



Rental Power

> Case History

Ansal Plaza, South Delhi, India

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Where:

Ansal Plaza shopping and commercial office complex, South Delhi, India

What:

Two 320 kVA generator sets from Cummins Power Generation for a rental tenure of 12 months

Purpose:

Power the chillers that serve the shopping mall of Ansal Plaza

Primary choice factors:

Fast-track system design, installation and commissioning by Cummins Power Generation, resulting in a reliable on-site power system

Ansal Plaza shoppers keep cool with power from Cummins Power Generation

SOUTH DELHI, INDIA — Situated in the very heart of South Delhi, in HUDCO Place Integrated Urban Complex, Ansal Plaza's shopping and commercial office complex offers the convenience of being located in one of the most easily accessible parts of the city. And with South Delhi rapidly emerging as the new commercial hub of the capital, the complex has the strategic advantage of being based in the thriving nucleus of all commercial activity. To ensure that visitors to the Plaza's shopping mall are comfortable in the often hot and humid Delhi climate, mall management decided to rent generators to power the complex's chillers and selected Cummins Power Generation Inc. as its supplier.

Ansal Plaza's mall management group ordered two 320 kVA DG sets for a 12-month period for the exclusive purpose of powering the chillers that supplied the mall's air conditioning. This system ensured the comfort of shoppers and other visitors to the mall's posh shops and its circular atrium complete with fountains, landscaping and an amphitheater. The two Rental



The circular roof configuration of the three-story Ansal Plaza Mall necessitated a special approach for placing the rooftop generators from Cummins Power Generation.

Power generators used to run the chillers were in addition to the existing 2100 kVA power system from Cummins Power Generation that was already in place for emergency backup power by the local supplier, Cummins India Limited.

The installation challenge—a circular, rooftop site

The temporary power system installation was unique because the generators had to be installed on the Ansal Plaza's rooftop, which was around 60 feet above ground level. In addition to the height, another challenge was the circular shape of the roof, which resulted in load-bearing members being located at only the extreme ends of the roof.

In order to place the generators on the roof, the sets had to be dismantled and placed piece by piece—radiator, engine, batteries, alternator and control panel—on the rooftop. Each component was lifted by a 90-foot boom crane onto the rooftop of the mall complex.

In prime power applications, fuel consumption can be the major expense, and fuel-efficient generators can significantly reduce the cost of power.

Eight-meter-length girders or channels were used to shift the generators. This precarious aspect had to be considered when transporting the two 320 kVA generator sets, each weighing 5 tons, for about 25 meters across the surface of the roof. The two sets were placed on the foundation, which had been constructed by the customer with the suspended channels, and were then aligned.



Heavy rains during the commissioning process did not stop the installation from being accomplished in just eight days, thanks in part to special sheds that were erected over the generator sets.

Four earth pits were made at ground level and GI™ or galvanized steel strips were run from the pits to the rooftop level through the ducts and shafts. Arrangements were made to transfer fuel from the storage tank placed two floors below ground level up to the rooftop three floors above ground level, which meant that the fuel was transported up a total of five floors to reach the generator sets.

Nighttime work and heavy rains add more challenges

Because of Ansal Plaza's popularity as a shopping destination, most of the installation work had to be done in late night and early morning hours—starting after the rush of retail customers that continued right up until 11 p.m. daily. The climatic conditions were also challenging since South Delhi experienced unseasonable downpours during the time the system was installed and commissioned. Special roof sheds for both generator sets were fabricated and covered by canvas to protect the sets and the workers from rain.

A job well done in just eight days

In spite of these tough conditions, the job of placing the generator sets on Ansal Plaza's rooftop and transporting them to the exact installation locations was completed in two days. In all, the entire project commissioning was accomplished in eight days. The Ansal mall management group expressed its satisfaction about the diesel gensets provided to it by Cummins Power Generation. In a letter, the group complimented the coordination and support it received in its purchase of Rental Power from Cummins Power Generation and Cummins India Limited.

For more information about Rental Power or other energy solutions, contact your local Cummins Power Generation distributor or visit www.cumminspower.com/rental.

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