



AALBORG UNIVERSITET

Panel: What are the Most Important Research Challenges in Energy Data Management?

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Panel/Roundtable Discussion



- Answer these questions (and perhaps more)
- What are the research challenges within energy data management?
- What are their nature (scientific, technical, interdisciplinary,..) ?
- Which ones are the most interesting
 - From a scientific point of view?
 - From a societal point of view?

My Own Opinions



- Research challenges
 - Modeling and management of energy flexibilities
 - ◆ More powerful flexibility models
 - ◆ Aggregating, scheduling, and disaggregating flexibilities
 - Open and realistic benchmarks with associated open datasets
 - Predicting/forecasting energy consumption, production, and flexibilities, at a very fine-grained level.
- Technical challenges
 - Community-wide common definitions of data and information concepts, e.g., standardized ontologies
 - Standardization of communication protocols, e.g., for communicating available flexibilities

My Own Opinions



- *Interdisciplinary challenges?*
- Perhaps the most important from a societal perspective
 - Interplay between data management and human-computer interaction to determine how to interact with a smart grid system
 - New economics-based business models and energy taxation schemes for ensuring flexible consumption
 - ◆ Mixing monetary and non-monetary incentives
 - An example of data management, HCI, and economics interacting to develop viable solutions for the smart grid is found in the Danish Totalflex project www.totalflex.dk

And Now, Let's Discuss!



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