



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project DESTA

### Demonstration of 1st European SOFC Truck APU

Within the DESTA project the first European SOFC (“Solid Oxide Fuel Cell”) Truck APU (“Auxiliary Power Unit”) will be demonstrated. SOFC technology offers big advantages compared to other fuel cell technologies due to compatibility to conventional road fuels like diesel. Within the last years significant improvements have been made to bring SOFC stack technology and APU BoP components to prototype and product level. The project will begin with APU requirement definition for application of an SOFC APU into an US type Volvo heavy-duty truck. In parallel the test conditions for the vehicle test and off-vehicle tests will be elaborated. Due to huge development efforts at Eberspächer and AVL at project begin of DESTA already 2 SOFC APU systems will be available at laboratory prototype level. These 2 APU systems (in each case 3) will be tested based on an accelerated test profile for at least 1 year. Based on the test results and additional investigations a benchmark of the 2 systems will be performed by the independent research institute Forschungszentrum Jülich. Based on this benchmark and derived recommendations the 2 systems will be merged and optimized to one final DESTA SOFC APU. In this process the most promising approaches from both systems will be identified and realized in the final DESTA SOFC APU. In parallel to the system test and development TOFC will focus on SOFC stack optimization. In this project the decision has been made to focus on ASC stacks to due high maturity of this technology. This technology is already very close to industrialization. But the stacks still have to be improved in terms of start-up time, lifetime and sulphur tolerance which will be performed in WP3. Finally the optimized DESTA SOFC APU systems will go into tests. On the one hand the truck demonstration and on the other hand laboratory systems tests (performance, long-time, vibration, salt spray,..) will be performed.

## Project Information

**Type of project :** Demonstration

**Timing :** 01/01/2012 > 30/06/2015

**Project website:** <http://www.fch.europa.eu/project/demonstration-1st-european-sofc-truck-apu>

**Project Budget :** 10.441.618 €

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## Funding

European Union through FCH JU: Grant agreement 278899 - [CORDIS link](#)

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## Project partners

**Coordinator :**

[AVL](#)

**Partners :**

[Volvo Group](#)

[JÜLICH - Forschungszentrum Jülich GmbH](#)

[EBERSPAECHER CLIMATE CONTROL SYSTEMS GMBH & CO KG](#)

[TOPSOE FUEL CELL A/S](#)

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**Sub project(s)**

**Sub project 1**

**Country:** Austria

**Address:**

HANS-LIST-PLATZ 1 8020 GRAZ

**Sub project categories**

Demonstration

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Project Id: 947

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