



Coordinator:
Compagnie Nationale du Rhône



5 Partners



01/10/2022
30/06/2028



More than 20M€
investments

CONTEXT

The **photovoltaic** sector is facing a **scarcity of available land** to develop new solar parks, despite playing an essential role in achieving the **energy transition objectives** set by the **French government**.

Large-scale linear photovoltaic systems are a response to this challenge, optimizing the use of long, narrow land and structures already dedicated to other uses (**dikes, railway and road edges, cycle paths, etc.**), while preserving natural spaces.

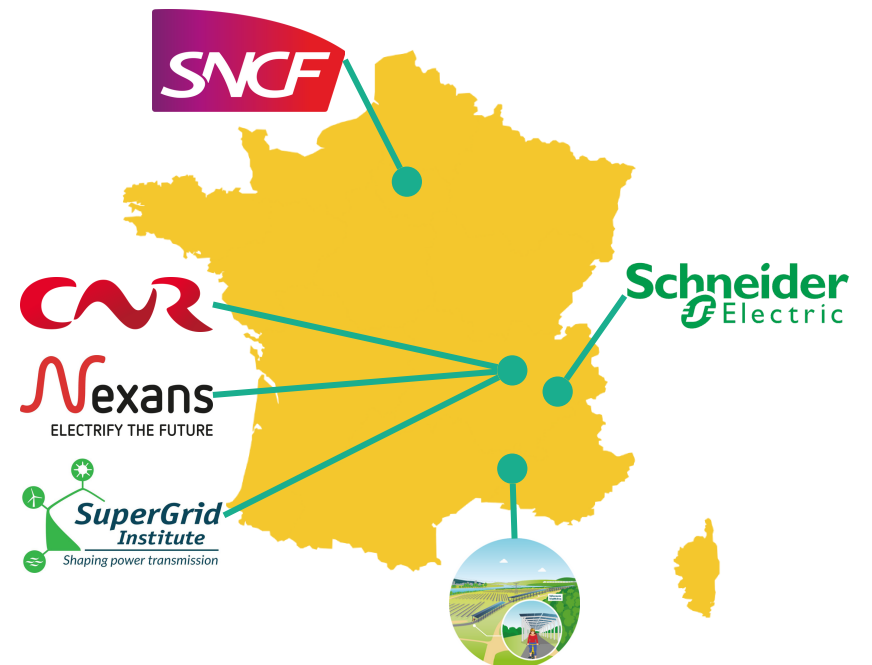
OBJECTIVES

- ☒ **Study the photovoltaic potential and integration solutions** on long, narrow land along **existing infrastructures**
- ☒ **Reduce electrical losses** due to the great length of cables, by developing technological building blocks to **replace alternating current with high voltage direct current**
- ☒ **Test the electrical architecture** and all prototypes on site thanks to the construction **of a demonstrator**

TARGETED IMPACTS

- ☒ **Environmental impacts**
 - ☒ **Preservation of natural, agricultural or forest surfaces** without technical installations.
 - ☒ **Reduction of GHG emissions** from direct current vs. alternating current architectures
 - ☒ **Reduction in the volume of materials** used for direct current equipment
 - ☒ **Reduction in the use of raw materials** through the use of recycled materials (cables).
- ☒ **Economic impacts:**
 - ☒ **A gross deployment potential in France of 60,000km**, or a capacity close to 60 GWc
 - ☒ **Benefits for the entire renewable energy sector** (energy producers, equipment suppliers and installers)
 - ☒ **A new source of infrastructure monetisation** (railways, dikes, etc.).

CONSORTIUM



« ViaSolaire du Colombier » Demonstrator in Caderousse (84), France

DEMONSTRATOR

- ☒ A **canopy structure**, approximately **900m in length**, installed as a cover for the **ViaRhôna cycle route**
- ☒ An electrical architecture **with high voltage direct current (+/- 5kV)**
- ☒ An installed **photovoltaic power** of approximately **1MWc**



Visual impression of the « ViaSolaire du Colombier » Demonstrator

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