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Narrative Report Template

For Grantees Outside of China
and U.S. Public Charities

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I. Background

Both air pollution and climate change pose significant public health concerns. These issues primarily arise from the combustion of fossil fuels, which release greenhouse gases (GHGs) and harmful pollutants that negatively impact the environment and human well-being. Despite their interconnectedness, research and policy efforts concerning air pollution and climate change often remain disjointed. Given the direct and indirect health implications associated with both challenges, addressing GHG emissions and improving air quality concurrently can effectively tackle these issues and protect public health. The health-based air quality standards and ambitious climate mitigation targets have been proved the most effective and efficient policy to drive the emissions of pollutants and GHGs in all the sectors, not only in U.S., but also in China in the past decades. These efforts will play an important role as a synergistic indicator to optimize the pathways of emission reductions. The specific goals of this training project are as follows: (1) introduce participants to the air quality and climate change management policies of the U.S. and California; (2) educate participants about the significance of incorporating research findings on air pollution and climate change into the policymaking process; (3) foster collaborations between policymakers in California and China with the aim of collectively addressing air pollution, climate change, and public health issues.

II. Results to Date

1. A summary of main activities

The detailed activities for this study-tour are summarized in the tables below.

Week 1: Los Angeles, California
April 8—April 14

Day	Date	Agenda
1	Monday, April 8	**Travel: Beijing to Los Angeles**
2	Tuesday, April 9	**Site Visit at Ports**

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		Policy solutions to accelerate deployment of zero-emission cargo handling equipment at the ports of Los Angeles Boat tours at ports **UCLA Campus Sustainability Tour** Evening – Welcome Dinner
3	Wednesday, April 10	**Monitoring and Control Strategy** Visit the new Southern California Headquarters – Mary D. Nichols Campus in Riverside China's ambient air quality standards (MEE) Process of developing California ambient air quality standards California Air Resources Board (CARB)'s strategy for controlling air pollutants from vehicles
4	Thursday, April 11	**Carbon Peak and Carbon Neutrality** China's carbon peak and carbon neutrality policy (MEE) CARB's scoping plan for achieving carbon neutrality **Site Visit at a Non-profit Organization** Visit to Los Angeles Cleantech Incubator (LACI)
5	Friday, April 12	**Enforcement and Supervision** Visit to the laboratory and Rubidoux Monitoring Center of SCAQMD, which has installed the most complete NAAQS equipment in the U.S. South Coast Air Quality Management District (SCAQMD)'s inspections, monitoring, and penalty policy
6	Saturday, April 13	**Site Visits to Local Companies and Organizations**
7	Sunday, April 14	**Travel: Los Angeles to U.S. EPA in North Carolina**

Week 2: U.S. EPA in North Carolina
April 15—April 21

Day	Date	Agenda
8	Monday, April 15	**Site Visit in Research Triangle Park (RTP)** Evening – Welcome Dinner
9	Tuesday, April 16	**Site Visit to the North Carolina Department of Environmental Quality (NC DEQ)**
10	Wednesday, April 17	**Meetings at EPA's Offices in RTP** Meetings with the technical experts from Office of Air and Radiation (OAR) and Office of Research and Development (ORD)
11	Thursday, April 18	**Meetings at EPA's Offices in RTP** Meetings with the technical experts from OAR and ORD
12	Friday, April 19	**Site Visit to Duke University**
13	Saturday, April 20	**Travel: U.S. EPA in North Carolina to Beijing**
14	Sunday, April 21	**Delegation arrival in Beijing**

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2. Basic conclusions of investigations and analysis

2.1 Integrated Science Assessments to Support National Ambient Air Quality Standards

U.S. Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone and related photochemical oxidants, particulate matter, carbon monoxide, lead, oxides of nitrogen, and oxides of sulfur. Sections 108 and 109 of the Clean Air Act govern the establishment, review, and revision of NAAQS, including: (1) primary (health-based) standards which in the "judgment of the Administrator" are "requisite to protect the public health" with an "adequate margin of safety"; (2) secondary (welfare-based) standards which in the "judgment of the Administrator" are "requisite to protect the public welfare from any known or anticipated adverse effects". The law requires U.S. EPA to review the NAAQS and supporting scientific information for each criteria pollutant every five years – Integrated Science Assessments (ISAs) provide the scientific foundation for those reviews.

2.2 Federal and State Level Air Quality Management

Air quality management is an ongoing process aimed at enhancing public health and the environment. Achieving this goal requires a robust partnership between federal and state entities. Effective air quality improvement relies on national, regional, and local regulations, along with voluntary and market-based programs. Regional cooperation is crucial for addressing air pollution issues that impact multiple cities and states, such as fine particulate matter ($PM_{2.5}$), ozone, and regional haze. Providing the public with accurate, scientifically sound information empowers them to contribute significantly to meeting air quality standards and enhancing public health.

3. Political challenges and other barriers to new policy options

(1) Identifying control technologies/measures for all of the reductions needed for all areas/counties to meet a new standard.

(2) Using national-level data, models, tools in national-level assessments when the ambient air quality issues being analyzed are highly complex and local in nature.

4. Policy recommendation details and achievements to date

(1) Establish measures for the administration of urban air quality and standards compliance, which requires local governments in non-compliance areas to formulate a long-term air quality compliance plan. Implement the plan on a five-year or three-year cycle, together with short-term air quality management plans.

(2) Focus on evaluating and optimizing the integration of existing, new, and emerging data streams, techniques, models, tools, or other methodologies for practical implementation in assessing human and environmental health.

(3) Ensure that the research remains solutions-focused and driven by priority needs, providing multiple sources of tailored assessment products and scientific/technical support as needed.

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III. Next steps

We are eager to continue our collaboration with the Energy Foundation to provide comprehensive training on air pollution prevention and control technologies, as well as climate mitigation and adaptation strategies.