

Growth opportunity: How one contractor turned the downturn into Prime time

Power Quality Case Study



Measuring tool: Fluke 1735
Three-Phase Power Logger

Operator: Prime Electric of Bellevue,
Washington

Features used: Power quality
logging, electrical load studies and
energy consumption testing

When a contractor has grown from zero to \$40 million in just over 20 years, it makes sense to ask how they did it—and how they're wrestling with the frigid business climate of 2009.

Prime Electric of Bellevue, Washington began its journey in 1987 as an electrical service company concentrating on small electrical service projects and facilities in-plant installations. Founder Wayne Tyrrell concentrated on creating an organization focused on providing the highest level of quality installations and customer service. Today this attention to detail and commitment to client needs and strong customer relationships remains a defining principle.

In just over two decades, Prime has grown into one of the Northwest's premier electrical contractors. The company's portfolio includes projects in aerospace, commercial and high rise office, municipal, education, institutional, high tech, hotel and hospitality, laboratory, industrial, high rise residential, medical, biotech and retail. Project owners—including Boeing, Microsoft, Vulcan, Amazon.com, Infospace and SeaTac Airport—are pillars of the northwest economy.

Prime's 40 office workers and 160 field staff are organized in five operating groups: construction, design build, special projects, traffic signals and service. Fluke News spoke with Ron Lambert, Group Executive and Special Projects Manager, and Greg Leaf, Service Manager, to learn how Prime and its customers are responding to today's market conditions.

Application Note

"Somebody turned off a spigot"

Even a successful firm like Prime feels the impact of the economic slowdown. "It's a really tight economy right now," said Leaf. "It seems like about the end of November or beginning of December, somebody turned off a spigot somewhere."

"Customers are tightening their belts, just as we are and everybody does at home," he added. "Prime Electric has a really good clientele base. As far as the service department goes, what we find in a down economy is that customers don't build out new, but they keep what they have going or expand a little bit. Most of our clients have reduced operating budgets these days. So, we focus on providing cost-saving designs and ideas in an effort to deliver 'more for less' in these tough times."

Increasingly, both ongoing service work and new projects include energy conservation as a component. Service work, for instance, may include replacement of old, inefficient light fixtures. New projects too have an eye on energy, and that's got Prime focused on added training for designers and project managers.

"A lot of project requests will have points evaluated based on LEED (Leadership in Energy and Environmental Design) certification," Lambert said. "We're actually making a concerted effort to get our team LEED certified as well. Typically if it's a plans and specs job, the design and engineering team is already going to be looking down that

avenue of the LEED process. If it's the design-build portion, it helps to have LEED-certified people working on the project." The U.S. Green Building Council and numerous others offer online and classroom-based training to prepare for LEED professional accreditation exams.

Opportunities in energy

With financial incentives in the offering at both federal and local levels, Prime stays focused on energy-saving initiatives.

"Obviously the stimulus money is going to be part of this as well, but we do hear certain jurisdictions in our state are testing LED street lighting, as opposed to HPS (high pressure sodium) or metal halide," Lambert said. "Lighting retrofits have been going on the last 15 or 20 years and they're still going very strong, along with the HVAC variable frequency drives. We stay involved with all of that."

Remodels and tenant improvements provide opportunities to update not just the look of a space, but its efficiency. "When we do jobs we bring that to the customer's attention," Leaf said. "If you want to save energy and get some rebate dollars back from the utility we can do that for you. Right now the City of Seattle is offering up to 70 percent rebates on our projects, dollars that go directly into our clients pocket."

"We like to see anything between one-and-a-half to two year payback period," said Lambert. "That's a real quick seller, really a no-brainer. You start getting into the five-six-seven-eight year payback, that's tougher to sell."

With Seattle City Light documentation on Prime's computers, determining energy savings and rebates is just a matter of filling in the blanks. To calculate energy savings, Prime uses a

Fluke power logger to measure energy consumption. "We have six of them and there are times when they're all out and we still need one," Lambert said. The loggers are also used to determine the spare capacity of a building's existing electrical system, prior to doing a retrofit. Municipalities require a 30-day record of power use.

"We use them a lot for our plan review process for the municipalities, and we also use it to measure loads on service, to let us know if we can add anything new to the service, Lambert said." Though power usage data is available from the utility, the Fluke power logger provides a detailed view of system conditions down to individual panel level, and gathers useful information on power quality, such as identifying harmonics that may be present.

Find it, fix it

Prime uses the loggers as electrical detectives. "We also use it if a customer calls up, say they get spikes that take their computers out," Leaf said. "We'll put the meter on and it'll give the exact time and day when that spike occurs. That enables us to focus in on what the cause is."

"When I read a power logger—we leave it on for a 30-day period—you're reading things in the middle of the night," he added. "I can tell when people are starting to come to work. I can tell when the computers come on. I can tell when the elevators come on."

"You can isolate on a panel further downstream, or set up on the system overall, on the main distribution panel," Lambert said. Use of the logger could be billed as a discrete service-related troubleshooting effort, or included as part of the overall effort in a renovation project.



Testing power on a distribution panel.

Another useful tool (and a new service offering) has just arrived in the Prime inventory: a Fluke Ti25 Thermal Imager. Two of Prime's wiremen have already been trained to use the tool in service applications: searching for hot, high-resistance connections and components on electrical panels, motors and drives.

"Quite often in an older building where we've got older panels, a breaker may be tripping regularly, there might be some aged-looking wire," Lambert said. "We're going to try to figure out what's causing that breaker to trip or why that wire appears to be warmer than it should. We've done a lot of this in the past, but we've always subbed it out. By taking this on ourselves we can actually give the customer some savings."

And some peace of mind. "We're finding that more and more buildings are doing it (thermal scans) on a yearly basis for insurance reasons," Leaf said.

The right people in the right spot

Even the best tools can't produce results for customers unless good people are using them. Leaf and Lambert are clearly proud of the Prime Electric team.

"For over two decades, Prime Electric and its electrical service wireman have been supporting Western Washington clientele," says Lambert. "Our people and our electricians have many great resources and abilities."

"A good portion of our service drivers have been with the company 12, 15, 18 years," Leaf added. "We don't have turnover in our service department because we provide them with the quality tools and support to do the job safely and efficiently."



Inspecting connectors in a panel supplying video server racks.

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