## Changing Human Behavior: The Optimal Solution for Long-term Energy Security Keshav Raj Panthee

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## Abstract

Will the energy security threat end at some point in time? Not sure. Growing energy demand and geopolitics around the world will keep this issue always uncertain. Efficient use of energy and implementation of energy efficiency practices could only help to find the optimal solution for long-term energy security.

The world has already witnessed and experienced the socio-economic impact of great wars as well as conflict between countries like India and Pakistan, Iraq and Iran, China and Taiwan, Russia-Ukraine, etc. Even after the first and second World Wars, it is difficult to find a year without no any type of war or conflict between countries. All these incidents and their background indicate that power, political influence, national security, and resource ownership are the main reasons behind such wars and conflicts. The ripple effect of such war is determined by the level of connectivity of the countries with the countries participating in the war. The magnitude of the impact of such war and conflict has increased these days along with the speed of globalization. Globalization has increased the level of interdependence between countries and promoted specialization in products. But it has become a curse for countries these days mainly after the spread of the Covid-19 pandemic. In the recovery phase of the economy damaged by Covid-19, the Russia-Ukraine war (started on Feb 24, 2022) has created an additional tense environment for the local and global economy due to the disturbance in the global supply chain.

Supply chain disturbance during the war is not a new phenomenon. It had been taken as the major weapon by the countries participating in war from the ancient time period in both the eastern and western countries. Only the difference lies in the degree and level of impact. The market impact of the Russia-Ukraine war of 2022 at present is quite high due to the nature of commodities that both countries supply in the world market. According to bp- Statistical Review-2022 Russia is the world's 2<sup>nd</sup> largest oil-producing country and 4<sup>th</sup> largest natural gas liquids-producing country. In this background, war affected the energy supply mechanism in the world. Europe which used to import around 30 percent of crude oil from Russia was hard hit by it. So, the energy price increased from 10.4 percent in April 2021 to 28.6 percent in January 2022 which further led to inflation in Europe to double digits (source: tradingeconomics.com). It has also increased the cost of living in Europe. Ukraine, being one of the top exporters of wheat, corn, sunflower, barley and soya in the world market was unable to regularly supply these food items in the market and hence the price of such

agro products increased almost everywhere. Now, energy and food-led inflation is traveling from Europe to Asia and all over the world.

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Besides oil world has developed different forms of energy like natural gas, coal, solar, and so forth. International trade has facilitated the flow of energy products from one country to another country and supported the social and industrial development of respective countries. But, disturbances in the supply chain of energy products is creating energy crisis time and again. The oil crisis of 1970s was the first energy crisis and now the Russia-Ukraine war of 2022 has created another world energy crisis. However, the recent energy crisis is termed as the real global energy crisis as it has disrupted massively used energy sources like oil, natural gas, and coal. So, Fatih Birol, executive director of IEA has rightly said in a panel discussion of 2022 at Davos, Switzerland (Energy Outlook: Overcoming the Crisis) that we are in the middle of the first global energy crisis and energy security is a priority for many governments.

At first, the Russia-Ukraine war raised major concerns for energy security mainly in Europe. Thereafter it was of great concern for growing countries like India, China as well as other developed countries. Member countries in Europe at present are initiating various measures to fulfill the energy gap. Setting gas levy on consumers and reduction of the sales tax on gas by Germany, decision for utilizing nuclear power plant by Slovakia, cutting VAT on gas by Spain, investment plan for power production by Hungary, energy aid package by Italy, coal-based energy production and priority for renewable energy in different countries, etc. are some of the initiations taken in Eurozone to combat against the adverse impact of energy supply disruption caused by the war. This situation has also raised the issue of energy source diversification as well as energy transition.

Will the energy security threat end at some point in time? Not sure. Growing energy demand and geopolitics around the world will keep this issue always uncertain. The only solution for energy security lies in human behavior. Long-term energy security can not be achieved without changing human behavior. Efficient use of energy and implementation of energy efficiency practices could only help to find the optimal solution for long-term energy security. But governments even in advanced countries are not found serious about energy efficiency practices in real terms though it is mentioned in their plans and policies. The type of house structure, electricity supply mechanism, type of personal devices used, people's behavior with electricity-using devices at their workplace and home massively affects the energy consumption behavior. Such facts are mainly limited to research papers and reports. So, it demands a massive campaign for energy literacy. Furthermore, people's living style has to be changed and too much dependency on machines have to be gradually reduced for energy saving and protection of the environment. Structure of the society and family could also work to some extent. Till today, joint family structure has become fruitful for coping with every type of crisis in South Asia. In the end, human being itself is the creator and destructor of the different scenarios in the world. So, without changing human behavior long-term peace and security can not be expected. In the present context of global energy supply disruption, changing human behavior is the only optimal solution for long-term energy security. Personal attempts made by European people at present for reducing energy bills could be applied in the coming days also for a better future.

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