Land Salzburg

Für unser Land!

The Precautionary Approach to Exposure Levels in Different Countries

EMF & Health – A Global Issue
London, 8th & 9th September 2008

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Public Health Department, Government of Salzburg

Guideline Values and Standards

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	ELF	↔	RF/MW
①	Electric Fields [V/m]		Electric Fields [V/m]
	Magnetic Fields [A/m, T]		Magnetic Fields [A/m]
			Power Density [W/m²]
②	General Public	↔	Occupational
③	Long Term (chronic effects)	↔	Short Term (acute effects)

Swiss Ordinance for Non-Ionising Radiation Protection 1999

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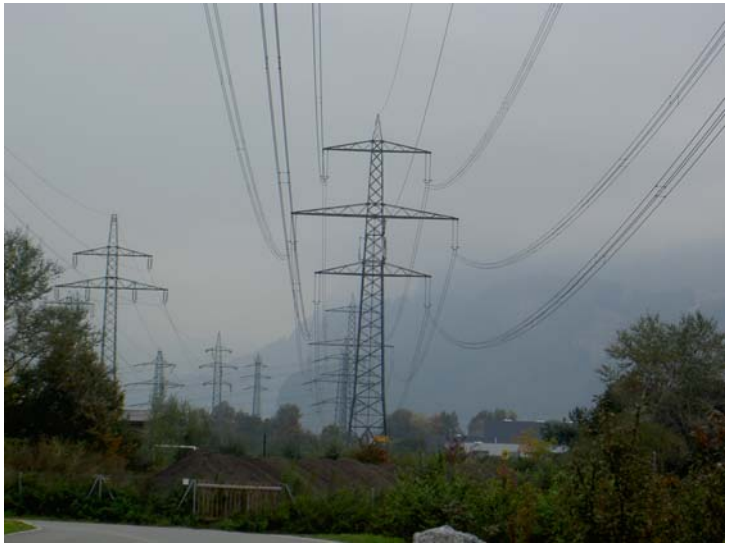
Power Lines ≥ 1000 V

- Installation Limit Value = 1 µT (10 mG)
- RMS
- Load = Thermal Maximum at 40° Celsius
- “Places with Sensitive Use”
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).



Swiss Ordinance for Non-Ionising Radiation Protection 1999

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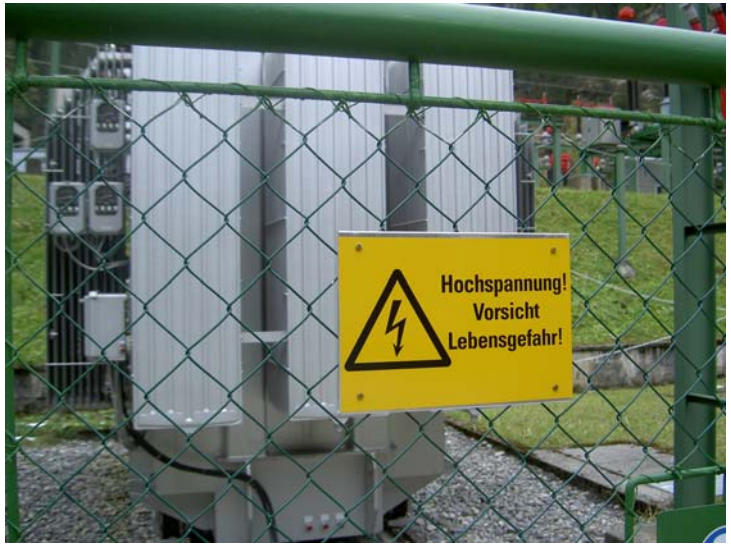
- Installation Limit Value = 1 µT (10 mG)
- RMS
- Load = Nominal Power
- “Places with Sensitive Use”
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

Transformers High + Low Voltage



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Switchgears

- Installation Limit Value = 1 µT (10 mG)
- RMS
- Load = Nominal power
- “Places with Sensitive Use”
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

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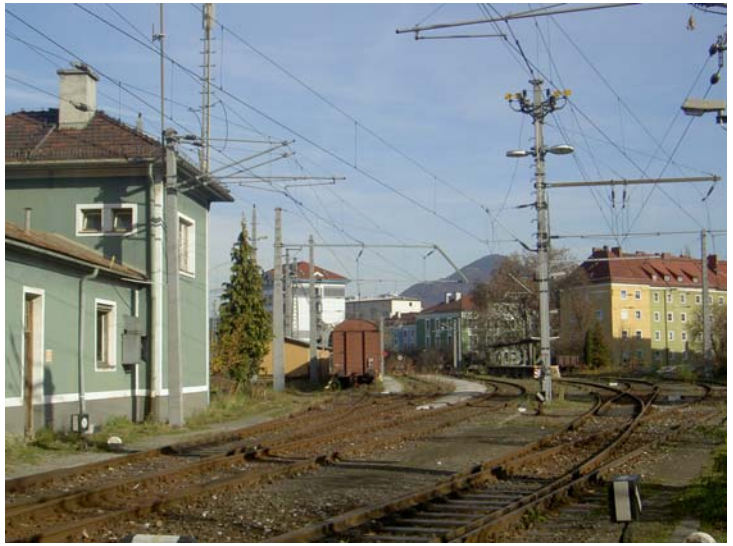
- Installation Limit Value = 1 µT (10 mG)
- RMS
- 24 hours average
- Load = Regular Railway Schedule
- “Places with Sensitive Use”
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

AC Overhead Lines Trains, Trolleys



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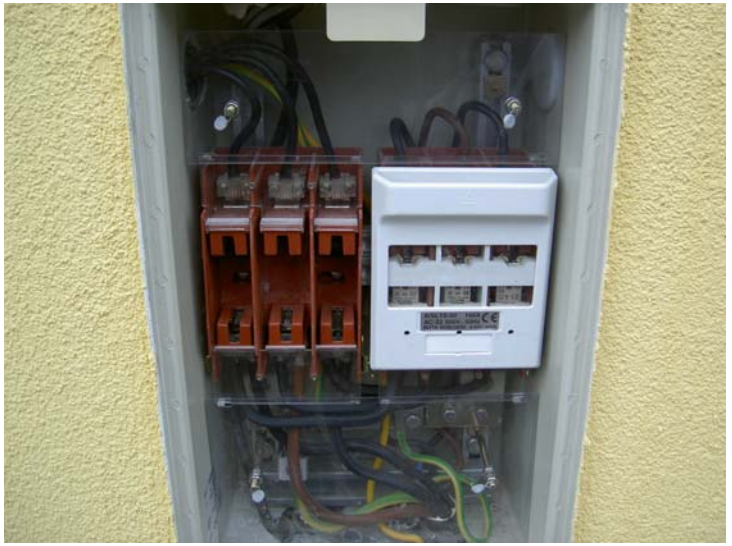
Electrical Installations

- Feeder lines from distribution boards have to be radially installed preferably
- Loops in feeder lines have to be avoided
- Main distribution boards must not be installed near the sleeping area



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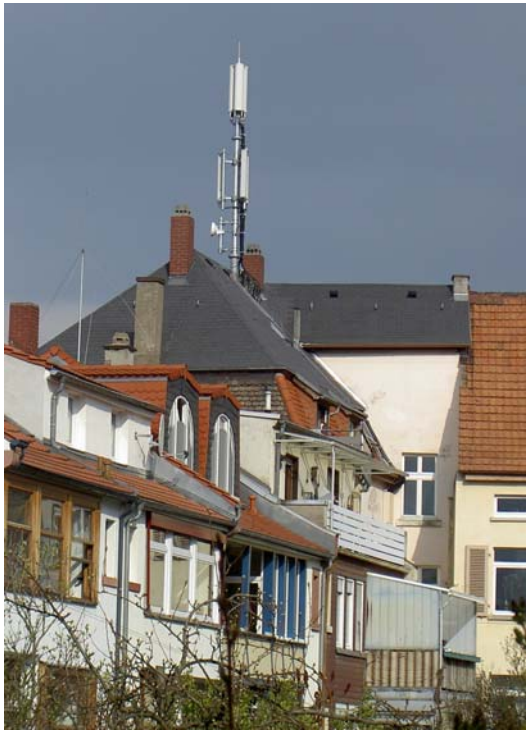
- Installation Limit Values
  - ~ 900 MHz = 4 V/m (4.25 µW/cm²)
  - ~ 900 MHz ≥1800 MHz = 5 V/m (6.64 µW/cm²)
  - ~ ≥1800 MHz = 6 V/m (9.55 µW/cm²)
- RMS
- Load = Maximum
- "Places with Sensitive Use"
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

Mobile Phone Base Stations ≥ 6W ERP



Swiss Ordinance for Non-Ionising Radiation Protection 1999

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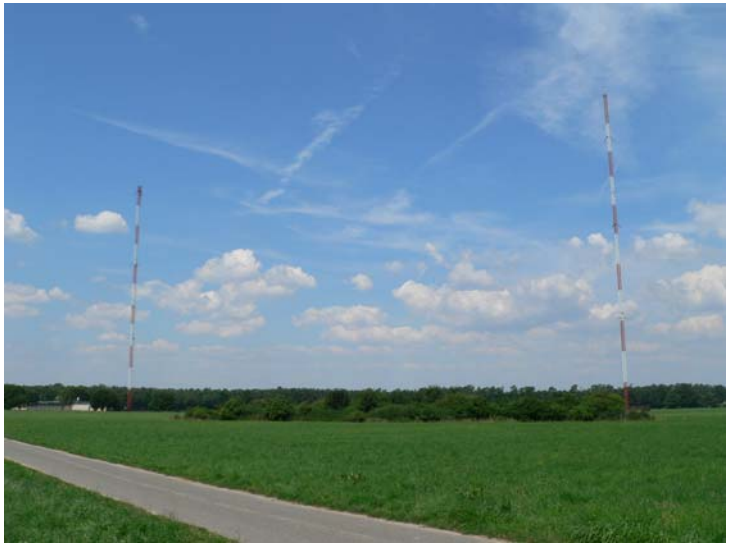
- Installation Limit Value = 8.5 V/m (19.17 µW/cm²)
- RMS
- Load = Maximum
- “Places with Sensitive Use”
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

Long- Medium Wave Transmitters ≥ 800 hours



Swiss Ordinance for Non-Ionising Radiation Protection 1999

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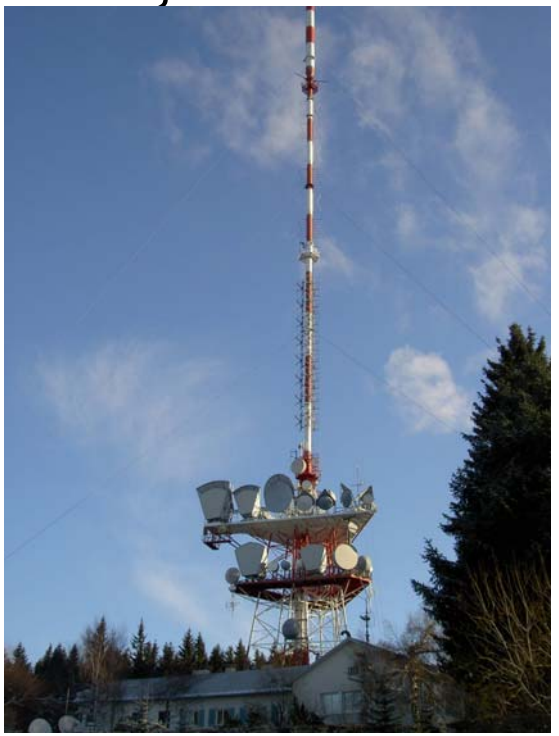
- Installation Limit Value = 3 V/m (2.39 µW/cm²)
- RMS
- Load = Maximum
- "Places with Sensitive Use"
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

Fixed RF Transmitters ≥ 6W, ≥ 800 hours



Swiss Ordinance for Non-Ionising Radiation Protection 1999

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- Installation Limit Value = 5.5 V/m (8.03 µW/cm²)
- RMS
- Load = Maximum
- Averaged over a complete cycle
- “Places with Sensitive Use” wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds).

RADAR ≥ 6 W ERP
≥ 800 hours

Italian Decree 8th July 2003 Protect the Population against Power Frequency (50 Hz) Electric and Magnetic Fields generated by Power Lines

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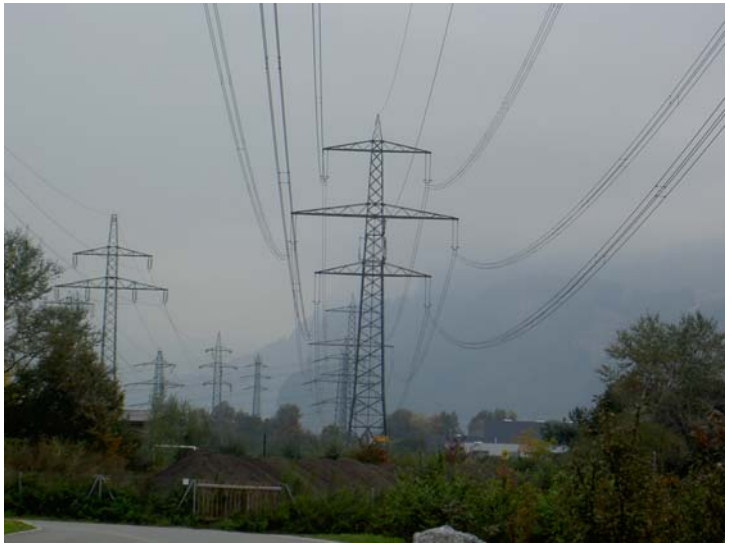
- Attention Value = 10 µT (100 mG)
- Quality Goal = 3 µT (30 mG) for new power lines and planning developments
- RMS
- Median 24 hours under normal operational conditions
- Children´s playgrounds, residential dwellings, school premises and areas where people stay for 4 hours and more per day

Power Lines



Italian Decree 8th July 2003
Protect the Population against Electric, Magnetic and Electromagnetic Fields
100 kHz-300 GHz

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- Attention Value = 6 V/m (9.55 µW/cm²)
- Quality Goal = 0.6 V/m (0.1 µW/cm²) for one source (only relevant when attention value is acceded)
- RMS, averaged over a six-minute period in an area equivalent to the vertical cross-section of the human body
- Children´s playgrounds, residential dwellings, school premises and areas where people stay for 4 hours and more per day, plus outdoor annexes like balconies, terraces, courtyards

Sum of RF/MW Radiation

Principality of Liechtenstein
Environmental Protection Law 2008

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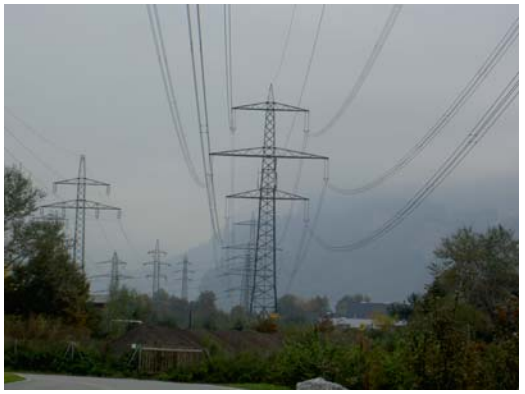
Radiation
ELF +RF/MW

- General aspects:
- Exposure standards for radiation are based on the state of **scientific knowledge** or **experience**
- People not endangered
- Well-being of the population not substantially interfered
- In urgent cases shutdown can be ordered



Principality of Liechtenstein
Environmental Protection Law 2008

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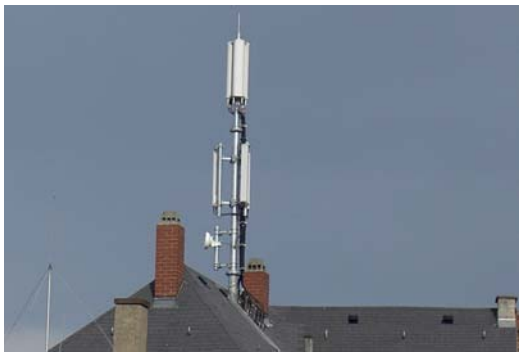
Mobile Phone Base Stations ≥ 6W ERP

- Installation Limit Value = 0.6 V/m (0.1 µW/cm²) (from January 1st, 2013)
- RMS, mean value (to be defined in a special regulation)
- "Places with Sensitive Use"
  wherever people regularly spend lengthy periods of time (e.g. apartments, schools, hospitals, offices and playgrounds)
  + workplaces outdoors > 800 hours/year
  (~20 working weeks same person)



Salzburg State Parliament, Austria Decision

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- Decision 29th March 2000

  "The Salzburg State Parliament supports the Mobile Phone Petition from November 30th 1999."[This means a limit value of 0.6 V/m (0.1 μW/cm²).]

Mobile Phone Base Stations

Salzburg State Parliament, Austria Decision

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- Decision 12th December 2007
  - „Negotiations with the federal government with the aim to implement the Salzburg precautionary limit as a fixed standard for electromagnetic radiation in order to minimize health risks.„ [This means a limit value of 0.06 V/m (0.001 µW/cm²).]
  - „Information campaign for parents and young people showing the dangers of mobile phone use for children and young people“.
  - „Differentiated and restrained use of WiFi in spheres of responsibility of the Salzburg government”

Mobile Phone Base Stations

Styria State Parliament, Austria Decision

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Mobile Phone Base Stations

- Decision 11th March 2008
  - „Call the federal government to implement the Salzburg precautionary limit as a fixed standard for electromagnetic radiation in order to minimize health risks.“ [This means a limit value of 0.06 V/m (0.001 µW/cm²).]
  - „Inform the public on the dangers of mobile phone use in an information campaign.“