ENERGY

Energy is the central theme of the next number of Revista da UFMG, and this is to invite the community to submit contributions.

In the area of Physics, the term energy refers to a fundamental physical entity that, together with matter, forms the universe as we know it. In this context, energy is ruled by balance equations in which the total amount of energy in a system is finite, while the increase and decrease of energy in this system imply the exchange of energy with the outer environment. The major part of the relevant transformations in the states of a system is only possible if energetic exchanges take place. Such transformations have a priority direction, giving rise to the so-called entropy increase. Time passes in the direction that entropy increases, and the existence of life stands for an effort against such increase.

This balance, a complex network of relationships among species and of these with natural resources, this ecological balance, means that, once time intervals have passed, the states of this system nearly return to their former states, though temporary unbalances take to new points of balance, different from the prior ones. One challenge is set to the human species: will it be able to choose not to promote the immediate consumption of the resources at hand, refraining from its voracious appetite for immediate satisfaction, and even from satisfying its greed for investments with immediate profit in favor of the terrestrial ecosystem longevity?

Energy is the capacity to do work. We have recent assertive examples of how the lack of it may affect us, for instance, blackouts and shortage of fuels. If clean or dirty, of many sources, it conditions development. It is always related to movement, transformation, change. Fire, atom, sun, wind are self-regulatory within the limits of thermodynamics. Energy to change the state of things, to get out of inertia, to create alternatives - it is a kind of resource that demands criteria in its use, in the name of which wars are made, the ground is drilled and its bowls are blown up, cities are flooded and governments overthrown.

In the humanities universe, energy reminds the multiple dimensions of life, of nature, of bodies and health, it calls for history and memory, it is the element that makes up creative processes, arts: dance, drama, music, literature among other forms of expression. Energy is found in human actions, in love and politics, in fights and resilience of peoples and social movements, in the building processes of autonomy and in the search for utopia that further the progress of society.

These are some teasers among manifold possibilities in order to encourage the remittance of contributions to this thematic number.

The articles shall comply with the publishing norms available on www.ufmg.br/revistadaufmg and electronically sent to the Editorial Board by March 15th 2019 to revistadaufmg@ufmg.br.