



**ADJUSTMENT METHODOLOGY OF ALLOWED
REVENUES AND TARIFFS OF THE EAC
REGULATED ACTIVITIES AND THE TSO
(REVISION No. 1)**

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Any correspondence regarding this document should be sent to the Cyprus Energy Regulatory Authority

Adjustment Methodology of Allowed Revenue and Tariffs of the EAC [Electricity Authority of Cyprus] Regulated Activities and the TSO [Transmission System Operator]

Note: The methodology concerns each of the following regulated activities: generation by a dominant generator, transmission system ownership, transmission system operation, distribution system ownership, distribution system operation and supply by a dominant supplier.

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1. INTRODUCTION

In accordance with the Tariff Methodology, Regulatory Decision No. 02/2015 (Reg. 208/2015), Statement on Regulatory Practice and Electricity Tariffs Methodology (“Tariff Methodology”), paragraph 6.1, CERA shall determine the Allowed Revenue for each one of the following activities: generation by a dominant generator, transmission system ownership, transmission system operation, distribution system ownership, distribution system operation and supply by a dominant supplier. In accordance with the provisions of the Tariff Methodology, there are various reasons for the differentiation of the Allowed Revenue (“AR”) that is approved by CERA before the start of the regulatory control period. Therefore, the value of the AR and electricity tariffs for the years of the regulatory control period depends on any such differentiation of AR approved by CERA.

Specifically, based on the Tariff Methodology, there are four reasons for differentiation of the Allowed Revenue for each year:

- Ex-post adjustment of the Regulated Asset Value Base (RAVB):
RAVB is re-calculated ex-post at the end of each year. If the capital expenditures are higher than budgeted, the difference shall be transferred to tariffs only to the extent that CERA considers the increase to be reasonable.
- Adjustment Factor *K*:
Allowed Revenue is adjusted for any positive or negative deviation in the recovery of Allowed Revenue in the previous year, which is due to reasonable non-controllable errors in the forecast of energy demand. The Adjustment Factor *K* is calculated based on the total energy produced in the case of the generation tariff (T-W) and based on the corresponding recorded consumer energy demand in the case of each of the network tariffs (T-NH, T-NM, T-NL).
- Significant Changes in the Electricity Market:
CERA reserves the right, when in its opinion there are significant changes in the electricity market during the regulatory control period, to intervene and request changes to the Allowed Revenues and electricity tariffs. Regulated activities may, in exceptional cases, request a differentiation in Allowed Revenues and in tariffs, when they consider that there are significant changes in the electricity market. This request shall be evaluated by CERA, which will issue its final Decision.
- Ex-post Adjustment for Non-Controllable Operating Expenditure:
All non-controllable operating expenditure shall be recovered at actual cost. If the actual cost is different from the budgeted cost, the Allowed Revenue is adjusted to cover the difference, whether positive or negative. The most significant non-controllable operating expenditure is fuel cost. Examples of other, non-controllable operating expenditures are regulatory fees, taxes, municipal charges and pension expenditures.

Furthermore, there may be other reasons for the adjustment of Allowed Revenue within the five-year regulatory control period, such as the re-assessment of the

WACC, the re-assessment of the efficiency factor and the ex-post adjustment of Allowed Revenues by the TSO.

As stated above, there are various reasons for the differentiation of Allowed Revenues for the remaining regulatory control period, although the methodology in which the differentiation of Allowed Revenues shall be made each year has not been determined, e.g. which year the ex-post adjustments shall relate to, what data shall be used, which are the sources of said data, whether revised forecasts will be used for certain items, such as inflation, etc. It is therefore necessary to determine the methodology of AR differentiation for each year of the regulatory control period.

Furthermore, the manner in which the differentiation of AR is to be transferred to electricity tariffs has not been determined.

The text below describes the adjustment mechanism for Allowed Revenues for each year of the regulatory control period, which shall be effective for the first period 2017 – 2021.

2. ADJUSTMENT MECHANISM

The Methodology for adjusting Allowed Revenues for each year of the Regulatory Control Period (“Methodology”) sets out the following:

- a. The mechanism for adjusting Allowed Revenues each year.
- b. The manner of application of AR adjustments to the tariffs of the following year.
- c. The sources of the data to be used for AR adjustments of each year.
- d. The schedules for the submission of data and calculations for approval by CERA (i.e. deadlines for submission of data to the regulator).

The initial Allowed Revenues for each year of the regulatory control period 2017 – 2021 have been approved by CERA through the Decision No. 97/2017. The adjustment mechanism of Allowed Revenues for each year of the period is described by the equations (1), (2), (3), and (4) below and their respective explanations.

2.1 Allowed Revenue adjustment mechanism

Adjustments to Allowed Revenues can be divided into:

- a. budget adjustments caused by differences in a forecast or estimate, arising from better information provided before the start of the specific year of the regulatory control period; and
- b. ex-post adjustments caused by differences or forecast errors in some data compared to actual ones. Ex-post adjustments concerning year t-2 are applied to the Allowed Revenue of year t.

$$\begin{aligned} &\textbf{Adjustments to Allowed Revenues of year } t \\ &= \textbf{Budget Adjustments of year } t \\ &+ \textbf{Ex-post Adjustments for year } t - 2, \textbf{ applied to year } t \end{aligned}$$

It is clarified that the following apply for the symbols used throughout the Adjustment Mechanism methodology:

Symbol over the variable (superscript)	Explanation
initial	Refers to the initial price approved before the start of the regulatory control period
revised	Refers only to ex ante prices: (i) either to the revised price, if CERA approved the revision, (ii) or to the initial price approved before the start of the regulatory control period, if no revision was approved.
A	Refers to Actual prices that are confirmed ex post.

Furthermore, when a variable begins with the *Adj* symbol, it refers to an ex post adjustment (adjustment). Only adjustments that begin with the *Adj* symbol and the adjustment factor *K* refer to ex post adjustments.

For example, for a variable *X*:

Variable	Explanation
$X_t^{initial}$	The initial <i>X</i> approved before the start of the regulatory control period for year <i>t</i> .
$X_t^{revised}$	<i>X</i> , which is equal: (i) either to the revised <i>X</i> for year <i>t</i> , if CERA approved the revision, (ii) or to the initial <i>X</i> for year <i>t</i> that was approved before the start of the regulatory control period, if no revision was approved.
X_t^A	The actual <i>X</i> for year <i>t</i> .
ΔX_t	Change (Δ) in <i>X</i> due to difference between the revised forecast and the initial forecast approved for the calculation of Allowed Revenues, before the start of the regulatory control period, for year <i>t</i>
$Adj_ \Delta X_t$	Adjustment due to difference (Δ) between the initial or the revised forecast – if any – that has been included in electricity tariffs and the actual <i>X</i> for year <i>t-2</i> .

Therefore, the Allowed Revenue for year *t* (AR_t) for each one of the regulated activities of Generation by a dominant generator, transmission system ownership, distribution system ownership, distribution system operation and Supply by a dominant supplier, shall be determined using the following equation:

$$AR_t = AR_t^{Initial} + \text{Budget Adjustments of year } t + \text{Ex-post Adjustments for year } t-2, \text{ applied to year } t \quad (1)$$

where

AR_t	\equiv	Allowed Revenue for year <i>t</i> .
$AR_t^{Initial}$	\equiv	Initial Allowed Revenue for year <i>t</i> , which, for the first regulatory control period 2017-2021, has been approved by CERA with Decision 97/2017 for all years of this period.

Budget adjustments to Allowed Revenues are calculated using the following equation:

$$\text{Budget Adjustments of year } t = \Delta RET_t^{WACC} + \Delta OPEX_t^{CON} - NR_t^M \quad (2)$$

where

ΔRET_t^{WACC}	\equiv	Change (Δ) in the Return of RAVB due to adjustment in the Weighted Average Cost of Capital for year <i>t</i> . $\Delta RET_t^{WACC} = (WACC_t^{revised} - WACC_t^{initial}) \times RAB_t^{initial}$ where: $WACC_t^{revised}$ = Weighted Average Cost of Capital (WACC) of year <i>t</i> which is equal:
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	<p>(i) either to the revised WACC of year t, if CERA has approved its revision (in case of significant changes to the WACC parameters and following consultation between CERA and EAC),</p> <p>(ii) or to the originally approved WACC for year t ($WACC_t^{initial}$) that was approved before the start of the regulatory control period, if it was not revised.</p> <p>$WACC_t^{initial}$ = Initial approved Weighted Average Cost of Capital (WACC) for year t that was approved before the start of the regulatory control period.</p> <p>$RAB_t^{initial}$ = Initial RAB for year t that was approved as part of the Allowed Revenue calculation before the start of the regulatory control period.</p> <p>The variable ΔRET_t^{WACC} applies to each one of the activities of Generation by dominant generator, Transmission System ownership and Distribution System ownership.</p>
<p>$\Delta OPEX_t^{CON} \equiv$</p>	<p>Change (Δ) in the controllable operating expenditures that were approved for recovery through the tariffs for year t.</p> <p>Such changes may occur <u>only upon the approval of CERA</u>, when in its opinion there are significant differentiations in the electricity market that justify changes to Allowed Revenues.</p> $\Delta OPEX_t^{CON} = \sum_{x=1}^X a_{x,t}$ <p>where:</p> <p>x = expenditure category (from 1 to X) for which there will be a change.</p> <p>$a_{x,t}$ = Change in the controllable operating expenditure x of year t.</p> <p>As regards the controllable operating expenditure of Supply, any differentiation thereto shall take into account the allowed margin on business management expenses which is in force.</p>
<p>$NR_t^M \equiv$</p>	<p>Net Revenue forecast from the estimates of sales through the pool, the balancing mechanism and the imbalance settlement, the ancillary services contracts and the long run reserve contracts for year t.</p> $NR_t^M = \sum_{i=1}^L NR_{i,t}$ <p>where:</p> <p>i = market (pool, balancing mechanism and imbalance settlement, etc.) in which the dominant Generator participates, in accordance with the applicable Market Rules in force during the given period.</p> <p>$NR_{i,t}$ = Net revenue expected from the market i in year t.</p> <p>The NR_t^M applies to the activity of Generation by a dominant Generator and the final tariff T-RET (for the cost of electricity supplied to the dominant supplier via the pool).</p>

Ex post adjustments to Allowed Revenues are calculated using the following equation:

$$\begin{aligned} & \text{Ex-post Adjustments for year } t-2, \text{ applied to year } t \\ & = Adj_ΔRAB_t + Adj_ΔCPI_t + Adj_ΔOPEX_t^{nonCON} \\ & + Adj_ΔFuelCost_t - K_t \end{aligned} \quad (3)$$

where

$Adj_ΔRAB_t$	≡	<p>Adjustment due to difference (Δ) between the forecast and the actual RAB for year $t-2$.</p> $Adj_ΔRAB_t = WACC_{t-2}^{revised} \times (RAB_{t-2}^A - RAB_{t-2}^{initial})$ <p>where:</p> <p>$WACC_{t-2}^{revised}$ = Weighted Average Cost of Capital (WACC) of year $t-2$ which is equal:</p> <ul style="list-style-type: none"> (i) either to the revised WACC of year $t-2$, if CERA has approved its revision before the start of year $t-2$ (in case of significant changes to the WACC parameters and following consultation between CERA and EAC), (ii) or to the originally approved WACC for year $t-2$ ($WACC_{t-2}^{initial}$) that was approved before the start of the regulatory control period, if it was never revised. <p>RAB_{t-2}^A = Actual Regulated Asset value Base (RAB) of year $t-2$, which is equal:</p> <ul style="list-style-type: none"> (i) either to the ex post approved RAB for year $t-2$, if capital expenditure is higher than $RAB_{t-2}^{initial}$ <u>and</u> the regulated activity submits a request for the inclusion of additional investments in RAB <u>and</u> CERA approves said request, (ii) or to the actual RAB, if the actual RAB is not higher than $RAB_{t-2}^{initial}$. <p>$RAB_{t-2}^{initial}$ = Initial RAB provision for year $t-2$ that was approved as part of the Allowed Revenue calculation before the start of the regulatory control period.</p> <p>The variable $Adj_ΔRAB_{t-2}$ applies to each one of the activities: Generation by a dominant generator, Transmission System ownership and Distribution System ownership.</p>
$Adj_ΔCPI_t$	≡	<p>Adjustment due to difference (Δ) between the forecast and the actual inflation for year $t-2$.</p> $Adj_ΔCPI_t = \left(\frac{CPI_{t-2}^A - CPI_{t-2}^f}{CPI_{t-2}^f} \right) \times OPEX_{t-2}^{CON}$ <p>where:</p> <p>CPI_{t-2}^A = Actual CPI of year $t-2$ (divided by 100), with the year 2017 as baseline.</p>

		<p>CPI_{t-2}^f = Forecast of CPI of year $t-2$ (divided by 100), with the year 2017 as baseline.</p> <p>$OPEX_{t-2}^{CON}$ = Controllable operating expenditure for year $t-2$, which was approved as part of the Allowed Revenues.</p>
CPI_t^f	≡	<p>Forecast of CPI of year t (divided by 100), with the year 2017 as baseline.</p> <p>For 2017:</p> $CPI_{2017}^f = CPI_{2017}^A = 1$ <p>For years 2018 to 2021:</p> $CPI_t^f = CPI_{t-1}^f \times (1 + \pi_t^f)$ <p>where:</p> <p>π_t^f = Forecast of inflation (based on the CPI) of year t.</p>
$Adj_ΔOPEX_t^{nonCON}$	≡	<p>Adjustment due to difference (Δ) between the forecast and the actual cost for non-controllable operating expenditures, excluding fuel costs, which are fully passed on to consumers, for year $t-2$.</p> $Adj_ΔOPEX_t^{nonCON} = OPEX_{t-2}^{nonCON,A} - OPEX_{t-2}^{nonCON,initial}$ <p>where:</p> <p>$OPEX_{t-2}^{nonCON,A}$ = Actual non-controllable operating expenditure, excluding fuel costs, for year $t-2$.</p> <p>$OPEX_{t-2}^{nonCON,initial}$ = Initial forecast for non-controllable operating expenditure, excluding fuel costs, for year $t-2$, that was approved as part of the Allowed Revenue before the start of the regulatory control period.</p> <p>As regards the non-controllable operating expenditure of Supply, any differentiation thereto shall take into account the allowed margin on business management expenses which is in force.</p>
$Adj_ΔFuelCost_t$	≡	<p>Adjustment due to difference (Δ) between the forecast and the actual fuel cost – which includes forecasts on the cost of fuel, the cost of purchase of greenhouse gas emission allowances, the cost of contribution to COSMOS and any other cost included in the calculation of the weighted average price of fuel – for year $t-2$.</p> $Adj_ΔFuelCost_t = FuelCost_{t-2}^A - (FuelCost_{t-2}^{initial} + R_{t-2}^{FCA})$ <p>where:</p> <p>$FuelCost_{t-2}^A$ = Actual total cost related to fuel, for year $t-2$.</p> <p>$FuelCost_{t-2}^{initial}$ = Initial forecast of the cost related to fuel that was approved as part of the Allowed Revenue before the start of the regulatory control period, for year t, at fuel base price.</p>

		R_{t-2}^{FCA} = Revenue from the fuel cost adjustment for year $t-2$.
K_t	≡	<p>Adjustment of allowed revenues using the K factor, i.e. correction taking into account the positive or negative deviation in Allowed Revenues recovery in previous years that is due to any reasonable errors in the forecast for electricity demand in previous years.</p> <p>Adjustment K_t applies to activities of Generation by a dominant generator, Transmission System ownership and Distribution System ownership, namely for the tariffs <u>T-W, T-NH, T-NM and T-NL</u>.</p> <p>The adjustment factor K may take into account errors in the demand forecast in the final tariff categories:</p> <ol style="list-style-type: none"> either without providing for errors in the forecast between demand of different periods in the day, or taking into account the errors in the forecast between demand of different periods in the day. <p>In the interest of simplification, the first option will be followed, which is described by the following equations.</p> <p>With the adjustment, only the fixed costs of each regulated tariff affected should be returned or charged to consumers, because in terms of cost, the difference in demand affects only variable costs, which have already been recovered by the Regulated Activity. Therefore, in order to avoid a change in the allowed return of each regulated activity, the adjustment should be made for the part of the fixed costs included in the tariff.</p> <ul style="list-style-type: none"> For the activity of Ownership of the Transmission System: $K_t = \sum_{i=1}^N (Q_{i,t-2}^A - Q_{i,t-2}^f) \times T_{i,t-2}^{NH \text{ fixed}}$ <p>where: $i = \{1,2, \dots N\}$ tariff code. $Q_{i,t-2}^A$ = Actual electricity demand for the approved tariff with code i, for year $t-2$. $Q_{i,t-2}^f$ = Forecast of electricity demand for the approved tariff with code i, for year $t-2$. $T_{i,t-2}^{NH \text{ fixed}}$ = Fixed cost included in the Average value of tariff T-NH, for the approved tariff with code i, for year $t-2$.</p> For the activity of Distribution: $K_t = \sum_{i=1}^N ((Q_{i,t-2}^A - Q_{i,t-2}^f) \times (T_{i,t-2}^{NM \text{ fixed}} + T_{i,t-2}^{NL \text{ fixed}}))$ <p>where:</p>

	<p>$T_{i,t-2}^{NM\ fixed}$ = Fixed cost included in the average value of tariff T-NM, for the approved tariff with code i, for year $t-2$.</p> <p>$T_{i,t-2}^{NL\ fixed}$ = Fixed cost included in the average value of tariff T-NL, for the approved tariff with code i, for year $t-2$.</p> <p>- For the activity of Generation by a dominant generator:</p> $K_t = (Q_{t-2}^{A, sentout} - Q_{t-2}^{f, sentout}) \times T_{t-2}^{W\ fixed}$ <p>where:</p> <p>$Q_{t-2}^{A, sentout}$ = Actual electricity sent-out to the transmission system, for year $t-2$.</p> <p>$Q_{t-2}^{f, sentout}$ = Forecast of electricity sent-out to the transmission system, for year $t-2$.</p> <p>$T_{t-2}^{W\ fixed}$ = Fixed costs included in the Average of the base tariff T-W, for year $t-2$.</p>
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Furthermore:

In case the actual revenues of a regulated activity (at fuel base price) are lower than 90% of the Allowed Revenues (AR_t) of said regulated activity for two consecutive years $t-3$ and $t-2$ of the regulatory control period, then:

- a. The activity is required to send justification of this fact in writing to CERA by 30 September of year t , and
- b. If necessary, the activity is required to send a justified request to CERA for the recovery of the difference in the years following the regulatory control period by 30 September of year t .
- c. In case of the activity of Generation, Ownership of Transmission System and the activity of Distribution, the activity is required to make reasonable efforts to cover in years t and $t+1$ the significant difference between Allowed Revenues and the recovery thereof.

In case the actual revenues of the regulated activity (at fuel base price) are higher than 110% of its Allowed Revenues (AR_t) for two consecutive years $t-2$ and $t-1$ of the regulatory control period, then:

- a. The activity is required to send justification of this fact in writing to CERA by 30 September of year t , and
- b. By its Decision, CERA may request the return of the difference with adjustment of the AR in the years following the regulatory control period.

Transmission System Operator

As regards the Transmission System Operation, at the moment no provision is made for the return on any TSO expenditure, while the Tariff Methodology provides both for the ex ante revision of Allowed Revenues and their ex post adjustment.

This report provides that each year there will be an ex ante revision of the Allowed Revenues based on the actual needs of the TSO and, upon the publication of the audited financial statements, the actual income and expenses of TSO will be reported and the Allowed Revenues will be adjusted for the following year. Therefore, the Allowed Revenues of the Transmission System Operation are not separated into controllable and non-controllable operating expenditures.

The ex ante revision based on the actual needs of TSO shall be based on the Budget of TSO, which shall be approved by CERA in the context of the consultation between TSO and EAC on the Budget of TSO.

The report of actual income and expenses of TSO shall be based on the audited financial statements of TSO, which requires that the ex post adjustment for year $t-2$ be applied to the Allowed Revenues of year t .

According to the above, the Allowed Revenues of the Transmission System Operation for year t are determined on the basis of the equation:

$$AR_t = AR_t^{initial} + \Delta AR_t^{exante} + \Delta AR_t^{expost} - NR_t^{TSO,M} \quad (4)$$

where

AR_t	\equiv	Allowed Revenue for year t .
$AR_t^{initial}$	\equiv	Initial Allowed Revenue for year t .
ΔAR_t^{exante}	\equiv	Change (Δ) in the Allowed Revenues with the assessment of the TSO needs before each year t of the regulatory control period. $\Delta AR_t^{exante} = \sum_{x=1}^X \alpha_{x,t}^{TSO} - \Delta R_t^{TSO}$ <p>where: x = expenditure category (from 1 to X) for which there will be a change. $\alpha_{x,t}^{TSO}$ = Change in the operating expenditure x of TSO, for year t. ΔR_t^{TSO} = Change in the estimate for the revenue of TSO, for year t.</p>
ΔAR_t^{expost}	\equiv	Change (Δ) to the Allowed Revenue after the ex post audit of the actual income and expenses of TSO for year $t-2$. $\Delta AR_t^{expost} = (C_{t-2}^{TSO,A} - R_{t-2}^{TSO,A})$ <p>where: $C_{t-2}^{TSO,A}$ = Actual expenditure of TSO, for year $t-2$. $R_{t-2}^{TSO,A}$ = Actual revenue of TSO for year $t-2$.</p> <p>An adjustment shall be made only if the actual income was higher than the actual expenses of TSO and therefore there is profit/surplus in TSO for year $t-2$. In this case, the AR of TSO for year t will be adjusted downwards to cover this difference.</p>

		The opposite shall not apply because, under the legislation in force, any shortages in the resources of the TSO are covered by the Transmission System Owner.
$NR_t^{TSO,M}$	\equiv	Net Revenues from the Operation of the Electricity Market for year $t-2$.

2.2 Application of AR adjustments to the tariffs of the following year

The above equations (1) to (4), shall be used to calculate the revised AR for year t (e.g. for year 2020).

Subsequently, the revised AR shall be applied to the tariff structure that has already been approved by CERA for each regulatory control period (e.g. 2017-2021) and to the estimated sales for year t (e.g. 2020).

2.3 Sources of data

Table 1 presents the sources of data used in calculating the adjustments to Allowed Revenue for each year of the regulatory control period.

Table 1. Sources of data for Calculating Annual Allowed Revenue

Variable	Explanation/Definition	Source of Data
$AR_t^{initial}$	Initial Allowed Revenue for year t , which, for the first regulatory control period 2017-2021, has been approved by CERA with Decision No. 97/2017 for all years of the period.	Relevant CERA Decision before the start of the regulatory control period.
π_t^f	Forecast of inflation (based on the CPI) of year t .	Submission of final statement of Allowed Revenue for the regulated entity, on which the CERA Decision was based before the start of the regulatory control period for the approval of Allowed Revenue.
CPI_{t-2}^A	Actual CPI of year $t-2$, with the year 0 as baseline.	Statistical Service of Cyprus ¹ .
$WACC_t^{revised}$	Weighted Average Cost of Capital (WACC) of year t which is equal: (i) either to the revised WACC of year t , if CERA has approved its revision before the start of year t (in case of significant changes to the WACC parameters and	In case (i), a relevant CERA Decision before the start of year t , in the event of significant changes in WACC parameters and following a consultation between CERA and the EAC, and in case (ii), a

¹ Published values of the CPI are available on the website of the Statistical Service, under the headings “Statistical Themes”, “Economy and Finance”, “Consumer Price Index”, “Key Figures”.

	following consultation between CERA and EAC), (ii) or to the originally approved WACC for year t ($WACC_t^{initial}$) that was approved before the start of the regulatory control period, if it was never revised.	relevant CERA Decision before the start of the regulatory period control.
$WACC_t^{initial}$	Initial approved Weighted Average Cost of Capital (WACC) for year t that was approved before the start of the regulatory control period.	Relevant CERA Decision before the start of the regulatory control period for the WACC of year t .
$RAB_t^{initial}$	Initial RAB provision for year t that was approved as part of the Allowed Revenue calculation before the start of the regulatory control period.	Submission of final statement of Allowed Revenue for the regulated entity, on which CERA Decision was based before the start of the regulatory control period for the approval of Allowed Revenue ² .
$OPEX_t^{CON}$	Controllable operating expenditure for year t , which was approved as part of the Allowed Revenues.	Relevant CERA Decision before the start of the regulatory control period.
$\sum_{x=1}^x a_{x,t}$	Change in the total of controllable operating expenditures that were approved for recovery through tariffs for year t , <u>only after the intervention of CERA</u> , when in its opinion there are significant differentiations in the electricity market that justify changes to Allowed Revenues.	Relevant CERA Decision before the start of year t .
$OPEX_t^{nonCON,initial}$	Initial forecast for non-controllable operating expenditure, excluding fuel costs, for year t , that was approved as part of the Allowed Revenue before the start of the regulatory control period.	Relevant CERA Decision before the start of the regulatory control period.
$FuelCost_t^{initial}$	Initial forecast of the cost related to fuel, that was approved as part of the Allowed Revenue before the start of the regulatory control period, for year t , at fuel base price.	Relevant CERA Decision before the start of the regulatory control period.
$NR_{i,t}$	Net revenue expected from the market i in year t .	Forecasts by the regulated entity.

² Final (Approved) Allowed Revenue includes any modifications that may be required following instructions by CERA.

RAB_{t-2}^A	Actual Regulated Asset value Base (RAB) of year $t-2$, which equals: (i) either with the ex post approved RAB for year $t-2$, in case capital expenditure is higher than $RAB_{t-2}^{revised}$ and the regulated activity submits a request for the inclusion of additional investments in RAB and CERA approves said request, (ii) or to the actual RAB, if the actual RAB is not higher than $RAB_{t-2}^{revised}$.	Actual RAB for year $t-2$, based on the audited financial statements of year $t-2$. If the capital expenditures are higher than budgeted, the difference shall be transferred to tariffs only to the extent that CERA considers the increase to be reasonable and following a request by the regulated activity.
$OPEX_{t-2}^{nonCON,A}$	Actual non-controllable operating expenditure, excluding fuel costs, for year t .	Audited Financial Statements of the regulated entity for year $t-2$.
$FuelCost_{t-2}^A$	Actual total cost related to fuel, for year $t-2$.	Audited Financial Statements of the regulated entity for year $t-2$.
R_{t-2}^{FCA}	Revenue from the fuel cost adjustment for year $t-2$.	Audited Financial Statements of the dominant Generator for year $t-2$.
$Q_{i,t-2}^A$	Actual electricity demand for the approved tariff with code i , for year $t-2$.	Audited Financial Statements of the regulated entity for year $t-2$.
$Q_{i,t-2}^f$	Forecast of electricity demand for the approved tariff with code i , for year $t-2$.	Submission of tariffs and of the allowed revenue simulation model for the regulated entity, on which the CERA Decision was based before the start of year $t-2$ for the tariff approval of each activity.
$Q_{t-2}^{A,sentout}$	Actual electricity sent-out to the transmission system, for year $t-2$.	Audited Financial Statements of the dominant Generator for year $t-2$.
$Q_{t-2}^{f,sentout}$	Forecast of electricity sent-out to the transmission system, for year $t-2$.	Submission of tariffs and of the allowed revenue simulation model for the regulated entity, on which the CERA Decision was based before the start of year $t-2$ for the tariff approval of each activity.

$T_{i,t-2}^{NH\ fixed}$	Fixed cost included in the average value of tariff T-NH, for the approved tariff with code i , for year $t-2$.	EAC calculations based on relevant CERA Decision before the start of year $t-2$, for tariff approval.
$T_{i,t-2}^{NM\ fixed}$	Fixed cost included in the average value of tariff T-NM, for the approved tariff with code i , for year $t-2$.	EAC calculations based on relevant CERA Decision before the start of year $t-2$, for tariff approval.
$T_{i,t-2}^{NL\ fixed}$	Fixed cost included in the average value of tariff T-NL, for the approved tariff with code i , for year $t-2$.	EAC calculations based on relevant CERA Decision before the start of year $t-2$, for tariff approval.
$T_{t-2}^{W\ fixed}$	Fixed cost included in the average value of the base tariff T-W, for year $t-2$.	EAC calculations based on relevant CERA Decision before the start of year $t-2$, for tariff approval.
$\sum_{x=1}^x \alpha_{x,t}^{TSO}$	Change in the total operating expenditure of TSO, for year t .	Assessment of the TSO Budget for year t in relation to the initial five-year budget.
ΔR_t^{TSO}	Change in the estimate for the revenue of TSO, for year t .	Assessment of the TSO Budget for year t in relation to the initial Allowed Revenue of TSO for year t that was approved by a relevant Decision of CERA before the start of the regulatory control period.
$C_{t-2}^{TSO,A}$	Actual expenditure of TSO, for year $t-2$.	Audited Financial Statements of TSO for year $t-2$.
$R_{t-2}^{TSO,A}$	Actual revenue of TSO for year $t-2$	Audited Financial Statements of TSO for year $t-2$.
$NR_t^{TSO,M}$	Net Revenues from the Operation of the Electricity Market for year $t-2$.	Audited Financial Statements of TSO for year $t-2$.

2.4 Schedule for the Submission of Data and Calculations

Adjustments to Allowed Revenues are divided into:

- budget adjustments caused by differences in a forecast or estimate, arising from better information provided before the start of the specific year of the regulatory control period; and
- ex-post adjustments caused by differences or forecast errors in some data compared to actual ones.

The ex post adjustments for year $t-2$ are applied to the Allowed Revenue of year t , to allow for complete and reliable data for year $t-2$. These data are collected from

the audited financial statements of each regulated entity (Separated Regulatory Accounts), which – under Regulatory Decision No. 02/2014 “Regulatory Accounting Instructions for the preparation of Separated Accounts” – shall be submitted to CERA the latest by the eighth month after the end of the reporting FY³. This means that by August of year $t-1$ there will be reliable data for year $t-2$. Therefore, the submission of the calculations of Allowed Revenue for year t cannot be made earlier than 31 August of year $t-1$.

CERA Decision No. 97/2017 instructs the EAC, for any year after 2017 and within the regulatory control period, to “submit for approval to CERA the Tariff plans by the 1st October of the preceding year”.

Given the above, and considering that a period of several weeks after the Allowed Revenue approval is required for the calculation of the amount of each tariff and the preparation of the Tariff Plans, there is a narrow time frame in early September of year $t-1$, within which CERA is required to audit said calculations and approve the final Allowed Revenue for t .

As regards budget adjustments, these include: any different estimates for the WACC (ΔRET_t^{WACC}), potentially revised forecasts for RAB (ΔRET_t^{RAB}), potentially revised forecasts for non-controllable operating expenditure ($\Delta OPEX_t^{nonCON}$ and $\Delta FuelCost_t$), potential differences in the controllable operating expenditure ($\Delta OPEX_t^{CON}$) following CERA’s intervention in accordance with the Tariff Methodology, and a forecast for net revenues from the Electricity Market (NR_t^M).

Budget adjustments to Allowed Revenues shall be submitted to CERA before the 31st of August, as the control of these adjustments requires more time and know-how, while they are not restricted by the submission date of the audited financial statements.

Provided that the budget adjustments of Allowed Revenues for year t are approved before September of year $t-1$ and the ex post adjustments depend on the published data, the calculation of Allowed Revenue for year t using equations (1) to (4) is relatively simple and may be submitted in a relatively short period after the publication of data.

Based on the above, Table 2 describes the relevant schedule.

Table 2. Schedule for the submission and approval of Allowed Revenues for each year of the regulatory control period.

	Submission by a regulated entity to CERA	Examination by CERA
Budget Adjustments	By 1 July of year $t-1$	1 July – 20 August of year $t-1$
Ex post Adjustments	By 31 August of year $t-1$.	1 – 15 September of year $t-1$.
Approval of Allowed Revenues for year t.	-----	Approval by CERA:

³ Regulatory Decision No. 02/2014, Annex 1, Paragraph 4.2.

ADJUSTMENT METHODOLOGY OF ALLOWED REVENUE AND TARIFFS FOR EACH YEAR OF THE REGULATORY CONTROL PERIOD

		15 September of year $t-1$.
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Each regulated activity is required to submit its calculations for the budget and ex post adjustments to CERA with the appropriate documentation and within the time frame described in Table 2.

3. ABBREVIATIONS

TSO	Transmission System Operator – Cyprus
CPI	Consumer Price Index
AR	Allowed Revenue
Tariff Methodology	Regulatory Decision No. 02/2015 (RAA 208/2015) Statement on Regulatory Practice and Methodology of Electricity Tariffs.
WACC	Weighted Average Cost of Capital