

ANNEX 5.3:

VRBAS FINANCIAL MODEL – PESSIMISTIC CASE



Demand projection		1	2	3	4	5	6	7	8	9	10	20	32
Financial year ending	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Water:													
Vrbas town													
Unit domestic consumption - before elasticity	m3/p/d	0.136	0.137	0.138	0.139	0.140	0.141	0.141	0.142	0.142	0.143	0.146	0.150
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.136	0.137	0.138	0.139	0.140	0.141	0.141	0.142	0.142	0.143	0.146	0.150
Vrbas villages													
Unit domestic consumption - before elasticity	m3/p/d	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
Kula town													
Unit domestic consumption - before elasticity	m3/p/d	0.136	0.137	0.138	0.139	0.140	0.141	0.141	0.142	0.142	0.143	0.146	0.150
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.136	0.137	0.138	0.139	0.140	0.141	0.141	0.142	0.142	0.143	0.146	0.150
Wastewater:													
Vrbas town													
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Unit domestic consumption - before elasticity	m3/p/d	0.122	0.123	0.124	0.125	0.126	0.126	0.127	0.127	0.128	0.128	0.132	0.135
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.122	0.123	0.124	0.125	0.126	0.126	0.127	0.127	0.128	0.128	0.132	0.135
Vrbas villages													
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Unit domestic consumption - before elasticity	m3/p/d	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122
Kula town													
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Unit domestic consumption - before elasticity	m3/p/d	0.122	0.123	0.124	0.125	0.126	0.126	0.127	0.127	0.128	0.128	0.132	0.135
Price elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/p/d	-	-	-	-	-	-	-	-	-	-	-	-
Unit domestic consumption - after elasticity	m3/p/d	0.122	0.123	0.124	0.125	0.126	0.126	0.127	0.127	0.128	0.128	0.132	0.135

Demand projection															
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039		
Water demand:															
Domestic PE connected to the Water system															
Vrbas town	Inh	26,535	26,641	26,748	26,855	26,962	27,070	27,178	27,287	27,396	27,506	28,626	30,031		
Vrbas villages	Inh	19,901	19,921	19,941	19,961	19,981	20,001	20,021	20,041	20,061	20,081	20,283	20,527		
Kula town	Inh	19,592	19,641	19,690	19,740	19,789	19,838	19,888	19,938	19,988	20,038	20,544	21,169		
Water sale Vrbas town															
<u>Domestic:</u>	m3/y	1,317,198	1,332,191	1,347,283	1,362,474	1,377,765	1,388,216	1,398,729	1,409,304	1,419,941	1,430,641	1,530,394	1,644,177		
- water billed	m3/y	1,317,198	1,332,191	1,347,283	1,362,474	1,377,765	1,388,216	1,398,729	1,409,304	1,419,941	1,430,641	1,530,394	1,644,177		
- unaccounted for water (administrative)	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
UFW	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
<u>Industry:</u>															
before elasticity	m3/y	120,584	125,909	131,274	136,681	142,129	147,618	155,619	163,681	171,806	179,993	240,276	271,332		
increase water consumption (new connections, new businesses)	m3/y	5,325	5,366	5,407	5,448	5,489	8,001	8,063	8,125	8,187	8,250	2,498	2,697		
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Water consumption by industry - after elasticity	m3/y	125,909	131,274	136,681	142,129	147,618	155,619	163,681	171,806	179,993	188,242	242,773	274,030		
<u>Institutional users</u>															
before elasticity	m3/y	120,584	125,909	131,274	136,681	142,129	147,618	155,619	163,681	171,806	179,993	240,276	271,332		
increase water consumption (new connections)	m3/y	5,325	5,366	5,407	5,448	5,489	8,001	8,063	8,125	8,187	8,250	2,498	2,697		
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Water consumption by institutional	m3/y	125,909	131,274	136,681	142,129	147,618	155,619	163,681	171,806	179,993	188,242	242,773	274,030		
Water sale Vrbas villages															
<u>Domestic:</u>	m3/y	980,621	981,602	982,583	983,566	984,550	985,534	986,520	987,506	988,494	989,482	999,422	1,011,481		
- water billed	m3/y	980,621	981,602	982,583	983,566	984,550	985,534	986,520	987,506	988,494	989,482	999,422	1,011,481		
- unaccounted for water (administrative)	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
UFW	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
<u>Industry:</u>															
before elasticity	m3/y	54,425	59,927	65,440	70,964	76,500	82,046	84,865	87,691	90,521	93,358	123,987	165,110		
increase water consumption (new connections, new businesses)	m3/y	5,502	5,513	5,524	5,535	5,546	2,820	2,825	2,831	2,836	2,842	3,390	3,471		
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Water consumption by industry - after elasticity	m3/y	59,927	65,440	70,964	76,500	82,046	84,865	87,691	90,521	93,358	96,200	127,377	168,580		
<u>Institutional users</u>															
before elasticity	m3/y	18,142	19,976	21,813	23,655	25,500	27,349	28,288	29,230	30,174	31,119	41,329	55,037		
increase water consumption (new connections)	m3/y	1,834	1,838	1,841	1,845	1,849	940	942	944	945	947	1,130	1,157		
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-		
Water consumption by institutional	m3/y	19,976	21,813	23,655	25,500	27,349	28,288	29,230	30,174	31,119	32,067	42,459	56,193		

Demand projection													
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Water sale total - Vrbas town & villages:	m3/y	2,629,539	2,663,595	2,697,847	2,732,297	2,766,944	2,798,142	2,829,532	2,861,117	2,892,897	2,924,873	3,185,199	3,428,491
domestic	m3/y	2,297,820	2,313,793	2,329,866	2,346,040	2,362,315	2,373,751	2,385,249	2,396,810	2,408,435	2,420,123	2,529,816	2,655,658
industry	m3/y	185,836	196,714	207,645	218,628	229,663	240,484	251,372	262,327	273,350	284,442	370,151	442,610
institutional users	m3/y	145,884	153,088	160,336	167,628	174,966	183,907	192,911	201,979	211,112	220,309	285,232	330,223
Losses													
Water losses out of water sold	%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%
Water losses out of water produced	%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%
Water losses	m3/y	1,007,964	1,021,018	1,034,148	1,047,353	1,060,634	1,072,593	1,084,626	1,096,733	1,108,915	1,121,172	1,220,961	1,314,220
Water production - TOTAL	m3/y	3,637,503	3,684,613	3,731,995	3,779,650	3,827,579	3,870,734	3,914,158	3,957,849	4,001,812	4,046,046	4,406,160	4,742,711
Water sale Kula town													
Domestic:	m3/y	972,563	982,164	991,806	1,001,491	1,011,217	1,017,366	1,023,539	1,029,736	1,035,958	1,042,205	1,098,329	1,159,007
- water billed	m3/y	972,563	982,164	991,806	1,001,491	1,011,217	1,017,366	1,023,539	1,029,736	1,035,958	1,042,205	1,098,329	1,159,007
- unaccounted for water (administrative)	m3/y	-	-	-	-	-	-	-	-	-	-	-	-
UFW	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industry:													
before elasticity	m3/y	89,167	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	172,699	191,553
increase water consumption (new connections, new businesses)	m3/y	3,799	3,817	3,835	3,854	3,873	5,702	5,729	5,757	5,785	5,814	1,534	1,615
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-
Water consumption by industry - after elasticity	m3/y	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	137,132	174,233	193,168
Institutional users													
before elasticity	m3/y	89,167	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	172,699	191,553
increase water consumption (new connections)	m3/y	3,799	3,817	3,835	3,854	3,873	5,702	5,729	5,757	5,785	5,814	1,534	1,615
Price elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-
Income elasticity effect	m3/y	-	-	-	-	-	-	-	-	-	-	-	-
Water consumption by institutional	m3/y	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	137,132	174,233	193,168
Water sale total - Kula town	m3/y	1,158,495	1,175,729	1,193,042	1,210,435	1,227,907	1,245,459	1,263,091	1,280,803	1,298,596	1,316,470	1,446,795	1,545,343
domestic	m3/y	972,563	982,164	991,806	1,001,491	1,011,217	1,017,366	1,023,539	1,029,736	1,035,958	1,042,205	1,098,329	1,159,007
industry	m3/y	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	137,132	174,233	193,168
institutional users	m3/y	92,966	96,783	100,618	104,472	108,345	114,046	119,776	125,533	131,319	137,132	174,233	193,168
Losses													
Water losses out of water sold	%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%	67%
Water losses out of water produced	%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Water losses (assumption)	m3/y	772,330	783,819	795,361	806,957	818,605	830,306	842,060	853,869	865,731	877,647	964,530	1,030,228
Water production - TOTAL	m3/y	1,930,824	1,959,548	1,988,404	2,017,391	2,046,511	2,075,764	2,105,151	2,134,671	2,164,326	2,194,116	2,411,326	2,575,571

Demand projection		1	2	3	4	5	6	7	8	9	10	20	32
Financial year ending	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Wastewater demand													
existing + new users Vrbas town	Inh	22,555	26,641	26,748	26,855	26,962	27,070	27,178	27,287	27,396	27,506	28,626	30,031
new users 5 villages Vrbas	Inh	5,970	11,953	19,941	19,961	19,981	20,001	20,021	20,041	20,061	20,081	20,283	20,527
new users Kula town	Inh	-	-	-	-	14,842	15,375	15,910	16,449	16,989	17,533	20,544	21,169
Total domestic users connected	Inh	28,525	38,594	46,689	46,815	61,785	62,445	63,109	63,776	64,446	65,119	69,453	71,727
Wastewater sale Vrbas town													
Domestic consumption - after elasticity	m3/y	1,007,657	1,198,972	1,212,555	1,226,227	1,239,989	1,249,395	1,258,856	1,268,374	1,277,947	1,287,577	1,377,355	1,479,759
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Small industries - after elasticity	m3/y	96,320	118,147	123,013	127,916	132,856	140,057	147,313	154,625	161,993	169,418	218,496	246,627
Large industries:													
Carnex	m3/y	-	-	-	1,241,000	1,241,000	1,241,000	1,241,000	1,241,000	1,241,000	1,241,000	1,241,000	1,241,000
Vital	m3/y	-	-	-	456,250	456,250	456,250	456,250	456,250	456,250	456,250	456,250	456,250
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Institutional users - after elasticity	m3/y	96,320	118,147	123,013	127,916	132,856	140,057	147,313	154,625	161,993	169,418	218,496	246,627
Wastewater sale Vrbas villages													
Domestic consumption - after elasticity	m3/y	264,768	530,065	884,325	885,209	886,095	886,981	887,868	888,756	889,644	890,534	899,480	910,333
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Small industries - after elasticity	m3/y	16,180	35,338	63,868	68,850	73,841	76,379	78,922	81,469	84,022	86,580	114,640	151,722
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Institutional users - after elasticity	m3/y	5,393	11,779	21,289	22,950	24,614	25,460	26,307	27,156	28,007	28,860	38,213	50,574
Wastewater sale Kula town													
Domestic consumption - after elasticity	m3/y	-	-	-	-	682,572	709,613	736,948	764,579	792,508	820,737	988,497	1,043,106
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Small industries - after elasticity	m3/y	-	-	-	-	73,133	79,547	86,239	93,208	100,459	107,992	156,810	173,851
Large industries:													
Istra	m3/y	-	-	-	-	401,500	401,500	401,500	401,500	401,500	401,500	401,500	401,500
Eterna	m3/y	-	-	-	-	547,500	547,500	547,500	547,500	547,500	547,500	547,500	547,500
Factor water to waste water	%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Institutional users - after elasticity	m3/y	-	-	-	-	73,133	79,547	86,239	93,208	100,459	107,992	156,810	173,851
Wastewater Vrbas city + villages													
by type of customer													
domestic	m3/y	1,272,424	1,729,037	2,096,880	2,111,436	2,126,083	2,136,375	2,146,724	2,157,129	2,167,591	2,178,111	2,276,834	2,390,092
Industry -small	m3/y	112,500	153,485	186,881	196,765	206,697	216,436	226,235	236,094	246,015	255,998	333,136	398,349
industry - big	m3/y	-	-	-	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250
institutional users	m3/y	101,714	129,926	144,302	150,866	157,470	165,516	173,620	181,781	190,001	198,278	256,709	297,201
by location													
Vrbas town	m3/y	1,200,297	1,435,266	1,458,580	3,179,308	3,202,950	3,226,758	3,250,732	3,274,874	3,299,183	3,323,662	3,511,597	3,670,263
Vrbas villages	m3/y	286,341	577,182	969,482	977,009	984,550	988,819	993,096	997,381	1,001,674	1,005,974	1,052,332	1,112,629
Infiltration													
Vrbas town	m3/y	851,472	914,544	977,616	1,040,688	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760
Vrbas villages	m3/y	75,686	151,373	227,059	302,746	378,432	387,893	397,354	406,814	416,275	425,736	491,591	536,112
Wastewater delivered to the WWTP	m3/y	2,413,797	3,078,364	3,632,738	5,499,751	5,669,692	5,707,230	5,744,942	5,782,829	5,820,892	5,859,132	6,159,279	6,422,764
Wastewater delivered to the WWTP	m3/d	6,613	8,434	9,953	15,068	15,533	15,636	15,740	15,843	15,948	16,052	16,875	17,597

Demand projection														
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039	
Wastewater total	m3/y	1,486,638	2,012,448	2,428,062	4,156,317	5,965,337	6,033,285	6,102,254	6,172,251	6,243,283	6,315,356	6,815,045	7,122,700	
by type of customer														
domestic	m3/y	1,272,424	1,729,037	2,096,880	2,111,436	2,808,655	2,845,988	2,883,672	2,921,709	2,960,100	2,998,847	3,265,331	3,433,199	
Industry -small	m3/y	112,500	153,485	186,881	196,765	279,830	295,983	312,473	329,303	346,474	363,989	489,945	572,200	
industry - big	m3/y	-	-	-	1,697,250	2,646,250	2,646,250	2,646,250	2,646,250	2,646,250	2,646,250	2,646,250	2,646,250	
institutional users	m3/y	101,714	129,926	144,302	150,866	230,602	245,064	259,859	274,990	290,459	306,270	413,519	471,052	
by location														
Vrbas town	m3/y	1,200,297	1,435,266	1,458,580	3,179,308	3,202,950	3,226,758	3,250,732	3,274,874	3,299,183	3,323,662	3,511,597	3,670,263	
Vrbas villages	m3/y	286,341	577,182	969,482	977,009	984,550	988,819	993,096	997,381	1,001,674	1,005,974	1,052,332	1,112,629	
Kula town	m3/y	-	-	-	-	1,777,837	1,817,707	1,858,425	1,899,996	1,942,426	1,985,720	2,251,116	2,339,808	
Infiltration														
Infiltration	%	62%	53%	50%	32%	33%	33%	33%	33%	33%	33%	33%	34%	
Infiltration - Vrbas town	m3/y	851,472	914,544	977,616	1,040,688	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	1,103,760	
Infiltration - Vrbas villages	m3/y	75,686	151,373	227,059	302,746	378,432	387,893	397,354	406,814	416,275	425,736	491,591	536,112	
Infiltration - Kula town	m3/y					473,040	488,808	504,576	520,344	536,112	551,880	677,096	788,400	
Wastewater delivered to the WWTP	m3/y	2,413,797	3,078,364	3,632,738	5,499,751	7,920,569	8,013,746	8,107,944	8,203,170	8,299,430	8,396,732	9,087,492	9,550,972	
Wastewater delivered to the WWTP	m3/d	6,613	8,434	9,953	15,068	21,700	21,955	22,214	22,474	22,738	23,005	24,897	26,167	

Capital expenditure

Financial year ending	Units	Total	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	17 2024	18 2025	32 2039
Summary (incl. VAT & contingencies)														
Investment	€ m	25.16	2.46	11.35	11.35									
Land	€ m	0.02	-	0.02	-									
Total. Incl. VAT & contingencies	€ m	25.18	2.46	11.37	11.35									
WWTP (excl. contingencies, excl. VAT)														
Investigation works & design	€ m	0.49	-	0.25	0.25									
Construction works	€ m	4.38	-	2.19	2.19									
Electro-mechanical equipment	€ m	5.31	-	2.66	2.66									
Additional land acquisition (1,5 ha)	€ m	0.02	-	0.02	-									
Trial run, staff training, operation	€ m	0.30	-	0.15	0.15									
Sewerage														
Vrbas main sewers	€ m	0.45	-	0.23	0.23									
Vrbas villages sewerage extension - civil works	€ m	1.33	0.27	0.53	0.53									
Vrbas villages sewerage extension - elctr/mech	€ m	0.38	0.08	0.15	0.15									
Vrbas villages sewerage extension - pipes & fitti	€ m	9.49	1.90	3.80	3.80									
Supervision														
Supervision WWTP	€ m	0.57	-	0.28	0.28									
Supervision sewer extension	€ m	0.35	0.07	0.14	0.14									
Total	€ m	23.06	2.31	10.39	10.37									
WWTP (incl. contingencies, excl. VAT)														
Investigation works & design	€ m	0.49	-	0.25	0.25									
Construction works	€ m	5.04	-	2.52	2.52									
Electro-mechanical equipment	€ m	5.79	-	2.89	2.89									
Additional land acquisition (1,5 ha)	€ m	0.02	-	0.02	-									
Trial run, staff training, operation	€ m	0.30	-	0.15	0.15									
Sewerage														
Vrbas main sewers	€ m	0.45	-	0.23	0.23									
Vrbas villages sewerage extension - civil works	€ m	1.33	0.27	0.53	0.53									
Vrbas villages sewerage extension - elctr/mech	€ m	0.38	0.08	0.15	0.15									
Vrbas villages sewerage extension - pipes & fitti	€ m	9.49	1.90	3.80	3.80									
Supervision														
Supervision WWTP	€ m	0.90	-	0.45	0.45									
Supervision sewer extension	€ m	0.58	0.12	0.23	0.23									
Total	€ m	24.77	2.36	11.22	11.20									

Capital expenditure

Financial year ending	Units	Total	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	17 2024	18 2025	32 2039
WWTP (incl. contingencies, incl. VAT)														
Investigation works & design	€ m	0.50	-	0.25	0.25									
Construction works	€ m	5.11	-	2.55	2.55									
Electro-mechanical equipment	€ m	5.87	-	2.93	2.93									
Additional land acquisition (1,5 ha)	€ m	0.02	-	0.02	-									
Trial run, staff training, operation	€ m	0.30	-	0.15	0.15									
Sewerage														
Vrbas main sewers	€ m	0.46	-	0.23	0.23									
Vrbas villages sewerage extension - civil works	€ m	1.35	0.28	0.54	0.54									
Vrbas villages sewerage extension - elctr/mech	€ m	0.39	0.08	0.15	0.15									
Vrbas villages sewerage extension - pipes & fitti	€ m	9.69	1.98	3.85	3.85									
Supervision														
Supervision WWTP	€ m	0.92	-	0.46	0.46									
Supervision sewer extension	€ m	0.59	0.12	0.24	0.24									
Total	€ m	25.18	2.46	11.37	11.35									
Reinvestment														
WWTP - electro-mechanical equipment	€ m	8.26											8.26	
Sewerage pumps Vrbas villages	€ m	0.53										0.53		
Financing														
EU-IPA	€ m	18.56	-	9.28	9.28									
Min. Agriculture, DG Water	€ m	3.87	-	1.94	1.94									
Municipal contribution	€ m	2.75	2.46	0.16	0.14									
Loan	€ m	-	-	-	-									
Total	€ m	25.18	2.46	11.37	11.35									

Operational expenditures													
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Expenditure by component													
Drinking water	000 RSD	69,314	76,373	82,670	92,226	98,598	104,450	110,702	118,175	126,261	135,002	267,145	623,854
Sewage collection Vrbas city	000 RSD	20,113	22,315	24,049	31,200	33,398	35,472	38,072	40,825	43,693	46,834	94,879	226,537
Waste water treatment	000 RSD	-	-	-	136,036	141,617	146,225	151,472	157,057	163,005	169,338	296,178	514,837
Sewage collection 5 Vrbas villages	000 RSD	-	9,846	31,077	56,900	59,264	61,054	63,168	65,435	67,868	70,479	111,502	212,705
Total		89,427	108,534	137,796	316,363	332,877	347,201	363,414	381,493	400,826	421,652	769,704	1,577,935
Drinking water	%	78%	70%	60%	29%	30%	30%	30%	31%	32%	32%	35%	40%
Sewage collection Vrbas city	%	22%	21%	17%	10%	10%	10%	10%	11%	11%	11%	12%	14%
Waste water treatment	%	0%	0%	0%	43%	43%	42%	42%	41%	41%	40%	38%	33%
Sewage collection 5 Vrbas villages	%	0%	9%	23%	18%	18%	18%	17%	17%	17%	17%	14%	13%
Total	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Expenditure by service													
water	000 RSD	69,314	76,373	82,670	92,226	98,598	104,450	110,702	118,175	126,261	135,002	267,145	623,854
sewage collection	000 RSD	20,113	32,161	55,126	88,101	92,661	96,526	101,240	106,261	111,561	117,312	206,380	439,243
wastewater	000 RSD	-	-	-	136,036	141,617	146,225	151,472	157,057	163,005	169,338	296,178	514,837
Total costs	000 RSD	89,427	108,534	137,796	316,363	332,877	347,201	363,414	381,493	400,826	421,652	769,704	1,577,935
going to water	%	78%	70%	60%	29%	30%	30%	30%	31%	32%	32%	35%	40%
going to sewage collection	%	22%	30%	40%	28%	28%	28%	28%	28%	28%	28%	27%	28%
going to wastewater	%	0%	0%	0%	43%	43%	42%	42%	41%	41%	40%	38%	33%
Total	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Depreciation													
water services	000 RSD	3,500	3,500	3,500	3,500	3,500	3,500	2,760	2,741	2,798	2,933	7,550	34,210
sewage collection	000 RSD	3,090	8,463	19,716	33,957	34,107	34,282	34,558	34,813	34,997	35,254	42,064	58,329
wastewater services	000 RSD	-	-	-	61,774	61,774	61,774	61,774	61,774	61,774	61,774	98,282	98,282
Depreciation	000 RSD	6,590	11,963	23,216	99,232	99,381	99,556	99,093	99,329	99,569	99,961	147,897	190,821
going to water	%	53%	29%	15%	4%	4%	4%	3%	3%	3%	3%	5%	18%
going to sewage collection	%	47%	71%	85%	34%	34%	34%	35%	35%	35%	35%	28%	31%
going to wastewater	%	0%	0%	0%	62%	62%	62%	62%	62%	62%	62%	66%	52%
Total	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Operational expenditures															
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039		
Cost structure for existing water services															
Water															
Water demand	m3/y	3,637,503	3,684,613	3,731,995	3,779,650	3,827,579	3,870,734	3,914,158	3,957,849	4,001,812	4,046,046	4,406,160	4,742,711		
Variable costs															
Liquid chlorine	000 RSD	13,197	14,811	16,435	18,068	19,677	21,200	23,008	24,971	27,106	29,426	65,820	171,041		
Electricity	000 RSD	874	974	1,065	1,154	1,239	1,315	1,397	1,483	1,574	1,671	2,965	5,731		
Fuel and lubricant	000 RSD	9,487	10,676	11,912	13,167	14,416	15,614	17,076	18,674	20,420	22,329	53,230	146,704		
	000 RSD	2,837	3,161	3,458	3,747	4,022	4,271	4,535	4,815	5,111	5,426	9,626	18,607		
Fixed costs															
Wages and Salaries	000 RSD	56,117	61,562	66,235	74,158	78,921	83,250	87,695	93,203	99,155	105,575	201,325	452,813		
Employee benefits	000 RSD	21,113	23,456	25,586	28,735	30,764	32,625	34,942	37,423	40,080	42,925	85,233	194,125		
Other materials	000 RSD	3,876	4,306	4,697	5,275	5,647	5,989	6,414	6,869	7,357	7,879	15,645	35,634		
Transport services	000 RSD	3,848	4,233	4,571	4,891	5,185	5,444	5,716	6,002	6,302	6,617	10,779	19,357		
Repair services	000 RSD	17	19	21	22	24	25	27	28	30	32	57	115		
Other services	000 RSD	11,592	12,783	13,840	14,846	15,776	16,606	17,524	18,492	19,514	20,592	35,257	67,223		
Taxes and fees	000 RSD	3,102	3,420	3,703	3,972	4,221	4,443	4,689	4,948	5,221	5,510	9,433	17,986		
Depreciation	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-		
Other costs	000 RSD	3,500	3,500	3,500	3,500	3,500	3,500	2,760	2,741	2,798	2,933	7,550	34,210		
Overhead costs	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-		
TOTAL	000 RSD	9,070	9,845	10,317	12,916	13,804	14,617	15,623	16,700	17,853	19,087	37,369	84,163		
		69,314	76,373	82,670	92,226	98,598	104,450	110,702	118,175	126,261	135,002	267,145	623,854		

Operational expenditures		1	2	3	4	5	6	7	8	9	10	20	32
Financial year ending	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Cost structure for existing wastewater services													
Wastewater demand (Vrbas towr	m3/y	1,200,297	1,435,266	1,458,580	3,179,308	3,202,950	3,226,758	3,250,732	3,274,874	3,299,183	3,323,662	3,511,597	3,670,263
Variable costs	000 RSD	1,675	2,225	2,491	5,926	6,455	6,965	7,589	8,268	9,008	9,815	22,700	60,750
Electricity	000 RSD	1,675	2,225	2,491	5,926	6,455	6,965	7,589	8,268	9,008	9,815	22,700	60,750
Fixed costs	000 RSD	18,438	20,090	21,558	25,274	26,942	28,506	30,484	32,557	34,684	37,019	72,178	165,788
Wages and Salaries	000 RSD	7,906	8,784	9,581	11,439	12,247	12,988	13,910	14,897	15,955	17,088	33,930	77,278
Employee benefits	000 RSD	1,546	1,718	1,873	2,237	2,395	2,539	2,720	2,913	3,120	3,341	6,634	15,110
Other materials	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Transport services	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Repair services	000 RSD	2,500	2,757	2,985	3,202	3,402	3,581	3,779	3,988	4,208	4,441	7,604	14,498
Other services	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Taxes and fees	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation	000 RSD	3,090	3,145	3,254	3,254	3,404	3,579	3,855	4,111	4,294	4,551	9,134	25,398
Other costs	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Overhead	000 RSD	3,396	3,687	3,863	5,142	5,495	5,819	6,219	6,648	7,107	7,598	14,876	33,504
TOTAL costs for existing infrastr	000 RSD	20,113	22,315	24,049	31,200	33,398	35,472	38,072	40,825	43,693	46,834	94,879	226,537
Incremental operational costs caused by connection of large industries to existing sewage collection network in Vrbas city													
Wastewater demand large industri	m3/y	-	-	-	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250	1,697,250
Variable costs	000 RSD	-	-	-	3,164	3,421	3,664	3,962	4,285	4,634	5,012	10,972	28,093
Electricity	000 RSD	-	-	-	3,164	3,421	3,664	3,962	4,285	4,634	5,012	10,972	28,093
Existing/base line costs sewage collection Vrbas city													
Variable costs	000 RSD	1,675	2,225	2,491	2,763	3,035	3,301	3,627	3,983	4,374	4,803	11,729	32,657
Electricity	000 RSD	1,675	2,225	2,491	2,763	3,035	3,301	3,627	3,983	4,374	4,803	11,729	32,657
Fixed costs	000 RSD	18,438	20,090	21,558	25,274	26,942	28,506	30,484	32,557	34,684	37,019	72,178	165,788
Wages and Salaries	000 RSD	7,906	8,784	9,581	11,439	12,247	12,988	13,910	14,897	15,955	17,088	33,930	77,278
Employee benefits	000 RSD	1,546	1,718	1,873	2,237	2,395	2,539	2,720	2,913	3,120	3,341	6,634	15,110
Other materials	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Transport services	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Repair services	000 RSD	2,500	2,757	2,985	3,202	3,402	3,581	3,779	3,988	4,208	4,441	7,604	14,498
Other services	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Taxes and fees	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation	000 RSD	3,090	3,145	3,254	3,254	3,404	3,579	3,855	4,111	4,294	4,551	9,134	25,398
Other costs	000 RSD	-	-	-	-	-	-	-	-	-	-	-	-
Overhead	000 RSD	3,396	3,687	3,863	5,142	5,495	5,819	6,219	6,648	7,107	7,598	14,876	33,504
TOTAL costs	000 RSD	20,113	22,315	24,049	28,036	29,977	31,808	34,110	36,540	39,058	41,822	83,907	198,445

Operational expenditures													
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Incremental costs for WWTP													
Waste water delivered at WWTP (Vrbas municipality only, including infiltration)				5,499,751	5,669,692	5,707,230	5,744,942	5,782,829	5,820,892	5,859,132	6,159,279	6,422,764	
Variable costs		-	-	-	34,594	37,601	39,891	42,471	45,227	48,173	51,322	96,876	211,154
Use of chemicals	000 RSD				4,167	4,554	4,813	5,087	5,377	5,683	6,006	10,284	19,259
Electricity	000 RSD				9,402	10,480	11,298	12,300	13,390	14,577	15,868	36,516	97,498
Sludge transport	000 RSD				4,182	4,593	4,878	5,208	5,559	5,934	6,335	11,982	25,285
Effluent discharge fee	000 RSD				16,843	17,975	18,901	19,876	20,901	21,979	23,113	38,093	69,111
Fixed costs	000 RSD	-	-	-	101,442	104,016	106,334	109,001	111,830	114,832	118,016	199,302	303,683
Wages and Salaries	000 RSD				7,229	7,740	8,208	8,791	9,415	10,083	10,799	21,443	48,839
Employee benefits	000 RSD				1,446	1,548	1,642	1,758	1,883	2,017	2,160	4,289	9,768
Other materials	000 RSD												
Transport services	000 RSD												
Repair services	000 RSD				21,840	23,208	24,430	25,779	27,204	28,707	30,293	51,867	98,891
Other services	000 RSD				5,903	6,273	6,603	6,968	7,353	7,759	8,187	14,019	26,728
Taxes and fees	000 RSD												
Depreciation	000 RSD				61,774	61,774	61,774	61,774	61,774	61,774	61,774	98,282	98,282
Overhead	000 RSD	-	-	-	3,250	3,473	3,677	3,931	4,202	4,492	4,802	9,402	21,174
TOTAL incremental costs	000 RSD	-	-	-	136,036	141,617	146,225	151,472	157,057	163,005	169,338	296,178	514,837
Variable costs	%				25%	27%	27%	28%	29%	30%	30%	33%	41%
Use of chemicals	%				3%	3%	3%	3%	3%	3%	4%	3%	4%
Electricity	%				7%	7%	8%	8%	9%	9%	9%	12%	19%
Sludge transport	%				3%	3%	3%	3%	4%	4%	4%	4%	5%
Effluent discharge fee	%				12%	13%	13%	13%	13%	13%	14%	13%	13%
Fixed costs	%				75%	73%	73%	72%	71%	70%	70%	67%	59%
Wages and Salaries	%				5%	5%	6%	6%	6%	6%	6%	7%	9%
Employee benefits	%				1%	1%	1%	1%	1%	1%	1%	1%	2%
Other materials	%				0%	0%	0%	0%	0%	0%	0%	0%	0%
Transport services	%				0%	0%	0%	0%	0%	0%	0%	0%	0%
Repair services	%				16%	16%	17%	17%	17%	18%	18%	18%	19%
Other services	%				4%	4%	5%	5%	5%	5%	5%	5%	5%
Taxes and fees	%				0%	0%	0%	0%	0%	0%	0%	0%	0%
Depreciation	%				45%	44%	42%	41%	39%	38%	36%	33%	19%
Overhead	%				2%	2%	3%	3%	3%	3%	3%	3%	4%
TOTAL incremental costs	%				100%	100%	100%	100%	100%	100%	100%	100%	100%
Incremental costs for sewerage extension													
Waste water originating from villages		340,454	681,438	1,111,384	1,187,955	1,264,527	1,274,874	1,285,221	1,295,570	1,305,920	1,316,270	1,391,070	1,446,445
Variable costs		-	1,278	4,222	7,681	8,839	9,544	10,406	11,345	12,367	13,481	31,189	83,038
Use of chemicals	000 RSD												
Electricity	000 RSD		1,278	4,222	7,681	8,839	9,544	10,406	11,345	12,367	13,481	31,189	83,038
Fixed costs	000 RSD	-	8,569	26,855	49,220	50,424	51,510	52,762	54,091	55,501	56,997	80,312	129,668
Wages and Salaries	000 RSD	-	613	2,007	3,615	3,870	4,104	4,395	4,707	5,042	5,400	10,722	24,420
Employee benefits	000 RSD	-	123	401	723	774	821	879	941	1,008	1,080	2,144	4,884
Other materials	000 RSD												
Transport services	000 RSD												
Repair services	000 RSD		1,987	6,317	11,052	11,744	12,362	13,045	13,766	14,527	15,329	26,246	50,042
Other services	000 RSD		270	859	1,503	1,597	1,681	1,774	1,872	1,975	2,084	3,569	6,805
Taxes and fees	000 RSD												
Depreciation	000 RSD	-	5,318	16,462	30,703	30,703	30,703	30,703	30,703	30,703	30,703	32,930	32,930
Overhead	000 RSD	-	257	809	1,625	1,736	1,839	1,965	2,101	2,246	2,401	4,701	10,587
TOTAL incremental costs	000 RSD	-	9,846	31,077	56,900	59,264	61,054	63,168	65,435	67,868	70,479	111,502	212,705

Operational expenditures													
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Total wastewater costs													
costs of the current system	000 RSD	16,717	18,628	20,185	26,058	27,903	29,653	31,853	34,177	36,586	39,235	80,002	193,034
incremental costs WWTP	000 RSD	-	-	-	132,787	138,144	142,548	147,541	152,856	158,513	164,536	286,777	493,663
incremental costs sewerage	000 RSD	-	9,589	30,268	55,276	57,527	59,216	61,203	63,335	65,622	68,078	106,801	202,118
overhead costs	000 RSD	3,396	3,944	4,673	10,016	10,704	11,335	12,115	12,951	13,844	14,801	28,979	65,265
Total	000 RSD	20,113	32,161	55,126	224,137	234,278	242,751	252,712	263,318	274,565	286,650	502,559	954,080
		-	-	-	-	-	-	-	-	-	-	-	-
Cost structure for overhead costs													
Wages and Salaries	000 RSD	10,886	12,094	13,192	17,531	18,769	19,905	21,318	22,831	24,452	26,189	52,000	118,435
Employee benefits	000 RSD	-	-	-	3,506	3,754	3,981	4,264	4,566	4,890	5,238	10,400	23,687
Other materials	000 RSD												
Energy (Electricity)	000 RSD	70	77	85	93	101	108	116	126	136	147	322	825
Transport services	000 RSD												
Repair services	000 RSD	49	54	58	62	66	70	73	77	82	86	148	281
Other services	000 RSD	987	1,089	1,179	1,264	1,343	1,414	1,492	1,575	1,662	1,754	3,002	5,724
Taxes and fees	000 RSD												
Depreciation	000 RSD	475	475	475	475	475	475	475	475	475	475	475	475
Other costs	000 RSD												
TOTAL	000 RSD	12,466	13,789	14,989	22,932	24,508	25,952	27,739	29,651	31,698	33,889	66,348	149,428
Staffing schedule & costs													
Water Supply													
Head of water supply	No.	36	36	36	37	37	37	37	37	37	37	37	37
Unit supervisor water treatment & c	No.	1	1	1	1	1	1	1	1	1	1	1	1
Foreman	No.	1	1	1	1	1	1	1	1	1	1	1	1
Technicians	No.	14	14	14	14	14	14	14	14	14	14	14	14
Support services	No.	1	1	1	1	1	1	1	1	1	1	1	1
Unit supervisor meetring & water si	No.	1	1	1	1	1	1	1	1	1	1	1	1
Technicians	No.	12	12	12	12	12	12	12	12	12	12	12	12
Support services	No.	6	6	6	6	6	6	6	6	6	6	6	6
Waste water - existing													
Head of waste water	No.	15	15	15	16	16	16	16	16	16	16	16	16
Unit supervisor sewage pumps & V	No.	1	1	1	1	1	1	1	1	1	1	1	1
Foreman	No.	1	1	1	1	1	1	1	1	1	1	1	1
Technicians	No.	12	12	12	12	12	12	12	12	12	12	12	12
Support services	No.	1	1	1	1	1	1	1	1	1	1	1	1
Waste water - sewerage new													
Technicians for 7 FCS	No.	-	1	3	5	5	5	5	5	5	5	5	5
			1	3	5	5	5	5	5	5	5	5	5
WWTP - new													
Unit supervisor WWTP operations	No.	-	-	-	10	10	10	10	10	10	10	10	10
Technicians	No.				1	1	1	1	1	1	1	1	1
Support services	No.				7	7	7	7	7	7	7	7	7
	No.				2	2	2	2	2	2	2	2	2

Operational expenditures		1	2	3	4	5	6	7	8	9	10	20	32
Financial year ending	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Overhead		13	13	13	22	22	22	22	22	22	22	22	22
General manager	No.				1	1	1	1	1	1	1	1	1
Technical manager	No.	1	1	1	1	1	1	1	1	1	1	1	1
Head of legal-adm department	No.	1	1	1	1	1	1	1	1	1	1	1	1
IT expert	No.				1	1	1	1	1	1	1	1	1
HR assistant	No.				1	1	1	1	1	1	1	1	1
Env. protection assistant	No.				1	1	1	1	1	1	1	1	1
Adm. Assistant	No.	1	1	1	1	1	1	1	1	1	1	1	1
security	No.	3	3	3	3	3	3	3	3	3	3	3	3
cleaning	No.	2	2	2	2	2	2	2	2	2	2	2	2
driver	No.				1	1	1	1	1	1	1	1	1
Head of fin-ec department	No.	1	1	1	1	1	1	1	1	1	1	1	1
Planner	No.	1	1	1	1	1	1	1	1	1	1	1	1
Accountant	No.	2	2	2	2	2	2	2	2	2	2	2	2
Complaints/info officer	No.	1	1	1	1	1	1	1	1	1	1	1	1
Billing/collection officers	No.				4	4	4	4	4	4	4	4	4
Total new PUC	No.	64	65	67	90	90	90	90	90	90	90	90	90
Water Supply	000 RSD	19,458	21,618	23,581	26,568	28,444	30,165	32,306	34,600	37,057	39,688	78,805	179,484
Head of water supply	000 RSD	-	-	-	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Unit supervisor water treatment & c	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Foreman	000 RSD	690	767	836	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
Technicians	000 RSD	7,728	8,586	9,365	10,121	10,836	11,491	12,307	13,181	14,117	15,119	30,021	68,375
Support services	000 RSD	414	460	502	542	580	616	659	706	756	810	1,608	3,663
Unit supervisor meeting & water si	000 RSD	690	767	836	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
Technicians	000 RSD	6,624	7,359	8,027	8,675	9,288	9,850	10,549	11,298	12,100	12,959	25,732	58,607
Support services	000 RSD	2,484	2,760	3,010	3,253	3,483	3,694	3,956	4,237	4,538	4,860	9,650	21,978
Waste water - existing	000 RSD	8,556	9,506	10,369	12,290	13,158	13,954	14,944	16,005	17,142	18,359	36,454	83,026
Head of waste water	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Unit supervisor sewage pumps & V	000 RSD	-	-	-	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Foreman	000 RSD	690	767	836	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
Technicians	000 RSD	6,624	7,359	8,027	8,675	9,288	9,850	10,549	11,298	12,100	12,959	25,732	58,607
Support services	000 RSD	414	460	502	542	580	616	659	706	756	810	1,608	3,663
Waste water - sewerage new	000 RSD	-	613	2,007	3,615	3,870	4,104	4,395	4,707	5,042	5,400	10,722	24,420
Technicians for 7 FCS	000 RSD	-	613	2,007	3,615	3,870	4,104	4,395	4,707	5,042	5,400	10,722	24,420
WWTP - new	000 RSD	-	-	-	7,229	7,740	8,208	8,791	9,415	10,083	10,799	21,443	48,839
Unit supervisor WWTP operations	000 RSD	-	-	-	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Technicians	000 RSD	-	-	-	5,061	5,418	5,746	6,154	6,590	7,058	7,560	15,010	34,187
Support services	000 RSD	-	-	-	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326

Operational expenditures													
Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Overhead	000 RSD	7,728	8,586	9,365	17,531	18,769	19,905	21,318	22,831	24,452	26,189	52,000	118,435
General manager	000 RSD	-	-	-	1,265	1,354	1,436	1,538	1,648	1,765	1,890	3,753	8,547
Technical manager	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Head of legal-adm department	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
IT expert	000 RSD	-	-	-	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
HR assistant	000 RSD	-	-	-	723	774	821	879	941	1,008	1,080	2,144	4,884
Env. protection assistant	000 RSD	-	-	-	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
Adm. Assistant	000 RSD	552	613	669	723	774	821	879	941	1,008	1,080	2,144	4,884
security	000 RSD	1,242	1,380	1,505	1,627	1,741	1,847	1,978	2,118	2,269	2,430	4,825	10,989
cleaning	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
driver	000 RSD	-	-	-	723	774	821	879	941	1,008	1,080	2,144	4,884
Head of fin-ec department	000 RSD	828	920	1,003	1,084	1,161	1,231	1,319	1,412	1,513	1,620	3,217	7,326
Planner	000 RSD	690	767	836	904	967	1,026	1,099	1,177	1,260	1,350	2,680	6,105
Accountant	000 RSD	1,380	1,533	1,672	1,807	1,935	2,052	2,198	2,354	2,521	2,700	5,361	12,210
Complaints/info officer	000 RSD	552	613	669	723	774	821	879	941	1,008	1,080	2,144	4,884
Billing/collection officers	000 RSD	-	-	-	2,892	3,096	3,283	3,516	3,766	4,033	4,320	8,577	19,536
Total	000 RSD	35,742	40,323	45,322	67,234	71,980	76,335	81,755	87,559	93,776	100,434	199,424	454,204

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Affordability domestic users													
Average household income	RSD	49,647	55,158	60,166	65,021	69,612	73,823	79,065	84,678	90,691	97,130	192,862	439,259
Average number of residents per household		3.02	3.02	3.01	3.00	2.99	2.98	2.97	2.96	2.95	2.94	2.86	2.80
Average water bill	RSD	332	349	367	386	445	491	530	574	616	661	1,250	2,813
Average sewerage bill	RSD	166	175	184	193	203	213	223	253	280	309	559	1,207
Average waste water treatment bill	RSD	-	-	-	270	284	298	313	328	344	361	580	1,037
Total average bill	RSD	499	524	551	849	932	1,002	1,066	1,155	1,241	1,331	2,389	5,058
Increase of an average bill	%	6.4%	5.1%	5.1%	54.2%	9.8%	7.4%	6.5%	8.3%	7.4%	7.3%	6.1%	6.8%
Maximum affordability level	RSD	1,986	2,206	2,407	2,601	2,784	2,953	3,163	3,387	3,628	3,885	7,714	17,570
Affordability Ratio	%	1.0%	1.0%	0.9%	1.3%	1.3%	1.4%	1.4%	1.4%	1.4%	1.4%	1.2%	1.2%
Affordability large industries													
Carnex revenues	RSD m	7,342	8,157	8,985	9,806	10,603	11,356	12,281	13,282	14,364	15,535	34,008	87,076
Vital revenues	RSD m	7,370	8,188	9,020	9,844	10,643	11,399	12,328	13,333	14,419	15,595	34,138	87,409
Carnex sewage charge	RSD m				50	47	45	43	42	41	41	41	45
Vital sewage charge	RSD m				18	17	16	16	16	15	15	15	16
Carnex affordability	%				0.5%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.1%	0.1%
Vital affordability	%				0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
Tariff summary (excl. VAT)													
Drinking water													
Domestic	RSD / m3	25	26	27	29	33	36	39	43	46	49	94	213
Institutional users	RSD / m3	25	26	27	29	33	36	39	43	46	49	94	213
Business - small	RSD / m3	49	52	54	57	59	59	57	56	54	52	94	213
Business - large	RSD / m3												
Waste water treatment													
Domestic	RSD / m3	-	-	-	20	21	22	23	24	26	27	44	78
Institutional users	RSD / m3	-	-	-	20	21	22	23	24	26	27	44	78
Business - small	RSD / m3	-	-	-	20	21	22	23	24	26	27	44	78
Business - large	RSD / m3	-	-	-	30	32	33	35	36	38	40	65	118
Business - large discharged wastewater	RSD / m3	-	-	-	33	35	37	39	41	43	45	73	131
Sewerage													
Domestic	RSD / m3	12	13	14	14	15	16	17	19	21	23	42	91
Institutional users	RSD / m3	12	13	14	14	15	16	17	19	21	23	42	91
Business - small	RSD / m3	25	26	27	29	27	26	24	25	25	24	42	91
Business - large	RSD / m3	-	-	-	29	27	26	24	25	25	24	42	91
Business - large discharged wastewater	RSD / m3	-	-	-	32	30	28	27	27	27	27	47	101
Total W&WW (RSD)													
Domestic	RSD / m3	37	39	41	63	69	74	79	86	92	99	180	382
Institutional users	RSD / m3	37	39	41	63	69	74	79	86	92	99	180	382
Business - small	RSD / m3	74	78	82	106	107	106	105	105	104	103	180	382
Business - large	RSD / m3	-	-	-	59	58	59	59	61	63	65	108	209
Business - large discharged wastewater	RSD / m3	-	-	-	65	65	65	65	68	70	72	119	232
Total W&WW (€)													
Domestic	€/ m3	0.35	0.34	0.34	0.50	0.53	0.56	0.59	0.63	0.67	0.72	1.18	2.23
Institutional users	€/ m3	0.35	0.34	0.34	0.50	0.53	0.56	0.59	0.63	0.67	0.72	1.18	2.23
Business - small	€/ m3	0.70	0.68	0.68	0.84	0.82	0.80	0.78	0.77	0.76	0.75	1.18	2.23
Business - large	€/ m3	-	-	-	0.46	0.45	0.44	0.44	0.45	0.46	0.47	0.71	1.22
Business - large discharged wastewater	€/ m3	-	-	-	0.51	0.50	0.49	0.49	0.50	0.51	0.52	0.78	1.35

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Tariff summary - % increase year-on-year avg													
Drinking water													
Domestic	%	6%	5%	5%	5%	15%	10%	8%	8%	7%	7%	7%	7%
Institutional users	%	6%	5%	5%	5%	15%	10%	8%	8%	7%	7%	7%	7%
Business - small	%	6%	5%	5%	5%	4%	-1%	-3%	-2%	-3%	-3%	7%	7%
Business - large	%												
Waste water treatment													
Domestic	%					5%	5%	5%	5%	5%	5%	5%	5%
Institutional users	%					5%	5%	5%	5%	5%	5%	5%	5%
Business - small	%					5%	5%	5%	5%	5%	5%	5%	5%
Business - large	%					5%	5%	5%	5%	5%	5%	5%	5%
Sewerage													
Domestic	%	6%	5%	5%	5%	5%	5%	5%	13%	11%	11%	6%	7%
Institutional users	%	6%	5%	5%	5%	5%	5%	5%	13%	11%	11%	6%	7%
Business - small	%	6%	5%	5%	5%	-6%	-6%	-6%	2%	0%	0%	6%	7%
Business - large	%					-6%	-6%	-6%	2%	0%	0%	6%	7%
Total W&WW													
Domestic	%	6%	5%	5%	54%	10%	8%	7%	8%	7%	7%	6%	7%
Institutional users	%	6%	5%	5%	54%	10%	8%	7%	8%	7%	7%	6%	7%
Business - small	%	6%	5%	5%	30%	1%	-1%	-2%	0%	-1%	-1%	6%	7%
Business - large	%					0%	0%	0%	4%	3%	3%	5%	6%
Tariff summary (excl. VAT, 2007 constant prices)													
Drinking water													
Domestic	RSD / m3	21	20	20	20	21	22	23	24	24	25	29	37
Institutional users	RSD / m3	21	20	20	20	21	22	23	24	24	25	29	37
Business - small	RSD / m3	43	41	40	39	38	36	34	31	29	26	29	37
Business - large	RSD / m3												
Waste water treatment													
Domestic	RSD / m3	-	-	-	14	14	14	14	14	14	14	14	14
Institutional users	RSD / m3	-	-	-	14	14	14	14	14	14	14	14	14
Business - small	RSD / m3	-	-	-	14	14	14	14	14	14	14	14	14
Business - large	RSD / m3	-	-	-	21	20	20	20	20	20	20	20	20
Sewerage													
Domestic	RSD / m3	11	10	10	10	10	10	10	10	11	12	13	16
Institutional users	RSD / m3	11	10	10	10	10	10	10	10	11	12	13	16
Business - small	RSD / m3	21	20	20	20	17	16	14	14	13	12	13	16
Business - large	RSD / m3	-	-	-	20	17	16	14	14	13	12	13	16
Total W&WW (RSD)													
Domestic	RSD / m3	32	31	30	43	44	46	46	48	49	50	56	66
Institutional users	RSD / m3	32	31	30	43	44	46	46	48	49	50	56	66
Business - small	RSD / m3	64	61	60	72	69	65	61	58	55	52	56	66
Business - large	RSD / m3	-	-	-	40	38	36	34	34	33	33	33	36

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Tariff summary - % increase year-on-year avg constant 2007 prices													
Drinking water													
Domestic	%	-8%	-5%	-3%	-2%	9%	5%	3%	3%	2%	2%	2%	2%
Institutional users	%	-8%	-5%	-3%	-2%	9%	5%	3%	3%	2%	2%	2%	2%
Business - small	%	-8%	-5%	-3%	-2%	-2%	-5%	-7%	-7%	-8%	-8%	2%	2%
Business - large	%												
Waste water treatment													
Domestic	%					-1%	0%	0%	0%	0%	0%	0%	0%
Institutional users	%					-1%	0%	0%	0%	0%	0%	0%	0%
Business - small	%					-1%	0%	0%	0%	0%	0%	0%	0%
Business - large	%					-1%	0%	0%	0%	0%	0%	0%	0%
Sewerage													
Domestic	%	-8%	-5%	-3%	-2%	-1%	0%	0%	8%	6%	5%	1%	2%
Institutional users	%	-8%	-5%	-3%	-2%	-1%	0%	0%	8%	6%	5%	1%	2%
Business - small	%	-8%	-5%	-3%	-2%	-11%	-10%	-10%	-3%	-5%	-5%	1%	2%
Business - large	%					-11%	-10%	-10%	-3%	-5%	-5%	1%	2%
Total W&WW													
Domestic	%	-8%	-5%	-3%	44%	3%	2%	1%	3%	2%	2%	1%	2%
Institutional users	%	-8%	-5%	-3%	44%	3%	2%	1%	3%	2%	2%	1%	2%
Business - small	%	-8%	-5%	-3%	21%	-4%	-6%	-6%	-5%	-5%	-5%	1%	2%
Business - large	%					-6%	-5%	-4%	-1%	-2%	-2%	0%	1%
Tariff summary - cumulative % increase year-on-year avg constant 2007 prices													
Total W&WW													
Domestic	%	-8%	-12%	-15%	29%	32%	35%	36%	40%	42%	44%	55%	72%
Institutional users	%	-8%	-12%	-15%	29%	32%	35%	36%	40%	42%	44%	55%	72%
Business - small	%	-8%	-12%	-15%	6%	2%	-4%	-10%	-15%	-20%	-25%	-19%	-2%
Business - large (discharged WW)	%	0%	0%	0%	0%	-6%	-10%	-15%	-16%	-18%	-20%	-18%	-10%
Tariff calculation water Vrbas municipality (town + villages)													
Cost to cover - water													
operating costs & depreciation	RSD m	69	76	83	92	99	104	111	118	126	135	267	624
increase in working capital	RSD m	0	1	(3)	(4)	0	2	1	1	1	1	2	5
bad debt	RSD m	6	6	4	4	4	5	5	6	6	7	14	34
Interest and fee payment	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
DSCR over depreciation	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment over depreciation	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
Total Water Costs to cover	RSD m	76	83	83	92	103	111	117	125	133	143	283	662
Volume produced	'000 m3	3,638	3,685	3,732	3,780	3,828	3,871	3,914	3,958	4,002	4,046	4,406	4,743
Volume billed													
Domestic	'000 m3	2,298	2,314	2,330	2,346	2,362	2,374	2,385	2,397	2,408	2,420	2,530	2,656
Institutional users	'000 m3	186	197	208	219	230	240	251	262	273	284	370	443
Business	'000 m3	146	153	160	168	175	184	193	202	211	220	285	330
Total	'000 m3	2,630	2,664	2,698	2,732	2,767	2,798	2,830	2,861	2,893	2,925	3,185	3,428
Allow reductions in nominal tariffs?													
Unit cost of water produced	RSD / m3	21	23	22	24	27	29	30	32	33	35	64	140
Unit cost of water billed	RSD / m3	29	31	31	34	37	40	41	44	46	49	89	193
Increase unit cost water	%	24%	8%	-1%	10%	10%	6%	5%	5%	6%	6%	7%	7%
Average tariff charged	RSD / m3	26	27	29	30	35	38	41	44	46	49	94	213
% of cost recovery - domestic	%	95%	95%	94%	94%	95%	96%	97%	98%	99%	100%	100%	100%
% of cost recovery - institutional users	%	95%	95%	94%	94%	95%	96%	97%	98%	99%	100%	100%	100%
% of cost recovery - business users	%	189%	189%	189%	188%	171%	156%	141%	128%	117%	106%	100%	100%

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Calculated tariff for water													
Domestic	RSD / m3	27.33	29.51	29.02	31.84	35.41	38.06	40.15	42.66	45.52	48.50	88.80	193.16
Institutional users	RSD / m3	27.33	29.51	29.02	31.84	35.41	38.06	40.15	42.66	45.52	48.50	88.80	193.16
Business	RSD / m3	54.67	59.01	58.03	63.67	63.75	61.66	58.53	55.98	53.76	51.55	88.80	193.16
Proposed tariff for water													
Domestic	RSD / m3	24.68	25.91	27.20	28.56	32.92	36.31	39.28	42.58	45.73	49.05	94.05	212.66
Institutional users	RSD / m3	24.68	25.91	27.20	28.56	32.92	36.31	39.28	42.58	45.73	49.05	94.05	212.66
Business	RSD / m3	49.35	51.82	54.41	57.13	59.26	58.82	57.27	55.87	54.00	52.14	94.05	212.66
		2.00	2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Tariff increases (nominal)													
Domestic	%	6.2%	5.0%	5.0%	5.0%	15.3%	10.3%	8.2%	8.4%	7.4%	7.3%	6.9%	7.1%
Institutional users	%	6.2%	5.0%	5.0%	5.0%	15.3%	10.3%	8.2%	8.4%	7.4%	7.3%	6.9%	7.1%
Business	%	6.2%	5.0%	5.0%	5.0%	3.7%	-0.8%	-2.6%	-2.4%	-3.3%	-3.5%	6.9%	7.1%
Total revenue with proposed tariff	RSD m	68	73	78	83	96	106	115	124	134	144	300	729
Tariff calculation for wastewater treatment plant													
Cost to cover waste water treatment													
operating costs & depreciation	RSD m	-	-	-	136	142	146	151	157	163	169	296	515
increase in working capital	RSD m	-	-	-	-	17	0	0	0	0	1	7	2
bad debt	RSD m	-	-	-	-	6	6	6	7	7	7	12	23
Interest and fee payment	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
DSCR over depreciation	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
CAPEX injection	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
Total Waste Water costs to cover	RSD m	-	-	-	136	164	153	158	164	170	177	316	540
Volume billed													
Domestic	'000 m3	-	-	-	2,111	2,126	2,136	2,147	2,157	2,168	2,178	2,277	2,390
Institutional users	'000 m3	-	-	-	151	157	166	174	182	190	198	257	297
Business - small	'000 m3	-	-	-	197	207	216	226	236	246	256	333	398
Business - large	'000 m3	-	-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total	'000 m3	-	-	-	4,156	4,187	4,216	4,244	4,272	4,301	4,330	4,564	4,783
Unit cost of wastewater treated (incl. infiltration)	RSD / m3	-	-	-	25	29	27	28	28	29	30	51	84
Unit cost of wastewater delivered to collection system	RSD / m3	-	-	-	33	39	36	37	38	40	41	69	113
Unit cost of wastewater of drinking water supplied	RSD / m3	-	-	-	29	35	33	34	35	36	37	62	102
Increase unit cost waste water	%	-	-	-	-	20%	-8%	3%	3%	3%	3%	6%	5%
Average tariff charged	RSD / m3	-	-	-	27	28	29	31	32	34	36	58	103
Average tariff charged expressed in drinking water	RSD / m3	-	-	-	24	25	26	28	29	31	32	52	92
% of cost recovery - domestic	%	-	-	-	83%	83%	83%	83%	83%	84%	84%	84%	85%
% of cost recovery - institutional users	%	-	-	-	83%	83%	83%	83%	83%	84%	84%	84%	85%
% of cost recovery - business small	%	-	-	-	83%	83%	83%	83%	83%	84%	84%	84%	85%
% of cost recovery - business large	%	-	-	-	125%	125%	125%	125%	125%	125%	125%	126%	127%

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Calculated tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3				27.18	32.54	30.13	31.04	32.04	33.09	34.21	58.30	95.88
Institutional users	RSD / m3				27.18	32.54	30.13	31.04	32.04	33.09	34.21	58.30	95.88
Business - small	RSD / m3				27.18	32.54	30.13	31.04	32.04	33.09	34.21	58.30	95.88
Business - large	RSD / m3				40.77	48.82	45.20	46.56	48.05	49.63	51.31	87.45	143.83
					1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Of drinking water invoiced													
Domestic	RSD / m3				24.46	29.29	27.12	27.94	28.83	29.78	30.79	52.47	86.30
Institutional users	RSD / m3				24.46	29.29	27.12	27.94	28.83	29.78	30.79	52.47	86.30
Business - small	RSD / m3				24.46	29.29	27.12	27.94	28.83	29.78	30.79	52.47	86.30
Business - large	RSD / m3												
Proposed tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3				22.22	23.33	24.50	25.73	27.01	28.36	29.78	48.51	87.11
Institutional users	RSD / m3				22.22	23.33	24.50	25.73	27.01	28.36	29.78	48.51	87.11
Business - small	RSD / m3				22.22	23.33	24.50	25.73	27.01	28.36	29.78	48.51	87.11
Of drinking water invoiced													
Domestic	RSD / m3				20.00	21.00	22.05	23.15	24.31	25.53	26.80	43.66	78.40
Institutional users	RSD / m3				20.00	21.00	22.05	23.15	24.31	25.53	26.80	43.66	78.40
Business - small	RSD / m3				20.00	21.00	22.05	23.15	24.31	25.53	26.80	43.66	78.40
Business - large	RSD / m3				30.00	31.50	33.08	34.73	36.47	38.29	40.20	65.49	117.60
					1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Tariff increases (nominal)													
Domestic	%					5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Institutional users	%					5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Business - small	%					5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Business - large	%					5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Total revenue with proposed tariff	RSD m				111	118	124	131	138	146	154	263	491
Tariff calculation for extension sewerage services in Vrbas villages													
Cost to cover													
operating costs & depreciation	RSD m	-	10	31	57	59	61	63	65	68	70	112	213
increase in working capital	RSD m	-	-	2	2	3	0	0	0	0	0	0	1
bad debt	RSD m	-	-	0	1	3	3	3	3	3	3	5	10
Interest and fee payment	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
DSCR over depreciation	RSD m												
CAPEX injection	RSD m												
Total Waste Water costs to cover	RSD m	-	10	33	60	65	64	66	68	71	74	117	223
Volume billed (Vrbas town + villages)													
Domestic	'000 m3		1,729	2,097	2,111	2,126	2,136	2,147	2,157	2,168	2,178	2,277	2,390
Institutional users	'000 m3		130	144	151	157	166	174	182	190	198	257	297
Business - small	'000 m3		153	187	197	207	216	226	236	246	256	333	398
Business - large	'000 m3		-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total	'000 m3	-	2,012	2,428	4,156	4,187	4,216	4,244	4,272	4,301	4,330	4,564	4,783
Unit cost of wastewater discharged	RSD / m3		5	14	14	16	15	16	16	16	17	26	47
Unit cost of wastewater of drinking water supplied	RSD / m3		4	12	13	14	14	14	14	15	15	23	42
Increase unit cost water	%			178%	6%	8%	-2%	2%	3%	3%	3%	4%	6%
Average tariff charged	RSD / m3		4	9	14	14	13	13	13	14	14	23	45

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
% of cost recovery - domestic	%		93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - institutional users	%		93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - business small	%		186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
% of cost recovery - business large	%		186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
Calculated tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3		4.55	12.65	9.89	11.42	11.86	12.88	14.00	15.23	16.53	25.57	46.71
Institutional users	RSD / m3		4.55	12.65	9.89	11.42	11.86	12.88	14.00	15.23	16.53	25.57	46.71
Business - small	RSD / m3		9.09	25.30	19.78	20.55	19.21	18.78	18.37	17.98	17.57	25.57	46.71
Business - large	RSD / m3		-	-	19.78	20.55	19.21	18.78	18.37	17.98	17.57	25.57	46.71
Of drinking water invoiced			2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Domestic	RSD / m3		4.09	11.38	8.90	10.27	10.67	11.60	12.60	13.70	14.87	23.02	42.04
Institutional users	RSD / m3		4.09	11.38	8.90	10.27	10.67	11.60	12.60	13.70	14.87	23.02	42.04
Business - small	RSD / m3		8.18	22.77	17.80	18.49	17.29	16.91	16.53	16.18	15.81	23.02	42.04
Business - large	RSD / m3												
Proposed tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3		3.75	8.11	9.83	10.08	10.25	10.53	11.70	12.80	13.97	22.91	45.19
Institutional users	RSD / m3		3.75	8.11	9.83	10.08	10.25	10.53	11.70	12.80	13.97	22.91	45.19
Business - small	RSD / m3		7.49	16.23	19.67	18.14	16.60	15.36	15.36	15.12	14.85	22.91	45.19
Business - large	RSD / m3		-	-	19.67	18.14	16.60	15.36	15.12	14.85	14.85	22.91	45.19
Of drinking water invoiced			2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Domestic	RSD / m3		3.37	7.30	8.85	9.07	9.22	9.48	10.53	11.52	12.58	20.62	40.67
Institutional users	RSD / m3		3.37	7.30	8.85	9.07	9.22	9.48	10.53	11.52	12.58	20.62	40.67
Business - small	RSD / m3		6.74	14.60	17.70	16.32	14.94	13.82	13.82	13.61	13.37	20.62	40.67
Business - large	RSD / m3				17.70	16.32	14.94	13.82	13.82	13.61	13.37	20.62	40.67
Tariff increases (nominal)													
Domestic	%			116.6%	21.2%	2.5%	1.7%	2.8%	11.1%	9.4%	9.1%	5.0%	6.3%
Institutional users	%			116.6%	21.2%	2.5%	1.7%	2.8%	11.1%	9.4%	9.1%	5.0%	6.3%
Business - small	%			116.6%	21.2%	-7.8%	-8.5%	-7.5%	0.0%	-1.5%	-1.8%	5.0%	6.3%
Business - large	%												
Total revenue with proposed tariff	RSD m	-	8	21	59	58	55	54	57	60	62	105	216
Tariff calculation for existing sewerage services in Vrbas city													
Cost to cover													
operating costs & depreciation	RSD m	20	22	24	31	33	35	38	41	44	47	95	227
increase in working capital	RSD m	(1)	1	(0)	(1)	1	0	0	0	0	0	1	2
bad debt	RSD m	1	2	1	1	2	2	2	2	2	2	5	12
Total Waste Water costs to cover	RSD m	20	25	25	31	36	38	40	43	46	50	101	241
Volume billed (Vrbas town + villages)													
Domestic	'000 m3	1,272	1,729	2,097	2,111	2,126	2,136	2,147	2,157	2,168	2,178	2,277	2,390
Institutional users	'000 m3	102	130	144	151	157	166	174	182	190	198	257	297
Business - small	'000 m3	113	153	187	197	207	216	226	236	246	256	333	398
Business - large	'000 m3	-	-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total	'000 m3	1,487	2,012	2,428	4,156	4,187	4,216	4,244	4,272	4,301	4,330	4,564	4,783

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Unit cost of wastewater	RSD / m3	14	12	10	8	9	9	9	10	11	11	22	50
Unit cost of wastewater of drinking water supplied	RSD / m3	12	11	9	7	8	8	9	9	10	10	20	45
Increase unit cost water	%		-10%	-18%	-27%	14%	4%	6%	6%	6%	6%	7%	7%
Average tariff charged	RSD / m3	15	11	8	9	9	9	9	10	11	12	24	56
% of cost recovery - domestic	%	93%	93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - institutional users	%	93%	93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - business small	%	186%	186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
% of cost recovery - business large	%	186%	186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
Calculated tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3	12.80	11.55	9.52	5.16	6.30	6.95	7.85	8.84	9.93	11.12	22.03	50.30
Institutional users	RSD / m3	12.80	11.55	9.52	5.16	6.30	6.95	7.85	8.84	9.93	11.12	22.03	50.30
Business - small	RSD / m3	25.60	23.09	19.04	10.32	11.35	11.27	11.45	11.60	11.72	11.82	22.03	50.30
Business - large	RSD / m3	-	-	-	10.32	11.35	11.27	11.45	11.60	11.72	11.82	22.03	50.30
		2.00	2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Of drinking water invoiced													
Domestic	RSD / m3	11.52	10.39	8.57	4.65	5.67	6.26	7.07	7.95	8.93	10.01	19.83	45.27
Institutional users	RSD / m3	11.52	10.39	8.57	4.65	5.67	6.26	7.07	7.95	8.93	10.01	19.83	45.27
Business - small	RSD / m3	23.04	20.78	17.14	9.29	10.21	10.14	10.30	10.44	10.55	10.64	19.83	45.27
Business - large	RSD / m3												
Proposed tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3	13.71	10.65	7.00	6.04	6.59	7.25	7.84	9.09	10.27	11.54	23.77	56.18
Institutional users	RSD / m3	13.71	10.65	7.00	6.04	6.59	7.25	7.84	9.09	10.27	11.54	23.77	56.18
Business - small	RSD / m3	27.42	21.30	14.00	12.07	11.86	11.74	11.43	11.93	12.13	12.27	23.77	56.18
Business - large	RSD / m3	-	-	-	12.07	11.86	11.74	11.43	11.93	12.13	12.27	23.77	56.18
		2.00	2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Of drinking water invoiced													
Domestic	RSD / m3	12.34	9.58	6.30	5.43	5.93	6.52	7.05	8.18	9.24	10.39	21.40	50.57
Institutional users	RSD / m3	12.34	9.58	6.30	5.43	5.93	6.52	7.05	8.18	9.24	10.39	21.40	50.57
Business - small	RSD / m3	24.68	19.17	12.60	10.86	10.67	10.57	10.28	10.74	10.91	11.04	21.40	50.57
Business - large	RSD / m3				10.86	10.67	10.57	10.28	10.74	10.91	11.04	21.40	50.57
Tariff increases (nominal)													
Domestic	%	6.2%	-22.3%	-34.3%	-13.8%	9.1%	10.1%	8.1%	16.1%	12.9%	12.4%	7.4%	7.5%
Institutional users	%	6.2%	-22.3%	-34.3%	-13.8%	9.1%	10.1%	8.1%	16.1%	12.9%	12.4%	7.4%	7.5%
Business - small	%	6.2%	-22.3%	-34.3%	-13.8%	-1.8%	-1.0%	-2.7%	4.4%	1.6%	1.2%	7.4%	7.5%
Business - large	%												
Total revenue with proposed tariff	RSD m	22	23	18	37	38	39	40	44	48	51	108	269
Tariff calculation for all sewerage services in Vrbas city and village													
Cost to cover waste water treatment													
operating costs & depreciation	RSD m	20	32	55	88	93	97	101	106	112	117	206	439
increase in working capital	RSD m	(1)	1	1	1	4	0	0	0	0	0	1	2
bad debt	RSD m	1	2	2	2	5	5	5	5	5	5	10	23
Interest and fee payment	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
DSCR over depreciation	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
CAPEX injection	RSD m	-	-	-	-	-	-	-	-	-	-	-	-
Total Waste Water costs to cover	RSD m	20	35	58	91	101	102	106	111	117	123	217	464

Tariff & affordability

Financial year ending	Units	1 2008	2 2009	3 2010	4 2011	5 2012	6 2013	7 2014	8 2015	9 2016	10 2017	20 2027	32 2039
Volume billed (Vrbas town + villages)													
Domestic	'000 m3	1,272	1,729	2,097	2,111	2,126	2,136	2,147	2,157	2,168	2,178	2,277	2,390
Institutional users	'000 m3	102	130	144	151	157	166	174	182	190	198	257	297
Business - small	'000 m3	113	153	187	197	207	216	226	236	246	256	333	398
Business - large	'000 m3	-	-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total	'000 m3	1,487	2,012	2,428	4,156	4,187	4,216	4,244	4,272	4,301	4,330	4,564	4,783
Unit cost of wastewater	RSD / m3	14	17	24	22	24	24	25	26	27	28	48	97
Unit cost of wastewater of drinking water supplied	RSD / m3	12	16	21	20	22	22	23	23	24	26	43	87
Average tariff charged wastewater	RSD / m3	15	15	16	23	23	22	22	24	25	26	47	101
Average tariff charged expressed as drinking water	RSD / m3	13	14	15	21	20	20	20	21	22	24	42	91
% of cost recovery - domestic	%	93%	93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - institutional users	%	93%	93%	93%	69%	73%	78%	83%	88%	92%	97%	100%	100%
% of cost recovery - business small	%	186%	186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
% of cost recovery - business large	%	186%	186%	186%	137%	132%	126%	121%	115%	109%	103%	100%	100%
Calculated tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3	12.80	15.29	17.63	15.00	16.38	17.20	18.39	20.54	22.73	25.09	44.94	95.48
Institutional users	RSD / m3	12.80	15.29	17.63	15.00	16.38	17.20	18.39	20.54	22.73	25.09	44.94	95.48
Business - small	RSD / m3	25.60	30.58	35.27	29.99	29.48	27.87	26.81	26.95	26.85	26.67	44.94	95.48
Business - large	RSD / m3	-	-	-	29.99	29.48	27.87	26.81	26.95	26.85	26.67	44.94	95.48
		2.00	2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Of drinking water invoiced													
Domestic	RSD / m3	11.52	14.48	19.95	13.54	15.95	16.93	18.66	20.55	22.64	24.88	42.84	87.31
Institutional users	RSD / m3	11.52	14.48	19.95	13.54	15.95	16.93	18.66	20.55	22.64	24.88	42.84	87.31
Business - small	RSD / m3	23.04	28.97	39.90	27.09	28.71	27.43	27.21	26.97	26.73	26.45	42.84	87.31
Business - large	RSD / m3	-	-	-	-	-	-	-	-	-	-	-	-
Proposed tariff													
Of waste water delivered to sewerage system													
Domestic	RSD / m3	13.71	14.39	15.11	15.87	16.66	17.50	18.37	20.80	23.07	25.52	46.68	101.37
Institutional users	RSD / m3	13.71	14.39	15.11	15.87	16.66	17.50	18.37	20.80	23.07	25.52	46.68	101.37
Business - small	RSD / m3	27.42	28.79	30.23	31.74	29.99	28.34	26.78	27.29	27.25	27.12	46.68	101.37
Business - large	RSD / m3	-	-	-	31.74	29.99	28.34	26.78	27.29	27.25	27.12	46.68	101.37
		2.00	2.00	2.00	2.00	1.80	1.62	1.46	1.31	1.18	1.06	1.00	1.00
Of drinking water invoiced													
Domestic	RSD / m3	12.34	12.95	13.60	14.28	15.00	15.75	16.53	18.72	20.77	22.96	42.02	91.23
Institutional users	RSD / m3	12.34	12.95	13.60	14.28	15.00	15.75	16.53	18.72	20.77	22.96	42.02	91.23
Business - small	RSD / m3	24.68	25.91	27.20	28.56	26.99	25.51	24.11	24.56	24.52	24.41	42.02	91.23
Business - large	RSD / m3	-	-	-	28.56	26.99	25.51	24.11	24.56	24.52	24.41	42.02	91.23
Tariff increases (nominal)													
Domestic	%	6.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	13.2%	10.9%	10.6%	6.2%	7.0%
Institutional users	%	6.2%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	13.2%	10.9%	10.6%	6.2%	7.0%
Business - small	%	6.2%	5.0%	5.0%	5.0%	-5.5%	-5.5%	-5.5%	1.9%	-0.1%	-0.5%	6.2%	7.0%
Business - large	%												
Total revenue with proposed tariff	RSD m	22	31	40	96	95	95	94	101	107	114	213	485

Profit and Loss - RSD (millions)

Financial year ending	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Revenue												
Drinking water	69	74	79	84	97	107	116	125	135	144	300	729
Sewerage service	22	31	40	96	95	95	94	101	107	114	213	485
Waste water treatment	-	-	-	111	118	124	131	138	146	154	263	491
Other	-	-	-	-	-	-	-	-	-	-	-	-
Subsidies	-	-	-	-	-	-	-	-	-	-	-	-
Total	91	105	119	292	310	326	341	365	388	412	775	1,705
Expenditure												
Variable costs	15	18	23	66	73	78	83	90	97	104	217	526
Chemicals	1	1	1	5	6	6	6	7	7	8	13	25
Electricity	11	14	19	36	40	43	47	52	56	61	144	388
Fuel & lubricant	3	3	3	4	4	4	5	5	5	5	10	19
Sludge transport	-	-	-	4	5	5	5	6	6	6	12	25
Effluent discharge fee	-	-	-	17	18	19	20	21	22	23	38	69
Fixed costs	68	78	91	151	161	170	181	192	205	218	405	861
Wages and Salaries	29	33	37	51	55	58	62	66	71	76	151	345
Employee benefits	5	6	7	10	10	11	12	13	14	14	29	65
Other materials	4	4	5	5	5	5	6	6	6	7	11	19
Transport services	0	0	0	0	0	0	0	0	0	0	0	0
Repair services	14	18	23	51	54	57	60	63	67	71	121	231
Other services	3	4	5	11	12	13	13	14	15	16	27	52
Taxes and fees	-	-	-	-	-	-	-	-	-	-	-	-
Other costs	-	-	-	-	-	-	-	-	-	-	-	-
Overhead costs	12	14	15	23	25	26	28	30	32	34	66	149
Operating costs	83	97	115	217	233	248	264	282	301	322	622	1,387
Depreciation	7	12	23	99	99	100	99	99	100	100	148	191
Bad debt	7	5	6	15	15	16	17	18	19	21	39	85
Total costs	97	114	144	331	348	363	380	400	420	442	808	1,663
Net Operating Income	(5)	(9)	(25)	(39)	(39)	(38)	(40)	(35)	(32)	(30)	(33)	41
Interest charges	-	-	-	-	-	-	-	-	-	-	-	-
FX loss (gain)	-	-	-	-	-	-	-	-	-	-	-	-
Net Income before Tax	(5)	(9)	(25)	(39)	(39)	(38)	(40)	(35)	(32)	(30)	(33)	41
Income tax	-	-	-	-	-	-	-	-	-	-	-	-
Net Income after Tax	(5)	(9)	(25)	(39)	(39)	(38)	(40)	(35)	(32)	(30)	(33)	41

Profit and Loss - EURO (millions)

Financial year ending	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Revenue													
Drinking water	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	2.0	4.3
Sewerage service	0.1	0.2	0.3	0.3	0.8	0.7	0.7	0.7	0.7	0.8	0.8	1.4	2.8
Waste water treatment	-	-	-	-	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.7	2.9
Other	-	-	-	-	-	-	-	-	-	-	-	-	-
Subsidies	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.8	0.9	0.9	1.0	2.3	2.4	2.4	2.5	2.7	2.8	3.0	5.1	10.0
Expenditure													
Variable costs	0.1	0.1	0.2	0.2	0.5	0.6	0.6	0.6	0.7	0.7	0.8	1.4	3.1
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Electricity	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.9	2.3
Fuel & lubricant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Sludge transport	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Effluent discharge fee	-	-	-	-	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4
Fixed costs	0.6	0.6	0.7	0.8	1.2	1.2	1.3	1.3	1.4	1.5	1.6	2.7	5.0
Wages and Salaries	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	1.0	2.0
Employee benefits	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
Other materials	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Transport services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Repair services	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.8	1.3
Other services	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
Taxes and fees	-	-	-	-	-	-	-	-	-	-	-	-	-
Other costs	-	-	-	-	-	-	-	-	-	-	-	-	-
Overhead costs	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.9
Operating costs	0.7	0.8	0.8	1.0	1.7	1.8	1.9	2.0	2.1	2.2	2.3	4.1	8.1
Depreciation	0.0	0.1	0.1	0.2	0.8	0.8	0.7	0.7	0.7	0.7	0.7	1.0	1.1
Bad debt	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.5
Total costs	0.9	0.9	1.0	1.2	2.6	2.7	2.7	2.8	3.0	3.1	3.2	5.3	9.7
Net Operating Income	(0.0)	(0.1)	(0.1)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	0.2
Interest charges	-	-	-	-	-	-	-	-	-	-	-	-	-
FX loss (gain)	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income before Tax	(0.0)	(0.1)	(0.1)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	0.2
Income tax	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Income after Tax	(0.0)	(0.1)	(0.1)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	0.2

Balance Sheet - RSD (millions)

Financial year ending	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Fixed assets	442	1,725	3,069	2,973	2,877	2,768	2,674	2,580	2,488	2,397	2,799	1,760
Current assets												
Inventories	1	1	1	1	1	2	2	2	2	2	4	9
Receivables	25	23	22	51	54	57	61	64	67	71	132	277
Cash	(0)	3	4	40	95	164	218	276	333	392	(247)	750
Total	25	27	27	92	151	223	280	341	402	465	(111)	1,036
Non-operating	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	467	1,752	3,096	3,066	3,028	2,992	2,954	2,921	2,890	2,862	2,689	2,796
Equity bf	199	453	1,737	3,080	3,041	3,002	2,964	2,925	2,890	2,858	2,659	2,618
Retained earnings	(5)	(9)	(25)	(39)	(39)	(38)	(40)	(35)	(32)	(30)	(33)	41
Grants	259	1,293	1,368	-	-	-	-	-	-	-	-	-
Equity cf	453	1,737	3,080	3,041	3,002	2,964	2,925	2,890	2,858	2,828	2,626	2,659
Long term liabilities												
Equity	453	1,737	3,080	3,041	3,002	2,964	2,925	2,890	2,858	2,828	2,626	2,659
Long-term liabilities	5	5	5	5	5	5	5	5	5	5	5	5
Total	458	1,742	3,085	3,046	3,007	2,969	2,930	2,895	2,863	2,833	2,631	2,664
Current liabilities												
Payables	8	9	11	20	21	23	24	26	28	30	58	131
Overdraft	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total	8	9	11	20	21	23	24	26	28	30	58	131
Non-operating	-	-	-	-	-	-	-	-	-	-	-	-
Total liabilities	467	1,752	3,096	3,066	3,028	2,992	2,954	2,921	2,890	2,862	2,689	2,796
Key ratios												
Current ratio	3.0	2.9	2.4	4.7	7.1	9.9	11.6	13.2	14.6	15.7	(1.9)	7.9
Leverage	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Balance Sheet - EURO (millions)

Financial year ending	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2027	2039
Fixed assets	2.0	4.2	15.2	25.5	23.5	22.1	20.8	19.9	19.0	18.2	17.4	18.4	10.3
	2.0	4.2	15.2	25.5	23.5	22.1	20.8	19.9	19.0	18.2	17.4	18.4	10.3
Current assets													
Inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Receivables	0.3	0.2	0.2	0.2	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.9	1.6
Cash	0.0	(0.0)	0.0	0.0	0.3	0.7	1.2	1.6	2.0	2.4	2.8	(1.6)	4.4
Total	0.3	0.2	0.2	0.2	0.7	1.2	1.7	2.1	2.5	2.9	3.4	(0.7)	6.0
	0.3	0.2	0.2	0.2	0.7	1.2	1.7	2.1	2.5	2.9	3.4	(0.7)	6.0
Non-operating	-	-	-	-	-	-	-	-	-	-	-	-	-
Total assets	2.3	4.4	15.4	25.7	24.2	23.2	22.5	22.0	21.6	21.1	20.7	17.6	16.3
	2.3	4.4	15.4	25.7	24.2	23.2	22.5	22.0	21.6	21.1	20.7	17.6	16.3
Equity bf	0.8	1.9	4.0	14.4	24.3	23.3	22.6	22.1	21.6	21.1	20.7	17.4	15.3
Retained earnings	(0.0)	(0.1)	(0.1)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	0.2
Grants	1.4	2.5	11.4	11.4	-	-	-	-	-	-	-	-	-
Equity cf	2.1	4.3	15.3	25.6	24.0	23.0	22.3	21.8	21.3	20.9	20.5	17.2	15.5
	2.1	4.3	15.3	25.6	24.0	23.0	22.3	21.8	21.3	20.9	20.5	17.2	15.5
Long term liabilities	2.1	4.3	15.3	25.6	24.0	23.0	22.3	21.8	21.3	20.9	20.5	17.2	15.5
	2.1	4.3	15.3	25.6	24.0	23.0	22.3	21.8	21.3	20.9	20.5	17.2	15.5
Equity	2.1	4.3	15.3	25.6	24.0	23.0	22.3	21.8	21.3	20.9	20.5	17.2	15.5
Long-term liabilities	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2.2	4.4	15.3	25.6	24.1	23.1	22.3	21.8	21.4	20.9	20.5	17.3	15.6
	2.2	4.4	15.3	25.6	24.1	23.1	22.3	21.8	21.4	20.9	20.5	17.3	15.6
Current liabilities													
Payables	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8
Overdraft	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8
	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8
Non-operating	-	-	-	-	-	-	-	-	-	-	-	-	-
Total liabilities	2.3	4.4	15.4	25.7	24.2	23.2	22.5	22.0	21.6	21.1	20.7	17.6	16.3
	2.3	4.4	15.4	25.7	24.2	23.2	22.5	22.0	21.6	21.1	20.7	17.6	16.3
Key ratios													
Current ratio	2.4	3.0	2.9	2.4	4.7	7.1	9.9	11.6	13.2	14.6	15.7	(1.9)	7.9
Leverage	2.4%	1.1%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

Cash Flow - RSD (millions)

Financial year ending	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2024	2025	2026	2027	2039
Cash bf	2	(0)	3	4	40	95	164	218	276	333	780	771	(391)	(322)	663
Overdraft bf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net cash bf	2	(0)	3	4	40	95	164	218	276	333	780	771	(391)	(322)	663
Revenue															
Water sales	69	74	79	84	97	107	116	125	135	144	241	259	278	300	729
Sewerage service	22	31	40	96	95	95	94	101	107	114	175	187	200	213	485
Waste water treatment	-	-	-	111	118	124	131	138	146	154	225	237	249	263	491
Less bad debt	(7)	(5)	(6)	(15)	(15)	(16)	(17)	(18)	(19)	(21)	(32)	(34)	(36)	(39)	(85)
Total	84	100	113	277	294	309	324	347	369	392	608	649	691	736	1,619
Costs															
Variable costs	15	18	23	66	73	78	83	90	97	104	174	187	201	217	526
Chemicals	1	1	1	5	6	6	6	7	7	8	11	12	13	13	25
Electricity	11	14	19	36	40	43	47	52	56	61	112	122	132	144	388
Fuel & lubricant	3	3	3	4	4	4	5	5	5	5	8	9	9	10	19
Sludge transport	-	-	-	4	5	5	5	6	6	6	10	11	11	12	25
Effluent discharge fee	-	-	-	17	18	19	20	21	22	23	33	34	36	38	69
Fixed costs	68	78	91	151	161	170	181	192	205	218	336	358	381	405	861
Wages and Salaries	29	33	37	51	55	58	62	66	71	76	123	132	141	151	345
Employee benefits	5	6	7	10	10	11	12	13	14	14	23	25	27	29	65
Other materials	4	4	5	5	5	5	6	6	6	7	9	10	10	11	19
Transport services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repair services	14	18	23	51	54	57	60	63	67	71	103	109	115	121	231
Other services	3	4	5	11	12	13	13	14	15	16	23	24	26	27	52
Taxes and fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Overhead costs	12	14	15	23	25	26	28	30	32	34	54	58	62	66	149
Total	83	97	115	217	233	248	264	282	301	322	510	545	582	622	1,387
Working capital required	(2)	2	3	(21)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(4)	(10)	(4)	(9)
Operating cash flow	(1)	6	1	39	58	60	58	63	66	68	94	100	100	111	223
Capex subsidy	259	20	16	-	-	-	-	-	-	-	-	-	-	-	-
Capex	259	1,293	1,368	-	-	-	-	-	-	-	78	1,235	-	-	-
Discretionary capex	1	2	-	3	4	(9)	5	5	8	9	24	27	31	35	136
Investment cash flow	1	1,275	1,351	3	4	(9)	5	5	8	9	103	1,262	31	35	136
Credit / overdraft interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grants	-	1,273	1,351	-	-	-	-	-	-	-	-	-	-	-	-
Financing cash flow	-	1,273	1,351	-	-	-	-	-	-	-	-	-	-	-	-
Cash for debt service	(2)	3	1	36	55	69	53	58	58	59	(8)	(1,162)	68	76	87
Capital repayment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest and fee payment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total debt service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net change in cash	(2)	3	1	36	55	69	53	58	58	59	(8)	(1,162)	68	76	87
Cash cf	(0)	3	4	40	95	164	218	276	333	392	771	(391)	(322)	(247)	750
Overdraft cf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net cash cf	(0)	3	4	40	95	164	218	276	333	392	771	(391)	(322)	(247)	750

Cash Flow - EURO (millions)

Financial year ending	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2024	2025	2026	2027	2039
Cash bf	0.0	(0.0)	0.0	0.0	0.3	0.7	1.2	1.6	2.0	2.4	5.3	5.2	(2.6)	(2.1)	3.9
Overdraft bf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net cash bf	0.0	(0.0)	0.0	0.0	0.3	0.7	1.2	1.6	2.0	2.4	5.3	5.2	(2.6)	(2.1)	3.9
Revenue															
Water sales	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.6	1.7	1.8	2.0	4.3
Sewerage service	0.2	0.3	0.3	0.8	0.7	0.7	0.7	0.7	0.8	0.8	1.2	1.3	1.3	1.4	2.8
Waste water treatment	-	-	-	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.5	1.6	1.7	1.7	2.9
Less bad debt	(0.1)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.3)	(0.5)
Total	0.8	0.9	0.9	2.2	2.3	2.3	2.4	2.6	2.7	2.8	4.1	4.3	4.6	4.8	9.5
Costs															
Variable costs	0.1	0.2	0.2	0.5	0.6	0.6	0.6	0.7	0.7	0.8	1.2	1.3	1.3	1.4	3.1
Chemicals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.8	0.8	0.9	0.9	2.3
Fuel & lubricant	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Sludge transport	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Effluent discharge fee	-	-	-	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
Fixed costs	0.6	0.7	0.8	1.2	1.2	1.3	1.3	1.4	1.5	1.6	2.3	2.4	2.5	2.7	5.0
Wages and Salaries	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.8	0.9	0.9	1.0	2.0
Employee benefits	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4
Other materials	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Transport services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Repair services	0.1	0.2	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.7	0.8	0.8	1.3
Other services	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Taxes and fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Overhead costs	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.9
Total	0.8	0.8	1.0	1.7	1.8	1.9	2.0	2.1	2.2	2.3	3.5	3.6	3.9	4.1	8.1
Working capital required	(0.0)	0.0	0.0	(0.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.0)	(0.1)
Operating cash flow	(0.0)	0.0	0.0	0.3	0.4	0.5	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.7	1.3
Capex subsidy	2.5	0.2	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Capex	2.5	11.4	11.4	-	-	-	-	-	-	-	0.5	8.3	-	-	-
Discretionary capex	0.0	0.0	-	0.0	0.0	(0.1)	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.8
Discretionary capex															
Investment cash flow	0.0	11.2	11.2	0.0	0.0	(0.1)	0.0	0.0	0.1	0.1	0.7	8.4	0.2	0.2	0.8
Credit / overdraft interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grants	-	11.2	11.2	-	-	-	-	-	-	-	-	-	-	-	-
Financing cash flow	-	11.2	11.2	-	-	-	-	-	-	-	-	-	-	-	-
Cash available for debt service	(0.0)	0.0	0.0	0.3	0.4	0.5	0.4	0.4	0.4	0.4	(0.1)	(7.8)	0.5	0.5	0.5
Capital repayment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest and fee payment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total debt service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net change in cash	(0.0)	0.0	0.0	0.3	0.4	0.5	0.4	0.4	0.4	0.4	(0.1)	(7.8)	0.5	0.5	0.5
Cash cf	(0.0)	0.0	0.0	0.3	0.7	1.2	1.6	2.0	2.4	2.8	5.2	(2.6)	(2.1)	(1.6)	4.4
Overdraft cf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net cash cf	(0.0)	0.0	0.0	0.3	0.7	1.2	1.6	2.0	2.4	2.8	5.2	(2.6)	(2.1)	(1.6)	4.4

Financial and economic cost benefit analysis

		1	2	3	4	5	6	7	8	9	10	17	18	19	20	32
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2024	2025	2026	2027	2039
Incremental demand analysis																
Without project																
domestic	000 m3/y	1,008	1,199	1,213	1,226	1,240	1,249	1,259	1,268	1,278	1,288	1,353	1,361	1,369	1,377	1,480
institutional users	000 m3/y	96	118	123	128	133	140	147	155	162	169	212	214	216	218	247
Industry -small	000 m3/y	96	118	123	128	133	140	147	155	162	169	212	214	216	218	247
industry - big	000 m3/y															
Total without project	000 m3/y	1,200	1,435	1,459	1,482	1,506	1,530	1,553	1,578	1,602	1,626	1,776	1,789	1,802	1,814	1,973
With project																
domestic	000 m3/y	1,272	1,729	2,097	2,111	2,126	2,136	2,147	2,157	2,168	2,178	2,250	2,259	2,268	2,277	2,390
institutional users	000 m3/y	102	130	144	151	157	166	174	182	190	198	247	250	253	257	297
Industry -small	000 m3/y	113	153	187	197	207	216	226	236	246	256	317	323	328	333	398
industry - big	000 m3/y	-	-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total with project	000 m3/y	1,487	2,012	2,428	4,156	4,187	4,216	4,244	4,272	4,301	4,330	4,511	4,529	4,546	4,564	4,783
Incremental demand																
domestic	000 m3/y	265	530	884	885	886	887	888	889	890	891	897	898	899	899	910
institutional users	000 m3/y	5	12	21	23	25	25	26	27	28	29	35	36	37	38	51
Industry -small	000 m3/y	16	35	64	69	74	76	79	81	84	87	106	109	112	115	152
industry - big	000 m3/y	-	-	-	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697	1,697
Total incremental demand	000 m3/y	286	577	969	2,674	2,682	2,686	2,690	2,695	2,699	2,703	2,735	2,740	2,745	2,750	2,810
Revenues																
Sewage existing	RSD m	18	22	24	26	27	28	30	34	38	42	69	74	79	85	200
Sewage incremental	RSD m	4	9	16	70	68	66	64	68	70	72	106	113	121	128	285
Total revenues	RSD m	22	31	40	96	95	95	94	101	107	114	175	187	200	213	485
Incremental revenues																
Sewerage	€ 000	39	78	130	557	524	498	480	499	510	520	716	759	800	842	1,663
Waste water treatment	€ 000	-	-	-	879	902	934	976	1,021	1,068	1,117	1,519	1,584	1,652	1,723	2,864
Total incremental revenues	€ 000	39	78	130	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	4,527
Financial internal rate of return of the total investment																
Sewage collection	€ 000	39	78	130	557	524	498	480	499	510	520	716	759	800	842	1,663
Waste water treatment	€ 000	-	-	-	879	902	934	976	1,021	1,068	1,117	1,519	1,584	1,652	1,723	2,864
Residual value	€ 000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,600
Incremental revenues	€ 000	39	78	130	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	13,127
Sewage collection	€ 000	-	43	130	256	268	277	292	309	327	347	522	553	587	622	1,277
Waste water treatment	€ 000	-	-	-	631	658	682	717	754	793	835	1,190	1,252	1,316	1,385	2,575
Incremental operational costs	€ 000	-	43	130	887	925	959	1,009	1,063	1,121	1,182	1,712	1,805	1,903	2,007	3,851
Sewage collection	€ 000	2,341	4,770	4,770												
Waste water treatment plant	€ 000	-	5,906	5,886												
Supervision	€ 000	122	695	695												
Subtotal investment costs	€ 000	2,462	11,371	11,351	-	-	-	-	-	-	-	-	-	-	-	-
Re-investment costs	€ 000	-	-	-	-	-	-	-	-	-	-	531	8,263	-	-	-
Incremental investment costs	€ 000	2,462	11,371	11,351	-	-	-	-	-	-	-	531	8,263	-	-	-
Net cash flow	€ 000	(2,423)	(11,337)	(11,351)	550	501	473	447	456	456	455	(8)	(7,726)	548	559	9,275
Cumulative cash flow	€ 000	(2,423)	(13,760)	(25,111)	(24,561)	(24,061)	(23,588)	(23,141)	(22,684)	(22,228)	(21,773)	(18,877)	(26,603)	(26,054)	(25,496)	(9,394)
Discount rate (nominal)	%		8.0%													
FNPI/C	€ 000		(17,913)													
FRR/C	%		-1.8%													

Financial and economic cost benefit analysis

	1	2	3	4	5	6	7	8	9	10	17	18	19	20	32
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2024	2025	2026	2027	2039
Modified formula															
NPV incremental revenues															
Sewage collection	€ 000	6,253													
Waste water treatment	€ 000	11,920													
Residual value	€ 000	733													
Subtotal incremental revenues	€ 000	18,906													
NPV incremental operational costs															
Sewage collection	€ 000	4,231													
Waste water treatment	€ 000	9,337													
Re-investment	€ 000	2,211													
Subtotal incremental operational costs	€ 000	15,779													
Discounted net revenues (DNR)	€ 000	3,127													
NPV investment costs (DIC)															
Sewage collection	€ 000	10,043													
Waste water treatment plant	€ 000	9,736													
Supervision	€ 000	1,260													
Subtotal investment costs (DIC)	€ 000	21,039													
Grant rate, calculated DIC/(DIC+DNR)	%	87.1%													
Grant rate, applied (max 75%)	%	75.0%													
Eligible investment cost (current prices)	€ 000	24,747													
EU grant (maximum)	€ 000	18,560													
New definition SF/CF															
Step 1: funding gap rate															
Discounted net revenues (DNR)	€ 000	3,127													
Discounted investment costs (DIC)	€ 000	21,039													
Eligible expenditure EE (DCI-DNR)	€ 000	17,913													
Funding gap rate R (EE/DIC)	%	85.1%													
Step 2: decision amount															
Eligible investment costs EC (current prices)	€ 000	24,747													
Decision amount DA (R x EC)	€ 000	21,069													
Step 3: maximum EU grant															
Maximum co-funding rate Crpa	%	75%													
EU grant (maximum)	€ 000	15,802													
Financial sustainability															
Total financial sources	2,462	11,371	11,351	-	-	-	-	-	-	-	-	-	-	-	-
Revenues	39	78	130	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	4,527
Total inflows	2,502	11,448	11,480	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	4,527
Total operating costs	-	43	130	887	925	959	1,009	1,063	1,121	1,182	1,712	1,805	1,903	2,007	3,851
Total investment costs	2,462	11,371	11,351	-	-	-	-	-	-	-	531	8,263	-	-	-
Interest on loans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retirement bonus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan principal repayment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total outflows	2,462	11,414	11,481	887	925	959	1,009	1,063	1,121	1,182	2,243	10,068	1,903	2,007	3,851
Total cash flow	39	34	(0)	550	501	473	447	456	456	455	(8)	(7,726)	548	559	675
Cumulative cash flow	39	74	73	623	1,123	1,596	2,043	2,500	2,956	3,412	6,307	(1,419)	(870)	(312)	7,190

Financial and economic cost benefit analysis

	1	2	3	4	5	6	7	8	9	10	17	18	19	20	32
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2024	2025	2026	2027	2039
Financial internal rate on invested capital															
Revenues	39	78	130	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	4,527
Residual value	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,600
Total revenues	39	78	130	1,436	1,426	1,432	1,456	1,520	1,577	1,637	2,235	2,342	2,451	2,565	13,127
Total operating costs	-	43	130	887	925	959	1,009	1,063	1,121	1,182	1,712	1,805	1,903	2,007	3,851
Re-investment financed from internal cash flow	-	-	-	-	-	-	-	-	-	-	531	8,263	-	-	-
Interest on loans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retirement bonus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan principal repayment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Private equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total national public contribution	2,462	2,091	2,071	-	-	-	-	-	-	-	-	-	-	-	-
Total expenditures	2,462	2,134	2,201	887	925	959	1,009	1,063	1,121	1,182	2,243	10,068	1,903	2,007	3,851
Net cash flow	(2,423)	(2,057)	(2,071)	550	501	473	447	456	456	455	(8)	(7,726)	548	559	9,275
Cumulative cash flow	(2,423)	(4,479)	(6,551)	(6,001)	(5,500)	(5,027)	(4,580)	(4,124)	(3,667)	(3,212)	(317)	(8,043)	(7,494)	(6,936)	9,166
Discount rate	%	8.0%													
FNPV/K	€ 000	(2,590)													
FIRR/K	%	4.0%													
Economic cost benefit analysis															
Economic cost benefit analysis	CF	NPV 7.0%													
BOD loading HH, institutions, small business	000 kg			736	745	753	762	770	779	787	843	848	854	859	925
BOD loading large industries	000 kg			764	764	764	764	764	764	764	764	764	764	764	764
BOD loading infiltration	000 kg			39	39	39	39	46	53	60	76	77	77	78	81
Total BOD influent	000 kg			1,539	1,548	1,556	1,565	1,580	1,596	1,611	1,683	1,689	1,695	1,701	1,769
Total BOD abated	000 kg			1,400	1,409	1,416	1,424	1,438	1,452	1,466	1,532	1,537	1,542	1,548	1,610
Total BOD effluent	000 kg			139	139	140	141	142	144	145	152	152	153	153	159
External benefit abated BOD	€000			910	933	957	981	1,011	1,041	1,072	1,287	1,317	1,348	1,380	1,820
correction VAT on investment		362	106	155	155	-	-	-	-	-	-	-	-	-	-
Fiscal corrections		362	106	155	155	-	-	-	-	-	-	-	-	-	-
Environmental effects of BOD reduction		11,924	-	-	910	933	957	981	1,011	1,041	1,072	1,287	1,317	1,348	1,820
Prevention of transport costs of septic tanks		12,221	234	480	823	846	870	891	913	935	958	1,162	1,191	1,221	1,677
External benefits		24,145	234	480	823	1,756	1,803	1,848	1,894	1,946	1,999	2,053	2,449	2,508	3,498
Revenues	0.97	21,383	38	75	126	1,393	1,383	1,389	1,412	1,474	1,530	2,168	2,272	2,378	12,733
Residual value	0.97	957	-	-	-	-	-	-	-	-	-	-	-	-	8,342
Operational costs	0.97	(15,346)	-	(42)	(126)	(860)	(898)	(930)	(978)	(1,031)	(1,087)	(1,146)	(1,661)	(1,751)	(3,736)
Investments, domestic	0.97	(16,841)	(2,283)	(8,713)	(8,694)	-	-	-	-	-	-	-	-	-	-
Investments, imported	1.00	(4,137)	(108)	(2,388)	(2,388)	-	-	-	-	-	-	-	-	-	-
Reinvestment, domestic	0.97	(1,023)	-	-	-	-	-	-	-	-	-	(206)	(3,237)	-	-
Reinvestment, imported	1.00	(1,511)	-	-	-	-	-	-	-	-	-	(309)	(4,778)	-	-
correction unskilled labour during construction		2,320	369	1,169	1,169	-	-	-	-	-	-	-	-	-	-
correction unskilled labour during operations		491	-	4	11	25	26	27	29	31	33	52	56	59	127
Conversion from market to economic prices		(13,707)	(1,984)	(9,896)	(9,902)	558	512	486	463	474	476	44	(7,439)	591	17,466
Total cash flow		10,800	(1,644)	(9,260)	(8,924)	2,314	2,315	2,334	2,357	2,419	2,474	2,530	2,494	(4,930)	20,964
Cumulative cash flow			(1,644)	(10,904)	(19,828)	(17,514)	(15,199)	(12,865)	(10,509)	(8,089)	(5,615)	(3,085)	15,981	11,051	79,492
Discount rate	7.0%														
ENPV	10,800														
EIRR	11.5%														
B/C ratio	1.31														