

Thermal Power plant monitoring in Tiroda, Maharashtra

Our Client

Adani Power Maharashtra Limited is the largest coal-based Thermal Power Plant in the state of Maharashtra, India. The plant has a capacity to generate 3300 MW power through its 5 units of 660 MW capacity. The first unit of the plant was commissioned on 28th August 2012 and subsequently, other units were commissioned. The plant achieved full capacity with the commissioning of Unit V on 11th October 2014. With its total capacity of 3300 MW, Tiroda comprises 5x660 MW units. All units at this location are of Supercritical Technology, driving efficiency in coal-based power generation. Tiroda uses the latest technology for environmental management and has been registered under CDM by UNFCCC.



The Challenge

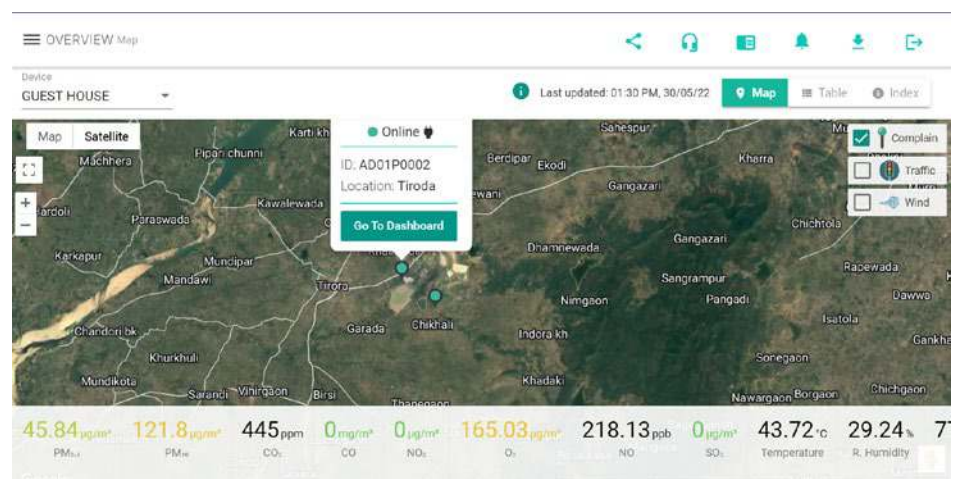
In a Thermal power plant, it is common to observe a huge amount of suspended particles and other harmful gases like SO_2 , NO_2 , etc. Since the thermal power plant is situated close to locals, it was important for the company to monitor the levels of suspended $\text{PM}_{2.5}$, PM_{10} , SO_2 , and other gases. It was also in their interest that such pollutants be reduced as per the Central Pollution Control Board (CPCB) guidelines. For achieving such, they needed an accurate air quality monitoring system that can be integrated with a purifying system. Subsequently, they wanted to ensure the locals of clean air, and that toxic gasses and particulate matter suspension were limited from the power plant.

The Solution

Oizom offered Polludrone Smart to the Adani Thermal Power plant unit in Tiroda unit to monitor the dust and toxic gases emitting from the plant to the surrounding city. Polludrone also comes equipped with Data analysing and Visualisation software that can keep track of the historical data and trends of the air pollutants emitting from the steel plants. The advanced data analytics module in Envizom allows the user to generate customised wind rose and pollution rose charts which is an essential tool for identifying the sources as well as assessing the direction of air pollution dispersion.

Installation Details

Polludrone Smart has been installed in the Adani Thermal Power plant unit in Tiroda, Maharashtra.



The Result

The Adani Power Thermal plant unit in Tiroda is now capable of real-time monitoring the levels of PM and gaseous levels and the direction from which it is originating around the steel plants. Oizom's smart, robust and accurate air quality monitoring system has assisted the company in reassuring the residents of the nearby city of safe breathing conditions. Oizom's capabilities in providing a wholistic solution which also provides advanced analytics like wind rose and pollution rose. This has helped the authorities in understanding the source and pollution concentrations at the thermal plant.

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“Oizom has installed monitors on time and automatic report facility is helpful to send reports timely to authorities.” - Mr VijenderKumar Khandekar, Assistant Manager (Environment), Adani Power Maharashtra Ltd.

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Oizom is an environmental IoT company offering data-driven environmental solutions for better decision making. With our sensor-based hardware, we monitor various environmental parameters like air quality, noise, odour, radiation, weather conditions, etc. Our data analytics platform derives many actionable insights for authorities, communities, and industries. Oizom strives to play an essential role in a sustainable future through smart environmental solutions and data science.