

PROJECT

## **E-Illum AC System**

### **An advanced air conditioning system for Electric Vehicles**

**Funding:** European (Horizon 2020)

**Duration:** Feb 2018 - Jul 2018

**Status:** Complete

**Total project cost:** €71,429

**EU contribution:** €50,000



[CORDIS RCN : 213653](#)

#### **Objectives:**

E-Illum A/C project aims at launching an advanced air conditioning system in the automotive sector, made using an innovative material called E-Illum as a new thermal source of air conditioning absorption. This system can reduce the energy consumption of the electric vehicle's air conditioning system by 20-40%.

The solution developed will make more efficient use of energetic resourcing, reaching a perfect control of the cooling process and reducing weight and installed power. It will increase the energy availability distances per charge and the general vehicle comfort thanks to the reduction of noise and cooler picks. Furthermore, E-Illum A/C will reduce the costs of the A/C car components and the time and costs of A/C maintenance.

The E-Illum A/C is a closed cycle system, instead of the common A/C system, because the thermal energy isn't released into the atmosphere as the actual external radiator is sited in the vehicle itself. It is also less harmful to the ozone layer as no HFCs gases are used.

The goal is to realise a strong business growth of E-WENCO initiative: to sell more than 100,000 E-Illum AC Systems per year, with an annual turnover of over 14 million euros.

#### **Parent Programmes:**

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

#### **Lead Organisation:**

**E-Wenco Srl**

**Address:**

VIA SAN MICHELE DEL CARSO 23  
20025 LEGNANO  
Italy

**EU Contribution:** €50,000

#### **Technologies:**

Road vehicle design and manufacturing  
Air conditioning system using innovative material E-Illum

**Development phase:** Implementation

Transport

**STRIA Roadmaps:** electrification

**Transport mode:** Road transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Environmental/Emissions aspects, Decarbonisation

**Geo-spatial type:** Other