**Strategic Considerations on Iran's Energy mix**

Energy planning has a special importance in economic, political and social activities of various communities. Considering the immense fossil fuel reserves and resources in Iran and also especial geographic position, energy could be accounted as one of the priorities and key factors in figuring the sustainable development strategy of the country. One of the basic components of development is to ensure possessing reliable and sustainable energy supply and the demand market with an appropriate elasticity and growth. In the past decade, energy consumption in the world has increased by more than 27 percent, whereas the increase in Iran’s energy consumption has been more than 80 percent. Therefore, in the near future, Iran might get switched from an energy exporter country to an energy importer country, due to high rate of energy consumption with high energy intensity and low productivity. High energy consumption (compared with GDP and population), undoubtedly will occur with intensification of air pollution and its consequent costs.

Iran holds 15.3 percent of the world's gas reserves and 11 percent of the world's oil reserves and is one of the energy rich-resource countries. Energy mix in Iran mostly includes fossil fuels such as oil and gas, accounting for 98 percent of primary energy production and 93 percent of electric power generation sources.

Fossil fuels produce toxic and hazardous pollutant to the environment which in turn finally enters to the human food chain. Power plant share in pollutant emission is about 40 percent. From CO2 emission side, nuclear energy has more appropriate situation compared with other sources of energy. The countries that use nuclear power plants and hydro-electric power plants for power generation have a less pollutant emission compared with the countries that rely on fossil fuels. Utilizing hydro-electric and nuclear energy have had considerable influence on CO2 emission. Considering the emission of various pollutants from different sources of electric generation, nuclear energy is the best accessible option.

In all countries, one of the main components to provide stable energy security is accessibility to energy. Rising any challenge in energy supply system, have irreparable damages and disturbances in all economic and social sectors. Therefore, diversification of energy is considered in all countries as the most basic strategy to avoid dependency on one or two energy sources and also reducing their vulnerability as less as possible.

Indeterminacy of appropriate share of the country's energy mix is a challenge in Iran's energy sector. Substitution of alternative energy sources for fossil fuels could increases export earnings and decreases government expenses and helps supplying required energy and also become an instrument to accelerate egressing from economic recession.

For determination of optimal and appropriate energy mix, it is necessary to take several measures in policy and executive levels; such as the necessity of preparation of national energy long-term plan, determining share of energy sources in country's energy mix, reforming the clean energy's tariffs, reforming selling prices of fossil fuels to the power plants and increasing guaranteed purchase price of clean energy.