



Powering transportation.

Driving change.

Natural Gas Vehicle Technologies for Light, Medium, Heavy and High Horsepower Applications

Forward Looking Statements

- This presentation contains forward-looking statements that are based on the beliefs of Westport's management and reflect Westport's current expectations. Investors are cautioned that all forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those expressed in these forward-looking statements, including, without limitation, Westport's ability to develop viable fuel systems; Westport's ability to provide the capital required for research, product development, operations, and marketing; product development, production and commercial launch delays; changing environmental regulations; Westport's ability to attract and retain key personal and business partners; competition from conventional diesel fuelled engines; and Westport's ability to protect its intellectual property. These factors should be considered carefully and investors should not rely on any forward-looking statements. Investors are encouraged to review Management's Discussion and Analysis and the Risk Factors section in Westport's most recently filed Annual Information Form and filings with securities regulators for a more complete discussion of factors that could affect Westport's future performance. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.
- All figures are in U.S. dollars unless otherwise stated.

Westport Engineers Advanced Natural Gas Engines

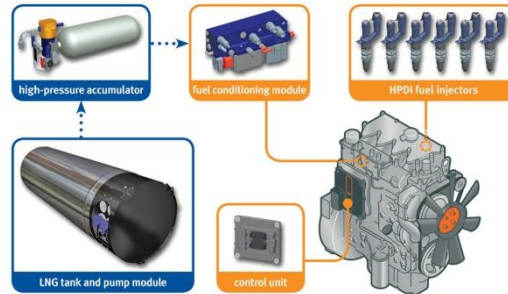
market focus

Transformation from petroleum-fuelled to alternative-fuelled engines.



position

The global leader in gaseous fuel engineering and technology.



strategy

Leverage IP to penetrate markets through relationships with market-leading OEMs.



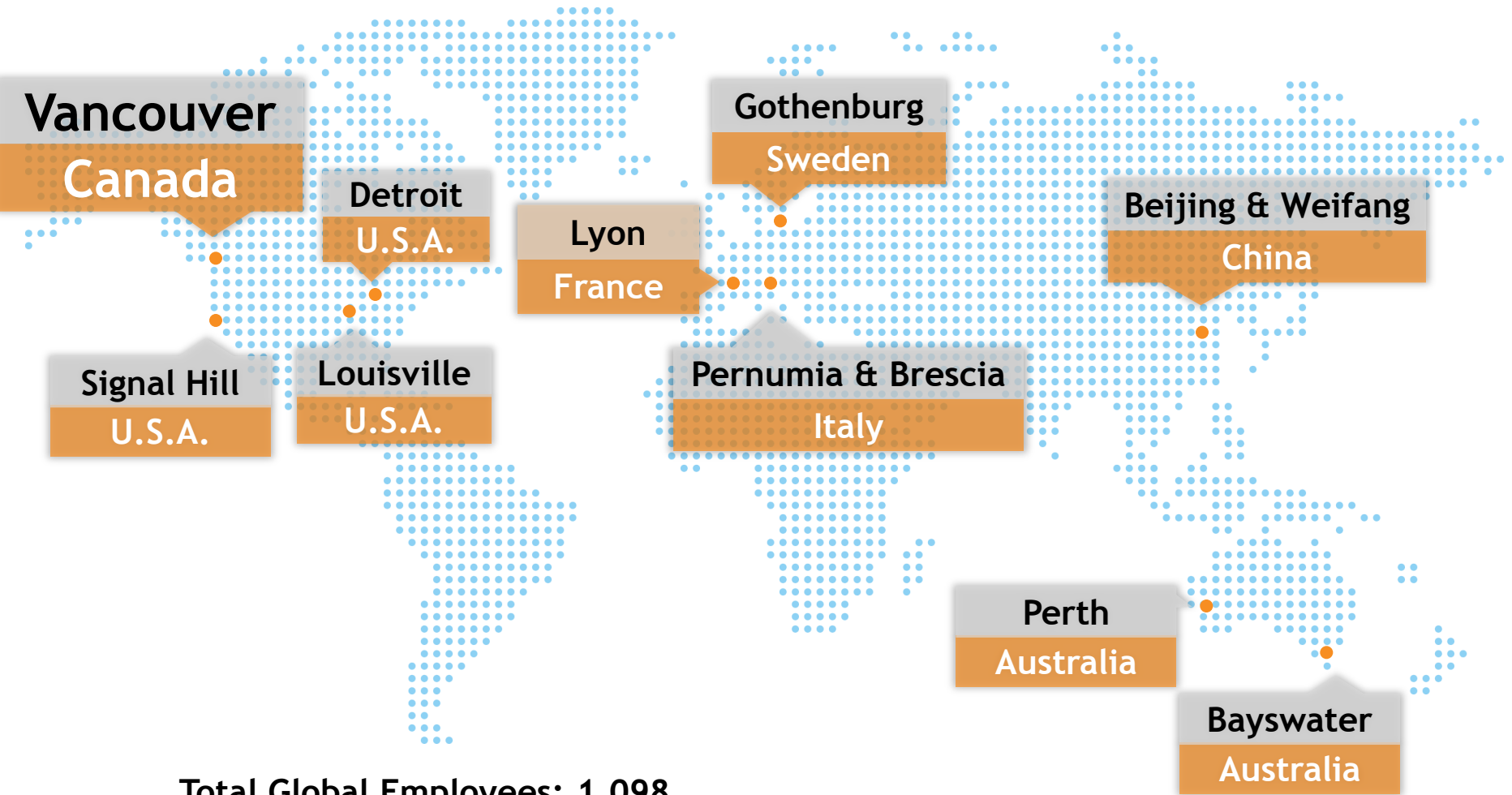
DELPHI



Volvo



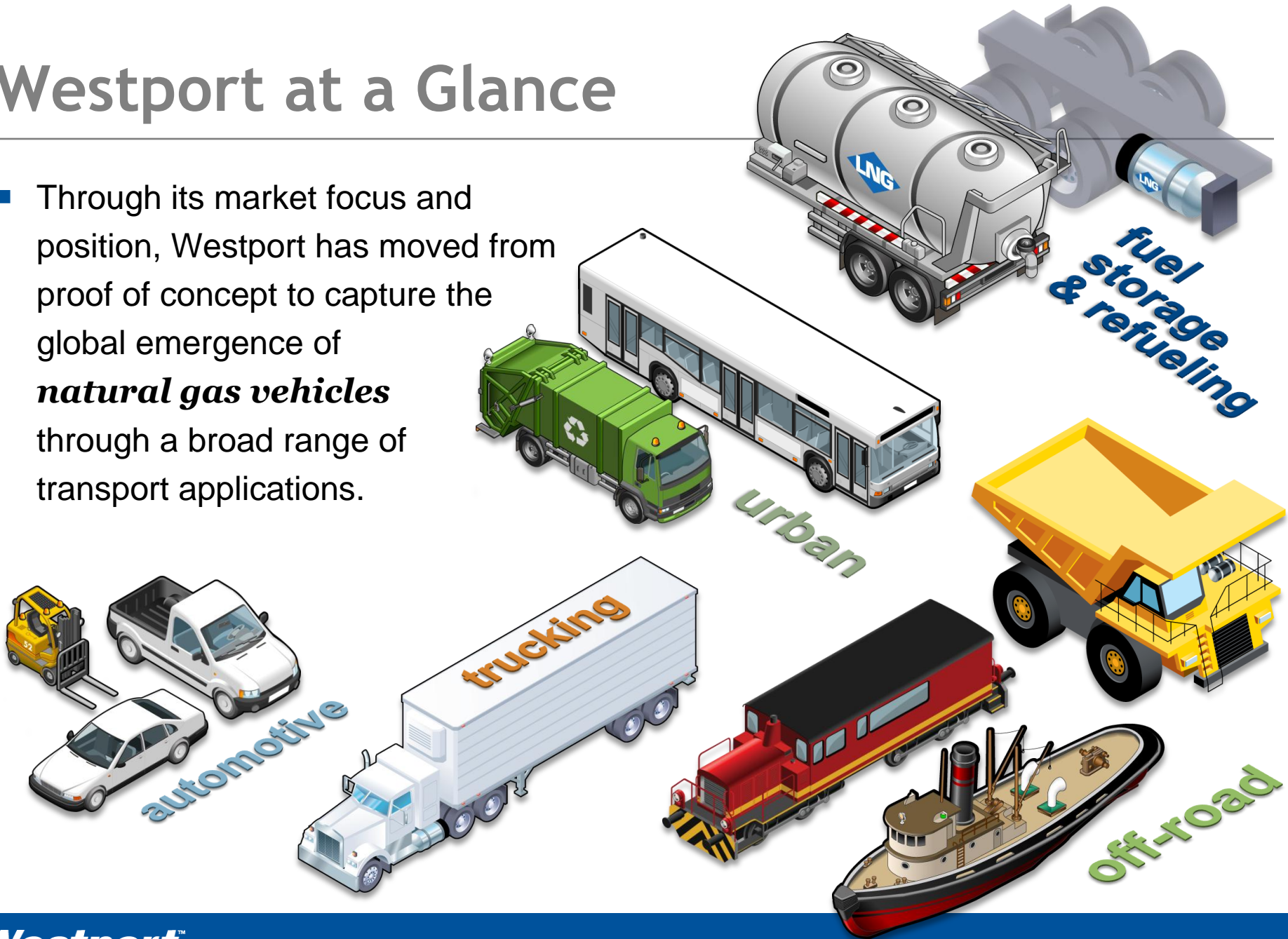
Global Operations



Total Global Employees: 1,098

Westport at a Glance

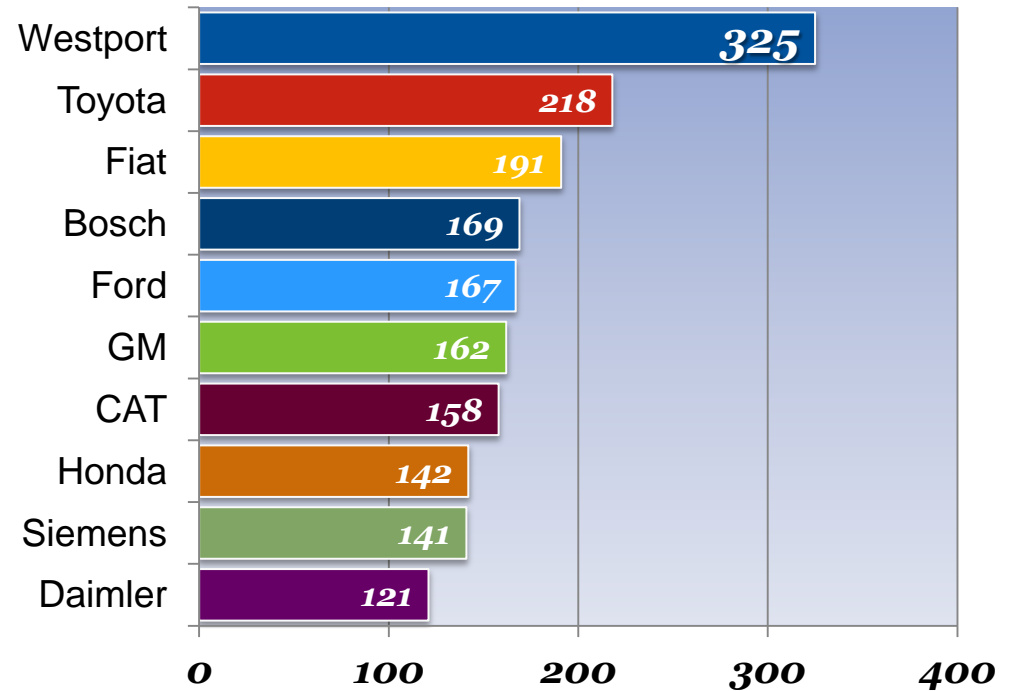
- Through its market focus and position, Westport has moved from proof of concept to capture the global emergence of *natural gas vehicles* through a broad range of transport applications.



Westport is the Technology Leader

- Global patent portfolio pivotal to Westport's market leading position with OEMs
- Worldwide, Westport and its affiliates have filed over 700 patent applications relating to over 180 inventions in:
 - engine technologies
 - fuel system components
 - control methods
 - vehicle integration
 - other related technologies
- Established strong development lead times and barriers to entry with over \$390M in R&D and commercialization since 1995

Top 10 Companies with Natural Gas Engine Related Patents*



* Based on the patent search results of publicly available data within the International Patent Classification F02, meeting the search term criteria: one of ("engine" or "combustion" or "injector" or "injection valve") and ("natural gas" or "methane" or "gaseous fuel") and not ("fuel cell" or "turbine"). This chart includes issued or granted patents from: Australia, Brazil, Canada, China, European Patent Office Grants, France, Germany, India, Italy, Japan, Poland, Russia, Spain, UK, USA, USSR, and pending published patent applications from: the European Patent Office, USA, and the World Intellectual Property Office.

Natural Gas Vehicles? Many Questions!

Which Engine Technology?

Spark-Ignited

Dual-Fuel

HPDI

Which Fuel?

CNG

LNG

Biomethane

For which Applications?

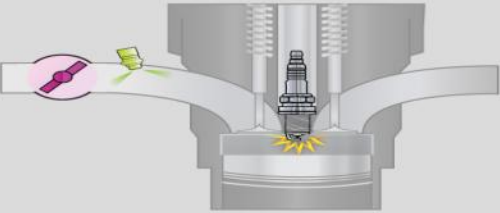
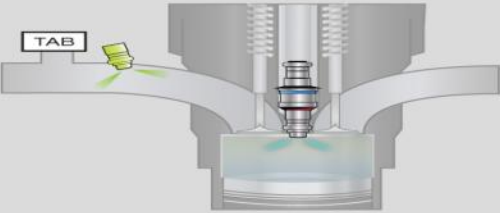
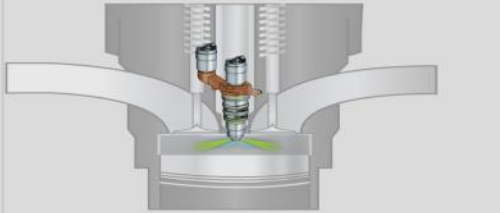


Which Supplier?

OEM Solution

Retrofit Solution

Westport Natural Gas Engine Technologies

	Spark-Ignited	Dual-Fuel (Fumigation)	High Pressure Direct Injection (HPDI)
			
How it works	<ul style="list-style-type: none"> Gas & air pre-mixed at low pressure Ignition from spark plug Reduced compression ratio to avoid knock Bi-fuel (automotive) or dedicated (trucking) Simple EGR and catalyst Otto cycle 	<ul style="list-style-type: none"> Gas and air pre-mixed at low pressure Diesel injection for ignition Diesel/gas mixture adjusted based on knock sensor Otto cycle Can revert to diesel fuel only 	<ul style="list-style-type: none"> High pressure gas injected directly into combustion chamber Compression Ignition from diesel pilot Diesel cycle
Westport products	<ul style="list-style-type: none"> Westport Automotive Cummins Westport Weichai Westport EPA 10 & Euro VI Capable 	<ul style="list-style-type: none"> Emer Westport Euro V Capable 	<ul style="list-style-type: none"> Westport Trucking & Off-Road EPA 10 & Euro VI Capable

Natural Gas Engine Technology

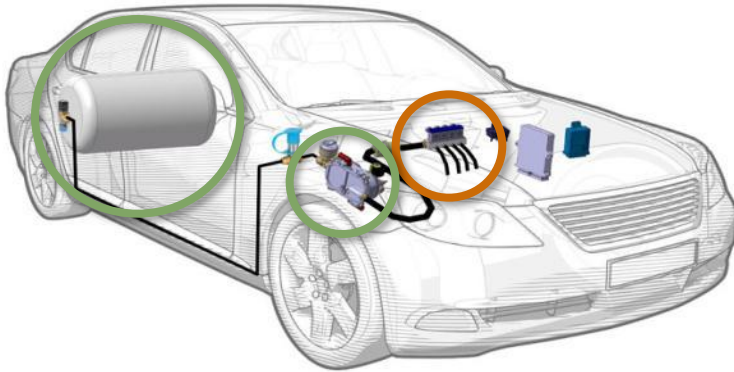
Compared to Diesel

	Spark Ignited	Dual Fuel	HPDI
Combustion Cycle	Otto	Diesel/Otto	Diesel
Ignition	Spark Plug	Diesel Injection	Micropilot
Fuel cost/mile	Better	Better (variable substitution)	BEST
Emissions	BEST	Same	Same or Better
GHG	Better	CH4 Cat	BEST
Power Density	Lower	Same or Lower	Same
Power/Torque	Same	Same or Lower	Same
Efficiency	Lower	Same or Lower	Similar or Same*
Noise	BEST	Same	Same
Aftertreatment	BEST	CH4 Cat	Same
Fuel Flexibility	CNG/LNG	BEST CNG/LNG/Diesel	LNG-limp mode on diesel

Automotive Components & Complete Solutions - Spark Technology

off-engine components

on-engine components



complete industrial engines



complete systems designed to specific OEM platforms



Historical Success: Urban Return-to-Base Fleets

BUS

REFUSE



North America:
20% Market Share
Market size 5,000 buses/Yr
20 Years
Compressed Natural Gas

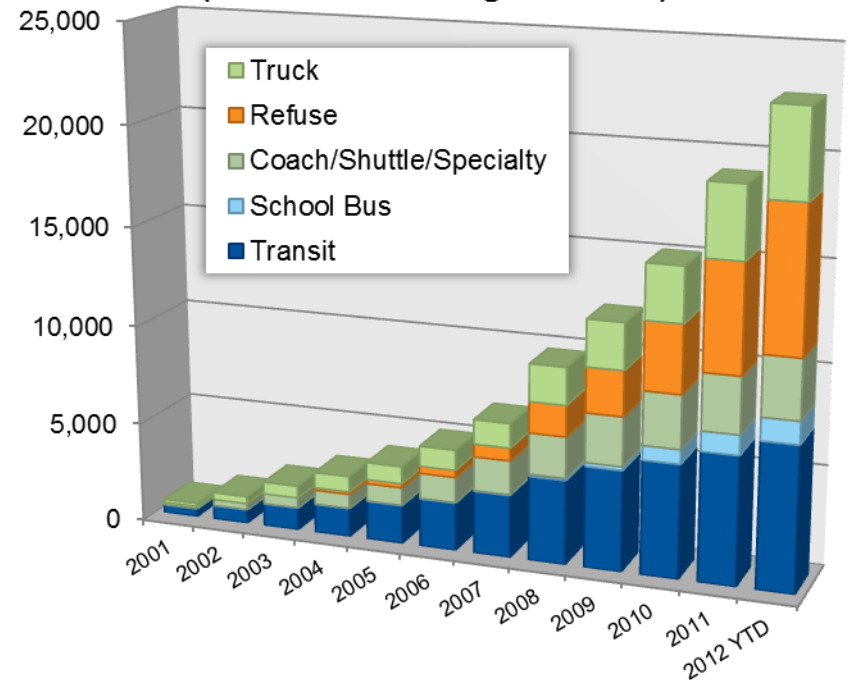
North America:
50% Market Share
Market size 5,000/Yr
10 Years
Compressed Natural Gas

Cummins Westport Joint Venture - Spark Technology

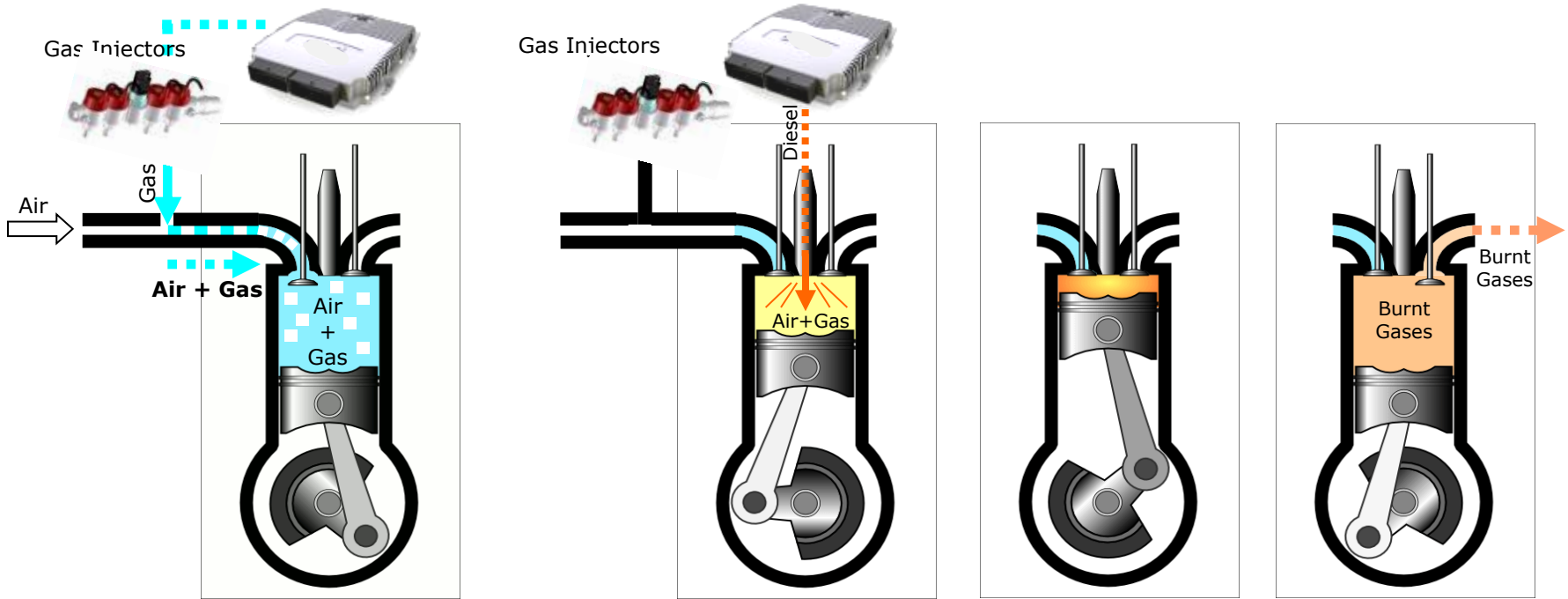
- 50:50 JV established in 2001
 - Renewed agreements 2004 and 2012
 - Delivered over 35,000 engines
 - Industry leading OEM availability
- Key recent growth driver:
 - refuse trucks in North America – approaching 50% natural gas market penetration
 - Medium and heavy truck applications

ISL G	ISX12 G	ISB6.7 G
		
8.9L SEGR 250–320hp 660–1,100 lb-ft	11.9L SEGR 320–400hp 1,150–1,450 lb-ft	6.7L SEGR
available now	2013 launch	2015 launch

CWI Engines in North America by Segment (cumulative through Q3 2012)



Westport Dual Fuel System



1: Intake

The gas is injected into the intake manifold close to intake valve. The mixture of air + gas enters the cylinder thanks to the air-stream.

2: Compression

The mixture of air + gas is compressed into the cylinder. Pressure and temperature of air + gas mix rise. The diesel fuel pilot is injected

3: Ignition

The diesel fuel ignites. The burning diesel fuel ignites the gas. Temperature and pressure quickly rise into the cylinder, forcing the piston downwards

4: Exhaust

Burnt gases leave through exhaust valve

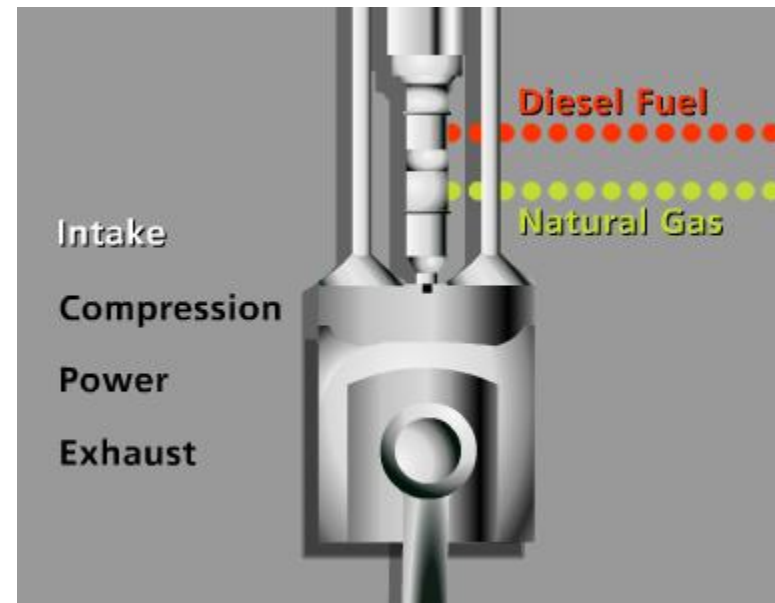
Exclusive Westport HPDI Technology

EPA 10 Certified & Euro VI Capable

- **Liquefied Natural Gas (LNG)**
- High Pressure Direct Injector (HPDI) replaces the diesel injector
- This two-fuel HPDI injector delivers both diesel fuel and natural gas to the engine cylinder
- Diesel fuel provides ignition only, natural gas provides >90% of the power
- Diesel engine performance remains
 - Same high power and torque
 - Same or similar efficiency
- **~20% GHG reduction** with fossil LNG

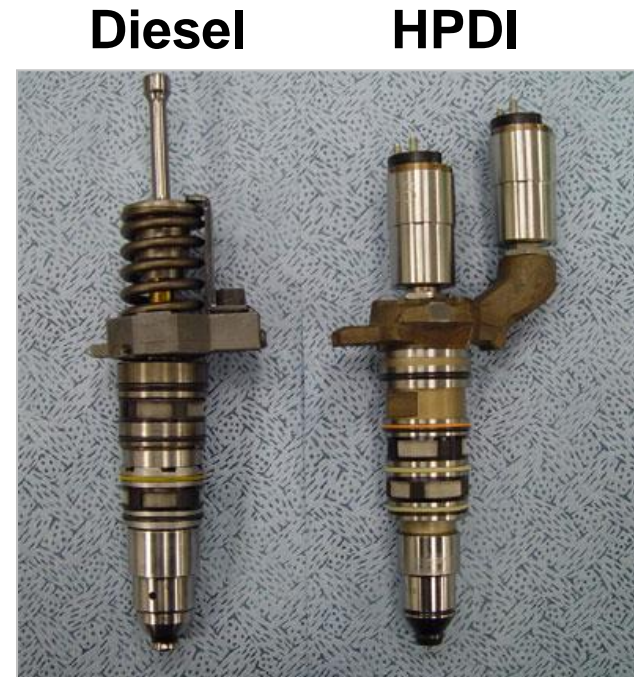
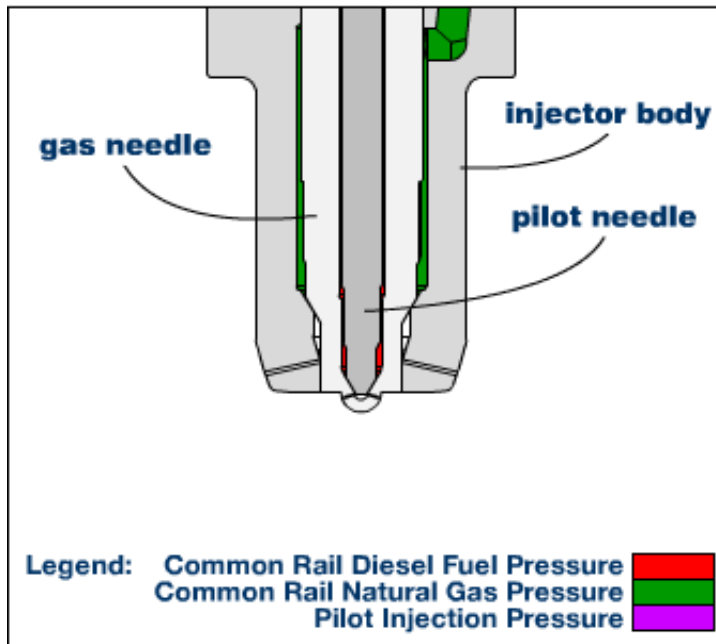


*two-fuel
HPDI
injector*

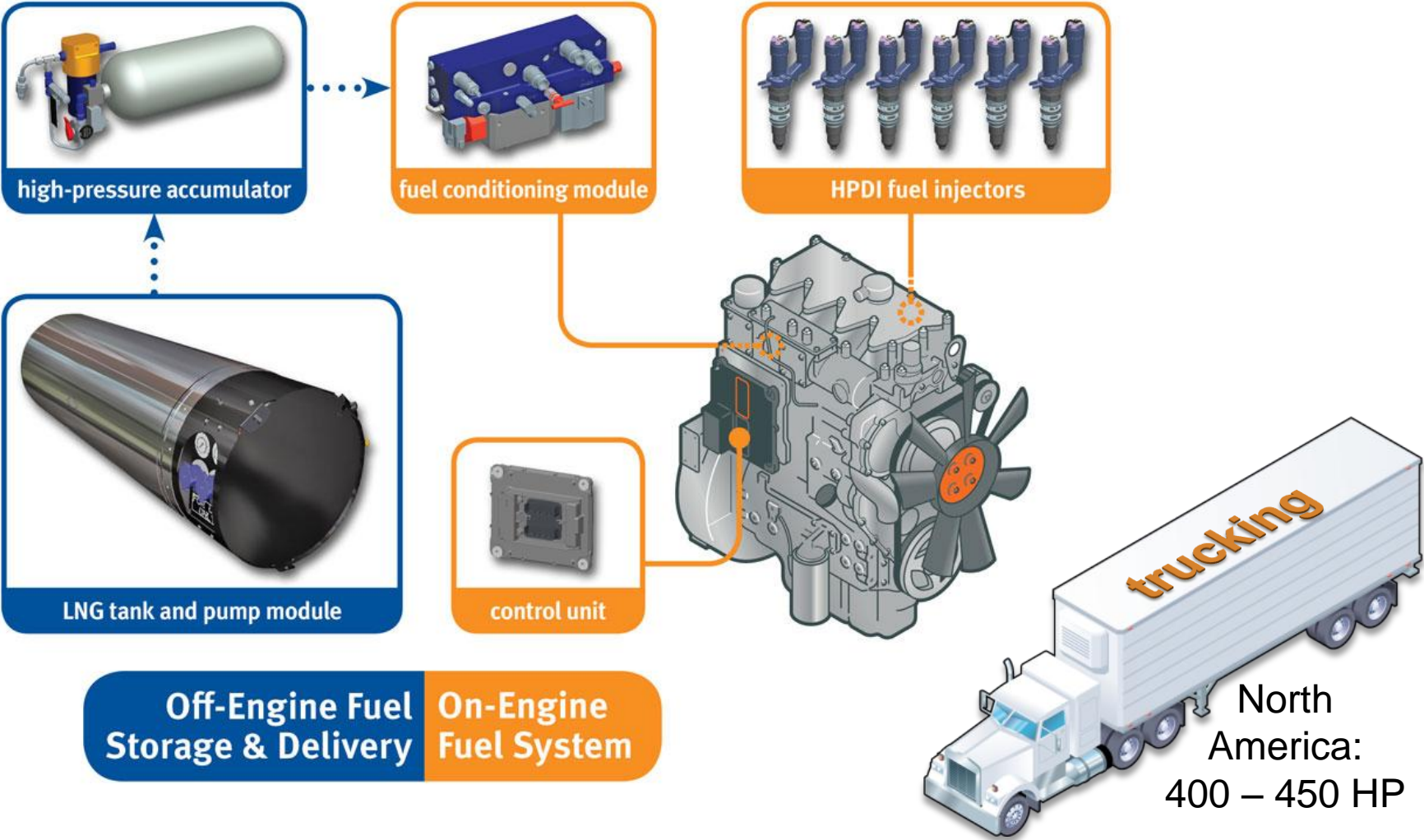


HPDI Injector Replaces the Diesel Injector

- Common-rail style injector – two fuels through one injector
- Directly replaces diesel injector – no engine modifications
- Diesel used as ignition source, actuation fluid, lubricant, and coolant



Westport HPDI System



North America:
400 – 450 HP

New Market: Heavy Duty Trucks

Regional and Long Haul - LNG

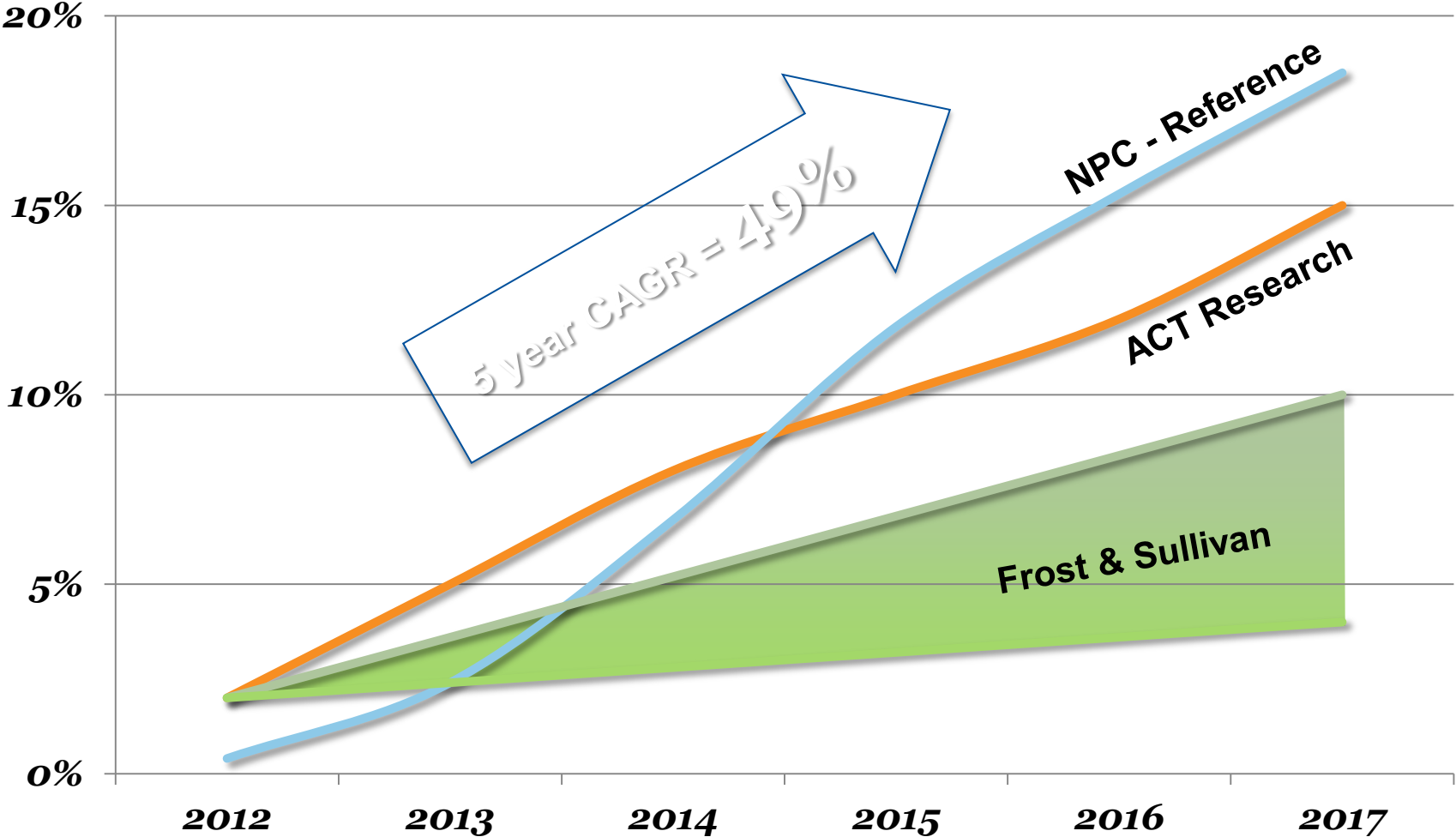


Liquefied Natural Gas (LNG)
opens the way for medium-long distance
road transport



Market Forecast

North American Class 8 Natural Gas Trucks



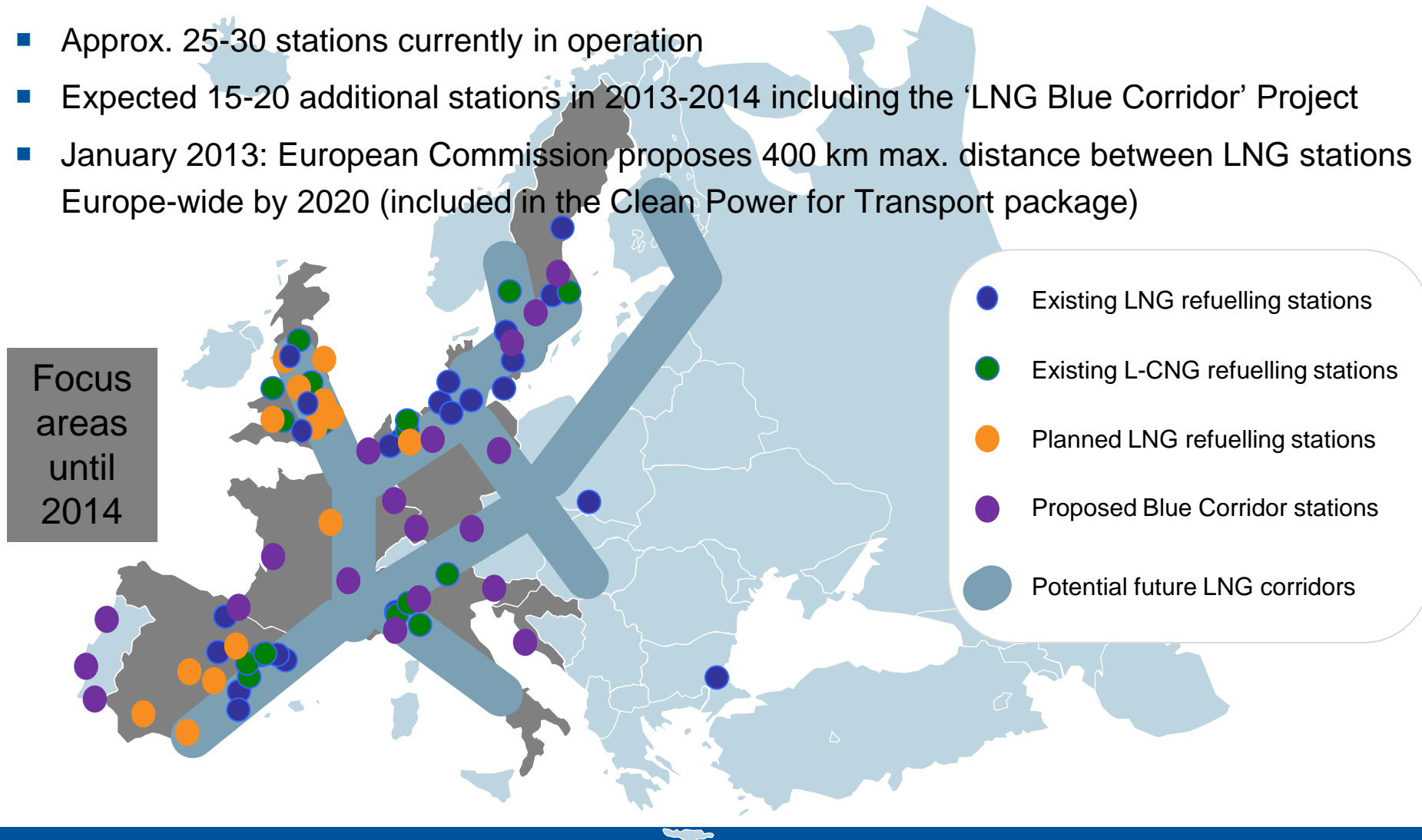
North America

Growth in LNG Fueling Infrastructure



LNG Fueling Infrastructure Developments

- Approx. 25-30 stations currently in operation
- Expected 15-20 additional stations in 2013-2014 including the 'LNG Blue Corridor' Project
- January 2013: European Commission proposes 400 km max. distance between LNG stations Europe-wide by 2020 (included in the Clean Power for Transport package)



Significant Off Road Opportunities



Westport - Caterpillar Partnership

Westport and Caterpillar Announce Agreement to Develop Natural Gas Technology for Off-Road Equipment June 5, 2012

The two companies are positioned to be the first to offer Westport™ HPDI technology in the high horsepower off-road market; initial focus on mining trucks and locomotives;

- Westport and Caterpillar co-developing natural gas fuel systems
- Westport to supply key natural gas fuel system components
- Product ready in about 5 years



Photos courtesy Caterpillar and EMD

Conclusion

Trends in NG Engine Technology

Application	Displacement	kW/Cyl	Fuel / Year	Gas Technology	Fuel Choice	Current Uptake
Large Marine	Up to 25,000 L	Up to 1000	Up to 30 mil. L	<ul style="list-style-type: none"> ➤ Direct Injection ➤ Dual Fuel 	Fossil and/or Bio LNG	~100
Off-Highway • Rail/Marine • Mine Truck	20 to 150 L	150 to 275	~1,000,000 L	<ul style="list-style-type: none"> ➤ Direct Injection ➤ Dual Fuel 		~0
Heavy Duty • On-highway trucks	10 to 16 L	50 to 75 (>350 hp)	~100,000 L	<ul style="list-style-type: none"> ➤ Direct Injection ➤ Dual Fuel ➤ Spark Ignited 		~10,000
Medium Duty • Buses • Refuse • MD Trucks	5 to 9 L	~40 (<350 hp)	~40,000 L	<ul style="list-style-type: none"> ➤ Spark Ignited <ul style="list-style-type: none"> ➤ Lean ➤ Stoich + EGR ➤ Dual Fuel 		~ 100,000
Light Duty • Pass. Cars • LD Trucks	Up to 7 L	~40	~5000 L	<ul style="list-style-type: none"> ➤ Spark Ignited 		CNG

Values are coarse estimates and information is based on Westport's best knowledge



Powering transportation.

Driving change.

Thank You

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