

13 5 2016



We are Kamangir: "Architects of the future". We are scientists, philosophers and artists. We create visions with transgenerational scope, define transition paths towards them and develop **models** to support them. We put the question before the answer. We go BEYOND lobby, beyond political, commercial or other gain. We work for the future, and empower influencers today to build legacies that their successors can proudly continue building upon. We believe in walue over volume, in an economy of natural abundance, backed by a culture of empowerment. This enables equal and truly democratic rights for every human being, and empowers to create true and sustainable wealth for all. Vision. Purpose. Action. Kamangir.





WHAT IS ENERGY?

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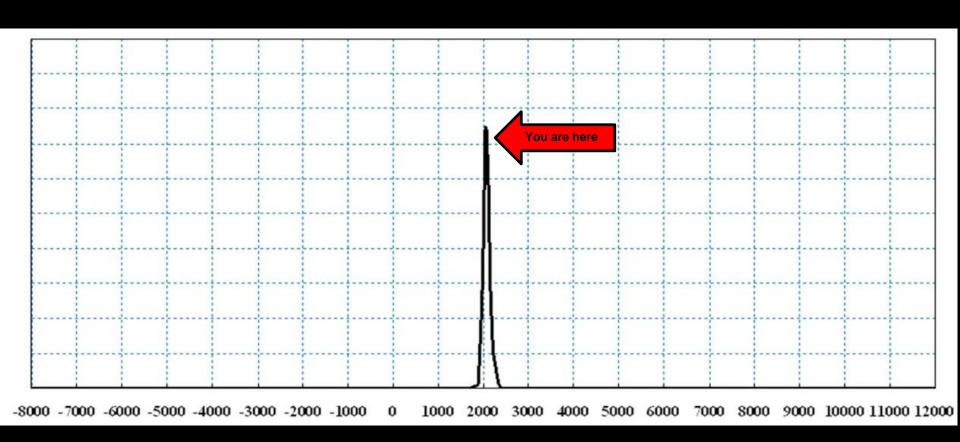
WHAT IS ENERGY?

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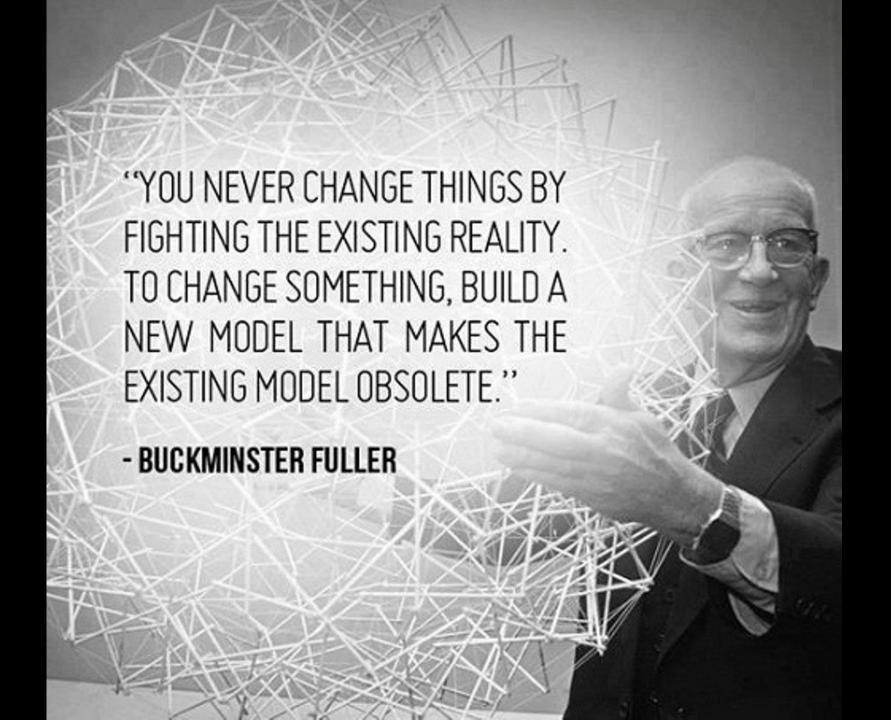






Fossil fuel consumption (8000BC to 12000AD)

the transition to a world that runs on 100% renewable resources is not a choice, it is an inevitability



PATH TO ZERO

GOAL A SUPPLIER THAT EARNS MORE THROUGH SELLING LESS ENERGY. AN ENERGY TRANSITION

PATH THAT FINANCES ITSELF

ALGORITHMS CALCULATE IN WHICH ORDER WHICH MEASURES SHOULD BE TAKEN ON THE **WHAT**

PATH TO ENERGY INDEPENDENCE. SAVINGS ON EACH MEASURE BUILD UP TO FINANCE AND

EXECUTE EVERY NEXT STEP ON THE PATH TO ZERO

PROFIT THROUGH VOLUME-SELLING IS BIG, BUT PASSÉ. PROFIT THROUGH CREATING VALUE **STATUS QUO**

HAS THE FUTURE. FIRST PTZ-COMPANY WAS FOUNDED IN 2010 AND EARNS MORE AS IT

SELLS LESS ENERGY

25% ENERGY SUPPLY REDUCTION PER CUSTOMER IN THE FIRST 4 YEARS, WHILE KEEPING THE **IMPACT**

ENERGY BILL AT THE SAME LEVEL. A WIN-PLAN FOR EVERY STAKEHOLDER. CURRENTLY

MILLIONS OF KWH AND TONS OF CO2 SAVED

TIME LINE DESIGNED IN 2008, FOUNDED IN 2010, AWARDED BY MIT IN 2014, INTERNATIONALIZING

NOW THROUGH A NUMBER OF UTILITIES

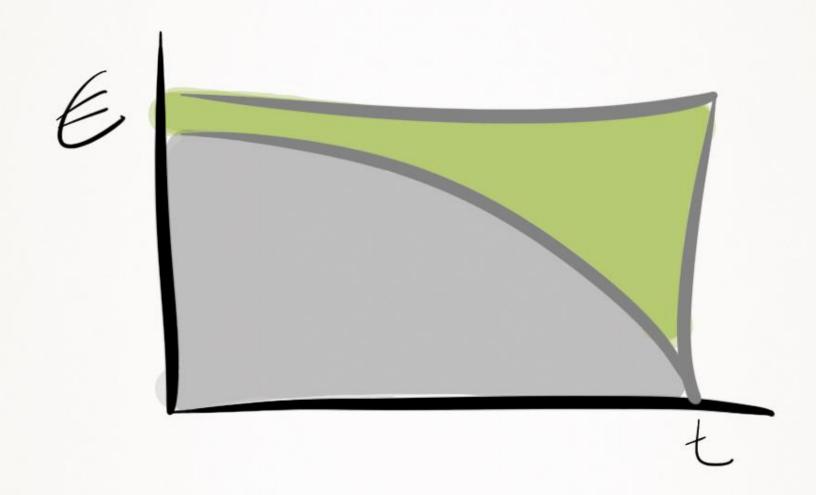


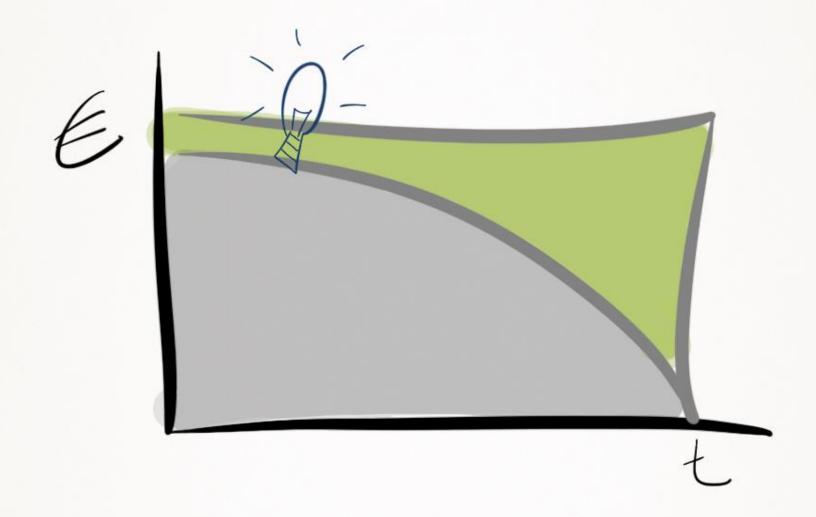


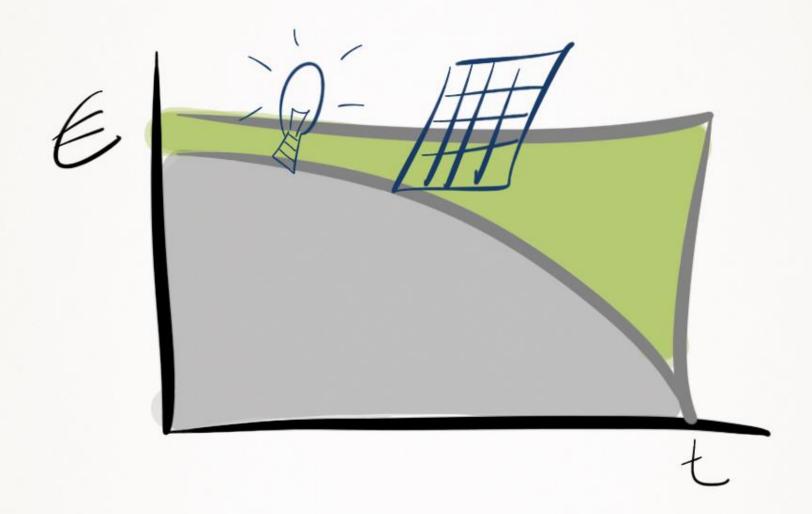


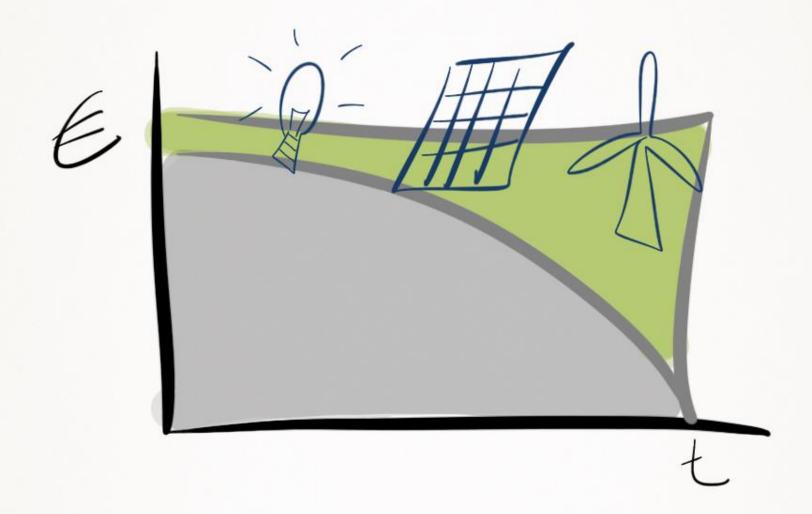












AND THERE IS MORE

ENERGY BLOCKCHAIN BLOCKCHAIN-BASED TECHNOLOGY TO VALIDATE PEER-TO-PEER ENERGY TRANSACTIONS IN

SMART GRID ENVIRONMENTS

GENER8 PV-TO-PV: DEVELOPING THE TECHNOLOGY TO TURN OLD AND DAMAGED SOLAR PANELS

INTO NEW ONES

AFRICA AIKIDO TURNING ELECTRONIC WASTE LANDFILLS INTO RENEWABLE ENERGY PLANTS THROUGH URBAN

MINING

ENERGY AS A CURRENCY DIGITAL CURRENCY MODELS FOR RENEWABLE ENERGY ECONOMIES — DEMOCRATIZATION OF

VALUE CREATION

FAIR GRIDS BLOCKCHAIN-VALIDATION OF ENERGY TRANSFERS BETWEEN 10 KV-SUBSTATIONS AND HIGH-

VOLTAGE GRID. ENABLES 100% ENERGY TRANSFER VALIDATION. SAVINGS IN NL WILL

AMOUNT TO 1,3 TWH / 1,2% OF ELECTRICITY NEEDS / >100M € PER ANNUM

ALGORITHMS ENABLE USERS TO RECOGNIZE AND REGULATETHE "FINGERPRINT" **METERLESS METERING**

CONSUMPTION OF EVERY APPLIANCE, AND REGULATE THEIR NEEDS IN DIRECT CONNECTION

TO THEIR GRID OPERATOR





Opportunities for data & energy

Some developments have world-wide impact potential:

- photonics
- blockchain
- energy data-disaggregation
- peer to peer energy exchange
- real-time energy pricing
- sensorics & algorithmics
- quantum computing

Who's leading the way?







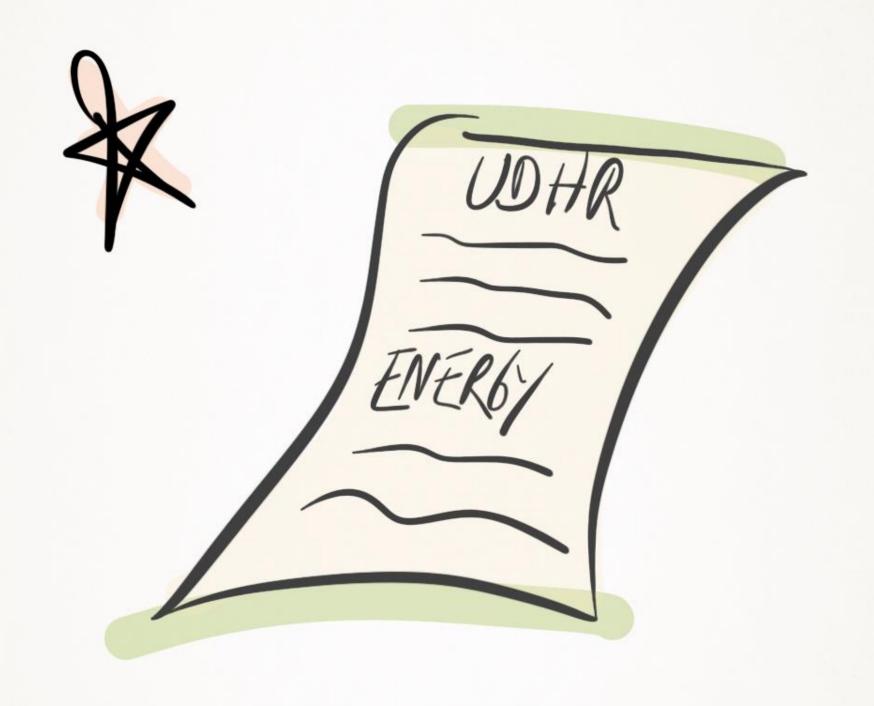
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http://beyondboundaries.nl

"let your vision be world-embracing"



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