

IT Audit Report

Subject of the audit:

Tarif Proposal 2024-2027 Elia for Belgium

Organization: Elia

Audit Period: July 2023 - August 30, 2023

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Executive Summary:

The audit assessed the IT structure and initiatives of ELIA and found that they align with the organization's objectives and needs. The rationale behind the Elia programs is solid.

However, the scale of the organization and its projects present significant challenges for objective assessment without a more detailed review, especially regarding metrics and amounts related to workload of employees or workforce.

Due to time constraints, a detailed examination was not feasible. Therefore, the audit is concentrated on the use personnel (Opex) and Programs Data Centricity and Elia Digital Platform.

It was observed that employees are hired for their specialized skills. There is a lack of information about whether these experts are fully engaged with tasks specific to their expertise. Due to this observation, we requested justification.

The workloads are based on estimates that could not be objectively justified. We expected task description or job description as one could find in the approval process of IT projects. (For example, the (PID) project initiation document of the Prince2 project methodology.)

A sector comparison report indicates a significant deviation from other TSOs in number of IT resources and utilization of IT resources. In a comparable program as the Elia Digital Platform program in another industry the staffing was lower and different. This reinforces our concern that the staffing budget may be overestimated.

Although not the primary focus of this audit due to the limited timeframe we verified a sample set the Elia Digital Platform budgets for services and goods. It was revealed that the listed prices are in line with current market prices, confirming this aspect of this sub-budget to be accurately and reasonably priced.

Given the major developments in the electricity market and the IT sector a four-year budget must deal with a lot of uncertainty and requires large safety margins.

In conclusion: Based on the findings, the significant size of the budgets, the potential for optimization and savings and the uncertainty in market and IT sector we recommend revising the tariff proposal so that it covers a shorter timeframe (2 years) and provides detailed substantiated budgets. **In its current form, we cannot confirm that the tariff proposal is acceptable.**

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Scope of Audit:

The audit's scope is to validate the tariff proposal presented by Elia for 2024 to 2027. The audit aims to assess, for CREG, whether the proposed IT activities, investments, hirings and costs are realistic and aligned with a typical IT organization in the Transmission System Operator (TSO) industry and are appropriate for an organization of Elia's size. This involves examining the organization's structure and the investments made in various programs and projects.

The evaluation of whether the services created or supported by the IT investments are justified and beneficial to the Belgian consumer falls outside the scope of this analysis.

How we conduct the audit:

The audit was conducted using a methodical approach involving a combination of document analysis and meetings (9) with Elia. The process included the following steps:

1. Document Analysis: A partial version of the 'Proposition Tarifaire 2024-2027' was received and reviewed.
2. Meetings (9) with Elia: Several meetings were held with Elia to understand their business context and challenges. During these meetings, Elia explained the GRID, its assets, the IT systems, and the relation between IT programs, projects, and the business.
3. Examination of the provided information.

4. Feedback Session: A feedback session was conducted to discuss the results of the audit with Elia. This session provided an opportunity for both parties to discuss the findings, clarify any misunderstandings, and address any concerns.
5. Examination of predefined set of budget allocations and personnel hirings.
6. Report Handover: Finally, a comprehensive audit report was prepared and handed over to CREG.

This approach ensured a thorough understanding of Elia's business context, challenges, and IT programs and projects. It also provided an opportunity for open communication and feedback between the auditors and the audited party before the final report was prepared.

During the audit's initiation, it became clear that the audit scope was much more extensive than anticipated. This was addressed in discussions with Creg and Elia, and it was agreed to alter our methodology by conducting random samples to assess the quality and accuracy of the Tariff Proposal. We have limited our scope to:

- The use or hiring of own personnel (Opex)
- Programs Data Centricity Program and Elia Digital Platform and the related departments. Both programs represent the most significant financial component of the dossier.

This limitation means that there may be other unidentified issues outside of the sampled areas.

The Tarif Proposal nor the provided information provided detailed justifications for the proposed personnel workloads. It also lacked bottom-up budget justifications based on activity descriptions. We expected task descriptions or job descriptions as one could find in the approval process of IT projects. (For example, the PID document of the Prince2 project methodology). The workloads and budgets we found were based on estimates that could not objectively be justified.

Upon presenting the preliminary audit report, it became increasingly evident that we had not received sufficient detailed information to justify and approve the tariff proposal. During this meeting, it was agreed to examine a predefined set of budget allocations and personnel hirings from the Elia Digital Platform. This set was determined by the auditors, and Elia was given the option to choose a subset for which they would need to provide detailed, verifiable activities and job justifications.

Findings:

1. Organization: The IT organization, including its initiatives, programs, and projects, is appropriately structured and aligned to meet the specific needs and objectives of Elia, thus making it fit for purpose. This ensures that the IT organization is equipped and organized to fulfill Elia's mission and operational requirements.
2. Programs Data Centricity Program and Elia Digital Platform. In both cases, the rationale behind the programs is solid. The objectives, requirements, business services, planned acquisitions or system to be built are good choices. But in both cases, we did not receive a justification for the proposed personnel workloads and bottom-up budget justifications. As mentioned before, a detailed project work breakdown such as in a project initiation document that states the activities, in detail, would have provided us with the insights to verify the costs and the budgets.
3. On the Elia Digital Platform. Elia Digital Platform is a program that provides Cloud IT infrastructure, cloud services, moving applications to the cloud, and providing support services for building cloud applications.

The introduction of a hybrid cloud platform is essential to effectively manage the IT systems and services required for the near-future operations of the Transmission System Operator (TSO) business, and to agilely respond to the uncertainties and dynamism of the electricity market.

The scale of the proposed budget appears remarkably extensive when compared to similar projects in other industries. For instance, in one comparable scenario, 2 entire data centers and 500+ applications were transferred to the cloud in less than a year with 2 dedicated cloud teams. The dedicated cloud teams worked together with the application owning/development teams to move or rebuild their applications to the cloud. We acknowledge that the disparity can be attributed to:

- The need to support a more intricate and varied array of applications and their associated requirements, with a particular emphasis on security and criticality.
- The development of a private cloud infrastructure and the implementation of hybrid cloud virtualization.

But for us it does not completely explain the scale of the effort and the budget.

In the discussion on the justification of the budgeted amount and the lack of details, we agreed that Elia would provide more details on an indicated part of the Elia Digital Platform program and on several hirings. For the [sample](#), we have indicated:

- 6 amounts in Capex of which Elia, at its discretion, must justify 3, as indicated above.
- 6 profiles (Opex) that are being recruited, of which Elia, at its discretion, must justify the workload for 3 as a full-time workload.

The result presented by Elia was a budget exercise ([excel-sheet](#)) that was used to determine the budget. This document did not present the justification with the requested level of detail for the personnel costs. It was explained that Elia never developed plans at a level of detail that we requested. The figures provided were based on un-verifiable estimates.

Our findings on Elia Digital Platform:

- a. Alignment with Elia's Needs: The Elia Digital Platform program is designed to provide Cloud IT infrastructure, cloud services, application migration to the cloud, and support services for building cloud applications. The program's objectives and scope align with Elia's operational needs
- b. Lack of Detailed Justifications: The data received regarding budget amounts and personnel recruitment did not include detailed justifications for the proposed expenditures or the full-time positions to be recruited. Proper justification is essential for a thorough assessment from both a project and personnel recruitment perspective. The absence of detailed justifications hinders the ability to assess the appropriateness and necessity of the proposed budget and personnel.
- c. Reliance on Estimates: Elia did not provide plans with the level of detail requested for the audit. Instead, the figures provided were based on estimates. This reliance on estimates, rather than detailed planning, raises concerns about the thoroughness of the planning process and the accuracy of the proposed budget and personnel requirements.
- d. Cost for services and goods: The budget exercise provided contained information about the services and goods for the program. We have verified a set of the budgets and found that prices were conform the

market prices. We can conclude that this aspect of the budget is correct.

Conclusion on Elia Digital Platform: While the objectives and scope of the Elia Digital Platform program are aligned with Elia's operational needs, there are significant concerns regarding the staffing requirements, absence of detailed justifications for the proposed budget and personnel, and the reliance on estimates rather than detailed planning. These issues raise questions about the program's efficiency, organization, and the detail of planning that needs to be resolved before it can be approved.

4. Cross-training or Upskilling: We noted that employees are recruited based on their specialized skills in individual competencies. However, in the proposal, there was no mention of any activities or budgets allocated for staff training, particularly for development teams. Investing in cross-training or upskilling initiatives for staff is advantageous. The trend towards agile, self-sufficient teams necessitates comprehensive knowledge and competence in all required tools. Providing multidisciplinary training can lead to cost savings by:

- a. Reducing the number of specialized personnel and associated hiring costs.
- b. Minimizing the reliance on employees with unique competencies.
- c. Streamlining communication. Accelerating development time.
- d. Enhancing the quality of solutions.

For instance, a training program on the knowledge and use of cloud services and tools for the entire IT staff, coupled with a certification step, can significantly lower costs in cross-support, communication, and solution quality. Although Elia showed us an intranet web-based training program it did not include training on the use of cloud services.

5. Scope of the Tariff Proposal. TSO's are confronted with uncertainty on multiple fronts. Firstly, the electricity market is undergoing significant transitional phases. Secondly, the IT landscape is evolving at a rapid pace with developments such as Artificial Intelligence (AI) and Cloud Computing, necessitating continuous reassessment and reorganization of working methods, as well as service and solution improvements. These two major uncertainties, when combined, exacerbate their respective impacts. Projecting a four-year outlook is riddled with ambiguities, necessitating considerable safety buffers in plans and budgets. Adopting a shorter timeframe (we suggest 2 years) for budgeting or a Tariff proposal could help avoiding unnecessary budgetary safety margins.

6. Sector comparison. ([APQC](#) – *Aggregate Benchmarking Report – August 2023. APQC is the world's foremost authority in benchmarking, best practices, process and performance improvement, and knowledge management.*) The sector comparison with the benchmark report shows a significant deviation compared to other TSOs. The number of IT staff is (CONFIDENTIAL) times the number compared to the Median, and the IT cost is (CONFIDENTIAL) times the amount compared with the Median. Elia's IT department already seems to be significantly better staffed than the other TSOs covered by this benchmarking, underlining the need for a detailed examination of the staffing levels.

Metric Name	25 th Percentile	Median	75 th Percentile	Sample size	Metric Category	ELIA (*)
NAICS Code 22112 – Electric Power Transmission, Control and Distribution						
Number of FTEs that perform IT processes per \$1 billion revenue	39,29	86,36	108,19	47	Process Efficiency	[CONFIDENTIAL]
Percentage of total IT cost, excluding depreciation/amortization allocated to growth/transformation of the business.	20,00%	26,00%	35,00%	47	Supplemental Information	[CONFIDENTIAL]
Percentage of total IT cost, excluding depreciation/amortization allocated to operating/maintaining the business.	65,00%	74,00%	80,00%	47	Supplemental Information	[CONFIDENTIAL]
Total IT cost, excluding depreciation/amortization, per \$1,000 revenue	€ 14,72	€ 19,55	€ 37,46	41	Cost Effectiveness	[CONFIDENTIAL]
Total IT cost, excluding depreciation/amortization, per IT function FTE	€ 204.835,29	€ 408.226,91	€ 613.333,33	40	Cost Effectiveness	[CONFIDENTIAL]
Total IT cost, excluding depreciation/amortization, as a percentage of the revenue	1,60%	2,13%	4,07%	41	Cost Effectiveness	[CONFIDENTIAL]

(*) Elia provided data (actuals 2023)	Data
Turnover	[CONFIDENTIAL]
IT FTE's	[CONFIDENTIAL]
IT Cost	[CONFIDENTIAL]
Program Cost	[CONFIDENTIAL]

Documentation

Doc Nr	Document	Type
1	Proposition Tarifaire 2024-2027 - 20230510 pour Cronos expurgé.docx	Document
2	Bespoke Question for Elia	Individual questions.
3	Q24 - annexe II tableau 1 à 6 vf.xlsx	Document – Elia answer in CREG question
4	Q25 - EPM - tableau 122 CAPEX VF.xlsx	Document – Elia answer in CREG question
5	Q25 - EPM - tableau OPEX vf.xlsx	Document – Elia answer in CREG question
6	Q80.2. EDP additionnels et place dans l'organigramme.xlsx	Document – Elia answer in CREG question
7	Q80.3. Organigramme 2022-2027.xlsx	Document – Elia answer in CREG question
8	Annexe III HRboekje - 20230510 pour Cronos.xlsx	Document
9	Q24 - annexe II tableau 1 à 6 vf.xlsx	Document – Elia answer in CREG question
10	20221208 - PT24-27 - Workshop GRID and ASSETS.pdf	Elia presentation
11	20221220 - PT24-27 - Workshop SYSTEM and IT.pdf	Elia presentation
12	CREG IT audit - EDP interview-20230828 110346-Meeting Recording.mp4	Meeting recording
13	Elia corporate presentation 2022 FINAL UK.pptx	Elia presentation
14	Kyndryl - Elia report.pptx	Elia presentation
15	General Introduction - CREG Audit-20230719 083533-Meeting Recording.mp4	Meeting recording
16	Presentation GRID - Audit CREG-20230719 100933-Meeting Recording.mp4	Meeting recording
17	Q67 - info additionnelle.docx	Document – Elia answer in CREG question
18	Presentation System - Audit CREG-20230720 100051-Meeting Recording.mp4	Meeting recording
19	Answer session-20230822 160233-Opname van vergadering.mp4	Meeting recording
20	CREG - ELIA study - Status 28 7 23.pptx	Bespoke presentation – status meeting

21	CREG - ELIA study - Status 3 8 2023.pptx	Bespoke presentation – status meeting
22	CREG - ELIA study - Status 25 8 20231.pptx	Bespoke presentation – status meeting
23	CREG - ELIA study - Status 11 8 20231.pptx	Bespoke presentation – status meeting
24	Status Meeting Audit ELIA-20230728_130256-Meeting Recording.mp4	Meeting recording
25	Status Meeting Audit ELIA-20230803_160213-Meeting Recording.mp4	Meeting recording
26	Status Meeting Audit ELIA-20230811_130244-Opname van vergadering.mp4	Meeting recording
27	Status Meeting Elia - Creg - Cronos-20230825_130233-Opname van vergadering.mp4	Meeting recording
28	20230930 Answer CREG Questions vs.xlsx	Budget calculation sheet
29	EDP cost calculation model.eml	Email
30	EDP&Profiles_selection.pptx	
31	IT OPEX Cost 2022 VF.xlsx	