

farhadshahnia@yahoo.com

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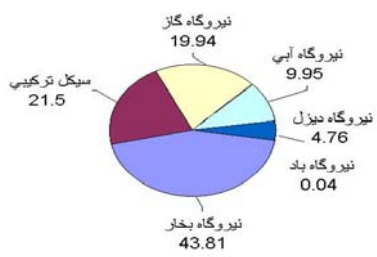
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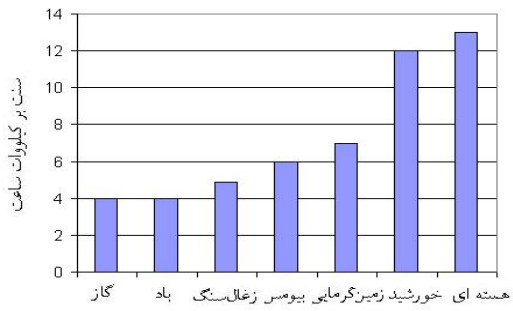
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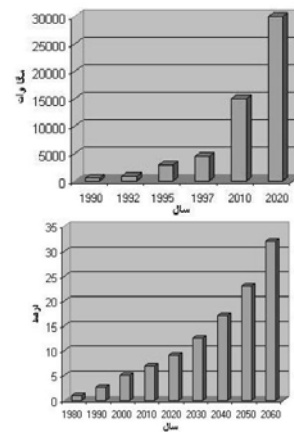
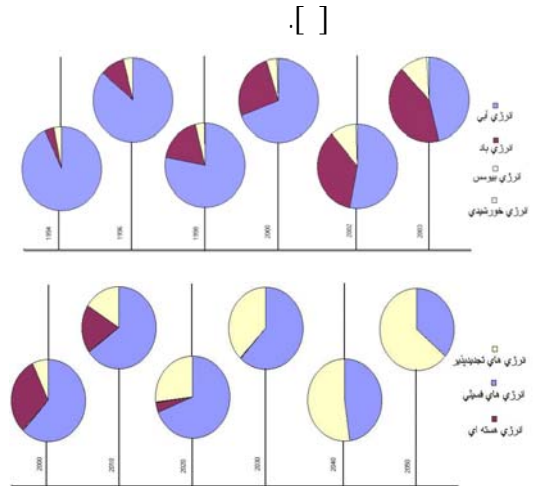




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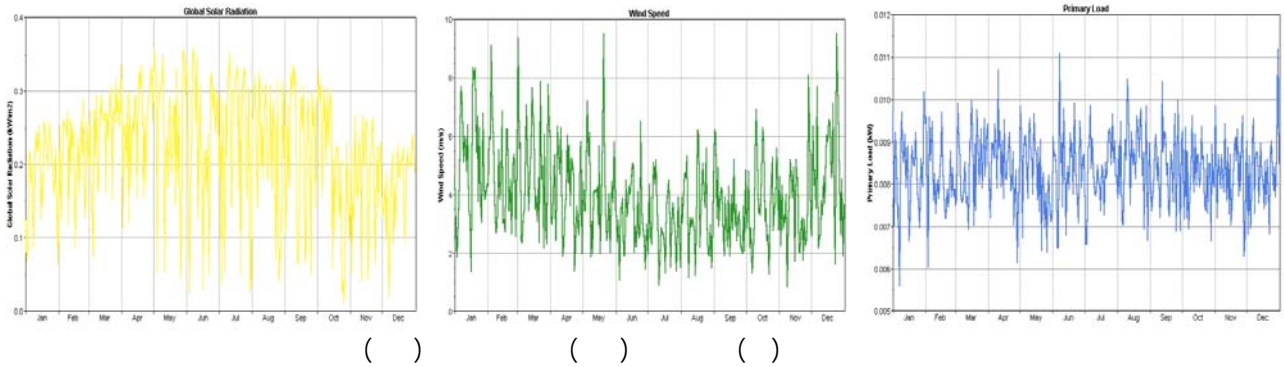


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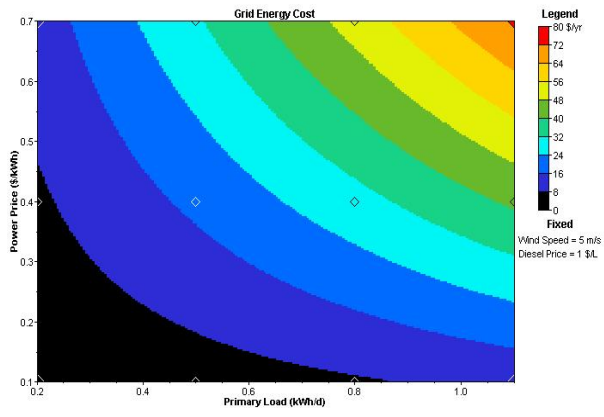
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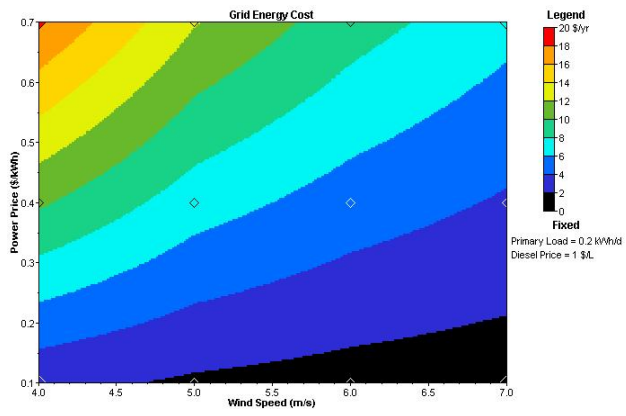


<i>Disel 2KW</i>	<i>Converter5KW</i>	<i>PV 1KW</i>	<i>Generic 10 KW</i>	
<i>AC</i>	<i>DC/AC</i>	<i>DC</i>	<i>DC</i>	
<i>1500 \$</i>	<i>5 \$</i>	<i>8000 \$</i>	<i>1200 \$</i>	
<i>1400 \$</i>	<i>1 \$</i>	<i>4000 \$</i>	<i>1100 \$</i>	
<i>0.08 \$/hour</i>	<i>1 \$</i>	<i>30 \$/year</i>	<i>20 \$/year</i>	
<i>0 2 5 KW</i>	<i>0 5 KW</i>	<i>0-0.4 KW</i>	<i>0 1 2 3 No.</i>	
<i>25000 hours</i>	<i>15 years</i>	<i>25 years</i>	<i>15 years</i>	
<i>90 %</i>	<i>85 %</i>	<i>80 %</i>	<i>100 %</i>	

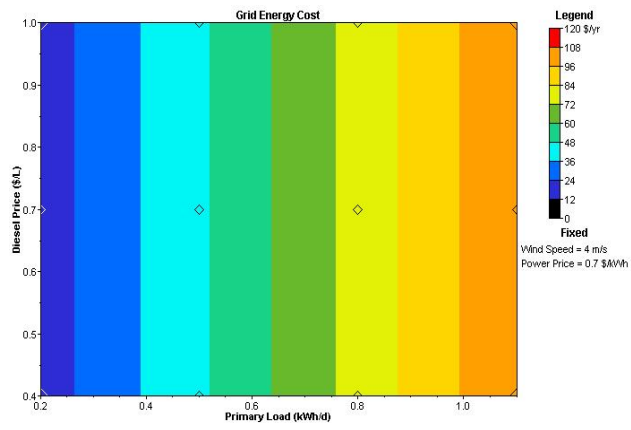
<i>2605 \$</i>		<i>10 KW</i>	<i>5 KW</i>	<i>2 KW</i>		
<i>16205 \$</i>		<i>10 KW</i>	<i>5 KW</i>		<i>2 KW</i>	
<i>18605 \$</i>		<i>10 KW</i>	<i>5 KW</i>	<i>2 KW</i>	<i>2 KW</i>	
<i>20105 \$</i>	<i>2 KW</i>	<i>10 KW</i>	<i>5 KW</i>	<i>2 KW</i>	<i>2 KW</i>	



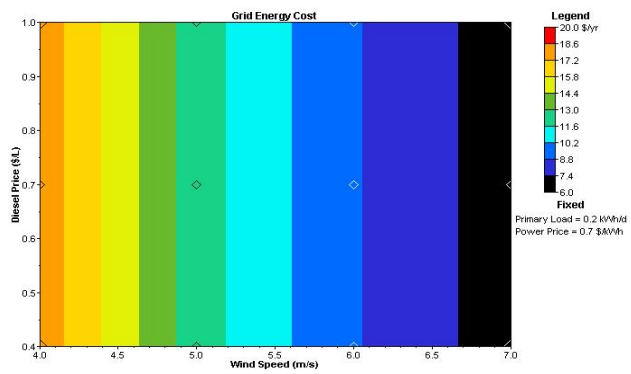
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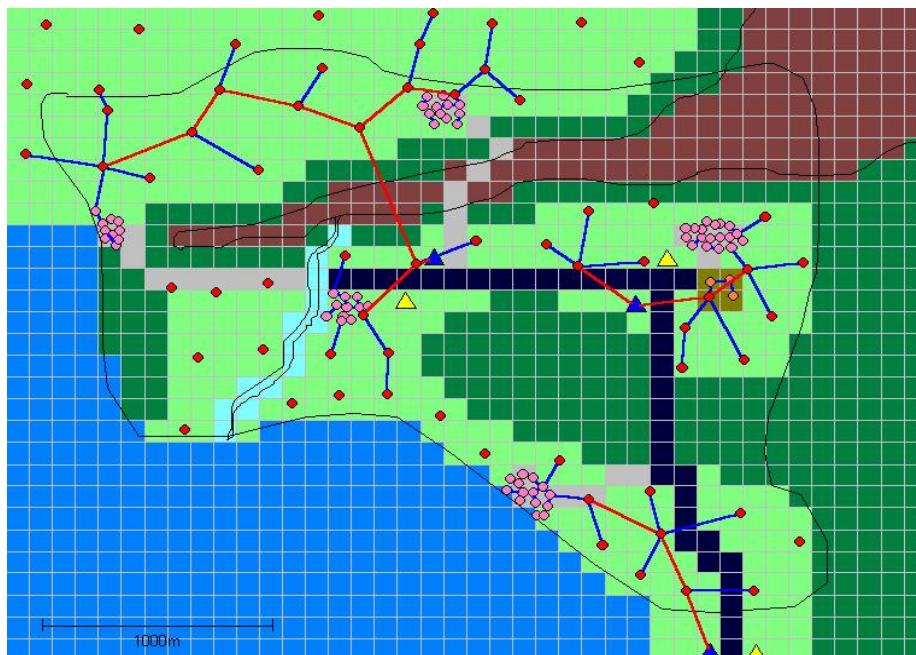
<i>\$/month</i>	<i>kWh/day</i>	<i>\$/month</i>	<i>kWh/day</i>	



Costs						
Component	Net Present (\$)	Initial Capital (\$)	Total Annualized (\$/yr)	Annualized Capital (\$/yr)	Annual O&M (\$/yr)	Annual Fuel (\$/yr)
Centralized Generation:	18,240	5,700	2,006	633	27	1,346
Isolated Generation:	23,760	12,960	367	216	151	0
Distribution System:	80,547	68,209	8,879	7,515	1,364	
Totals:	122,547	86,869	11,252	8,364	1,542	1,346
Per Load:	921	653	85	63	12	10

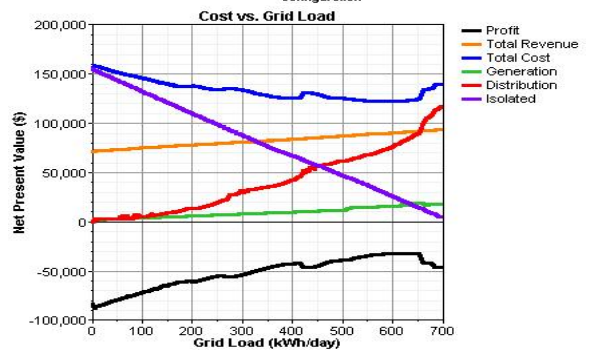
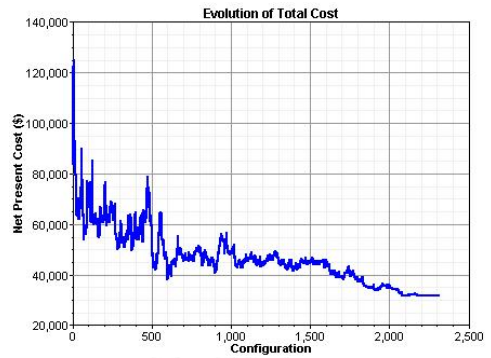
Revenue		Profit	
	Net Present (\$)	Annual (\$/yr)	
Centralized Loads:	80,931	8,916	Net Present Profit: -31,813 \$
Isolated Loads:	9,803	1,080	Annualized Profit: -1,256 \$/yr
Total:	90,734	9,996	Levelized COE: 0.043 \$/kWh
			Levelized Profit: -0.005 \$/kWh

Centralized Loads:	115	Total Centralized Load:	612.0 kWh/d
Isolated Loads:	18	Total Isolated Load:	108.0 kWh/d
LV Line Length:	10,598 m	No. of Transformers:	15
MV Line Length:	4,633 m	Max. Transformer Load:	98.0 kWh/d



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[6] P. Appleby, "Renewables in the future energy supply", *Renewable Energy World*, Vol. 2, No. 4, 1999.

[7] Margit Mertens, "Solutions made in Germany", *Deutschland*, No. 2, April 2004.