

# DELHI SMOG TOWER AND HOW IT WORKS

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Air pollution continues to remain a nuisance in most metropolitan cities, damaging the health, movement and functioning of people depending on its severity. Recently, Smog towers were installed in the capital region of Delhi — one in Connaught Place and the other in Anand Vihar. Due to the city's pollution problem, several methods to reduce the pollution were devised and among them, smog towers were touted as something that could alleviate the problem.

These towers came into existence as a result of a Supreme Court Order to the Central Government back in 2019. These towers which cost approximately 20 crores each supposedly filter out 80% of the particulate matter in the air, as stated by the Environment Minister of Delhi, Mr Gopal Rai.

Though these claims can be contested, there are some basics we ought to understand about the smog towers. Both the towers are identical in height (24 m) and are equipped with 5000 High-efficiency Particulate Air (HEPA) filters. These filters can theoretically remove at least 99.97% of dust, pollen, mould, bacteria, and any airborne particles with a size of 0.3 microns ( $\mu\text{m}$ ). It is designed to process 1000 cubic metres per second.



Source: Tennews

These towers were designed by the University of Minnesota but were modified by IIT Bombay and IIT Delhi to be more accommodative of the Indian weather. These towers suck air from the top and then this air is circulated through the filter, after which it is pushed out from the bottom by means of 40 large fans installed therein. These towers make use of the down draft cleaning system. The towers also have eight sensors that are located on each side of the square structure and are responsible for tracking pollution levels at the inlet and outlet. Control rooms are also attached to the towers and have screens that monitor the level of pollution at inflow and outflow, and can control the speed of the fans through which the air is pushed out.

According to officials at the Delhi Pollution Control Committee, the filters of these towers will need to be changed every three to four months. Now, the fact of the matter is that will these towers be useful in combatting air pollution? The answer is ambiguous, riddled with uncertainty. Since there is no data to support the claim that these towers can in fact reduce air pollution, the public is sceptical regarding its installation.

Air is dynamic in nature and flows in all directions, and many scientists claim that it is practically impossible to 'filter out' polluted air. Experts also agree that this is nothing but a makeshift arrangement, and whether it's going to be of use in fighting against Delhi's perennial air pollution woes is only something time can tell.