



NEW STORAGE LATENT AND SENSIBLE  
CONCEPT FOR HIGH EFFICIENT CSP PLANTS



Schweizerische Eidgenossenschaft  
Confédération suisse  
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**Project acronym: NEWSOL**

**Project full title: NEW StOrage Latent and sensible concept for high efficient CSP plants**

## **Deliverable D8.1 - Exploitation Plan Intermediate - Materials**

### **ABSTRACT**

The aim of deliverable 8.1 has been to assess the exploitation potential of the materials that has been developed during the NewSOL project.

An approach consisting of the following steps have been applied:

- Identification of the NewSOL materials
- Confirmation of ownership/IPR for each of the 11 identified material
- Development of data collection Protocol to facilitate data collection on exploitation issues from each of the involved partners
- Analysis of the collected input, implying categorisation of the material in terms of application areas, level of innovativeness, market segments
- Assessment of market sectors
- Development of a cost model that can also be used for the exploitation efforts to be reported in D8.3 Exploitation of NewSOL
- Development of business cases for the materials that were to be identified as having a commercial market potential due to novelty

The level of uniqueness or innovativeness is an important criterion to determine if a given material has an actual commercial potential.

The deliverable concluded that there are 5 individual materials that can be regarded as innovative materials that can have a substantial commercial market potential. These are the two types of Ultra High thermal performance concrete (Material 1A and Material 1B), although based on two rather distinct recipes the functionalities and performance of the materials are similar and they can be used for similar type of applications, hence they will be addressing the same type of market segments: namely the CSP market, power generation market, and industrial application producing excess heat. Secondly, it is Material M2 High insulation light weight expanded polystyrene concrete that possess unique features in terms of the very high temperature resistance. The fourth material is the filler rocks, or the mining slags, which has proved useful as a heat storage material. However, since the material



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as such is of the ownership of the mining company, NewSOL cannot claim ownership of the material but only on the testing methods. Finally, we have the molten salt, the YARA MOST ternary salt, which possess very high market prospects within the CSP market.

This Deliverable 8.1 will form input to Deliverable 8.3 which will specifically at the market prospects for the NewSOL Module and the NewSol Tank.