

# VALUE ESTIMATING TOOL GAS TURBINE IN HRSG APPLICATIONS

### **MAIN REFERENCE ASSUMPTIONS:**

Temperature: 15°C (59°F), Sea Level

Running Hours = 7,800 h/yr

Availability: 100%

No Selling Extra Power

Estimates Include Maintenance Costs

This tool provides a quick evaluation of potential annual operating savings. This is only an estimate and should be discussed with your Solar Sales Manager.



Visit the Solar Turbines CHP web page at www.solarturbines.com

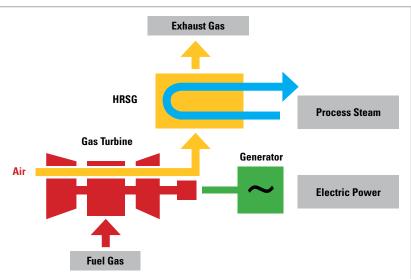
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REQUIRED DATA
1. Total Steam Production [t/hr]
2. Total Electrical Load [kW]
3. Gas Cost [USD/MMBtu]
4. Electrical Cost [USD/kWh]

# ... and for DEEPER ANALYSIS 5. Steam Pressure and Temperature 6. Gas Pressure 7. Hot Water Needs/Chilled Water Needs 8. Yearly Operating Hours 9. Yearly Operating Cost





### STEP 1 - Gas Turbine Selection

Select the turbine from the intersection of the electrical plant consumption [MW] and the steam production [t/hr].

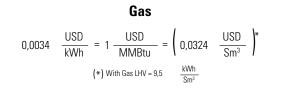
Electrical Plant Consumption [MW]	Steam Production [t/hr]															
	3	5-8	8-11	11 - 13	13 - 15	15 - 16	16 - 20	20 - 24	24 - 30	30 - 36	36 - 47	47 - 50	50 - 59	59 - 80	80 -89	89 - 12
	3-4		C40	C40	C40	C40	C40	C40	C40	C40						
	4-5	M50	C40	C50	6	9 9		- 4		0						
	5-6	M50	C40	T60/C50	T60											
	6-7	M50	C40	T60/C50	T60/T65	T65	T65	T65	T65	T65	T65					
	7-8	M50	C40	T60/C50	T65	T65/T70	T70	T70	T70	T70	T70	170				
	8-9	M50	C40	T60/C50	T65	T70										
	9-10	M50	C40	T60/C50	T65	T70	T70	T70	T70	T70	T70	170				
	10 - 11	M50	C40	T60/C50	T65	T70	T70	M100								
	11 - 12	M50	C40	T60/C50	T65	T70	T70	M100								
	12 - 13	M50	C40	T60/C50	T65	T70	T70	M100								
	13 - 14	M50	C40	T60/C50	165	T70	T70	M100								
	14 - 15	M50	C40	T60/C50	T65	T70	T70	M100	T130	T130	T130	T130	T130	T130	T130	
	15 - 16	M50	C40	T60/C50	T65	T70	T70	M100	T130	T130	T130	T130	T130	T130	T130	
	16 - 17	M50	C40	T60/C50	T65	T70	T70	M100	T130	T130	T130	T130	T130	T130	T130	
	17 - 18	M50	C40	T60/C50	T65	T70	T70	M100	T130	T130	T130	T130	T130	T130	T130	
	18 - 19	M50	C40	T60/C50	T65	T70	T70	M100	T130	T130	T130	T130	T130	T130	T130	
	19 - 20	M50	C40	T60/C50	T65	T70	170	M100	T130	T130	T130	T130	T130	T130	T130	A market factor
	20 - 21	M50	C40	T60/C50	T65	T70	T70	M100	T130	1250	T250	T250	T250	T250	T250	T250
	21 - 22	M50	C40	T60/C50	T65	T70	T70	M100	T130	T250	T250	T250	T250	T250	T250	T250
	22 - 23	M50	C40	T60/C50	T65	T70	T70	M100	T130	T250	T250	T250	T250	T250	T250	T250

# **STEP 2 – Identify Your Potential Savings**

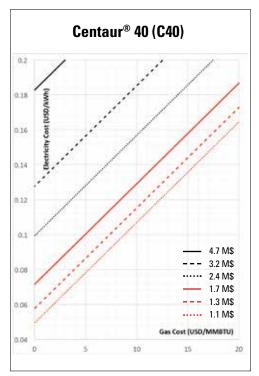
Steam

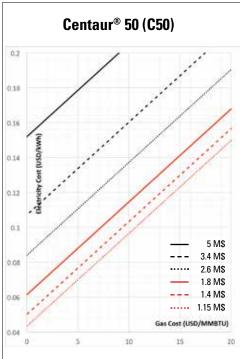
Locate the gas turbine from step 1 in the charts below. Identify the savings line according to your gas [USD/MMBtu] and power [USD/kWh] costs.

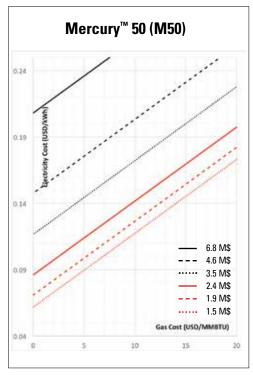
### **CALCULATION TIPS**

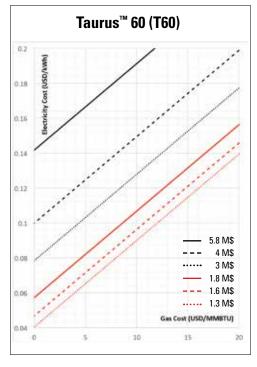


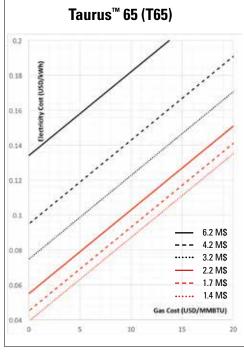


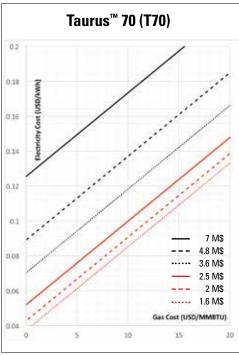




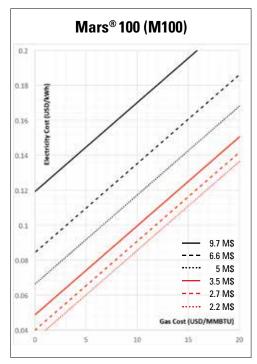


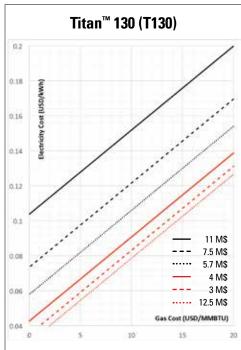


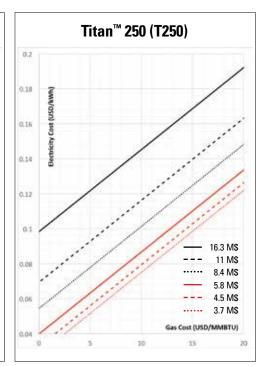




# **STEP 2 (continued) – Identify Your Potential Savings**







### **Solar Turbines - Sales and Service Locations**



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