The American Nuclear Society (ANS) recognizes that the earth's climate over the past 50 years has changed. Human activities, notably the production of greenhouse gases, have contributed to this phenomenon. While the science of climate change is still maturing, the risks presented by rising temperatures across the globe are sufficiently large to justify enactment of policies at the national and international level.

ANS supports policies designed to address carbon emission reductions that are performance-based and technology neutral. While ANS believes that nuclear energy has a crucial role to play in addressing the global need for reduced emissions from energy generation, it is the position of ANS that carbon-reduction policies should not explicitly privilege any one energy source over another. Instead, such policies should evaluate energy sources based upon their ability to reliably contribute to meeting carbon reduction goals.

To date, few state and local governments have adopted approaches that explicitly include nuclear energy among targeted ways to reduce carbon emissions. Some renewable and clean energy portfolios mandate technologies and/or fuel sources; in effect, this excludes other energy technologies on an a priori basis. ANS contends that performance-based, technology neutral policy approaches must be the standard and are the best way to encourage innovation and achieve intended carbon reduction goals.

ANS considers nuclear energy an essential component to policies designed to address risks presented by a changing climate and future energy needs and believes that the increased use of nuclear energy in offsetting the use of fossil fuels where appropriate offers an effective means of reducing global carbon emissions. Nuclear energy delivers large amounts of reliable, economically competitive electricity with no carbon emissions during reactor operations and has among the lowest lifecycle carbon emissions of any energy source. Nuclear energy is the only such energy technology with a proven capability of delivering large amounts of baseload electricity essential to modern industrial societies.

ANS recognizes the value of energy diversity and believes that other low-carbon energy technologies (such as wind, solar, and hydro) should be deployed as appropriate while recognizing the benefits and drawbacks associated with each technology. However, with the exception of hydro, renewable sources are limited by their intermittency, requiring backup power generation or storage capabilities. Further, competing priorities, such as wildlife protection and land use requirements constrain the contributions of these inherently diffuse energy sources. In all cases, policymakers should carefully evaluate external costs of energy technologies.

For background and further information on this topic, visit www.NuclearConnect.org or www.ANS.org.

The American Nuclear Society, founded in 1954, is a not-for-profit professional society of more than 10,000 scientists, engineers, educators, and other professionals from universities, government, private laboratories, and industry devoted to the peaceful applications of nuclear science and technology.

Position Statements are the considered opinions and judgments of the Society in matters related to nuclear science and technology. They are intended to provide an objective basis for weighing the facts in reaching decisions on important national issues.
References


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