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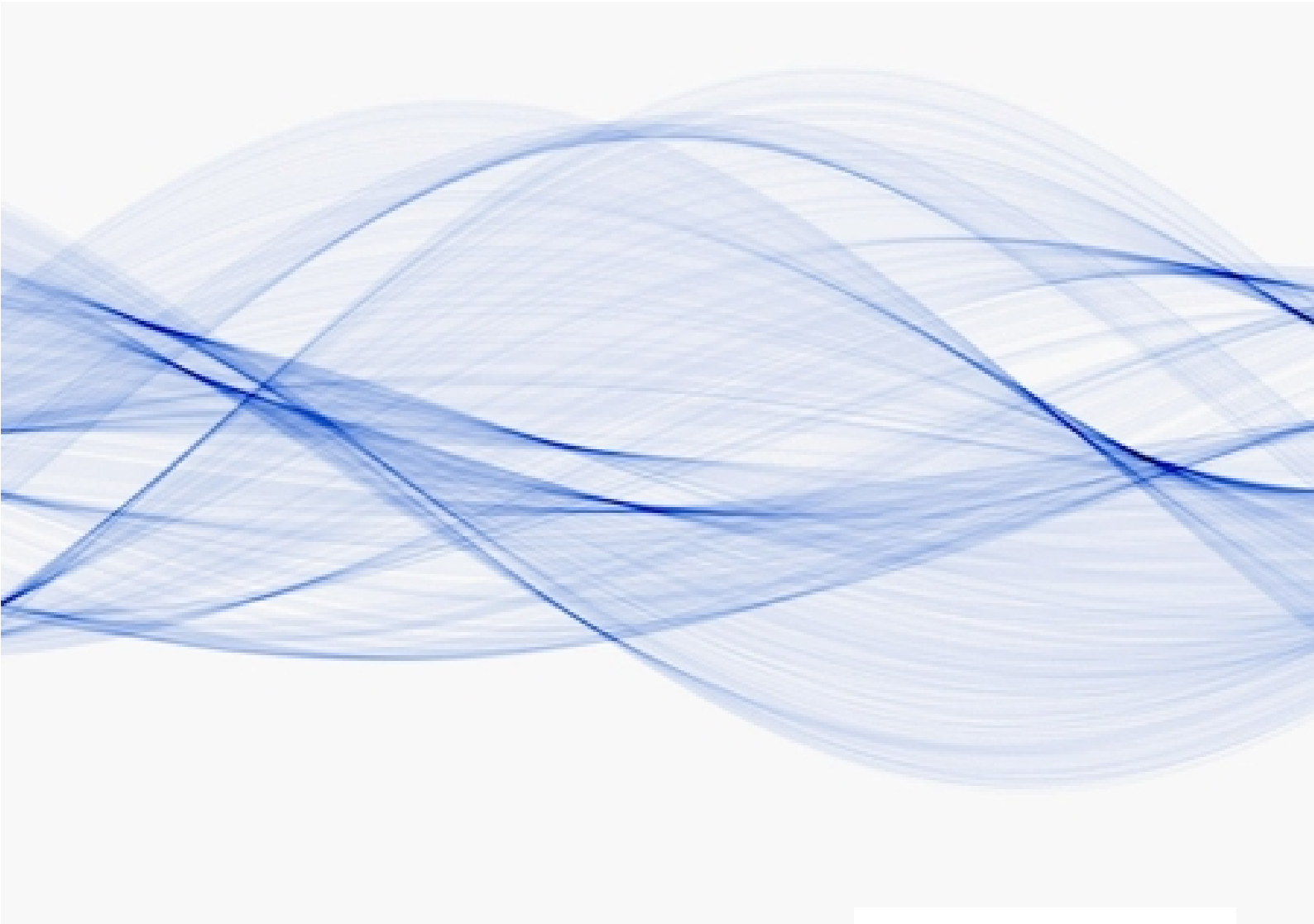
ZYRA RREGULLATORE PËR UJËSJELLËS DHE MBETURINA
REGULATORNI URED ZA VODOVOD I OTPAD
WATER AND WASTE REGULATORY OFFICE

ZRRUM

2012 – 2014 WATER SUPPLY AND WASTEWATER TARIFFS

A report on the outcomes of the 2012 – 2014 tariff review for the seven licensed regional water supply and wastewater services companies



Pristina, December 2011

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Water and Waste Regulatory Office

Vision

"Water and solid waste utilities delivering a consistent, good quality and efficient service to all customers throughout Kosovo."

Mission

"To regulate the water and solid waste sectors in a transparent and equitable manner in accordance with good European practice which ensures that the water and solid waste utilities deliver a qualitative, sustainable, reliable and affordable service throughout Kosovo, with respect for both the environment and for public health."

2012 - 2014

WATER SUPPLY AND WASTEWATER TARIFFS

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Acronyms and abbreviations

CAPM	Capital Asset Pricing Model
CCC	Customer Consultative Committee
ECLO	European Commission Liaison Office
EU	European Union
FE	Regional Water Company Bifurkacioni (Ferizaj)
GJA	Regional Water Company Radoniqi (Gjakova)
GJI	Regional Water Company Hidromorava (Gjilan)
KEPA	Kosovo Environmental Protection Agency
MESP	Ministry of Environment and Spatial Planning
MIT	Regional Water Company (Mitrovica)
NIPH	National Institute of Public Health
PE	Regional Water Company Hidrodrini (Peja)
POE	Publicly Owned Entrerprise
PR	Regional Water Company Prishtina (Pristina)
PZ	Regional Water Company Hidroregjioni (Prizren)
RAB	Regulatory Asset Base
RWC	Regional Water Company
WWRO	Water and Waste Regulatory Office

FOREWORD

We are pleased to be able to set out the new water and wastewater tariffs that will apply to each the seven regional water companies (RWCs) for the three years from 1 January 2012. This document explains the process and the basis on which hawse have determined these tariffs and sets out the assumptions behind our decisions.

Our role is to balance customer interests with the need to maintain the financial integrity of the RWCs. We have a duty to ensure that the RWCs operate as efficiently as possible to ensure that customers pay no more than is necessary. In setting these tariffs we have also had regard to the ability of customers to pay their bills.

The new tariffs provide for real increases in household water supply and wastewater bills of between 3% and 12% each year across all seven RWCs. Put another way average household water and wastewater bills will rise from their current levels of EUR 6.99 a month to EUR 8.49 a month by 2014. Any increase in inflation will be on top of these tariffs. Customers in some RWC regions will pay more and others will pay less. Commercial tariffs will increase in real terms by approximately 4% per year but commercial customers will still be paying more than twice that of household customers.

We believe that customers will be able to afford these increases. We have noted that customer complaints about poor service have increased and as a result we are confident that customers will be willing to pay more to secure improvements in their water and wastewater services. As part of the process of setting these tariffs we consulted with the Customer Consultative Committees who represent customers' interests.

In 2008 we moved towards a three year tariff review process that was based on forward-looking projections of costs, capital investment and an allowance for a return on capital sufficient to attract investors into the sector. We have now completed our second three year tariff review. We believe our assumptions on tariff levels this time are more robust than in 2008. The water companies have been able to provide us with improved data in their business plans on which we can base our tariff decisions and we have learned to be more conservative in our expectations of efficiency improvements.

It is important that the RWCs recognise that the business plans they submitted and which we have used for the basis of our tariff setting are an implicit *"contract of obligations"* in exchange for the prices agreed. Although the RWCs are not expected to undertake additional activities not provided for in their business plans and not reflected in the tariffs we have set, we will be relentless in our determination to ensure that the RWCs meet their obligations. We shall rigorously monitor performance relative to such obligations and we will not hesitate to publicly rebuke those RWCS that fail to meet them. In the extreme we will refer serious failures to Government with recommendations for strong action to be taken.

In July 2011 WWRO published its annual report on the performances of the licensed water and wastewater companies in the previous year. During 2010 the RWCs only carried out about 10% of their planned investment in improving services. Over the next three years this has to improve. We have made realistic allowances for investment but to finance this investment it is necessary for the RWCs to improve their revenue collection from customers. Without this money the RWCs are powerless to meet their level of service and investment obligations.

Customers must also play their part. Bills must be paid. WWRO is working with the companies to ensure that firm but fair disconnection policies are in place. Where people are suffering genuine hardship they should be given help but we have to eradicate this *"won't pay"* mentality that is all too prevalent amongst those who can afford to pay.

I would like to thank the RWCs for their co-operation in preparing their regulatory business plans. The tariff setting process is still not perfect but I hope that we will continue to work together in the

interests of customers to ensure that Kosovo's water and wastewater sector can begin to measure up to that of other European countries.

Tariffs in Kosovo are still well below those in other European countries where service levels are much higher. In the longer run tariffs will have to increase substantially more than the increases set out in this report. This is especially true of wastewater where the long term investment necessary to meet EU environmental requirements will be substantial.

Finally my thanks go to my staff at WWRO and all who have supported us through this tariff setting process. In particular I would like to thank the European Commission Liaison Office (ECLO) for their support in the preparation of this report through the support provided by the IPA-led consortium of consultants as part of the *"Further Institutional Strengthening Support to the WWRO Project".*

Raif Preteni

Director WWRO

December 2011

ROLE AND RESPONSIBILITIES OF WWRO

The Water and Waste Regulatory Office (WWRO) was originally established in 2004 through UNMIK Regulation 2004/49 which was subsequently superseded by Law No. 03/L-086 as passed by the Kosovo Assembly in June 2008. According to this Law we report our activities and are accountable to the Kosovo Assembly.

Our role as an economic regulator for the water supply, wastewater and solid waste sectors is to ensure that the regulated service providers (the publicly-owned and socially-owned providers of water, wastewater, and solid waste services) do not abuse their monopoly positions by ensuring that they provide a reasonable standard of service at a fair price and that their rights and obligations, and those of their customers, are fairly balanced and enforced. To achieve this role we undertake the following principal activities:

- Setting tariffs at levels sufficient for the service providers to finance their activities in accordance with obligatory standards of service and acceptable level of service expectations, but at the same time promoting efficiency to ensure that prices are no higher than they need to be.
- Ensuring that service providers meet their level of service obligations.
- Issuing licences to the water and waste service providers.
- Stimulating competition in the water and waste sectors through benchmarking and regular performance reporting.
- Safeguarding customers' interests by ensuring that the regulated service providers do not abuse their monopolistic positions and ensuring that services are provided in accordance with established and appropriate standards of service.
- Establishing and supporting Customers' Consultative Committees (CCC).
- Providing a mechanism for customers to pursue complaints against service providers through the CCCs and ultimately to the WWRO directly.

In accordance with good regulation practice our approach is output driven. We are primarily concerned with the levels of service and overall costs. We do not, therefore, directly interfere with the day-to-day management of the regulated service providers, leaving this responsibility to their management teams and boards. Furthermore, we do not have any jurisdiction over private water supplies, bottled water providers or non-POE operators providing water supply services outside the POEs' defined areas of supply, e.g. rural water supply. Similarly, we have no regulatory jurisdiction over the many informal private waste collection operators.

We are not responsible for setting drinking water quality standards or for monitoring drinking water quality. This is the responsibility of the National Institute of Public Health (NIPH). However we do work closely with the NIPH, especially with respect to sharing information on compliance with water quality standards and we have a Memorandum of Understanding with NIPH.

Similarly, we are not responsible for the protection of the environment. This is the responsibility of the Ministry of Environment and Spatial Planning (MESP) and the Kosovo Environmental Protection Agency (KEPA). However our approach is to ensure that our policies and procedures do not harm the environment or public health and to cooperate closely where possible with other regulators.

KEY OUTCOMES

Note: the outcomes described below refer to sector averages. Charges to individual customers will vary depending upon which RWC the customer is served by and the volume of water consumers. Furthermore, targets of performance for specific RWCs will also vary.

Tariffs and household charges

- Fixed fee water charges will remain frozen at current levels of EUR 1.00 per household per month for households and EUR 3.00 for commercial and institutional customers until the end of 2014.
- Volumetric water tariffs will increase in real terms, on average, by 6.4% per year for households and 1.8% per year for commercial and institutional customers.
- Volumetric wastewater tariffs will increase in real terms, on average, by 19.2% per year from their already very low levels.
- The combined effect of water and wastewater charges equates to approximately 6.7% real increase in household charges each year.
- The impact on household bills will be an average annual increase from the current average levels of EUR 6.99 per household per month to EUR 7.43 per month in 2012 rising to EUR 8.49 per household per month in 2014. Adjustments for inflation will be added to these charges.
- These increases are necessary to finance much needed investment in the sector in response to customer dissatisfaction with the poor levels of service.
- The tariffs have been designed to ensure that there is no cross-subsidy between water and waste water tariffs.
- For water supply tariffs the cross-subsidy from non-household to household customers has been reduced marginally.

Efficiency improvement expectations

- The RWCs are expected to reduce their combined annual operating costs on average over the three year period by EUR 2.07 million from EUR 17.01 million to EUR 14.94 million.
- The RWCs are expected to increase their revenue collection performance from 60% (household customers), 75% (commercial) and 89% (institutional) to 69%, 87% and 97% respectively by 2014.

Capital investment

- The RWCs are expected to carry out an investment programme for water supply of EUR 66 million (EUR 21 million from their own resources and EUR 45 million funded by grants) over the period 2012 – 2014. This equates to EUR 250 per water supply customer over three years, or EUR 83 per year.
- The RWCs are expected to carry out an investment programme for wastewater services of EUR 29 million (EUR 4 million from their own resources and EUR 25 million funded by grants) over the period 2012 – 2014. This equates to EUR 142 per wastewater customer over three years, or EUR 47 per year.

Growth and levels of service

- Through the investment programme the RWCs are expected to increase the number of water customers by over 10,000 per year rising from 248,000 in 2011 to 279,000 in 2014. This equates to water supply service coverage increasing from 75% in 2011 to 80% in 2014.
- Similarly, wastewater customers are also expected to increase by 10,000 per year rising from 187,000 in 2011 to 217,000 in 2014. This equates to wastewater service coverage increasing from 53% in 2011 to 60% in 2014.

RWC CONTRACTS OF OBLIGATIONS

The final agreed business plans constitute implicit contracts of obligations whereupon the regulator agrees to tariffs based upon a commitment by the RWCs to deliver the outcomes as set out in the business plans. Failure to achieve one target will have serious repercussions on other targets, e.g. failure to achieve growth and revenue collection targets will result in income less than planned and thereby inhibit the RWCs' abilities to meet their investment obligations. Although the targets are demanding we believe them to be achievable but for true success the RWCs should strive to meet or exceed all of the targets rather than some of them.

We have identified the key drivers for the successful achievement of the tariff review and have scheduled them below for each RWC as a 'Contract of Obligations'.

Regional Water Company Prishtina (Pristina)

	RWC Obligation			
Operating cost efficiency				
Water supply services	Reduce annual operating costs from the submitted level of EUR 6.562,000 to EUR 5.373,000, a reduction of EUR 1.190,000 (at 2011 price levels). The bulk of the reduction in operating costs (EUR 992,000) is expected to be derived from improved efficiency in water supply business activities with the remaining reductions expected from efficiency gains in water resources/treatment and distribution activities.			
Wastewater services	Reduce annual operating costs from the submitted level of EUR 216,000 to EUR 201,000, a reduction of EUR 15,000 (at 2011 price levels), largely through efficiency improvements in wastewater collection activities.			
Commercial (revenue collection) efficiency		Households	Commercial	Institutional
	2011 (current)	58%	90%	98%
	2014 (minimum)	67%	96%	100%
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)		RWC resources	Grants	Total
Water supply	Infrastructure renewals	9,436	9,011	18,447
	Infrastructure enhancement	1,110	200	1,310
	Non-infrastructure capital maintenance	1,965	360	2,325
	Non-infrastructure enhancement	4,032	4,327	8,358
	Total	**16,543**	**13,897**	**30,440**
Wastewater services	Infrastructure renewals	1,401	1,870	3,271
	Infrastructure enhancement	100	450	550
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	59	-	59
	Total	**1,560**	**2,320**	**3,880**
Customers & sales				
Water supply	Household connections to increase from 89,000 in 2011 to 102,500 by end 2014			
Wastewater	Household connections to increase from 68,900 in 2011 to 82,400 by end 2014			
Water sales	To increase from 22.4 million m^3 per year in 2011 to 25.8 million m^3 per year by 2014			
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 12.2 million in 2011 to EUR 15.8 million by 2014 (at 2011 price levels)			

Regional Water Company Hidroregjioni (Prizren)

	RWC Obligation				
Operating cost efficiency					
Water supply services	Reduce annual operating costs from the submitted level of EUR 2.563,000 to EUR 2.364,000, a reduction of EUR 199,000 (at 2011 price levels). The reduction in operating costs is expected to be derived from improved efficiency in water resources / treatment and distribution activities.				
Wastewater services	Allow for a net increase in operating costs from the submitted level of EUR 126,000 to EUR 131,000. This is derived through a reduction in wastewater collection activities by EUR 24,000 but allowing for a EUR 29,000 increase in wastewater business activities.				
Commercial (revenue collection) efficiency		Households	Commercial	Institutional	
	2011 (current)	59%	72%	86%	
	2014 (minimum)	68%	87%	97%	
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)			RWC resources	Grants	Total
Water supply	Infrastructure renewals		272	1,582	1,854
	Infrastructure enhancement		195	1,951	2,146
	Non-infrastructure capital maintenance		150	393	543
	Non-infrastructure enhancement		120	628	748
	Total		**737**	**4,553**	**5,290**
Wastewater services	Infrastructure renewals		254	800	1,054
	Infrastructure enhancement		35	1,458	1,493
	Non-infrastructure capital maintenance		-	-	-
	Non-infrastructure enhancement		-	4	4
	Total		**289**	**2,262**	**2,551**
Customers & sales					
Water supply	Household connections to increase from 27,800 in 2011 to 30,300 by end 2014				
Wastewater	Household connections to increase from 23,500 in 2011 to 30,000 by end 2014				
Water sales	To increase from 7.2 million m^3 per year in 2011 to 7.9 million m^3 per year by 2014				
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 3.3 million in 2011 to EUR 4.7 million by 2014 (at 2011 price levels)				

Regional Water Company Hidrodrini (Peja)

	RWC Obligation				
Operating cost efficiency					
Water supply services	Reduce annual operating costs from the submitted level of EUR 1.686,000 to EUR 1.540,000, a reduction of EUR 146,000 (at 2011 price levels). The reduction in operating costs is expected to be derived from improved efficiency in water distribution activities.				
Wastewater services	Reduce annual operating costs from the submitted level of EUR 101,000 to EUR 84,000, a reduction of EUR 17,000 (at 2011 price levels), largely through efficiency improvements in wastewater collection activities.				
Commercial (revenue collection) efficiency		Households	Commercial	Institutional	
	2011 (current)	58%	75%	82%	
	2014 (minimum)	67%	89%	95%	
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)			RWC resources	Grants	Total
Water supply	Infrastructure renewals		688	885	1,573
	Infrastructure enhancement		600	1,050	1,650
	Non-infrastructure capital maintenance		-	-	-
	Non-infrastructure enhancement		114	1,735	1,849
	Total		**1,402**	**3,670**	**5,072**
Wastewater services	Infrastructure renewals		430	14,285	14,715
	Infrastructure enhancement		-	715	715
	Non-infrastructure capital maintenance		-	-	-
	Non-infrastructure enhancement		0	700	700
	Total		**430**	**15,700**	**16,130**
Customers & sales					
Water supply	Household connections to increase from 27,700 in 2011 to 30,400 by end 2014				
Wastewater	Household connections to increase from 11,500 in 2011 to 13,300 by end 2014				
Water sales	To increase from 8.5 million m^3 per year in 2011 to 9.3 million m^3 per year by 2014				
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 2.8 million in 2011 to EUR 3.7 million by 2014 (at 2011 price levels)				

Regional Water Company (Mitrovica)

	RWC Obligation			
Operating cost efficiency				
Water supply services	Reduce annual operating costs from the submitted level of EUR 1.856,000n to EUR 1.716,000, a reduction of EUR 140,000 (at 2011 price levels). The bulk of the reduction in operating costs is expected to be derived from improved efficiency in water supply business activities with the remaining reductions expected from efficiency gains in water resources/treatment activities.			
Wastewater services	Reduce annual operating costs from the submitted level of EUR 180,000 to EUR 163,000, a reduction of EUR 17,000 (at 2011 price levels), largely through efficiency improvements in wastewater business activities.			
Commercial (revenue collection) efficiency		Households	Commercial	Institutional
	2011 (current)	45%	85%	95%
	2014 (minimum)	53%	92%	100%
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)		RWC resources	Grants	Total
Water supply	Infrastructure renewals	-	1,800	1,800
	Infrastructure enhancement	-	795	795
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	-	17,640	17,640
	Total	**-**	**20,235**	**20,235**
Wastewater services	Infrastructure renewals	408	82	490
	Infrastructure enhancement	-	-	-
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	-	3,500	3,500
	Total	**408**	**3,582**	**3,990**
Customers & sales				
Water supply	Household connections to increase from 20,300 in 2011 to 24,100 by end 2014			
Wastewater	Household connections to increase from 15,100 in 2011 to 17,200 by end 2014			
Water sales	To increase from 5.0 million m^3 per year in 2011 to 5.3 million m^3 per year by 2014			
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 2.4 million in 2011 to EUR 3.5 million by 2014 (at 2011 price levels)			

Note: the success of the above performance expectations is partially dependent upon the level of government subvention to be restored to the 2010 level of EUR 385,000 per year

Regional Water Company Radoniqi (Gjakova)

	RWC Obligation			
Operating cost efficiency				
Water supply services	Reduce annual operating costs from the submitted level of EUR 1.778,000 to EUR 1.545,000 million, a reduction of EUR 233,000 (at 2011 price levels). The bulk of the reduction in operating costs is expected to be derived from improved efficiency in water distribution activities.			
Wastewater services	Reduce annual operating costs from the submitted level of EUR 101,000 to EUR 80,000 This is derived through a reduction in wastewater collection activities by EUR 34,000 but allowing for a EUR 14,000 increase in wastewater business activities.			
Commercial (revenue collection) efficiency		Households	Commercial	Institutional
	2011 (current)	70%	68%	90%
	2014 (minimum)	78%	82%	98%
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)		RWC resources	Grants	Total
Water supply	Infrastructure renewals	1,138	450	1,588
	Infrastructure enhancement	-	-	-
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	19	-	19
	Total	**1,157**	**450**	**1,607**
Wastewater services	Infrastructure renewals	438	10	448
	Infrastructure enhancement	-	-	-
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	-	-	-
	Total	**438**	**10**	**448**
Customers & sales				
Water supply	Household connections to increase from 24,900 in 2011 to 26,800 by end 2014			
Wastewater	Household connections to increase from 13,400 in 2011 to 15,300 by end 2014			
Water sales	To increase from 6.3 million m^3 per year in 2011 to 6.7 million m^3 per year by 2014			
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 2.7 million in 2011 to EUR 3.7 million by 2014 (at 2011 price levels)			

Regional Water Company Bifurkacioni (Ferizaj)

	RWC Obligation				
Operating cost efficiency					
Water supply services	No reductions in annual operating costs from the submitted level of EUR 720,000 per year is expected.				
Wastewater services	Reduce annual operating costs from the submitted level of EUR 57,000 to EUR 53,000, a reduction of EUR 4,000 through efficiency improvements in wastewater business activities.				
Commercial (revenue collection) efficiency		Households	Commercial	Institutional	
	2011 (current)	63%	51%	85%	
	2014 (minimum)	71%	70%	95%	
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)			RWC resources	Grants	Total
Water supply	Infrastructure renewals		248	1,135	1,383
	Infrastructure enhancement		30	500	530
	Non-infrastructure capital maintenance		53	-	53
	Non-infrastructure enhancement		7	-	7
	Total		**338**	**1,635**	**1,973**
Wastewater services	Infrastructure renewals		590	449	1,039
	Infrastructure enhancement		-	300	300
	Non-infrastructure capital maintenance		6	-	6
	Non-infrastructure enhancement		-	50	50
	Total		**596**	**799**	**1,395**
Customers & sales					
Water supply	Household connections to increase from 14,300 in 2011 to 16,900 by end 2014				
Wastewater	Household connections to increase from 12,700 in 2011 to 13,100 by end 2014				
Water sales	To increase from 2.8 million m^3 per year in 2011 to 3.4 million m^3 per year by 2014				
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 1.4 million in 2011 to EUR 1.9 million by 2014 (at 2011 price levels)				

Regional Water Company Hidromorava (Gjilan)

	RWC Obligation			
Operating cost efficiency				
Water supply services	Reduce annual operating costs from the submitted level of EUR 970,000 to EUR 894,000, a reduction of EUR 76,000 (at 2011 price levels). The bulk of the reduction in operating costs is expected to be derived from improved efficiency in water resources / treatment activities with some improved efficiency in water distribution activities.			
Wastewater services	Reduce annual operating costs from the submitted level of EUR 95,000 to EUR 76,000, a reduction of EUR 19,000 (at 2011 price levels), largely through efficiency improvements in wastewater collection activities and some improved efficiency in business activities.			
Commercial (revenue collection) efficiency		Households	Commercial	Institutional
	2011 (current)	70%	83%	90%
	2014 (minimum)	78%	93%	98%
Capital investment 2012 – 2014 (EUR x 1000 at 2011 price levels)		RWC resources	Grants	Total
Water supply	Infrastructure renewals	452	36	488
	Infrastructure enhancement	-	-	-
	Non-infrastructure capital maintenance	30	-	30
	Non-infrastructure enhancement	145	800	945
	Total	**628**	**836**	**1,464**
Wastewater services	Infrastructure renewals	339	-	339
	Infrastructure enhancement	-	-	-
	Non-infrastructure capital maintenance	-	-	-
	Non-infrastructure enhancement	3	-	3
	Total	**342**	**-**	**342**
Customers & sales				
Water supply	Household connections to increase from 16,600 in 2011 to 18,600 by end 2014			
Wastewater	Household connections to increase from 15,300 in 2011 to 17,400 by end 2014			
Water sales	To increase from 2.9 million m^3 per year in 2011 to 3.5 million m^3 per year by 2014			
Water and wastewater sales turnover (exc. connection fees and other income)	To increase from EUR 1.5 million in 2011 to EUR 1.9 million by 2014 (at 2011 price levels)			

1 WWRO APPROACH TO SETTING TARIFFS

1.1 Background

Prior to 2009 water supply and wastewater tariffs were determined annually on the basis of historical financial records being used as the primary determinant of financial needs for the following year. This process took little or no account of future sector development objectives (and how they are to be financed), did little to promote financial and operational efficiency and created uncertainty that discouraged investors.

In 2008 we embarked on our first three year tariff review (2009 – 2011) that was based on forward-looking projections of costs, capital investment and an allowance for a return on capital sufficient to attract investors into the sector. Tariffs were set in advance at base year (2008) price levels for the three years of the review period[1].

Although this process was a significant improvement on the previous annual price setting process it was not without its problems. The principal issues were:

- The format of the tariff submission was considered by the RWCs to be too complex and resulted in errors in the tariff submissions.
- The raw base-line data upon which tariff submissions were founded were often inaccurate and unreliable resulting in actual performance being significantly different to planned performance.
- Our expectations of efficiency improvements proved to be over-ambitious, especially revenue collection performance, which in turn resulted in insufficient cash revenues to meet the RWCs' investment obligations as set out in their submissions and agreed with us.

We have learned from these experiences and, with development agency support, have improved the processes in this review:

- We have developed a far more user-friendly business planning model.
- Through the regulatory reporting framework baseline data is much improved.
- We have been more conservative in our expectations of efficiency improvements.

It is important to recognise that the RWCs' business plans, once agreed with us, and used as the basis for tariffs, should be regarded as a *'contract of obligations'* in exchange for the prices agreed. Performance of the RWCs will be measured against the expectations and targets as set out in their plans. Furthermore, the agreed plans set out the limit of the RWCs obligations. They are not expected to undertake activities not provided for in their plans so that they are not placed in the difficult position of having un-funded mandates.

1.2 The tariff setting process

The regulatory process for setting tariffs in Kosovo is illustrated in Figure 1-1 below. This process clearly defines the roles, responsibilities and boundaries of the principal parties in the tariff setting process:

- **Government of Kosovo** – setting policy objectives and creating legislation.
- **WWRO** – employing the regulatory tools (including legislation), processes and economic conditions designed to deliver the objectives.

[1] Tariffs were determined in advance at base year price levels and annual adjustments for inflation were required. In practice inflation adjustments were not applied, WWRO's intention being to penalise the RWCs for not meeting their investment targets. The implication of this decision is, however, that the 2012 tariffs would require an initial uplift of some 8% to compensate for inflation over the past review period before other additional costs are considered before allowing for efficiency improvement expectations.

- **RWCs** – delivering the services in accordance with legally binding standards and targets / objectives set by government and/or regulator and whose activities are financed by the agreed tariffs.

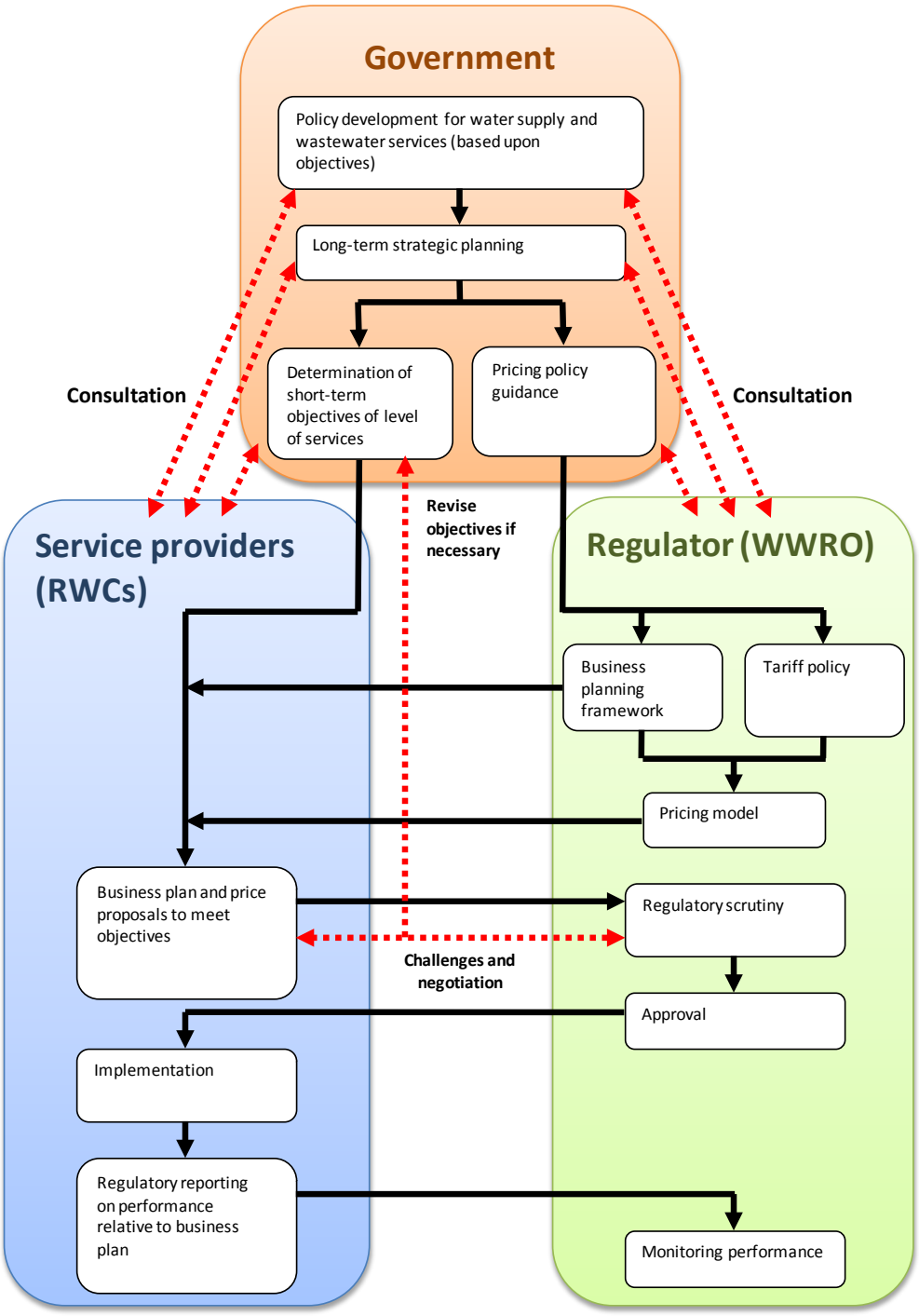


Figure 1-1 Regulatory tariff setting process

1.2.1 Tariff policy

Within the overall tariff setting framework we have developed a *Tariff Policy for Water Supply and Wastewater Services, March 2011*[2]. The key policy issues contained in this document are:

[2] This Tariff Policy document replaces the earlier 'Tariff Policy for Water Supply', 2008 with minimal changes, the most significant being the inclusion of wastewater services. The Tariff policy can be found on: http://www.wwro-ks.org

- For each RWC tariffs shall be uniform across the service area for each class of customer.
- The existing cross subsidy from non-household customers to household customers for water supply services is to be gradually reduced over time.
- For wastewater services the current differential between non-household and household tariffs shall remain on the grounds that non-household customers generate more polluting waste than household customers[3].
- Tariffs should be sufficient to maintain serviceability of the assets and to finance investment.
- The RWCs shall be entitled to earn a return on their regulatory asset bases sufficient to finance capital investment in the sector.

1.2.2 The companies' business plans and tariff submissions

Since the last tariff review we have developed a comprehensive, yet simple to use, business planning model that captures the requirements of the Tariff Policy and, once completed by the RWCs, provides us with sufficient supporting information to properly scrutinise their tariff proposals. Where necessary, we are able to challenge the RWCs' projections of costs, efficiency, investment requirements and expected performance. Figure 1-2 below illustrates the structure of the model.

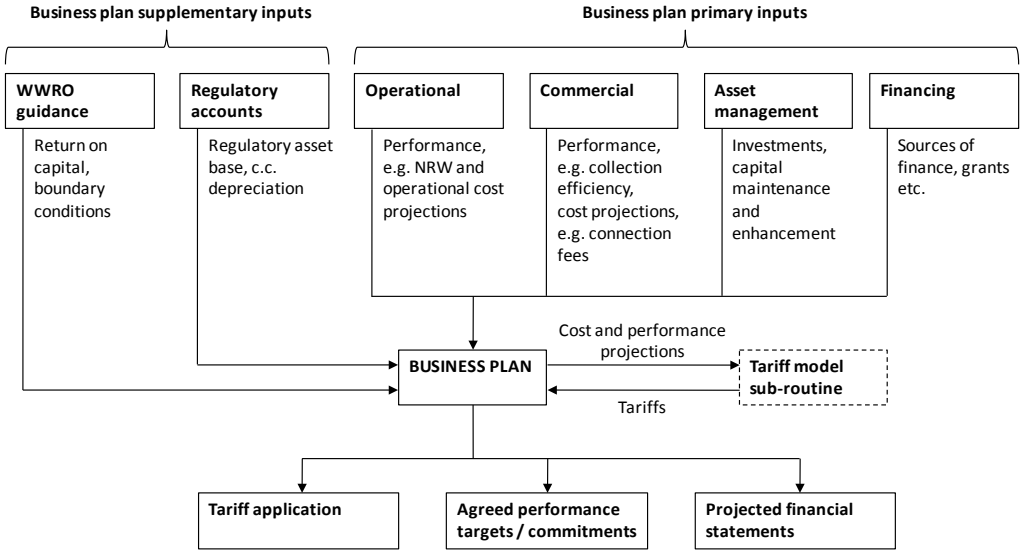


Figure 1-2 Business plan model[4]

Although we went to great lengths to develop a simple user-friendly business planning model the quality of submissions from the RWCs was generally poor. They contained many errors that required significant effort on the part of WWRO to correct before they could be considered acceptable enough to warrant scrutiny and challenge with respect to costs, efficiency and targets. The need to correct submissions resulted in considerable delays to the regulatory tariff setting process.

1.2.3 WWRO scrutiny of RWC submissions

Our role of balancing customer interests with the need to maintain the financial integrity of the RWCs requires detailed scrutiny of the RWCs' tariff submissions. We have a duty to ensure that the RWCs operate as efficiently as possible to ensure that customers pay no more than they need to. It is also recognised, however, that ideal levels of efficiency cannot be achieved quickly and that the WWRO has to allow sufficient time for efficiency gains to be realised. Furthermore, the targets set should be challenging but nonetheless realistic. The lesson learned from the 2009 – 2011 tariff review is that the revenue

[3] This is a substitute for more complex non-household charging systems based upon the 'polluter pays' concept which can only be applied once wastewater treatment facilities are in operation across each RWC's service area, and will not be achieved within the next tariff review period.

[4] Source: *Water supply and wastewater services 2012 – 2014 Tariff Review, Procedures, Version 2011-01, May 2011.*

collection performance targets proved to be unrealistically high with consequential adverse impacts on other targets, notably investment levels.

There are three principal areas in the RWCs' business plans that we have challenged:

1. We are firmly of the opinion that the RWCs' operating costs are much greater than they need to be and have a direct impact on tariffs. In our deliberations we have pressed the RWCs to reduce their operating costs over time.
2. We believe that the RWCs have a high degree of commercial losses (illegal connections and poor billing activities) that could, if rectified, generate significantly improved sales of water supply and wastewater services and thus reduce tariffs. We are generally satisfied that the business plans have taken due recognition of the potential to reduce such losses.
3. Although revenue collection performance is improving we are firmly of the opinion that the improvements are far less than they could and should be, although we are cautious not to repeat the over-ambitious assumptions made in the 2009 – 2011 tariff review.

With respect to challenging the investment programme we have taken a far more cautious approach. We are justifiably concerned that the RWCs, having failed on their investment commitments over the last three years without any consequential penalties, may see no reason to meet such commitments in the future. We cannot, however, simply exclude investment proposals on the grounds that we do not believe such investments will be made (unless we have compelling evidence to suggest that this is in fact the case), and any such exclusions should only be made on the grounds of investment necessities and priorities. We do recognise, however, that the investment programme, infrastructure renewals in particular, will have a direct and significant impact on tariffs and in order to maintain tariffs within the confines of acceptable tariff increases (after addressing operational and commercial efficiency) it may be necessary to exclude some lower priority investments but recognising that this would have an adverse impact on the degree to which levels of service can improve.

A further consideration made in our scrutiny of submissions is the importance we attach to maintaining the financial integrity of the RWCs and in particular their financial status in the eyes of investors, notably the international development community. The water sector in Kosovo (RWCs, Government and the WWRO) needs to demonstrate that it is serious about improving services and is willing to take, sometimes difficult, decisions to achieve this aim. It is important to send clear and unequivocal positive signals to the market and we should avoid, at all costs, sending negative signals. Water supply and wastewater services tariffs in Kosovo are well below full cost recovery levels if they were to meet European levels of service and were financed entirely through their own financial resources. We are firmly of the opinion that, to maintain market credibility, tariffs for all RWCs should be increased, if only by a very modest amount, regardless of immediate financial needs. Any additional income received by such an increase we expect to be added to the investment pool. A reduction in tariffs will send negative signals to the market and would undoubtedly discourage much needed investment in the sector.

1.2.4 Draft tariffs and consultation

During November 2011 we consulted with the CCCs on the draft tariffs. The comments and opinions from the CCCs were, in general, an opinion that a) the increases were considered high, b) they felt that the paying customers were subsidising the non-paying customers and that if the RWCs required additional income they should be more pro-active in this area, and c) the fixed charge element for non-household customers (EUR 3.00 per month) was considered too high, especially for small businesses. We have taken these considerations into account and respond as follows:

a) We believe that the increase in tariffs is not too high and, based upon our research into affordability, the proposed average household charges for water supply and wastewater services is comfortably affordable, rising from the current level of EUR 6.99 to EUR 8.49 by 2014 (plus adjustments for inflation). Our analysis of current performance and customer perceptions of levels of service strongly suggests that customers would be prepared to pay a small increase in charges in return for improved services. We believe that these tariff increases are modest, but are sufficient to finance the RWCs' obligations as set out in their plans which will see improvements in levels of service.
b) We agree that the level of non-paying customers is too high but the business plan proposals already factor in a significant improvement in revenue collection performance

which helps to keep prices below what they would otherwise be. We have further challenged these expectations but we do not want to repeat the assumptions made in the 2009 – 2011 tariff review where they were overly optimistic resulting in the RWCs being unable to raise the revenue they expected.

c) The fixed charges for both household and non-household customers (EUR 1.00 and EUR 3.00 respectively) have been frozen at their current levels since 2009 until 2014. In real terms (allowing for inflation) these charges have effectively fallen, and will continue to fall. Furthermore, and in accordance with the WWRO tariff policy, we have addressed the concerns of the non-household customers by allowing for a gradual reduction in the cross-subsidy effect from non-household to household customers. Non-household customers will still be paying more than household customers but the difference has been reduced by a marginal amount. In future tariff reviews we expect such cross subsidies to be reduced still further but on a gradual basis.

1.2.5 Finalised tariffs

The finalised regulatory business plans shall be published on the WWRO website in due course.

It is important to recognise that the tariffs determined through this process are at 2011 price levels and will need to be adjusted for inflation each year (including tariffs for 2012 that has been adjusted for inflation). For illustrative purposes we have presented tariffs without inflation adjustments and adjusted for inflation for 2012 only now that statistical data for the adjustments are available.

For these tariffs to take effect from 1 January 2012 tariff orders were formally issued to the seven RWCs on 8 December 2011.

2 REGULATORY TOOLS AND CONCEPTS

In accordance with good regulatory practice we have developed several regulatory tools to evaluate costs and performance to ensure that tariffs are set on the basis of real financial needs. The three principal tools developed by the WWRO for this tariff review are:

- Regulatory accounting guidelines.
- Performance monitoring and assessment of service levels.
- Benchmarking using statistical analysis.

2.1 Regulatory accounting guidelines (RAG)

Conventional accounting systems, in particular those employed by the RWCs as part of their statutory accounting obligations, are not appropriate for the determination of tariffs in the water sector in Kosovo for various reasons. They do not:

- identify and separate income and expenditure from core (regulated) activities and non-core (un-regulated) activities;
- separate income and expenditure by business activities (water supply and wastewater services) nor do they subdivide costs into required cost centres;
- attach an appropriate regulatory asset base valuation on the RWCs assets that reflects a reasonable valuation of assets for tariff setting purposes;
- use realistic asset lives for depreciation purposes;
- capture the effects of inflation on depreciation of long-life assets;
- provide a means to determine the financial needs of maintaining indeterminate life assets (pipelines in the main);
- properly capture the impact of uncollected revenues.

We have developed a set of Regulatory Accounting Guidelines designed to operate in parallel with the statutory accounting processes, that provide additional information (and/or in a different format) specific to the needs of economic regulation of the RWCs in Kosovo. These guidelines set out rules and processes for:

- Profit and cost centres.
- Asset valuations based upon an opening (2009) regulatory asset base net of additions and disposals since the opening date.
- Infrastructure renewals accounting for infrastructure (pipe networks and other indeterminate life assets).
- Current cost depreciation (based upon inflation indexation) for non-infrastructure (other assets, e.g. water treatment facilities and pumping stations).
- Provisions for bad debts (write-off) defined as the difference between billing and revenue collection from the previous year.

All financial information in this report is presented in accordance with the RAG definitions.

2.2 Tariffs and levels of service assessment

The 2010 annual performance report identified many failings in the provision of water supply and wastewater services in Kosovo. In particular, the levels of service with respect to water quality, service coverage (water and wastewater), water supply reliability, losses, and wastewater discharge quality are well below the levels of service expected in a modern European country. These deficiencies, however, can only be resolved to a noticeable degree with significant investment in the sector (largely financed through tariffs), e.g. service expansion, water mains replacement and wastewater treatment facilities. The information systems employed by the RWCs are not sophisticated enough to allow detailed analysis of changes in levels of service relative to capital expenditure. For the time being professional, but

subjective, judgement is applied to determine investment needs and prioritisation. In the future we shall be encouraging the RWCs to develop more scientific asset management plans that can demonstrate the costs of improvement in levels of service which can then be applied to determine future investment requirements (see Box 1 below). The 2010 annual performance report, however, did identify that capital maintenance in 2009 and 2010 has been negligible and that levels of service are falling as a direct consequence. It is beyond doubt that increased expenditure on infrastructure renewals is essential if the deterioration in levels of service is to be arrested.

Box 1: Expenditure on infrastructure renewals and levels of service

The right amount of money necessary for effective infrastructure renewals is difficult to determine but after a reasonable period of time and with sufficient data on costs and performance it is possible to relate the degree of expenditure to the improvement or worsening of infrastructure serviceability (see Figure 2-1). Where serviceability worsens over time and extends beyond defined limits it is indicative that expenditure on infrastructure renewals has been insufficient. Similarly, if serviceability improves dramatically to the point where it exceeds limits considered necessary for economic viability it is indicative that expenditure has been too much and could be reduced in the future. Over time, we should be able to determine appropriate levels of expenditure providing stability in prices and levels of service.

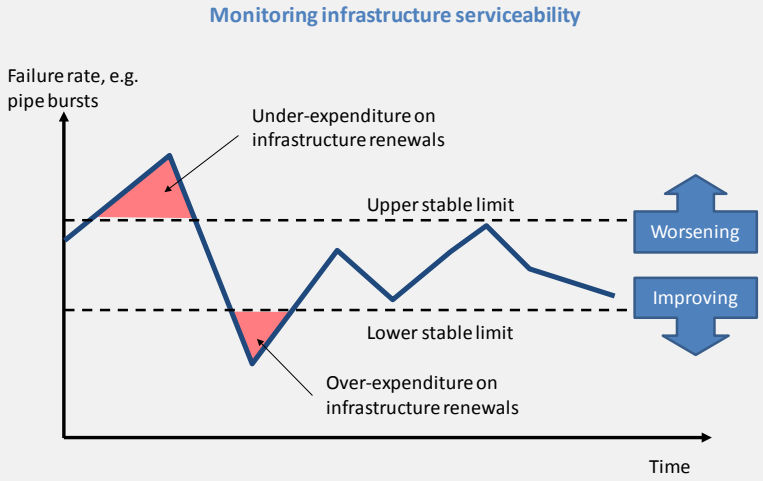


Figure 2-1 Illustration of monitoring infrastructure serviceability

2.3 Benchmarking

There are serious differences in operating costs presented by the RWCs. We employ five statistical techniques to compare operating costs:

1. Cost of water resources and treatment relative to water produced.
2. Cost of water distribution services relative to pipe length.
3. Cost of business activities (water) relative to water customers.
4. Cost of wastewater collection services relative to pipe length.
5. Cost of business activities (wastewater) relative to wastewater customers.

For water supply activities operating costs (models 1 and 2) we exclude the costs of energy as these are unique to each company's operating environment. We set allowances for operating costs to fall to the levels of the most efficient over the three year review period. Further details of this analysis is presented in ANNEX 2.

Similar benchmarking analyses have been undertaken to determine appropriate levels of revenue collection performance expectations.

3 REVIEW OF RWC SUBMISSIONS

3.1 The build-up of the tariff

Our approach to determining tariffs is to ensure that the RWCs are able to finance their activities in accordance with their prescribed standards of service and/or agreed levels of service plus 'fair' return on capital for the money that they have invested.

Consequently the tariff is defined by a revenue requirement that satisfies the above condition divided by the volume of water sold (adjusted for revenue collection efficiency). The revenue requirement is made up of three principal components:

- Operating costs.
- Capital maintenance made up of:
  - Infrastructure renewals (the financing necessary to maintain the serviceability of the underground (infrastructure) network assets), and
  - Current cost depreciation of non-infrastructure (largely above ground) assets.
- Return on the Regulatory Asset Base.

The overall breakdown of the revenue requirement is presented in Figure 3-1. Individual RWC revenue requirement details are provide in ANNEX 1.

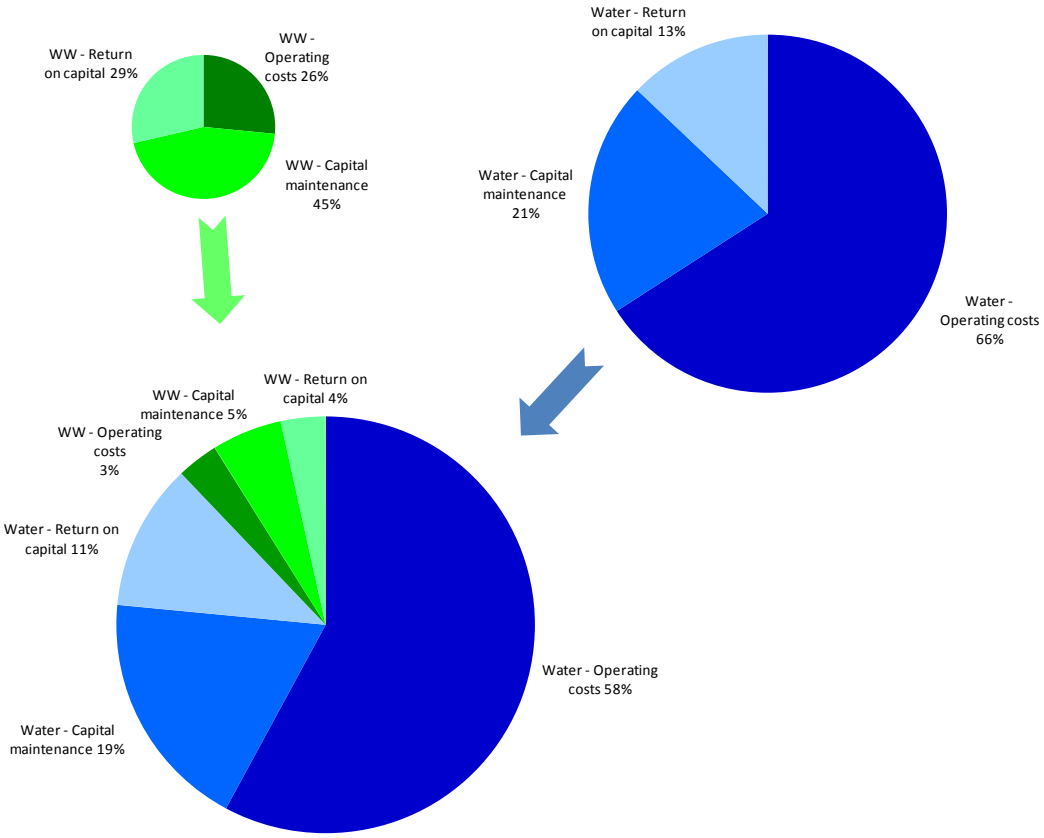


Figure 3-1 Revenue requirement by service activity (water supply, wastewater and combined)

The Tariff Procedures published by WWRO together with the Regulatory Accounting Guidelines provide more detailed descriptions of the build-up of the revenue requirement and the subsequent determination of the tariffs.

3.2 Operational costs

The operational costs of the RWCs are dominated by staffing costs and energy, the combined costs amounting to 75% of overall operating costs, see Figure 3-2.

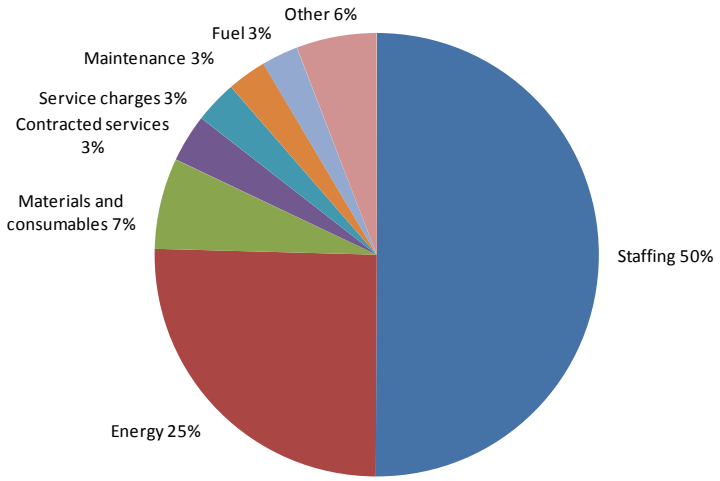


Figure 3-2 Operating cost breakdown by cost category (after WWRO adjustments for operating efficiency gains)

We are firmly of the opinion that these operating costs are inefficient with significant over-staffing in many if not all RWCs. In our price setting process the operating costs have been challenged on the basis of benchmarking the proposals. We have therefore made adjustments to the operating cost proposals as illustrated in Table 3-1 amounting to a reduction in annual operating costs of some 12% from the levels submitted by the RWCs in their original proposed business plans. Further details on the methods adopted in this challenge and the detailed outcomes are produced in ANNEX 2.

Table 3-1 Projected operational expenditure (2012 – 2014) as submitted and post efficiency adjusted (at 2011 price levels)

	Operational expenditure (annual average - EUR x 1000 at 2011 price levels)		
	Business plan submissions	**WWRO efficiency improvement adjustments**	**Business plans WWRO approved**
Water supply			
Water resources and treatment	5,460	-312	5,148
Water supply distribution	4,990	-350	4,640
Water supply business activities	5,685	-1,321	4,364
Water supply services total	**16,135**	**-1,983**	**14,152**
Wastewater services			
Wastewater collection	587	-110	477
Wastewater treatment	89	0	89
Sludge treatment and disposal	0	0	0
Wastewater services business activities	200	22	222
Wastewater services total	**876**	**-87**	**788**
Total	**17,010**	**-2,070**	**14,940**

We anticipate that these operational efficiency gains will be made through the reduction of the cost of staffing the RWCs although savings in other areas may also be possible (provided it is not at the expense of worsening levels of service).

3.3 Operational subsidies / government subvention

The RWCs do not receive any direct operating subsidies with the exception of Regional Water Company (Mitrovica) that receives limited financial support from the Government of Kosovo. This support comprises the payment of energy and some other costs in partial recognition of the particular circumstances of this RWC with respect to the government's obligations to provide water to North Mitrovica. The business plan submission was based upon an expectation of the government support to remain at the 2011 level of EUR 252,000, reduced from EUR 385,000 in 2010[5]. Our evaluation of the implications of this reduction in the subsidy revealed that the tariffs would need to increase substantially, in excess of 15% per annum in real terms, in order to meet the financial needs of this particular RWC. We have therefore based our tariffs on the assumption that the support provided by the Government of Kosovo will be restored to the 2010 levels of EUR 385,000 per year (in real terms) over the period 2012 – 2014. We intend to engage in discussions with both Regional Water Company (Mitrovica) and the Government of Kosovo to determine the validity of this assumption and, if there is a substantial adjustment to this assumption, we reserve the opportunity to re-determine the water supply tariffs for RWC (Mitrovica) accordingly, early in 2012.

3.4 Commercial efficiency

It is now self-evident that the revenue collection performance projections made in the 2009 – 2011 Tariff Review were over-optimistic and actual performance was well below expectations. This had consequential impacts on cash flow which in turn seriously restricted the RWCs from carrying out their planned investment programme. We do not wish to repeat this situation in the 2012 – 2014 period and we are therefore more cautious in our approach to determining realistic, but nonetheless challenging, targets for future revenue collection performance.

As for operational efficiency we have made modest adjustments to the proposed revenue collection performance expectations as illustrated in Table 3-2 and have incorporated such adjustments in the tariff setting process. Further details on the methods adopted in this challenge are produced in ANNEX 3.

Table 3-2 Projected revenue collection performance as submitted and post efficiency adjusted

	Average (un-weighted) revenue collection performance expectations			
	2011 (forecast)	2014 business plan submissions	WWRO efficiency improvement adjustments	2014 business plans WWRO approved
Households	60.4%	67.0%	1.8%	68.8%
Commercial	74.9%	84.1%	1.8%	87.1%
Institutional	89.4%	95.3%	1.8%	97.4%

The proposed improvement in revenue collection performance resulted in the tariffs being approximately 10% lower that what they would otherwise be without such improvement. This translates to a saving per household of approximately EUR 0.60 per household per month. The net effect of the WWRO adjustments further reduces household bills by EUR 0.09 per household per month.

3.5 Capital expenditure

The submitted planned capital investment for the period 2012 – 2014 amounts to EUR 60.6 million for water supply and EUR 25.9 million for wastewater. Approximately 80% of this investment programme is anticipated to be grant financed from development agencies. This still leaves EUR 16.6 million to be financed from the RWCs' own financial resources (including loan financed investments) which ultimately needs to be paid for by customers for which provisions in the tariffs have to be made.

[5] Based upon figures included in the business plan but not confirmed by WWRO from audited accounts.

The 2010 Annual Performance Report has highlighted a serious need for investment in the sector if the current deterioration in the levels of services is to be reversed. Consequently we are cautious in our approach to challenging the investment programmes and would prefer that investment was increased rather than decreased in order to accelerate the improvement in levels of service. We recognise, however, that increasing investment, especially infrastructure renewals, the area of greatest need, results in upward pressures on prices. We are also conscious of the fact that some RWCs have secured access to donor grant financing and that the allowances for investment through the RWCs' own financial resources is not uniform for all RWCs.

We have chosen not to challenge any expenditure proposals for infrastructure enhancement and non-infrastructure capital expenditure (both capital maintenance and enhancement). The focus of our challenge is directed to infrastructure renewals only as this is the area of greatest need with respect to levels of service improvements and also has direct and material tariff implications.

Our rationale for adjusting the investment programme is based upon ensuring a minimum level of infrastructure renewals[6]. Further adjustments are made to ensure a minimum level of real tariff increase to provide market signals for investors[7] (4% per year for water and 10% per year for wastewater). This process is illustrated in Figure 3-3 (wastewater similar).

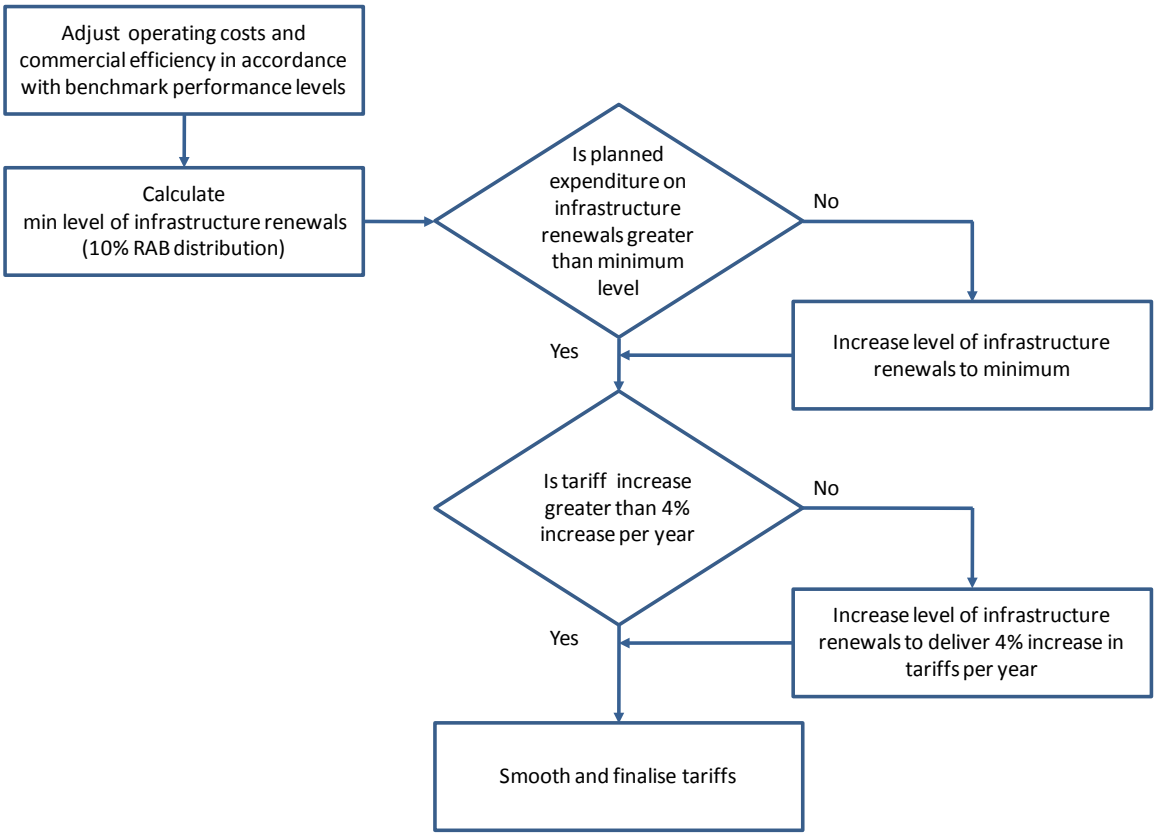


Figure 3-3 Rationale for adjusting expenditure on infrastructure renewals (water)

The outcome of these adjustments is an overall addition to the business plan submissions in infrastructure renewals expenditure (water and wastewater) of EUR 8.3 million over the three year period, see Table 3-3. Further details on the expenditure by RWC produced in ANNEX 4.

[6] In the absence of any reliable asset management performance data this is determined in this tariff review as an annual expenditure of at least 10% of the RAB value for the distribution network for water supply and 10% of the RAB value of the wastewater collection system for wastewater services.

[7] It has been assumed that the minimum level of annual (real) tariff increases necessary for ensure investor confidence is 4% per year for water and 10% per year for wastewater.

The water supply expenditure per customer per year (approximately EUR 80) is considered reasonable by international comparisons[8]. Recognising a long term backlog of investment needs we would expect this figure to remain at its current level, or even increase, in the medium term. For wastewater the expenditure per connection is substantially lower, largely due to little or no investment in wastewater treatment. In the long run we expect capital expenditure in the wastewater sector to rise substantially, as will tariffs, as wastewater treatment facilities are developed.

Table 3-3 Projected capital expenditure (2012 – 2014) as submitted and adjusted (at 2011 price levels)

	2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			Exp per cust. EUR
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	6,751	14,898	5,484	12,234	14,898	27,133	103
Inf. enhancement	1,935	4,496	-	1,935	4,496	6,431	24
Non-inf. capital maintenance	2,198	753	-	2,198	753	2,951	11
Non-inf enhancement	4,437	25,129	-	4,437	25,129	29,566	112
Total water	**15,321**	**45,276**	**5,484**	**20,804**	**45,276**	**66,081**	**250**
Wastewater							
Inf. renewals	1,036	17,496	2,824	3,860	17,496	21,356	106
Inf. enhancement	135	2,923	-	135	2,923	3,058	15
Non-inf. capital maintenance	6	-	-	6	-	6	0
Non-inf enhancement	62	4,254	-	62	4,254	4,316	21
Total wastewater	**1,239**	**24,673**	**2,824**	**4,062**	**24,673**	**28,736**	**142**
Total water + wastewater	**16,560**	**69,950**	**8,307**	**24,867**	**69,950**	**94,816**	**392**

The adjustments we have made to capital expenditure amount to approximately an additional EUR 2.8 million per year which is marginally greater than the expected reductions in operating costs of EUR 2.1 million per year. We urge the RWCs not to use the additional infrastructure renewals allowances for maintaining operating costs at their inefficient levels but rather redirect their human and other resources towards the investment programme as set out in this report.

3.6 Regulatory asset base and return on capital

3.6.1 Regulatory asset base

The opening regulatory asset base (RAB) upon which the return on capital is determined was set in 2008 for the 2009 – 2011 Tariff Review. Since 2009 the RWCs have engaged in some, albeit limited, investment activities that have, net of current cost depreciation, increased the RAB marginally from EUR 62.0 million to EUR 63.5.million. The planned investment programme for the period 2012 to 2014 (plus budget provisions for expenditure in 2011) will increase the RAB to EUR 70.1 million (see Figure 3-4).

It is important to recognise that the bulk of the increase in the RAB is due to the investment programme of the Pristina Regional Water Company. This increase in the RAB will substantially strengthen the financial position of the RWCS through increasing the return on capital not only in this review but also for future reviews. ANNEX 1 provides details of the return on capital (average per year) for the each of the RWCs.

[8] In the latest 5 year price review in England and Wales the water supply expenditure per property per year amounted to approximately EUR 95. For wastewater the expenditure per year was approximately EUR 125.

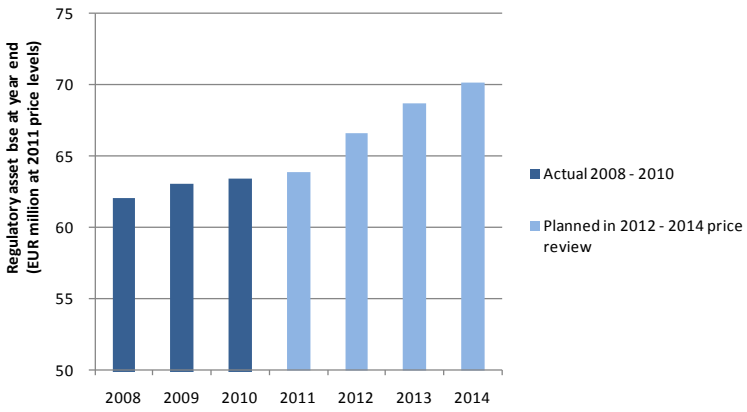


Figure 3-4 Regulatory Asset Base (2011 price levels)

3.6.2 Return on capital

The return on capital for this review has been set at 5.3% (real), an increase on the 4.0% (real) return on capital for the previous 2009 – 2011 Tariff Review. ANNEX 5 provides a more detailed description of the return on capital and how it has been determined.

The increase is needed to ensure investor confidence in the sector, necessary if the RWCs are to attract financing for much needed improvements and expansion of the assets in order to meet the required improvements in levels of service.

Over the three year price review period the RWCs are expected to generate a combined (water and wastewater) return on capital (before tax and interest payments) of almost EUR 11 million. As the RWCS do not pay dividends this return is expected to be re-invested in the companies. This amount is reflected in the EUR 6.5 million net increase in the RAB over the same period. The difference between the return and reinvestment is expected to be used to cover the costs of debt finance and / or held as cash reserves by the RWCs in order to strengthen their balance sheets for the future.

3.7 Customer and sales growth

3.7.1 Service coverage

The business plan submissions include the RWCs' proposals for increased service coverage for both water supply and wastewater services (see Figure 3-5).

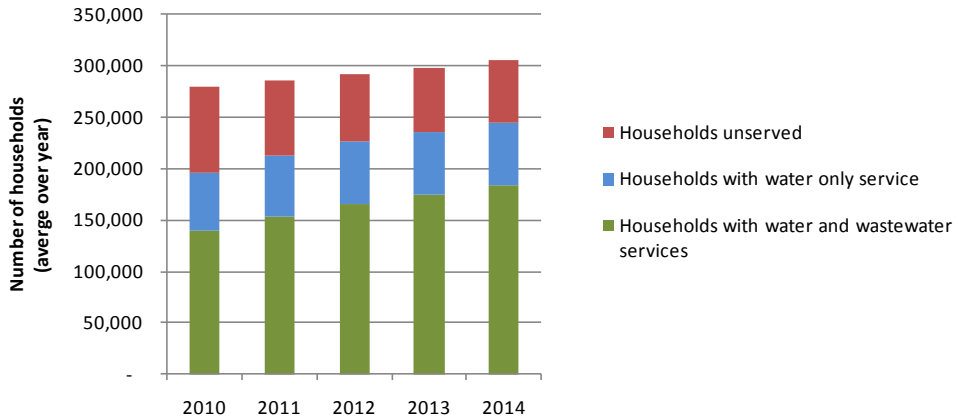


Figure 3-5 Service coverage (year average) projections (water and wastewater)

This increase is anticipated to be generated by the addition of approximately 9,700 and 9,400 new water and wastewater customers per year respectively (see Table 3-4). For water supply we expect

this to be largely attributable to the regularisation of illegal connections thereby reducing the overall level of non-revenue water (commercial losses).

Table 3-4 Projected increase in customer numbers by category

	end 2011	end 2014	Increase 2012 to 2014	Average annual increase
Water supply customers				
Household	220,580	249,709	29,129	9,709
Commercial	25,454	26,966	1,512	504
Institutional	2,300	2,410	111	37
Total water supply customers	248,334	279,085	30,751	10,250
Wastewater services customers				
Household	160,487	188,736	28,249	9,416
Commercial	24,079	25,726	1,647	549
Institutional	2,022	2,150	128	43
Total water supply customers	186,588	216,612	30,024	10,008

In our scrutiny of the RWCs' business plans we have not challenged projections on customer growth plans. The achievement of the growth projections in customer numbers is crucial to the success of the RWCs' business plans. Without the additional income generated from this growth it is unlikely that the RWCs will be able to meet their investment targets. Having submitted their proposals for growth we expect such growth to be delivered and that the RWCs should make every effort to achieve the expected outcomes. The RWCs' business plans also illustrate that a large potential for customer and sales growth will be derived from the regularisation of illegal connections. This should provide an opportunity of increasing sales without a commensurate increase in production capacity. It will also contribute to a net reduction in non-revenue water.

The service coverage expressed as a percentage of households in the RWCs' service areas is illustrated in Figure 3-6. At past and projected customer growth rates full service coverage will only be attained by approximately 2020 for water. For wastewater, full coverage will take much longer to achieve unless investment in service expansion is accelerated. Further details on customer and sales growth is presented in ANNEX 6.

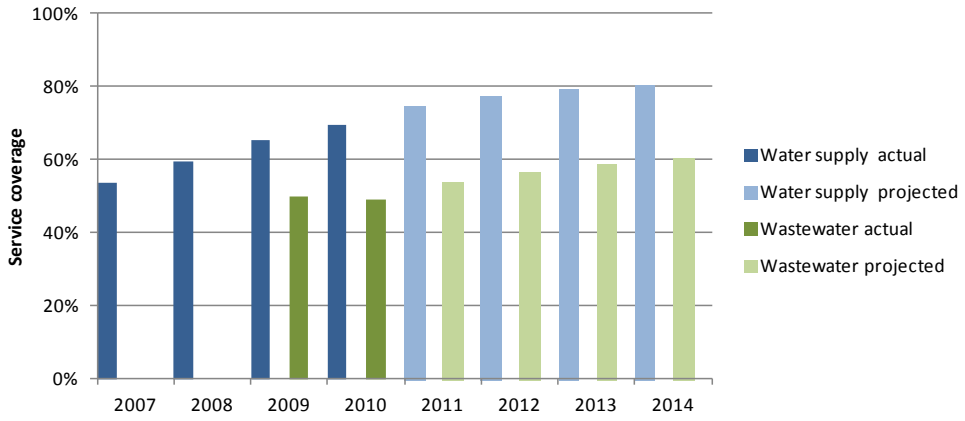


Figure 3-6 Service coverage 2007 – 2014

3.7.2 Sales projections (volume and value)

The RWCs' business plans extend this customer growth projection to water sales growth (see Table 3-5). This clearly illustrates that growth in water only customers is expected to be minimal. As for customer numbers we have not challenged the sales volumes projections included in the business plans.

Table 3-5 Projected increase in water sales (m^3 x 1000)

	2011	2014	Increase 2012 to 2014	Average annual increase
To customers with a wastewater service	41,030	47,651	6,621	2,207
To customers without a wastewater service	14,109	14,228	120	40
Total	**55,139**	**61,880**	**6,741**	**2,247**

The sales projections, by value, have been adjusted from the RWCs' business plans by virtue of the challenges made to operating costs, revenue collection and capital investment described above that impacted on the tariffs. Based upon the derived tariffs and the sales volume growth projections the projected sales value growth (at 2011 price levels) is illustrated in Figure 3-7.

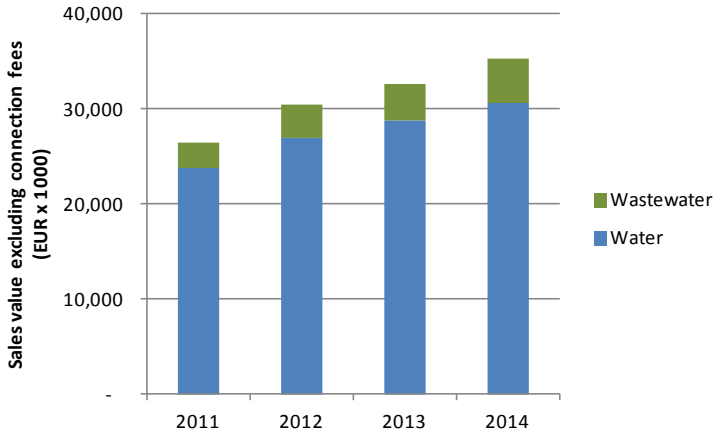


Figure 3-7 Sales value growth projections (EUR x 1000 at 2011 price levels)

Further details of sales and costs for each RWC are presented as summary income statements in ANNEX 7.

3.8 Tariff structures

3.8.1 Fixed and variable charges

The current water tariff structure comprises a fixed charge component and a volumetric charge per m^3 of water sold. For wastewater the charge is based upon a volumetric charge against water sold. Some RWCs proposed in their business plans an increase in the fixed charge component of the tariff structure. After due consideration, we rejected such proposals on the grounds of uniformity across Kosovo and the current fixed charges of EUR 1.00 per month for household customers and EUR 3.00 per month for non-household customers will remain in place until 2014. By restoring the fixed charges to current levels the volume tariff has been adjusted accordingly and there is no net gain or loss in the RWCc' revenue streams as a result of this adjustment.

3.8.2 Cross subsidy from non-household to household customers

Tariffs for non-household customers are currently 2.0 – 2.5 times tariffs for household customers. In accordance with the WWRO Tariff Policy and to promote greater economic efficiency we have instructed the RWCs to include in their business plans a gradual reduction in this cross subsidy. Tariffs for non-household customers will still be significantly higher than those for households but by 2014 the ratio will be reduced from an average of 2.26 to 2.09. This net reduction is smaller than we would have preferred but we have chosen not to insist on further reductions as we consider this decision to be a matter for the RWCs themselves to determine within the confines of wider policy objectives.

4 TARIFFS AND IMPACT ON HOUSEHOLD BILLS

4.1 Tariffs 2012 - 2014

The tariffs for 2012 – 2014 have been determined from the business plans as adjusted by our office. Details are provided in ANNEX 8. For the period 2012 – 2014 the fixed charge component of the water supply tariff will remain frozen at their current levels of EUR 1.00 per month for household customers and EUR 3.00 per month for commercial and institutional customers. The weighted average volumetric tariffs for the review period at 2011 price levels are presented in Table 4-1.

Table 4-1 Weighted average volume tariffs 2011 – 2014 (2011 price levels)

	2011 (current)	2012	2013	2014
Water supply (per m^3 water sold)				
Household	0.2956	0.3141	0.3345	0.3564
Commercial	0.6641	0.6791	0.6955	0.7016
Institutional	0.6641	0.6791	0.6955	0.7016
Wastewater services (per m^3 water sold)				
Household	0.0514	0.0593	0.0679	0.0798
Commercial	0.1080	0.1383	0.1579	0.1828
Institutional	0.1080	0.1383	0.1579	0.1828

The finalised weighted average tariffs adjusted for inflation in accordance with the WWRO tariff procedures are presented in Table 4-2.

Table 4-2 Finalised inflation adjusted weighted average tariffs 2012

	Water supply (EUR per m^3 water sold)	Wastewater services (EUR per m^3 water sold)
Household	0.3299	0.0639
Commercial	0.7123	0.1411
Institutional	0.7123	0.1411

4.2 Impact on household bills

The impact of these tariff adjustments and our adjustments to the submitted business plans on average household bills is presented in Table 4-3.

Table 4-3 Impact on household bills (average over 2012 – 2014 EUR per month at 2011 tariff levels)

	Average household charge (2012 – 2014) (EUR per month)		
	Water	Wastewater	Total
Average household bill 2011	**6.12**	**0.87**	**6.99**
Add for 2012 – 2014 business plan submission	0.90	-0.06	0.84
Average household bill 2012 - 2014 business plan submission	**7.02**	**0.81**	**7.83**
WWRO adjustments for operating efficiency	-0.71	-0.04	-0.75
WWRO adjustments for commercial efficiency	-0.09	-0.02	-0.11
WWRO adjustments for capital investment	0.54	0.39	0.94
Average household bill 2012 – 2014 WWRO approved business plan	**6.77**	**1.15**	**7.91**

Households on average over the three years will pay an additional EUR 0.92 per month as a result of these tariff adjustments. We have smoothed the increases over the three years to reduce the

impact, the net effect being average annual increases of approximately EUR 0.50 per household per month. Our research into affordability confirms that these very modest increases are affordable.

ANNEX 1 Revenue requirement

Note: Revenue requirement comprises those activities financed by the RWCs and does not include capital maintenance activities financed by grants. Consequently, a low value of capital maintenance is not indicative of very little capital maintenance being carried out but rather that much of it is expected to be financed through grant support from development agencies and/or government.

Water supply

	PR	PZ	PE	MIT	GJA	FE	GJI	Total
EUR x 1000 (average per year – 2011 price levels)								
Operating costs	5,373	2,364	1,540	1,695	1,545	720	894	**14,131**
Capital maintenance	3,407	140	266	21	436	99	180	**4,549**
Return on capital	1,211	344	357	244	303	170	141	**2,770**
Total	**9,991**	**2,848**	**2,163**	**1,960**	**2,284**	**989**	**1,215**	**21,451**
Percentage of revenue requirement)								
Operating costs	54%	83%	71%	86%	68%	73%	74%	**66%**
Capital maintenance	34%	5%	12%	1%	19%	10%	15%	**21%**
Return on capital	12%	12%	17%	12%	13%	17%	12%	**13%**

Wastewater services

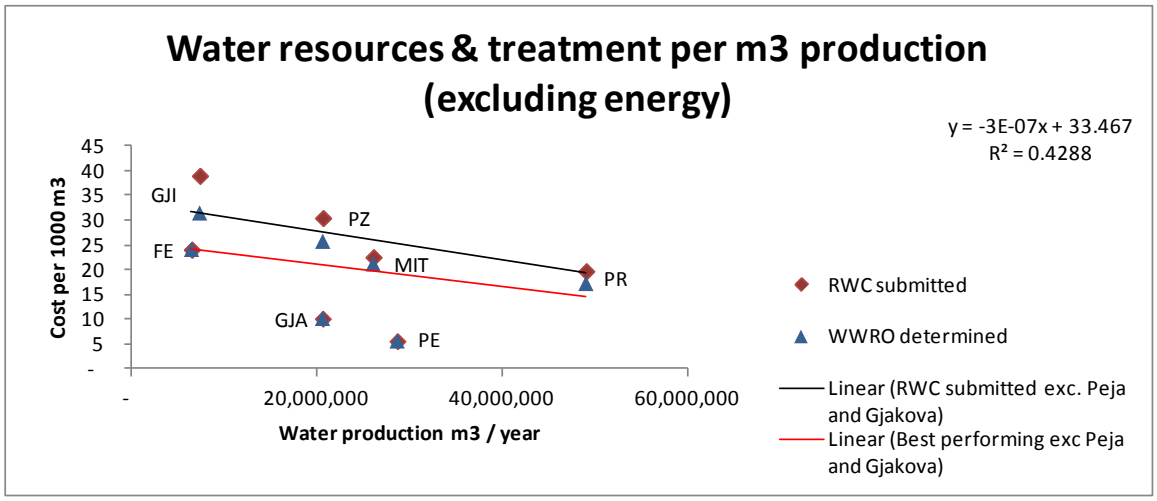
	PR	PZ	PE	MIT	GJA	FE	GJI	Total
EUR x 1000 (average per year – 2011 price levels)								
Operating costs	198	131	84	163	80	53	76	**785**
Capital maintenance	473	86	145	136	158	203	124	**1,326**
Return on capital	373	123	69	91	85	42	63	**847**
Total	**1,044**	**341**	**298**	**391**	**323**	**298**	**263**	2,958
Percentage of revenue requirement)								
Operating costs	19%	39%	28%	42%	25%	18%	29%	**27%**
Capital maintenance	45%	25%	49%	35%	49%	68%	47%	**45%**
Return on capital	36%	36%	23%	23%	26%	14%	24%	**29%**

ANNEX 2 Operational costs

Linear regression analysis of the cost proposals is used to determine 'best fit'. The 'best fit' line is then shifted to the best performing (see diagrams below). The allowances for operating costs are then determined from this shifted line. Caution is advised when determining the most efficient upon which to base the rest. The most efficient is that company that can deliver an acceptable level of service at the lowest cost (relative to whatever parameter is chosen). If the lowest cost is achieved by delivering a lower and unacceptable level of service it cannot be used as the benchmark measure of efficiency.

Water supply operating costs

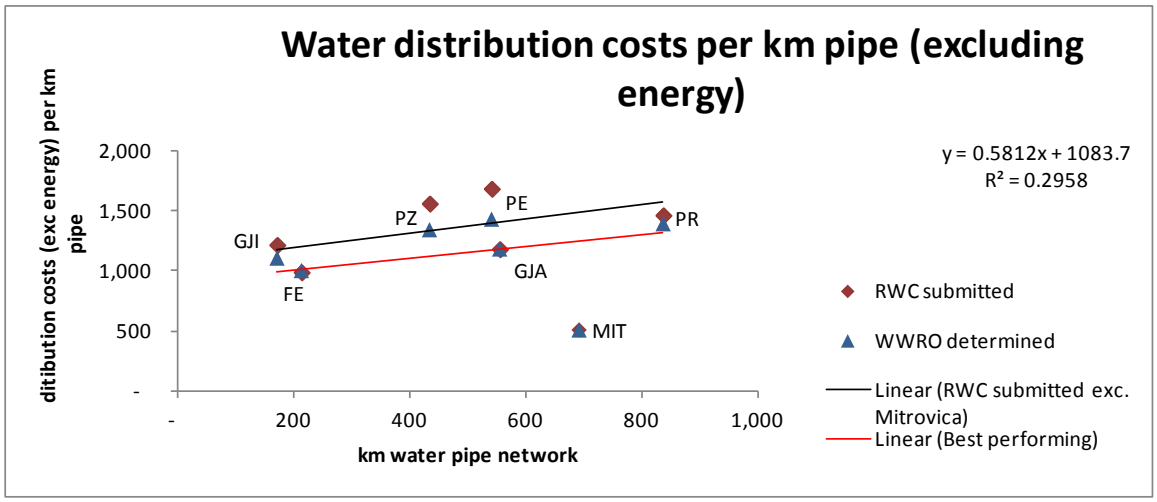
Water resources and treatment



Rationale:

1. Energy costs excluded as energy is unique to each RWC's operating environment.
2. Peja and Gjakova excluded as 'outliers'.
3. Target performance line determined as a proportion (percentage) of the 'best-fit' line that passes through the best performing.
4. Allowable performance for tariff review based upon the achievement of the level of performance mid-way between as submitted and target performance line. For outliers allowable performance remains as submitted.

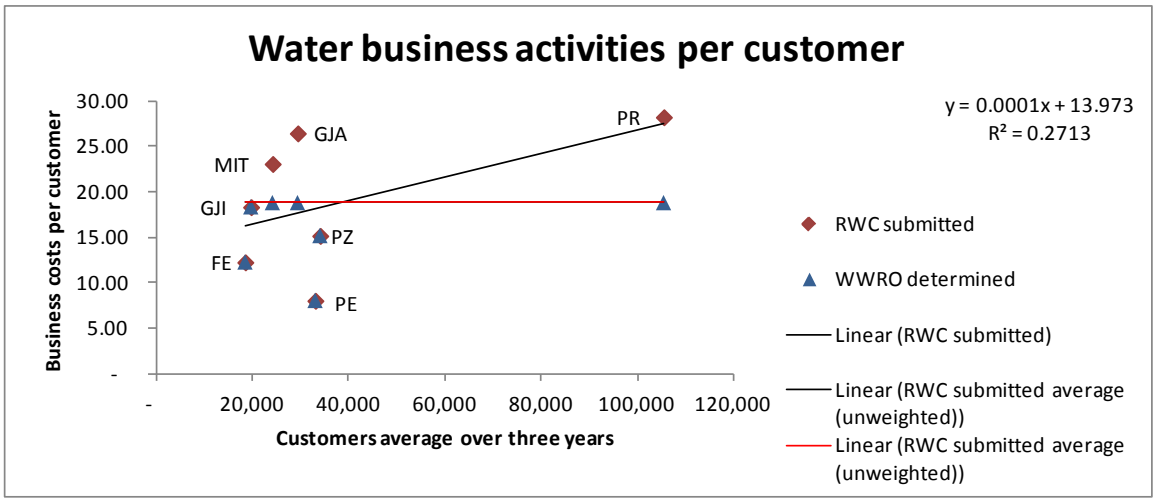
Water distribution



Rationale:

1. Energy costs excluded as energy is unique to each RWC's operating environment.
2. Mitrovica excluded as an 'outlier'.
3. Target performance line determined as a proportion (percentage) of the 'best-fit' line that passes through the best performing.
4. Allowable performance for tariff review based upon the achievement of the level of performance mid-way between as submitted and target performance line. For outliers allowable performance remains as submitted.

Water business activities

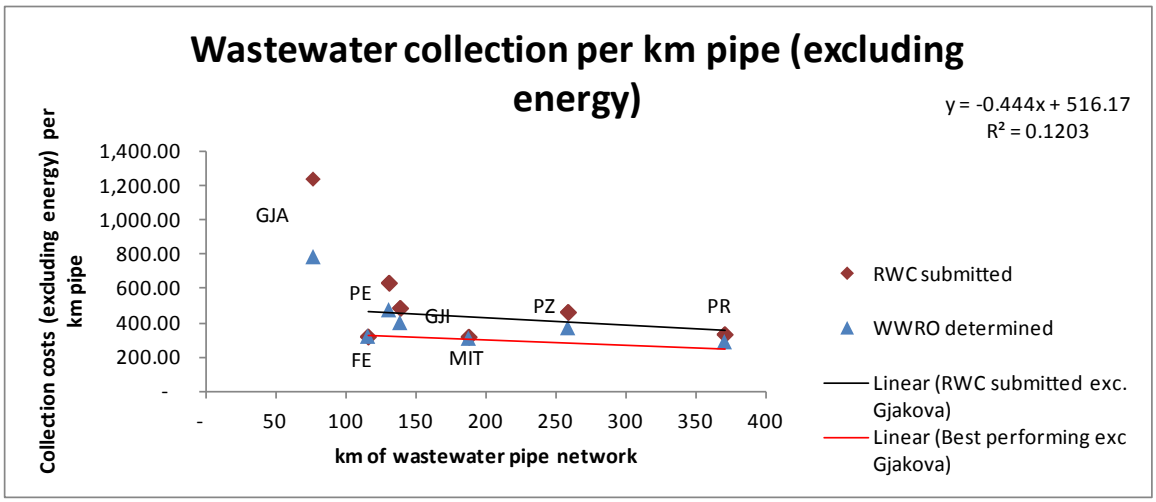


Rationale:

1. No identifiable statistical pattern on submissions.
2. Target performance line determined as the average level of performance.
3. Allowable performance for tariff review based upon the achievement of the average level of performance for those above average and for those below average the allowable remains as submitted.

Wastewater services operating costs

Wastewater collection



Rationale:

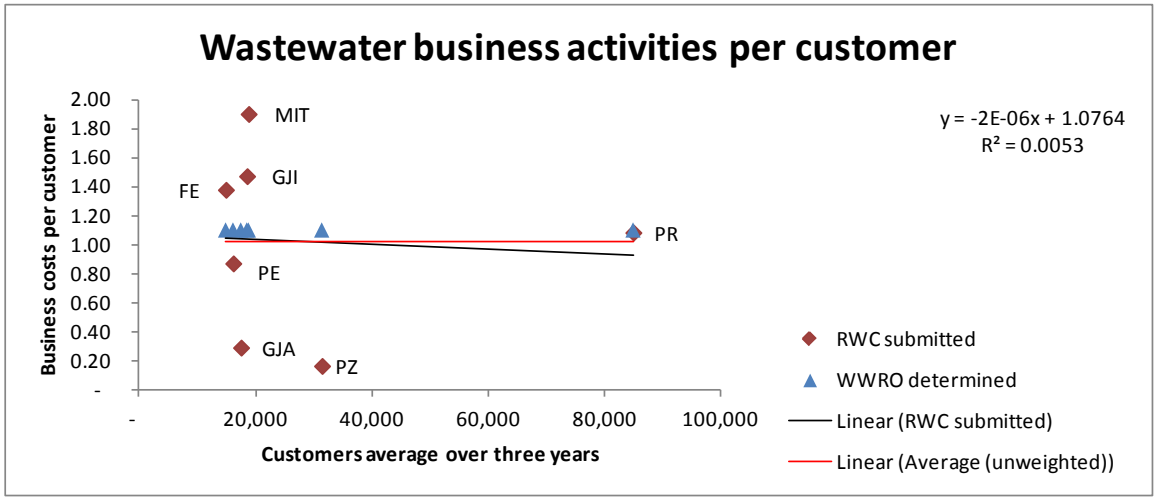
1. Energy costs excluded as energy is unique to each RWC's operating environment.
2. Gjakova excluded as an 'outlier'.

3. Target performance line determined as a proportion (percentage) of the 'best-fit' line that passes through the best performing.
4. Allowable performance (including outliers) for tariff review based upon the achievement of the level of performance mid-way between as submitted and target performance line.

Wastewater treatment and sludge treatment / disposal

No statistical analysis undertaken as so little treatment and disposal undertaken in Kosovo. No challenges have been made to business plan submissions for these activities.

Wastewater business activities



Rationale:

1. No identifiable statistical pattern on submissions.
2. Target performance line determined as the average level of performance.
3. Allowable performance for tariff review based upon the achievement of the average level of performance for those above and below average.

Operating costs submissions and WWRO adjustments

Water supply operating cost (2012 - 2014) by company at 2011 price levels (EUR x 1000 average per year)

	PR	PZ	PE	MIT	GJA	FE	GJI	Total
RWC Business plan submissions								
Resources and treatment	2,129	1,355	168	869	259	279	401	**5,460**
Distribution	1,459	691	1,251	428	741	214	207	**4,990**
Business activities	2,975	518	267	559	778	227	362	**5,685**
Total	**6,562**	**2,563**	**1,686**	**1,856**	**1,778**	**720**	**970**	**16,135**
WWRO adjustments								
Resources and treatment	-123	-98	-	-36	-	-	-55	**-312**
Distribution	-74	-101	-146	-	-8	-	-21	**-350**
Business activities	-992	-	-	-104	-225	-	-	**-1,321**
Total	**-1,190**	**-199**	**-146**	**-140**	**-233**	**-**	**-76**	**-1,983**
WWRO determined allowable costs								
Resources and treatment	2,005	1,257	168	833	259	279	347	**5,148**
Distribution	1,385	590	1,105	428	733	214	186	**4,640**
Business activities	1,983	518	267	455	553	227	362	**4,364**
Total	**5,373**	**2,364**	**1,540**	**1,716**	**1,545**	**720**	**894**	**14,152**

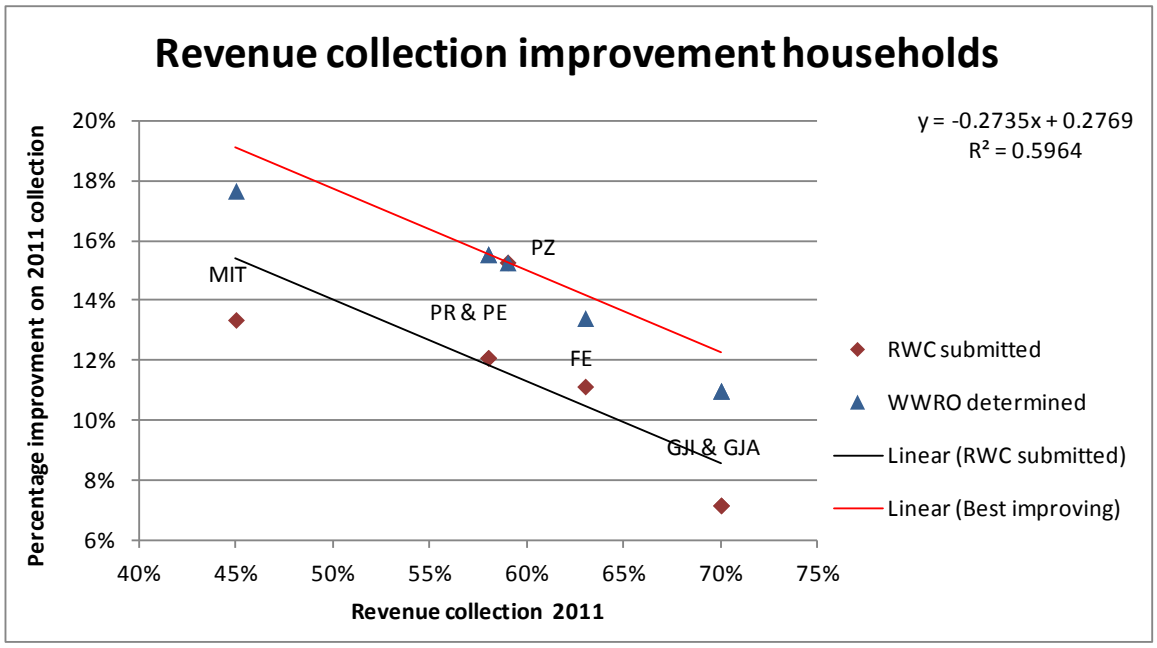
Wastewater services operating cost (2012 – 2014) by company at 2011 price (EUR x 1000 average per year)

	PR	PZ	PE	MIT	GJA	FE	GJI	Total
RWC Business plan submissions								
Collection	124	121	83	60	95	37	67	**587**
Wastewater treatment	-	-	4	85	-	-	-	**89**
Sludge treatment / disp.	-	-	-	-	-	-	-	**-**
Business activities	92	5	14	36	5	20	27	**200**
Total	**216**	**126**	**101**	**180**	**101**	**57**	**95**	**875**
WWRO adjustments								
Collection	-17	-24	-21	-2	-34	-	-12	**-110**
Wastewater treatment	-	-	-	-	-	-	-	**-**
Sludge treatment / disp.	-	-	-	-	-	-	-	**-**
Business activities	1	29	4	-15	14	-4	-7	**22**
Total	**-15**	**5**	**-17**	**-17**	**-20**	**-4**	**-19**	**-87**
WWRO determined allowable costs								
Collection	107	97	62	58	61	37	55	**477**
Wastewater treatment	-	-	4	85	-	-	-	**89**
Sludge treatment / disp.	-	-	-	-	-	-	-	**-**
Business activities	93	34	18	21	19	16	20	**222**
Total	**201**	**131**	**84**	**163**	**80**	**53**	**76**	**788**

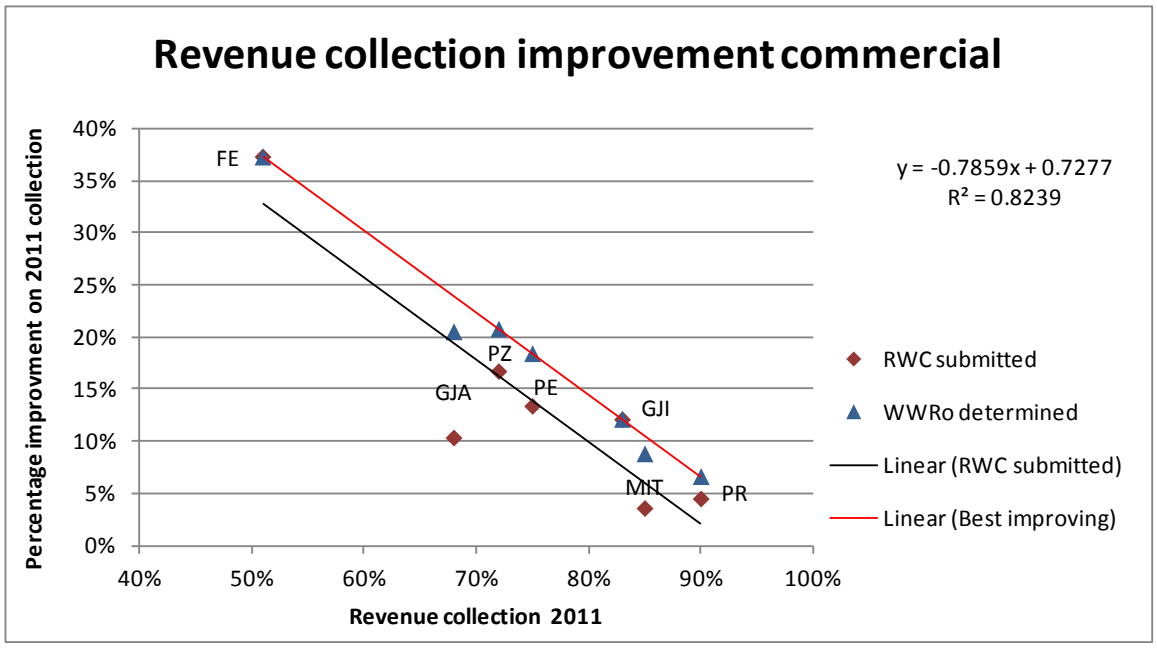
ANNEX 3 Commercial efficiency

Linear regression analysis of the commercial efficiency (revenue collection efficiency) proposals based upon the degree of improvement expected from current (2011) levels to that expected in 2014 relative to current levels is used to determine 'best fit'. The 'best fit' line is then shifted parallel to the best performing (see diagrams below). The allowances for commercial efficiency are then determined from this shifted line. Those companies that are receiving technical support in revenue collection are treated as being able to satisfy the target levels whereas those that are not receiving such support are deemed to achieve 75% of the difference between 2011 levels and the target line.

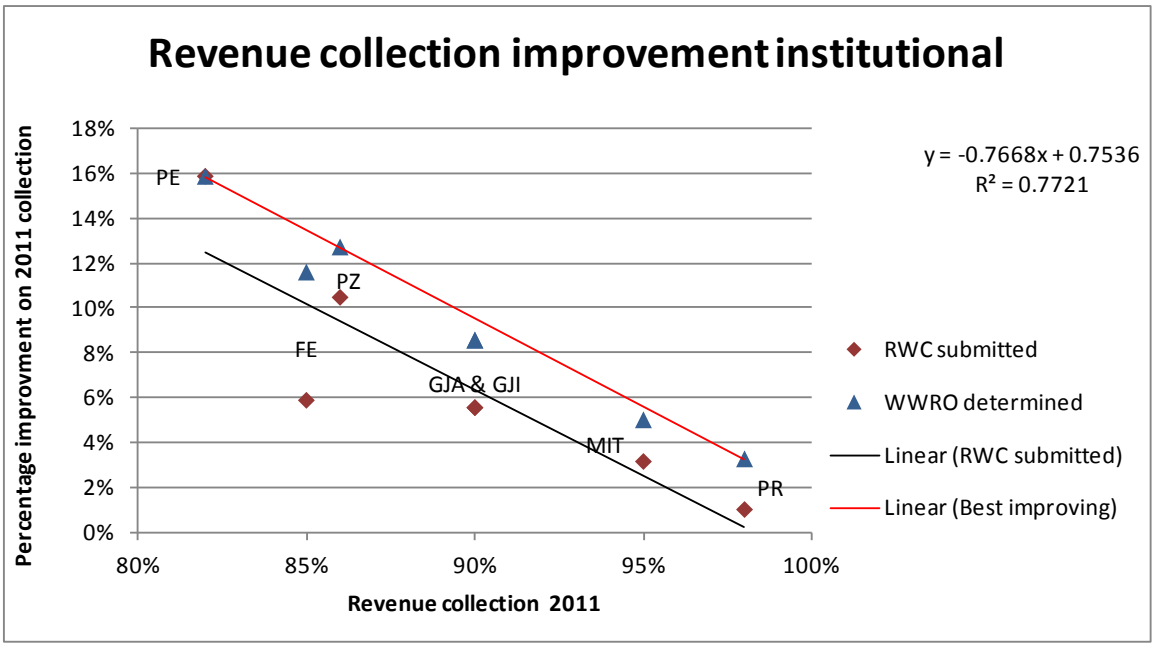
Household customers



Commercial customers



Institutional customers



Commercial efficiency submissions and WWRO adjustments

	PR	PZ	PE	MIT	GJA	FE	GJI	Average (un-weighted)
RWC Business plan submissions 2011 collection rates								
Households	58%	59%	58%	45%	70%	63%	70%	**60%**
Commercial	90%	72%	75%	85%	68%	51%	83%	**75%**
Institutional	98%	86%	82%	95%	90%	85%	90%	**89%**
RWC Business plan submissions 2014 projected collection rates								
Households	65%	68%	65%	51%	75%	70%	75%	**67%**
Commercial	94%	84%	85%	88%	75%	70%	93%	**84%**
Institutional	99%	95%	95%	98%	95%	90%	95%	**95%**
WWRO adjustments to 2014 projected collection rates								
Households	2%	0%	2%	2%	3%	1%	3%	**2%**
Commercial	2%	3%	4%	4%	7%	0%	0%	**2%**
Institutional	1%	2%	0%	2%	3%	5%	3%	**2%**
WWRO determined 2014 projected collection rates								
Households	67%	68%	67%	53%	78%	71%	78%	**69%**
Commercial	96%	87%	89%	92%	82%	70%	93%	**87%**
Institutional	100%	97%	95%	100%	98%	95%	98%	**97%**

ANNEX 4 Capital expenditure programme

Regional Water Company Prishtina (Pristina)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	6,369	9,011	3,067	9,436	9,011	18,447	175
Inf. enhancement	1,110	200	-	1,110	200	1,310	12
Non-inf. capital maintenance	1,965	360	-	1,965	360	2,325	22
Non-inf enhancement	4,032	4,327	-	4,032	4,327	8,358	79
Total water	**13,476**	**13,897**	**3,067**	**16,543**	**13,897**	**30,440**	**289**
Wastewater							
Inf. renewals	400	1,870	1,001	1,401	1,870	3,271	39
Inf. enhancement	100	450	-	100	450	550	6
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	59	-	-	59	-	59	1
Total wastewater	**559**	**2,320**	**1,001**	**1,560**	**2,320**	**3,880**	**46**
Total water + wastewater	**14,034**	**16,217**	**4,068**	**18,102**	**16,217**	**34,320**	**334**

Regional Water Company Hidroregjioni (Prizren)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	272	1,582	-	272	1,582	1,854	54
Inf. enhancement	195	1,951	-	195	1,951	2,146	63
Non-inf. capital maintenance	150	393	-	150	393	543	16
Non-inf enhancement	120	628	-	120	628	748	22
Total water	**737**	**4,553**	**-**	**737**	**4,553**	**5,290**	**155**
Wastewater							
Inf. renewals	200	800	54	254	800	1,054	34
Inf. enhancement	35	1,458	-	35	1,458	1,493	48
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	-	4	-	-	4	4	0
Total wastewater	**235**	**2,262**	**54**	**289**	**2,262**	**2,551**	**81**
Total water + wastewater	**972**	**6,816**	**54**	**1,026**	**6,816**	**7,841**	**237**

Regional Water Company Hidrodrini (Peja)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	50	885	638	688	885	1,573	48
Inf. enhancement	600	1,050	-	600	1,050	1,650	50
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	114	1,735	-	114	1,735	1,849	56
Total water	**764**	**3,670**	**638**	**1,402**	**3,670**	**5,072**	**153**
Wastewater							
Inf. renewals	430	14,285	-	430	14,285	14,715	914
Inf. enhancement	-	715	-	-	715	715	44
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	0	700	-	0	700	700	43
Total wastewater	**430**	**15,700**	**-**	**430**	**15,700**	**16,130**	**1,002**
Total water + wastewater	**1,194**	**19,370**	**638**	**1,832**	**19,370**	**21,202**	**1,155**

Regional Water Company (Mitrovica)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	-	1,800	-	-	1,800	1,800	74
Inf. enhancement	-	795	-	-	795	795	33
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	-	17,640	-	-	17,640	17,640	729
Total water	**-**	**20,235**	**-**	**-**	**20,235**	**20,235**	**836**
Wastewater							
Inf. renewals	-	82	408	408	82	490	26
Inf. enhancement	-	-	-	-	-	-	-
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	-	3,500	-	-	3,500	3,500	187
Total wastewater	**-**	**3,582**	**408**	**408**	**3,582**	**3,990**	**213**
Total water + wastewater	**-**	**23,817**	**408**	**408**	**23,817**	**24,225**	**1,049**

Regional Water Company Radoniqi (Gjakova)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	30	450	1,108	1,138	450	1,588	54
Inf. enhancement	-	-	-	-	-	-	-
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	19	-	-	19	-	19	1
Total water	**49**	**450**	**1,108**	**1,157**	**450**	**1,607**	**55**
Wastewater							
Inf. renewals	1	10	436	438	10	448	26
Inf. enhancement	-	-	-	-	-	-	-
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	-	-	-	-	-	-	-
Total wastewater	**1**	**10**	**436**	**438**	**10**	**448**	**26**
Total water + wastewater	**50**	**460**	**1,545**	**1,595**	**460**	**2,055**	**80**

Regional Water Company Bifurkacioni (Ferizaj)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	30	1,135	218	248	1,135	1,383	75
Inf. enhancement	30	500	-	30	500	530	29
Non-inf. capital maintenance	53	-	-	53	-	53	3
Non-inf enhancement	7	-	-	7	-	7	0
Total water	**120**	**1,635**	**218**	**338**	**1,635**	**1,973**	**107**
Wastewater							
Inf. renewals	5	449	585	590	449	1,039	70
Inf. enhancement	-	300	-	-	300	300	20
Non-inf. capital maintenance	6	-	-	6	-	6	0
Non-inf enhancement	-	50	-	-	50	50	3
Total wastewater	**11**	**799**	**585**	**596**	**799**	**1,395**	**94**
Total water + wastewater	**131**	**2,434**	**803**	**934**	**2,434**	**3,368**	**201**

Regional Water Company Hidromorava (Gjilan)

	Capital expenditure 2012 - 2014 (EUR x 1000 at 2011 price levels)						Exp per cust. EUR
	2012 - 2014 business plan submissions		WWRO adjust-ment	2012 - 2014 business plans WWRO approved			
	RWC financed	Grant financed	RWC financed	RWC financed	Grant financed	Total	
Water							
Inf. renewals	0	36	452	452	36	488	25
Inf. enhancement	-	-	-	-	-	-	-
Non-inf. capital maintenance	30	-	-	30	-	30	2
Non-inf enhancement	145	800	-	145	800	945	48
Total water	**175**	**836**	**452**	**628**	**836**	**1,464**	**74**
Wastewater							
Inf. renewals	-	-	339	339	-	339	18
Inf. enhancement	-	-	-	-	-	-	-
Non-inf. capital maintenance	-	-	-	-	-	-	-
Non-inf enhancement	3	-	-	3	-	3	0
Total wastewater	**3**	**-**	**339**	**342**	**-**	**342**	**19**
Total water + wastewater	**178**	**836**	**792**	**970**	**836**	**1,806**	**93**

ANNEX 5 Return on capital

Background

The return on regulatory asset base (RAB) (also referred to as the return on capital) was set at 4% (real) for the 2009 – 2011 tariff review. This rate of return was not determined through any specific rationale and/or calculation method but was rather set on the basis of 'what is affordable'. In practice the 4% real rate actually turned out to be a 4% nominal rate as no inflation adjustments to the tariff were provided for (contrary to the tariff review intentions). As a consequence of not passing on inflation adjustments, and in a period when inflation was occasionally high, the expected returns were largely cancelled out by inflation effects as well as under-performance in revenue collection and other areas.

Notwithstanding the above weaknesses there is a perception that the rate of return offered is low and is failing to attract investment in the sector other than through the donor agencies on concessionary terms (extended interest free grace periods, and very low interest rates). The rate of 4% (real), even today when global interest rates are at all-time lows, is unlikely to prove attractive for non-concessionary finance where higher returns are expected. A higher rate of return is considered necessary if the RWCs are to be able to finance the necessary investment in the sector.

Rationale

The determination of an appropriate level of a return on capital is subject to serious debate in economics circles. For utilities the approach that is often applied is the 'Capital Asset Pricing Model' (CAPM)[9]. This rationale is widely respected and is considered to be the most viable approach to assessing the cost of capital[10].

The CAPM is summarised in the following simple formula:

$$\overline{r_a} = r_f + \beta_a\left(\overline{r_m} - r_f\right)$$

Where:

$\overline{r_a} = expected\ rate\ of\ return\ for\ the\ asset$

$r_f = risk\ free\ rate$

$\beta_a = beta\ of\ the\ asset$

$\overline{r_m} = expected\ martket\ return$

The concept of the CAPM is that investors need to be compensated in a manner that reflects the risk of the business they are investing in. The formula of the CAPM is such that investors should expect a return that comprises a risk free rate (r_f) plus a premium to reflect the risk of the investment.

The risk free rate (r_f) is often interpreted as the long run yields of AAA graded treasury bonds (or gilts), e.g. bonds issued by central banks that enjoy AAA status.

The market risk premium is a premium (adjusted for all equity) that investors in stock markets expect to receive in the long run for investing in equities. For investing in the market generally investors would expect to receive an average return of $\overline{r_m}$ reflective of the returns expected from the market as a whole. The 'risk premium' is therefore $\left(\overline{r_m} - r_f\right)$.

For a specific asset, the risk may be greater or less than the market risk. This is determined by the asset's particular β_a as a multiplier of the risk premium. If an asset's risk (defined as volatility of

[9] There are many texts describing in detail the theory and application of CAPM. A brief description ca be found on http://www.investopedia.com/terms/c/capm.asp

[10] A recent report, Imrecon, The cost of capital for PR09 High level review of the issues, 2009, states: "CAPM is intuitively powerful and a practical tool. It has its critics who point out empirical shortcomings, but it remains overwhelmingly the gold standard of cost of capital methodologies and one that is broadly accepted by the important audiences in the investor community and universally used by the UK sector regulators".
(http://www.ccwater.org.uk/upload/pdf/High_level_review_of_CC_issues_-_Imrecon_9.09.pdf)

returns) is greater than the average market risk the value of β_a will be greater than 1.0. Conversely, if the risk is less than the average market risk it will be less than 1.0. For example, high risk oil exploration companies may have a β_a in excess of 2.0, whereas very secure 'blue-chip' investments such as large utilities will have a β_a of, say, 0.5. The value of β_a is determined through long-run statistical analysis from which it is possible to determine β_a for specific sectors on average rather than individual companies.

CAPM in Kosovo water sector

The financial sector in Kosovo is not a sophisticated market structure and statistical data on risk premiums (average and individual company) are not available. Furthermore, determination of a risk free rate for Kosovo is also not possible owing to its adoption of the Euro as its currency while not being a Euro-zone member. It is possible, however, to employ statistical information from other countries in order to employ a surrogate set of parameters for the determination of a rate of return on capital for the water sector in Kosovo.

Risk free rate of return r_f

The risk free rate of return employed by OFWAT (the water sector regulator for England and Wales) is based upon historical ten year index linked government bonds whereby a real risk free rate of 2.0% has been derived. The current (mid 2011) real yield on such bonds (UK 2.5% 2024) is in the order of 0.66%[11] with a break-even inflation rate expectation[12] of 3.18%. This return is abnormally low and it would not be unreasonable to assume that within the next few years the yield would rise to its longer run average of 2.0%.

The only immediately available information on Euro denominated index linked bonds is from France (Fr 2.5% 2020) with a real yield of 1.16% and break-even inflation of 2.16%. Similarly, Germany's index linked rates are in the order of 1.0%. Again, these rates are abnormally low with longer run rates of nearer 2% being the norm.

In the absence of any further information for Kosovo it is suggested that a risk free rate of 2.0% (within a range of 1.8% to 2.2%) can apply for Kosovo.

Equity risk premium $(\overline{r_m} - r_f)$.

The average equity risk premium in Europe has been estimated as 5.0%[13]. In other economies (UK, USA, Canada etc.) the risk premium is almost identical ranging from 5.1% to 5.2%. Although, as an emerging economy it can be argued that the risk premium should be higher there is no firm evidence to suggest how much higher. In the most recent OFWAT review a cautious premium of 5.4% was applied. In the absence of any further information it is suggested that a risk premium of 5.5% (within a range of 5.0% to 6.0%) should be applied for Kosovo.

Beta β_a

The water industry is generally considered to be a relatively secure sector (insulated against aggressive competition, and benefiting from captive customers and steady income streams). Consequently the β_a for the sector is generally below 1.0. Research in the USA[14] suggest that a β_a of 0.47 for the water sector is appropriate. OFWAT in the UK, in its most recent price review, applied an asset β_a of 0.4 (water and wastewater companies) and 0.45 (water only companies), broadly very much in line with the USA estimate. Adjusted for gearing of 57.5% this equates to an equity β of 0.9 (not relevant in Kosovo as the level of borrowing is so small). Notwithstanding the low beta levels in USA and UK for the water sector it can be argued that the country risk associated with Kosovo in the financial markets could justify a higher level of β for the water sector in Kosovo if it is to be successful in securing financial creditworthiness. For the foreseeable future, however, the RWCs in Kosovo are unlikely to be seeking access to capital markets but rather seeking funding from the international development sector which, by

[11] http://markets.ft.com/RESEARCH/markets/DataArchiveFetchReport?Category=BR&Type=ILB&Date=05/18/2011

[12] The break-even rate of inflation (inflation expectations) is calculated as the difference in yields between conventional and index linked bonds.

[13] http://www.cxoadvisory.com/equity-premium/the-2010-equity-risk-premium-from-practitioners/

[14] http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html

its very nature, will absorb country risk. It is suggested that a β level of 0.5 (with a range of 0.4 to 0.6) be applied in Kosovo

Adjustment to pre-tax returns

The CAPM framework is based upon a post-tax return on capital. The tariff model, however, is based upon a pre-tax return on capital and an adjustment is needed. On the basis that the RWCs in Kosovo do not have any material levels of debt and that the interest charges, if any, are negligible, it can be assumed that these returns will be subject to taxation at the corporation tax rate of 10%. Consequently to arrive at a pre-tax return on capital an adjustment of 1/(1-10%) is required.

Computed return on capital

Based upon the above assumptions the following estimates of return on capital are illustrated in the table below.

Post tax return on capital

	Recommended	Min	Max
Risk free rate	2.00%	1.80%	2.20%
Beta	0.5	0.4	0.6
Asset risk premium	5.50%	5%	6%
Post tax return on capital (real)	4.75%	3.80%	5.80%
Pre-tax return on capital (real)	5.28%	4.22%	6.44%

Conclusions and recommendations

The past return on capital rate of 4% was too low and even falls below the lower extreme in this analysis. A return on capital of 5.3% (real) has been applied in this 2012 – 2014 tariff review.

ANNEX 6 Customer and sales projections

Customer projections 2011 - 2014

	PR	PZ	PE	MIT	GJA	FE	GJI	Total
Water supply								
End 2011								
Household	89,000	27,789	27,748	20,320	24,886	14,282	16,555	220,580
Commercial	4,239	3,617	1,895	3,313	1,996	1,577	25,454	42,091
Institutional	533	563	289	393	223	118	181	2,300
Total 2011	**93,772**	**31,969**	**29,932**	**24,026**	**27,105**	**15,977**	**42,190**	**264,971**
End 2014								
Household	102,500	30,300	30,448	24,070	26,836	16,900	18,655	249,709
Commercial	4,355	3,712	2,195	3,328	2,082	1,847	26,966	44,485
Institutional	548	590	298	408	226	144	196	2,410
Total 2011	**107,403**	**34,602**	**32,941**	**27,806**	**29,144**	**18,891**	**45,817**	**296,604**
Increase per year	**4,544**	**878**	**1,003**	**1,260**	**680**	**971**	**1,209**	**10,544**
Wastewater services								
End 2011								
Household	68,949	23,541	11,465	15,150	13,389	12,668	15,325	160,487
Commercial	8,326	4,239	3,368	1,895	2,873	1,801	1,577	24,079
Institutional	495	553	166	388	121	118	181	2,022
Total 2011	**77,770**	**28,333**	**14,999**	**17,433**	**16,383**	**14,587**	**17,083**	**186,588**
End 2014								
Household	82,449	29,950	13,265	17,250	15,339	13,058	17,425	188,736
Commercial	8,956	4,355	3,463	2,195	3,023	1,887	1,847	25,726
Institutional	510	580	175	408	136	145	196	2,150
Total 2011	**91,915**	**34,885**	**16,903**	**19,853**	**18,498**	**15,090**	**19,468**	**216,612**
Increase per year	**4,715**	**2,184**	**635**	**807**	**705**	**168**	**795**	**10,008**

Water sales projections 2011 – 2014 (m^3 x 1000)

	PR	PZ	PE	MIT	GJA	FE	GJI	Total
2011								
To customers with a wastewater service	18,002	6,280	4,173	3,819	3,469	2,545	2,742	41,030
To customers without a wastewater service	4,399	890	4,337	1,142	2,860	285	197	14,109
Total	**22,401**	**7,169**	**8,510**	**4,961**	**6,329**	**2,830**	**2,938**	**55,139**
2014								
To customers with a wastewater service	21,340	7,684	4,623	4,127	3,928	2,678	3,271	47,651
To customers without a wastewater service	4,445	252	4,699	1,199	2,735	702	197	14,228
Total	**25,785**	**7,935**	**9,322**	**5,326**	**6,662**	**3,380**	**3,468**	**61,880**
Increase per year	**1,128**	**255**	**271**	**122**	**111**	**184**	**177**	**2,247**

ANNEX 7 Summary income statements

The following tables present the projected income and expenditure statements for the seven RWCs in accordance with the regulatory accounting guidelines based upon the tariffs and levels of service commitments as set out in the WWRO agreed business plans.

All values are presented in EUR x 1000 at 2011 price levels.

Regional Water Company Prishtina (Pristina)

	2012		2013		2014	
Income						
Sales excluding connection fees		**13,772**		**14,800**		**15,783**
Water supply	12,543		13,498		14,251	
Wastewater	1,229		1,301		1,532	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**13,772**		**14,800**		**15,783**
Costs						
Operating costs		**5,571**		**5,571**		**5,568**
Water supply	5,373		5,373		5,373	
Wastewater	198		198		195	
Bad debts		**3,427**		**3,412**		**3,479**
Net income before capital maintenance		**4,774**		**5,817**		**6,737**
Capital maintenance		**3,680**		**3,833**		**4,144**
Water supply	2,957		3,466		3,799	
Wastewater	723		367		345	
Net income before taxes, interest and dividends		**1,094**		**1,984**		**2,593**

Regional Water Company Hidroregjioni (Prizren)

	2012		2013		2014	
Income						
Sales excluding connection fees		**3,938**		**4,310**		**4,732**
Water supply	3,511		3,884		4,220	
Wastewater	428		426		512	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**3,938**		**4,310**		**4,732**
Costs						
Operating costs		**2,407**		**2,455**		**2,622**
Water supply	2,282		2,324		2,486	
Wastewater	125		131		136	
Bad debts		**1,048**		**1,049**		**1,058**
Net income before capital maintenance		**483**		**805**		**1,052**
Capital maintenance		**342**		**170**		**169**
Water supply	222		50		149	
Wastewater	121		121		20	
Net income before taxes, interest and dividends		**141**		**635**		**883**

Regional Water Company Hidrodrini (Peja)

	2012		2013		2014	
Income						
Sales excluding connection fees		**3,132**		**3,409**		**3,680**
Water supply	2,797		3,025		3,236	
Wastewater	335		383		444	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**3,132**		**3,409**		**3,680**
Costs						
Operating costs		**1,624**		**1,624**		**1,623**
Water supply	1,540		1,540		1,540	
Wastewater	84		84		83	
Bad debts		**935**		**852**		**901**
Net income before capital maintenance		**573**		**933**		**1,156**
Capital maintenance		**329**		**403**		**507**
Water supply	300		249		249	
Wastewater	29		154		259	
Net income before taxes, interest and dividends		**244**		**530**		**649**

Regional Water Company (Mitrovica)

	2012		2013		2014	
Income						
Sales excluding connection fees		**2,828**		**3,039**		**3,470**
Water supply	2,406		2,481		2,726	
Wastewater	422		558		744	
Subsidies / government subvention		**385**		**385**		**385**
Total income		**3,213**		**3,424**		**3,855**
Costs						
Operating costs		**1,801**		**1,802**		**1,971**
Water supply	1,638		1,638		1,808	
Wastewater	163		163		163	
Bad debts		**941**		**1,031**		**1,063**
Net income before capital maintenance		**472**		**591**		**821**
Capital maintenance		**158**		**157**		**157**
Water supply	21		21		20	
Wastewater	136		136		136	
Net income before taxes, interest and dividends		**314**		**434**		**664**

Regional Water Company Radoniqi (Gjakova)

	2012		2013		2014	
Income						
Sales excluding connection fees		**3,109**		**3,378**		**3,735**
Water supply	2,809		2,976		3,190	
Wastewater	300		402		546	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**3,109**		**3,378**		**3,735**
Costs						
Operating costs		**1,625**		**1,625**		**1,625**
Water supply	1,544		1,545		1,546	
Wastewater	80		80		80	
Bad debts		**766**		**733**		**729**
Net income before capital maintenance		**718**		**1,020**		**1,381**
Capital maintenance		**596**		**604**		**612**
Water supply	438		436		435	
Wastewater	159		168		177	
Net income before taxes, interest and dividends		**122**		**416**		**769**

Regional Water Company Bifurkacioni (Ferizaj)

	2012		2013		2014	
Income						
Sales excluding connection fees		**1,792**		**1,869**		**1,921**
Water supply	1,382		1,449		1,488	
Wastewater	411		420		433	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**1,792**		**1,869**		**1,921**
Costs						
Operating costs		**773**		**773**		**773**
Water supply	720		720		720	
Wastewater	53		53		53	
Bad debts		**513**		**561**		**548**
Net income before capital maintenance		**506**		**535**		**600**
Capital maintenance		**298**		**313**		**313**
Water supply	89		104		104	
Wastewater	209		209		209	
Net income before taxes, interest and dividends		**208**		**222**		**287**

Regional Water Company Hidromorava (Gjilan)

	2012		2013		2014	
Income						
Sales excluding connection fees		**1,804**		**1,873**		**1,895**
Water supply	1,504		1,541		1,554	
Wastewater	300		332		341	
Subsidies / government subvention		**-**		**-**		**-**
Total income		**1,804**		**1,873**		**1,895**
Costs						
Operating costs		**970**		**970**		**969**
Water supply	894		894		894	
Wastewater	76		76		75	
Bad debts		**377**		**379**		**364**
Net income before capital maintenance		**457**		**524**		**562**
Capital maintenance		**314**		**315**		**314**
Water supply	179		181		181	
Wastewater	135		134		133	
Net income before taxes, interest and dividends		**143**		**209**		**248**

ANNEX 8 Tariffs 2012 - 2014

The following tables set out the WWRO determined fixed charge and volume tariffs for each company. The published Tariff Orders set out tariff schedules for connection fees and other associated costs.

Fixed charge tariffs (EUR per customer per month) - all RWCs

	2012	2013	2014
Households	1.00	1.00	1.00
Commercial	3.00	3.00	3.00
Institutional	3.00	3.00	3.00

Note: These fixed charges are set at nominal price levels and no adjustments for inflation will be made.

Volume tariffs (water and wastewater)

The following schedules set out the tariffs per m^3 of water sold for water supply and wastewater services in addition to the fixed monthly charge. The tariffs for 2012 – 2014 are presented in 2011 price levels to four decimal places and shall be subject annual inflation adjustments in accordance with the October inflation index of the prior year. The tables also provide for 2012 inflation adjusted finalised tariffs.

Regional Water Company Prishtina (Pristina)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.37	0.3546	0.3699	0.3859
Commercial	0.87	0.8332	0.8507	0.8682
Institutional	0.87	0.8332	0.8507	0.8682
Wastewater				
Households	0.05	0.0446	0.0498	0.0556
Commercial	0.11	0.1049	0.1146	0.1251
Institutional	0.11	0.1049	0.1146	0.1251

Regional Water Company Hidroregjioni (Prizren)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.31	0.3001	0.3342	0.3722
Commercial	0.61	0.5853	0.6518	0.7072
Institutional	0.61	0.5853	0.6518	0.7072
Wastewater				
Households	0.05	0.0491	0.0491	0.0600
Commercial	0.09	0.0842	0.0883	0.0979
Institutional	0.09	0.0842	0.0883	0.0979

Regional Water Company Hidrodrini (Peja)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.22	0.2072	0.2264	0.2474
Commercial	0.43	0.4144	0.4529	0.4454
Institutional	0.43	0.4144	0.4529	0.4454
Wastewater				
Households	0.06	0.0564	0.0637	0.0719
Commercial	0.12	0.1129	0.1274	0.1439
Institutional	0.12	0.1129	0.1274	0.1439

Regional Water Company (Mitrovica)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.33	0.3176	0.3492	0.3841
Commercial	0.73	0.6987	0.6985	0.6913
Institutional	0.73	0.6987	0.6985	0.6913
Wastewater				
Households	0.08	0.0778	0.1021	0.1339
Commercial	0.20	0.1946	0.2552	0.3347
Institutional	0.20	0.1946	0.2552	0.3347

Regional Water Company Radoniqi (Gjakova)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.33	0.3137	0.3400	0.3684
Commercial	0.72	0.6902	0.6799	0.6631
Institutional	0.72	0.6902	0.6799	0.6631
Wastewater				
Households	0.07	0.0646	0.0839	0.1089
Commercial	0.16	0.1616	0.2098	0.2724
Institutional	0.16	0.1616	0.2098	0.2724

Regional Water Company Bifurkacioni (Ferizaj)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.31	0.2945	0.3107	0.3279
Commercial	0.68	0.6478	0.6214	0.5902
Institutional	0.68	0.6478	0.6214	0.5902
Wastewater				
Households	0.13	0.1194	0.1301	0.1417
Commercial	0.30	0.2986	0.3252	0.3542
Institutional	0.30	0.2986	0.3252	0.3542

Regional Water Company Hidromorava (Gjilan)

	Tariff per m^3 of water sold (EUR)			
	Tariff Order 2012 inflation adjusted	At 2011 price levels		
		2012	2013	2014
Water supply				
Households	0.32	0.3082	0.3168	0.3256
Commercial	0.71	0.6780	0.6335	0.5861
Institutional	0.71	0.6780	0.6335	0.5861
Wastewater				
Households	0.08	0.0748	0.0799	0.0855
Commercial	0.19	0.1869	0.1999	0.2137
Institutional	0.19	0.1869	0.1999	0.2137

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