Younicos
Let the fossils rest in peace.
Batteries for balancing power
- a regulatory review

January 22nd, 2016
Why do we need batteries in the grid?
Because they limit must-run costs of conventional generators

BNetzA reported for the first half of 2015 costs of €149m for curtailment of renewables and €253m for redispach measures.
And because they do a better job than conventional technology

**Must-Run Environment**

**External Costs**

Performance
Will we open the door for battery storage?
Capacity requirement for storage: Technological discrimination and the 15min vs. 30 min-Question
How much capacity do batteries need to reserve for the worst case?
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30min requirement

15 min requirement
Current regulators issues

**Guideline Electricity Transmission System Operation**
- Defining 15min capacity requirement for storage to participate in the market for frequency containment reserve
- Final decision in Feb/March

**European Market Design Initiative**
- Definition of storage in unbundled energy markets
- Market Design for increasing share of renewable → reform of ancillary services
- Ownership role of storage for TSOs/DSOs?

**New markets opening up quickly**
- Enhanced Frequency Response Tender in the UK
- DS3-service package in Ireland
Batteries are not a technology for the future, but for today
Thank you for your attention!

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