



## ENERGY

° **noun** (pl. **energies**) **1** the strength and vitality required for sustained activity. **2** (energies) a person's physical and mental powers as applied to a particular activity. **3** power derived from physical or chemical resources to provide light and heat or to work machines. **4** Physics the property of matter and radiation which is manifest as a capacity to perform work.

– DERIVATIVES **energize** (also **energies**) verb.

– ORIGIN Greek *energeia*, from *ergon* "work" .

*Oxford English Dictionary*

## FRAMEWORK

**ENERGY!** represents a strategic opportunity to imagine the future of a "sustainable society" that relates to the emerging qualities of products, services, systems and interactive tools, and to their ability to raising an awareness of the importance of energy production, management and consumption in the everyday life.

The contemporary society in relation to the massive introduction of electrically powered objects and appliances combined with the emergent social behaviours based on communication and information is increasingly becoming energy dependant.

From a design perspective this requires to start from the re-interpretation of the relationships between everyday life practises and the creation, manipulation and consumption of energy by developing concepts and scenarios aimed at increasing both the awareness on and around the energy issue and to stimulate innovative and responsible behaviours in relation to energy.

### ENERGY SINERGY

**ENERGY:** the capacity for motion or doing work, controvertible with matter, it is the power and ability to be physically and mentally active.

Energy is a source, exists both internally or externally of a body, product, system, its by-product is that which powers that body, product, system, relative to its surrounding environment.

Energy is usually considered as being granted, provided, but yet still maintains, generally, an anonymous relationship with their audience/society panorama.

In design by designing their (energy) services and products, **aim is to** explore another vision of energy that is more responsive, active and in a sense more alive amongst their environment and audience/user. it is generally measured on assumption.

In this way we highlight levels of thinking that can be embodied through design (brand design, sustainable design, service design).it means to address the **tangible aspects** of their medium in relation to:

### THE IDENTITY OF ENERGY

What does it look, sound, feel like. It's presence within a product or environment and it's interface of exchange with the user. Where does the interaction take place?

Keywords: religion, symbolism, passive-ism

### THE AESTHETIC OF ENERGY

How can it be used as a design material. To apply aesthetic values to a product. We can treat it as an expressive material.

Keywords: dynamic balance, connection, rhapsody

### USER RELATIONSHIP

Emotional. How we are emotionally connected to many services, products that are energy dependent.

Keywords: addiction, random, chance, feedback

### LANDSCAPE OF ENERGY

How does energy impacts our landscape in relation to the various types of producing plants, the transportation of the medium. On a local level, how to be more informative?

**Keywords:** sensitive space, mobility, active environment

## OBJECTIVE

The objective of the workshop is to develop concept and scenarios of artefacts, spaces, systems and services that exploring a meaningful sustainable presence of energy in the everyday life will permit us:

- to investigate the potentialities of energy both as a communication media and as a material for design
- to increase the awareness of the way in which energy is produced, stored, transmitted, consumed, reused...
- to critically explore through design the role of energy in our society by exploiting its communication potentialities, by making tangible the intangible

Concepts and scenarios will be developed considering:

- the aspects relating to the definition of the characteristics and qualities of the physical artefacts
- the aspects relating to the interaction with energy related services and information
- the characteristics of the communicative tools and media that will facilitate the relation between people and energy

The scale of the projects can range from the design of tools/artefacts, to micro-environments (architecture), to large dimension solutions (territory)

**EY!**

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E like expression, enhancement, engagement, exchange.....as a starting point

Y like Young Generation: the age group between 20/25 years old are seen as the most interested to adopt responsible behaviours and because they are the potential main target of a medium term project.

Y like WHY: the most important aspect of a design driven process is to give a meaning to socio-technological choices in order to stimulate both the cultural and the economical arena.

## TIMELINE

- **30/01 KICK-OFF Seminar n.1: *Energy***
- **31/01 First meeting with project leaders**
- **17/02 12 am: DEADLINE TO HAND OVER PROJECT DESCRIPTIONS**
- **21/02 12 am: DEADLINE TO HAND OVER DIGITAL PRESENTATIONS**
- **24/02 FINAL PRESENTATION Seminar n.1**

## **PURE ENERGY**

**Project leaders:** Dante Donegani & Giovanni Lauda

**Assistant:** Jae-Kyu Lee

Modern times have been dominated by the concept of energy: it has influenced the shape of industrial towns, cars, speed, the relationship between time and space, the concepts of repetitiveness, series, production, ongoing movement. All these concepts were well represented by Historical Avant-Gardes, by Futurists and Pop Art.

Design too played a role, by creating the image of “fuelled” or “powered” products: from Bauhaus machines to Ulmian black boxes, to American Styling and the provocation of Alessi toys or Philips experiments.

Often, “modern” objects can only be redesigned because they have become obsolete in terms of performance, uses and rituality. When design does nothing else but redesign the shape of objects, it shows all its limits and uselessness.

We believe that an analysis on energy and everything connected to it might give rise to ideas about new products, new uses and new languages.

From the problem of energy saving and renewable sources to a wide-ranging reflection on energy and its symbolic value, by designing:

Objects and systems powered by alternative, renewable and clean sources of energy...

Objects and systems with a low energy consumption, devices with virtuous performances (low-tech objects, minimal appliances...)

## **BACI ELETTRICI**

**Project leader:** Giovanni Levanti

**Assistant:** Cem Cansu

The form of energy and a social rite in urban parks. By choosing city parks as a location, I would like to tackle the Energy issue by focussing on two important project elements: the first is form, i.e. how to communicate all energy types in an easy and widely understood way. The second element is that of a social rite, a small or bigger community taking part in an event whose main character is energy – looking at energy, playing with energy, saving energy, creating energy...

### **Electric kisses # 1**

The Lighting Field– Walter De Maria: four hundred, six-meter high poles are placed at a distance of around 70 meters from one another, in New Mexico, in a desert area. The poles so arranged attract lightning; energy materializes and is discharged in a spectacular way. A shelter has been especially created and fitted for the observation of lightning. You can book a night in there. This is something interesting, as this event attracts a lot of people; it turns into a collective rite, full of expectations.

### **Electric kisses # 2**

Akira Kurosawa's Dreams – Akira Kurosawa. Because of an eruption of the Fuji volcano, a nuclear power station is damaged and the population gets scared. Coloured, radioactive clouds fall down; a boy desperately waves his arms to keep the vapours away. Kurosawa has coloured caesium, uranium and radioactivity. He tried to give esthetical quality to something which is invisible, in order to make everybody understand how ambiguously dangerous some forms of energy can be.

### **Electric kisses # 3**

The Sun – Olafur Eliasson. Olafur Eliasson's exhibition at London's Tate Modern was the exhibition by a living artist which recalled the highest number of visitors ever: an artificial sun, a sphere of light rising and setting just like the real thing. The younger visitors returned many times, to lay on the floor and sunbathe. The museum turns here into a beach, a meeting place for enjoyment.

## **LIVE UN-PLUGGED**

**Project leader:** Guido Venturini

**Assistant:** Caroline Dippold

How could we redesign the urban space in the light of technologies allowing for a widespread distribution of energy sources and connections? From Wi Fi to Camping Gaz, from wood fire to pedal energy to alternative or recyclable energy sources. Advanced IT connection points, optical and electro-optical technologies, laser systems, smart luminosity, anti-freeze shields, robotics, biomedical diagnostic technologies. Free or pay access services for practical use and esthetical enjoyment.

# ENERGY-CITY

**Project leader:** Claudio Moderini

**Assistants:** Katrin Svabo Bech and Pietro Turi

**ENERGY-CITY** is a living organism fed by **ENERGY** and **INFORMATION FLOWS**, whose body is compounded by a grid of **SENSORS** and **PUBLIC INTERFACES** that permits to its citizen to monitor, control, produce, transform...every type of energy.

**ENERGY** is both a **MEDIA** and a **MATERIAL** for design, it embodies communication and expressive values in the same way as it incorporates tangible potentialities.

**ENERGY-CITY** is an active city, full of energy (literally speaking), every **NEIGHBOURHOOD** has a network of renewable sources and the balance between production, consumption and individual needs is ruled on the basis of the citizen needs and expectations.

***ENERGY-CITY** is a new typology of urban space defined both by an infrastructure made of **DIGITAL ENHANCED ARTEFACTS** like urban furniture, street lamps but also dynamic signage and digital facades and by **MEDIA ELEMENTS** (information and processes); it is a physical space that bears and preserves the traces of the information that crossed it; it is a system for the memorisation of collective and individual experiences; it is a responsive space that makes the information flows and interactions both manifest and perceptible.*

On the street people can both recharge their personal devices in the public dispensers and trade energy for information and viceversa, so as sell the energy in excess or simply give it for free to the community, as a **GIFT**, in order to be used for public unexpected performances.

In the territory surrounding the city an **UBIQUITOUS** system of mobile energy sources and energy related **SERVICES** guarantees a safety margin for critical situations.

***ENERGY-CITY** is part of the **CITIZEN APPLIANCES** research framework, an investigation on how physical and architectural elements, interactive artefacts for public places can become the access points to an integrated system of public services and information fostering people interaction and participation to social dynamics.*

The **ENERGY SHOW** begins:

- tools and spaces for supporting activities related to self production, monitoring and distribution of energy
- tools and micro-architectures for visualizing the energy flows parameters
- morphic services adapting their features according to the energy characteristics and availability
- energy visualization systems for reinforcing the awareness of people with regards to energy consumption models

# ENERGIES IN TRANSITION

**Project leader:** Arcangelo Jeker

**Assistant:** Stefano Osculati

The representation of energy has always been an important topic for transportation design, which is normally associated to the idea of performance.

The types and shapes of all vehicles are inextricably linked to the energy powering them, even though in the past 100 years the internal combustion engine has played the key role.

The energy to be used for vehicles in the future is still an open issue: high-yield hydrocarbons, natural gases, alcohol, hydrogen, pure electricity, photovoltaic cells. All these solutions are currently feasible.

The scenario, however, is still quite hazy both from the point of view of technology and of distribution.

Actually, the source of energy powering the vehicles of the future will be chosen on the basis of its availability on the territory, on the relative costs and will depend on high-level political decisions.

The only certainty we have is that we face a transition period during which, for 5-10 years, no energy source will prevail over the others.

During this period, it will be necessary to have hybrid and very flexible vehicles, able to cope with the gradual development of the distribution network.

The students will be asked to design concepts for vehicles focussing on the idea of hybrid and flexible fuelling. They will tackle both typology problems and the representation of energy, never losing sight of the overall concept of energy and of the FLEXIBILITY in its use.

From the didactic point of view, this workshop aims at improving the students' ability to develop a strategic project, forcing them to look at the more general context, and not only to the mere application to a physical transportation means: given a complex scenario like the one described above (which they will have to realistically project into the future) , they are asked to propose concepts which are consistent with the given framework. The formal aspect is only secondary.

From a technical point of view, the students will be invited to use a quick, high-impact representation technique (sketch + Photoshop with graphical table), which is a crucial tool for their training as transportation designers.