energy efficiency

# Big Data and Energy Efficiency, a research area for the IEA DSM Agreement?

*EXCO meeting Cape Town, March 2015*

# Big Data: a container concept

1. Volume:

   Large number of data

2. Varity:

   Data related to very different topics

3. Velocity:

   Quick availably of data

# *Big Data, general topics*

It possible that one can (re)act earlier to changes, as

- the amount of data is increasing
- the production of these data is continues speeding up

Data used are often the combination of:

- data from different sources
- the use of data for other purposes then those were these data were collected for

Privacy is one obvious obstacle; uneasiness about sharing data

# *Big Data and energy savings & energy efficiency improvements*

Better and faster information on energy use and changes

- use of improved metering information on processes
- the combination with other (big) data in industrial companies

The introduction of smart meters

- results in a large amount of data on the energy use of consumers, detailed over the time of use and (almost) real-time

Utilities are approaching the Big Data for e.g.

- better estimate the state of the grid, better assess the material lifetime duration of power lines, transformers and other distribution grid equipment
- try to manage the energy consumption

A new potential for evaluation, measurement and verification of energy efficiency programmes

- the data can be used to get quicker and cheaper answers on the impact of polices
- more accurate savings estimates
- allow new kind of analysis

# Topics to decided on

1. Is Big Data is a topic the Agreement wants to deal with

2. Focus for one or more Big Data topics

3. The selected topic(s) should be developed as
   - A new subtask within an existing Task (or more Tasks?)
   - A new Task (or more Tasks?)

# Potential topics

1. Tools to improve the knowledge of real time energy use in companies and organisations; e.g. Changing energy management systems

2. Use of big data for improved evaluation, monitoring and verification of EE programs

3. Big data as a tool to improve the customer relationship of the energy providing company/utility

4. Big data as a tool for network operators for smarter operation of the grid

5. Others?

*Any Questions?*