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DIRECTORATE-GENERAL JRC
JOINT RESEARCH CENTRE
Institute for the Environment and Sustainability
Renewable Energy Unit

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RE/PB /pb/

Subject: Minutes of the Meeting of the working group on the European Code of Conduct for Data Centres, 24 September 2009, Ispra (Italy)

1. Introduction

The meeting covered four areas:

- Basic overview of progress to date
- Data collection and analysis results to date and improvements
- Green Grid tools and metrics to integrate
- Best practice revision
- Marketing and barriers to joining

2. Progress to date

Mr. Bertoldi indicated that currently there are approximately 15 Participants with 20 data centres and 35 Endorsers. The goal is to have around 30 participants by the end of the year (2009) increasing to around 100 participants by end of next year (2010).

3. Data collection (see attached presentation by Mr. Wu)

Mr Wu reported that energy reporting is a problem for some data centres with divergent streams, e.g. cooling is split between the office space and the data centre. In addition, it is very difficult to meter the correct points. Currently, participants are required to submit IT and whole DC energy consumption. However, to encourage participation it was suggested that only IT energy must be reported for data centres below e.g. 100kW of which there are believed to be a very large number. In addition, the Best Practice plan must include actions to improve energy use measurement in the future. For data centres above this size, the cost of installing measurement equipment is marginal compared to energy costs and therefore full data must be provided, as currently requested by the Code of Conduct.

It was pointed out that not all participants are reporting in the same way. It is possible to compensate for this, but it was decided that the additional information requirement would be too much burden and that it does not support the main aim of the CoC – to measure and compare improvement against themselves. For this reason proposals to change the reporting criteria were not accepted since it would create incomparable data over time.

The quantity of data collected to date is too small to make many firm conclusions and potential participants question the value of reporting. It was also stressed that the Code of Conduct collects energy, not power data.

Actions: Include measurement plan in the Best Practice for Participant unable to measure total and IT energy consumption. Prepare a promotion leaflet for the Code of Conduct where to make it clearer what the value of the energy reporting is to the participant.

4. GreenGrid

Mr Smith presented the recent Green Grid developments. A number of white papers and tools have been developed which could be utilised to assist the Code of Conduct.

It was decided that the reporting system proposed by Green Grid be used to clarify how to measure the data to be submitted to the Code of Conduct. The Code of Conduct website would also link to White Paper 14¹ which presents detailed DCiE analysis.

Action: to review the Green Grid White paper and incorporate into CoC methodology plus link to Green Grid website

5. Best practices

The required best practices in the reporting form will be clarified by an additional input which states the areas of a participant's responsibility (full participation vs. partial participation). This addresses the problem with applicants not knowing what they were expected to apply.

The revised retrofit and new build best practice will apply from 2010 onwards efficient according to BP from the start (design phase) and not wait to be retrofitted in the 36 months period.

It was decided not to produce an additional tier to recognise the most efficient participants.

It was agreed to extend the role of endorser to include Data Centre clients who can use the CoC as procurement criteria.

A few adjustments were made to the best practice and agreed:

- Clarify whether ETSI temperature operating range requirements would allow equipment to throttle at the operating thresholds
- Alter the humidity to require 5.5degC dew point be set as ASHRAE standards. This saves energy by eliminating humidification/dehumidification cycles.
- There was some discussion surrounding the value of moving the set points
- Expected best practices in future revisions are listed to give participants and vendors advance warning. However, changes to best practice are not applied retroactively to older participants
- Future best practice includes specifying IT equipment that matches the airflow plan. This reduces the likelihood of manufacturers selling incompatible equipment for new participants. A new construction data centre must be

Action: to finalise changes to best practices and open wider consultation.

6. Marketing and barriers to joining

The main barriers were identified as:

- Unclear requirements and benefits

¹ The Green Grid Metrics, data centre infrastructure efficiency (DCiE) detailed analysis, available from http://doe.thegreengrid.org/files/temp/8095A14D-D0EF-8299-A39B24EC690C8513/White%20Paper%2014%20-%20DCiE%20Detailed%20Analysis_072208.pdf

- Lack of awareness
- Security and liability of data disclosed and data loss
- Tie in with national initiative and legislation: eg Environment agencies

There was general request for clear marketing presentation to outline the key benefits and basic requirements for participants. In addition a logo for participants and endorsers was requested.

It was stated that the logo could not be used for endorsing a particular product and it only covered the endorser or participant as an organisation. There was a discussion about how to logo a participant given that the best practices evolve over time and are not retroactively applicable. It was suggested that the year of participant status and most recent reapplication be included in the logo. However, a time limit of 3yrs was proposed for participant status as this would be administratively simpler.

It was left open for the attendees to make suggestions for the design of the logo logo, a possible solution was to make adjustments to the JRC standby logo:



No conclusion was reached about whether to produce a standard 'marketing' presentation, or who would do it.

Data security

There is no formal statement of the security and liability of data being submitted which is hindering adoption by clients of the attendees. In particular the liability is distributed across the EC, MTP and BCS. A clearer statement is proposed to outline exactly how the data is used and steps to prevent distribution of the information. One proposal was to use a possible Green Grid web interface and database to do this. Green Grid would then bear liability. However, this would be more complicated, especially since liability would have to be passed down to the EC and data would be stored in USA, raising data protection concerns. At the moment data is stored at JRC. MTP and BCS staff only sees anonymous data centres data. The JRC, MTP and BCS staff are all bound by data confidentiality rules, and non disclosure commitments. It was proposed that BCS will investigate possible solutions and make recommendations to JRC.