FIRST SOLAR Q4'19 EARNINGS AND 2020 GUIDANCE CALL

February 20, 2020

First Solar.

LEADING THE WORLD'S SUSTAINABLE ENERGY FUTURE

IMPORTANT INFORMATION

Cautionary Note Regarding Forward Looking Statements

This presentation contains forward-looking statements which are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements in this presentation, other than statements of historical fact, are forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning: effects resulting from certain module manufacturing changes and associated restructuring activities; our business strategy, including anticipated trends and developments in and management plans for our business and the markets in which we operate; our financial guidance for 2020, future financial results, operating results, net sales, revenues, cost of goods sold, gross margin, gross margin percentage, operating expenses, operating income, earnings per share, net cash balance, capital expenditures, products, efficiency, projected costs (including estimated future module collection and recycling costs), warranties, shipments, bookings, booking opportunities, backlog, confirmations, sales, supply, production, nameplate manufacturing capacity, solar module technology and cost reduction roadmaps, restructuring, product reliability, photovoltaic ("PV") market growth and competitiveness, investments in unconsolidated affiliates, and capital expenditures; our ability to continue to reduce the cost per watt of our solar modules (and the impact of drivers to reduce such costs); our ability to expand manufacturing capacity worldwide; our ability to reduce the costs to construct PV solar power systems; research and development ("R&D") programs, the impact of our copper replacement program; sales and marketing initiatives; the impact of U.S. tax reform; and competition. These forward-looking statements are often characterized by the use of words such as "estimate," "expect," "anticipate," "project," "plan," "intend," "seek," "believe," "forecast," "foresee," "likely," "may," "should," "goal," "target," "might," "will," "could," "predict," "continue" and the negative or plural of these words and other comparable terminology. Forward-looking statements are only predictions based on our current expectations and our projections about future events and therefore speak only as of the date of this presentation. You should not place undue reliance on these forward-looking statements. We undertake no obligation to update any of these forward-looking statements for any reason, whether as a result of new information, future developments or otherwise. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by these statements. These factors include, but are not limited to: structural imbalances in global supply and demand for PV solar modules; the market for renewable energy, including solar energy; our competitive position and other key competitive factors; reduction, elimination, or expiration of government subsidies, policies, and support programs for solar energy projects; the impact of public policies, such as tariffs or other trade remedies imposed on solar cells and modules; our ability to execute on our long-term strategic plans; our ability to execute on our solar module technology and cost reduction roadmaps; our ability to improve the wattage of our solar modules; interest rate fluctuations and both our and our customers' ability to secure financing; the creditworthiness of our offtake counterparties and the ability of our offtake counterparties to fulfill their contractual obligations to us; the ability of our customers and counterparties to perform under their contracts with us; the satisfaction of conditions precedent in our project sale agreements; our ability to attract new customers and to develop and maintain existing customer and supplier relationships; our ability to successfully develop and complete our systems business projects; our ability to convert existing production facilities to support new product lines, such as Series 6 module manufacturing; general economic and business conditions, including those influenced by U.S., international, and geopolitical events; environmental responsibility, including with respect to cadmium telluride ("CdTe") and other semiconductor materials; claims under our limited warranty obligations; changes in, or the failure to comply with, government regulations and environmental, health, and safety requirements; effects resulting from pending litigation, including the opt-out action against us; future collection and recycling costs for solar modules covered by our module collection and recycling program; our ability to protect our intellectual property; our ability to prevent and/or minimize the impact of cyber-attacks or other breaches of our information systems; our continued investment in R&D; the supply and price of components and raw materials, including CdTe; our ability to attract and retain key executive officers and associates; and the matters discussed under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Conditions and Results of Operations" of our most recent Annual Report on Form 10-K, and our subsequently filed Quarterly Reports on Form 10-Q, as supplemented by our other filings with the Securities and Exchange Commission.

Non-GAAP Financial Measure

This presentation includes the presentation and discussion of certain financial information that differs from what is reported under generally accepted accounting principles in the United States ("GAAP"). This non-GAAP financial measure includes non-GAAP earnings per share ("EPS"). See the Appendix for a reconciliation of non-GAAP EPS to its most directly comparable GAAP measure and further information regarding such measures. Investors and other readers should consider non-GAAP measures only as supplements to, not as substitutes for or superior to, measures of financial performance prepared in accordance with GAAP.

AGENDA

- Business & Technology Update
- Q4 2019 & Fiscal Year 2019 Financial Results
- 2020 Business & Strategy Update
- 2020 Financial Outlook
- Q&A

2019 REVIEW

- **Company:**
  - Celebrated 20th anniversary
  - Achieved milestone of 25 GW of cumulative modules shipped
  - Largest thin-film PV module manufacturer globally

- **Bookings/Pipeline:**
  - Record year with shipments of 5.4 GW(1)
  - Net bookings of 6.1 GW

- **Technology, Manufacturing & Operations:**
  - Series 6 year-end nameplate capacity increased to 5.5 GW
  - Achieved top module production bin of 435 watts
  - Record 447 Watt Series 6 module validated by Fraunhofer

(1) Includes 0.2GW of shipments for internal systems projects prior to the step down in the U.S. investment tax credit

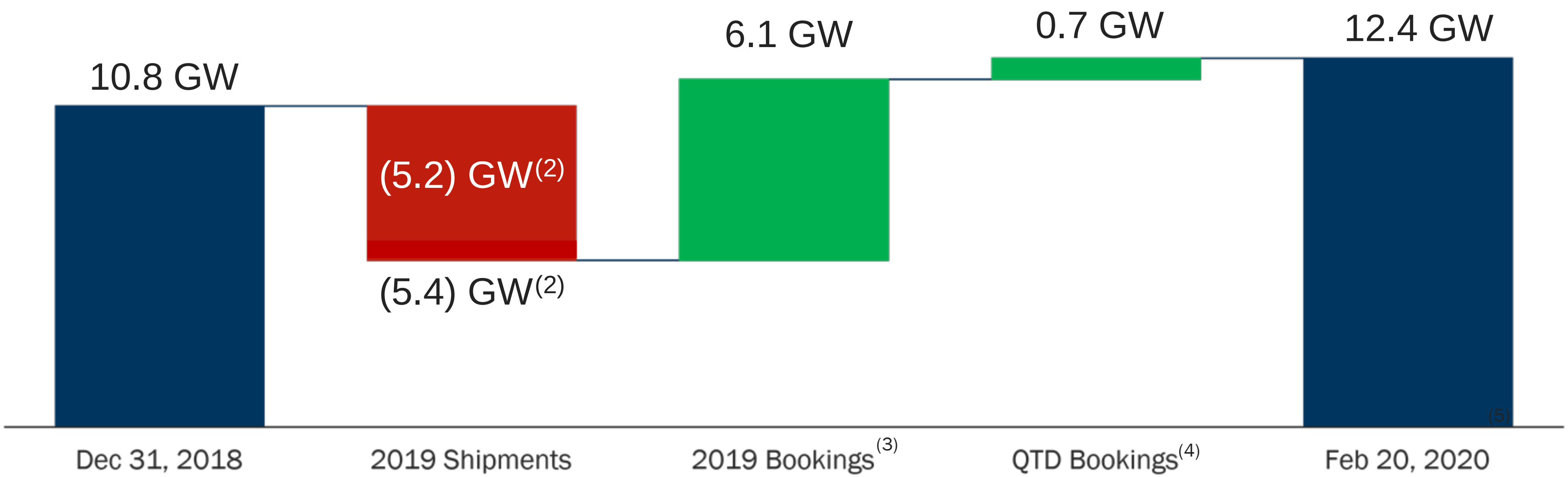
BUSINESS & TECHNOLOGY UPDATE

SERIES 6 OPERATIONS UPDATE

METRIC	Dec’18 vs. Dec’19	Oct’19 vs. Feb’20[1]
MWs Produced per Day	152 %	25 %
Capacity Utilization Percentage	26 pts	2 pts
Yield Percentage	32 pts	2 pts
Watts per Module	20 W	7 W
ARC Utilization	24 pts	2 pts

(1) Data through February 19, 2020

EXPECTED MODULE SHIPMENTS[1] (GW_{DC}): SYSTEMS + THIRD-PARTY MODULE



The above table presents the actual module shipments for 2019 through Dec 31, 2019, new module volume bookings through Feb 20, 2020, and the expected module shipments beyond Dec 31, 2019. A module is considered to be shipped when it leaves one of our manufacturing plants. Expected module shipments do not have a direct correlation to expected revenues as expected module shipments do not represent total systems revenues and do not consider the timing of when all revenue recognition criteria are met, including timing of module installation.

(1) Expected Module Shipments includes systems projects and contracted 3rd party module-only sales. Systems projects include (a) under sales agreement, (b) executed PPA not under sales agreement, and (c) no PPA and not under sales agreement, but electricity to be sold on an open contract basis.

(2) 5.2GW of net shipments deducted from backlog; 0.2GW of 5.4GW total shipments shipped to safe harbor the U.S. investment tax credit for future systems projects.

(3) Reflects bookings from Jan 1, 2019 to Dec 31, 2019, reduced by 1.7 GW of debookings.

(4) Reflects bookings from Jan 1, 2020 to Feb 20, 2020.

(5) Balance includes remaining shipment volumes as of Dec 31, 2020 and bookings through Feb 20, 2020. Shipments from Jan 1 to Feb 20, 2020 not deducted.

Q4 2019 & FISCAL YEAR 2019 FINANCIAL RESULTS

KEY INCOME STATEMENT DATA

(in millions, except gross profit % and net income per share data) (Unaudited)	Q4'19	Q/Q	Y/Y	2019	Y/Y
Net sales	$ 1,399.4	156%	102%	$ 3,063.1	37%
Gross profit %	23.8%	-1.5 ppt	9.6 ppt	17.9%	0.4 ppt
Selling, general and administrative	55.6	4%	8%	205.5	16%
Research and development	25.4	2%	19%	96.6	14%
Production start-up	7.4	(11.2)	(7.2)	45.9	(44.8)
Litigation loss	363.0	363.0	363.0	363.0	363.0
Operating (loss) income	(117.9)	(159.2)	(128.9)	(161.8)	(201.9)
Other income, net	21.9	25.3	(10.2)	17.5	(22.2)
Income tax (benefit) expense	(30.9)	(45.9)	(26.5)	(5.5)	8.9
Equity in earnings of unconsolidated affiliates, net of tax	(0.1)	(0.2)	(0.6)	(0.3)	(34.9)
Net Loss	(59.4)	(90.0)	(111.5)	(114.9)	(259.3)
Share count - Diluted	105.4	(1)%	(0)%	105.3	(1)%
GAAP loss per share – Diluted	(0.56)	(0.85)	(1.05)	(1.09)	(2.45)
Non-GAAP earnings per share – Diluted [1]	N/A	N/A	N/A	1.48	N/A

(1) Refer to the appendix for a reconciliation of this non-GAAP measure to its most directly comparable GAAP measure

KEY BALANCE SHEET AND CASH FLOW DATA

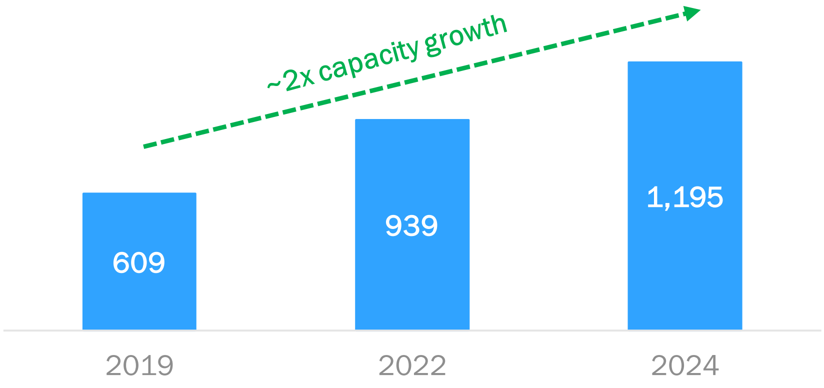
(in millions) (Unaudited)	Q4'19	Q3'19	Q4'18	Q/Q	Y/Y
Assets & Liabilities					
Cash, cash equivalents, and marketable securities[1]	$ 2,258.0	$ 1,637.1	$ 2,706.3	$ 2,256.4	$ 2,255.3
Accounts receivable trade, net	475.0	367.3	128.3	107.7	346.8
Accounts receivable, unbilled and retainage	183.5	165.0	458.2	18.5	(274.7)
Inventories — current	443.5	576.8	387.9	(133.3)	55.6
Balance of systems parts	53.6	68.9	56.9	(15.3)	(3.3)
PV solar power systems, net	477.0	484.6	308.6	(7.6)	168.3
Project assets — current and noncurrent	337.1	572.1	498.4	(235.0)	(161.3)
Long-term debt — current and noncurrent	471.7	480.3	466.8	(8.6)	4.9
Cash Flow					
Net cash provided by operating activities	$ 781.7	$ (317.6)	$ (185.5)	$ 1,099.3	$ 967.2

(1) Includes restricted cash

2020 BUSINESS & STRATEGY UPDATE

PV MARKET GROWTH AND COMPETITIVENESS

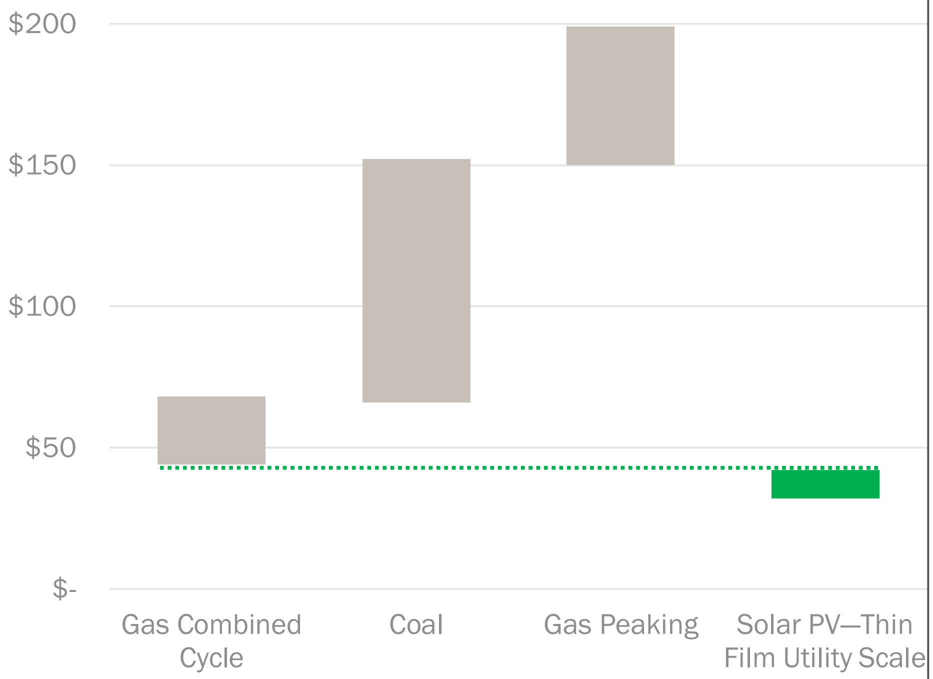
Cumulative Global Installed PV Capacity[1]



Cost Competitiveness – A Driver of Growth

- Unsubsidized utility-scale solar has a **lower levelized cost of energy** compared to conventional generation including coal, nuclear and natural gas peaking plants[2]

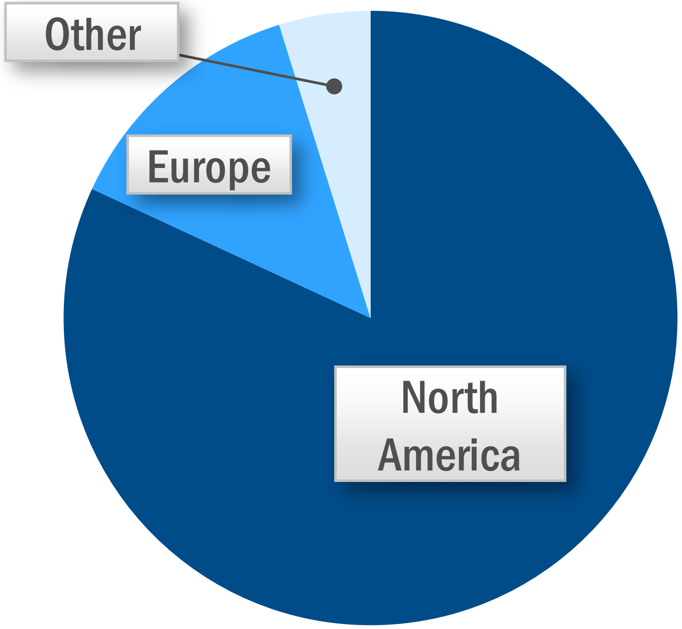
LCOE ($/MWh)[2]



(1) EIA 'Renewables 2019'; (2) Lazard Levelized Cost of Energy Analysis – Version 13.0

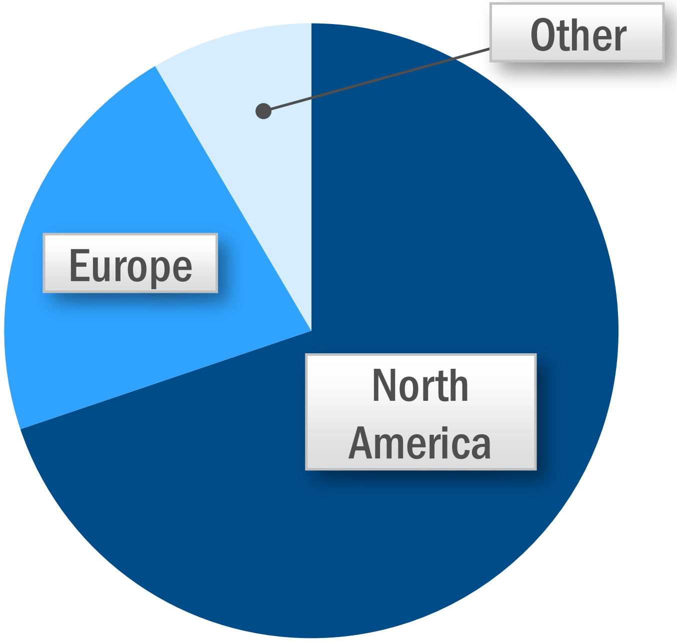
POTENTIAL BOOKING OPPORTUNITIES: BY GEOGRAPHY

Total bookings opportunities



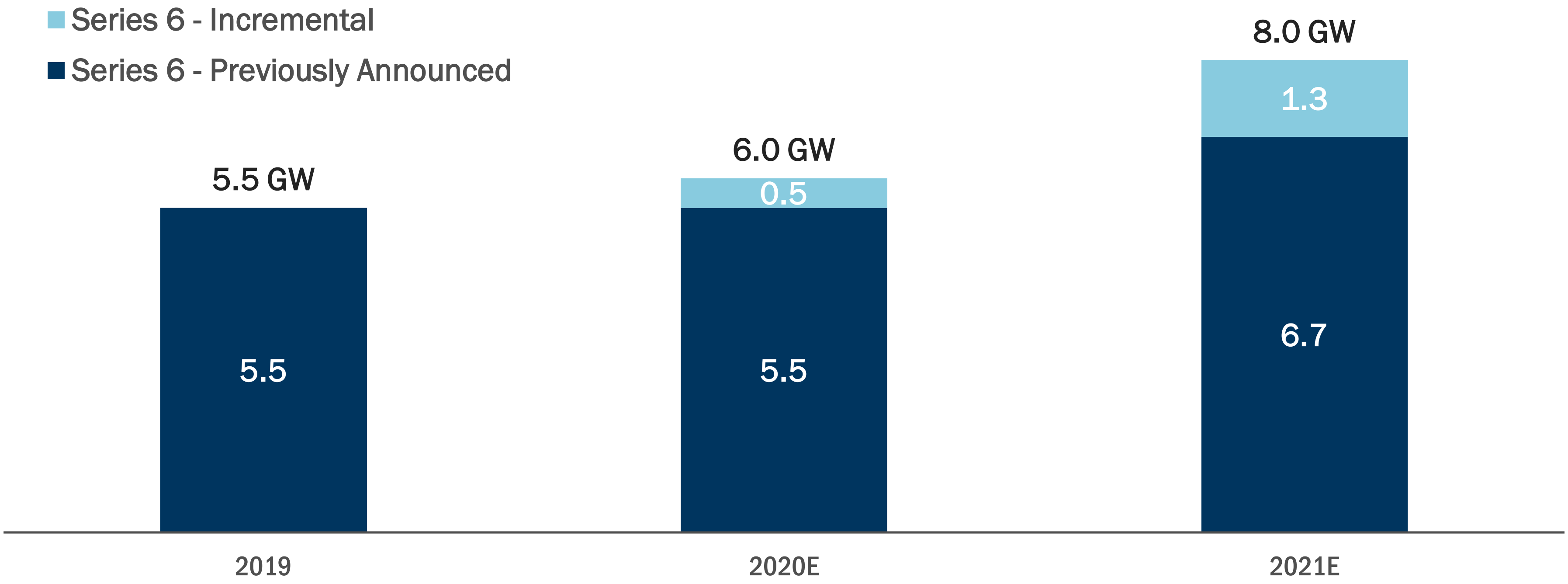
18.1 GW_{DC} Opportunity

Mid-to-Late stage opportunities



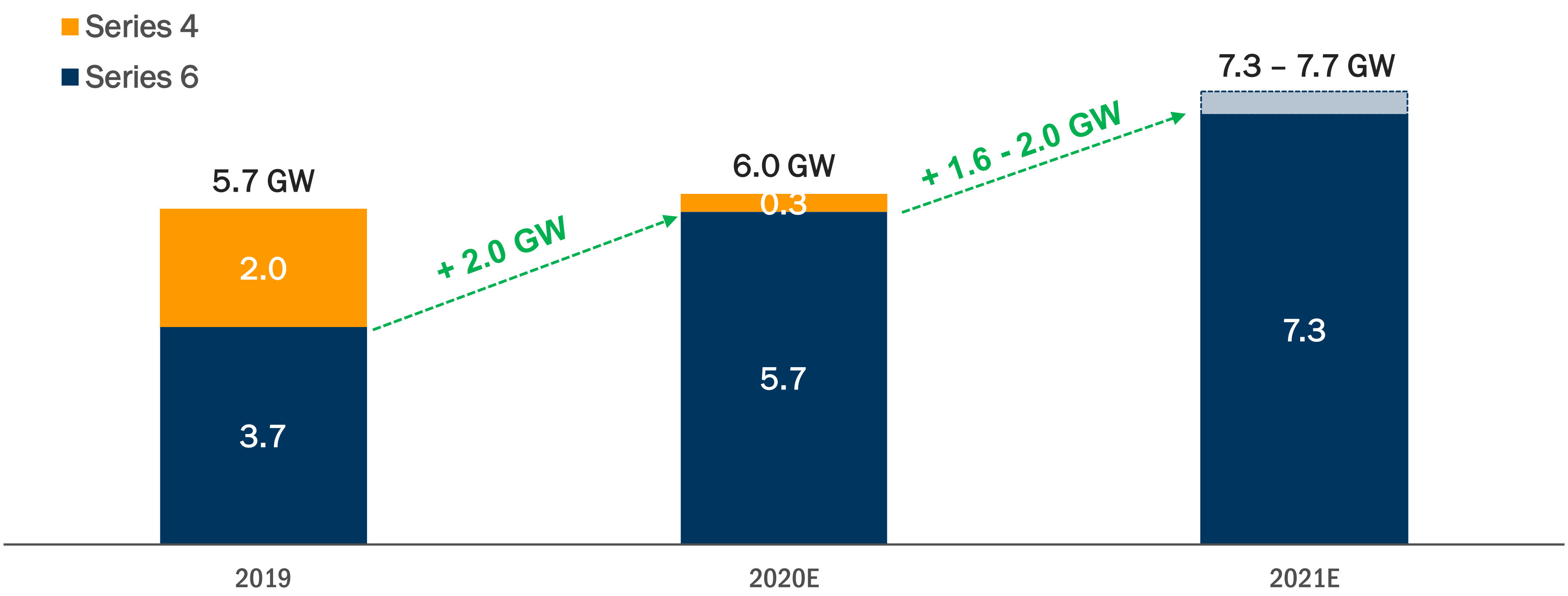
8.2 GW_{DC} Opportunity

YEAR-END NAMEPLATE MANUFACTURING CAPACITY



2.5 GW of Series 6 capacity growth expected from year end 2019 to 2021

PRODUCTION VOLUME



n/a	<90% contracted	~2/3 contracted

Series 6 volume expected increase of 3.6 – 4.0 GW between 2019 and 2021

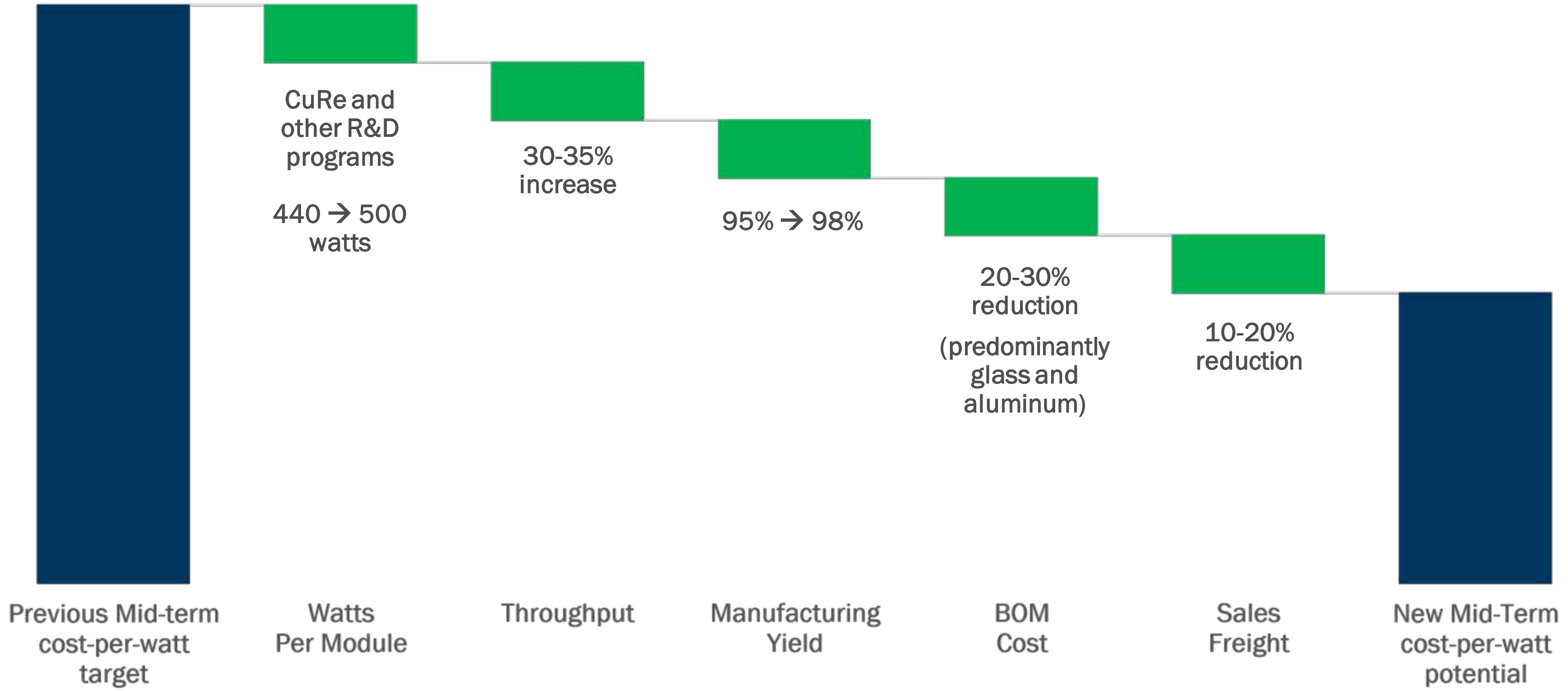
SERIES 6 EFFICIENCY ROADMAP

Note: Actuals represents fleet average year end exit rate
* = Forecast improvements inclusive of all R&D program, primarily driven by CuRe Phases 1-3

SERIES 6 VERSUS BIFACIAL

Impact	CuRe Series 6	Mono-PERC Bifacial
Front Side Module Wattage	↑	↓
Module CpW Impact	↓	↑
Degradation	↓	⇔
Temperature Coefficient	↑	⇔
Backside Energy	⇔	↑
Balance of System Cost	⇔	↑
Development Cost	⇔	↑
O&M Cost	⇔	↑
Energy Prediction Risk	⇔	↑

INDICATIVE DRIVERS OF MODULE COST REDUCTION



Note: Not to scale

FINANCIAL GUIDANCE

2020 GUIDANCE ASSUMPTIONS

PRODUCTION VOLUME:

- Series 6 (5.7 GW), Series 4 (0.3 GW)
- Perrysburg 2 expected to exit ramp period by end of Q1 2020

VOLUME SOLD:

- 5.7 to 5.9 GW
- Sold volume includes ~900 MW module segment sales originated through systems channel

NET SALES MIX:

- ~70% module / ~30% systems
- Systems includes project development, O&M, PGA

SERIES 6 EXPANSION:

- Ramp Cost (COGS): $5–15M
- Plant Start-Up (OPEX): $50–60M

OTHER

- ~$30M of Series 4 shutdown and other restructuring costs
- Class action settlement cash payment in Q1 2020

2020 GUIDANCE AS OF FEBRUARY 20, 2020

	2020 Guidance
Net Sales	$2.7B to $2.9B
Gross Margin (%)[1]	26% to 27%
Operating Expenses[2]	$340M to $360M
Operating Income[3]	$360M to $420M
Earnings Per Share	$3.25 to $3.75
Net Cash Balance[4]	$1.3B to $1.5B
Capital Expenditures	$450M to $550M
Shipments	5.8GW to 6.0GW

- $5M to $15M of ramp impact included in COGS
- $50M to $60M of plant start-up included in Operating Expenses
- $30M of Series 4 shutdown and other severance costs included in Operating Income

(1) Includes $5 to $15M of ramp cost. (2) Includes $50 to $60M of plant start-up expense. (3) Includes $55 to $75 million of ramp cost and plant start-up expense, and $30 million of Series 4 shutdown and other severance costs. (4) Defined as cash, marketable securities and restricted cash less expected debt at the end of 2020

SUMMARY & HIGHLIGHTS

PIPELINE & BOOKINGS:

- 2019 net bookings of 6.1 GW
- Current contracted backlog of 12.4 GW, including 2 GW for delivery in 2022 and beyond
- Opportunity pipeline of 18.1 GW, including 8.2 GW mid-late stage

SERIES 6 PRODUCT

- Series 6 Nameplate capacity growth expectation from 5.5 GW in 2019 to 8.0 GW in 2021
- 2020 Series 6 expected production of 5.7 GW, increase of <50% over 2019
- Ongoing module efficiency, cost and energy yield improvement opportunities over near to mid term

CORPORATE

- 2019 GAAP loss-per-share of $(1.09) and non-GAAP EPS of $1.48
- 2020 EPS guidance of $3.25 – $3.75

APPENDIX

USE OF NON-GAAP FINANCIAL MEASURES

In this presentation, we provide non-GAAP earnings per share for the year ended December 31, 2019. We have included this non-GAAP financial measure to adjust for losses associated with our class action and opt-out legal proceedings and the associated tax effects. We believe non-GAAP earnings per share, when taken together with the corresponding GAAP financial measure, is relevant and useful information to our investors because it provides them with additional information in assessing our financial operating results independent of the litigation loss described below. Our management uses this non-GAAP financial measure in evaluating our operating performance. However, this measure has limitations, including that it excludes the effect of the $350 million that, subject to court approval, we will pay in cash pursuant to the class action settlement and the amount of costs that we may ultimately have to pay in cash to resolve the opt-out action. As of December 31, 2019, we accrued $13 million of estimated losses for the opt-action, which represents our best estimate of the lower bound of the costs to resolve this case. The ultimate amount of loss may be materially higher. Accordingly, this non-GAAP financial measure should be considered in addition to, and not as a substitute for, or superior to earnings per share prepared in accordance with GAAP. The following is the reconciliation of earnings per share prepared in accordance with GAAP to non-GAAP earnings per share for the year ended December 31, 2019 (in millions, except per share amounts):

RECONCILIATION OF NON-GAAP EARNINGS PER SHARE TO GAAP

	Year Ended December 31, 2019
Net loss	$ (114.9)
Litigation loss	363.0
Tax effect of litigation loss	(90.9)
Non-GAAP net income	$ 157.2
Weighted-average number of shares used for diluted earnings per share	105.3
GAAP loss per share	$ (1.09)
Weighted-average number of shares used for diluted earnings per share	106.1
Non-GAAP earnings per share	$ 1.48

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