

Investor Overview

November 4, 2021



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: 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 the full-year 2021, 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, product improvements, efficiency, projected costs (including estimated future module collection and recycling costs), freight costs, warranties, shipments, bookings, booking opportunities, backlog, confirmations, sales, supply, production, nameplate manufacturing capacity, solar module technology and cost reduction roadmaps, product reliability, photovoltaic ("PV") market growth and competitiveness, installed PV capacity growth, comparative levelized cost of energy, 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; the commenced construction of our third Ohio factory and India (Tamil Nadu) factory; our ability to reduce the costs to construct PV solar power systems; research and development ("R&D") programs; the impact of our copper replacement (CuRe) program; currently anticipated delays in implementation of our CuRe program and related estimated impacts; 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," "contingent" 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: the severity and duration of the COVID-19 pandemic, including its potential impact on the Company's business, results of operations and financial condition; 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, expiration, or introduction 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 loss of any of our large customers, or the ability of our customers and counterparties to perform under their contracts with us; the satisfaction of conditions precedent in our 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 litigation; 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 Condition 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. You should carefully consider the risks and uncertainties described in these reports.



Corporate Overview

First Solar Overview

Providing modules globally to:



Utilities



Developers



IPPs



Distributors



EPCs



Financial
Investors



Commercial &
Industrial

20+ years

Founded in 1999



~8GW

manufacturing capacity
across 3 countries



98%

Less semiconductor
compared to c-Si



45+

countries with
First Solar modules



2.5x

lower carbon
footprint than c-Si PV



90%+

material recovery
through recycling



\$1.7B USD

Net cash⁽¹⁾



\$2.7B USD

2020 net sales



(1) Defined as cash, cash equivalents, marketable securities, and restricted cash less debt as of September 30, 2021

Investment Thesis

Market Opportunity

- In the next five years, installed PV capacity globally is expected to double⁽¹⁾
- Unsubsidized utility-scale solar has a leading levelized cost of energy, which in most cases is lower than the marginal cost plants⁽²⁾
- Our technology, product roadmap, and research and development are all key differentiators which we believe will enable us to meaningfully participate in this wave of demand for clean and affordable energy

Competitive Advantage

- Differentiated Cadmium Telluride (CdTe) thin-film technology with superior temperature coefficient and spectral response yielding an energy advantage in many climates
- Proprietary manufacturing process which enables production of a CdTe module in a matter of hours and utilizes less than 2% of the amount of semiconductor material that is used to manufacture conventional crystalline silicon solar panels
- Market leading Series 6 product, with a 16.5 GW contracted backlog for deliveries in 2021 through 2024
- U.S. and India expansion and fleet optimization expected to double nameplate capacity to 16 GW in 2024; growth expected to drive contribution margin expansion given operating expenses are 80% to 90% fixed
- Strong balance sheet enabling growth and investment in a disruptive technology roadmap

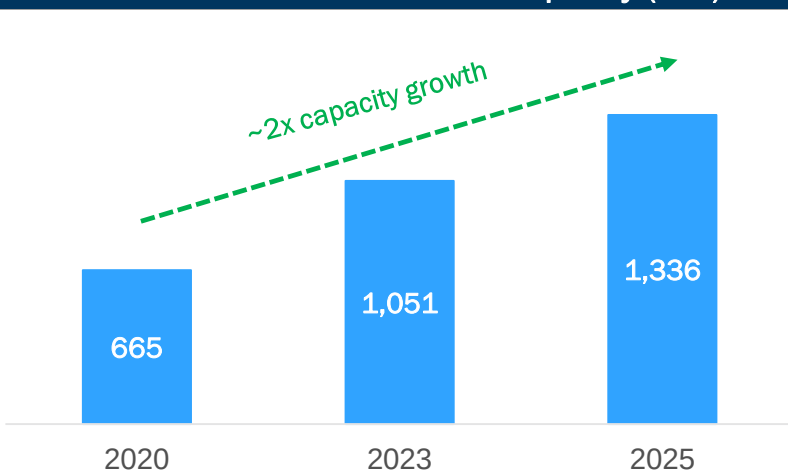
(1) IHS Market, Global Power and Renewables (2021)

(2) Lazard's Levelized Cost of Energy Analysis – Version 15.0 (October 2021)



PV Market Growth and Competitiveness

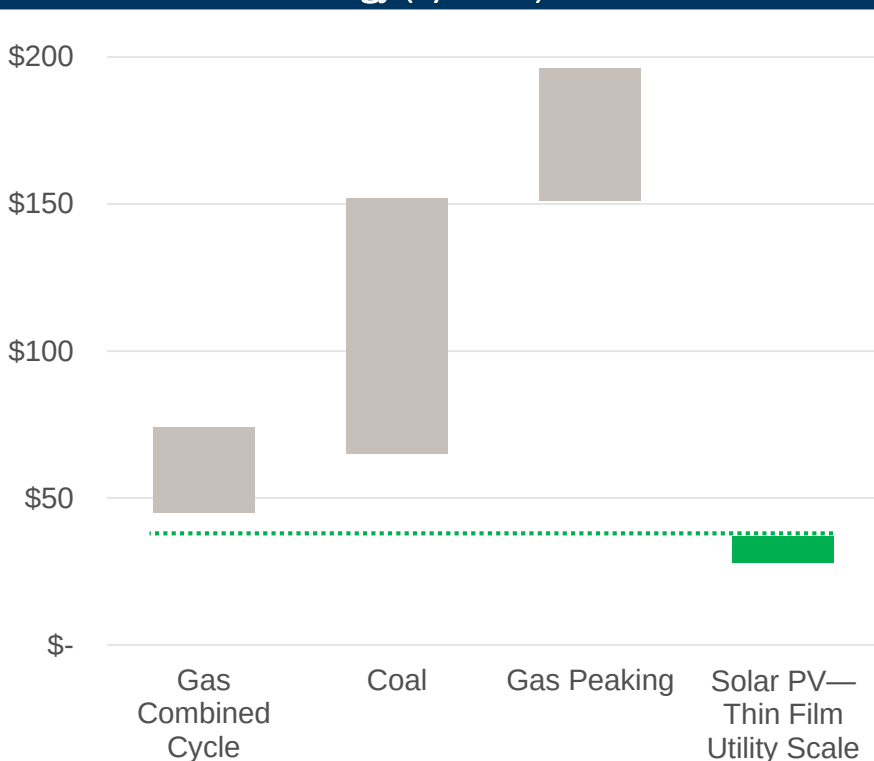
Cumulative Global Installed PV Capacity (GW)⁽¹⁾



Cost Competitiveness – A Driver of Growth

- Unsubsidized utility-scale solar has a leading levelized cost of energy, which in most cases is lower than the marginal cost of coal plants⁽²⁾

Levelized Cost of Energy (\$/MWh)⁽²⁾



(1) IHS Market, Global Power and Renewables (2021)

(2) Lazard's Levelized Cost of Energy Analysis – Version 15.0 (October 2021)

Business Segments

Manufacturing

- As of Q3 2021, 6 manufacturing facilities across Ohio, Malaysia and Vietnam with a combined nameplate capacity of ~8 GW
- U.S. and India expansion and fleet optimization expected to double nameplate capacity to 16 GW in 2024

Module Sales

- Module sales in the United States, Western Europe, India, Latin America, Brazil, Middle East, Japan, Australia, and South East Asia

Project Development⁽¹⁾

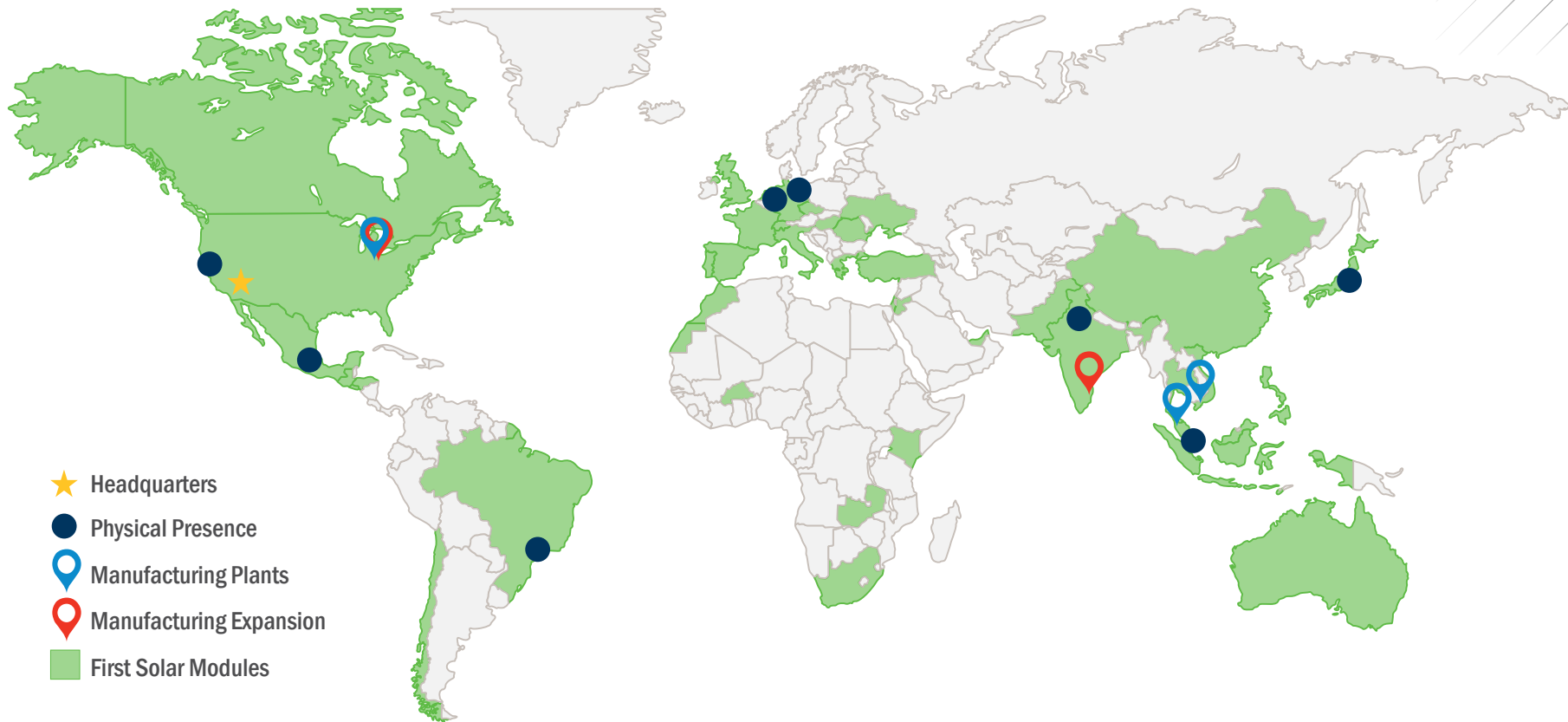
- Continue developing in Japan with ~360 MW of projects with feed-in-tariff rights secured
- In March 2021 completed the sale of our U.S. Project Development business to Leeward Renewable Energy

Operations and Maintenance

- In March 2021 completed the sale of our North American O&M business to NovaSource Power Services

(1) From time to time, we may temporarily own and operate, or retain interests in, certain of our systems projects for a period of time based on strategic opportunities or market factors

First Solar Across the Globe



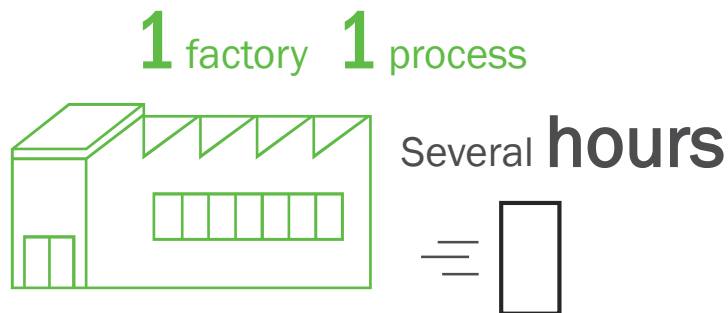


Manufacturing and Technology Advantages



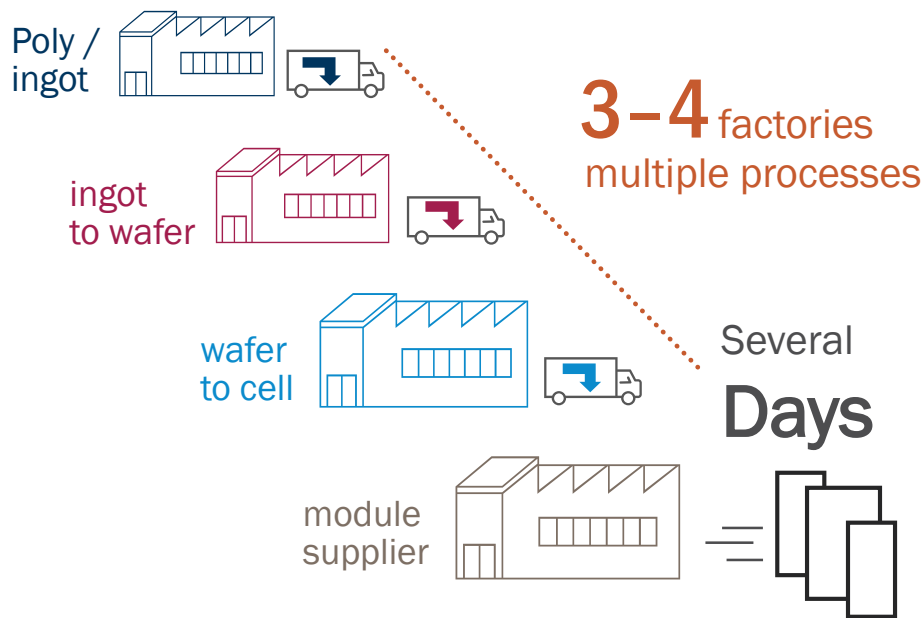
Vertically Integrated Manufacturing Process

First Solar's CdTe Thin Film Technology

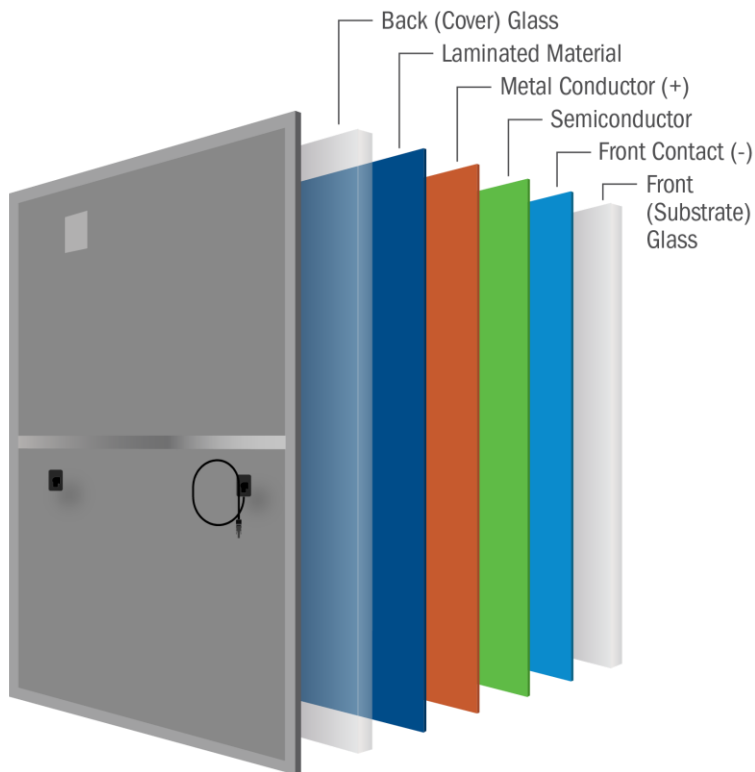


- Fully integrated, continuous process is quality-controlled under one roof
- Supply chain traceability and transparency
- 98% less semiconductor material vs c-Si
- Single glass substrate vs. multiple c-Si wafers
- Lowest carbon footprint and fastest energy payback time available in the market today

c-Si Batch Processing



What's Inside 20+ Years of Innovation?



- Leading-edge performance derived from \$1.5 billion in R&D investments
- Continuous technology enhancements lower LCOE and boost module efficiency consistently year-over-year
- Ultra-thin semiconductor film is 3% the thickness of a human hair
- Durable and encapsulated glass-on-glass construction stands up to rigorous lab and field testing
- Optimized design from manufacturing through shipping, installation, and recycling



Sustainability⁽¹⁾

(1) See 2021 Sustainability Report for more details ([link](#))

How Are We Delivering Responsible Solar Today?



RE100

Environmental

- Lowest environmental footprint in the industry
- Resource-efficient and RE100⁽¹⁾-committed operations
- Industry leading high-value recycling services



Social

- Safe, inclusive and diverse workplace
- Contributing to local communities and a just transition
- Responsible sourcing and zero tolerance for forced labor



Governance

- Transparent reporting and disclosure
- EPEAT⁽²⁾ Silver Rated
- Member of the Responsible Business Alliance (RBA)

(1) Commitment to power 100% of global photovoltaic (PV) solar manufacturing operations with renewable energy by 2028 and transition U.S. facilities to carbon-free electricity by 2026
(2) See slide 15 for more details

Creating More Value with Less Environmental Impact

2.5x
LOWER

90%+ module
recycling
material
recovery rate

2x
FASTER

Enhances end-
to-end supply
chain
transparency

3x
LOWER

Up to 2.5x lower
carbon footprint
than c-Si PV

90%+

Up to 2x faster
energy payback
time than c-Si
PV

**Vertically
Integrated
Manufacturing**

Up to 3x lower
water footprint
than c-Si PV

First Solar's sustainability advantage supports a circular economy

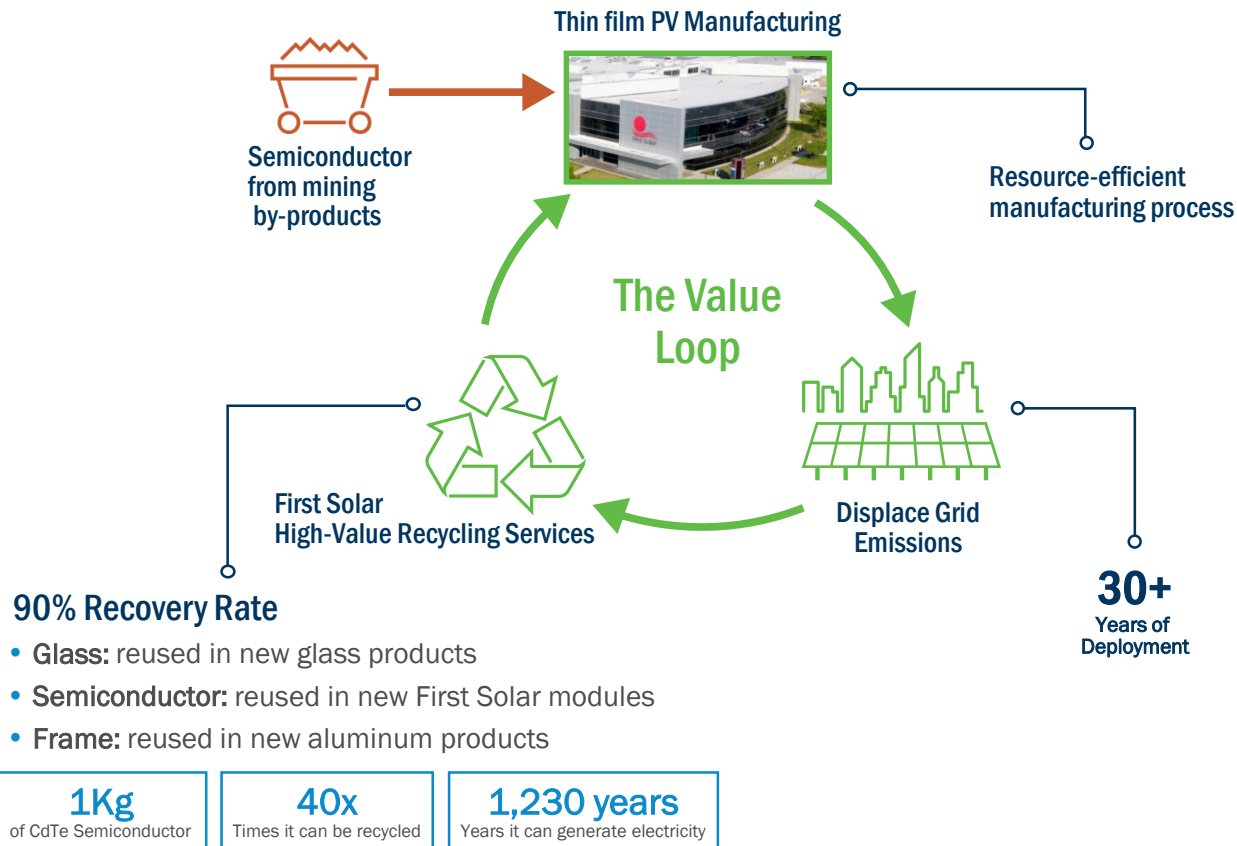
Electronic Product Environmental Assessment Tool ([EPEAT](#))



- ✓ Establishes corporate and product sustainability performance criteria that exemplify sustainability leadership in the market
- ✓ Globally recognized and independently verified Type 1 Ecolabel (designated under ISO 14024)
- ✓ Gives customers confidence that they are purchasing an environmentally-leading product from a socially-responsible company

First Solar Series 6 modules are the first PV products included in the EPEAT registry for sustainable electronics.

Contributing to a Circular Economy



Typical Recycling Rates



Automotive
~75%

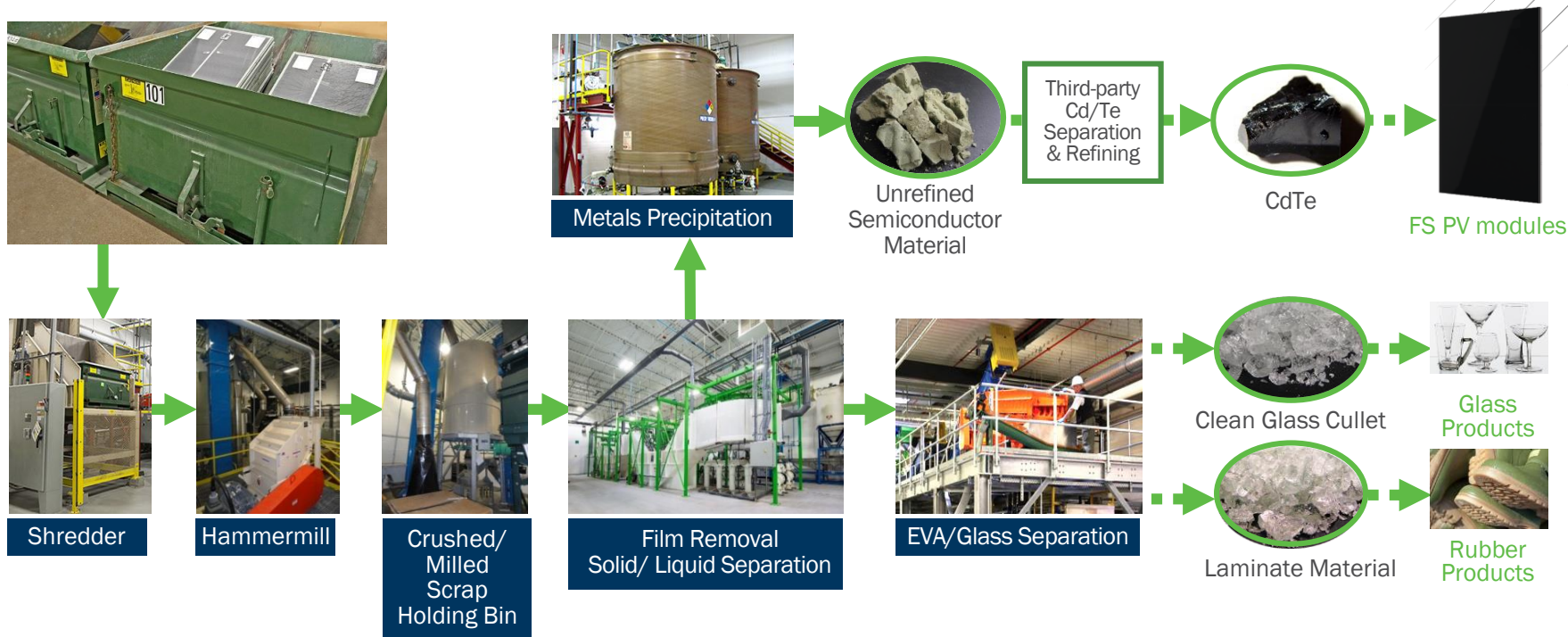


Information Technology
~45%



First Solar Modules
~90%

First Solar's Module Recycling Process



+ 90% Recycling of Semiconductor Material and ~ 90% Recycling of Glass

Partnering for Responsible PV End of Life Management



- Cost-effective contracts with 2-year termed renewable pricing
- No up-front fees: “pay as you go” model using future project cash flows
- Recycling Services offered in all regions of the world
- Scalable from construction through decommissioning
- Flexible start date: at module sale, throughout plant life, and decommissioning
- Owner is responsible for module removal, packaging and logistics to First Solar recycling facility
- Owner always has the discretion to elect alternate recycling vendor or responsible disposal

Flexible. Commercially attractive. Environmentally responsible.

SUSTAINABILITY VALUE OFFERING

- **Lowest Environmental Footprint:** First Solar technology has a carbon footprint that is up to 2.5X lower, a water footprint up to 3X lower and an energy payback time up to 2X faster than crystalline silicon PV.
- **EPEAT Silver Ecolabel:** First Solar Series 6 modules are the world's first PV product to be rated in the Electronic Products Environmental Assessment Tool (EPEAT) registry for sustainable electronics.
- **Recycling Solutions:** First Solar has an industry-leading module recycling program which recovers over 90% of semiconductor and glass used in its modules.
- **RE100:** We have committed to powering 100 percent of our global operations with renewable energy by 2028. Going 100 percent renewable will reduce the embodied carbon footprint of our PV modules by 40 percent.



RE100

Awards and Recognition



“First Solar is an outstanding Ohio business. This really is an exclusive club. You’ve got one of the best programs we’ve ever seen.”



“Winners of the award are widely recognized by the public as role models in business and industry’s environmental performance and excellence.”



First Solar was selected as joint winner of PV Magazine’s inaugural sustainability award, in recognition of Series 6’s industry leading environmental profile.



First Solar received an A- in recognition of the company’s disclosure and management of its climate change and water risks.



In 2020, First Solar received a Prime rating from the Institutional Shareholder Service for demonstrating best in class environmental, social and governance performance.

MSCI
ESG RATINGS



In 2021, First Solar received an “AA” (leader) rating from MSCI ESG Research- the highest rating in the solar industry.





Operations, Bookings and Financials as of November 4, 2021

Third Quarter 2021 Highlights

- **Manufacturing**

- Q3'21 production of 2.0 GW despite challenging freight and COVID-19 environment in Vietnam and Malaysia
- Increased top production bin to 465 watts
- Started construction and purchased equipment for our next-generation factories in Ohio and India, respectively

- **Commercial**

- Record year-to-date bookings of 10.5⁽¹⁾ GW; 1.5⁽²⁾ GW since previous earnings call
- Q3'21 shipments of 2.1 GW modestly below expectations

- **Financial**

- Sales freight costs remain elevated, but inline with expectations as of the prior earnings call
- Freight market experienced record schedule delays and reliability issues
 - 820 MW remained in transit at quarter end, and not recognized as Q3'21 revenue
- Reiterating 2021 EPS guidance due to strong start to Q4'21

(1) Data from January 1, 2021 through November 4, 2021

(2) Data from July 30, 2021 through November 4, 2021

Module Segment Update

COVID-19 Update

- Maintained capacity utilization over 100%⁽¹⁾ despite the challenging COVID-19 environment in South East Asia
- Travel and other COVID-19 restrictions have added constraints on getting third party equipment installers, as well as our U.S. based associates into Malaysia and Vietnam to perform necessary upgrades
- COVID-19 has contributed to delays in Series 6 Plus implementation in Vietnam and CuRe implementation in Malaysia and Vietnam

Performance Metrics

- 105%⁽²⁾ and 105%⁽³⁾ fleet-wide capacity utilization
- 23.6⁽²⁾ / 23.7⁽³⁾ MWs produced per day and 97.5%⁽²⁾ / 97.6%⁽³⁾ manufacturing yield
- Increased top production bin to a record 465⁽³⁾ watts
- 450⁽²⁾ / 451⁽³⁾ average watts per module and 96%⁽²⁾ / 97%⁽³⁾ bin distribution from 445 to 465

Supply Chain and Logistics

- Sales freight reduced module segment gross margin by 12 percentage points in Q3'21
- 2021 sales freight guidance unchanged, but expect elevated freight costs to be a headwind to 2022 results
- A portion of expected 2022 deliveries have contractual sales freight cost-sharing provisions with our customers
- Have largely hedged glass costs via long term fixed-priced agreements with volumetric pricing benefits
- Mid-term target to reduce bill of material costs by 20% to 25% remains on track

Financial

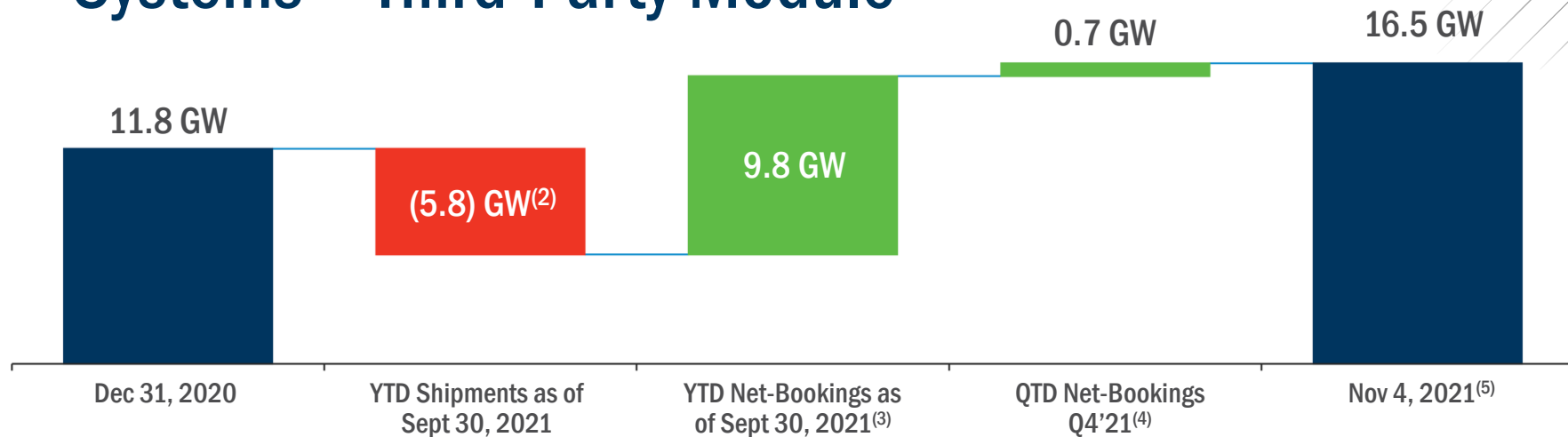
- Target 3% cost per watt sold reduction between Q4'20 and Q4'21 unchanged from prior earnings call
- Targeting 5% cost per watt produced reduction between Q4'20 and Q4'21

(1) Excludes planned downtime for factory upgrades

(2) Data from September 1, 2021 through September 30, 2021

(3) Data from October 1, 2021 through October 31, 2021

Expected Module Shipments⁽¹⁾ (GW_{DC}): Systems + Third-Party Module

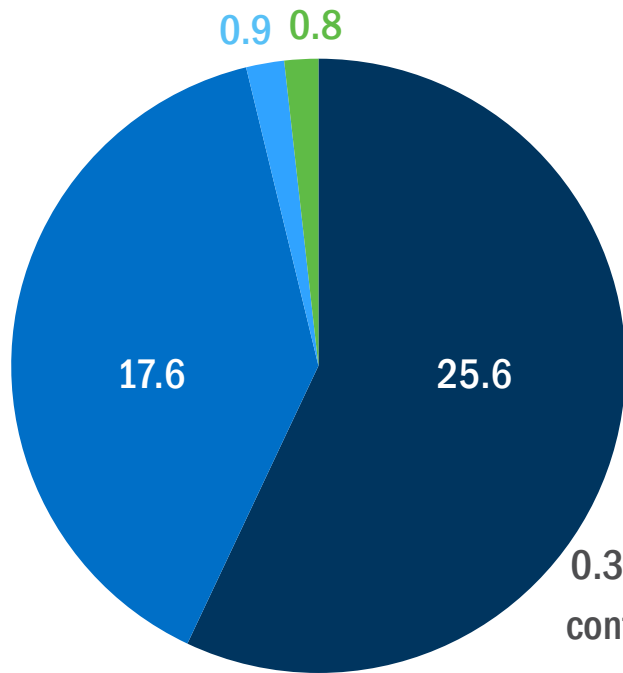


The above table presents the actual module shipments for 2021 through Sept 30, 2021, new module volume net-bookings through Nov 4, 2021, and the expected module shipments beyond Sept 30, 2021. A module is considered to be shipped when the delivery process to a customer commences and the module leaves one of our facilities or the module has been recognized as revenue. 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) 5.8 GW of net shipment volume deducted from backlog; 0.2 GW of modules previously shipped to safe harbor the U.S. investment tax credit for future systems projects.
- (3) Reflects net-bookings from Jan 1, 2021 to Sept 30, 2021, reduced by 0.6 GW of debookings.
- (4) Reflects net-bookings from Oct 1, 2021 to Nov 4, 2021
- (5) Balance includes remaining shipment volumes as of Sept 30, 2021 and net-bookings through Nov 4, 2021. Shipments from Oct 1 to Nov 4, 2021 not deducted.

Potential Booking Opportunities: By Geography

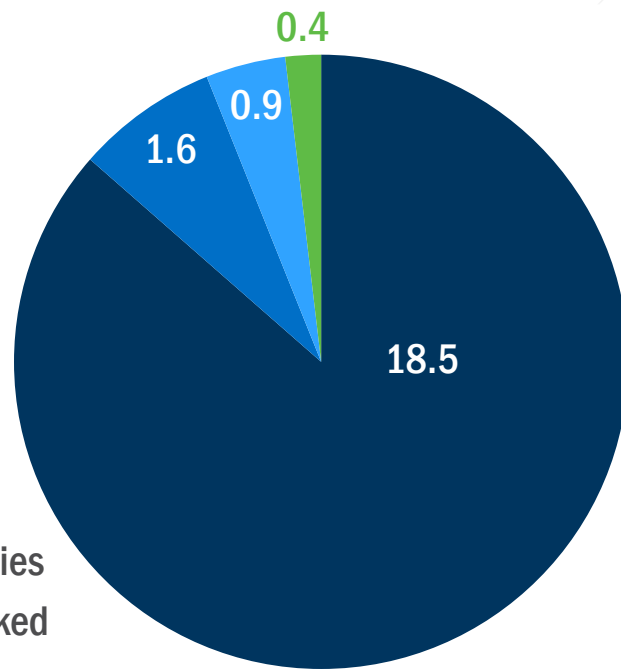
Total bookings opportunities



44.9 GW_{DC} Opportunity

0.3 GW_{DC} of opportunities confirmed, but not booked

Mid-to-Late stage opportunities



21.4 GW_{DC} Opportunity

Quarterly Income Statement Highlights

<i>(In millions, except per share amounts)⁽¹⁾</i>	Q3 2021A	Q2 2021A	Q3 2020A	QoQ Change	YoY Change
Net sales	\$584	\$629	\$928	(\$46)	(\$344)
<i>Gross profit %</i>	<i>21.4%</i>	<i>27.7%</i>	<i>31.6%</i>	<i>(6.3%)</i>	<i>(10.2%)</i>
Selling, general and administrative	43	36	50	7	(7)
Research and development	25	24	23	1	2
Production start-up	3	2	13	1	(10)
Gain on sales of businesses, net ⁽²⁾	(2)	(2)	-	(0)	(2)
Operating income	51	110	207	(60)	(156)
Income tax expense	(1)	(20)	(38)	20	37
Net income	45	82	155	(37)	(110)
Net income per share - diluted	0.42	0.77	1.45	(0.35)	(1.03)

(1) Actual, QoQ, and YoY amounts rounded to the nearest million and may not tie due to rounding

(2) Realized \$151 million gain on the sales of our North American O&M and U.S. Project Development businesses in Q1'21; certain purchase price adjustments recorded in Q2'21 and Q3'21

Quarterly Balance Sheet Highlights

(In millions) ⁽¹⁾	Q3 2021A	Q2 2021A	Q3 2020A	QoQ Change	YoY Change
Cash and marketable securities ⁽²⁾	\$1,940	\$2,052	\$1,671	(111)	270
Accounts receivable ⁽³⁾	273	598	307	(324)	(34)
Inventories (current and noncurrent)	884	830	765	54	119
Property, plant and equipment, net	2,506	2,397	2,387	109	119
PV solar power systems, net	230	233	257	(3)	(27)
Project assets - current and noncurrent	335	311	364	24	(29)
Total assets	7,269	7,248	6,985	20	283
Long-term debt - current and noncurrent	279	279	261	(1)	18
Total liabilities	1,439	1,465	1,589	(26)	(151)
Total stockholders' equity	5,830	5,784	5,396	46	434

(1) Actual, QoQ, and YoY amounts rounded to the nearest million and may not tie due to rounding

(2) Includes cash and cash equivalents, marketable securities, and restricted cash

(3) Includes accounts receivable trade, net & unbilled and retainage, net

2021 Guidance as of November 4, 2021

Current

Net Sales	\$2.875B to \$3.1B
Gross Margin (\$) ⁽¹⁾	\$695M to \$760M
Operating Expenses ⁽²⁾	\$285M to \$300M
Operating Income ^(3,4)	\$545M to \$625M
Earnings Per Share	\$4.00 to \$4.60
Net Cash Balance ⁽⁵⁾	\$1.45B to \$1.55B
Capital Expenditures	\$675M to \$725M
Shipments	7.6GW to 8.0GW

(1) Includes of \$1 million of related ramp expense and \$40 million of impact due to underutilization and reduced throughput

(2) Includes \$20 million to \$25 million of production start-up expense

(3) Includes \$61 million to \$66 million of related ramp expense, production start-up expense, underutilization and reduced throughput impact

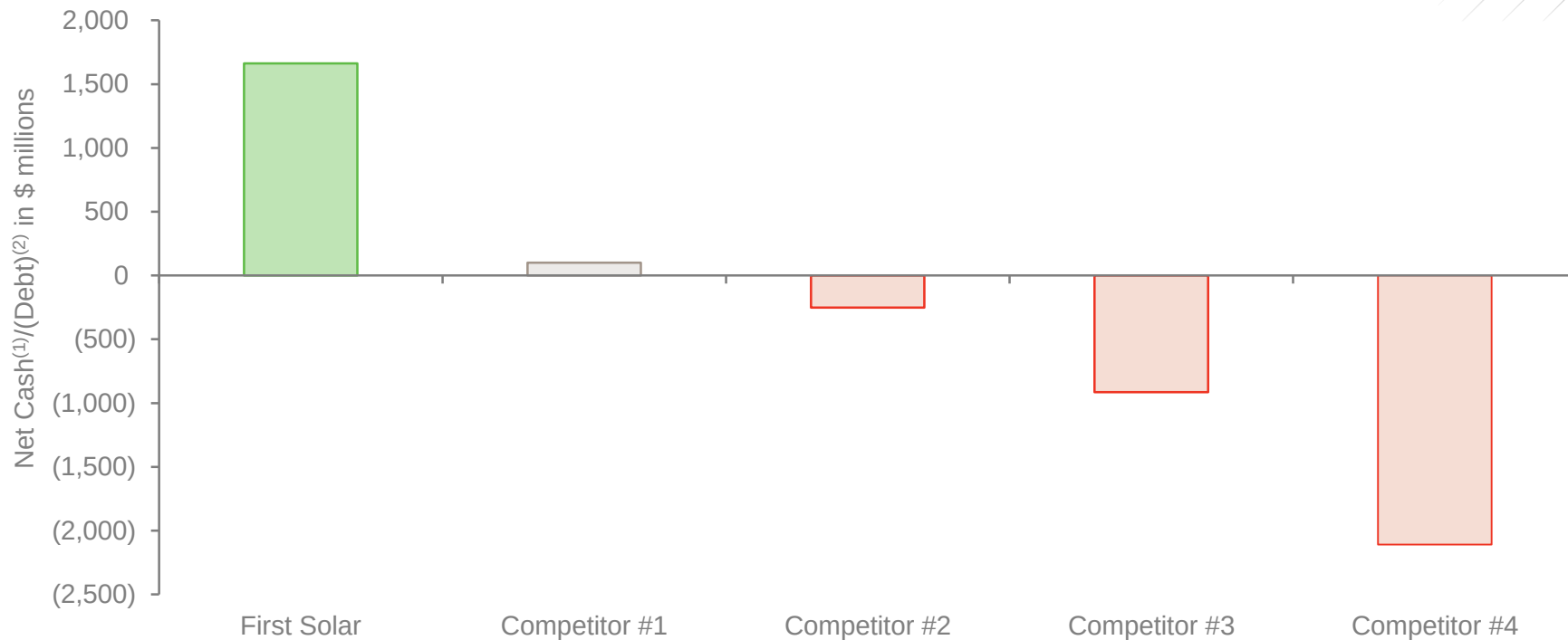
(4) Includes a \$147 million pre-tax gain related to the sales of the North American O&M and U.S. project development businesses

(5) Defined as cash, cash equivalents, marketable securities, and restricted cash less expected debt at the end of 2021



Photo © Swinerton Renewable

Strong Balance Sheet | U.S. Listed Competitors



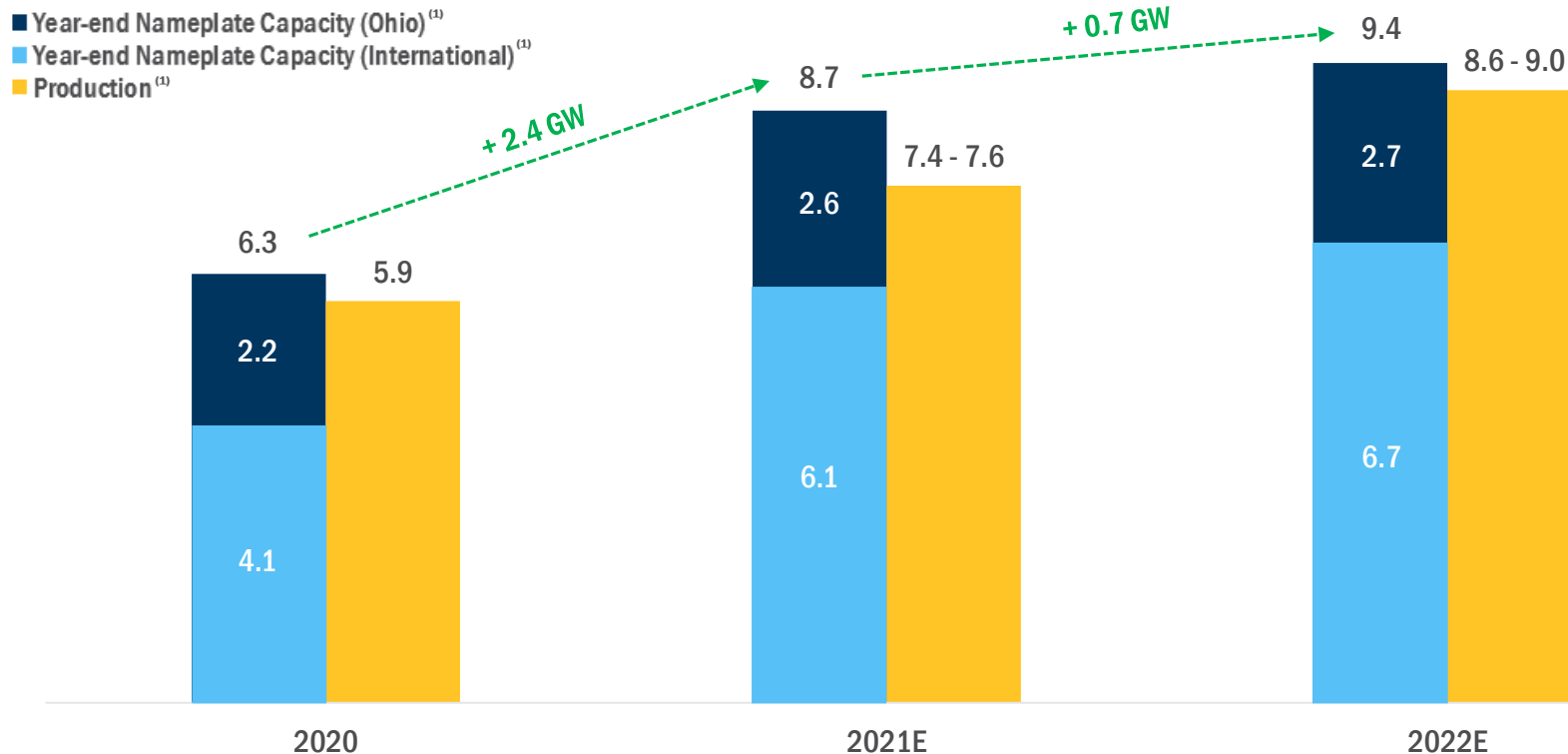
Note: 'Net (Debt) / Cash' is based on latest quarterly financial filings as of 11/16/2021; (1) Cash includes cash, cash equivalents, marketable securities and restricted cash; (2) Debt includes current portion of long-term debt, long-term debt and convertible debt



Manufacturing and Cost Roadmap



Expanding Series 6 Footprint (GW)



New Malaysia factory and optimization of existing fleet expected to increase capacity

(1) GW per year

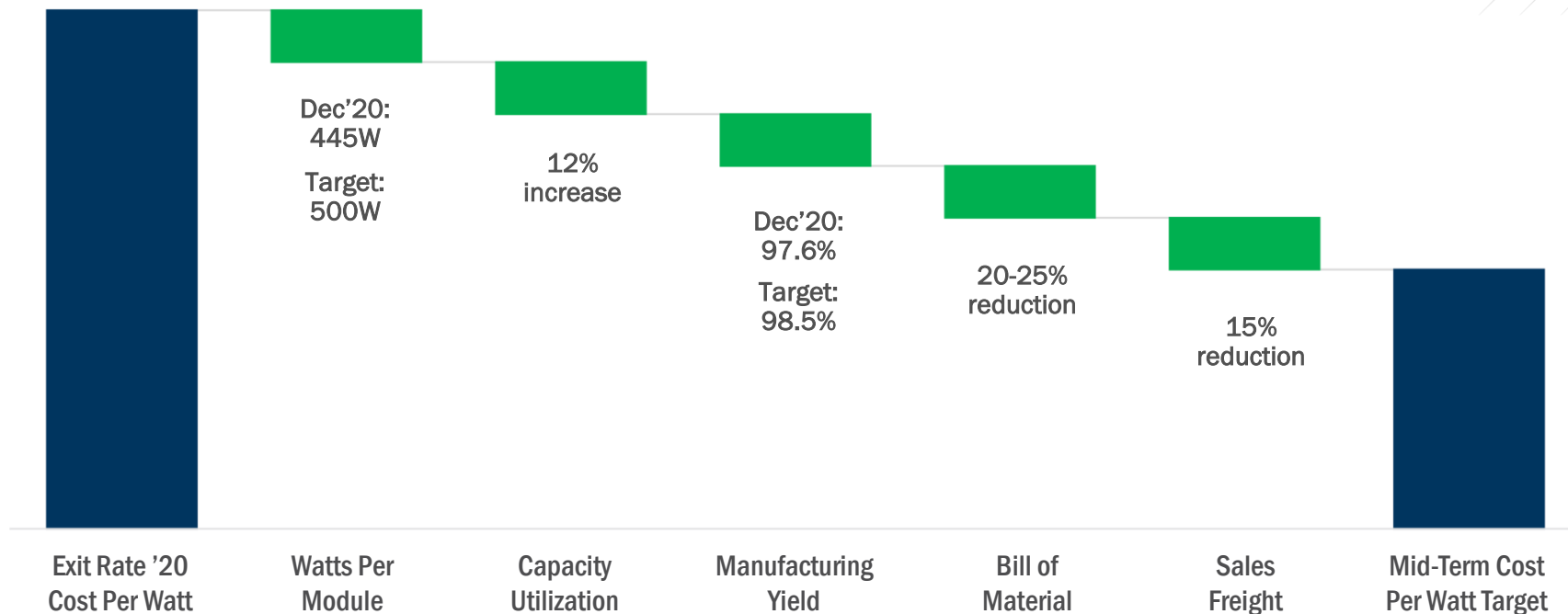
Next-Generation Capacity Expansion Expectations

	United States (Ohio)	India (Tamil Nadu) ⁽¹⁾
Production Start	■ First half of 2023	■ By year end 2023
Capacity	■ 3.0 GW by year end 2023 3.3 GW in 2025	■ 3.0 GW by year end 2024 3.3 GW in 2025
'23 Production	2 GW to 3 GW in total between Ohio 3 and India	
Capex / Capex per Watt	■ \$680 million / ~\$0.20 per watt	■ \$684 million / ~\$0.20 per watt
Technology	Fleet-leading efficiency, module wattage, and environmental footprint	
Cost per Watt	■ Lowest cost per watt produced (tracker)	■ Lowest cost per watt produced (fixed tilt)
Demand Catalysts	■ Cost competitiveness, solar penetration, corporate demand, load growth, policy	■ Technology advantages, domestic capacity, load growth, policy
Policy	■ Continue to evaluate evolving policy environment for future expansion	■ Tariffs and production-linked incentives

U.S. and India expansion and fleet optimization expected to double nameplate capacity to 16 GW in 2024

(1) Construction of facility contingent upon permitting and approval of incentives by the Government of India that are satisfactory to First Solar

Indicative Drivers of Series 6 Cost Per Watt Reduction



Next-generation module expected to increase gross margin-per-watt by approximately 1 to 3 cents relative to Series 6

Note: Not to scale



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