

For the Government of Lahore

This project provides instructions and recommendations on how to implement the model developed for reducing air pollution in Lahore through the use of Direct Air Capture (DAC) technology. The model shows promising results in reducing carbon dioxide levels and improving air quality, which can have a significant impact on public health in Lahore.

ORCA DAC has proven to be very feasible for the requirements of Lahore. It is capable of capturing CO₂ at a much better efficiency and effectiveness than any other methods. For example, the plant captures approximately 4000 tons of CO₂ on a land of 0.42 acres, where trees can only capture 4.62 tons (Climeworks, n.d.). The technology is scalable and can operate on various energy sources and only requires sufficient space to operate. Based on the findings, it is recommended to set up as many plants as possible; even 20 units would contribute a huge impact on reducing CO₂ emissions and improving public health. 4 lives could be saved, 70,000 tons of CO₂ removed while, reducing respiratory infections & asthma, cancers, heart disease, Chronic Obstructive Pulmonary disease, and blindness and vision loss by approximately 10, 1, 20, 1 and 25 respectively. To ensure the successful implementation of the DAC plants, it is essential to partner with industry experts who have experience in the design, construction, and operation of these plants. This can include local or international organizations like NGO's and the company producing DAC, Climeworks itself. The installation of DAC plants can be a significant investment, and it is essential to secure financing from public and private sources to cover the costs associated with the installation and operation of these plants. This can include local and international funding agencies, private investors, and government initiatives.

Once the DAC plants are operational, it is essential to monitor and evaluate their performance regularly to ensure that they are meeting the desired objectives. This can include measuring the reduction in carbon dioxide levels and improvements in air quality, as well as assessing the impact on public health.

By following these steps, the Government can successfully implement our model for reducing air pollution through the use of DAC technology. We believe that this technology has the potential to make a significant impact on the environment and public health in Lahore and can serve as a model for other cities in Pakistan and around the world.

Thank you for your attention to this matter.