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Office Complex for Delhi Pollution Control Committee Proposal / M:OFA Studios

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Commissioned through a design competition, the Office Complex for Delhi Pollution Control Committee proposal by [M:OFA Studios](#) houses about 200 officials, scientists and a devoted work force responsible for making and implementing policies, research and formulating norms for keeping India's capital Pollution free. The significance of this office in the larger context is an affirmation of this purpose itself contributing towards a higher standard of living for the populace of Delhi State. It was the understanding of this purpose and sustainability in the Indian context that became the core design parameters for the DPCC head office building. More images and architects' description after the break.

As an example of what the design preaches, here the building acts as an 'Urban Sponge' feeding on polluted air & water of its micro-climate and gives out clean air & water back to the Environment much like the Aquatic sponge which feeds on bacteria and gives out nutrients and oxygen. It's been designed as a next generation green building with multiple passive and active systems co existing and supporting each other aimed at making the building work like a machine that is self-sustainable.



Starting with the orientation of the Building, it harnesses both the north western winds prevalent in Delhi as well as adequate diffused daylight to naturally ventilate, cool as well as minimize the use of lights during the day time. Also bolstering this are the automatic motion sensors, self dimmable ballasts and smart lighting system.



The Parasol roof and window overhangs are lined with Photovoltaic Cells to generate electricity that is stored in the batteries to run the outdoor lighting after sunset. The depth of the overhangs and the roof is designed as per the sun direction and penetration so as to keep a balance between the availability of natural day light inside the office throughout the day yet not increasing the ambient temperature inside the building. Both bringing down the lighting and the air conditioning loads significantly.



The parasol roof like an upturned basin, collects rainwater that is stored in the Underground reservoir surrounding the entire basement perimeter not only bringing the ambient temperature there but providing sufficient Drinking water to take care of the requirement of the entire office for all the year round.



The parallel cavity walls constructed with bentonite clay lined foam concrete blocks act as filters to help in cleaning out the polluted air of the micro climate. Also the vertical green walls in various parts also greatly help in the oxygen exchange. Mechanical filters in the basement which force the polluted hot air from the basement through the hollow walls in winters to act as a heater while cleaning the pollution alongside and in summers infused with fresh air from roof mechanical filters to keep the pollution in check.



Due to its location adjoining the city sewage main drain, tapping into the 'black gold' that the architects call it, The Sewage Treatment Plant turns the black water into grey providing the building three important ingredients; (a) enough methane to run a co-generation gas turbine to produce sufficient electricity adding further to the energy bank, (b) grey water run through a reed bed filtration system removed of its foul smell to be cooled using condensation is then further passed through the tanks filled with phase change material. This cold water is run within the radiating chilled beam system bringing down the air conditioning load significantly. In the end, (c) all the manure left as a final by product is used to bring alive all the landscape planned as terrace gardens and green walls.



The two parabolic forms floating out of the building are a symbolic expression to bubbles of fresh air released into the atmosphere due to this 'Urban Sponge'. These bubbles house the Presentation room and the Meeting room both which are meant as innovation rooms/ 'think tanks' for the scientists and the policy makers. Roof gardens are built as intermediate open spaces throughout the building for shading and cleansing of the air and the much needed 'step out' for the employees to in reality know how their efforts and policies have actually impacted the air quality / pollution levels and the thus the quality of life of the Residents of [New Delhi](#).



The building with its aesthetics symbolizing hope acts as an active-passive filter and represents the transparency of work environment, co-relation and inter dependence and conveys a strong message of Harnessing every waste / outlet and re-utilizing it as a resource and an atmosphere of trust and inter-dependence.



Multiple layers of philosophy, technology, vision and function shaped the final design of the Building which will also host a permanent exhibition on Green Technologies and Innovations as an awareness drive in its Plaza and Exhibition Centre for the people to learn, percolate the information, implement and through osmosis benefit the social fabric ultimately.



Architects: [M:OFA Studios](#) Location: New Delhi, India Principal Architect: Manish Gulati Principal Planner: Tanushree Gulati Energy Consultants: TERI Design Team: Shuchita Jain, Amit Palia, Shabina Shahin Site Area: 1350 sqm Built-up Area: 3500 sqm Completion Year: 2014