

CUSTOMER: ILIAD (DC3) - FREE**POWER PLANT:** 6 x 1540 kVA**LOCATION:** VITRY-SUR-SEINE FRANCE

KOHLER-SDMO: GUARANTEEING A RELIABLE SOURCE OF POWER IN A CONSTANTLY GROWING SECTOR DATA CENTRE

Opened in September 2012, the third data centre owned by Online (Iliad/Free group) hosts tens of thousands of servers and telecommunications equipment within an infrastructure certified by the Uptime Institute as Tier III (first French data centre to be accredited).

It is the second data centre opened by Iliad in Vitry-sur-Seine, covering over 11,800m² of floor space, which is itself divided up into 22 private data centres each of 250m². Its predecessor, the DC2, was fully renovated in 2009. The DC3 site has been designed to meet the specific demands of cloud computing and large IT systems.



EXPRESSION OF NEED: A DATA CENTRE MEETING MULTIPLE CHALLENGES AND GROWING ENERGY DEMAND

Data centres have to meet strict and specific requirements in terms of electrical infrastructure availability, climatic engineering and physical and fire safety. The very same applies to Iliad, which focusses on the reliability of the infrastructure to ensure continuous service for its customers around the clock. The functioning of a data centre is based on 4 main pillars: security (against outside factors), interconnectivity (secure networks), air conditioning (to guarantee constant temperature) and power supply without outages (even in the event of fire).

The installation of generating sets is therefore vital to ensure the power supply and guarantee

that these four fundamentals can be maintained in the event of any grid failure.

Online commenced significant extension works in 2014 in order to double the capacity of the data centre. The work took nearly four months to complete. For its opening, 6 SDMO generating sets of 1540 kVA were installed.



PROJECT IMPLEMENTATION: A DOUBLING OF CAPACITY WITH NEW ELECTRICITY GENERATION DEMANDS

SDMO worked with AEEN, a long-standing partner, to provide a bespoke turnkey solution in extension to the first installation. The site was designed to be able to anticipate additional energy demand and enable the addition of 6 new gensets of 1540 kVA. Iliad therefore once again placed its trust in the expertise of SDMO.

SDMO took design requirements into account in order to be able to extend the available space and install a total of twelve generating sets.

To obtain Tier III certification, a data centre must offer continuous infrastructure availability (99.98%, or 1.6 hours downtime each year). It must therefore meet the demands of the most intensive generating set utilisation

in permanent production mode. This means that wearing parts must be able to be replaced without stopping the generating set. It was also vital for the centre operators to be able to perform any required maintenance operations.



Pic. 1. Overhead view of the ILIAD DC3 before installation of the new generating sets.



KOLHER - SDMO SOLUTION: A REPOSE ADAPTED TO THE REQUIREMENTS AND TECHNICAL CONSTRAINTS

The twelve generating sets were installed outside the building in six containers. Four containers (yellow, blue, green and red) power the DCC's servers, while two containers (black and white) were solely designed to meet the centre's cooling requirements.

In the interests of rapid identification, all of the other functional power components comply with the same colour coding as the generating sets (fuel tanks, transformers, main low voltage board) and even the cable ducts have also been painted. This enables the operational teams to rapidly visualise the complete power chain should urgent intervention be required.

Each room receives power from two separate networks. Should either network fail, the second alone can supply up to 75% of requirements.

To overcome the space constraints, the generating sets have been fitted in 20-foot containers coupled to the first installation already in place.



Pic. 2. The six new generating sets have been connected to the first installation and each has a defined colour code.

The DC3 power plant is now fully operational. SDMO is keen to exploit its expertise for other major projects.

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