

## Case Study

# Benefits of Factory-Built vs. Site-Built Data Center Power Whips



## Improved Speed, Standardization, Quality Control, and Cost Visibility

### Client Overview

A Fortune 500 financial institution operating multiple data centers across the United States needed a better way to manage the procurement, fabrication, testing, and installation of data center power whips.

Historically, each location relied on local electrical contractors to build power whips in the field. While this approach worked on a site-by-site basis, it created inconsistency across the client's national data center portfolio. Each contractor had different fabrication methods, labeling practices, testing procedures, lead times, and pricing structures.

As the client's data center needs continued to grow, this decentralized approach made it difficult to control costs, maintain consistency, verify quality, and support fast-moving deployment schedules.

### The Challenge

The client's existing site-built power whip process created several operational challenges:

#### 1. Lack of Standardization

Each facility worked with different local contractors, which resulted in inconsistent materials, assembly methods, labeling, documentation, and installation practices.

## 2. Limited Quality Control

Because many cables were built onsite, testing protocols varied by contractor and location. The client wanted greater confidence that each power whip and related component was properly assembled, tested, and ready for use in a critical data center environment.

## 3. Longer Lead Times

Onsite fabrication created delays, especially when local contractor availability, material sourcing, scheduling, and site access became constraints.

## 4. Inconsistent Cost Tracking

With multiple contractors working independently across multiple locations, the client had limited visibility into total spend, pricing trends, and cost-saving opportunities.

## 5. Increased Operational Risk

In a data center environment, power distribution must be reliable, consistent, and properly documented. The client needed a more controlled process that reduced the chance of errors, rework, and installation delays.

## Client Objectives

The client wanted to improve its national power whip program by achieving the following objectives:

- Standardize power whip specifications across all sites
- Reduce total cost of ownership
- Shorten lead times for new cable orders and installations
- Implement consistent factory testing protocols
- Improve labeling, documentation, and reporting
- Create a centralized ordering and support process
- Reduce reliance on inconsistent site-built fabrication

## Solution

ProSource worked with individual site managers to better understand their power whip needs, installation requirements, equipment standards, labeling preferences, and ordering process. After reviewing the client's current approach, ProSource recommended transitioning from site-built power whips to a factory-built power cable program.

## The solution included

- Standardized cable configurations by site and application
- Factory-built power whips manufactured in a controlled environment
- Consistent labeling and documentation
- Factory testing of power whips and circuit breakers prior to shipment
- Streamlined quote and ordering process
- Fast turnaround for standard cable assemblies
- Centralized customer support
- Summary reporting to improve cost visibility across locations

This approach allowed the client to move from a fragmented local-contractor model to a more consistent national program.

## Why Factory-Built Power Whips Were Better

### 1. Greater Consistency Across Sites

Factory-built power whips allowed the client to standardize components, labeling, lengths, connectors, and configurations across multiple data centers. This helped reduce confusion, improve inventory management, and create a more repeatable process for future deployments.

### 2. Improved Quality Control

Unlike site-built cables that may vary depending on the contractor, factory-built power whips are assembled in a controlled production environment. Each cable can be inspected, tested, labeled, and documented before delivery, helping reduce the risk of installation issues or field failures.

### 3. Faster Turnaround Times

By using pre-configured and factory-built assemblies, ProSource helped reduce turnaround times to less than 48 hours for many standard power whip orders. This improved speed was especially valuable for data center teams working around tight maintenance windows, equipment deployments, or urgent expansion needs.

### 4. Lower Total Cost of Ownership

The client reduced total costs by moving away from fragmented onsite fabrication and toward a centralized, repeatable factory-built model. Savings came from reduced labor time, fewer inconsistencies, faster order processing, less rework, improved purchasing visibility, and more efficient deployment across multiple sites.

## 5. Better Documentation and Reporting

Centralized ordering and summary reporting gave the client greater visibility into power whip purchases, site-level demand, standard configurations, and overall program costs. This helped the client make better purchasing decisions and identify future savings opportunities.

### Results

After testing the factory-built power whip model through a streamlined quoting and ordering process, the client achieved its intended objectives.

#### Key Outcomes

- Reduced total cost of ownership by approximately 30%–50%
- Improved standardization across multiple data center locations
- Reduced turnaround times to less than 48 hours on standard orders
- Implemented consistent factory testing protocols
- Improved labeling, documentation, and quality control
- Created centralized support and reporting

### Before and After Comparison

Area	Site-Built Power Whips	Factory-Built Power Whips
Fabrication	Built onsite by local contractors	Built in a controlled factory environment
Standardization	Varied by location and contractor	Standardized across sites
Testing	Inconsistent or limited	Factory-tested before shipment
Lead Times	Dependent on local contractor availability	Faster turnaround, often less than 48 hours
Labeling	Varied by site	Consistent labeling and documentation
Cost Visibility	Decentralized and difficult to track	Centralized reporting and cost tracking
Quality Control	Dependent on field conditions	Controlled assembly and inspection process
Scalability	Difficult to manage across multiple sites	Easier to scale across a national portfolio

## Conclusion

For large data center operators, factory-built power whips provide a more reliable, scalable, and cost-effective alternative to traditional site-built cable assemblies.

By transitioning to factory-built power cables, this Fortune 500 financial institution improved quality control, reduced lead times, standardized components across multiple facilities, and gained better visibility into total program costs.

For mission-critical data centers where uptime, consistency, speed, and documentation matter, factory-built power whips offer a smarter and more controlled approach to power distribution deployment.

Factory-built power whips help data center operators reduce cost, improve consistency, shorten deployment timelines, and lower operational risk by replacing fragmented field fabrication with a standardized, tested, and centrally managed solution.



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