

Longer-Duration Storage; Hours To Days

12:15-5pm Thursday 4th May 2017

[The Institution of Mechanical Engineers, One Birdcage Walk, London, SW1H 9JJ](#)

The current expansion in deployment of storage has been driven by short-duration needs, whether for frequency response or for short periods of inadequate peak capacity. We are also looking forward to the initiation of the market in network asset deferral. This step change in storage deployment is very welcome and supported by ESN. However, the immediate benefits of short-duration solutions risk overshadowing the need for development of longer-duration storage solutions for future energy balancing, i.e: when total electricity generation exceeds or does not meet demand over a period of a few hours to several days. According to Imperial College, some 30% of our electricity production by 2030 would need to be curtailed without the introduction of flexibility solutions such as demand-side response and storage.

Storage assets are beginning to be installed now, and commercial and regulatory frameworks being considered, that are likely to persist into the 2020s. It is therefore important that these be developed with a view to longer-duration service needs. This seminar, with presentations, panel sessions, and active audience discussion, will consider:

- The volumes and timescales over which longer-duration storage may be needed
- Current regulatory and market arrangements for deployment of longer-duration storage
- Prospects for the future regulatory and market landscape

Programme

	Registration and Refreshments
12:15	SESSION 1 - Chairman's welcome and introduction
	The emerging need for longer-duration storage Anthony Price, Chairman, ESN
12:30	SESSION 2 – The Challenge Chairman: Zoltan Zavody, ESN
	Energy balance and curtailment of generation Goran Strbac, Imperial College London
	Audience Discussion – Is the physics right? What are the sensitivities? What are the obvious solutions in physical terms?
	Energy balance and energy trading – economics Tbc
	Energy balance and renewables generation Edward Kenney-Herbert, RES

	Audience Discussion – How far will the market self-balance? What is the scope for storage solutions given other flexible providers and markets?
13:50	Refreshments
14:10	SESSION 3 - Current Market Frameworks Chairman: Anthony Price, ESN
	Perspective from long-duration storage developer Stuart Nelmes, Highview Power
	Perspective from portfolio storage developer Marek Kubik, AES
	Panel debate: How do we invest today when technological capabilities are still developing? What signals and revenue streams are there for long-duration storage in the short-term? Panellists: Stuart Nelmes Highview Power, Marek Kubik AES, Scott McGregor redT, Peter Taylor Quarry Battery
15:10	Refreshments
15:30	SESSION 4 - Frameworks for the Future Chairman: Zoltan Zavody, ESN
	The role and drivers of different parties on the energy system Tbc: Ofgem
	The Role of the SO in the energy markets Paul Lowbridge, National Grid
	Audience Discussion – What are the relative merits of different players? How will this work with increasing volumes of generation-demand imbalance?
	DNO flexibility tenders Sotiris Georgiopoulos, UKPN
	Efficient coordination of services Rory McCarthy, Origami Energy
	Panel debate: Which shorter-term and longer-term services can realistically be coordinated? What further developments in market frameworks are needed for this to happen? What can we expect to happen in 2017/2018?
16:50	SESSION 5 – Chairman’s Close
	Next steps – ESN Policy Development Anthony Price, Chairman, ESN
17:00	Close

The organisers reserve the right to modify this programme.

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