

# Danish Act on Processing of Personal Data, in a Smart Cities Research Perspective

Alexander Tureczek: PhD Student CITIES WP 1, Smart Meter Analytics

Supervisors: Per Sieverts Nielsen, DTU Management Engineering, Henrik Madsen, DTU Compute



## Smart City Data

By 2050 Denmark aims to be free of fossil fuels in the energy system. This is an ambitious goal, and in order to reach it, it is vital that we use our energy in a smarter way. Smart Cities and Smart Grid will be part of the solution using in-depth knowledge of the energy system, from production, transmission, distribution and consumption.

Technically the system will be optimized in every aspect and reduce the amount of wasted energy, but if the transition is to succeed an integral part of the effort must be to incorporate consumers, especially households, in the solution. We must be able to understand the end users and their consumption behavior. This move away from a purely technical solution to a solution which builds on consumption information and behavior analysis has restrictions imposed on it by legislation. This raises the questions:

- What legal restrictions are imposed on smart meter data?
- What processing can be done on end user consumption data?



## Smart Meters

The smart meters collect consumption information on home owners e.g. data subjects. These home owners are aware that they have digital meters in their homes used for billing purposes, which is the agreement they have made with the DSO that installed the meter. The DSO is then data responsible and can use the data for billing and internal statistical or historical processing. As data has to be collected with **explicit, specified** and **legitimate** purposes, the data is not collected for other purposes, and would require new consent from the data subject.

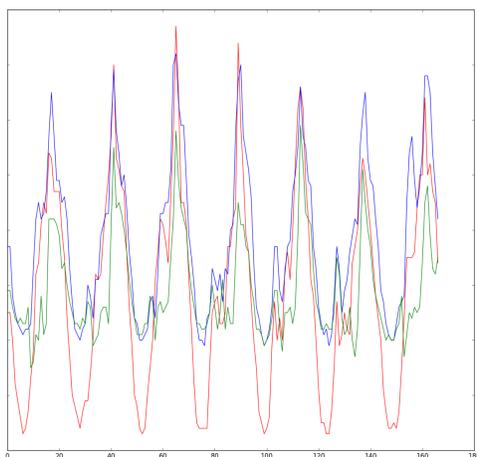


Figure of 3 different smart meter hourly readings from 01-01-12 00:00 and 1 week ahead. There is clearly a difference between consumption. The data considered personal and must be anonymized when publishing.

## Danish Data Protection Act

The Danish act on processing of personal data, applies to all automatic processing of personal data, smart meter data is considered personal information. It governs how personal digital or archived information can be processed and distributed.

The act was introduced in May 2000 and has received several revisions and amendments. Even so, the act is constantly under pressure from technological development that has increased the harvesting of personal data through smartphones and Internet of Things.



## Important paragraphs

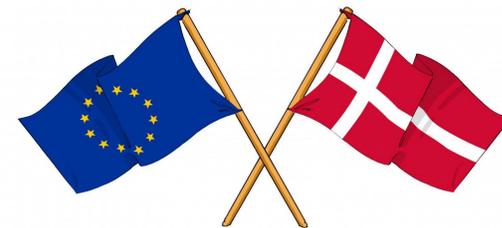
There are 83 paragraphs divided into 19 chapters, organized in 6 sections in the Act. Many of the chapters are concerned with the data collection and archiving by public institutions. Below are listed few of the most important paragraphs.

§1.1: The act applies to **any kind of electronic processing** of personal data or data intended for filing.

§2.3: The act **does not apply** to purely personal activities.

§5.2: The data must be collected for **specified, explicit** and **legitimate** purposes. Further processing of data in a historic, statistical or **scientific** setting are compatible with the original purpose.

§38: data subject can **always withdraw his consent**.



## Conclusions

Even though the Act on Processing of Personal Data imposes restrictions on information flows, there are some lenient sections about processing information in a **statistical, historical** or **scientific** setting that enables researchers by large to feel safe that their processing of information is in full compliance with the act.

There are sections which need careful attention; **discrimination, anonymization for publication, data responsibility** when receiving data, and of course **common sense**. The Danish Universities have a general agreement with the Data Protection Agency, which allows researchers to bypass the notification requirement for information processing.

These agreements and leniencies makes it possible for researchers to enter data exchange agreements with DSO or other partners in a research setting without having to notify all data subjects or the Data Protection Agency.

The new EU data protection directive which will be in full effect by May 25<sup>th</sup> 2018 will result in stricter compliance requirements, larger penalty and rights to the data subject and will ultimately make it harder to enter data processing agreements.

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## References

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