

**ANNEXURE 8**

**PROJECT FINANCIAL AND ECONOMIC ANALYSIES  
EVALUATION OF THE TOTAL INVESTMENT CAPITAL / TOTAL PROJECT COST  
3 x 3.333 MWH (10 MWH IGSC)**

**Capital Cost**

Capital Cost (€)	17,295,871
Reimbursables (Preoperational Fees, including License) (€)	50,000

**Electrical and Fuel--base year**

Net Plant Capacity (kW)	9,356.00
Capacity Factor (%)	68
Annual Hours	8,760
Net Station Efficiency (%)	31
Fuel Heating Value (kJ/kg)	29,676.41
Annual Coal Fuel Consumption - Coal (kg/h)	10.50
Fuel Ash Concentration (%)	8.60
Annual Generation (kWh)	55,731,821
Capital cost per net electrical capacity (€/kWe)	1,971
Annual Fuel Consumption (t/y)	91,980

		(€/kWh-net electrical)
<b>Expenses--base year</b>		
Fuel Cost (€/t)	46.00	0.0759
Labour Cost (€/y)	126,600.00	0.0023
Variable Maintenance Cost (€/y)	167,981.76	0.0030
Insurance/Property Tax (€/y)	172,958.71	0.0031
Utilities (€/y)	100,000.00	0.0018
Ash Disposal (€/y) - use negative value for sales	0.00	0.0000
Services - Management/Administration (€/y)	50,000.00	0.0009
Other Operating Expenses (€/y)	15,000.00	0.0003
Total Non-Fuel Expenses (€/kWh)	300,000.00	0.0113
Total Expenses Including Fuel (€/y)	2,415,540.00	0.0873

**Taxes**

Federal Tax Rate (%)	30.00
State Tax Rate (%)	9.60
Production Tax Credit (€/kWh)	0.009
Combined Tax Rate (%)	36.72

**Income other than energy**

Capacity Payment (€/kW-y)	0.14375
Interest Rate on Debt Reserve (%/y)	5.00
Annual Capacity Payment (€/y)	8,011,449
Annual Debt Reserve Interest (€/y)	193,496

**Escalation/Inflation**

General Inflation (%/y)	2.10
Escalation--Fuel (%/y)	2.10
Escalation for Production Tax Credit	2.10
Escalation--Other (%/y)	2.10

**Financing**

Debt ratio (%)	85.00
Equity ratio (%)	15.00
Interest Rate on Debt (%/y)	5.00
Economic Life (y)	5
Cost of equity (%/y)	15.00
Cost of Money (%/y)	6.50
Total Cost of Plant (€)	19,711,411
Total Equity Cost (€)	2,956,712
Total Debt Cost (€)	16,754,699
Capital Recovery Factor (Equity)	0.2983
Capital Recovery Factor (Debt)	0.2310
Annual Equity Recovery (€/y)	882,033
Annual Debt Payment (€/y)	3,869,913
Debt Reserve (€)	3,869,913

**Depreciation Schedule**

	Fraction
Year 1	0.0500
Year 2	0.0500
Year 3	0.0500
Year 4	0.0500
Year 5	0.0500
Year 6	0.0500
Year 7	0.0500
Year 8	0.0500
Year 9	0.0500
Year 10	0.0500
Year 11	0.0500
Year 12	0.0500
Year 13	0.0500
Year 14	0.0500
Year 15	0.0500
Year 16	0.0500
Year 17	0.0500
Year 18	0.0500
Year 19	0.0500
Year 20	0.0500
<b>Total</b>	<b>1.0000</b>

Depreciation Schedule:

Fraction of capital asset depreciated in each year

MACRS-5 year	MACRS-10 year	Straight Line-20 year
0.2000	0.1000	0.0500
0.3200	0.1800	0.0500
0.1920	0.1440	0.0500
0.1152	0.1152	0.0500
0.1152	0.0922	0.0500
0.0576	0.0737	0.0500
0.0000	0.0655	0.0500
0.0000	0.0655	0.0500
0.0000	0.0655	0.0500
0.0000	0.0655	0.0500
0.0000	0.0329	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
0.0000	0.0000	0.0500
<b>1.0000</b>	<b>1.0000</b>	<b>1.0000</b>

<b>Tax Credit Schedule</b>	<b>Fraction in Year</b>
Year 1	1
Year 2	1
Year 3	1
Year 4	1
Year 5	1
Year 6	0
Year 7	0
Year 8	0
Year 9	0
Year 10	0
Year 11	0
Year 12	0
Year 13	0
Year 14	0
Year 15	0
Year 16	0
Year 17	0
Year 18	0
Year 19	0
Year 20	0

## CONCLUSION

The Total Investment Capital for the construction of the 10 MWh IGCS Power Plant with its own is **€19,711,411**. The Capital Cost is **€1,971**. The Total Plant cost, excluding Operations Management, Maintenance and Materials costs is **€15,678,064.64**.

Electricity Yearly Capacity Payment is **€0.14375/kW-yr.** (based on NERC’s regulated Price for the year 2015). Besides, it is even the lowest in Nigeria and one of the lowest prices in the world. The Annual Capacity Payment (Total Income on Electricity) is **€8,011,449** per year. This low price is demonstrated bankable and technoeconomically viable to cover the reimbursement of the loan for a period of Five (5) years from the effective date of its commercial operation. As an embedded power supply, this price can be fixed at **€203.24 (US€ 230)** minimum.