

## Renewable energy and its impact on contemporary sculpture

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### Introduction: -

Modern technology in environment and oceans from the proportion of energy and energy consumption such as coal and petroleum, all institutions in the countries of the world are trying to use alternative energy for electricity production, so the language of the era in this field is renewable energy, and artists in general, and the researchers are concerned with the aesthetic values that can be created using renewable energy in sculptures.

### The research problem lies in the following: -

1- What is the effect of renewable energy on sculptures aesthetically and functionally?

### The research importance: -

1- The necessity to emphasize the importance of energy in general and renewable energy in particular to contemporary sculpture.

2- Emphasizing the importance of the sculptor's understanding of the importance of the environment and its preservation.

### Research goal: -

1- Shedding light on the importance of renewable energy and making use of it.

2- Shedding light on the innovations of the technological age and their importance for preserving the environment.

### The research assumes: -

1- The research assumes that the use of renewable energy positively affects the elements of formation and confirms some aesthetic values in the sculptural form.

2- The research assumes that the sculptor works can give an aesthetic flair to the renewable energy production units.

### Research Methodology: -

The researcher uses the descriptive and analytical methodologies.

### Definition of energy:

Energy is the engine of all growth and development, as it is the basic element for all sectors of the economy and a companion to human life, just as no one misses that the energy used in the whole world is conventional and unsustainable energy, as well as polluting the environment and causing harmful emissions, and as sustainable development is based Primarily, on protecting the environment, ensuring the optimal use and equitable distribution of resources between the present and future generations, as such traditional energy does not allow achieving sustainable development.

Hence, international organizations began, since the launch of the Earth Summit, and the subsequent Club summits that all followed the necessity for governments to implement their promises to achieve just and sustainable development. On the one hand and looking for a variety of more permanent sources, on the other hand, it has resorted to exploiting its available renewable energy potentials represented in solar energy, wind energy, hydropower, biomass, geothermal ... etc. (Job 2019 CE)

### Scientific definition of the term energy:

Energy is not a substance, but rather the inherent quality of matter that makes it capable of transformation and change from its original state. It is a physical quantity that appears in the form of heat, mechanical movement, or energy resulting from linking the atomic nuclei between a proton and a neutron.

Definition of renewable energy sculpture

Renewable energy sculpture is one of the environmental art styles, combining sculpture, which produces energy from renewable sources (solar, wind, geothermal, hydroelectric or tidal). The main feature of renewable energy sculpture is that artists of this trend develop solutions that combine aesthetical and functional characteristics of energy production and saving. Practitioners in this growing field often operate to (eco-design) standards. \*

### The emergence of renewable energy sculpture

Renewable energy sculpture was first featured by artists such as Patrice Stellest, Sarah Hall, Julian H. Scuff, Patrick Marold, Elena Parucheva, architects Lori Chetwood and Nicholas Grimshaw, Bickle University of Illinois professor Bill Beckett. By sharing ideas of environmental art, they believe that the aesthetic part of their work is closely related to the environmental function of design. In addition, while sculpting renewable energy, artists are often inspired by the forms and processes of nature, preferring the colors and textures of the surrounding world, and such sculpture is functionally a renewable energy generator and a work of art, fulfilling utilitarian, aesthetic and cultural functions. Artists who create renewable energy sculpture believe that the aesthetics of a work of art is closely related to its environmental function (Ferry 2020).

### Plastic treatments for models of renewable energy production

Through some of the models presented by the researcher, the research deals with the role of the sculptor in finding aesthetic solutions for the energy production models, in terms of the shape of the model and its various parts in a way that does not negatively affect the functional aspect of each of them.

The researcher presents Figure (1), which is an old model that was not used optimally, as there were fewer surfaces on the solar tree, and in Figure (2) the areas that were used as solar roofs have increased until it reached the shape of the solar tree in its concept and usual form for the recipient, as shown in Figure (3).



Figure ( ٢ )



Figure ( ١ )

The researcher presents the following examples of generators that came in human figures as sculptures that simulate many figures in gardens and squares, which the contemporary sculptor implemented through the renewable energy sculpture pattern.

Figure (8), which is found in Texas. It consists of a set of 16 by 15-foot vertical wind turbines. All of this installation can be found outside El Paso Airport, the lights can also be programmed to celebrate seasons or other events in the area, and are designed and manufactured for micro-wind technology. They worked with the company behind this technology being V-Air, Vicki Scuri SiteWorks, Alexandr Polzin, and Jacobs Engineering Group. Its purpose was not to create a visually stunning gateway to the airport but also to showcase the sustainable benefits of wind energy.



figure 8, gate of flight lines in Al-Passo airport  
( ٩ )5. Ondine, figure created by Elena Parishev

## Results

- 1- Renewable energy sculpture plays an important role in preserving the technical shape and functional performance of the energy production models.
- 2- The contemporary artist benefits from the data of technology and the use of renewable energy in his sculptural works.
- 3- The contemporary sculptor greatly contributes to preserving the environment and helps spread awareness of the sustainable environment.

## Recommendations

- 1- The author recommends that researchers should pay attention to everything that is new in the field of technology and energy.
- 2- That specialized scientific institutions provide references and periodicals for everything modern in sculpture technology and arts.

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