For Change

Press Release

CLIMATE CHANGE!
From Mass Consumption to a Sustainable Quality Society

A cooperation between the MAK and the Federal Ministry for Sustainability and Tourism

Exhibition Venue	MAK DESIGN LAB MAK, Stubenring 5, 1010 Vienna
Exhibition Dates	29 May – 6 October 2019
Opening Hours	Tue 10 a.m.–10 p.m., Wed-Sun 10 a.m.–6 p.m.

With the exhibition project *CLIMATE CHANGE! From Mass Consumption to a Sustainable Quality Society*, the well-known Viennese design studio EOOS (Martin Bergmann, Gernot Bohmann, and Harald Gruendl) revolves around the contribution transformation design can have towards the necessary turnaround of climate change. Mobility, energy, food, and a circular economy are fields relevant for the development of innovations for sustainable living. EOOS developed four concrete utopias: a car, a fridge, a solar roof, and a public charging station for electric vehicles. Two additional works show speculative design projects on the topic of energy.

"Especially with regard to climate change, transformation design can trigger processes of change. However, the transition from the current world-destroying lifestyle to a future-proof, sustainable one is not only a question of design but also of a participative society. All our united creativity can produce common property which can be used and improved by everybody. United, change will be faster," Harald Gruendl states.

A fridge, a TV, travel, and one's own car were achievements promising a better life during the era of the economic miracle after World War II. However, wealth was based on the exploitation of resources and, ultimately, led to a global climate crisis. With new goals, such as a turnaround in energy policy, decarbonization of traffic, a circular economy, a bioeconomy, and a globally sustainable carbon footprint of all of us, the era of the economic miracle of the 21st century has only just begun.

The Austrian climate and energy strategy #mission2030 serves as a starting point for *CLIMATE CHANGE! From Mass Consumption to a Sustainable Quality Society*. The exhibition also refers to the guide *Qualitätsstandards für Circular Design* [Quality Standards for Circular Design], developed by the IDRV – Institute of Design Research Vienna and published by designaustria (2019).

The presented works not only encourage active participation in a sustainable lifestyle but can also be viewed as pilot projects for possible working procedures and potentials of design in the future:

SOV – Social Vehicle
Mobility is one of the main contributors to climate change. Traffic causes almost one-third of greenhouse gases in Austria. Since 1990, emissions have increased by more than 60%. Electromobility is a climate-friendly alternative we can already make use of in the form of trains or trams. Electric bikes are one of the top-selling individual electric mobility solutions. A surprising amount of 94% of all car rides are shorter than 50 km. Still, electric cars are often not bought because of their insufficient range.

The *SOV – Social Vehicle* (2018–), developed by EOOS, is a compact electronic lightweight vehicle with three seats, which can be built, improved, and repaired in small, local workshops by means of an open design license. Its production consumes only one-tenth of the resources an average medium-sized vehicle requires. The project is in an open process of development and will be developed further in a participative design workshop throughout the duration of the exhibition.

Power Plant
By 2030, Austria wants to cover 100 % of the national overall power consumption with renewable energy sources. Decentralized photovoltaic systems are intended to play an important part in this energy turnaround.

For the *SOV*, EOOS developed a solar extension module that is folded over the roof and windshield of the vehicle and can generate electricity when the car is not in use. The *SOV* is parked in sunny passages and always positions itself—like a heliostat—towards the sun. The *Power Plant* (2019) supplies the *SOV* with enough energy for daily trips in the city.

In the exhibition, square fields of 1x1 m visualize the electricity production of a solar panel of 100 kWh/year. Current electricity consumption per household and capita but also the electricity consumption and production of the design projects developed by EOOS become tangible through the respective amount of square meters of solar panels. Based on solar power, an understanding of the abstract topic of renewable energy is created.

Citizen Socket
A lack of infrastructure for charging electromobiles is slowing down the transition to mobility free of oil and gas. *Citizen Socket* (2019) is a design project based on the topic of “digital and smart energy” of the climate and

energy strategy #mission2030. Citizens organize the installation of temporary electricity charging stations in public spaces.

For the course of the VIENNA BIENNALE, a demonstrator in front of the MAK's main entrance invites everybody to test this idea hands-on—in a way, a living lab using the urban space. A high-voltage power cable leads from the MAK to a lamppost where a wallbox is installed, run by software integrating all other *Citizen Sockets.* Payments take place via the peer-to-peer network.

Greenfreeze 2

In 1991, an East German company, supported by the environmental organization Greenpeace, built ten prototypes of CFC- and HFC-free fridges. Dynamics arose that would lead to big producers not only changing their insulants but also using climate-friendly refrigerants.

Now, *Greenfreeze 2* (2019) introduces further ecological improvements: The refrigeration unit is modular and can simply be exchanged as a component or be replaced by newer technology. A changeover of the economy to renewable resources (bioeconomy) is demonstrated by the use of wood and sheep wool as construction elements for the corpus.

The version presented in *CLIMATE CHANGE!* consists of three elements: one for fresh food, one for semi-perishable food, and a box for drinks. The elements are each connected by a temperature lock. This makes it possible to disconnect elements that are not in use from the power supply to save energy. *Greenfreeze 2*, therefore, also adapts when living conditions change.

Kitchen-Cow

The speculative design project *Kitchen-Cow* (2019) explores the possibilities of using food waste to again produce energy for cooking. The workbench consists of a funnel into which food waste but also hot cooking water are filled. By means of a crank, the food is reduced to small pieces and reaches a "glass stomach" via a kind of esophagus. The fermenter produces biogas from the organic waste. The biogas is then collected in a tank and reused for cooking.

Lunar Lander

Already in the 1960s, the esthetics of space expeditions inspired the avant-garde in design, architecture, and fashion. The *Lunar Lander* (2018) by EOOS emphasizes that the use of natural resources is not a technological issue but rather a socio-political one.

Lunar Lander turns microbes in urine, collected in a urinal, into electricity. The transformative technology was developed by the Bristol Robotics Laboratory at the University of West England to self-sufficiently run bio-

robots with energy from biological nutrients. The high-tech fuel cells were manually produced by EOOS, the ceramics cylinders were provided by the sanitary ceramics producer LAUFEN.

For one kilowatt-hour of energy, 85 liters of urine are required. If, for example, all visitors of the Donauinselfest used the toilet and produced about 350 ml of urine, this would sum up to about 1 million liters of urine. This could be used to gain enough energy to make a phone call lasting 30 million hours.

A leaflet on the exhibition with details on the individual projects, including further technical specifications, as well as image material are available for download at MAK.at/presse and viennabiennale.org.

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