ZYRA E RREGULLATORIT PËR ENERGJI
ENERGY REGULATORY OFFICE
REGULATORNI URED ZA ENERGIJU

Consultation Paper

The Seventh Electricity Tariff Review

ETR7 (2013-2017)

Initial Assessment of KEK's Cost Submissions

DISCLAIMER

This Consultation Paper has been prepared by ERO for the purpose of receiving eventual comments from stakeholders. It does not represent a decision by the ERO.

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1 Introduction

In a letter dated 8 June 2012 ERO announced the commencement of Electricity Tariff Review 7 (ETR7) which, for the first time, will enable the setting of licensee maximum allowable revenues over multi year periods. Those maximum allowable revenues must, by law, be adequate to cover the reasonable operating and capital costs of performing the licensed activities. In order to determine adequacy of revenues, ERO must therefore carefully assess the licensees' forecast costs and satisfy itself that their proposals are reasonable and appropriate. It should be noted that, by law, the licensees are obliged to provide all the data that ERO requires for this analysis. In June ERO therefore consulted on its proposed reporting formats, which were designed to be used as the basis for data collection for the review. Following that consultation, the licensees were given some eight weeks to complete the reporting formats. The licensees were asked to present their submissions to ERO and the public on 3rd September. Neither company provided complete returns. Since that date, ERO has had several working level meetings with both licensees in order to clarify the data submitted. ERO has reviewed KEK's data submissions with the support of two international engineering firms. Initial findings of ERO's assessments are summarised below. More detailed information on the assessments is contained in Appendices A to D of this document.

2 General Comments

The data requests that form the basis of this MYT review contain a large amount of detail about past and proposed future expenditure. ERO understands that company inexperience of the requirements may have contributed to difficulty in delivering complete and justified data. However, despite active interchanges between ERO and the company during the analysis period, significant questions remain unanswered. These principally relate to:

- A lack of justification for proposed costs;
- Possible inconsistencies with other sources of information; and
- Provision of supporting information and narratives to back up cost forecasts

There is a risk that, without proper supporting evidence, ERO will conclude that some cost elements are unjustified and exclude them from the MYT calculations. It is important that the company recognise this danger and use its best efforts to clarify and justify all information requested by ERO or its consultants.

ERO also notes that there is a poor correlation between allowed costs under earlier ETRs and those costs quoted in the submissions for ETR7. In its own analysis ERO has found that this may in part be due to a mis-match in reporting year cycles but this does not explain the magnitude of the differences observed. Such potential inconsistencies contribute to difficulty in using historic operating cost data as an aid to projecting potential future costs and it is important that licensees

should use best endeavours that information provided to ERO for different purposes and at different times is always on a consistent basis, or that any valid differences are properly explained.

3 Assessment KEK'S Generation and Mining Costs

The principal findings from the initial review of KEK's Mining and Generation operating expenditure (opex) forecast are as follows.

- KEK has not provided sufficient information to allow a calculation of depreciation. Nevertheless, KEK did provide its own calculated values for depreciation which ERO believes to be based on accounting asset lives. For the purpose of ERO's calculations it is necessary to have an insight into the approach and data KEK used in its calculation, and consequently KEK's proposal for depreciation requires further investigation. This issue was raised with KEK on September 11, but no satisfactory response has been received to date.
- In terms of environmental project for Kosovo B, an explanation for the €110 million investment to meet the LCP Directive needs to be given.
- The proposed types of operational investment suggested by KEK appear reasonable. Nevertheless without detailed information regarding technical characteristics of planned investments it is difficult to judge whether cost estimates are justified.

3.1 Mining Opex

Initial staff costs are projected at €7000 to €8000 per employee. As with other business areas, KEK has forecast a 5% per annum increase in salary costs but has not provided any evidence in support of this view.

Electricity and Other Utilities costs are mostly driven by fuel costs and to a lesser extent by water costs. KEK should provide further breakdown of component costs in this category to allow for a proper evaluation of its forecasts.

Maintenance and Material Costs need further clarification: they have been varying considerably over the years but KEK has not explained why.

3.2 Generation Opex

The quantities of coal reported by KEK are in line with expected quantitites of coal needed to generate the planned quantity of electricity. However there is a significant difference between production of coal and use of coal for generation (generation uses roughly 5 million tons of coal while the mines claim they sell roughly 7.8 million tons to generation). This requires further clarification and explanation by KEK.

In terms of fuel oil (heavy and light) used in Kosovo A and B, quantities reported are generally in line with the explanations ERO received regarding the operations of the power plants. However further clarification is needed about the technical efficiency levels of Kosovo A to support this analysis.

3.3 Mining Capex

KEK's submission contains insufficient information about the nature of and justification for its proposed capital investments. Without this it may be difficult for ERO to allow costs of unsupported schemes.

3.4 Generation Capex

Capex costs for Kosovo A and B can be roughly divided into two types: investments to keep the plants in operation (overhauls) and investments related to environmental protection. The proposed types of operational investment suggested by KEK appear reasonable. Nevertheless without detailed information regarding technical characteristics of planned investments it is difficult to judge whether cost estimates are justified.

In terms of environmental project for Kosovo B, an explanation for the €110 million investment to meet the LCP Directive needs to be given. To evaluate this item further, KEK should provide information regarding its current emissions and detail of the planned investments should be provided.

The KEK submission says that none of the current and forecast capital projects is funded by grants. KEK should explain how it expects to finance these projects. To date, ERO is not aware that the company has secured any commercial financing for capital projects. ERO needs t obe satisfied that KEK has an appropriate and realisable strategy in place for financing its projected investments. In addition to providing more information about projected capex, KEK should indicate the status of investments planned for 2012 so that these can be understood in the context of forecast capex.

4 Assessment of KEK'S DSO CAPEX Submission

The principal findings from the initial review carried out by ERO into KEK's DSO capital expenditure forecast are as follows.

4.1 KEK's DSO CAPEX Proposals

- The total CAPEX budget for the period 2013-2017 is € 114.3 million
- The proposed total annual CAPEX is between € 22.3 million and € 23.4 million per year.

- The total load-related investment is € 46.3 million, including € 6.2 million carried forward from 2011 and 2012 projects
- The total non-load-related investment is € 44.8 million
- The total non-operational investment is € 23.2 million
- The submission is consistent with the proposed investment in the 2013-2017 Network Development Plan (NDP)

4.2 KEK Unit Costs

KEK unit costs are for a single size or rating – in practice a number of sizes and ratings are in use. ERO compared KEK's proposed unit costs with those from distribution companies that procure on the international market and have similar local labour costs for installation and commissioning. This analysis indcates that KEK overhead line units costs appear 20% to 30% higher than for comparator companies, as does the 10 kV switchgear cost. 400 V cable unit costs appear 50% higher than comparators.

KEK should be able to provide historic cost information from the last two years demonstrating an average installed cost for assets to support their views. Without such additional justification it may be difficult for ERO to accept the proposed unit cost levels.

4.3 LRE and NLRE modelling

ERO carried out load-related expenditure (LRE) and non-load related expenditure (NLRE) modelling based on KEK customer numbers, demand forecast, unit costs, asset age profiles and asset lives. ERO's NLRE model identifies total CAPEX requirement for period 2013-2017 (based on KEK unit costs and a conservative assessment of asset lives) at over € 140 million compared with around € 45 million in the submission.

The LRE model identifies total CAPEX requirement for period 2013-2017 (based on KEK unit costs) at over € 140 million compared with around € 46 million in KEK's submission.

In the light of this, KEK's CAPEX proposals seem low given their customer numbers, demand forecast, unit costs, asset age profiles and asset lives. However they are consistent with expenditure over the last 5 years and this may indicate a resource/capital constrained forecast. We would expect KEK to have a long term plan to address age and condition issues that it faces as it is apparent that this 5 year plan does not appear to take account of replacement or reinforcement requirements that would move KEK towards international good practice in terms of network condition or performance.

5 KEK's DSO Opex Submission

KEK has provided very limited information to support its claimed levels of operating costs in the forecast period. Without further supporting explanation and justification, it may be difficult for ERO to accept forecast increases in operating cost levels.

In particular, in the light of constant staffing levels, there is no supporting evidence for KEK's claimed 5% per annum increase in salary costs.

KEK has provided a forecast of Repairs and Maintenance volumes. However, in the absence of unit cost information, it is difficult to justify KEK's proposal for a 4% per annum increase in these costs.

6 KEK's PES Submission

The average cost to service customers in 2012 is broadly in line with benchmark analysis conducted by ERO. However the increase in costs to serve customers in future years is predominantly driven by a 5% increase in average salaries per annum. As KEK have not forecast an increase in staff from 2012 onwards and they have not provided any justification for above inflation pay rises, ERO will make its own judgement on the appropriate allowed levels.

Operating and maintenance and other costs per customer would not be expected to increase without reasoned justification. Unless KEK provides such supporting evidence, ERO will make its own judgement on the appropriate allowed levels.

7 Next Steps

KEK is now invited to comment on ERO's initial assessment of its data submissions and to provide substantiation and justification in support of that submission. Where no such justification is received, ERO will need to take its own view on appropriate levels for certain costs. If the company fails to do provide justification, costs that may be entirely appropriate may be excluded from consideration to the detriment of the its financial position.

KEK's response is sought no later than close of business on 9th November 2012.

Following receipt of KEK's responses to this paper, ERO will prepare its Provisional Evaluation of the MARs for the separate licensed businesses, which it aims to send to the company by the end of December 2012. At that time it will make available to KEK the revenue model that has been developed to support the calculation of MARs in line with the Pricing Rules.

Appendix A

KEK Mining and Generation Submission

1 Introduction

This appendix outlines ERO's initial assessment of the submission made by KEK in the multiyear tariff questionnaire on 31 August 2012 and subsequent clarification meetings and additional documentation provided by KEK.

2 KEK 2013-2017 submission for Mining

2.1 Mining Opex

2.1.1 Staff Costs

Initial staff costs are projected at €7000 to €8000 per employee. As with other business areas, KEK has forecast a 5% per annum increase in salary costs but has not provided any evidence in support of this view.

2.1.2 Electricity and Other Utilities Costs

These costs are mostly driven by fuel costs and to a lesser extent by water costs. KEK should provide further breakdown of component costs in this category to allow for a proper evaluation of its forecasts.

2.1.3 Maintenance and Material Costs

These costs need further clarification: they have been varying considerably over the years but KEK has not explained why.

KEK has not provided sufficient information to allow a calculation of depreciation. Nevertheless, KEK did provide its own calculated values for depreciation which we believe to be based on accounting asset lives. For the purpose of ERO's calculations it is necessary to have an insight into the approach and data KEK used in its calculation, and consequently KEK's proposal for depreciation requires further investigation. This issue was raised with KEK on September 11, but no response has been received to date.

2.2 Mining Capex

KEK's submission contains insufficient information about the nature of and justification for its proposed capital investments. Without this it may be difficult for ERO to allow costs of unsupported schemes.

3 KEK 2013-2017 submission for Generation

3.1 Cost of Fuel

In terms of fuel oil (heavy and light) used in Kosovo A and B, quantities reported are generally in line with the explanations we received regarding the operations of the power plants. However further clarification is needed about the technical efficiency levels of Kosovo A to support this analysis.

3.2 Operation and Maintenance Costs

3.2.1 Staff costs

Initial gross salaries per employee appear to be in line with expected values. However, without further justification it may be difficult to accept KEK's projected increase in salary levels over the forecast period.

3.2.2 Utilities costs

This item consists of electricity purchases (only for 2008 and 2009), fuel costs, water costs and transmission of electricity costs. In all cases, KEK has provided insufficient explanation of the nature of these costs. In particular, KEK should explain the nature and extent of gas and water requirements and clarify apparent inconsistencies between the costs for both plants.

3.3 Generation Capex

Capex costs for Kosovo A and B can be roughly divided into two types: investments to keep the plants in operations (overhauls) and investments related to environmental projection. The proposed types of operational investment suggested by KEK appear reasonable. Nevertheless without detailed information regarding technical characteristics of planned investments it is difficult to jduge whether cost estimates are justified.

In addition to regular maintenance and overhaul costs, a major source of capex relates to environmental projection in the case of Kosovo A:

- Electrostatic Precipitator Unit A4
- Environmental upgrade to meet the LCP Directive

The validity of these schemes and their associated costs will depend on wider decisions about investment in new capacity, as these will impact on the future operation and existence of Kosovo A. In the event that Kosovo A is decommissioned, KEK should provide its strategy to cover the related costs.

In terms of environmental project for Kosovo B, an explanation for the €110 million investment to meet the LCP Directive needs to be given. To evaluate this item further, KEK should provide

information regarding its current emissions and detail of the planned investments should be provided.

In addition to providing more information about projected capex, KEK should indicate the status of investments planned for 2012 so that these can be understood in the context of forecast capex.

Appendix B

KEK DSO Capex Submission

1 Introduction

This appendix outlines ERO's initial assessment of the submission made by KEK in the multiyear tariff questionnaire on 31 August 2012 and subsequent clarification meetings and additional documentation provided by KEK up to 13 October 2012.

2 Methodology

Bottom up and top down assessments were used to assess capital expenditure requirements.

For the bottom up assessment ERO:

- Reviewed the submission against the network development provided by KEK for the period to assess whether the submission was accurately derived from the licensee's investment planning process and targeted at the areas identified by the licensee as priority areas.
- Reviewed the forecast expenditure against historic expenditure. KEK did not provide historic capital expenditure, so ERO derived a figure from the asset age information.
- Reviewed the unit costs used by KEK in the development of the capital expenditure forecast to make sure that they were reasonable.
- Determined the forecast capital expenditure with revised unit costs where KEK's unit costs were higher than expected.

The bottom up capital expenditure forecast derived above was compared against a top-down model. This modelling has two parts:

Non-Load Replacement modelling of expenditure (NLRE) which assesses replacement requirements derived from an age-based replacement forecast using KEK's asset age information and applying a Poisson distribution on standard asset life for each asset type. As KEK did not provide its estimated asset lives, ERO used figures from Ofgem.

Load-Related Expenditure (LRE) modelling identifies likely asset increases needed to meet the forecast growth projected by the licensee. The modelled expenditure is likely to be highter than that expected for Kosovo as it is based on a network that is running within normal operating parameters, whereas from information presented on loading and voltage drop it is clear that the KEK distribution system is considerably overloaded.

Initial Assessment of KEK's Cost Submissions

From this bottom up unit cost adjusted forecast and the top down modelled expenditure ERO have formed an initial view on the reasonableness of the forecast provided by KEK DSO.

3 KEK 2013-2017 CAPEX submission

The KEK DSO capital expenditure forecast data contained considerable information but the projects were not classified into the main drivers of Load Related, Non-Load Related, Non Operational or Quality of Supply. ERO would expect an efficient business to be able to identify the main project drivers and include schemes under appropriate headings. ERO classified the projects through interpretation of the project titles and the description of the works in the Network Development Plan.

Good asset information is key to modelling replacement requirements but the asset tables presented in the submission had very limited information on LV assets and in the evaluation ERO had to assume the volume and age of most of the low voltage assets based on standard ratios to other known assets and customer numbers. Also it is essential that assets presented in the asset age profile do not include old assets that have been removed from the system. It is not clear how robust KEK's procedures are for ensuring that this is the case.

KEK did not provide an historic expenditure profile and ERO have used the asset age profile and unit cost information to derive modelled historic capital expenditure at current prices. This does not include any non operational expenditure and may include assets that were transferred to KEK as part of customer connections.

The KEK CAPEX submission (DS6 worksheet) included costs streams over the period 2013-2017in 2012 prices. To aid assessment ERO grouped these into classifications of:

- Load related expenditure
- Non-load related expenditure
- Non-operational expenditure.

The total CAPEX in the three categories amounts to € 114.3 million, spread evenly over the five years of the MYT (i.e. between € 22 and € 23 million per year).

3.1 Load-related expenditure

Load related expenditure is expenditure on new assets to meet increased load on the network arising from new connections or underlying growth in electricity usage from existing customers. The forecast expenditure over the period 2013-2017 amounts to € 46.3 million, which includes € 6.2 million on projects carried over from 2012 including the completion of three 35/10 kV substations. The other € 40.1 million works cover:

- Provision of additional capacity at 35/10 kV substations
- Removing "bottlenecks" of overloaded lines, cables and transformers at 35 kV, 10 kV and LV. Increasing the capacity of these "bottlenecks" or bypassing them with new circuits allows the full capacity of existing assets to be utilised.

3.2 Non-load related expenditure

Non-load related expenditure is primarily aimed at replacing aged assets. Over the period 2013-2017 this amounts to amounts to € 44.8 million which covers:

- Network reinforcement (i.e. replacement of 10 kV and LV lines and 10/0.4 kV transformers) – although network reinforcement is usually a load related expenditure, the works under this heading are identified as predominantly rebuild.
- Replacement of overhead lines that are a safety risk

3.3 Non-operational expenditure

The non-operational expenditure over the period 2013-2017 amounts to € 23.2 million which covers:

- Programme of annual metering enhancements
- Implementation of Distribution Management System (DMS) and substation automation at 35kV level
- Other minor items, including a new Dispatch Centre

3.4 Assessment against the Network Development plan

The CAPEX presented in DS6 worksheet is consistent with the budget presented in Table 12 of the Network Development Plan (2013-2017 NDP) which is presented below as Table 1. The 2013-17 NDP presented detailed costs for:

i) Capital projects started from 2011 carried over into 2013 (€ 5.6 m)
ii) Removal/replacement of overhead lines that are a safety issue (€ 16.8 m)
iii) Upgrading the overloaded distribution 35 kV and 10 kV lines (€ 17.8 m)
iv) Upgrading the overloaded 10/0.4 kV substations (€ 7.8 m)
v) Upgrading overloaded 0.4 kV lines (€ 7.9 m)

The cost items for ii) to v) above that were presented in detail in Appendix B of the 2013-17 NDP were summated for each year and the annual budgets were consistent with the figures quoted in the

KEK CAPEX submission (DS6) for items 13 to 16 in Table 1. A sixth cost stream presented in the 2013-17 NDP for the re-laying of 35 kV and 10 kV cables in cable channels with manholes for access (total estimated cost of €10.8 million) has purposely been omitted by KEK from the proposed CAPEX budget as KEK said it was not a priority.

An additional cost stream targeting the 10 worst feeder circuits in each of the seven Kosovo districts to address issues such as overloads, safety, maintenance and reliability is undertaken under the Annual Network Reinforcement Programme. The 2013-14 Programme is estimated to cost €10.4 million.

3.5 Comparison with Historic Capex

KEK did not provide historic capex in its submission. ERO have modelled historic expenditure based on its view of unit costs and the KEK Asset age profile, with assumptions to substitute for missing data. This indicated a total estimated expenditure for the five years to 2011 was €117m with an average annual investment of €23.4m, broadly in line with KEK's forecast for 2013-2017.

3.6 KEK unit costs

KEK presented unit costs used in the Network Development Plan as being based on recent contract prices. ERO compared these against the costs reported by other utilities in developing countries that purchase on international markets and have reasonably low cost local labour. The information provided by KEK for an individual item (e.g. 35 kV cable) was based on a single type and size, although the detailed costs of individual projects shows a whole range of types and sizes in use with different costs. ERO's modelling is based on average costs. This could be subject to further review if KEK is able to provide evidence of recent costs and a suitable weighting for their asset sizes

If ERO unit costs were to be used instead of KEK's, the overall capex forecast would be reduced by 4-5%.

The modelling uses the customer number increases as the main driver for forecasting additional asset requirements. This assumes that all customers forecast are new to the network. KEK indicated that some of the historic customer growth was due to "normalising" existing supplies ie (installing a meter) it is not clear if some of the forecast customers also include an element of "normalising". The model also assumes that the existing system is operating at a steady state in terms of network loading.

4 Findings

The capital expenditure request submitted is derived from the Network Development Plan and it appears that the projects are based on the requirements of the network and the priorities of KEK. On this basis it may be reasonable to accept the scope of KEK's proposed capex programme, recognizing that the network has historically operated at lower than required standards and that this situation may continue for some time to come. The CAPEX budget that KEK has proposed in the submission and the other costs identified in the Network Development Plan (but not included in the submission) do not correspond to the level of costs that ERO would expect from modeling NLRE and LRE based on experience from mature networks elsewhere. This may indicate that KEK's capital expenditure forecast submitted is resource-constrained, or that it reflects a continuation of expenditure limitations in recent years which has not kept pace with performance requirements.

Assessment of the unit costs indicates that some unit costs are higher than expected. Using ERO's view of the unit costs would give a 4-5% reduction of total expenditure compared with KEK's forecast.

Some unanswered questions remain on unit costs and KEK should provide additional information to substantiate its proposals.

Appendix C

KEK DSO OPEX Assessment

1 Introduction

This document outlines ERO's assessment of the submission made by KEK in the multiyear tariff questionnaire on 31 August 2012 and subsequent clarification meetings and additional documentation provided by KEK. Specifically, this document relates to the KEK DSO operating costs (opex)

The KEK Source Data was provided in Excel spreadsheet titled *"Formularet Raportues 2013-2017 14 09 2012.xls.*

Within this spreadsheet, the cost data within the worksheets *"DS1 Opex (DSOa) KEK"* and "DS3 Other (DSO) KEK" were used in the analysis.

The main categories of KEK DSO operating expenditure are:

- Salary Costs (including pension and other salary related payments to staff)
- Maintenance & Repair costs (including materials supplied)
- Other operating expenditure (transport services and other expenses, but excluding cost items relating to Insurance, Licence Fees and Depreciation that are usually passed through at cost.

2 Methodology

A technique commonly used to assess a company's operating costs is to benchmark these costs against those of similar companies elsewhere. In the absence of cost data for companies in the region, ERO used information for companies in the Middle East for comparison purposes.

This analysis showed a wide spread of costs for activities within the comparator companies, even after normalising costs to account for differences in network topology, customer density etc. This made it difficult to draw conclusions about the reasonableness or otherwise of KEK's operating costs from benchmarking.

As a result of the limitations of the benchmarking analysis it was considered more appropriate to carry out a detailed assessment of the KEK opex levels over the period of 2008 to 2017. This analysis compares historic versus forecast costs and allows a judgement to be made on the reasonableness, or otherwise, of any cost movements in the future.

3 Analysis of KEK DSO Operating costs

Operating costs have been provided by KEK for the period 2008 to 2017. It has been assumed that the 2008 to 2011 costs are in nominal terms (actual costs) whilst the costs from 2012 to 2017 have been assumed as being in real terms (2012 prices). For the purposes of analysing these costs, the 2008 - 2011 costs have been adjusted by CPI to 2012 prices.

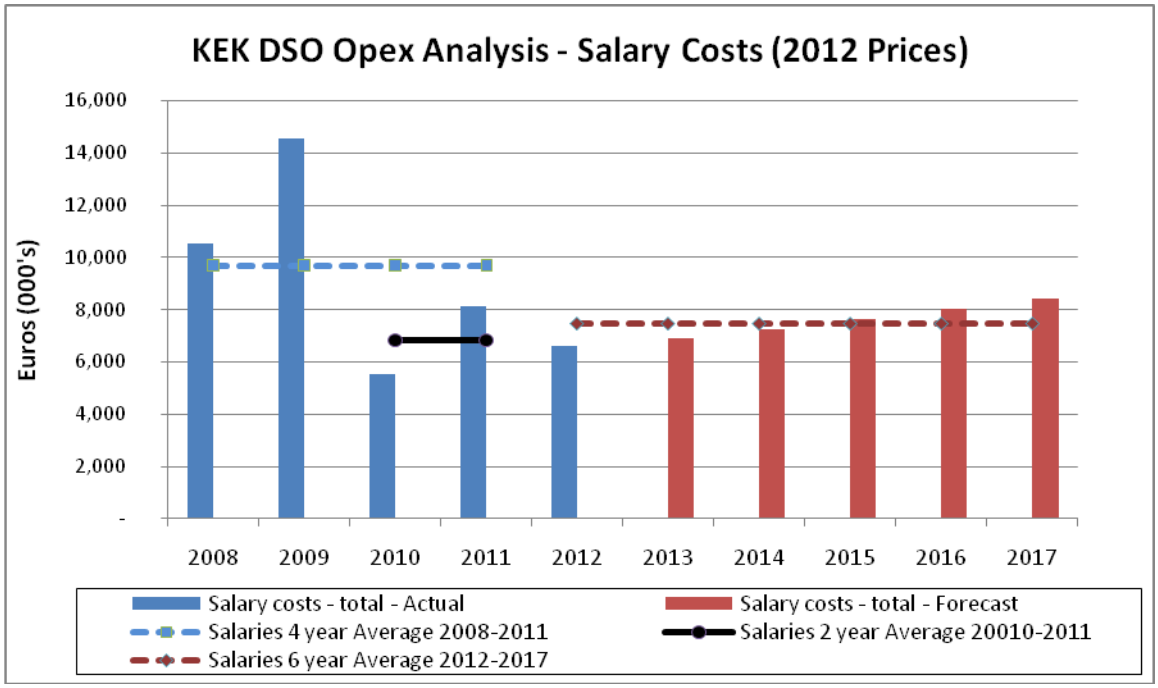
Table 1 below provides analysis of actual and forecast expenditure against each of the main cost categories.

Table 1 – KEK Salary Costs (2012 Prices) - €'000

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Staff Costs										
Salaries (net)	8,756	12,366	4,552	6,822						
Pension contribution and taxes	1,661	2,037	795	1,199	6,595	6,925	7,271	7,635	8,017	8,417
Other	131	159	206	90						
Salary costs - total - Actual	10,549	14,562	5,554	8,111	6,595					
Salary costs - total - Forecast						6,925	7,271	7,635	8,017	8,417
Maintenance										
Repairs Service	1,625	2,314	1,677	-						
Maintenance Service	275	41	56	1,906	4,905	5,101	5,305	5,517	5,738	5,968
Materials and Supplies	2,545	3,133	4,253	6,280						
O & M Costs - Actual	4,444	5,487	5,985	8,185	4,905					
O & M Costs - Forecast						5,101	5,305	5,517	5,738	5,968
Other Operating Expense										
Transport Services	395	441	304	194		201	210	217	224	228
Other Expenses	1,064	2,567	- 166	1,094	1,420	1,497	1,560	1,612	1,666	1,694
Other Costs - Actual	1,459	3,007	138	1,289	1,420					
Other Costs - Forecast						1,698	1,770	1,829	1,891	1,922
Internal Expense										
Cost of Coal from Mining	-	-	-	-						
Cost of Electricity and Distribution Services	-	-	-	-						
Total costs - Actual	24,282	31,451	20,129	23,704	20,332					
Total costs - Forecast						22,321	23,831	25,363	26,778	28,253

Each of the main cost categories (salaries, maintenance and other costs) are analysed in further detail below -the profile of Salary costs is included in Figure 1 below.

Figure 1 KEK Salary Costs – 2012 Prices

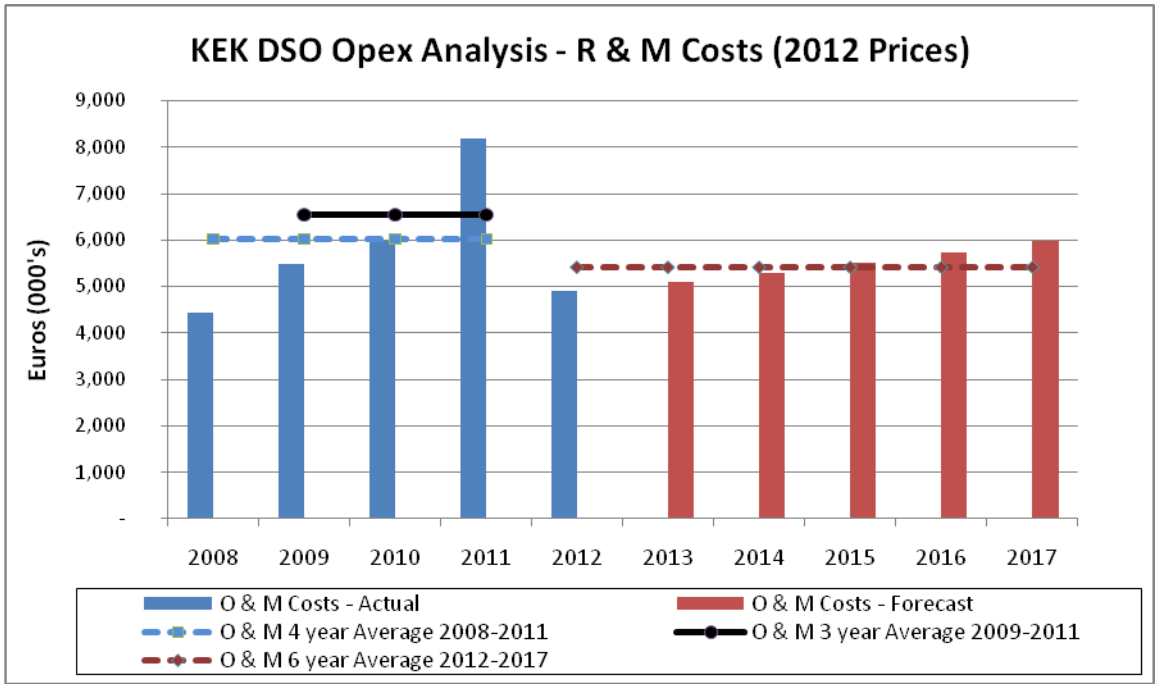


The pattern of salary levels has been affected by two factors. In 2009 salaries appear high as a result of supply business staff being included in the distribution staff number, giving an abnormally high cost. The second factor is the transfer of 110kV assets and associated staff from KEK to KOSTT on 1st April 2012. Salary costs over the period of 2013 – 2017 are forecast to increase from €7.4 million compared with €6.8 million for the most recent years, 2010 and 2011. This represents an increase in real terms of 9.4%. This increase is predominantly due to the forecast from 2012 being increased at 5% per year above inflation.

KEK has not provided any justification for the 5% above inflation salary increases, particularly as staff numbers are steady from 2012. As a result, maintaining the 2012 level of salary costs in real terms would seem appropriate unless KEK can provide substantive reasons for increases above inflation.

Figure 2 below presents a profile of KEK operating costs for Repairs and Maintenance Activity

Figure 2 KEK Maintenance Costs – 2012 Prices



The forecast shows a 4% year on year increase from the allowed expenditure for 2012.

It has proved difficult to understand the nature and extent of KEK's R&M activities as information has only been provided on the basis of KEK's financial accounts, rather than activity based costs from KEK's engineering departments. We would expect an efficient company to have much fuller and more disaggregated information on R&M activities in order to manage its resources and plan effectively for the future. It is therefore particularly disappointing that KEK has only provided limited detail of the costs of its activities. Nevertheless, some analysis of R&M has been possible using the data submitted by KEK. This indicates that 2012 costs are an appropriate base for assessing future costs. In addition, ERO have analysised trends in R&M volumes to determine the likely effective operating costs. The results are shown in Table 2 below.

The unit cost for each of these R&M activities is not available from the present KEK accounting systems and further information is required from KEK on the costs and activities that are incurred on each of these tasks to allow further quantative analysis of the allowance. As presented they do not support an increase of 4% per year. However it is clear that some additional R&M costs are required. For example KEK identify additional tree cutting programmes however as this is a predominantly labour cost it is not clear what costs would be incurred in R&M. It is therefore proposed to allow the 2012 expenditure through the 5 year period unless KEK can produce explanations of the anticipated non salary costs for each of the identified tasks.

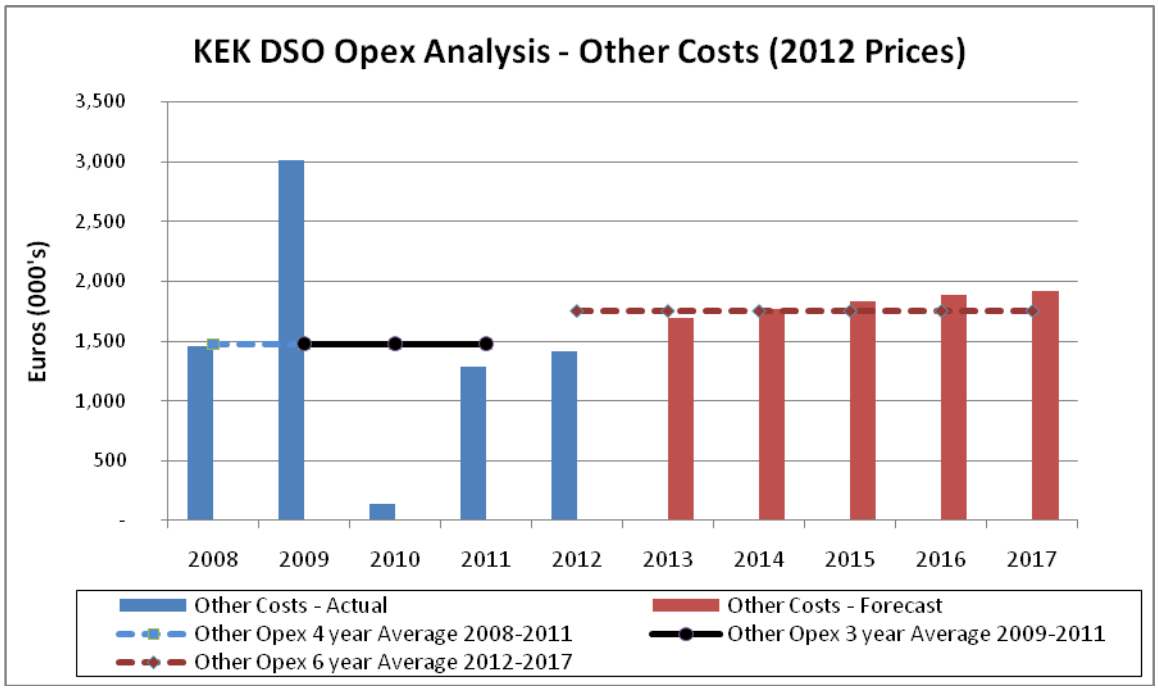
Table 2 – KEK Distribution R & M activities – comparison of actual v forecast volumes

Maintenance Activity	2008-2012 Average	2013-2017 Average	Variance Analysis	Response Provided by KEK
Replacement of switch-breaker-breaker power 35kV	5.6	5.2	-7.1%	KEK's practice has been to capitalize each cubicle (position) in a substation. In the event that a single component is repaired or replaced, the cost is charged to maintenance.
Replacement of switch-breaker power 10kV	39.2	41.0	4.6%	
Replacement of switch-breaker power 0.4 kV	74.4	73.4	-1.3%	
Repair of switch-breaker power 35 kV	5.2	5.6	7.7%	See response above. The 7.7% increase is because the 35kV circuit breakers are of high importance because their failure will leave considerable number of customers without electricity.
Repair of switch-breaker power 10 kV	23.2	11.2	-51.7%	
Protection check in TS 35/10 kV	117.8	93.2	-20.9%	
Replacement of seperators 10 kV	11.2	10.0	-10.7%	
Replacement of Isolators 35 kV (piece)	44.0	21.8	-50.5%	
Replacement of Isolators 10kV (piece)	2930.2	3120.0	6.5%	The existing insulators are aged and need periodic replacement
Replacement of Isolators 0.4 kV (piece)	7083.4	7260.0	2.5%	
Construction of cable connection 10 kV (piece)	553.4	636.0	14.9%	This activity is not capital project related. This activity is associated with repairs/replacement of the damaged/failed underground cables. Usually it is part of the O&M budget. The existing cable splices are old and require repair. Does this justify a 15% increase in activity?
Construction of cable connection 4 kV (piece)	130.4	129.4	-0.8%	
Construction of cable heads 35 kV (piece)	12.2	6.6	-45.9%	
Construction of cable heads 10 kV (piece)	146.2	182.8	25.0%	This activity is not capital project related. This activity is associated with repairs/replacement of the damaged/failed underground cables. Usually it is part of the O&M budget. Most of the underground cables are not equipped with proper cable heads and repairs are needed to prevent sudden failures. Is the failure rate increasing to suggest a 25% increase is realistic?
Replacement of poles 12m for 10 kV (piece)	1463.2	1830.0	25.1%	Some existing 12m poles are aged and in poor condition. KEK's practice has been to charge the cost of replacing just a few poles on a line to maintenance.
Replacement of poles 9m (piece)	3461.2	2832.0	-18.2%	
Cleaning of track for LP 35kV and 10 kV (km)	136.4	184.0	34.9%	This activity is to cut/remove trees and vegetation from the overhead lines in order to ensure the public safety and prevent line defects and short circuits. The above increase is because KEK is trying to reduce unforeseen outages.
Cleaning of track for LP 0.04 kV (km)	170.9	252.8	47.9%	This activity is to cut/remove trees and vegetables from the overhead lines in order to ensure the public safety and prevent line defects and short circuits. The above increase is because up to now activities were more focused in cleaning the track of the MV overhead lines. The future activities will focus more in LV network.
Replacement of conductors AlFe in LP 10 kV (kg)	13316.6	12500.0	-6.1%	
Replacement of conductors AlFe in LP 0.4kV (kg)	18100.8	18360.0	1.4%	
Replacement of cables 10 kV (m)	16850.8	16180.0	-4.0%	
Replacement of cable 0.4 kV (m)	41135.0	34060.0	-17.2%	
Oil check in TS 10/0.4 kV	690.0	128.0	-81.4%	
Protection check in TS 10/0.4 kV	335.2	344.0	2.6%	
Replacement of surge switch-breaker 10 kV (piece)	126.2	151.2	19.8%	This activity is related to surge arrestors installed in 10/0.4kV transformer stations. The existing surge arresters installed at SS 10/0.4kV are aged and failing.

There is a wide and presently unexplained variance for many of the activities, but there is no conclusive support for KEK's proposed increase of 4% per year in overall R&M costs. Unless KEK chooses to provide further evidence in support of this claim, ERO may conclude that present (2012) levels of R&M costs remain appropriate for the forecast period.

Figure 3 below presents a profile of KEK operating costs relating to the "Other" category of expenditure.

Figure 3 KEK Operating costs – "Other" costs



KEK forecast operating costs over the period 2012 to 2017 are 19% higher than in the 4 year period 2008 to 2011. This is a significant increase in costs and KEK would need to provide further justification. Without further explanation it would be difficult for ERO to accept such a large increase.

Appendix D

KEK PES OPEX Assessment

1 Introduction

This Appendix outlines ERO's assessment of the submission made by KEK in the multiyear tariff questionnaire on 31 August 2012 and subsequent clarification meetings and additional documentation provided by KEK. Specifically, this document relates to the KEK PES operating costs (opex)

The KEK Source Data was provided in Excel spreadsheet titled *"Formularet Raportues 2013-2017 14 09 2012.xls.*

Within this spreadsheet, the cost data within the worksheet *"PS2a Other PES KEK"* was used in the analysis.

The main categories of KEK DSO operating expenditure are:

- Salary Costs (including pension and other salary related payments to staff)
- Maintenance & Repair costs (including materials supplied)
- Other operating expenditure (transport services and other expenses).

The present cost analysis excludes items relating to Insurance, Licence Fees and Depreciation in addition to electricity purchases, transmission, electricity exchange, fuel, gas and water costs that are usually passed through at cost.

2 Methodology

A technique commonly used to assess a company's operating costs is to benchmark these costs against those of similar companies elsewhere using a normalising factor based on company specific drivers on costs (i.e. customer numbers in the case of supply businesses).

To carry out a benchmarking exercise accurately, good reliable and comparable data is required. Data from neighbouring Supply companies in the Eastern European/ Balkan area is not readily available and therefore benchmarking data has been used for UK electricity supply companies. The benchmarking exercise was undertaken with reference to UK electricity supply company costs in when these companies had been recently privatised and therefore not subject to cost distortions from the introduction of retail competition.

For the purposes of the benchmarking exercise, it is more appropriate to use actual opex data rather than forecast data and therefore benchmarking analysis has been carried out using KEK data for 2010.

The UK benchmark data has been inflated to 2010 prices using the UK Retail Price Index.

Our analysis identifies a spread of benchmarked costs per customer and compares these benchmarks with KEK PES costs per customer.

In addition to providing commentary on the benchmarking analysis, this report also provides comments on the movement in KEK DSO opex over the period of 2012 to 2017.

3 Analysis of KEK PES Operating costs

Operating costs have been provided by KEK for the period 2008 to 2017. For the purposes of analysing these costs, the 2008 - 2011 costs have been adjusted by CPI to 2012 prices.

Table 1 below provides analysis of actual and forecast expenditure against each of the main cost categories.

Table 2 – KEK PES Costs (2012 Prices) - €'000

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Staff Costs										
Salaries (net)	1,913	432	9,505	8,529	7,935	8,332	8,749	9,186	9,645	10,128
Pension contribution and taxes	342	76	1,586	1,476						
Other	6	6	147	9						
Salary costs - total - Actual	2,260	513	11,238	10,014	7,935					
Salary costs - total - Forecast						8,332	8,749	9,186	9,645	10,128
Maintenance										
Repairs Service	26	166	90	-	-	-	-	-	-	-
Maintenance Service	38	6	25	298	282	296	309	319	330	335
Materials and Supplies	108	208	553	575	310	326	339	351	363	369
O&M costs - total - Actual	172	380	667	873	592					
O&M costs - total - Forecast						622	648	670	692	704
Other Operating Expense										
Transport Services	75	69	176	110						
HQ allocation from 2012 to 2017	*HQ allocation included above in audited financial statements*				1,871	1,800	1,915	2,032	1,988	2,027
Other Expenses	189	682	3,556	1,470	1,640	1,723	1,796	1,856	1,918	1,950
Other costs - total - Actual	264	751	3,732	1,580	3,511					
Other costs - total - Forecast						3,523	3,711	3,888	3,905	3,977
Internal Expense										
Cost of Coal from Mining	-	-	-	-						
Cost of Electricity and Distribution Services	116,341	148,292	122,693	131,243						
Total costs - Actual	119,037	149,935	138,331	143,711	12,039					
Total costs - Forecast						12,477	13,108	13,744	14,243	14,808

Note the above table excludes: Insurance, Licence Fees and Depreciation that are usually passed through at cost, in addition to electricity purchases, transmission, electricity exchange, fuel, gas and water costs.

The benchmarking data available from UK Supply companies shows that the KEK PES 2012 cost base is in line with projected costs of a supply company with a customer base of 450,000 after appropriate adjustments for average salary costs and Purchasing Power Parity (PPP) between UK and Kosovo.

Variations of each of the main cost category forecasts (salaries, maintenance and other costs) are analysed in further detail in the table below.

Table 2 – KEK PES Costs per customer and employee (2012 Prices) - €'000

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Staff Numbers	155	75	1,310	1,684	1,272	1,272	1,272	1,272	1,272	1,272
Customer numbers (000's)	383	401	422	442	449	462	476	491	505	520
Salary cost per employee (€'000)	14.58	6.84	8.58	5.95	6.24	6.55	6.88	7.22	7.58	7.96
					% Change	5.0%	5.0%	5.0%	5.0%	5.0%
Costs per customer (€'000)										
Salary Costs	5.90	1.28	26.61	22.67	17.68	18.02	18.37	18.73	19.09	19.46
					% Change	1.9%	1.9%	1.9%	1.9%	1.9%
O&M Costs	0.45	0.95	1.58	1.98	1.32	1.35	1.36	1.37	1.37	1.35
					% Change	2.0%	1.2%	0.3%	0.3%	-1.3%
Other operating expenses	0.69	1.87	8.83	3.58	7.82	7.62	7.79	7.93	7.73	7.64
					% Change	-2.6%	2.3%	1.7%	-2.5%	-1.1%
Salary+O&M+Other	7.04	4.10	37.02	28.22	26.82	26.98	27.52	28.02	28.19	28.45
					% Change	0.6%	2.0%	1.8%	0.6%	0.9%

Between 2012 and 2013 staff numbers remain constant while customer numbers increase by 3%.

Operating costs between 2012 and 2013 change as follows:

- Salary costs increase by 5.0% per employee and 1.9% per customer
- O&M costs increase by 2.0% per customer
- Other operating expenses decrease by 2.6% per customer

Total costs (Salaries plus O&M plus Other) increase by 0.6% per customer.

Between 2012 and 2017 staff numbers remain constant and customer numbers increase by 16%.

Operating costs between 2012 and 2017 change as follows:

- Salary costs increase by 27.6% per employee and 10% per customer
- O&M costs increase by 2.5% per customer
- Other operating expenses decrease by 2.3% per customer

Total costs (Salary+O&M+Other) increase by 6.1% per customer

The increase in average costs per customer is principally driven by the annual salary increases of 5% per annum per employee. As for other parts of KEK's business, it is difficult to support this rate of increase without further justification from the company.