



Occupational Exposure to EMF in the European Union

2.1 Present status on the EMF directive and the way forward

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Summary

Part 1: Directive 2004/40/EC *(reminder)*

Part 2: Implementation problems?

Part 3: Work already done *(how & why)*

Part 4: The way forward *(how & why)*

(actions & calendar)



Summary

Where are we

66 months after adoption of

Directive 2004/40/EC ?



Part 1

Directive 2004/40/EC



EU legislation for H&S at work

- **Responsibility on employers**
- ***Ex-ante* risk assessment mandatory**
- **Eliminate or reduce (all) risks**
- **Information, training and consultation of workers**
- **Appropriate medical surveillance**



EMF Directive 2004/40/EC

Results and Compromises :

- **Article 1: “Aim and Scope”**

“

....

- Risks due to **known short-term adverse effects** in the human body
- **It does not address the long-term effects**
- It does not address the risks resulting from contact with live conductors
- **Directive 89/391/EEC fully applies”**



EMF occupational exposure Directive

Results and Compromises :

- No exposure limit value set for static magnetic fields
- Reinforcement of provisions relating to *information of workers*
- Reinforcement of provisions relating to *medical surveillance*
- Regime of sanctions
- Review of situation after 5 years *(Commission)*



Part 2

**Implementation
problems ?**



EMF Directive

Implementation problems?





Electromagnetic Fields:

Exposure Limit Values in the directive = ICNIRP Basic Restrictions

Frequency range	Current density for head and trunk J (mA/m ²) (rms)	Whole body average SAR (W/kg)	Localised SAR (head and trunk) (W/kg)	Localised SAR (limbs) (W/kg)	Power density S (W/m ²)
Up to 1 Hz	40	–	–	–	–
1 - 4 Hz	40/f	–	–	–	–
4 - 1000 Hz	10	–	–	–	–
1000 Hz – 100 kHz	f/100	–	–	–	–
100 kHz – 10 MHz	f/100	0.4	10	20	–
10 MHz – 10 GHz	–	0.4	10	20	–
10 – 300 GHz	–	–	–	–	50

No ceiling values for Static Magnetic fields



EMF Directive

The specific case of MRI

Magnetic Field (Frequency of)	Action Value (Magnetic flux density)	Exposure Limit Value Head & Trunk	Exposure Limit Value Whole Body (average SAR)	Exposure Limit Value Limbs
STATIC (0 Hz)	200 mT	None	None	None



EMF Directive

The specific case of MRI

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Switched Gradient (ca 1000 Hz)	30.7 μ T	Current Density = 10 mA/m ²	None	None



EMF Directive

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Switched Gradient (ca 1000 Hz)	30.7 μ T	Current Density = 10 mA/m ²	None	None
RF field (10-110 MHz)	1) 0.2 μ T & 2) S_{eq} = 10 W/m ² 3) I_c = 40 mA 4) I_L = 100 mA	SAR = 10 W/kg	SAR = 0.4 W/kg	SAR = 20 W/kg



EMF Directive

The electric distribution

Magnetic Field (Frequency of)	Action Value (Magnetic flux density)	Exposure Limit Value Head & Trunk	Exposure Limit Value Whole Body (average SAR)	Exposure Limit Value Limbs
STATIC (0 Hz)	200 mT	None	None	None
GRID (50 Hz)	500 μ T (400 A/m)	Current Density = 10 mA/m ²	None	None
Switched Gradient (ca 1000 Hz)	30.7 μ T	Current Density = 10 mA/m ²	None	None
RF field (10-110 MHz)	1) 0.2 μ T & 2) S_{eq} = 10 W/m ² 3) I_C = 40 mA 4) I_L = 100 mA	SAR = 10 W/kg	SAR = 0.4 W/kg	SAR = 20 W/kg



EMF Directive

Identified problems

- **Exposure Limit Values & Action Values**
(Art. 2 & 3)
- **Assessment, measurement & calculation**
(Art. 3.3)
- **Guidance for Risk Assessment**
(Art. 4)
- **Difficulties for SMEs**
(general)



Part 3

Work already done



EMF Directive

Work done

Legal domain

Step 1: ***achieved !***

**Adoption of directive 2008/46/EC
of 23 April 2008
by EP and Council**

Step 2: **Preparation of a new substantial
proposal
on the basis of the most recent
new elements**



EMF Directive

Work done

Technical domain

Action 1: Analyse « MRI » study (April 2008)

Action 2: call for tender for a study to support an impact assessment (September 2009)

Action 3: analysis of other recent studies and new ICNIRP recommendations

*(« static » 04/2009,
draft « ELF » July 2009)*

Action 4: discussions with social partners and stakeholders



Planning

Occupational exposure to EMF directive: planning

Step	2008			2009											
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Impact Assessment	Evaluation +selection +contract			Study											
			Roadmap			ISSG		ISSG				ISSG	Drafting and approval of IA		
1st consultation of social partners		Drafting		Approval+ launching					Results						
2nd consultation of social partners								Drafting	Approval+ launching				Results		
Opinion of the ACSH															Opinion
Meetings of the EMF Working Party	16/10			21/1			23/4							Proposal for opinion	
Consultations & Conference	Consultations											Preparation		Conference	



Part 4

The Way forward



The way forward

Ideal plan:

**Commission proposal to
Council and EP**

**adopted by end of April
2010 !**



The way forward: ideal scenario

- April 2010:** **Commission proposal**
- By April 2011 (?):** **new directive adopted
by EP and Council
(2011/XY/EC)**
- By April 2012 (?):** **new directive
transposed by Member
States**



The way forward

Formal, compulsory steps

- **1st phase of consultation of Social Partners (Art 138 (2) of Treaty)**
- **2nd phase of consultation of Social Partners (Art 138 (3) of Treaty)**
- **Comprehensive Impact Assessment**



1st phase of consultation

Options proposed:

- **No change**
- **New binding legislation (+due flexibility)**
- **Only non binding recommendations**
- **No Community action for EMF**



1st phase of consultation

- **6 July - 25 September 2009**
- **15 formal answers received:**
**BUSINESS EUROPE, CBI, CEEMET, CEEP,
CER, DGB, EEF, EFBWW, EMC, ENTSO-E,
EPSU, ETUC, EURELECTRIC, HOSPEEM,
UEAPME**



The way forward

2nd consultation of Social Partners (Art 138 (3) of Treaty:

- **More concrete proposals**
- **Main points addressed**





EMF Directive

Identified problems

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EMF Directive for occupational exposure



***Thank you
for
your attention***