

ANNEXURE 12

**PROJECT FINANCIAL AND ECONOMIC ANALYSIES
EVALUATION OF THE TOTAL INVESTMENT CAPITAL / TOTAL PROJECT COST
13.50 MWH IGCC**

Capital Cost

Capital Cost (€)	22,519,656
Reimbursables (Preoperational Fees, including License) (€)	50,000

Electrical and Fuel--base year

Net Plant Capacity (kW)	12,856.00
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)	76,580,621
Capital cost per net electrical capacity (€/kWe)	1,847
Annual Fuel Consumption (t/y)	91,980

Expenses--base year

		(€/kWh-net electrical)
Fuel Cost (€/t)	46.00	0.0553
Labour Cost (€/y)	126,600.00	0.0017
Variable Maintenance Cost (€/y)	167,981.76	0.0022
Insurance/Property Tax (€/y)	225,196.56	0.0029
Utilities (€/y)	100,000.00	0.0013
Ash Disposal (€/y) - use negative value for sales	0.00	0.0000
Services - Management/Administration (€/y)	50,000.00	0.0007
Other Operating Expenses (€/y)	15,000.00	0.0002
Total Non-Fuel Expenses (€/kWh)	300,000.00	0.0089
Total Expenses Including Fuel (€/y)	2,415,540.00	0.0642

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)	11,008,464
Annual Debt Reserve Interest (€/y)	244,775

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 (€)	24,935,196
Total Equity Cost (€)	3,740,279
Total Debt Cost (€)	21,194,916
Capital Recovery Factor (Equity)	0.2983
Capital Recovery Factor (Debt)	0.2310
Annual Equity Recovery (€/y)	1,115,783
Annual Debt Payment (€/y)	4,895,492
Debt Reserve (€)	4,895,492

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
Total	1.0000

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
1.0000	1.0000	1.0000

Tax Credit Schedule	Fraction in Year
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 **13.50 MWh IGCC** Power Plant with its own is **€24,935,196**. The Capital Cost is **€1,847**.

Electricity Yearly Capacity Payment is **€0.14375/kW-yr**. (based on NERC’s assumed regulated price for the year 2015 in the MYTO of 2012). 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 **€11,008,464** 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.