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2011



DRIVING CHANGE

Greening the Automotive Workforce

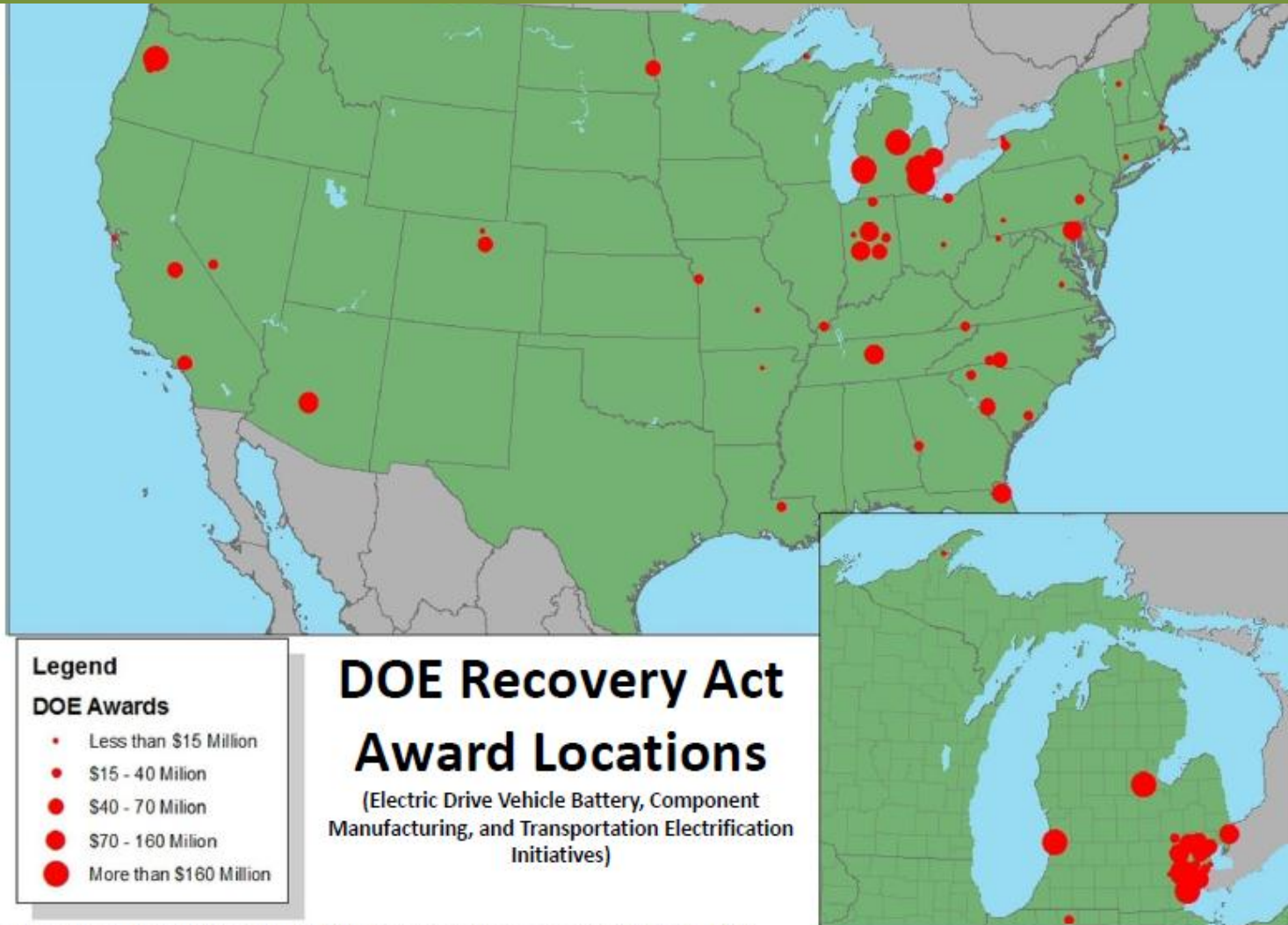
Ford Conference and Event Center, Dearborn, Michigan

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Center for Automotive Research






A New Auto Industry Takes Root



Source: U.S. Department of Energy <http://www.energy.gov/news2009/7749.htm>

Department of Energy

Advanced Technology Vehicles Manufacturing Loan Program ATVM / Section 136 Loans: \$8.4 Billion of \$25 Billion Awarded

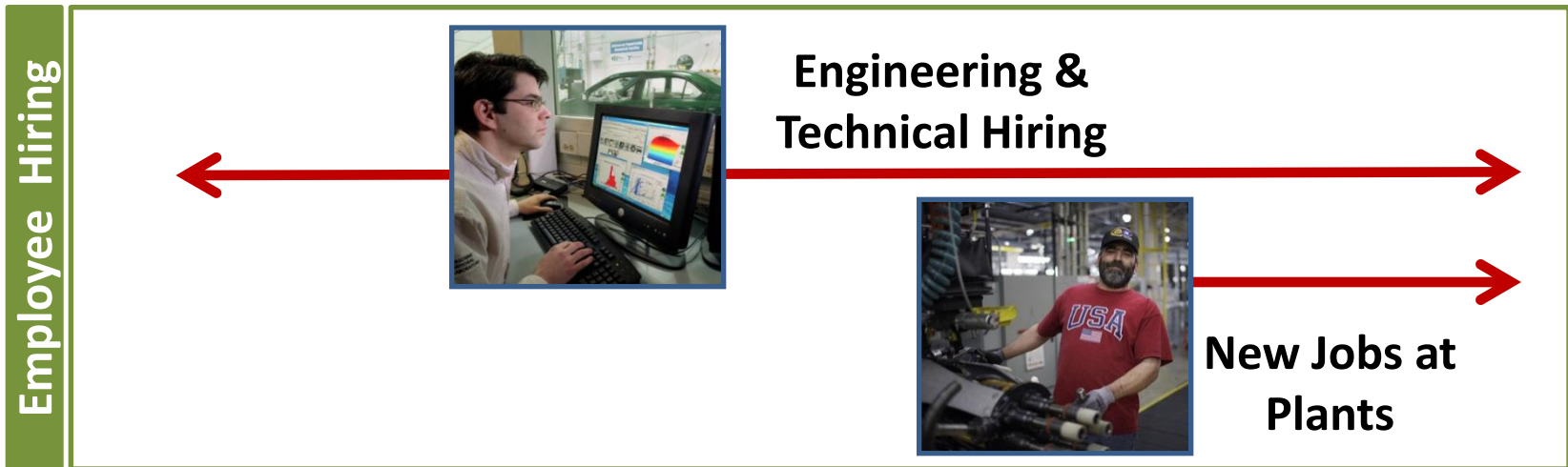
Company	Award	Project
 Ford	\$5.9 Billion	Transform factories across Illinois, Kentucky, Michigan, Missouri, and Ohio to produce more fuel efficient models
 Nissan	\$1.44 Billion (reduced from \$1.6 Billion award)	Retool Tennessee factory to build advanced electric automobiles and build an advanced battery manufacturing facility
 Fisker	\$528 Million	Development of two lines of plug-in hybrids
 Tesla	\$465 Million	Manufacture electric drive trains and electric vehicles in California
 Tenneco	\$24 Million	Development of fuel efficient emission control components

Green Automaker Investment in Indiana, Michigan and Ohio, By Company and By State, 2010-2011 Announcements

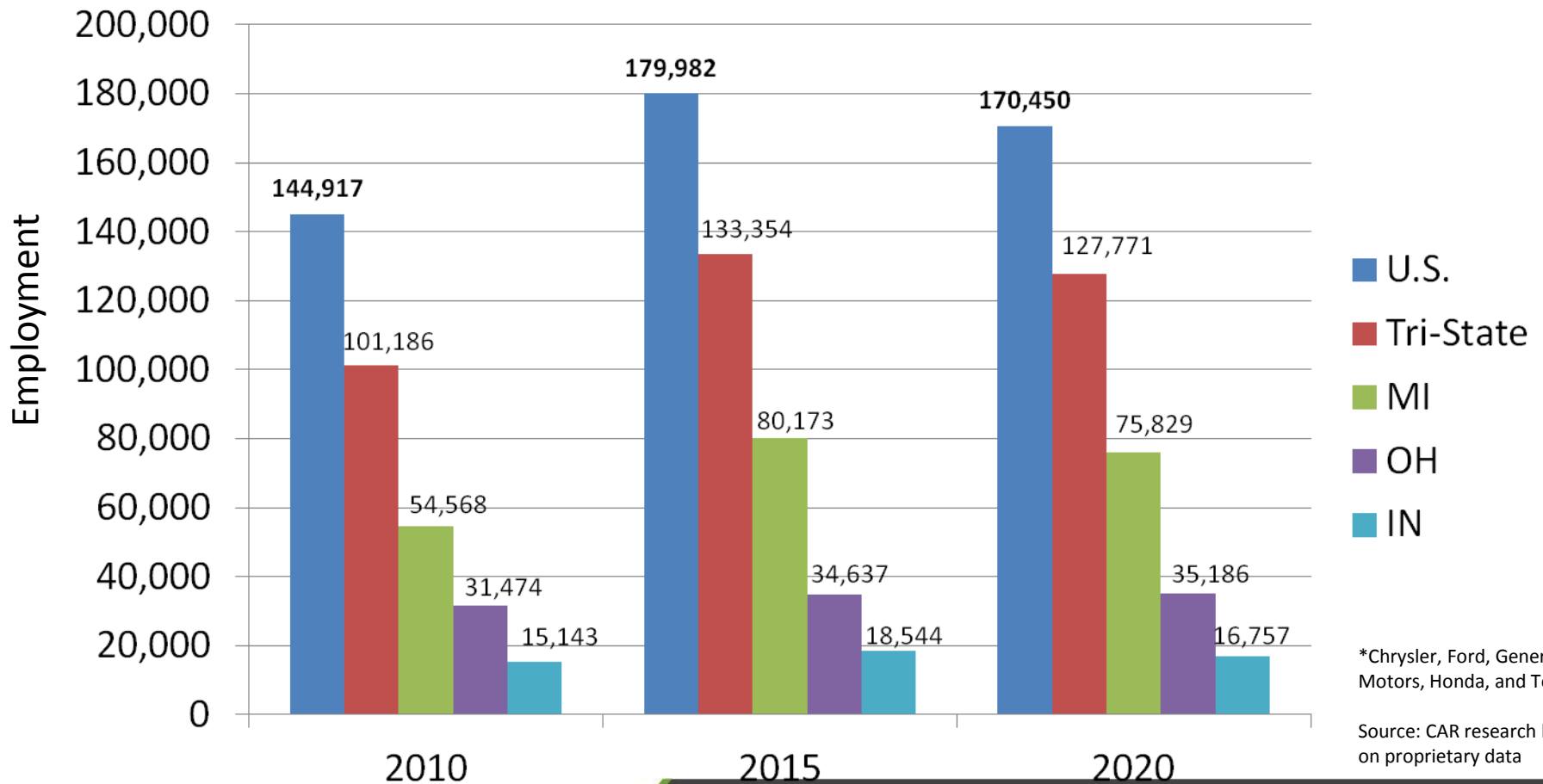
Company	Indiana (in millions)	Michigan (in millions)	Ohio (in millions)	Tri-State Total (in millions)
Bright		\$11.0		\$11.0
Chrysler	\$1,271.3	\$302.0		\$1,573.3
Ford		\$1,183.5	\$420.0	\$1,603.5
General Motors	\$111.0	\$613.2	\$186.2	\$910.4
Honda			\$70.0	\$70.0
Subaru (SIA/Toyota)	\$81.0			\$81.0
Think	\$43.5			\$43.5
Total	\$1,506.8	\$2,109.7	\$676.2	\$4,292.7

Source: Center for Automotive Research

Automotive Jobs and Investment



Forecast of Major Automakers* Hourly Employment



Skill Needs: Production and Trades

- Product change is quicker and more revolutionary
- Most training is product-based
- Other areas:
 - Problem Solving
 - Continuous Improvement
 - Teamwork
- Trades:
 - Cross-skilling
 - Mix is changing with green

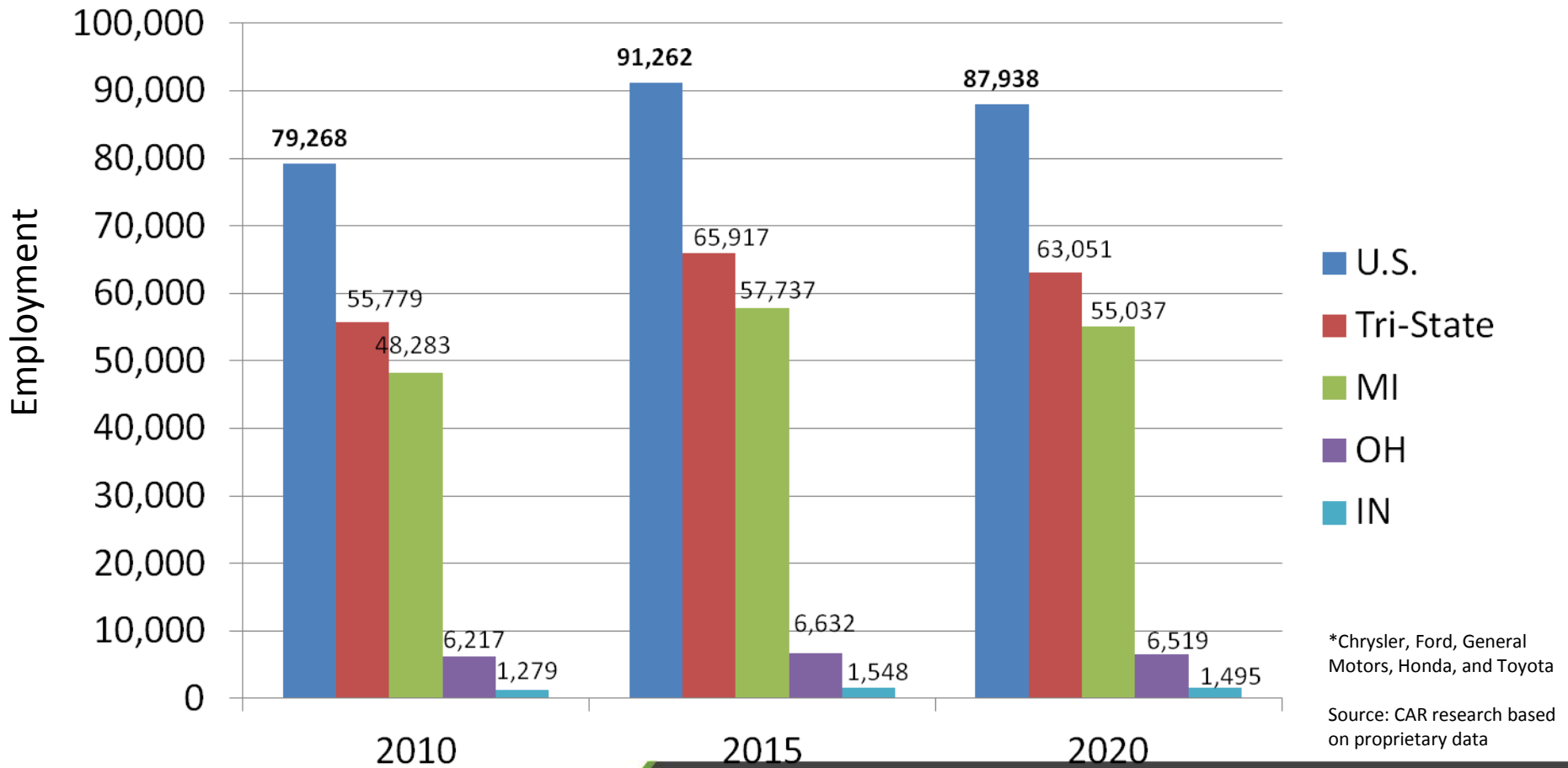


What Employers Want

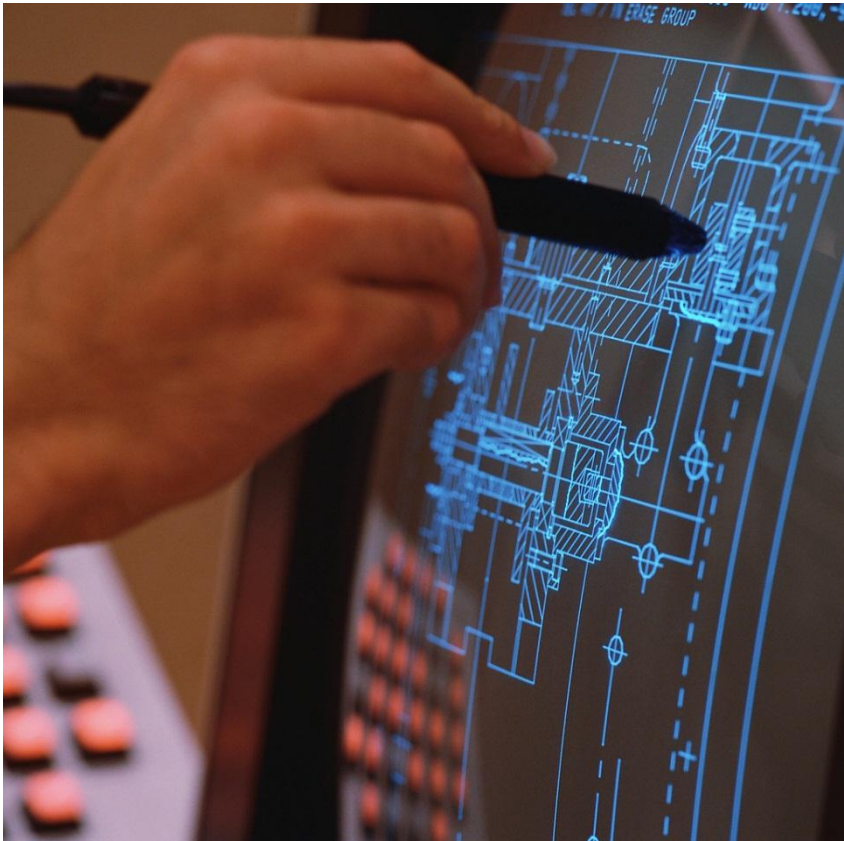
Employers want highest quality hourly labor at a much lower “entry-level” wage—little, if any, differences in job requirements

- Selection process more extensive (9-for-1)
- Higher turnover (0%? 20%?)
- What happens in a tighter labor market?
- “Entry level” is an issue to watch in this Summer’s UAW negotiations

Forecast of Major Automakers* Salary Employment



Skill Needs: Engineering and Technical



- Electrical
- Powertrain
- Chemical & electrochemical
- Materials
- Software & electronics
- Mechatronic
- Systems
- Environmental

What Employers Want

Some direct salaried hires—especially at suppliers, but significant portion of new jobs will be contract and “temp-to-perm”

- Suppliers re-building core capabilities through direct hiring
- Many employers still tentative on program and market recovery – not willing to commit
- Becoming a “candidate’s market” as competition for skills intensifies

What Employers Want

Automakers and suppliers want people who have broad, cross-functional skills—especially problem solving

- “Soft skills” are critical for collaboration, systems integration, problem solving
- Still want deep knowledge
- Not everyone can do both
- Many of these skills acquired on-the-job and through corporate “branded” training

What Employers Want

Engineering & Technical Demand is high for very specific skills (hybrid/electrification, battery, embedded software, designers)

- Many of these graduates are “produced” elsewhere – difficult to get them to move where the jobs are
- Employers want mid-level experience, but few people were hired 5-8 years ago
- Training for new grads and re-training for dislocated workers needed

Concerns

- No time for strategy
 - Cost-cutting in 2008-2009
 - Competitive market for skills 2010+
- Pipeline
 - Sources
 - Uncertainty/temp-to-perm status
 - Wages
- Retraining incumbent workers
 - Faster pace
 - Few public dollars available
- Retraining displaced workers
 - Not all will find room in auto
 - Demographic challenge
 - Public funding a victim of budget cuts