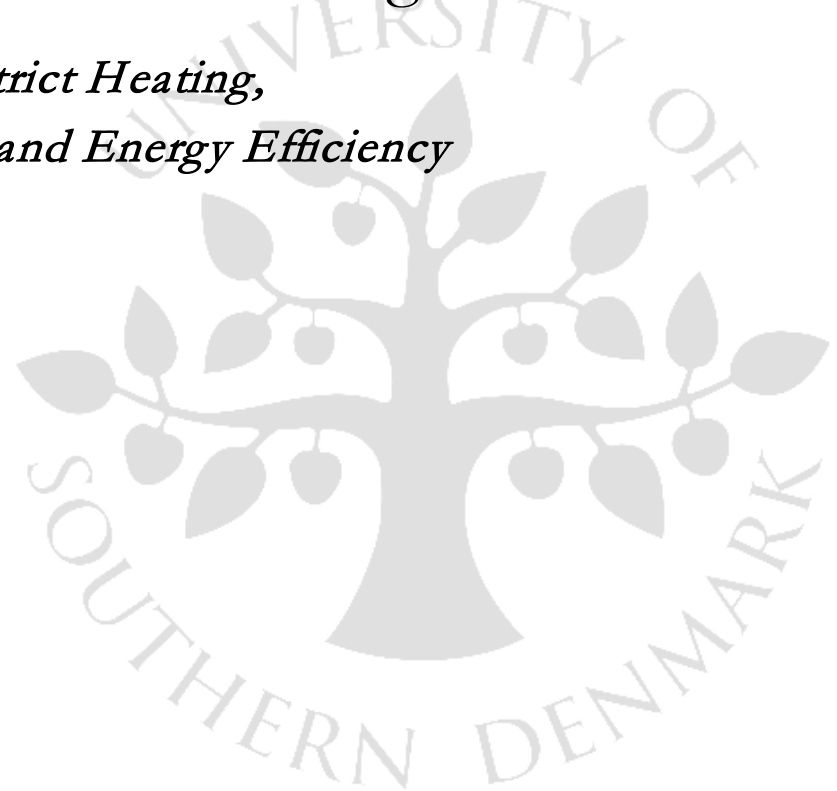




Purpose limitation for smart metering data

*4th Generation District Heating,
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Abstract

More and more households and businesses in Europe are equipped with a digital utility meter that can register and pass on the consumption (supply data) remotely.

Smart meters have for some time been on the political agenda in the EU. Smart meters (“electronic metering”) were mentioned as a tool to gain energy efficiency back in 2006 in the Energy Service Directive. In accordance with the market directives for electricity and natural gas from the Third Energy Package.

The reason for the out roll of smart meters is primary for billing purposes. But the expected better data can be used for many different things, including fault detection, dimensioning and optimization of the grid. However, supply data are personal data. As of May 2018, new rules from the EU’s regulation of personal data (General Data Protection Regulation - GDPR) has come into effect and includes some principles relating to processing personal data. Among other things, personal data must be collected for explicitly-mentioned and legitimate objectives and cannot be processed in a way that is incompatible with these objectives.

This paper will investigate the purpose limitation principle in relation to smart metering data. To what extent can smart metering data be used and sold to other purposes than billing? By the utilities, by the Government? There are no clear limitations in the EU legislation on how the data may be used, nor any limitations on how often utility meters may be read.

Bent Ole Gram Mortensen

Digital Leninism

- An Orwellian scheme seeking to establish an all-seeing state
- Big data as part of a national security strategy and political control system
 - Social Credit Systems
- Sebastian Heilmann: Leninism Upgraded: Xi Jinping's Authoritarian Innovations in China
Economic Quarterly 20 (4), Dec. 2016

But what about metering?

- Many households and businesses in Europe are equipped with a digital utility meter
 - Usually referred to as smart or intelligent meters
- Automatic meter reading (AMR)
 - Saving the utility providers the periodic trips to each physical location to read a meter
- Based on advanced metering infrastructure (AMI)
 - Includes two-way communication between the meter and a central system and records energy consumption hourly or more frequently

Metering as personal data

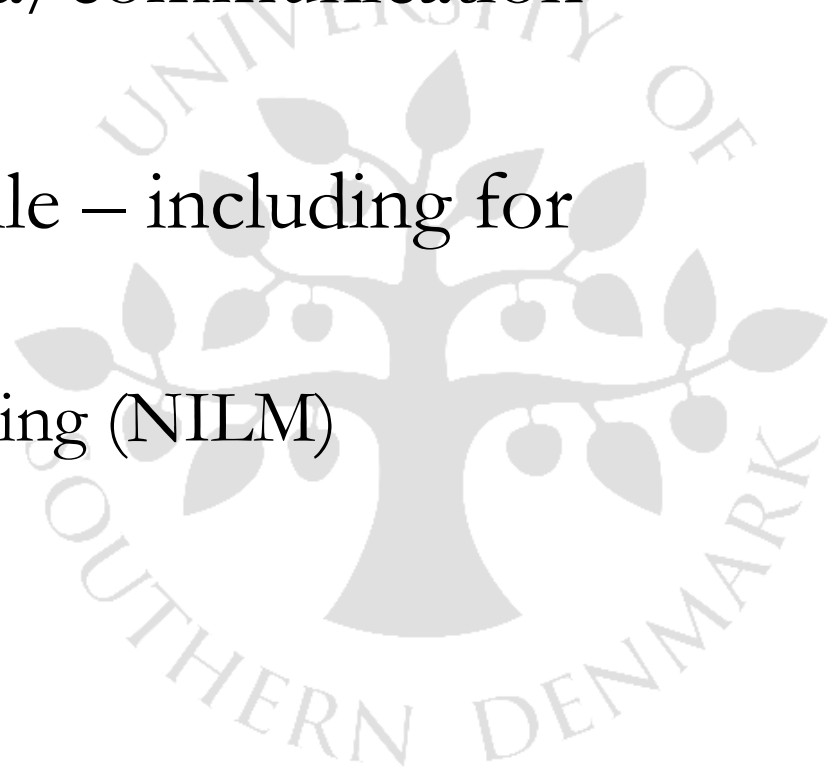
- Household metering – personal data?
- We have had laws on personal data in Europe for decades
 - Privacy is part of the code of practice of the Convention on Human Rights
- Regulated in GDPR art. 4(1)
- ‘personal data’ means **any information** relating to **an identified or identifiable natural person** (“data subject”); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person;

Household metering

- Yes, consumption of energy is ”any information”
- But is a household ”an identified or identifiable natural person”?
 - Article 29 Group: WP183 Opinion 12/2011 on smart metering of 4 November 2011, p. 8 – Meter ID is personal data
 - 12 July 2019 judgment - the Supreme Court of Spain ruled that a household’s hourly electricity consumption is personal data as third parties could identify consumers with additional information, such as their household’s energy supply point (quoting C-582/14 - Breyer)

But hardly sensitive

- Metering data are not mentioned in GDPR art. 9(1)
- But in other customer data/communication sensitive data may exist
- Can contribute to a profile – including for instance health
 - Nonintrusive load monitoring (NILM)



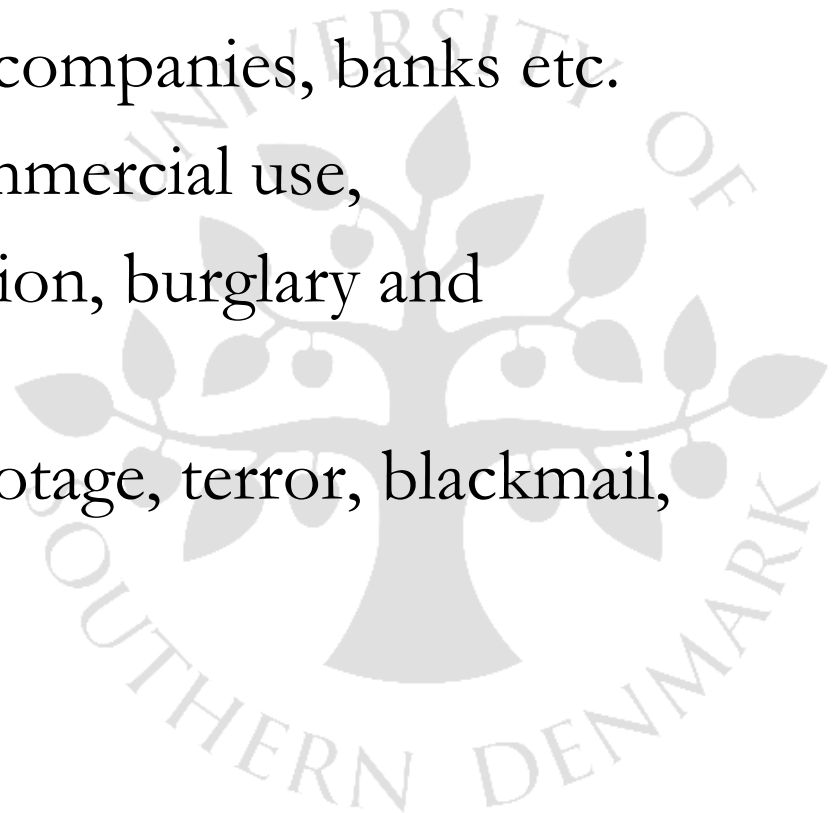
Why is that a problem?

Personal data shall be ... (b) collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall, in accordance with Article 89(1), not be considered to be incompatible with the initial purposes (“purpose limitation”);

- GDPR art. 5(1)(b)

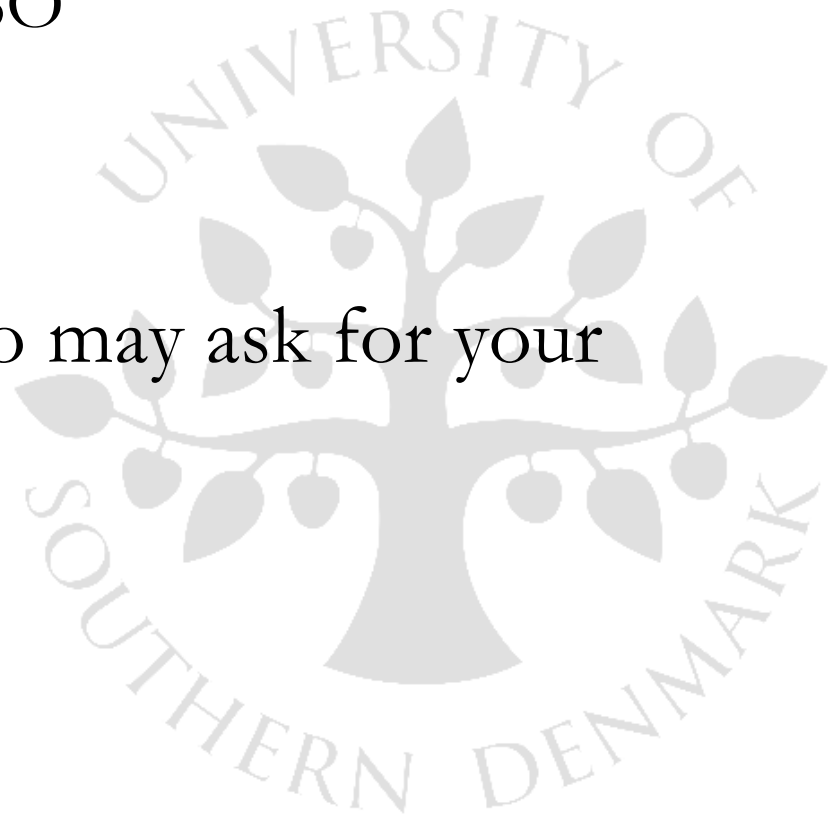
In concreto

- The collected metering data can be used for
 - public monitoring and data mining (Big Brother ...),
 - data demand by insurance companies, banks etc.
 - profiling to be sold for commercial use,
 - can be hacked for persecution, burglary and blackmail,
 - interruption of supply (sabotage, terror, blackmail, cyber attack)



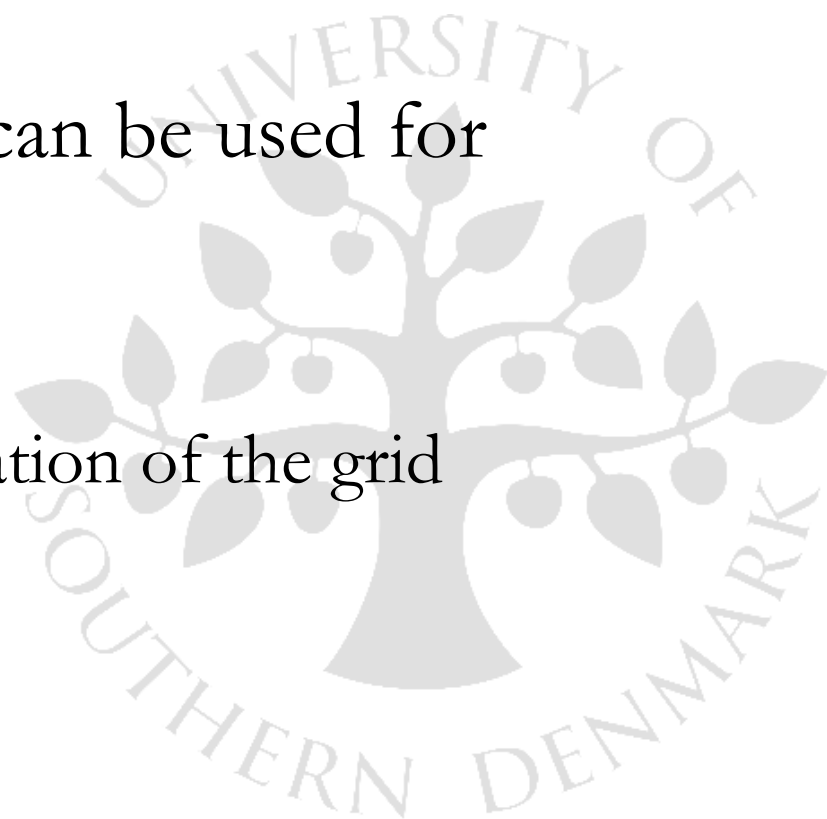
The underlying question

- Who owns your meter data?
 - The person(s) registered
 - The network company/DSO
 - The TSO
 - The State
- Shall we put limits on, who may ask for your meter data?



But meter data is a gift

- The main reason for the out roll of smart meters is to help consumers to adapt their consumption to real-time energy prices
- The expected better data can be used for
 - invoicing
 - fault detection
 - dimensioning and optimization of the grid



For the better or the worse

- Thou shall not abuse meter data
 - Save these data for important purposes (planning and optimizing)
- Thou shall protect meter data
 - We loose our data, we risk must more strict regulation, than now

Thank you for your attention

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