

Company Report: IntegEner-W see www.integener.com
 Report by: Anthony Chessick, Managing Director
 Date: 080212 (Data collected in early 2005)

This collection of data was taken on a number of weekends during the assignment held at OCES up to mid 2005. These were selected turbines among the smaller units manufactured chiefly by Micon and Nordtank with ratings of no more than 108 kws. They are older and some are in various stages of disrepair but what is seen here is surprisingly good performance during the period it was taken. The readings are not routinely collected in any central way electronically except as totals that show up on the tabulation for the entire OCES system throughout the wind park. Each turbine has its own meter inside the door at the base of the tower that must be read individually upon being visited, the only way this data can be collected.

So this was keyed in on 080212 from handwritten notes I have on file exactly as it was recorded. The turbines were selected from among many more only on the basis of their locations being somewhat convenient to my patrols through the OCES wind park, both on the West (turbine IDs preceded by number) and East (turbines IDs preceded by letter) sides. A calculation was made in doing so of the amount of money that would be earned for the kwhs produced for each assuming a rate of 5.37 cents per kwh, a contracted rate with SCE that was once mentioned to me by another wind project owner here in Tehachapi for his turbines. It was further stated by him as being applicable to all the projects here and is considered to be within a close approximation to probable rates.

On the West side only two readings a week apart were taken from 8 turbines.

	yymmdd	yymmdd				
Turbine	050516	050523	kwhs	\$		Comment
07-06	00113	03459	3346	\$179.68		Type M9. Rating not listed. Whistling blades. All 3 tips partly (somewhat) deployed.
07-09	40976	50028	9052	\$486.09		Type L9. Rating not listed. One blade tip nearly fully deployed (~45 degrees).
08-06	89212	99695	10483	\$562.94		Type M9. Rating not listed.
09-16	79024	90734	11710	\$628.83		Type L9 110 kw winter, 99 kw summer. Fresh oil running down side of tower.
09-18	70900	70900	0	\$0		Type M9 108 kw winter, 97 kw summer. Running but the meter is not working and so no kwhs are being recorded.
09-19	90040	02138	12098	\$649.66		Type M9 108 kw winter, 99 kw summer.
22-0D	03117	07159	4042	\$217.06		Type M7 55 kw winter, 50 kw summer. Stopped but was running last week. Yawing sounds heard. Clean machine.
25-13	86842	94315	7473	\$401.30		Type M9 90 kw winter, 81 kw summer. Clean machine.

Totals kwhs - 58204 worth \$3125.56 over 7 days for 7 turbines (not counting 09-18) for 49 turbine days
 The averages per turbine day are 1187.84 kwhs and \$63.79 revenue.

On the East side 7 turbines were read over a longer period of time. All readings were taken in 2005.

Turbine	N-21 M7 Nordtank	K-26 Micon L9 90kw-w/ 81kw-s	J-31 L9 90kw-w/ 81kw-s	M-22 L9 90kw-w/ 81kw-s	M-25 M9 90kw-w/ 81kw-s	G-25 M9 50kw-w/ 45kw-s	J-22 M9 90kw-w/ 81kw-s
mddd							
0320	8766						
0321	8825						
0327	9836						
0328	10074						
0403	11232						
0404	11293						
0410	13210						
0411	13224						
0417	14713						
0418	15130						
0424	17314						
0501	18046						
0502	18623						
0508	20011	73020					
0509	20464	74932					
0516	22990	83778	29302	22292	58625		
0522	25546	94722	40064	34054	69887	87527	58119
0529	28306	04568	49394	44615	80176	93104	65262
0606	31255	12904 stopped	59811	56727	91670	99804	73855
0613	32846	21979 running	69516	68414	02632	06055	82010
0620		27444	74222	73962	08361	09523	86060
0626	34675	33203	79674	80506	14636	13334	90787
Totals	25909	60183	50372	58214	56011	25807	32668
	98 days	49 days	41 days	41 days	41 days	35 days	35 days
	\$1391.31	\$3231.83	\$2704.98	\$3126.09	\$3007.79	\$1385.84	\$1754.27

Grand Totals for these 7 turbines on the East side

kwhs generated - 309164
 gross revenue - \$16602.11
 turbine days - 340
 kwhs generated per turbine day - 909.3 average
 revenue earned per turbine day - \$48.83 average

Grand Totals for all turbine power production reported in the above listing on both East and West sides

kwhs generated - 367368 (= 367.4 MWhs)
 gross revenue - \$19727.67
 turbine days - 389
 kwhs generated per turbine day - 944.39 average
 revenue earned per turbine day - \$50.71 average