

«Κοστολογικός έλεγχος / συγκριτική αξιολόγηση του κόστους της Δημόσιας Επιχείρησης Ηλεκτρισμού (ΔΕΗ Α.Ε.) και των θυγατρικών της σε Σύστημα και Δίκτυο (ΑΔΜΗΕ Α.Ε. & ΔΕΔΔΗΕ Α.Ε.). Προτάσεις στρατηγικής και ρυθμιστικών μέτρων για την επίτευξη του υφιστάμενου περιθωρίου βελτίωσης του κόστους αυτού.

Συναφής οδικός χάρτης / χρονοδιάγραμμα»

(«Cost benchmarking of the Public Power Corporation (PPC S.A.) and its network subsidiaries (ADMIE S.A. & DEDDIE S.A.). Strategic recommendations on their cost improvement potential and roadmap»)

* * * * *

1. Introduction

The Regulatory Authority for Energy ("RAE") invites applications for the provision of consultancy services in relation to :

- a) Conducting a baseline study of the cost structure of the Public Power Corporation ("PPC") and its network subsidiaries (ADMIE S.A. & DEDDIE S.A.), including mining, generation, transmission, distribution and supply .
- b) Benchmarking of the above cost structure and performance against international power utilities.
- c) Identifying and recommending forward looking strategic measures on how to improve the cost base of PPC, ultimately with a positive impact on the end-customers, and providing a high level roadmap for the application of the recommended measures.
- d) Providing to RAE the framework developed for the cost baseline analysis and benchmarking, so that RAE could use it to monitor the cost structure development of PPC and other major players, and to assess their performance going forward.

All a), b), c) and d) above are hereinafter referred to as the "Project".

1.1. Background

RAE is an independent administrative authority that monitors compliance between Greek and EU energy regulation and acts as an advisor to the Ministry of Environment, Energy and Climate Change in areas related to energy policy. RAE is also responsible for supervising the proper functioning of the energy market and ensuring fair competition, as well as monitoring the security of energy supply.

In the context of the ongoing market liberalization and its market supervising responsibilities, RAE is seeking to use the support of an international management consulting firm, in order to analyse the cost structure of PPC and its network subsidiaries, benchmark it against international power utilities and identify areas of strategic improvements going forward.

PPC is the leading power utility in the Greek market and holds significant market shares across the value chain:

- In generation, PPC had a 75% market share in 2011. Generation is currently the most liberalised part of the domestic electricity market. Independent Power

Producers (IPPs) have developed thermal (mostly CCGT) capacity of c. 2.7GW and RES capacity of c. 2GW.

- In supply, PPC has currently almost 99% of the market. The market share of PPC had dropped close to 90% in 2011, but its two main competitors filed for bankruptcy in 2012, bringing the market share of PPC back to 99%.
- In transmission and distribution, PPC holds a dominant position under the close supervision of the relevant regulatory bodies.

Given PPC's importance to the Greek power system, the Project shall be a key element to enhance efficient monitoring of the Greek power market. In particular, it is expected that the Project will support RAE in:

- Mapping the existing PPC cost structure in key parts of the value chain.
- Benchmarking this cost structure and performance against international competition.
- Estimating the gap to second and first quartile of cost performance across the value chain, based on the above international benchmarking analysis.
- Identifying key levers of improvement that could lead to higher efficiency of a) PPC and b) the power market overall.
- Increasing the efficiency of the Greek power market towards the level of the most efficient European markets.
- Recommending and agreeing on cost improvement initiatives with PPC and monitoring the relevant progress.
- Monitoring the development of competition based on the real cost structure of the Greek market, so as neither to allow windfall profits for market participants, nor to threaten their long term viability.
- Ensuring the optimal exploitation of the lignite and hydro reserves of the country.
- Setting up the grounds for conducting regular cost benchmarking studies of major participants in the power market, in line with international practices. Indicatively, OFGEM in the United Kingdom conducts and publishes an annual cost benchmarking study, covering the major market participants. Other EU regulators have already taken a similar approach to better supervise and monitor the power market.
- Ensuring that the electricity prices paid by the consumers reflect the cost structure of an efficient power market.
- Transforming the power sector into a catalyst for the improvement of the competitiveness of the whole Greek economy.

2. Project objectives and scope

The Project will have three major objectives/deliverables:

a) Analysis of the cost baseline of PPC and its work subsidiaries

The selected Applicant must perform an analysis of the cost baseline of PPC across the value chain. The analysis shall result into accurate estimates of the cost baseline of each part of the value chain, which will be used to benchmark PPC's performance against

international competition. The analysis shall also identify the key value levers and set the basis for specific improvement initiatives/measures.

Indicatively the analysis is expected to include:

Mining Costs

- Operating and maintenance (taking into account geological characteristics of each mine)
- Transport
- Storage/ inventory management
- Outsourced services
- Support functions dedicated to mining segment
- Investment costs - efficiency of capital deployment (time, costs) via examples

Generation costs:

- Operating and maintenance by type of generation asset (e.g. lignite, hydro, etc.)
- Procurement (parts, services)
- Scheduled and unscheduled outage
- Outsourced services
- Inventory management
- Support functions dedicated to generation segment
- Investment costs

Transmission costs:

- Operating and maintenance
- Procurement of parts and services
- Outsourced services
- CAPEX spend for maintenance and to secure system sustainability and low failure rates
- Support functions dedicated to transmission

Distribution costs:

- Operating and maintenance
- Procurement of parts and services
- Outsourced services
- CAPEX spend for maintenance and to secure system sustainability and low failure rates
- Support functions dedicated to distribution
- Meter data management

Supply costs:

- Post sales & operation services
 - Billing
 - Payments (receivables management, collections, judicial dunning)

- Customer contact management (face-to-face, mail, phone, online)

RAE will ensure reasonable access of the successful Applicant to the company (PPC S.A. & subsidiaries) and data, necessary for pursuing, in an efficient and effective manner, the objectives of the Project, in accordance with RAE's own jurisdictions and powers, as stipulated by Law 4001/2011, articles The said access will, of course, be subject to the confidentiality agreement, to be signed between the successful Applicant and RAE.

b) Benchmarking against internal best practices and competitors

Based on the above analysis of the cost baseline of PPC, the selected Applicant shall perform a high-level benchmarking across the value chain, against internal best practices and international peers. The internal benchmarking shall be performed against the best performing areas within PPC and the external one against a selected group of peers for each part of the value chain. The analysis shall focus on a selected and narrow set of specific key performance metrics and shall form the basis for informed strategic recommendations.

Indicatively, the analysis is expected to include:

Mining

- Internal benchmarking of performance of the mining fields of PPC, to identify performance differences among the fields. The analysis shall take into account the geological characteristics of each field.
- Benchmarking against international players with comparable mining activity

Indicatively, performance metrics could include extraction cost/tn of lignite, FTEs/tn of lignite extracted for each field, scheduled and forced unavailability for each field

Generation:

- Internal benchmarking of performance among similar generating assets of PPC, to identify differences in performance across the company's generation portfolio
- Benchmarking against international players with a comparable asset portfolio to PPC

Indicatively, performance metrics could include total production cost/MWh, FTEs/operating hour per unit, FTEs/MWhs per unit, asset utilization (generated volumes/value of fixed assets), OPEX/generated volume, OPEX/installed capacity, power plant scheduled and forced un-availability

Transmission:

- Benchmarking of performance with selected European TSOs

Indicatively, performance metrics could include average total cost per network length (€/km), average total cost per consumption (€/GWh), average total cost per peak load (€/MW), average network loss cost per network length (€/km), average depreciation per network length (€/KM)

Distribution:

- Benchmarking of performance with selected European DSOs

Indicatively, performance metrics could include average total cost per network length (€/km), average network loss cost per network length (€/km), average depreciation per network length (€/km)

Supply:

- Benchmarking of performance with selected European electricity suppliers

Indicatively, performance metrics could include total cost to serve per customer, billing cost per customer, payment collection cost per customer, overhead & other costs per customer. Benchmarking shall also include some key practices, e.g. payment methods (e.g. direct debit)

c) Recommendations on the way forward

The selected Applicant shall provide strategic recommendations on the way forward, based on the cost baseline and the benchmarking analysis.

Leveraging on his experience in strategy consulting and power utility projects, the selected Applicant will:

- Identify the key areas of improvement for PPC and propose specific improvement initiatives/measures for the company. The successful Applicant shall leverage on his international and local experience, to propose initiatives derived from international best practices and adjusted to the Greek context
- Quantify the expected economic impact of each initiative
- Provide a strategic roadmap for the implementation of the improvement initiatives. The strategic roadmap shall constitute a basis for a potential transformation program of PPC. It will indicatively include:
 - Prioritisation of initiatives based on economic impact, required investments and qualitative parameters
 - High level action plan for the implementation of each initiative
 - High level assignment of responsibilities to the involved stakeholders
 - Well defined timeframe
- Identify the key areas of regulatory intervention that could support the process of efficiency improvement of both PPC and the rest of the Greek power market participants
- Provide a high level view of the economic impact of the proposed regulatory interventions

d) Framework to assess future performance

The successful Applicant will need to share with RAE the framework developed to conduct the cost baseline study and the benchmarking, which RAE will use going forward to:

- Monitor the cost structure development of PPC and other players
- Assess the overall performance of PPC and other players
- Assess the effectiveness of the measures taken to improve efficiency

RAE firmly believes that the results of the Project, as described above, will lead to a more accurate and updated, quantitative determination of the cost improvement potential of PPC's entire productive chain, as well as to its optimal realisation path, and, in doing so, it will ensure that the final consumer pays only the absolutely necessary (minimum) electricity costs, and will also improve the viability and competitiveness of the country's energy sector, and its national economy in general.