

“Chengdu Jiujiang Municipal Solid Waste Incineration Power Plant Project”

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Despite several concerns having been raised around incineration technology around the world as a result of its very severe impacts on ecosystems and communities, the CDM continues supporting projects as the **Chengdu Jiujiang Municipal Solid Waste Incineration Power Plant Project**. This kind of project support worsens CDM’s environmental integrity in a major way and raises fundamental questions about the additionality of the CERs that this project would eventually issue.

This document highlights major flaws and inconsistencies detected in the limited information provided in the PDD, in order to give constructive input, and to show that its claim of contributing to “significant environmental and social benefits” (p.2) does not stand. As such, this document finally recommends the rejection of the project.

1. Impact on recycling rates. Recycling is a major industry in China, particularly through the informal sector. The PDD makes no mention of the recyclable materials that are present in MSW, which indicates that the developer intends to burn commingled waste. In fact, this must be the case; if recyclable materials were separated out of the waste before incineration, the remainder would be largely food waste, which is low in calorific value and high in moisture, and eminently unsuitable for incineration. So the developer intends to burn materials that are currently being recycled. Yet the climate impact of a reduced recycling rate is omitted from the GHG calculations. This must be included and the “avoided emissions” revised accordingly.

2. Impact on recyclers. Tens or hundreds of thousands of individuals make a living by recovering recyclable materials from dumps and landfills in China. While their working conditions are often insalubrious, this is the best form of employment available to them. If the incinerator burns recyclable materials, they will lose even this livelihood. The PDD misleads the reader when it says that it will “Create more employment opportunities over the project construction and operation period” (p.3), as there is no mention of 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.

3. Lack of alternate scenarios. 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 (methane-generating) waste. Basically, the project assumes that without the project activity, the generated MSW will to be disposed of at a landfill (p.14), which again it is a very distorted version of reality. 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. The developer should be required to analyze the financial and climate implications of implementing these approaches as alternate scenarios.

4. Appropriate disposal of incinerator ash. Incinerator ash is a hazardous waste product, containing a variety of toxic elements and compounds. Because of its fine granular nature, it is particularly susceptible to dissolution in water, leading to the contamination of ground- and surface-waters. Proper treatment requires vitrification in a high-temperature furnace, which is not provided for under the PDD, followed by disposal in a hazardous waste landfill. It is not clear that the landfill is appropriate for hazardous waste management and it should never be used as construction materials as the project plans to do (p.50) as it may have very severe impact on human health and the environment. The developer should be required to implement ash vitrification and ensure that the vitrified ash is sent only to a properly maintained hazardous waste landfill.

5. Impact on future recycling programmes. Recycling programmes in cities such as Cairo and Denpasar (Indonesia) have shown that 80% recycling is feasible in a developing country context. Yet the project developer intends to incinerate 650,000 tons of MSW per year (p. 5). This clearly creates a disincentive for the city or private actors (including the wastepickers) to mount a more aggressive recycling effort, which would have a far better climate impact than incineration.

6. Production of toxic emissions. The PDD acknowledges that the incinerator will produce new, problematic pollutants, but it adopts insufficient technology to filter toxic pollutants and finally discharges toxic gases from the chimney into the atmosphere (p.50). This involves an uncontrolled release of dioxins, furans, PCBs (all of which are regulated under the Stockholm Convention), brominated and brominated-chlorinated aromatic hydrocarbons; heavy metals; particulates, including nanoparticles. In this sense, the PDD shows a total lack of scientific rigour when it states, “No distinct influence on environment of atmosphere exists in the proposed project.” (p.50). 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. Increased toxic pollution is certainly inconsistent with sustainable development.

7. Displacement of electricity. Given that China’s electric grid is chronically under-powered, it is inappropriate to claim that the additional electricity generated by the incinerator would displace another source as the PDD says in p.2: “The electricity will replace equivalent electricity supplied by CCPG, which is predominated by fossil fuel-fired power plants.” With spiralling electricity demand, there is no evidence to suggest that China will refrain from building a power plant because of the incinerator; and it is ludicrous to suggest that China would shut down an existing plant. There are co-benefits to increased electricity supply to the grid, but no climate benefits without real displacement.

8. Reduced toxic emissions from coal-burning. The PDD claims that it will “reduce GHG emissions and mitigate the emissions of other pollutants caused from local coal-fired power plants by displacing part of electricity from Grid” (p.2). In fact, MSW is a dirtier fuel than coal, because of its heterogenous nature and the inclusion of a variety of toxins, including heavy metals, chlorinated and other halogenated compounds, brominated flame retardants, and others. While coal burners and waste burners have dissimilar pollution profiles, it is generally accepted that incinerator emissions are more toxic and more difficult to control; to suggest the opposite is

merely disingenuous. Also note that, if the incinerator's electricity production does not result in a reduction in coal burning (see point #7 above), there is no reduction in emissions at all from coal-burning.

9. Biogenic emissions. The PDD asserts "The electricity will be delivered (...) without CO₂ emissions" (p.2) which is totally incorrect because it fails to include CO₂ emissions of biogenic carbon dioxide. This is based on the assumption that the source of such carbon is being sustainably harvested. Most biogenic carbon in MSW is found in food and in paper products. Given the parlous and deteriorating nature of top-soils in China, and the unsustainable nature of deforestation for paper products worldwide, this assumption cannot be accepted a priori. The project developer should be required to document the sustainable source of the biogenic carbon, or to count biogenic carbon in the total emissions. Otherwise, the inaccuracies of the total estimated emission reductions will be erroneous and the project would be eventually issuing non-additional CERs.

10. Energy inefficiency. The PDD indicates that the incinerator will be an extremely inefficient producer of energy. First, the incinerator will use 600.000 tons of natural gas/year to run the furnace (p.8), which it is likely to increase given that calorific value of waste in China is very low due to being mostly organic waste (World Bank, 2005). The developer should be required to include data about the composition of MSW in Chengdu and ratify and provide a rigorous account of how much auxiliary fuel will be needed depending on the calorific value of MSW. Second, there seems to be no use for the heat, other than to generate electricity. A CHP configuration, which is necessary to maximize efficiency, is thus not anticipated. The developer should be required to re-site the incinerator to a location where CHP is practical.

11. Stakeholders consultation. There is also the troubling issue of local stakeholders. According to the PDD, a survey was done of the local population to determine their opinion about the project. No methodology for the survey is given, but some observations can be made based on the results given in the PDD. First, 50 questionnaires were given; out of a population of 10 million inhabitants, 50 people is hardly representative. Second, the sample was not representative in terms of age, gender or geographical location. Third, the results – support for the project ranging from 95% to 100% -- are on their face not credible, and suggest that results were heavily conditioned.

Given the problems outlined above, it is unacceptable for this PDD to maintain statements like "environmental impacts arising from the Project are considered insignificant" (p.51). In sum, it is highly questionable that the project will "stimulate economy development and improve the environment of local area" (p.2) and it is the opinion and request of GAIA that this project's request for validation should be rejected.