

I would like to refer back to the subject of setbacks for high voltage power lines. This is in reference to 301.14 (f) (2) c.

A while back, attorney Weisner was asked if he knew of any other states that had setback regulations for high voltage power lines, and he said he didn't know of any. I'm afraid this Commission might have taken his "I don't know" as a negative as in "no, there are none" Well, the answer actually is Yes, there are states with power line setbacks. A number of states, local jurisdictions and countries have statutory limitations on the distance transmission lines can be built from various structures or the distance buildings can be sited near transmission lines. Some other states have implemented maximum levels of electric fields or magnetic fields, or both, either on or at the edges of the transmission line right of way.

For instance, California has specific guidelines of how close residences and schools can be built near power lines:

- 100 feet from the edge of an easement for a 50-133 kV line
- 150 feet from the edge of an easement for a 220-230 kV line
- 350 feet from the edge of an easement for a 500-550 kV line

California's guidance was developed in consultation with international experts on the health effects of electromagnetic fields, the state Department of Public Health, the Division of the State Architect, the California Public Utilities Commission, electric utilities, school districts, consultants, and private citizens.

In 2004 the Connecticut General Assembly enacted Public Act 04-246 which restricted the siting of overhead transmission lines 345 kV or greater adjacent to "residential areas, private or public schools, licensed child day care facilities, licensed youth camps or public playgrounds," unless the applicant can demonstrate that "burying the facility will be technologically infeasible" or may result in an unreasonable economic burden on the ratepayers of the state. Iowa's Code Chapter 478 places restriction on the distance of new transmission lines from any home or business. In Washington State, there are prudent avoidance municipal regulations for electrical transmission and distribution facilities which include a preference for undergrounding transmission and distribution facilities. In Colorado, no public utility may construct facilities within the territorial boundaries of a city or county unless the utility complies with the applicable zoning requirements.

Other countries, as well, have setback requirements for high voltage power lines, including Great Britain, Finland, Switzerland, Bulgaria, and Israel. Austria requires underground burial of all new transmission lines.

There are setbacks for houses from each other, houses from the street, building near or in flood plains, lakes, streams, creeks and rivers, setbacks for septic systems and fences, setbacks for cell towers and wind turbines. There is absolutely no excuse not to have setbacks for high voltage power lines. In Northern Pass's original alternate route, their plan was to go directly through two children's camps. Right through them. They took that proposal off the table because they were denied the right of eminent domain, but not because they worried about the children's health or safety.

The reason utility companies balk at setbacks is not because they are unnecessary, as National Grid argued in their testimony, but because they don't want to be forced to bury their power lines; they want maximum

profit from their investment. But testimony at NH legislative hearings by companies that bury power lines has proven that burial of power lines is not only technologically feasible, it is affordable and much safer for humans and the environment. Burial of power lines along pre-softened transportation rights of way is 21st century, state-of-the-art technology, avoiding property damage, environmental impacts and EMF fears. Stringing overhead power lines from giant steel towers is a relic of the past.

One committee member mentioned unintended consequences of requiring setbacks, but what about the unintended consequences of not requiring setbacks. A 125 ft. tower could someday be replaced by a much taller tower. Hydro Quebec's own website states that they have towers up to 175m. That's 574 ft. What happens to the residence, school, children's camp or playgrounds which are now within the fall zone. Without a reasonable setback requirements, the welfare and safety of the residents of NH and our property are put at risk.

So, Commission members, for the sake of the health, welfare and safety of the public, please rethink your position on setbacks for transmission lines following HUD requirements. Study what the other states I have mentioned have done. We have an opportunity to be part of the future like the other New England states, not the past.

Pamela Martin, Plymouth
House Representative Susan Ford, Easton
Rick Samson, Coos County Commissioner, Stewartstown
Robert Tuveson, Holderness
Elizabeth Terp, Thornton
Pat Kellogg, Littleton
Mary Northrop, Littleton
Irene Mosedale, Littleton
Tom Mullen, Campton
Brad & Daryl Thompson, Gilford
Susan Schibanoff, Easton
Roxanne Busch, Sugar Hill
Chris Thayer, Appalachian Mountain Club, Sugar Hill
Dorothy McPhaul, Sugar Hill
James & Judy Ramsdell, Dalton

<http://www.maine.gov/mpuc/legislative/Reports/ATTACHMENT%201%20-%202011-30-13.pdf>

<http://www.cde.ca.gov/ls/fa/sf/powerlinesetback.asp>

From HUD:

Fall Zone Setbacks

Setback from Occupied Buildings: The setback distance between a wind turbine tower, a radio/TV transmission tower, microwave relay dish or satellite dish (radio, TV cable), or high-voltage electrical transmission tower* and a non-participating landowner's existing occupied building shall be not less than three times the height of the tower. The setback distance shall be measured from the center of the tower base to the nearest point on the foundation of the occupied building.

Setback From Property Lines: The setback distance between a wind turbine tower, a radio/TV transmission tower, microwave relay dish or satellite dish (radio, TV cable), or high-voltage electrical transmission tower* and non-participating landowner's property line shall be not less than the 2.5 times the tower height. The setback distance shall be measured to the center of the tower base.

Setback From Public Roads: All wind turbine towers, radio/TV transmission towers, microwave relay dish or satellite dish (radio, TV cable), or high-voltage electrical transmission tower* shall be set back from the nearest public road a distance of not less than 1.5 times the tower height as measured from the right-of-way line of the nearest public road to the center of the tower base.

* A High-Voltage Electric Transmission Line is a power line that carries high voltage between a generating plant and a substation. These lines are usually 60 Kilovolts (kV) and greater, and are considered hazardous. Lines with capacity of 12-60 kV and above are considered high voltage. High voltage lines do not include local distribution and service lines. Low voltage power lines are distribution lines that commonly supply power to housing developments and similar facilities. These lines are usually 12 kV or less and are considered to be a minimum hazard. These lines may not pass directly over any structure, including pools or other outbuildings.

HUD guidelines preclude a building from being constructed within the "Engineered" Fall Distance of a high voltage tower. HUD is tightening their lending. They want verification that the building is not within this fall distance.

<http://www.hud.gov/offices/adm/hudclips/handbooks/hsggh/4150.2/41502c2HSGH.pdf>.

OVERHEAD HIGH-VOLTAGE TRANSMISSION LINES

No dwelling or related property improvement may be located within the engineering (designed) fall distance of any pole, tower or support structure of a high-voltage transmission line, radio/TV transmission tower, microwave relay dish or tower or satellite dish (radio, TV cable, etc.). For field analysis, the appraiser may use tower height as the fall distance. For the purpose of this Handbook, a High-Voltage Electric Transmission Line is a power line that carries high voltage between a generating plant and a

substation. These lines are usually 60 Kilovolts (kV) and greater, and are considered hazardous. Lines with capacity of 12-60 kV and above are considered high voltage for the purpose of this Handbook. High voltage lines do not include local distribution and service lines. Low voltage power lines are distribution lines that commonly supply power to housing developments and similar facilities. These lines are usually 12 kV or less and are considered to be a minimum hazard. These lines may not pass directly over any structure, including pools, on the property being insured by HUD.