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# Overcoming the Fire Age – Challenge of the 21st Century and 3rd Millennium

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Since the discovery of fire thousands of years ago combustion marks the most tragic period in human history. The worst excesses of this development were the "fire" arms, the abuse of explosives, the combustion engines, the steam and gas technologies ranging from old coal fired steam engines to modern turbines in coal and gas fired and nuclear power plants, as well as the jet engines.

All these technologies have the common drawback that they use finite mineral resources extremely inefficiently and that they cause air and water pollution, unbalance the climate by gas emissions, increase the atmospheric temperature and thus cause rising oceans, and reduce the oxygen content, indispensable for life. Thus the health of all species on Earth is threatened by the consequences of hazardous fuels, besides the millions of victims from fire arms and explosives in the last Millennium.

The fact that burnt organic molecules of flesh and plants – such as tobacco – and the Diesel fuels are cancerous, underlines the tragedy of this chapter of human history. All this is worsened by the madness of clearing precious woods in virgin jungles by fire, heating up the Earth atmosphere additionally and thus eradicating rare health plants and animal species forever.

The extent of this man-made catastrophe is becoming fully evident when the world energy statistics are consulted, showing our dangerous dependence on mineral fuels – in some countries to the extent of over 90 % and on the world average still by four-fifth of total energy consumption.

How can we escape this devil's circle of combustion, before we destroyed the biosphere and therefore our only life base completely – thus terminating life diversity and humanity on Earth ?

Let us start with the heat and refrigeration needs of buildings and industry, which consume about half of the global energy production. With solar collectors, heat pumps, electricity from clean sources and by innovative biomass usage all calorific needs for living comfort and industry can be covered with intelligent energy management, even more so when better insulations prevent excessive heat losses.

The second largest energy consumer – the transport sector – which still depends nearly 100 % on fossil energy, can also be completely satisfied by sustainable energy – economically and ecologically. Combustion engines with their very low efficiency of less than a third of the fuel energy content and their idling losses in traffic congestion belong to the technical museum. Clean battery and hydrogen technologies permit a rapid transition – in case of electric drives even without extra cost.

The third largest energy squanderers and polluters are the thermal power plants which still use by more than 75 % the mineral fuels coal, gas, petroleum and Uranium in very inefficient thermal processes. The renewable energy sources hydropower, wind, geothermal energy, bio energy, wave and tidal power can fully substitute all hazardous fuels. They even allow a further evolution of population and prosperity for the coming Millennia. The present electricity share of about one fifth of total energy consumption must and can be increased drastically and shall ultimately feed all energy systems centrally, but more and more also decentralized - including all vehicles.

Fire is in all its forms is the worst enemy of nature and humanity and should be prohibited.

How can one overcome the fatally dominant combustion ?

- Apply full energy costing by the international standard ISO 13602-1 covering also the social cost
- The rising prices of depleting mineral resources make clean energy systems more competitive
- Innovation of new energy systems applying modern physical, i.e. electro chemistry
- Re-orientation of architects towards sustainable comfort systems and energy efficiency
- Substitution of long-haul Diesel trucks by electrified railways and combined inter-modal transport
- Transition of individual transport needs to clean vehicles / restructuring of the vehicle industry
- Conservation of all fossil resources for chemical and industrial purposes with higher added values
- Prohibition of all coal fired power plants, coal fires, fire arms and martial explosives

Bibliographie: www.uniseo.org > Blueprint for the Clean, Sustainable Energy Age; & > Future Transportation;
www.heise.de/tp/r4/artikel/19/19463/1.html "Die Überwindung des Feuers" (Interview)