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January 26, 2010

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Comments on the Validation of the Anhui Wenergy Tongling 1000 MW Ultra-Supercritical Coal-Fired Power Project

Executive Summary

On behalf of CDM-Watch, the Stanford Environmental Law Clinic respectfully submits the following comment on the Project Design Document (PDD) for the Anhui Wenergy Tongling 1000 MW Ultra-Supercritical Coal-Fired Power Project (Project). We thank the CDM Executive Board and designated operating entity (DOE), Bureau Veritas Group, for recognizing the integral role of transparency in the CDM registration process, and for taking this comment into consideration.

Our analysis of the PDD indicates that the DOE cannot validate the Project under the ACM0013 methodology for the reasons as outlined below. If approved, this Project could lead to excess issuance of CERs beyond any actual emissions reductions. In particular, the PDD calls into question the Project´s compliance with two of the key principles of the CDM:

1. **Additionality**: A project is additional if it could not have been implemented absent CDM funding, i.e., if it would not otherwise be the most financially attractive among other plausible baseline scenarios. Unless the project is additional, it cannot be registered under the CDM because it does not represent emissions reductions (compared to business-as-usual) made possible by the CDM. The Project fails to prove additionality both under ACM0013 and the "Tool for Demonstration and Assessment of Additionality" (Additionality Tool) for the reasons described below.

2. **Contribution to Sustainable Development:** The DOE must also ensure that the project participants fulfill the sustainable development requirements of the methodology, contained in the disclosure of environmental impacts and stakeholder commentary. Such disclosure is critical, not only to allow DOE verification, but to provide enough material for substantive public commentary on environmental and other impacts—impacts which vary from project to project, and which, given their locally-based nature, may be more difficult for the DOE to anticipate or verify than investment or emissions data. This PDD does not fulfill the environmental impact and stakeholder commentary disclosure requirements.

Our comments highlight the following six reasons why the Project does not comply with the CDM procedures and should therefore receive a negative validation:

I. **The PDD Fails To Prove That The Project Would Not Occur But For CDM Financing**: The project timeline fails to establish that the Project would not occur but for CDM financing because it indicates that key project activities began before approval of the ACM0013 methodology and because it does not substantiate the claim that the CDM played a determinative role in the selection of ultra-supercritical technology. Moreover, the project participants failed to include required documentation to support their claims of prior, serious consideration of the CDM.

II. **The PDD Fails To Consider All Plausible Baseline Scenarios**: The project participants' selection of alternatives for comparison to the project is not based on evidence in the PDD but instead relies on unsubstantiated claims about the infeasibility of potentially attractive project alternatives. Specifically, the PDD eliminates several potentially plausible baseline scenarios, including renewable energy projects, based on conclusory statements. In several cases, available evidence actually undercuts the PDD's conclusions.

III. **The PDD's Investment Analysis Does Not Support The Selection Of Subcritical Coal-Fired Power Plants As The Project Baseline**: The investment analysis is unambiguously flawed, and does not support the selection of subcritical coal-fired power plants as the Project's baseline. The investment analysis is not reproducible, and the PDD does not justify its assumptions, many of which are questionable. The sensitivity analysis is particularly flawed because it does not utilize realistic variations in fuel price and does it consider the effect of China's dispatch policy on plant load.

IV. **The PDD Fails To Prove That The Project Is Not A Common Practice**: The PDD does not fulfill the requirements of the common practice analysis, which compares the proposed Project to similar activities occurring without CDM funds in order to check the credibility of additionality claims. The project participants do not substantiate the claim that construction of ultra-supercritical coal plants, or at least supercritical coal plants, is not a common practice in eastern China.

V. **The PDD's Environmental Impacts Disclosure Does Not Provide Meaningful Opportunity For Public Comment:** The summary of the environmental impact assessment (EIA) does not contain enough qualitative or quantitative data on specific environmental impacts to afford a meaningful opportunity for substantive public commentary. The PDD fails to disclose the Project's full environmental impacts, and casts doubt on whether this Project would promote sustainable development in China. Propagation of new coal-fired power plants under the

CDM invites scrutiny, and skepticism is only increased when environmental impacts are hidden or ignored.

VI. **The PDD Does Not Meet Requirements For Disclosure Of Stakeholder Commentary**: Robust stakeholder commentary is one of the CDM's key ways of ensuring sustainable development. Yet the PDD does not disclose or describe the process for obtaining stakeholder comments, or the content of those comments, in a way that sufficiently illuminates stakeholders' responses.

We emphasize that the ultimate consequence of approval of non-additional projects either by the DOE or by the CDM Executive Board is to undermine the caps contained in Annex B of the Kyoto Protocol – the core environmental objective of the Conference of the Parties. Consequently, determination of additionality should always be made using conservative assumption after careful analysis of all data necessary to test a project applicant's assertions.

TABLE OF CONTENTS

COMMENTS

I. The PDD Fails To Prove That The Project Would Not Occur But For CDM Financing.

To be eligible for CDM financing, Wenergy Tongling Power Generation Co., Ltd. and Bunge Emissions Holdings S.A.R.L. (project participants) must "demonstrate that the CDM was seriously considered in the decision to implement the project activity."[1] The project participants must satisfy this requirement by demonstrating: (1) "awareness of the CDM prior to the project activity," (2) "that the benefits of the CDM were a decisive factor in the decision to proceed with the project," and (3) "that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation."[2] The project participants must present to the DOE evidence of their serious consideration of CDM prior to project implementation, as this bears directly on their project's additionality. The DOE must, in turn, provide this evidence to the public prior to making a validation decision. The project participants cannot withhold such evidence from the public because "information used to determine additionality . . . shall not be considered proprietary or confidential."[3]

The project participants' mere assertion that they considered the CDM prior to the Anhui Wenergy Tongling 1000 MW Ultra-Supercritical Coal-Fired Power Project (Project) start is insufficient to meet this obligation. To prove that the CDM was seriously considered in the project implementation decision, the CDM Executive Board's rules place the burden on project participants to provide evidence in their PDD, including, "*inter alia*, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a CDM project activity."[4] The DOE cannot validate the project based on the existing PDD.

Furthermore, the information that the project participants did provide in their PDD casts doubt on whether CDM benefits were essential to the project decision.

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[1] Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, EB 49 Report, Annex 22, Version 03, 1 [hereinafter "Guidelines on Prior Consideration of CDM"] ("Proposed project activities with a start date before 2 August 2008, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are required to demonstrate that the CDM was seriously considered in the decision to implement the project activity."); PDD, 32 ("The Project's starting date is August 2007."); CDM Anhui Tongling 1000MW Ultra-Supercritical Coal-Fired Power Project, UNFCCC, *available at* http://cdm.unfccc.int/Projects/Validation/DB/6EK3YTI1OXILJ786S71PTX5DMMZN6S/view.html (The DOE posted the PDD for comment on December 29, 2009.).

[2] Guidelines on Prior Consideration of CDM, 1-2.

[3] "Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), EB 41 Report, Version 07, EB 41, 4, 19 [hereinafter PDD Guidelines].

[4] Guidelines on Prior Consideration of CDM, 1.

According to the project participants, their board of directors decided to implement the Project as a CDM project on September 8, 2006.[5] This timing suggests that the CDM could not have been an overriding consideration because the CDM Executive Board had not yet approved a methodology covering the project activity proposed here. Participants also signed main equipment contracts for the Project in August 2007, again without an approved CDM methodology. Participants now propose their Project under CDM methodology ACM0013,[6] but they had already committed to move forward before the CDM Executive Board adopted this methodology.[7] The project participants have presented no evidence to contradict this conclusion.

Nor have the project participants provided evidence to show that "continuing and real actions were taken to secure CDM status for the project in parallel with its implementation." Table 10 of the PDD lists points at which the project participants claim to have considered the CDM.[8] But it is impossible from the PDD to determine whether these actions were necessary or only supplemental to the project participants' project decision. To support their claim that action to secure CDM status occurred in parallel with project implementation, the project participants must produce evidence, including, "*inter alia*, contracts with consultants for CDM/PDD/methodology services, Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds), evidence of agreements or negotiations with a DOE for validation services, submission of a new methodology to the CDM Executive Board, publication in newspaper, interviews with DNA, earlier correspondence on the project with the DNA or the UNFCCC secretariat."[9] Without evidence of the project participants' actions to secure CDM status, the DOE cannot validate this Project.

For any consideration of CDM funding, the project participants must provide key financial documents that are material to the project decision and necessary to establish additionality. Such documents include any loan documents that they secured to fund the Project. The DOE should ascertain when such loans were provided and to what extent the loans relied on potential CDM revenues. If, for example, the participants secured loans based on anticipated non-CDM revenues from the Project, this fact would raise questions about whether the project participants actually relied on the availability of CDM benefits in making their project decision.

Moreover, even if the project participants provide documents to demonstrate prior consideration of the CDM, CDM compliance can only be achieved if this information is available to the public for comment. According to the CDM Executive Board, "[p]roject

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[5] PDD, 15-16.
[6] Approved Consolidated Baseline and Monitoring Methodology ACM0013, EB 46 Report, Version 02.1, [hereinafter ACM0013].
[7] *Id*. (The CDM Executive Board approved ACM0013 on September 12, 2007.)
[8] PDD, Table 10.
[9] Guidelines on Prior Consideration of CDM, 2.

participants shall . . . describe . . . additionality in a transparent and conservative manner."[10] The DOE must provide stakeholders with an opportunity to comment on this evidence by making the information "publicly available on the UNFCCC CDM web site for a period of 30 days."[11]

II. The PDD Fails To Consider All Plausible Baseline Scenarios

Another shortcoming of the PDD is that it does not consider all plausible baseline scenarios. Under ACM0013, the first step in selecting the proper baseline scenario is to identify all "plausible baseline alternatives,"[12] a process that is further explained in Section B.4., Step 1 of the "Tool for the demonstration and assessment of additionality" (Additionality Tool). The Additionality Tool defines these alternatives as "realistic and credible alternative(s) available to the project participants or similar project developers that provide outputs or services comparable with the proposed CDM project activity."[13] According to the methodology, these alternatives must deliver similar services as the proposed project (e.g. peak vs. base load), but "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 project activity)."[14] Alternatives that do not provide comparable outputs or services or deliver similar services can be eliminated.[15] But contrary to these requirements, the PDD eliminates the following plausible baseline alternatives without "appropriate explanation and documentation."[16]

A. Project participants do not sufficiently justify their rejection of natural gas as a project alternative.

The PDD claims that natural gas is generally used only for peak load in the East China Power Grid (ECPG), and it therefore excludes natural gas as a plausible baseline alternative. To show that natural gas cannot provide base load, the PDD provides a web link for an article, entitled "China's Natural Gas Fired Power Generation Needs Support from Related Policy." But this web page is no longer available. If project participants are to eliminate the natural gas alternative, they must provide supporting documents that are current and accessible. Such supporting documents are particularly important in light of recent CDM monitoring reports for some natural gas plants in China that show these plants operating at capacity factors between 0.54 and 0.84 (equivalent to 4,700 to 7,300

[10] PDD Guidelines, 4.
[11] Procedures for Processing and Reporting on Validation of CDM Project Activities, EB 50 Report, Annex 48, Version 03, 1; *see also* Modalities and Procedures, paragraph 40(c), 15.
[12] PDD, 11.
[13] Tool for the Demonstration and Assessment of Additionality, Annex 10, Version 5.2, EB 39, 4 [hereinafter Additionality Tool].
[14] ACM0013, 3.
[15] *Id*.
[16] ACM0013, 3.

hours per year).[17] This fact suggests that natural gas may be capable of meeting base demand. Accordingly, the PDD must provide further justification to exclude natural gas as a plausible baseline alternative.

The PDD also asserts that "a natural gas fired power plant cannot provide outputs comparable with the Project," and is therefore not a plausible alternative. The lesser capacity of individual natural gas power plants, however, does not preclude natural gas as a baseline alternative. As ACM0013 expressly provides, "several smaller plants . . . may be a reasonable alternative to project activity."[18] The investment analysis in this PDD recognizes this principle when it compares two 600 MW subcritical coal power plants, as well as two 600 MW supercritical plants, to one 1000 MW ultra-supercritical coal unit. In the same way, participants should also aggregate multiple natural gas plants for comparison with the Project.

B. Project participants do not sufficiently justify their rejection of hydro power, biomass power, or municipal solid waste incineration power as project alternatives.

As with natural gas, the PDD cannot reject hydro, biomass, and municipal solid waste (MSW) power[19] without "appropriate explanations and documentation."[20] The PDD provides neither.

For hydro power, the PDD states that because only a very small portion (3%) of China's hydro power resources are located in the Project's region, and because 56.3% of that small portion has already been exploited for power generation, "it would be difficult to construct hydro power plants with comparable capacity" to the Project. But to meet the requirements of the methodology, the project participants must substantiate their

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[17] Beijing No.3 Thermal Power Plant Gas-Steam Combined Cycle Project Using Natural Gas, CDM Monitoring Report 1, July 1, 2008, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/1U6UFGCPOX5I30W4LDIEYYH3QMP354 (capacity factor of 0.64 between February 15, 2008, and June 30, 2008, based on 849,743.84 MWh generated by a 406.83 MW project); Beijing No. 3 Thermal Power Plant Gas-Steam Combined Cycle Project Using Natural Gas, CDM Monitoring Report 2, November 14, 2008, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/3768L5FRHBXMCIWEJUG0SONVTKD294 (capacity factor of 0.54 between July 1, 2008, and October 31, 2008, based on 642,925.54 MWh generated by a 406.83 MW project); Beijing No. 3 Thermal Power Plant Gas-Steam Combined Cycle Project Using Natural Gas, CDM Monitoring Report 3, June 22, 2009, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/Z5P1Y4N8QHUEWG32DLIOMB9KJ6S0T7 (capacity factor of 0.84 between November 1, 2008, and March 31, 2009, based on 1,234,843.24 MWh generated by a 406.83 MW project); Qinghai Ge-ermu Gas Turbine Power Plant Project, Monitoring Report (Version 01), Oct. 22, 2009, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/03PE95K2HYWQ4JI6L1DVRUSXN7OTZ8 (capacity factor of 0.58 between July 20, 2008, and December 31, 2008, based on 687,728.98 MWh generated by a 300 MW project).

[18] *Id.*

[19] PDD, 12.

[20] ACM0013, 3.

claims with evidence. The PDD must document and explain why the implementation of more hydro power is implausible, and not simply assert that it is "difficult." A difficult alternative may still be a "reasonable and credible" baseline, particularly if, as the project participants argue, the Project itself is not financially viable without the CDM.

For biomass and MSW power, the PDD makes the same error as it does for natural gas: it points to the lesser capacity of individual biomass and MSW plants without considering the fact that these plants can be aggregated to deliver services comparable to the Project. This is a critical requirement of ACM0013, and is necessary to comply with the CDM. One of the main objectives of the CDM is to shift investment from fossil fuels to renewable energy. Yet if project participants are allowed to eliminate alternatives based solely on disparities in individual plants' capacities, then they would never have to present a direct investment comparison between renewable energy and coal power. Here, if construction of multiple biomass or MSW power plants is implausible, the PDD must explain why, and substantiate its claim with evidence.

C. Project participants do not sufficiently justify their rejection of imported electricity as a project alternative.

The PDD claims that importing electricity from connected grids is not a plausible baseline alternative because "[d]ifferent tariff mechanisms and the lack of a trading mechanism" prevent such imports.[21] To support this position, the PDD cites an article in which the State Energy Regulatory Commission points to the lack of "reasonable" tariff mechanisms as a source of problems with inter-regional electricity trading in China and indicates that resolving the tariff issue is a top priority.[22] This article alone, however, does not prove that importing electricity is implausible.

First, the cited article is based on a report of electricity pricing implementation in 2007. The policy environment may well have changed since then, especially since the SERC spokesperson quoted in the article refers to resolution of the tariff and trading problems as a high priority. The project participant must provide documentation of the current tariff and trading mechanisms.

Second, the article describes the inter-regional trading system as one between provinces and districts, not power grids. Thus, it is unclear how exactly the tariff problems would impact the ECPG. The project participant must provide clarification with respect to this discrepancy.

Third, while the article points to pricing problems within the trading system (e.g., the lack of public and transparent information), it in no way suggests that inter-regional

[21] PDD, 13.
[22] Economic Reference News, *SERC: Inter-Regional Electricity Trading Lacks Reasonable Tariff Mechanism*, Economic Reference News (Sept. 16, 2008), http://news.bjx.com.cn/html/20080916/145532.shtml.

electricity trading has been halted as a result of these problems. The project participants must provide documentation that addresses this point as well.

III. The PDD's Investment Analysis Does Not Support The Selection Of Subcritical Coal-Fired Power Plants As The Project Baseline.

Because project participants have failed to justify their elimination of several alternative baselines, their investment analysis may not be sufficiently comprehensive. But even among the alternatives that the PDD considers—ultra-supercritical (i.e., the Project without CDM funding), supercritical, and subcritical coal-fired power plants—the investment analysis is flawed.

ACM0013 requires that the project participants identify the "economically most attractive baseline scenario" by using Step 2 of the Additionality Tool.[23] Step 2 is intended to "[d]etermine whether the proposed project activity is not: (a) The most economically or financially attractive; or (b) Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)."[24] Here, the PDD considers only costs. Thus, it does not address scenario (b) and fails to conclusively show, with respect to (a), that the Project itself is not the most economically or financially attractive alternative. Ultimately, the investment analysis does not support the participants' conclusion: that subcritical coal is the Project's appropriate baseline.

ACM0013 further requires that "[c]ritical techno-economic parameters and assumptions (such as capital costs, fuel price projections, lifetimes, the load factor of the power plant and discount rate or cost of capital) . . . be clearly presented"[25] in the investment analysis. The project participants must "[j]ustify and/or cite assumptions in a manner that can be validated by the DOE."[26] In addition, "[t]he investment analysis should be presented in a transparent manner and all the relevant assumptions should be provided in the CDM-PDD, so that a reader can reproduce the analysis and obtain the same results."[27] Here, the PDD is not transparent, its investment analysis is not reproducible, and the project participants fail to justify their assumptions.

A. The investment analysis is not reproducible.

Based on the information that the project participants provided, it is not possible to reproduce the PDD's calculations for the levelized cost of electricity (LCOE). ACM0013 states that LCOE "should be used as [the] financial indicator for investment

[23] ACM0013, 5; *see also*, Additionality Tool, 5.
[24] *Id*.
[25] ACM0013, 4.
[26] *Id*.
[27] *Id*.

analysis," and requires the project participants to include all relevant information needed to calculate LCOE in the PDD.[28] The PDD provides an LCOE formula, [29] which is:

$$LCOE = \sum_t \frac{I_t + M_t + F_t}{(1+r)^t} \Big/ \sum_t \frac{E_t}{(1+r)^t}$$

The PDD also provides several values for the equation in Table 6.[30] But this information is incomplete, non-transparent, and insufficient to reproduce the participants' calculations.

First, "$\sum_t$" "is the summation over the period including construction, operation during the economic lifetime and decommissioning of the plant as applicable,"[31] but the PDD fails to quantify the period "t" for the scenarios. At best, the PDD implies that the "economic lifetime" of the proposed Project is equivalent to the "Useful Life" (20 years) of significant equipment, which is found in a different section of the document.[32] But this connection, if intended, is neither obvious nor explicit. Nor does the Project's "Useful Life" appear to include the periods "t" for construction and decommissioning of the Project. The PDD provides no information at all on the economic lifetimes or other periods "t" for the remaining two alternatives—the two 600 MW supercritical coal plants and the two 600 MW subcritical coal plants.

Second, "I_t" represents capital expenditures in year "t," but the PDD provides only a single "Unit cost" for each alternative[33] and does not provide a schedule for capital expenditures. It is not clear how these expenditures should be treated in calculating LCOE. The project participants must clarify whether all costs are to be incurred in year one, or spread across multiple years.

Third, "M_t," which represents operational and maintenance expenditures in year "t," cannot be calculated from the information provided. The PDD lists several elements of M_t, including "Welfare" and "Maintenance," which it provides as percentages.[34] But these percentages are meaningless because the PDD fails to specify base numbers for "Welfare" and "Maintenance" (i.e., numbers that these elements are to be calculated as percentages of).

Fourth, Table 6 lists an operations cost for "Desulfidation," but uses inconsistent units between the different alternatives.[35] It is not clear whether a unit conversion would be sufficient here, or whether the numbers are in error.

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[28] ACM0013, 3.
[29] PDD, 13.
[30] PDD, 14.
[31] *Id*.
[32] PDD, 5-6.
[33] PDD, 14.
[34] *Id*.
[35] *Id*.

Without clarifications, the project participants' investment analysis is not reproducible and is not transparent. Given the impossibility of verifying the project participants' numbers, and of providing meaningful opportunity for stakeholder feedback, the DOE must not validate the Project. To correct this problem under a revised PDD or in future projects, the project participants should provide spreadsheets that reveal their calculations and assumptions.

B. Project participants fail to justify their investment assumptions for each alternative.

Even if the PDD's calculations were reproducible, the project participants fail to justify the specific numbers that are inputs to the LCOE formula. Without citations to relevant reference sources or other explicit reasoning behind the listed numbers, it is impossible to determine their source or accuracy. LCOE is central to proving additionality, determining a baseline, and, ultimately, calculating emissions reductions. The DOE's validation cannot be based on such opaque assumptions.

In particular, the project participants must justify inputs, such as coal prices, that differ between the alternatives. Under ACM0013, "[w]here assumptions, input data, and data sources for the investment analysis differ across the project activity and its alternatives, differences should be well substantiated."[36] Therefore, the project participants must explain why coal is more expensive for the Project (490.54 RMB/t) than for the alternatives (430 RMB/t).[37] Although the PDD's LCOE calculation is not reproducible, a 14 higher price per ton of coal must have a significant impact on the Project's LCOE. And this price differential would make the Project appear significantly less financially attractive than subcritical or supercritical technology, despite the Project's use of a more efficient technology. If the project participants believe these prices are correct, they must at least indicate sources for their data.

The project participants must also explain why the annual operating hours differ between the Project and the two alternatives. It is not clear why the supercritical and subcritical plants would run 500 fewer hours per year than the Project. Nevertheless, because the supercritical and subcritical alternatives would provide 200 MW in additional capacity (1200 MW, as opposed to the 1000 MW for the ultra-supercritical plant), these less efficient plants would still generate nine percent (500,000 MWh) *more* electricity than the Project each year, based on the PDD's figures.[38] Increased generation would

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[36] ACM0013, 4.
[37] PDD, 14.
[38] *Id*. (According to Table 6, the Project would include a 1000 MW ultra-supercritical unit that would operate for 5500 hours and generate 5,500,000 MWh each year. The supercritical alternative would include two 600 MW supercritical units (1200 MW total) that would operate for 5000 hours and generate 6,000,000 MWh each year. The subcritical alternative would operate for the same hours and generate the

correspondingly depress the LCOE calculations for subcritical and supercritical, because the investment cost is spread over the increased generation. Notably, the PDD's calculations, using these unequal loading assumptions, put the Project's LCOE at only three percent higher than subcritical and less than one percent higher than supercritical.

Looking specifically at the alternatives, the project participants must also explain why costs for supercritical coal plants are, in several cases, higher than costs for both the subcritical and ultra-supercritical (Project) coal plant alternatives. Given that ultra-supercritical coal plants use newer, less prevalent, and more advanced technology, it is surprising to see the project participants list supercritical plants as the most expensive of the three alternatives. It is also surprising to see that the "pollution discharge" cost for the supercritical plant alternative is by far the most expensive of the three. This cost is more than twice as high for supercritical plants as it is for the Project and nearly twice as high when compared to the subcritical plants. Given that supercritical plants are more efficient than subcritical ones—and thus would be expected to emit fewer pollutants per unit of electricity generated—the project participants must justify these figures. The project participants must also explain why the relative costs of maintenance are highest for the supercritical plants, and lowest for the Project, with the subcritical plants in between. The combined effect of these numbers appears to significantly raise the LCOE of the supercritical plants while favoring the ultimate selection of the subcritical plants as the baseline. This result, contrary to logical expectations, must be transparently justified.

Finally, the project participants must explain what individual cost categories refer to when the category titles are not self-explanatory. For example, the PDD does not explain what the item "pollution discharge" covers or how this differs from "desulfidation." Nor does the PDD explain what "other expenses" include and why these expenses are higher for the Project than for the other alternatives.

C. The sensitivity analysis does not reflect all reasonable variations in critical assumptions.

ACM0013 provides that "[a] sensitivity analysis shall be performed for all alternatives, to confirm that the conclusion regarding the financial attractiveness is robust to reasonable variations in the critical assumptions (e.g. fuel prices and the load factor). The investment analysis provides a valid argument in selecting the baseline scenario only if it consistently supports (for a realistic range of assumptions) the conclusion that the pre-selected baseline scenario is likely to remain the most economically and/or financially attractive."[39] Here, the PDD's sensitivity analysis does not reflect all reasonable variations in fuel price and load factor.

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same amount of electricity as the supercritical, but would instead include two 600 MW subcritical (i.e., less efficient) units.)

[39] ACM0013, 4.

1. The sensitivity analysis for fuel costs does not reflect actual price volatility.

The project participants do not show that a plus or minus ten percent variation in coal price, as shown in Table 8,[40] accurately reflects potential volatility in Chinese coal prices. In fact, without further explanation, the project participants' sensitivity analysis for fuel cost is confounding. Recent coal price spikes in China are well documented. This year, thermal coal prices in China have already reached approximately 680 RMB/t.[41] This price is well in excess of the project participants' estimated fuel costs of 430 and 490 RMB/t, and is not captured in the PDD's 10 percent sensitivity analysis. To incorporate recent costs, the project participants would need to analyze price fluctuations of at least 40 to 60 percent.

Given that China increasingly relies on imported coal and is exposed to global market fluctuations,[42] it would not be unreasonable to require an even wider range of fuel costs when projecting LCOE over the longer term. As China's coal demand grows, short supplies and resulting higher prices are reducing profits for Chinese power generators, including at plants operated by the project participants.[43] Some analysts expect coal prices to remain high throughout this year.[44] Yet participants ignore the possibility of higher coal prices, even when such higher prices are already seen today. Amending the methodology to further specify what amounts to "reasonable variation" in fuel price, for the coal context, would be an important step.

It is possible to project the PDD's sensitivity analysis for larger coal price variability, but the results only raise more questions about the project participants' investment analysis. As previously noted, the investment analysis as a whole is not reproducible. But it is possible to project a broader LCOE sensitivity because fuel cost is presented as a linear variable that remains constant (subject to discounting) through time.

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[40] PDD, 15.

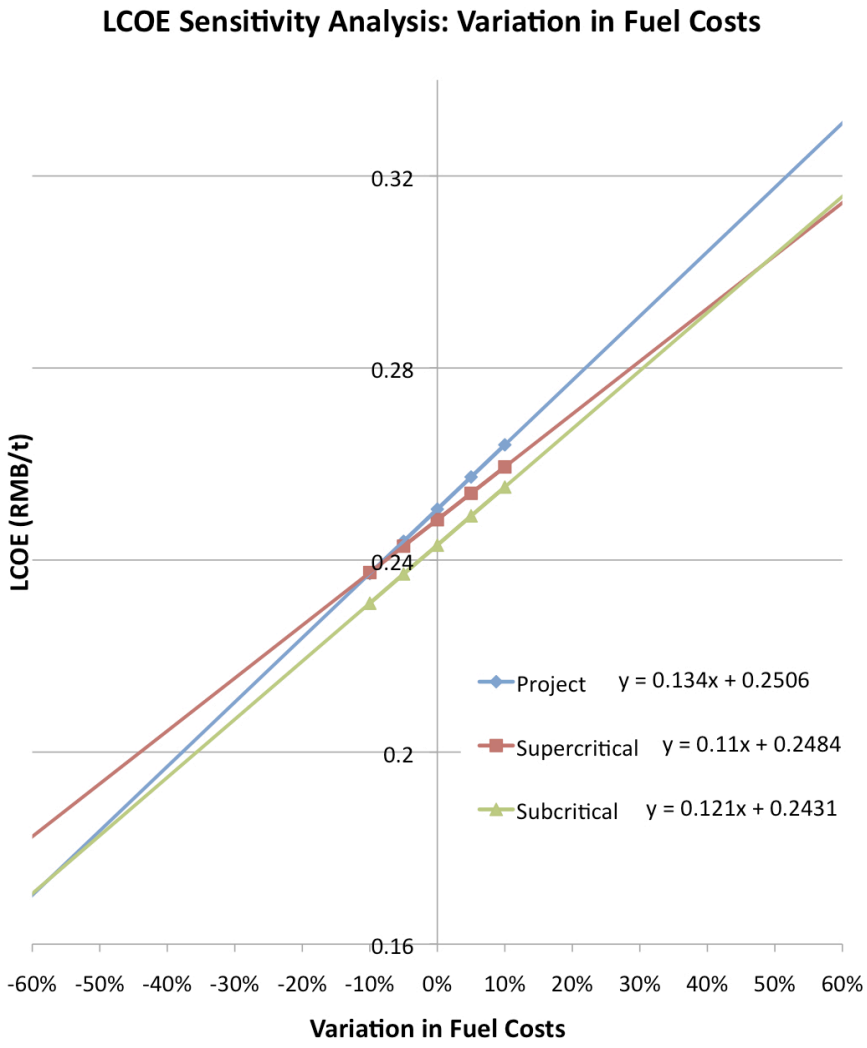
[41] *Could China fall out of love with coal?* Financial Times, Jan. 14, 2010, *available at* http://blogs.ft.com/energy-source/2010/01/14/could-china-fall-out-of-love-with-coal/ (Coal imports have been in the news this week as prices for thermal coal hit $100/tonne and China began importing from new sources).

[42] *Id*.

[43] *Anhui Wenergy H1 Net Profits Dived 34.4%*, SinoCast, Aug. 29, 2008, (LexisNexis Academic) ("Chinese power generator Anhui Wenergy Co., Ltd. today posts net profits of CNY 63.8575 million in January-June 2008, slumping 34.4% from a year ago, hurt by hiking coal prices."); *China Orders Power-Station Coal Price Caps At Ports*, International Energy, July 24, 2008, http://en.in-en.com/article/News/Coal/html/200807248017.html ("Most of China's power plants are losing money because of rising coal prices and government controls on electricity tariffs."); *Coal Prices Smothering Profits of East China Power Plants*, China.org.cn, July 5, 2008, http://www.china.org.cn/business/news/2008-07/05/content_15959625.htm ("An earlier report found that 80 percent of China's coal-fired power plants were in deficit in the first five months this year, as thermal coal prices had risen by 60 yuan since the beginning of the year.").

[44] *Coal Rise Set To Hit China Power Producers' Profits*, MarketWatch, Jan. 18, 2010, http://www.marketwatch.com/story/coal-rise-set-to-hit-china-power-producers-profit-2010-01-18.

The figure below provides trend lines for each alternative baseline at a plus or minus 60 percent variation in fuel cost, using the data provided in the PDD.



Generally, one would expect more efficient coal plants to become more cost competitive with rising fuel costs. Looking at the figure above, such a relationship is observed between the supercritical and subcritical plants, which converge in their LCOEs when coal prices rise approximately 48 percent above the PDD's price assumptions (i.e., to around 637 RMB/t). Given recent, observed coal prices, if this analysis is correct, supercritical plants may already be more financially attractive than the subcritical alternative.

Remarkably, the PDD's data suggest that the Project will actually become *less* financially attractive than either of the other, less efficient alternatives as the price of coal rises. The data point to this result both when looking at the PDD's narrower sensitivity

analysis (from plus or minus 10 percent) and the broader spectrum provided above (from plus or minus 60 percent). As noted, more efficient plants should become more financially attractive as coal prices rise. The project participants must explain this counterintuitive result.

The PDD's potentially incorrect starting assumptions regarding coal prices, combined with its overly narrow and potentially flawed sensitivity analysis, appear to substantially undervalue more efficient supercritical and ultra-supercritical plants. Based on these factors, the investment analysis is deficient, and cannot be considered credible without further explanation. The DOE should request clarification from the project participants and provide an opportunity for public comment on any such responses.

2. The sensitivity analysis for load factor fails to account for dispatch policies that favor more efficient power plants.

The project participants' sensitivity analysis for load factor, as shown in Table 9,[45] is also deficient: it not only fails to justify its numbers, but does not reflect dispatching policies that favor lower emitting, more efficient power plants. China's 2007 energy-saving approach to power dispatching provides more efficient plants with priority access to the grid.[46] Thus, depending on grid demands, a supercritical or ultra-supercritical coal-fired power plant may operate for more hours each year than a less efficient, dirtier subcritical plant. As more renewable, nuclear, and natural gas generators enter the mix, utilization of coal plants, regardless of technology, also will fall. The PDD's plus or minus ten percent sensitivity analysis does not reflect this dispatch reality.

Moreover, to the extent that more efficient coal plants receive a higher load, the load sensitivity comparison needs to compare loading variability between the alternatives; it cannot be based simply on loading in the power sector as a whole. The PDD states that "The sensitivity analysis confirms that the subcritical alternative continues to enjoy the lowest LCOE after reasonable variations to critical assumptions." This statement is incorrect because the PDD's treatment of variability as an equivalent force among all three plants is not based on actual conditions.

Based on the participants' numbers, the ultra-supercritical (Project) alternative would be more financially viable than the subcritical alternative under any of the following scenarios: (1) a 10 percent decrease in load for the subcritical plant and no

[45] PDD, 15.
[46] http://www.gov.cn/zwgk/2007-08/07/content_708486.htm. *See also* Regulatory Assistance Project, *China's Power Sector: A Backgrounder for International Regulators and Policy Advisors*, Feb. 2008, *available at* http://www.raponline.org/docs/RAP_ChinaPowerSectorBackground_2008_02.pdf ("The rule modifies the current practice of dispatch based on average total cost (i.e., contract price) to one based on the environmental (primarily emissions) impacts and thermal efficiencies of the units. The dispatch, or loading, order of units calls for the operation of non-emitting resources first, then by low-emissions resources, and, lastly, the highest emitting units.").

change or an increase in load for the Project; (2) a five percent decrease in load for the subcritical plant and a five percent or greater increase in load for the Project; or (3) no change in load for the subcritical plant and a ten percent or greater increase in load for the Project. The supercritical alternative might be even more cost competitive against the subcritical plant. Again, depending on actual power demands and installed capacity in the ECPG, the Project would in some cases remain the most cost competitive alternative of the three. Further, as noted above, the project participants' LCOE projections are based on an assumption that the supercritical and subcritical alternatives will generate 500,000 MWh *more* per year than the Project. Given the dispatch policy, the DOE must challenge this assumption.

To the extent that a broader sensitivity analysis may produce no clear winner among the alternatives, ACM0013 requires the project participants to "select the baseline scenario alternative with the lowest emission rate among the alternatives that are the most financially and/or economically attractive."[47] If a broader sensitivity analysis reveals reasonable situations where the ultra-supercritical or supercritical alternatives are the most financially attractive, then the project participants cannot conclude that subcritical is the appropriate Project baseline.

D. The PDD's investment analysis is incomplete without consideration of revenues.

ACM0013 requires the project participants to "include all relevant costs . . . *and revenues* (including subsidies/fiscal incentives, ODA, etc. where applicable."[48] In their investment analysis, the project participants only provide LCOE. While LCOE is an important part of project consideration,[49] it only reflects costs, and thus does not provide sufficient information from which to judge overall financial attractiveness.

In addition to LCOE, the project participants should consider revenues, such as by calculating the internal rate of return (IRR) for each alternative. The ACM0013 states, "The levelized cost of electricity production in $/kWh should be used as financial indicator for investment analysis."[50] But the ACM0013 also clarifies that "The CDM-PDD submitted for validation shall present a clear comparison of the financial indicator for all scenario alternatives. The baseline scenario alternative that has the best indicator (*e.g., highest IRR*) can be pre-selected as the most plausible baseline scenario."[51]

China's dispatch policy favors more efficient plants, both in terms of costs and revenues. One effect of this policy on financial indicators will be to decrease the LCOE

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[47] ACM0013, 4.
[48] ACM0013, 3-4 (emphasis added) (footnote omitted) (The footnote clarifies that EB 22 provides guidance on consideration of subsidies/fiscal incentives. EB22 Report, Annex 3.).
[49] ACM0013, 3.
[50] *Id*.
[51] ACM0013, 4 (emphasis added).

of renewable and more efficient fossil fuel plants by spreading investment costs across increased power generation. Another outcome will be to increase revenues by allowing these plants to sell more electricity to the grid. Without understanding the interplay between costs and revenues, it is not possible to evaluate the financial attractiveness of individual alternatives.

Further, LCOE on its own cannot explain project behavior or viability because China sets different tariff rates for different electricity generation technologies. For example, China is setting higher prices for electricity generated by ultra-supercritical coal plants as a way to incentivize adoption of this more efficient technology.[52] Because all electricity rates are set by the national government, normal market behavior cannot be imputed to state-owned electricity generators. During recent coal price increases, coal power plants have often run at a loss because the government has not allowed these plants to increase their rates.[53] This suggests that power plant operators make decisions based on non-economic factors, including China's broader energy security concerns. As a result, cost alone may not be the most appropriate indicator of project decision-making.

To the extent that ACM0013 and the CDM Executive Board's E+/E- rule allow the project participants to ignore revenues in their investment analysis, this methodology and rule undermine the Kyoto Protocol and the UNFCCC. Project additionality is fundamental to the CDM. The purpose of the CDM is, after all, to help achieve the ultimate objective of the UNFCCC: "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[54] But this objective cannot be achieved if developed countries are able to reduce their obligations under the Kyoto Protocol by purchasing non-additional CERs. Nor will the objective be met if climate change resources are misdirected to energy projects that would have occurred in the absence of the CDM. The Kyoto Protocol is explicit: Reductions in emissions must be "additional to any that would occur in the absence of the certified activity."[55]

Yet, with respect to ACM0013, the E+/E- rule is contrary to principles of additionality. In China specifically, the power sector is too large and too complex to ignore every policy that affects technology adoption. For example, when the Chinese government incentivizes cleaner and renewable electricity generation through higher

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[52] Yuchun Cao et al*, Development of Ultra-Supercritical Power Plant in China*, Presented at the International Conference on Power Engineering-2007 (Oct. 23-27, 2007), 234.
[53] China Orders Power-Station Coal Price Caps at Ports, *International Energy*, July 24, 2008, http://en.in-en.com/article/News/Coal/html/200807248017.html ("Most of China's power plants are losing money because of rising coal prices and government controls on electricity tariffs."); Coal Prices Smothering Profits of East China Power Plants, *China.org.cn*, July 5, 2008, http://www.china.org.cn/business/news/2008-07/05/content_15959625.htm ("An earlier report found that 80 percent of China's coal-fired power plants were in deficit in the first five months this year, as thermal coal prices had risen by 60 yuan since the beginning of the year.").
[54] United Nations Convention on Climate Change, Article 2.
[55] Kyoto Protocol, Article 12(5)(c).

rates, this is not only linked to climate change or other environmental concerns. Tariffs are at least in part a response to national coal shortages and local air pollution concerns. To the extent that China and other developing countries must increase their energy resource use efficiency in response to energy security or local air pollution concerns, providing CDM benefits will not secure additionality.

This is not to say that the CDM has no role in the Chinese power sector. But additionality can only be achieved if baseline calculations incorporate underlying policy realities and incentivize technologies that exceed these realities. In the case of coal, subcritical plants are a highly questionable baseline. Based on the analysis above, it appears that supercritical plants may be a more appropriate baseline.

Actual developments in the Chinese power sector confirm that supercritical coal plants may be the real baseline. Recent NDRC-approved plants in eastern China use supercritical and ultra-supercritical technology.[56] And at least some analysts consider supercritical to be in the current "mainstream."[57] Moreover, while several generators are undergoing the CDM validation process, no Chinese supercritical or ultra-supercritical coal plants have yet been registered under ACM0013. Given the number of supercritical and ultra-supercritical coal plants that have nevertheless started construction or already been completed,[58] it stretches credulity to conclude that subcritical coal is the de facto baseline in the ECPG.

IV. The PDD Fails To Demonstrate That The Project Is Not A Common Practice.

Even beyond the PDD's investment analysis, the project participants also failed to prove that installation of an ultra-supercritical coal plant is not a "common practice" in the ECPG. Common practice analysis provides a "credibility check" for claims that a project is additional. If the Project is similar to other power plants that are operating without CDM funding, then "it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/ economically unattractive or subject to barriers."[59] In other words, similar activities

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[56] *NDRC Sanctions 12 Coal-fired Power Stations in Three Months in China*, Energy Business Review, May 4, 2009, http://coal.energy-business-review.com/news/ndrc_sanctions_12_coalfired_power_stations_in_three_months_in_china_090504/.

[57] *China Builds Bigger and Better Power Equipment*, Xinhua Economic News Service, Oct. 4, 2009; *Chinese Energy is Greener than Ours*, The Australian, July 27, 2009 ("Since 2005 China has required all new large power plants to use at least high-efficiency, super-critical technology and since 2007 it has shut down smaller, inefficient plants with a capacity of 14,380MW (more generation capacity than in NSW)."); *see also SDIC Xinji Energy to Set Up Venture with Anhui Wenergy*, SinoCast China Business Daily News, Dec. 8, 2008 (LexisNexis Academic) ("The venture, 55 to 45 owned by SDIC Xinji Energy and Anhui Wenergy, is planned to build and operate two 600MW supercritical pressure coal-fired power generator sets in the first phase.").

[58] *Id*.

[59] Additionality Tool, 10.

render the claim of additionality suspect, and the burden falls on the applicant to prove that the Project is actually financially or economically unattractive.[60] Similarly, under ACM0013, "[i]f the type of power plant identified as the baseline scenario is different from the power plant technologies that have recently been constructed or are under construction or are being planned (e.g. documented in official power expansion plans), the project participants shall provide explanations to this apparent discrepancy between observations and what should be considered as rational economic behavior."[61]

The participants failed to show why other ultra-supercritical coal plants on the ECPG and elsewhere in China should not be considered in the PDD's common practice analysis. While the CDM Executive Board stipulates that other CDM project activities—i.e., "registered project activities and project activities which have been published on the UNFCCC website for global stakeholder consultation as part of the validation process"—should not be included in common practice analysis, project participants must provide "documented evidence" to exclude similar projects on the basis of CDM application status.[62] Here, the project participant claims that all other ultra-supercritical plants operating on the ECPG "are in the process of CDM development,"[63] and are thereby excluded from common practice analysis. But they do not provide evidence to support their assertion.

In fact, evidence appears to contradict the project participants' assertion. For example, the project participants must address the status of the Jiangsu Kanshan ultra-supercritical plant, which is located in a province covered by the ECPG.[64] Plans to build ultra-supercritical units at this plant existed as early as 2005,[65] but the project is neither registered as a CDM project, nor published on the UNFCCC website for public comment, meaning that it cannot be excluded from common practice analysis under this methodology. If the Jiangsu Kanshan plant is not a CDM project, then the project participants must explain why it "enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project is subject."[66]

Even if this PDD technically complies with common practice requirements, the CDM Executive Board should note that common practice analysis, by excluding projects undergoing CDM validation, does not provide a meaningful credibility check for additionality claims. As noted above, there are currently a number of Chinese projects

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[60] *Id*.
[61] ACM0013, 4.
[62] Additionality Tool, 10.
[63] PDD, 18.
[64] *Power Plants Around the World*, Coal-Fired Power Plants in China – Jiangsu, http://www.industcards.com/st-coal-china-jiangsu.htm.
[65] *Kanshan Power Plant De-NOx Project Contract Signature Ceremony*, China Environmental Protection Co., Ltd, (Dec. 30, 2005), http://www.cepe.cn/en/News/ShowInfo.aspx?ID=1.
[66] Additionality Tool, 10.

that have applied for CDM credits under ACM0013. The fact that so many are being developed before the CDM Executive Board has approved any such projects for registration in China, coupled with the fact that at least some of these projects were initiated before the CDM Executive Board approved the ACM0013 methodology (e.g., Zhejiang Guodian Beilun Ultra-Supercritical Power Project[67]), suggests that excluding project applicants from common practice analysis merely because they have applied for CDM validation or registration may prevent a thorough investigation of additionality.

For the future, it also would also be helpful if the CDM Executive Board clarified what the spatial boundary for common practice analysis is, particularly in relation to the project boundary. For common practice analysis, the methodology states that the projects to be compared must be in the same "country/region."[68] Yet the project boundary is defined as the area that encompasses the Project and "all power plants considered for the calculation of the baseline CO2 emission factor."[69] By default, the project boundary is the extent of the grid to which the plant will be connected, and not the country or region as a whole.[70] It would be important to know whether the determination of the project boundary has any bearing on the common practice analysis.

V. The PDD's Environmental Impacts Disclosure Does Not Provide Meaningful Opportunity For Public Comment.

Along with additionality, projects must undergo an environmental impact analysis, but this PDD does not provide sufficient information to evaluate the Project's environmental impacts. Documentation of the Project's environmental impacts analysis (EIA), including analysis of transboundary impacts, must be included in Section D of the PDD.[71] This PDD's summary of the EIA performed by the Institute of Environmental Science of Anhui Province in April 2007[72] is exceedingly limited: it does not provide enough quantitative or qualitative data to provide an accurate or complete picture of the project's anticipated impacts on the environment.

A. The EIA summary fails to describe environmental impacts of project construction in sufficient detail.

The PDD lists the environmental impacts of constructing the power plant under the categories of air, water, noise, and solid waste, but provides too little detail for a reader to evaluate the likely impacts of construction on the surrounding ecosystem and

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[67] Zhejiang Guodian Beilun Ultra-Supercritical Power Project Project Design Document Form, Version 03.1, 18 (indicating that the decision to develop the power plant as a CDM project was made on November 3, 2005, with construction formally beginning on December 15, 2006).
[68] Additionality Tool, 10.
[69] ACM0013, 5.
[70] ACM0013, 7.
[71] PDD Guidelines.
[72] PDD, 33-35.

public health. The PDD's summary also prevents the public from being able to distinguish between serious and minimal impacts.

The PDD's summary of specific construction impacts does not provide enough information to evaluate the EIA. With respect to air pollution, the PDD states that "[t]he main sources of air pollution are dust from construction activities and transportation, and emissions from vehicles, construction machinery and the Project's boilers."[73] But the PDD does not provide any data on the contents or volume of the dust and emissions. In the section on water, the PDD states that "[t]he Project will generate waste water from construction and from Project workers' domestic use."[74] The PDD does not, however, provide any further description of the specific types or volume of pollutant. In the section on noise, the PDD states that "[c]onstruction machines and vehicles will generate noise."[75] The PDD fails to mention how much noise will be generated and at what hours. In the section on solid waste, the PDD states that "[c]onstruction waste will be piled up and buried at the designated landfill. Domestic waste will also be collected and transported away."[76] Yet there is no further description of where the landfill is located, the content of the solid waste, or the effect of that kind of waste on the environment.

Beyond these impacts, the PDD also contains no description of the project site prior to construction. The PDD does not say whether the site is open space, agricultural land, or already part of the urban environment. Without this basic baseline information, construction impacts cannot be measured. The project participants must describe site conditions before the project commences.

In the absence of a description of the existing environmental setting and an adequate and transparent analysis of the effects of construction activities on that baseline, stakeholders cannot meaningfully assess the seriousness of the Project's construction impacts and the adequacy of the proposed mitigation measures.

B. The EIA summary fails to fully account for the environmental impacts of project operation.

The PDD makes an even more significant omission in its the section on environmental impacts during the operation of the plant. Here, the PDD does not list any environmental impacts. Instead, the PDD only describes mitigation measures for air, water, noise, and solid waste pollution, as well as a virescence policy. Describing mitigation measures is not enough; the PDD fails must describe anticipated impacts to the environment before mitigation as well as the impacts that are still likely to occur after mitigation.

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[73] PDD, 33.
[74] PDD, 34.
[75] *Id*.
[76] *Id*.

For air pollution, the PDD lists measures to reduce emissions of pollutants such as SOx, NOx, PM10, and dust,[77] but does not provide any information on what the net emissions of these pollutants would be, or their impact on the environment and public health (e.g., the effect of soot on respiratory health).

For water pollution, the PDD states that "[t]he Project will construct a neutralizing pool, an oil-water separator, a coal sinking pool, a domestic sewage treatment system and a desulfurization wastewater treatment system to ensure the treated water discharged reaches the standard,"[78] but it does not indicate what this standard is, what kind of waste will be discharged, or what the environmental impact of the waste water will be.

For noise pollution, the PDD states that mufflers will reduce noise emissions by 15 to 30 dB(A), and that a soundproof room and control room will reduce the noise below 70 dB(A);[79] however, the PDD provides no information on the size of the area that will be impacted by this noise, or on the impact of 70 dB(A) noise on the surrounding environment and population.

For solid waste, the PDD states that "[p]art of the ash residues will be for integrated utilization, the others will be transported to the Meichong Ash Rolling Field."[80] The PDD does not address the content of the ash, its effects on the environment, or what "integrated utilization" means in this context.

Finally, the PDD indicates that "[a] virescence policy will be applied to the workshop area, roads and power generation facilities to attain a green ratio of 20.1%."[81] It does not, however, explain the significance of the 20.1 percent, or the specific measures through which this policy will be applied (e.g., what species will be planted on the Project site).

Because the PDD provides no context for the expected environmental impacts—i.e., no description of the surrounding ecosystems that the plant will affect—assessing these mitigation measures with any degree of particularity is impossible. Furthermore, there may be environmental impacts that are not or cannot be the target of mitigation strategies. Since the PDD guidelines require "[d]ocumentation on the analysis of the environmental *impacts*,"[82] the DOE cannot validate the PDD without this information.

In addition, the PDD fails to address a number of likely and significant project impacts. First, the PDD does not address the fact that the Project is only 3.5 km from the

[77] PDD, 34.
[78] PDD, 35.
[79] *Id.*
[80] *Id.*
[81] *Id.*
[82] PDD Guidelines, 19 (emphasis added).

Yangtze River. Based on this proximity, the Project's waste water could have serious implications for the river ecosystem and for transboundary water pollution problems. The PDD also omits any discussion of water supply for the plant. The fact that such questions are not addressed casts doubt on the PDD's assertion that the environmental impacts of the project are "not significant."[83] The project participants must provide "conclusions and all references to support documentation of an environmental impact assessment."[84]

C. The project participants' failure to release the Project's EIA further hampers public commentary.

The foregoing analysis illustrates that meaningful commentary on a project's environmental impacts is not possible without sufficient information. If the aim of publicizing the PDD is to invite well-informed commentary, then the public must be able to access documents that provide a full picture of how the Project will interact with the local environment. The most efficient way of doing so would be to make the EIA itself available on the UNFCCC website.

VI. The PDD Does Not Meet Requirements For Disclosure Of Stakeholder Commentary.

According to the PDD Guidelines, local stakeholders must be invited to comment in an "open and transparent manner, in a way that facilitates comments to be received from local stakeholders, and allows for a reasonable time for comments to be submitted."[85] In Section E.1 of the PDD, project participants must describe the process of eliciting and addressing stakeholder comments, a process which must be completed before the PDD is submitted to the DOE for validation.[86] Project participants must also show that they described the proposed project to stakeholders in a way that allows them to understand the project activity.

This PDD indicates that local stakeholders were notified of the opportunity to comment at a meeting only five days before the meeting took place. Ninety stakeholders attended the meeting, and the project participants asked attendees to complete questionnaires. The CDM Executive Board's guidelines require that project participants describe the information they provided to stakeholders, and give stakeholders a reasonable time to submit comments.[87] This PDD, however, does not describe the project participants' presentation, nor does it indicate how the much time the project participants gave stakeholders to provide comments.

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[83] PDD, 35.
[84] PDD Guidelines, 19.
[85] PDD Guidelines, 20.
[86] PDD, 35-36.
[87] *Id.*

Section E.2 of the PDD Guidelines also requires project participants to identify the commenting stakeholders, and provide a summary of those comments.[88] The PDD provides information on the occupation, approximate age, level of education, and gender of stakeholders.[89] But "identification" of a person normally refers to identification by name, which the PDD does not provide. Since the purpose of stakeholder commentary is to evaluate how stakeholders may be affected by the Project, the PDD's description of stakeholders should include more information on the kinds of stakes that individual commentators have in the Project (e.g., the proximity of their home to the Project site, their employer, if applicable, or any potential conflicts of interest).

With regard to the summary of comments, the PDD lists the seven questions on the questionnaire, which are:

1. Have you heard about the proposed ultra-supercritical power generation project?
2. Can the local power supply meet your need?
3. What is your attitude towards the project?
4. How will the Project improve your quality of life?
5. What will the Project's negative impacts on the environment be?
6. What will the Project's impact on local economic development be
7. What issues require consideration during the Project's construction and operation?[90]

Although the questionnaire asked seven questions, the comments are summarized into four points, which are as follows:

1. All of the respondents believed that the construction of the Project would have little or no negative impact on the local environment;
2. All of the respondents believed that the construction of the Project would assist local economic development and improve the quality of life for local residents
3. All of the respondents supported the construction of the project; and
4. The respondents suggested mitigating noise pollution during the construction phase, and restoring the surrounding ground and vegetation after construction is completed.[91]

This summary provides little indication of the variation in comments that one would expect from such open-ended questions. Further, given that the responding stakeholders are supposed to be identified, the summary would be more informative if it indicated which stakeholders provided which responses.

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[88] PDD Guidelines, 20.
[89] PDD, 35-36.
[90] PDD, 36.
[91] *Id*.

CONCLUSION

The role of the CDM within the Kyoto framework is to assist developing countries in achieving sustainable development and allow developed countries to meet their emissions reductions obligations, with the ultimate objective of reducing overall global emissions and averting dangerous interference with the climate system. Unless a project is additional and contributes to sustainable development—not only in terms of technical compliance with methodologies, but in fact—it cannot contribute towards the fundamental goals of the UNFCCC.

The PDD here neither proves that the Project is additional nor that the Project meets the requirements for environmental impact disclosure and stakeholder commentary. Without compliance with these principles of the CDM, the DOE, which upholds the integrity of the CDM through its independent analysis of this issue, cannot validate the Project.

Our analysis raises serious questions about the PDD's Project baseline (subcritical coal), and suggests that this baseline is likely inappropriate in the ECPG. As a result, this Project could lead to excess issuance of CERs beyond any actual emissions reductions, thus undermining the objectives of both the Kyoto Protocol and the UNFCCC.

Based on these concerns, we call on Bureau Veritas Group not to validate the proposed Project.

Respectfully submitted,

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