

**Bunker • Slomškova 11 • 1000 Ljubljana**

**SI(Ε)NERGIJA**

**DNEVI ZA USTVARJALNO RAZUMEVANJE  
SPREMEMB IN SPODBUJANJE  
SODELOVANJA UMETNIKOV,  
ZNANSTVENIKOV IN PRAKTIKOV.**

**SY(Ε)ENERGY**

**Days for Creative Understanding  
of Changes and Stimulating  
the Collaboration among Artists,  
Scientists and Practitioners.**

**STARA ELEKTRARNA**

Od nedelje do sobote, 3. do 9. junij,  
vsak dan od 16.00 do 21.00.  
From Sunday to Saturday, June 3rd to 9th,  
every day from 4.00 to 9.00 PM.

**bunker**

**Stara elektrarna**

**SI(Ε)NERGIJA**

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**SY(Ε)ENERGY**

**Dnevi SI(Ε)NERGIJA** so zasnovani kot odprt forum povezovanja umetniških, znanstvenih, tehnoloških, humanističnih, izobraževalnih, filozofskev in teoretičnih disciplin. Namenjeni so vsem, ki v raziskovanjem in delovanju odgovarjajo na globalne spremembe življenja na Zemlji. Ponuditi želimo inspiracijo in informacije za nadaljnje delovanje in ustvarjanje.

Večletni projekt povezovanja umetnosti, znanosti in tehnologije začenjamamo na področjih električne energije, bivanja in prometa. Gre za tri področja človekovih izumov, za katera iščemo alternativne. Izbiro področja je spontano narekovala preobrazba Stare elektrarne v središču Ljubljane. Opečnata zgradba z visokim dimnikom je iz tovarne za proizvodnjo elektrike postala gostišče umetniških praks, izobraževanja in srečevanja novih razmišljanj.

S poskusom združevanja navidezno nezdružljivih praks želimo preveriti, koliko znanosti je v umetnosti in obratno, koliko umetnosti je v znanosti. Zanima nas, ali lahko dialog med disciplinama oblikuje sporočila, potrebna za razumevanje vsega, kar danes označujemo s pojmom globalni problemi. Eni drugim naj bi služili za ustvarjalni navdih in raziskovanje, ki bi se odrazila v praksi. V prihodnje želimo dnevi SI(Ε)NERGIJA spremeniti v laboratorij ustvarjalnih tandemov ali skupin znanstvenikov, umetnikov in praktikov in njihovo delovanje javno predstaviti.

## POZIV ➤ ISKRART

Vsi dogodki tega tedna so namenjeni tudi inspiraciji in kot odskočna deska v prihodnje projekte. Če se vam je utrnila iskra in imate idejo za umetniški projekt, sodelovanje s kom od predavateljev ali drugimi udeleženci dogodkov, nas prosim kontaktirajte. Nekaj izbranih idej bomo skušali podpreti pri idejni razdelavi ali kasneje pri izvedbi.

Days of **SY(Ε)ENERGY** are designed as an open forum for connecting artistic, scientific, technological, humanistic, educational, philosophical and theoretical disciplines. They are intended for all those who respond to the global changes of life on Earth in conjunction with their research and activities. We would like to provide a source of inspiration and information for their future activities and creative processes.

We start our long term project of connecting the fields of art, science and technology within the parameters of electrical energy, residential abodes and traffic. We want to find alternatives for these three fields of inventions. The choice of these three fields was made spontaneously by the metamorphosis of the Old Power Station in the Ljubljana city centre. The brick building with a high chimney has from a plant producing electricity been transformed into a venue where various artistic practices can be seen, a place for education and a meeting point of new reflections.

The aim of our experiment is to integrate apparently incompatible fields and to examine what percentage of science is present in art and vice-versa: how much art is present in science. We are interested in finding out if a dialogue between these two disciplines can create messages, which are needed in order to understand everything comprised under the concept of "global problems". To each other, they are intended to be a creative inspiration and a basis for research work to be instigated, which would bear some practical results. In future, we would like to transform the days of SY(Ε)ENERGY into a laboratory of creative tandems or groups of scientist, artists and practitioners and to present their work to the public.

## appeal ➤ SPARKART

All events within this week are intended to stimulate a sense of inspiration and also to be used as a spring-board for future projects. If an idea sparked something within you to endeavour towards an artistic project or collaboration with one of the lecturers or other participants, please don't hesitate to contact us. We shall choose a few ideas and try to provide support for a more detailed deliberation of these chosen ideas and their realization.

## ► PROJEKCIJE FILMOV FILM PROJECTIONS

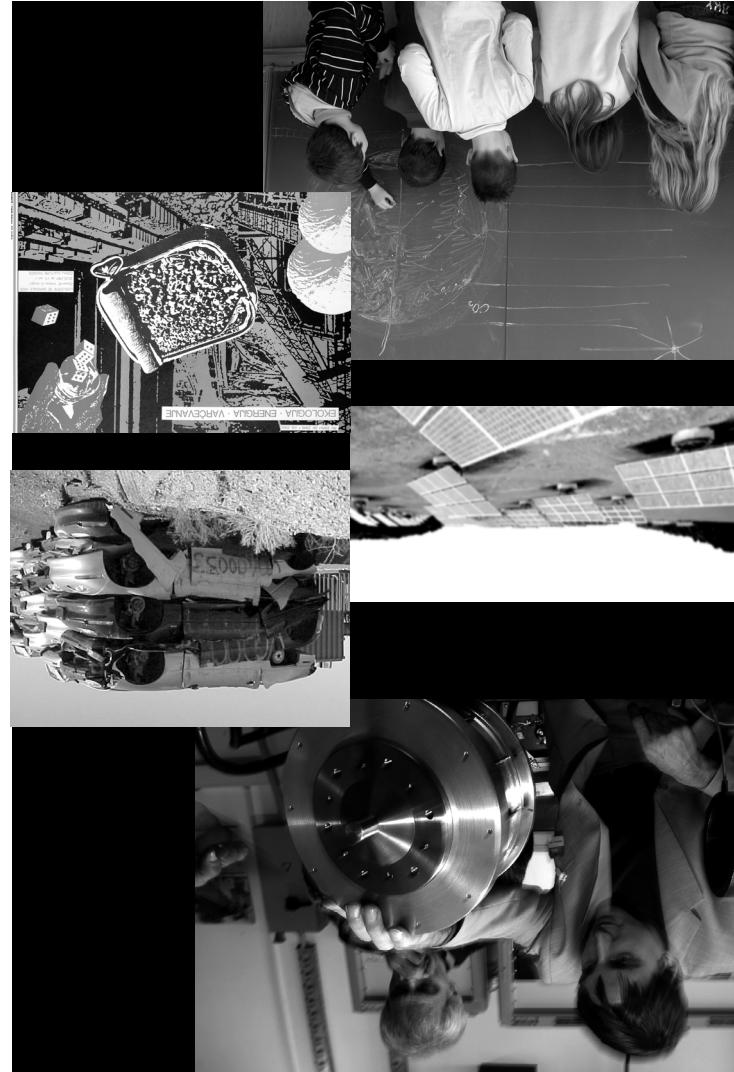
**UMETNOST S SPREMINJANJOČE SE ANTARKTIKE ART FROM A CHANGING ARCTIC**  
BBC-jev dokumentarec o projektu Cape Farewell, v okviru katerega David Buckland vsako leto zbire skupino umetnikov, ki jim samo omogoči ogled taljenja arktičnega ledu v živo. Izkšuna je tako močna, da evocira izjemna umetniška dela. This is a BBC documentary about the Cape Farewell project, where David Buckland gathers a group of artists every year and gives them an opportunity to see the Arctic ice melting on the spot. The experience is overwhelming and also evokes amazing artistic creations.

**KDO JE UMORIL ELEKTRIČNI AVTO WHO KILLED THE ELECTRIC CAR**  
Leta 1996 so po Kaliforniji že kar pogosto vozili električni avtomobili. Dve leti kasneje so izginili. Dokumentarec, ki raziskuje razvoj električnih avtomobilov in zakaj še vedno niso v množični proizvodnji. In 1996, electric cars were quite a common sight in California. Two years later they disappeared from the roads. This documentary investigates the developmental stages of the electric car and finds the answers as to why they still aren't mass produced.

**KONEC PREDMESTJA THE END OF SUBURBIA**  
Po drugi svetovni vojni je bil urbanistični trend v ZDA selitev v predmestja. Sprememba življenjskega stila je močno vplivala na energetsko porabo in sedaj ravno temu življenjskemu stilu grozi razpad ameriških sanj. After WWII, a trend of migrating to the suburbs spread throughout the United States. This change of lifestyle strongly affected the rate of energy consumption. At the moment, this lifestyle of the American dream is under threat of imploding upon itself.

**ČMRLJ – KRATKI FILM ANDREJA DETELE O ELEKTROMOTORU ZA DIREKTNI POGON BUMBLEBEE – A SHORT MOVE BY ANDREJ DETELA ABOUT AN ELECTRIC MOTOR UNDER DIRECT DRIVE CONDITIONS**

► Vsredo, 6. junija, ob 17.00 bo na dvorišču parkiran hibriden avtomobil domače predelave in na ogled bo elektromotor Andreja Detela, namenjen za vgradnjo v pogonska kolesa vozil. On Wednesday, June 6th, from 5.00 PM, a hybrid car remodelled in Slovenia will be parked at the Old Power Station yard and visitors will be able to view an electric motor, designed by Andrej Detela. The motor is intended to be built as an integral component of the vehicles' driving wheels.



## 1 nedelja, 3. junij Sunday, June 3rd

► ob 15.00 At 3.00 PM

### ZEMLJA IMA VROČINO THE EARTH HAS FEVER

**aktivno predavanje za otroke od 6 do 10 let**

An interactive lecture for children between the ages of 6 to 10

Slavica Peševska, slikarka, performerka in oblikovalka, bo skozi risbo na zanimiv način pripovedovala o podnebnih spremembah ter vzrokih in posledicah tega okoljskega problema. The painter, performer and designer Slavica Peševska, will with the help of her drawings, talk about climate changes and explain the causes and effects of this environmental problem.

## 2 ponedeljek, 4. junij Monday, June 4th

► ob 17.00 do 19.00 From 5.00 to 7.00 PM

### IZDELAVA SOLARNIH KUHALNIKOV THE MAKING OF SOLAR COOKERS delavnica za otroke od 8 do 11 let A workshop for children between the ages of 8 to 11

Ker lahko s pomočjo sončnih žarkov tudi kuhamo, bomo na delavnici iz kartona in srebrne folije izdelali solarni kuhalnik, imenovan koncentrator. Delavnico bo vodila Barbara Hrovatin iz Tehniškega muzeja v Bistri. With the help of the sun's rays, we can also cook and therefore we will make a solar cooker, using only cardboard and tin foil, named "Concentrator" in this workshop. The workshop will be held by Barbara Hrovatin from the Slovene Technical Museum in Bistra.

► ob 19.30 At 7.30 PM

### SLOVENSKI BALTAZAR MATEVŽ ČOKL THE SLOVENE INVENTOR MATEVŽ ČOKL pogovor A discussion

Čokl je inženir lesarstva, ki največ časa prebije v delavnici, v kateri izdeluje naprave za proizvodnjo elektrike in čistejo rabo virov energije, od sončne elektrarne, nameščene na streho bloka, elektrarne na kokosovo olje, avtomobila na rastlinsko olje in biodizel, skuterja, ki ga poganja avtoplín ... Matevž Čokl is an engineer of woodwork and spends most of his time in his workshop, where he makes instruments for producing electric energy and also for the cleaner use of energy sources: solar power plants on the roof on an apartment bloc, a power plant running on coconut oil, cars running on vegetable oil and bio-diesel and scooters running on car gasses...

## 5 četrtek, 7. junij Thursday, June 7th

► ob 17.00 At 5.00 PM

### KONEC PREDMESTJA THE END OF SUBURBIA

**projekcija filma Film projection**

► ob 19.00 At 7.00 PM

### PREMIŠLJANJE DOMOVANJA RE-THINKING OUR DWELLING AND WORKING PLACES

Prostori, v katerih smo do danes delali in živelji, so kar naenkrat pomankljivi, energetsko potratni, nezdravi ... Podnebne spremembe in izivi za njihovo ublažitev so nam zapletli življenje. V želji po kakovostenem bivanju, s katerim želimo hkrati ohraniti ugodje in manj škoditi okolju, smo pripravljeni spreteti novost. Zaplete se, ko začnemo željo uresničevati. V pogovoru o številnih odločitvah, ki jih moramo sprejeti, spremembah, novostih in tehnologijah se bomo pogovarjali z:

Our dwelling and working places have suddenly become insufficient, energy wasteful and unhealthy. Climate changes and the challenges regarding the alleviation of these problems have complicated our lives. We are prepared to accept changes in order to preserve our good standard of living and at the same time mitigate harmful effects on the environment. But when we try to realize our dreams, everything becomes complicated. About the numerous decisions which have to be made, about the changes, novelties and new technologies we will talk with:

**Matjaž Malovrh**, vodja centra za bivalno okolje, gradbeno fiziko in energijo pri Gradbenem inštitutu ZRMK Manager of the Centre for dwelling environment, construction engineering physics and energy at the Building Institute ZMRK.

**Ira Zorko**, arhitekt v svobodnem poklicu, ki je že v času študija posvečal pozornost različnim umetniškim praksam, ekološkim projektom in še posebej eksperimentalnemu filmu Free-lance architect, who was even during his studies interested in differing fields of the arts, ecological projects and especially that of experimental movies.

**Veronika Valendar**, specialistka za gozdarstvo pri Kmetijsko gozdarskem zavodu v Mariboru An expert on forestry at the Agricultural and Forestry Institution in Maribor.

**Miro Škvorc**, direktor podjetja za energijsko varčno gradnjo Eko produkt. V Mariboru so zgradili prvo aktivno solarno hišo v Sloveniji, ki pri ogrevanju ne onesnažuje okolja s CO<sub>2</sub> Manager of a company for energy saving buildings "Eko produkt". The first Slovene active solar house, which doesn't pollute the environment with carbon dioxide emissions, was built in Maribor.

**Mateja in Matjaž**, mlad par želi graditi hišo za prijetno bivanje iz materialov, ki ne ogrožajo in slabijo okolja Mateja and Matjaž are a young couple. They want to build a cosy house from materials, which don't threaten and exhaust the environment.

## 6 petek, 8. junij Friday, June 8th

► ob 18.30 At 6.30 PM

### 8 MINUT OD SONCA 8 MINUTES FROM THE SUN projekcija filma A film projection

► ob 19.00 At 7.00 PM

### PRIHODNOST SONČNE ENERGIJE V SLOVENIJI THE FUTURE OF SOLAR ENERGY IN SLOVENIA

**okrogla miza Round table discussion**

Pridobivanje elektrike iz sončne energije postaja ena najpomembnejših gospodarskih in raziskovalnih dejavnosti v svetu. V Sloveniji število in velikost sončnih elektrarn raste in imamo podjetja in razvojno-raziskovalne ustanove, ki se ukvarjajo s tem področjem. Kaj se nam zato obeta, bodo povedali:

Producing electricity from solar energy is becoming one of the most important economic and researched activities in the world. The number and size of solar power plants in Slovenia is on the increase. We have companies and R&D institutes, which deal with this area of activities. About the prospects within this field, we will talk with:

**Bojan Voh**, direktor razvoja v podjetju HTZ, hčerinskem podjetju v poslovnom sistemu Premogovnika Velenje, kjer na rudniškem jezeru načrtujejo največjo sončno elektrarno Bojan Voh, a manager for development at the company HTZ, a subsidiary company of the business system Premogovnik Velenje, where they plan to build the biggest solar power plant in Slovenia at the artificial lake.

**Franko Nemac**, direktor Agencije za prestukturiranje energetike, ki se ukvarja s promocijo vseh obnovljivih virov energije in je leta 2001 prva v Sloveniji sončno elektrarno priklopila na električno omrežje in bila pobudnica, ustanoviteljica in koordinatorka Tehnološke platforme za fotovoltaiko Manager of the Agency for energy restructuring (ApE), which aim is to promote all renewable energy sources. The Agency was the first company in Slovenia to connect a solar power plant to the electricity grid. The agency was also an initiator, founder and coordinator of the Technological platform for the photovoltaic sciences.

**Dr. Uroš Merc**, direktor podjetja Bisol, edinega slovenskega proizvajalca fotonapetostnih modulov, ključnega segmenta pri pretvorbi sončeve energije v električno Manager of the company Bisol, the only Slovene producer of photovoltaic modules, which are the key elements in transforming solar energy into electric energy.

**Dr. Marko Topič**, redni profesor na Fakulteti za elektrotehniko UL, kjer je predstojnik laboratorija za fotovoltaiko in optoelektroniko in vodja centra za razpršene vire energije Professor at the Faculty for Electrical Engineering at the University of Ljubljana, where he is also the chairman of the Laboratory for Photovoltaic and Optical Electronics and the manager of the Centre for dispersed energy sources.

## 3 torek, 5. junij Tuesday, June 5th

► ob 18.30 At 6.30 PM

### ZNANOST V UMETNOSTI IN UMETNOST V ZNANOSTI SCIENCE IN ART AND ART IN SCIENCE

**okrogla miza Round table discussion**

S poskusom združevanja navidezno nezdržljivih praks želimo preveriti, koliko znanosti je v umetnosti in obratno, koliko umetnosti je v znanosti. Ali tovrsten dialog obstaja in kakšni so njegovi učinki? Zanimalo nas, ali lahko zlitje ustvarjal-nega navdihja in znanstvenega raziskovanja porodi sporočila, s katerimi lahko posamezniki osmislijo pomen tega, kar označujemo za globalne probleme, naj bodo to podnebne spremembe, energetika ali katero drugo področje človekovoga-delovanja. We will try to integrate apparently incompatible fields, and examine what percentage of science is present in the art and vice-versa: what percentage of art is present in science. Can the fusion of creative inspiration and scientific research produce messages, which enable individuals to give meaning to the so-called global problems, i.e. climate changes, energy issues or other fields within the realm of human activities?

Razmislek za izhodišča pogovora bo predstavljal dr. Andrej Lukšič, profesor na Fakulteti za družbene vede, kjer vodi predmet E-demokracija, in hkrati vodi Inštitut za ekologijo, pri katerem deluje tudi Center za e-demokracijo.

The introduction for this discussion will be presented by Andrej Lukšič, PhD, a Professor at the Faculty of the Social Sciences in Ljubljana, a lecturer of E-Democracy and the chairman of the Institute for Ecology/Centre for Electronic Democracy.

**V pogovoru bodo sodelovali Participants at the discussion:**

**Marko Peljhan**, "prototip" umetnika, ki združuje znanost in umetnost A "proto-type" of an artist, who amalgamates science and art

**Janko Rožič**, arhitekt in pesnik Architect and poet

**mag. Božidar Flajšman**, profesor likovne umetnosti in avtor knjige Vizualna ekologija Professor of fine arts and author of the book entitled "Visual Ecology"

**Andrej Detela**, fizik in izumitelj Physicist and inventor

**Marjetica Potrč**, umetnica in arhitektka Artist and architect

## 4 sreda, 6. junij Wednesday, June 6th

► ob 17.00 At 5.00 PM

Na dvorišču bo parkiran hibriden avtomobil domače predelave in na ogled bo elektromotor Andreja Detele, namenjen za vgradnjo v pogonska kolesa vozil.

A hybrid car remodelled in Slovenia will be parked at the Old Power Station yard and visitors will be able to view an electric motor, designed by Andrej Detela. The motor is intended to be built as an integral component of the vehicles' driving wheels.

► ob 17.30 At 5.30 PM

### KDO JE UMORIL ELEKTRIČNI AVTO WHO KILLED THE ELECTRIC CAR

**projekcija filma Film projection**

► ob 19.00 At 7.00 PM

### SLOVENSKI ELEKTROMOTORJI IN NJIHOVO ŽIVLJENJE SLOVENE ELECTRIC MOTORS AND THEIR LIVES

**pogovor A discussion**

Potrebjujemo alternativo za potovanja in prevoz, ne da bi zmanjšali prevozene kilometre, ampak upočasnil podnebne spremembe, ki jih povzročamo z izpuhi. Ena od rešitev, da bi te spremembe upočasnilo, so hibridna in električna vozila. Ljudje pričakujemo, da nam bosta znanost in tehnologija skupaj z avtomobilsko industrijo ponudili alternativo. Je temu res tako?

**Andrej Pečjak**, poznavalec in ljubitelj alternativnih virov energije predvsem na področju transporta oziroma elektrike, vodika in hibridov, je sofinanciral predelavo starega avtomobila v hibriden avto. Na svoji hiši je zgradil solarno elektrarno 1kW, za svoje potrebe izdeluje tudi biodiesel.

We need alternative solutions for travelling and transport, which would enable us to slow down climate changes caused by exhaust fumes, without reducing the mileage undertaken. One of the possible solutions are hybrid and electric vehicles. People expect an alternative solution from science, technology and the automotive industry. Are their expectations realistic?

Andrej Pečjak is an expert and enthusiast of alternative sources of energy production, especially in the field of transport, i.e. electricity, hydrogen and hybrids. He co-financed the adaptation of an old car into a hybrid vehicle. Pečjak also built a solar power plant with a 1kW of power produced on the roof on his house and he also produces biodiesel for his own personal needs.

**Sodelovalci bodo tudi Other participants:**

**Miro Zorič**, mehanik, ki prodaja elektromotorje po svetu in je izdelal hibridni avto A mechanic who sells electric motors worldwide and the fabricator of a hybrid car.

**Vando Arsov**, avtoelektričar, brez katerega Zoričev elektromotor ne bi bil vgrajen v star Renault Espace A car electrician, who enabled Zorič to build his electric motor in an old Renault Espace.

**Andrej Detela**, fizik in izumitelj, vodja razvoja elektromotorjev na Inštitutu Jožef Stefan, je že pred dobrim desetletjem začel z razvojem elektromotorjev za direktno pogone, ki bi omogočali pogon nove generacije električnih vozil. The physicist and inventor, manager of the sector responsible for electric motor development at the Jožef Stefan Institute. Detela started developing electric motors for direct drive configuration more than 10 years ago. These motors should provide the drive for a new generation of electric vehicles.

**Gorazd Lampič** se je kot mlad diplomant fizike pred petimi leti pridružil Deteli pri razvojnem projektu elektromotorjev. Zdaj sodeluje v podjetju Elaphe, ki deluje na področju razvoja elektromotorjev za direktno pogone električnih in hibridnih vozil After graduating from the field of physics, Gorazd Lampič joined Detela where the development of electric motors was under way. They founded a company "Elaphe" for developing electric motors using direct drive configuration in electric and hybrid vehicles.

## 7 sobota, 9. junij Saturday, June 9th

► ob 15.00 At 3.00 PM

### ENERGETSKA DETEKTVIKA AN ENERGY CRIME STORY

**predavanje za mladostnike od 11 do 15 let**

**A lecture for young people from the ages of 11 to 15**

**Slavica Peševska**, slikarka, performerka in oblikovalka bo skozi kombinirano tehniko risanja in projekcije pripovedovala o podnebnih spremembah in energetskim detektivom Mega Wattom raziskovala, zakaj so šole klimatske bombe in kaj lahko naredimo, da bodo prijazne do podnebja. The painter, performer and designer Slavica Peševska, will with the help of her drawings and slides talk about climate changes. She and the energy detective Mega Watt will investigate why schools are climate assaulters and what can we do to make them climate friendly.

► ob 17.15 At 5.15 PM

### VROČ IZZIV Z ANDREJEM KLEMENCOM

**A HOT CHALLENGE WITH ANDREJ KLEMENC**

**Podnebne spremembe in Ljubljana – kako se bomo hladiли v pregetem mestu?**

**Climate changes in Ljubljana: How will we cool ourselves in an overheated city?**

**Andrej Klemenc**, politolog, tajnik Slovenskega E-foruma, društva za energetsko ekonomiko in ekologijo, dolgoletni okoljski aktivist, strokovnjak za energetsko politiko, sodelovanje javnosti pri varstvu okolja in inovativne oblike promocije varstva podnebja med mladimi. Bachelor of Political Sciences, secretary of Slovene E-forum and the Society for energy economics and energy, long time environmental activist, expert on energy policies, on public involvement in environmental issues and on innovative education for the young on climate changes.

► ob 19.00 At 7.00 PM

### VSAK DAN PADE Z NEBA 970 MILIJARD kWh ENERGIJE

**970 BILLION kWh OF ENERGY FALLS FROM THE SKY EVERY DAY**

**zaključno predavanje Closing lecture**

Strokovnjak za sončno energijo **Denis Lenardič** bo povedal, zakaj uporabljamo samo znaten delček energije, ki jo prejmemo na Zemljo.

Denis Lenardič, an expert on solar energy, will explain why we use just a tiny fraction of energy, which the Earth receives.