

An Out of the Box -48V DC Solution

Fitting a -48V DC Plant in Existing White space

Our client, a telecommunications firm, was looking to build out a whitespace with a -48V DC plant in order to better serve its customers with on-demand video and other streaming entertainment options in the Houston, Texas area. Typically, -48V DC plants are built on slabs due to battery weight requirements. Because of the existing infrastructure installed as part of the data center, DC plant batteries were not required in this case. Our client quickly recognized the benefits and was eager to put existing whitespace to use. Instor was happy to oblige.

Executive Summary:

- Instor and Digital Realty partnered with Vertiv to build a -48V DC plant
- The data center hosts on-demand video for a telecom company
- The project involved a 125kW build with no batteries
- Built in nine weeks, the high-density plant includes 26 two-post racks + nine enclosures
- The project included 1,100 square feet of raised floor space
- A CE+T Inverter helped bring 120-volt circuits of power to the facility

Unusual,
but highly
efficient

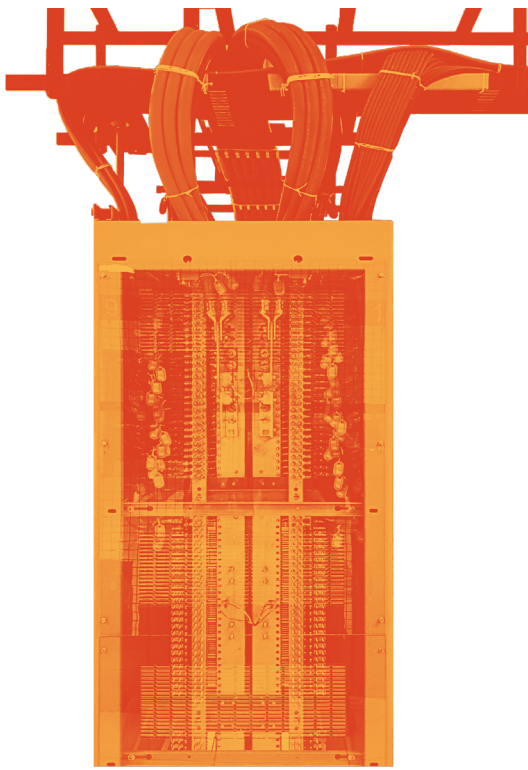


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Raising the Floor and the Bar

Instor, Digital Realty and Liebert teamed up for an unusual, but highly efficient solution for the client. Using the existing whitespace and building the plant on a raised floor would solve two problems. Firstly, because existing whitespace was available, there was not a need to build a stand-alone slab data center site. This saved capital and time related to delivery of the project. Secondly, it allowed us to locate the plant behind the existing Uninterruptible Power Supply (UPS), which fully eliminated the need for batteries and the associated costs of battery maintenance for the life of the plant.

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Instor served as the primary contractor, hiring Vertiv, known for its superior power and thermal management systems, to undertake the design. Over the course of nine weeks, a team of contractors and subcontractors worked to build out the 1,100 square foot Texas plant, resulting in a high-density 125 kW build with 26 two-post racks and nine enclosures. By bringing in a CE+T power inverter, Instor was able to deliver multiple 120-volt circuits, thus eliminating the need to use 225A PDU breakers which would have resulted in stranded power.



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Significant Savings and Higher Density

The client not only saved money by avoiding building a new data center site, but it was able to eliminate the cost of battery maintenance for as long as the plant is in operation. This also helped the client tap into its existing resources for a higher-density solution, making it a more environmentally friendly approach while serving customers with on-demand video across all their devices.

Michael McIntyre, senior sales engineer with Digital Realty, had high praise for the Instor team: "It's always been great working on projects with Instor," he said. "This team is always willing to go the extra mile and they're super easy to work with. Together, we work to find a good solution for the customer. It's a real team effort."