

# FuelMarket



## THE PREMISE

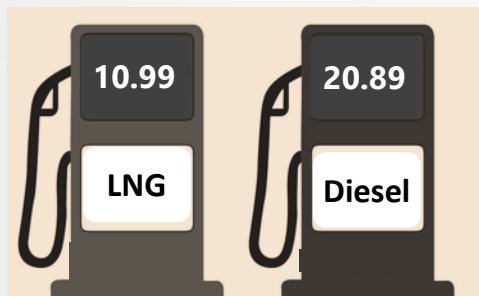
DISRUPT THE MEXICAN FUELS MARKET BY DEVELOPING A NATURAL GAS BASED **FUELING ECOSYSTEM**

**As a result of a unique set of circumstances**, the >100 billion US Dollars per year Mexican fuels market may be disrupted. Established players with large sunk value-chain costs are slow to react. The market is massive and the market is asking for natural gas solutions. Fuel Market has developed the solutions and aims to revolutionize the fuels market in Mexico.

## Three key market supply & demand drivers

A combination of supply-drivers and demand-drivers have created a unique opportunity to disrupt the fuels market in Mexico

### LOW PRICE



#### LNG/CNG is cheaper than Diesel

- 40-50% savings per liter
- Driven by the US shale gas revolution

### EMISSION BENEFITS

Carbon Monoxide	70% reduction
NOx Emissions	80% reduction
Greenhouse Gases	20% reduction
Particulates	75% reduction

#### LNG/CNG is cleaner than Diesel

- Treaties & regulation drive natural gas demand
- It is also safer, more difficult to steal and offers good PR

### FAST, EASY, RELIABLE



#### Technological advancements

- ssLNG has become a proven technology
- Preconstructed & modular for fast construction
- Reliable and financeable

# PWC STRATEGY&

## SMALL GOING BIG: WHY SMALL SCALE LNG MIGHT BE THE NEXT BIG WAVE

“The winning players will need to be active across all segments of the industry, from the supply of gas, to transportation and distribution, right down to the point of direct commercial relationships with end-users (where sizable).

Companies that can move with agility, with the right strategy and capabilities in place, and that can build partnerships across the LNG value chain will benefit from the advantage that accrues to first movers.

In the same way that fracking transformed the US energy sector, small scale LNG may be the next ‘small’ revolution in the gas sector. Those first off the mark will be the most likely to reap the benefits.”

Quoted from Giorgio Biscardini, Partner PwC Strategy&; Adrian Del Maestro, Director PwC Strategy& and Rafael Schmill, Director PwC Strategy&.

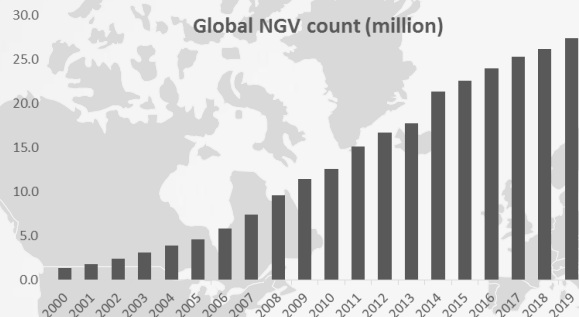
Published by ‘LNG Industry’ on August 22, 2018.

<https://www.lngindustry.com/small-scale-lng/22082018/small-going-big-why-small-scale-lng-might-be-the-next-big-wave/>

# 27.4 million NGVs globally

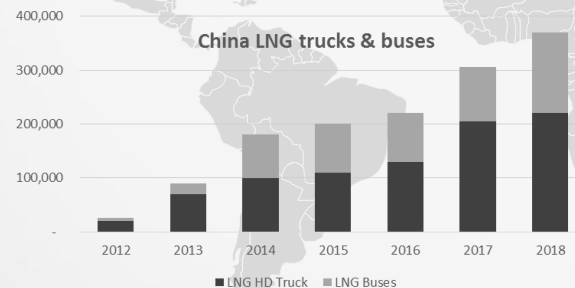
ENVIRONMENTAL POLICY AND COST COMPETITIVENESS HAS DRIVEN GLOBAL GROWTH OF NGVS. NORTH AMERICA LAGS BEHIND

Global NGV count (million)

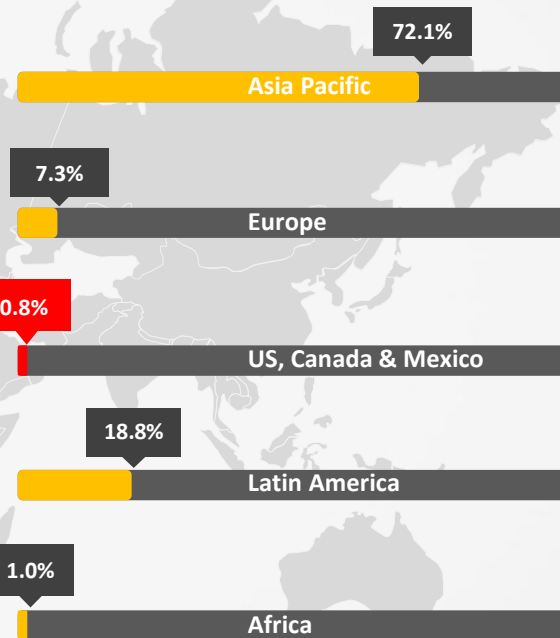


Source: NGV Global

China LNG trucks & buses



Source: Shell LNG outlook 2019



Source: NGV Global, updated 30 April 2019.

# Mexico multi-billion market opportunity

MEXICO IS WELL POSITIONED FOR NGV: CLOSENESS OF CHEAP NATURAL GAS FROM THE US AND SIGNIFICANT ENVIRONMENTAL PRESURES



- ▶ Key fuel consuming transportation sectors in Mexico:<sup>1</sup>
  - Cars, trucks, vans, busses and trucks: 45.5 million units consuming 220 million liters day
  - Mining & heavy equipment: 140 million liters a day
  - Marine and rail transport: 85 million liters a day
- ▶ Fuel Market aims for an initial 2% market share by addressing both the demand-side and the fuel availability-side by working directly with large fleet owners to secure demand while making the fuel available to them in a comprehensive turnkey solution

Vehicle type	Liters per day <sup>1</sup>	Liters per year	Fuel Market 2% target	100k GPD ssLNG required
Cars, trucks, vans, buses, trucks	220,000,000	80,300,000,000	1,606,000,000	11.6
Mining & heavy equipment	140,000,000	51,100,000,000	1,022,000,000	7.4
Marine & rail transport	85,000,000	31,025,000,000	620,500,000	4.5
<b>Total liters</b>	<b>445,000,000</b>	<b>162,425,000,000</b>	<b>3,248,500,000</b>	<b>23.5</b>
<b>Revenue (MXN) at 20 peso per liter<sup>2</sup></b>	<b>8,900,000,000</b>	<b>3,248,500,000,000</b>	<b>35,733,500,000<sup>2</sup></b>	

1. Fuel Market estimates

2. Fuel Market fuel revenue assumed based on 11 cent a liter. No revenue from conversions, maintenance, insurance, finance, etc. Assumed.

# Ecosystem offered by Fuel Market

Fuel Market, alone and through partnerships, is able to offer customers a bespoke solution to save costs and reduce pollution



## Fuel supply

Fuel Market will supply customers with LNG & CNG under long-term contracts. Fuel Market will arrange for the fuel, the transportation and the storage.



## Fueling infrastructure

Fuel Market will install, operate and maintain fueling infrastructure onsite / near-site as per customer demands.



## Vehicles & conversions

Fuel Market sell new vehicles that are LNG/CNG ready, and/or will convert customers' existing fleet to accommodate LNG/CNG.



## Monitoring

Fuel Market offers customer real-time and historical vehicle performance information, thereby increasing performance, reducing cost and reducing risk.



## Service & maintenance

Fuel Market provides service and maintenance of vehicles and the conversion equipment.



## Warranty & insurance

Fuel Market provides customers warranties and insurance in partnership with Quálitas, Mexico's leading vehicle insurance company.



## Financing

Fuel Market offers qualifying customers structured financing solutions that eliminate or minimize upfront investment by customers.

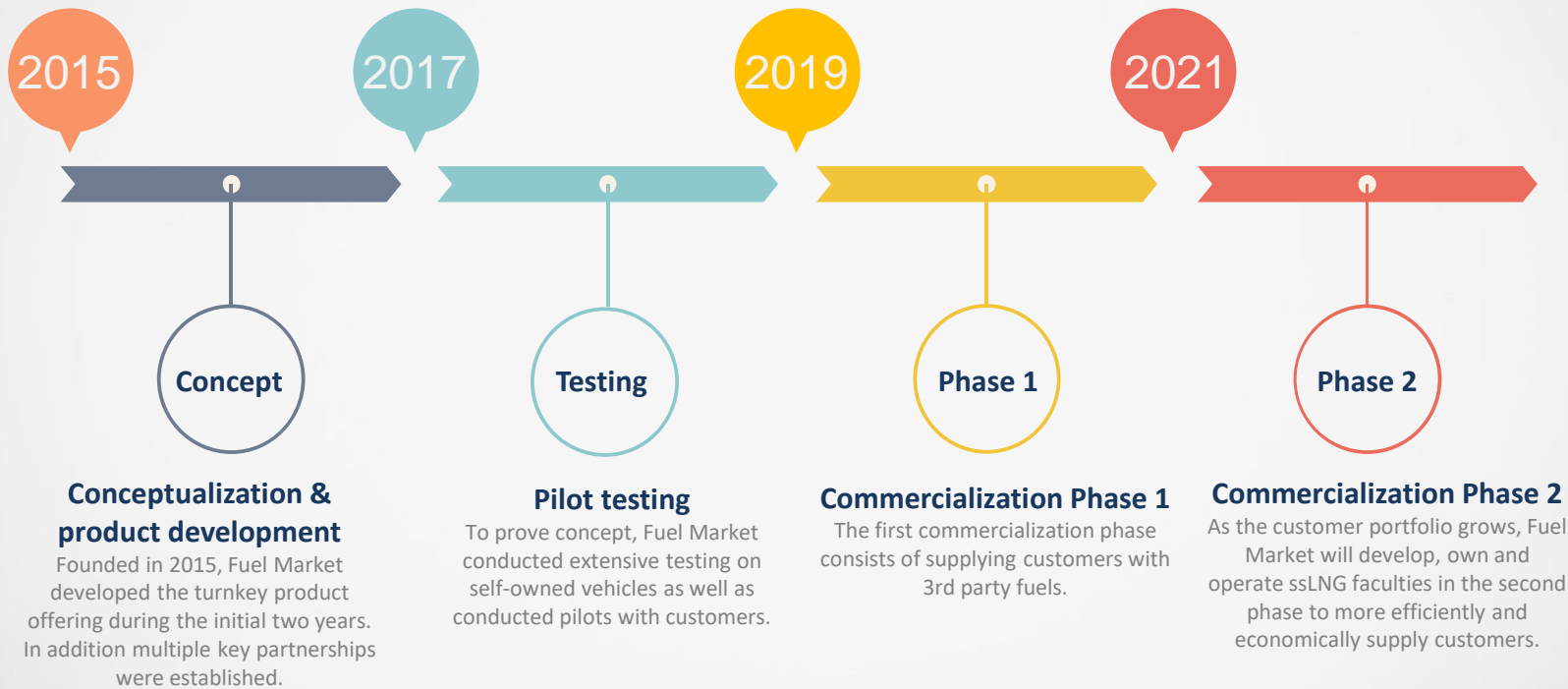


## Risk management

Fuel Market offers customers the ability to manage risk through hedging of natural gas prices and dollar exchange rates.

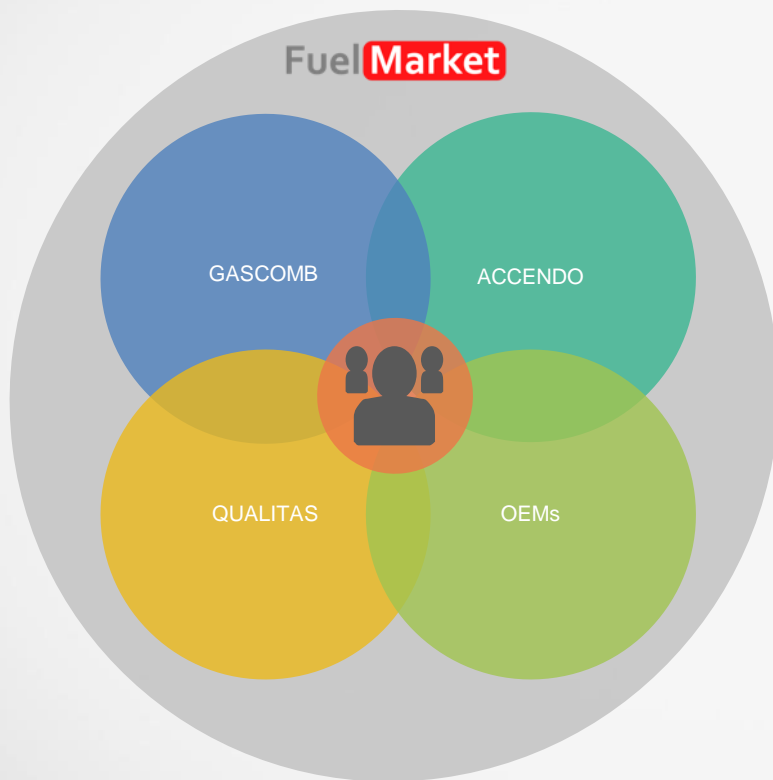
# Fuel Market development timeline

FUEL MARKET HAS PLANNED ITS GROWTH IN PHASES TO REDUCE RISK



# Partnerships for success

FUEL MARKET BRINGS TOGETHER DIFFERENT INDUSTRY LEADERS TO JOINTLY OFFER TURNKEY SOLUTIONS TO CUSTOMERS



## Gascomb

Over 30 years of experience. A pioneer in Mexico in conversion systems from single fuel to hybrid/duel fuel. It controls the largest and most experienced network of natural gas service centers in Mexico and is a distributor of the most important brands in the world of hybrid conversion systems, some on an exclusive basis.

## Accendo

A Mexican bank focused on the SME market. Accendo Banco and some of its principals contribute resources, financial advisory services, operational support and funding. Furthermore Accendo will help source customers in Mexico.

## Qualitas

The leading insurance provider for the vehicle market in Mexico with 47% market share. Qualitas will provide Fuel Market's clients with extended warranty and full coverage. Qualitas will also promote Fuel Market solutions to its customers.

## OEMs

Fuel Market has developed strong relations with OEMs in the automotive sector and is able to function as dealer to most of the brands of vehicles available in Mexico, including Mercedes-Benz, Volkswagen, Volvo and Toyota. With some of these OEMs, Fuel Market has the ability to install the gas conversion kits on factory site, after production.



# Tests & Pilots

TESTS AND PILOTS HAVE TAKEN PLACE FOR MULTIPLE VEHICLE TYPES, FUEL TYPES (LNG & CNG) AND CUSTOMERS, INCLUDING 60-DAY TESTS WITH SEVERAL CANACAR MEMBERS FOR LONG-HAUL TRUCKS CONVERTED TO LNG

Unidad	Brand/ Model	Avg haul weight	Controlled speed	Route	Km, Annual	% Substitution	Efficiency/Performance	Savings-range % <sup>1</sup>
1	Kenworth 2015	13-15 TM	90 kmh	Laredo - Querétaro	190,000 km	Diésel 76% / GNL 24%	- 1.687% / 2.75 km/lt	9 - 19%
2	Kenworth 2018	13-15 TM	90 kmh	Laredo - Querétaro	190,000 km	Diésel 60% / GNL 40%	- 7.71% / -2.97 km/lt	14%
3	Kenworth 2014	30 TM	120 kmh	Monterrey - Laredo	105,000 km	Diésel 76% / GNL 24%	+ 19.99 % / 3.29 km/lt	28 - 30%
4	Kenworth 2014	30 TM	120 kmh	Monterrey -Laredo	105,000 km	Diésel 78% / GNL 22%	+ 33.51% / 3.96 km/lt	42%
5	Volvo 2015	30 TM	120 kmh	Monterrey -Laredo	105,000 km	Diésel 81% / GNC 19%	+ 20.44% / 2.64 km/lt	28 - 32%
6	Freightliner 2006	22 TM	120 kmh	Monterrey -Laredo	105,000 km	Diésel 69% / GNL 31%	+ 7.64% / 3.03 km/lt	20 - 24%
7	International 2015	30 TM	120 kmh	Monterrey -Matamoros	135,000 km	Diésel 68% / GNL 32%	+ 29% / 3.95 km/lt	39%
8	Freightliner 1206 2018	30 TM	80 kmh	México -Puebla	90,000 km	Diésel 66% / GNL 34%	+ 25 % / 3.19 km/lt	35%
9	Freightliner 60 2013	25 TM	120 kmh	Laredo- Bajío	180,000 km	Diésel 70% / GNL 30%	+ 15% / 3.45 km/lt	25%
10	Kenworth 2017	30 TM	120 kmh	Laredo- Querétaro	212,000 km	Diésel 58% / GNL 42%	+ 15% / 3.45 km/lt	30%

1. Range of savings due to varying test conditions during the 60-day trial (change in weight, change in truck driver, etc.).



## CANACAR

Four Canacar members participated in the testing

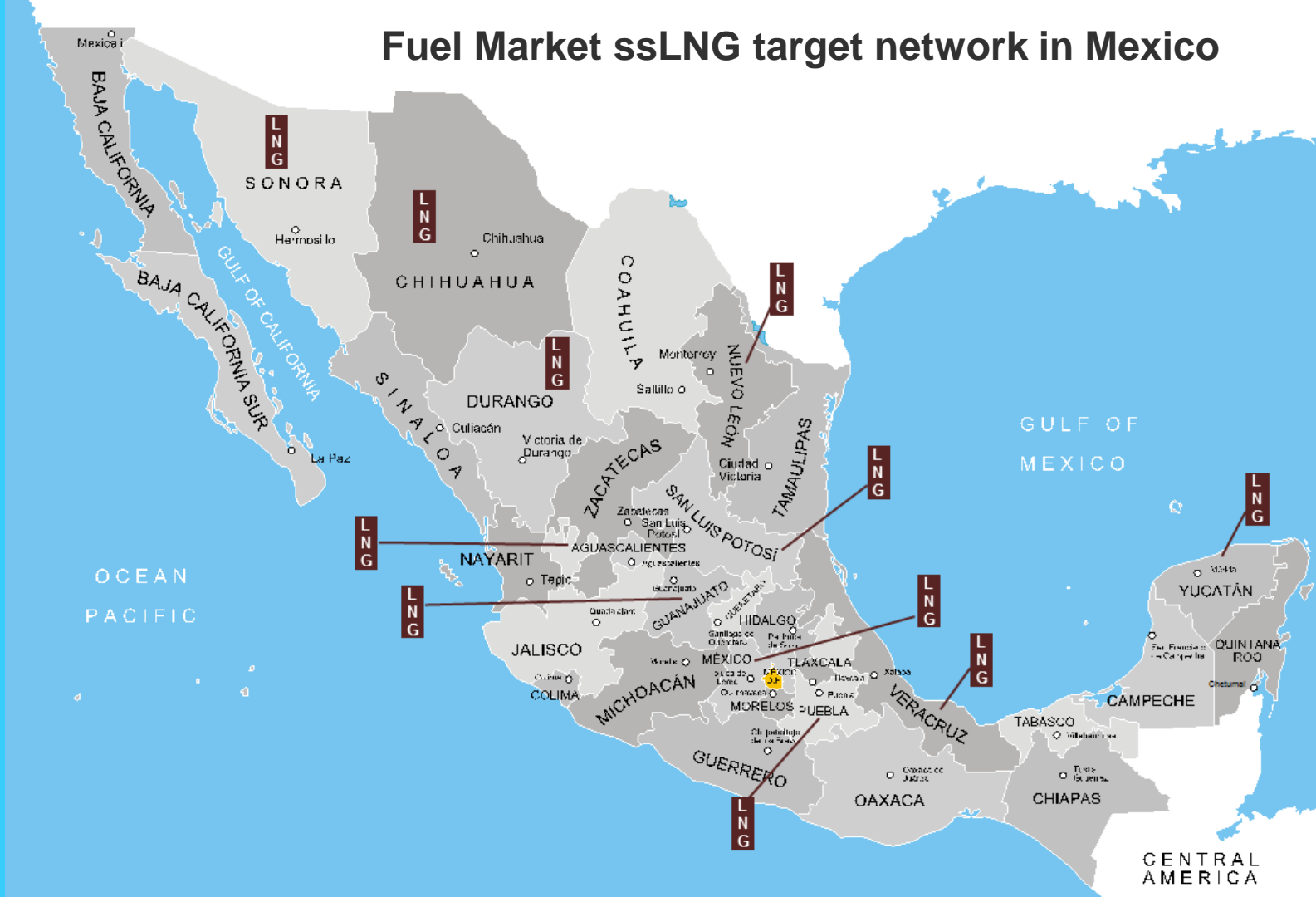


## LNG fueling

During test phase, LNG sourced and supplied via mobile fueling storage and fueling stations



# Fuel Market ssLNG target network in Mexico



# Opportunity considerations

The Mexican natural gas fueled transportation market will grow exponentially into a multi billion dollar industry

US gas and domestic natural gas supply is available and will grow with coming E&P projects

Arbitrage between oil-based and natural gas fuels makes the financing of NGV projects possible

Collateral instruments are available for ease of financing

Technological advancements are driving improved efficiencies and longer equipment life

Mexico is part of the Paris Climate Accord and Kyoto Protocol

Improvement in air quality & noise pollution leads to better health for the people of Mexico

Fuel Market can take advantage of the opportunities presented in the market such as demand created by IMO 2020

## Get in Touch

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### Disclaimer:

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