



Advanced Energy

**Investor Relations Presentation
Needham 18th Annual Growth Conference**

January 2016

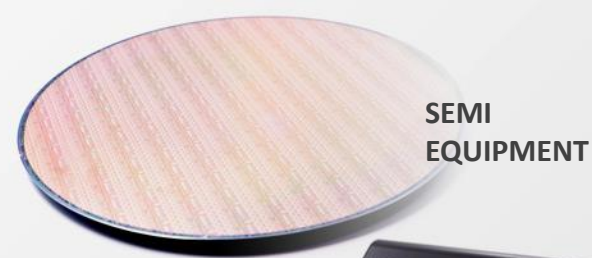
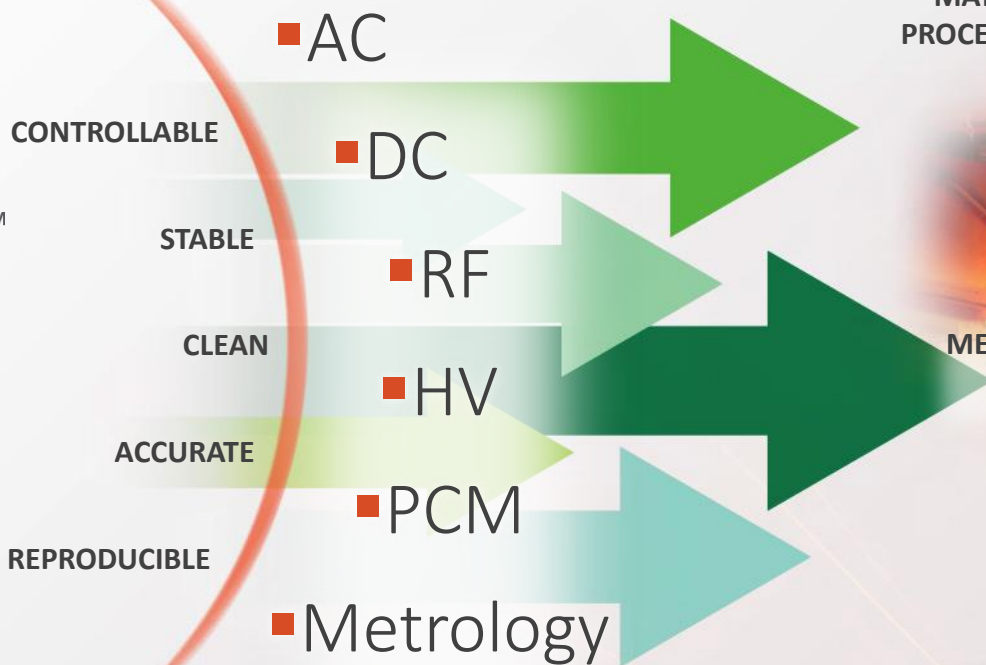
Safe Harbor

The company's guidance with respect to anticipated financial results for the fourth quarter and year ending December 31, 2015, estimates of future costs after the wind down of the Solar Inverter business, estimated future market and growth opportunities, expectations regarding future market trends and the company's future performance within specific markets, aspirational goals and other statements that are not historical information are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Such risks and uncertainties include, but are not limited to: (a) the effects of global macroeconomic conditions upon demand for our products; (b) the volatility and cyclical nature of the industries the company serves, particularly the semiconductor industry; (c) delays in capital spending by end-users in our served markets; (d) expected decreases in customer orders and sales and potential disruptions in operations, supplier relationships and employee relations given the wind down the Solar Inverter business; (e) the company's ability to identify and execute upon a sale of any remaining assets or license of intellectual property (if any) of the inverter business; (f) the resources and costs related to fulfill the remaining Solar Inverter product warranty and post warranty obligations; (g) the company's ability to realize on its plan to avoid additional costs after the wind down the Solar Inverter business; (h) the accuracy of the company's estimates and assumptions on which its financial statement projections are based, including estimates and assumptions related to the wind down of the Solar Inverter business; (i) the impact of price changes resulting from a variety of factors; (j) the timing of orders received from customers; (k) the company's ability to realize benefits from cost improvement efforts including avoided costs, restructuring plans and inorganic growth; (l) the company's ability to obtain materials and manufacture products; and (m) unanticipated changes to management's estimates, reserves or allowances. These and other risks are described in Advanced Energy's Form 10-K, Forms 10-Q and other reports and statements filed with the Securities and Exchange Commission (the "SEC"). These reports and statements are available on the SEC's website at www.sec.gov. Copies may also be obtained from Advanced Energy's investor relations page at <http://ir.advanced-energy.com> or by contacting Advanced Energy's investor relations at 970-407-6555. Forward-looking statements are made and based on information in the November 2, 2015 press release. Aspirational goals and targets discussed on the conference call or in the presentation materials should not be interpreted in any respect as guidance. The company assumes no obligation to update the information in the November 2, 2015 press release and this investor presentation is not intended to provide such an update.

Driving Strong Shareholder Returns



Precision Power Solutions Enable Critical Applications



MEDICAL DIAGNOSTICS / TREATMENT



ANALYTICAL EQUIPMENT



Highly Competitive and Differentiated Model

GROWTH
OPINC
CASH FLOW

Precision Power
Conversion Focus,
Leadership & Talent

Operational
Excellence

Global Footprint,
Diverse Markets,
Critical Applications

Precision Power Solutions Enabling Mobile Technology



Revenue Growth Vision



**NEW
APPLICATIONS**

Industrial Power

Power Applications

High Voltage, High Power, Thermal Applications,
Instrumentation, Environmental, Custom Power

**ADJACENT
APPLICATIONS**

Industrial Thin Films

Geographic Expansion, Integrated Solutions Services

PV Solar – Deposition, Glass coating, FPD -
Deposition/Etch, Industrial/Hard Coating, In-Line
Optical, Measurements, Gas abatement

**CORE
APPLICATIONS**

Semi

RF, DC, RPS, Deposition, Etch, Clean,
Pyrometry, Integrated products

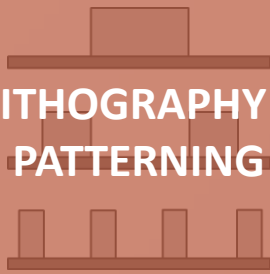
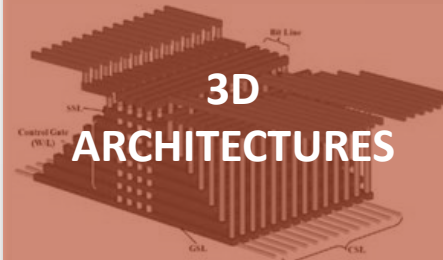
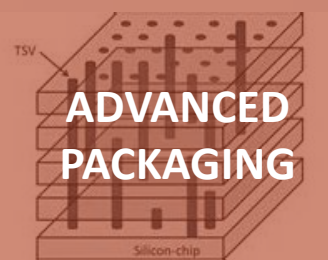
Mobility and the Cloud Driving Semi Growth

Increasing Innovation and More Advanced Devices

- Exponential growth in Memory
- Smaller and faster Logic
- Lower power consumption requirements



Semi Drivers Increasing Etch and Deposition

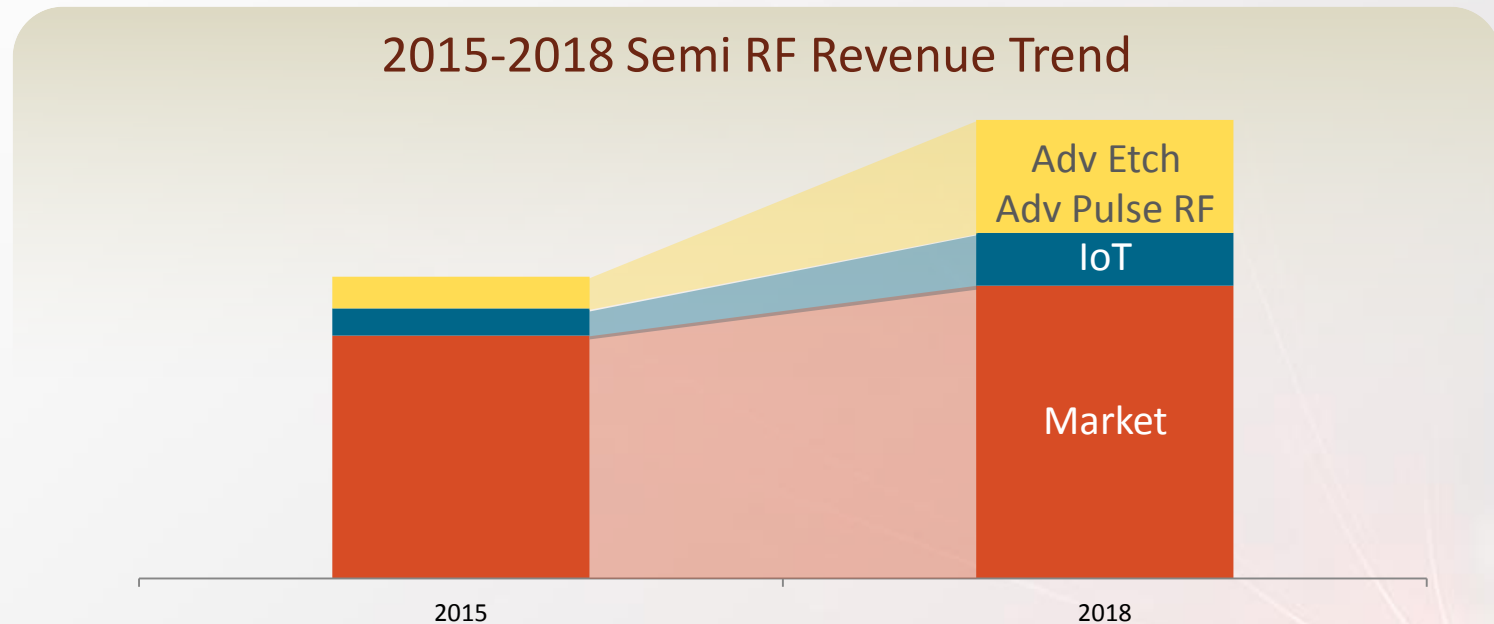
	MARKET DRIVERS	MARKET IMPACT
 <p>LITHOGRAPHY / PATTERNING</p>	<ul style="list-style-type: none">• Multi-patterning below 32nm node• 3-5 times etch/dep steps	Expands SAM 20-50% for logic and memory
 <p>3D ARCHITECTURES</p>	<ul style="list-style-type: none">• More sophisticated etch and deposition processes• 5-10 time etch/dep steps	Expands SAM by >50% for 3DNAND
 <p>ADVANCED PACKAGING</p>	<ul style="list-style-type: none">• Advanced sensor apps• Thru silicon via (TSV) for interconnects	Expands SAM by >100%

Forward-looking information believed to represent potential market size opportunity

Etch & Deposition Driving Growth in RF Power

AE Outpacing Overall Semi Market

- Accelerating demand for Advanced Pulse RF solutions
- Increasing number of units and in RF content per unit
- Growing faster than the market



Forward-looking information believed to represent potential growth opportunity

Industrial Growth Strategy in Thin Films

APPLICATIONS

STRATEGY




Energy Efficiency

Display Technologies

Drive fast adoption of advanced bipolar technology


- Superior film performance
- Superior cost of ownership
- Retrofit large installed base



Consumer Electronics

Increase share with advanced pulsed DC

- Better film properties
- Higher deposition rates



Industrial Hard Coatings

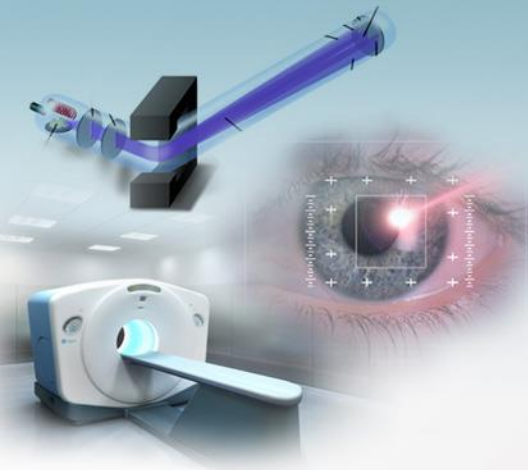
Expand AE's Solvix hard coating solutions into new growth regions

- India and China

Industrial Growth Strategy in Power

APPLICATIONS

STRATEGY



High Voltage Systems

Focus on advanced HV applications

- Mass Spectrometry
- X-Ray (Industrial)
- Electron Beam

High Voltage Modules (embedded HV)

Increase share

- Channel and distribution
- New applications (e-chuck, Defense)



Thermal Applications

Geographical and applications growth:

- Channel partners (Rockwell, Siemens)
- Regional growth (U.S. China, India)
- Integrated solutions

Continuing Value Growth Acceleration

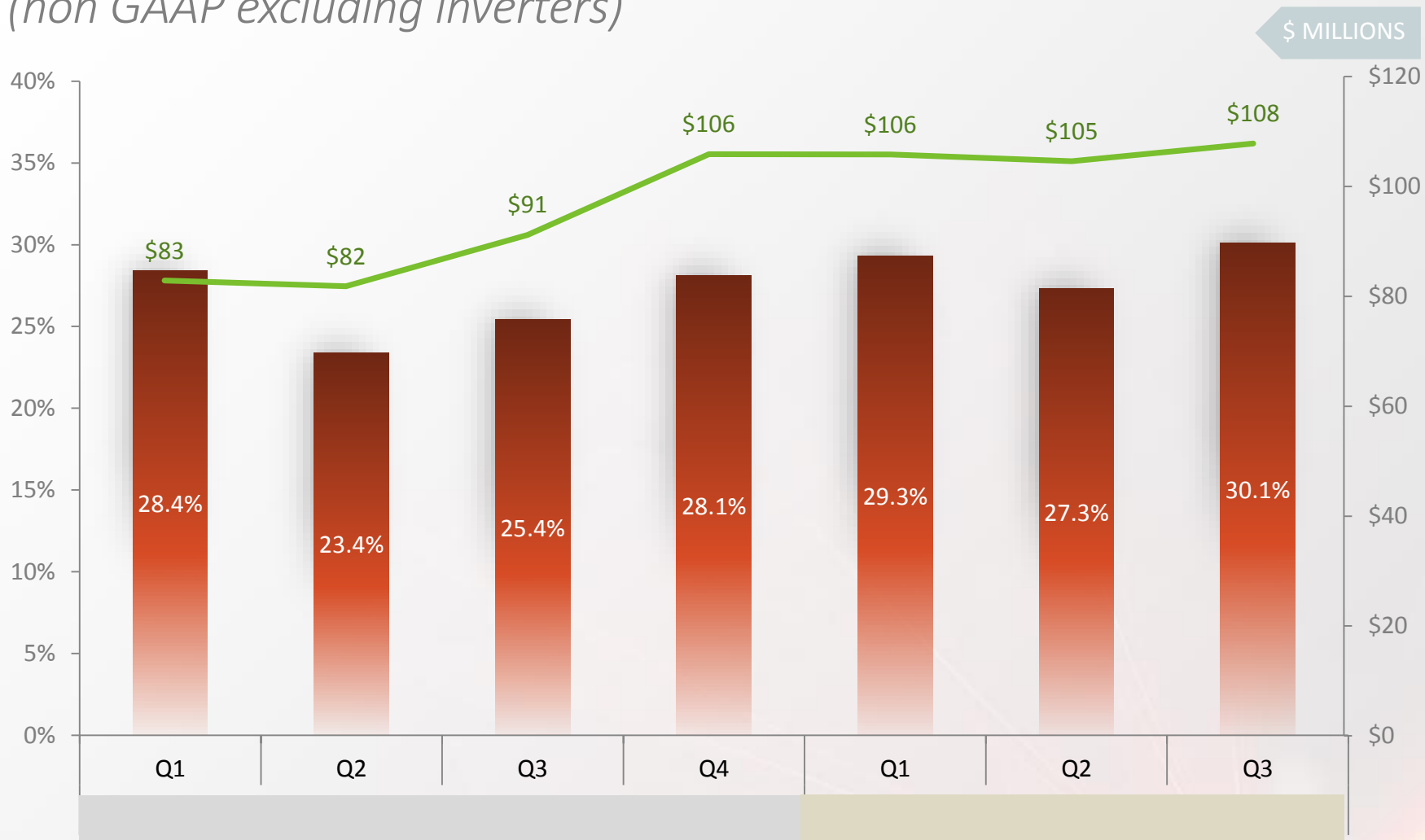
- Enabling critical applications with advanced power conversion technology
- Leading in highest growth Semi sectors
- Increasing investment in organic growth (RD&E, S&M)
- Actively pursuing acquisitions to accelerate growth
- Growth strategy to increase revenue from \$400M to \$700M
- Significant earnings power through industry cycles

FINANCIALS



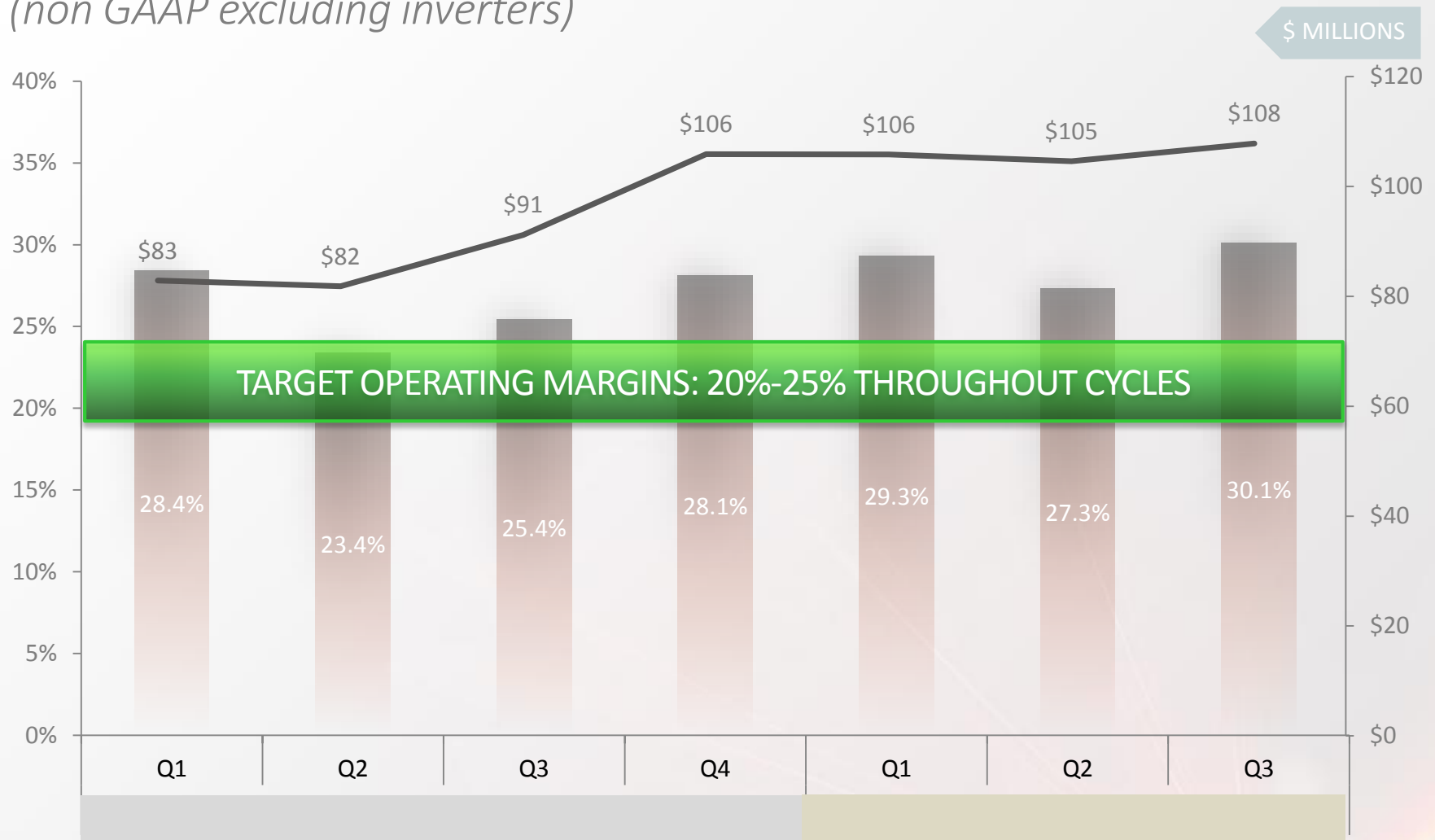
Healthy Revenues and Operating Margins

(non GAAP excluding inverters)



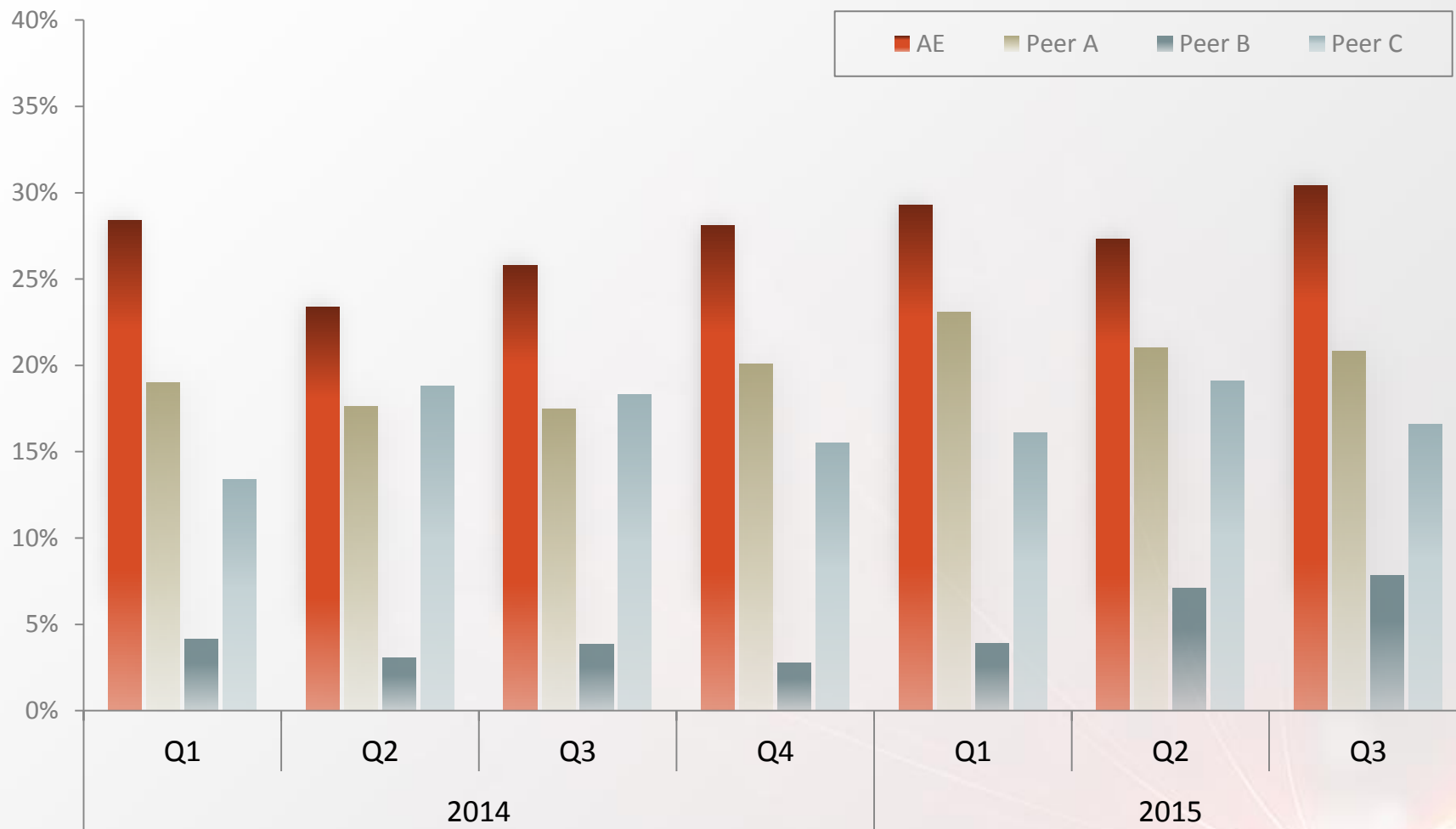
Strong Operating Margins Throughout Cycles

(non GAAP excluding inverters)

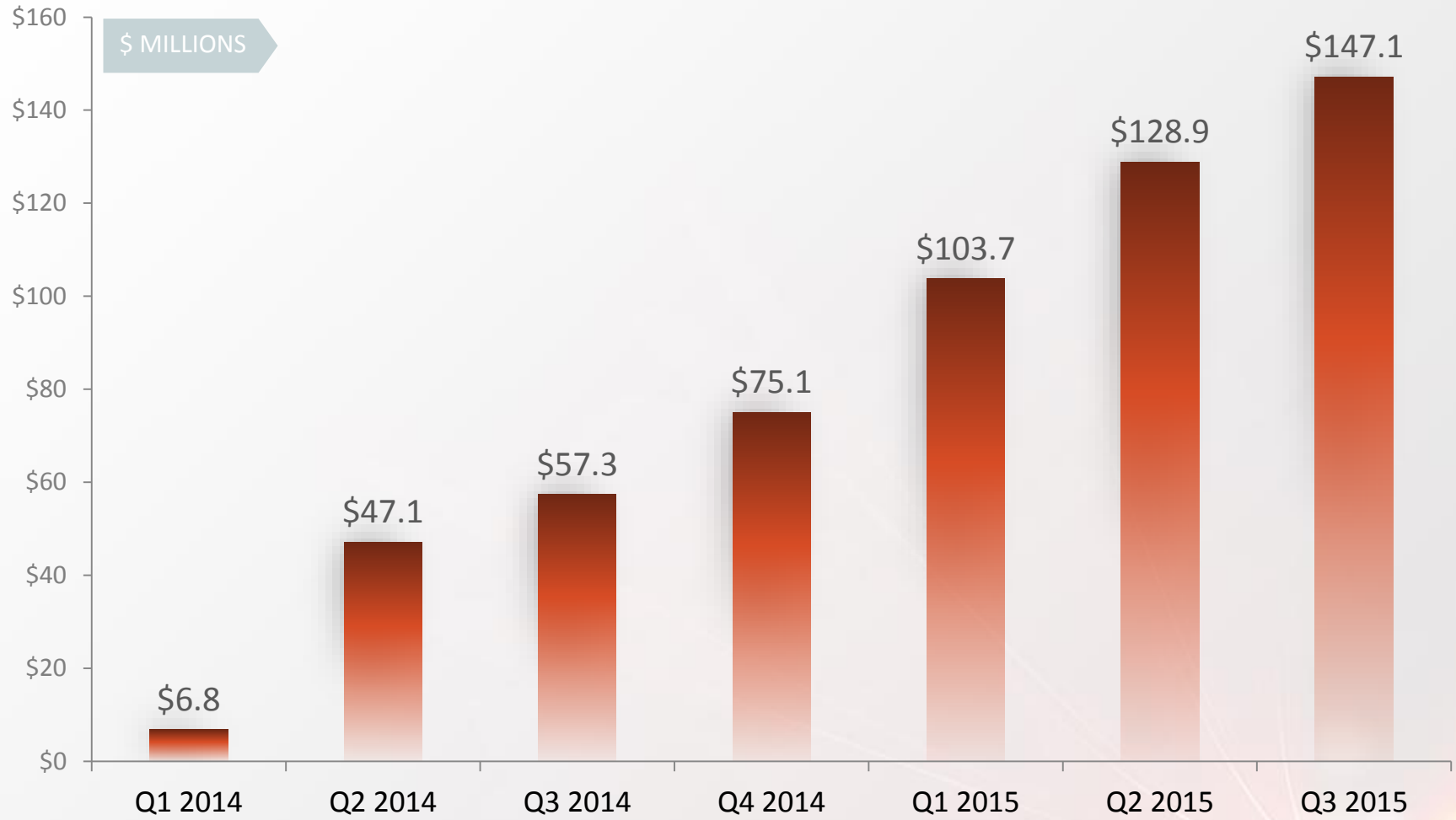


Operating Margins Outperform Peers

(non-GAAP, AE excluding inverters)



Generating Healthy Cash Flows



Financial Strategy

OPTIMIZE COST STRUCTURE

- Reduce G&A and leverage structure during growth
- Low cost supply chain with annual cost improvements

REINVEST SAVINGS FOR GROWTH

- Support semi expansion during 3D ramp
- Drive industrial growth to expand geographies and markets

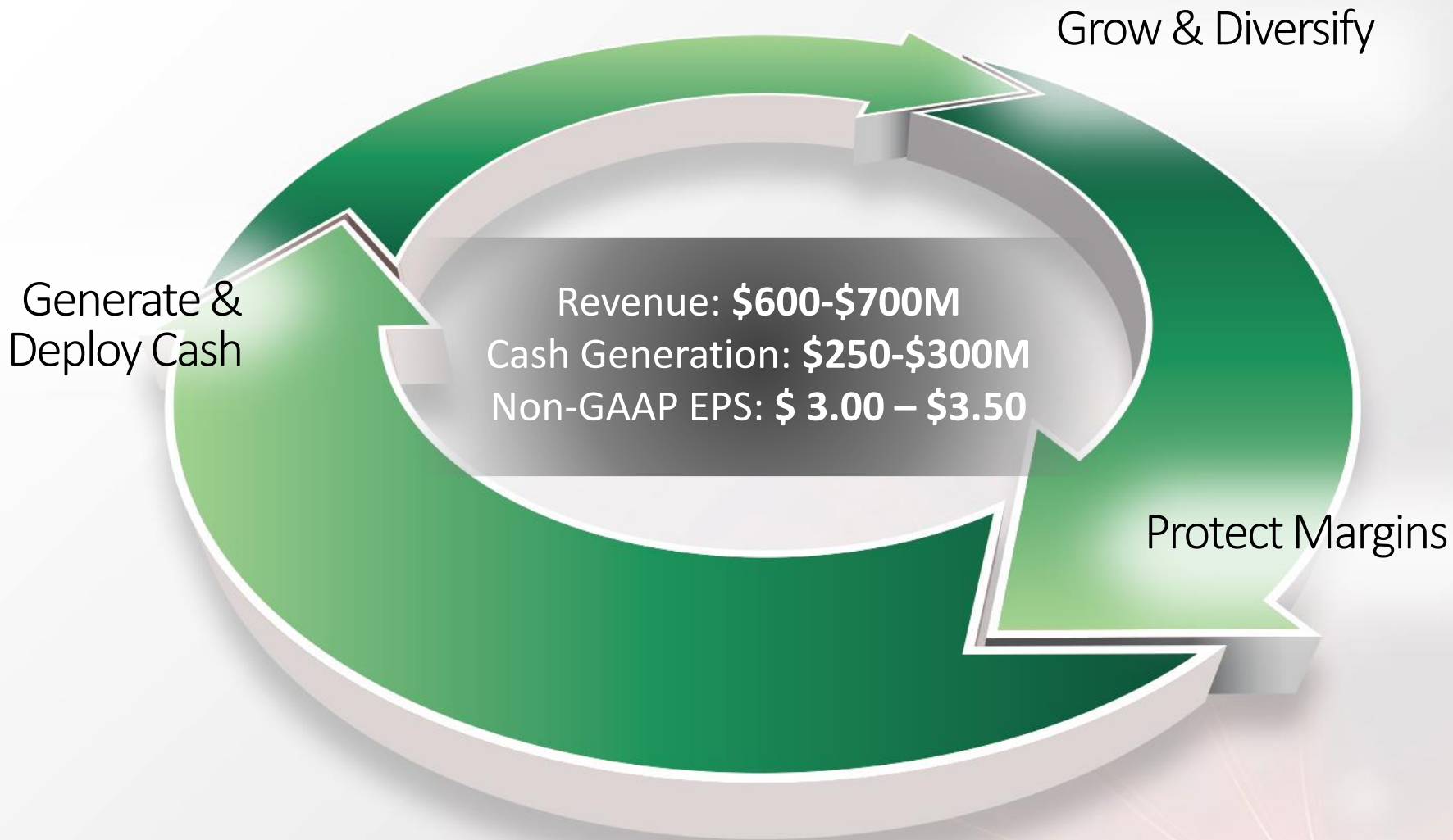
MANAGE CAPITAL STRUCTURE

- Reduce net working capital days
- Strengthen liquidity and flexibility of capital structure (debt)

CAPITAL DEPLOYMENT STRATEGY

- 70% to growth and 30% to share repurchases
- \$150M repurchase underway including \$50M accelerated share repurchase

Aspirational Financial Goals



Note: Please note that hypothetical scenarios regarding revenue growth, EBITDA, EPS, cash generation, acquisitions, aspirational goals and targets and similar statements illustrate various possible outcomes of our different strategies if they are successful. These hypothetical scenarios and illustrations should not be treated as forecasts or projections or financial guidance. We cannot assure you that we will be able to accomplish any of these goals, metrics or opportunities at any point in the future (if at all), all of which are subject to significant risks and uncertainties.

THANK YOU

