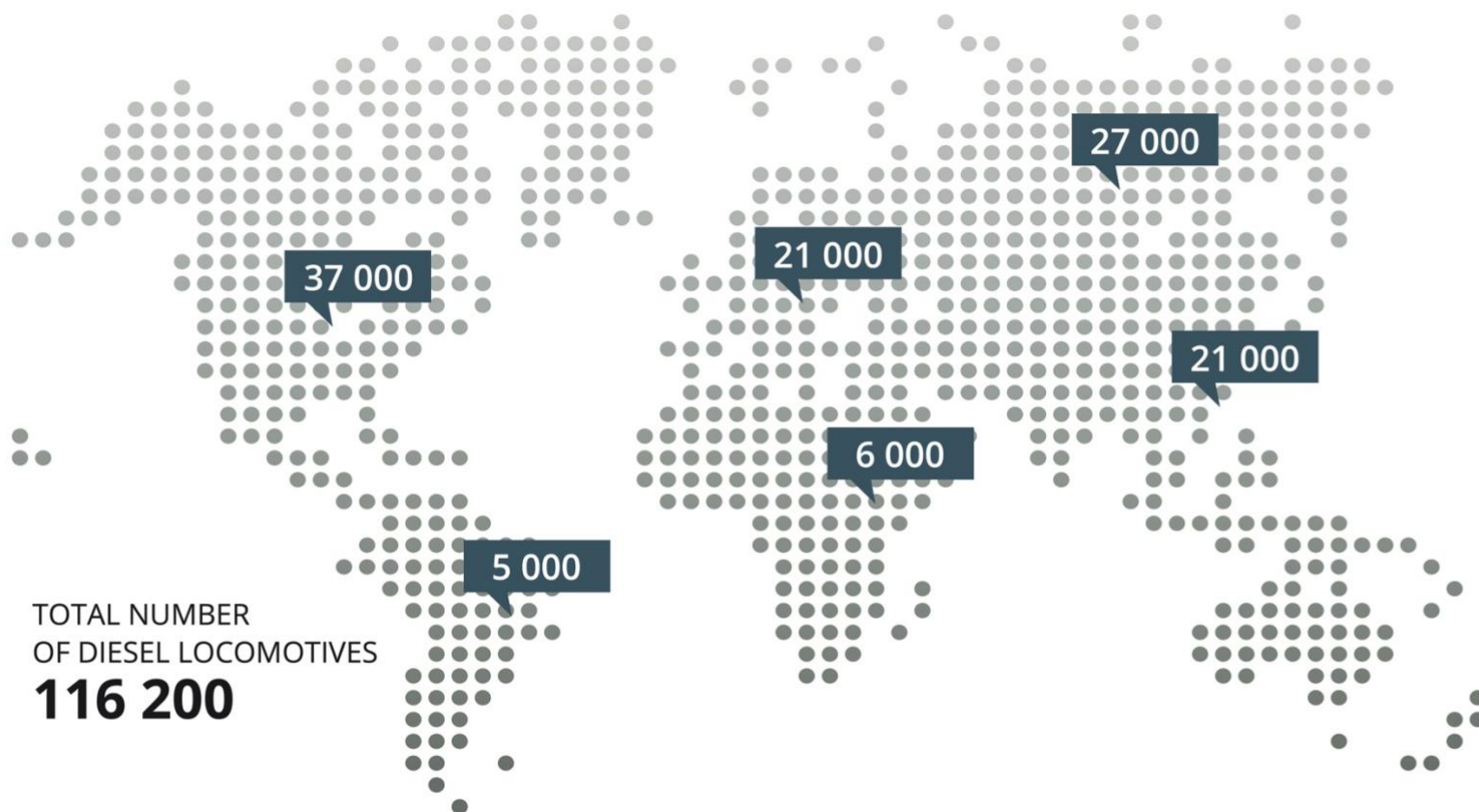


NYSMART

Novel dual-fuel system for modernization of air-polluting diesel locomotives to clean and efficient gas operation

The NYSMART project objective is to finalize, certify and pilot the NYSMART dual fuel system for 5 most used in Europe locomotive types and achieve ready to market product with the actual dual fuel system proven in an operational environment. In order to achieve this objective, the work plan spans a duration of 24 months, consists of 7 working packages (WP) and its overall structure follows a logical flow to take the NYSMART technology from TRL6 to TRL9 - compliance testing, field demonstration, and certification - the precursors for full market entry



VALUE FOR RAILWAY OPERATORS

- Diesel substitution rate from 55% to 80%, depending on the load
- Fuel-cost savings in a range of 30% to 50%
- Versatile – minimal tailoring to individual engine types
- Compatible and certifiable on all diesel locomotives
- Simple installation and low maintenance costs
- Provides remote monitoring and operator control (data on more than 100 various indicators supplied in real time)
- Offers a **very fast payback** of less than 1,5 years (less than 3,5 years in a case of shunter locomotives)

*Based on operational ChME3 shunter locomotive tests in Latvia

DIGAS COMPETITIVE ADVANTAGES

- LOWER COST
- HIGH DIESEL FUEL SUBSTITUTION RATE
- REMOTE MONITOR AND OPERATOR CONTROL
- CERTIFIED LOCOMOTIVE DEDICATED DUAL FUEL SYSTEM

NYSMART SYSTEM AND ENVIRONMENT

- Emissions reduction:
– 80% PM, – 30% NO_x, – 80% SO₂
- Annual external health costs reduction:
> EUR 150 000 per mainline locomotive
> EUR 80 000 per shunter locomotive
- Noise reduction: – 50%
- Vibration reduction: – 30%
- CO₂ reduction:
20% to 25% if CNG and 70% if RNG is used

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