



# Careers in Nuclear Energy

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# Day & Zimmermann



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# Nuclear Energy across the USA



**50.4%**

share of carbon-free electricity generated by nuclear energy

**482M**

metric tons of carbon emissions avoided in 2021

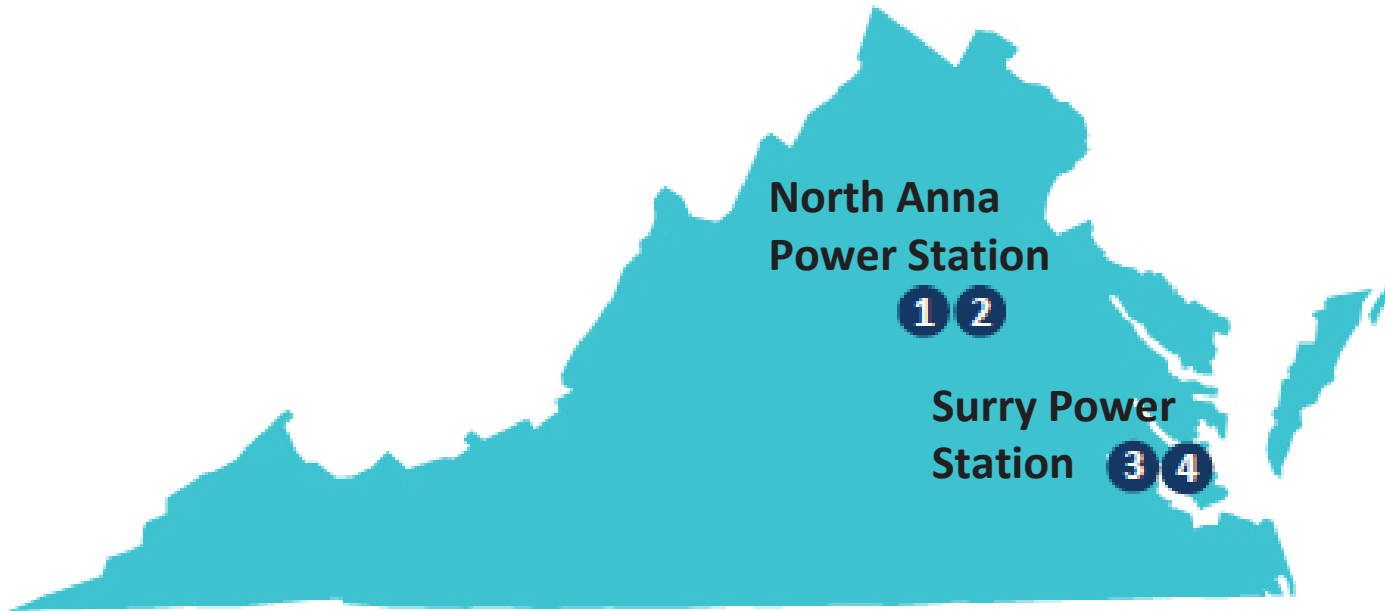
**475,000**

well-paying, sustainable direct and indirect jobs in the nuclear industry

**92.7%**

capacity factor of U.S. nuclear plants in 2021 as a reliable electricity source

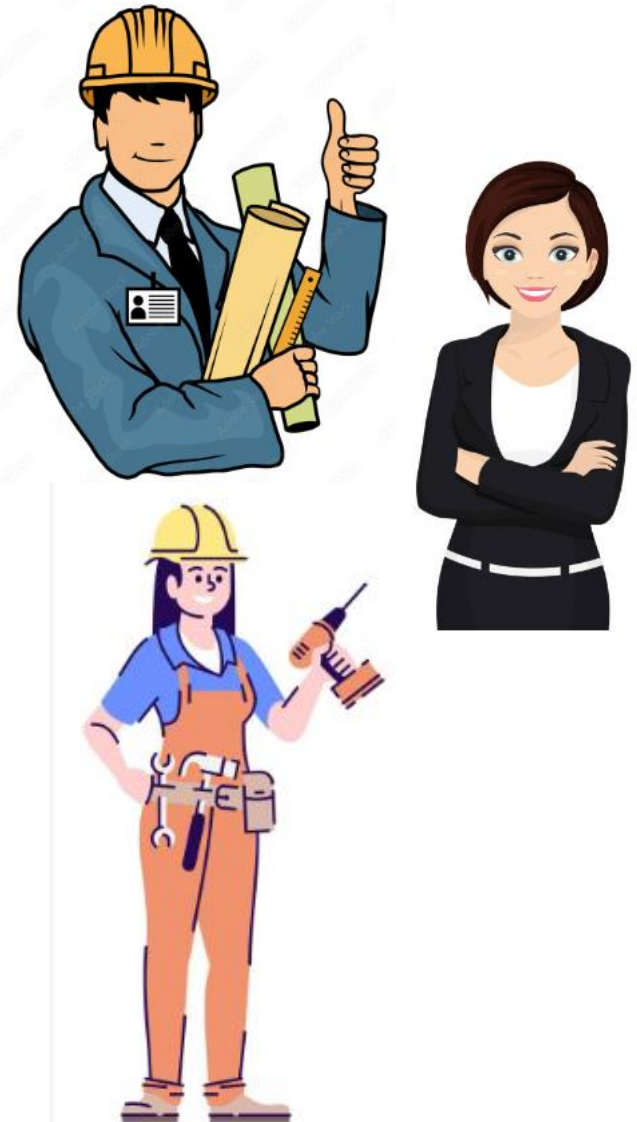
# Virginia Nuclear Sites



- 2 Dominion Energy sites, 4 operating units
- 31% of the electricity generated in Virginia
- 95% of Virginia's carbon-free electricity, only carbon-free source available 24/7
- Generates 29 million mega-watt hours of electricity a year, enough to power 2.1 million households
- Nuclear License Renewal extends the operating life through 2060
- Small Modular Reactors on the horizon for Virginia

# Nuclear Industry Jobs

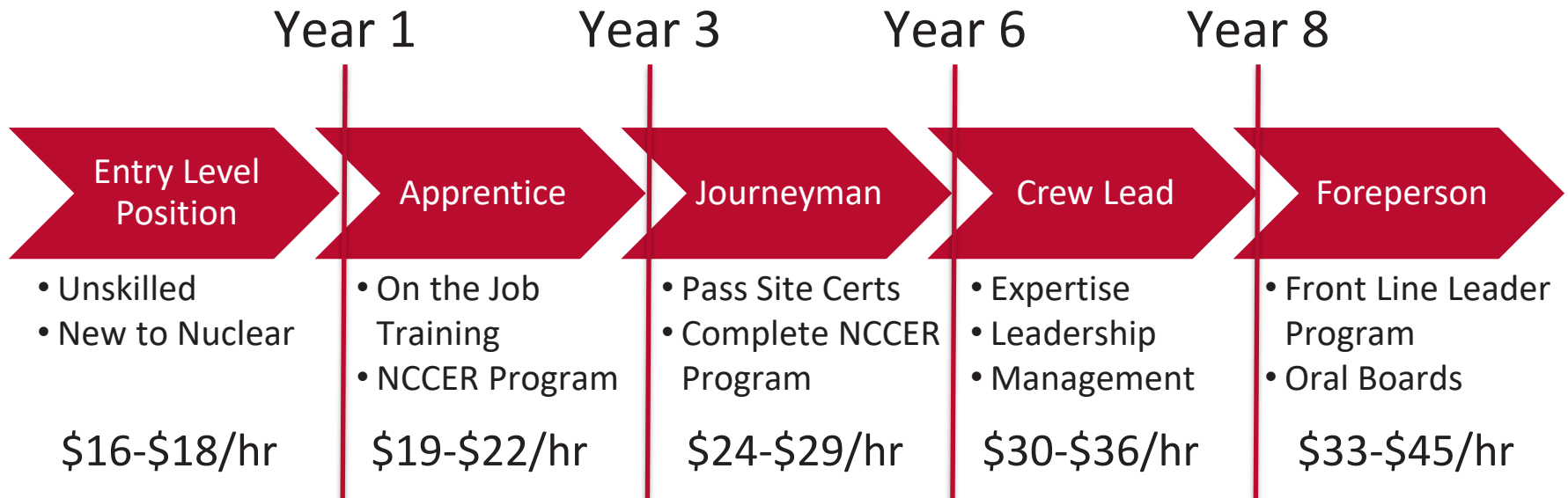
- US nuclear industry spends roughly \$11B annually on labor
- Nuclear worker salaries are 50% higher on average than other generation sources
- Each plant employs 500 to 800 workers
- Refueling outages add another 1000 workers





# Nuclear Career

## “Earn as you learn”



- Minimal cost for Apprentice Programs – **No Student Loan Debt**
- Planned progression through the trade based on your performance
- Potential annual salary in year 1 - \$34,000; year 3 - \$41,000; year 5 - \$53,000 and this does not include overtime

# On-line Work

## What is On-line?

- Period of time when the plant is running and connected to the electric grid

## During On-line:

- Equipment maintenance is performed
- Emergent repairs are made
- Preparation is made for the installation of design changes

## On-line Work Schedule

- Monday-Thursday
- 4x10 schedule, 6:00 to 4:30
- Opportunity for overtime



# Outage Work

## What is an Outage?

- Scheduled time to shut the plant down for re-fueling
- Occurs every 18 months

## During the Outage:

- Work is performed that cannot be conducted when the plant is operating
- Maintenance is conducted on existing equipment
- New equipment is installed
- Security upgrades are performed

## Outage Season

- Spring – March through mid-June
- Fall – September through mid-December



# Outage Work

## Outage Work Schedule

- 6x12 schedule, with 1 shift day off
- Day Shift or Night Shift
- Each week earns 40 hours straight time (ST) and 32 hours of over time, making each week equivalent to 2 weeks of ST pay

## How long is an Outage?

- ~30 days pre-outage preparation
- 28 to 42 days Outage duration
- 6 week outage equals ~13 normal weeks of ST pay

## Blueprinting

- Lining up multiple outages in a season
- North Anna to Surry



# Life of Nuclear Worker

- Satisfaction of making a difference
- Work-life balance
- Camaraderie – life long friendships
- Travel
- New challenges
- Professional growth
- Transition to full time positions within the utility



*“My family always told me how important working in nuclear was, but it didn’t hit me until I was standing on a refuel floor looking down at the refuel canal. **Everyone’s job here is essential to not only producing electricity for America, but also ensuring their safety.** It’s a feeling I can’t explain, but I know all of my peers know what I’m talking about.”* **Debra Atterberry (Nuclear Pipe Welder)**

# How to Prepare for a Career

## Learn a trade

- HQWBL – Technical Education
- Internship
- Entry-level positions → D&Z JobLinX
- Apprenticeship - “Earn While You Learn”
  - On-site apprentice programs
  - Virginia Community College Fast Forward programs



## Getting Badged

- 18 years of age
- High school degree or GED
- Background Check for Security Clearance
- No drug use (working on federal facilities)
- Nuclear Worker Training Program

# Partnership with Local Schools

- Zoom presentations
- In person meetings
- Career Days
- Site Visits
- CTE Advisory Committee
- Curriculum design

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