GE Energy Management
Global Industrials & EU Autos Conference

Mark Begor, CEO
March 19, 2015

Imagination at work.
GE’S MISSION:
TO INVENT THE NEXT INDUSTRIAL ERA,
AND BUILD, MOVE, POWER AND CURE THE WORLD

Imagining the things others don’t / Building the things others can’t / Delivering outcomes that make the world work better

~$149B Revenue in 2014
$17B Operating Earnings
GE Energy Management

GE’s roots in electrification go back 130 years, beginning with our first transformer and electric motor.

Today Energy Management is built upon the same legacy and innovation culture that Thomas Edison founded in 1890.

More than ever, we enable utilities and industry to efficiently manage electricity from the point of generation to the point of consumption.

2014
Revenue ($B)
$7.3

Utility
$1.4
Oil & Gas
$0.7
Marine
$0.7
Heavy Industry
$0.7
Telecom & Datacom
$0.7
Commercial & Industrial
$3.0
Military & Aero
$0.2

- Generate
- Protect
- Transmit
- Automate
- Distribute
- Control
- Convert
- Optimize

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- Transmit
- Automate
- Distribute
- Control
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- Optimize
Solutions that span the energy value chain

**What we do**

- Grid Modernization
- Electrical Distribution, Protection & Control
- Electric Transformation
- Digital Energy
  - Revenue: $1.4
- Industrial Solutions
  - Revenue: $3.9
- Power Conversion
  - Revenue: $2.1

**How we do it**

- World class products
- Integrated systems
- Flawless Delivery

Broad electrical domain expertise & technology leadership
Global scale matched by deep local domain expertise

- North America: $3,700 employees
- Latin America: $700 employees
- Europe: $1,400 employees
- Asia: $1,200 employees
- Middle East & Africa: $275 employees

- 29,000 employees serving 150+ countries
- 15,000 suppliers
- 2,500+ channel partners
- 62 manufacturing plants, 27 ERP’s
- >50% global revenue ... fastest growing markets outside US

Major office
- Customer Experience Center
  - Plano, TX (IS)
  - Atlanta, GA (DE)
  - Mebane, NC (IS)
  - Markham, Canada (DE)
  - Bracknell, UK (DE)
  - Riazzino, Switzerland (IS)
  - Xi’an, China (DE)
  - Shanghai, China (IS)

Brilliant Factory
- Arecibo, Puerto Rico (IS)
- Bielsko-Biała, Poland (IS)
The world needs reliable, efficient energy

+78% Electricity demand by 2040

85% of global electricity growth is in emerging markets

Aging infrastructure in many markets ... 40+ years

2x new sources + micro-grid growth

Diversification

Grid market growing $50B from 2014 to $220B in 2020

Energy efficiency +35% by 2040

Source: IEA World Energy Outlook
Environment

Market segment

$150B+

‘14-’17 annual growth

- Power & Utility: 3%
- Oil & Gas: (2)%
- Marine: 8%
- Heavy industry: (7)%
- Technology: 5%
- Commercial & Ind: 4%
- Military: 3%

Big space with big growth potential

Long-term growth drivers

✓ Oil and gas demand
✓ Global data processing boom
✓ Renewable and distributed generation growth
✓ Aging infrastructure

Selected competitors

<table>
<thead>
<tr>
<th>Company</th>
<th>Est. Segment Revenue ($B)</th>
<th>Est. Margin%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABB</td>
<td>~$30</td>
<td></td>
</tr>
<tr>
<td>Siemens</td>
<td>~30</td>
<td>~10-20%</td>
</tr>
<tr>
<td>Schneider Electric</td>
<td>~20</td>
<td>~10-20%</td>
</tr>
<tr>
<td>Eaton</td>
<td>~7</td>
<td>~10-20%</td>
</tr>
<tr>
<td>Rockwell Automation</td>
<td>~6</td>
<td>~10-20%</td>
</tr>
<tr>
<td>Energy Management</td>
<td>~7</td>
<td>~3%+</td>
</tr>
</tbody>
</table>
Industrial Solutions

GE Electrical Infrastructure

Prime generation

Distributed power

Commercial infra

Data Centers

Hospitals

Residential

Oil & Gas

Mining

Industrials

Industrial Solutions value prop

✓ Low/Medium Voltage equipment
  - Standardized products
  - Distribution and OEM's

✓ Controls
  - Advanced computing & comm's
  - Configured for OEM and process applications

✓ Critical Power products
  - Reliable efficient power ... AC & DC
  - Off grid, off site solutions

✓ Services
  - Life cycle opportunities

Power Equipment

Medium Voltage Equipment

Power Delivery

Low Voltage Equipment

Power Comp's

Breakers, Contactors & Accessories

Critical Power

AC Power

DC Power

Embedded

Services

Field Service, repairs + parts

Intel. Platforms

Software

Controls

Mil/Aero

$4B orders & revenue ... investing in world-class products
Power Conversion

Motion into Electricity
Mechanical energy transformed into electrical energy by a generator
- Wind turbines
- Turbo generators
- Hydropower
- Wet renewables

Wind farm

Electricity into Electricity
Adjusting frequency and current through a converter or an inverter
- Wind/solar PV
- Railway substations
- Pulse power supply
- Soft starters

Railway substation

Electricity into Motion
Electrical energy transformed into mechanical energy by a motor
- Compressors
- Hoists
- Rolling mills
- Pumps

Ship propulsion

Complete Solution Offering
Electrical grid + Electrical machines + Variable speed drives + Automation and control

$3B orders, $3B backlog, $2B revenue ... global growth business
Digital Energy

Power Delivery
Enable delivery of electricity from generation station to end user
- Transformers & capacitors
- Instrumented transformers
- Projects
- XD Primary equipment

Grid Automation
Electrical grid monitoring and control
- Protection & Control
- Industrial communications
- Monitoring & diagnostic
- Meters

Software Solutions
Utility asset management and control
- Asset Management
- Asset Control
- Grid IQ™ Insight
- Software as a Service

Projects & System Solutions COE ... EBoP
- System solutions & services
- Enhancing multi-product line system capabilities
- Power systems economic consulting

Complete Solution Offering

$1.5B orders, $1.4B revenue ... strategic growth business
Diverse customer portfolio

Power & Utility
Oil & gas
Marine
Heavy industry
Technology
Commercial & Industrial
Military & Aero

Customers

GE connection

Power & Utility
Oil & Gas
Transportation and Aviation
Mining and Transportation
Lighting and Healthcare

Domain expertise across verticals
Investing in new products

($ in millions)

**Program investment**

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>'14</td>
<td>$290</td>
<td></td>
</tr>
<tr>
<td>'15</td>
<td>~$300</td>
<td>+5%</td>
</tr>
</tbody>
</table>

% of sales:

- '14: 4.0%
- '15: ~4.0%

**Key new product investments**

<table>
<thead>
<tr>
<th>Product Type</th>
<th>'14 Rev</th>
<th>'15 - '17 CAGR</th>
<th>'15 Inv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakers &amp; Components</td>
<td>$1,020</td>
<td>5%</td>
<td>$55</td>
</tr>
<tr>
<td>Switchgear &amp; Equipment</td>
<td>$975</td>
<td>10%</td>
<td>$25</td>
</tr>
<tr>
<td>Rotating Machines</td>
<td>$840</td>
<td>9%</td>
<td>$15</td>
</tr>
<tr>
<td>Industrial Controls</td>
<td>$410</td>
<td>7%</td>
<td>$28</td>
</tr>
<tr>
<td>Grid Control Software</td>
<td>$110</td>
<td>3%</td>
<td>$15</td>
</tr>
</tbody>
</table>
FastWorks example: GuardEon breakers NPI

($ in millions)

- Co-located team … design, manufacturing, commercial, finance
- Deep customer involvement

**Design cycle**
- Industry: 5–6 yrs (67)%
- GuardEon: 2 yrs

**Part count**
- GE legacy: 580
- Competitor: 460 (24)%
- GuardEon: 440

**Platforms**
- GE legacy: 16
- GuardEon: 7 (56)%

**Cost**
- GE legacy
- GuardEon: 21% (21)%

**CM%**
- GE legacy: 45%
- GuardEon: 52% (+7%)

Fewer platforms, simpler design, best in class technology … CM up 7 pts
Benefits of the “GE Store”

**Energy Management**
- GE2GE
  - Electrical Components
    - Controls
    - Motors/generators
    - Drive controls
    - Switchgear
  - GE4GE
    - E-Balance of Plant
      - Power plants
      - Wind
      - Solar
      - Oil & Gas
    - Brilliant Factory
      - Controls
      - Software

**GLOBAL RESEARCH CENTER**
- POWER & WATER
  - Combustion science & services, installed base

**GLOBAL GROWTH ORGANIZATION**
- AVIATION
  - Advanced materials & manufacturing, & engineering productivity
- ENERGY MANAGEMENT
  - Electrification, controls & power conversion technology
- OIL & GAS
  - Services & technology and is a first-mover in growth regions
- TRANSPORTATION
  - Engine technology & localization in growth regions
- SOFTWARE CENTER OF EXCELLENCE
- CULTURE & SIMPLIFICATION

**APPLIANCES & LIGHTING**
- LED is gateway to energy efficiency

**HEALTHCARE**
- Diagnostics technology, is a first-mover & anchor in growth markets

**GLOBAL GROWTH ORGANIZATION**

**The “GE Store”**
- CONTRIBUTE ..
- CROWD SOURCE ...
- COLLABORATE
GE4GE ... EBoP with GE businesses

($ in millions)

**Thermal**
- Motor controls, drives
- HV switchyard
- Electrical & control room

**Distributed Power**
- Power train controls
- HV substation, x-formers
- Electrical & control room

**Oil & Gas**
- Helper & pump motors
- Motors & generators
- Electrical & control room

✓ Partner with GE businesses to deliver Electrical Balance of Plant
✓ Components insourced from EM: electrification, Controls, Power Conversion technology (motors and generators)
✓ Increased scale & factory utilization ... opportunity doubles with addition of Alstom Grid

$1.6B current pipeline

- **Thermal** $950
- **Aero/Distributed Power** $560
- **Oil & Gas** $100

Big growth play for EM to partner with GE Power & Water, Wind, Oil & Gas ...
GE2GE ... expanding EM content across GE
($ in millions)

GE2GE sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'13</td>
<td>$500</td>
</tr>
<tr>
<td>'14</td>
<td>$600</td>
</tr>
<tr>
<td>'15</td>
<td>++</td>
</tr>
<tr>
<td>'18</td>
<td>++</td>
</tr>
</tbody>
</table>

- Replace competing products in GE offerings
- Capture economics for GE
- Scale & factory utilization
- Additional benefit from parts/services stream

Big growth potential from GE make/buy
Growing a global Marine business

($ in millions)

<table>
<thead>
<tr>
<th></th>
<th>Orders</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>'14</td>
<td>$478</td>
<td></td>
</tr>
<tr>
<td>'15</td>
<td>~$750</td>
<td>+57%</td>
</tr>
</tbody>
</table>

Recent wins

- Rotating equipment: $58
- Drillship prop & positioning: $54
- Propulsion & positioning: $27
- Drillship prop & positioning: $26

Key products

**Merchant**
- Electrical propulsion
- Efficient electric solutions with optimized cargo capability

**Offshore**
- Broad portfolio
- High operational efficiency and availability

**Naval**
- Differentiated technology
- Integrated low-noise full-electric solutions

$3.4B pipeline ... $12B market growing at 6%
Driving structural cost through simplification

**SG&A coming down**

<table>
<thead>
<tr>
<th>Year</th>
<th>SG&amp;A % of sales</th>
</tr>
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<tbody>
<tr>
<td>'13</td>
<td>21%</td>
</tr>
<tr>
<td>'14</td>
<td>20%</td>
</tr>
<tr>
<td>'15</td>
<td>19%</td>
</tr>
<tr>
<td>'18</td>
<td>16%</td>
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Industry benchmark:

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<th>SG&amp;A % of sales</th>
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**Headcount reductions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Headcount reductions</th>
</tr>
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<tbody>
<tr>
<td>'14</td>
<td>1,980</td>
</tr>
<tr>
<td>'17</td>
<td>5,405</td>
</tr>
</tbody>
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**Consolidating manufacturing plants**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>'12</td>
<td>76</td>
</tr>
<tr>
<td>'14</td>
<td>62</td>
</tr>
<tr>
<td>'16</td>
<td>45</td>
</tr>
</tbody>
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**Reducing supplier base (in 000’s)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of suppliers</th>
</tr>
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<tbody>
<tr>
<td>'12</td>
<td>18.6</td>
</tr>
<tr>
<td>'14</td>
<td>14.7</td>
</tr>
<tr>
<td>'16</td>
<td>12.4</td>
</tr>
</tbody>
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**Reducing P&L’s and ERP’s**

- P&L’s: 38 → 11 (71%)
- ERP’s: 50 → 5 (90%)

**P&L’s**

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<tr>
<td>'12</td>
<td>18.6</td>
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<tr>
<td>'14</td>
<td>14.7</td>
</tr>
<tr>
<td>'16</td>
<td>12.4</td>
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**Margin rate +2.5 pts, simplification paying off ... more to do**
Driving gross margin performance

<table>
<thead>
<tr>
<th>Lean process improvements</th>
<th>Driving product cost improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before</strong></td>
<td><strong>After</strong></td>
</tr>
<tr>
<td>Rugby, UK</td>
<td><img src="image1" alt="Image" /></td>
</tr>
<tr>
<td>Ft. Ed → Clearwater, USA</td>
<td><img src="image3" alt="Image" /></td>
</tr>
<tr>
<td>Pittsburgh, USA</td>
<td><img src="image5" alt="Image" /></td>
</tr>
<tr>
<td>Berlin, Germany</td>
<td><img src="image7" alt="Image" /></td>
</tr>
<tr>
<td>Plainville, USA</td>
<td><img src="image9" alt="Image" /></td>
</tr>
<tr>
<td>Campinas, Brazil</td>
<td><img src="image11" alt="Image" /></td>
</tr>
</tbody>
</table>

1. **Sourcing execution** ... proven track record to deliver deflation commitments
2. **Restructuring efforts** ... delivered $170 of incremental savings in ’14, $175 in ’15
3. **Mfg. labor & OVC VCP** ... projects to drive labor/Other Variable Cost efficiency ... “lean within plant”
4. **Gaining momentum on new tools** ... should cost, brilliant factory, analytics, etc.
5. **Non SG&A Base Cost discipline** ... Prioritized program spend ... continued Readiness-to-serve rigor
Alstom Grid completes EM product offerings
($ in billions)

GE Grid Solutions

- $5B
- $1.4B
- $3.7B
- $2.1B

2 Power transmission
3 Power distribution
4 Power supply

Power Generation
Voltage
Customers

Solutions
HVDC
Equipment
Sub. Auto.
Software

HV/UHV
HV/MV
HV/MV/LV

Transmission network companies
Distribution network companies
Distribution suppliers
Industrial companies

Alstom Grid delivers scale, adds full EM product offerings
GE Digital Energy + Alstom Grid ... GE Grid Solutions
($ in billions)

Great combination ... completes GE HV/UHV footprint

What we like

1. Complete T&D offering ...
   - AG in UHV/HV
   - DE in HV/MV
   - IS in LV/MV

2. Business Scale
   - $2B projects
   - $500M Software business
   - $800M Grid Automation business
   - $500M to $1B in GE opportunities

3. Strong global footprint
   - AG global position
   - DE North America scale
   - Connection to GE ... P&W, O&G

4. AG adds global project capabilities ...
   - $7B+ backlog
   - 2,000 resources
   - Product pull through

5. Cost synergies
   - Sourcing/MFG Savings
   - Cost rationalization

6. Growth synergies
   - GE2GE, GE4GE/BoP

Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>AG</th>
<th>DE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>5.1</td>
<td>1.4</td>
<td>$6.5</td>
</tr>
<tr>
<td>2018</td>
<td>++</td>
<td>++</td>
<td>$GE2GE / GE4GE</td>
</tr>
</tbody>
</table>

Op Profit

<table>
<thead>
<tr>
<th>Year</th>
<th>AG</th>
<th>DE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>0.2</td>
<td>0.1</td>
<td>$0.3</td>
</tr>
<tr>
<td>2018</td>
<td>++</td>
<td>++</td>
<td>Synergies</td>
</tr>
</tbody>
</table>

Bank of America Merrill Lynch Conference | 19 March 2015

GE Energy Management
Energy Management growth
($ in millions)

Op Profit

- Market trends positive
  + Electricity demand
  + Grid investments
  + Efficiency

- Margins improving ... more to do
  + RTS ... headcount reduction
  + Plant consolidations
  + IT investments/ERP
  + Better execution
  + New incentive compensation program

- Product investments

- GE4GE/GE2GE growth

- Alstom Grid
  + Global footprint, product line
  + Projects
  + Cost and growth synergies

Strong progress ... and potential ... driving towards double-digit operating profit