STEAM TO GASOLINE TO DIESEL TO?

THE POWER OF TOMORROW

AEM Annual Conference 2019
STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
AGENDA

- CNH Industrial: Overview
- Trends and Regulations
- Natural Gas and Biogas
- Battery and Fuel Cell
- Closing
A GLOBAL LEADER IN THE CAPITAL GOODS INDUSTRY

STRONG PRESENCE IN OFF- AND ON-HIGHWAY SEGMENTS

1. AGRICULTURE
- Second largest manufacturer of agricultural equipment
- Global financial services player supporting customers and dealers
- Global leader in regulated markets

2. CONSTRUCTION
- A global player in construction equipment

3. COMMERCIAL & SPECIALTY VEHICLES*
- Market leader in alternative fuels

4. POWERTRAIN
- Global leader in regulated markets

5. FINANCIAL SERVICES
- Global financial services player supporting customers and dealers

$29.7B
Revenues 2018

* 3% of total revenue

STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
COMMITTED TO A BETTER FUTURE

ASPIRATIONAL SUSTAINABILITY TARGETS

CARBON FOOTPRINT

LIFE-CYCLE THINKING

OCCUPATIONAL SAFETY

PEOPLE ENGAGEMENT

CARBON NEUTRAL

FULLY RECOVERABLE

ZERO SERIOUS INJURIES

FULLY ENGAGED
TRANSFORM 2 WIN STRATEGY: A CLEAR PATH TO VALUE CREATION TO 2024

WHERE WE GO

TOP-LINE GROWTH THROUGH INNOVATION AND DISRUPTION

NET SALES *
+5% CAGR TO $35.1B
$13B CUMULATIVE INNOVATION INVESTMENTS

MARGIN IMPROVEMENT THROUGH PERFORMANCE AND SIMPLIFICATION

ADJ. EBIT*
+400 BPS TO 10%

ROIC*
+600 BPS TO 20%

PORTFOLIO VALUE UNLOCKING

SPIN OFF ON-HIGHWAY

CREATING 2 WORLD LEADERS

WHERE WE WILL BE

CREATOR OF SUPERIOR STAKEHOLDER VALUE

* Industrial Activities; Note: figures 2019G-2024E
CNH INDUSTRIAL CORPORATE TRANSFORMATION

CREATING TWO GLOBAL LEADERS IN THEIR INDUSTRIES

GLOBAL LEADER IN SUSTAINABLE AGRICULTURE AND CONSTRUCTION

Vision: Be the partner of choice to feed and build the world

- NET SALES: $15.6B
- ADJ. EBIT: $1.0B

GLOBAL LEADER IN SUSTAINABLE TRANSPORTATION AND PROPULSION

Vision: Be the partner of choice to connect and power the world

- NET SALES: $13.1B
- ADJ. EBIT: $0.5B

Note: 2018 Net Sales and Adjusted EBIT pro-forma
TRENDS AND REGULATIONS
ECONOMIC AND SOCIAL MACROTRENDS

CHANGING OUR FUTURE ENVIRONMENT TODAY

**POPULATION**
Population growth: +2B people by 2050
Changing diets: 10% average calorie increase by 2030

**URBANIZATION**
Rural exodus: 1.5M people move into urban areas each week
Megacities: 140 cities with >3M inhabitants

**CONNECTEDNESS**
Connected devices: Expected to double from 27B in 2019 to 60B in 2024
E-commerce: $4T of e-commerce retail sales globally

**CLIMATE CHANGE**
Economic impact: 11% of the world’s population is vulnerable to climate change impacts
Social: Social awareness and increasing social action

Growing demand for food
Increasing infrastructure demand
Rising transportation needs
Sustainability is fundamental
INDUSTRY AND TECHNOLOGY MEGATRENDS

TRANSFORMING THE CAPITAL GOODS INDUSTRY

DIGITALIZATION
Broad diffusion of digital and connected applications

AUTONOMOUS
Automation enabled by digitalization and robots

SERVITIZATION
Rise of "as a service" offerings in capital goods

ALTERNATIVE PROPULSION
Tightening emission rules and awareness of climate change

Connected is the "new normal"
Vehicle, process and task automation
Emerging service models
Alternative power sources
FUTURE TRENDS

INCREASING EMISSION STANDARDS AND CUSTOMER REQUIREMENTS NEED A DISRUPTIVE APPROACH

NEW REGULATIONS
- 30% CO₂ on-road by 2030* in Europe
- 40% CO₂ on-road by 2030** in the U.S. and Canada
Global regulation convergence
Zero-emission zones

CUSTOMER REQUIREMENTS
Performance
Total Cost of Ownership
Servitization

TECHNOLOGIES
Digitalization and Smartability
Alternative fuels and propulsions
Model-based control

Global Regulation by Emission Level [%]

Global Regulation by Market (2025)

Note: Different baseline years for Europe vs. the U.S. and Canada

* European Union
** International Council on Clean Transportation

STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
### Well-To-Wheel (WTW) — GHG emissions in CO₂ g/km

<table>
<thead>
<tr>
<th>Source</th>
<th>Emission (CO₂ g/km)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fossil Fuel:</strong></td>
<td></td>
</tr>
<tr>
<td>Petrol</td>
<td>125</td>
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<tr>
<td>Diesel</td>
<td>101</td>
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<tr>
<td><strong>Bio-Diesel</strong></td>
<td></td>
</tr>
<tr>
<td>CNG/LNG</td>
<td>90</td>
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<tr>
<td>Municipal waste</td>
<td>20</td>
</tr>
<tr>
<td>Synthetic natural gas</td>
<td>8</td>
</tr>
<tr>
<td>From manure</td>
<td>-80</td>
</tr>
<tr>
<td><strong>Natural Gas &amp; Biomethane:</strong></td>
<td></td>
</tr>
<tr>
<td>Electricity (from renewable or fuel cells)</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: HVO Hydrotreated Vegetable Oils
Source: Elab. Thinkstep Study 2017 and JEC WTW study v4 2014

**INNOVATION PORTFOLIO FOR LOWER CO₂ EMISSIONS**

- **Disruptive technology innovations**
- **Efficient Diesel and CNG/LNG engines**
- **Zero-emission propulsion solution**

**PRODUCT PORTFOLIO: MEETING THE CO₂ CHALLENGE**

*STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW*
MEETING THE CO₂ CHALLENGE WITH A PORTFOLIO OF ALTERNATIVE PROPULSION SYSTEMS

- Compressed and Liquefied Natural Gas
- Battery and Fuel Cell Electrification
- Hybrids thereof

AFTER PIONEERING THE ON-HIGHWAY NATURAL GAS MARKET, WE WILL NOW CREATE THE MARKET FOR OFF HIGHWAY APPLICATIONS IN CE AND AG

CNG PLUS BATTERY ELECTRIC
CNG & LNG IN PARALLEL W/FUEL CELLS
LNG IN PARALLEL W/FUEL CELLS

ENERGY & POWER DEMAND

STEAM TO GASOLINE TO DIESEL TO... THE POWER OF TOMORROW
NATURAL GAS AND BIOGAS
EUROPE HAS WELL-ESTABLISHED INFRASTRUCTURE

**GERMANY**
- 11,000 Biogas plants in total
  - 200 biomethane
- Currently 51% use of energy crops
- Electricity subsidies ending (unless using 100% waste) 2020/21

**FRANCE**
- 742 Biogas plants in total
  - 44 biomethane
- Currently 14% use of energy crops
- ~250 biomethane projects to be commissioned to the grid
- Target: potential to reach 100% renewable gas by 2050

**ITALY**
- 1,700 Biogas plants in total
- 44 biomethane
- Currently 14% use of energy crops
- ~250 biomethane projects to be commissioned to the grid
- Target: potential to reach 100% renewable gas by 2050

**UK**
- 600 Biogas plants in total
  - 92 biomethane
- Currently 6% use of energy crops
- Electricity subsidies ending in 2021
- Subsidies moving to Biomethane production

**EU RENEWABLE ENERGY DIRECTIVES TARGET**: 32% BY 2030
14% OF WHICH IN TRANSPORT SECTOR
SUBTARGET 3.5% FOR ADVANCED BIOFUELS AND BIOMETHANE

**Source:** EBA Statistical Report 2018

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**17,783 BIOGAS PLANTS**

**STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW**

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**CNH INDUSTRIAL**
BIOGAS MARKET TRENDS

NORTH AMERICA HAS ROOM FOR IMPROVEMENT

USA

- Over 2,237 sites producing biogas
  - 250 anaerobic digesters on farms
- Potential for development of 13,500 new sites:
  - 8,241 dairy and swine farms
- California is the #1 state for methane production potential from biogas

CANADA

- 200 operating biogas projects
  - 61 agriculture & food waste,
- Biogas production equivalent to 3% of Canada’s natural gas and 1.3% of Canada’s electricity demand
- Full potential of biogas development: can lead to construction capital investment of $7 bn, economic spin-off $21 bn

2,437 BIOGAS FACILITIES

Sources: American Biogas Council, Canadian Biogas Association
ON-ROAD NATURAL GAS SCENARIO IN EUROPE

INFRASTRUCTURE AND TRENDS

NATURAL GAS DISTRIBUTION

EXPANSION OF THE NETWORK

LNG STATIONS

EUROPE
- HDT natural gas penetration +2% in 2019 vs. 1% in 2018
- Conservative market assumptions of 6% - 8% LNG in HDT segment by 2024

CHINA
- HDT volumes at 6% of TIV (60K units)
- Figures in line with 2019

NATURAL GAS TIV IVECO SHARE 2013-2020

NATURAL POWER TIV >=16TON IVECO NATURAL POWER MS%>=16TON

STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
USING THE CIRCULAR ECONOMY TO COMBINE ECONOMIC ADVANTAGE WITH SUSTAINABILITY

OFF-ROAD NATURAL GAS POTENTIAL

- First in the world to offer an alternative to diesel
- Going beyond CO₂ neutrality/decarbonization
- Delivering better TCO performance vs. diesel
- Bringing the benefits of the circular economy to life
- Enabling farmers to be energy independent
- Already a reality in public transport, introduced concept for construction

STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
T6 METHANE POWER
RUNNING ON NATURAL GAS VS DIESEL

-99% PARTICULATE MATTER

-10% CO₂
NATURAL GAS

-80% TO -180% CO₂
BIOGAS

-80% OVERALL EMISSIONS

-30% RUNNING COSTS

SAME POWER - 180 HP
SAME TORQUE - 740 NM
SAME DURABILITY
SAME SERVICE INTERVALS
PROJECT TETRA

BIOMETHANE VIRTUOUS FUEL CYCLE

WASTE BECOMES THE PATHWAY TO FREE SUSTAINABLE POWER
BATTERY AND FUEL CELL
HOW THE FUEL CELL WORKS

VS BATTERY ELECTRIC

BEV
Battery Electric Vehicle

FCEV
Fuel Cell Electric Vehicle

STEAM TO GASOLINE TO DIESEL TO? THE POWER OF TOMORROW
HYDROGEN

NEGATIVE AND NEUTRAL PRODUCTION

PRIMARY ENERGY
- SOLAR WIND
- ALGAE FROM SUNLIGHT
- BIOMASS
- NATURAL GAS
- OIL
- COAL

SECONDARY ENERGY
- ELECTRICITY, SOLAR ELECTRICITY (SOLAR CRACKING)
- BIOMETHANE, BIOGAS, ETHANOL, VEGETABLE OILS

CONVERSION
- ELECTROLYSIS
- BIOCHEMICAL CONVERSION
- THERMOCHEMICAL CONVERSION
  - SMR: Steam methane reforming
  - POX: Partial oxidation
  - ATR: Autothermal reforming

INTERMEDIARY PRODUCT
- Syngas

FINAL ENERGY CARRIER

GREEN HYDROGEN
- Split water into hydrogen by electrolysis powered by wind and sun
- No CO₂ emitted

CARBON NEGATIVE HYDROGEN
- Produced from sustainable biomass w/renewable energy
- Removes CO₂ from atmosphere

BLUE HYDROGEN
- Split natural gas into CO₂ and hydrogen
- CO₂ stored or reused

CO2 NEGATIVE
- Produced from sustainable Biomass w/renewable energy
ZERO-EMISSION: FUEL CELLS & BEV

WE WILL PARTNER WITH NIKOLA TO DISRUPT THE INDUSTRY

**NAFTA**

- **NIKOLA/ONE**
  - Class 8 sleeper model
  - FCEV

- **NIKOLA/TWO**
  - Class 8 day-cab model
  - FCEV / BEV

**EUROPE**

- **NIKOLA/TRE**
  - Based on IVECO S-Way Platform
  - FCEV

- **BEV**
  - Based on IVECO S-Way Platform

- **FCEV**
  - Based on IVECO S-Way Platform

**PARTNERSHIP ON FUEL CELLS (FCEV) & BATTERY EV (BEV)**

**TOTAL INVESTMENT** $250Mn

**2021**

- FCEV

**2023**

- BEV
  - FCEV

STEAM TO GASOLINE TO DIESEL TO... THE POWER OF TOMORROW
CLOSING
EXCELLING IN DIESEL & NATURAL GAS ENGINES
- Fuel efficiency & CO₂ reduction
- Aftertreatment solutions
- New product introductions

PIONEERING IN DISRUPTIVE TECHNOLOGIES
- CO₂ reduction by 30%
- Product cost advantage
- Payload leadership

INTRODUCING ZERO-EMISSION PROPULSION SOLUTIONS
- CO₂ emission elimination
- TCO certainty built into business model

PRODUCT PORTFOLIO: ROADMAP
SUSTAINING LEADERSHIP IN DIESEL AND GAS WHILE INVESTING IN NEW ZERO-EMISSION SOLUTIONS
OUR PURPOSE
POWERING SUSTAINABLE TRANSFORMATION

OUR VALUES

PASSION
ENTREPRENEURSHIP
TEAM SPIRIT
EXCELLENCE