

Linjiang Erqi MSW Incineration for Power Project

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Whether waste incineration is a clean, environment friendly, resource saving approach is still disputable all over the world. Although waste incineration causes serious pollution, such as emission of dioxins, furans and heavy metals, seriously affect communities and environment, through the CDM a number of waste incineration projects have been approved. For us it is incomprehensible.

Regarding the application of the “Linjiang Erqi Waste Incineration Project”, we argue that the discussion of baseline and additionality in the PDD is neither sufficient nor convincing. Furthermore, we think the statements that the incineration project improves the local environment, increases job opportunity, reduces coal-burning and is supported by local stakeholders needs to be seriously questioned. Also, we doubt that whether the plant can implement the measures as set out in EIA, because of the environmental behavior of the 1st phase of the Linjiang Incineration Project which is demonstrated in the EIA report.

(Linjiang Erqi MSW incineration is 2nd phase of the complete Linjiang Incineration Project)

Supported by the arguments below, the Wuhu Ecology Center and eight other Chinese environmental NGOs strongly recommend the rejection of this project under the CDM.

1. Insufficiency of alternate scenarios discussion

Under the CDM the developer is required to compare the proposed project with alternative scenarios: yet none of the described alternatives propose other means for handling the organic waste (methane-generating) (p.12), which is improper in current situation that MSW in China consists to more than 50% of organic waste (World Bank, 2005) and it would need more auxiliary fuel because of organic waste (see point #5 below). Animal feed, composting and anaerobic digestion are three proven, low-technology and low-capitalization means for handling organic waste and avoiding methane emissions. These should be considered alongside the development of recycling management systems. Especially in recent two years, central and local government has paid much more attention to organic waste disposal and waste recycling. Cities like Beijing, Guangzhou, Hangzhou begin to launch waste classification in communities: In the State Council routine conference held by State Council Premier Wen Jiabao on 23th March 2011, it is announced that waste classification would be launched and 50% cities with districts should achieve separated transportation and disposal of organic waste by 2015^[1]. In this sense, waste classification and organic waste handling must be included in alternate scenarios.

These two rational alternate scenarios have not been considered in the PDD, so the demonstration of baseline and additionality in this PDD is disconfirmed.

2. Insufficient demonstration of additionality

Back to 21st January 2009, BOT Privilege Agreement of Linjiang Erqi Municipal Solid Waste Incineration Power Plant was officially signed^[2]. On 14th September 2009, the Department of Environment Protection in Zhejiang posted the public announcement of the Environment Impact Assessment^[3]. On 8th September 2010, the power plant was reported to be completed in January 2011^[4]. All the information reveals that this project has started before the approval date of CDM, indicating insufficient additionality. Meanwhile, the developer has not provided any document to demonstrate that the income of this CDM project has been examined with strict measures.

3. Questioning the statement of ‘Improvement local environment’

3.1 Burning waste emits dioxins, which is a highly toxic substance and has become a serious phenomenon in China. In China, waste is not sorted before incineration, resulted in an increasing emission of dioxins from burning plastic wastes. Moreover, the kitchen wastes are more than half of all types of waste in China. According to the investigation results from the Environment Science and Engineering Department of Pecking University in 2008, the moisture content of waste in Beijing is 50.19 per cent. The excessive amount of moisture lowers the caloric value of the waste and induces incomplete combustion, resulted in an increasing probability of dioxins emission. If detrimental waste is not excluded, flue gas and dust would pollute the environment during the incineration process. In addition, China has not established effective monitoring systems to address the dioxins emissions from waste-incineration. All the above is current situation of waste incineration power plants in China, which have already created substantial negative impacts on communities and environment. However, such important background information has not been provided in the PDD.

3.2 The PDD says in p.54: “The main air pollutants in the operating process comprise acid gases (SO₂, HCl, and HF), heavy metals, dioxins and NO_x from the flue gas generated during the incineration process, and dust and odor from MSW tanks”, but the other pollutants such as furans, PCBs (all of which are regulated under the Stockholm Convention), brominated and brominated-chlorinated aromatic hydrocarbons in the process of incinerating are not included in the PDD. In this sense, the PDD shows a total lack of scientific rigour when it states, “The Project has no significant environmental impacts during the construction phase and the operation phase” (p.55). The World Bank estimates that China’s push to increase waste incineration will double the global production of dioxins alone. These pollutants will have significant health impacts on the Chinese population as well as globally, because of the long-distance transport of some chemicals.

3.3 Burning waste also causes vast amounts of fly ash containing hyper toxic substances, which are particularly susceptible to dissolution in water, resulting in pollution of surface and ground water. It causes substantial influence on both environment and human health. On p.54 of the PDD it is said 'The fly ash as hazardous solid waste will be treated by a professional entity', but it does not specify how and where and by whom the fly ash will be professionally treated. In China, fly ash treatment is difficult to establish and monitor. In November 2010, the Macaw Solid Waste Incineration Power Plant, which has been considered as the prototype project of waste incineration power plant in China, was reported its fly ash scandal. Scandals like this are more likely to happen in the Mainland. On p.54 of the PDD shows 'The slag will be reused as raw materials for brick making', which also needs to be questioned or further explained in detail. Because during the incineration process, heavy metal is everlasting toxin, dioxins and furan are persistent pollutant. If the slag is used e.g. for road construction, when the road surface would be damaged or removed, it will lead to the release of hazardous dust particles.

To sum up, on p.2 of the PDD document, the statement "Improvement local environment-The project prevents waste from being left to decay...a potent greenhouse gas and potential fire hazard" does not sufficiently reveal the objective facts, and severely compromises the objective of the CDM to promote sustainable development.

4. Questioning the statement of 'Job creation'

Tens or hundreds of thousands of individuals make a living by recovering recyclable materials from municipal waste. Although their working conditions are often insalubrious, it is the best or only way of employment available to them. If the incinerator burns recyclable materials, they will lose even this livelihood. The PDD misleads the readers when it says that it achieves "Job creation – A large number of local staff will be employed during the construction stage and also to operate and maintain the project" (p.2), as there is no mention about the number of people who will be deprived of their livelihoods. Ultimately, this negative impact on employment is in no way consistent with the CDM's goal of sustainable development.

5. Questioning the statement of 'Fossil fuel consumption reduction'

5.1 On p.10 of the PDD it is stated "Approximately 200 tons light diesel will be used annually as auxiliary fuel for the start-up of the incinerator", in fact much more fossil fuel may be used. Because the main content of waste in China is organic kitchen waste (Word Bank, 2005), according to a research done by the College of Environmental Science and Engineering, Peking University, 69.32% of the municipal waste in Beijing is kitchen waste, which caused 50.19% of water content. This has to some extent reflected the reality of the composition of waste in China. The calorific value of the municipal waste in China is low and the incinerators need to constantly feed in fossil fuel to sustain operation combustion temperature. The developer should be required to include scientific and reliable data about the composition of MSW in Wenzhou city and provide a rigorous account of how much auxiliary fuel will be

needed depending on the calorific value of MSW. The actual amount of fossil fuel needed based on the real quality of the municipal waste in Wenzhou city shall be clearly explained.

5.2 With the incentive of national subsidy on electricity, the waste incineration power plant will likely mix huge amounts of fossil fuel with the waste to maximize the profit. In the national regulation on waste incineration power generation project, it is clearly stated that coal as auxiliary fuel shall not exceed 20%. However, this PDD only mentioned “The fraction of energy generated by fossil fuel is far below 50% of the total energy generated in the incinerator” (p.10), in addition that there is no third party monitoring to guarantee the proportion of fossil fuel would fulfill the national requirement and the commitment in PDD, in order to avoid the waste incineration to become a fossil power plant.

5.3 The current waste incineration is mixed-combustion. Recyclable resources such as paper and plastic will also be used as fuel. This not only results in waste of non-renewable resources, but will also increase GHG emission and energy consumption through the production of the materials which are supposed to be recycled. This part of emissions is not considered in the PDD. It is disputable to argue that such waste incineration power plants reduce overall GHG emission when the whole life cycle is considered. Wasting resources and indirectly increasing GHG emission violates the principle of sustainable development of the CDM.

To conclude, the statement “Fossil fuel consumption reduction- By utilizing waste as the primary fuel for energy generation... need to rely on imported fossil fuels” (p.2) is not sufficient.

6. Questioning the statement of ‘Stakeholders’ comments’

On P.57 of PDD file is information about the stakeholder consultation and their attitudes to this project. We have different opinions on several points. First, the PDD document does not include the methodology they use for stakeholder consultation. Second, approximately 16000 villagers from 16 villages would be influenced because of the project^[5], but only 63 of them were investigated.

The sample size is much too small to be representative and there is no further description of the sample sites. Third, the consultation result shows the support rate is 92% without any objections, of which the reliability is really worthy to be questioned.

In China there are still many problems in environment impact assessment for waste incinerator projects, especially concerning the public engagement part. In 2010, an incineration plant in Qinhuangdao forged public opinion, while the residents around the plant require legal compliance.^[6] In June, 2011, the information on stakeholders consultation of an environment impact assessment report of the Beijing Sujiatuo waste incineration plant proved to be false. Although the project has been questioned by environment NGOs, it was still approved by Beijing Environment Protection Bureau ^[7]. Thus, in this context, we request more detailed submission of the investigation methods, the original document of participants’ information to prove the support from the stakeholders of this project.

7. Questioning the implement of the measures in EIA of this project

Linjiang Erqi MSW incineration is the 2nd phase of the whole Linjiang Incineration Project. According to demonstration of environmental performance of the 1st Phase in the EIA report of Linjiang Erqi MSW incinerator (abridged version)^[5] the following points have been made: Gas emission has reached the Standard of Incineration (GB18485-2001); Dioxins emission cannot reach EU standard; odor exceeds national standards; noise pollution higher than normal at night; fly ash stored in the plant after solidification and both of store site and solidification site are shabby, lacking of leachate and dust control measures, which cannot meet the requirements of environmental protection standards. The current capacity of leachate treatment is 30t/d, which does not meet the requirements of the plant. In this sense, there already exist many unresolved problems with the environmental performance behavior of the plant, especially the treatment of fly ash. Therefore we question the statement on noise, gas emission and solid waste treatment in this PDD (p.54) and the statement that “All the measures set out in the EIA will be implemented.”(p.57). With the multitude of problems of 1st phase of the Linjiang Erqi plant, it is very questionable whether the 2nd phase project will be without faults.

Given the problems outline above, it is unacceptable for this PDD to maintain statements such as “Improvement on local environment” (p.2) or “The project has no significant environmental impacts during the construction phase and the operation phase.” (p.55) And it is highly questionable that “The survey shows that the Project receives strong support from the local community, which is closely linked to the fact that the majority of local residents have some understandings of the Project.” and “All the measures set out in the EIA will be implemented”(p.57).

Therefore it is the opinion and request of Wuhu Ecology Center that this project’s application for validation should be rejected, a request which is also supported by eight other Chinese environmental NGOs (see below).

Related information:

[1] <http://stock.stockstar.com/JI2011032600001663.shtml> (in Chinese)

[2] <http://www.wszyl.cn/cn/view.asp?ArticleID=5831> (in Chinese)

[3] http://www.zjepb.gov.cn/hbthmhwz/bsdt/xzxkspgs/200911/t20091101_8958.htm (in Chinese)

[4] <http://www.wszyl.cn/cn/view.asp?ArticleID=6986> (in Chinese)

[5] http://www.zjepb.gov.cn/hbthmhwz/bsdt/xzxkspgs/200911/t20091101_8958.htm (in Chinese)

[6] http://news.ifeng.com/fhzk/detail_2011_03/01/4905732_0.shtml (in Chinese)

[7] <http://green.sina.com.cn/news/roll/2011-06-16/101822651473.shtml> (in Chinese)

The following Chinese environmental NGOs support this comment:

安徽绿满江淮环境咨询中心
Green-An Hui Environmental Development Center



创绿中心
Greenovation Hub

道和环境与发展研究所
Insitute of Environment and Development



达尔问自然求知社
Green Beagle



福建省绿家园环境友好中心
Fujian Green Home Environment-Friendly Center



绿色潇湘
Green Hunan



厦门市绿十字环保志愿者中心
Xiamen Greencross Association



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