

OCTOBER | 2024

# Transformative Power Solutions

Designing, developing and deploying power control systems that harmonize an increasingly complex energy system



# Forward Looking Statements

This presentation contains forward-looking statements. Such forward-looking statements include those about American Superconductor Corporation's ("we," "us," "our," "AMSC" or the "Company") strategy, future plans, prospects and goals, including statements regarding addressable markets, markets and market drivers, orders, business momentum, the anticipated benefits from our recent acquisitions, functionality, performance and capabilities of our products, power quality and control solutions positioning us for growth, industry and market opportunities for our products, expected high growth in India for future wind installations, potential revenue streams, customer demand, inflection points, growth drivers, our expected GAAP and non-GAAP financial results for the quarter ending December 31, 2024, and other statements containing the words "believes," "anticipates," "plans," "expects," "will" and similar expressions, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement. Such risks and uncertainties include: our history of operating losses and negative operating cash flows, which may continue in the future and require additional financing; our operating results may fluctuate significantly and fall below expectations; our technology and products could infringe intellectual property rights of others, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages and disrupt our business; risks related to changes in exchange rates; we may be required to issue performance bonds or provide letters of credit; failure to maintain proper and effective internal control over financial reporting, our ability to produce accurate and timely financial statements could be impaired and may lead investors and other users to lose confidence in our financial data; not realizing all of the sales expected from our backlog of orders and contracts; U.S. government contracts being subject to audit, modification or termination; changes in U.S. government defense spending and reduction in revenue due to lack of government funding; pandemics, epidemics or other public health crises may adversely impact our business, financial condition and results of operations; reliance on third-party manufacturers, suppliers, subcontractors and collaborators; uncertainty surrounding our prospects and financial condition may have an adverse effect on our customer and supplier relationships;

dependence upon attracting and retaining qualified personnel; A significant portion of our Wind segment revenues are derived from a single customer and if this customer's business is negatively affected, it could adversely impact our business; our success in addressing the wind energy market is dependent on the manufacturers that license our designs; failure or security breach of our or any of our critical third parties' information technology infrastructure and networks; failure to realize anticipated benefits from acquisitions; failure to comply with evolving data privacy and data protection laws and regulations or to otherwise protect personal data; failure to implement our business strategy successfully; problems with product quality or product performance; risks from customers outside of the United States that may be either directly or indirectly related to governmental entities and risks associated with anti-bribery laws; limited success marketing and selling our superconductor products and system-level solutions; we may be adversely affected by natural disasters, including events resulting from climate change, and our business continuity and disaster recovery plans may not adequately protect us or our value chain from such events; adverse changes in domestic and global economic conditions could adversely affect our operating results; our products face competition, which could limit our ability to acquire or retain customers; our reliance on emerging markets; changes in India's political, social, regulatory and economic environment may affect our financial performance; dependence on the success of the commercial adoption of the REG system, which is currently limited; risks related to industry consolidation; risks related to the increasing focus on environmental, sustainability and social initiatives; risks related to operations in foreign countries; dependence of the growth of the wind energy market on government subsidies, economic incentives and legislative programs; lower prices for other fuel sources may reduce the demand for wind energy development; risks related to our intellectual property; risks related to our technologies; risks related to our legal proceedings; risks related to our common stock; and the other important factors discussed under the caption "Risk Factors" in Part I. Item 1A of our Form 10-K for the fiscal year ended March 31, 2024, and our other reports filed with the U.S. Securities and Exchange Commission. We do not undertake, and specifically disclaim, any obligation to update any forward-looking statements contained in presentation.

# American Superconductor at a Glance

We design, develop and deploy power control systems that harmonize an increasingly complex energy system

**Ticker symbol:** **AMSC** (NASDAQ)

**HQ:** Ayer, MA (near Boston)

**Founded:** 1987

**Global Manufacturing, Sales and R&D:** U.S., Australia, Austria, India, Poland, Romania, South Korea & U.K.

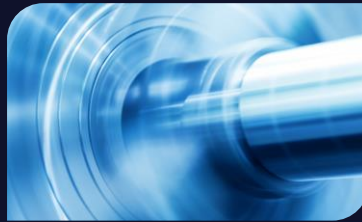
## Leverage Massive Investments in Multiple Markets



### Renewables

2022 Renewable Power CapEx: **\$472B**

- Significant investment in updating the aging grid so it can better support continued adoption of intermittent renewable power sources and the electrification of transportation



### Mining & Materials

2022 Mining CapEx: **\$98B**

- The need to prioritize energy security, electrify transportation, and bolster domestic supply chains is driving investment in critical minerals



### Semiconductors

2023 Semiconductor CapEx: **\$147B**

- An emphasis on the US regaining leadership in next-gen semiconductor manufacturing capacity and expertise to reduce reliance on international supply chains



### Military

2023 US Naval Ships CapEx: **\$41B**

- Increasing demand for advanced ship protection systems to ensure performance and security amid geopolitical uncertainty

Sources: IEA, IC Insights, S&P Global Market Intelligence, Department of Defense.

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# Primary Drivers for AMSC

Robust investment and demand for renewable power management generating significant tailwinds

## Key Drivers



**Increased Semiconductor Production Driven by CHIPS Act**



**Decarbonization and Transition to Clean Energy Economy**



**Electrification of Transportation Industry**



**Strengthening of U.S. Manufacturing**



**Rising Geopolitical Tensions and Military Fortification**



**AI and Data Center Surge**

## How AMSC is Positioned to Capitalize on the Opportunity

Ramping of U.S. semiconductor production to reduce reliance on global supply chains driving growing order sizes of voltage sag mitigation systems to support expanded fab capacity

Global investment in grid modernization has driven increased shipments of new energy power systems and wind turbine systems as well as recurring demand by key customers

Investment in critical minerals and stable power for heavy machinery and infrastructure upgrades driving demand for distributed voltage management and harmonic filtering systems

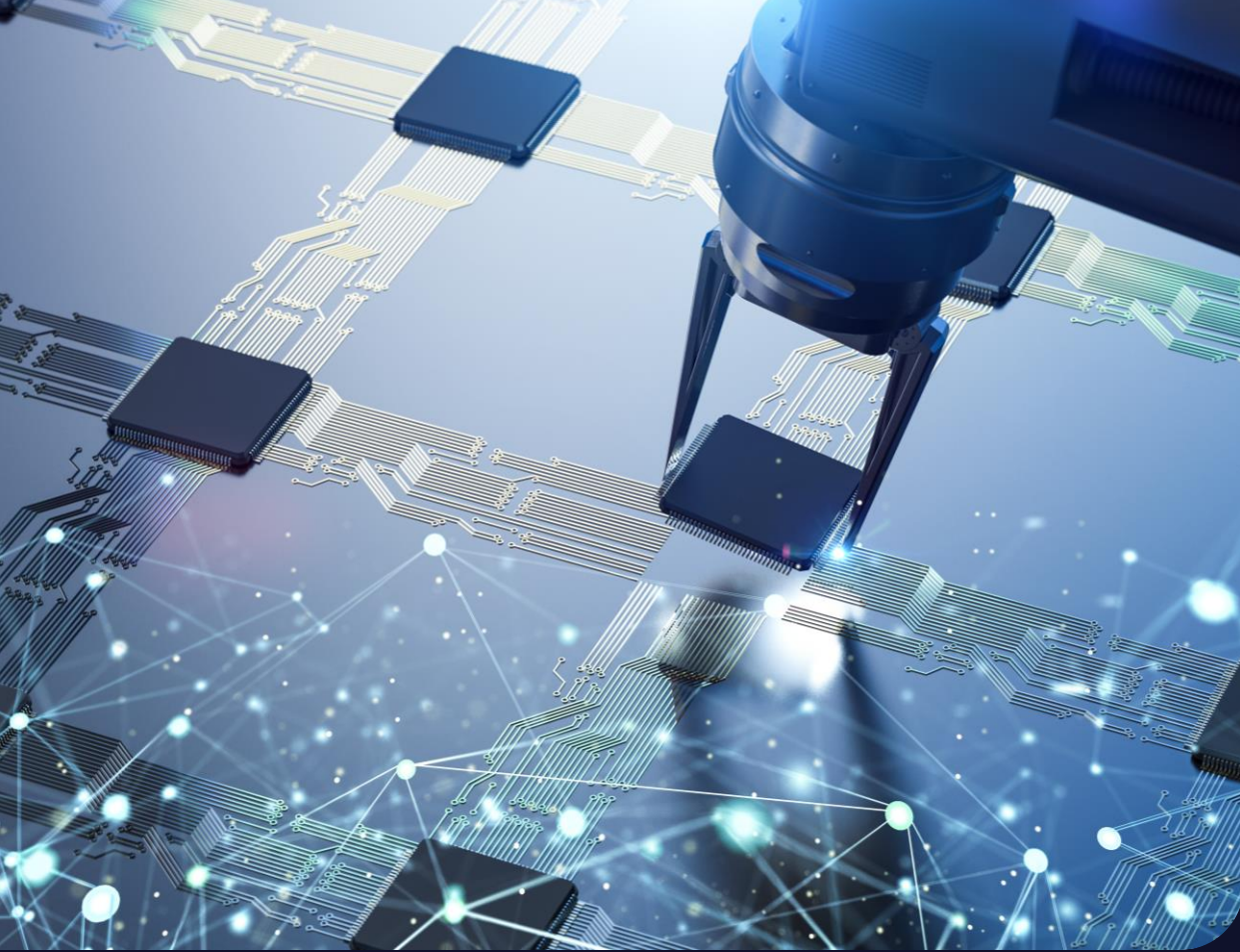
Voltage management and power conversion solutions minimize operation downtime of energy-intensive equipment; NWL acquisition provides access to untapped factory-level customer base

Record \$75 million order from the Royal Canadian Navy and five U.S. Navy contracts for ship protection systems, with cross-selling potential of NWL's ship power systems enhancing the military sales channel

Expanding pipeline of opportunities in data centers, providing enhanced grid stability and backup protection for AI-ready infrastructure

Sources: IEA, IC Insights, S&P Global Market Intelligence, Department of Defense.

AMSC enables industrial  
manufacturers to power their  
factories in ways that scale without  
adding complexity or size



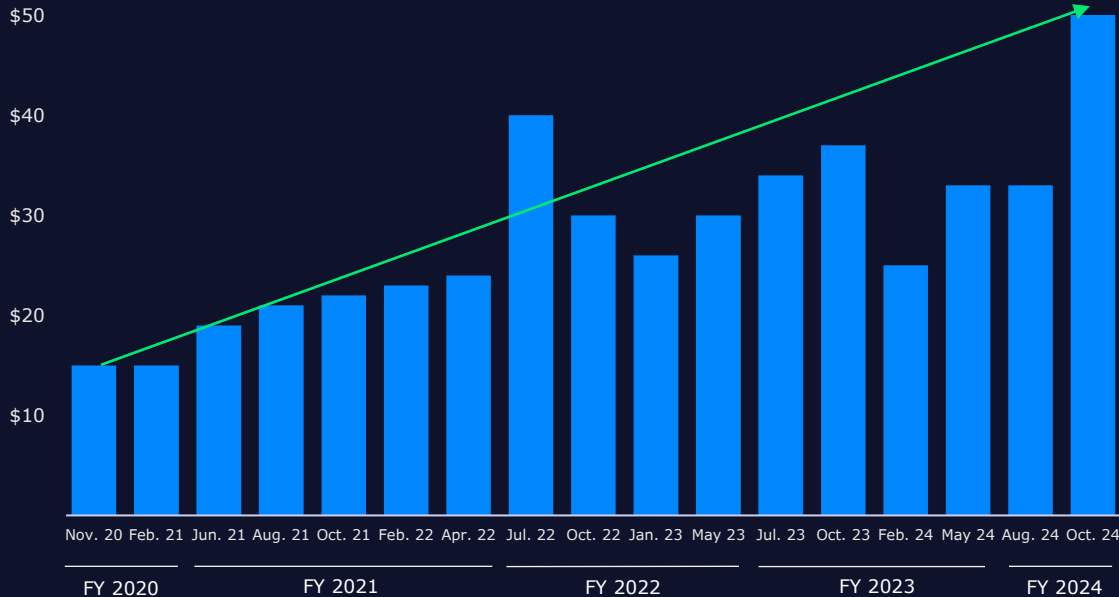
## New Energy Power Systems

# New Energy Power Systems Orders

Power control solutions that position us for growth

## New Energy Power Systems Orders

\$ in USD millions



## Industry Opportunities



### Semiconductors

- Protects the fab from the grid
- Controls power surges and dips to avoid costly production disruptions



### Renewables

- Connects wind or solar farm to the grid
- Controlling variability and the intermittent nature of renewable power production (electrical input) into the grid



### Mining & Metals

- Powers and controls electrical equipment at site
- Controls and converts power to ensure continuous flow of stable power to equipment



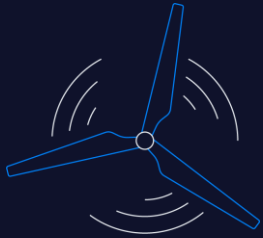
AMSC's proprietary technology  
enables its partners to deliver  
a superior product



# Wind Turbine Electrical Control Systems (ECS)

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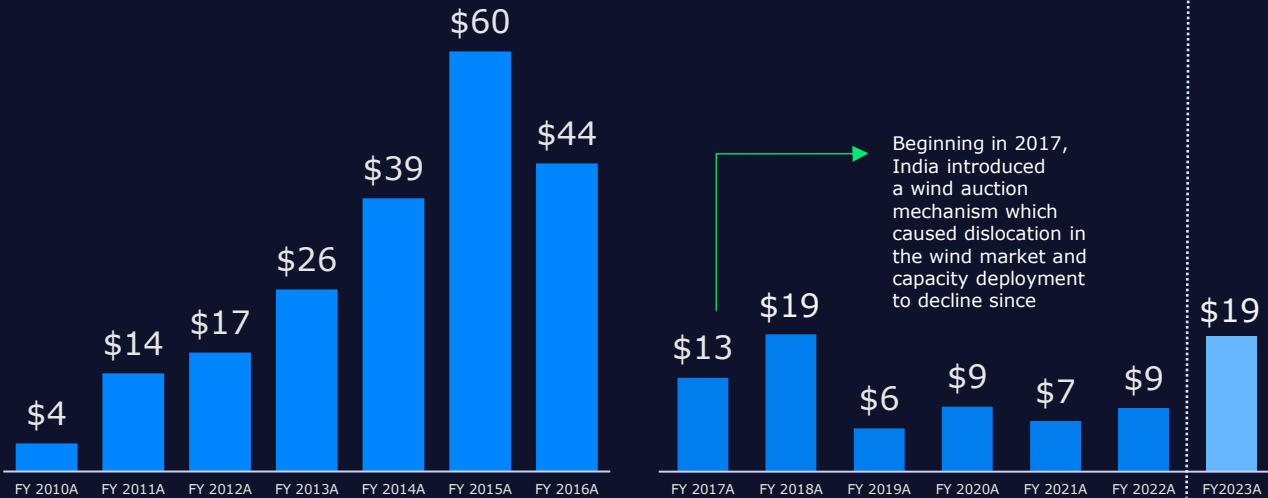
AMSC's proprietary technology enables its partners to deliver a superior product



ECS Represents  
5% - 10%  
of the Turbine Cost<sup>1</sup>

## Historical Revenue from Sales of 2 MW Wind Turbines to Inox

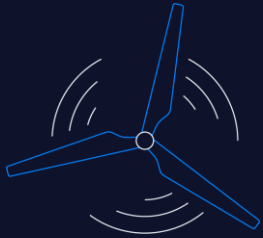
\$ in USD millions



Sources: Company management, GWEC.  
<sup>1</sup>Typical wind turbine cost \$1.3M per MW.

# Wind Turbine Electrical Control Systems (ECS)

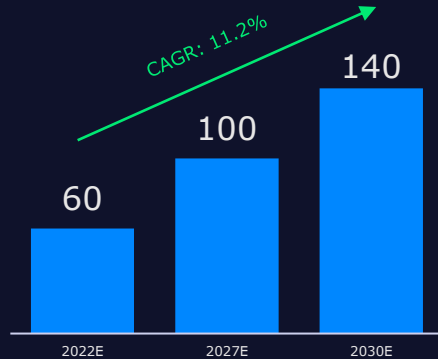
AMSC's proprietary technology enables its partners to deliver a superior product



## High Growth is Expected for Future Wind Installations in India

Units in GW

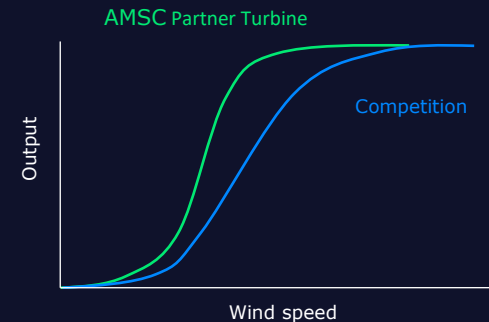
India is among the world's fastest-growing electricity markets, with power demand expected to double by 2030



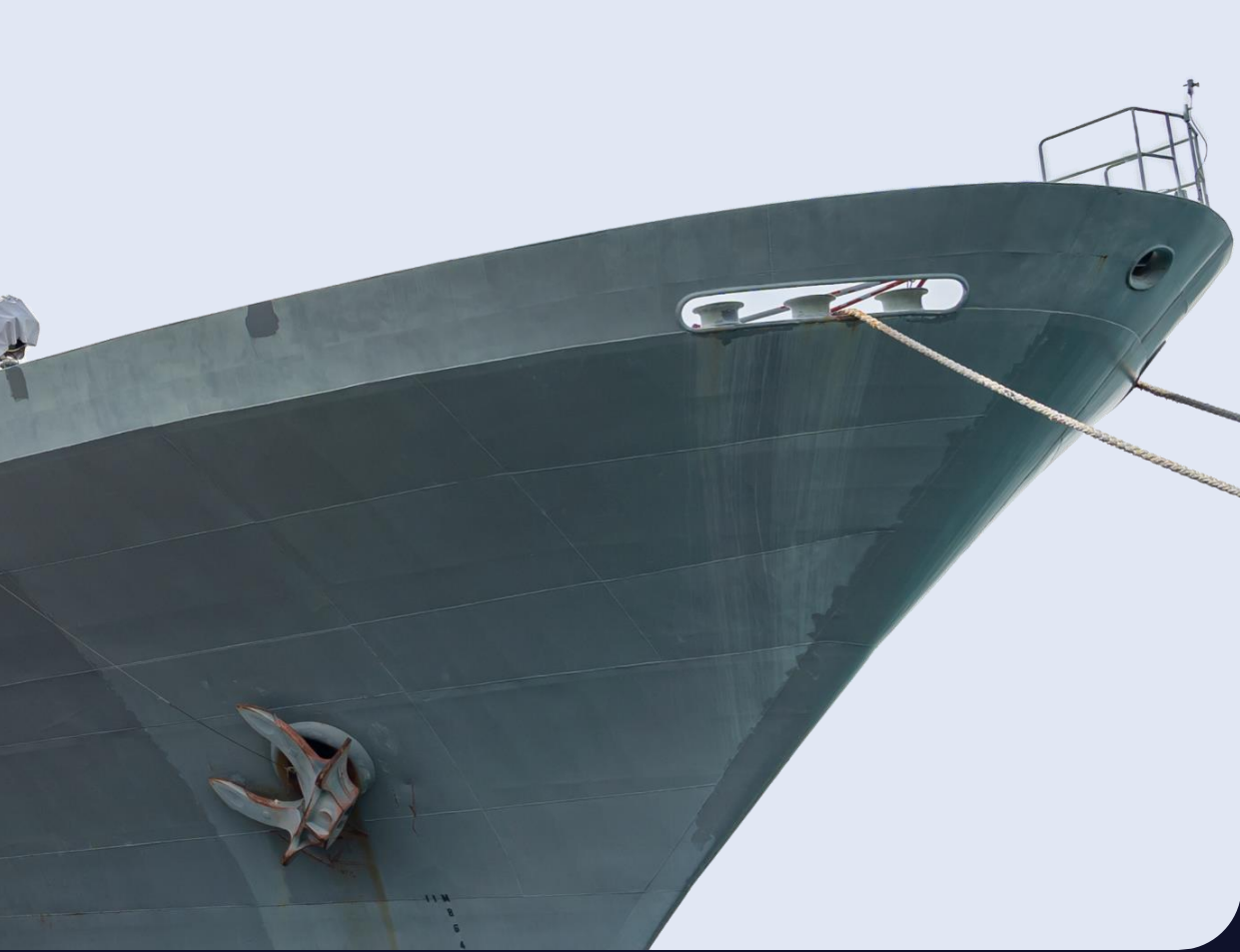
Sources: Company management, GWEC.

## 3 MW Wind Turbine Development Progress

- Q4FY21: Design certification of the 3 MW class wind turbine prototype for the Indian market is complete
- FY22: 3 MW erected and in operation. Commissioning of the 3 MW is complete
- FY23: Type certification completed, which allows for grid connectivity. AMSC received initial and follow-on 3MW class ECS order
- Q1FY24: Third follow-on order for 3MW class ECS



AMSC's proprietary systems are helping the US Navy better power and protect its ships



# Ship Protection Systems

## LPD REVENUE

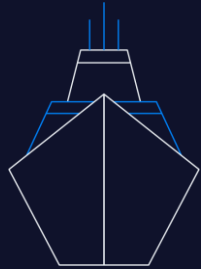
- 2 Flight I LPDs
- 13 Flight II LPDs
- \$10-\$15 Million per vessel
- Potential **\$200** Million revenue stream

## CSC REVENUE

- 15 CSC total vessels
- \$15-\$20 Million per vessel
- Potential **\$300** Million revenue stream

# Ship Protection System

AMSC's proprietary systems are helping the US Navy better power and protect its ships



## Ship Protection Systems (SPS) five contracts for San Antonio Class LPD

- USS Fort Lauderdale
- USS Richard McCool
- USS Philadelphia
- USS Harrisburg
- USS Pittsburgh

## SPS Contract with Royal Canadian Navy for Canadian Surface Combatants CSC

- \$75M multi-year, multi-unit contract with Irving Shipbuilding Inc., a Halifax, Canada shipbuilder
- First CSC vessel: HMCS Fraser with expected delivery of first SPS system in 2026

## Deployable Mine Countermeasure Payload System

### WHAT IS IT

AMSC's High Temperature Superconductor Magnetic Mine Countermeasure Payload is a system for the U.S. Navy to deploy & test as part of its Mine Countermeasure Unmanned Service Vehicle program

### WHAT IT DOES

Expected to provide a robust mine countermeasure capability to minimize risk to fleet assets during mine-hunting & mine-neutralization operations

### OPPORTUNITIES

- \$8M to develop & deliver initial system—under contract
- Multi-year program prior to initial production
- Multiple systems per year once production begins

## Opportunities under development

- SPS on other ship platforms
- SPS for allied Navies
- Ship power systems

# Inorganic Growth Contributing to Operating Performance

AMSC's successful acquisitions leading to larger sales in multiple markets

## Recent Acquisitions

### September 2017

Acquired ITC Power Solutions



### October 2020

Acquired Northeast Power Systems



### May 2021

Acquired Neeltran



### August 2024

Acquired NWL





# Growth Drivers and Business Models

- Inflection point in core businesses, positioning AMSC to achieve outsized growth and margin expansion.
- Most recent acquisition extends our product offerings into industrial and military power supplies.

## New Energy Power Systems

- Delivery of higher quantities to repeat customers and markets
- Sale synergies driving larger orders
- Integration synergies optimizing cost structure

## Wind Power Systems

- Robust 2 & 3MW demand with upside growth opportunities
- Inox Wind placed three follow-on orders for 3MW ECS, which is expected to drive additional customer demand

## Ship Protection Systems

- Designed into multiple ship platforms: LPD for the US Navy and CSC for the Royal Canadian Navy
- Mine Countermeasure solution multi-year Navy contract presents scalable demand approaching an inflection point for additional ship systems

## What's Next



**More Content in Substation and Industrial Projects for Renewables, Semiconductors and Materials**



**More Turbines with More Value**



**More Ships with More Content**



**More Cities**

# Power Quality Solutions that Position Us for Growth



## Electrical Control System for Wind Turbines (wtECS™)

## Transmission Voltage Management (D-VAR®)

## Resilient Electric Grid (REG) Systems

## Distribution Voltage Optimization (D-VAR VVO®)

## Power Electronics & Control Systems

## Power Supply

## Ship Protection Systems (SPS)

### What it is

Components and controls that act as the “brain” and “nerves” of turbines

Voltage regulation solution, driven by power electronics components

System that increases electric grid resiliency, reliability, and load serving capacity

Direct connect 15Kv class power quality system for distribution network

Capacitor banks and harmonic filters for medium-voltage power quality applications. Rectifiers and transformers for industrial equipment

Transformers and power supplies for motor drivers for a variety of energy applications as well as for critical military systems

Advanced HTS-based systems that enhance operational safety

### What it does

Maximizes power generation, ROI of wind power installations

Connects renewable energy to grid; provides reactive power compensation

Increases reliability of urban grids and provides cost-effective, simplified solution for urban load growth

Optimally controls voltage, allowing utilities to build distribution networks using distributed generation (DG)

Mitigates common power quality issues in the areas of power-factor correction and harmonic distortion as well as current control

Provide primary power to industrial equipment and ship systems

Degaussing is a magnetic system that interferes with a mine’s ability to detect and damage a ship

### Target markets

**Renewables:** Wind turbine OEMs using AMSC wind turbine designs

**Renewables and Semiconductors:** Renewable plants, electric utilities, industrial facilities

**Renewables:** Urban electric utilities

**Renewables:** Electric distribution grids incorporating DG

**Mining & Materials and Semiconductors:** Industrial, mining and chemical

**Industrials Manufacturing and Military**

**Military:** Navy Surface fleet

# Recent Highlights

January 2022

AMSC delivered **first of four** contracted ship protection systems to the U.S. Navy

October 2022

AMSC announced \$30 million of new energy power system orders from customers in the **metals, mining and materials** markets

April 2023

AMSC Announced **\$8 million** contract for US Navy Deployable Mine Countermeasure System

July 2023

Announced \$34 million of new energy power systems orders from customers in the renewables and industrials markets and **new military** market opportunity

October 2023

Announced \$37 million of new energy power systems orders from customers in the industrials, renewables and **utility** markets

July 2024

AMSC Receives **\$12 million** in Wind Turbine Electrical Control Systems Order to Inox Wind in **third follow-on 3 MW ECS Order**

July 2022

AMSC announced \$40 million of new energy power system orders from customers in the **semiconductor and renewables** markets

December 2022

US Navy awarded AMSC **fifth** ship protection system contract for the San Antonio Class Platform

May 2023

AMSC Agrees to Deliver nearly **\$20 million** in Wind Turbine Electrical Control Systems to Inox Wind including \$5 Million of **initial 3 MW ECS Order**

September 2023

Generated non-GAAP net income and positive operating cash flow and have consistently done so since our September quarter or Q2FY23

June 2024

AMSC Awarded **First Allied Navy \$75 Million** Contract for Proprietary Ship Protection System

August 2024

AMSC Accelerates toward Profitability and Extends Product Offerings in the Military and Industrial Sectors with the Acquisition of NWL, Inc

Market diversification highlights

Technology highlights

Financial highlights



# Investment Highlights

- Strong, sustained financial performance with 60% revenue growth, improved margins and positive operating cash flow<sup>1</sup>
- Large and growing market opportunity driven by proliferation of renewable energy generation, aging utility infrastructure and U.S. policy
- Increased market penetration bolstered by recent acquisitions, including the acquisition of NWL which expands offering of proprietary power products to broader base of industrial and military customers
- Business growth underwritten by new and existing customers placing larger orders including \$75 million order from the Royal Canadian Navy and third follow-on order from Inox Wind
- Record orders and backlog – nearly \$60 million in new orders in FQ2'24 with 12-month backlog of over \$200 million and total backlog of over \$300 million at September 30, 2024

## Market Opportunities:

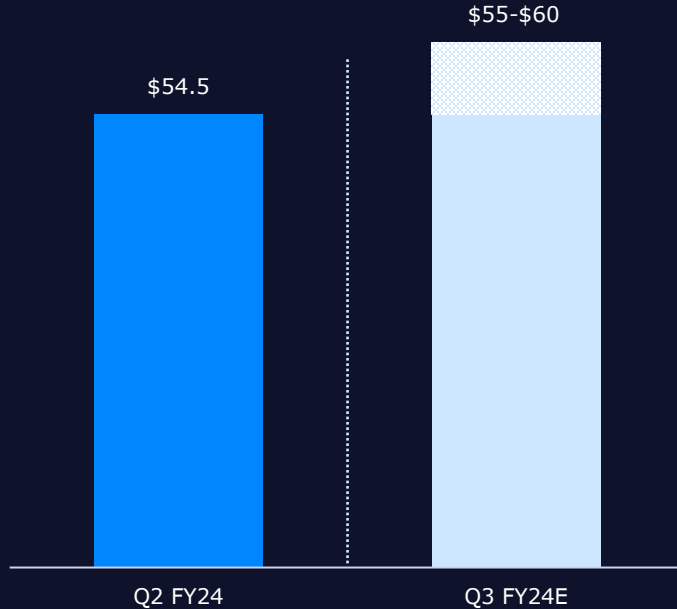
- More content in substation and in the factory projects for Industrials, renewable, semiconductor and materials
- More turbines with more value
- More ships with more content
- More cities

<sup>1</sup>For Q2 FY 2024.

# AMSC Financial Performance

\$ in USD millions

## Revenue



Q3'FY24 Guidance (as of Oct. 30, 2024)<sup>1</sup>

Revenue  
**\$55-\$60**

Non-GAAP Net Income\*  
**> \$2**

<sup>1</sup> This Q3FY24 guidance and expected Q3 revenue were provided on Oct. 30, 2024 and is not being updated or confirmed herein.

. Please reference appendix for GAAP to Non-GAAP reconciliations

# Reconciliation of Forecast GAAP Net Loss to Non-GAAP Net Income

In millions, except per share data

	Three Months Ending December 31, 2024
Net loss	\$ (1.0)
Stock-based compensation	2.3
Amortization of acquisition-related intangibles	0.7
Non-GAAP net income	\$ 2.0

