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Editorial

MDPI Sustainability: Special Issue: "Women's Special Issue Series: Sustainable Energy"

Maria Elena Bruni

Department of Mechanical Energy and Management Engineering, University of Calabria, 87036 Rende, Italy; mariaelena.bruni@unical.it

The conflict in Europe in 2022, in addition to the horrible humanitarian consequences, is also affecting the global energy markets and energy prices, threatening economic growth and lives worldwide. There is no doubt that securing affordable and available energy, while at the same time reducing emissions, is a great challenge, and the urgency is greater now than before. The proper management of energy in all stages and at all levels in all timeframes is the key to addressing the emerging challenges related to the size of the strategic issue that needs to be addressed and its extremely complex, comprehensive nature.

Sustainable energy management will require many changes in the traditional way in which we understand and interpret energy management at all levels. It is necessary to redefine the existing legislation, adopt appropriate strategies at global and national levels, and adjust the business operations of every business entity.

Company orientation, stakeholders' requirements, awareness, and commitment as well as general orientation towards socially responsible business are all priorities based on fundamental principles of sustainable development.

Energy transition will accelerate this sustainable development, creating massive opportunities not only in the production, transmission efficiency, and consumption of energy, but also in the way companies address the key challenges of the transition [1] in cities [2] and industry. In this respect, it will likely create global opportunities for innovation, investments, and partnerships and will strengthen the role of environmental, social, and corporate governance (ESG) factors in companies' financial performance and reputation [3].

The transition will provide researchers with a unique opportunity to address questions and problems across disciplines [4] with focus on sustainability, with the aim of planning pathways and predict future scenarios [5,6] towards a renewable circular and sustainable society.

This will be implemented through the technological modernization of existing power plants/systems/sources, in the sectors of oil, natural gas, coal, hydrogen, electric power sector, wind, solar, thermal, hydro and heating power plants, and transmission systems or distribution systems. New renewable energy sources and new energy-efficient and environmentally friendly energy technologies should be designed, tested, and developed, together with innovative urban solutions, for instance, in the mobility sector.

In fact, the rational use of quality energy and the increase in energy efficiency in production and distribution, together with the more responsible use of energy by end users are the main goals to be pursued.

In order for a global society to navigate within this complexity, we need better knowledge and improved skills; this means that the role of the researcher community is more important than ever to address the so-called transition.

The aim of this Special Issue is to share and put a spotlight on findings, new insights, and valuable discussions on innovative solutions that will tackle the emerging challenges above described, gathering contributions on advanced models, methodologies, technologies, best practices, and innovative solutions for making energy, transportation, and economic systems sustainable and companies resilient.

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References

1. Chang, M.; Thellufsen, J.Z.; Zakeri, B.; Pickering, B.; Pfenninger, S.; Lund, H.; Ãstergaard, P.A. Trends in tools and approaches for modelling the energy transition. *Appl. Energy* **2021**, *290*, 116731. [CrossRef]
2. Liu, H.; Li, Y.; Zhang, C.; Li, J.; Li, X.; Zhao, Y. Electric Vehicle Charging Station Location Model considering Charging Choice Behavior and Range Anxiety. *Sustainability* **2022**, *14*, 4213. [CrossRef]
3. Kempeneer, S.; Peeters, M.; Compernolle, T. Bringing the User Back in the Building: An Analysis of ESG in Real Estate and a Behavioral Framework to Guide Future Research. *Sustainability* **2021**, *13*, 3239. [CrossRef]
4. Mao, Q.; Guo, M.; Lv, J.; Chen, J.; Xie, P.; Li, M. A Risk Assessment Framework of Hybrid Offshore Wind–Solar PV Power Plants under a Probabilistic Linguistic Environment. *Sustainability* **2022**, *14*, 4197. [CrossRef]
5. Beraldi, P.; Violi, A.; Bruni, M.E.; Carrozzino, G. A probabilistically constrained approach for the energy procurement problem. *Energies* **2017**, *10*, 2179. [CrossRef]
6. Beraldi, P.; Violi, A.; Carrozzino, G.; Bruni, M.E. A stochastic programming approach for the optimal management of aggregated distributed energy resources. *Comput. Oper. Res.* **2018**, *96*, 200–212. [CrossRef]