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## **Competition Authority's position regarding the compliance of the price of water service applicable in Tallinn and Saue City by AS Tallinna Vesi with the valid Public Water Supply and Sewerage System**

### **1. Initiating the supervision proceedings**

On 23.01.2011 with a decree No 9.2-5/11-011 the Competition Authority (hereinafter the CA) initiated a supervision proceedings regarding the price of water service in Tallinn and Saue City, taking as the basis §74 (1) of the Government of the Republic Act and §15<sup>4</sup> (1)-(3) of Public Water Supply and Sewerage Act.

Pursuant to Public Water Supply and Sewerage Act<sup>1</sup> (hereinafter PWSSA) § 14 (1), the following fees may be collected for water supply and leading off and purifying waste water, rain water, drainage and other soil and surface water (hereinafter the price of water service):

- 1) a charge for water extracted;
- 2) a charge for leading off and purifying waste water (hereinafter waste water);
- 3) a charge for leading off and purifying rain water and drainage and other soil and surface water (hereinafter storm water);
- 4) a basic fee.

Pursuant to PWSSA § 14 (6), the water undertaking providing services to several different wastewater collection areas (in this case Tallinn and Saue City) may establish a compound water tariff for all areas, considering the summarised costs of the water undertaking. Hence, ASTV has the right to establish a compound price of water service in Tallinn and Saue City.

According to PWSSA § 14 (2), the price of the water service shall be established such that the water undertaking can:

- 1) cover justified operation costs;
- 2) make investments to guarantee the sustainability of the existing public water supply and sewerage systems;
- 3) comply with environmental requirements;
- 4) comply with quality and safety requirements;
- 5) operate with justified profitability on the capital invested by the water undertaking;
- 6) develop the public water supply and sewerage system, including the rain water sewerage, in accordance with the public water supply and sewerage system development plan in an area where more than 50 per cent of residential buildings for which building permits were issued before 22 March 1999 are connected to the public water supply and sewerage system.

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<sup>1</sup> RTI 1999, 25, 363; 2010, 56, 363

Pursuant to PWSSA §7<sup>2</sup> (1), in addition to the fulfilment of the requirements provided for in §18 (1) clause 2 of the Competition Act, a water undertaking shall keep separate account of the costs of following operations:

- 1) water supply;
- 2) leading off and purification of waste water;
- 3) leading off rainwater and drainage water and other soil and surface water;
- 4) additional services related to the operations mentioned in clauses 1–3 of this subsection;
- 5) connection charges for subscribing to the public water supply and sewerage system;
- 6) other operations.

Pursuant to PWSSA § 7<sup>2</sup> (2), the costs mentioned in clauses 1–4 of § 7<sup>2</sup> (1) must separately point out the assets acquired by grant aid.

PWSSA § 7<sup>2</sup> (3) states that if the water undertaking provides the service to a client or another water undertaking on the territory of several local governments, the water undertaking must keep separate account across different local governments pursuant to the provisions laid down in PWSSA § 7<sup>2</sup> (1), except if local governments have reached a different agreement.

In line with PWSSA §14 (9), the CA developed the guidelines “Recommendatory principles for calculating the price of water service”<sup>2</sup> (hereinafter the Guidelines) and published it in its webpage. When developing the Guidelines the provisions of PWSSA §14, 14<sup>1</sup>, 14<sup>2</sup> were considered, based on which the water tariff is calculated dividing the justified costs, capital cost and justified return of the water undertaking by sale volume (articles 7.3; 7.5; 7.6 of the Guidelines), i.e. using the cost-based approach. For the material purposes the Guidelines are in compliance with PWSSA §14 (2) that foresees the cost-basis of the price of water service.

CA finds that using the Guidelines in the supervision proceedings for checking the compliance of the current price of water service with the PWSSA is justified because both the price of water service submitted for approval as well as the current price of water service must be formed on the basis of PWSSA §14 (2).

Pursuant to article 7.6 of the Guidelines the price of water service is formed by dividing the operating costs, cost of capital and justified return referred to in article 7.3 of the Guidelines with the sales volume.

Based on article 4.8 of the Guidelines, the CA uses the following methods for checking whether the water tariff is justified:

- 1) Observing the dynamics of costs in time and the comparison thereof with the dynamics of the CPI;
- 2) In-depth analysis of the justifiability of various cost components (incl. expert opinions);
- 3) Comparison of the operating expenses of the undertaking and the statistical indicators calculated on the basis thereof with the indicators of other undertakings.

Based on article 4.1 of the Guidelines, the CA uses the following methods for analysing the sales volumes:

- 1) Dynamic in the sales volumes (incl. sales volumes of previous periods, economic forecasts, water consumption and other indicators forecasted in the long-term development plan shall be taken into account);
- 2) Dynamics and forecast of the number of consumers.

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<sup>2</sup> The Guidelines are Publisher on the CA’s webpage (<http://www.konkurentsiamet.ee>, menu: energeetika- ja veeteenistus/Vesi/Hinna kooskõlastamise meetodikad ja juhendid). In the tariff approval process, whilst analysing the operation and approving the tariffs of all water undertakings under the CA’s regulation, the Guidelines are applied in the similar and same manner in order to avoid unequal treatment. The named Guidelines may be used also by local governments when approving water tariffs.

Pursuant to article 6.1 of the Guidelines justified return is calculated on the basis of applying a justified rate of return on regulatory asset base.

Pursuant to article 5.7 of the Guidelines when calculating the value of regulatory asset base, the residual book value at the end of the accounting regulation period is used. In the calculation of the capital expenditure, depreciation rate on regulatory assets base reflected in the accounting shall be used.

Pursuant to the PWSSA §14<sup>2</sup> (7), upon the fulfilment of their obligations provided for in this Act the water undertaking shall allow the CA to examine its accounting, shall justify the bases for establishing the price of the water service and provide required explanations regarding its economic activities.

## 2. Data of the Applicant

ASTV's main activities include the production, treatment of water and supplying water to consumers and the discharge and treatment of waste- and storm water.

ASTV is the biggest water undertaking in Estonia, offering water and wastewater services to over 400,000 people in Tallinn. In Tallinn operating area ASTV has the exclusive right of providing public water supply and wastewater services until the year 2020. ASTV has also been appointed as a water undertaking in: Saue City, Maardu City, Saue Rural Municipality, Harku Rural Municipality. In addition ASTV is providing public water supply and/or wastewater services to several water undertakings operating in surrounding rural municipalities.

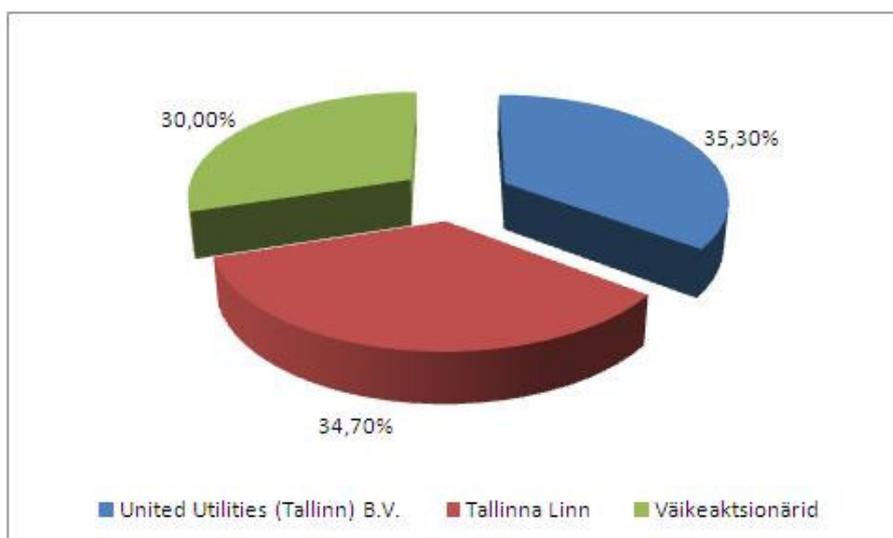
The company has two treatment plants – Ülemiste WTP and Paljassaare WwTP. Ülemiste WTP has sufficient additional capacity to increase production volumes and to provide services to a much bigger population than it is done now.

ASTV has over 20,000 contractual customers and employs 307 people.

ASTV's MB has three members, including the CEO (Chairman of the MB), COO and CFO. The Council of the company includes 9 members.

ASTV was privatised in 2001. Since 1.06.2005 ASTV shares have been listed on the main list of TSE.

As at 31.12.2010, the company had 2865 shareholders. 30% of the free float of the company on the TSE is owned by foreign institutional investors by 19.5%; local small investors by 6.4%; local institutional investors by 3.9% and foreign small investors by 0.2%.



AKTSIONÄRID	AKTSIAID	OSALUS
United Utilities (Tallinn) B.V.	7 060 870	35,30%
Tallinna linn	6 939 130	34,70%
Väikeaktsionärid	6 000 000	30,00 %

The company has 20 million A-shares and 1 B-share. 30% of the A-shares i.e. 6,000,0000 is on a free float on TSE.

### 3. Course of proceedings and positions

With a decree No 9.2-5/11-011 of 23.02.2011 the CA initiated a supervision proceedings proceeding from PWSSA §15<sup>4</sup> (1) – (3) in order to verify whether the (current) price of water service applicable in Tallinn and Saue City by ASTV has been formed on the basis of costs for the purposes of PWSSA §14 (2).

On the basis of the information published on ASTV's website, the current price of water service is as follows:

Charge for water extracted (€/m<sup>3</sup>):

Physical persons 0,95

Legal persons 2,32.

Charge for leading off and purifying waste water (€/m<sup>3</sup>):

Physical persons 0,78

Legal persons 1,69.

On 28.02.2011 the CA informed ASTV of the supervision proceeding initiated pursuant to §35 (1) clause 2 of the Administrative Procedure Act (APA) and obligated ASTV to fill in the Excel file titled "Järelevalve (2010)" attached to the letter at the latest by 15.03.2011. In the file "Järelevalve (2010)" the CA asked for the 2010 actual data in addition to the actual data for the 9 months of 2010 and the forecasted data for 3 months previously submitted by ASTV within the tariff approval proceeding<sup>3</sup>.

On 07.03.2011 ASTV applied for an extension of the deadline for submitting the actual data of 2010 from 15.03.2011 to 31.03.2011-le.

On 09.03.2011 the CA agreed with ASTV's proposal to extend the deadline for submitting the actual data of 2010 to 31.03.2011.

On 15.03.2011 ASTV submitted a new letter to the CA in which it asked once again to extend the deadline of providing the actual data for 2010, however, this time already until 13.05.2011. As a reason ASTV pointed out the submission of a complaint to European Commission regarding the bases for price formation of water services.

In the response sent on 18.03.2011 the CA informed ASTV that it does not agree with extending the deadline of submitting the actual data of 2010 because the decision of the European Commission does not in any extent impact the actual costs, revenues and value of fixed assets reflected in the accounting to be submitted on ASTV regarding 2010. Pursuant to §5 (2) of the APA, administrative procedure shall be shall be purposeful and efficient, also as easily and quickly as possible. In the letter the CA noted that in case ASTV fails to submit the actual data of 2010 by 31.03.2011, then in a situation in which ASTV has submitted to the CA actual data regarding 2008 and 2009, actual data for the 9 months of 2010 and the forecasted data for 3 months and the forecasted data for 2011 during the tariff

<sup>3</sup> On 14.01.2011 AS Tallinna Vesi submitted an application for approving the prices of water supply in Tallinn and Saue City, with which it requested to approve a price of water service higher than the current price. When analysing the data that served as the basis of the tariff application, the CA had a doubt that the current price of water service may be in contradiction with PWSSA, pursuant to which the CA initiated the respective supervision proceeding

approval process, the CA shall take as the basis for forming its positions that data previously submitted by ASTV in order to ensure pursuant to PWSSA and APA as quick as possible supervision proceeding with regard to the current price of water service.

On 31.03.11 ASTV submitted the 2010 actual data to the CA.

When verifying the compliance of the current price of water service with the PWSSA the CA shall proceed from the forecast of operating costs for 2011 submitted by ASTV in the tariff approval process, because the price of water service in 2011 must cover the costs made for providing water service in 2011 and ensure a justified return to the water undertaking from the invested capital (PWSSA §14 (2)). In assessing the forecast of the 2011 operating costs the CA uses, among others, also the actual data of 2008-2010.

#### 4. Principles for calculating water tariffs.

According to article 7.1 of the Guidelines, the basis for calculating water tariffs is the allowed sales revenue during the regulation period ( $T_{allowed}$ ). The regulation period is a 12 month period, during which the costs and justified rate of return serve as the basis for calculating water tariffs (Guidelines article 2.12). Based on the above, the year 2011 is the regulation period under review. ASTV has submitted the costs forecasted for 2011 to the CA with the tariff application.

Article 7.2 of the Guidelines allows the following costs to be included in the water tariffs:

- 1) Operating costs;
- 2) Cost of capital;
- 3) Justified rate of return.

Based on article 7.3 of the Guidelines, the allowed sales revenue is calculated based on the following formula:

$$T_{allowed} = TK + A + PT,$$

where:

- $T_{allowed}$  - allowed sales revenue;
- $TK$  - operating costs;
- $A$  - cost of capital;
- $PT$  - justified rate of return.

According to article 7.5 in the Guidelines, the division of allowed sales revenue between the various water services must be justified and correspond to the following formula:

$$T_{iubatud} = \sum T_{iubatud_n},$$

where:

- $T_{allowed}$  - the allowed sales revenue of the respective water service;
- $n$  - water service.

Based on article 7.6 of the Guidelines, the allowed sales revenue serves as the basis for calculating specific water service tariffs as follows:

$$hind_n = \frac{T_{iubatud_n}}{m_n} (kr/m^3),$$

where:

- $T_{iubatud_n}$  - allowed sales revenue of the respective water service during the regulation period;
- $m_n$  - the sales volume of the respective water and wastewater service during the regulation period;
- $hind_n$  - water tariff of the respective water service during the regulation period.

Proceeding from the above, the CA shall verify the compliance of the price of water service valid in Tallinn and Saue City with the PWSSA by comparing the **allowed sales revenue** to be formed as the sum of justified operating costs (based on the 2011 forecast submitted by ASTV in tariff approval process), cost of capital (article 5.7 of the Guidelines) and justified return (articles 5.7 and 6.2 of the Guidelines) with the sales revenue received by ASTV (article 7.5 of the Guidelines), formed as the product of the **valid price of water service** applicable by ASTV and the **volume of water service** (ASTV's forecast for 2011) (article 7.7 of the Guidelines). ASTV's valid price of water service is compliant with the legal requirements only in case ASTV's sales revenue from the sale of water service equals the sum of operating costs, cost of capital and justified return considered as justified by the CA or the allowed sales revenue. If ASTV's sales revenue from the sale of water service with the current prices of water service does not coincide with the allowed sales revenue as calculated on the basis of PWSSA §14 (2), then the price of water service, pursuant to the provisions of the law, is not cost-based.

In the following the CA shall perform an analysis regarding the price components that serve as the basis for calculating the price of water service, as listed in PWSSA §14 (2), in Tallinn and Saue City:

- in analysing justified operating costs taking as the basis the 2011 forecasted data submitted by ASTV in tariff approval process;
- taking as the value of the cost of capital (depreciation) as forecasted by ASTV for 2011 pursuant to article 5.7 of the Guidelines;
- taking the value of regulatory asset base as calculated on the basis of article 5.8 of the Guidelines (based on the forecast of the value of fixed assets by the end of 2011 made by ASTV).

## 5. Sale volumes

Price of water service is formed when dividing sales revenue (the sum of justified costs, cost of capital and justified return set in PWSSA §14 (2)) with sales volume. It is possible to verify the compliance of the valid prices of water service with the law when to compare the amount of water service sales revenue, which is calculated by multiplying valid price of water service with the expected water service sales volume, with the allowed extent of sales revenue resulting from PWSSA §14 (2). From the above it appears that in order to verify the compliance of the valid price of water service with the provisions in the law, it is important to analyse the sales volumes for 2011 forecasted by ASTV.

### CA's position regarding the expected sales volume of water service

CA has analysed ASTV's sales volumes (volume of water extracted, volume of wastewater disposal and treatment service) in order to check the compliance of the valid price of water service with the law. CA prepared a table (see Table 1) on the basis of the data submitted by ASTV, which reflects the sales volumes of water service in years 2008-2011 (actual for 2008, 2009, 2010 and forecasted data for 2011).

Table 1: Sales volumes and the related general indicators

Row no.	Tallinn and Saue City	Unit	2008	2009	2010	2011
A	B	C	D	E	G	H
1	Volume of extracted water physical persons	th.m3	14432	13960		13868
2	Volume of extracted water legal persons	th.m3	4634	4145		4047
3	Total volume of extracted water	th.m3	19066	18106	17853	17916
4	Change vs previous year	%		-5,0	-1,4	0,4
5	Wastewater disposal and treatment service physical persons	th.m3	14102	13708		13681

6	Wastewater disposal and treatment service legal persons	th.m3	4986	4444		4458
7	Wastewater disposal and treatment service total	th.m3	19088	18152	18054	18139
8	Change vs previous year	&		-4,9	-0,5	0,5
9	Length of public water network	km	909	925	931	931
110	Consumption per length of public water network	m3/km	21,0	19,6	19,2	19,2
11	Length of public wastewater network	km	1213	1269	1263	1263
12	Consumption per length of public wastewater network	m3/km	15,7	14,3	14,3	14,4

### 5.1 Volume of water extracted

On the basis of the data reflected in Table 1, ASTV has planned an increase in the volume of water extracted in 2011 compared to the level of 2010 (see Table 1 row 3 columns respectively H and G). Water consumption per one metre of public sewerage pipeline has reduced year-on-year (see Table 1 row 10 columns G and H). ASTV has justified the reduction in water consumption of previous years with economic recession and introduction of sanitary equipment that enables a more optimal use of water. **Having assessed and analysed the dynamics of water consumption volume, the CA has concluded that in verifying the justifiability of the valid price of water service, the justified volume of water service in total of 17 916 th m<sup>3</sup>** (volume of water extracted by legal persons 4 047 th m<sup>3</sup> (see Table 1 row 2 column H) and volume of water extracted by physical persons 13 868 th m<sup>3</sup> (see Table 2 row 1 column H)) **is in compliance with that referred to in ASTV's tariff application. CA came to the conclusion above on the basis of analysing the dynamics of sales volumes (article 4.1.1 of the Guidelines):**

- In 2009 and 2010 (Table 1 row 3 columns E and G) water consumption has reduced in comparison with the previous year. In the conditions of the stabilising economy, when checking the justifiability of the valid price of water service (2011) it is justified to use the volume of water extracted at the level referred to by ASTV in the tariff application that is higher than the sales volume of 2010 because usually when the economy stabilises, the reduction in consumption also stops.
- As from the data submitted by ASTV it appears that in 2011 the length of public water supply pipeline remains at the same level as in the previous year (2010), then when checking the justifiability of the valid price of water service it is justified to use the volume of water extracted of 17 916 th m<sup>3</sup> as referred by ASTV in the tariff application (volume of water extracted by legal persons 4 047 th m<sup>3</sup> and volume of water extracted by physical persons 13 868 th m<sup>3</sup>).

### 5.2 Volume of wastewater disposal and treatment service

Volume of wastewater disposal and treatment service has reduced in 2010 compared to 2009 by 0,5% (see Table 1 row 8 column G). The volume of wastewater disposal and treatment service per one metre of pipe has reduced year-on-year (see Table 1 row 12). In addition to the reduction in sales volume stopping compared to the previous year, ASTV has planned for 2011 also a small increase in the sales volume per one metre of public sewerage pipe (see Table 1 row 12 columns H and G). ASTV has justified the reduction in the volume of wastewater disposal and treatment services with economic recession and introduction of sanitary equipment that enables a more optimal use of water. ASTV has not planned in the valid price of water service also an increase in the length of public sewerage pipe (see Table 1 row 11).

**Having assessed and analysed the dynamics of the volume of wastewater disposal and treatment services, the CA has concluded that in verifying the justifiability of the valid price of water**

**service, the justified to use the volume of wastewater disposal and treatment service at the level of 18 139 th m<sup>3</sup>** (Table 1 row 7: for legal persons (4 458 th m<sup>3</sup> see Table 1 row 5 column H) as well as for physical persons (13 681 th m<sup>3</sup> see Table 1 row 6 column H)) **as referred to in the tariff application by ASTV. CA came to the conclusion above on the bass of analysing the dynamics of sales volumes (article 4.1.1 of the Guidelines):**

- as in 2009 and 2010 the volume of wastewater disposal and treatment services have reduced compared to the previous year (Table 1 row 7), then in the conditions of the stabilising economy it is justified by ASTV to forecast an increase in the volume of wastewater disposal and treatment services (usually when the economy stabilises, the reduction in consumption also stops and the company's courage in forecasting an increase in service volumes is positive).
- as ASTV has not planned in the valid price of water service an increase in the length of public sewerage pipe, then planning the sales volume of wastewater disposal and treatment services in 2011 at the same level as in 2010 is justified (volume of wastewater disposal and treatment services 18 139 th m<sup>3</sup>, incl physical persons 13 681 th m<sup>3</sup> and legal persons 4 458 th m<sup>3</sup>).

## **6. Operating costs**

Pursuant to article 2.15 of the Guidelines operating costs are the costs to be included in the price, which do not include capital cost and financial cost. Pursuant to article 2.15 of the Guidelines the costs incurred by the undertaking are divided in their nature into controllable and uncontrollable.

The CA has divided the operating costs submitted by ASTV as follows (article 4.2, 4.6.1 of the Guidelines):

- Uncontrollable costs;
- Controllable costs;
- Costs of bad debts.

### **6.1 Uncontrollable costs**

According to article 4.4 of the Guidelines, uncontrollable costs are those that cannot be affected by the undertaking's operating activities, but are completely dependent on external factors beyond the undertaking (primarily legislative). In ASTV's case, uncontrollable costs are e.g. legally established environmental tax rates.

Therefore the CA considers the environmental tax rates to be justified (article 4.5 of the Guidelines) as these have been stipulated in the Environmental Charges Act (hereinafter the ECA). In the following the CA shall analyse the volumes taxable with rights of special use of water and taxable with pollution taxes, to which the tax rates set in ECA are applied.

#### **6.1.1 Fee for special use of water**

Costs calculated on the basis of the rates of special use of water in an unmanageable cost for the water undertaking (article 4.5 of the Guidelines), at the same time the undertaking must justify the water volumes taxable with rates for the special use of water.

### **CA's position on the fee for special use of water to be included in the price of water service in Tallinn and Saue**

ASTV has planned in 2011 or in the valid price of water service the fee for special use of water in the amount of 885 th € (13 854 th kr), incl. 819 th € (12 818 th kr) for Tallinn and Saue City. Thus from the total ASTV's fee for special use of use water or 92.5% ( $819 / 885 \times 100$  (multiplying by 100 is necessary in order to express the outcome in %) = 92,5%) is attributed to Tallinn and Saue City water tariffs. CA has collected ASTV's explanations regarding the formation of the fee for special use of water of 885 th € into the following table (Table 2), proceeding from the water volumes to be taxed with the fee for the special use of water and the rates of the fees for the special use of water as

established in the §1 of the Government of the Republic Decree<sup>4</sup> based on Environmental Charges Act §10 (3) (hereinafter ECA).

Table 2 Fee for special use of water

type	Type of fee	Coefficient	Rate		Total volume	EF coefficient	Total fee for special use of water	
			kroons	€			th kr	th €
A	C	D	E	F	G	H	I	J
Special use of water	E-V	1,0	1,162	0,07426	2 975 790	1,00	<b>3457,6</b>	221,0
Special use of water	O-E	1,0	1,041	0,06653	476 284	1,00	<b>495,8</b>	31,7
Special use of water	Water body	1,0	0,484	0,03,93	20 457 012	1,00	<b>9900,2</b>	632,7
<b>Total</b>							<b>13854</b>	<b>885</b>

CA, having checked the 2011 water volumes taxable with the fee for special use of water, found that these are lower than the 2010 water volumes taxable with the fee for special use of water, despite ASTV's intention to sell more water in 2011 compared to 2010 (Table 1 row 3 column H and G), which is why the CA considers the water volumes taxable with the fee for special use of water planned by ASTV in the price of water service to be justified.

ASTV has planned for 2011 the sales volume of extracted water of the entire company to be 18 752 m<sup>3</sup> and the sales volume of extracted water in Tallinn and Saue City to be 17 915 m<sup>3</sup>. Sales volume of water service in Tallinn and Saue City forms 95,5% ( $17\,915 / 18\,752 \times 100$  (multiplying by 100 is necessary in order to express the outcome in %) = 95,5) of the entire company's sales volume of water services. ASTV plans to include into the 2011 price of water service of Tallinn and Saue City the fee for special use of water of 92,54%. AS ASTV has included fee for special use of water into the price of water service of Tallinn and Saue in a smaller proportion (92,54%) that could be derived from the proportion of sales volume (95,5%), the the CA regards the proportion of the fee for special use of water of 2011 (92,5%) in the price of water service of Tallinn and Saue (from the entire ASTV's fee for special use of water) to be justified.

**Proceeding from the above, the fee for special use of water in the valid price of water service of Tallinn and Saue in the amount of 819 th € (885 (Table 2 row 4 column J)  $\times$  92,5 /100 (dividing by 100 is necessary in order to find % from the number) = 819 th €) or in the extent pointed out in the tariff application by ASTV.**

### 6.1.2. Pollution tax

In connection with true and fair reflection of the environmental objectives on the price of water service, the CA has turned to the **Ministry of Environment**. In the positions of the current supervision proceedings the CA also reflects the positions presented by the Ministry of Environment on 14.04.2011.

Water undertaking has several legal obligations for preventing the overpollution of the environment. E.g. pursuant to PWSSA §10 (1) the water undertaking must ensure the functioning and maintenance of the public water supply and sewerage system in its operating area. Treating wastewater is the obligation of the water undertaking, but this above all pursuant to the Water Act, i.e. this is its obligation in public law. Water undertaking is obliged to acquire the permit for the special use of water (Water Act §8) and to pay pollution tax as an environmental tax when pollution the water body (ECA §3, 5, 17, 20, 24). In general there are no environmental obligations for treating wastewater for the customers resulting from discharging wastewater to the sewerage system (when complying with public requirements), i.e. it does not have any additional obligations, if the water undertaking does not treat its wastewater, however, the water undertaking is held liable.

<sup>4</sup> Rates of fee for the special use of water for water extraction from water body or ground water aquifer

In order to restrain environmental pollution, the state has established with the Environmental Charges Act environmental taxes for the polluters, incl. pollution tax must be paid as environmental charge for discharging pollutants into water body or ground water (ECA §3 (2) clause 6, §5 (1), §14 (1), §17, §20, §24). The aim of applying environmental charges is pursuant to ECA §4 (1) to prevent or reduce the possible damage of discharging pollutants to the environment. On the basis of Water Act §15 (2) and §24 (2) the requirements for the treatment of wastewater have been established with the Regulation No 269 of the Government of the Republic of 31.07.2001 "Procedure for discharging wastewater into water bodies or soil". Pursuant to §5 (1) of this regulation pollution indicators of the wastewater discharged into water bodies shall comply with the pollution limit values or degrees of treatment provided in Appendix 2 of the Regulation. The choice of limit values or degree of treatment depends on the need for environmental protection and economic considerations, which will be set by the issuer of the permit for special use of water. Proceeding from the above, the requirement of wastewater treatment shall be established with the permit for the special use of water depending on the sensitivity of the recipient.

Based on the information submitted to the CA by the Ministry of Environment on 14.04.2011, with the EU Directive concerning urban wastewater treatment 91/271/EEC (hereinafter the Directive) the requirement of the nitrogen treatment efficiency of 70% has been set for ASTV, but the members states of the EU can set stricter requirements than these of the directive pursuant to the characteristics of the area if these prove to be necessary from the environment protection perspective. The Directive sets out in addition to the requirement of treatment efficiency also the possibility of implementing a concentration-based limit value, which is also applied for ASTV, by establishing for ASTV the limit value of 10 mg/l (more than 100 000 population equivalents) for nitrogen (N).

Pursuant to the permit for the special use of water No L.VV.HA-171414 issued to ASTV a limit value of 10 mg/l has been established for total nitrogen, which serves as the basis for assessing the compliance of the wastewater treatment of the water undertaking, as the permit for the special use of water does not provide an opportunity to use the degree of treatment for ASTV. If the water undertaking's concentration of wastewater with regard to total nitrogen is more than 10 mg/l, then the water undertaking's wastewater does not comply with the established requirements and the water undertaking is obliged to pay higher pollution tax for overpolluting the environment. From the response by the Ministry of Environment of 14.04.2011 to the CA it appears that the liability of paying higher pollution tax characterises the non-compliance of the activity of the water undertaking with the law. §24 (4) of the ECA sets an exception only in case when due to weather conditions the temperature of wastewater in the wastewater treatment plant reduces below 12 degrees. In such a case the technological possibilities for reducing the total nitrogen in wastewater are limited and the higher pollution tax shall not be applied in calculating the pollution tax for total nitrogen.

For analysing the justifiability of the pollution tax to be included in the price of water service, pursuant to §5 (1) of the APA (the CA has the right to establish the form of the proceeding process on the basis of discretionary power), the CA has developed and published on its website the price application form or a Questionnaire in the form of MS Excel tables. On page „Tabel F. Keskkonnatasud“ of this questionnaire there is a table that the water undertaking is obliged to fill in and that serves as a justification from the undertaking regarding the pollution taxes in the price of water service. „Tabel F. Keskkonnatasud“ has been developed on the basis of the forms regarding pollution tax that the water undertakings submit to the state on a regular basis (forms were sent to the CA by the Ministry of Environment).

Cost of pollution tax is formed when the pollution tax rates established in ECA are applied to the pollution volumes (several various types).

### **CA's position on the pollution tax for Tallinn and Saue City**

For 2011 ASTV has submitted to the CA an explanation regarding the Company's pollution taxes (2 519 th €, of which 2 307 th € is included in the price of water service of Tallinn and Saue), pursuant to

which the CA has prepared a table (see Table 3), taking as the basis the pollution loads (see Table 3 row F) and the rates established to these in ECA §20. ASTV has attributed to the price of water service of Tallinn and Saue City 91,56% (2 307 / 2 519 × (multiplying by 100 is necessary in order to express the outcome in %) = 91,56% ) of the Company's total pollution taxes. Pursuant to ASTV's explanations the pollution taxes attributed to the price of water service of Tallinn and Saue are in equal proportion with the volume of wastewater discharged and treated and volume of discharge and treatment of storm water and drainage water and other soil and surface water of Tallinn and Saue City within the volume of wastewater discharged and treated and volume of discharge and treatment of storm water and drainage water and other soil and surface water of the entire ASTV. CA is of the opinion that implementing this principle in dividing allocating pollution taxes is in every respect justified, because ASTV pays pollution tax for discharge and treatment of wastewater, storm water and drainage water and other soil and surface water, and it is fair to allocate it in between various areas on the basis of the area's volume of wastewater, storm water and drainage water and other soil and surface water.

Table 3 Calculation of pollution taxes made by the CA for 2011 on the basis of ASTV's explanations

Rea- ar	liik	Pirkond	KOEF	Tasuliik	Tasumäär 2011(€)	Kogu- kalkku	EF. KOEF	Saastetaru KOKKU (mln.kr)	Saastetaru KOKKU (mln.€)
	A	B	C	D	E	F	H	I	J
1	veezaste	TL0687	1,2	BHT7	1 379,0	54	0,5	699	45
2	veezaste	TL0687	1,2	HA	377,7	125	0,5	445	28
3	veezaste	TL0687	1,2	P	4 206,0	10	0,5	390	25
4	veezaste	TL0687	1,2	NS	2 620,0	0	0,5	3	0
5	veezaste	TL0687	1,2	OA	12 039,0	0	0,5	23	1
6	veezaste	TL0687	1,2	N	1 616,0	174	0,5	2 646	169
7	sih temperatuuril alla 12°C	TL0687	1,2	N	1 616,0	174	0,5	2 646	169
8	veezaste	TL0687	1,2	BHT7	1 379,0	128	1,0	3 310	212
9	veezaste	TL0687	1,2	HA	377,7	337	1,0	2 387	153
10	veezaste	TL0687	1,2	P	4 206,0	35	1,0	2 729	174
11	veezaste	TL0687	1,2	NS	2 620,0	1	1,0	41	3
12	veezaste	TL0687	1,2	OA	12 039,0	1	1,0	297	19
13	veezaste	TL0687	1,2	N	1 616,0	34,79	10,0	10 556	675
14	veezaste	TL0687	1,2	N	1 616,0	443	1,0	13 433	859
15	sih temperatuuril alla 12°C	TL0687	1,2	N	1 616,0	190	1,0	5 753	368
16	veezaste	HA1106	1,5	BHT7	1 379,0	0	1,0	6	0
17	veezaste	HA1106	1,5	HA	377,7	1	1,0	12	1
18	veezaste	HA1106	1,5	P	4 206,0	0	1,0	2	0
19	veezaste	HA1106	1,5	NS	2 620,0	0	1,0	0	0
20	veezaste	HA1106	1,5	N	1 616,0	0	1,0	6	0
21	KOKKU							36 984	2 364
22	Tulumaks							2806	179
23	21.02.11 ASTV salgustele kohaselt ei ole tulumaksu lisatud tšiel materjal veetootmise hinda vnaid osundatud vnaikesmas koguses							2437	156
24	Kalkku							39 421	2 519

The table (Table 3) reveals that ASTV has planned for 2011 pollution taxes in the price of water service in the sum of 2 519 th € (Table 3 row 21 column L), incl. 675 th € (9 178 th kr: Table 3 row 13 column L) from the volume of nitrogen pursuant to ECA §24 (1) applicable if pollutants have been released to a water body, ground water or soil in larger quantities and concentration than allowed. In this case in addition to the pollution tax of 2364 th € referred to in the table (Table 3 row 21 column L) the company has had to pay also income tax (Income Tax Act (hereinafter ITA) §51 (1); ITA §51 (2) clause 1; ITA §34 clause 6; calculated into the price of water service in the extent referred to in Table 3 row 23 or 156 th €).

CA regards in the price of water service as justified all the pollution taxes included in the calculation of the 2011 pollution tax by water pollution (Table 8 column "D") **except pollution tax from the volume of nitrogen, proceeding from ECA §24 (1)** (Table 8 row 13 column L) **in the amount of 675 th € + 156 th €** (156 th € is income tax that the company is paying because the undertaking's concentration of wastewater for total nitrogen will be higher than that marked on the permit for special use of water). CA cannot find it justified to include sums paid for pollution loads taxed with higher pollution tax rates based on ECA §24 (1) in the price of water service (675 th € + income tax from this amount of 156 th €, which the undertaking is paying because the undertaking's concentration of

wastewater for total nitrogen was higher than that marked on the permit for special use of water), because this cost has arisen due to a planned fact that the undertaking did not treat wastewater in the required extent, which can be regarded as the negligence of the water undertaking (confirmed by the respective information request received from the Ministry of Environment on 14.04.2011). If ASTV will pay for nitrogen pollution loads at higher pollution tax rates as specified in ECA §24 (1), then this indicates to the insufficiency of the environmental investments by the company. CA cannot accept including pollution loads taxed with a higher pollution tax rate in the price of water service. If CA accepted pollution loads taxed with a higher pollution tax then it would take away from the undertaking the motivation to invest into reducing environmental pollution, because the consumer would have to pay for the resulting costs. If CA does not find it justified to include pollution loads taxed with a higher pollution tax rate in the price of water service, then this will motivate the water undertakings to invest into eliminating pollution loads that are taxed with a higher pollution tax rate and complying with Estonian environment protection legislation. The CA considers in all respect to be justified if all the investments, which ensure the treatment of wastewater in an extent in which higher pollution tax would not apply to the water undertaking for overpolluting the environment, are included in the price of water service.

**Proceeding from the above, the CA is of the position that in the valid price of water service in Tallinn and Saue the justified pollution tax is 1 546 th € (2 364 th € - Table 3 row 21 column J minus 675 th € - Table 3 row 13 column J – pollution tax from the volume of nitrogen taxed with a higher pollution tax rate  $\times 91,56/100$  (dividing by 100 is necessary in order to find % from the number) = 1 546 th €).**

**Pursuant to APA §40 (1) the CA shall provide ASTV with a possibility to present its opinion and objections in writing regarding the volume of pollution tax in the price of water service.**

## **6.2 Controllable costs**

Pursuant to article 4.3 of the Guidelines, the controllable costs are the costs that the undertaking may influence through a more efficient economic activity (e.g. labour costs, transport costs, other operating costs).

### **CA's position regarding controllable costs**

In the analysis of the undertaking's costs the CA uses observing the dynamics of costs in time and the comparison thereof with the dynamics of the CPI. As ASTV's costs include a modest proportion on factors that are influenced by so-called world market prices, then the majority of these are stable cost components that are also of fixed nature. Therefore it is appropriate to compare the costs of ASTV (except electricity costs) as well as the costs attributed to Tallinn and Saue City with the changes to the CPI<sup>5</sup>, because the change in stable cost components mostly depends on inflation, i.e. the change in CPI. Among others, ASTV<sup>6</sup> has noted that it is capable of demonstrating efficiency in its activity, as a result of which the costs would increase in a slower rate of 1.5% than CPI. CA regards this approach justified and efficient.

The CA has prepared a table (Table 4) on the basis of the data submitted by ASTV, both in kroons and euros, for analysing the controllable costs of ASTV and Tallinn and Saue City.

Table 9 Controllable costs (actual data of 2008, 2009, 2010 and forecasted data of 2011)

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<sup>5</sup> Forecast of CPI for 2011: 4.5%. Economic forecast by the Ministry of Finance in spring 2011, 12.04.2011

<sup>6</sup> „AS Tallinna Vesi's tariff application and business plan for 2011-2015“ submitted 10.11.2010, end of page 35

Rida nr	Kontrollitavad kulud kroonides	2008			2009			2010			2011		
		ASTV tuh kr	Tallinn & Saue tuh kr	kuulu osakaal ASTV kaheldest %	ASTV tuh kr	Tallinn & Saue tuh kr	kuulu osakaal ASTV kaheldest %	ASTV tuh kr	Tallinn & Saue tuh kr	kuulu osakaal ASTV kaheldest %	ASTV tuh kr	Tallinn & Saue tuh kr	kuulu osakaal ASTV kaheldest %
A	B	C	D	E	G	H	I	J	K	L	M	N	O
1	Elektrenergia loulu	29 739	28 128	95%	31 423	31 278	98%	42 314	38 992	92,14%	49 098	43 351	88%
2	Kemikaalide loulu	22 841	21 589	95%	20 082	18 793	94%	22 425	20 664	92,14%	21 398	19 298	90%
3	Remontide-ja hooldustööd	20 056	18 579	93%	19 248	17 502	91%	22 517	20 069	89,26%	22 704	20 343	90%
4	Materjalid	4 905	4 544	93%	6 056	5 471	91%	7 660	6 827	89,26%	7 098	6 351	90%
5	Tööspordikulud	21 538	19 970	93%	19 139	17 483	91%	20 310	18 125	89,26%	21 168	18 967	90%
6	IT & sidekulud	5 826	5 397	93%	5 485	4 988	91%	4 732	4 224	89,26%	4 531	4 066	90%
7	Kandlasteelid	2 897	2 683	93%	2 852	2 557	91%	2 431	2 170	89,26%	2 418	2 167	90%
8	Koolituskulud	1 094	1 021	93%	1 170	1 064	91%	1 398	1 248	89,26%	1 382	1 267	91%
9	A- ja kontrollitavate teenuste osakaal	11 814	10 944	93%	11 821	12 568	91%	24 816	22 151	89,26%	21 066	18 875	90%
10	Muud kontrollitavad tegevuskulud	17 449	16 164	93%	16 649	15 139	91%	16 764	14 960	89,26%	8 449	7 571	90%
11	Muutuvate tegevuskulude kokku	138 289	129 823	93%	137 844	126 762	92%	165 369	149 478	90,39%	159 788	142 658	89%
12	Täienduskulud	88 422	81 911	93%	95 177	86 546	91%	90 521	80 880	89,26%	87 949	78 895	89,60%
13	Kontrollitavad kulud kokku	226 632	210 934	93%	233 821	213 308	92%	255 898	230 278	89,99%	247 729	221 462	89,39%
14	Muud kontrollitavad kulud kokku	188 458	180 894	96%	184 422	174 485	95%	123 853	110 486	89,28%	118 692	99 307	83,71%

Rida nr	Kontrollitavad kulud eurodes	2008			2009			2010			2011		
		ASTV tuh €	Tallinn & Saue tuh €	kuulu osakaal ASTV kaheldest %	ASTV tuh €	Tallinn & Saue tuh €	kuulu osakaal ASTV kaheldest %	ASTV tuh €	Tallinn & Saue tuh €	kuulu osakaal ASTV kaheldest %	ASTV tuh €	Tallinn & Saue tuh €	kuulu osakaal ASTV kaheldest %
A	B	C	D	E	G	H	I	J	K	L	M	N	O
1	Elektrenergia loulu	1 902	1 768	93%	2 136	1 998	93%	2 764	2 492	90,2%	3 137	2 771	88,31%
2	Kemikaalide loulu	1 460	1 380	95%	1 283	1 203	94%	1 433	1 323	92,3%	1 367	1 233	90,18%
3	Remontide-ja hooldustööd	1 282	1 187	93%	1 230	1 119	91%	1 439	1 289	89,5%	1 451	1 303	89,80%
4	Materjalid	313	290	93%	385	358	93%	466	437	93,7%	453	408	89,82%
5	Tööspordikulud	1 178	1 076	91%	1 223	1 112	91%	1 298	1 159	89,3%	1 353	1 212	89,60%
6	IT & sidekulud	372	345	93%	351	319	91%	300	270	90,0%	290	259	89,31%
7	Kandlasteelid	188	171	91%	180	163	91%	155	139	89,7%	155	138	89,05%
8	Koolituskulud	71	65	92%	75	68	91%	89	80	89,9%	124	108	86,30%
9	A- ja kontrollitavate teenuste osakaal	755	699	93%	803	803	91%	1 386	1 416	102,1%	1 346	1 206	89,60%
10	Muud kontrollitavad tegevuskulud	1 115	1 013	91%	1 064	968	91%	1 071	956	89,3%	548	484	88,30%
11	Muutuvate tegevuskulude kokku	8 833	8 246	93%	8 810	8 102	92%	10 569	9 553	90,4%	10 212	9 117	89,28%
12	Täienduskulud	5 651	5 235	93%	6 083	5 531	91%	5 785	5 164	89,3%	5 621	5 037	89,60%
13	Kontrollitavad kulud kokku	14 484	13 481	93%	14 893	13 633	92%	16 354	14 717	90,0%	15 833	14 154	89,39%
14	Muud kontrollitavad kulud kokku	6 931	6 448	93%	6 674	6 103	91%	7 865	7 061	89,8%	7 075	6 247	88,31%

Controllable costs of 14 154 th € (221 462 th kr) can be divided as follows:

Labour costs 5 037 th € (78 805 th kr)

Electricity costs 2 771 th € (43 351 th kr)

Other controllable costs 6 347 th € (99 307 th kr)

Cost of bad debt 312 th € (4 887 th kr)

CA shall check the justifiability of the controllable costs in the valid price of water service of Tallinn and Saue City and if all types of the controllable costs (labour costs, electricity costs, other controllable costs) are justified in the valid price of water service, then also the total controllable costs are justified.

### 6.2.1 Labour costs

A significant proportion of 35% (see Table 4 (in euros) row 12 column 2010: 5 785 / 16 354 (see Table 4 (in euros) row 13 column 2010) x 100 (multiplying by 100 is necessary in order to express the outcome in %) = 35%) of the operating costs of ASTV in 2010 form labour costs. Regarding labour costs there has been an increase of altogether 7.6% in 2009 (see Table 4 (in euros) row 12: 6 083/5 651 \*100 (multiplying by 100 is necessary in order to express the outcome in %) - 100% = 7.6%) compared to 2008. Thus contrarily to the general salary decrease tendency that took place in the economy at the referred period, ASTV has increased the salaries of its employees. With regard to 2010 there has been a decrease in the labour costs compared to 2009 (in correlation with what took place in the economy) due to a reduction in the number of employees (from 322 to 307). From the above the CA concludes that ASTV has increased efficiency, which the CA regards to be positive, by rearranging its work with a lesser amount of employees. The valid price of water service should not include an increase in labour costs, in case the volume of service provision remains approximately at the same level as last year, that is higher than the increase in CPI (4.5%), from which the efficiency

indicator allowed by ASTV has been deducted, i.e. 1.5%. On the basis of the above, if in 2010 the labour costs in Tallinn and Saue City were 5 164 th € (see Table 4 (in euros) row 12 column K), then in the valid price of water service, taking into account the increase in CPI and the efficiency allowed by ASTV, the justified labour cost is 5 319 th € ( $5\,164 \times (4,5\% - 1,5\%) / 100$  (dividing by 100 is necessary in order to find % from the number) + 5 164 = 5 319 th €). ASTV has planned the 2011 labour costs to be included in the price of water service of Tallinn and Saue City to be 5 037 th € (Table 4 (in euros) row 12 column N), which shows that ASTV is planning to demonstrate an even higher efficiency than the allowed 1.5%. Based on the above, **the CA considers as justified in the price of water service of Tallinn and Saue City the labour costs of 5 037 th € (78 805 th kr) or in the extent pointed out in the tariff application by ASTV.**

### 6.2.2 Electricity costs

ASTV purchases electricity required in production processes at the price that forms on the open market, which is why it is understandable that there was a drastic increase of 26.6% in the electricity costs in 2010 compared to 2009 (see Table 4 (in euros) row 1 columns “ASTV” respectively 2010 and 2009:  $2\,704 / 2\,136 \times 100$  (multiplying by 100 is necessary in order to express the outcome in %) - 100 = 26.6%), when the market opened and the electricity cost for consumers who purchase from open market, which also include ASTV. As ASTV started to purchase electricity from open market only on 01.04.2010, the impact of the total price increase resulting from the opening of the electricity market did not appear so much in 2010 (transfer to open market took place in April, i.e. for 3 months electricity was still purchased with the closed market price), but rather in 2011 (increase in electricity purchase cost in 2011 compared to 2009 see Table 4 (in euros) row 1 columns N and H:  $38,6\% : 2771 / 1\,999 \times 100$  (multiplying by 100 is necessary in order to express the outcome in %) - 100% = 38,6%).

For assessing the electricity costs in the valid price of water service the CA takes into account the following circumstances:

- **In purchasing electricity ASTV has proceeded from the electricity provider who made the best offer.**
- **The price of the electricity offered by the electricity provider who made the best offer does not differ from the average electricity price forming on the open market.**

Based on abovementioned, the electricity cost in the sum of 2 771 th € ( $1\,999$  (Table 4 row 1 column 2009 „Tallinn ja Saue“)  $\times 38,6\% / 100$  (dividing by 100 is necessary in order to find % from the number) + 1 999 = 2 771 th €) in the valid price of water service in Tallinn and Saue City are justified.

**Thus the CA considers as justified in the valid price of water service the electricity costs of 2771 th € (43 351 th kr) or in the extent pointed out in the tariff application by ASTV.**

### 6.2.3 Other controllable costs (controllable costs reflected in Table 4 row 14 without electricity costs and labour costs)

CA has prepared a table (see Table 5) for the other controllable costs.

Table 5 Other controllable costs (actual data of 2008, 2009, 2010 and forecasted data of 2011)

Item	Kontrollitavad kulud	2008			2009			2010			2011		
		ASTV	Tallinn & Saue	Tallinn & Saue kulu ASTV kulu %	ASTV	Tallinn & Saue	Tallinn & Saue kulu ASTV kulu %	ASTV	Tallinn & Saue	Tallinn & Saue kulu ASTV kulu %	ASTV	Tallinn & Saue	Tallinn & Saue kulu ASTV kulu %
A	B	C	D	E	G	H	I	J	K	L	M	N	O
1	Muud kontrollitavad kulud (rub. kr)	108 450	100 894	93,0	104 422	95 485	91,4	123 053	110 486	89,8	110 602	99 307	89,7
2	Muud kontrollitavad kulud (rub. €)	6931	6448	93,0	6674	6103	91,4	7865	7061	90,0	7075	6347	90,0
3	Kalade muudat sõltuvalt veidi				-3,71	-5,36		17,84	15,71		-10,08	-10,12	
4	Hinnastus*				-0,1	-0,1		3,0	3,0		4,5	4,5	

\* Data regarding CPI taken from the website of Statistics Estonia.

When assessing the justified other controllable costs in the valid price of water service, the CA shall proceed from the principle that in 2008 (6 448 th € Table 5 row 2 column D) other controllable costs would not exceed the change in CPI and assumes that in managing ASTV has also achieved certain efficiency, i.e. that other controllable costs have changed in time less compared with the change in CPI.

Proceeding from the above, (Table 5 row 4 column 2009, 2010, 2011, change in CPI in the period reviewed) the CA is of the position that the level of other controllable costs in the price of the water service valid for Tallinn and Saue City by ASTV in the amount of 6 347 th € (Table 5 row 2 column N) or in the sum presented in the tariff approval application by ASTV was justified.

**Proceeding from the above, the CA considers as justified in the price of water service of Tallinn and Saue City the other controllable costs in the sum of 6 347 th € or in the extent pointed out in the tariff application by ASTV.**

#### **6.2.4 Costs of bad debts.**

Pursuant to article 4.6.1 of the Guidelines costs for bad debts shall not be included in the prices for water service.

#### **CA's position regarding bad debts.**

CA does not accept that costs of bad debts are included in the price of water service, because no consumer correctly paying the invoices agrees to pay through the price of water service the invoices that have not been paid to by the debtors to the water undertaking. If to accept that costs of bad debts are included in the price of water service, then this would take off the motivation of the companies to deal with debtors and the consumers who have so far paid their invoices correctly will lose motivation to pay the invoices in future. CA is of the opinion that bad debts must be collected through court.

**Due to the abovementioned reasons the CA does not accept the cost of bad debts (312 tuh €) in the price of water service. The price of water service that would include the cost of bad debts would not comply with the principles of PWSSA §14 (2) and article 4.6.1 of the Guidelines.**

**Pursuant to § 40 (1) of the APA the CA shall grant ASTV a possibility to provide its opinion and objections in a written form regarding including the costs of bad debt into the price of water service.**

## **7. Calculation of regulatory asset base, capital expenditure and justified return**

### **7.1 Principles of calculating regulatory asset base**

Pursuant to article 2.14 of the Guidelines fixed assets and working capital used in the regulated activity are the regulatory asset base.

Pursuant to article 5.4 of the Guidelines it is necessary to determine the regulatory asset base for calculating the capital expenditure (depreciation of asset) and justified return.

Pursuant to article 5.6 of the Guidelines the following shall not be included into the regulatory asset base:

- 1) Fixed assets used in non-core activity;
- 2) Long-term financial investments;
- 3) Intangible fixed assets (except for computer software and programmes' licences and connection fees paid to other water undertakings);
- 4) Fixed assets acquired through grant aid (incl. through government grants);
- 5) Fixed assets acquired from the connection fees paid by the consumers;
- 6) Unjustified investments.

Pursuant to article 5.7 of the Guidelines when calculating the value of regulatory asset base, the residual book value at the end of the regulation period is used (Pursuant to article 2.12 of the Guidelines regulation period is a 12-month period, the costs and justified return of which serve as the basis for calculating the prices). Pursuant to §15(1) of the Accounting Act, the aim of the annual accounts (pursuant to §15(2) of the Accounting Act the annual accounts includes also the balance sheet) is to give a true and fair view of the company's financial position, financial results and cash flows. Pursuant to §18 (1) of the Accounting Act balance sheet is a financial statement that shows the financial position (assets, liabilities and owners' equity) of an accounting entity at a given date. Pursuant to §16 (7) of the Accounting Act the objectivity principle – information presented in financial statements shall be objective and reliable – shall be taken into account in preparing the annual accounts. Thus when analysing the justifiability of the current price of water service, it is justified to take as the basis the forecast for the end of 2011 of the book value of the fixed assets prepared by ASTV on the basis of the annual accounts. The CA has no basis to assume as if the data submitted by ASTV would be in contradiction with the best accounting practices.

### **CA's position regarding the value of regulatory asset base in the price of water service of Tallinn and Saue City**

The rate of return of monopoly companies must be restricted, which is also set out in § 14 (2) clause 5 of the PWSSA, which stipulates that the price of water service must be established such that the water undertaking can operate with justified profitability on invested capital. ASTV is a monopoly, being in a dominant position for its consumers, which is why the consumers do not have the option of purchasing the PWSS service from competitive companies. Proceeding from that, generally recognised price regulation principles have been formed both in Europe as well as elsewhere in the world, one aim of which is restricting the return. Without restricting the return a company in a dominant position would have an opportunity to earn excess profit from the expense of consumer and without the intervention of the regulator (in this case the CA) the consumer would have to pay up the possible excess profit of the company in a dominant position because the consumer does not have an alternative choice.

Table 6 Values of fixed assets submitted to the CA by ASTV in the tariff application review proceeding (actual data of 2008, 2009, 2010 and forecasted data of 2011)

		2008	2009	2010	2011
<b>Acquisition value of fixed assets at the beginning of the year</b>	th €	<b>190 792</b>	<b>196 172</b>	<b>199 111</b>	<b>203 844</b>
<b>Residual value of fixed assets at the beginning of the year</b>	th €	<b>124 068</b>	<b>125 497</b>	<b>126 696</b>	<b>127 466</b>
Invested into the acquisition of fixed assets	th €	<b>6 904</b>	<b>6 218</b>	<b>5 916</b>	<b>10 338</b>
Calculated depreciation of fixed assets	th €	<b>5 309</b>	<b>5 181</b>	<b>5 083</b>	<b>5 044</b>
Fixed assets sold in acquisition value	th €	<b>1 341</b>	<b>792</b>	<b>1 131</b>	
Fixed assets sold in residual value	th €	<b>16</b>	<b>6</b>	<b>12</b>	
Fixed assets in acquisition value written off	th €				
Fixed assets in residual value written off	th €				
Reclassified fixed assets in acquisition value	th €	<b>182</b>	<b>30</b>	<b>51</b>	
Reclassified fixed assets in residual value	th €	<b>150</b>	<b>30</b>	<b>51</b>	
Other changes in the calculation of fixed assets in acquisition value	th €				
Other changes in the	th €				

calculation of fixed assets in residual value					
<b>Acquisition value of fixed assets at the end of the year</b>	<b>th €</b>	<b>196 172</b>	<b>201 568</b>	<b>203 844</b>	<b>214 182</b>
<b>Residual value of fixed assets at the end of the year</b>	<b>th €</b>	<b>125 497</b>	<b>126 498</b>	<b>127 466</b>	<b>132 759</b>

\* 2010 acquisition value and residual value of fixed assets at the beginning of the year are different from the 2009 acquisition value and residual value of fixed assets at the end of the year, due to the changes carried out in the accounting by ASTV (see Annex 2 to ASTV's 2010 annual accounts)

Pursuant to article 5.7 of the Guidelines, component  $RAB_r$  of ASTV's regulatory asset base will be formed, which is justified to be used when verifying the compliance of the price of water service in Tallinn and Saue City with the law, which in 2011 is as per ASTV's forecast 132 759 th € (2 078,2 mln kr Table 6 column 2011 last row or residual value of fixed assets at the end of 2011).

Pursuant to article 5.8 of the Guidelines the regulatory asset base at the regulation period is calculated as follows:

$$RAB = RAB_r + WC,$$

where:

$RAB$  - regulatory asset base;

$RAB_r$  - residual book value of regulatory asset base at the end of a regulation period;

$WC$  - working capital (Pursuant to article 5.9 of the Guidelines 5% of the allowed sales revenue of the regulation period shall be taken as the basis for calculating the working capital).

5% has been taken as the amount of the working capital similarly to the basis of §8 (7) of the Decree of the Minister of Economic Affairs and Communications "Terms and conditions and procedure for establishing a price for water service"<sup>7</sup> prepared on the basis of PWSSA §10. Pursuant to page 7 (in the middle) of the explanatory note to the Decree of the Minister of Economic Affairs and Communications "Terms and conditions and procedure for establishing a price for water service" 5% of the allowed sales revenue shall be considered as the working capital, as according to the economic practices the working capital of a reasonably managing company in the balance sheet is on an average 5% of the sales revenue. The internal turnover of other companies belonging to a vertically integrated group shall not be taken into account when determining the working capital in order to prevent cases where the water undertakings establish a company belonging to the group to whom they will first sell the service to be provided by them and then the other company will, in turn, sell it on to consumers, thus the working capital is already a twice higher amount.

Proceeding from the above, when calculating the working capital (component WC in the regulatory asset base) the CA takes as the basis the sales revenues in Tallinn and Saue City forecasted by ASTV as referred to in § 14 (1) of the PWSSA, proceeding from the product of the price of water service and the sales volume (see Table 10):

- Sales revenue for water extracted 22 565 th € (Table 10 row 1 or 13 175 + Table 10 row 2 9 390 = 22 565 th €);
- sales revenue from leading off and purifying waste water 18 205 th € (Table 10 row 3 or 10 672 th € + Table 10 row 4 or 7 533 = total 18 205 th €);
- a charge for leading off and purifying storm water, drainage water and other soil and surface water 3 678 th € (Table 10 row 5).

Sales revenue totals 44 448 th €

Pursuant to article 5.9 of the Guidelines the amount of working capital is 2 222,4 th € (44 448 x 5 (working capital) /100 (dividing by 100 is necessary in order to find % from the number) = 2 222,4 th €).

<sup>7</sup> <https://www.riigiteataja.ee/akt/105112010005>

Thus pursuant to article 5.8 of the Guidelines the value of the regulatory asset base is 134 981.4 th € (132 759 th € + 2 222.4 th € = 134 981.4 th €).

Pursuant to § 40 (1) of the APA the CA shall grant ASTV with a possibility to provide its opinion and objections in a written form regarding the formation of the value of regulatory asset base that serve as the basis for the formation of the valid price of water service.

## 7.2 Principles for calculating capital expenditure

### CA's position regarding the capital expenditure to be included in the price of water service of Tallinn and Saue City.

Pursuant to article 5.1 of the Guidelines capital expenditure is a cost to be included in the price of water service that is related to the acquisition of fixed assets. Pursuant to article 5.2 of the Guidelines the aim of the capital expenditure is to earn back the expenses made for the acquisition of fixed assets through the price of water service during the useful lifespan of the fixed assets. Pursuant to article 5.3 of the Guidelines capital expenditure is calculated from the depreciable fixed assets included within the regulatory asset base. Pursuant to article 5.7 of the Guidelines in the calculation of the capital expenditure, depreciation rate on regulatory assets base reflected in the accounting shall be used.

Pursuant to the table (Table 6 row "Calculated depreciation of fixed assets" column 2011) prepared by the CA on the basis of the data from the accounting presented by ASTV the depreciation rate on regulatory assets reflected in accounting in 2010 is 5 044 th €.

The CA has prepared a table (Table ) on the lifespans of the assets reflected in accounting by ASTV:

Table 7 Life spans

	ASTV's data	KIK recommendation*
Networks pipeline	54 years	40 years
Production buildings	80 years	40 years
Reservoirs and tanks	60 years	40 years
Machinery and equipment	10,6 years	15 years
Weighted average lifespan of assets at the regulation period	41 years	

\* Ministry of Environment Decree No 34 of 01.07.2009, useful lifespans of assets reflected in clause 10 of Annex 2 "Guidelines for preparing the feasibility study, financial and economic analysis and provisional environmental impact assessment for a project if the application for co-financing the project is submitted to the EU Cohesion Fund".

From the data reflected in the table (see Table 7) it may be concluded that ASTV generally uses a longer lifespan of assets in its accounting than is recommended in the regulation of the Ministry of Environment (economically useful lifespan). The longer the lifespan of assets used in the provision of PWSS services, the lesser the price of water service. At the same time, the higher is the regulatory asset base, as the value of assets decreases slower (through deducting the depreciation from the value of regulatory asset base at the beginning of the year, the value of regulatory asset base at the end of the year is formed, which pursuant to article 5.8 of the Guidelines serves as a basis for calculating justified return), and this, in turn, increases the service price.

As in its accounting when establishing the lifespan of assets ASTV has followed the actual technical service life of the assets (which is longer than the economically useful lifespan), due to which the application of a longer lifespan to assets decreases the sum of amortisation in the price, and enables the consumers a smoother increase in prices of water service when the company performs new investments, then, based on article 5.7 of the Guidelines, the CA deems it **justified to include in the price of water service the forecast of the depreciation.**

Pursuant to the above, capital expenditure in the amount of 5044 th € (see Table 11 row “Calculated depreciation of fixed assets” column “2011”) is justified in the price of water service or in the extent pointed out in the tariff application by ASTV.

### 7.3 Principles of the calculation of justified return

#### CA’s position on justified return.

Pursuant to the PWSSA § 14 (2) clause 5 the price of water service shall be established such that the water undertaking can operate with justified profitability on the **capital invested** by the water undertaking. Pursuant to the article 5.7 of the Guidelines, when determining the value of regulatory asset base the residual value of the fixed assets used in the regulated activity as reflected in the company’s accounting shall be used, to which pursuant to article 5.8 of the Guidelines the working capital will be added (see clause 7.1 of this analysis). Thus the invested capital is equal to the regulatory asset base.

According to the articles 6.1 and 6.2 the justified return is calculated by multiplying the value of regulatory asset base with a justified rate of return:

$$JR = r_p \times RAB;$$

where:

- $JR$  - justified return;
- $r_p$  - justified rate of return (WACC);
- $RAB$  - regulatory asset base.

Based on the article 6.3 of the Guidelines, the justified rate of return equals with the weighted average cost of capital (WACC) i.e.:

$$r_p = WACC.$$

Based on the article 6.5 of the Guidelines, when calculating the WACC the CA uses capital structure, of which 50% is debt and 50% equity.

In order to provide more detailed explanations of the principles outlined in articles 6.4 to 6.10, the CA has developed guideline materials named “Guidelines for calculating WACC (2011)” for calculating WACC for distant heating, electricity, gas and water companies, which are published on CA’s webpage <http://www.konkurentsiamet.ee/?id=18324>. Table 5 in clause 3 of these guidelines sets out a **WACC of 8,18% for water undertakings**, the basis for the calculation of which is set out in the following table (see Table ).

Table 8 Weighted average cost of capital in 2011

WACC calculation (%)	water undertakings
1. Yield of risk-free 10-y German bonds	3,58
2. Estonian country risk premium	1,9
3. Risk premium of the debt of an undertaking	1
<b>4. Pre-tax cost of debt</b>	<b>6,48</b>
1. Yield of risk-free 10-y German bonds	3,58
2. Estonian country risk premium	1,9
7. Market risk premium (McKinsey)	5
8. Beta (gearing 50%:50%)	0,88
<b>9. Pre-tax cost of equity</b>	<b>9,88</b>
10. Debt/equity ratio (50%:50%)	0,5
<b>11. WACC</b>	<b>8,18</b>

“Guidelines for calculating WACC (2011)” includes detailed explanations and reasoning for calculating and using each of the components used in the calculation of WACC (risk-free 10-year German bond rates, Estonian country risk premium etc).

In its justified profitability calculations CA follows the value of WACC of 8.18% included in the table (see Table 8).

**Thus as per PWSSA §14 (2) clause 5 and Article 6 of the Guidelines the justified profitability in the valid price of water service of Tallinn and Saue City will be 11 041,5 th € or 172 762 th kr (regulated assets 134 981.4 th € x 8,18 (WACC) / 100 (dividing by 100 is necessary in order to find % from the number) =11 041,5 th €).**

**Based on §40 (1) of the APA, the CA shall give ASTV an opportunity to present in writing its opinions and counterclaims with regard to justified return in the valid price of water service.**

## 8. Conclusion

Proceeding from PWSSA §14 (2) and the Guidelines, which served as the basis for the positions of the CA expressed in this analysis regarding the allowed sales revenue (costs, depreciation rate and justified return) that served as the basis for calculating the valid price of water service of Tallinn and Saue City, the CA has prepared the following table (see Table 9):

Table 9 Allowed sales revenue pursuant to PWSSA §14 (2)

No		CA's position th €	Reasoning in the analysis
1	Water resource tax	819	Clause 6.1.1
2	Pollution tax	1 546	Clause 6.1.2
3	Labour costs	5 037	Clause 6.2.1
4	Electricity costs	2 771	Clause 6.2.2
5	Other uncontrollable costs	6 347	Clause 6.2.3
6	Cost of bad debts	0	Clause 6.2.4
7	Depreciation rate	5 044	Clause 7.2
8	<b>Justified return</b>	11 042	Clause 7.3
9	Costs, depreciation rate and justified return aka allowed sales revenue that serve as the basis for calculating the price of water service	32 605	

CA checked on the basis of valid price of water service and sales volume how high is the sales revenue of ASTV in Tallinn and Saue City (see Table 10) and whether it complies with the requirements set in PWSSA §14 (2).

Table 10 ASTV's sales revenues in case of the price of water service valid in Tallinn and Saue

No	Tallinn and Saue City	volume	unit	price	unit	th €
ASTV's sales revenues						
1	Volume of extracted water physical persons	13 868	th m <sup>3</sup>	0,95	€/m <sup>3</sup>	13 175
2	Volume of extracted water legal persons	4 047	th m <sup>3</sup>	2,32	€/m <sup>3</sup>	9 390
3	Wastewater disposal and treatment service physical persons	13 681	th m <sup>3</sup>	0,78	€/m <sup>3</sup>	10 672
4	Wastewater disposal and treatment service legal persons	4 458	th m <sup>3</sup>	1,69	€/m <sup>3</sup>	7 533
5	Discharge and treatment of storm water and drainage water and other soil and surface water + hydrants					3 678
6	<b>Total</b>					<b>44 447,7</b>

From the above it appears that ASTV's price of water service valid in Tallinn and Saue City enables the company to receive a sales revenue of 44 447,7 th € (see Table 10 row 6 last column). Pursuant to PWSSA §14 (2) ASTV can receive a sales revenue of 32 605 th € (see Table 9 row 9 column "CA's position th €"). Therefore with the price of water service currently valid in Tallinn and Saue City ASTV earns a sales revenue that exceeds by 36% ( $44\,447,7 / 32\,605 \times$  (multiplying by 100 is necessary in order to express the outcome in %) - 100% = 36%) the extent of the allowed sales revenue as calculated on the basis of PWSSA §14 (2) and the Guidelines.

As ASTV's sales revenue is 36% higher than that provided with PWSSA §14 (2), then this enables the CA to conclude that also the valid price of water service has not been formed as per PWSSA.

Pursuant to §40 (1) of the Administrative Procedure Act an administrative authority shall, before issue of an administrative act, grant a participant in a proceeding a possibility to provide his or her opinion and objections in a written, oral or any other suitable form.

Pursuant to PWSSA §15<sup>5</sup> Competition Authority is entitled to issue to ASTV a precept for bringing the price of water service into compliance with the provisions of PWSSA. In the event of failure to comply with a precept specified in PWSSA §15<sup>5</sup> (1) the CA is entitled to impose a coercive measure pursuant to the procedure provided for in the Substitutive Enforcement and Penalty Payment Act.

Pursuant to PWSSA §16 (9), in the event of failure to comply with a precept the CA is entitled to establish a temporary price of water service for ASTV.

On the basis of §40 (1) of the Administrative Procedure Act, the CA hereby shall provide ASTV with a possibility to submit its positions regarding the price components that serve as the basis of the valid price of water service **at the latest by 9 June 2011**, taking into account the positions presented by the CA in this letter. After the receipt of the reasoning and explanations from ASTV to the positions referred to in this letter, the CA shall adopt a final decision regarding the compliance of the valid price of water service with the PWSSA.

In case ASTV shall not submit its additional explanations regarding the circumstances pointed out in this letter by 9 June 2011 the latest, the CA shall adopt a decision on the basis of the positions reflected in this letter.

Sincerely,

*/signed digitally/*

Märt Ots  
Director General