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Tony Wall *Editors*

# Affordable and Clean Energy


 Springer

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Editors

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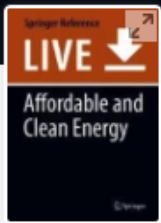
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## Sustainable Energy Challenges in Realizing SDG 7

[Narendra N. Dalei](#) , [Pramod Kumar Painuly](#), [Atul Rawat](#) & [Githa S. Heggde](#)

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### Synonyms

[Barriers](#); [Clean energy](#); [Modern energy](#); [Obstacles](#); [Renewable energy](#)

### Definitions

The energy that can meet the demand of all sections of society and that can be available for present and future generations can be considered as sustainable energy. This energy is thus to fulfill our present demand without harming our environment, and the same will continue for

## Sustainable Energy Challenges in Realizing SDG 7



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### Definitions

The energy that can meet the demand of all sections of society and that can be available for present and future generations can be considered as sustainable energy. This energy is thus to fulfill our present demand without harming our environment, and the same will continue for the future without being depleted while contributing to the survival of all species (Jain and Jain 2020; Rinkesh 2020; Lund 2010). This is the energy which is very much aligned with SDG 7 and

basically comes from biomass, solar, wind, water, and geothermal (Kutscher et al. 2018) (see Fig. 1). However, there are numerous challenges to face in order to transit from dirty energy to sustainable energy. This entry discusses all such challenges in realizing Sustainable Development Goal 7 (SDG7), which ensures sustainable energy that is affordable, reliable, modern, and clean for all (UN 2018).

### Introduction

Sustainable and modern energy, which is accessible and affordable, has been positioned as one of the major 2030 Agenda for Sustainable Development Goal 7 (SDG7) (UN 2018). Heavy dependence on fossil fuel energy has created hurdles during previous decades to shift to sustainable energy sources, and as a result the decarbonization of the energy system becomes a distant dream, despite lots of effort by the global community for better, affordable, clean, and sustainable energy. Since two-thirds of greenhouse gas (GHG) emission come entirely from energy generation and its usages, the entire world is putting effort to shift to sustainable energy quickly in order not to be trapped into the detrimental impact of climate change for a long period (Dalei and Gupta 2020). Transitioning to sustainable energy according to the Paris agreement has been considered as one of the major drivers of keeping the global mean temperature rise well below 2 °C