URBAN DESIGN RESEARCH INSTITUTE

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म. न. पा. आयुक्तांचे कार्यालय
10/10/11
बृहन्मुंबई महानगरपालिका

3rd October 2011

Dear Sir,

Re: Revision of the Development Plan for Mumbai 2014-2034 – ENERGY

This is in follow up to our earlier letter to you dated 29th July 2011 on the subject of Facilitating and ensuring wider consultation in the formulation of the Development Plan of Mumbai 2014-2034.

The Stakeholder group on Energy is by this letter forwarding you its initial suggestions for the energy sector in the revised development plan.

1.0 BACKGROUND

Mumbai Electricity Supply and Consumption is currently 2,579 MW of which 389 MW is generated from Hydro power, 1597 MW from Thermal (Coal) and the remaining is supplied from Mahagenco supply. The entire state of Maharashtra (excluding Mumbai) has an electricity demand of 8117 MW.

2.0 BASIC PREMISES

2.1 In the context of global warming it is essential to work towards reducing the Energy footprint of the City. This should be done without impacting the foot print of the urban poor but by reducing the consumption of those who have a larger foot print currently.

2.2 Reduce the fossil fuel dependence of the city by encouraging low carbon growth

2.3 Create equity in the distribution of Energy

2.4 Design facilities/infrastructure for conservation of Energy.

2.5 Build in conservation efforts in redevelopment/ cluster redevelopment schemes

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3.0 STRATEGY

This could be done through mechanism such as:

3.1 Reducing fossil fuel consumption by prioritizing investment in public transport and walking over private transport.

3.2 Setting in Building Design guidelines for energy conservation and higher efficiency of use by rapid adoption of norms and standards such as ECBC, GRIHA, IGBC and Eco Housing standards.

3.3 Encouraging tri-generation facilities in cluster developments and leverage likely higher allocation of natural Gas for the City.

3.4 Encouraging private investments in renewable energy

3.5 Promote Waste to Energy Projects to reduce Carbon footprint.

4.0 RECOMENDATIONS

4.1 Create mechanism for feeding renewable energy into grid by private generators

There are private players who may have captive renewable energy generation but this is used wholly on site. Though there are mechanisms for selling the power to the grid for distribution and retail sale by the big distributions companies, a good business model for generation of renewable energy by private players is yet to be developed. It is important that the state encourage the generation of renewable energy by private players by setting in the right policy and tariffs for this to become a viable business model.

4.2 Generation of renewable power by city

The city needs to look at the possibilities of generating renewable energy and include this for implementation in the new DP. These could be wind power, tidal power, Waste to Energy. It would be necessary to identify the theoretical potential for each type of renewable energy for each area of Mumbai. Also it would be important to map the demand curves in terms of location and quantity in the city. Efforts towards allocating land for such projects is essential

4.3 Piped Gas and CNG filling stations

There is need for infrastructure for supplying piped gas. The DP plan should be done after discussion with Mahanager Gas in order to ensure the availability of right of ways and bunker space for this.

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4.4 District Heating and Cooling for Cluster Developments

Tri-generation facilities that provide cooling, hot water and energy production for neighborhoods should be implemented wherever possible. Complexes such as Bandra Kurla Complex and the proposed cluster development would benefit from the energy savings which may be as much as 40%. The DP should regulate the requirement for the provision of Tri-Generation facilities in larger developments

4.5 Waste to Energy conversion

There is considerable potential in setting up a Waste to Energy plant for Municipal Solid Waste and Sewage Treatment Plants. The processes for this need to be considered in looking at the planning of the DP in terms of space and equipment for Solid Waste compaction facilities (which reduce the water content of wet waste and increase its heating value) and the setting up of Waste to Energy plants. Also the DP need to consider locating decentralized Waste to Energy Plants (of 1 to 5 ton capacity) that reduces the haulage of organic waste and produces thermal energy thru methane for use within the neighborhood. It is estimated the city will need around 350 such neighborhood plants (that can be located underground) that would occupy a space of about 30 sq m per ton.

To implement this complete segregation of waste at source will need to be implemented and collected separately for transport to the local facility.

4.6 ECBC Building Code and ECO Housing regulations.

The Eco housing code and the ECBC code or any other similar standard may be made the standard for building design for residential and commercial development respectively and included in the Building Code for the revised DP.

These are our initial suggestions for your consideration. We will be looking at how we can build on these strategies in the future deliberations of the group and will follow up on these suggestions in greater detail. In the meantime we would be happy to have feedback or comments from the consultants in order to engage with them on this process. We will also be happy to further elaborate these suggestions to you in person if you should allow us this opportunity.

Thanking You,

Yours Sincerely

Sd/-

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BARC

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NEERI

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continuation sheet

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