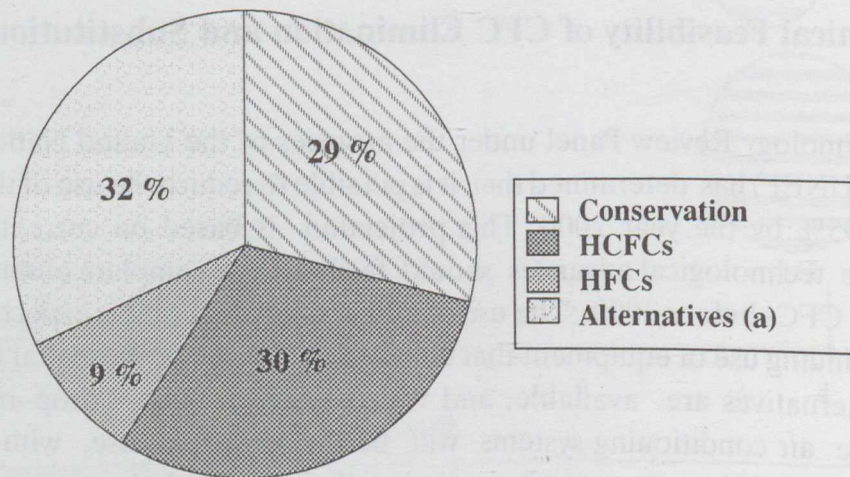


Protection Agency (EPA), HCFCs will contribute between 2% and 10% to global warming at least until 2030.

Substitutes for CFCs, most importantly HCFCs, can affect global warming in more than one way. They may have their own radiative properties or GWP. Moreover, their use may change the efficiency of equipment and products, which could result in changes in fossil fuel demand and emissions of carbon dioxide. Use of an HCFC in high-quality insulation, for example, may increase energy efficiency sufficient to offset the GWP produced by the HCFC acting as a greenhouse gas. It is thus important to ensure that choices minimize the overall ODP and the GWP. At times, more than one CFC substitute or HCFC may be usable in a given application. The decision to use a particular HCFC must be made on environmental grounds, considering both ODP and GWP.

**Figure 5: Projected Displacement of Current CFC Demand by 2000**



**Note (a):** "Alternatives" are substitutes for CFCs other than HCFCs and HFCs.

**Source:** United Nations Environment Program, Technology Review Panel, *Technical Progress on Protecting the Ozone Layer*, 30 June 1989, p. viii, Figure 5.

The Office of Air and Radiation of the U.S. EPA has examined four scenarios for HCFC/HFC substitution, assuming a phasing out of CFCs by the year 2000. One scenario, called "Minimize Greenhouse/Energy Impact," projected that a mix of HCFCs