

> Case History

Belgrade Sports Arena, Belgrade, Serbia

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What:

4 x 500 kVA standby Cummins Power Generation (CPG) generator sets. Each pair of generator sets is transferred by 1600A CPG ATS and controlled by MC150-4

Purpose:

To provide emergency standby power for electrical systems during sporting events and concerts in the arena

Primary Choice Factors:

CPG's reputation for providing reliable backup power and the ability to provide additional generator sets as the development continues to grow, together with service accessibility

Sports arena finds reliable energy solution with emergency standby power from Cummins Power Generation

BELGRADE, SERBIA — The Belgrade Arena was purpose-built in New Belgrade for the Euro 2005 Basketball Championship. It now houses other international sports competitions — boxing, football, hockey, athletics, gymnastics, handball, volleyball, among other activities, and large music events.

As a venue designed to accommodate some of the world's largest sporting competitions, power reliability is essential. The owner of the arena, Investor, has therefore chosen Cummins Power Generation to provide four 500 kVA generator sets, organized into two pairs, each pair covering the needs of half the arena. In each pair, one generator is set aside to completely satisfy all of the arena's sporting event requirements, while the other is in backup mode. If one generator fails, the other will automatically take over all loads and, as a result, supply will be continuous. However, at music concerts staged at the arena both pairs of generator sets will be in operation to satisfy demand.



Four 500 kVA generator sets, organized into two pairs, each cover the power needs for half the arena.

The building is well known throughout Europe and consists of three main areas: the arena, the small hall and the parking area. The arena covers 48,000 square meters with six sub-levels and 20,000 seats. There are 68 exclusive boxes with 768 seats, a VIP room with 38 seats and a conference hall.

The arena is built to the highest technological standards, similar to those used in Olympic stadia, and contains a digital scoreboard designed in accordance with NBA standards. In addition, every part of the building is tracked by a fully automated surveillance system. All of these systems rely on backup power provided by the Cummins Power Generation generator sets.

Radoslav Pavlovic, sales representative of Cummins Dizel Motori d.o.o., the local Cummins Power Generation distributor responsible for the project, said, "The generator sets were installed by a local company, which also included the connection of control and monitor cables and the testing of the system under load, while another local company provided the software needed to control the system."

Energoprojekt Company (the architect on this project) commented, "We needed the generator sets to be installed in a few stages. To begin with, we just wanted one 500 kVA generator set but we needed the possibility of adding three more in the future and for them to be able to work in conjunction with each other."

Radoslav Pavlovic continued, "In accordance with Investor's needs we shipped the first generator set in 1999 and at the beginning of 2004 we shipped the remaining three, along with the two MC150-4 controls. In 2005 we arranged the networking so all four generator sets could be controlled and monitored by a central computer that is also responsible for other systems like the lights and security. We have clearly demonstrated our ability to grow our installations in response to our clients' needs."

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

