Pacific Northwest Region Energy & Labor Market Research

Alan Hardcastle, PhD
Washington State University Energy Program

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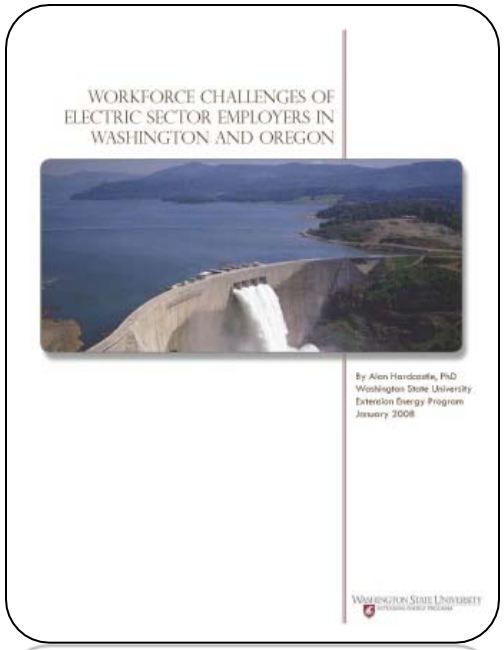
Utility Industry Workforce

2008 Labor Market Research

- Industry trends
- Labor shortages
- New skills needed
- Workforce education solutions
- Growing the workforce pipeline

http://cleanenergyexcellence.org/resources/



Electric Sector Workforce Survey Purpose and Design - 2008

* **Needs assessment of the industry**
  * Existing labor market data insufficient
  * Understand labor and workforce issues directly from employers
  * Benchmark for HR planning and training
  * Boost education/training system responsiveness

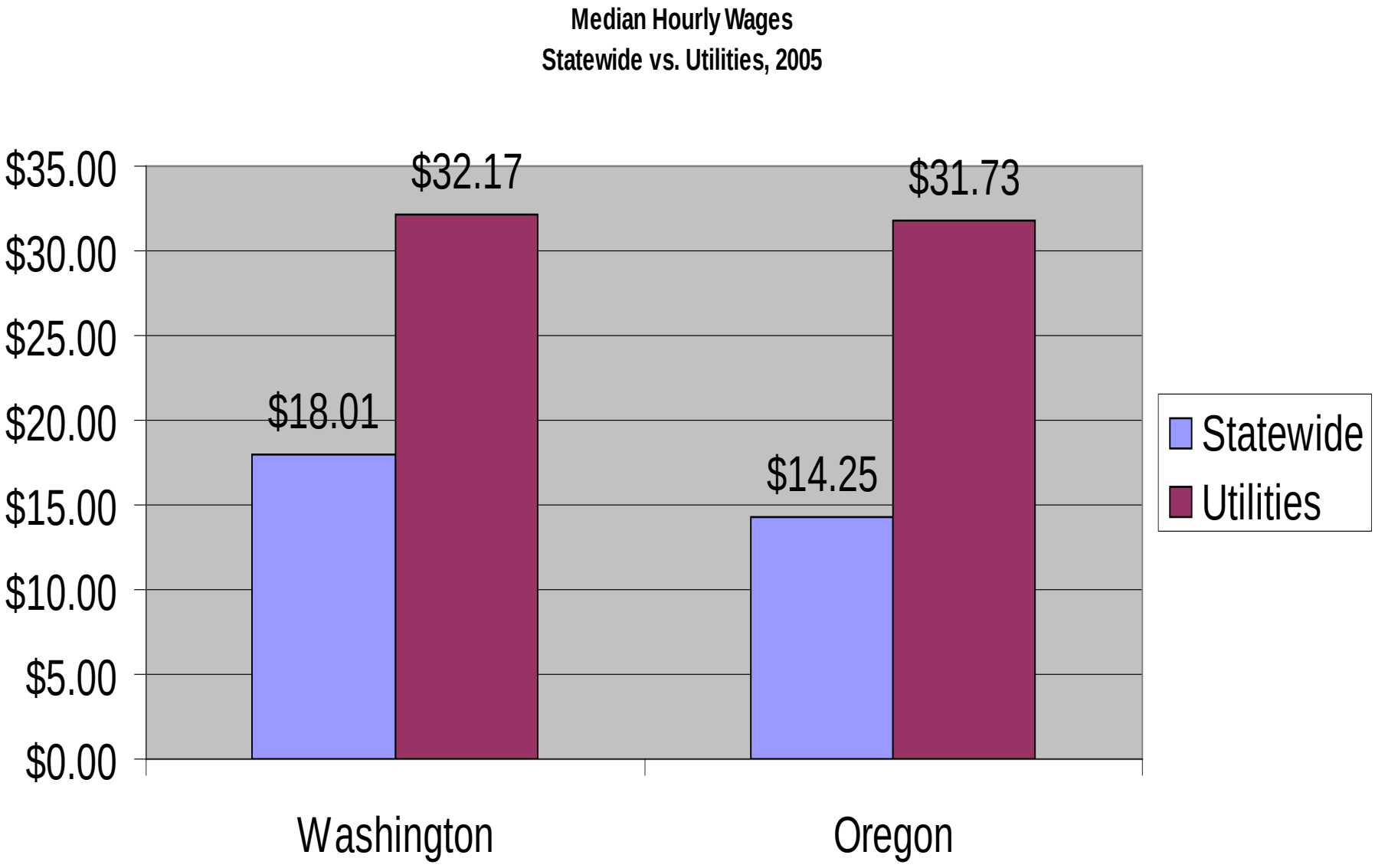
* **12 Regional employers (WA and OR)**
  * Diverse mix: Large-small, energy source, generation/transmission/distribution

* **Five key occupational groups:**
  * Operator (Plant and Substation)
  * Line Worker
  * Mechanic
  * Electrician
  * Technician (Instrument/Control/Relay/Meter)

Participating Employers

2008 Labor Market Study	
Employer	**Employment**
Avista	1476
Bonneville Power Administration	2914
U.S. Bureau of Reclamation	1187
Chelan County PUD	774
Energy Northwest	1155
Grays Harbor County PUD	171
Portland General Electric	2651
Puget Sound Energy	2500
Seattle City Light	1713
Snohomish County PUD	934
Tacoma Power	633
TransAlta	359
Total Employment	**16,467**

High Wage Employment



Projected Retirements By Occupational Group (WA & OR) 2007 - 2011			
Occupational Group	**Number of Employers Projecting Retirements**	**Net Retirees**	**Percent of Current Workforce**
Operator	11	100	16.4
Mechanic	10	133	30.6
Electrician	11	164	24.7
Instrument/Control/Relay/Meter Technician	12	188	33.3
Line Worker	9	215	20.0
Total Retirements in the Occupational Groups		**800**	**23.8**

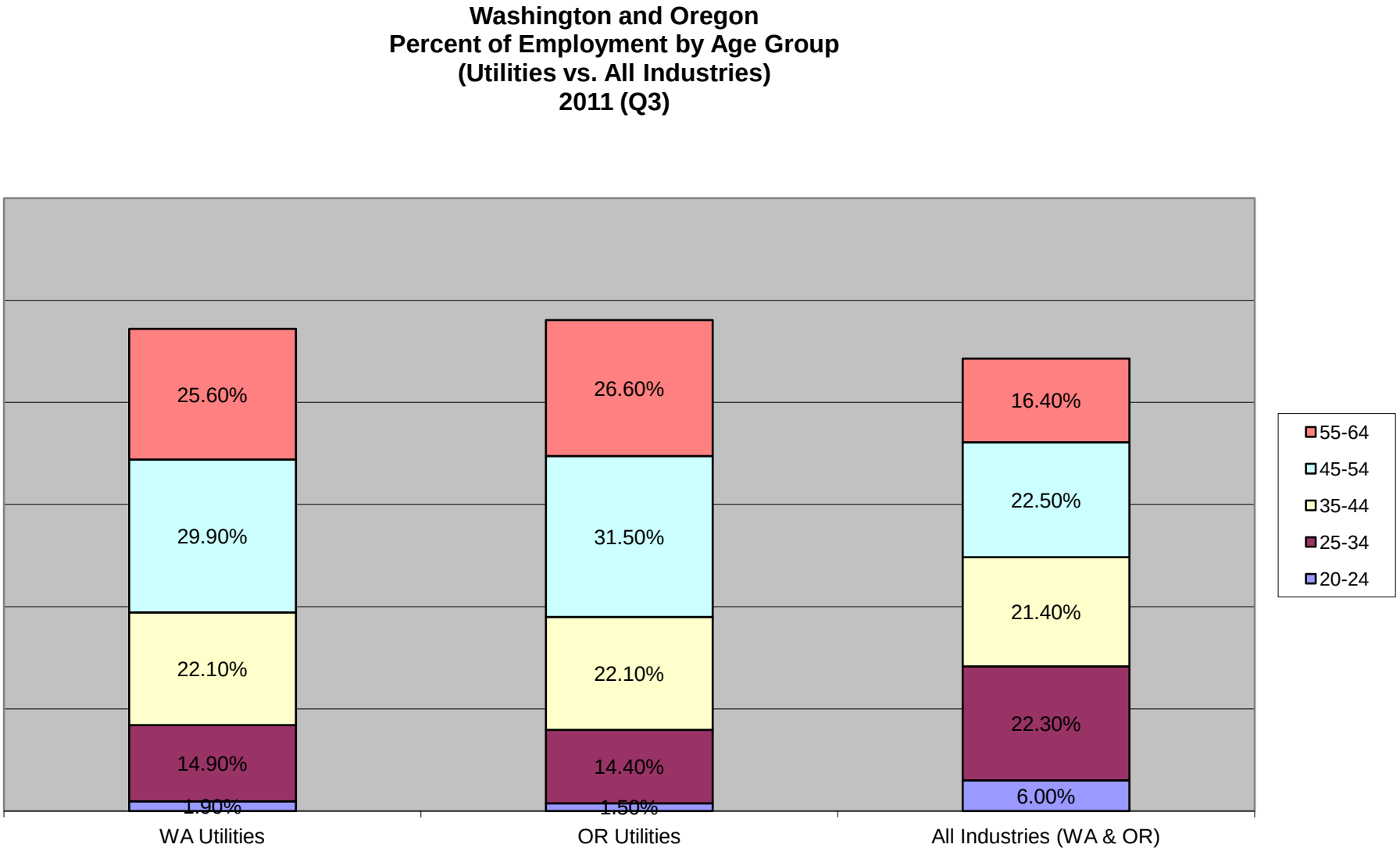
2008 Conclusions (Challenges)

* Labor shortages exist, will worsen
* Recruiting and hiring challenges increasing
* Workforce succession planning informal
* Two-year college connections limited
* Apprenticeship capacity insufficient
* K-12 outreach underdeveloped

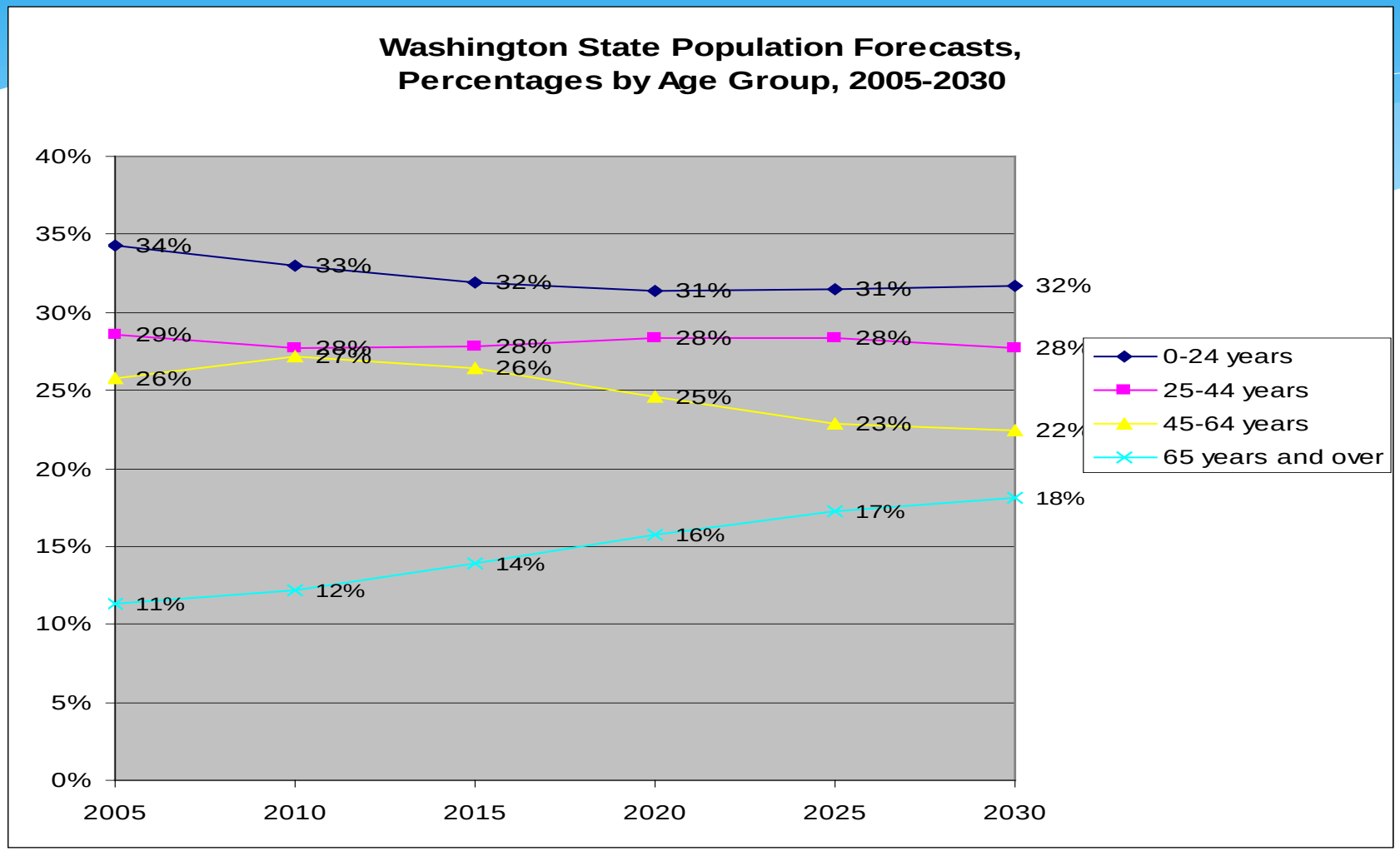
2013 Labor Market Study Participants

Army Corp of Engineers-Bureau of Reclamation	Northwestern Energy, MT
Avista	PacifiCorp
Bonneville Power Administration	Pend Oreille County PUD, WA
Chelan PUD, WA	Portland General Electric
Douglas County PUD, WA	Puget Sound Energy
Energy Northwest	Seattle City Light
Flathead Electric, MT	Snohomish PUD, WA
Grant County PUD, WA	Tacoma Power
Grays Harbor PUD, WA	TransAlta, Centralia WA
Idaho Power	

An Aged Utility Workforce



Future Labor Pool Shrinking



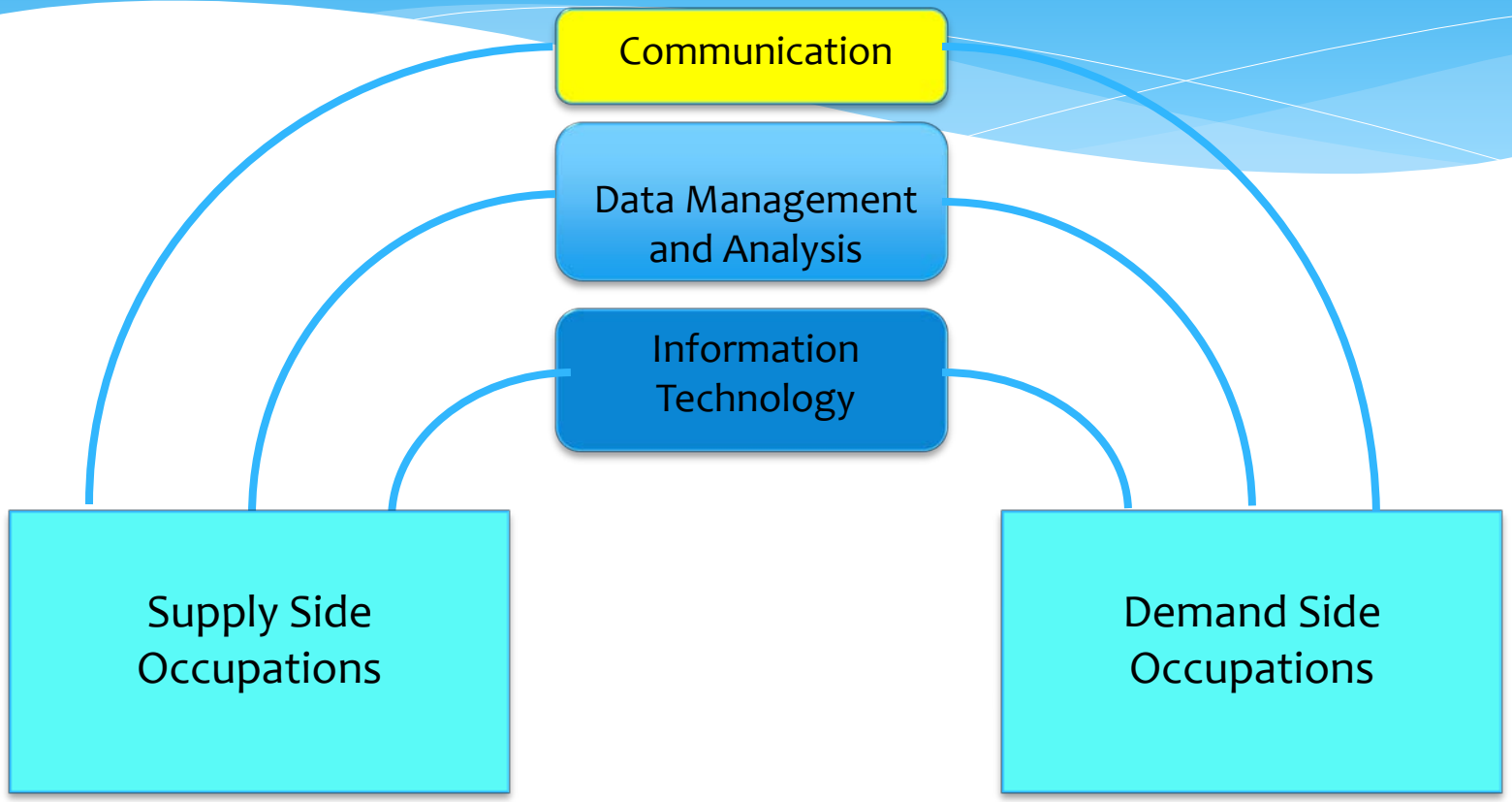
Population and Workforce Shifts

- Retirements likely to increase, especially as economy improves
- Working age population shrinking (to 2030)
  - All industries and occupations
- More ethnically-diverse labor pool
  - Under-represented in higher education
- Millennial generation
  - Different attitudes, expectations about work

DOE Smart Grid Workforce: Research and Employer Input

- Jobs are changing
- Occupations vary among employers
- Career pathways/lattice show connections within and between jobs
- Smart Grid will require more IT, Data Management & Analysis, and Communication Skills

New Skills/Functions Connect Occupations



2013 Study Early Findings

* Recession: demand down, companies right sizing
* Retirements imminent—and no room to enter
* Fewer vacancies, especially entry level, apprenticeship
* Largest current openings are for power engineers, line workers, customer service reps
* Openings at mid and upper levels
* Greater reliance on technology and automation
* Rising knowledge and skills bar