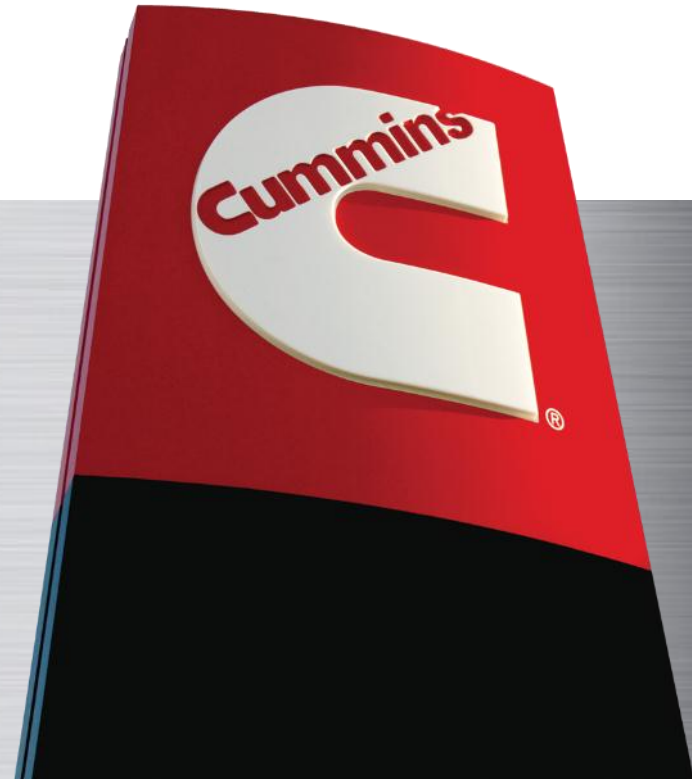


Cummins Energy Management

Sylvie Doré

September 16^h, 2015

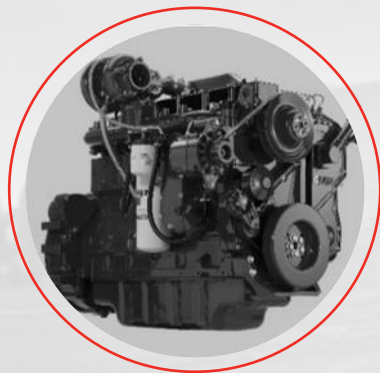
Public



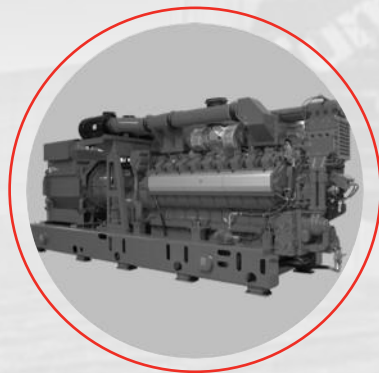
Cummins, Inc.

2014 Revenue: \$19.2 billion

55,000 employees, 190+ countries & territories



Engines



Power
Generation



Components



Distribution



Agenda

- Cummins Energy Efficiency Strategy
- Drivers for Energy Efficiency Strategy
- Outcomes from Energy-Efficiency efforts
- Government Support / Needs for International collaboration

Cummins Environmental Sustainability Plan



PRODUCT LIFECYCLE

PRIORITY AREAS



Materials & Fuel Efficiency

Innovative project design for efficient use of fuel and raw materials



Products In Use

Partner with customers to improve fuel efficiency of our products in use



Facilities & Operations

Improve eco-efficiency at all Cummins and JV sites



Logistics

Use most efficient method and mode to move goods across Cummins network

GOALS

- Strategy for new product design in 2016
- Requires supplier engagement

Achieve an annual reduction of 3.5 mmt of CO₂ by 2020



Reduce energy use intensity by 25% and greenhouse gas emissions 27%



Reduce direct water use intensity by 33% and achieve water neutrality at 15 sites



Increase recycling rate to 95% and achieve zero disposal at 30 sites

Reduce carbon dioxide per kilogram of goods moved by 10% by 2020

Public

KEYS TO SUCCESS: ENGAGED EMPLOYEES. COMMUNITY PARTNERSHIPS. COMMUNICATING RESULTS

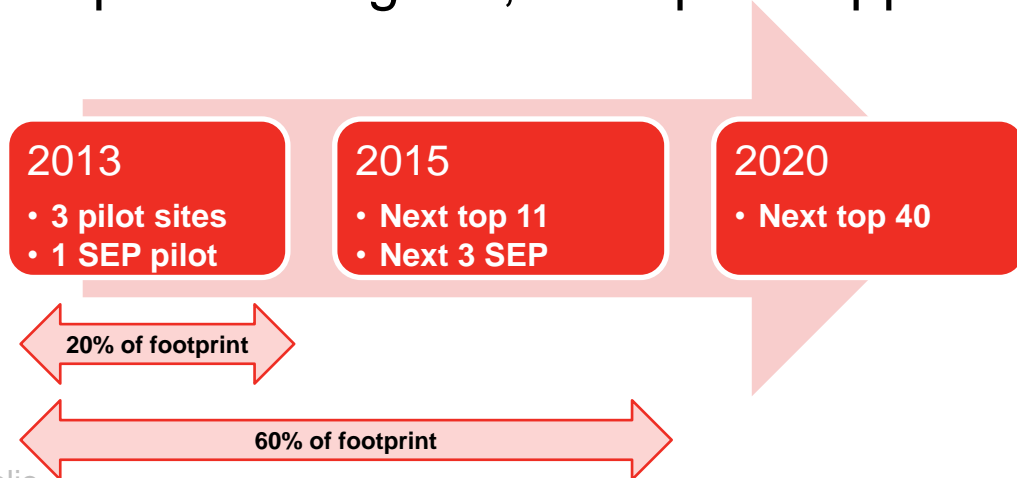
Cummins Energy Roadmap





Cummins Energy Management System

- Cummins EnMS supports our Energy Roadmap and Sustainability Plan Goals
- ISO 50001 & Superior Energy Performance
- Corporate Program, Enterprise approach





Agenda

- Cummins Energy Efficiency Strategy
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Drivers for Energy Efficiency

Compliance

EED, ESOS

**Local
constraints**

Energy & Water
shortages

**Costs
Reduction**

\$150 million total
energy spend in
2014

**Corporate
Goals**

Sustainability Plan

Drivers for Energy Efficiency

Cummins Mission:

Demanding that everything we do leads to a cleaner, healthier, safer environment

Recognition

Scored perfect in Corporate Equality Index by Human Rights Campaign for the 10th straight year in 2015



Listed Dow Jones Sustainability Index for a 10th consecutive year

Received Robert W. Campbell Award by the National Safety Council in 2014



Ranked Among World's Best in Newsweek's 2014 Green Rankings

Named one of the World's Most Ethical Companies by the Ethisphere in 2014 for 7 years in a row



Ranked No.15 for Top Diversity Companies by DiversityInc. for the 8th consecutive year



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ISO 50001 & SEP Implementation Costs

Metric	US DOE Pilot Avg.	Cummins Pilot
Annual energy bill	\$9.8M	\$5.0M
Staff time cost	\$224K	\$140K*
3 rd party audit cost	\$18K	\$20K
External tech assistance cost	\$47K	\$0K**
Monitoring & metering equipment	\$36K	\$100K
Annual cost savings (\$)	\$810K	\$606K
Annual energy performance improvement (%)	8%	12%
Simple payback	1.5 yrs	0.5 yrs

*Building on existing HSEMS

** In partnership with US DOE

Challenges & Solutions

Challenge	Solution
Management support	Multi-year energy/GHG plan; leadership scorecard
Site bandwidth	Team approach; common tools & templates; global program manager
Energy technical support	BU Energy Managers (CP EnMS)
Energy data	Sub-metering included in plan; central capital fund



2014 footprint – global operations

903,000,000 kWh
electricity

12,600,000 gallons
diesel fuel

1,600,000,000
cubic feet natural
gas

789,000 metric tons CO₂e
emissions

\$150 million
total energy
spend

98% GHGs
associated
with energy
use

34% energy intensity
reduction since 2005

\$51 million USD avoided
energy costs; 33% IRR

268,000 metric tons CO₂e
emissions avoided



Benefits of the Cummins EnMS

- Systemic approach driving continuous improvement
- Enterprise vs. individual site certification
- Integrated into existing Cummins HSEMS* Enterprise
- Corporate Policies & Procedures, Toolkit
- Best Practice Sharing
- Audit Costs Savings

*HSEMS = Health, Safety & Environmental Management System (14001 & 18001)



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DOE Support – INPLT

US DOE on-site Energy Assessments & Training:

- Compressed air (2013)
- Motors, fans & pumps (2015)
- Superior Energy Performance (2012 – 2014/2015)



International Collaboration



- Cummins Enterprise EnMS implemented globally to ensure consistent approach throughout our Sites.

- Challenges:
 - Regulations
 - Global roll-out of Best Practice Programs such as the Superior Energy Performance.

