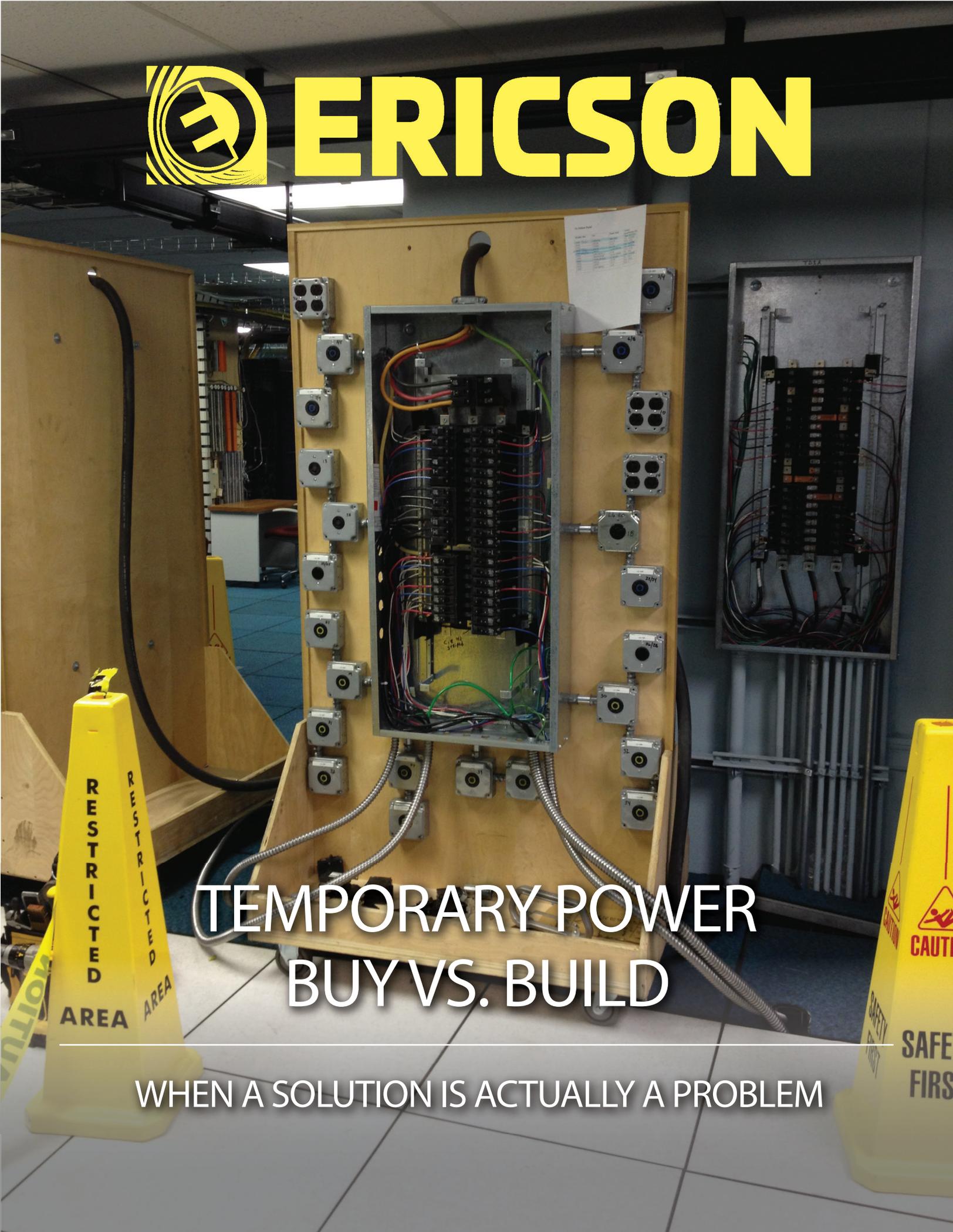




# ERICSSON

## TEMPORARY POWER BUY VS. BUILD

WHEN A SOLUTION IS ACTUALLY A PROBLEM



## Should we buy a portable power solution, or build our own?

It's a question that's been around almost as long as the need for temporary power distribution. Whether you require power for an event, a jobsite, a refinery, or a power generation facility, there are certain aspects you need to consider before deciding to build your own or buy a professionally designed and manufactured temporary power distribution solution. Key factors you might focus on when looking into temporary power units are time and money savings, ease of use and portability on site, and safety.

In this white paper, we'll examine each of these facets and show you why buying a temporary power distribution unit (PDU) is your best option.

### Time and Money

You need a temporary power solution and you think that you can just whip something up quickly to save time. But in the long run, is it a true savings? Probably the most cited argument for building your own PDU is the initial cost of purchase. While a certain amount of "sticker shock" can happen, you must look beyond the purchase price and to the total cost of ownership of a professionally manufactured unit to understand the true benefits and cost savings over time.

Home-built temporary power solutions are often cobbled together with parts found around the shop or purchased from a hardware store. While at first it seems like you could save time building this yourself, there are other, more long-term factors, which also need to be considered.

Product longevity and reusability is not usually on your mind when considering building your own power distribution unit, but it should be. A product manufactured by a trusted, established company will last you many years with little need for repairs or maintenance and can be used again and again on various jobs. Longevity of a self-built solution is usually minimal.

A home-built unit, with its Frankensteinian hodgepodge of parts, can require frequent maintenance periods that result in downtime. Also, many times, electrical contractors build a PDU for a specific job and then dismantle it once the job is complete. This method of building new units for each job actually doubles labor time for each cart and for each project – adding to lost productivity and labor expense.

And then what happens when the Authority Having Jurisdiction (AHJ) inspectors come calling? Is your home-built solution going to pass code with no issues? A professionally manufactured PDU with a rating from a Nationally Recognized Testing Laboratory (NRTL) is a near-automatic inspection pass. Having to rework a built PDU to fall within code contributes to unnecessary productivity loss and increased labor costs.

With the time needed to build a unit plus maintenance and tear-down, building your own unit can actually result in wasted time, lost productivity, and increased labor costs over the long run.



## Ease of use/portability

Besides exploring the time and money savings that can occur when purchasing a PDU, you should also examine how the unit functions in the field to get a full picture of the benefits.

How easy is your home-built power distribution center to use in the field? That obviously depends on how it is made, but judging from the many we've seen, the convenience factor of these units is not particularly high. Why? Because when a unit is built for one particular job, there is usually little forethought put into how to make a long-lasting easy-to-use unit – the focus is solely on the task of distributing power.

But what if you need to move the unit (for safety, convenience, or productivity reasons)? What if your unit is not able to distribute power to enough places and you need to connect it to another PDU? Can it handle that safely? Does your unit have designated lift points or handles for safe and easy transport?

These are all possible scenarios for power distribution whether you are using units for construction projects, events, or even for equipment turnarounds at plants or refineries.

A professionally engineered solution will have most or all of these features built into it. You'll know if it's capable for easy transport and whether it can be daisy-chained with other similar units for added versatility. Many PDUs offer "plug-and-play" functionality meaning all you need to do is attach it to your main power source and you're off and running with minimal set-up.

This type of functionality and portability not only saves time and money during initial phases or installation but also during the progression of a project, as equipment and temporary power needs migrate across the jobsite. These types of features make a unit simple to work with and add a superior level of safety to what can be a dangerous situation if PDUs are not constructed to exacting standards.

## Safety & Liability

Safety should be at the forefront of everyone's mind while on the job. This is particularly true when thinking about any type of power solution or tool. The risks associated with faulty electrical equipment are far too great to ignore in regards to both personal safety and the liability that is incurred when an accident happens.

When you build your own unit, you may put it together using parts that are all listed by a NRTL, but that does not ensure that the PDU you are constructing will be up to those same rigorous standards. Owning an NRTL-listed distribution center ensures that you have a safe product that has been tested under demanding conditions by a respected regulatory body. Besides the obvious point that having an NRTL-listed PDU better safeguards your employees from potential dangers, a professionally-built PDU insulates the company from potential liability when if an accident were to occur.



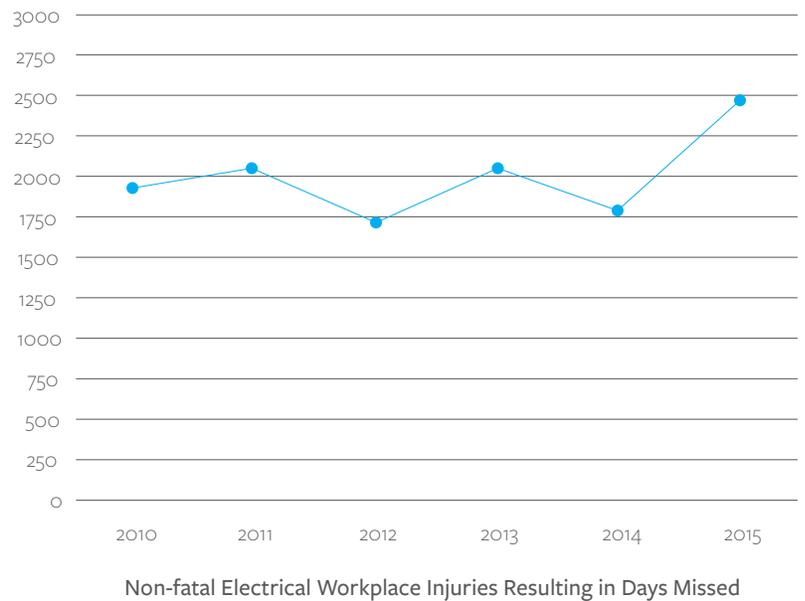
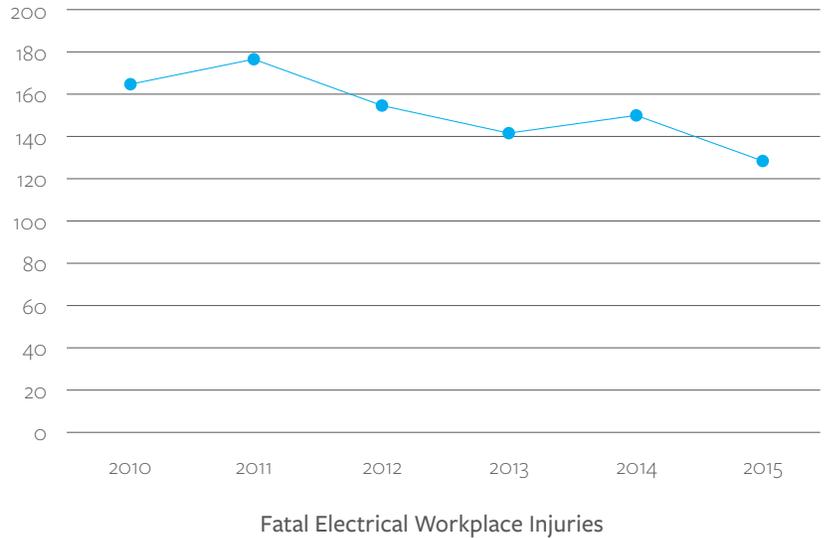
Also worth considering is that the engineers that make professional power distribution solutions are required to have and use the National Electric Code (NEC) book and all the national standards when designing this type of equipment.

A trained electrical engineer who knows the NEC code book well will design equipment with electrical systems designed for superior safety not just with the mindset of getting power from point A to point B. Of particular importance are articles 406.9 (Receptacles in Damp or Wet Locations), 525.22 (Portable Distribution or Termination Boxes), and 590 (Temporary Installations).

Another advantage of an engineered solution is that it can help you stay compliant with Occupational Safety and Health Administration (OSHA) regulations. For purposes of temporary power, regulations 1926.404 and 1926.405 - which deal with wiring design, protection, wiring methods, components, and equipment for general use - are of significance.

Other ratings that can be of critical importance in certain situations (particularly when using power distribution units in outdoor or wet-location settings) are those put forth by the National Electrical Manufacturers Association (NEMA.) NEMA provides industry-wide standards for many electrical products and components that help consumers decide what kind of product is needed for certain jobs. Professionally designed and manufactured equipment can have certain ratings that can better inform you of what type of solution you need. A home built unit can never promise that.

The last point worth considering when thinking about safety is protecting your company from liability. We live in a very litigious world, so when an injury occurs (i.e. electrocution, shock or a kinetic event, cart rolling into a worker) many questions will get asked. The first one will probably be “who manufactured this equipment?” A homemade solution opens the company up to too much liability risk.



## How We Can Help

Are you still on the fence about whether you should buy a professionally engineered and manufactured temporary power distribution or build your own? We hope that we've given you enough to think about when making this crucial decision. If you have questions about purchasing a portable power solution, please do not hesitate to contact Ericson Manufacturing at [info@ericson.com](mailto:info@ericson.com), call us at 1-800-ERICSON, or visit [ericson.com/contact-us](http://ericson.com/contact-us).

We have a robust line of power distribution and transformer units to fit your needs. Don't see exactly what you are looking for? Ericson can design and manufacture a custom unit for you. Our engineers will listen to your application needs and specifications and design a custom engineered solution that fits.

Let us make your work place safer and more efficient. Contact us today!



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e-Cart-XP™ 15-75 kVA PTU



Portable Transfer Switch 400 Amp



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