They also include low-power devices such as electronic garage-door openers, some of which, because of poor design or otherwise, emit radiofrequency energy beyond that needed for their functions.

The cumulative effect of all this undesired radiation is most apparent in large metropolitan areas. Especially in peak periods of operation of radiating devices, such areas are blanketed by a "radiation smog" which makes it increasingly difficult for many users of radio communications to obtain interference-free reception.

This radiation problem is most serious in vital areas where radio is used for safety purposes, such as in air navigation control. In a number of instances, the Federal Aviation Agency has issued notices informing pilots that certain radio navigation devices are not usable in particular quadrants because the interference caused by industrial equipment makes these navigation aids unreliable. Problems in this areas can pose a genuine threat to safety of life and, as the volume of air traffic increases, this threat becomes more acute.

This legislation will help police and fire departments and others using radio for public safety purposes, where interference would cause errors or delays affecting the preservation of life and property.

It will help radio listeners and television viewers, because such excessive radiation also means the reception of distorted and garbled signals, or fluttering images, or pictures of a technical quality less than that possible when interference is under effective control.

It will help those who use radio for industrial communications services, where the cumulative effect of undesired radiation means increased disruption of communications services.

And, finally, it will help those users of radio whose operations must be conducted under conditions of relatively low background interference. Examples of this are the Commission's monitoring activities, the operation of military communications systems, and radio astronomy observations. High levels of undesired radiation in some of these activities have forced the abandonment of geographic areas of high interference, or required special efforts to detect radiating devices which are causing harmful interference, both of which solutions import additional costs of operation on the Government.

The Commission presently has authority under section 301 of the Communications Act to prohibit the use of equipment or apparatus which causes interference to radio communications and, under section 303(f), to prescribe regulations to prevent interference between stations. However, it has no specific rulemaking authority under the act to require that, before equipment or apparatus having an interference potential be put on the market, it meet the Commission's required technical standards which are designed to assure that the electromagnetic energy emitted by these devices does not cause harmful interference to radio reception.

This hiatus in the Commission's authority has undesirable results. Since the prohibition presently falls only on the use of offending equipment, the Commission, in trying to eliminate interference, is confined largely to measures applying to the use of equipment which interferes with radio communications. In most instances the users have purchased the equipment on the assumption that its operation would be legal. Thus, the Commission is frequently confronted by the question: "If I can't use this equipment, why was he permitted to sell it to me?" The Commission is also reduced to an after-the-fact approach