

**EVER WONDERED  
HOW WE CAN SPEED UP  
THE GLOBAL ENERGY TRANSITION  
IN AN ECONOMICAL AND  
ENVIRONMENTAL SUSTAINABLE WAY?**

**WE BELIEVE WE DO HAVE THE SOLUTION  
AND IT'S NOT ELECTRIC...**

**IMAGINE A REVOLUTIONARY  
NEW ENGINE MANAGEMENT SYSTEM,  
PROVEN FOR ANY COMBUSTION ENGINE,  
ALLOWING ANY FUEL,  
SAVING 100% FOSSIL CO2  
AND EVEN RAISE FUEL EFFICIENCY...**

## COMBUSTION PRESSURE BASED CONTROLLED

ENGINE MANAGEMENT



### Energy transition

The main objective of the energy transition is to reduce global warming. One possibility is leaving fossil fuel underground. This demands for solutions that enable sustainable fuels. Many new fuels enter the market. For instance Methanol which can be made from solar and wind power, or Ethanol which can be made from non-food biomass. Besides these two fuels there are many more fuels available, for example; (Bio) -LNG, -Propane, etc...

### How?

Imagine an engine management system, that is able to observe the combustion and therefore is able to optimise and control the combustion in such a way that always the best possible power stroke is delivered. Optimally tuned to emissions and efficiency, stroke by stroke, throughout the entire lifetime. With ArenaRED many fuels become possible to use, this allows the user to be ready for the future not having to understand tomorrows fuel prices.

### ArenaRED

ArenaRED offers such an engine management system, based on combustion pressure sensing. To achieve this, ArenaRED has developed her own; 1) chip in order to be able to do all the calculations needed to auto adjust, 2) Fiber Optical Combustion Pressure sensor with two measurement points eliminating thermal shock, 3) Fuel injectors with options to parallel integrated diesel and sustainable fuel injection plus a built-in Combustion Pressure Sensor. The combination of those three products enables ArenaRED to perform as a total solution provider for Retrofit and/or OEM. We can support with rapid prototyping and engine testing.

### Current Status

ArenaRED has realised her first field application on the river ship MTS Argonon equipped with Caterpillar 3500 engines. Running world's first RCCI application resulting in ultra clean emissions without SCR and DPF, ultra-high efficiency and ultra-low engine noise, while using 99% LNG. ArenaRED is currently working on a Mercedes Sprinter Diesel to (M)Ethanol conversion kit which is expected as a proto on the road in 2021 and deliverable in 2022.

**We smooth the energy transition.**

