

## Policy Making and Planning the Environmental Education to Localization the Use of Renewable Energies in Iran

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### ABSTRACT

Nowadays, energy is one of the important elements in the economical lives of countries without which industrial living is not possible. The experience of recent decades shows that limited reserves of fossil fuels and exhaustibility of these sources besides the environmental issues arising from these sources, has made cutting this ties necessary and in this regard we should look to other alternatives of energy. To achieve sustainable development, internalization of principles and governing rules based on sustainability is required and establishing this ruling in the light of balance in all three areas of economic, social and environment. In this research, after investigating the status of using renewable energies in Iran and also the present challenges, it was revealed that cognitive obstacles are one of the effective factors in the lack of development of renewable energies. Environmental education through the promotion of awareness and knowledge, change in attitude and obtaining the necessary skills, can be an effective factor for removing the cognitive obstacles and also recognizing the available potentials in the country in the field of renewable energies. A good educational process must move towards improving the ethical rules and principles of behavior, so that their ability to understand complex issues in the environment, increase. Therefore, policy making and planning of environmental education must include all aspects of the economic, social and environmental environment and such processes should be continuous to provide the ground for sustainable development. In this research, the necessary suggestions in the field of environmental education have been offered to remove the cognitive obstacles for using the renewable energies in order to achieve sustainable development goals.

**KEYWORDS:** fossil fuels- renewable energies –policy making- environmental education- localization.

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### 1-INTRODUCTION

Over the past half century landscape has undergone a dramatic transformation. Population growth, agriculture, industry and services developments led to uncontrolled exploitation of environmental resources, and the world was faced with a problem called environmental degradation.

In the early 1970s, when this kind of irregular and non-harmonious development sounded the first alarms, the World Conference entitled Human and Environment was held by the efforts of United Nation. The conference consequences were, discussing environmental issues in the international community and in the various gatherings and also establishment of institutional and organizational systems in the member states of the United Nations and also creating United Nations Development Program about environment. Unfortunately, despite all the efforts, still environmental degradation continued and by coming the factors such as water pollution, loss of forest cover, development of desert regions, droughts, industrial waste, acid rain, drainage basins degradation, degradation of biodiversity and sort of these issues, it took a new dimension.

In 1987, a report on the status of the environment in the world was presented by the United Nations Environment Commission to the General Assembly, in which the face of the earth in the future, without commencing the essential measures, on which all members of League of Nations share common and individual responsibilities to cope with the adverse effects of irrational development and fight with the threatening factors to environment, have been drawn critical. Accordingly, by the establishment of the Earth Heads conference in Rio de Janeiro and Brazil in 1992, the attention of global world has been paid to the issue of environmental protection more than before and therefore, the numerous regional and international letters of understanding for environmental protection have been concluded in the global community [UNEP, 2002]. In this conference, the necessity to create and sustain an educational movement in order to change the behaviors and modify the public attitudes toward environment was emphasized as the introduction of action for achieving sustainable development. In the global decade of education, during the years 2014-2005, it was recommended by the Heads of States to the United Nations General Assembly that leading the environmental training toward promoting the idea of sustainable development, provides grounds for the realization of this important issue [Boyd, 2012].

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On the other hand, coinciding with the beginning of the 20th century was the energy revolution from solid fossil fuels to liquid. In this era, the countries with the divine resources faced with an economic boom, as in the years before the economic boom belonged to countries with rich coal mines. But it seems that in the early 21<sup>st</sup> century, directional shift from fossil fuels to renewable and clean fuels is coming. Two main factors are involved in this shift:

**A-Oil crisis:**

Arab-Israeli war that led to the oil crisis increased the price of a barrel of crude oil from three dollars to more than \$ 13. The oil crisis in 1973 and six-year later shock with increasing energy prices, led to a rapid shift in the world's energy system. That decade represents the abrupt end of the era of economic growth based on oil which is the feature of the decades after World War II. Dozens of global economic indicators from GDP to steel production in around 1973 shows a sharp drop. Simple assumptions about economic and social endless progress were questioned throughout the world and the need for alternative energies of fossil fuels was felt.

**B: Environmental problems:**

At the beginning of 1977, temperatures began to rise, and from then on, the temperature was always above normal. In 1980, the temperature was 0/26 ° C and in 1990, was averagely 4.0 degrees above normal and in the three years of the third millennium, the temperature reached 0/55 ° C above normal. Global warming, changed the whole climate system and affected the life on earth, this phenomenon is accompanied by intense heat waves, more destructive storms, less agricultural production, melting ices, and rising sea levels and finally smaller snow glaciers that feed rivers [Ahmad AlYasin 2006].

Almost since the early 1990s, the problem of the environment became more acute; maintaining it was on the agenda of many international organizations and non-governmental organizations. Rio Conference in 1992 was a turning point that investigated the destruction of the environment essentially [Kyoto Protocol 1998].

This Protocol was established on 11 December 1997 and on 16 March 1998 was offered to the Office of the United Nations to be signed and on 25 November 2004, with the ratification of the Protocol by Russia, got certainty and a 90-day deadline began. On this date, 84 countries signed the present Protocol, in ratification or accession phase by 129 countries that in total, all these countries are in charge of 6/61% of total greenhouse gas emissions [UNFCCC, 2004]. It is obvious that this protocol recipient countries are required to comply with environmental issues and as more than 80 percent of greenhouse gas emissions is the result of human activities in the fields of energy, certainly the most changes should be done in this sector and in this context, use of renewable energies is the best option to achieve the above objectives. Use of renewable energy is not just an option but a necessity to strengthen energy security and sustainable development.

Sustainable development requires the integration of principles and rules of governance based on sustainability and solidification of this governance will be realized in the shadow of a balance in all economic, social and environmental areas. Only in this case, the background for the realization of governance ideals based on the stability such as justice between generations and supply of future generations' needs, at least to the extent of today generation's needs, is provided [Alaleh Ghaemi, 2014].

Sustainable utilization of renewable energies is a key factor in ensuring a sustainable future of global green economy. The existence of renewable energy is a feature or characteristic of a local nature but use of renewable energy in the in the international global economy is the production by renewable energy at one point and transmission of product to other regions which do not have the potential of renewable energy. So the transfer of energy consumer industries to the areas with abundant renewable energy sources is an important and vital task which is not possible without international cooperation. Now the most important means of achieving economic income of some countries is the export of energy resources in the form of artifacts [Egill Benedikt Hreinsson 2008].

Global pressure to combat climate changes in the developed and developing countries, has become tougher and more. Some countries have voluntarily committed to reduce greenhouse gas emissions by 2020. One way to fulfill this obligation is the change from the use of fossil fuels to the use of renewable energy sources [Tito Summa Siahaan, 2013].

Scope and purpose of the global fund for nature in the energy sector is the creation of a stable life. Achieving this goal is for avoidance of catastrophic climate change, community empowerment, biodiversity conservation, pollution reduction, increased energy security and stability and people's health improvement throughout the world [WWF Report, 2012].

To achieve the objectives of sustainable development, environmental education can lead to a change in the individuals' attitudes toward the environment according which sustainable development programs be pursued more vigorously [Tilbury, 2010]. The ultimate result of environmental education, is the creation of individuals environmental education [CEPA-Canada, 1999].

Environmental education can begin at the very early stage and from childhood. Often, in some cultures, everyone is trying to share a common philosophy, belief, value systems, conceptual models and responsibilities. These cultural patterns are not considered as individuals' variables but try to establish the environmental perspective to create a harmony between people and nature [Elshinta, 2012].

In the modern view, nature is considered more as a commodity while earlier the environment was a living concept and as the core of development background. However, in contemporary attitudes, the people awareness has been emphasized and also the point that, this change of attitude has been due to the increase in the population pressure [Siahaan, 2013].

Environmental Education implies on the organized efforts of humans for the natural environment operations and how human can manage a sustainable life by behaviors and also maintaining the ecosystem power of their surroundings. It may seem that, this concept often implies on the primary and secondary school education system. However, sometimes this process implies on all the public efforts in the field of education, including a variety of print media such as newspapers, magazines, brochures, websites, media, etc. [Smith, 2010].

## 2-METHODOLOGY

Method of this study was as follows:

- Evaluation of energy types;
- Potential of use of renewable energies in Iran;
- Challenges or the use of renewable energies in Iran;
- Existing challenges for achieving the goals of environmental education and the use of renewable energies;
- Setting goals for removing cognitive obstacles of renewable energies use;
- Planning environmental education operational program for the use of renewable energies;
- Conclusions and recommendations;

### 3- Types of Energy

Types of energy in the world are divided into two main groups: renewable and non-renewable energy and sometimes also divided into 4 sub-groups as follows:

- A: Polluting and non-renewable energies
- B: Polluting and renewable energies
- C: Non-polluting and non-renewable energies
- D: Non-polluting and non-renewable and unlimited energies

### 4- The potential of renewable energies use in Iran

The Islamic Republic of Iran is located in the western part of the plateau and in South-West Asia. Iran with an area of 1648195 square kilometers is located in the east longitude of 44 to 63/99 degrees and north latitude of 25 to 39/99 degrees and more than half of its area is covered by mountainous terrain. The country faces great climatic diversity. Northern part of Iran has a moderate climate and considerable rainfall especially in the western areas of the Gilan province. The climate of the western areas of Iran is cold and wet in cold seasons and dry and moderate in warm seasons. In southern areas, the temperature and the humidity is higher, very hot summers and mild winters are the climatic characteristics of this region and the daily temperature variation is less perceptible. Eastern and south-eastern areas have desert climate with considerable temperature changes throughout the day.

The favorable climate and sunshine in the most parts of Iran and in the most seasons, as well as ups and downs in the water stream course, having areas with high wind potential, solar energy and potentials of geothermal production, have provided the appropriate background for the use and development of new and renewable energies.

Hydroelectric plants require no fuel and are helpful in preserving the environment and water supplies. In addition, the experience has shown that dealing with the consequences of dam-building industry can guarantee the long-term benefits of the country and in contrast with some people ideas, implementing this plan to deal with potential losses of this industry, is not only the loss of benefits, but also it will increase the benefits of dams building and dam building operations. This is while some of these dams can be adjusting and balancing factors of electricity production and consumption in the network.

Hydroelectric energy share of total world energy consumption is predicted 8% by 2025 and this is while the growth of hydroelectric power production, in the estimated time, increases 56%. Hydroelectric plants have a key role in controlling the frequency, by considering the problem of frequency shift in the country network; these plants are useful in controlling the frequency. Hydroelectric power plants, supply the energy needed to produce electricity, from rivers water flow or water channels. There is a capacity of hydroelectric production of about 26 thousand megawatts in Iran, the major part of which is provided by the Karun, Karkheh and Dez river basins. Due to the increase in the engineering power of the country in the construction of hydroelectric power plants, the use of hydropower potential has become a priority in the construction of new power plants.

The Fifteenth principle of Iran's constitution, has known the protection of the environment, that today's generation and future generations should have a growing social life in it, as a public responsibility and has known every economic activity and non-economic activity that is connected with the pollution of the

environment or irreversible damage, forbidden [Ali Hatami, 2010]. In the meantime, the law of the Islamic Republic's accession to the Kyoto Protocol about climate change was approved on 31<sup>st</sup> of May 2005 in Iran Parliament and was approved on 15 June of the same year by the Guardian Council.

According to the mentioned law, the country of Iran has put numerous and diverse activities in the agenda during the past year for environmental protection, vegetation management, development of indicators of biodiversity, waste management, air pollution reduction, use of renewable energy, etc.

Location of Iran in the tectonic boundaries shows the country's major power in the country body. Saudi Arabia continental plate pressure and the Indian Ocean plate on the other hand, caused large deformations in Iran, the Zagros region wrinkles and its expulsion are the massive level of evidence of these forces. Locating in the volcanic Belt has led the country in terms of land area, to be very active and benefit from the high potential of geothermal energy and many hot springs and volcanic activities, are the evidence of this claim. According to the studies, geothermal energy potential in Iran has been explored in more than 10 districts. These areas are explored based on tectonic activity, the hot springs and surface appearances and other geological evidence. According to the studies, Sabalan area, Meshkinshahr, Sarein and bushli, Damavand region, Nandel area of Baku, Siah Cheshme area in Khoy region, Ghattor area in Sahand region, Taftan area, Bazman, Naiband area, Birjand area, Ferdos in Takab region, Hashtrood in Khoy, Biabanak in Isfahan area, Mahalat in Ramsar area, Bandar Abbas area, Minab in Bushehr area, Kazeron and Larbestak area, have the geothermal energy potential.

According to the global classification, Iran is in the group of countries that have probable reserves to generate electricity from geothermal energy, using moment and binary evaporation cycles (Barandoorteh 30 years old); and has the capacity to generate geothermal power more than 200 MW. Geothermal power plant in Iran and in Meshkinshahr region will be the first plant of its kind in the Middle East and will provide the access to green energy to produce electricity without any environmental pollution. Geothermal power plant in Meshkinshahr is located in 25 km from the city within the scope of Sabalan Mountain which, besides electricity generation, is applicable for pisciculture and construction of greenhouses and supply of warm water for houses [<http://www.suna.org.ir>].

In Iran, some tasks have been done to exploit the wind energy. To be able to use the available wind resources for electricity generation, the wind reliable information about the wind potential of the desired area to build a wind powerhouse is essential. In Iran, due to the presence of windy areas, there is a suitable basis to extend the utilization of wind turbines. One of the most important projects in the field of wind energy, was developing the wind atlas of the country, the project has been carried out in the Renewable Energy Organization of Iran and is considered as one of the national projects in the wind energy industry. According to the prepared wind atlas and the data from 60 stations across different regions in the country, the capacity of sites in terms of numbers are about 60,000 MW. Based on forecasts made, the amount of recoverable wind energy of the country in economically estimated as 18,000 MW which suggests the considerable potential of the country in the field of construction of wind power plants and also economy of investing in the wind energy industry. According to implemented studies, the recoverable wind potential in the country is estimated at 100 thousand MW. In Manjil in Roudbar and Binalud in Neishaboor, some wind turbines have been installed and utilized [<http://www.suna.org.ir>].

Solar energy is one of the renewable energy resources and it is the most important. Solar radiation varies in different parts of the world and is ranked highest in the Sun Belt of the earth. Iran is also located in areas of high radiation and studies show that the use of solar equipment is suitable in Iran and can provide some of the country's energy needs.

Iran is a country which, according to specialists, with 300 sunny days in more than its two-third and average sunshine of 4/5 to 5/5 kilowatt/HM2 per day, is introduced as one of the countries with a high potential of solar energy. Some solar energy experts have stepped further and ideally claim that, if Iran equips its desert area to receive radiant energy systems, can also supply the energy needs of a wide range of regions and get activate in the field of electricity export. With studies in the area of over 2000 square kilometers, there is the possibility of installing more than 60000 MW solar thermal power plants. If we allocate an area of 100 × 100 square kilometers of the land to build a solar photovoltaic power, the generated electricity will be equal to the total electricity production in 2010 [<http://www.suna.org.ir>].

## **5. The challenges of using renewable energies in Iran**

Iran is facing major and important drawbacks in using renewable energies. One of these obstacles is the existence of cheap oil and the rich hydro carbonate source in the country, and another one is not being familiar with renewable energies and the passive information of its advantages by people and authorities and the lack of economic justification, especially in this period of time that is recognition, technical and technological, financial and subjective obstacles.

### **A. The recognition obstacles:**

It involves the shortage of knowledge and trust in this section that forms prejudgment in society, private sections and even the government and is caused by the lack of basic education in this area. As an example, no family, institute or company plan on renewable energy as one of their own power source. Since this is one of the

most important reasons for not using this clean and extendable energy, removing this case to a great extent, can be applied by environmental education process.

**B. Subjective obstacles:**

The small number of organizations in this section, lack of supporting rules and suitable markets are the most important subjective obstacles on expanding renewable energy in the country. However, in Iran much effort has been made to clarify the priority of clean and renewable energy rather than the other forms, the achievements have not been considerable. Because in general, the real place of environmental factors is not specified in production and decision making system and unfortunately until the time that the problems made by fossil fuels do not clearly reach the border of destroying the environment, it is not possible to attract all-dimension attention to support it. Moreover, the low price of fossil fuels in the country due to the high subsidies and relying on their huge source, reduced the strategic attention to energy discussion.

Regarding the economic fax of using renewable energy in Iran, firstly it can be said that using these energies can cause saving in oil products. Saving can preserve the oil products and leads to more exports and more importantly it provides converting the oil products into the huge amount of petrochemical offshoot with high adjunct value. Secondly, producing electricity through this energy lacks any kind of environmental pollution in which case has enormously assisted saving human environment.

**C. Technical and technological obstacles:**

The geographical situation, the natural limitations of renewable energies such as air and water (that determine the potential of the region) and the existence of technological setbacks can be one of the reasons for not expanding the renewable energy sources in the country.

**D. Financial obstacles:**

One of the drawbacks of increasing the renewable and clean energies in Iran is the financial obstacle. This case sources from two points. One of them is relatively the high cost of investment on new and extendable energy in comparison with fossil fuels and another one is the paid subsidy to fossil fuel that reduced their relative price and made it uncompetitive.

**6. Challenges against the goals of environmental education and using renewable energies:**

Since the recognition obstacles are one of the most important reasons for not using clean and renewable energy, resolving this problem to a great extent, can take place by environmental education. Increasing people's knowledge and information can lead to a change in attitude and people's attention to environmental issues and finally modifying their habits and behavior towards environmental cases and problems. Although in order to remove the recognition obstacles, performing the environmental education process is unavoidable [Ghaemi A. 2014]. In present time, the inadequacy of some rules and regulations related to environmental education and lack of the necessary performance assurance in this regard. The infirmity of environmental performance organization in the country and discordance of performance system with environment protection organization regarding environmental education, the low knowledge of different group of people in the society in connection with the importance of environment, the weakness in using people's participation in protecting environment and also lack of expert and the people who are familiar with the knowledge and new findings of environmental education are the most challenging factors in finalizing the purposes of environmental education [Ghaemi A., Ghaemi P., Shabani M., 2013].

**7. Determining the goals in order to remove recognition obstacles of renewable energy use**

In this section, the important required goals to remove the recognition obstacles in using renewable energy are presented.

1. Codifying the suitable rules and regulations in connection with renewable energies.
2. Using suitable methods in the field of increasing the environmental information and knowledge especially about ecologic potency and the region's range capacity and overusing the non-renewable sources due to the low level of people's information regarding the importance of environment.
3. Reinforcement of the country's environmental performance organizations and coordinating the performance system with environmental protection organization in connection with environmental education and using renewable energies.
4. Producing an observation system and usefulness perpetuity regarding the process of using renewable energy in the country.
5. Reinforcement of exploiting people's participation in using renewable energies and saving the environment.
6. Reinforcing the expert and familiar people with new knowledge and findings of using renewable energies.

**8. Codifying the scouting program of environmental education in order to use renewable energies**

A. The scouting plan in order to codify suitable rules and regulations regarding environmental education through:

- Revising and reviewing the legal pillars and existing rules in the field of environmental education.
- Codifying the rules and regulations in order to perform and use the environmental education in all ministries, organizations, institutes, governmental departments and other places.

- Codifying the legal works for the exact performance of the environmental management's plan by relying on the performance of environmental education.

**B.** Scouting plan in order to use suitable methods in the field of increasing the environmental knowledge and information and information and renewable energies through:

- Attending to international plan performance and world conventions in the field of environmental education and using renewable energies.

- Information gap in international level to consider the current and forthcoming actions.

**C.** The scouting programs in order to reinforce the performance organizations of the country's environment regarding environmental education and using renewable energies through:

- Official and legal actions for reinforcing the department of environmental education for all ministries, organizations, institutes, governmental departments and other places in order to use the renewable energies.

- Improving organizational structure and departments and institutes' human resource through hiring the university educated experts in the field of environment and using renewable energy.

**D.** Scouting plans for observation system and usefulness perpetuity regarding the process of using the country's renewable energies through:

- Creating and expanding active base of information bank in connection with renewable energy.

- Using suitable technology to use and process data in connection with renewable energy.

- Process, analysis and publishing the surveys related to renewable energy in local and national levels as a tool for creating and promoting the level of people's knowledge in using renewable energy.

**H.** Scouting plan to reinforce the benefit of people's participation in using renewable energy and saving the environment through:

- Promoting the plans related to people's information and education regarding the importance and familiarity with the region's renewable energy through the city and villages' campaigns in order to use renewable energy.

- Capacitating in order to submit authority in the lowest suitable level by using techniques and getting people such as women, youths, the locals and the local groups involved in using renewable energy.

- Special actions for mobilizing and simplifying the active participation of women, youths, locals and local societies in the field of environment education and using renewable energy in order to support, create and expand council and active committees in this regard.

**Z.** Scouting plans to reinforce the forces that are expert and familiar with new knowledge and findings of using renewable energy through:

- Recognizing and determining the scientific and educational needs related to renewable energy by attending to the special need of country.

- Providing all systems with educational facilities for relevant staff training and education by participating in national and international conferences.

- The policies of appropriate encountering with the issue of expanding human resource such as reinforcement, strengthening and improving the human resource capacity in the field of environmental education and using renewable energy.

## **9. Conclusion and Suggestion:**

Despite the existence of important items in basic law and five year plans of Iran's economical, social and cultural expansion, it seems that in order to success in achieving the predicted goals, it is highly needed to heighten the public information, group and national activities to attract people, state and private institutes for using renewable energy.

Since the recognition obstacles are one of the most important reasons for not using the renewable energy, to a great extend, removing this case can take place by the process of environmental education. Therefore, the policy and planning to educate environment must involve all aspects of economic, social, cultural and environmental factors. A good educational process must move toward improving the rules and behavioral principles in people's behavior, in a way that the ability of understanding them. These types of process must be frequent and flawless in order for the environmental crisis to decrease. Parish and industrialism cause pollution and the quick detriment of the natural world. The social and economical expansion and protecting the environment is necessary and essential for the constant expansion column reinforcement and one of the basic conditions for performing constant expansion, is boosting up the level of information and understanding of all the people in society.

The government, school, society and families must try to increase the environmental education together with a sequent organized plan. Everybody must be helped in their daily activities regarding environmental issues such as the bad effects of non-renewable energies, non technical expulsion of dung, swages, non hygienic expulsion of rubbishes or the other non ethical behaviors.

By considering the fact that the fossil energies are capable of ending and the environment contaminators such as oil, natural gas, coal that currently are the major energy source in the world, carry irreparable effects such as increasing carbon dioxide, the earth temperature, melting the ice cap, destroying the ozone layer and so

on. The forthcoming plans for moving the human's knowledge in providing the world's energy must be towards clean and renewable energy and replacing them with contaminator energy of fossil [Ghaemi P. 2014].

Despite the fact that the information and environmental knowledge alone are not enough for showing the environmental authorities' behaviors in daily life, they greatly affect accepting the environmental policies. The researchers have also shown that the people who have enough information about environmental subject support the environmental policies, and this does not apply to people who are against the environmental policies. The environmental information is an essential prerequisite in order for the one to act in the field of special cases. [Wallner S., Hunzikey M., Kienast F., 2003].

In order to realize reign on perpetuity, the existence of three elements, law, legitimating, participation is necessary. So suitable and constant expansion needs reign on constant expansion and its prerequisite is moving from the paradigm of axis growth to the axis constancy paradigm [Ghaemi A. 2014]. Through achieving these goals, the following items are suggested.

1. Educating environment to promote information, knowledge and gaining necessary skill connected with knowing the country's potentials in the field of using clean and renewable energies in the following levels:

**A.** The special gigantic level of decision makers to codify rules and regulations, expanding policies specially in the section of innovation and new science with the purpose of moving towards constant expansion of energy production systems, reaching the level of constant expansion of production and energy market, promoting the public knowledge and the social acceptance and renewable energy use, increasing the technology performance and distinguishing the products and services, promoting the capability of competitiveness in terms of determined price;

**B.** The middle level for energy producers and consumers in the field of energy use improvement, the ordinate management of expert and educated human resource in the relevant organizations, emphasizing on transferring the technology even in the signed contracts with foreign countries.

2. Commitment to international conventions and contracts in the field of decreasing greenhouse gases and benefiting from the renewable energies and green economy.

3. Iran's membership in international clean energy committees that are active in the world in order for the academic society to update their knowledge by accepting the membership in this committees in the field of producing power, similar to some developed countries, and even neighbor countries such as Turkey, be able to enter the power made of clean and new energies throughout the web;

4. By attending to internal and external technical and non technical potentials, since using new energies decreases the environmental pollution, the international institutes especially support these plans morally and financially. On the other hand, the technical potentials in the country, for making required equipments of power stations by clean energy, is still ignored.

5. The great committees of energy must be formed by the management of president or the president's first assistant and the companionship of the representative of relevant institutes such as oil ministry, power ministry, and the energy and environment improvement organization and so on, and the approved items of this committee must be seriously performed by the performing institutes. Then by performing the research projects, the structural solutions and challenges with the title of "energy ministry" whose most responsibility is performing "the country's universal energy map" are extracted, on that base the quality and quantity of offering, producing and distributing of country's energy carriers according to the country's potentials and enquiries by separating the determined regions and act based on that.

6. Codifying the supporting rules, encouraging tariffs for the investors of clean energy expansion, codifying the approved rules of national and local for expanding renewable sources, approving the necessary rules and regulations for handing over the rights and ownership of renewable energy sources and the responsibility of the energy use expansion;

7. Reinforcing the clean energy researchers and supporting research plans and students' thesis in technical localization of renewable and clean energy.

8. The structure change in organizational groups and human resource expansion policies, human resource expansion of skill promotion process, people's knowledge and outcome for empowering the activities to reach the determined goals through systematic and organized prevocational, educational plans.

9. Adopting the policies of technology transferring necessity that the process is the knowledge and skill transformation from a group of experts or specialized organizations to the organization or a group that do not have the ability or relevant knowledge or the possibility of creating technology and necessary tools. The technology of renewable energy is regarded as a modern technology in the world. Although transferring this knowledge and technology from the countries owning this technology to developing countries is necessary. This technology transformation can be done through universities' educational programs, short time cooperation with the foreign counselors involved in renewable

energy expansion in Iran. The exchange of the international agreement of research and expansion in connection with using renewable energies among the proctors of renewable energies in Iran and universities and science and research centers of countries developed in renewable energy science and technology is an effective method in transferring technology.

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