



# **Workers' exposure to EMF**

**New EU approach to protecting workers  
against exposure to electromagnetic  
fields.**

**(Future EMF Directive)**

**Polish Presidency Conference: « Strengthening OSH knowledge and  
innovation as a driver of EU smart growth »**

**Warsaw, 7 November 2011**



# **Directive 2004/40/EC**

**Current situation in the EU:**

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF  
THE COUNCIL**

**on the minimum health and safety requirements  
regarding the exposure of workers to the risks arising  
from physical agents (electromagnetic fields)**

**(18th individual Directive within the meaning of Article 16(1) of Directive  
89/391/EEC)**

**To be transposed by 30 April 2012 !!!**



# Commission's Answer

Proposal **for a** (new)

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF  
THE COUNCIL**

**on the minimum health and safety requirements  
regarding the exposure of workers to the risks arising  
from physical agents (electromagnetic fields)  
(20th individual Directive within the meaning of Article  
16(1) of Directive 89/391/EEC)**



# Commission's Answer

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## Warning

**This reflects the content and principles underlying the  
Commission proposal COM (2011) 348  
of 14 June 2011.**

**Results of discussions currently ongoing in the Council  
are not reflected here.**



# **DIRECTIVE 2004/40/EC**

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**What went wrong ?**

**Historical background ...**



# What has not changed?

## The scope:

- The frequency range (from 0 to 300 GHz) remains the same
- All activities and categories of workers are concerned
- Only short term effects are addressed
- Binding exposure limit values are present (new under 100 kHz, unchanged above 100 kHz)
- Directive 89/391/EEC shall apply



# New EMF Proposal

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Which are the **proposed**  
changes compared to  
Directive 2004/40/EC?



# Orientations & Principles

1. coverage of all sectors
2. Updated definitions on health effects
3. Revised exposure limit values taken from ICNIRP
4. Use of a zoning (steps) system  
(more proportionality in the approach of the risk)
5. Simplification of carrying out of risk assessments
6. Limited flexibility in a controlled working environment





# Orientations & Principles

7. **Adapted** medical surveillance provisions
8. Ensuring medical MRI processes are not restricted
9. Inclusion of non binding measures
10. « Delegated Acts » mechanism incorporated to amend the directive as necessary and to establish follow-up procedures
11. Reference to standards such as CENELEC in text

*NB: these principles were taken as basis for the ACSH to give its favourable opinion to the draft proposal*



# Definitions (principle 2)

In the low frequency range (0 to 100 KHz):

- Introduction of an exposure limit for **safety** effects and **health** effects
- Introduction of an *orientation value* in addition to the existing *action value*



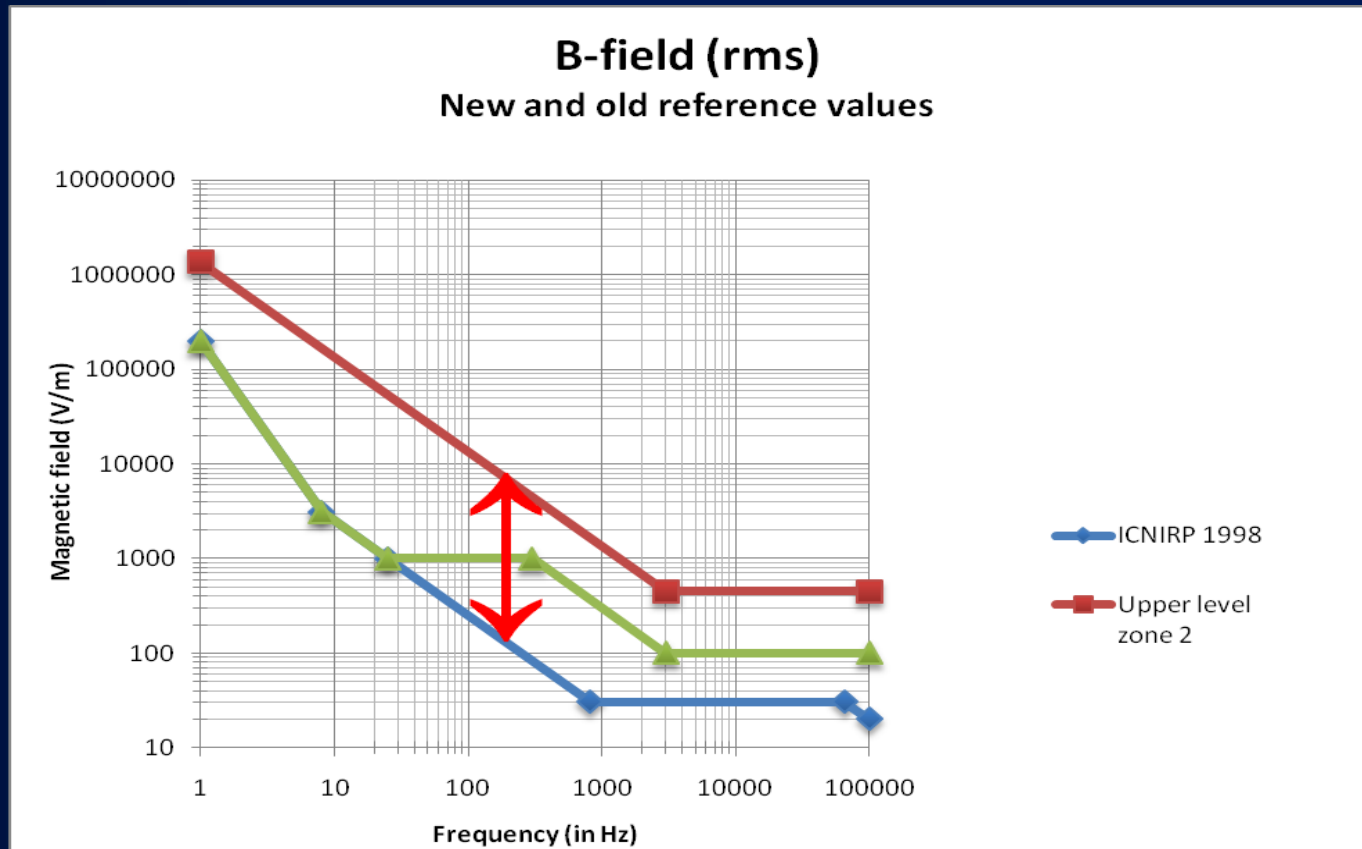
# ELVs & zoning system

## (principles 3 & 4)

- Physiological exposure limit values (induced electric field **inside the body**)
- Stepwise system with the **orientation and action values** to introduce a proportionate approach and facilitate assessments (fields measured at the workplace)



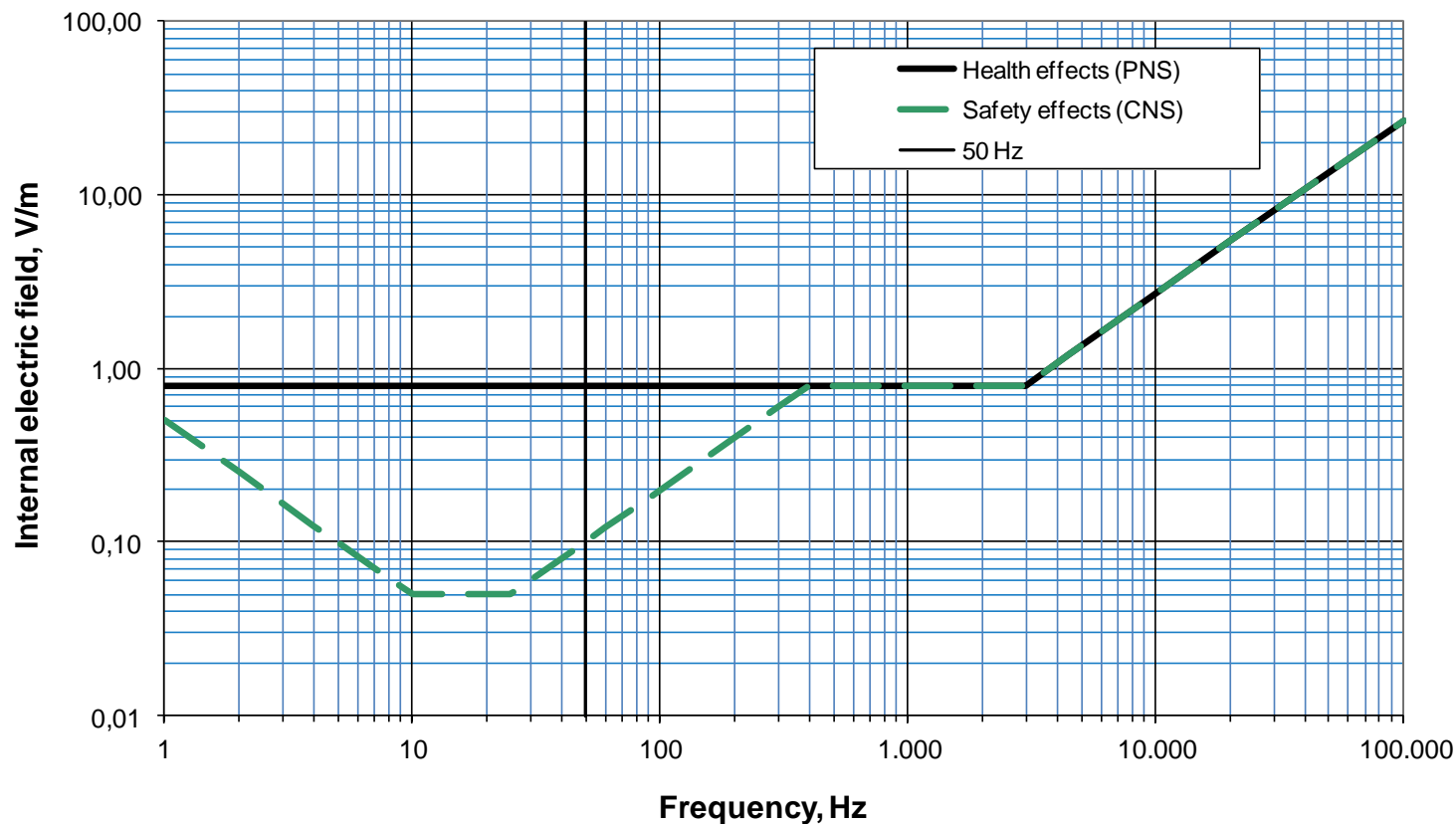
# Occupational exposure to EMF: “zoning” principle





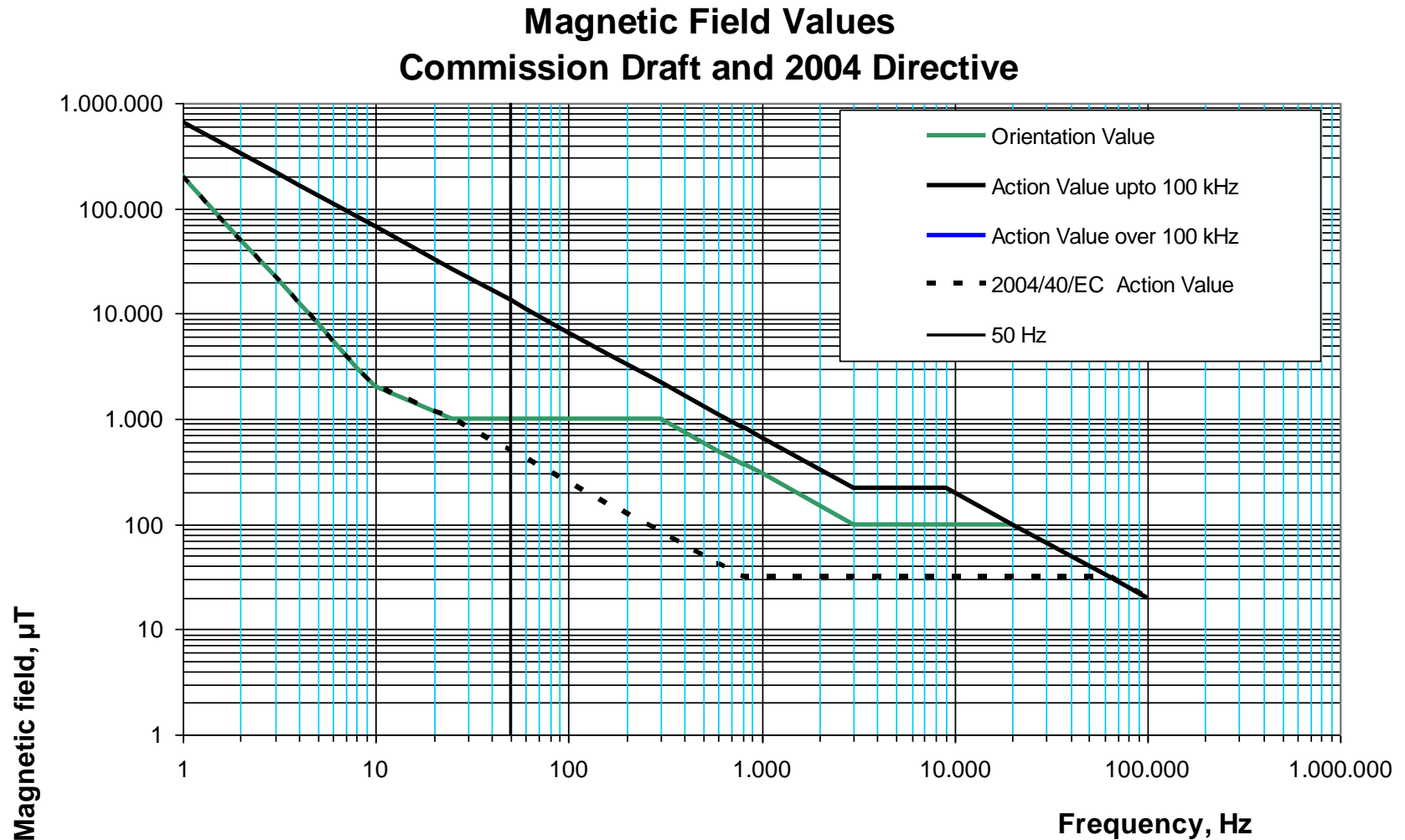
# Occupational exposure to EMF : exposure limit values

Exposure Limit Values  
Commission Draft June 2011



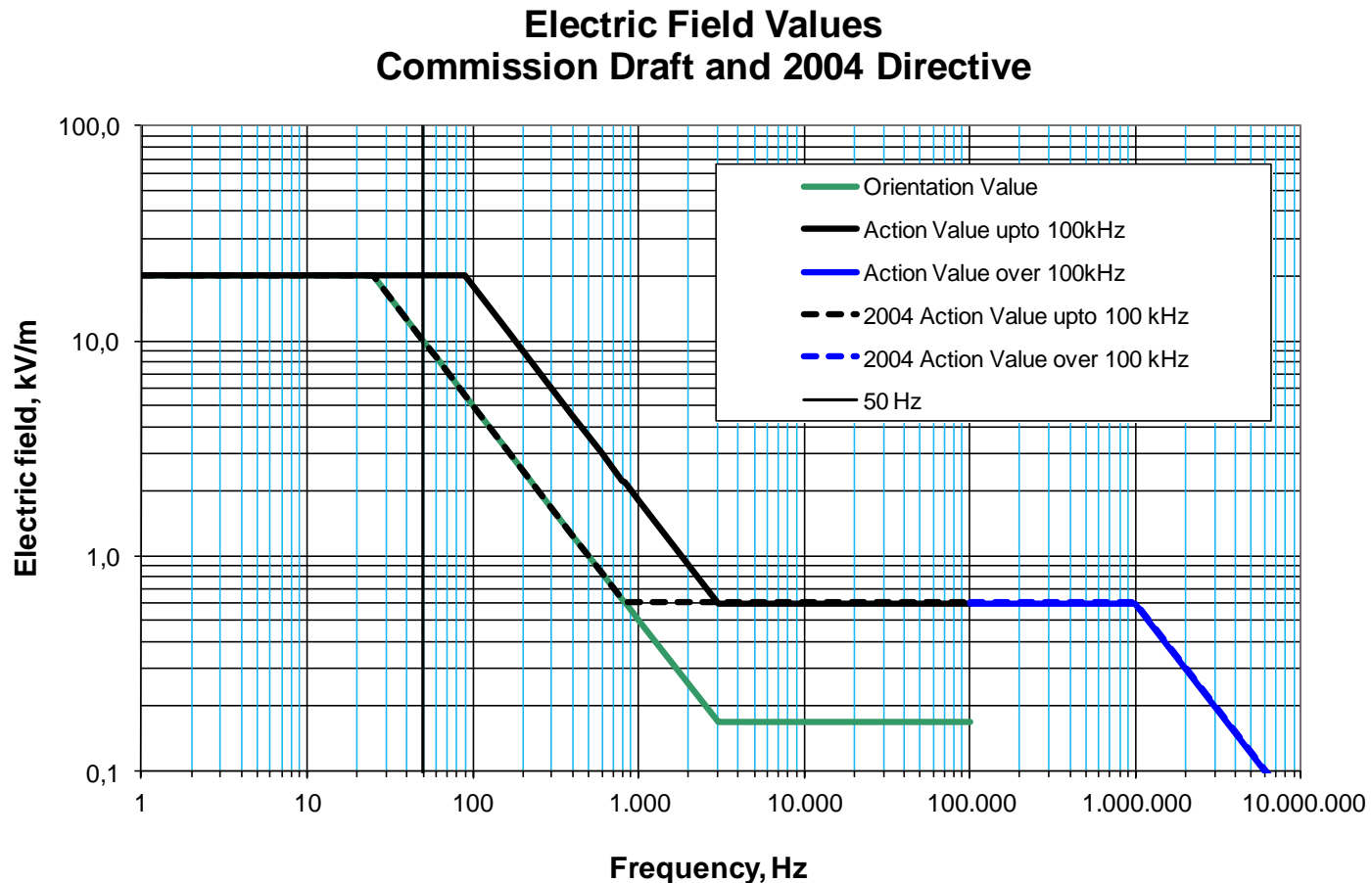


# Occupational exposure to EMF : action & orientation values for B field





# Occupational exposure to EMF : action & orientation values for E field





# **Risk assessment**

## **(principle 5)**

**SIMPLIFICATION wherever possible !!**

- **Higher action values in the LF range (based on scientific evidence !)**
- **Lists of equipments (more straightforward)**
- **Guidance for protective measures**
- **But: reinforced attention for groups at particular risk**





## **Limited flexibility in a controlled working environment (principles 6)**

- **Medical MRI case (no binding ELVs)**
- **« Armed Forces » case to ensure NATO interoperability (adapted but mandatory protection system)**
- **Industry & others: temporary derogation possibilities for specific cases**



# Occupational exposure to EMF

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*Thank you  
for  
your attention*