Q4 2018
Earnings Presentation

Advanced Energy

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Yuval Wasserman
President & CEO

Paul Oldham
EVP & CFO

Safe Harbor Statement

The company's guidance with respect to anticipated financial results for the first quarter ending March 31, 2019, potential future growth and profitability, our future business mix, expectations regarding future market trends and the company's future performance within specific markets (e.g., statements regarding anticipated semiconductor and industrial market growth) and other statements herein or made on the above-announced conference call 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 and services; (b) the volatility and cyclicality of the industries the company serves, particularly the semiconductor industry; (c) delays in capital spending by end-users in our served markets; (d) the accuracy of the company's estimates related to fulfilling solar inverter product warranty and post-warranty obligations; (e) the company's ability to realize its plan to avoid additional costs after the solar inverter wind-down; (f) the accuracy of the company's assumptions on which its financial statement projections are based; (g) the impact of product price changes, which may result from a variety of factors; (h) the timing of orders received from customers; (i) the company's ability to realize benefits from cost improvement efforts including avoided costs, restructuring plans and inorganic growth; (j) the company's ability to obtain in a timely manner the materials necessary to manufacture its products; (k) unanticipated changes to management's estimates, reserves or allowances; (l) changes and adjustments to the tax expense and benefits related to the U.S. tax reform that was enacted in late 2017; and (m) the effects of recent U.S. government trade and export restrictions, Chinese retaliatory trade actions, and other governmental action related to tariffs upon the demand for our, and our customers', products and services and the U.S. economy. 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 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 available to the company on the date of this presentation. 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 this presentation.

Key Messages

- Q4 revenue near midpoint of guidance in challenging environment
  - Revenue of $154.2 million, non-GAAP* operating margin of 18.6%, and non-GAAP* EPS of $0.73
  - Non-GAAP* EPS at the lower end of guidance range due to accelerated R&D investments, partially offset by one time discrete tax benefits
  - Taking actions to optimize manufacturing footprint, accelerate integrations and improve efficiency
- Successful 2018 with record revenue, solid profitability, and execution of our inorganic growth strategy
  - Revenue grew 7% y/y to $719 million, non-GAAP* operating margin of 27.2%, and operating cash flow from continuing operations of $151 million
- Accelerated investments in new products and technologies
  - Strong customer engagement drives opportunities for revenue growth and market share gains
- Continue to grow our revenues in Industrial Technologies and Service
- Committed to our long-term aspirational goals, subject to length of semi downturn

*non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations, estimated income tax expense associated with U.S. tax reform, and non-recurring items such as acquisition-related costs and restructuring expenses.

Semiconductor

- Q4 Semiconductor revenue of $83.5M, -13% q/q and -32% y/y
  - Results impacted both by weak capital equipment spending and finished goods inventory draw down at our key OEM customers
- Weak conditions expected to persist through 1H 2019, but long-term drivers intact
  - Long-term drivers of increased power level and content per system remain intact
- Strong customer engagement for our new technologies to accelerate their roadmaps
  - Shipped multiple evaluation products to 5 leading OEM customers
  - Design wins from prior quarters drove market share gain at a key Korean OEM
  - Key wins pave way for future gains in etch, deposition, implant, inspection and metrology

Long-term drivers remain intact while near-term visibility is low

Industrial Technologies

- Q4 Industrial revenue of $41.6M; -14% q/q and +36% y/y
  - Strong y/y growth driven by acquisitions
  - Advanced Materials revenue down sequentially on seasonal decline and lower solar vs. Q3
  - Applied Power grew sequentially and y/y mostly on LumaSense

- For 2018, Industrial revenue grew 43% y/y and grew 98% in 2 years
  - Organic revenue grew 15% y/y, driven by our robust design win pipeline

- LumaSense acquisition update
  - Integration making good progress
  - Confidence in ability to achieve annualized revenue and cost synergy target of $8-$10M
  - LumaSense added approx. $12M to Q4 revenue, with Semi being soft at just 13% of sales

Organic growth and execution of acquisition strategy drove a record 2018

Global Service

- Q4 Service revenue of $29.1M; +3% q/q and +16% y/y
  - Service reached another record quarter in Q4
- 2018 Service revenue grew +18% y/y
  - Sustaining double-digit-% y/y and tracking ahead of our target of >10% y/y
- Several long-term drivers support continued growth ahead
  - Beginning to see the benefits of our growing installed base
  - Continuing share gains from regional 3rd party service providers to drive future growth
  - Developing new service programs and engineering solutions

Market share gains and growing installed based support >10% CAGR

Q4 and 2018 Revenue by Application

($ in thousands)	Q4'18	Q3'18	Q4'17	Q/Q	Y/Y
Semiconductors	$83,480	$96,360	$123,565	(13.4%)	(32.4%)
Industrial Technologies	$41,559	$48,483	$30,607	(14.3%)	35.8%
Global Service	$29,122	$28,239	$25,042	3.1%	16.3%
Total Revenue	**$154,161**	**$173,082**	**$179,214**	**(10.9%)**	**(14.0%)**

($ in thousands)	2018	2017	Y/Y
Semiconductors	$443,141	$461,701	(4.0%)
Industrial Technologies	$167,185	$116,949	43.0%
Global Service	$108,566	$92,362	17.5%
Total Revenue	**$718,892**	**$671,012**	**7.1%**

Q4 2018 Income Statement

($ in Millions, except percentage & EPS)	Q4'18	Q3'18	Q4'17	Q/Q	Y/Y
Revenue	$154.2	$173.1	$179.2	(10.9%)	(14.0%)
GAAP gross margin %	48.8%	49.4%	54.8%		
GAAP operating expenses	$55.6	$45.7	$40.1	21.8%	38.7%
GAAP operating margin from continuing ops %	12.7%	23.0%	32.4%		
GAAP EPS from continuing ops	$0.50	$0.90	($0.73)	(44.4%)	N/M
Non-GAAP* Gross Margin %	49.4%	50.0%	55.0%		
Non-GAAP* operating expenses	$47.5	$42.2	$37.4	12.6%	26.8%
Non-GAAP* operating margin from continuing ops %	18.6%	25.6%	34.1%		
Non-GAAP* EPS	$0.73	$1.05	$1.31	(30.5%)	(44.3%)

non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations, estimated income tax expense associated with U.S. tax reform, and non-recurring items such as acquisition-related costs and restructuring expenses.

Full Year 2018 Income Statement

($ in Millions, except percentage & EPS)	2018	2017	Y/Y
Revenue	$718.9	$671.0	7.1%
GAAP gross margin %	50.9%	53.1%	
GAAP operating expenses	$194.1	$155.6	24.7%
GAAP operating margin from continuing ops %	23.9%	29.9%	
GAAP EPS from continuing ops	$3.74	$3.39	10.3%
Non-GAAP* Gross Margin %	51.2%	53.3%	
Non-GAAP* operating expenses	$172.8	$140.0	23.5%
Non-GAAP* operating margin from continuing ops %	27.2%	32.5%	
Non-GAAP* EPS	$4.37	$4.77	(8.4%)

*non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations, estimated income tax expense associated with U.S. tax reform, and non-recurring items such as acquisition-related costs and restructuring expenses.

Q4 2018 Balance Sheet and Cash Flow

- Generated $32.9 million in cash flow from continuing operations in Q4
  - Generated $151.4 million in 2018
- Continuing execution of share repurchase program
  - In Q4, repurchased 575 thousand shares at $45.36 per share for total of $26.1 million
  - In 2018, repurchased 1.70 million shares at $56.07 per share for total of $95.1 million
  - Since program inception in 2015, repurchased 3.84 million shares for total of $175.1 million
- Inventory turns at 3.0x; DSO 58 days; DPO 48 days
  - Inventory declined $12.3 million from end of Q3

($ in Millions)	**Q4'18**	**Q4'17**
Cash & Investments	$351.8	$410.4
Accounts Receivable	$100.4	$87.4
Inventory	$98.0	$78.5
Total Assets	$816.5	$733.3
Liabilities	$209.2	$212.7
Shareholders' Equity	$607.3	$520.6

Q1 2019 Guidance*

	Q1 2019		
Revenue	$138M	-	$148M
GAAP EPS from continuing operations	$0.24	-	$0.42
Non-GAAP** EPS	$0.40	-	$0.55

*Estimates as of Q4 2018 earnings conference call. The company assumes no obligation to update guidance.

**Q1 2019 non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations and non-recurring items such as acquisition-related costs and restructuring expenses.

Non-GAAP Measures

This presentation GAAP and non-GAAP income and per-share earnings data and other GAAP and non-GAAP financial information. Advanced Energy's non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations and non-recurring items such as acquisition-related costs and restructuring expenses. Additionally, the fourth quarter non-GAAP results exclude estimated income tax expense associated with U.S. tax reform. The non-GAAP measures included in this release are not in accordance with, or an alternative for, similar measures calculated under generally accepted accounting principles and may be different from non-GAAP measures used by other companies. In addition, these non-GAAP measures are not based on any comprehensive set of accounting rules or principles. Advanced Energy believes that these non-GAAP measures provide useful information to management and investors to evaluate business performance without the impacts of certain non-cash charges and other charges which are not part of the company's usual operations. The company uses these non-GAAP measures to assess performance against business objectives, make business decisions, develop budgets, forecast future periods, assess trends and evaluate financial impacts of various scenarios. In addition, management's incentive plans include these non-GAAP measures as criteria for achievements. Additionally, the company believes that these non-GAAP measures, in combination with its financial results calculated in accordance with GAAP, provide investors with additional perspective. While some of the excluded items may be incurred and reflected in the company's GAAP financial results in the foreseeable future, the company believes that the items excluded from certain non-GAAP measures do not accurately reflect the underlying performance of its continuing operations for the period in which they are incurred. The use of non-GAAP measures has limitations in that such measures do not reflect all of the amounts associated with the company's results of operations as determined in accordance with GAAP, and these measures should only be used to evaluate the company's results of operations in conjunction with the corresponding GAAP measures. Please refer to the Form 8-K regarding this release furnished today to the Securities and Exchange Commission.

Reconciliation of GAAP to non-GAAP* Measures

Reconciliation of Non-GAAP measure - operating expenses and operating income, excluding certain items (in thousands)	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2018	2017	2018	2018	2017
Gross profit from continuing operations, as reported	$ 75,188	$ 98,175	$ 85,539	$ 365,607	$ 356,381
Adjustments to gross profit:					
Stock-based compensation	166	346	76	742	1,394
Facility transition and relocation costs	354	—	725	1,328	—
Acquisition-related costs	411	—	158	569	—
Non-GAAP gross profit	76,119	98,521	86,498	368,246	357,775
Operating expenses from continuing operations, as reported	55,618	40,113	45,677	194,054	155,611
Adjustments:					
Amortization of intangible assets	(1,816)	(1,174)	(1,437)	(5,774)	(4,350
Stock-based compensation	(2,077)	(1,496)	(948)	(8,961)	(11,155
Acquisition-related costs	(416)	—	(705)	(1,726)	(150
Facility expansion and relocation costs	—	—	(29)	(518)	—
Restructuring charges	(3,836)	—	(403)	(4,239)	—
Non-GAAP operating expenses	47,473	37,443	42,155	172,836	139,956
Non-GAAP operating income	$ 28,646	$ 61,078	$ 44,343	$ 195,410	$ 217,819

Reconciliation of Non-GAAP measure - operating expenses and operating income, excluding certain items (in percentage)	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2018	2017	2018	2018	2017
Gross profit from continuing operations, as reported	48.8%	54.8%	49.4%	50.9%	53.1%
Adjustments to gross profit:					
Stock-based compensation	0.1	0.2	—	0.1	0.2
Facility transition and relocation costs	0.2	—	0.5	0.1	—
Acquisition-related costs	0.3	—	0.1	0.1	—
Non-GAAP gross profit	49.4	55.0	50.0	51.2	53.3
Operating expenses from continuing operations, as reported	36.1	22.4	26.4	27.0	23.2
Adjustments:					
Amortization of intangible assets	(1.2)	(0.7)	(0.8)	(0.8)	(0.6)
Stock-based compensation	(1.3)	(0.8)	(0.6)	(1.3)	(1.8)
Acquisition-related costs	(0.3)	—	(0.4)	(0.2)	—
Facility expansion and relocation costs	—	—	—	(0.1)	—
Restructuring charges	(2.5)	—	(0.2)	(0.6)	—
Non-GAAP operating expenses	30.8	20.9	24.4	24.0	20.8
Non-GAAP operating income	18.6%	34.1%	25.6%	27.2%	32.5%

Reconciliation of Non-GAAP measure - income excluding certain items (in thousands)	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2018	2017	2018	2018	2017
Income from continuing operations, less noncontrolling interest, net of income taxes	$ 19,218	$ (29,007)	$ 35,150	$ 147,063	$ 136,101
Adjustments:					
Amortization of intangible assets	1,816	1,174	1,437	5,774	4,350
Stock-based compensation	2,243	1,842	1,024	9,703	12,549
Acquisition-related costs	827	—	863	2,295	150
Facility expansion and relocation costs	354	—	754	1,846	—
Restructuring charges	3,836	—	403	4,239	—
Nonrecurring tax (benefit) expense associated with inverter business	—	6,357	—	—	(33,837)
Loss on foreign exchange hedge	—	—	—	—	3,489
Incremental expense associated with start-up of the Asia regional headquarters	—	—	—	—	1,133
Tax Cuts and Jobs Act Impact	1,452	72,867	2,398	5,703	72,867
Tax effect of Non-GAAP adjustments	(1,736)	(813)	(843)	(4,626)	(5,264)
Non-GAAP income, net of income taxes	$ 28,010	$ 52,420	$ 41,186	$ 171,997	$ 191,538

Reconciliation of Non-GAAP measure - per share earnings excluding certain items	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2018	2017	2018	2018	2017
Diluted earnings per share from continuing operations, as reported	$ 0.50	$ (0.73)	$ 0.90	$ 3.74	$ 3.39
Add back:					
per share impact of Non-GAAP adjustments, net of tax	0.23	2.04	0.15	0.63	1.38
Non-GAAP per share earnings	$ 0.73	$ 1.31	$ 1.05	$ 4.37	$ 4.77

*non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations, estimated income tax expense associated with U.S. tax reform, and non-recurring items such as acquisition-related costs and restructuring expenses.

Reconciliation of Q1 2019 Guidance*

	Low End		High End
Revenues	**$138M**	**-**	**$148M**
Reconciliation of Non-GAAP ** **earnings per share**			
GAAP earnings per share	**$0.24**	-	**$0.42**
Stock-based compensation	0.13	-	0.10
Amortization of intangible assets	0.05	-	0.05
Restructuring and other	0.01	-	0.01
Tax effects of excluded items	(0.03)	-	(0.03)
Non-GAAP ** **earnings per share**	**$0.40**	-	**$0.55**

**Estimates as of Q4 2018 earnings conference call. The company assumes no obligation to update guidance.*

***Q1 2019 non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations and non-recurring items such as acquisition-related costs and restructuring expenses.*