

NSPE Position Statement No. 05-100 – Sustainability

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NSPE Contact: Committee on Policy and Advocacy

Professional Policy Supported: 05 – Environment

Position Statement: Because sustainable communities—communities that meet the needs of the present without compromising the ability of future generations to meet their own needs—are critical to public health, safety and welfare, it is the position of NSPE that licensed Professional Engineers must be engaged in creating, maintaining and renewing sustainable communities.

Background: The National Environmental Policy Act of 1969 committed the United States to sustainability, declaring it a national policy “to create and maintain conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations.”

Healthy ecosystems and environments are necessary to the survival of humans and other organisms. As more information is gained from various sources, the ability of the engineer to address the economies and social aspects of the ecosystems is improved. Moving towards sustainability is also a social challenge that entails international and national law, urban planning and transport, supply chain management, local and individual lifestyles, and the ethical practice of engineering.

Sustainable engineering can take many forms, including: optimizing living conditions (e.g., ecovillages, eco-municipalities and sustainable cities), considering economic drivers (green building, sustainable agriculture), establishing best work practices (sustainable architecture), using science to develop new technologies (green technologies, renewable energy and sustainable fission and fusion power), designing systems in a holistic manner, and adjusting individual lifestyles to conserve natural resources. Engineering sustainable solutions requires systems thinking rather than solving isolated problems that could lead to unintended consequences.

The professional engineer’s education, experience, and professional obligation to protect safety, health and welfare uniquely position professional engineers to be a positive and driving influence in creating, maintaining and renewing sustainable communities.