Joint Annual Conference: Teaming up for Energy Renewal
Conrad Hotel, Brussels June 2, 2010

Customer Satisfaction
Latest developments in smart heat metering

What is Smart Metering?
First I turned to some search engines:

A **smart meter** is an advanced meter (usually an electrical meter) that identifies consumption in more detail than a conventional meter; and optionally, but generally, communicates that information via some network back to the local utility for monitoring and billing purposes (telemetering).

Smart metering is designed to provide utility customers information on a real time basis about their domestic energy consumption. This information includes data on how much gas and electricity they are consuming, how much it is costing them and what impact their consumption is having on greenhouse gas emissions.

COGEN europe | EUROHEAT & POWER

Some Key words from this:

- *Advanced meter*
- *Driven by Electricity meter sector*
- *More detailed information on consumption*
- *Communication via network*
- *Real-time info on consumption and cost*
- *Information on impact on our environment*

- But what about Non-electricity meters ?

Provisional European Functionality Requirements

1. Remote reading of metrological register(s) and provision to designated market organisation(s)

2. Meter supporting advanced tariffing and payment systems

3. Communicating with (and where appropriate directly controlling) individual devices within the home / building

4. Meter providing information via portal / gateway to an in-home / building display or auxiliary equipment

5. Two-way communication between the metering system and designated market organisation(s)

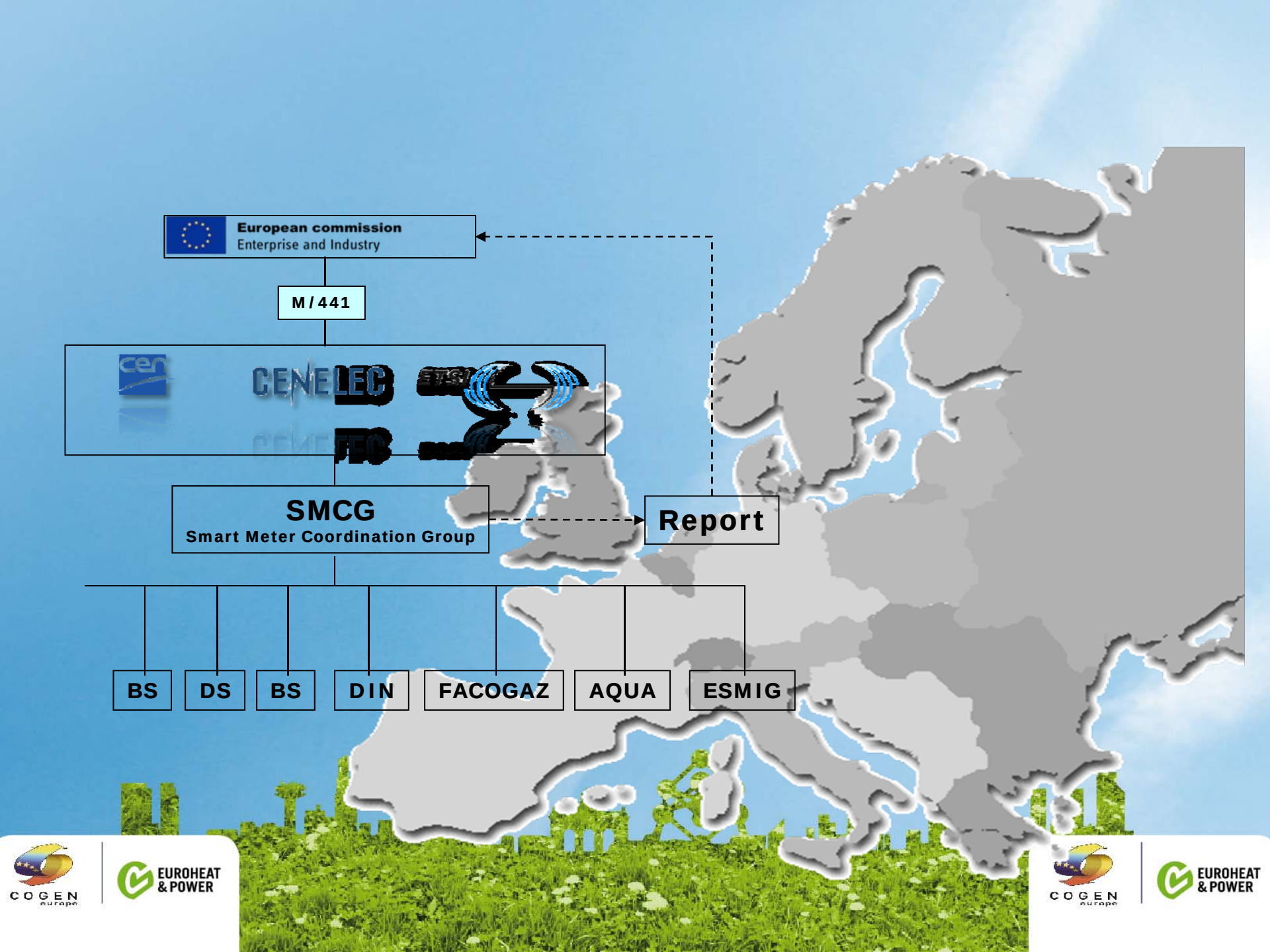
6. Meter allowing remote disablement and enablement of supply

COGEN europe | EUROHEAT & POWER

M/441

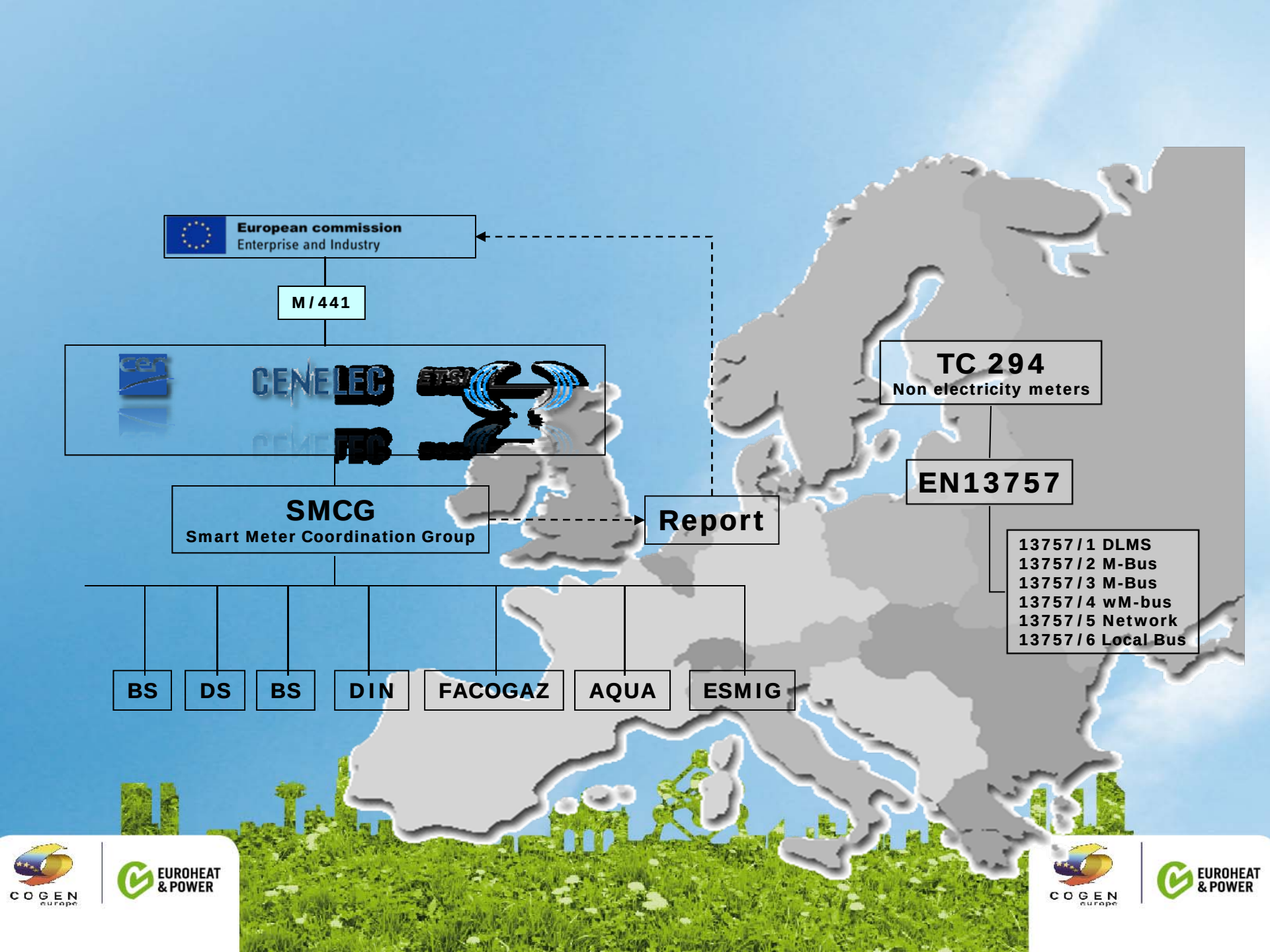
The general objective of the M/441 mandate is to create European standards that will enable **interoperability** of utility meters (water, gas, electricity heat) which can then improve the means by which customers' awareness of actual consumption can be raised in order to allow timely adaptation to their demands ('SMART METERING').

Lucia Palmegiani,
Policy Officer,
DG ENTR I.5


European commission
Enterprise and Industry
M/441
CENELEC
SMCG
Smart Meter Coordination Group
Report
BS
DS
BS
DIN
FACOGAZ
AQUA
ESMIG
COGEN europe
EUROHEAT & POWER

Standard / Requirement	Relevant Technical Committee	Brief Standard Description	Functionality					
			F1	F2	F3	F4	F5	F6
EN 13757	CEN /TC 294	Communication systems for meters and remote reading of meters (other than electricity)	√	√	√	√	√	√
EN1434	CEN/TC 176 CEN/TC 294 (part 3)	Heat Meters – Part 3 deals with data exchange and other parts are functional in nature.	√					
EN14154	CEN/TC 94	Water Meters	√					
Standards Controlled by CEN/TC 237	CEN/TC 237	Gas Meters	√					
EN 50470 / 62052 / 62053	CLC/TC 13	Electric Meters	√					
EN 62056	CLC/TC 13	Electricity metering – Data exchange for meter reading, tariff and load control) (Defines data models and application independent of communication channel. Also describes how to interface with different communication channels)	√	√	√	√	√	

F1. Remote reading of metrological register(s)and provision of these values to designated market organisation(s)
F2. Two-way communication between the metering system and designated market organisation(s)
F3. Meter supporting advanced tariffing and payment systems
F4. Meter allowing remote disablement & enablement of supply
F5. Communicating with other devices in home/ building
F6. Meter providing information via portal / gateway to an in-home/building display or to auxiliary equipment

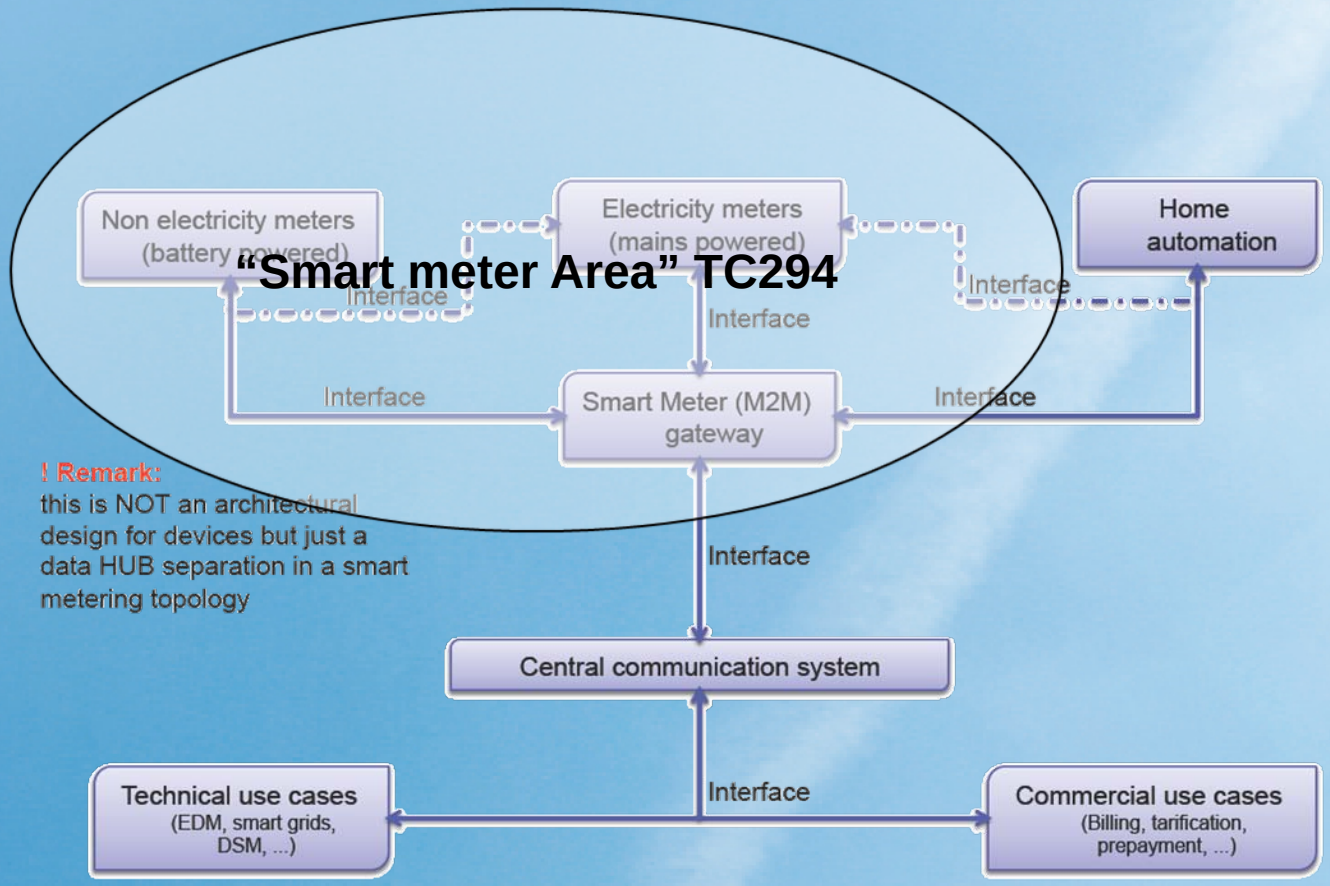

European commission
Enterprise and Industry
M/441
CEN
CENELEC
ETSI
SMCG
Smart Meter Coordination Group
Report
TC 294
Non electricity meters
EN13757
13757/1 DLMS
13757/2 M-Bus
13757/3 M-Bus
13757/4 wM-bus
13757/5 Network
13757/6 Local Bus
BS
DS
BS
DIN
FACOGAZ
AQUA
ESMIG
COGEN europe
EUROHEAT & POWER

The EN13757 family

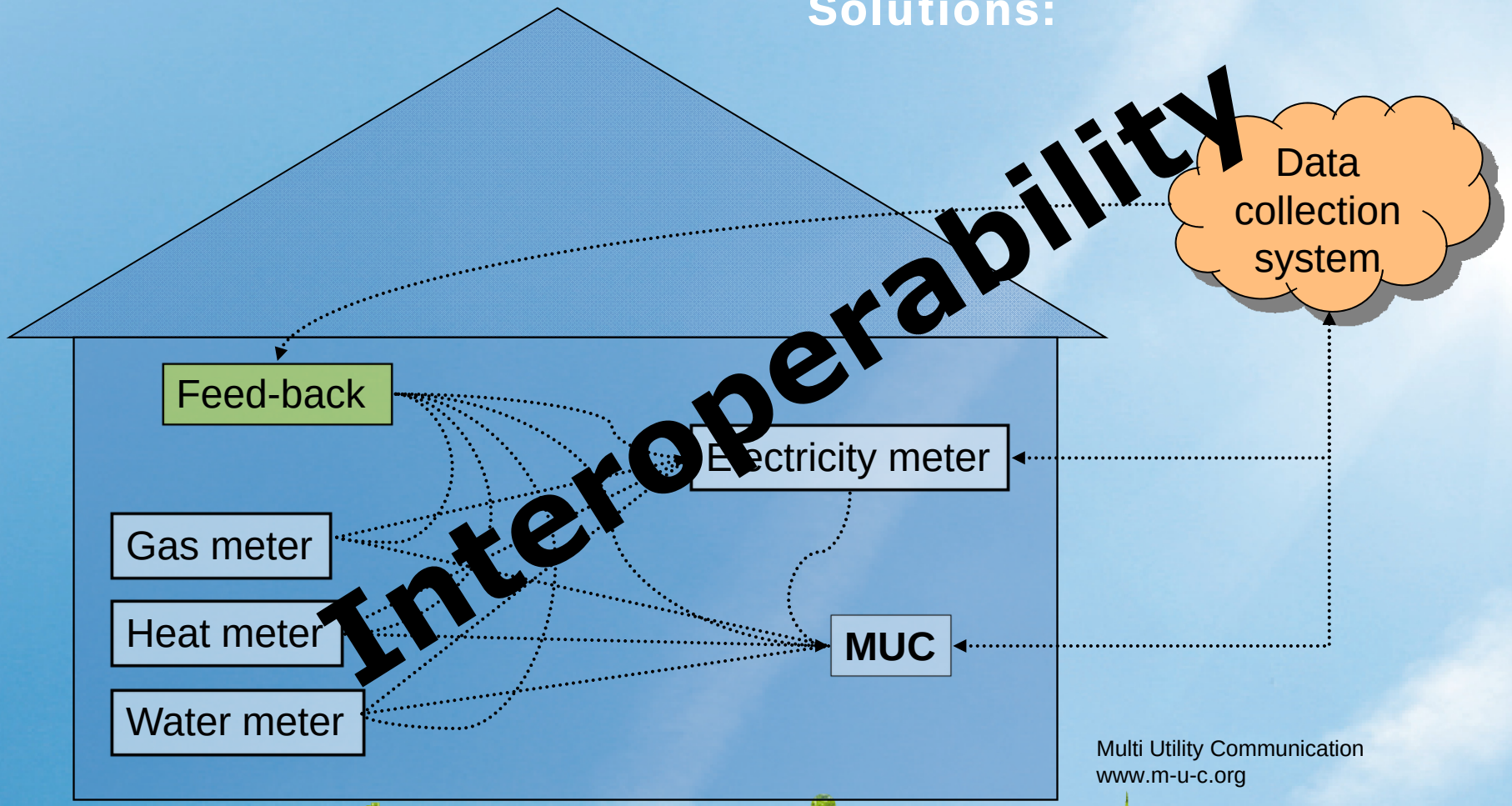
EN13757–1	DLMS	(Application)
EN13757–2	Wired M-Bus (HW)	(Physical)
EN13757–3	M-Bus (SW)	(Application)
EN1377–4	Wireless M-Bus	(Physical)
EN13757–5	Radio network	(Physical)
EN13757–6	Local Bus	(Physical)

COGEN europe | EUROHEAT & POWER

“Smart meter Area” TC294



Solutions:



Multi Utility Communication
www.m-u-c.org

statement

"*Smart Metering, combined with direct customer feed-back has been shown to increase energy efficiency by 5-15%, and in some cases even higher*"

This

depends on Ensuring effective engagement with customers

Requires Protection of consumers interests; secure from unauthorized access

Shall provide Real-time feed back; internet or local display

With Smart Heat Metering

Billing can be made on actual consumption data if and where required as an alternative to Harmonized billing

Data and statistics on consumption pattern can be provided as help to increase the consumer awareness

Consumers can see long-term trends in their consumption

Actual consumption can be measured against target consumption as well as against previous years

Readings shall be safe and data well protected

Etc. etc.

Most Heat meters does already offer relevant data from the display

and, Heat meters can have their own reading system (AMR)

Ideally the heat meter shall be able to integrate with the Smart metering system and its feed-back features = INTEROPERABILITY

Heat meters to be read together with other utility meters or as co-operation in Multi-Utilities

Question is then :

To follow the EN13757 standard interface and protocols, or to implement a Manufacturer specific (proprietary) solution

Standards vs Manufacturer

Standard		Manufacturer specific
✓	Open Protocol – accessible to everyone	✗
✓	Standardized – regulated by CEN/CENELEC/ETSI	✗
✗	Using state-of-the-art technology	✓
✗	Flexible	✓

Both can be a competent selection

COGEN europe | EUROHEAT & POWER

What is going on right now?

The Netherlands

First national attempt to implement smart metering — Status: Waiting for EU

Germany

New mode under implementation in EN13757 (OMS) — Status: Ongoing

Denmark

New mode under implementation in EN13757 (C-mode) — Status: Ongoing

France

New frequency under implementation in EN13757 (169 MHz) — Status: Ongoing

Implemented in EN13757 earliest year 2012

COGEN europe | EUROHEAT & POWER

COGEN europe | EUROHEAT & POWER

Joint Annual Conference: Teaming up for Energy Renewal
Conrad Hotel, Brussels June 2, 2010

Benny Møller Thomsen
Key Account Manager

Email : bmt@kamstrup.dk
Website: www.kamstrup.com