MODEL LEGISLATION FOR ELECTROMAGNETIC FIELDS PROTECTION

WHO 推荐的 电磁场防护法律范本
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WHO 推荐的电磁场防护法律范本

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World Health Organization

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内容提要

为加快全球电磁场标准协调化的进程，促进向全人类提供相同或相似健康保护水平目标的实现，世界卫生组织于2006年向各成员国发布了《电磁场防护法律范本》，帮助尚无适宜法律的成员国制定电磁场防护法案及相应的法规、条例，以保护各国公众免受可能产生有害健康影响的电磁场暴露。

本书可供政府环保、卫生、工贸、发展、规划、建设、法律等相关部门的决策管理人员阅读使用；也可供电磁环境保护、疾病控制与预防、公共卫生领域内的研究人员，以及从事电力和通信工程规划、设计、建设、运行的相关管理人员和技术人员参考。

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译者前言

为加快全球电磁场标准协调化的进程，促进实现向全人类提供相同或相似健康保护水平的目标，世界卫生组织于2006年向各成员国发布了电磁场防护立法范本，以帮助尚未有合适法律的成员国制定电磁场防护法案及相应的法规、条例，保护各国公众免受可能产生有害健康影响的电磁场曝露。

本法律范本的核心内容是采纳国际标准（ICNIRP 曝露导则）；指出政府主管部门实施电磁场管理的目标应该是确保与标准限值的相符性；明确指出管理机构采取的预防措施不应扩展到改变依法制定的曝露限值。理解上述意见对指导中国电磁场立法具有重要参考价值。

本书的翻译出版得到了世界卫生组织辐射和环境卫生处及出版部的支持与帮助，国内多位电磁环境保护相关领域的专家对译文内容进行了审读并提出了宝贵意见，在此一并致以诚挚谢意。

本书可供政府环保、卫生、工贸、发展、规划、建设、法律等部门的决策管理人员阅读使用；也可供电磁环境保护、疾病控制与预防、公共卫生领域内的研究人员，以及从事电力和通信工程规划、设计、建设、运行的相关管理人员和技术人员参考。

限于译者水平，书中难免存在错误或不妥之处，敬请读者批评指正。

译者
2009年2月
原版前言

国际顾问委员会（IAC）成员向世界卫生组织（WHO）“国际电磁场计划”表达了制定法律范本的必要性，使政府机构能用它来限制人们的电磁场（EMF）暴露。该法律将促进采用适当的措施，为保护公众与职业人员免受电磁场潜在的有害影响。

为了帮助尚无适用法律的国家保护其公众，国际电磁场计划制定了法案范本（Model Act）和条例范本（Model Regulation），作为提供这种保护的法律框架。法律范本的重要特征在于它使用国际标准（ICNIRP 暴露标准）来限制人们的电磁场暴露，以及使用国际标准（IEC 和 IEEE 的设备排放标准）来限制来自设备的电磁场排放。

本法律范本遵循了立法机构中广为接受的惯例，即制定一项授权法案，允许责任部长随后发布适用于处理其所关注的特定领域的法规、法令或条例。本法律范本包括三个部分：

- 一项法案范本，用以授权某权威机构制定限制民众在 0 ~ 300GHz 频率范围内电磁场暴露的法规和律例；
- 一项条例范本，在限制人体电磁场暴露的法案许可下，规定详细的范围、适用性、暴露限值和符合性程序；
- 一个说明性备忘录，描述法案及其条例的处置方法。

如果某国家当局希望制定自己的暴漏限值，其应当使用或参考 WHO 的《制定电磁场标准的框架》。（见 http：//www. who. int/peh-emf/standards/en/）

如果某国家当局希望实施降低暴漏限值的措施，其应当使用或参考 WHO 的《在科学不确定领域中指导政策方案的框架》。（见 http：//www. who. int/peh-emf/en/）

国际电磁场计划诚挚地感谢 Tom McManus 博士，感谢他在本法律范本准备过程中的辛勤工作；对于 WHO 道德、贸易、人权和卫生法各部门的帮助，以及美国乔治敦大学与约翰霍普金斯大学法律和公共卫生中心的意见表示衷心的感谢。也非常感激给草案提出意见的利益相关人士。
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人体电磁场曝露法案范本

I. 前言与总则

1. 短标题

1.1 本法案可称为《人体电磁场曝露法案》。

2. 目的

2.1 本法案的目的是规定人体电磁场曝露限值，保护人体免受来自任何产生电磁场的设施和装置的、已知的有害健康影响。

3. 范围和应用

3.1 对曝露于0~300GHz 频率范围电磁场的公众和职业人员，本法案规定了保护的最低要求，以避免产生或可能产生的健康风险。

3.2 本法案不适用于正处于诊断或在医疗监护下治疗的病人，也不适用于军队成员。

4. 定义

有害的健康影响（Adverse health effect）：对暴露者精神、身体和/或总体健康产生有害影响的生物效应，不论是短期还是长期。

机构（Agency）：由相关部长任命的一个实体，向本法案涉及的部长提供建议或代表部长行事。

基本限值（Basic Restrictions）：直接根据已确定的健康影响制定的电场、磁场和电磁场的曝露限值。根据场频率的不同，用于描述这些限值的物理量是电流密度（J）、比能量吸收率（SAR）和功率密度（S）。只有躯体外空气中的功率密度，可以容易地在曝露人体上测量。
符合性（Compliance）：符合本法案或依据本法案制定的条例的要求。

符合性声明书（Declaration of Compliance）：由供货商、制造商或部长指定的其他实体所签署的文件，证实声明书所涉及的装置或设施满足本法案或依据本法案制定的条例的要求。

装置（Device）：制造出来的会产生电磁场的产品。

电磁场（Electromagnetic fields）：在空间中携带或储存能量的物理实体，通过对电荷的作用力显示其存在。就本法案而言，电磁场包括静电场与静磁场，以及时变的电场、磁场和电磁场，涉及的频率在0～300GHz范围内。

电气医疗设备（Electro-medical equipment）：用于在医疗监护下检查或治疗病人的电气装置、仪器或修复物、假体。

设备（Equipment）：制造出来的会产生电磁场的工业、商业、消费或医疗产品。

曝露（Exposure）：人经受到的，有别于躯体内生理过程和其他自然现象所产生的那些电场、磁场或电磁场，或接触电流。

曝露限值（Exposure Limit）：人体电磁场曝露的上限值，用来防止产生与该场存在因果关联的有害生理反应。这些限值并不是用于保护由于对这种曝露的恐惧而导致的其他影响（如心理上的）。

健康（Health）：身体、心理和社交的良好状态，而不仅仅是没有疾病或虚弱（《WHO宪章》）。

设施（Installation）：包含有电磁场源的一种结构物。

部长（Minister）：由总统或政府首脑任命来监管政府某行政部门的相关人员。

职业曝露（Occupational exposure）：个人在完成工作过程中所经受的所有电磁场曝露。

物主（Owner）：拥有或负责运行会在环境或工作场所中产生电磁场的设施的个人或公司。

模型（Phantom）：一个含有组织等效物质的物理模型，用于在实验室剂量测定中模拟躯体。

公众（Public）：除工作人员、军队成员或在医疗监护下的病人以外的任何个人。
公众曝露 (Public exposure)：除职业曝露和医疗过程中的曝露外，一般公众成员所经受的所有电磁场曝露。

参照水平 (Reference Level)：为实际曝露评估目的而提供的电磁场曝露水平，用来确定是否可能超过基本限值。有些参照水平可以使用测量和/或计算技术，从相应的基本限值导出；而有些参照水平则针对曝露于电磁场的感觉和有害的非直接效应。

源 (Source)：产生电磁场的装置或设施。

特定的源 (Specified source)：依据本法案制定的条例中所指明的，以名称、性质或位置来确定的电磁源。

监督 (Surveillance)：对人体电磁场曝露的监控或对电磁场发生源的监控。

受过培训的工作人员 (Trained worker)：接受过任何有关电磁场保护措施的必要信息与培训的、在工作中已受到电磁场曝露的雇员或个体工作人员。

工作人员 (Worker)：在工作中已受到电磁场曝露的雇员或个体工作人员，他可能是受过培训的工作人员，或是在不超过电磁场限值的场所内工作的人员。

II. 电磁场曝露限值和符合性程序

5. 电磁场曝露限值

5.1 依据本法案的目的，应当采纳国际非电离辐射防护委员会 (ICNIRP) 推荐的“基本限值”和“参照水平”，作为相关的电磁场曝露限值。

5.2 部长应当确保产生电磁场的任何设施与装置符合本法案所设定的曝露限值，同时应当选定适当措施来确保相符性。

5.3 部长应有权提议采纳依据本法案制定的条例（该条例执行 ICNIRP 特定的推荐）、必要的符合性措施，以及会对本法案相关条款产生进一步影响的任何其他要求。

5.4 任何依据本法案制定的条例，应当在国家管辖范围内统一适用。

6. 符合性

6.1 依据条款 6.2 规定适当的符合性安排时，部长可以：

- 规定测量和/或计算，以及监控公众与工作人员的曝露的监督要求；
针对不符合电磁场曝露限值的电磁场源规定减少曝露的措施；
> 要求对电磁场源测量和监控；
> 确定对超出曝露限值的处罚；
> 规定任何确保符合曝露限值所必需的其他措施。
6.2 在条款 6.1 的规定之外，部长可以要求任何设施或装置的制造者、进口商、安装方或运行方通过测量、符合性声明书，或由部长批准的机构出具的符合性证明来证实符合曝露限值。
6.3 部长在制定符合性程序时，应考虑针对产生电磁场的产品测试已达成共识和认可的相关协议（如果这些协议存在的话）。
6.4 部长可以设立或任命一个合适的团体或专门机构（以下简称“机构”），用以管理由部长依据本法案所制定的符合性框架。

7. 执行

7.1 部长应当要求任何设施的物主在其公众可以进入而电磁场曝露超出限值的场所，采取必要的措施以限制公众进入，和 / 或减少一个或一些产生曝露的电磁源的电磁场排放。

7.2 设施的物主应当确保在工作中曝露到电磁场的、又被分类为受过培训的工作人员，接受与他们的曝露有关的任何必要的信息和培训，并让他们了解为符合电磁场曝露限值所需的任何减少曝露的措施。

7.3 未按条款 7.2 要求接受过必要培训的工作人员，应当受到本法案向公众提供的相同保护。

7.4 在所采取的预防措施不违背本法案目的的前提下，部长可采取降低电磁场曝露的预防措施。预防措施应该考虑世界卫生组织在《科学不确定领域指导公共卫生政策方案框架》中提出的意见与建议。

7.5 依据条款 7.4 规定所采取的预防措施不应该扩展至改变本法案已确认的曝露限值。

8. 记录保存和信息提供

8.1 部长应当保存一份由机构作出或以机构名义作出的曝露测量记录。

8.2 如果部长认为合适，可以授权机构公布或发表与本法案规定相关的信
息、测量或任何其他此类事项。

9. 生效

9.1 按照相应的程序法和惯例，本法案在[某日期]生效。
人体电磁场曝露限值条例范本

I. 前言与总则

1. 短标题

   1.1 本条例可称为[某日期]的《人体电磁场曝露限值条例》。

2. 目的和目标

   2.1 本条例按照[某日期]的《人体电磁场曝露法案范本》制定。
   2.2 本条例的目的是保护公众和工作人员，防止生活和工作环境中电磁场（EMF）曝露引起的有害健康影响。

3. 范围和应用

   3.1 本条例为下列人员设定电磁场曝露限值：
       - 在公众有权进入的场所内的公众；
       - 在工作场所的工作人员。
   3.2 本条例不适用于在医疗监护下受到由诊断和治疗设备产生的电磁场曝露的病人；也不适用于军队成员。

4. 定义

   《人体电磁场曝露法案》条款4中的定义也适用于本条例。

II. 电磁场曝露限值和符合性程序

5. 电磁场曝露限值

   5.1 本条例中有两种电磁场曝露限值：
“基本限值”，应当始终符合；
“参照水平”，在“基本限值”未超出的前提下可以超过。
（解释性说明：“基本限值”可能是难于直接测量的量。在有些情况下，它们只能够使用数学方法来计算或是在虚拟模型内进行测量。相反，“参照水平”可用各种科学仪器容易测得的量来表达。）

5.2 在公众有权进入的场所，公众暴露的“基本限值”见表1“基本限值——公众暴露”。
5.3 在公众有权进入的场所，公众暴露的“参照水平”见表2“参照水平——公众暴露”。
5.4 受过培训的工作人员在其工作环境中的“基本限值”见表3“基本限值——职业暴露”。
5.5 受过培训的工作人员在其工作环境中的“参照水平”见表4“参照水平——职业暴露”。

6. 符合性程序

6.1 公众有权进入而且电磁场暴露处在或低于表2规定的“参照水平”的场所，符合本条例要求。
6.2 对公众有权进入而且电磁场暴露超过表2规定的“参照水平”的场所，必须进行评价，来确认电磁场暴露是否超过“基本限值”。电磁场暴露处在或低于表1规定的“基本限值”的场所，符合本条例要求。
6.3 公众有权进入而且电磁场暴露超过表1规定的“基本限值”的场所，不符合本条例要求，这些场所需采取条款9规定的措施。
6.4 非因有评价指出有害健康影响的危险，下列几类工作人员在其工作环境中受到电磁场暴露的限值应与公众相同，即表1规定的“基本限值”和表2规定的“参照水平”；
因对其提供服务的性质而与公众处在同一场所或环境的工作人员。
已向雇主告知怀孕的妇女。
带有已知会受到工作中电磁场暴露水平有害干扰的金属假体、心脏起搏器、去颤器和其他电气医疗装置的工作人员。
在可能超过表1规定的“基本限值”的场所内，未受过工作程序方面的适
当培训的工作人员。

6.5 工作人员（以条款 6.4 为条件）电磁场曝露处于或低于表 4 规定的“参照水平”的工作场所，符合本条例要求。

6.6 对那些工作人员（以条款 6.4 为条件）电磁场曝露超过表 4 规定的“参照水平”的工作场所，必须进行评价，以确认电磁场曝露是否超过“基本限值”。电磁场曝露处在或低于表 3 规定“基本限值”的工作场所，符合本条例要求。

6.7 工作人员（除条款 6.4 所列各类工作人员外）电磁场曝露超过表 3 所规定“基本限值”的工作场所，不符合本条例要求，需要采取条款 9 规定的措施。

6.8 应当采用直接测量、型式试验、计算或模拟来验证是否符合本条例。任何验证应当按法案范本第 6.4 条款指定机构的所有要求进行。

7.1 确认符合本条例的所有测量和/或评价，应当由指定的机构作出或授权，并报告给部长。在这些测量和/或评价之后，对电磁场曝露水平并不增加的场所，其结果将在部长规定的时期内保持有效。

7.2 为条款 7.1 的目的，部长可以将部长权力的全部或部分授予依法案范本条款 6.4 建立的机构。

7.3 符合性的验证应当基于正常运行中产生的、导致最高电磁场曝露的那些条件（最不利条件），并采用适当的国际认可的测量和评价技术规范。（说明：适当的国际技术规范包括那些由 CENELEC、IEC 和 IEEE 制定的规范）

7.4 当测量不是在最不利条件下作出时，最不利条件下的电磁场曝露应当计算或在测量值基础上外推。测量和/或计算应当使用适当的技术规范，考虑多源和多频率曝露的情况。

7.5 在出现可能会显著增加公众与工作人员电磁场曝露的任何变化后，例如在某地区增加产生电磁场的设备或设施后，需要再次测量和/或评价。
III. 职责和执行

8. 职责

8.1 部长在机构的建议下，应当建立一项适当的程序来监控公众和受过培训的工作人员的电磁场暴露限值的符合性。

8.2 部长应当每年公布该程序的详情，以及为支持该程序所采取的行动。

9. 执行

9.1 部长应当确定对那些公众与工作人员有权进入，但不符合本条例要求的场所应采取的适当措施。这些措施可包括：

- 扩展可能会超过表 2 中公众“参照水平”的场所边界，并限制公众进入该场所。
- 要求使用适当的标识、警告和公众告示等。
- 工程或/和管理的控制。
- 机构建议的其他措施。

10. 记录保存

10.1 机构应当保存一份有关电磁场暴露测量和评价的记录，该记录应是由机构或经其授权作出的，或依据本条例可进行此类测量与评价的其他部门作出的。

10.2 机构应当以公众容易理解的方式，并考虑任何可适用的隐私法规，发布依据条款 10.1 所得到的信息。

11. 生效

按照相应的程序法和惯例，本条例在 [某日期] 生效。

附录

基本限值和参照水平，表 1 ~ 表 4。

（说明：插入 1998 年 ICNIRP 导则或导则最新版本的相关表格）
测量和评价

测量或评价的方法应是由国际标准制定机构（如 IEC、CENELEC 或 IEEE）所制定的测量或评价方法。（说明：本附录将给定在测量、计算“参照水平”或评价“基本限值”时可提供帮助的标准和导则。此外，还将论述处理多源和多频率的方法）
说明性备忘录

提出本法律范本是为了帮助成员国颁布适当的法律，这项法律将保护各国公众避免可能产生有害健康影响的电磁场暴露水平。

本法律范本由法案范本和条例范本组成。本说明性备忘录的目的是说明在准备法律范本时采取的方法。通过章节和条款的编号尽可能保持相似，使本法案和本条例间尽量保持一致关系。例如，在本法案和本条例中，曝露限值都在第 5 条款中涉及。

I. 法案范本

法案范本的目的是保护人体健康，使之免受电磁场的过度曝露。在本法案中，责任当局，被称之为部长，可以规定为达到上述目的所必要的措施。特定的详细措施则在依据本法案制定的条例中规定。本法案范本中条款的顺序和分类反映了所遵循方法的逻辑性。

条款

条款 1.1 指出本法案可称为《人体电磁场曝露法案》。

目的

条款 2.1 说明本法案范本的目的是确认由国际非电离辐射防护委员会（ICNIRP）所制定的、国际公认的人体曝露限值。
范围和应用

条款 3  指出本法案规定了在所涉及的频率范围内保护公众电磁场曝露的最低要求，但是并不适用于使用电磁场进行医学治疗的病人和军队人员。

定义

条款 4  对本法案中使用的各种不同词组、单词和术语给出定义。

电磁场曝露限值

条款 5.1  把国际上接受的 ICNIRP 建议编入国家法典。
条款 5.2  本条款和许多其他条款均提到“部长”。应当注意，这个名称在国家层面上需有所调整，以确切地反映国家相应的一个或数个部长——反映不同部长通常对不同电磁场源具有的责任，例如：
- 卫生部长对使用或产生电磁场的医疗装置的法规负责；除非在本法案中另作规定，也负责管理本法案。
- 通信部长负责电信和无线电广播。
- 贸易与工业部长负责电磁场的工业源。
- 环境部长负责物理因子的环境水平。
- 运输部长负责与铁路、空中交通控制，以及航空和航海通信相关的电磁场源。
- 海洋资源部长负责海洋导航和其他基于海洋的电磁场应用。
- 国防部长负责电磁场的军事使用。
- 就业（劳工）部长负责工作人员电磁场源曝露与职业卫生和安全。
- 能源部长负责发电与输配电中的电磁场曝露和产生。

条款 5.2 要求部长确保遵循限值。条款 5.3 授权部长推行必要的法规。条款 5.4 简明规定了全国统一贯彻法规。

符合性

条款 6.1  提供了部长在选定符合性框架时可能认为是合适的一系列选择方案。
条款 6.2 规定了部长要求通过测试或其他方法来证明符合性。
条款 6.3 纳入了一项要求，即：考虑任何有关产生电磁场的产品测试相互承认和接受的协议。
条款 6.4 允许部长建立或指定一个实体或机构，来管理部长所确认的符合性要求。

执行

条款 7.1 规定了部长要求任何设施的物主确保在公众可进入的场所达到符合性。
条款 7.2 要求设施的物主向进入该设施的工作人员提供有关他们暴露的必要信息和培训。
条款 7.3 指出，在工作人员没有接受条款 7.2 中相关的培训和信息时，给予他们与公众成员相同的保护。
条款 7.4 授予部长处理权，以采纳与世界卫生组织《科学不确定性领域指导公众卫生政策方案框架》相一致的预防措施。
条款 7.5 明确规定任何预防措施不得改变本法案确定的电磁场曝露限值。

记录保存

条款 8.1 规定了对已进行的曝露测量记录的保管。
条款 8.2 允许部长在认为合适的时候授权机构来发布那些测量结果和其他相关材料。

生效

条款 9.1 允许本法案在立法当局规定的日期生效。

II. 条例范本

本条例范本涉及公众和工作人员在生活与工作环境中的电磁场曝露。
《人体电磁场曝露限值条例范本》对公众规定了一套曝露限值，而对受过培训的工作人员规定了另一套较为宽松的限值。后一套限值只适用于受过培训的
工作人员，他们对工作场所的电磁场暴露有充分的了解。其他的工作人员，在
还没有接受相关培训或者根据预期的暴露水平认为没必要接受培训时，视为与
普通公众成员等同。

暴露限值分为两部分：”参照水平”和”基本限值”。这种安排是必要的，
因为人体的电磁场暴露是用参数——”基本限值”来表示，它是在体内的参数,
不容易测得。为了解决这一问题，引入”参照水平”，它是测量躯体外部的电磁
场，因而容易测量。每个”参照水平”相当于一个在特定环境中近似产生体内
”基本限值”的外部场。不过，外部场超出”参照水平”并不表示”基本限值”
已经必然超过；只不过表明有必要使用物理或计算机模型来进一步计算或测定，
以证实符合性。（见 http://www.icnirp.org/documents/emfgdl.pdf）

在本条例中，按照法案范本设置的机构承担处理公众电磁场暴露的责任。
而由雇主承担处理职业暴露的责任，同时接受机构的监督。

### 条款

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| 本条例规定了公众有权进入场所的电磁场暴露限值（3.1a）；以及工作人员
在工作场所的电磁场暴露限值（3.1b）。本条例并不适用于接受医疗护理的病
人或军队人员（3.2）。 |

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<tr>
<td>法案范本条款4中的定义也适用于本条例。</td>
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### 曝露限值

条款 5 说明曝露限值有两个部分，“参照水平”和“基本限值”（5.1）。公众的曝露限值在表 1 和表 2（5.2，5.3）中给出，而职业曝露在表 3 和表 4（5.4，5.5）中给出。

### 符合性程序

关于公众曝露，电磁场曝露不超过“参照水平”的场所是符合要求的（6.1）；超过“参照水平”的场所需要通过评价来确定是否已经超过“基本限值”（6.2）；评价之后已经确定并不超过“基本限值”的场所也是符合要求的（6.2）；但是超过“基本限值”的场所有不符合要求的，要采取条款 9 中规定的措施（6.3）。

关于职业曝露，某些类别的工作人员，就电磁场工作曝露而言，除非进行了额外的评价，他们应被给予与公众成员相同的保护（6.4）。这几类人包括在公众有权进入的工作场所中的工作人员（6.4a）；怀孕的工作人员（6.4b）；带有金属植人物的工作人员（6.4c）；以及未接受过允许在曝露超过公众允许曝露水平的场所工作的必要信息和培训的工作人员（6.4d）。

对于受过培训的工作人员可适用较高的曝露限值，曝露低于相应“参照水平”的场所是符合要求的（6.5）。超过“参照水平”的场所，必须进行评价以确定是否已经违背相应的“基本限值”（6.6）。对没有出现违背的场所，其职业曝露是符合本条例的（6.6）。但是如果“基本限值”已经超过，那么该工作场所是不符合本条例的，必须采取条款 9 中的缓和措施（6.7）。

最后，符合性可以通过测量、计算或建模来确定（6.8）。

### 报告和测量

所有的测量和评价必须由相关部长指定的机构作出或另外委托（7.1）。部长可以把委托权授予机构（7.2）。测量应在正常条件下，在最高曝露时间内进行（7.3），但在不能达到上述要求时，电磁场曝露可用推算计算来评估（7.4）。在电磁场源的数量或功率已有显著增加的场所，应进行进一步的测量（7.5）。
### 职责

要求机构建立一套程序来监控公众的电磁场曝露（8.1），机构应每年发布该程序的详情和为支持该程序所采取的行动（8.2）。

### 执行

对公众和工作人员有权进入、却不符合本条例要求的场所，应该采取措施，或不让公众进入或恢复曝露到符合要求（9.1）。这些措施可以包括：界定曝露限值超过的场所（9.1a）；警戒示志（9.1b）；工程或管理控制（9.3c）以及机构建议的其他措施（9.1d）。

### 记录保存

公众电磁场曝露的所有测量和评价信息以及超过“参照水平”的场所详情，应当由机构保存在数据库内（10.1），而且可向公众提供（10.2）。

### 生效

由立法当局规定的日期。
MODEL LEGISLATION FOR ELECTROMAGNETIC FIELDS PROTECTION
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PREFACE

The need to develop Model Legislation that enables government agencies to limit the exposure of people to electromagnetic fields (EMF) was expressed by members of the International Advisory Committee (IAC) to WHO’s International EMF Project. Such legislation would facilitate the introduction of appropriate measures to protect the public and workers from potential adverse effects of EMF.

To assist countries not having appropriate legislation to protect their population, the International EMF Project has developed a Model Act and a Model Regulation that provide the legal framework to provide this protection. An important aspect of this model legislation is that it uses international standards that limits EMF exposure of people (ICNIRP exposure standards) and international standards that limit the emissions of EMF from devices (IEC and IEEE device emission standards).

This Model Legislation follows the widely accepted practice among lawmakers of setting out an enabling Act that permits the responsible Minister to subsequently issue Regulations, Statutory Orders or Ordinances as appropriate to deal with specific areas of concern. It comprises three elements:

➤ A Model Act to enable an Authority to initiate regulations and statutes that limit the exposure of its population to electromagnetic fields in the frequency range 0Hz to 300GHz.

➤ A Model Regulation which sets out in detail the scope, application, exposure limits and compliance procedures that are permitted under the Act to limit people’s exposure to electromagnetic fields (EMF).

➤ An Explanatory Memorandum describing the approach to the Act and its Regulations.

If a national authority wants to develop its own exposure limits, it should use or take into account the WHO Framework for Developing EMF Standards. See: http://
www.who.int/peh-emf/standards/en/.

If a national authority wants to implement measures that will lead to lower exposures, they should use or take into account the WHO Framework for Guiding Policy Options in Areas of Scientific Uncertainty. See: http://www.who.int/peh-emf/en/.

The International EMF Project thanks sincerely Dr Tom McManus for his tireless effort in the preparation of this model legislation. The assistance of WHO’s Department of Ethics, Trade, Human Rights and Health Law, and comments from The Center for Law & the Public’s Health at Georgetown University & Johns Hopkins University, USA, are gratefully acknowledged. Special gratitude is also due to those stakeholders who provided comments on the drafts.
# MODEL ELECTROMAGNETIC FIELDS HUMAN EXPOSURE ACT

## I. Preliminary and General

### 1. SHORT TITLE

1.1 The Act may be cited as The Electromagnetic Fields Human Exposure Act.

### 2. PURPOSE

2.1 The purpose of the Act is to establish limits on human exposure to Electromagnetic Fields (EMF) that will provide protection against known adverse health effects from any installation or device emitting such fields.

### 3. SCOPE AND APPLICATION

3.1 The Act establishes minimum requirements for the protection of the public and workers from risks to their health arising or likely to arise from their exposure to EMF in the frequency range 0 to 300GHz.

3.2 The Act does not apply to patients undergoing diagnosis or treatment under medical supervision or to the military.

### 4. DEFINITIONS

**Adverse health effect**: A biological effect that has a detrimental effect on mental, physical and/or general well being of exposed people, either in the short-term or long term.

**Agency**: A body nominated by a relevant Minister to provide advice to, or act on behalf of, the Minister with regard to this Act.
**Basic Restrictions**: Restrictions on exposure to electric, magnetic, and electromagnetic fields that are based directly on established health effects. Depending upon the frequency of the field, the physical quantities used to specify these restrictions are current density \( J \), specific energy absorption rate \( SAR \), and power density \( S \). Only power density in air, outside the body, can be readily measured in exposed individuals.

**Compliance**: Conformity with the requirements of the Act or Regulation pursuant to the Act.

**Declaration of Compliance**: A document signed by a supplier or manufacturer or other such body nominated by the Minister that attests that the device or installation to which the Declaration refers meets the requirements of the Act or Regulation pursuant to the Act.

**Device**: A manufactured product that produces EMF.

**Electromagnetic fields**: A physical entity carrying or storing energy in empty space and manifesting itself by exerting forces on electric charges. For purposes of this Act EMF includes static electric and magnetic fields as well as time-varying electric, magnetic and electromagnetic fields with frequencies in the range 0 to 300GHz.

**Electro-medical equipment**: Electrical devices, instruments or prostheses employed to investigate or treat patients under medical supervision.

**Equipment**: Manufactured industrial, commercial, consumer or medical products that produce EMF.

**Exposure**: The subjection of a person to electric, magnetic, or electromagnetic fields or to contact currents other than those originating from physiological processes in the body and other natural phenomena.

**Exposure Limit**: An upper limit placed on human exposure to EMF to protect against adverse physiological responses that are causally related to the fields. Such limits are not intended to provide protection against other effects (e.g., psychological) arising from fear of such exposures.

**Health**: A state of complete physical, mental and social well-being and not
merely the absence of disease or infirmity (WHO constitution).

**Installation:** A construction that incorporates a source of EMF.

**Minister:** The relevant person appointed by the President or head of government to supervise an administrative department of the government.

**Occupational exposure:** All exposure to EMF experienced by individuals in the course of performing their work.

**Owner:** The person or company who owns, or is responsible for, the operation of an installation emitting EMF into the environment or workplace.

**Phantom:** A physical model containing tissue-equivalent material used to simulate the body in an experimental dose measurement.

**Public:** Everyone who is not a worker, member of the military or a patient under medical care.

**Public exposure:** All exposure to EMF experienced by members of the general public, excluding occupational exposure and exposure during medical procedures.

**Reference Level:** EMF exposure level provided for practical exposure assessment purposes to determine whether the basic restrictions are likely to be exceeded. Some reference levels are derived from relevant basic restrictions using measurement and/or computational techniques and some address perception and adverse indirect effects of exposure to EMF.

**Sources:** Devices or installations that produce EMF.

**Specified sources:** Sources that are identified by name, nature or location to which a Regulation pursuant to the Act refers.

**Surveillance:** Monitoring of human exposure to EMF or monitoring of a EMF-emitting source.

**Trained worker:** An employee or self-employed individual subjected to EMF exposure at work, who receives any necessary information and training about EMF protective measures.

**Worker:** An employee or self-employed individual who is subjected to EMF exposure at work, and can be either a trained worker or a worker in an area where EMF limits will not be exceeded.
II. EMF Exposure Limits and Compliance Procedures

5. EMF EXPOSURE LIMITS

5. 1 For the purposes of this Act, the recommendations by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) with respect to Basic Restrictions and Reference Levels shall be adopted as the relevant EMF Exposure Limits.

5. 2 The Minister shall ensure that any installation or device that emits EMF complies with the Exposure Limits set out in this Act and shall designate appropriate measures to ensure compliance.

5. 3 The Minister shall have the power to introduce Regulations implementing the specific recommendations of ICNIRP, the necessary compliance measures as well as any other requirements that will give further effect to the relevant provisions of this Act.

5. 4 Any Regulation made under this Act shall apply uniformly across the national jurisdiction.

6. COMPLIANCE

6. 1 The Minister, in designating appropriate compliance arrangements under Article 6. 2, may:

- Prescribe surveillance requirements to measure and/or calculate, and monitor the exposures of the public and workers.
- Prescribe mitigating actions where sources are not in compliance with EMF Exposure Limits.
- Require the measurement and monitoring of sources of EMF.
- Establish penalties where exposure limits are exceeded.
- Include any other measure necessary to ensure compliance with the Exposure Limits.

6. 2 Further to the provisions of Article 6. 1, the Minister may require a
manufacturer, importer, installer or operator of any installation or device to demonstrate compliance with the Exposure Limits by means of measurement, Declaration of Compliance or by a certificate of compliance from a body approved by the Minister.

6.3 The Minister, in establishing compliance procedures, shall take into account any relevant agreements relating to the mutual recognition and acceptance of testing of products emitting EMF, where they exist.

6.4 The Minister may establish or nominate an appropriate body or Agency (“the Agency”) for the purposes of administering the compliance framework established by the Minister under this Act.

7. ENFORCEMENT

7.1 The Minister shall require the owner of any installation where exposure in areas accessible to the public exceeds the EMF Exposure Limits, to take such measures as are necessary to restrict public access and/or reduce the EMF emissions from a source or sources contributing to the exposure.

7.2 The owner of an installation shall ensure that workers who are exposed to EMF at work, and who are to be classified as trained workers, receive any necessary information and training relating to their exposure and are made aware of any mitigating measures needed to comply with EMF exposure limits.

7.3 Workers who have not received the necessary information and training as required for trained workers under Article 7.2 shall receive the same protection afforded under the Act as members of the public.

7.4 The Minister may take precautionary measures that reduce exposure to EMF, provided that such measures do not undermine the purpose of this Act. The precautionary measures should consider the advice and recommendations contained in the WHO Framework for Guiding Public Health Policy Options in Areas of Scientific Uncertainty.

7.5 Precautionary measures adopted under the provisions of Article 7.4 shall not extend to changing the exposure limits established by this Act.
8. RECORD KEEPING AND INFORMATION PROVISION

8. 1 The Minister shall maintain a record of exposure measurements made by, or on behalf of, the Agency.

8. 2 The Minister may authorize the Agency to publish or disseminate information, measurements, or any other such matter relevant to the provisions of this Act as is deemed appropriate.

9. ENTRY INTO FORCE

9. 1 This Act shall enter into force on [Date] in accordance with appropriate protocol and custom.
MODEL HUMAN EMF EXPOSURE LIMIT REGULATION

I. Preliminary and General

1. SHORT TITLE

1.1 This Regulation may be cited as the Human EMF Exposure Limit Regulation of [date].

2. PURPOSE AND OBJECTIVES

2.1 This is a Regulation pursuant to the Electromagnetic Fields Human Exposure Act of [date].

2.2 The purpose of this Regulation is to protect the public and workers from adverse health effects arising from exposure to electromagnetic fields (EMF) in the living and working environments.

3. SCOPE AND APPLICATION

3.1 This Regulation sets EMF exposure limits for:

► The public in areas to which the public has access.
► Workers in their places of work.

3.2 The Regulation does not apply to patients under medical care receiving EMF exposure from diagnostic or treatment equipment, or to the military.

4. DEFINITIONS

The Definitions in Article 4 of the Electromagnetic Fields Human Exposure Act are applicable to this Regulation.
II. Exposure Limits and Compliance Procedures

5. EMF EXPOSURE LIMITS

5. 1 In this Regulation there are two kinds of EMF exposure limits:

▷ Basic Restrictions that should always be complied with.

▷ Reference Levels that may be exceeded provided the Basic Restrictions are not exceeded.

(Explanatory Note: Basic Restrictions are quantities that may be difficult to measure directly. In some instances, they can only be calculated using mathematical methods or measured in a phantom. Reference Levels, in contrast, are expressed in quantities that can be readily measured by a variety of scientific instruments)

5. 2 Basic Restrictions for public exposure in areas to which the public have access are set out in Table 1 “Basic Restrictions — Public Exposure”.

5. 3 Reference Levels for public exposure in areas to which the public have access are set out in Table 2 “Reference Levels — Public Exposure”.

5. 4 Basic restrictions for trained workers in their occupational environment are set out in Table 3 “Basic Restrictions — Occupational Exposure”.

5. 5 Reference Levels for trained workers in their occupational environment are set out in Table 4 “Reference Levels — Occupational Exposure”.

6. COMPLIANCE PROCEDURES

6. 1 Those areas where members of the public have access and where EMF exposures are at or below the Reference levels set out in Table 2 are in compliance with this Regulation.

6. 2 In those areas where members of the public have access and where the Reference Levels set out in Table 2 are exceeded, an evaluation must be undertaken to establish if EMF exposures exceed the Basic Restrictions. Where EMF exposures are at or below the Basic restrictions set out in Table 1, they are in compliance with this Regulation.
6.3 Those areas where members of the public have access and where EMF exposures exceed the Basic Restrictions set out in Table 1 are not in compliance with this Regulation. Such areas are subject to the measures set out in Article 9.

6.4 Unless an evaluation shows that there are no risks of adverse health effects, the following categories of worker shall have their exposures to EMF in their working environment subject to the same limits as those applicable to members of the public, namely Basic Restrictions as set out in Table 1 and Reference Levels as set out in Table 2:

- Workers who share the same area or environment with the public by virtue of the nature of the service being provided to the public.
- Women who have declared their pregnancy to their employer.
- Workers having metallic prostheses, cardiac pacemakers, defibrillators and other electro-medical devices that are known to suffer adverse interference from the EMF exposure levels in which they work.
- Workers who have not received appropriate training regarding workplace procedures in areas where the Basic Restrictions, set out in Table 1, could be exceeded.

6.5 Workplaces where workers, subject to Article 6.4, are exposed to EMF at or below the References Levels set out in Table 4 are in compliance with this Regulation.

6.6 In those workplaces where workers, subject to Article 6.4, are exposed to EMF that exceeds the Reference Levels set out in Table 4 an evaluation must be undertaken to establish if EMF exposures exceed the Basic Restrictions. Where EMF exposures are at or below the Basic Restrictions set out in Table 3, such workplaces are in compliance with this Regulation.

6.7 Workplaces where workers, other than those in the worker categories listed in Article 6.4, are exposed to EMF in excess of the Basic Restrictions set out in Table 3 are not in compliance with this Regulation and are subject to the measures set out in Article 9.

6.8 Compliance with this Regulation shall be verified by direct measurement,
type testing, calculation or modelling. Any verification shall be subject to any requirements of the Agency defined in Article 6.4 of the Model Act.

7. REPORTING AND MEASUREMENTS

7.1 All measurements and/or evaluations to establish compliance with this Regulation shall be made or authorized by the nominated Agency and reported to the Minister. Following such measurements and/or evaluations and where EMF exposure levels are not subsequently increased, the results will remain valid for a period set by the Minister.

7.2 The Minister may delegate all or part of the Minister’s authority to the Agency set up under Article 6.4 of the Model Act for the purposes of Article 7.1.

7.3 Verification of compliance should be based on those conditions that lead to the highest EMF exposure (worst-case conditions) produced under normal operating conditions and employ appropriate internationally recognized measurement and evaluation protocols. (Comment: Appropriate international protocols include those developed by CENELEC, IEC and IEEE).

7.4 Where measurements are not made under worst-case conditions, EMF exposure for the worst-case conditions should be calculated or extrapolated on the basis of the measured values. Measurements and/or calculations should take account of exposures to multiple sources and multiple frequencies using the appropriate protocols.

7.5 Further measurements and/or evaluations may be required following any changes likely to significantly increase EMF exposure to the public or workers, such as following additions of equipment or installations generating EMF in an area.

III. Responsibilities and Enforcement

8. RESPONSIBILITIES

8.1 The Minister, on advice from the Agency, shall establish a programme to monitor compliance with public and trained worker EMF Exposure Limits as appropriate.
8.2 The Minister shall publish details of this programme and the activities undertaken in support the programme each year.

9. ENFORCEMENT

9.1 The Minister shall determine the appropriate measures to be undertaken in areas to which both the public and workers have access and which do not comply with this Regulation. Such measures may include:

- Extending the boundaries of areas where public Reference Levels in Table 2 may be exceeded, and restricting public access to those areas.
- Requiring the use of appropriate signs, warnings and public notices.
- Engineering or Administrative controls.
- Other measures as advised by the Agency.

10. RECORD KEEPING

10.1 The Agency shall maintain a record of EMF exposure measurements and estimates made by the Agency or on its behalf and by others approved to make such measurements and estimates under the Regulation.

10.2 The Agency shall publish the information obtained under Article 10.1 in a form readily accessible to the public, taking into account any applicable privacy legislation.

11. ENTRY INTO FORCE

This Regulation shall enter into force on [date] in accordance with protocol and custom.

Annexes

BASIC RESTRICTIONS AND REFERENCE LEVELS, TABLES 1 – 4.

(Comment: Insert relevant tables from ICNIRP Guidelines, 1998 or the latest version of these Guidelines)
MEASUREMENT AND EVALUATION

Measurement or evaluation methods should be those developed by international standards setting agencies such as the IEC, CENELEC or IEEE. (Comment: This annex will identify standards and guidelines available to assist those involved in measuring or calculating Reference levels or evaluating Basic restrictions. In addition it will deal with handling multiple sources and frequencies)
EXPLANATORY MEMORANDUM

This Model Legislation has been produced to assist Member States enact appropriate legislation that will protect their citizens from levels of exposure to electromagnetic fields (EMF) that could produce adverse health effects.

The Model Legislation comprises a Model Act and a Model Regulation. The purpose of this Explanatory Memorandum is to describe the approach adopted in the preparation of the Model Legislation. Efforts have been made to maintain a consistent relationship between the Act and its Regulation by ensuring that Section and Article numbering were kept similar as far as possible. For example, Exposure Limits are dealt with in Article 5 of the Act and of the Regulation.

I. Model Act

The aim of the Model Act is the protection of human health from excessive exposure to electromagnetic fields (EMF). Under the Act the responsible authority, called the Minister, may specify the measures necessary to achieve this aim. The specific detailed measures are set out in the Regulation pursuant to the Act. The order and nature of the Articles that make up the Model Act reflect the logic of the approach followed.

The Articles

SHORT TITLE

Article 1.1 indicates that Act may be cited as The Electromagnetic Fields Human Exposure Act.
## PURPOSE

**Article 2.1** states that the purpose of the Model Act is to establish internationally recognized limits of human exposure developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

## SCOPE AND APPLICATION

**Article 3** indicates that the Act specifies minimum requirements for the protection of the public from exposure to EMF in the frequency range provided, but does not apply to patients undergoing medical treatment with EMF or military personnel.

## DEFINITIONS

**Article 4** provides definitions for the various phrases, words and terms used in the Act.

## EMF EXPOSURE LIMITS

**Article 5.1** codifies the internationally accepted recommendations of the ICNIRP into national legislation.

**Article 5.2** and many other Articles reference “the Minister”. It should be noted that this will need adjustment at the national level to accurately reflect the appropriate Minister or Ministers of State-reflecting that different Ministers will normally have responsibility for different EMF sources, for example:

- The Minister for Health for the regulation of medical devices using or emitting EMF and unless otherwise provided for under this Act, the administration of this Act.
- The Minister for Communications with respect to telecommunications and radio broadcasting.
- The Minister for Trade and Industry with respect to industrial sources of EMF.
- The Minister for the Environment with respect to environmental levels of
physical agents.

The Minister for Transport with respect to EMF sources associated with railways, air traffic control and aeronautical and marine communications.

The Minister of Marine Resources with respect to marine navigational and other marine based uses of EMF.

The Minister for Defense with respect to military uses of EMF.

The Minister for Employment (or Labor) with respect to the exposure of workers to EMF sources and occupational health and safety.

The Minister for Energy with respect to the exposure to and generation of EMF in power generation and distribution.

Article 5.2 obliges the Minister to ensure compliance with the Limits, while Article 5.3 empowers the Minister to introduce the necessary regulations. Article 5.4 simply provides for uniform national implementation of the regulation.

COMPLIANCE

Article 6.1 provides a range of options that the Minister may consider appropriate in designating a compliance framework.

Article 6.2 provides for the Minister to require compliance to be demonstrated through testing or other means.

Article 6.3 incorporates a requirement to take into account any agreements relating to the mutual recognition and acceptance of testing of products emitting EMF.

Article 6.4 allows for the Minister to establish or nominate a body or Agency to administer the compliance requirements established by the Minister.

ENFORCEMENT

Article 7.1 provides for the Minister to require any owner of an installation to ensure that compliance is achieved in publicly accessible areas.

Article 7.2 obliges the owner of an installation to provide workers accessing the installation with the necessary information and training concerning their exposure.

Article 7.3 indicates that, where workers have not received the training and
information referred to in Article 7.2, they are to be afforded the same protection as members of the public.

Article 7.4 provides the Minister with the discretion to adopt precautionary measures that are consistent with the WHO Framework for Guiding Public Health Policy Options in Areas of Scientific Uncertainty.

Article 7.5 specifies that any precautionary measures do not change the EMF Exposure Limits established by the Act.

RECORD KEEPING

Article 8.1 provides for the maintenance of records of exposure measurements undertaken.

Article 8.2 allows the Minister to authorize the Agency to publish those measurements results and any other relevant material deemed appropriate.

ENTRY INTO FORCE

Article 9.1 allows the Act to enter into force on a date to be specified by the legislative authority.

II. Model Regulation

The Model Regulation deals with exposures of the public and of workers to EMF in their living and working environments.

The Model Human EMF Exposure Limit Regulation provides one set of exposure limits for the public and another less stringent set for trained workers. The latter set of limits is applicable only to trained workers who have been made fully aware of their exposure to EMF in their workplace. Other workers are treated as equivalent to members of the public when such training has not been provided or is considered unnecessary in the light of the expected levels of exposure.

The exposure limits have two components: Reference Levels and Basic Restrictions. Such an arrangement is needed because the human exposure to EMF is
expressed in terms of parameters — Basic Restrictions — that are internal to the body but cannot be easily measured. To overcome this problem, Reference Levels are introduced, which are measures of EMF external to the body and which are readily measured. Each Reference Level corresponds to an external field that could in a particular circumstance give rise to a Basic Restriction being approached within the body. However an external field that exceeds the Reference Level does not necessarily imply that a Basic Restriction has been exceeded; simply that further calculation or measurements using physical or computer models may be necessary to verify compliance. See: http://www.icnirp.org/documents/emfgdl.pdf.

In this Regulation, responsibility for dealing with public exposures to EMF is given to the Agency set up under the Model Act. Responsibility for dealing with occupational exposures is placed on the employer, subject to surveillance by the Agency.

The Articles

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<th>SHORT TITLE</th>
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<tbody>
<tr>
<td>The Human EMF Exposure Limit Regulation.</td>
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<tr>
<th>PURPOSE AND OBJECTIVES</th>
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<tr>
<td>To protect people from adverse health effects of exposure to EMF in the living and working environments.</td>
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<tr>
<th>SCOPE AND APPLICATION</th>
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<tr>
<td>The Regulation sets limits to the EMF exposure of the public in places to which it has access (3.1a); and the exposure of workers in their place of work (3.1b). The Regulation does not cover patients undergoing medical care or military personnel (3.2).</td>
</tr>
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</table>
DEFINITIONS

The definitions in Article 4 of the Model Act are applicable to this Regulation.

EXPOSURE LIMITS

Article 5 states that there are two components to the exposure limits, Reference Levels and Basic Restrictions (5.1). The exposure limits for the public are given in Tables 1 and 2 (5.2, 5.3) and those for occupational exposure are given in Tables 3 and 4 (5.4, 5.5).

COMPLIANCE PROCEDURES

Concerning public exposure, areas where EMF exposures do not exceed the Reference Levels are in compliance (6.1); areas where the Reference Levels are exceeded require an evaluation to determine whether or not the Basic Restrictions have been exceeded (6.2); areas where it has been determined that following evaluation the Basic Restrictions are not exceeded are also in compliance (6.2); but areas where the Basic Restrictions are exceeded are not in compliance and subject to the measures set out in Article 9 (6.3).

Concerning occupational exposure, there are categories of worker that are to be given the same protection as members of the public as far as their work exposures to EMF are concerned unless additional evaluations are undertaken (6.4). These categories include workers in workplaces where the public has access (6.4a); pregnant workers (6.4b); workers with metallic implants (6.4c) and workers who have not received the necessary information and training to allow them to work in areas where exposures could exceed those permitted the public (6.4d).

For trained workers the higher exposure limits are applicable and workplaces where exposures are below the relevant Reference Level are in compliance (6.5). Where Reference Levels are exceeded an evaluation must be carried out to determine whether or not the relevant Basic Restrictions have been infringed (6.6) and where such infringement has not taken place, the occupational exposures are in compliance.
with the Regulation (6.6). However where the Basic Restrictions are exceeded, then
the workplace is not in compliance with the Regulation and mitigating measures must
be taken under Article 9 (6.7).

Finally, compliance can be determined by measurement, calculation or
modelling (6.8).

REPORTING AND MEASUREMENTS

All measurements and evaluations must be made or authorized by the Agency
ominated by the relevant Minister (7.1). The Minister may delegate authority for
designation to the Agency (7.2). Measurements shall be made at times of highest
exposure under normal circumstances (7.3) but, where this is not possible, EMF
exposures can be assessed by an extrapolation calculation (7.4). Further
measurements should be taken in areas where there has been a significant increase in
the number or power of electromagnetic field sources (7.5).

RESPONSIBILITIES

The Agency is required to establish a programme to monitor public exposure to
EMF (8.1) and shall publish details of this programme and activities undertaken in
support of this programme each year (8.2).

ENFORCEMENT

Areas to which the public and workers have access and that are not in compliance
with the Regulation shall be subject to measures to either exclude the public or return
the exposure to compliance (9.1). The measures can include defining areas where
exposure limits are exceeded (9.1a); warning notices (9.1b); engineering or
administrative controls (9.1c); and measures recommended by the Agency (9.1d).

RECORD KEEPING

Information on all measurements and evaluations of public exposure to EMF and
details of areas where the Reference Levels are exceeded shall be maintained on a
database by the Agency (10.1) and made available to the public (10.2).

ENTRY INTO FORCE

A date to be specified by the legislative authority.
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