



## Storage Business Models: Lessons for Electricity from Natural Gas, Cloud Data and Frozen Food

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**Abstract** The aim of this paper is to evaluate different well-established non-electrical storage markets (gas, frozen food and cloud storage) in order to identify relevant lessons for electrical energy storage (EES) connected to the electricity distribution networks. The case studies that have been evaluated are Centrica Storage (gas storage), Google Drive (cloud storage) and Oakland International (frozen food storage). A specific business model methodology has been selected for comparing the different business model components across these sectors. The methodology (following Johnson et al., 2008) refers to key interconnected components: customer value proposition, the revenue formula, key resources and key processes. The evaluation of the three case studies suggests that well-developed business models already exist in growing and mature storage markets. Regulation also plays an important role across the different storage markets and business model components, however its importance varies depending on the type of market. Innovation in storage business models is also observed (technological and contractual) which should be also facilitated in EES. Innovation helps move markets towards more sustainable business models.

**Keywords** Business models, electrical energy storage, natural gas storage, frozen food storage, cloud storage.

**JEL Classification** L94, Q48

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