



# PieZeroWatt™: Large-scale clean electric cogeneration



A technology of Constant Dynamic Systems Ltd



We address the **global basic need** for more and more, cleaner and cleaner, and more secure **electricity**, now more than ever before.

Our **electric cogeneration technology**, PIEZEROWATT™, empowers one to access **more, cheaper, cleaner and reliable electricity**, than it would be expected otherwise.

Our way is the **piezoelectric “chain reaction”**: a piezoelectric element is reminiscent to some extent of a moist sponge, and a **larger sponge provides more water**, other things being equal.





Piezoelectricity: a type of a **repeatable** exoelectric and exothermic **material transformation**, such as combustion or nuclear fusion.

$$E=mc^2$$

One can think of it as a **specific type of eccentric “fuel”**: completely clean, and used again and again; or, as a large-scale **fully self-rechargeable battery**.



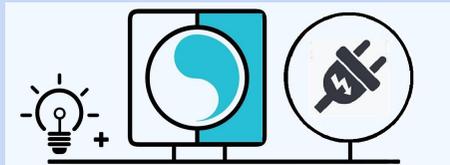
Not something that any **self-respecting fuel** would do. But such are the piezo materials, which **cannot be exhausted**.

**C'est  
la  
vie!**



Two modes of application:

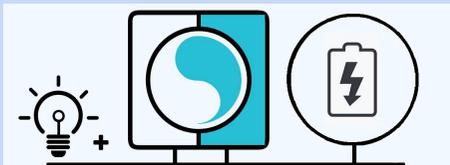
- **On-grid:** general use, large scale price competitiveness



(economy of scale)

**NB:** Any Bulgarian on-grid facility could suddenly fall off-grid, so called “**discoteque/ stroboscope mode**” ;-)

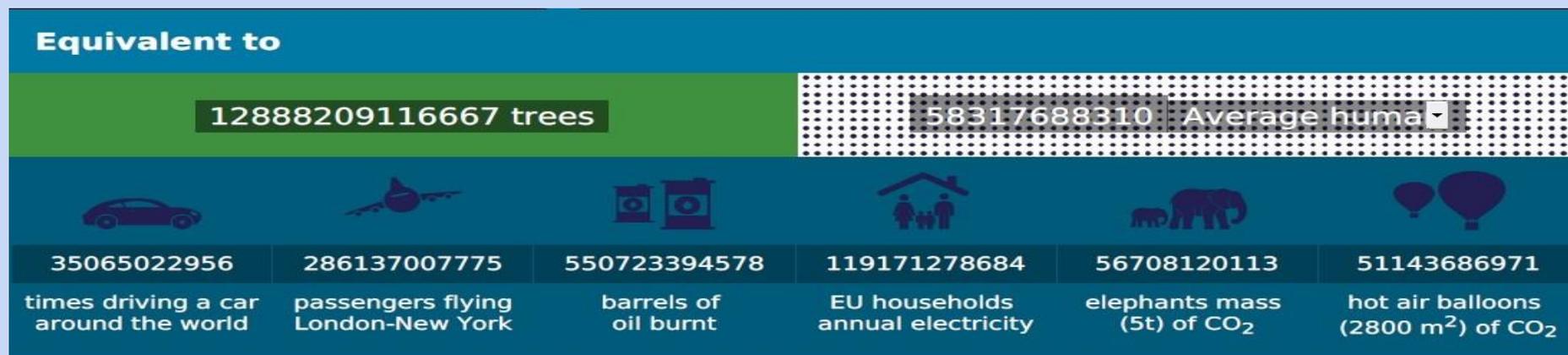
- **Off-grid:** distant locations, and/or meeting specific



functions: i.e. hydrogen plants, charging stations, cargo vehicles, hospitals, science missions, water from the sea/air etc.



Such installations would be **carbon-neutral** and extremely clean, according to the climate impact methodology and online toolkit of [“Climate Impact Forecast”](#).



**Other advantages: no consumables** (daily or monthly); **no threats** to the environment or human health; **better calamity protection** - needless outdoor environment; **eliminating the distribution losses** in case of in-situ energy generation; **modul-based** and **time-scalable**; available **four seasons, 24/7**.



**The supreme power:** Any volume of **1 dm<sup>3</sup>** of polled quartz may allow **1.25 MW** of electric power. Hence, any additional **1 m<sup>3</sup>** is expected to provide **1.25 GW** more electric power, at a cost of about **MEUR 80** each (compared to about **1.3 bln EUR/GW**, generated by **wind turbines**). What energy output may be potentially achieved in such a way, other things being equal, may be expressed only with the volume of the **biggest integer**.





Meaning 1 m<sup>3</sup> instead of 250 wind turbines x 4 MW, each 130 meters tall.





### **DRAGOMIR KONSTANTINOV**

Founder, manager, head of “Research and Development” division.

Experience and expertise in the fields of blue economy and integrated local development.



### **SIMEON GOROV**

Co-Founder, Head of “Partnerships and Market Analysis” division.

Experience and expertise in the areas of team building and coordination, negotiation processes, and sustainable development.



### **VELICHKO TEPAVICHAROV**

Partner, Head of “Technological Development” division.

Many years of experience and expertise in the fields of high frequency electronic systems and electrical installations.



We are your men, because:

- **Have a clue about electronics** (i.e. 30 years of experience).
- **Think out of the box.**
- **Validate our concepts scrupulously, and in a scientific way** (four years of concept development, four PCT patents achieved; proof of concept via physical experiment - 10.12.2021, BlackSea ClimAccelerator Demo Day, preparing formal validation).
- **Dare to try a change in the game, sailing in this blue ocean.**





**In August 2022** we look for **EUR 20 000**, in order to complete our **formal technology validation**. Including: supply of components, external services, fine tuning and validation expenses. Additional **consultancy and professional EU expertise** in the piezoelectric technology would be most welcome.

Our progress up to date provided us with the following necessary preconditions:

- a **reliable EU provider** of larger and more **powerful piezo actuators**;
- improved **test bench**, more **empirical tests**, and **better design** of our **validation prototype**;
- a conversation with a reliable **Bulgarian validation organization**.



**Come join us on this profitable journey!**



**CDS Crew**



[www.constant-dynamics.com/en/  
office@constant-dynamics.com](http://www.constant-dynamics.com/en/office@constant-dynamics.com)