



# EU Code of Conduct for Data Centre Efficiency

## An Opportunity



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Development

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Development

Become a signatory

Best Practices

Use as a procurement tool

- Political context
- Carbon reduction Commitment
- Forecasts of rising energy use in Data Centres
  - Europe 56TWh / PA 2007
  - Rising to 104TWh / PA by 2020
- Energy security

## Industry context

- Many activity's within Industry
- Reduce confusion with a clear message
  - Board review and input
  - CoC first and only system level standard
- Lower the barrier to access and application

## Social context

- Rising public awareness
- Data Centres represent an easy target
- ICT is a key enabler of environmental impact reduction
- Demonstrate that the industry is not a profligate with energy

## Goals

- Led by Paolo Bertoldi, DG JRC
  - “aim is to inform and stimulate Data Centre operators to reduce energy consumption in a cost effective manner without hampering the critical function....”
- A practical voluntary commitment

## Scope

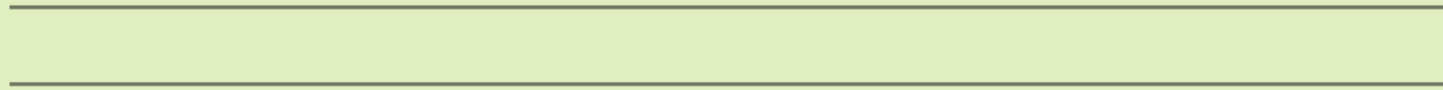
- The Code of Conduct covers
  - “Data centres” of all sizes – server rooms to dedicated buildings
  - Both existing and new facilities
  - Mechanical plant to software

## International expert review

- Contribution and review from
  - EU, UK, Japan, USA
  - Vendor specialist
  - Operators
  - Professional bodies

## Substantial Interest

- Broad participation and support from
  - Vendors
  - Data centre operators
  - End user organisations



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Sign the code as either;

- Participant:

  - Data centre owners and operators

- Endorser:

  - Vendors, consultants, industry associations

## Participants

- Single data centre or corporate level
  - Corporate > 40% of facilities
- Select new or existing data centre(s)
  - Measurement
  - Best practices
  - Reporting

## Participants

- Partial or full Participant
  - Full participants control
    - Software, IT & Data Centre
  - Partial participants control only part
    - e.g. colo providers
    - Required to endorse other practices

## Participants

- Participants include
  - Intel
  - Telecity Group
  - HP
  - Fujitsu
  - Microsoft
  - Vodafone

## Endorsers

- Organisations

- Vendors, Consultancies, Utilities, Government, Industry Associations & Standards bodies, End users

## Endorsers

- Support and promote the goals of the Code
  - Products, consultancy, services
  - Programmes, education
  - Labelling
  - Supplier selection criterion

## Endorsers

- Endorsers include
  - The Green Grid
  - HP (inc Critical Facilities)
  - Keysource
  - Hitec



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## Existing market confusion

- Too many simplistic “vendor only ten tips .....data centre”
- Mixture of engineering terms with product and market names
- No coherent set of expert strategy
- Most information is not vendor neutral

There is more to an  
efficient data centre  
than just measuring DCIE or PUE

- Establish common vocabulary and terminology
- Broad coverage, most people are non-expert in some area(s) of data centre

- Provide operators with an understanding of
  - Available technology option
  - Relative merits
  - Processes they should establish
  - Communication that is necessary
  - Relationship between technology areas

- Best practices are guidance to operators
- Practices are scored 1-5 (min-max)
- Practice scores should not be summed for an 'overall score'
  - Scorecards do not work in the data centre

- Set a minimum standard for participants
- Current metrics present mixed incentives
- Practices were identified as a measure
- Many contributors requested a high barrier to entry

- Group Involvement
  - “Establish an approval board containing representatives from all disciplines (software, IT, Facilities, Suppliers)
  - Require approval for any significant decision to ensure that the impacts of the decision have been properly understood.”

## Environmental

- “Rack air flow management – Blanking plates”
- “Review and if possible raise target IP equipment intake temperature”
  - ASHRAE new specifications
  - ETSI expanded
- Review and if possible increase the working humidity range”
- “Review set temperature points for air or chilled water system”



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## Who is using the CoC?

- UK Government
  - CIOs requested to adhere to the CoC
- Commercial customers
  - Validate claims from suppliers
  - Benchmarking internally and externally

## How can you use the COC?

- Internal
  - Benchmark against a useful standard
  - Justify economic and energy saving practices

## How can you use the CoC

- Procuring services or data centre space
  - Start at the basic level
  - Require Participant status of your suppliers
  - Full Participant, partial Participant or endorser?

## How can you use the CoC?

- Procuring services or data centre space
  - Drive further energy and cost efficiency
  - Use the Best Practice reporting form as a standardised response format to compare potential suppliers
  - Request suppliers to provide energy meeting data

## How can you use the CoC?

- Procuring services or data centre space
  - Help your supplier be efficient
  - Allow them to virtualise
  - Help them implement air flow management
  - Don't block temperature increases

## How can you use the CoC?

- Apply pressure to vendors
  - Specify efficient hardware and software
  - Buy equipment with the widest environmental specifications
  - Buy equipment with the correct air flow direction

## Training

- BCS is delivering a qualification and training courses, qualified staff will;
  - Understand the goals and practices of the Code
  - Understand how to maintain compliance
  - Understand how to apply for Participant or Endorser status
  - Demonstrate to your customers that you are serious about energy management
  - Evaluate and compare suppliers claims

## Services

- Vendors and specialists now offer;
  - Assistance in applying for participant status
  - Assistance in auditing performance against the code
  - Products to assist with compliance

- Starting another review round
  - Energy metering and reporting
  - Best practices
  - Spring 2010



Thank you  
Andrew Stevens  
Managing Director  
CNet Training



Customer Focused ▶▶  
Quality Driven ▶▶▶▶