

Energy Security and Climate Change

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Energy Transition Holds Key to Tackle Global Energy and Climate Crisis (IRENA 2022)

Energy transition is not a smooth process and may adversely affect energy security.

Example of possible difficulty: Transition risk

Transition risks of climate change emanate from efforts to build a green economy. Transition risks materialize when changes in technology, standards, taxation, and other policies turn carbon-intensive assets into stranded assets and amplify losses through financial interconnectedness (Cevik 2022).

Figure 3: The Trilemma dimensions

ENERGY SECURITY

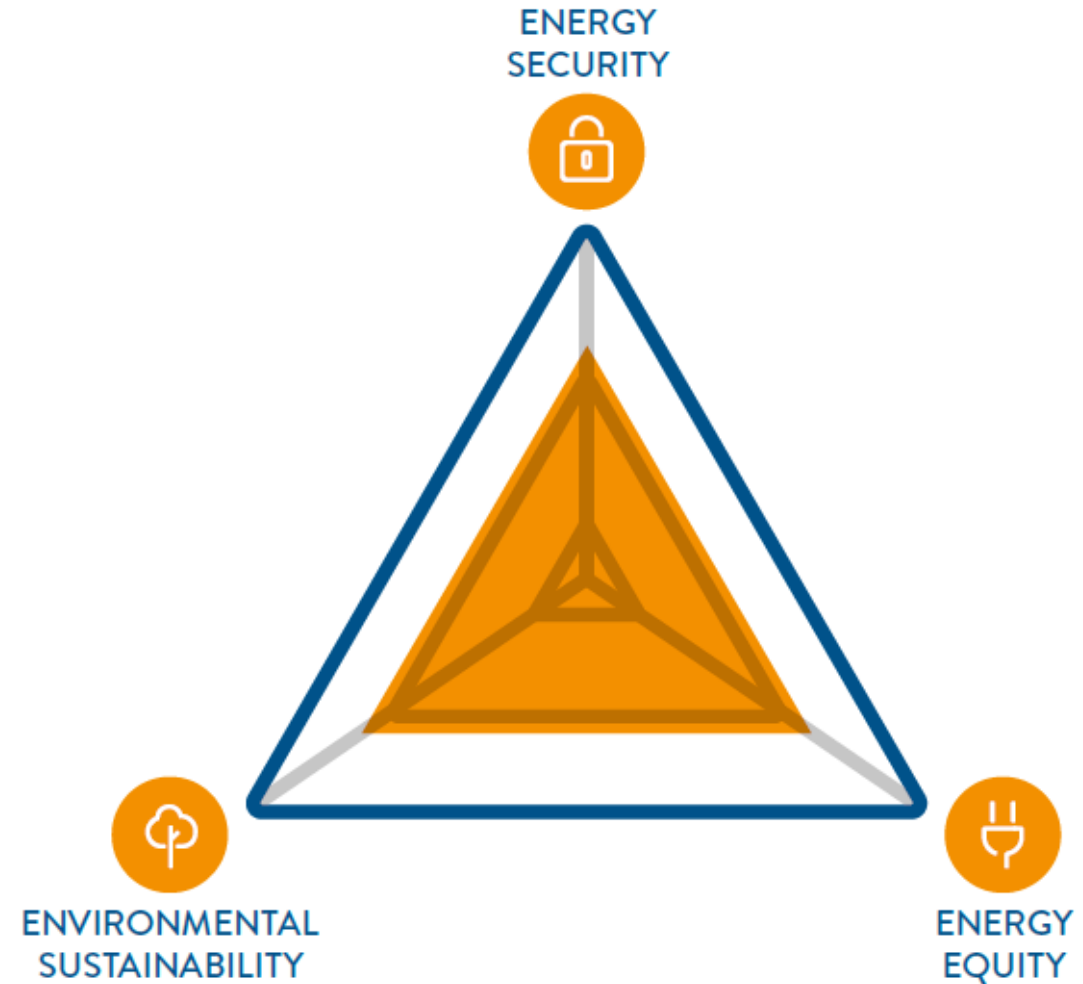
Reflects a nation's capacity to meet current and future energy demand reliably, withstand and bounce back swiftly from system shocks with minimal disruption to supplies.

ENERGY EQUITY

Assesses a country's ability to provide universal access to affordable, fairly priced and abundant energy for domestic and commercial use.

ENVIRONMENTAL SUSTAINABILITY OF ENERGY SYSTEMS

Represents the transition of a country's energy system towards mitigating and avoiding potential environmental harm and climate change impacts.



Source: World Energy Council. 2019 World Energy Trilemma Index

Policy responses

- Greater energy efficiency brings a significant reduction in CO₂ emissions and strengthens energy security.
- Facilitate investment in renewable energy technology. For example, in the Philippines: R.A. 9513 An Act Promoting the Development, Utilization and Commercialization of Renewable Energy Resources
- Allow enough time to retire existing coal plants (Department of energy declared a moratorium on new applications for greenfield coal power plants)
- However, incorporation of renewables has been constrained by relatively slow expansion of power grid
- An interesting scenario captured by title of this paper: “Nuclear & Renewables, the Ultimate Power Couple? We Think So” (Kempfer 2019)

References

- Cevik, S. 2022. Climate Change and Energy Security: The Dilemma or Opportunity of the Century? IMF Working Paper WP/22/174 (September).
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- Kempfer, J. 2019. Nuclear & Renewables, the Ultimate Power Couple? We Think So. Washington, DC: Thirdway. Retrieved August 9, 2020 from <https://www.thirdway.org/blog/nuclear-renewables-the-ultimate-power-couple-we-think-so>.

THANK YOU !!!