



# Hydroelectric

## Choosing a Hydro Apprenticeship

Imagine starting your workday inside a waterfall, surrounded by the raw power of rushing water and the pristine beauty of national parks and river systems. The Hydro Apprenticeship offers something truly unique in the trades—a career that combines cutting-edge technology with some of the most scenic work environments imaginable.

But don't let the beautiful setting fool you—this is precision work at its finest. Every day operates like a well-managed farm, with scheduled maintenance tasks and unexpected repairs that demand exacting standards. The tolerances are incredibly tight; a seal that's off by half the width of a hair can cause equipment failure and costly downtime that translates to lost revenue. When massive turbines and generators are assembled, everything must be perfect because these machines harness millions of gallons of flowing water to generate the electricity that powers communities.

The work rhythm follows nature's patterns—planned outages are strategically scheduled during low river periods for annual overhauls, where you'll methodically work from top to bottom, inspecting electrical systems, checking for abnormal wear, examining hydraulic equipment, and planning future maintenance schedules. But when unplanned outages strike, the pace intensifies dramatically. Equipment failures demand immediate response, with teams rushing to diagnose problems and restore power generation under strict FERC regulations. This environment

demands flexibility—you might be pulled away from routine maintenance to tackle emergency repairs, requiring quick thinking and seamless teamwork. You'll learn to watch out for your teammates as procedures change and challenges evolve, creating bonds forged by shared responsibility for keeping the power flowing.

This apprenticeship offers unparalleled career growth opportunities. You'll develop specialized skills in precision machinery, hydraulic systems, and power generation that make you invaluable in a field where expertise is rare and demand is constant. For those seeking a trade that combines technical mastery with natural beauty, job security with adventure, and the satisfaction of working with clean, renewable energy, the Hydro Apprenticeship offers a career path as powerful and enduring as the rivers themselves.



### Our power grid role

Hydroelectric energy converts flowing water pressure into mechanical motion to generate electricity. This renewable technology harnesses one of Earth's most abundant resources that we use to create reliable power.

## Taking charge of your career!

The journey from helper to journey worker in the utility industry represents a remarkable transformation that mirrors the evolution of power generation technology itself. It begins at the ground level, where success as a helper hinges not on technical expertise, but on fundamental work ethic and attitude. The most successful helpers distinguish themselves by being reliable, showing up with a positive attitude, and demonstrate a desire to learn.

The transition to apprentice marks a critical shift in both responsibility and mindset. Here, humility becomes your greatest asset—recognizing that despite any previous experience, you're entering a world of precision and complexity that demands respect. Successful apprentices cultivate an open-minded approach to learning, actively seeking feedback. During this phase, you begin developing the core competencies that define skilled workers: mechanical intuition that allows you to understand how systems function, meticulous attention to detail that prevents costly mistakes, and genuine pride in craftsmanship that drives you to exceed standards rather than simply meet them.

The evolution to journey worker status represents mastery not just of current systems, but adaptability to an industry in constant technological flux. The role demands continuous learning, as each technological upgrade brings new challenges and opportunities to expand your expertise, ensuring that the journey from helper to journey worker is really just the beginning of a lifelong evolution in the dynamic world of power generation.

### Day in the life video



[youtu.be/4UipVrAQSnI](https://youtu.be/4UipVrAQSnI)

## Success story

### Jake F.

Hydro Mechanic Journey Worker

Hydroelectric mechanic journey worker Jake has had a wide-ranging career, from CNC dental mill operator to electrical parts warehouse worker. Jake learned of the PSE Pathway-to-Apprenticeship Program while pursuing an industrial electronics and robotics degree from Bates Technical College.

Jake's 8,000-hour, four-year hydroelectric apprenticeship helped support day-to-day operations at Snoqualmie Falls, one of the oldest hydroelectric facilities in the US. As a run-of-the-river facility, Snoqualmie Falls offers PSE hydro helpers and apprentices a unique opportunity to support clean, renewable power generation by harnessing the river's churn. "I may be working 280 feet underground in the 'cavity' supporting powerhouse operations or helping ensure intakes on the river's surface are clear of harmful debris," said Jake.

Each day on the river presents apprentices with new learning opportunities. Tasks may include maintaining mechanical equipment, winterizing buildings, managing vegetation growth, and designing solutions to a host of mechanical system challenges. "I'm motivated by challenging problems that require me to engineer and fabricate solutions," said Jake.

Jake has acquired hydroelectric-specific job skills as an entry-level helper and apprentice. With promotions every six months he completed his goal of becoming a hydroelectric mechanic journey worker.

### Follow Jake's path to success:

1. Energy Production Helper (Pathway to Apprenticeship)
2. Hydro Apprentice
3. Hydro Journey Worker

For more information, contact us at [PTA@PSE.com](mailto:PTA@PSE.com)