



Position Statement #63

External Costs of Energy Technologies



The American Nuclear Society believes that decisions concerning national energy policy should appropriately take external costs into account. In some energy options, external costs are not included in the cost of the energy produced; instead, they are borne by parties not involved in the original transaction, generally without consent or due compensation.

External costs¹ may be related to many factors, including impacts on public health, environmental impacts, degradation of quality of life, degradation of agricultural land, depletion of natural resources, and reduction in security. These costs are incurred at various stages of the life cycle of an energy technology.

While some energy technologies may appear to have smaller environmental impacts than others, their external costs may be significant when the complete life cycle costs are taken

into account. Particularly, an energy source that is inherently intermittent will require, for applications demanding reliable performance, either a backup energy supply or an energy storage facility, whose external costs are not negligible. On the other hand, practically all the costs to make nuclear power technology safe and secure, including the costs of waste management and disposal, are already incorporated into the cost of electricity generation.²

Appropriately accounting for external costs should be an essential element in energy policy since in doing so, the final product is compared based on a consistent set of parameters for all technologies, and the resulting mix of energy sources will more appropriately balance the competing economic, environmental, and social needs from energy production and consumption.

References

1. J. M. Buchanan and W. C. Stubblebine, "Externality," *Economica*, New Series, Vol. 29, No. 116, pp. 371-384 (Nov. 1962).
2. Committee on Health, Environmental, and Other External Costs and Benefits of Energy Production and Consumption, "Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use," National Research Council, The National Academies Press (2009).



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