CDM Watch
Scrutinizing Carbon Offsets

Comments on the validation of the
Grid connected super-critical technology based power generation in Chhattisgarh, India.
- 14 July 2010 –

INTRODUCTION

CDM Watch respectfully submits the following comment on the Project Design Document (PDD) for Grid connected super-critical technology based power generation in Chhattisgarh, India to be developed by GMR Chhattisgarh Energy Private Limited, a subsidiary of GMR Energy Limited.

We highlight the importance of recognizing the integral role of transparency in the CDM validation process, and for taking this comment into consideration.

After careful consideration of the PDD in the given time, we conclude that if approved, this project would lead to the excess issuance of about 1,102,364 Certified Emissions Reductions (CERs) annually beyond any actual emissions reductions.

Based on our analysis, this project must not be validated for the following reasons:

I. There are a number of significant concerns about non-compliance with CDM key requirements:

1. The PDD fails to show that ACM0013 is applicable to supercritical coal projects in India.
2. The PDD does not include information on the project boundary.
3. The PDD fails to consider all plausible baseline scenarios.
4. The investment analysis in the PDD fails to support the choice of subcritical coal as the baseline scenario.
5. The PDD fails to prove that the Project would not occur but for the CDM financing.
6. The PDD fails to show that the project is not a common practice.
7. The PDD's environmental impacts disclosure does not provide meaningful opportunity for public comment.
8. The PDD does not meet the requirements for disclosure of stakeholder commentary.

II. Additionally, Part II of this comment highlights more reasons why the project should not be validated. The Stanford Environmental Law Clinic recently submitted comments on behalf of CDM Watch that raised serious concerns about the additionality of four coal-fired power generation projects proposed

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under ACM0013 and the ability of ACM0013 to filter out non-additional projects. The following arguments are borrowed from these submissions[1]:

a. **At Least Half Of All New Coal-Fired Generating Capacity In India Will Use Supercritical Technology:** News reports suggest that at least 35 supercritical plants, in addition to the proposed project, are at various stages of planning and implementation in India. All told at least half of India's more than 70,000 MW in planned coal-fired generating capacity over the next several years will be supercritical.
b. **CDM Benefits Are Neither Necessary Nor Responsible For India's Transition To Supercritical Technology:** Contrary to project participants' claims, a number of non-CDM drivers are likely responsible for this technological shift. Generators have strong, non-CDM-related incentives to install supercritical technology to avoid both market and policy risks.
c. **Here, It Is Doubtful That Project Participants Actually Considered A Subcritical Plant As A Realistic Alternative:** Given the market and policy risks of subcritical technology and the specific parameters of this project, it is unlikely that project participants actually considered a subcritical coal-fired power plant to be a realistic alternative. Project participants have multiple non-CDM incentives to install up to national supercritical baseline.

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. Here, such assumptions and analysis require that the DOE provide a negative validation to this Project.

DETAILED COMMENTS

1. The PDD falls to disclose relevant information in order to justify that the selected methodology ACM13 should apply.

Project participants fail to establish that ACM0013 is applicable to the proposed project. The PDD uses outdated information sources. Therefore, doubts

[1] "Comments on the Validation of the Anhui Wenergy Tongling1000 MW Ultra-Supercritical Coal-Fired Power Project," Letter from Stanford Environmental Law Clinic on behalf of CDM Watch to Bureau Veritas Certification Holding SAS, Jan. 26, 2010, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/IUAVZ3IDRAT913Q7HWRILJBWIZ2OYM; "Comments on the Validation of Grid Connected Energy Efficient Power Generation in Jhajjar, Haryana," Letter from Stanford Environmental Law Clinic on behalf of CDM Watch to SIRIM QAS International Sdn. Bhd., Feb. 16, 2010, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/QOO0MM4DP39ZYCBPCI2RGMRSVQZ7NL; "Comments on Shanghai Caojing 2!1000MW Ultra-Supercritical Project," Letter from Stanford Environmental Law Clinic on behalf of CDM Watch to Bureau Veritas Certification Holding SAS, Feb. 16, 2010, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/EGWBRZLZJPSAY9YSFZSCPR20C19LB9; "Comments on the Validation of the Jiangxi Xinchang 2x660MW Ultra-Supercritical Project," Letter from Stanford Environmental Law Clinic on behalf of CDM Watch to Bureau Veritas Certification Holding SAS, Feb. 16, 2010, *available at* http://cdm.unfccc.int/UserManagement/FileStorage/ZKC2IM52U7ZMYJ6JNCOJ0Q1K1KOC1K.

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can be raised as to the fulfillment of the 50% requirement for the same fossil fuel to be used in electricity generation.

B.2 - Justification of the methodology	
Applicable Rule(s)	**Description of Non-compliance**
"*The identified baseline fuel is used in more than 50% of total generation by utilities in the geographical area within the host country, as defined later in the methodology, or in the country. To demonstrate this applicability condition data from the latest three year shall be used. Maximum value of same fossil fuel generation estimated for three years should be greater than 50%.*"[2]	The PDD cites information which is not made available. The PDD should include explicitly the percentage of fuel used in each category for the 3 years prior to the project activity. This information is missing in the PDD[4].
„Data on fuel consumption and electricity generation of recently constructed power plants are available" in the PDD.[3]	The information contained in the PDD does not allow the DOE or other interested stakeholders to evaluate if recent trends in energy generation, especially from renewable sources, were taken into account. Hence, it is doubtful that the project developers are seriously addressing applicability criteria[5].

2. The PDD does not include important information regarding the project boundary for calculating the baseline emissions factor.

The PDD is requested to describe all relevant technical parameters of the project that will be used to calculate the baseline emission factor and, consequently to verify actual emission reductions. Without this information neither the DOE, nor other stakeholders would be able to verify the selected monitored gases, the baseline emission reduction factor or actual emission reductions claimed.

B.3. Description of the sources and gases included in the project boundary.	
Applicable Rule(s)	**Description of Non-Compliance**
„In addition to the table, present a flow diagram of the project boundary, physically delineating the project	The PDD does not include detailed information on the technology that will be employed.[7] Thus, the DOE would

[2] Approved Consolidated Baseline and Monitoring Methodology ACM0013, EB 46 Report, Version 03.1, p. 2 [hereinafter "ACM0013"].
[3] ACM 0013, p.2.
[4] Project Design Document (hereinafter « PDD »), p.7.
[5] PDD, p.7.
[7] PDD, p.8.

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activity, based on the descriptions provided in section "A.4.3. Technology to be employed by the project activity". Include in the flow diagram all the equipments, systems and flows of mass and energy described in that section. Particularly, represent in the diagram the emissions sources and gases included in the project boundary and the monitoring variables".[6]	not be able to verify neither the type of gases that have been included or excluded in the calculations, nor verify that emission reductions claimed by the project developers are calculated against a plausible baseline emission scenario.

3. The PDD discards unjustifiably alternative 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. The PDD eliminates several potentially plausible baseline scenarios based on conclusory statements. Therefore, it will be impossible for the DOE to make a conclusion on the possible baseline scenario

B.4. Description of how the project baseline scenario is identified and description of the identified baseline scenario.	
Step 1. Identify plausible baseline scenarios.	
Applicable Rule(s)	**Description of Non-Compliance**
To identify the baseline scenario, the PDD must compare the proposed project to *"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".*[8] "*several smaller plants, or the share of a larger plant may be a reasonable alternative to the project activity*"[9]	The PDD fails to provide sufficient evidence as to why the renewable option would not be a plausible alternative. The rejection of this option lays exclusively on the unjustified assumption that it is technically and economically unfeasible to generate power at 1370 Mw from renewable sources. This is in contradiction with the current trends in the sector of renewables in India in recent years. [10] Furthermore, as per methodology ACM 0013 a number of smaller optional projects could substitute a large-scale polluting coal fired power plant.

6 GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM). p. 10. (Hereinafter Guidelines for the PDD).

8 Tool for the Demonstration and Assessment of Additionality, Annex 10, Version 5.2, EB 39, 4 [hereinafter "Additionality Tool"].

9 ACM 0013.Ver3 , p.3.

10 Report of the Working Group on Power for the Eleventh Plan (2007-12), Volume - II, Main Report, Government of India, Ministry of Power, Feb. 2007, at Chapter 1, p. 22 (Northern India has country's largest hydro capacity of 8,465 MW, Table 1.23); Report of the Working Group on Power for the Eleventh Plan (2007-12), Volume - II, Main Report, Government of India, Ministry of Power, Feb. 2007, at Chapter 10, p. 7 ("The estimated potential by FY 2032 for power generation from renewable energy sources such as wind, small hydro, solar, waste to energy and biomass in the country is estimated of about 183,000 MW. A capacity of 13,500 MW is expected from renewable energy source during 11th plan. This shall comprise of around 75% from wind (10,000 MW), 10% from small hydro power (1,400 MW) and 15% from bio energy (2,100 MW).")

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4. The PDD's investment analysis does not support the selection of sub-critical coal-fired power plants as the Project's baseline.

The PDD does not display data to allow the DOE to recreate its analysis and identify the most attractive baseline. The PDD should be clearer on how the numbers in the chart it supplies are obtained. Details on the calculations are missing. Furthermore, the sensitivity analysis is not conservative enough in its critical assumptions.

B.4. Description of how the project baseline scenario is identified and description of the identified baseline scenario.	
Step 2. Identify the economically most attractive baseline scenario.	
Applicable Rule(s)	**Description of Non-Compliance**
"Please explain how the most plausible baseline scenario is identified in accordance with the selected baseline methodology. Where the procedure involves several steps, describe how each step is applied and transparently document the outcome of each step. Explain and justify key assumptions and rationales. Provide relevant documentation or references. Illustrate in a transparent manner all data used to determine the baseline scenario (variables, parameters, data sources etc.). *Provide a transparent and detailed description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity"*[11]*.*	Detailed information regarding the selection of the baseline is missing in the PDD. The PDD does not include any explanation or justification on how the numbers are obtained. The economic analysis is the most crucial step in the evaluation of the attractiveness and addiotionality of a project. If all relevant information is not presented in a clear and comprehensive way, it will be impossible to recreate the calculations and reach a conclusion based on facts and figures.[15]
"The economically most attractive baseline scenario alternative is identified using investment analysis"." *The 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".*[12]	In the PDD the sub-critical coal-fired power generation is identified as the baseline scenario.[16] However, the PDD does not include data regarding neither the origin of the fuel that would be used in case of sub-critical technology power plant, nor the substantial difference in efficiency using super-critical technology. With the expected substantial increase in coal price[17], the

[11] Guidelines to PDD, p.11.
[12] ACM 0013.03,p.3.
[15] PDD, p.11-13.
[16] PDD, p.13.

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"Calculate the suitable financial indicator for all alternatives remaining after Step 1. Include all relevant costs (including, for example, the investment cost, fuel costs and operation and maintenance costs), and revenues (including subsidies/fiscal incentives,[13] ODA, etc. where applicable), and, as appropriate, non-market cost and benefits in the case of public investors".[14]	more efficient super-critical technology becomes economically more attractive. The PDD apparently does not include these critical elements in their analysis. The data presented in the PDD in the tables on p.11 -13 is not justified. At a return on equity rate as high as 16%, sharply increasing coal prices and substantially more efficient a technology, super critical coal technology becomes economically more attractive[18]. Moreover, evidence could be found which contradicts the figures for coal price in the PDD[19], but also on the Gross Caloric value per Kg[20]. This could lead to different energy price calculation and different conclusions as to the cost/efficiency of the proposed project.
***"**Critical 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) should be clearly presented. Justify and/or cite assumptions in a manner that can be validated by the DOE"[21].*	To substantiate its investment analysis, the PDD only discloses summarised data in table. The PDD fails to include links to the sources for this numbered data[22], making it thus completely non-verifiable neither by the DOE, nor by a third party. The PDD does not use reliable data regarding fuel prices increase in the future. The 6,12% increase put forward in the PDD is not responding to market realities.[23]

[17] [17] G. Naga Srindar, Spiralling Coal Prices May Push Up Cement Cost Further (Coal Prices Up By Over 100 Percent in Last One Year), India Business Insight (India), May 21, 2008, available at http://www.thehindubusinessline.com/2008/05/21/stories/2008052151370200.htm.; Thaindian News; Coal India hints at price increase; accessible at: http://www.thaindian.com/newsportal/uncategorized/coal-india-hints-at-price-increase_100150698.html

[13] Note the guidance by EB 22 on national and/or sectoral policies and regulations.

[14] ACM 0013.03, p.3.

[18] PDD, p.12.

[19] http://www.mahagenco.in/genstats/data2005-n.pdf (tariff indications for the region). p.69.

[20] *Id.* p. 62.

[21] ACM 0013.03, p.4.

[22] PDD, p.12-13.

[23] G. Naga Srindar, Spiralling Coal Prices May Push Up Cement Cost Further (Coal Prices Up By Over 100 Percent in Last One Year), India Business Insight (India), May 21, 2008, available at http://www.thehindubusinessline.com/2008/05/21/stories/2008052151370200.htm.; Thaindian News; Coal India hints at price increase; accessible at: http://www.thaindian.com/newsportal/uncategorized/coal-india-hints-at-price-increase_100150698.html

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"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"[24].	The sensitivity analysis included in the PDD does not provide reasonable variations in its critical assumptions, because it only foresees ±10 variation in fuel prices.[25] In fact, prices have fluctuated by as much as 100% in recent years.[26] Hence, as coal prices increase above project participant's assumptions, supercritical technology is revealed as the true baseline. In fact, more efficient super-critical coal technology becomes more financially attractive as fuel price rises as it offers a generation efficiency.[27]

5. The PDD fails to prove that the Project would not occur but for the CDM financing.

Project participants must provide documented evidence that demonstrates that they seriously considered the CDM in the decision to implement the project activity. The investment analysis is weak and lacks detail. The information provided in the PDD is insufficient to establish that CDM benefits are necessary for Project implementation.

B.5 Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality)	
Step 2 – Investment analysis	
Applicable Rule(s)	**Description of Non-Compliance**
The PDD has to include the proper investment analysis in order to determine that the proposed Project activity is not *"the most economically or financially attractive; or Economically and financially feasible, without the revenue from the sale of CERs".*[28]	The investment analyses included in the PDD is far from conservative. The PDD does not include a detailed investment analysis. Details are missing (calculations; methods; assumptions; etc.) and the PDD rather includes a description and a comparison of levelised prices.[29]
To be eligible for CDM financing, project participants must *"demonstrate*	The PDD does not provide any data on how and when the decision to invest

[24] ACM 0013.03, p.4.
[25] PDD, p.13-14.
[26] G. Naga Srindar, Spiralling Coal Prices May Push Up Cement Cost Further (Coal Prices Up By Over 100 Percent in Last One Year), India Business Insight (India), May 21, 2008, available at http://www.thehindubusinessline.com/2008/05/21/stories/2008052151370200.htm.
[27] Source: http://www.cea.nic.in/god/opm/Thermal_Performance_Review/0708/highlights.pdf

[28] Tool for demonstration and assessment of additionality, EB 39 Report, Annex 10, (hereinafter "Additionality Tool), p.6.
[29] PDD,p.16.

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that the CDM was seriously considered in the decision to implement the project activity." [30]The project participants must prove this 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."*[31]	was taken. There should be a clear timetable, indicating when all relevant decisions were taken regarding the Project activity. Lacking this information the DOE will not be able to decide whether or not the Project activity would have been possible if it were not for the CDM financial support.

Sub-step 2.B: Option II – Apply investment comparison analysis.	
"(3) Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service (e.g., levelized cost of electricity production in $/kWh or levelized cost of delivered heat in $/GJ) most suitable for the project type and decision-making context".[32]	The PDD is basing its investment analysis taking into account-levelized price as the only financial indicator to establish a comparison between the 4 plausible alternatives.[33] The difference in the calculated levelized cost is not very important between the sub-critical (2,71 INR/KWh) and super-critical (2,95 INR/KWh) technology coal technologies[34]. What is more, evidence show that India's current 11th plan features the construction of 9 Ultra Mega Power Plants of 4000 Mw each[35]. The cost would be much lower than what is proposed by the PDD*".. between Rs 1.50 and Rs 1.80 per unit,"* the Central Electricity Authority (CEA) Chairman, Mr Rakesh Nath[36]. If we apply a reasonable assumption for coal price increase[37], which would be dramatic especially taking into account the expected substantial

[30] 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.).
[31] Guidelines on Prior Consideration of CDM, 1-2.
[32] Additionality Tool, p. 6.
[33] PDD, p.35.
[34] *Id.*
[35] Wikipedia, available here: http://en.wikipedia.org/wiki/Ultra_Mega_Power_Plants_%28India%29
[36] Business Line, Internet edition, Financial Daily from THE HINDU group of publications Tuesday, Jan 17, 2006; available here: http://www.thehindubusinessline.com/2006/01/17/stories/2006011703180900.htm
[37] US Energy Information Administration;"Inernational Energy Outlook 2009"; available at http://www.eia.doe.gov/oiaf/ieo/coal.html

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	increase in demand for imported coal. Given this price increase evidence, a rational investment analysis would eliminate the difference between levelized prices in both scenarios. Thus, as coal prices increase[38], super-critical technology is revealed as the most financially attractive option because of its sensibly higher technological efficiency. Thus the project activity becomes financially the most attractive and should not qualify for CDM financial support.
"(3) Identify the financial indicator, such as IRR…."[39]	The relevant parameter for considering investment attractiveness in power plants is the equity IRR, or RoE. Levelized cost cannot be parameter since the tariff is borne by the consumer and not the project developer. The incentive and the attractiveness of the investment is clearly the IRR. It should be clear that the most suitable indicator is the IRR. At an IRR rate of 16% identified in the PDD[40] and at a coal price increase expected to be much higher than the 6, 12% foreseen in the PDD[41] investing in super-critical coal fired power plant would be the economically most attractive option. The PDD should explain how it reached its conclusions given the fact that at a 16% rate of RoE, the return on investment is already a sufficient stimulus to invest in this technology.

6. The PDD fails to show 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 their claim that construction of supercritical coal plants is not a common practice in India.

[38] See, e.g., G. Naga Srindar, Spiralling Coal Prices May Push Up Cement Cost Further (Coal Prices Up By Over 100 Percent in Last One Year), India Business Insight (India), May 21, 2008, available at http://www.thehindubusinessline.com/2008/05/21/stories/2008052151370200.htm.;
[39] Additionality Tool,p.6.
[40] PDD, p.13.
[41] PDD,p.12.

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B.5 Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality).	
Step 4: Common practice analysis.	
Applicable Rule(s)	**Description of Non-Compliance**
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."*[42] "*Registered project activities and project activities which have been published on the UNFCCC website for global stakeholder consultation as part of the validation process are not to be included in this analysis".*[43] *"If 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."*[44]	Contrary to what is claimed in the PDD, the construction of super-critical power plants *is* a common practice in India. (We show this in detail in part II). Efforts are made to bring in highly efficient super critical technology in India for thermal power plant.[45] What is more, super-critical power plants are getting privileged access to coal supplies, which of course is a form of incentive to stimulate the use of super critical technology.[46] The execution of six super-critical units of 660Mw capacity each (NTPC Sipat and Bahr) was taken up during the 10th period[47] and the first units are already generating power. Moreover, the Government of India plans to electrify the whole country, which means that for the 11th plan they plan some 60,000 Mw additional thermal capacities to be developed.[48] If we consider than there are 9 Ultra Mega Power Plants of 4000Mw are planned, and 5 are on the project level[49], 14 super- critical power plants under construction and another 31 that

[42] Additionality Tool, p.10.
[43] *Id.*
[44] ACM 0013.03, p.4.
[45] Electrical Monitor, "India goes supercritical", Tuesday, September 01, 2009, http://www.electricalmonitor.com/GENERATION/india-goes-supercritical
[46] Live Mint com, The Wall Street journal, *"Large Utilities to get priority on coal supply"* http://www.livemint.com/2009/12/23234919/Large-utilities-to-get-priorit.html
[47] NTPC's barh Mega-Power Project Stage-II launched; http://frontierindia.net/cae/ntpcs-barh-mega-power-project-stage-ii-launched/92/ NTPC's Sipat unit begins power generation; http://www.thaindian.com/newsportal/business/ntpcs-sipat-unit-begins-power-generation_10046069.html
[48] The Government of India has an ambitious mission of POWER FOR ALL BY 2012. This mission would require that the installed generation capacity should be at least 200,000 MW by 2012 from the present level of 144,564.97 MW. Power requirement will double by 2020 to 400,000MW.; Central Electricity Authority – Targets for the 11th Period; http://www.cea.nic.in/power_sec_reports/executive_summary/2008_12/4.pdf
[49] Source Watch; available at: http://www.sourcewatch.org/index.php?title=India_and_coal#cite_note-ABARE2010-9

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	are at the proposal stage, as shown in a publicly accessible analysis[50], it seem clear that super- critical technology is the common practice in India. (Or at least will be by 2012 when the Project activity will be operating).

7. The PDD's environmental impacts disclosure does not provide meaningful opportunity for public comment.

The summary of the Project's environmental impact assessment (EIA) does not contain sufficient information to afford a meaningful opportunity for substantive public commentary. Because project participants' failed to release their full EIA it is not possible to gauge the Project's full potential environmental impacts.

D. Environnemental impacts	
Applicable Rule(s)	Description of Non-Compliance
"*The PDD must provide documentation for its analysis regarding environmental impacts".*[51]	The PDD does not provide documented arguments to support its overall claim that all the measures would be taken to tackle negative environmental impacts of the power plant. The PDD only includes a short summary of mitigation actions to be taken.[52] The PDD fails to fully address the fact that Indian domestic coal has high ash content. The PDD points to mitigation measures, but is unclear as to how much ash will be generated, utilized, and disposed. Indian coal contains heavy metals and fly ash released after burning can still be hazardous and contain heavy metals[53]. The PDD does not address these environmental concerns.

[50] Anto C, Boben and Prof. Hasan, M. M. ,"Super- Critical Technology in India", p.24 -26.; accessible at: http://www.scribd.com/doc/20902219/Paper-on-Super-Critical-Technology-and-Analysis-for-Indian-Environment#fullscreen:on

[51] PDD Guidelines, p.19.

[52] PDD, p.31-32.

[53] Snigdha Sushil & Vidya S. Batra, Analysis of fly ash heavy metal content and disposal in three thermal power plants in India, *Fuel*, vol. 85 (17-18), 2676 ("In India, at present, the major portion of fly ash produced goes for disposal in ash ponds and landfills and only a small fraction of it is utilized [5]. The utilization rate (13%) is far below the global utilization rate (25%) [6]. Due to minute particle size and presence of potentially toxic elements like arsenic, chromium, boron, vanadium and antimony, fly ash has been considered hazardous for living organisms. Some heavy metals leach out of the ash ponds and contaminate the soil, surface and ground water. These heavy metals have been known to limit the survival and growth of plants and microbial population [7].") (p. 2676) ("In general the heavy metal concentration of Indian coal ash was less compared to ash from other parts of the world.") (p. 2678)

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8. The PDD does not meet the requirements for disclosure of stakeholder commentary.

Robust stakeholder commentary is one of the CDM's key ways of ensuring sustainable development. Yet this PDD does not clearly describe the stakeholders involved in Project outreach or the information provided to them. As a result, the summary of public comments fails to sufficiently illuminate potential sustainability concerns.

E. Stakeholders' comments	
Applicable Rule(s)	**Description of Non- Compliance**
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."*[54] Project participants must describe the process of eliciting and addressing stakeholder comments. Project participants must also show that they described the proposed project to stakeholders in a way that allows them to understand the project activity.[55]	The PDD mentions that there was a 12 day period when invitations were sent, but did not include the type of information on how and what information was sent prior to the meeting in order to fully inform the stakeholders on the project and its various impacts and allow stakeholders to prepare and submit more in depth comments/questions[56]. It is legitimate to ask why the PDD does not include any evidence of the discussions (minutes etc.) during the consultation for public review. This indicates a lack of transparency during the consultation process.

II. Even if project participants correct the PDD's technical deficiencies, the DOE must not validate this Project because super-critical—not sub-critical—technology is the baseline for new coal-fired power plants in India.

Project participants assert that sub-critical technology is the baseline for their proposed project, but this flies in the face of observed practices in India. Rather,

[54] PDD Gudelines, p.20.
[55] *Id.*
[56] PDD, p.33-34.

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as shown below, most new planned and under-construction coal-fired power plants have adopted more efficient supercritical technology. Moreover, this behavior does not appear to be linked to the CDM. 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."[57] This "common practice analysis" provides a "credibility check" for a project participant's claim that its project is additional.[58]

Here, project participants fail to explain the discrepancy between their proposed baseline and observed, contrary behavior in India. Accordingly, project participants' claim of additionality is not credible and the DOE must not validate this project.

A. At least half of all new coal-fired generating capacity in India will use supercritical technology.

While project participants are correct that no *existing* coal-fired power plants in India use supercritical technology, they fail to acknowledge that the majority of *new* coal-fired power plants are expected to use this technology. Project participants assert that only two similar super-critical plants (excluding their own) are planned in India.[59] But this is demonstrably untrue. News reports suggest that at least 35 supercritical plants, in addition to the proposed project, are at various stages of planning and implementation in India (see Table below). National Thermal Power Corporation (NTPC) is expected to commission the country's first such plant this summer in Sipat, Chhattisgarh.[60] All told at least half of India's more than 70,000 MW in planned coal-fired generating capacity over the next several years will be super-critical.[61] Further, if all of the plants listed in the table below are built, super-critical plants will likely represent much more than 50 percent of new coal-fired generating capacity.[62]

[57] ACM0013, 4.
[58] Additionality Tool, 10.
[59] PDD, 32.
[60] *See* NTPC plans capex of over Rs 29,000 cr in FY 2011, *The Economic Times*, Jan. 27, 2010 (the first 660MW generator at the Sipat supercritical coal-fired power plant will be commissioned in August 2010.).
[61] Research and markets: proposed thermal power projects in India - 2009, *Business Wire*, Oct. 5, 2009 ("Out of the 76,198 MW being proposed and detailed in this report, about half of the capacity is through the super-critical technology clearly indicating a move towards more efficient and environment friendly technology."); Sub-660 MW plants face denial, Financial Express, Jan. 5, 2010 ("The government's target is that 60% of fresh thermal capacities in the 12th Five-Year Plan [2012-2017] and 100% in the 13th Plan [2017-2022] would be of supercritical technology.").
[62] The proposed plants listed below would add approximately 72,000 MW of supercritical coal generating capacity, which is higher than government estimates regarding the amount of this technology likely to be installed during India's 12th five year planning period (2012-2017). *See, e.g.*, Large utilities to get priority on coal supplies, *Livemint.com*, Dec. 23, 2009, *available* http://www.livemint.com/2009/12/23234919/Large-utilities-to-get-priorit.html (60 percent, or approximately 44,000 MW, of 74,000 MW in planned capacity to come from supercritical); Perfect engineering, *Business Standard*, July 14, 2008, *available* http://www.business-standard.com/india/news/perfect-engineering/328564/ (47 percent, or approximately 54,000 MW, of 114,000 MW to come from supercritical).

CDM Watch
Scrutinizing Carbon Offsets

Thirty-Five Supercritical Coal-Fired Power Plants in India

#	Project Developer(s)	State	City / District	Planned Generating Capacity
	**Coastal Andhra Power Ltd.	Andhra Pradesh	Sri Potti Sree Ramulu Nellore district	3960 Mw[63]
	Thermal Powertech Corp. Ltd. and Amaravathi Thermal Power	Andhra Pradesh	Machilipatham, Krishna District	1980 MW (3 x 660 MW)[64]
	East Coast Energy	Andhra Pradesh	Srikakulam District	4000 MW[65]
	Karnataka Power Corporation Ltd.	Chhattisgarh		1200 MW[66]
	National Thermal Power Corp.	Chhattisgarh	Sipat, Bilaspur District	660 MW[67]
	Canasia	Gujarat		2000 MW[68]
	**Adani Power Ltd.	Gujarat	Mundra, Kutch District	3300 MW (5 x 660 MW)[69] *(1320 MW have thus far been proposed under the CDM)*
	**Tata Power Company Ltd.	Gujarat	Mundra, Kutch District	4000 MW (5 x 800 MW)[70]

[63] CDM: Greenhouse Gas Emission Reductions Through Super Critical Technology – Coastal Andhra Ltd. ; available at: http://cdm.unfccc.int/UserManagement/FileStorage/UA4Q025GSZNOT8C9LBYRMIFDVXP6WH
[64] Tenders invited for Indian power plants, no purchase deal needed, *Platts International Coal Report*, July 28, 2008.
[65] East Coast Energy to establish 4,000 MW plant in Andrah Pradesh (along with a jetty to evacuate coal in Srikakulam district), *India Business Insight*, Oct. 31, 2008
[66] Karnataka plans mega project in Chhattisgarh (to set up supercritical 1,200 MW power plant at cost of RS6,000crore), *India Business Insight*, Sep. 21, 2008.
[67] First 500 MW of Sipat project reaches full load, *UNI (United News of India)*, May 30, 2008; *see also* NTPC plans capex of over Rs 29,000 cr in FY 2011, *The Economic Times*, Jan. 27, 2010.
[68] Canasia setting-up 2 units of 660MW supercritical power project in India, *Market Wire*, June 5, 2008.
[69] Corporate Adani Power's Mundra plan, *Business Line*, May 15, 2009; *see also* India: Mundra unit certified as first global project, *Daily the Pak Banker*, Jan. 22, 2010.
[70] CDM: GHG Emission Reductions through grid connected high efficiency power generation, http://cdm.unfccc.int/Projects/Validation/DB/7BSLZ4OVA742BMPB3WU8T1U4S4Y6P1/view.html; *see also* Mundra ultra mega power project (to be developed by TPC based on imported coal), *India Business Insight*, July 6, 2007; International finance corp clears $450 million for Tata power plant, *Platts International Coal Report*, Apr. 14, 2008; Invensys Operations Management to Supply Integrated Solutions for

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#	Project Developer(s)	State	City / District	Planned Generating Capacity
	Haryana Power Generation Corp. Ltd.	Haryana	Yamuna Nagar District	660 MW[71]
	Damodar Valley Corp.	Jharkhand	Koderma District	1320 MW (2 x 660 MW)[72]
	Madhya Pradesh Power Generation Co. and Bharat Heavy Electricals Ltd.	Madhya Pradesh	Khandwa District	1600 MW (2 x 800 MW)[73]
	Jaiprakash Power Ventures Ltd.	Madhya Pradesh	Nigrie, Singrauli District	1320 MW (2 x 660 MW)[74]
	**Lanco Infratech	Madhya Pradesh	Sasan, Sidhi District	4000 MW[75]
	Reliance Power Ltd.	Madhya Pradesh	Singrauli District	6600 MW (6 x 660 MW, 2 x 1320 MW)[76]
	**Thermal Powertech Corp. Ltd. and Amaravathi Thermal Power	Maharashtra	Amaravathi District	1320 MW (2 x 660 MW)[77]
	Maharashtra State Power Generation Co.	Maharashtra	Chandrapur District	800 MW[78]
	Maharashtra State Power Generation Co.	Maharashtra	Dhopave, Ratnagiri District	1600 MW (2 x 800 MW)[79]

First Ultra-Mega Power Plant in India; Technology and Consulting Expertise to Optimize Country's Largest Coal-Fired Plant, *Marketwire*, Oct. 20, 2009.

[71] 660-MW power station to come up at Yamuna Nagar, *Financial Express*, Nov. 9, 2009.

[72] News Domodar Valley plans super critical power stations, *Business Line*, Apr. 6, 2009; *see also* DVC to build super critical power stations (in Jharkand jointly with CIL), *India Business Insight*, May 31, 2009.

[73] India JV formed to build, operate supercritical plant, *Platts International Coal Report*, Nov. 23, 2009.

[74] MHI Receives Order for Two Supercritical-Pressure Boiler/Steam Turbine Sets From Jaiprakash Power Ventures Limited of India, Jointly with L&T, *ENP Newswire*, Jan. 14, 2010.

[75] CDM: Greenhouse Gas Emission Reductions Through Super Critical Technology – Sasan Power Ltd., http://cdm.unfccc.int/Projects/Validation/DB/JB9AVH5IAWF0MDFULY3P4678XR05JN/view.html; *see also* Rs 1.19 per unit tariff feasible: Shahi, *The Press Trust of India*, Dec. 19, 2006; Two ultra mega power projects to be initiated at Sasan, Mundra, *Hindustan Times*, Dec. 28, 2006.

[76] Funds tied up Reliance Power Ltd. (mobilised debt of RS1455 billion for the Sasan UMPP), *India Business Insight*, May 31, 2009.

[77] CDM: Grid Connected Power Generation through Supercritical Technology, http://cdm.unfccc.int/Projects/Validation/DB/IA8VQAT2JPKZD0SA8FGE1W5FSSKAC7/view.html; *see also* Tenders invited for Indian power plants, no purchase deal needed, *Platts International Coal Report*, July 28, 2008.

[78] Power companies go for 800-MW supercritical unit (to have lower emissions than subcritical plants), *India Business Insight*, July 2, 2007.

[79] Power-starved Maharashtra plans new plant at Dhule, *Indian Express*, June 29, 2009.

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#	Project Developer(s)	State	City / District	Planned Generating Capacity
	Maharashtra State Power Generation Co.	Maharashtra	Dondaicha, Dhule District	1320 MW (2 x 660 MW)[80]
	Maharashtra State Power Generation Co.	Maharashtra	Koradi, Nagpur District	1600 MW (2 x 800 MW)[81]
	Maharashtra State Power Generation Co. and Bharat Heavy Electricals Ltd.	Maharashtra	Latur District	1320 MW (2 x 660 MW)[82]
	**Adani Power Ltd.	Maharashtra	Tirora, District Gondia	1320 MW (2 x 660 MW)[83]
	Neyveli Lignite Corp.	Orissa		2000 MW[84]
	Unknown	Punjab	Gidderbaha, Muktsar District	2640 MW (4 x 660 MW)[85]
	Sterlite Energy	Punjab	Talwandi Sabo, Mansa District	1980 MW[86]
	IL&FS Tamilnadu Power Company Ltd.	Tamil Nadu	Cuddalore District	4000 MW[87]
	Steel Authority of India Ltd. and Larsen and Toubro	*Unknown*		1600 MW (2 x 800 MW)[88]
	Lanco	Uttar Pradesh	Allahabad District	1980 MW (3 x 660 MW)[89]
	Lanco (second project)	Uttar Pradesh	Allahabad District	1320 MW (2 x 660 MW)[90]

[80] Power-starved Maharashtra plans new plant at Dhule, *Indian Express*, June 29, 2009.
[81] Power companies go for 800-MW supercritical unit (to have lower emissions than subcritical plants), *India Business Insight*, July 2, 2007.
[82] Maharashtra State Power, Bharat sign MOU for supercritical plant, *Platts International Coal Report*, Aug. 17, 2009.
[83] CDM: Energy efficient power generation in Tirora, India, http://cdm.unfccc.int/Projects/Validation/DB/259L8CYWH665QF5XEXXKIGR1A6FO0Y/view.html.
[84] Neyveli Lignite wants majority stake in power project, *Indo-Asian News Service*, May 27, 2008.
[85] India to open tender for 2,600 MW power plant in Punjab, *Platts International Coal Report*, Sep. 1, 2008.
[86] India to open tender for 2,600 MW power plant in Punjab, *Platts International Coal Report*, Sep. 1, 2008.
[87] Tender process kicks off for 1,500 MW Tamil Nadu coal-fired plant, *Platts International Coal Report*, Sep. 22, 2008 ("What has been tendered is phase one of the project which proposes to develop a total 4,000 MW of capacity, equal to the size of a Ultra Mega Power Plant (UMPL).").
[88] Steel Authority of India ties up with Larson and Toubro for power plants, *Indo-Asia News Service*, Sep. 30, 2008.
[89] India's Lanco wins bid to develop two major coal-fired plants, *Platts International Coal Report*, Apr. 21, 2008.
[90] *Id*.

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#	Project Developer(s)	State	City / District	Planned Generating Capacity
	UP Power	Uttar Pradesh	Bara, Allahabad District	1980 MW (3 x 660 MW)[91]
	Canasia Power Corp.	Uttar Pradesh	Jawaharpur, Etah District	2000 MW[92]
	UP Power	Uttar Pradesh	Karchchana, Allahabad District	1320 MW (2 x 660 MW)[93]
	National Thermal Power Corp.	Uttar Pradesh	Meja Tehsil, Allahabad District	1320 MW (2 x 660MW)[94]
	National Thermal Power Corp.	Uttar Pradesh	Tanda, Ambedkar Nagar District	1320 MW (2 x 660 MW)[95]
	CESC	West Bengal	Haldia, Purba Medinipur District	1320 MW (2 x 660 MW)[96]
	Damodar Valley Corp.	West Bengal	Raghunathpur, Purulia District	1600 MW (2 x 800 MW)[97]

** Denotes projects proposed under the CDM, as listed at http://cdm.unfccc.int, as of February 16, 2010.

The fact that project participants could find only 12 other proposed supercritical coal-fired plants in India is peculiar since most of the 35 plants listed above were announced well before project participants completed their PDD.[98]

The PDD relies almost entirely on project information listed on the CDM website. While project participants' full research path is unknown, if they relied solely on the CDM website for this information, then it should come as no surprise that they concluded that they only identify so few other similar projects. To date, only six of the 35 proposed plants listed above have entered the CDM process. Other projects may eventually apply for CDM benefits, but such applications cannot be assumed. Of note, NTPC, despite being further along in

[91] Spate of supercritical power plants in UP (new power projects to have a capacity of 6,000 MW), *India Business Insight*, Feb. 22, 2008.
[92] Canasia Power develops 4,000MW of clean-coal power in India, *Marketwire*, Mar. 24, 2009; *see also* Canasia setting-up 2 units of 660MW supercritical power project in India, *Market Wire*, June 5, 2008.
[93] CDM: Grid connected energy efficient power generation, http://cdm.unfccc.int/Projects/Validation/DB/GV4Q5DLY8Z3NBDLMVIEANVT992JRKY/view.html; *see also* Spate of supercritical power plants in UP (new power projects to have a capacity of 6,000 MW), *India Business Insight*, Feb. 22, 2008.
[94] Spate of supercritical power plants in UP (new power projects to have a capacity of 6,000 MW), *India Business Insight*, Feb. 22, 2008.
[95] Spate of supercritical power plants in UP (new power projects to have a capacity of 6,000 MW), *India Business Insight*, Feb. 22, 2008.
[96] CESC to invest in high-end thermal plants (to set up two 660-MW super-critical thermal power plants at Haldia in West Bengal), *India Business Insight*, Sep. 11, 2006.
[97] News Domodar Valley plans super critical power stations, *Business Line*, Apr. 6, 2009; *see also* DVC to build super critical power stations (in Jharkand jointly with CIL), *India Business Insight*, May 31, 2009.
[98] PDD, p.19-20.

construction of its super-critical plant than any other super-critical project proponent in India, has not proposed its project under the CDM.

B. CDM benefits are neither necessary nor responsible for India's transition to supercritical technology.

Some of the many proposed super-critical projects in India may apply for CDM benefits, but the sheer number and scale of proposed super-critical projects in India raises serious doubts about whether the mere *potential* of CDM benefits has precipitated India's dramatic investment in super-critical capacity. Only six projects (not including the Project at issue here) are currently within the CDM process. This scant record of ACM0013 projects is unlikely to have convinced public and private power producers to gamble on the bulk of the country's future power sector.

Contrary to project participants' claims, a number of non-CDM drivers are likely responsible for this technological shift. For one, super-critical plants are expected to provide long-term economic benefits by reducing variable costs even if the initial capital costs of construction are slightly higher. In 2007, India's Bureau of Energy Efficiency noted that super-critical coal technology raised upfront construction costs by 10 to 15 percent, but reduced variable fuel costs by 10 percent over the long term.[99] More recently, project participants themselves recognized that the difference in the capital cost between subcritical and super-critical units is not that much.[100] And in the case of India's planned "Ultra Mega Power Plants" (UMPPs), which will each provide at least 4000 MW of supercritical generating capacity, the higher scales and efficiencies achievable through supercritical technology have contributed to electricity tariffs that are well below economically feasible rates from traditional, subcritical plants.[101]

Recent coal shortages in India have also provided an impetus for prospective coal-fired power plant developers to install more efficient power generating technology.[102] Over the last five years, critical shortages of coal have been well documented across India, inhibiting the ability of generators to produce and sell electricity to the grid.[103] Given the fact that the Mundra 1980Mw power pant will be running exclusively on imported, more expensive, coal super-critical technology, which is sensibly more efficient, has become a logical investment for new generators.

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[99] Fire without smoke making the switch (supercritical technology considerably lowers the costs of coal-based power generation), *India Business Insight*, Aug. 29, 2007.

[100] Large utilities to get priority on coal supplies, *Livemint.com*, Dec. 23, 2009, *available* http://www.livemint.com/2009/12/23234919/Large-utilities-to-get-priorit.html (quote from a CLP managing director). PDD, p.29-30.

[101] *See, e.g.*, Rs 1.19 per unit tariff feasible: Shahi, *The Press Trust of India*, Dec. 19, 2006 ("Government today said the Rs 1.19 per unit tariff proposed by Lanco Infratech for the 4,000 MW Sasan Ultra mega power project is feasible . . . "Super critical system gives you an advantage of fuel input and cost of power which has helped lowering the tariff," he said.").

[102] *See, e.g.*, David Victor, He protests too much; India is already going green, *Newsweek*, Aug. 17, 2009 ("Shortages in coal, which supplies about three quarters of India's electricity, are forcing India to accelerate this trend to higher efficiency.").

[103] *See, e.g.*, Thermal plants' coal shortage worsening, Business Line, Apr. 4, 2005; Thermal plants face acute coal shortage (coal stock at 8,689 million tonnes against normal replacement of 22 million tonnes), *India Business Insight*, Apr. 2, 2008; Coal situation worsens at thermal stations (several stations super critical with stocks for less than 4 days), *India Business Insight*, May 9, 2008; Corporate power crisis looms large as key thermal stations starve for coal, *Business Line*, Aug. 9, 2008; Inadequate coal linkages hit power stations, *The Press Trust of India*, Jan. 26, 2009; Govt revises coal import target upwards to 35 MT in FY'10, *The Press Trust of India*, Mar. 20, 2009; Thermal stations continue to battle coal shortages, *Business Line*, Apr. 16, 2009; Shortage of coal, gas to hit power sector, *Financial Express*, Nov. 2, 2009; Indian market ready for plants, but needs steady supply of coal, *Platts Coal Outlook*, Nov. 16, 2009; India's NTPC shuts two coal plants on coal shortages, *Platts International Coal Report*, Nov. 23, 2009.

Government policies, too, are encouraging power generators to move to super-critical or even ultra-supercritical technology. India faces massive power supply deficits and to meet its population's energy demands, the country must rapidly grow its power sector. The Central Electricity Authority of India estimates that generators failed to meet 12 percent of peak demand in 2008-2009 and that the country faced an overall energy shortage of 11 percent during that same period.[104] Much of this new generating capacity is likely to be met by new coal-fired power plants, yet increased coal generation will only exacerbate existing coal supply problems. As a result, the Indian government is incentivizing more efficient generating technologies in a number of ways.

For example, India has adopted a "mega power project policy" that waives import duties on equipment purchases and provides income tax incentives for new coal-fired power plants of 1000 MW and larger.[105] While this policy could theoretically incentivize efficiencies of scale with any technologies, it may be easier to reach these incentives with super-critical and eventually ultra-supercritical units, which can operate at higher capacities than sub-critical units. Further, India is now considering whether to explicitly restrict "mega power project" benefits to super-critical plants.[106] Coastal Andhra Ltd. Project falls within this plans for boosting super-critical technology.

In order to ensure efficient energy resource use, India is also considering new policies that would give super-critical generators priority access to scarce coal supplies[107] and may ban subcritical plants altogether.[108] One proposed policy would deny coal linkages to new coal-fired power plants with units of less than 660 MW in capacity. At present, 660 MW coal-fired units can only be achieved with super-critical or ultra-supercritical technology.[109]

To the extent that the government policies are playing a role in India's transition to supercritical technology, we believe that these policies do not fall within the CDM Executive Board's E+/E- rule. While India's efficiency policies may be linked in part to environmental concerns, including climate change, India also faces acute power shortages and pinched coal supplies that are forcing the country to use coal more efficiently. India's efficiency policies are necessary to maintain the country's energy security and are likely outcomes regardless of climate change. To pretend otherwise under an E- argument would lead to perverse, non-additional CDM outcomes. Since the E+/E- rule is designed both to avoid perverse incentives and to ensure additional carbon reductions, application of E+/E- to the Indian coal sector would undermine both the purposes of the rule and the larger objectives of the Kyoto Protocol. Further, if India does adopt a policy banning (or effectively banning) subcritical plants, then the E+/E- rule clearly will not apply to future questions about subcritical technology, as

[104] Research and markets: proposed thermal power projects in India - 2009, *Business Wire*, Oct. 5, 2009.
[105] India: Power firms likely to be told to tread green path, *Daily the Pak Banker*, Jan. 4, 2010.
[106] *Id*.
[107] Large utilities to get priority on coal supplies, *Livemint.com*, Dec. 23, 2009, *available* http://www.livemint.com/2009/12/23234919/Large-utilities-to-get-priorit.html.
[108] Sub-660 MW plants face denial, *Financial Express*, Jan. 5, 2010.
[109] *Id*.

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ACM0013.03 requires that project participants "exclude baseline scenarios that are not in compliance with all applicable legal and regulatory requirements."[110]

Ultimately, even if government policies favor super-critical technology, this does not change the fact that generators have faced coal shortages for several years. This situation has created significant new risks for generators that may have once considered subcritical technology to be an appropriate investment. To address both market and policy risks, generators now have a strong, non-CDM-related incentive to install supercritical, if not ultra-supercritical, technology.

C. Here, it is doubtful that project participants actually considered a subcritical plant as a realistic alternative.

Given the market and policy risks outlined above, and the specific parameters of this project, it is unlikely that project participants actually considered a sub- critical coal-fired power plant to be a realistic alternative. While project participants may be commended for contributing to a cleaner shift, from sub-critical to super-critical technology, they have not shown that their decision would have been any different without the potential for CDM benefits.

Project participants do not provide any documents on the origins of the imported coal or the security of supply for that same coal.[111] In consequence, the DOE must inquire as to whether there will be enough coal supplies to cover only the quantities needed to generate the necessary power from a super-critical plant or whether project participants could have acquired sufficient coal resources to also justify, economically, the sub-critical coal-fired power plant alternative. To prove that sub-critical coal could be a legitimate alternative baseline, project participants should show evidence that enough coal supplies are available for this technology. Given documented coal shortages, and the potential for priority coal access for new super-critical plants, project participants must show that sufficient coal supplies would actually exist for a sub-critical plant.

Based on all of these factors, it is unlikely that project participants would choose to install a subcritical plant here even if the potential for CDM benefits did not exist. Supercritical technology has become a common practice in new coal-fired power plants in India, and is now the de facto baseline. Project participants have multiple non-CDM incentives to install up to this baseline.

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 emission reduction 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.

[110] ACM0013, Step 1, p. 3.
[111] PDD,p.32.

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The PDD here fails to prove that the project is additional and sustainable. On a purely technical basis, the PDD fails to comply with ACM0013.03. But even if project participants could correct the PDD's technical deficiencies, this project would likely not be additional. Our analysis raises serious questions about the PDD's project baseline—subcritical technology—and suggests that this baseline is inappropriate for new coal-fired power plants in India. India is in the midst of a clear shift to more efficient supercritical technology. In fact, the next big shift, already on the horizon in India, is not toward supercritical but to even more efficient ultra-supercritical coal-fired power plants.[112] Thus, approving CDM benefits for new supercritical projects in India would lead to excess issuance of CERs, beyond any actual emissions reductions, and undermine the objectives of both the Kyoto Protocol and the UNFCCC.

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

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[112] *See, e.g.*, India to expand electrical production, *UPI Energy*, Oct. 7, 2009 ("According to Central Electricity Authority official Swapna Seshadri, "Our next step would be setting up [ultra-supercritical coal-fired power plants]. The government is planning to set up eight plants across the country with 800 megawatts each. We are planning to start the initiative by next year.""); *see also* Clean coal, the next big step, *Hindustan Times*, Dec. 8, 2009; Large utilities to get priority on coal supplies, *Livemint.com*, Dec. 23, 2009, *available* http://www.livemint.com/2009/12/23234919/Large-utilities-to-get-priorit.html; Giant coal-fired power plant gets green subsidies, *The Sunday Times (London)*, June 15, 2008; Centre bets on shift to supercritical tech to add to thermal capacity, *Business Line*, Aug. 7, 2009.