Better Buildings Summit
Industrial Energy Technology/
Emerging Technologies in Manufacturing

Presenters:
George Andraos – Ford Motor Co, Director of Energy
Michael Schratz – Dialight, VP of Sales and Marketing
“A business that makes nothing but money is a poor business.”
- Henry Ford

“Improved sustainable performance is not just a requirement, but a tremendous business opportunity.”
- Bill Ford

Meeting The Needs Of The Present Without Compromising The Future
Using this process, Ford has replaced 30% of HID lamps in the US compared to industrial industry at 3% inefficient lighting conversion.
Ford Supplier Partnerships

High Bay Applications

- Partner: Dialight
  - Initiated by a small LED trial in Livonia area facility in 2012
  - Global LED High Bay specification process concluded in 2013
  - Currently 75,000 fixtures installed across 7 countries & 51 facilities

Other Applications

- Key Partners: Cree, Hubbell and Acuity
LED Project Challenges and Lessons Learned

Perception
Changing the mindset

Financials
Reaching payback and total cost of ownership goals

Standardization
Product & process

Shadowing
LED = directional light source

Darker Ceiling
Due to less up-light

LED Challenges & Lessons Learned
Sustainability Impacts

75,000 Fixtures Globally

High Bay Applications
22 MW demand reduction
= Large Assembly Plant Demand

Annual CO2 Reduction
75,000 metric tons of CO2

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Sustainability and Technology Impacts (Non-Energy)

Annual Maintenance Savings

100,000+ maintenance hours

Improved Light Levels & Uniformity

Improved plant environment
**Sustainability and Technology Impacts (Non-Energy)**

- Reduce power, extend lifetime
- Reduce part count from 261 to 21 parts
- Streamlined manufacturing and lead time
- Reduce installation time

**Simplified Logistics**

- Tactical logistics w/ 3 channel partners
- Reusable packaging eliminates cardboard
- Reducing # of trucks for transporting

**Next Generation Technology**

- Reduce power, extend lifetime
- Reduce part count from 261 to 21 parts
- Streamlined manufacturing and lead time
- Reduce installation time
Next Generation Technology

As energy efficient LED lighting becomes more prevalent in industrial plants, the next step for significant reduction in energy and operating cost will be realized through intelligent control systems

Wirelessly controls enabled lights connected to building management system (BMS)

Productivity
- Energy conservation/management
- Equipment & space utilization
- Inventory management
- Predictive maintenance
- Human convenience

Safety & Security
- Emergency notification and management
- Integrated facility security
- Human centric light – right light at the right time
- Adaptive lighting – measurement & adjustment

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