

The United Nations Brundtland Commission described the concept of sustainable development, for which energy is a key component, in its 1987 report *Our Common Future*. It defined sustainable development as meeting "the needs of the present without compromising the ability of future generations to meet their own needs". This description of sustainable development has since been referenced in many definitions and explanations of sustainable energy.

No single interpretation of how the concept of sustainability applies to energy has gained worldwide acceptance. Working definitions of sustainable energy encompass multiple dimensions of sustainability such as environmental, economic, and social dimensions. Historically, the concept of sustainable energy development has focused on emissions and on energy security. Since the early 1990s, the concept has broadened to encompass wider social and economic issues.

The environmental dimension of sustainability includes greenhouse gas emissions, impacts on biodiversity and ecosystems, hazardous waste and toxic emissions, water consumption, and depletion of non-renewable resources. Energy sources with low environmental impact are sometimes called green energy or clean energy. The economic dimension of sustainability covers economic development, efficient use of energy, and energy security to ensure that each country has constant access to sufficient energy. Social issues include access to affordable and reliable energy for all people, workers' rights, and land rights.

In the present book, fifteen typical literatures about Energy Sustainability published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on Energy Sustainability. We hope this book can demonstrate advances in Energy Sustainability as well as give references to the researchers, students and other related people.¹

The Editorial Board of Academic Archives
Scientific Research Publishing
March 2, 2023

¹ https://en.wikipedia.org/wiki/Sustainable_energy