



The numbers matter.

Taking measure of green jobs.

Presented by Katrina Mitchell, *Green Cities, Green Jobs* team member,
at the 2009 Minnesota CERTs Conference

February 11, 2009

"We've also got to do more to create the green jobs that are jobs of the future. My energy plan will put \$150 billion over 10 years into establishing a green energy sector that will create up to

5 million new jobs

over the next two decades."

- *President Barack Obama*

17% increase in US
renewable energy from 2002-2006¹

"In 2006 renewable energy and energy efficiency technologies generated **8.5 million new jobs**, nearly \$970 billion in revenue, and more than \$100 billion in industry profits."²

"...45 occupations employing more than **14 million people** across the country can be boosted through investments in green measures."³

"**4.2 million green jobs by 2038.**"³

What is a “Green” Job?

“Well-paid, career-track jobs that contribute directly to preserving or enhancing environmental quality”.⁴

What numbers are important for economic development?

1. What proportion of the jobs in this subsector are manufacturing positions?
2. How well does the current workforce satisfy this subsector's workforce requirements?
3. How many jobs per 1,000 square feet of facility space does this subsector house, on average?
4. What is the median age of firms in this subsector?
5. How many new jobs have been created in the last three years by this subsector?
6. How much do these manufacturing jobs pay?

Where are the numbers from?

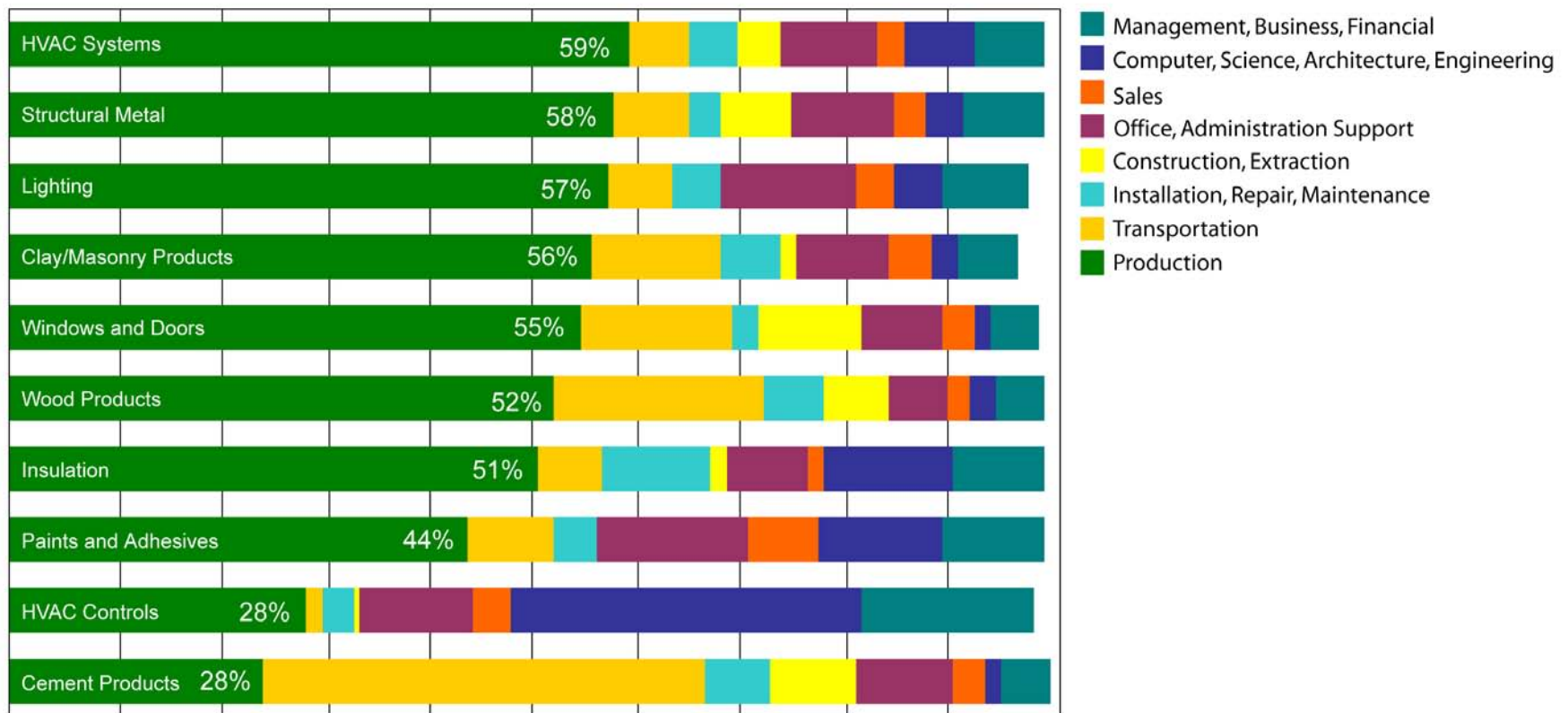
- Bureau of Labor Statistics (BLS) industry and occupational data by North American Industry Classification System (NAICS)
 - Not green specific
 - Wages, occupational structure
- Dun & Bradstreet's Million Dollar Database
 - Green specific
 - Facility size, employees per facility, annual sales

What did we find?

Green Cities
Minneapolis
Saint Paul
Green Jobs

Occupational Structure

Green Building Products Occupational Structure
Percent of Workforce in Occupation by Product Type



0 Source: Bureau of Labor Statistics 2006

50

100

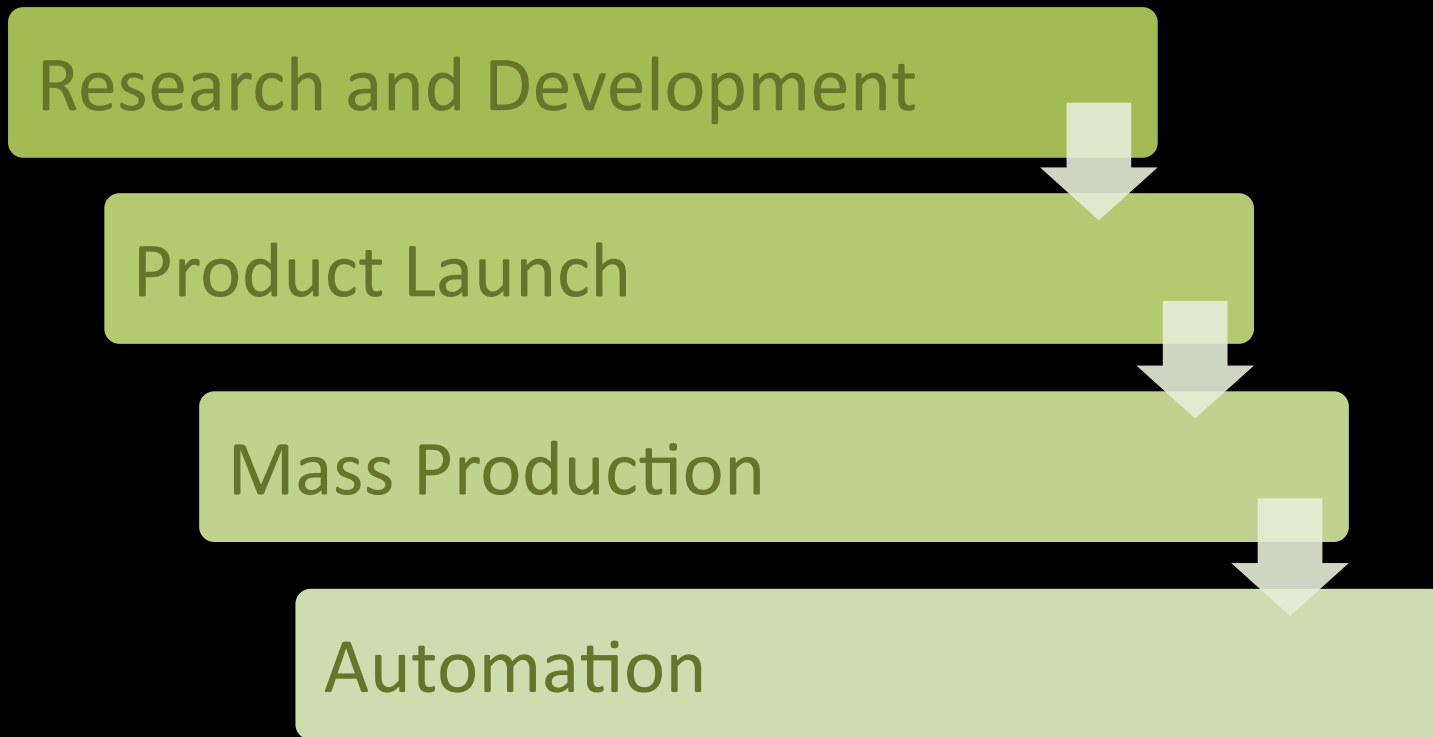
Job Density



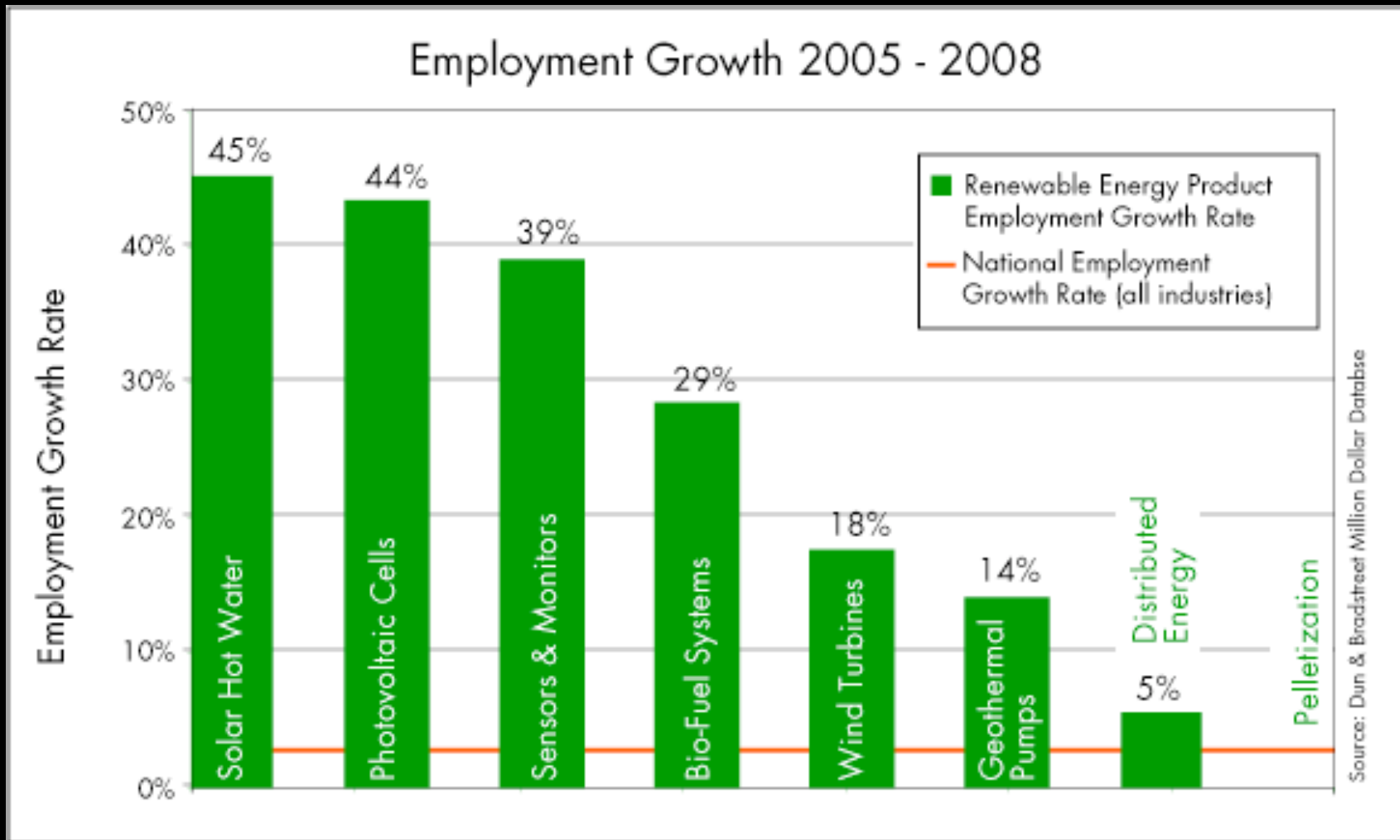
Number of workers / 1000 sq. feet

Median Firm Age

Product Profit Cycle

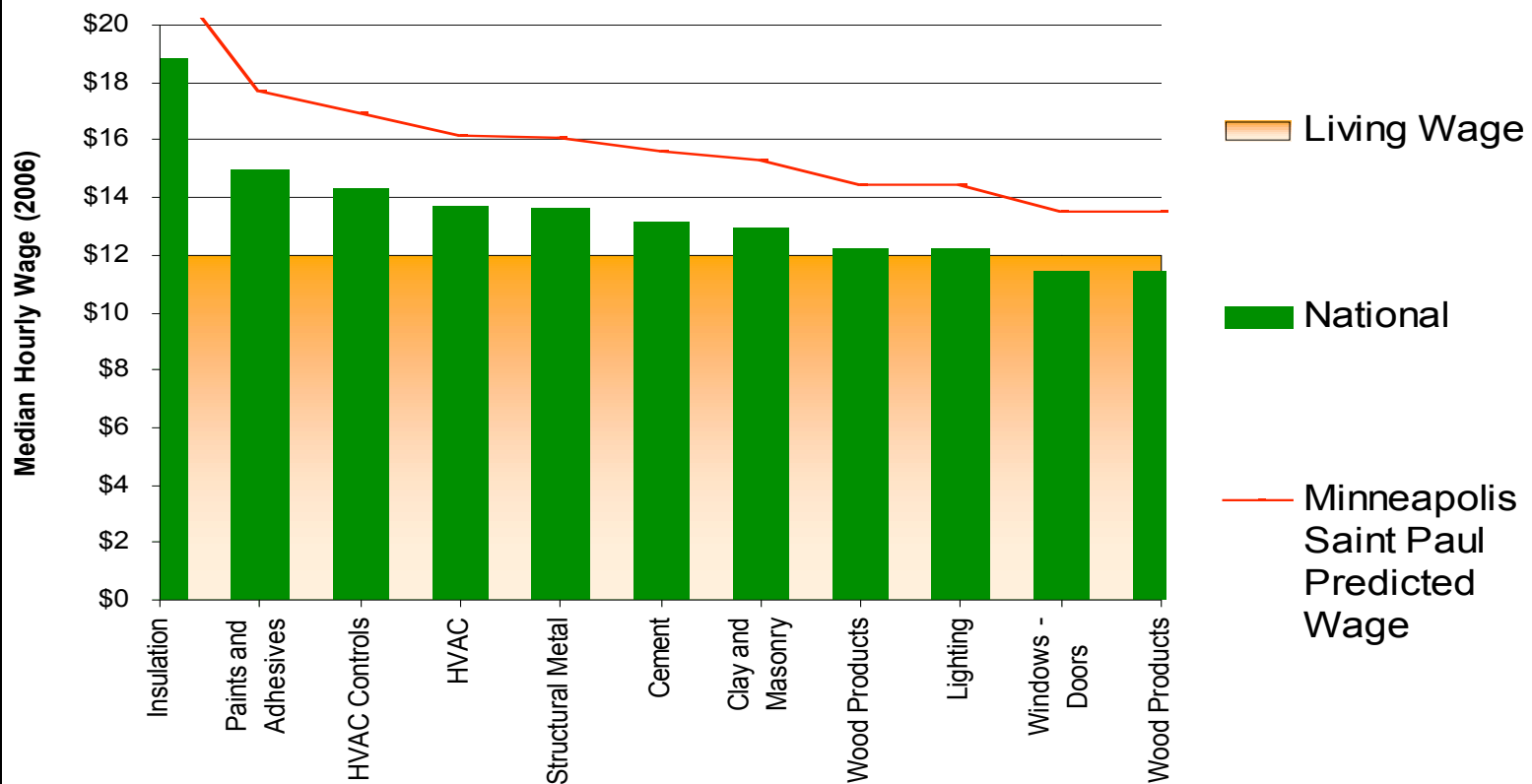


New Job Creation



Median Wages

Green Building Products Median Hourly Wages for Production Occupations



Source: Bureau of Labor Statistics 2006

Are all green jobs good jobs?



Family supporting wages differ by location
and family size

The data isn't perfect...

- NAICS categories do not map exactly onto green products.
- The production of green products and traditional products in the same industry might require different workforce composition and different skills.
- Firms may manufacture both green products and traditional products. There's no way to separate out how many people and how much space is allocated to green manufacturing.
- Many firms are startups or in emerging technology and work may be substantially in R&D and not yet in manufacturing. R&D requires a completely different skill set.

Resources

- ["High Road or Low Road? Job Quality in the New Green Economy" - Good Jobs First Green Jobs Report 2009](#)
- [Green Cities, Green Jobs Report](#)
- [Economic Policy Institute - Basic Family Budget Calculator](#)