

Water Quality Project Life Cycle Cost Analysis

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Alternative	TECO Big Bend III Battery Energy Storage									
Duration	Economic Evaluation Duration				25	years				
Replacement Costs	Replacement Costs			Expected Service Life (Years)	# Replacements Over Project Life	1 time Replacement Cost	Replacement Cost (Present Worth Assumed)	Upper End of Estimated Replacement Costs for Selected Elements (Optional)		
								1 time Replacement Cost	Replacement Cost (Present Worth Assumed)	
	5	Piping, Gravity Flow1		50	0.5	\$ 54,796	\$ 54,796	\$ 54,796	\$ 27,398	
	7	Dry Storage		50	0.5	\$ 224,687	\$ 224,687	\$ 224,687	\$ 112,344	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
		#N/A		#N/A	#N/A	\$ 1,000	\$ -	\$ -	\$ -	
	TOTAL PRESENT WORTH OF REPLACEMENT COST							\$ 279,483	\$ 139,742	
	Replacement Costs Annualized over the Project Life							\$ 10,756	\$ 5,378	
Annual Costs	Annual Costs		Unit	% of Initial Cost	Present Worth Factor	Present Worth	Annual cost	Upper End of Estimated Annual Costs for Selected Elements (Optional)		
	Maintenance Cost of Items Listed in Replacement Cost Section. NOTE!: Must be in same order as Replacement Costs above as Annual Costs link to Replacement Cost Entries				16.8451			% of Initial Cost	Present Worth	Annual Cost
	5	Piping, Gravity Flow1	1	1.00%		\$ 9,230	\$ 548	1.00%	\$ 9,230	\$ 548
	7	Dry Storage	1	0.05%		\$ 1,892	\$ 112	0.15%	\$ 5,677	\$ 337
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
		#N/A	0	0.00%		\$ -	\$ -	0.00%	\$ -	\$ -
	Other Maintenance Costs, \$/unit		Unit	\$/ unit	Present Worth Factor	Present Worth	Annual cost	\$/ unit	Present Worth	Annual Cost
140	Mowing/Vegetation Control/Litter Removal	1	\$ 4,800		\$ 80,857	\$ 4,800	\$ -	\$ -	\$ -	
150	Clean/Repair Drainage Structures	1	\$ 1,200		\$ 20,214	\$ 1,200	\$ -	\$ -	\$ -	
160	Site Enviromental Inspections - Annual	1	\$ 3,000		\$ 50,535	\$ 3,000	\$ -	\$ -	\$ -	
170	Site Civil Inspections - Annual	1	\$ 3,000		\$ 50,535	\$ 3,000	\$ -	\$ -	\$ -	
0		0	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	
0		0	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	
0		0	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	
Electrical Energy			kwh		\$ -	\$ -		\$ -	\$ -	
TOTAL PRESENT WORTH OF ANNUAL COST						\$ 213,264		\$ 14,908		
TOTAL OF ANNUAL COSTS							\$ 12,660		\$ 885	
	ESTIMATED REPLACEMENT + O&M ANNUALIZED COST RANGE		\$ 23,420	TO	\$ 6,260					