



# CLEAN HORIZON

The Energy Storage Experts



## Online energy storage training sessions 2020

**Introduction to markets, technologies, costs and risks**  
**Markets and regulations for storage in Europe**  
**Storage business cases in France & Great Britain**

**May 26th, 3pm-6pm CET**  
**May 28th, 3pm-6pm CET**  
**June 2nd, 3pm-6pm CET**





# Clean Horizon was founded in 2009 as a “one-stop shop” consultancy 100% focused on energy storage

## MARKET ANALYSIS



Our experts track the development of energy storage markets and related regulations on all continents and leverage this knowledge to develop go-to-market strategies tailored to our customers' needs.

**Update from the Field**  
*Monthly analysis notes*

**CHES**  
*Storage projects database*

## TECHNICAL CONSULTING



Relying on CRE-STORE, our dedicated energy storage modeling tool, we act as owner's engineer and lender's engineer for IPPs worldwide.

We also work for national utilities to help them quantify their energy storage master plan.

**CRE-STORE**  
*Storage simulation tool*

# Webinar training: Session 1

## Energy storage: introduction to markets, technologies, costs and risks



### Speaker

Michael SALOMON Ph.D.  
**CEO**  
**Clean Horizon**

Michael obtained his engineer's degree at Mines ParisTech in France and his Ph.D. at Stanford in the USA. He witnessed the booming of cleantech venture capital and entrepreneurship while an academic in the Silicon Valley, and then went on to become a management consultant at McKinsey & Company in Paris.

In 2009, he founded Clean Horizon in Paris which he has led and grown since then. Since its creation, Clean Horizon has confirmed its status as the world's sole consultancy to be fully dedicated to energy storage. Clean Horizon is active globally (Europe, Africa, Americas, Asia) both as a market analyst and as a technical consultancy focusing on energy storage.

### Agenda:

1. Introduction to the storage markets worldwide
  - Storage technologies
  - Applications
  - Trends in the market
2. Lithium-ion: the benchmark for the next 10 years?
  1. CAPEX, Li-ion future prices at the cell and container levels
  2. Operation & maintenance
  3. Fire safety: best industry practices
3. Beyond lithium-ion:
  1. Other existing technologies: flow batteries, gravitational storage
  2. Hydrogen case studies: industry, mobility, electricity
  3. 2<sup>nd</sup> life batteries' potential: projects, reuse VS repurpose

### What's included:

- 3-hour live webinar
- Q&A
- Training slides

### When:

**May 26th 2020, 3pm to 6pm CEST**

### Who should attend?

Any stakeholder interested in understanding the energy storage markets and the different technologies available

### Session prerequisites:

None

### Session objectives:

This introductory session to energy storage is a great introduction to

- Global energy storage markets, taking a look at the broader picture from an international perspective
- Energy storage technologies and applications

### PRICE

**400 EUR net of VAT per participant per session**

### **GROUP DISCOUNT (3 - 10 people)**

*Benefit from a total price of 1 000 EUR net of VAT per session*

# Webinar training: Session 2

## Markets and regulations for storage in Europe



### Speaker

Corentin BASCHET, MSc.  
**Head of Market Analysis  
Clean Horizon**

Corentin Baschet graduated in engineering at Ecole des Ponts et Chaussées in Paris and studied his master in sustainable energies at the Imperial College in London. He first developed his technical skillset by working in anaerobic submarine energy propulsion systems and racing yachts electricity system.

At Clean Horizon, Corentin is the Head of market analysis activities, thus overseeing one of the two business units of the company. As such, he acts as project manager on key market analysis projects. In parallel, he maintains a hands-on approach of key development markets for the ESS market.

Corentin has worked on more than 50 engagements regarding energy storage since 2017.

### Agenda:

1. Overview of the European markets
2. The capacity markets in Europe
  - Strike price mechanisms in Italy & Ireland
  - Peak activation in France & Great Britain
3. Frequency regulation markets
  - Continental Europe & FCR
  - Italy and fast reserves
  - Great Britain: FFR, EFR and DC
4. Arbitrage on the balancing mechanism and wholesale markets
5. T&D investment deferral
  - GB: DSO local flexibility
  - German Netzboosters
  - France and RINGO

### What's included:

- 3-hour live webinar
- Q&A
- Training slides

### When:

**May 28th 2020, 3 pm to 6 pm CEST**

### Who should attend?

Investors, developers, independent power producers willing to discover the different revenue streams available for a storage system in Europe. This session is also a good opportunity to apprehend how the European market structure enables storage development through revenue stacking to maximise benefits.

### Session prerequisites:

None

### Session objectives:

To understand the market structure in Europe, its benefits for energy storage and the market developments for storage to provide a variety of services across the electricity supply chain (from generation to distribution).

### PRICE

**400 EUR net of VAT per participant per session**

### **GROUP DISCOUNT (3 - 10 people)**

*Benefit from a total price of 1 000 EUR net of VAT per session*

# Webinar training: Hands-on session

## Energy storage business cases in France and Great Britain



### Speaker

Samuel PORTEBOS, MSc.  
**Head of engineering**  
**Clean Horizon**

Samuel graduated in engineering at Ecole Centrale de Lille (France) and in electrical engineering at Pontificia Universidade Catolica de Rio de Janeiro (Brazil).

At Clean Horizon, Samuel is the Head of engineering, one of the 2 business units of the company. As such spearheads all the company's technical consulting activities, which include identification of the need for energy storage at the local or national level, optimal sizing of energy storage projects, and storage projects due diligence.

Samuel has been active on over 48 storage projects in more than 25 countries, representing a volume of more than 700 MWh of storage capacity.

### Agenda:

1. Financing energy storage projects
  - Commodity risks
  - Merchant risks
  - Revenue diversification
2. The business case in continental France
  - Frequency Containment Reserve revenues
  - Capacity market
  - Expected shift towards arbitrage revenues
3. The business case in Great Britain
  - Capacity market
  - Arbitrage on the BM
  - Wholesale market revenues

### What's included:

- **3-hour live webinar**
- **Q&A**
- **Training slides**
- **Two Excel business cases**

### When:

**June 2<sup>nd</sup> 2020, 3 pm to 6 pm CEST**

### Who should attend?

Investors, developers, independent power producers willing to have a deep understanding of the revenue stacking in France and Great Britain as well as the risks associated with the projects.

### Session prerequisites:

Good understanding of the revenue streams available and regulations in place for storage to participate in the different markets (Session 2)

### Session objectives:

- Precise understanding of the different revenues accessible and optimization of the gains
- Understanding the revenue stacking strategies in France and Great-Britain

### PRICE

**400 EUR net of VAT per participant per session**

### **GROUP DISCOUNT (3 - 10 people)**

*Benefit from a total price of 1 000 EUR net of VAT per session*



## HOW TO ENROL ?

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**ONLINE REGISTRATION on [www.cleanhorizon.com/online](http://www.cleanhorizon.com/online) store:**

Session 1: [Energy storage: introduction to markets, technologies, costs and risks](#)

Session 2: [Markets and Regulations for storage in Europe](#)

Session 3: [Energy storage business cases in France and Great Britain](#)

You will need to create your client account to proceed with your registration.

***Interested in signing up for the 3 sessions?***

You can benefit from an additional discount of 10% if you sign up to the 3-in-1 session package!!!

Please select our [3-in1 training webinar](#) in our online store.

**FOR MORE INFO, please feel free to contact us at [training@cleanhorizon.com](mailto:training@cleanhorizon.com)**



**CLEANHORIZON**

The Energy Storage Experts



**Thank you!**  
**[www.cleanhorizon.com](http://www.cleanhorizon.com)**

**Europe (France)**  
Clean Horizon Consulting  
Paris  
[europe@cleanhorizon.com](mailto:europe@cleanhorizon.com)  
Direct: +33 1 78 76 57 04

**Americas (USA)**  
Clean Horizon Americas  
Miami, FL  
[americas@cleanhorizon.com](mailto:americas@cleanhorizon.com)  
Direct: +1 (786) 901-7784

