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# Abstract

In order to improve the fine dust(PM2.5) problem in the air, Gyeonggi Province has been implemented 250 billion won worth of subsidy support programs to replace/improve air pollution prevention facilities in the industrial sector from 2017. The effect of fine dust reduction due to the subsidies program showed an averagely 64% before and after the program, and it was estimated that there was also a job creation effect.

The improvement rate of dust reduction was found to be the highest when applied to electric precipitators and total hydrocarbon was applied to scrubbers. The number of job creation was estimated to be around 1,200 in 2020 and 570 in 2021. A survey was also conducted on supported facilities. As a result, 139 facilities responded survey and most of them evaluated positively this susidy programs.

The policy implications of this study are as follows. It is necessary to increase efficiency by expanding subsidy projects in the future, strengthening follow-up management, and creating a scientific foundation. At first, it is necessary to strengthen overall program by continuously expanding subsidies and diversifying support types. This is because there are still many small facilities that lack environmental management capabilities within Gyeonggi Province. Second, it should strengthen follow-up management such as introducing performance inspection system and making IoT inspection tool installation. This may also include technical supports and other subsidies of maintenance costs. Third, an emission facility management data base should be constructed as a scientific basis for emission management. This system can be used throughout the management of emission facilities, such as inspection, subsidy program implementation and follow-up measures.

**Keyword** Air Pollutants Emission Facility, Subsidy Program for Emission Facility Management