

## **THE PROBLEM**

*The Earth is 4.6 billion years old. Let's scale that down to 46 years. We've been here for 4 hours. Our industrial revolution began 1 minute ago. Ecological deficit spending, primarily generated by increased carbon dioxide emission in the atmosphere began ten seconds ago.*

*In that 10 seconds, CO2 concentrations in the atmosphere have increased by nearly half, from 280 parts per million to 407 parts per million. Direct measurements show that today's greenhouse gas concentrations are far higher than they were at any time during the past 800,000 years.*

*Multiple lines of evidence show climate change is happening: more floods, droughts and intense rain; reduction of plant and animal species; rapid change of global temperature causing changes in the dates when ice melts, extent of snow cover, reduction in glaciers and raising temperature of oceans with multiple consequences.*

**CLIMATE CHANGE CAUSED BY HUMAN ACTIVITIES IS NOT JUST A SCIENCE HYPOTHESIS, IT IS REAL AND GROWING THREAT TO HUMANITY. CLIMATE CHANGE COSTS THE GLOBAL ECONOMY MORE THAN \$5 TRILLION ANNUALLY.**

## **ARE WE DOING ENOUGH?**

*Without additional efforts to reduce greenhouse gas emissions, the Earth's surface temperatures will increase between 3.7°C and 4.8°C by 2100. We have to reduce CO2 emissions by 70 per cent by 2050, to keep Earth's surface temperatures below 2°C.*

*We accelerate ecological deficit primary by accumulating carbon dioxide in the atmosphere and directly increase magnitude of climate change.*

**EARTH OVERSHOOT DAY ALREADY REACHED END OF JULY AND IS HALF WAY OF MOMENT OF NO RETURN.**

## CURRENT INITIATIVES ON CO2 REDUCTION

*One of the most important global initiatives on CO2 reduction is Paris Agreement signed by 195 UNFCCC members. The Agreement aims to respond to the global climate change threat by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.*

*While some progress has been made since Paris Agreement, all major industrialized nations are failing to meet the pledges they made in the Paris Agreement. Progress pace is not sufficient to keep global warming to the agreed 1.5°C limit especially taking in consideration that the effects of climate change will continue after we reduce emissions.*

*TOP TEN WORLD ECONOMIES ARE EMITTING MORE THAN 66% OF GLOBAL CO2 EMISSION, TOP FIVE DECISION MAKING COUNTRIES IN THE WORLD, PERMANENT MEMBERS OF UN SC ARE EMITTING MORE THAN 50% OF GLOBAL CO2 EMISSION AND TWO FINANCIALLY MOST POWERFUL COUNTRIES IN THE WORLD ARE EMITTING NEARLY 45% OF GLOBAL CO2 EMISSION.*

*TWENTY YEARS AFTER THE KYOTO PROTOCOL WE ARE FAR BEHIND REQUIRED ACTIONS TIME FRAME TO DECREASE CO2 EMISSION AND WE HAVE TO FIND THE WAY TO DECREASE CO2 EMISSIONS IN EVERY SECTOR OF ECONOMY*

## REFORMS OF ENERGY SECTOR

*Contribution of the electrical generation industry on global CO2 emissions is very high, currently reaching approximately 37%.*

*FOSSIL FUELS ARE STILL HUMANITY'S PRIMARY ENERGY SOURCE AND ENERGY PRODUCTION BASED ON FOSSIL FUELS CONTINUES TO GROW.*

*Even it is evident that time period in which reforms of energy sector should be performed is essential for preventing earth overshoot day to reach point of no return, there is no consent of how deep reforms have*

*to be made and in what progress pace these reforms have to be performed.*

*REFORM OF ENERGY SECTOR IS CRUCIAL AND IS NEEDED MORE THAN EVER BEFORE.*

*There are strong evidence that the goals provided by the Paris Agreement could not be met in the future without disruption of traditional models in energy sector.*

*REFORMS OF ENERGY SECTOR REQUIRES DISRUPTION OF TRADITIONAL MODELS AND IMPLEMENTATION OF COMPLETELY NEW MODELS OF DECENTRALIZED AND CONSUMER CENTRIC ENERGY MANAGEMENT AND ENERGY TRADING.*

### **THE SOLUTION**

*Disruption of traditional models is very challenging and complex task which requires:*

- structural change of traditional model architecture from centralized to decentralized,*
- transformation of consumer's role from passive to active and*
- implementation of new models and new technologies.*