

計畫編號：1050216

105 年度「嘉義市空氣品質考核及管理計畫」

期末報告(定稿)

委託單位：嘉義市政府環境保護局

受託單位：瑩諮科技股份有限公司

中華民國 105 年 12 月

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計畫經費：3,410 (仟元)

計畫執行期間：105 年 3 月 4 日至 105 年 12 月 15 日

計畫主持人：蕭伯任

計畫執行人員：許逸欣、范珮貞、許憲昇、李家瑜

嘉義市政府環境保護局 委託辦理

印製年月：民國 105 年 12 月

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期末報告 定稿 (1050216)

嘉義市政府環境保護局

計畫成果中英文摘要

一、中文計畫名稱：

105 年度「嘉義市空氣品質考核及管理計畫」

二、計畫編號：

1050216

三、執行單位：

瑩諮科技股份有限公司

四、計畫主持人：

蕭伯任

五、執行期程：

105/3/4~105/12/15

六、報告撰寫工作進度統計期程：

105/3/4~105/12/15

七、中文摘要(簡要版)：

為了積極有效運用空氣污染防制費以改善本市空氣品質，並於環保署的績效考評制度中爭取佳績，故執行本項計畫作為整合各項空氣品質改善維護子計畫成果，也就污染防制策略進度實施追蹤，適時提出建議，達到持續改善空氣品質之目的。本年度計畫執行期間自 105 年 3 月 4 日起至 105 年 12 月 15 日止，執行至工作進度統計期程，時間比例 100%，依據合約規定提送期末報告，工作進度 100%，各項重點工作項目之執行成果摘要如下：

(一) 空氣品質指標與空氣品質變動趨勢

統計本市 95 年至 104 年 $PSI > 100$ 站日數，自 95 年 30 站日 (不良率 8.22%)，降至 104 年 2 站日(0.55%)，顯示嘉義市空氣品質改善具有實效，空氣品質獲得改善。105 年(11 月) 不良站日 1 站日(0.30%)，符合本年度空氣污染防制目標(低於 7 站日，1.92%)； $PSI < 50$ 空氣品質良好站日數方面，自 95 年 78 站日(比例 21.4%)，增至 104 年 112 站日(比例 30.8%)，顯示空氣品質趨於良好。105 年(11 月)良好站日 139 站日，比例 41.5% (139 站日/測站日數 335 站日)，符合防制目標 (高於 24.6%，90 站日)。

(二) 各類排放源污染屬性分析

依據本計畫檢討更新和掌握之 TEDS 9.0 排放量資料，本市 102 年(排放量基準年)排放量分別為懸浮微粒 (PM₁₀) 1,167 公噸、細懸浮微粒(PM_{2.5}) 491 公噸、硫氧化物(SO_x) 44 公噸、氮氧化物(NO_x) 2,283 公噸、非甲烷碳氫化合物(NMHC) 4,004 公噸、一氧化碳(CO) 4,891 公噸，與前一版(TEDS 8.1, 99 年度)相較，粒狀污染物(PM₁₀、PM_{2.5})排放量增加，行業別以營造業者增量較高，污染管理上須重視。

因應對策為強化營建施工污染防制措施，包括：1.提高營建工程污染削減率(採用高防制效率措施)、2.營建工程管理辦法符合度管理、3.提高營建工程納管比例、4.推動營建工程道路認養與圍籬綠美化、5.街道揚塵洗掃工作。

(三) 檢討與追蹤空氣污染防制維護策略

掌握本年度 1 月至 12 月，本市空氣污染防制策略推動現況，移動污染源 11 項策略，平均達成率 98%、逸散污染源 13 項策略，平均達成率 100%、固定污染源 18 項策略，平均達成率 100%、推動低碳城市 11 項策略，平均達成率 99%，符合時程管制進度。

(四) 推動環保署績效考評作業

本市 104 年度考評成績達同組縣市(基隆市、新竹市、新竹縣、南投縣、嘉義市、臺東縣) 前二名，得「特優」評等。

統計本市 105 年 1 月至 12 月環保署績效考評自評得分為 94.8 分，達成率 94.8%，符合時程管制進度。

(五) 空氣品質淨化區

本市共設置 8 處空氣品質淨化區，綠化面積達 11.452 公頃，分別為裸露地綠化 4 處、環保公園 2 處、自行車道 2 處。本年度透過自行考核、委員考核方式，掌握淨化區基地管理維護現況；經 5 月 18 日、10 月 19 日委員二次現勘，各淨化區基地以「富國重劃區裸露地綠化工程」及「下路頭段自行車道 (嘉油鐵馬道)」最佳。

八、英文摘要(Summary)：

In order to actively and effectively use air pollution control costs to improve the city's air quality, and strive for success in the EPD's performance appraisal system, the implementation of this program integrated various air quality improvement sub-program results, also track the pollution control strategy implementation progress, and raise proposals in due course to achieve the purpose of continuous improvement of air quality. This year's program execution period started from March 4, 2016 till December 15, 2016. At the implementation of the final phase, in the proportion of the time 100%, according to the contract, the final report should be submitted. The work progress reached 100%, and the focuses of the work program in the implementation of the outcomes are summarized as follows：

(A) Air quality indicators and trends in air quality changes

Statistically, our city from 2006 till 2015, the days of station $PSI > 100$ have decreased from 30 days of station (NPL ratio 8.22%) in 2006 to two days of station (0.55%) in 2015, showing Chiayi City air quality has improved with the effectiveness and its air quality has also improved. In 2016, from January to November, the adverse Station Day is only one day, which is also in line with this year's air pollution control targets (less than 7 days of station, 1.92%); as for $PSI < 50$, days of good air quality days of station. In 2006, 78 days of station with 21.4% proportion has increased to 104 days of stations (the proportion of 30.8%), showing the air quality tends to be good. In 2016, from January till November, the good days of station is 139 with the proportion of 41.5% (139 days of station/ days measured 335 days of station, which is also in line with the prevention and control target. (greater than 24.6%, 90 days)

(B) Various types of pollution sources attribute analysis

According to the program update and review of the TEDS 9.0 emissions data, in 2013 the city's (emission base year) emissions were suspended particulates (PM_{10}) with 1,167 tons, fine suspended particles ($PM_{2.5}$) with 491 tons, sulfur oxide matter (SO_x) with 44 tons, nitrogen oxides (NO_x) 2,283 tons, non-methane hydrocarbons (NMHC) with 4,004 tons, and carbon monoxide (CO) with 4,891 tons. Compared to the previous version (TEDS8.1, 2010), the emissions of granular pollutants (PM_{10} , $PM_{2.5}$) have increased; the increment industry has produced them increasingly, the pollution management of which must be paid attention to.

Measures are to strengthen the construction pollution control measures, including：1. Improve construction engineering pollution reduction rate (high efficiency prevention and control measures), 2. Enhance the construction engineering consistent management, 3. Improve construction engineering

controlling ratio 4. Promote road construction adoption and green fence landscaping, 5. Improve street dust sweeping and washing work.

(C) Reviewing and tracking air pollution control maintenance strategy

Take the current year from January to December for example. As for the city's air pollution control policy promotion status, among the mobile sources 11 strategies, the average of completion rate reached 98%; fugitive sources 13 strategies, the average rate of completion reached 100%; Stationary sources 18 strategies, the average of completion rate reached 100%; among 11 strategies to promote low carbon city, the average rate of completion reached 99%, which are all in line with the progress of time process control.

(D) Promoting EPD performance evaluation

In 2015, the city's annual evaluation results in the same group of counties and cities (Keelung City, Hsinchu City, Hsinchu County, Nantou County, Chiayi City, Taitung County) was in the second place with "Premium" rating.

In statistics, the city in 2016, from January till December, the EPA performance evaluation self-assessment score was 94.8 with the completion rate of 94.8%, which are all in line with the progress of time process control.

(E) Air quality purification zone

The city was set 8 air quality purification areas with its green area reaching 11.452 hectares, with 4 exposed green places, 2 green parks and 2 bike lanes. This year after the self-assessment, the Commission assessment methods, we easily master the purification zone base management and maintenance status; On May 18 and October 19, members inspected the site. In each purification zone base, Fuguo redrawing district bare ground greening projects and Chia-yu bike lane are the best ones.
