



## Update from the Field – April 2021

A monthly analysis note from the energy storage experts

## **Table of contents**

Executive summary	2
New regulations and initiatives discussed this month	5
Americas	5
Canada	5
Europe	5
France	5
Project updates and announcements	6
Overview of the 2021 market for utility-scale energy storage projects	6
Projects announced or contracted this month	6
Australia & Oceania	7
Europe	8
Projects commissioned this month	8
Europe	8
Tenders this month	9
Africa	9
Focus of the month: benchmark of storage system performances	10
Round trip efficiency	10
Overview of guaranteed efficiency proposed by suppliers	10
Impact of environment on storage round trip efficiency	11
Simulation of operation under various conditions	12
Usage profile: 2 cycle/day, for 1h storage system in France's winter average day (5°C)	13
Usage profile: 2 cycle/day, for 1h storage system in France's summer average day (22°C)	13
Usage profile: 2 cycle/day, for 1h storage system in Sahelian average day (30-45°C)	14
Conclusions	14
Degradation and lifetime	15



## Update from the Field – April 2021

A monthly analysis note from the energy storage experts

## Table of figures

Figure 1: Utility-scale energy storage projects announced/contracted and commissioned in 202 and 2021 (ongoing)
Figure 2: Global efficiency of storage systems1
Figure 3: High-level view of Clean Horizon's thermoelectric model 1
Figure 4: Performance indicators for France's summer average day (22°C) 1
Figure 5: (a) indoor temperature profile and (b) Operating curve and duty cycle for a average winter day in France
Figure 6: (a) indoor temperature profile and (b) Operating curve and duty cycle for average summer day in France
Figure 7: (a) indoor temperature profile and (b) Operating curve and duty cycle for average Sahelian day
Figure 8: Global efficiency evolution versus the temperature and the per day cycles number 1