

Sustainable and Ethical Energy Access and Consumption

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Energy services enable clean water, sanitation, lighting, cooking, healthcare, transportation, telecommunications, and many other processes vital to human well-being. Nevertheless, today one in every six people does not have sustainable energy access, and almost two in every five people lack safe cooking facilities. Current energy and supply fore- and backcasting studies tend to fail to address the ethical implications of the resulting recommended technological changes, or the applied governmental and societal assumptions. Often, the fact that a large number of people in the world that does not have access to energy or alternative energy options is ignored, or practical changes to increase their energy access remain unaddressed. Moreover, few studies note or offer alternatives for unsustainable industrial processes incorporated in future assessments.

Without a clear concept of what sustainable energy consumption looks like, we cannot downscale the forecasted future energy consumption scenarios to a practical level where all individuals have the opportunity to live a decent life. Therefore, this study develops a definition of sustainable and ethical energy access and consumption following the viewpoints of human rights, energy justice, and conservation ethics. Questions of both supply and demand are addressed along the lines of maximizing energy access for all current and future users, as well as the question of what sustainable and ethical purposes can be considered for energy consumption. This results in a set of guiding criteria to be used as a roadmap when quantifying current and future energy consumption.

We are facing the inevitable need to transition our energy infrastructure, resulting in that we must ensure our energy systems will be protected against hacking, natural hazards, and the consequences of social unrests leading to war, while simultaneously safeguarding against resource depletion and corruption, as well as adapting to the loss of livelihoods in existing energy sectors, and guaranteeing the continued spread of factual knowledge to all energy users. This paper shows the need to reevaluate on a collective scale what energy consumption, transportation, and production patterns reflect a 'decent' standard of well-being, in order to ensure sustainable energy access for all people, now and in the future.

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