



## **Technician Apprentice Programs Case Study**

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Continually facing the need to recruit and train new technicians for their maintenance operations, utility fleet managers in some operations are finding that apprenticeship programs provide the highest quality staff.

Apprenticeship programs are varied based on each fleet's needs and its operation. In some, the programs involve training seasoned technicians while other fleets provide opportunities exclusively for new hires. Some fleets also work with local schools to find, recruit and train apprentice technicians, and to support educational offerings for potential candidates.

Based on projections covering the number of open positions a fleet maintenance operation will need to fill, apprenticeship program openings are usually limited, enabling fleets to fill those spots with the highest caliber candidates. The approaches being taken to train technician apprentices are illustrated by the programs now in place at three of the nation's leading utility fleets.

### **Arizona Public Service**

"When an apprentice completes our program we have a technician who's ready to perform at a journeyman level, is trained to our satisfaction, and who is familiar with our vehicles and equipment," says Gregg Doeden, Transportation Maintenance Leader. "Just as importantly, we've had a chance to get to know each other. Our apprentices felt like a part of the company because they've had

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the opportunity to work with our staff and to decide they really want to do this kind of work.”

Headquartered in Phoenix, Arizona Public Service (APS) is the state’s largest electric utility, serving more than 1.1 million customers in 11 of 15 counties. The utility’s fleet includes 3,200 pieces of equipment that are maintained at 18 shops by 46 journeymen technicians.

In place for many years at APS, a four-year apprenticeship program is ensuring that well trained and highly motivated new technicians are available when the fleet needs to fill open positions. “We had six mechanics take early retirement packages in 2009,” Doeden relates. “Since then, we have not had a mechanic retire, but in the next two years we could have six openings as some of our older mechanics become eligible for retirement.”

The four-year apprentice program at APS includes 900 hours of training at the Universal Technical Institute and a full-time position working with journeymen mechanics in the fleet’s shops. Graduates of accredited automotive schools can finish the program in three and a half years.

The training curriculum for APS technician apprentices includes a series of three-week classes. Covered are gasoline and diesel engines, diesel fuel systems and

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accessories, truck drivetrains, ignition systems, emissions, electronics and hydraulics, among others.

Apprentices at APS are assigned to work in different shops. “That gives them experience in all parts of our operation,” Doeden states. “In large shops they mainly work on vehicles. In smaller shops they also learn how to serve as the service writer, and about parts management.”

A committee made up of members from different areas within APS oversees the apprenticeship program. Included is one journeyman technician. “Every month, the journeyman technician and the foreman overseeing an apprentice’s training fill out grade cards, which are reviewed by the committee,” Doeden explains. “We also look at each apprentice’s classroom performance.

“If anyone in the program isn’t meeting our standards they can wash out,” Doeden continues, “but that never happens because everyone in the program wants to be here. We even have a pre-apprenticeship where employees that work in the garages can bid on apprenticeships when spots in the program open up. That’s been a good way to get people involved at the ground level.”

Overall, Doeden says that the technician apprentice program at APS has worked very well. “We know this program is a good opportunity because we never have trouble finding people that want to participate,” he concludes. “It’s a good

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opportunity for people that want to benefit from the learning process, and APS benefits as well because it helps us develop a staff that is well positioned to provide the highest quality service.”

### **Idaho Power Company**

“To join our company as a new hire, a technician has to be a journeyman somewhere else,” says Jerry Olson, Fleet Manager. “We look for established mechanics with a minimum of five years experience. We often target heavy equipment dealers because their technicians usually have experience with hydraulic systems, and train them on the equipment we operate, like aerial units and digger derricks.”

The Idaho Power fleet operation fields about 1,500 vehicles and pieces of equipment, maintained by 21 technicians in five shops. The fleet includes a wide variety of equipment types in use across a 24,000-square mile service area that covers rugged and remote terrain. Idaho Power, based in Boise, provides electricity to an estimated one million people in southern Idaho and eastern Oregon.

Idaho Power did have a formal technician apprenticeship program for new hires but after four years has shifted its emphasis to training established journeymen. “With very little turnover, we decided to focus on hiring experienced apprentices

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and providing structured training,” Olson explains. “When we do bring someone on, the program is about the equipment we operate and about the company.”

The training program for newly hired technicians at Idaho Power covers different categories of equipment. The majority of the focus is on hydraulics and heavy-duty issues. “We emphasize that you can’t take shortcuts in a utility,” Olson states, “so we also focus on things like dielectric testing and safety. Our trainees also spend time in the fleet’s fabrication and welding shops and in the new vehicles division where assembly and wiring work takes place.”

Idaho Power is also thinking long term, Olson notes. For example, the utility offers internships to college seniors to give them real world experience. “That doesn’t guarantee a job in the future,” he says, “but we have hired a few of our interns, usually after they work elsewhere for a few years and come back and meet our requirements.

“We normally don’t have any technician positions open because we have a lot of veterans on our staff,” Olson concludes. “We have one technician with 40 years of service. The average is ten to 15 years. We also have about 15 technicians who will be eligible to retire in the next five years. Our approach will continue to provide a path to a long term career for technicians and give us qualified people who want to work in this industry.”

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## **Salt River Project (SRP)**

“Quality is the biggest benefit SRP receives from its Auto Technician apprenticeship program,” says Israel Garza, Regional Manager, Transportation Services Department. “Utility equipment is unique and maintaining it requires special skills. Having a program that develops technicians with those capabilities and a keen understanding of our needs is very beneficial to our operation.”

The SRP maintenance organization of six shops staffed by 35 journeymen technicians is responsible for about 2,200 pieces of rolling stock and equipment ranging from electric golf carts to 70-ton cranes. Made up of two entities, Tempe, Arizona-based SRP includes the Salt River Project Agricultural Improvement and Power District, a political subdivision of the state of Arizona, and the Salt River Valley Water Users' Association, a private corporation. The District provides electricity to nearly 934,000 retail customers in the Phoenix area. The Association delivers nearly one million acre-feet of water annually to a service area in central Arizona.

“Our apprentice program has evolved over the years,” relates Santos Leon, Regional Supervisor. “We typically add two apprentices per year, selected from internal candidates such as trades helpers, automotive utilitymen, or field equipment servicemen. When we have openings, candidates are interviewed by a committee that includes management and hourly staff members from various SRP divisions.

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“After a first round of interviews,” Leon continues, “prospects attend an orientation and then spend two days shadowing journeymen technicians in different shops to help them fully determine if this is something they want to do. Four of the candidates are then interviewed again and questioned on their knowledge of vehicle components and systems, and from that group two people are offered spots in the program.”

Those apprentices then begin a four-year program that includes classes at a local community college and on-the-job training, notes Frank Hernandez, Regional Supervisor. Participants are required to take two classes per semester in related subjects and work regular shifts in one of the fleet’s shops.

“They are required to complete 1,000 hours of OJT every six months, including work that correlates with the classes they are taking,” Hernandez explains. “The subjects begin with basics, such as preventive maintenance, safe use of tools and personal protective equipment (PPE), tires and completing work orders, and then quickly move on to more difficult topics.”

In each subject area, competency based testing and diligent monitoring of “on the job” performance reflects how apprentices at SRP are progressing.

Successful completion of every step results in graduation and a position as a journeyman technician with the fleet.

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To find and attract candidates for entry-level automotive utilitymen, which in many cases are the feeder group for the apprenticeship program, the utility works with several local area community colleges. Hernandez sits on the Advisory Committee of two such colleges, who appreciate his efforts and guidance.

“It’s all about finding the best people and helping them develop into journeymen technicians,” Israel Garza concludes. “We’re projecting a need for 12 new technicians through 2016. Our goal is to give people within and outside our operation the chance to grow and learn from us, so we can fill those openings with the highest caliber staff. The results of our apprenticeship program have been excellent, something that makes everyone at Salt River Project’s Transportation Services Department very proud.”

## **MEETING NEEDS**

Based on projected needs, fleets that are developing and operating technician apprentice programs are helping ensure a cost-effective and successful future for their vehicle and equipment maintenance operations.

While varying in design and execution, technician apprentice programs share a common goal— to help fleets develop well-trained and highly qualified staff to meet their current and long-term fleet maintenance

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