

9. Regulatory Activity and Exposure Standards

There are growing pressures for states to take regulatory action to protect citizens against possible risks posed by power frequency fields. Major transmission line projects in New York, Montana, Florida and several other states have encountered considerable opposition. The courts have now become involved [Alvarez 86, Kelly 86]. In 1985, a Texas a County Civil Court ordered Houston Lighting and power to pay \$25 million in punitive damages on the grounds that in building a 345 kV transmission line within 60 meters of a school, and in full compliance with all laws of the State of Texas, the utility had acted "with callous disregard for the safety, health and well-being of... the children...". The Texas Court of Appeals has since denied the \$25 million award but affirmed the lower court's finding that there are potential health effects associated with exposure to powerline fields. Prevented from using the transmission line pending its appeal, Houston Lighting and Power rerouted the line around the school property at a cost of \$8.6 million [MWN 87]. In New York, a group of land owners has filed a \$66.5 million class-action suit claiming that the fear of health effects has had a negative impact on the value of properties along a new 345 kV transmission line. It is estimated that over \$1.5 million in attorney and witness fees had been spent on the case through August 1988 [MWN 88d]. Other less dramatic incidents are occurring all over the country.

To date, most of those pressures are directed toward the control of transmission lines, but it seems likely that similar pressures will grow for distribution lines, at least for those which are visible because they are above ground. While fields from house wiring and appliances can involve field exposures that are comparable to those associated with transmission and distribution lines (Figures 2-5 and 2-8), pressures to control fields from house wiring and appliances are likely to be slower in building. [Morgan 85].

If pressed to regulate field exposures, the natural instinct of most state regulatory authorities, based on experience with other environmental agents, is to implicitly assume that more is worse and impose field strength limits. To date, seven states have taken regulatory actions to limit the intensity of the electric field on transmission line rights-of-way. Recently, the state of Florida adopted limits on both electric and magnetic fields from transmission lines. A brief summary of the existing field limits is shown in Table 9-1.

Table 9=1: State regulations that limit field strengths on transmission line rights of way (RoW).

State	Field limit
Montana	1 kV/m at edge of RoW in residential areas
Minnesota	8 kV/m maximum in RoW
New Jersey	3 kV/m at edge of RoW
New York	1.6 kV/m at edge of RoW
North Dakota	9 kV/m maximum in RoW
Oregon	9 kV/m maximum in RoW
Florida	10 kV/m maximum for 500 kV lines in RoW 2 kV/m maximum for 500 kV line at edge of RoW 8 kV/m maximum for 230 kV smaller lines in RoW 2 kV/m maximum for 230 kV and smaller lines at edge of RoW 200 mG for 500 kV lines at edge of RoW 250 mG for double circuit 500 kV lines at edge of RoW 150 mG for 230 kV and smaller lines at edge of RoW

Despite the proliferation of regulations based on field strength, the discussion in Section 2.5 makes it clear that regulatory approaches which set quantitative 'safe' field strength limits (such as 1 kV/m at the edge of the right-of-way) cannot be supported on risk management grounds, given available scientific understanding. Such a standard offers no assurance that it will reduce the overall level of risk.