

D2.1d: Legal documents



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April 30, 2019**

Public deliverable

Confidential deliverable

Preface

EnergyLab Nordhavn – New Urban Energy Infrastructures is an exciting project which will continue until the year of 2019. The project will use Copenhagen's Nordhavn as a full-scale smart city energy lab, which main purpose is to do research and to develop and demonstrate future energy solutions of renewable energy.

The goal is to identify the most cost-effective smart energy system, which can contribute to the major climate challenges the world are facing.

Budget: The project has a total budget of DKK 143 m (€ 19 m), of this DKK84 m (€ 11 m) funded in two rounds by the Danish Energy Technology Development and Demonstration Programme (EUDP).

Forord

EnergyLab Nordhavn er et spændende projekt der løber til og med 2019. Projektet vil foregå i Københavns Nordhavn, og vil fungere som et fuldskala storbylaboratorium, der skal undersøge, udvikle og demonstrerer løsninger for fremtidens energisystem.

Målet er at finde fremtidens mest omkostningseffektive energisystem, der desuden kan bidrage til en løsning på de store klimaudfordringer verden står overfor nu og i fremtiden.

Budget: Projektets totale budget er DKK 143 mio. (EUR 19 mio.), hvoraf DKK 84 mio. (EUR 11 mio.) er blevet finansieret af Energiteknologisk Udviklings- og Demonstrationsprogram, EUDP.

Project Information

Deliverable no.: D2.1d

Deliverable title: Legal documents

WP title: Data and Measurements

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Comment Period: 05-15-2019 to 05-31-2019

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Quality Assurance

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Status of deliverable		
Action	By	Date/Initials
Sent for review	Christoffer Greisen, DTU Elektro	May 1, 2019
Reviewed	Benny Stougaard Hansen, ABB	May 8 2019
Verified	Benny Stougaard Hansen	May 15 2019
Approved	WPL group	May 31 2019

1. Introduction

This document provides an overview of the legal documents put in place in order to establish the data streams and data exchanges necessary for the demonstrations and development work in the EnergyLab Nordhavn and – when desirable for the project purpose – beyond the project itself. It is not a legal document itself, and this is particularly important as it contains judgments by the author on the balance between the safeguards obtained by the legal documents and the negative side effects that such documents may have in terms of resource load, overinterpretations, bottlenecks etc.

2. Background and definitions

Agreements between consortium partners and between external partners and relevant consortium partners are based on the findings referred to in D2.1c1, D2.1c2 and D2.1c3 and judgments made by the DTU legal office, both before and after the formal establishment of a Data Protection Officer (DPO) at DTU. The research exception entails a warrant for utilities to hand over data to DTU for research purposes.

Unless otherwise stated, for all GDPR considerations, DTU is data responsible, and the warrant for data acquisition and sharing is established by the document “*Energylab Nordhavn Fortegnelse-DTU-som-dataansvarlig*”, filed under DTU Doc no 18/13666, expiring in 2024.

For the purpose of clarity a few definitions are provided here:

- **Data responsible:** the legal entity ultimately responsible towards national Danish legislation and/or EU regulation.
- **Data processor:** a legal entity operating under the instructions of a data responsible in order to serve the purposes defined by the latter
- **Data provider:** a legal entity delivering the data to the data responsible.
- **Data subject:** The physical or legal person, that the data in question relates to.

Regarding definitions of sensitivity (personal, sensitive, commercial etc), please refer to D2.1c1.

3. Description of legal documents

3.1 The Grant agreements

The project is executed under two EUDP grants, j.nr. 64014-0555 and j.nr 64015-0055, respectively, hence there are two grant agreements, qualitatively quite alike. These agreements are the basis for the obligations between EUDP and the consortium represented by DTU Electrical Engineering. The documents also serve as proof that the

project serves the interests of the broader societal interest, which is sometimes a warrant¹ for data acquisition

3.2 The project Collaboration agreement

The agreement establishes DTU as the coordinating partner and is an agreement between all legal entities supported by the two EUDP grants stipulated in section 3.1. It contains the usual clauses regarding confidentiality, obligations to share background IP and joint ownership to foreground.

3.3 Definition of purpose – Personal data

Since DTU is data responsible, the purpose with the data acquisition is stated in internal DTU documents² reading (authors translation): “1.1. *The purpose of the research project is to investigate the energy consumption in a range of building designs and to develop new energy technologies and intelligent solutions for energy management.*

1.2. *Furthermore, the research project investigates how to coordinate the operation of power and heating systems, store energy, design and build low energy buildings optimized towards the energy markets and introduce technologies for flexible shift between energy sources.*” Furthermore, in the project justification, it is stipulated that: “*IPCC states that the increase in global temperature must be kept below 2 centigrades in order to avoid a tipping point, which will lead to global and irreversible climate change. Scientists have reached a broad consensus that a reduction of CO2 emissions is instrumental to stay below this limit.*”

These definitions may seem very broad, but they do render unlawful some of the most obvious misuses such as the investigation of social fraud. This is also well in line with a statement from the ministry of justice: “*In conclusion, the official Danish position states that the frequent data collection from heat meters can be done without customer consent as long as the energy supplier uses that data either in the interest of the public to save energy and minimise energy losses, or for the legitimate purpose of improving the energy efficiency of its operations.*”³

3.4 DTU Consent declarations – individual households

Although the Danish legislation does provide openings to do without it, when working under the research exception, it has been chosen to work on the basis of consent declarations with individual households when data is acquired directly by DTU and can

¹ In this context equivalent to the danish term “hjemmel”

² *Personoplysninger til forskningsbrug - ansøgning om godkendelse*, October 1, 2016, filed under , DTU DOC nr 17/05712. *Skabelon til Fortegnelser*, October 15, 2018, filed under DTU DOC 18/13666.

³ Interpretations from relevant Danish authorities as well as reflections on the novelty and ambiguity existing in the area are also well described by other stakeholders in the field, such as Kamstrup in their white paper: “*Digitalised district heating in the age of GDPR*, 06-05-2018”

potentially be used to derive very detailed information about the activities of the occupants of the apartment. These declarations are referred to the overlying purpose with the project and hence their expiration is not limited to the expiration of the grant. However, in most cases, they expire at the end of the project. 24 such declarations, formally signed on paper are collected by Balslev for apartments in Sundmolehusene and Frihavnstårnet respectively and 10 declarations are collected by DTU BYG for the Havnekanten apartments. The initial contact to the residents was made by developers such as CASA, Boll+ and KPC, who presented the declarations and obtained initial accept through the apartment configuration sheets. For the fuel shift demonstrations in Frikvarteret, 3 consent declarations have been collected by MetroTherm.

3.5 Radius Remote Power Meter data request, Erklæring om modtagelse af data

Data from standard remote power meters at individual electricity consumers (households and businesses) are delivered from Radius to DTU IT systems based on a declaration⁴ from DTU stipulating the purpose and the range of data, the latter being all RPM meters located with the postal code 2150 Nordhavn.

3.6 HOFOR consent declarations – heat consumers

Heat metering data is acquired by HOFOR, by whom it has been deemed necessary to obtain consent declarations. In Nordhavn, the typical heat consumer is an owners association, but there are also a number of individual households having signed consent declarations in connection with indoor climate measurements as part of the demonstration of flexible heat customers.

At HOFOR it has been chosen to let these declarations expire with the original project grant expiration. Requests for extension until October 2019 are all obtained.

Inspired by ELN, HOFOR has decided to obtain consent declarations from all customers, if possible, in the area of Århusgade in Nordhavn to be able to a.o. visualize and benchmark the heat consumption between the customers and buildings in the area in the period of 2019-2021.

3.7 HOFOR/DTU NDA

Early in the project, HOFOR deemed the provisions in the collaboration agreement insufficient for the protection of HOFOR customer data and has therefore required an additional Non-Disclosure Agreement to be executed between HOFOR and the three involved DTU departments. It restricts the use of HOFOR data to a closed list of named individuals at DTU. The project secretariat maintains a list of DTU employees who have been added to this list. The agreement has allowed researchers to get unaccompanied access to HOFOR premises and very direct access to HOFOR information. However, in

⁴ *Erklæring om modtagelse af data*, Radius ref: DLGL-16-05170

practice the setup has been cumbersome and has also led to some delays in the research work at DTU Elektro.

3.8 Data processing agreements – subcontractor to DTU

This type of agreement is used for subcontractors such as Uptime IT, to whom much of the development of the Data Management System is outsourced.

Since the collaboration agreement does not include the clauses necessary for the protection of the privacy of data subjects, this is also necessary for industrial consortium partners involved in the research, such as Balslev.

3.9 Data processing agreement – student

Since M.Sc and B.Sc students are not legally bound through an employment contract, they execute their projects as separate legal entities. For such students to be allowed to work with personal data and personal sensitive data, it has been deemed by the DTU legal services that they must work under individual data processing agreements. At time of writing, 14 of such agreements are in place. Unfortunately, due to uncertainty on the interpretation of the new GDPR regulation for universities, this setup was not in place before mid 2017.

4. Overview of data types and the legal documents

All data streams, GIS data and other information exchanged in the project is covered by the grant agreement and the collaboration agreement. In the following table each of the other types of agreements are mapped to data sources established.

Description	No. Of Interfaces	DTU - Consent with data subject (physical person)	Radius, Exchange of RPM meter data	HOFOR - Consent with customer (physical or legal person)	HOFOR/DTU NDA	Data processing agreement - subcontractor	Data processing agreement - student
Danfoss living.	15	x				x	X
Danfoss Heat Booster Station (HBS)	1						
Danfoss Supermarked	1						
Terra Nova Concrete temp. Meas.	4	x				x	x
Frihavnstårnet apartment meas, KNX	13	x				x	x
Sundmolen apartments KNX measurements	19	x				x	x
Tetris rowhouses fuelshift	13	x				x	x
Casa Rowhouses fuelshift	11	x				x	x
PowerLabDK Syslab Fuelshift	1						
Weather station at CIS	1						
Heat Storage Radiators	1						
Power grid meas (SGU)	1						
EV Charging data	1					x	x
Copenhagen international School (CIS) building meas.	1						
District heating meters	45			X	x		
Remote Power meter readings	1400+		x			x	x
Tomorrow, CO2 forecast	1						
MeteoBlue, weather forecast	1						
Battery	1						
Nordpool, power spot prices	1						

5. Discussion

Assessment of the sensitivity of the data has been very different between organizations, and this has been determining for the various partners' positions as to sharing data, and their requirements to the legal framework. This is of course a consequence of the increased focus on the GDPR regulation. It is a topic of continuous negotiation and a true dilemma exists between the greater societal good, which depends on the smooth execution of the project and the accessibility of the data vs the protection of privacy of individuals.

6. Conclusions and outlook

It can be concluded that the set of agreements regarding data is sufficient for the lawful execution of the project demonstrations and the related analyses, including a setup to permit for non-university partners to contribute to the research, also to allow for such research to support the development of products and services that can in turn be exploited commercially. With the choice of purpose, reasonable protection of data subjects have been established. The set of agreements and the trust established during the course of the project constitute a considerable intangible asset for use in research, development and demonstration projects also after the completion of the EnergyLab Nordhavn project.