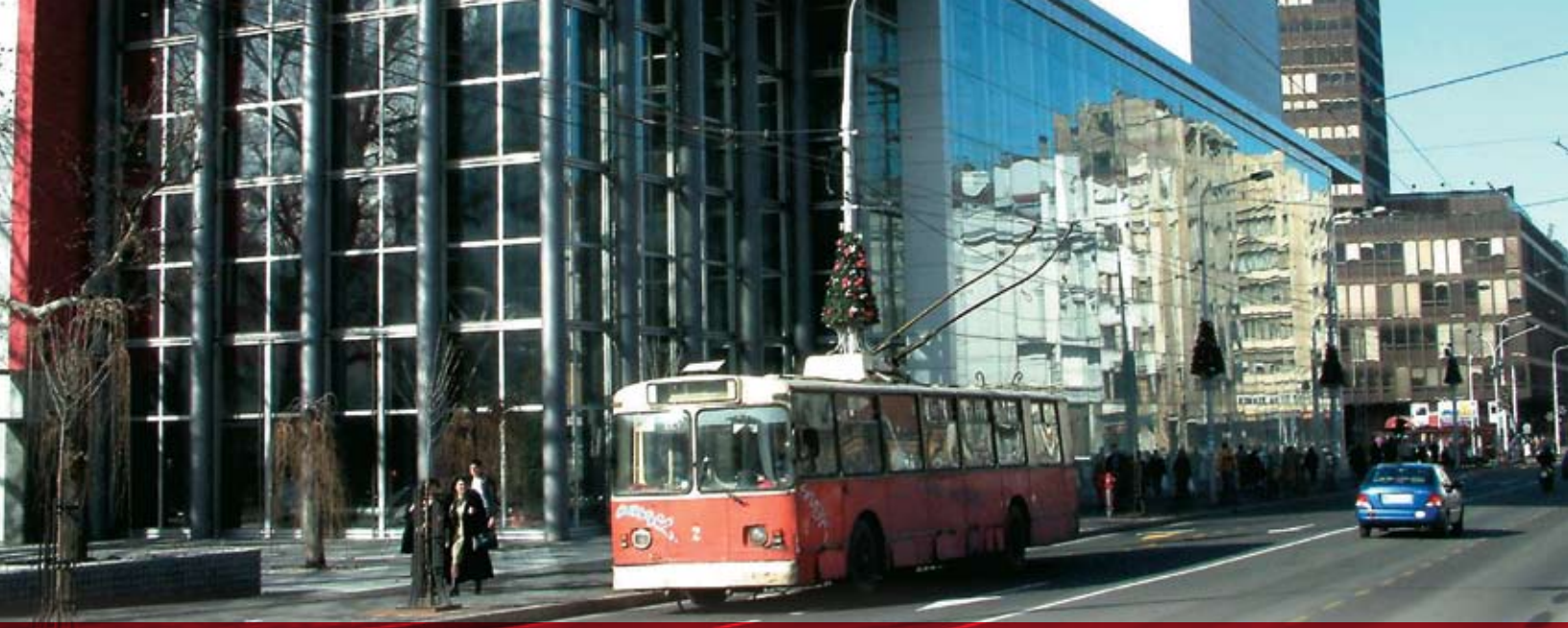

Emergency power

> Case History
Yugoslav Drama Theatre (Jugoslovensko Dramsko Pozoriste), Belgrade, Serbia

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Cummins Power Generation

Where:
Yugoslav Drama Theatre (Jugoslovensko Dramsko Pozoriste), Belgrade, Serbia

What:
550 kVA standby Cummins Power Generation C550D5A generating set, powered by QSX15G8 engine

Purpose:
To provide quiet, emergency backup power to support all theater electrical systems, including a sophisticated fire security system

Primary Choice Factors:
Cummins Power Generation's reputation as the world leader in the generator set business, alongside its renowned ability to accommodate challenging projects and its quality aftersales service

Drama Theater finds quiet solution for their backup power with Cummins Power Generation

BELGRADE, SERBIA — The Yugoslav Drama Theatre was established in 1956 and was a prominent building in the heart of Belgrade. Destroyed by fire in 1997, the theater was rebuilt in the same original location but with a modern design. Due to fire being the main cause of the destruction of the previous building, extra attention was paid to the fire security system during the design process. A main requirement of the new design was a reliable power supply. Provisions needed to be made to ensure that in the event of a power cut in the city, ongoing performances would not be disturbed. An uninterruptible power supply (UPS) was also especially important due to the concerns over the successful operation of the high-tech fire security systems.

The Yugoslav Drama Theatre contacted Cummins Power Generation and advised that in addition to the UPS requirements, there would need to be strict controls on noise levels. If a power cut did occur during a performance, the noise of the generators must not rise to a level where it would interfere with the show.

Special steps were taken to maneuver the large genset into the theater's basement.

The generators housed in the basement feature soundproof enclosures to limit noise levels.

Cummins Power Generation recommended the installation of a C550D5 generator set in the theater's basement, together with a soundproof enclosure to limit noise levels, particularly as there is only one floor separating the generator set room from the theater stage.

Potential difficulties with the installation were immediately highlighted by Cummins Power Generation, as the generator set, complete with soundproofing, would be too large to maneuver directly into the basement.

With the help of Cummins Power Generation's Hungarian distributor, they employed computer aided design (CAD) techniques to help devise a solution. The generating set was first installed into the basement, and then a specially designed soundproof enclosure, broken down into pieces, was mounted around it. The exhaust pipe was then run up through the building to discharge on the roof, minimizing pollution to those passing the theater on the street outside. Finally, the walls of the basement were insulated to further reduce the noise output.

After the installation was complete, a full-load test of all the electrical equipment in the theater was carried out on the generator set, with outstanding results. An official representative from an independent company enlisted to test all equipment and installations in the new theater commented, "The test carried out on the generator set was largely unrealistic as it is unlikely that all the electrical equipment in the theater would ever be in use all at the same time. What's more, when the test was carried out I was standing near the stage, and I didn't realize the main power had been cut as I couldn't hear the generator set working."

Slobodan Pijevac, Marketing Manager for Cummins Power Generation's Hungarian distributor commented, "We are delighted with the outcome of this project. We provided the theater with our most advanced engine technology, the QSX15G8, and the combination of this with the installation by our remarkably skilled Hungarian distributor meant the results were extremely satisfying. We managed to give our customer maximum output from the generator set with astonishingly low noise levels. I'm pleased that Cummins Power Generation could provide the Yugoslav Drama Theatre with the right solution for their needs."

For more information about integrated emergency power systems, contact your local Cummins Power Generation distributor or visit www.cumminspower.com.

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