

Gas Power Systems Vertical Research Industrial Conference

Joe Mastrangelo

Caution Concerning Forward-Looking Statements:

This document contains "forward-looking statements" – that is, statements related to future events that by their nature address matters that are, to different degrees, uncertain. For details on the uncertainties that may cause our actual future results to be materially different than those expressed in our forward-looking statements, see http://www.ge.com/investor-relations/disclaimer-caution-concerning-forward-looking-statements as well as our annual reports on Form 10-Q. We do not undertake to update our forward-looking statements. This document also includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially.

The NEW GE Power

Multiple generation types

GAS **POWER SYSTEMS**



STEAM







Fleet Ops

POWER SERVICES



Being divested

T&D

GRID SOLUTIONS



WATER &

PROCESS

TECHNOLOGIES

- Expansive global reach ... >150 countries
- Powering more than 1/3 of the world's power
- ~1,600 GW installed capacity
- >750,000 installed assets
- Equipping 90% of transmission utilities worldwide

Efficiency

POWER DIGITAL SOLUTIONS









INDUSTRIAL

SOLUTIONS

Target close date 4Q



Target close date 3Q







Gas Power Systems Overview

2 | Gas market softening ... planning for Ψ GW in '17 & '18

Capacity reductions & increased utilization since 2015

3 Customers seeking integrated solutions

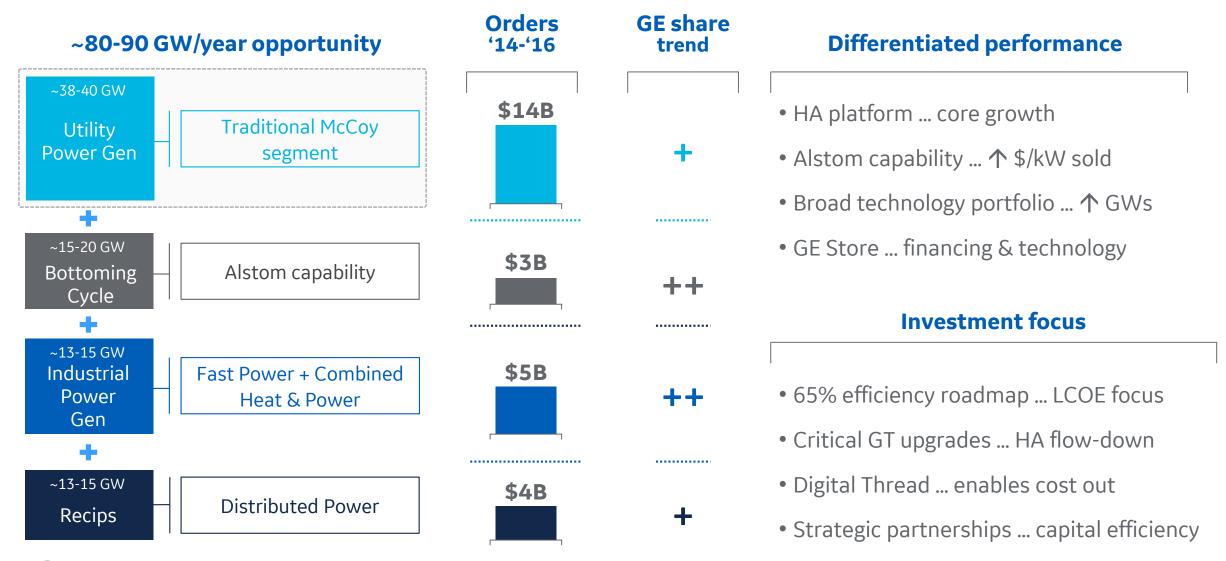
Technological capability + financing

4 "Ecosystem" complexity increasing Intermittency, storage & LCOE position

5 Driving higher returns
Investments delivering ... continued cost out



An integrated Gas Power Systems business





HA platform launch on-track

Program overview

2016 accomplishments

- ✓ 26 unit shipments, +1 vs outlook
- ✓ 10th unit profitable

GAS TURBINE

33

✓ 50/60Hz models fully validated

HA Unit backlog 2Q'17

HRSG

26

STEAM TURBINE

22

2017 outlook

- 23 unit shipments
- Margin improvement
- Continued performance improvement

GENERATOR

35

Leading & delivering



EDF Bouchain ... world record in efficiency 99.5% reliability ... Base load in 23 minutes

> 8,400+ hours 130+ starts



Exelon ... 2x7HA.02 successful full-load validation ... May/June COD

> +10MW vs. 320MW guarantee



Sergipe ... LATAM's largest Gas Power Plant first HA turnkey self-implement project

> \$1B 2016 order



Tierra Mojada ... first HA in Mexico Digitally-enabled combined cycle plant

> Power 2.8 million Mexican homes



Clear leader in H technology



HA efficiency growth with technology

On path to achieve 65% efficiency



62.2% 9HA.01, 7HA.01, 7HA.02 ... in operation

Eff. in '13

\$1.8B investment ~64% \$400MM investment

Eff. today

9HA.02 ... being mfg'd

65%+

Eff. ~'20+

Technology enabling success

COMBUSTION

• Emissions leadership for greater than 3000° Fahrenheit and <25% turndown

COOLING

 Hyper efficient, simple passages to minimize cooling flows

SEALING

 Unique configurations to maximize cooling effectiveness & prolong life

MATERIALS

 Patented alloys & coatings for durability @ high temps

Existing product enhancements



65% efficiency by ~2020 ... HA "architecture" change not required

Opportunities for growth

Fast Power

Indonesia distributed grid

20 TMs

sites

515 MW

- √ 1st site w/in 3 mos
- ✓ World-class fulfillment



Yemen capacity additions

TMs

62 MW

- √ 1st site w/in 5 mos
- ✓ Achieved comm'l operation May '17



Distributed Power

Power & heat with storage

20 J920

90%+ efficiency

190 MW

- **✓** Flexible operation
- √ Lower cost of ownership



Large recip peaking power

J920

47% efficiency

MW

- √ 5 minute start-up
- √ Smooth grid volatility



Intermediate applications

Power & steam cogeneration

56% efficiency

225 MW

6F.01

√ Flexible steam or power



 \checkmark +10% steam, \checkmark fuel

Urban peaking power

LM6000

40% efficiency

MW

- ✓ Reshaping "duck curve"
- ✓ Power near demand



Diverse portfolio meeting new market requirements

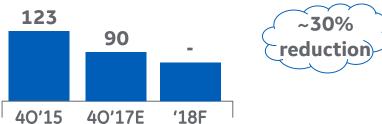


Improving cost competitiveness

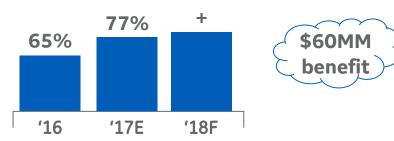
Key metrics







Alstom factory capacity



Operational excellence

- ✓ Right-sized footprint for industry dynamics
- ✓ Additive driving ↑ performance & ↓ cost
- \checkmark Factory optimization yielding \checkmark cycle time

EFFICIENCY

7F stage one nozzle cooling holes



25-30% Cost reduction

7HA rotor cycle-time reduction



14 weekCycle reduction

Multi-head robotic welding



70% | 50% Less cost

ADDITIVE

DLN fuel nozzle tip



8,400+ Shipped

E-class combustor ring



30%Cost reduction

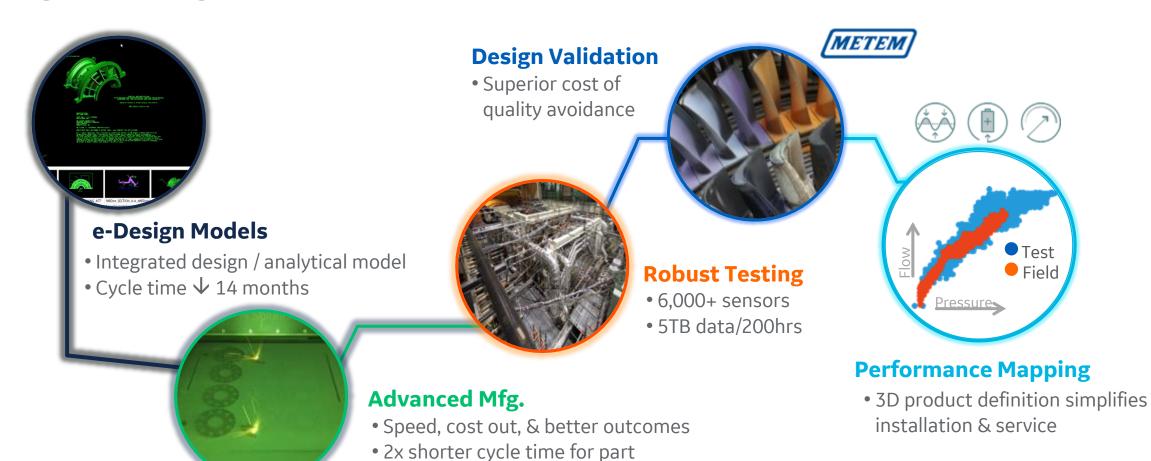
HA turbine shroud



50% | 30% | Less cost



Integrated digital ecosystem



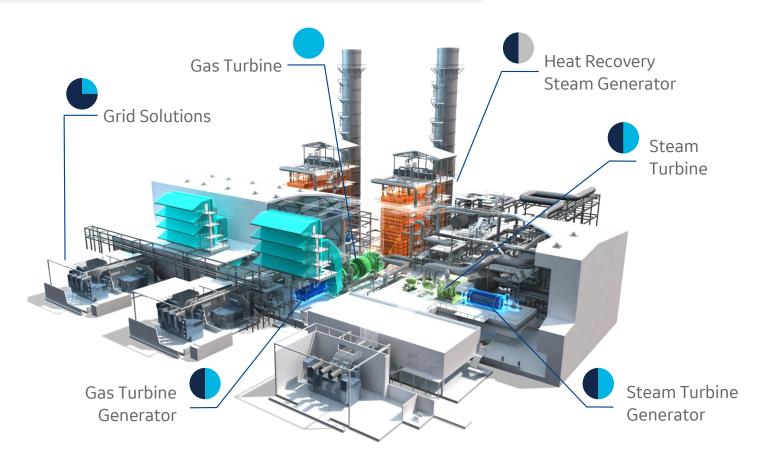


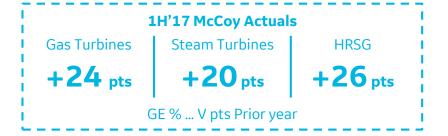
Continuous innovation delivering differentiated performance ... ~\$30mm per GT

production

Positioned for the future

Contributions: **GE Alstom Doosan**





2017 IMPERATIVES

- 1 Continue \$/kW sold focus
- 2 Prioritized investment plan
- **3** Deliver higher returns
- 4 Stronger working capital performance



Strong fundamentals ... focused on driving returns

