

Proposed Municipal Solid Waste Processing Plant in Perungudi – From the Frying Pan into the Fire

The Chennai Corporation has proposed a 1400 TPD Municipal Solid Waste Processing plant for conversion of waste to compost, Refuse Derived Fuel (RDF) and building bricks, and landfilling the residue in a Sanitary Landfill (SLF). The project proponent is the Chennai Corporation acting through its concessionaire Mumbai-based Hydroair Techtonoics Pvt Ltd. The project requires Chennai Corporation to deliver 1400 tpd of waste and 30 acres of land to the Concessionaire.

Here are some fundamental objection not only in the manner which the project is being proposed but the efficacy of the entire proposal itself.

Procedural Violations:

- The document available for the public to assess the project is not a Summary of the EIA as defined in Appendix IIIA of the EIA Notification, 2006. The said Appendix mandates the required contents for Summary documents that ought to be made available by the project proponent to regulatory authorities, and by Regulatory authorities to the public. The document provided as the executive summary reads like the company's marketing brochure with sections like – environmental issues covered, technology relevance, benefits to Corporation of Chennai and about RDF-Green Coal directly lifted from the Company's website (<http://www.hydroair.com/solid.html>). Overall the document provides sketchy details about the project but fails to provide the following mandatory information: a) description of the environment; b) anticipated environmental impacts and mitigation measures; c) environmental monitoring program; d) additional studies; e) project benefits; f) environment management plan. The absence of a proper summary renders the Public Hearing illegal and meaningless, as the Public is being asked to comment on a proposal whose details are not known.
- The advertisement (Public Notice) to the public hearing in the newspapers claim that Corporation of Chennai is the project proponent. However, the documents made available at the Pollution Control Board pertain to Hydroair Tectonics, with the Corporation playing the role merely of a supplier of raw material and infrastructure. In absence of a clarity on the project proponent itself, the public hearing cannot be conducted.

Lack of Clarity:

- There is no clarity regarding the details of the project. For instance, it is arbitrarily assumed that the 1400 tpd waste will arrive in four equal streams of 350 tpd each. Studies conducted of Indian garbage clearly show that Indian waste is nearly 50 percent organic/biodegradable, 25 percent inert, 9 percent plastic and 8 percent paper, in addition to other material. There is no clarity as to how the different streams will be processed. Rather there is conflicting information about how the biodegradable waste will be treated. The summary starts by saying that the biodegradable waste will be treated by accelerated aerobic bioconversion. At another place, under the heading "Processing Operation," they indicate that short-term biodegradables will be fermented (an anerobic process).
- The alleged "summary" document refers to RDF but does not indicate where the RDF will be used as fuel, and to what environmental effect. Neither does it provide details of the toxic constituents of the RDF.
- The project fails to clarify as to how compost quality would be maintained. Because the wastes remain mixed from source to facility, any compost will automatically be contaminated by other toxic substances present in other waste streams.
- The project proponent fails to provide any data on the toxicological contents of the bricks that would be produced out of the garbage. Under these circumstances it is impossible to say if these brick are even safe to be produced and would cause no public health hazards.

Violations of MSW Rules, 2000:

- **Siting Guidelines Violation:** The project is proposed to be located near a residential area and inside the Pallikaranai marshland which is a wetland and a water body. According to Schedule III (Siting Guidelines) of the MSW Rules, 2000, “the landfill site shall be away from habitation clusters, forest areas, water bodies monuments, National Parks, Wetlands and places of important cultural, historical or religious interest.”
- The MSW Rules mandate local bodies to collect source-segregated garbage, and prohibits the entry of unsegregated garbage into waste facilities. The project proposes to receive unsegregated garbage from the City of Chennai and segregate it at the premises before processing it.
- Rather than promote source segregation (as per Para 1(2) and 1(3) of Schedule II) and decentralised treatment closer to source, the project promotes mixed waste processing.
- According to the available documents the implementation of the project would bind the Corporation of Chennai to make available 1400 Tonnes Per Day (TPD) of garbage. This provision would discourage the corporation from cooperating with residential areas and neighbourhoods that would like to implement decentralised composting and partnerships with ragpickers.
- The current ongoing dumping of garbage in the Pallikarnai marshland is an illegal activity and the Chennai Corporation has been one of the key parties involved in committing this illegality. This project is an effort by the Corporation to escape prosecution by legalising the ongoing dumping and thus condoning several years of illegality.

Hydroair's and RDF's track record or lack thereof:

- The project proponent has provided no information to convince the public that the technology proposed by them would be effective. There has been not a single place in the country where this proponent has demonstrated a successful operational plant with this technology. The Company website lists out various cities where it is currently executing the projects on waste management, interestingly all the projects including the Perungudi plant is in the “execution” stage. The proposed technology for the Perungudi plant itself is not of Hydroair but is of Nestler Ecotech, which in turn is a licensee of Skanska Econet, Finland. Moreover Hydroair has a dubious history in the state of Goa where it was served a show-cause notice in 2008 for abandoning an anaerobic digester plant.

About RDF and its impact:

Generating electricity from Refuse Derived Fuel (RDF) is nothing but a modern method of incinerating the waste. Pellets are made in the process to get the waste in a dry combustible form which would be then fed into an incineration for burning to generate electricity. RDF is thus not a stand-alone technology but another stage in the process of incineration. The calorific value for the waste comes from materials such as plastics and metals. Plastics, especially chlorinated plastics such as polyvinyl chloride (PVC) when combusted gives rise to carcinogenic chemicals like dioxins and furans. In fact PVC plastic combustion is banned in India by regulation both in the municipal and bio-medical waste handling rules.

Incineration of mixed waste in general causes the release of most toxic chemicals including dioxins, furans, volatile organic compounds and heavy metals. A 2005 air quality analysis of the smoke from open garbage incineration in Perungudi dumpsite revealed the presence of at least 27 toxic chemicals in the air including carcinogens like benzene, 1-3butadiene, chloromethane etc. All the chemicals detected damage one or more parts of the human body and are especially damaging to the vulnerable populations like children, women and the elderly. Through RDF technology the project proposes merely another form of incineration.

Track Record of Waste to Energy Projects in India:

Source: "Waste to Energy: An Imperative for Sustainable Waste Management"; published in IDFC's Policy Group Quarterly, No 3/ March 2009.

- The first such facility was set up in 1987 at Timarpur, Delhi, based on incineration technology to produce 3.5 MW power. It soon became inoperative due to mismatch in quality of waste received and plant design.
- The fate of the 5 MW project in Lucknow, which started commercial operation in 2003, was similar. Based on an imported biomethanation technology used in over 50 WTE plants worldwide, the plant only reached 1 MW and was closed down within six months due to several reasons. Prime among them was the ineffective waste segregation system which led to poor quality of MSW being delivered to the plant. The waste contained only 12-15% biodegradables. Problems were aggravated by poor accountability on part of the ULB for the waste supplied.
- The RDF technology based power plants at Vijayawada and Hyderabad, of 6 MW each, also started commercial operations in 2003. However, to overcome the poor heat value of MSW received, viz. about 1000Kcal/Kg and way below the optimum 2500Kcal/Kg, the plants supplement MSW with agro wastes as auxiliary fuel. The RDF plants remain grossly underutilized as the desired amount of MSW is not being received.

For more information visit:

www.no-burn.org

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