

## **Energy Industry in Context**

- 1990-2006: >25% employment, 200,000 EEs
  - Improved production,
  - Operating efficiencies,
  - Consolidation
- Reductions also in education and training
- Employment continues to remain stable today
- BUT demand for energy and consumption increases

## **Energy Industry in Context**

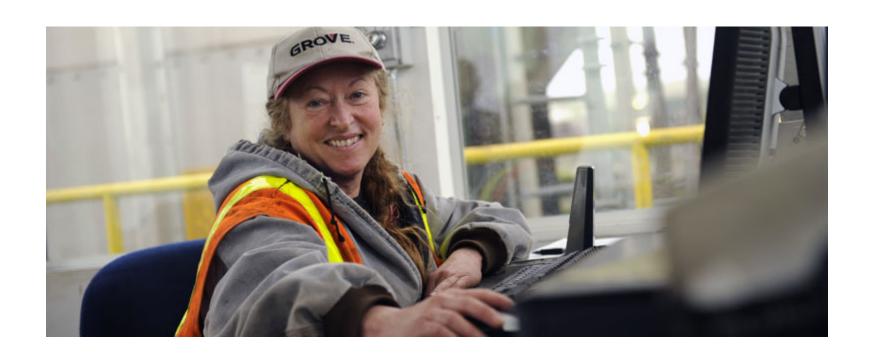
- While the physical infrastructure degrading...
- Electrical system becoming more sophisticated
- Growing political pressure to expand and integrate clean renewable energy, and energy efficiencies =
  - Reduce environmental pollution
  - Improve energy security
  - Spur economic development and job creation

## **Energy Industry in Context**

Utilities and governments investing in new research and technology upgrades to:

- Support a "smarter" electrical grid
- Increase use of renewable generation sources
- Boost consumer education
- Expand incentive programs to spur greater efficiencies through consumer engagement

## Workforce Ready?



# Snapshot of Trends, Challenges: 2013: 16 ERs, 9000 EEs, 5 NW States

Retirements – 1,522 craft/prof EEs next 5 yrs, 17% current workforce

across 9 occupations

- 60% utility workers 45 yrs.+
- Future labor pool smaller; many unprepared
- Shortage of qualified applicants, esp. power engineers, power system operators, electricians
- Competition for qualified applicants intense

### Snapshot of Trends, Challenges: 2013: 16 ERs, 9000 EEs, 5 NW States

- Students view energy field as "green" with opportunities to work on:
  - Renewable energy and efficiency projects that are sustainable and environmentally responsible
- Building the K-12 Pipeline with relationships:
  - Activities at all levels to generate interest
  - Stress importance of STEM education
  - Best practices evolving

### Snapshot of Trends, Challenges: Sector Strategies

- PNCECE: sector strategy in WIRED and DOE Smart Grid Workforce Development grants
- Statistical evidence that sector strategies:
  - Address current and emerging skill gaps
  - Engage directly with industry across boundaries
  - Better align state programs & resources serving employers
    and workers

#### **PNCECE Website**

http://cleanenergyexcellence.org/wp-content/uploads/2013/11/LaborMarketStudy-2013\_WEB.pdf

**Workforce Challenges of Electric Power Employers in the Pacific Northwest** 

By: Alan Hardcastle, Ph.D. with Pamela Jull, Ph.D. and Sally Zeiger Hanson, M.Ed., Washington State University Energy Program, for the: Pacific Northwest Center of Excellence for Clean Energy "A Centralia College Partnership", OCTOBER 2013

http://www.nationalskillscoalition.org/assets/reports-/state\_sector\_strategies\_coming\_of\_age.pdf

State Sector Strategies Coming of Age: Implications for State Workforce Policymakers,

By: The National Governors Association, Corporation for a Skilled Workforce, & National Skills Coalition