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Request for Review
"Request for review for: "Integrated Energy Ltd. Grid Connected Electricity Generation Plant using Natural Gas" (1870)

Dear Sir/Madam,

Please find below the response of the project participant (Integrated Energy Ltd. and EcoTraders Ltd.) and the TÜV NORD JI/CDM Certification Program to the request for review for the above mentioned project no. 1870.

If you have any questions do not hesitate to contact us.

Yours sincerely,

TÜV NORD JI/CDM Certification Program

Rainer Winter

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Request for Review	
Issue 1	
Issue raised by EB Members / DNA	*"1. The DOE is requested to further clarify the suitability the selected benchmark."*
Response of project participant	The selected benchmark is the **actual equity IRR of the top 75 electric utility** companies in the United States, as accessed at the time that the feasibility considerations were conducted. Regarding the suitability of the selected benchmark Project participants believes that this is as an appropriate benchmark for the following reasons: a. **Requirements of the Additionality Tool:** According to the Additionality Tool, the benchmark must "represent standard returns in the market, considering the specific risk of the project type, not linked to the subjective profitability." This is not a subjective estimate, but rather a specific actual index which best represents returns in this specific market. b. **Similar financial parameters:** The IRR of power plants in the U.S. can be seen as indicative of a benchmark IRR for power plants in Israel due to similar capital investments – comparable EPC contracts from Annex I companies and similar fuel costs (commodities). c. **Trusted source of information:** The equity IRR of electrical utilities presented on Yahoo Finance represents the equity IRR of a wide array of major electrical utilities, and is provided by Capital IQ, a division of Standard & Poor's. d. **Stable indicator over time:** Although the indicator does change slightly over time, it is extremely stable due to the fact that electricity generation is largely regulated. Despite recent economic and financial turmoil, this indicator currently (20/11/08) stands at 11.2% - just slightly below the 11.7% at the time of the feasibility study. In order to support this benchmark, the project owner compared it to market returns on a financial investment with a similar level of risk. As in all financial investments, this was done by constructing a portfolio of a risk-free asset and the expected return of the market (risky investments). A three-year average of the return on government bonds was selected, as this is best representative of risk-free investments, and a three-year average return on the Tel Aviv 100 stock index was selected as most representative of the expected return of the market (risky investment). A composite of the returns was constructed based on a 0.6 weight for government bonds and a 0.4 weight for the TA-100, as AIPM's financial experts concluded that the risk profile of an investment in such a portfolio would most resemble the risk profile of an investment in a power plant. This indicator – 11.61% - lent support to the suitability of the 11.7% benchmark. This calculation is presented in Annex 1.

	Further evidence of the suitability of the benchmark can be found in a document published on the 19/06/08 by Israel's Public Utilities Authority, a government authority which regulates all electricity generators and periodically sets the electricity tariff. As the process of privatization moves forward, the Public Utilities Authority is drafting the necessary regulatory framework, based on the profile of the average private power plant. This draft clearly states that, in order to be financially attractive, a private power plant must have a normative equity IRR of 12%. The document and a translated copy of the relevant sections are attached as Annexes 2 and 3, respectively.
Response of DOE	In the section B.5 of the PDD, the benchmark analysis has been carried out as per Step 1 of AM0029 (version 1) and the sub-steps 2b, 2c and 2d of the "Tool for the demonstration and assessment of additionality" (Version 4) were applied. The selected benchmark (**11.7%)** is the actual **equity IRR** of the top 75 electric utility companies in the United States, at the time when project participants investigated the viability of their project. To identify the benchmark project participants have at first elaborated an indicative rate of return for projects in power sector in general and afterwards justified the selected benchmark based on analysis of alternative investment options in Israel from the point of view of equity investor. In order to investigate alternative investment options from the point of view of an equity investor and to support the identified benchmark value, project participants considered Government bond rates and standard rate of return in Israel's market based on Tel Aviv 100 stock. The applied value **(5.6%)** for the three-year average risk free rate of the **government bonds** has been based on the General Index which includes all the government bonds traded in Israel on the exchange as indicated in the PDD. As per the PDD the computed three-year average return on the **Tel Aviv 100 stock Index** is **20.68%.** A composite of the returns was constructed based on a 0.6 weight for government bonds and a 0.4 weight for the TA-100, as Integrated Energy's financial experts concluded that the risk profile of an investment in such a portfolio would most resemble the risk profile of an investment in a power plant. The calculated weighted average (11.61%) is very close to the selected benchmark of 11.7%. TÜV Nord came to the conclusion that the identified benchmark is appropriate for the following reasons: **1st reason:** According to the Additionality Tool, the benchmark must "represent standard returns in the market, considering the specific risk of the project type, not linked to the subjective profitability." Electricity market in Israel is mainly represented through the state-owned monopoly – IEC (Israel Electric Corporation) that holds 99.4% of the total installed capacity. The Independent Power Producers (IPPs) hold less than 1% (0,6%) of the total installed electrical capacity in Israel[1].

[1] http://www.iec.co.il/bin/en.jsp?enDispWhat=Zone&enZone=IRRIIP&enDispWho=IRRIIP&enPage=IRRWPage&enDisplay=view&

According to the rate policy, the Public Utility Authority (PUA) decided that the annual rate of return on the shareholders' **equity** should be **7%** for the generation segment[2] (Please also refer to the IEC annual report[3]). However this benchmark refers mainly to state-owned company IEC because there are almost no private producers in Israel. TÜV Nord is convinced that the equity IRR of the state-owned company can not be used to substantiate the benchmark because it would not appropriately reflect the standard return on equity in Israel's power sector for private investors.

TÜV Nord is of the opinion that a private power plant investor would require a higher IRR than equity IRR of a state-owned company. Bearing in mind that financial indicator of the proposed project activity (6.28%) is even below the IRR required by state-owned plants TÜV Nord is convinced that the project activity with equity IRR of 6.28% would be not economically attractive for private investors.

In this context it is important to take into account that the integration of private producers in the electricity sector was stipulated by policy. Government of Israel has undertaken significant efforts to move forward the process of liberalisation of the electricity generating industry to private producers[4]. Different rules and regulations to make Israel's power sector more attractive for IPPs were introduced by the government in the time period when project participants started to look into possibilities for this project activity (2006). However neither during 2007, nor later private power producers have entered to the market. Even today there is no competition at the electricity generation segment in Israel[5].

This was mainly the reason why the project participants have at first elaborated an indicative rate of return for projects in power sector in general and afterwards justified the selected benchmark based on analysis of alternative investment options in Israel from the point of view of equity investor. The purpose was also to shed a light on plausible standard expectations of private investors in power sector in Israel.

2nd reason

The applied value **(5.6%)** for the three-year average risk free rate of the **government bonds** has been based on the General Index which includes all the government bonds traded in Israel on the exchange as indicated in the PDD.

Consideration of the government bonds with comparable (or longer) lifetime as well as government bonds that are not linked to Dollar or Consumer price index delivers higher values (5.73% or 6.64%) than the General Index (5.6%). Therefore the identified value for government bond has been assessed as

[2] Please refer to: http://www.iec.co.il/bin/ibp.jsp?ibpDispWhat=zone&ibpDisplay=view&ibpPage=IRRWPage&ibpDispWho=IRRTariff&ibpZone=IRRTariff&
[3] http://www.iec.co.il/Static/WorkFolder/IRR/2006%20Financial%20ENG.pdf
[4] Pleaserefer to: http://www.iec.co.il/bin/ibp.jsp?ibpDispWhat=zone&ibpDisplay=view&ibpPage=IRRWPage&ibpDispWho=IRRIIP&ibpZone=IRRIIP&
[5] http://www.iec.co.il/bin/ibp.jsp?ibpDispWhat=zone&ibpDisplay=view&ibpPage=IRRWPage&ibpDispWho=IRRIIP&ibpZone=IRRIIP&
[6] Please refer to: http://www.pua.gov.il/Sip_storage/FILES/9/819.pdf

	conservative. • Average yield to redemption on government bond – Shahar (years to maturity: 9, unindexed, fixed, net) time period 2004-2006 is **5.73%.** (Annex 4): • Average yield to redemption on government bond – Shahar (years to maturity: 9, unindexed, fixed, brute) time period 2004-2006 is **6.64%** (Annex 4): Government bonds are referred to as risk-free bonds and equity investor will consider them as an alternative investment option. The difference between the risk-free government bond rate (5.6%) and the equity IRR (6.28%) is approximately 0.7%. TÜV Nord is of the opinion that a risk premium of approximately 0.7% cannot be considered as sufficient / plausible to encourage private investors to invest in long-term projects in the power sector. **3rd reason**. As already mentioned Israel power sector currently undergoes a process of liberalization. Information about required return on equity was unfortunately not available from official sources at the time of validation. However the Public Utilities Authority (PUA), a government authority which regulates all electricity generators and periodically sets the electricity tariff is drafting the regulatory framework based on the profile of the average private power plant. A document published on the 19/06/08 by PUA states that, in order to be financially attractive, a private power plant must have a **normative equity IRR of 12%.**[6] TÜV Nord is convinced that this document can be applied to provide further evidence of the suitability of the 11.7% benchmark. A translated copy of the relevant sections was reviewed by TÜV Nord as part of a background investigation to gain sufficient confidence about the selected benchmark. (Annex 2 and Annex 3) Summarizing the mentioned above, the project participant provided a benchmark that to the assessment of TÜV Nord is a suitable indicator of standard equity IRR in this specific market, the power sector in Israel.
Issue 2	
Issue raised by EB Members / DNA	*"2. Further explanation is required on how DOE has validated the suitability of the input values used in the investment analysis."*
Response of project participant	
Response of DOE	The input parameters for the financial analysis and supporting evidence were reviewed and cross checked by the TÜV Nord validation team and deemed appropriate. Plant technical specifications and construction costs were based on the technical specification and commercial proposal of the most likely supplier. Gas prices were taken from a contract for the purchase of natural gas. Electricity tariffs were as per official electricity tariffs published by Public Utilities Authority.

For more details of the assessment of the considered financial parameters pl. refer to the attached document (Annex 5 -"Financial Analysis").

Issue 3

Issue raised by EB Members / DNA

"3. Further explanation is required on why PP/DOE have not considered total investment in the sensitivity analysis."

Response of project participant

A sensitivity analysis on the total investment was not deemed necessary, due to the fact that the bulk of this parameter is based on an actual price proposal for the power plant's construction and therefore is not considered to be at risk of changing significantly. However, due to the Board's query, the project owner has applied the following sensitivity analysis to total investment, and would be happy to add it to the PDD:

The sensitivity analysis was conducted by assuming a 10% increase in the cost of constructing a coal-fired power plant (baseline), as well as a 10% decrease in the cost of constructing a natural gas power plant and a diesel power plant. This is extremely conservative for two reasons. First, it assumes a significant increase on the cost of the baseline power plant (coal) while the costs of constructing the alternatives – a natural gas power plant and a diesel power plant – decrease significantly. Second, the 10% reduction in the total investment required for the NG power plant is extremely conservative, given that the investment is largely comprised of an existing, firm price proposal. As can be seen from the following table, in this unlikely and highly conservative scenario, the coal fired power plant remains the most financially attractive option and therefore the baseline scenario. In addition, the project activity equity IRR is still below the suitable benchmark, and therefore the project remains additional. The investment analysis' outcome was added to the calculations first presented in the PDD and highlighted in yellow.

Baseline Sensitivity Analysis:

	Natural Gas Power Plant		Coal Power Plant		Diesel Power Plant	
	IRR (%)	Levelized Cost (US$/MWh)	IRR (%)	Levelized Cost (US$/MWh)	IRR (%)	Levelized Cost (US$/MWh)
Fuel Price +5%	5.14	42.27	9.86	34.55	Cannot be calculated (large negative)	138.88
Fuel Price -5%	7.63	40.44	11.23	33.57	Cannot be calculated (large negative	127.77
Electricity Price +5%	8.3	41.4	11.71	34.11	Cannot be calculated (large negative	133.37
Electricity Price	4.52	41.31	9.28	34.01	Cannot be calculated	133.28

Total Investment Cost +10	5.5	43.18	9.5	36.19	Cannot be calculated (large negative	135.15
Total Investment Cost -10%	7.5	39.53	11.8	31.93	Cannot be calculated (large negative	131.5

Additionality Sensitivity Analysis:

Scenario	Parameter	Variation	Equity IRR
1	Natural Gas Price	+ 5%	2.01%
		-5%	9.63%
2	Electricity Price	+ 5%	11.15%
		-5%	-0.78%
3	Total Investment Cost	+ 10%	3.30%
		-10%	9.40%

Response of DOE

The investment costs have been verified based on data as contained in the Technical specification and commercial proposal of the most likely technology supplier dated 2006.

As per the commercial proposal EPC price might be adjusted based on mutual agreement. As per information provided by Electric Power Supply Association construction costs for combined cycle power plants have been increased by 33% since 2005. Considering the significant escalation of construction costs for new power plants since 2005 (please refer to Annex 10 and IHS CERA Power Capital Costs Index Index[7]) a decrease of EPC price as of 2006 has been considered as an unlikely scenario. To assume increasing costs would lead to decrease of financial indicator and thus be less conservative.

In the course of the response to this request project participants have also carried out a sensitivity analysis for deviation of investment costs. Financial indicator computed for decrease investment costs by 10% remains below selected benchmark (Sensitivity analysis in excel file format is attached as Annex 11a - 11f). TÜV Nord reviewed the calculation and assessed as appropriate elaborated.

[7] Please refer to: http://energy.ihs.com/News/Press-Releases/2008/IHS-CERA-Power-Capital-Costs-Index.htm

Issue 4	
Issue raised by EB Members / DNA	*4. The DOE is requested to further explain how it has validated the economic comparison for baseline alternatives, in particular, suitability of the capacity, operational hours, efficiency, load factor and net electricity generation. The economic comparison must be conducted for equal level of services."*
Response of project participant	
Response of DOE	In section B.4 of the PDD following scenarios have been identified as the most plausible baseline alternatives according to Step 1 of AM0029: 1. The project activity not implemented as a CDM project (natural gas) 2. Coal-fired power plant 3. Diesel-fired power plant. Afterwards an economic comparison of the identified most plausible baseline alternatives has been carried out in section B.4. of the PDD as per Step 2 of AM0029 in order to identify the economically most attractive baseline scenario. All alternatives – Natural gas, coal and diesel power plants - applied within the investment comparison deliver the same services as the proposed project activity – **base load power** generation. TÜV Nord is of the opinion that coal power plants can be considered as a typical base load power generation technology. TÜV Nord agreed to consider diesel power plant also as a plausible alternative because all natural gas power plants of over 100 MW capacity are required by Israeli law to be duel fueled for emergency purposes. Thus, in the course of the validation project participants included also diesel power plant as a plausible baseline alternative and conducted investment analysis also for this scenario. Along with electricity generation the proposed natural gas power plant is designed to deliver steam at certain pressure and temperature to the paper mill. **Steam output** has been identified also as a main service the considered alternative must be able to deliver. In all three alternatives – natural gas, coal and diesel fired power plants – the considered fuels can be combusted in order to generate steam – which is then used by steam turbines to generate electricity. Afterwards this steam can be utilized as thermal energy. Similar steam demand (between 109 t/h and 157 t/h) has been assumed for all alternatives economic comparison analysed has been conducted for. Electricity generation has been based on the assumed capacities available to meet the steam demand and operate in different loads like peak &shoulders and off peak. TÜV Nord is of the opinion that coal and diesel power plants are realistic and credible alternatives that provide outputs or services comparable with the proposed CDM project activity.

Suitability of the input values for Coal Fired Plant

Suitability of **capacity** of the **Coal-fired** power plant as the input parameter within economic comparison:

TÜV Nord agreed to identify 350 MW sub-critical pulverized bituminous coal power plant as the most realistic and credible alternative to the project activity for the following reasons:

a) As per methodology baseline alternatives "need not consist solely of power plants of the same capacity, load factor and operational characteristics (i.e. several smaller plants, or the share of a larger plant may be a reasonable alternative to the project activity), however they should deliver similar services (e.g. peak vs. base load power)." As already explained above TÜV Nord is of the opinion that coal power plant delivers similar services – base load power.

b) Israel's existing coal-fired power plants are all sub-critical pulverized bituminous coal power plants. Furthermore, the range of the generating capacity of existing coal units in Israel is 350MW – 575MW (Annex 12 as per IEC published information).Thus the smallest capacity available for modern efficient coal-fired power plants in Israel is 350 MW. TÜV Nord agreed that plausible capacity of a coal fired power plant to be compared with project activity should be at least the minimal capacity installed in the country.

c) Furthermore coal based power plants are usually of higher capacities. Sufficient confidence in this matter has been gained based on information about recently build coal based power plants published by IEA (Annex 13), information about average capacity in United States (Annex 14).

d) In addition the basic design of steam power plant offered by Siemens - global leader in design and construction of coal power plants – indicates minimum capacity of 350 MW.[8]

e) Furthermore the financial indicators like internal rate of return (also levelized power costs) the investment comparison is based on are calculated not as an absolute but as a relative value indicating only the rate of return (cost per unit) as compared to the investment costs. Hence to consider of certain share of the coal power plant and to consider the whole power plant would deliver the same relative indicators like the internal rate of return.

Financial Analysis of Coal-Fired Plant:

The Tool for the demonstration and assessment of additionality, version 4, states that "Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated."

In line with these instructions, all major assumptions and input data used in the

[8] http://www.powergeneration.siemens.com/products-solutions-services/power-plant-soln/steam-turbine-power-plants/technical-data/

financial analysis of the coal-fired power plant, including electricity tariffs are identical to those used in the financial analysis of the proposed project activity, with the exception of the following,

- Total Plant Cost
- Heat Rate:
- Annual Operating Cost
- Net Electricity Capacity
- Operating Hours
- Load Factor
- Coal Prices
- Efficiency

for which TÜV Nord has viewed the evidence provided and validated the appropriateness of the parameters and assumptions:

Total Plant Cost and Heat Rate:

Total Plant Cost and Heat Rate were based on a U.S. Environmental Protection Agency (EPA) report published in July 2006 titled "Environmental Footprints and Costs of Coal-Based Integrated Gasification Combined Cycle and Pulverized Coal Technologies"[9]. The report details the specifications of a number of alternative coal-fired power plants, such as specific investment costs and heat rate.

TÜV Nord is convinced that information provided by US Environmental Protection Agency can be considered as very reliable appropriate for economic comparison purposes. Furthermore both the EPA report (July 2006) and commercial proposal (Mai 2006) for the project activity are Middle 2006. For these reasons TÜV Nord considers EPA report as an appropriate date source and information in this report about coal power plants can be applied within the economic comparison.

Total investment costs assumed in financial comparison for coal power plant is 423 Mio US$. This figure has been elaborated based on information about investment costs of coal fired power plants as indicated in EPA report.

The assumed specific investment costs are 1209 US $/kW. To gain further confidence about appropriateness of the specific investment costs TÜV Nord considered average specific investment costs (1249 US $/kW) as indicated in National Petroleum Council Report (Annex 19). Furthermore TÜV Nord considered Concept study “Reference Power Plant North Rhine-Westphalia” 2003[10] by VGB Power e.V. – the Federation of Large Boiler Owners that indicates average specific investment costs for coal power plants of 995 $/kW.

TÜV Nord is of the opinion that information about investment costs will vary between different data sources accordingly. TÜV Nord is convinced that EPA

[9] www.epa.gov/air/caaac/coaltech/2007_01_epaigcc.pdf
[10] http://www.vgb.org/fue_projekt237-highlight-Archiv_2004.html
[11] http://www.netl.doe.gov/energy-analyses/baseline_studies.html
[12] http://www.netl.doe.gov/energy-analyses/baseline_studies.html
[13] http://www.eia.doe.gov/fuelcoal.html
[14] http://80.70.129.40/docs/igudim2/pdf/igudim2_4.pdf
[15] http://www.cbs.gov.il/reader/new_energy/new_enr_nach_eng_new_huz.html

report is an appropriate data source and investment costs indicated in this report are also plausible regarding information from other data sources. Considering this TÜV Nord assessed the assumed value for coal power plant of 423 Mio US $ as appropriate.

Heat Rate: The assumed value for the heat rate is 9500 BTU per kWh. To cross check the plausibility TÜV Nord considered National Petrolium Council Report (Annex 6) that indicates an average value of 8844 BTU/kWh. Cost and Performance Baseline for Fossil Energy Plants published in 2007 by the U.S. Department of Energy's National Energy Technology Laboratory[11] indicates an average heat rate of 9276 BTU/kWh. Both these values are lower than the Heat Rate used in the model, leading to a more conservative financial analysis – as the higher the heat rate, the greater the fuel consumption, increasing costs and decreasing IRR. Considering this TÜV Nord is of the opinion that assumption of 9500 BTU per kWh is appropriate.

Annual Operating Cost: This parameter was estimated at $30 million per annum, as per a detailed list of the expected expenditures.

Operating costs for coal power plant as per EPA report are 27.7 million US $. Assuming higher operating costs leads to a lower and therefore more conservative IRR. Bearing this in mind TÜV Nord agrees with the assumed value for operating costs.

Load Factor: The coal-fired plant is assumed to operate at 100% capacity at all times – peak, shoulder, and off-peak. This is a conservative and appropriate assumption as the coal power plants are typically operated in the base load (due to the time needed for start-ups, etc). Furthermore all existing coal fired power plants in Israel belong to the Israel Electric Corporation, and operate around the clock providing base load electricity. This issue has been discussed within the validation and sufficient confidence could be gained that this is an appropriate and conservative assumption for coal power plant.

Operating Hours: The plant is assumed to operate 24 hours per day, 7 days per week, just as the project power plant. This is appropriate for two reasons. First, like the project power plant, it must provide steam and electricity to the AIPM paper mill around the clock as per the contractual requirements. Second, it is common practice for coal-fired power plants to serve as base load power generation and therefore operate constantly.

Net Electricity Capacity:

332.5 MW net electricity capacity was calculated based on the assumption that the coal-fired plant with 350 MW electrical capacity will use 5% of electricity generated for auxiliary purposes.

The plausibility of this figure has been gained through “Cost and Performance Baseline for Fossil Energy Plants, Volume 1: Bituminous Coal and Natural Gas to Electricity Final Report” published in 2007 by the U.S. Department of Energy's National Energy Technology Laboratory.[12] From this report the auxiliary power use can be calculated at 5.6%. Considering this TÜV Nord is

convinced that assumed value of 5% is appropriate.

Coal Prices:

Project participants elaborated the price of coal based on coal prices made publicly available by the U.S. Energy Information Administration[13] (Please refer also to Annex 15a and 15b). Associated costs such as land and sea transportation, unloading, management, finance, and distributor's fee were taken from a report published by Israel's State Comptroller[14]. A two percent annual increase on all fuel-related costs was assumed, leading to a lower and therefore more conservative IRR.

TÜV Nord cross checked the assumed value with the information on coal prices published by IEA (Annex 16) and is convinced that assumed coal price is plausible and appropriate.

Suitability of the input values for Diesel-Fired Plant

All natural gas power plants of over 100 MW capacity are required by Israeli law to be duel fueled for emergency purposes, and therefore the use of diesel is seen by TÜV Nord as a plausible alternative to the project activity. It is important to stress that, in the case of the proposed project activity, the plant has no intention of using any fuel other than natural gas, and in fact is barred from doing so unless specifically ordered by the government in the event of an emergency.

Financial Analysis of Diesel-Fired Plant:

As the proposed project plant is duel-fuel, and can therefore operate on diesel, all parameters and assumptions are the same as in the financial analysis of the project power plant, with the exception of diesel prices. Given that the plant is duel-fuel, this was deemed by TÜV Nord to be most appropriate.

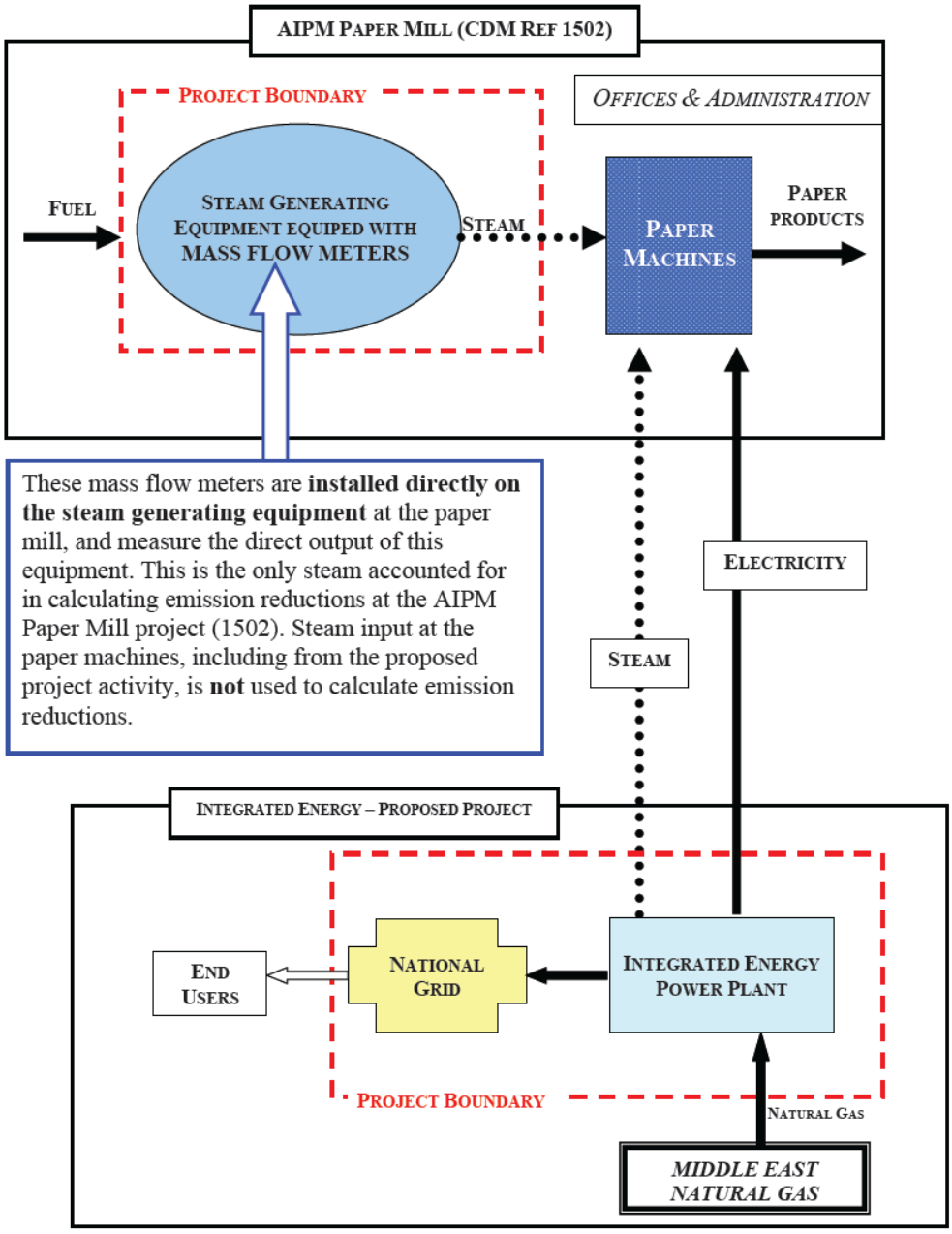
Diesel prices,

Diesel price was assumed to be (1.110 US $/tonne). The price for diesel like the prices of all liquid fuels, are controlled by the regulator, the Ministry of National Infrastructures, which publishes prices once a month. The price used in the model was taken from the official website of the Ministr[15], as were the taxes and operating costs associated with the use of diesel as a fuel.

TÜV Nord cross checked the input values with the these publications. TÜV Nord also cross checked this value with information about Diesel prices published by IEA (Annex 17) and came to the conclusion that the diesel price has been appropriately assumed.

Issue 5

Issue raised by EB Members / DNA	*"The PP/DOE are required to further explain how the monitoring plan will ensure that the waste heat sold to the paper mill (CDM Ref 1502) will not be accounted for in the calculation of emission reductions. The electricity generation should be crosschecked with reliable evidences, such as sales invoices."*
Response of project participant	The EB's concern for potential double counting or false additions to the ERs claimed by either of the projects is certainly understood. However, in neither case is this possible. In the proposed power plant, emission reductions are claimed solely for the generation of electricity, and no reductions are claimed in any way for the steam generation. Steam generation is not a parameter in any of the equations, which allow the project to enjoy CERs based solely on the amount of electricity generated by the plant. Registered CDM project 1502 is a stand-alone, well-defined CDM project of its own. In this project, the project boundary is clearly defined as the existing boilers within the paper mill which are already supplying steam to the plant. Therefore, future steam generation at the power plant is clearly defined as being outside of the project boundary. At the paper mill, steam generation is measured by flow meters that are installed on each existing boiler. ER calculations are based entirely and solely on the steam generated in these boilers and recorded by these flow meters, in accordance with the approved and well-defined monitoring plan. ER calculations are not based on the amount of steam consumed by the plant, and therefore no emission reductions can be claimed for steam purchased from the proposed power plant project or any other external source for that matter. The approved monitoring plan for this project therefore provides full assurance that steam generated by the power plant will not be taken into account when calculating emission reductions. To further illustrate this point, please see the following diagram of the projects and the project boundaries:



Regarding the electricity generated by the plant, the amount of electricity generated as recorded by the electricity gauges (the parameter used for ER calculations) will be crosschecked with sales invoices as part of the internal procedures of the power plant, as this is a core parameter for the plant. The project owner would be happy to update the monitoring plan in the PDD to include this crosscheck.

Response of DOE	The power plant of the considered project activity is designed in a way to be capable to deliver steam to the paper mill.

	At the paper mill itself a CDM project activity (American Israel Paper Mill (AIPM) Natural Gas Fuel Switch) has been carried out and registered on 25 April 2008. The major parameter to calculate emission reductions achieved in this project activity is tons of steam produced in the project scenario in year y. In case the steam production would be measured not on each boiler but by joint meter(s) (e.g. at the entrance to production facilities) this could indeed lead to the case where steam from other sources could be also accounted for in the calculation of emission reductions. According to the registered PDD the steam production is measured by steam meters mounted **on each boiler**. This has been positive validated by another DOE in course of validation. Bearing this in mind TÜV Nord is of an opinion that steam delivered from the power plant to the paper mill will be not accounted for calculation of emission reduction in another project activity. With respect to the request regarding the crosscheck of the electricity generated by the plant with reliable evidences TÜV Nord and project participant agree to include a corresponding provision to the monitoring plan.