



**POWER SOLUTIONS  
INTERNATIONAL**

# **CORPORATE OVERVIEW**

December 27, 2019

# SAFE HARBOR & OTHER CAUTIONARY NOTES

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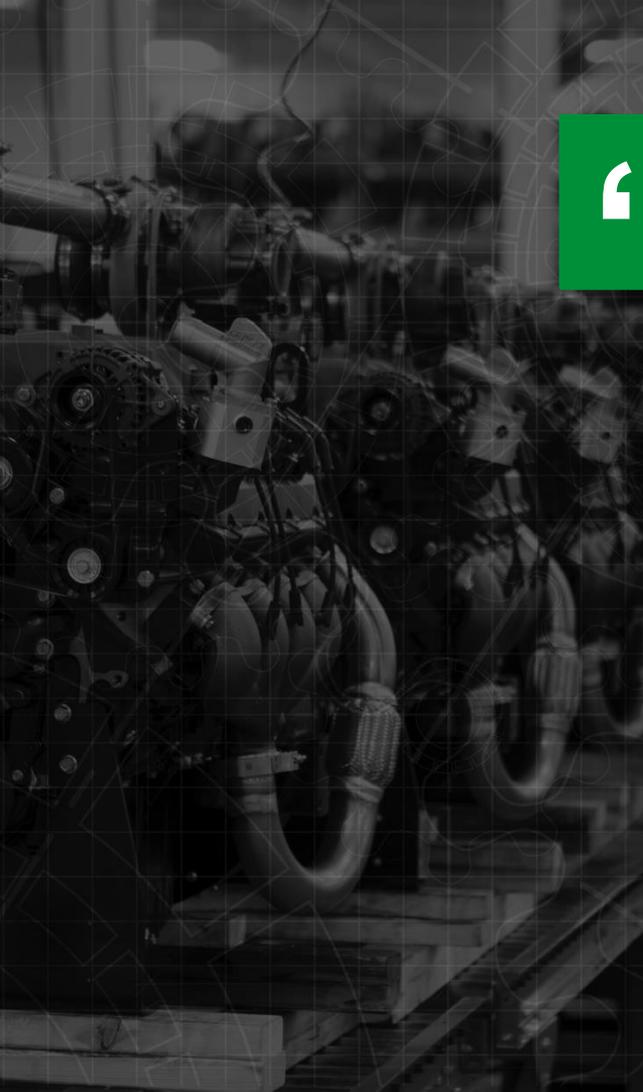
This presentation (including any oral statements transmitted to the recipients of this presentation) contains forward-looking statements regarding the current expectations of the Company about its prospects and opportunities. These forward-looking statements are entitled to the safe-harbor provisions of Section 21E of the Securities Exchange Act of 1934. The Company has tried to identify these forward-looking statements by using words such as "anticipate," "believe," "budgeted," "contemplate," "estimate," "expect," "forecast," "guidance," "may," "outlook," "plan," "projection," "should," "target," "will," "would," or similar expressions, but these words are not the exclusive means for identifying such statements. These forward-looking statements include statements regarding or implicating the Company's projected sales and potential profitability, strategic initiatives, future business strategies, warranty mitigation efforts, market opportunities, improvements in its business, remediation of internal controls, improvement of product margins, product market conditions and trends, a debt refinancing and a potential listing on a national exchange. These statements are subject to a number of risks, uncertainties, and assumptions that may cause actual results, performance or achievements to be materially different from those expressed in, or implied by, such statements.

The Company cautions that the risks, uncertainties and other factors that could cause its actual results to differ materially from those expressed in, or implied by, the forward-looking statements, include, without limitation: management's ability to successfully implement the Audit Committee's remedial recommendations; the time and effort required to complete its delinquent financial statements and prepare the related Form 10-Q filings, particularly within the current anticipated timeline, and resume timely filing of its periodic reports; the timing of completion of necessary interim reviews and audits by the Company's independent registered public accounting firm; the timing of completion of steps to address, and the inability to address and remedy, material weaknesses; the identification of additional material weaknesses or significant deficiencies; variances in non-recurring expenses; risks relating to the substantial costs and diversion of personnel's attention and resources deployed to address the financial reporting and internal control matters; the ability of the Company to accurately budget for and forecast sales, and the extent to which sales result in recorded revenues; changes in customer demand for our products; the impact of the investigations being conducted by United States Securities and Exchange Commission ("SEC"), and the criminal division of the United States Attorney's Office for the Northern District of Illinois ("USAO") and any related or additional governmental investigative or enforcement proceedings; any delays and challenges in recruiting key employees consistent with the Company's plans; any negative impacts from delisting of the Company's Common Stock from the NASDAQ Stock Market and any delays and challenges in obtaining a re-listing on a stock exchange; and the risks and uncertainties described in reports filed by the Company with the SEC, including without limitation its Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

The Company's forward-looking statements are presented as of the date hereof. Except as required by law, the Company expressly disclaims any intention or obligation to revise or update any forward-looking statements, whether as a result of new information, future events or otherwise.



## ABOUT PSI



# POWERING FORWARD

**Powering the future of  
energy, transportation  
and industrial applications**

# POWERING LEADING EQUIPMENT MANUFACTURERS GLOBALLY



**KOHLER**



**NAVISTAR**



**PSI** INDUSTRIAL



**PSI** ENERGY



**PSI** TRANSPORTATION

# OVERVIEW

Approximately 1,000 Employees

Leading Worldwide Manufacturer of Engines

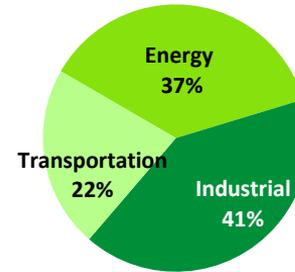
- Produced 1,000,000 engines historically
- Wide range of engines: 27 different displacements ranging from 1L to 53L
- Approximately 1,000,000 sq. ft. manufacturing footprint, with headquarters in Wood Dale, IL

OTC Pink: PSIX

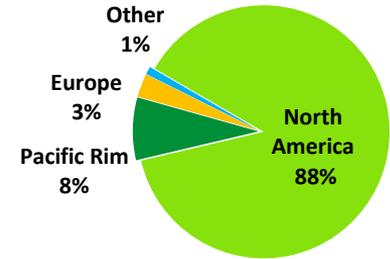
- Founded in 1985
- Public listing in 2011

## 2018 SALES

### End Market



### Geography



## SALES



# ADVANCED FACILITIES

- Dedicated R&D & Engineering Facility
- Automotive Grade High-Volume Production Lines
- State-of-the-Art Machining Center
- Advanced Testing Laboratory
- Approximately 1,000,000 sq. ft.



**PSI Corp. HQ & Engine Dress Facility**  
201 Mittel Dr.  
Wood Dale, IL  
**261,000 sq. ft.**



**PSI Machining & Engine Build Facility**  
101 Mittel Dr.  
Wood Dale, IL  
**105,000 sq. ft.**



**PSI R+D, Engineering & HD Assembly Facility**  
1465 Hamilton Pkwy.  
Itasca, IL  
**198,000 sq. ft.**



**PSI R+D, Vehicle Integration Facility**  
32505 Industrial Dr.  
Madison Heights, MI  
**40,000 sq. ft.**



**PSI Energy Packaging Facility**  
448 W. Madison St.  
Darien, WI  
**200,000 sq. ft.**

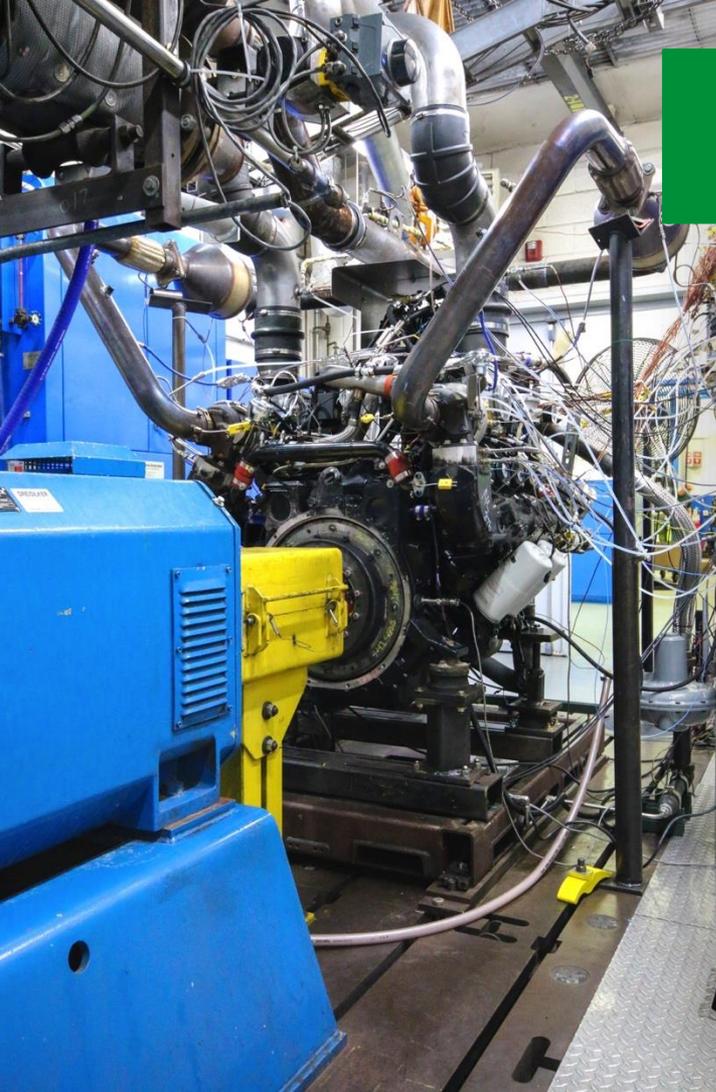


**PSI Engine Development Center**  
7850 S. Grant St.  
Burr Ridge, IL  
**22,400 sq. ft.**



**PSI Materials & Warehousing**  
6450 Muirfield Dr.  
Hanover Park, IL  
**160,400 sq. ft.**

# ENGINE DEVELOPMENT CENTER



- Acquired in 2018
- Located near Illinois headquarters
- Increase speed to market response
- Industry leading engine testing
- In-house EPA & CARB certified test cell operation



# TECHNOLOGIES & TALENT



## Innovative Technologies

- PSI Proprietary Controls
- Certified, Low-Emission Solutions (EPA, CARB Certifications)
- Fuel-Flexible Systems: Natural Gas, Propane, Gasoline, Diesel

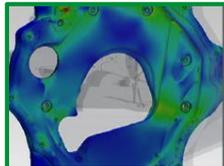


## Leading Talent

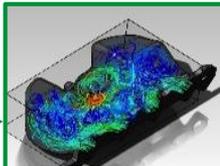
- Advanced Engineering Disciplines
- Industry-Leading Application Knowledge
- Strategic Partnerships
- Approximately 1,000 Employees

# MANUFACTURING & ENGINE CAPABILITIES

Complete Range



ENGINE DESIGN  
& ENGINEERING



MATERIAL  
OPTIMIZATION  
& SIMULATION



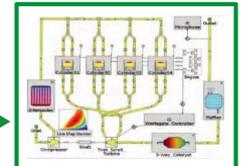
SPECIALIZED  
MACHINING



ADVANCED  
MANUFACTURING



POWERTRAIN  
ASSEMBLY  
& KITTING



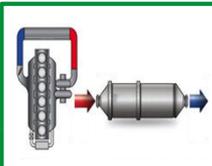
COMPLETE  
ENGINE  
SIMULATION



APPLICATION  
ENGINEERING  
& INTEGRATION



TESTING &  
VALIDATION



CALIBRATION  
& EMISSIONS



ELECTRONICS,  
SOFTWARE  
& CONTROLS



TURBO & FUEL  
SYSTEMS



COOLING  
PACKAGE  
DEVELOPMENT

# EXPANSIVE PRODUCT LINE

Powering Global Transportation, Energy & Industrial OEMs



## TRANSPORTATION



**Engine Displacements**  
6.0L, 8.8L

**Fuel Types**  
Propane, Natural Gas,  
Gasoline

**Integration**  
Transmissions & Tanks

**Horsepower Range**  
293 hp – 345 hp

**Torque Range**  
317 lb-ft – 565 lb-ft



## ENERGY



**Engine Displacements**  
Ranging from 2.0L to 53L

**Fuel Types**  
Propane, Natural Gas,  
Wellhead Gas, Diesel

**Electrical Power Range**  
20 kWe – 1650 kWe

**Mechanical Power Range**  
26 kWm – 1850 kWm



## INDUSTRIAL



**Engine Displacements**  
Ranging from 1L to 8.8L

**Fuel Types**  
Propane, Natural Gas,  
Gasoline, Diesel

**Horsepower Range**  
28 hp – 245 hp

**Torque Range**  
43 lb-ft – 503 lb-ft

**Mechanical Power Range**  
19 kWm – 1850 kWm

## TECHNOLOGY

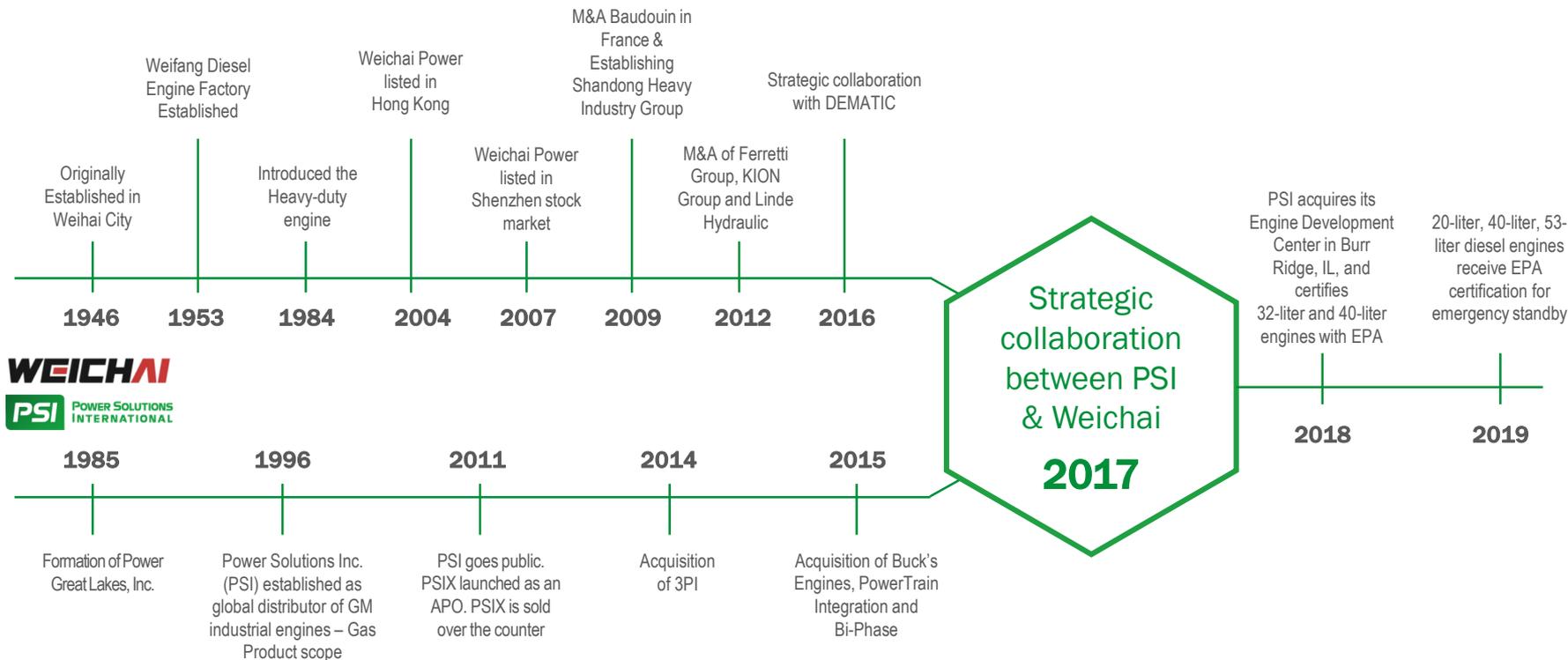




# **WEICHAI COLLABORATION**

A Global Partner

# PSI & WEICHAI HISTORY & MILESTONES

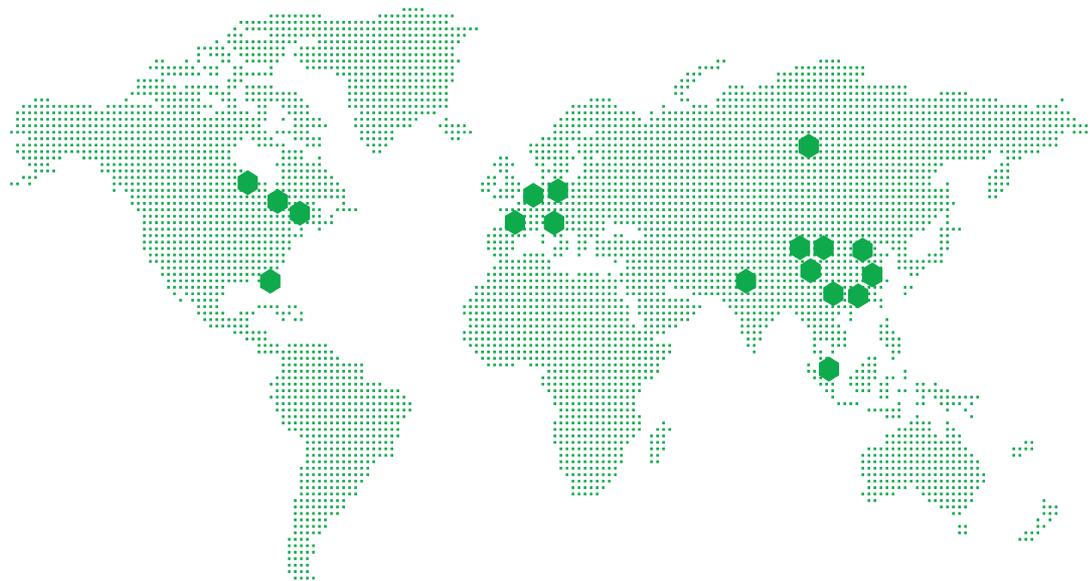


# EXPANDED GLOBAL BUSINESS FOOTPRINT

Weichai has operations in 55 Countries with 500 Authorized Service Centers Worldwide

## Major Facility Snapshot:

- **Shanghai** – Engine Matching R&D
- **Welfang** – High-Speed Engine & Vehicle Matching R&D
- **Chongqing** – Medium/ High-Speed Engine & MVP R&D
- **Xi'an** – HD Truck & HD Transmission Box R&D
- **Wiesbaden, Germany** – Forklift & Hydraulics R&D
- **Forli, Italy** – Luxury Yachts R&D
- **Marseilles, France** – Marine Engine R&D
- **Chicago, IL** – Natural Gas Technology R&D
- **Yangzhou** – Bus & Low-Power Engine R&D



# PRODUCT SYNERGIES



*Our collective product portfolio offers the most competitive and complete engine and power range available across all applications*

## Energy/Power Generation

- 32L and 40L base engines EPA certified in 2018 for North American market – GAS
- 20L, 40L, 53L EPA certified – DIESEL (Sept. 2019)
- 53L in development and 65L planned for North America – GAS
- 10L, 13L, 17L diesel engines are in development for North American market
- The new engines expand our addressable market for power generation products from less than \$1 billion in 2018 to between \$3 billion and \$4 billion by 2023

## Industrial

- Industrial applications being introduced into the Asian material handling market

## Transportation

- On highway applications being explored in the Chinese and Asian transportation markets
- Weichai has a large market share in Asia, for which it develops and manufactures thousands of commercial vehicle engines annually
- PSI can access more than 1 million square feet of manufacturing space in Asia

## Weichai Cost Reduction Opportunities

- Access to state-of-the-art foundries and machining facilities
- Sourcing of block and head casting & machining
- Potential manufacturing and global supply chain opportunities

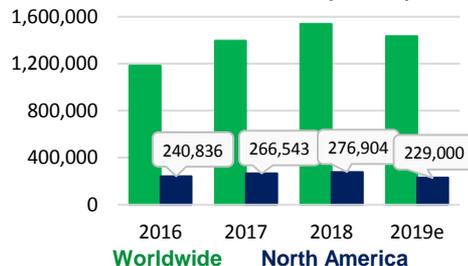


# MARKET INDICATORS

# DETAILED END MARKET INDICATORS & PROJECTIONS

## LIFT TRUCKS

Lift Truck Orders (WITS\*)



## MD TRUCK (CLASS 5-7)

Class 5-7 Production (N.A.)



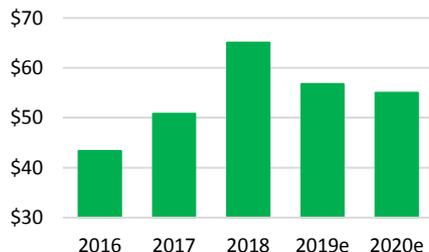
## GENERATORS

Production of Generators by N.A. OEMs (51-1,000kW)

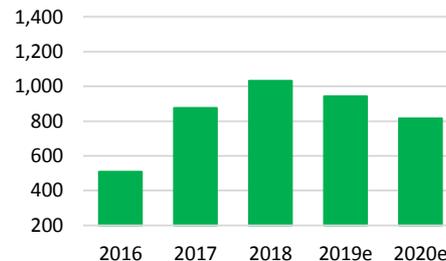


## OIL & GAS

WTI Crude Oil Price (Avg.)



U.S. Rig Counts (Avg.)





# ENERGY

Powering the Future

# ENERGY MARKETS & CUSTOMERS

## Markets



Oil & Gas



Telecommunications



Data Centers



Medical



Office &  
Commercial



Utility & Water  
Treatment

Growth opportunities across various markets driven by several factors (e.g., aged electric grid, power outage activity, growth of intermittent sources of energy, utility curtailment incentives, increased regulations in healthcare facilities, increased growth rate of natural gas installations compared to diesel, and datacenter electrical usage growth)

## Our Customers/End Users



# APPLICATION/MARKET GROWTH OPPORTUNITIES

The growth of intermittent sources of energy, such as wind and solar, is driving increased demand for generators, microgrids and demand response equipment



## Demand Response

- Global demand response capacity is expected to grow from nearly 39 GW in 2016 to 144 GW in 2025.



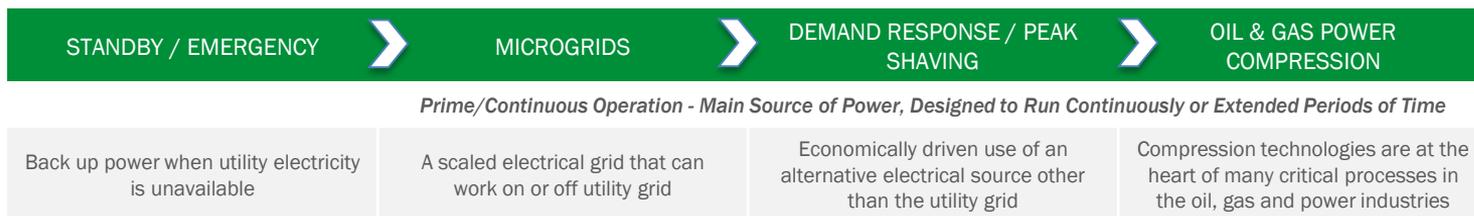
## Microgrids

- The global microgrid market was worth \$19 Billion in 2018. The market is further projected to cross \$36 Billion by 2024, at a CAGR of around 10.9% during 2019-2024.



## Combined Heat & Power (CHP)

- The global combined heat and power (CHP) market is poised to grow by 125 GW during 2018-2023 at CAGR of nearly 3%.

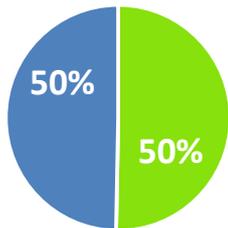


## Diesel Generator Market Size

- The global diesel generator market was valued at over \$13 billion in 2018 and is projected to reach over \$20 billion by 2025

# NATURAL GAS ENERGY GROWTH

**2019 PRODUCTION OF GENERATOR SETS  
(NORTH AMERICAN OEMs)  
TOTAL: 121,523  
51-1,000kW (% IN UNITS)**



■ LPG/Natural Gas ■ Diesel

**Natural gas gensets are  
gaining market share  
versus diesel**

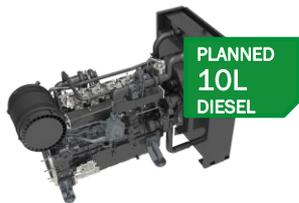
## Natural Gas Energy Market Dynamics

- Cleaner than diesel; Not subject to the transportation limitations that diesel has during times of extreme weather
- Global natural gas generator market totaled \$4.6 billion in 2016 and is expected to increase to \$8.5 billion by the end of 2024.
- More than 1,500 GW of new gas-fired generation capacity is expected to be added to global power networks by 2040. By 2040 installed electric capacity across the world will reach 12,480 GW – 22 percent of which will be supplied by natural gas, the most of any single fuel source.
- Abundant and reliable supply. U.S. EIA estimates that as of 1/1/17 the United States has enough dry natural gas to last about 80 years.

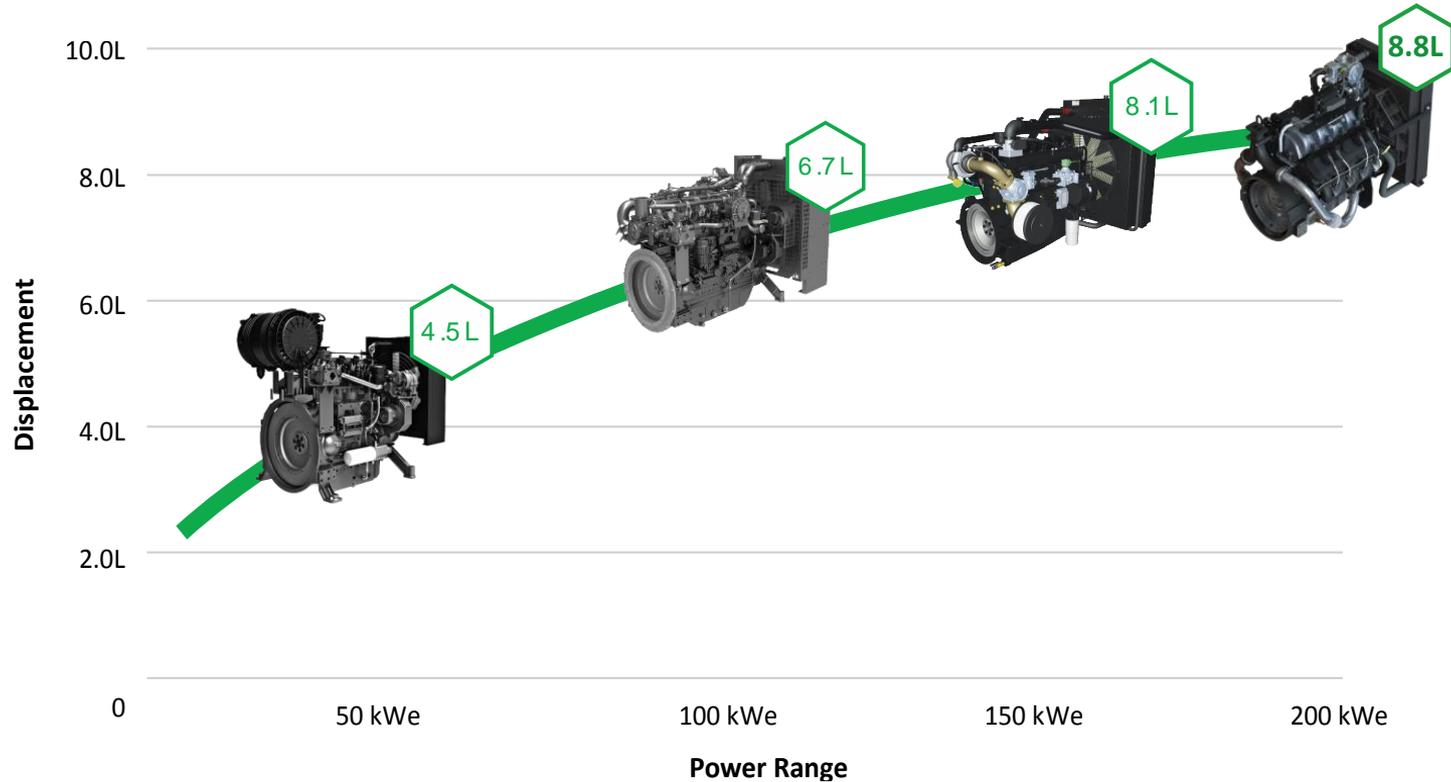
# ENERGY ENGINE PORTFOLIO – GAS



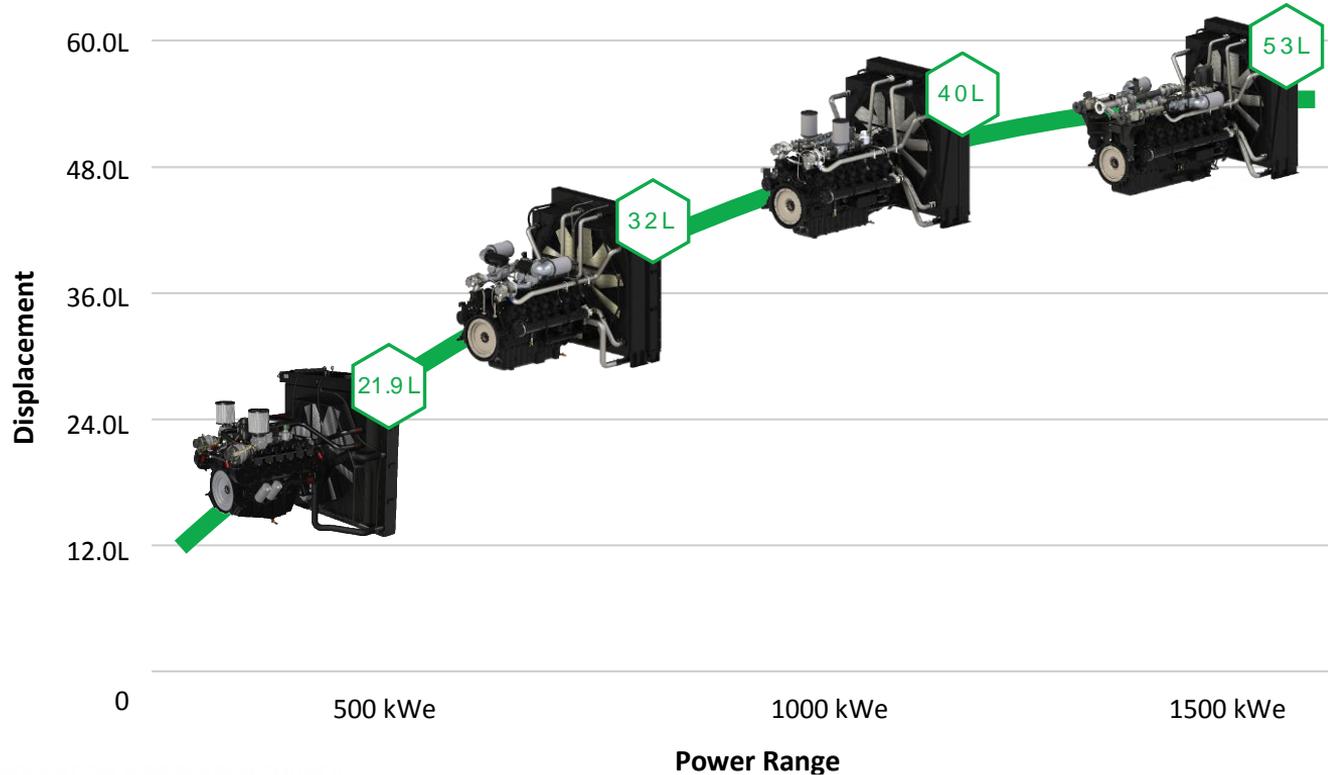
# ENERGY ENGINE PORTFOLIO – DIESEL



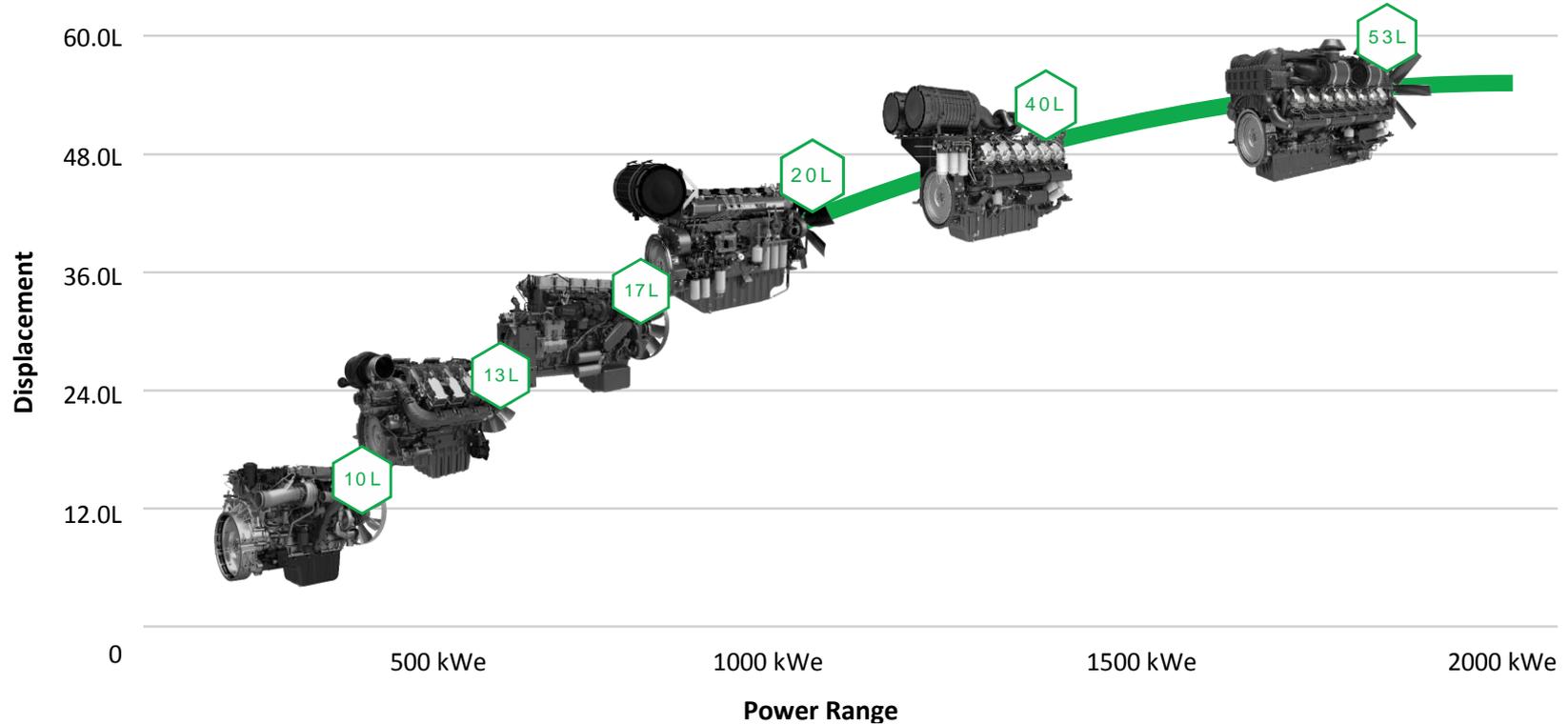
# GAS PRODUCT EXPANSION <150kWe



# GAS PRODUCT EXPANSION >500kWe



# DIESEL PRODUCTS ADDITION



# POWER GENERATION OPPORTUNITY TODAY & FUTURE

Weichai Gas & Diesel Engine Platforms Open Power Generation Market Significantly

**2018 PSI POWER GEN  
ADDRESSABLE MARKET  
NG Engines 2.4L-22L**

**ESTIMATED 2023 PSI POWER GEN  
ADDRESSABLE MARKET  
NG Engines 2.4L-65L, Diesel Engines 10L-65L**



\* Power generation market opportunity projections are based on internal estimates and data from Power Systems Research



# TRANSPORTATION

Powering the Road Ahead

# PSI TRANSPORTATION MARKETS & CUSTOMERS

## RECENT EXPERIENCE



## FUTURE OPPORTUNITIES



EUROVAN & TRANSIT



CHASSIS & OEM



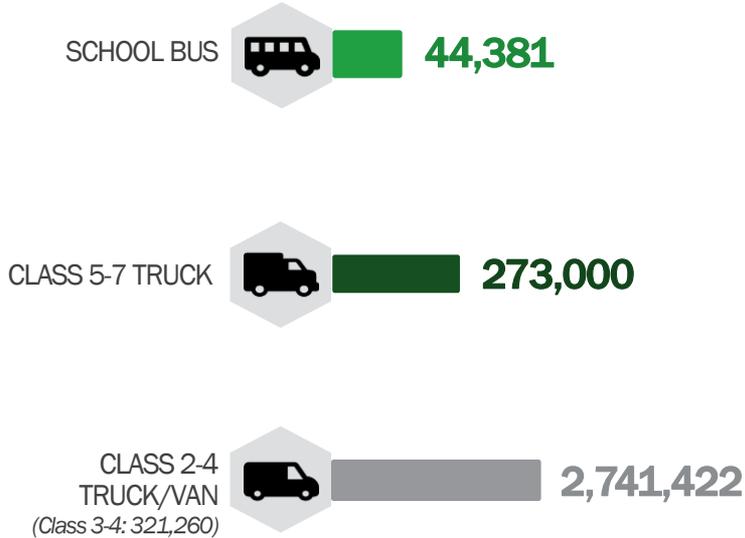
UTILITY



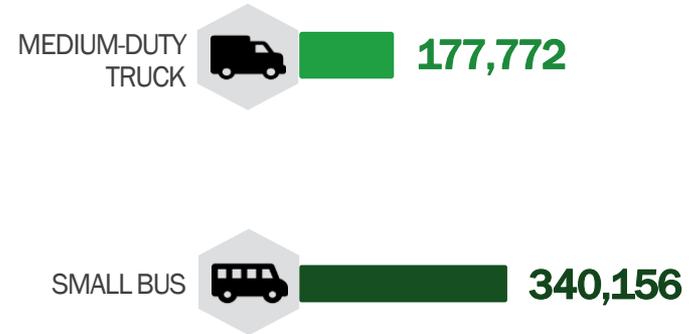
RV

# TRANSPORTATION MARKET

## U.S./North America Market



## China Market



# SCHOOL BUS MARKET

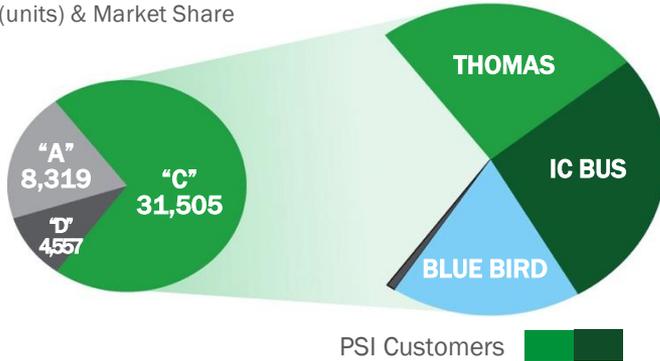
Strong Gasoline & Propane Growth, Industry-Leading Customers, Significant Engine Market Opportunity

## NORTH AMERICA

Bus Sales (units) & Market Share

Total Units  
By Class  
2018:  
44,381

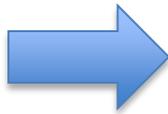
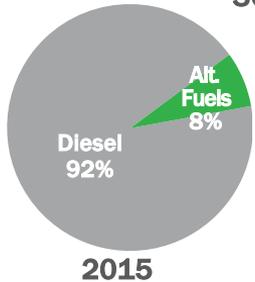
“C” & “D”  
Units  
2018:  
36,062



PSI is the Exclusive Supplier of Propane and Gasoline Engines to IC Bus and Provides Propane Engine Option to Thomas Built Buses

- **NOISE.** Propane & gasoline vehicles are noticeably quieter than diesel.
- **COST.** Very competitive total cost of ownership versus diesel. Easier and less costly to maintain.
- **ENVIRONMENT.** Propane vehicles can reduce lifecycle GHG emissions by nearly 13%.
- **INCENTIVES.** VW Mitigation Funds.

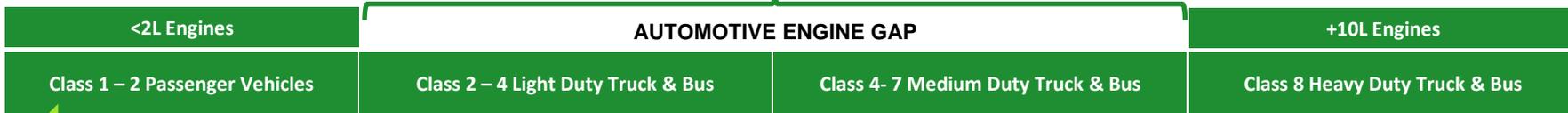
## SCHOOL BUS MARKET



Alt. fuels continue to gain market share versus diesel; Blue Bird at 48% alt. fuel mix in FY19

Trends and Future Outlook

# FILLING THE GAP



## AUTOMOTIVE ENGINE DOWNSIZE OR ELIMINATION DUE TO HYBRIDIZATION OR ELECTRIFICATION

- Major Automotive OEMs including General Motors, Ford, Mitsubishi and others are moving into electrification and hybridization which eliminates completely or utilizes smaller combustion engines
  - Emission regulations like the current standard, the Corporate Average Fuel (CAFÉ) standard, for passenger cars and light trucks will increase to 40.3 to 41.0 MPG by model year 2021, and Greenhouse Gas emission (GHG) will require 163 grams/mile of CO<sub>2</sub> in model year 2025. (Source: Transportation.gov)
- Newer automotive engines utilize lighter aluminum block, direct injection technologies that are not nearly as commercially viable as current engines and lack the power required for certain applications
- This shift leaves a potential gap in the market of 80,000 to 100,000 engines annually
- PSI's mature product line that includes 6.0L and 8.8L engines can address portions of the transportation, energy and industrial product markets that require these engines since they will no longer be served by the major OEMs



# INDUSTRIAL

Powering Productivity

# INDUSTRIAL MARKETS & CUSTOMERS



FORKLIFT



AERIAL WORK PLATFORM



ARBOR CARE



OIL & GAS COMPRESSION/  
OIL LIFTS



UTILITY VEHICLE



SWEEPERS /SCRUBBER

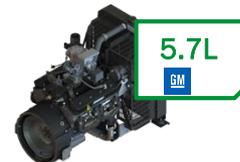


ICE RESURFACING



OTHER INDUSTRIAL

# INDUSTRIAL ENGINE PORTFOLIO





**FINANCIAL UPDATE  
NEXT STEPS  
BUSINESS OBJECTIVES**

# CAPITAL STRUCTURE OVERVIEW

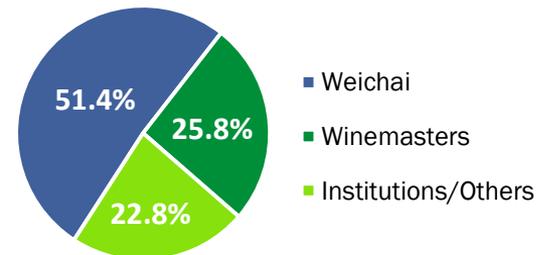
## Weichai America Investment

- Investment of \$60 million of equity in PSI on 3/31/17
- Warrant exercise on 4/23/19 for approximate proceeds of \$1.6 million

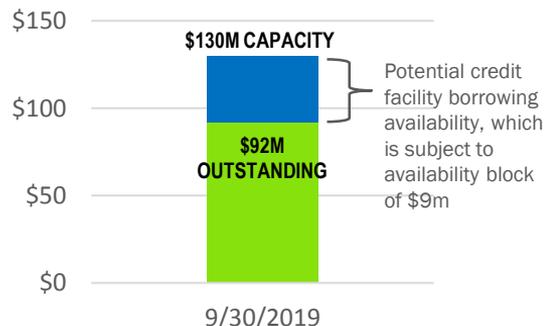
## Debt Overview

- PSI is working in concert with Weichai to refinance its debt
- \$75 million Credit Facility with Wells Fargo
  - Maturity earlier of 3/31/21, or 60 days prior to maturity of Senior Notes
  - LIBOR + 2.75% - 3.25%; Prime + .25% margin + 1.25% - 1.75%
  - Approximately \$20 million of availability as of September 30, 2019
- \$55 million Senior Notes
  - Maturity of 6/30/20
  - Interest rate of 7.5%

## PSI Stock Ownership\*



## Total Debt Capacity (\$mm)



\*Based on 22,856,534 shares outstanding as of 12/2/19 and information contained in the Company's Form 10-K for the year ended 12/31/18.

# UPDATE - NEXT STEPS

Filed Form 10-K on 5/16/19: Covers restated financials for the full years of 2014 and 2015, and Q1 of 2016, in addition to the audited financial statements for 2016 and 2017

Form 10-K covering full year 2018 financials filed on 12/27/19

Numerous changes and improvements have been made across the organization since 2017

- New management team and key hires: CEO; CFO; Corporate Controller; Chief Technical Officer; Chief Commercial Officer; VP, Internal Audit; Director of Accounting
- 6 of 7 new board members, including new audit committee
- Updated policies and the implementation of a comprehensive internal control program

Accounting and finance focus

- Intend to file Form 10-Q's and 10-K for 2019 by 3/30/20
  - Upon completion and becoming current, plan to seek relisting on national exchange
- Remediation of internal controls

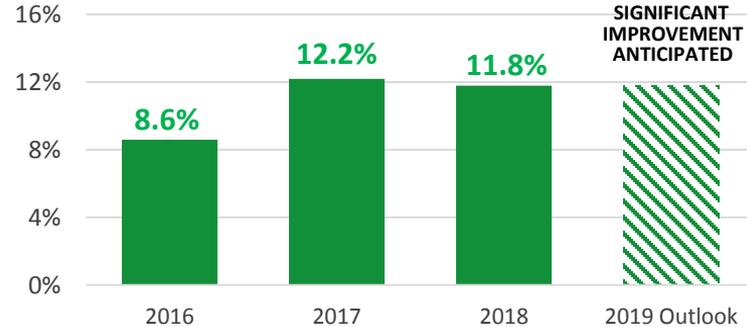
Working on debt refinancing in concert with Weichai Power Co., Ltd., our strategic investor and collaboration partner

# UPDATE - FINANCIAL RESULTS

## SALES



## GROSS MARGIN



2018 sales reflects growth across all end markets (Transportation and Energy end markets comprise a majority of the increase)

2018 gross profit negated by \$18.6m of warranty costs (net of supplier recoveries of \$1.1m), including \$3.8m of charges for adjustments to pre-existing warranties, up from \$5.4m last year, primarily associated with the Transportation end market

- Gross margin negatively impacted by warranty costs, unrecovered costs associated with the ramp up of production of the 8.8L PSI produced engine and operational inefficiencies, partly offset by an improvement in product mix

2019 sales expected to exceed 2018 levels (Increase expected from energy and transportation, partly offset by lower industrial)

2019 gross margin anticipated to show a significant improvement versus 2018

- Gross margin aided by healthy sales growth, favorable mix, strategic pricing actions, lower warranty costs and operational productivity improvements

In addition, 2019 operating income expected to be favorably impacted by lower SG&A expenses primarily due to a decline in restatement-related expenses

2019 profitability expected to show a major improvement versus 2018

# BUSINESS OBJECTIVES

## Improve Profitability

- Plan focused on review of customer and product portfolio (multi-year effort)
  - Strategic price increases
  - Product redesign
  - Re-sourcing of certain components
  - Strategic assessment of certain areas where profitability does not meet established thresholds
- Improve manufacturing efficiency
- Enhance working capital efficiency
  - Opportunities to further increase inventory focus

## Streamlining of Business Processes

- Review and identify cost reductions throughout the organization
  - Enhanced controls and monitors across major spend areas

## Warranty Expense Mitigation Efforts

- Developing reimbursement/commercial remedies from key suppliers, where applicable
- Continued evaluation and improvement of engineering validation and reliability programs for products and applications
- Continued investments in technology to further enhance tools and processes.

# BUSINESS OBJECTIVES CONTINUED

## Grow the Business in the Highest Return on Investment Areas

- Investing in R&D resources and the recruitment of key management, sales and operations staff to support development and sales of higher margin, heavy-duty engines for the energy markets
  - Leverages relationship with Weichai
  - Obtained EPA approval for 32L and 40L gas engines and EPA emergency standby certification for 20L, 40L, and 53L diesel engines; Development and launch plans for 53L gas model as well as other engines
    - Total addressable market within power generation expands from less than \$1 billion in 2018 to \$3-\$4 billion by 2023
  - Allows us to serve a greater portion of the demand response, microgrid, combined heat and power (CHP) and oil and gas markets, while supporting the expansion of the range of customers

## Strengthen Business through Optimization of Business Systems and Technology

- Reimplementation of ERP system
- Supports efforts to remediate internal controls, improve processes, drive greater operational efficiencies and provide better and timelier decision making across the organization



**POWER SOLUTIONS  
INTERNATIONAL**

**THANK YOU.**

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