System Advisor Model
Marine Energy Wave Report

Wave Energy Converter
WEC data was imported.

Device Performance	
Device Rated Power, kW	30
Device Average Power, kW	12.375
Plant Capacity, kW	3000.000
Capacity Factor, %	38
Annual energy production, kWh	10081746

Wave Resource

Resource type	Frequency of Occurrence
Resource name	PacWave South
Location	Newport
Latitude	44.57
Longitude	-124.23
Buoy Number	NDBC 46094
Bathymetry	Gently Sloping
Seabed	Sandy
Avg Power Flux, kW/m	40.70

Array Design Parameters

Rated Array Capacity, kW	3000
Number of Devices	100
Distance to shore, km	5000
Depth, m	50
Device spacing, m	600
Row spacing, m	600

System Performance

Annual Energy Production, kWh	10,081,746
Capacity Factor, %	38.36
Total assumed losses, %	7.00

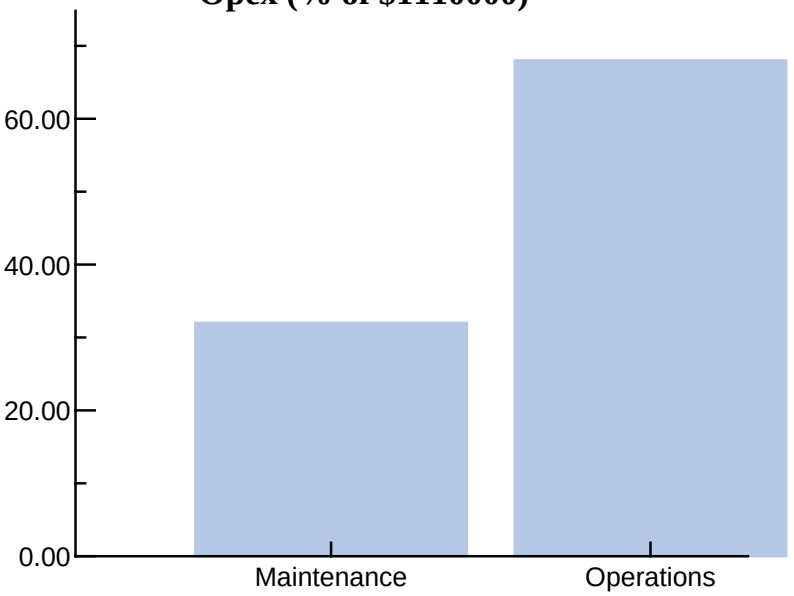
System Costs

	$	$/kW	$/kWh/yr	Value Type
Capital Expenditures				
Marine Energy Converter				
Structural Assembly	4,146,487	1,382	0.04	user-spec
Power take-off System	6,312,572	2,104	0.06	user-spec
Mooring, Found., & Sub-Struct.	953,361	318	0.01	user-spec
Subtotal	**11,412,420**			
Balance of System				
Development	5,000,000	1,667	0.05	user-spec
Engineering and Management	1,500,000	500	0.01	user-spec
Electrical Infrastructure	700,000	233	0.01	user-spec
Plant Commissioning	1,000,000	333	0.01	user-spec
Site Access, Port & Staging	750,000	250	0.01	user-spec
Assembly & Installation	1,000,000	333	0.01	user-spec
Other Infrastructure	500,000	167	0	user-spec
Subtotal	**10,450,000**			
Financials				
Project Contingency Budget	1,005,621	335	0.01	modeled
Insurance during Construction	201,124	67	0	modeled
Reserve Accounts	603,373	201	0.01	modeled
Subtotal	**1,810,118**			
Total Capital Expenditures	**23,672,538**	**7,891**	**0.22**	
Operational Expenditures				
Operations	750,000	250	0.07	user-spec
Maintenance	360,000	120	0.04	user-spec
Total Operational Expenditures	**1,110,000**	**370**	**0.11**	

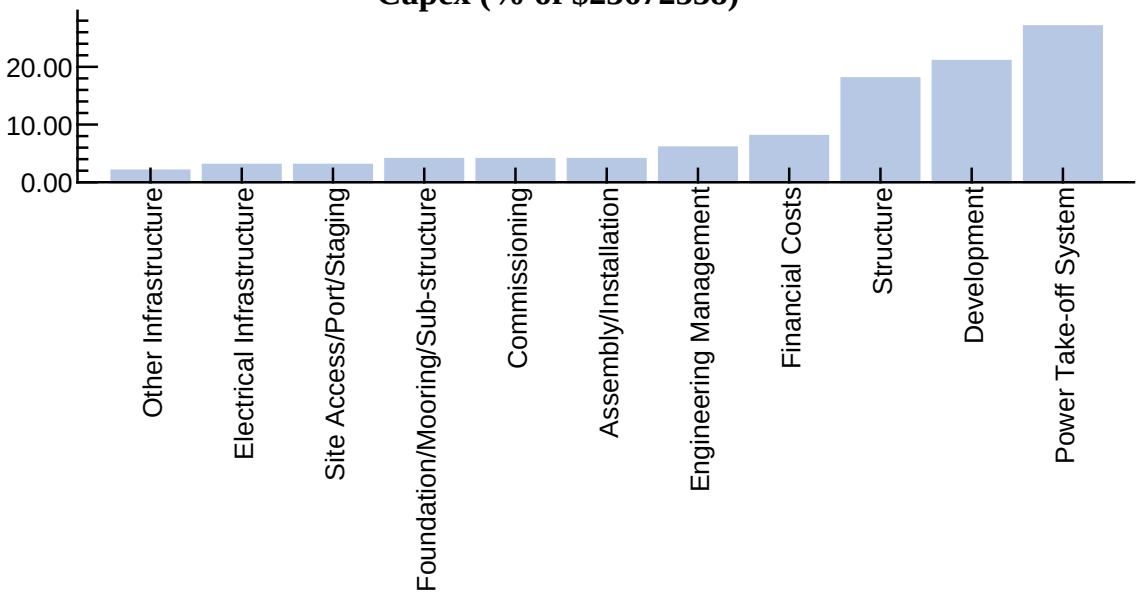
Economic Performance

Levelized Cost of Energy, $/kWh	0.33
Fixed Charge Rate, %	9.4

Opex (% of $1110000)



Capex (% of $23672538)



LCOE (% of $0.33/kWh)