
- DEPA (Public Gas Corporation S.A. - "ΔΕΠΑ")
- DESFA (Hellenic Gas Transmission System Operator S.A. - "ΔΕΣΦΑ")
- DTPP (Directorate of Transmission Planning and Performance - "ΔΣΑΜ")
- EIA (Environmental Impact Assessment - "ΜΠΕ")
- E/P (Electric Power - "Η/Ε")
- EPD (Environment and Land Planning Department - "ΔΙΠΕΧΩ")
- EPGEC (Electric Power Grid and Exchange Code - "ΚΔΣΣΗΕ")
- FIFTH REFERENCE DAY: The date on which all provisions under the EGPEC come into effect (23 September 2010)
- HAIPC (Hellenic Association of Independent Power Companies - "ΕΣΑΗ")
- HE (Hydroelectric - "Υ/Η")
- HP (Hydroelectric Power - "Υ/Ε")
- HTDSO (Hellenic Transmission and Distribution System Operator S.A - "ΔΕΣΔΗΕ")
- HTSO (Hellenic Transmission System Operator S.A. - "ΔΕΣΜΗΕ")
- HV (High Voltage - "ΥΤ")
- HVTL (High Voltage Transmission Lines - "ΓΜΥΤ")
- LAO (Local Administration Organisation - "ΟΤΑ")
- Min.EECH (Ministry of the Environment, Energy and Climate Change - "ΥΠΕΚΑ")
- MV (Medium Voltage - "ΜΤ")

- NG (Natural Gas - "Φ/A")
- PPC (Public Power Corporation S.A. - "ΔΕΗ")
- PV (Photovoltaic - "Φ/B")
- RAE (Regulatory Authority for Energy - "ΡΑΕ")
- RES (Renewable Energy Sources - "ΑΠΕ"; comprise Wind Farms and Photovoltaic power, small Hydropower, Solar Thermal Power, Biomass and Geothermal plants)
- SMP (System Marginal Price - "ΟΤΣ")
- TCG (Technical Chamber of Greece - "ΤΕΕ")
- 3rd PACKAGE: The third legislative package on the liberalisation of the energy market and the creation of the internal energy market in the European Union.
- TMPD (Transmission Materials and Purchasing Department - "ΔΥΠΜ")
- TNPD (Transmission New Projects Department - "ΔΝΕΜ")
- TSD (Transmission System Department - "ΔΣΜ")

HOLDINGS 
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