

## **In The Name of the Most High**

### **Introduction**

Energy sector plays a significant role in achieving sustainable development and is one of the most important factors for economic development.

In this regard, deployment of renewable energies can play an effective role in the partial fulfillment of energy demand, rural development, job creation, and most importantly environmental protection. Concerns relating to global warming, climate change and vast droughts are considered to be serious threats for human life. Deployment of renewable energy along with the rational use of fossil fuels is an important option for us.

The fundamental factor for a successful development and utilization of renewable energy is the possibility of competing with other forms of energy regarding the cost and the price. This is more pronounced in developing countries where financial resources are limited than developed countries; hence observing the principle of optimum allocation of financial resources is decisive. However, it should be noted that allocation of financial resources towards renewable energy in the developing countries should not be a constraint to their more serious priorities as education and public health.

Islamic republic of Iran pursuing its sustainable development objectives has taken significant measures towards the energy consumption optimization, hydropower, renewable energies, replacement of natural gas for other fuels in power plants and other energy consuming sectors.

### **Main policies**

Regarding renewable energy development in Iran the following policies are to be persuaded:

1. Encouraging private sector to invest in renewable energies by preparing power purchase agreements for all renewable energy resources
2. Providing subsidies and supporting manufacturers and designing companies for technology development & transfer for competitive technologies in mid-term like wind, PV and biomass power plants.
3. Supporting university researches for research development on upcoming competitive technologies like fuel cells.
4. Providing sustainable and accessible energy to the poor and isolated areas in order to bring about improvement in life condition, and social development. It is worth mentioning that at present more than 96% of rural areas of the country has access to national electrical grid.

For implementing policies above, vast actions have been fulfilled among which the following actions can be mentioned:

1. Development of academic-training courses, creating and supporting research centers creating executive organizations and encouraging manufacturers to produce required systems and instruments.
2. Legislation and amendment of laws by parliament and ministry of power for forcing government to purchase the power produced from renewable resources by private sector.
3. Enhancement of public awareness on renewable energies applications.
4. Implementing pilot projects by government in order to ensure and pave the way for private sector.
5. Performing capacity recognition studies for all kinds of renewable resources and updating continuously their data.

### Goals

Based on previous studies and execution of renewable energy projects for the period of 2005-2009 the following objectives had been set:

#### **More than 2067 MW of RE Power Plants would be installed until 2015**

Small Hydropower	150	MW
Wind Farm	2026	MW
Geothermal Power Plant	37	MW
Solar Thermal Power Plant	1.7	MW
Fuel Cell	60	KW
Photovoltaic	1.2	MW
Biomass Power Plant	92.6	MW
<i>Total</i>	2308.56	MW
Solar Water Heater (1,000,000 m <sup>2</sup> )	52.6	MW <sub>th</sub>
<i>Total (including Solar Water Heaters)</i>	2361.16	MW

### Renewable Energy Projects

During the past, many study and implementing pilot projects have been defined and under taken. Some of these projects are completed and the others are on going.

#### **a) Major implemented Projects**

1. Capacity recognition for all kinds of renewable resources in country
2. Installation and operating of two wind farms with currently operated capacity of more than 84 MW (Manjil and Binaloud)
3. Installation of PV systems in 60 isolated village households
4. Installation of Solar parabolic trough power plant in Shiraz with the minimum capacity of 250 kW

5. Solar water heaters for urban and remote areas with total capacity of 53000 m<sup>2</sup>
6. Small hydro power plants in different locations with total capacity of 39 MW

**b) Major ongoing projects**

1. Design, construction, installation and operating of Geothermal power plant with final capacity of 25 MW which its drilling is under operation
2. Completion of wind farm in Manjil with the final 100 MW capacity
3. Installation and operating of 38 MW small hydro power plants in different regions
4. Providing National Wind Atlas (phase 1)
5. Testing geothermal heat pumps in different regions
6. Development of a Framework Strategy for Renewable Energy in Iran cooperation with World Bank
7. 440 MW different private renewable power plants
8. Completion and updating of capacity recognition of different renewable energy resources

**Past achievements**

Implementation different kinds of renewable projects during the past years that has led us to some achievements:

1. Creating manufacturing facilities for wind turbines, solar water heaters, parabolic trough concentrators and solar photovoltaic panels both in public and private sectors
2. Experiencing geothermal drilling in harsh climate areas
3. Ensuring private investors for power production from renewable resources especially wind farms
4. Tangible promotion of university students' knowledge in the field of renewable energies
5. Amendment of law pertaining to tariffs for assured purchasing of power produced by private sector from renewable energy resources.

**Conclusion**

I am confident that through international cooperation among the developed and developing countries, we may achieve our objective of advancing the share of renewable energy in global energy supply by establishing a coherent institutional framework to support the promotion of renewable energy use in the developing countries and to promote research and development aimed at reducing costs and enabling renewable energy to become competitive in the energy markets. This will ensure the significant role which renewable energies may perform in sustainable development.

We must also work harder to pave the way for private sector effective investment in the field of renewable energy which is a key factor in making renewable energy cost-effective and competitive as well as bring about innovation, creativity and dynamism.

Finally it is invited from the international society, all capable groups and formations in renewable energies execution and development, to promote operational relations and technical interactions for more objective cooperation.

It should be mentioned that with necessary regulations, today the possibility for desirable investment in Iran is present.

Once again, may I express my sincere gratitude to the organizers of this congress and wish the congress a great success. Many thanks for your kind attention.