***Drawings***

**(Alphabet for a new future)**

The project presents a corpus of artworks shaping three-dimensional drawings in the space.

The installations are composed of cylindrical photovoltaic modules. During the day each independent structure absorbs and stores solar energy; during the night each of them becomes a source of illumination in the landscape.

*Drawings* is inspired by the culture of Native Americans.

The single elements offer an artistic interpretation of the symbols representing natural phenomena, human life and animals. They stand in the form of a new alphabet for a translation of one of the most ancient – and most suggestive – cultural heritages of humanity into the language of our technological and sustainable present.

Here are the main elements in the corpus, with their relative symbolic meanings:

*Rain Clouds* symbolize – as for the Natives – good prospects for the future. Constantly changing, they give water which is essential for life, thus representing fertility and renewal.

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*Lightnings* represent power and speed.

*Mother* stand for the never-ending cycles of nature and human life, being a symbol of evolution, growth and regeneration.

*Infinity* is a symbol for the passage of time, embodying the eternal motion and the gradual variation of the atmosphere in relation to the course of the days and the seasons.

*Life* is athree-dimensional maze which represents the unfolding of human lives, with the experiences and choices, the obstacles and challenges that man has to overcome during his lifetime.

*People* represents people's life paths, their encounters and experiences.

*Carapace* is a dome that represents a turtle, symbol of perseverance and protection.

It epitomizes self-reliance, tenacity, slow but steady progress, good health and long life.

*Man* draws the silhouette of a human figure on the ground. The winding contour is a symbol of the continuity and flow of life.

*Wings* represents the gradual movement of the wings of an eagle in the air. Frontally the lines draw the feathers of the wings. The eagle symbolizes the divine spirit, creation and freedom; it also represents strength, courage, leadership and prestige. Eagles feathers used to signify honor and represent the Creator’s love for people.

*Transition* is a passage that represents a gradual transformation.

*Spider* symbolizes creativity, power, growth and mystery.

*Metamorphosis* draws a continuous line with a changing shape depending on the viewer’s vantage point. From one point of view it depicts a dragonfly, symbol of happiness, speed and purity representing the transformation. Changing the point of view it draws a rabbit, which represents caution, fertility, rebirth, and safety.

*Sun/Moon.* The sun is the provider of light and healing energy.

It is a giver of life, a provider of warmth, and represents the growth of crops.

The moon is the protector of the earth.

Drawings *is an ideal set of “cultural signs” open to expansion and further new combinations, embodying the theme of change and transition.*

*It is a “visible” project aiming to stress the change of society and economy we are currently experiencing and the necessity for an ecological transition towards a culture of conservation of nature.*

TECHNOLOGY

The artworks are composed of “solar light tubes with integrated cylindrical photovoltaic elements” that convert the energy of the sun into electricity and transmit the electrical power to the site.

The installations can also act as autonomous solar lighting structures with all the components integrated into their linear elements.

The all-in-one modules contain everything needed to harvest solar energy and provide illumination or energy, id est, the high-efficiency mono-crystalline silicon solar modules, the batteries, the LED engine, the smart control electronics.

The lightweight aluminum structures have variable dimensions and are made up of modules with variable length (from 50 to 200 cm). The photovoltaic modules are covered with a variable number of cylindrical photovoltaic cells depending on the length (from 12 to 48). The diameters of the cylinders indicatively measure 20 cm.

The modules have a black back-sheet encapsulant and a LED lighting.

The cells are encapsulated into the external borosilicate glass to protect them from humidity, dust and sand even in extreme conditions.

The installationsare constructible, as they employ a highly tested technology. The linear elements are available on the market and can be composed of cylindrical segments in painted aluminum or covered with photovoltaic cells. The curved lines are composed of straight segments of different lengths depending on the curvature.

The artworks are composed of modules, dismountable and transportable elements that can be easily and rapidly moved and take new configurations in other places and events as needed.

The independence from the electricity grid increases the adaptability and the mobility of the installations.

The sculptures are functional and flexible: their modularity facilitates the reparability and the adaptability to different energy demands. The lighting levels and times are programmable and controlled wirelessly.

The installations have a slim design with a low wind load, and use recyclable materials like aluminum and glass.

The artworks require a simple installation and a minimal maintenance over their lifecycle.

The borosilicate glass and the dirt repellent coating reduce the operational costs of cleaning.

The high-efficiency silicon solar cells guarantee maximum solar energy yield as they can receive sunlight from all directions.

The cost estimate and the power output of the artworks are variable depending on the configuration of the installations.

Nominal power of 48 PV cells (a 2-meter long module): 238 Watt peak.

Dimensions and annual capacity of some artworks:

*Rain Clouds*: 42 x 40 x h23 m – 100 MWh

*Lightnings*: medium height 35 m – 65 MWh

*Mother*: 30 x 23 x h 20 m – 35 MWh

*Infinity*: 51 x 59 x h 9 m – 100 MWh

*Life*: 21 x 30 x h 25 m – 35 MWh

*Carapace*: 30 x 22 x h 8 m – 25 MWh

*Man*: 341 x 366 x h 7/13 – 850 MWh

*Sun*: diameter 16 m – 6 MWh

*Wings*: 65 x 20 x h 15 m – 55 MWh

People: 25 x 28 x h 18 m – 70 MWh

Transition: 54 x 7 x h 8 m – 55 MWh

The eventual prototype could be represented by a minimal sculpture or by a more complex installation, depending on the budget.

The artworks are in harmony with the natural ecosystems, their microclimates and natural habitats.

The structures are open and transparent, and do not visually impact the surrounding landscape.

The lightweight sculptures minimize the use of materials and do not require deep foundations or excavations, being their ground occupation limited to only few points.

The activities of the artworks have no impact on the environment: during the day the structures stand as artworks, offering new dynamic social spaces. At night they can act as modern beacons, meeting points or suggestive spots for performances.

The installations are safe for people, produce sustainable energy and don’t generate waste materials and greenhouse gas emissions or other forms of environmental pollution: the full lifecycle environmental footprint of the artworks from fabrication to decommissioning is zero.