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Maintenance Alternatives Case Study

Making the right choices for vehicle maintenance programs

What factors do fleet managers consider when making decisions about whether to perform vehicle maintenance in company shops, outsource work to service locations or bring in a vendor to handle maintenance on-site? Once a choice is made, how do they evaluate in-house or supplier performance to justify their decision, and quantify how productivity and efficiency improvements lead to a measurable return on investment?

Many factors must be considered. Among them are a company's operating territory, and the type of service and the vehicles needed by internal customers to provide it. Economic conditions at any point in time must also be taken into consideration.

There are other concerns as well. Included are vehicle, maintenance, shop and equipment, and management costs. Also important are the availability of trained technicians, parts and fuel suppliers, and outside service offerings in a given area. Last but not least, internal resources such as management capabilities and information systems are considered as well.

For three leading utility fleet managers, all of those factors, and in all cases a comparison with internal and industry data used as a benchmarking tool, led to three different but equally valid and effective choices about maintenance alternatives.

In House Maintenance at Pacific Gas and Electric Company

“As a utility, we have to consider vehicle maintenance and service needs differently,” says Dave Meisel, Director of Transportation Services at Pacific Gas and Electric Company (PG&E). “Our primary consideration is that the fleet is ready in case an emergency response is needed. In part, that means we tend to be much more service oriented. It’s not that we’re not cost oriented but our main mission, along with other factors, lead us almost by default to handle vehicle and equipment maintenance in-house.”

Those other considerations, Meisel notes, include the inherent complexity of utility equipment. For example, utility vehicles can be expensive and need to be outfitted with a variety of tools and supplies, making it hard to find replacement vehicles in lease or rental fleets if needed on short notice.

“The large, diverse geographical region we service is another major factor in our decision to maintain our fleet in 72 company garages,” Meisel relates. “We have a total of just under 14,000 vehicles and pieces of equipment and on an average day there are 12,000 units in service that we own, lease or rent long term. In major metropolitan areas we do have access to in-sourced or outsourced services with the requisite skilled labor and shop equipment, but in remote locations we have to maintain our own facilities and staff.

“That scenario,” Meisel continues, “makes it cost prohibitive to completely in-source or outsource maintenance for our fleet. With a large investment in facilities, overhead costs are set and easier to justify over a larger number of vehicles.”

Part of the equation as well is that PG&E has a very productive, highly trained staff in place. “We’ve invested heavily in technicians, and because we offer steady work at fair wages and good benefits, we are an attractive place to work,” Meisel states. “Currently as well, with dealerships and independent repair shops struggling, the availability of high quality applicants is rising dramatically. That not only means we don’t have a technician shortage; it also makes our rationale for keeping maintenance in-house even stronger.”

PG&E, according to Meisel, is able to verify its decision to handle vehicle maintenance in-house using a variety of productivity and cost measurements. Benchmarking against industry data provided by Utilimarc, for example, the company’s unit per technician ratio places it in the top 25 percent of similar companies nationwide.

“Even with internal data, industry benchmarking is critical to fully understanding our costs and the productivity of our operation,” Meisel states. “We measure everything from workload per person to wages across the utility market, to cost

per customer and main line mile to data on vehicle types. We use it to find where we may be outside industry operating parameters and ways to improve.

“No one measurement tells us if we’ve made the right choices,” Meisel concludes, “but without this data determining whether to handle maintenance in-house, or to in-source or outsource services, would be impossible. When we look at all the pluses and minuses, and concentrate on making the best decision, an in-house maintenance operation works best for us and for our customers.”

Pacific Gas and Electric Company, a subsidiary of PG&E Corporation based in San Francisco, provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California, stretching from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The PG&E fleet is used to maintain 123,054 circuit miles of electric distribution lines and 18,610 circuit miles of interconnected transmission lines as well as 40,123 miles of natural gas distribution pipelines and 6,136 miles of transportation pipelines.

Vendor On-Site Maintenance at PECO Energy

“The cost savings we’ve realized since we began using an on-site vendor to handle our vehicle maintenance needs was not the only reason we made that choice,” says William Flemming, Manager at PECO Energy. “Our decision was based on the belief that maintenance was not our core competency. The driving factor was a desire to focus our resources, including management time, on other things.”

Since 2004, maintenance and repairs on the 1,383-vehicle PECO fleet has been handled on-site by a carefully selected vendor. Vehicles in the operation, ranging from SUVs and pickups up to medium-duty aerial units and a small group of tractors, are maintained in ten PECO garages by 40 technicians.

“We provide all the assets, from facilities to shop tools and equipment,” Flemming explains, “and our on-site vendor handles staffing, technician recruiting and training, parts and management functions. They also maintain our 21 on-site fueling facilities. Operating in a small geographic area we’re able to meet about 95% of our fleet’s fuel needs in-house. We handle our own contracts for bulk fuel and as part of our agreement the vendor manages the fuel islands.”

PECO’s initial three-year contract with its maintenance services provider covered routine maintenance for a fixed fee and included a provision for time and materials costs on nonstandard items. “We did see savings when we compared

costs in the first three years to our previous in-house operation," Flemming states. "Our vendor is also able to secure favorable contracts with suppliers and address technician availability in a competitive market."

After its first agreement expired, PECO signed a new contract based on a cost plus approach. "This is more like an in-house operation with a budget," Flemming explains. "We agree to a set amount that provides for a reasonable profit margin for the vendor. They meet our defined maintenance and repair needs within the budgeted amount to earn their profit. As an incentive, we pay a bonus if they are under budget, which still costs us less than our previous operation."

To verify cost data for its vendor on-site maintenance agreement, PECO has access to its supplier's management information systems, and evaluates a number of other factors as well. For example, performance indicators such as the percentage of preventive maintenance completed on time each month are used. There is also in place a quality indicator to measure time between service intervals, and a 60-day vehicle history profile set to alert the fleet if the same repair is required in that timeframe. In addition, the number of road service requests is tracked along with the response time for road calls.

"For any given day," Flemming also relates, "our goal is to not have more than 24 vehicles out of service. While we track that number, and the average number of days each unit is out of service, we already know that our vehicle uptime has not been impacted by the decision to use an on-site vendor for vehicle maintenance.

“Regardless of how we choose to handle maintenance for the fleet,” Flemming concludes, “we always have to keep validating our decision. We know that overall our costs have declined and based on Utilimarc data that we’re performing on par with industry benchmarks. Things do change over time, though, so we always have to be ready to meet new challenges. For that reason we will continue to look more closely at our entire operation, and to evaluate in-house or supplier performance for productivity and efficiency.”

PECO Energy, an electric and natural gas utility subsidiary of Exelon Corporation based in Philadelphia, serves 1.6 million electric and 491,000 natural gas customers in southeastern Pennsylvania. The state's largest utility, PECO maintains a network with 550 electric substations, 21,000 miles of distribution and transmission lines, 27 natural gas gate stations and 6,600 miles of underground gas mains.

In-House Operations and Outsourcing to a Vendor Network at Public Service Company of New Mexico and Texas New Mexico Power

“The challenges of managing two utility fleets that operate across a wide and varied geographic region and the need to meet specific requirements for a variety of equipment types make the decision about how to best provide vehicle

maintenance services a moving target," says Dave Fisher, Fleet Manager at Public Service Company of New Mexico (PNM) and Texas New Mexico Power (TNMP), subsidiaries of PNM Resources. "In our case, the answer was a combination of in-house shops staffed by our own highly qualified service technicians and a vendor network managed by an outside provider."

Combined, PNM fields approximately 1,000 vehicles in its two fleet operations, including 600 in New Mexico and 400 in Texas. In the fleet are everything from light-duty vehicles and pickups to a variety of service trucks, medium-duty trucks with service bodies, small buckets and cranes, aerials and digger derricks, and trailers.

"Our fleets operate from eight company shop locations," Fisher relates. "In New Mexico we have two facilities with 70 vehicles each and larger operations in Albuquerque and Santa Fe. In Texas, there are four shops across a large region with about 100 vehicles per location.

"We have 11 company technicians, including four at our largest facility in Albuquerque," Fisher continues. "At each shop, our staff focuses on larger, heavier and specialized units, and handles hydraulic system maintenance and repairs. The technicians also perform routine truck maintenance."

Where PNM faced its biggest challenge was in managing light-duty vehicles. “In New Mexico we cover the entire state so there is a lot of distance between company locations,” Fisher explains. “In Texas, the size of our territory is also large. In addition to managing widespread fleets in both states, with the sale of PNM’s gas utility we also cut our management staff in half to three people.”

PNM, according to Fisher, spent approximately 18 months evaluating alternatives to its traditional in-house maintenance operation. Considerations, he notes, included the need for a proven, reliable vendor network, highly detailed reporting systems, and a supplier that could handle the company’s finance lease needs for everything from cars to large pieces of equipment.

“We determined that our current finance lessor was the best fit to meet our needs,” Fisher states. “Since the beginning of 2009, they have been managing our light-duty fleet, including handling preventive maintenance and breakdowns, as well as licensing, registrations, titles and fuel cards. The company is now managing the process of using a vendor network approved by PNM for maintenance and breakdown repairs on the light-duty fleet, and monitors the work being done.

“Our lessor also consolidates data on internal and outsourced services that lets us more effectively track parts and labor costs for vehicles and charge them out to customers appropriately,” Fisher concludes. “Using this capability and

Utilimarc data to compare our operation to industry benchmarks, we're seeing expenses for maintenance drop and finding other ways to trim costs. We're also able to meet our management challenges with a smaller staff, and most importantly we can validate our maintenance choices."

PNM Resources, based in Albuquerque, New Mexico, is an energy holding company that serves the electric needs of 859,000 homes and businesses in New Mexico and Texas. It utility operations include Public Service Company of New Mexico (PNM), the state's largest electricity provider with customers in 100 communities and Texas New Mexico Power (TNMP) that meets the needs of customers in 76 cities throughout Texas. In 2007, TNMP's New Mexico operations merged with PNM.

Right Choices

For fleet managers in all types of industries and operations, making effective choices about maintenance alternatives is about weighing all the options. Decisions about whether to perform vehicle maintenance in company shops, outsource work to service locations or bring in a vendor to handle maintenance on-site are based on careful consideration of many factors and on going evaluations of performance.

Different, but proving to be equally beneficial, the conclusions about maintenance alternatives reached by three utility fleet managers illustrate the process that these skilled executives employ. In the end, the right choices lead to measurably enhanced productivity and efficiency.