

Appendix 6

Cost Estimates for Feasibility Study

Cost estimates for feasibility study, krong nang town _ d1

option 1

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	2	2	76,000	4,000	76,000	4,000		
	Well head	Set	3	2	5,100	600	3,400	400		
	Submersible Motor Protection Pipe and Accessories	set	3	2	15,000	3,000	10,000	2,000		
	Power Supply System	set	3	2	12,000	900	8,000	600		
	Well House	m2	36	24	5,400	1,080	3,600	720		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	33,000	3,300	16,500	1,650		
	Reservoir	m3	300	122	23,100	9,000	9,394	3,660		
	Elevated Tower	m3	43	17	9,890	4,300	3,910	1,700		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	86	34	34,240	10,272	13,600	4,080		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				221,930	37,452	144,404	18,810		
B	Pipeline Network									
1	Rawwater Pipeline	km	4.5	3.0	54,000	18,000	36,000	12,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		21.0	1.9	52,500	73,500	4,750	6,650		
	80-125		12.5	1.1	75,000	43,750	6,600	3,850		
	150-200		3.5	0.0	40,250	19,250	0	0		
3	Public taps		10		4,500	500				
	Sub-Total				226,250	155,000	47,350	22,500		
C	Construction cots (A+B)				448,180	192,452	191,754	41,310		
D	Land cost									
E	Engineering Service (15%C)				67,227	28,868	28,763	6,197		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				515,407	221,320	220,517	47,507		
G	Physical contingency (10%F)				51,541	22,132	22,052	4,751		
H	Project cost (F+G)				566,948	243,452	242,569	52,257		
I	Price contingency (10%H)				56,695	24,345	24,257	5,226		
J	Total financing required (H+I)				623,642	267,797	266,826	57,483		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

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Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	6	3	228,000	12,000	114,000	6,000		
	Well head	Set	7	3	11,900	1,400	5,100	600		
	Submersible Motor Protection Pipe and Accessories	set	7	3	35,000	7,000	15,000	3,000		
	Power Supply System	set	7	3	28,000	2,100	12,000	900		
	Well House	m2	84	36	12,600	2,520	5,400	1,080		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	42,000	4,200	21,000	2,100		
	Reservoir	m3	490	227	37,730	14,700	17,479	6,810		
	Elevated Tower	m3	None	None						
	Booster Pumping Station : Pumps, Pipes and Accessories	item	None	None						
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				403,430	44,920	189,979	20,490		
B	Pipeline Network									
1	Rawwater Pipeline	km	10.5	4.5	126,000	42,000	54,000	18,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		21.5	8.5	53,750	75,250	21,250	29,750		
	65-125		12.0	3.5	72,000	42,000	21,000	12,250		
	150-200		3.5	0.5	40,250	19,250	5,750	2,750		
3	Public tap		16		7,200	800				
	Sub-Total				299,200	179,300	102,000	62,750		
C	Construction cots (A+B)				702,630	224,220	291,979	83,240		
D	Land cost									
E	Engineering Service (15%C)				105,395	33,633	43,797	12,486		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				808,025	257,853	335,776	95,726		
G	Physical contingency (10%F)				80,802	25,785	33,578	9,573		
H	Project cost (F+G)				888,827	283,638	369,353	105,299		
I	Price contingency (10%H)				88,883	28,364	36,935	10,530		
J	Total financing required (H+I)				977,710	312,002	406,289	115,828		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Cost estimates for feasibility study, krong puk commune _ d3-1

option 1

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	1	1	38,000	2,000	38,000	2,000		
	Well head	Set	2	1	3,400	400	1,700	200		
	Submersible Motor Protection Pipe and Accessories	set	2	1	10,000	2,000	5,000	1,000		
	Power Supply System	set	2	1	8,000	600	4,000	300		
	Well House	m2	24	12	3,600	720	1,800	360		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	33,000	3,300	16,500	1,650		
	Reservoir	m3	199	103	15,323	5,970	7,931	3,090		
	Elevated Tower	m3	28	15	6,440	2,800	3,450	1,500		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	57	29	22,720	6,816	11,600	3,480		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				148,683	25,606	89,981	13,580		
B	Pipeline Network									
1	Rawwater Pipeline	km	3.0	1.5	36,000	12,000	18,000	6,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		10.0	1.5	25,000	35,000	3,750	5,250		
	65-125		3.5	0.5	21,000	12,250	3,000	1,750		
	150-200		1.0	0.0	11,500	5,500	0	0		
3	Public taps		9		4,050	450				
	Sub-Total				97,550	65,200	24,750	13,000		
C	Construction cots (A+B)				246,233	90,806	114,731	26,580		
D	Land cost									
E	Engineering Service (15%C)				36,935	13,621	17,210	3,987		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				283,168	104,427	131,941	30,567		
G	Physical contingency (10%F)				28,317	10,443	13,194	3,057		
H	Project cost (F+G)				311,485	114,870	145,135	33,624		
I	Price contingency (10%H)				31,148	11,487	14,513	3,362		
J	Total financing required (H+I)				342,633	126,357	159,648	36,986		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Cost estimates for feasibility study, krong puk commune _ d3-2

option 1

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Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	1	1	38,000	2,000	38,000	2,000		
	Well head	Set	1	1	1,700	200	1,700	200		
	Submersible Motor Protection Pipe and Accessories	set	1	1	5,000	1,000	5,000	1,000		
	Power Supply System	set	1	1	4,000	300	4,000	300		
	Well House	m2	12	12	1,800	360	1,800	360		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	25,000	2,500	12,500	1,250		
	Reservoir	m3	104	54	8,008	3,120	4,158	1,620		
	Elevated Tower	m3	15	8	3,450	1,500	1,840	800		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	30	15	11,840	3,552	6,000	1,800		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				106,998	15,532	74,998	9,330		
B	Pipeline Network									
1	Rawwater Pipeline	km	1.5	1.5	18,000	6,000	18,000	6,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		15.0	5.0	37,500	52,500	12,500	17,500		
	65-125		5.0	2.0	30,000	17,500	12,000	7,000		
	150-200		2.0	0.0	23,000	11,000	0	0		
3	Public taps		7		3,150	350				
	Sub-Total				111,650	87,350	42,500	30,500		
C	Construction cots (A+B)				218,648	102,882	117,498	39,830		
D	Land cost									
E	Engineering Service (15%C)				32,797	15,432	17,625	5,975		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				251,445	118,314	135,123	45,805		
G	Physical contingency (10%F)				25,145	11,831	13,512	4,580		
H	Project cost (F+G)				276,590	130,146	148,635	50,385		
I	Price contingency (10%H)				27,659	13,015	14,863	5,038		
J	Total financing required (H+I)				304,249	143,160	163,498	55,423		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	2	1	76,000	4,000	38,000	2,000		
	Well head	Set	3	1	5,100	600	1,700	200		
	Submersible Motor Protection, Pipe and Accessories	set	3	1	15,000	3,000	5,000	1,000		
	Power Supply System	set	3	1	12,000	900	4,000	300		
	Well House	m2	36	12	5,400	1,080	1,800	360		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	33,000	3,300	16,500	1,650		
	Aeration Tower	m2	5	2	500	150	150	45		
	Reaction Tank	m3	26	9	5,200	1,820	1,700	595		
	Rapid Filter Basin	m2	11	3	18,700	3,300	5,100	900		
	Reservoir	m3	181	59	13,937	5,430	4,543	1,770		
	Elevated Tower	m3	26	9	5,980	2,600	2,070	900		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	52	16	20,640	6,192	6,400	1,920		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				219,657	33,372	86,963	11,640		
B	Pipeline Network									
1	Rawwater Pipeline	km	4.5	1.5	54,000	18,000	18,000	6,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		17.0	2.0	42,500	59,500	5,000	7,000		
	80-125		6.5	1.0	39,000	22,750	6,000	3,500		
	150-200		3.0	0.0	34,500	16,500	0	0		
3	Public taps		9		4,050	450				
	Sub-Total				174,050	117,200	29,000	16,500		
C	Construction cots (A+B)				393,707	150,572	115,963	28,140		
D	Land cost									
E	Engineering Service (15%C) <i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>				59,056	22,586	17,394	4,221		
F	Base cost (C+D+E)				452,763	173,158	133,357	32,361		
G	Physical contingency (10%F)				45,276	17,316	13,336	3,236		
H	Project cost (F+G)				498,039	190,474	146,693	35,597		
I	Price contingency (10%H)				49,804	19,047	14,669	3,560		
J	Total financing required (H+I)				547,843	209,521	161,363	39,157		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

A6-6

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	1	0	38,000	2,000	0	0		
	Well head	Set	1	0	1,700	200	0	0		
	Submersible Motor Protection, Pipe and Accessories	set	1	0	5,000	1,000	0	0		
	Power Supply System	set	1	0	4,000	300	0	0		
	Well House	m2	12	0	1,800	360	0	0		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	25,000	2,500	12,500	1,250		
	Aeration Tower	m2	1	1	100	30	50	15		
	Reaction Tank	m3	7	2	1,400	490	400	140		
	Rapid Filter Basin	m2	2	2	3,400	600	3,400	600		
	Reservoir	m3	48	15	3,896	1,440	1,155	450		
	Elevated Tower	m3	7	2	1,810	700	460	200		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	14	4	5,440	1,632	1,600	480		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				99,346	12,252	19,565	3,135		
B	Pipeline Network									
1	Rawwater Pipeline	km	1.5	0.0	18,000	6,000	0	0		
	80-100									
	150-200									
2	Distribution Pipeline									
	25-65	km	10.0	3.0	25,000	35,000	7,500	10,500		
	80-125	km	5.0	0.5	30,000	17,500	3,000	1,750		
	150-200	km	0.0	0.0	0	0	0	0		
3	Public tap		6		2,700	300				
	Sub-Total				75,700	58,800	10,500	12,250		
C	Construction cots (A+B)				175,046	71,052	30,065	15,385		
D	Land cost									
E	Engineering Service (15%C)				26,257	10,658	4,510	2,308		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				201,303	81,710	34,575	17,693		
G	Physical contingency (10%F)				20,130	8,171	3,457	1,769		
H	Project cost (F+G)				221,433	89,881	38,032	19,462		
I	Price contingency (10%H)				22,143	8,988	3,803	1,946		
J	Total financing required (H+I)				243,577	98,869	41,835	21,408		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Cost estimates for feasibility study, ea wel _ d5.1

option 1

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010	2020		2010	2020	
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	2	1	76,000	4,000	38,000	2,000		
	Well head	Set	3	1	5,100	600	1,700	200		
	Submersible Motor Protection, Pipe and Accessories	set	3	1	15,000	3,000	5,000	1,000		
	Power Supply System	set	3	1	12,000	900	4,000	300		
	Well House	m2	36	12	5,400	1,080	1,800	360		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	42,000	4,200	21,000	2,100		
	Aeration Tower	m2	6	3	550	165	300	90		
	Reaction Tank	m3	30	13	6,000	2,100	2,600	910		
	Rapid Filter Basin	m2	11	7	18,700	3,300	11,900	2,100		
	Reservoir	m3	207	93	15,939	6,210	7,161	2,790		
	Semi-Elevated Tower	m3	30	13	6,900	3,000	2,990	1,300		
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/hour	59	27	23,680	7,104	10,640	3,192		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				235,469	36,659	107,091	16,342		
B	Pipeline Network									
1	Rawwater Pipeline	km	4.5	1.5	54,000	18,000	18,000	6,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		15.5	2.8	38,750	54,250	7,000	9,800		
	80-125		5.0	2.6	30,000	17,500	15,600	9,100		
	150-200		4.5	0.0	51,750	24,750	0	0		
3	Public taps		11		4,950	550				
	Sub-Total				179,450	115,050	40,600	24,900		
C	Construction cots (A+B)				414,919	151,709	147,691	41,242		
D	Land cost									
E	Engineering Service (15%C)				62,238	22,756	22,154	6,186		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				477,157	174,465	169,845	47,428		
G	Physical contingency (10%F)				47,716	17,447	16,984	4,743		
H	Project cost (F+G)				524,873	191,912	186,829	52,171		
I	Price contingency (10%H)				52,487	19,191	18,683	5,217		
J	Total financing required (H+I)				577,360	211,103	205,512	57,388		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Cost estimates for feasibility study, kien duc town _ d6

option 1

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	3	1	114,000	6,000	38,000	2,000		
	Well head	Set	4	1	6,800	800	1,700	200		
	Submersible Motor Protection, Pipe and Accessories	set	4	1	20,000	4,000	5,000	1,000		
	Power Supply System	set	4	1	16,000	1,200	4,000	300		
	Well House	m2	48	12	7,200	1,440	1,800	360		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	33,000	3,300	16,500	1,650		
	Aeration Tower	m2	7	3	700	210	300	90		
	Reaction Tank	m3	35	16	7,000	2,450	3,200	1,120		
	Rapid Filter Basin	m2	14	7	23,800	4,200	11,900	2,100		
	Reservoir	m3	282	126	21,714	8,460	9,702	3,780		
	Elevated Tower	m3	None	None						
	Booster Pumping Station : Pumps, Pipes and Accessories	item	None	None						
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				258,414	33,060	92,102	12,600		
B	Pipeline Network									
1	Rawwater Pipeline	km	6.0	1.5	72,000	24,000	18,000	6,000		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		15.5	8.5	38,750	54,250	21,250	29,750		
	80-125		8.5	1.5	51,000	29,750	9,000	5,250		
	150-200		0.5	0.0	5,750	2,750	0	0		
3	Public taps		10		4,500	500				
	Sub-Total				172,000	111,250	48,250	41,000		
C	Construction cots (A+B)				430,414	144,310	140,352	53,600		
D	Land cost									
E	Engineering Service (15%C)				64,562	21,647	21,053	8,040		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				494,976	165,957	161,405	61,640		
G	Physical contingency (10%F)				49,498	16,596	16,140	6,164		
H	Project cost (F+G)				544,474	182,552	177,545	67,804		
I	Price contingency (10%H)				54,447	18,255	17,755	6,780		
J	Total financing required (H+I)				598,921	200,807	195,300	74,584		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Cost estimates for feasibility study, krong kmar town _ d7

option 1

Nos	Description	Unit	Quantity		Cost Amount (US\$)				Cost amount (Mil. VND)	
			2,010	2,020	2010		2020		2010	2020
A	Structural Facilities				Material	Installation	Materials	Installation		
1	Well Pumping Station									
	Drilling Well	well	1	0	38,000	2,000	0	0		
	Well head	Set	2	0	3,400	400	0	0		
	Submersible Motor Protection, Pipe and Accessories	set	2	0	10,000	2,000	0	0		
	Power Supply System	set	2	0	8,000	600	0	0		
	Well House	m2	24	0	3,600	720	0	0		
2	Treatment Plant									
	Access road, Management house, Fence	Set	1	1	33,000	3,300	16,500	1,650		
	Aeration Tower	m2	5	3	450	135	250	75		
	Reaction Tank	m3	25	11	4,900	1,715	2,200	770		
	Rapid Filter Basin	m2	9	6	15,300	2,700	10,200	1,800		
	Reservoir	m3	199	86	15,323	5,970	6,622	2,580		
	Elevated Tower	m3	None	None						
	Booster Pumping Station : Pumps, Pipes and Accessories	m3/h	50	21	19,920	5,976	8,560	2,568		
	Chlorinator	item	1		4,200	200				
	Power Supply System	item	1		4,000	800				
	Sub-Total				160,093	26,516	44,332	9,443		
B	Pipeline Network									
1	Rawwater Pipeline	km	1.5		18,000	6,000	0	0		
	80-100									
	150-200									
2	Distribution Pipeline	km								
	25-65		13.0	5.0	32,500	45,500	12,500	17,500		
	80-125		5.0	3.0	30,000	17,500	18,000	10,500		
	150-200		1.0	0.0	11,500	5,500	0	0		
3	Public taps		10		4,500	500				
	Sub-Total				96,500	75,000	30,500	28,000		
C	Construction cots (A+B)				256,593	101,516	74,832	37,443		
D	Land cost									
E	Engineering Service (15%C)				38,489	15,227	11,225	5,616		
	<i>(Incl. Soil investigation, field serve, detailed design and construction supervisor</i>									
F	Base cost (C+D+E)				295,082	116,743	86,057	43,059		
G	Physical contingency (10%F)				29,508	11,674	8,606	4,306		
H	Project cost (F+G)				324,590	128,418	94,662	47,365		
I	Price contingency (10%H)				32,459	12,842	9,466	4,737		
J	Total financing required (H+I)				357,049	141,260	104,129	52,102		

Note : Cost 2001 year level
Exchange rate US\$ 1.00 = 15,000 VND

Appendix 7

Summary of Price for Well Drilling Equipment, Supporting Equipment, Mobile Workshop Equipment & Spare Parts

**Summary of Price for Well Drilling Equipments,
Supporting Vehicles & Equipment, Mobile Workshop Equipment & Spare Parts**

Summary of Price for Well Drilling Equipment					
Supporting Equipment, Mobile Workshop Equipment & Spare Parts					
Item	Description	Q'ty	Unit	Unit Price	Amount
I	Water Well Drilling Equipment (I-1 to I-E)	1	Lot		
I-1	Drilling Rig	1	Set		
I-2	Operating Accessories	1	Set		
I-3	Drilling Casing and Fishing Tools	1	Lot		
I-A	Drilling tools & Accessories	1	Set		
I-B	Down-the-hole Tools	1	Set		
I-C	Direct Mud Circulation Drilling Tools & Accessories	1	Set		
I-D	Casing Tools	1	Set		
I-E	Fishing Tools	1	Set		
II	High Pressure Air Compressor	1	Set		
III	Miscellaneous Ancillary Equipment	1	Lot		
IV	Air Lift Equipment	1	Lot		
V	Spare Parts for Item I. to IV.	1	Lot		
VI	Supporting Equipment (VI-1 to VI-5)	1	Lot		
VI-1	Cab-back crane cargo truck	1	Set		
VI-2	Water tank truck	1	Set		
VI-3	Pumping test equipment	1	Set		
VI-4	Well logging equipment with accessories	1	Set		
VI-5	Water Quality Analysis Instruments	1	Lot		
VII	Spare Parts for Item VI.	1	Lot		
VIII	Mobile Workshop Equipment (VIII-1 and VIII-2)	1	Lot		
VIII-1	Mobile Workshop Truck	1	Set		
VIII-2	Maintenance and repairing equipment and tools	1	set		
IX	Spare Parts for Item VIII.	1	Lot		
	Total (Ex-go-down YOKOHAMA, without export packing)	1	Lot		
X	Solar and Generator Driven Pumping System for 5 systems	1	Lot		
XI	Supporting Vehicles	4	Sets		
Grand Total					¥361,000,000

Appendix 8-1

General Regulations of Services for Piped Water Supply

**GENERAL REGULATIONS OF SERVICES
FOR PIPED WATER SUPPLY
PROVIDED BY
_____ WATER SUPPLY UNIT**

**GENERAL REGULATIONS OF SERVICES
FOR PIPED WATER SUPPLY
PROVIDED BY _____ WATER SUPPLY UNIT**

Chapter I: General Conditions

Article 1: Name, address and mission

The name of the provider of water supply services is _____ Water Supply Unit (hereinafter WSU).

The address of the WSU is _____.

The Mission of the WSU is to supply piped potable water to the population living in the service area of the WSU in an efficient, economical and sustainable manner. The first priority is given to domestic water use and the second priority, as the capacity of the system allows, to water use in services and businesses.

The WSU is a non-profitable service provider, who operates the water supply system and is responsible for the services and the technical and financial performance and sustainability of the system. The WSU shall cover its costs, including electricity, chemicals, staff salaries, repairs, expansion of services (new connections), maintenance and replacement of facilities and installations at the end of their economic life. In order to cover its cost WSU is authorised to collect revenues for house connections (connection fee or rent) and water sold to the clients (water bills based on metered water use).

Article 2: Service area of WSU

The service area of the WSU is defined by the Board of the Water Supply Unit (hereinafter the Board). The present service area is shown on a map in Attachment 1.

Within the service area as defined above, the WSU is generally responsible for accepting connections applied by household and other consumers. The WSU may also supply water to clients outside the service area. These General Regulations would then be applied only to the extent reasonable.

Article 3: Organisation of WSU

The WSU is responsible for the operation and maintenance of the water supply system providing piped potable in the service area defined above. The WSU comprises employed staff under the management of the Manager of the WSU. The Manager, on behalf of the WSU, is accountable to the Board.

The Board comprises five members appointed by the People's Committee of _____ commune/town (hereinafter PC). _____ of the five members of the Board shall be elected by the clients as their representatives. This election shall take place in an annual meeting of registered clients of the WSU.

The Chairperson of the Board, on behalf of the Board, is accountable to the PC. The Board convenes meetings whenever necessary, however at least once a month. The members of the Board, if paid for performing their duties in the Board, shall not be paid from the funds of the WSU.

The organisational chart of the WSU is shown in Figure 1.

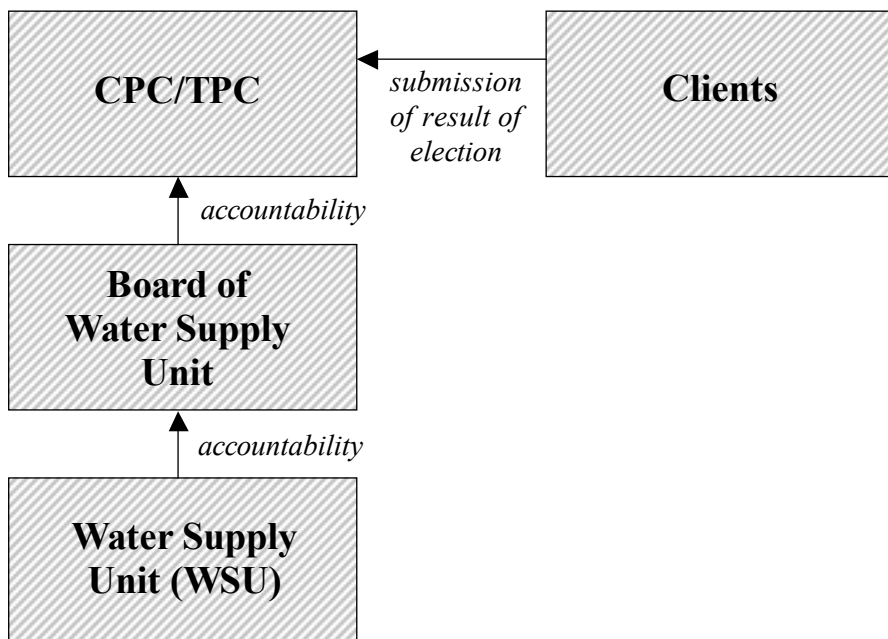


Figure 1 Organisation of WSU

Chapter II: Clients of WSU

Article 4: Rights of clients

All people residing within the service area of the WSU are eligible to sign a contract with the WSU. However, if the capacity of the water supply system is restricted and does not allow the WSU to accept to clients, in order to be able to fulfil its duties as defined in the contracts with already served clients, the WSU may reject the application. The relations between the WSU and the client are defined in the contract to be signed between before its effectiveness.

The clients have the right to:

- to enjoy uninterrupted 24-hour service provided by the WSU , except for a) interruptions caused by regularly scheduled improvements and maintenance, or b) sudden interruptions caused by unexpected repairs,
- terminate the contract by their initiative,
- transfer the contract to a third person, and

- participate in the management of the WSU, especially through their elected members in the Board.

Article 5: Responsibilities of clients

The clients have the responsibility to:

- pay to the WSU the monthly water bills based on metered water use and the costs resulting from connection and possible relocation of the connection,
- allow the WSU's authorised personnel to inspect the installations that belong to the connection, to read the meter and to collect the water bills,
- protect the meter against damage and theft and inform the WSU about any irregular performance, breakdown or loss of the meter soonest, latest within 24 hours from the incidence,
- protect the water supply system against any damage and illegal water abstraction from the system, and report to the WSU about any such irregularities soonest.
- obey the General Regulations of the WSU, decided by the Board, and comply with the terms of the contract with the WSU
- file a complaint against the WSU if s/he considers that it violates the General Regulations or the terms of the contract, and if not satisfied the decision of the Board, s/he has the right to send the complaint to the competent State agency or start a legal action at the Court as prescribed by law,
- transfer the contract to a third person (for example, a new owner of the property), after notifying the WSU to make the legal change of the ownership,
- withdraw from any exploitation and cultivation of land in the protection zone of the water source as illustrated in Attachment 2.

Chapter III: Water Supply Unit

Article 6: Appointment of staff

The manager of the WSU shall be appointed by the Board. The other staff members are also appointed by the Board based on the proposal made by the Manager. The duties of the other staff members include pump operation, treatment plant operation (if there is a treatment plant), pipeline inspection (including installation of connections, disconnection and reconnection), accounting, meter reading and money collection.

The staff members of the WSU can be full-time or part-time employees. Their salaries are paid from the revenues collected from the clients. In the initial period of the water supply system operation, some staff members may not be paid at all if they perform their duties as an additional task associated with their previous duties. For example, the duties of the Manager may temporarily be undertaken by a PC member or the Chief of Administration of the commune/town.

If the Board is dissatisfied with the performance of the Manager or other WSU staff members, it can terminate the work contract and appoint a new member as the replacement.

The Manager and the Board shall ensure that for each activity of the WSU there are always at least two staff members who are familiar with this activity. This means that although there have to be

clear responsibilities with one person having the responsibility for the task there is a need to develop overlapping skills. This will ensure uninterrupted operation and performance if a staff member is temporarily or permanently out of service.

Article 7: Rights and responsibilities of WSU

The WSU is responsible for the technical and financial performance of the water supply system. The rights and responsibilities of the WSU include, but are not limited to:

- the supply of adequate amount of water, as defined in the contract signed with the client, and with adequate pressure (minimum 4m or 0.4 bar at the water meter) and quality (as defined in the Standard 505 of the Ministry of Health) without any undue interruptions, except for a) interruptions caused by regularly scheduled improvements and maintenance, or b) sudden interruptions caused by unexpected repairs,
- in case a) above, notification of clients at least 48 hours prior to the interruption,
- ensuring the service to clients if they move to another location in the service area,
- inspection of the meter and other house connection installations as well as the way in which clients use water,
- reading of the meter and maintaining a record of the amount of water used by each client for at least two full year after the “water use month”¹,
- protection of the water source,
- ensuring the sustainability of the water supply system by preparing annual financial plans with a tariff proposal and closely and timely monitoring the balance of costs and revenues against the financial plan and reporting to the Board with a frequency not exceeding one month,
- transparent management of funds and accounts,
- routine maintenance as well maintenance and repair of faulty facilities by themselves or by contracted service providers,
- maintenance of water meters and calibration of the meters when there is a reason to suspect their accurate performance or at least once in three years.

Article 8: Responsibilities of Manager:

The Manager has the overall responsibility for the WSU and s/he is accountable for her/his work to the Board. The Manager especially focuses on the service and financial management of the WSU but s/he also assumes the responsibility for the technical operations of the WSU. The duties of the Manager include planning and budgeting, monitoring of the performance of the WSU, reporting to the Board, personnel management, liaison with PC and authorities, customer relations, material management, contract management and supervision and control of the WSU staff.

As being responsible for the financial performance of the WSU, the Manager needs to be active in promoting and marketing water sales in order to improve the efficiency of the water supply system and to reduce water tariff per cubic metre.

¹ The term “water use month” means the time between two consecutive meter readings. In normal conditions the “water use month” shall be 30 days plus/minus five days.

The Manager is the legitimate representative of the WSU before the law. S/he is responsible for the bank account of the WSU. S/he defines the detailed division of duties of each staff member and ensures that there is clear responsibility for each task to be performed. For that purpose, the Manager defines the job description for each staff member and provides them with written procedures and instructions. The Manager countersigns water bills and all records kept by respective staff members.

Article 9: Responsibilities of Accountant:

The Accountant is responsible for accurate and timely accounting of the WSU. In addition to accounting s/he is also responsible for preparing monthly water bills, based on the data provided by meter readers, and maintaining customer ledgers. The Accountant assists the Manager in the preparation of the annual financial plan and tariff calculation and performs other tasks requested by the Manager.

The Accountant reports to the Manager.

Article 10: Responsibilities of Pump Operator:

The responsibilities of the Pump operator cover the water intake, its structures and installations, the rising main from the borehole to the treatment plant and (only for K3) the reservoir, and the treatment plant and (only for K3) the reservoir.

The main daily tasks of the Pump Operator include the operation and control of the borehole pump, keeping record on the flow, pressure, voltage, power consumption, the times of switch-on and switch-off of the pumps, as well as any observations of irregularities at the intake and the facilities up to the reservoir. Because the pump operation is fully manual, the Pump Operator needs to monitor closely the water use pattern of the clients and develop an optimal pumping schedule to ensure that a) there is a continuous 24-supply of water in the service area, and b) there is no wastage of water and pumping energy caused by overflow from the reservoir.

(This applies only to K3:) At the treatment plant the Pump Operator controls the volume and quality of inflow and outflow at the plant, the condition and operation of all installations at the plant, monitoring and control of the performance of filtration, and cleaning of the topmost layer of sand in the filter.

The Pump Operator reports to the Manager and informs her/him for any purchasing and maintenance needs that require disbursement of funds.

Article 11: Responsibilities of Pipeline Inspector:

The Pipeline Inspector is responsible for the overall network operation downstream of the reservoir and for the supply of water to the customers in adequate quantity and with adequate pressure, and in general for the technical performance of the distribution system, paying particular attention on minimising the non-revenue water.

The duties of the Pipeline Inspector include general monitoring of the performance of distribution, based on readings of the master meters and customer meters, observation of any irregularities, detection of potential leaks and illegal connections, consequent repair, installation, possible disconnection and reconnection of house connections and public water taps, and testing of water quality in the system. The Pipeline Inspector is also responsible for the performance of the water meters, including the maintenance and calibration of the meters. This responsibility does not mean that s/he has to carry out these tasks personally. Rather it means that he has to ensure the timely meter calibration and maintenance by a contracted service provider.

The Pipeline Inspector reports to the Manager and informs her/him about the purchase and maintenance needs (pipes, meters, valves, fittings, etc.) that require disbursement of funds.

Article 12: Responsibilities of Meter Reader:

The main tasks of the Meter Reader include monthly reading of customer meters, distribution of water bills and collection of payments. Additionally, the Meter Reader is to inspect the functioning and condition of the meter as well as its seal. The Meter Reader reports the readings to the Accountant and receives the bills from her/him.

The Meter Reader is accountable for her/his work and the collected payments to the Manager. S/he also reports about her/his work and any observed irregularities to the Manager.

Initially, the duties of the Meter Reader are undertaken by the Pipeline Inspector until the Board decides to fill the vacancies of the Meter Reader along with increasing number of connections.

Chapter IV: Board of Water Supply Unit

Article 13 Rights and responsibilities of Board:

The main duties of the Board are to monitor and supervise the financial and technical performance of the WSU, and to approve the annual plans and decide upon the water tariff and other payments and fines related to water supply services provided by the WSU.

The responsibilities of the Board include:

- appointment of the Manager of the WSU,
- appointment of other staff members of the WSU on the basis of the proposal of the Manager,
- decisions on the salaries and possible performance incentives of the Manager and other staff members of the WSU,
- decision of the General Regulation of the WSU and the conditions of contracts between the clients and the WSU,
- decisions on protection of the water source and the water supply system,
- approval of annual (financial) plans proposed by the WSU, (if the Board is not satisfied with the WSU's proposal, it requests WSU to submit anew plan that takes into account the guidance provided by the Board)
- decisions on water tariff, connection fees, meter rents, reconnection fees, fines etc.,

- close and timely monitoring of the balance of costs and revenues against the financial plan and taking measures to ensure the sustainability in the case of possible deficit (either by reducing costs or increasing revenues),
- monitoring of the efficiency and performance of the WSU in the provision of water supply services through customer satisfaction and inspections,
- provision of transparent information of the performance and accounts of the WSU to PC and clients,
- promotion of water use in collaboration of health and educational authorities and mass organisations,
- settlement of disputes between the clients and the WSU,
- reporting to PC and submission of tariff decisions and other decisions to PC for adoption, and
- support to the WSU in the enforcement of the General Regulations and requesting support from relevant authorities if necessary.

Article 14: Working modalities of Board:

The Board members are appointed by PC for a period of two years. At least two members shall be elected by the clients.

The decisions of the Board are binding and legal when at least three members of the Board agree with the decision. The Board shall keep minutes of their meetings and they have to be signed by each member.

The Board convenes meetings according to the schedule decided by them, however at least once a month. If need arises, the Chairman of the Board may invite the Board to have additional meetings by inviting the members accordingly. However, to enter into legal decisions, three members have to agree with the decision.

Each of the Board members is accountable to PC and responsible before the law for the performance of the Board in its task.

Chapter V: People's Committee

Article 15: Rights and responsibilities of People's Committee

The People's Committee appoints the members of the Board and adopts the tariff and other relevant decisions of the Board.

PC is in charge of resolving problems on sabotage, damaging the safety of the water supply system, and enforcing the measures against the violators of the General regulations and other relevant rules and misconduct of the staff of the WSU and the members of the Board.

PC provides support to the Board and the WSU in their duties, especially in training.

If PC refuses to adopt the new tariffs decided by the Board and accepted by the representatives of the clients in the Board, PC shall reimburse the WSU any and all losses incurred due, or related to, the PC's decision of not adopting the required tariff.

Chapter VI: Other Clauses

Article 16: Implications of violation of regulations

If a client fails to pay the water bill when the money collector authorised by the WSU is collecting the payment or within 10 days thereafter, the WSU has the right to interrupt water supply to the said client. If this client fails to pay the water bill during the following 20 days, the WSU has the right to disconnect the client and terminate the contract. If the client wishes to be reconnected, s/he has to settle all due payments and pay the reconnection fee of VND _____.

If Party B breaks the seal of the meter, tampers with the meter or lets the meter be damaged or lost, Party A has the right to charge Party A for the cost of a new meter and a fine from Party B in the range of VND _____ to VND _____ or decided by the Board.

If the WSU violates the contract signed with the client, the client can claim compensation from the WSU in the range of VND _____ to VND _____ or a sum to be specifically decided by the Board. If the client violates the contract, otherwise than mentioned above, the WSU can terminate the contract, disconnect the client and claim compensation and fine from her/him in the range of VND _____ to VND _____ or a sum to be specifically decided by the Board. In case of clearly unintentional damage the compensation and fine can be exempted by the Board.

Those who cause damage to the water intake or the water supply system, have to:

- compensate the damage,
- pay a fine in the range of VND _____ to VND _____, and
- be brought to court.

The compensation shall include:

- compensation for revenues that are lost during repair and recovery,
- costs of investigation and excavation of violated areas in order to repair, and
- repair or replacement of pipelines, valves, manholes and other assets.

If a staff member of the WSU is guilty for misconduct, the Board can give her/him a written warning, deduct a share of whole of her/his salary, dismiss her/him and/or bring him to court. The Board is responsible for supervision of the WSU staff and if it is found that misconduct of a WSU staff member has been made possible by the neglect of supervision by the Board, the Board members may also be brought to court.

Article 17: Public taps

Instead of and in addition to house connections there can be public or collective taps in the water supply system. They are intended to provide service to those without a connection of their own. For each public tap, the WSU signs a contract with a representative of the user group of the tap. The General Regulations, the terms of the contract and other rules relevant to house connections apply also to public taps.

The water use from a public tap is metered and the person responsible for the tap is accountable to the WSU for the payment of water bills. The user group shares the bills as they decide between themselves.

The user group of the public tap is responsible for the protection of the tap, its installations and the cleanliness of its environment. If the tap or its installations are damaged as a result of improper use or intentional vandalism, the user group is responsible for covering the expenses of the repair. Otherwise the tap will be disconnected.

The manholes of tanks associated with the taps are allowed to be opened only by persons authorised by the WSU.

It is forbidden to hang buckets or any other vessels at the cock of the tap.

In _____ on _____

Chairperson of the Board

Member of the Board

Member of the Board

Member of the Board

Member of the Board

Adopted by _____ People's Committee

Position

Appendix 8-2

Application for a Connection to Piped Water Supply

APPLICATION FOR A CONNECTION TO PIPED WATER SUPPLY

I apply for a house connection to _____ piped water supply system and promise to pay all expenses for the connection and water meter and to comply with the terms of Water Supply Contract and the General Terms of _____ Water Supply Unit.

Address of the property to be connected: _____

Number of people living in the address: _____

Type of non-domestic water use in the address: _____

Date: _____

Applicant:

Signature: _____

Name: _____

Address: _____

Telephone: _____

Decision of _____ Water Supply Unit

Connection approved _____

Connection rejected _____, because _____

Date: _____

Signature: _____

Name: _____

Position: _____

Appendix 9

Contractor for Water Supply between the User and the WSU

CONTRACT FOR PIPED WATER SUPPLY

BETWEEN

_____ **WATER SUPPLY UNIT**

AND

CONTRACT FOR PIPED WATER SUPPLY

Pursuant to the civil law of the Socialist republic of Viet Nam, and based on the requirements to supply piped potable water, we have entered into this contract on supply of piped potable water between the following two parties:

Supplier of potable water: _____ Water Supply Unit (hereinafter Party A)

Address: _____

Bank and account number: _____

Telephone: _____

Client: Mr./Ms. _____ (hereinafter Party A)

Address: _____

Bank and account number: _____

Telephone: _____

Article 1: Location and service level:

Party A shall be responsible for supplying Party B with potable water as regulated by law with adequate pressure (minimum 4m or 0.4 bar at the water meter) and in adequate quantity (at least _____ m³/month) in the following location _____, shown also on the attached map.

The supply of water by Party A and the water use of Party B shall be verified with a water meter installed and managed by Party A.

Article 2: Water tariff, billing and payments:

1. The water tariff shall be calculated and set by the Board of the Water Supply Unit and adopted by the People's Committee of _____ commune/town. The tariff shall cover the operation and maintenance cost of the water supply system and it shall in longer term provide sufficient saving to cover the cost of replacement of civil structures, pipelines and electrical and mechanical installations. If the revenues from water sales are not sufficient to cover the

aforesaid costs and saving need, the Board of the Water Supply Unit shall recalculate to tariff and set a new tariff to ensure the sustainability of the water supply system. Party A shall inform Party B about tariff adjustments within one week from the decision and the new tariff shall not be applied until for the next full “water use month”.

2. The term “water use month” means the time between two consecutive meter readings. In normal conditions the “water use month” shall be 30 days plus/minus five days.
3. The water meter and all installations upstream of the meter are the property of Party A and all installations downstream of the meter are the property of Party B. Although the installations upstream of the meter and the meter itself are the property of Side A, Side B shall cover the whole cost of the connection from the main pipe, including the meter and the upstream installations. The cost of the meter can be paid as part of the connection fee in one instalment or in a number of instalments decided by the Board, or Party B may pay a monthly rent fro the meter to Party A as agreed by the Board. In the latter case, the meter rent has to be specified in the water bill separated from the water charge based on metered use.
4. Party B shall pay for the water s/he has used on the basis of the reading of the meter and the valid water tariff. If the user fails to pay to the money collector authorised by Party A, Party B shall settle the payment in the office of Party A. If Party B has a bank account, s/he can pay directly to the bank account.
5. If the meter reader authorised by Party A has not access to the meter or otherwise fails to read the meter, the monthly water use shall be calculated as the average of the previous three months. The estimated water use shall be balanced as a result from the following meter reading.

Article 3: Rights and responsibilities of each party:

Party A:

1. Party A shall supply adequate amount of water with adequate pressure as per contract without any undue interruptions, except for a) interruptions caused by regularly scheduled improvements and maintenance, or b) sudden interruptions caused by unexpected repairs. In case a) above, Party A shall notify Party B at least 48 hours prior to the interruption.
2. Party A shall ensure the service under this contract to Party B if s/he moves to another location in the service area. Party A has the right to charge Party B for all material and labour costs resulting from moving the connection.
3. Party has the right to inspect the meter and other house connection installations as well as the way in which Party B uses water. Party A shall read the meter and record the amount of water used by Party B. Party A shall maintain the records for at least two full year after the “water use month”
4. Party A is responsible for routine maintenance of the meter and its calibration when there is a reason to suspect its accurate performance or at least once in three years. Party A shall then remove the meter and replace it by a calibrated and sealed meter.

Party B:

1. Party B has the right to uninterrupted 24-hour service provided by Party A under this contract with the exceptions defined in Paragraph 1 under the rights and responsibilities of Party A above.
2. Party B shall pay to Party A the monthly water bills based on metered water use and the costs resulting from connection and possible relocation of the connection.

3. Party B shall allow Party A's authorised personnel to inspect the installations that belong to the connection, to read the meter and to collect the water bills.
4. Party B shall not deliberately move, remove or repair the meter and installations upstream of the meter, and s/he shall protect the meter from damage and theft and the sealing of the meter, and pay for possible damage. Particularly serious are any attempts to stop the meter from rotating, to manipulate the meter, and to exploit water upstream of the meter (theft). It is not allowed, either, to accelerate the flow in the connection by using pumps by Party B.
5. Party B shall inform Party A about any irregular performance, breakdown or loss of the meter soonest, latest within 24 hours from the incidence.
6. Party B shall obey the General Regulations of the WSU, decided by the Board. Violation of the General Regulations may result in payment of fines set by the Board or termination of the contract.
7. Party B can file a complaint against party B if s/he considers that Party A violates the General Regulations or the terms of this contract. The complaint shall be addressed to the Board of the WSU. If Party B disagrees with the decision of the Board, s/he has the right to send the complaint to the competent State agency or start a legal action at the Court as prescribed by law.
8. If Party B transfers this contract to a third person (for example, a new owner of the property), the transfer shall take place within seven days after Party B notifies Party A to make the legal change of the ownership.

Article 4: Implications of violation of contract:

1. If Party B fails to pay the water bill when the money collector authorised by Party A is collecting the payment or within 10 days thereafter, Party A has the right to interrupt water supply to Party B. If Party B fails to pay the water bill during the following 20 days, Party A has the right to disconnect the connection of Party B and terminate the contract. If Party B wishes to be reconnected, s/he has to settle all due payments and pay the reconnection fee decided by the Board.
2. If Party B breaks the seal of the meter, tampers with the meter or lets the meter be damaged or lost, Party A has the right to charge Party A for the cost of a new meter and a fine from Party B in the range of VND _____ to VND _____ or decided by the Board.
3. Disputes between Party A and Party B shall, in principle, be settled by the Board. In general, if Party A violates the contract, Party B can claim compensation from Party A in the range of VND _____ to VND _____ or a sum to be specifically decided by the Board. If Party B violates the contract, otherwise than mentioned above, Party A can terminate the contract, disconnect Party B, and claim compensation and fine from Party B in the range of VND _____ to VND _____ or decided by the Board.
4. In case of clearly unintentional damage the compensation and fine can be exempted by the Board.

Article 5: Other agreements:

1. Within the service area as defined in The General Regulations for the Water Supply Unit as decided by the Board, Party A is generally responsible for accepting connections. If mutually agreed between Party A and Party B, Party B can be authorised by Party A to sign sub-contracts with other water users, who would connect to the connection of Party B downstream of the meter of Party B. Party B shall then be responsible for the payment of all metered water use to Party A and s/he would have the right to charge the other users as s/he has agreed with them.

Party A will not be responsible for the service level provided to the sub-contracted users through Party B.

2. If Party B does not use water from the connection for two consecutive months (no metered use), Party A has the right to disconnect Party B. If Party B wishes to be reconnected, s/he has to settle all due payments and pay the reconnection fee decided by the Board.
3. This contract has to be in compliance with the General Regulations of the WSU, decided by the Board. If the Board amends the General regulations, the amendments shall apply to this contract.
4. This contract has been made in two identical copies signed by both parties. Each party shall keep one copy that is effective from the signatory date until the day when one of the parties wishes to terminate or amend it. Amendments can only be made mutually.

In _____ on _____

On behalf of the Client:

On behalf of _____ Water Supply Unit

Appendix 10

Daily Operations Record

DAILY OPERATIONS RECORD

1. Pumping record (raw water):

Date	Time of pump switch-on	Time of pump switch-off	Flow meter reading at switch-on	Flow meter reading at switch-off	Volume pumped	Power meter reading at switch-on	Power meter reading at switch-off	Power consumption
Total								

2. Availability of water to consumers: _____ h/d. If less than 24 h, specify where and why (in an attachment).

3. Observations, if any, on water quality:

4. Observations, if any, on problems or irregularities (power failure, leaks, violation of regulations, etc.) and description of corrective or other special measures, (repair, filter backwash, etc.):

5. Additional information:

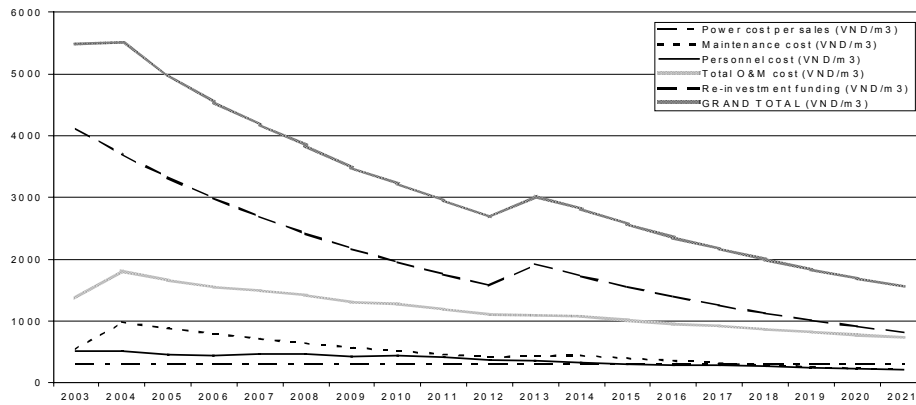
6. Date, name and signature of Operator

7. Date, name and signature of Manager

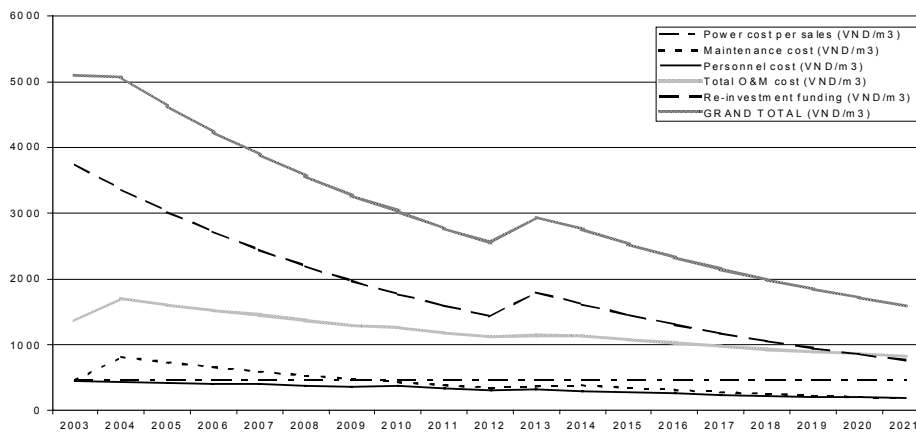
Appendix 11

O&M Costs for Each Target Communes

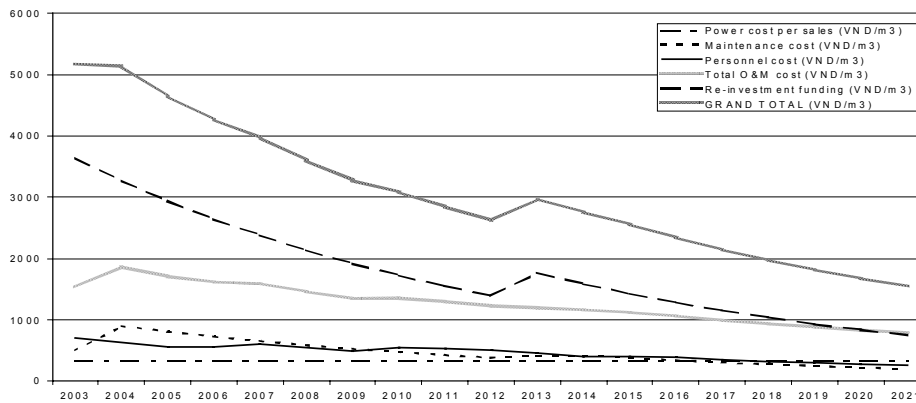
O & M costs of Krong Nang scheme D1



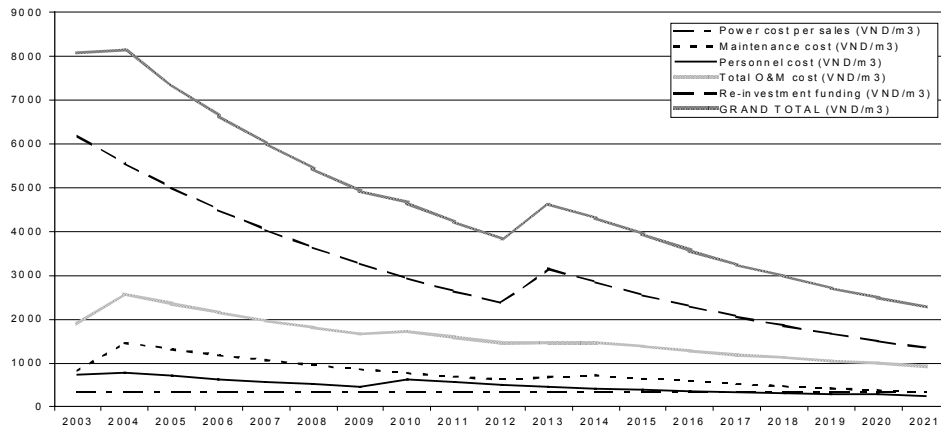
O & M costs of Ea Hleo scheme D2



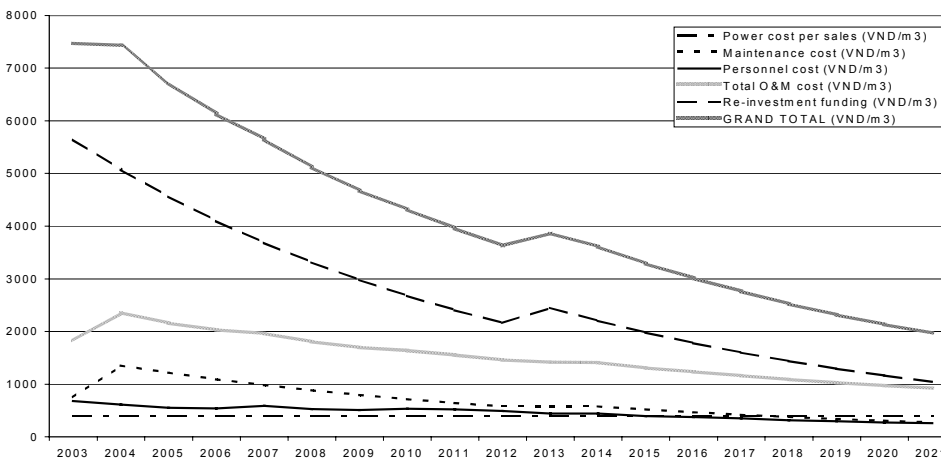
O & M costs of Krong Puk scheme (D3-1)



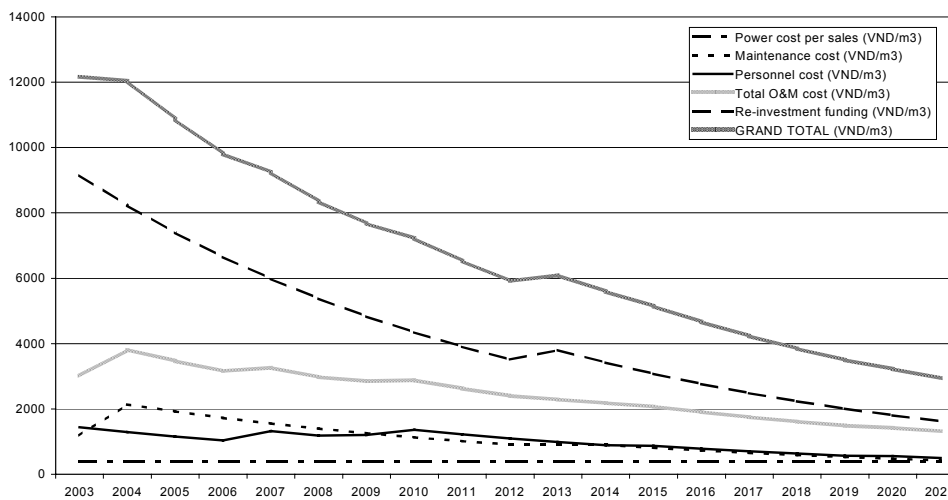
O&M costs of Krong Puk scheme (D3-2)



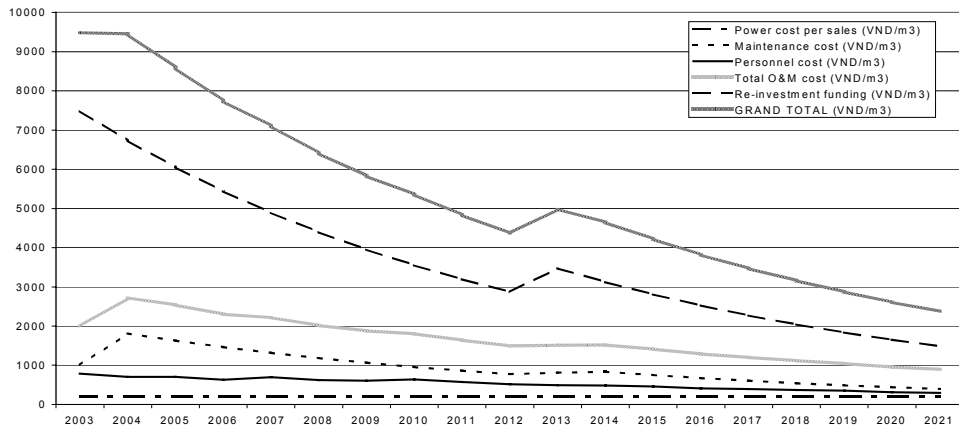
O&M costs of Ea Drong scheme (D4-1)



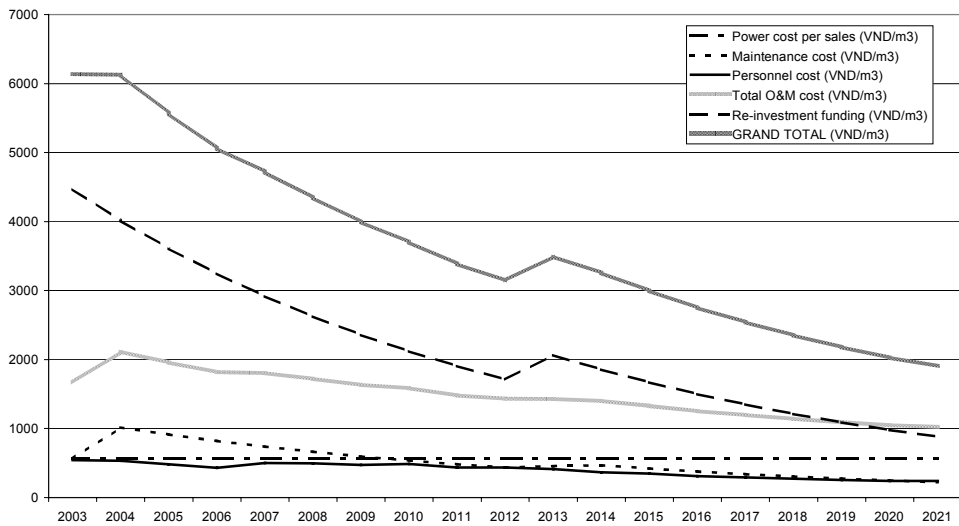
O&M costs of Ea Drong scheme (D4-2)



O&M costs of Ea Wer scheme D5



O&M costs of Kien Duc scheme D6



O&M costs of Krong Kmar scheme D7

