

Topic: Renewable Energy can build prosperity and improve energy security in Pakistan

Outline

1. Introduction

Thesis Statement:

These renewable source of energy have the capacity to reduce the energy insecurity and help bring prosperity. If renewable energy is implemented in true manner, the problems can be eased out in Pakistan.

2. Pakistan and the renewable energy: An Overview

3. Why Pakistan is not switching and relying over renewable source of energy

a) Paucity of knowledge about the benefits of renewable energy

b) Policy makers failure of not formulating long-term policy

4. Renewable energy will help bring palmy days in Pakistan

a) Infrastructure will be well-developed in Pakistan

b) Technological advancement will flourish without power breakdown due to shortage

- c) Modern mode of education will spread in large geography of Pakistan
- d) Health sector will be benefited without scarcity of energy
- e) Reducing inequality and decreasing rural-urban divide
- f) Decreasing pollution by means of renewable resources will help improve quality of environment
- g) Countries and companies will be motivated to cooperate and integrate from around the world
- h) Tourism sector will flourish in Pakistan

5. Pragmatic measures to accelerate renewable energy production and usage

- a) Investment on R&D for development of plans and technology to work out best mode of renewable energy
- b) Promoting modern kind of solar energy usage
- c) Rewarding the local companies who are generating their energy from renewable sources
- d) Integration of waste disposal and biomass energy generation companies
- e) Long-term policy for renewable energy

6. Conclusion

Since past two decades, Pakistan is facing shortage of energy. People of the country are suffering from this crisis. Seeing this scenario, the researcher, analyst and consultant believes that renewable energy will help reduce energy insecurity and build prosperity in Pakistan. If this thing is so true that it will work as magic pill for Pakistan, then why they are not going for renewable energy? The answer to this is that Policy maker lacks long-term approach and are not much aware about the benefits of renewable energy. The renewable energy if implemented in true notion will help develop infrastructure, improved modern education facility and efficient health sector. With this, it will also bring FDI and raises the level of tourism in country. Thereby, Pakistan needs to takes series of action which will make it self-reliant in arena of renewable energy. Thus, renewable source of energy have the capacity to reduce the energy insecurity and help bring prosperity.

☞ If the renewable energy is implemented in true manner, the problems can be eased out in Pakistan.

Energy is considered as the engine of an economy. So, a country like Pakistan, which spends its ~~major~~ major proportion on imports of energy realizes the importance of it. Most of the budget or the foreign reserve is utilized on energy imports. As per the report, ~~is~~ twenty nine percent of the import burden is of energy (Express Tribune, 2022). Such a high percentage emphasizes the need of renewable source of energy — which needs to be increased for lowering the demand of ~~non-~~ non-renewable energy. Hence, renewable energy application in Pakistan is likely to change the fate of country.

Before diving deep into the reasons that how renewable energy will welcome the ~~grossy~~ grossy days, there is a need to look over why Pakistan is lagging behind renewable energy. The top most reason is that there is paucity of knowledge about the benefits of renewable energy. A country like Pakistan, where many of the people are living below the poverty line and don't have the basic resources for living — so the government focus on providing short-term solution, rather than focusing on benefits. So, the governance don't focus over ~~&~~ acquiring knowledge and the benefits that country will get due to renewable energy. Thereby, this lack of knowledge regarding the advantage of renewable energy

becomes a hurdle in the way toward switching to it.

Other than paucity ~~too~~ of knowledge, the administrative approach in Pakistan is quite short-term. The focus over short-run issues, not investing and drafting long-term policy approach. If the shortage of energy occurs, the country goes for acquiring more imports at higher prices, rather than investing in renewable resources — which will reap benefits in future. As recently, due to shortage of energy, Pakistan ~~got~~ government purchased LNG at forty percent higher prices (Dawn, 2022). Therefore, the failure of forward looking approach by policy maker don't open up the ways for renewable energy.

Once the light is shed over the causes of why renewable energy is not implemented, it makes ~~a~~ easy for how it will help bring palmry days. Firstly, the ~~renewable~~ renewable energy will help in developing infrastructure of Pakistan. With cheap and vast energy availability due to renewable resources, electricity will be provide across the geography of country. Even the technology line of telephone, cable and internet will spread across every corner. Thus, the renewable energy will make it easy to afford — that will help in development of infrastructure.

Secondly, the ~~new~~ renewable

energy will ensure technological advancement. The reason is that availability of renewable energy will reduce the barrier of power break-down. As it is common in Pakistan that local-shedding happens for several of hours - which creates difficulty in research and testing the hypothesis. Hence, the renewable energy availability will decrease the shortage of energy, which ultimately lead to power break-down.

Thirdly, the renewable energy will ensure electricity availability across the country, which will initiate modern mode of education. In this, the very first reason is that educational institute don't prefer projector, computer, visualize and technologically advance machines for teaching students as it will require more voltage - consequently more cost. And the second foremost reason is that modern mode of education include distant learning, which is not possible in far area - due to connectivity issue. As it was reported that students faced connectivity issue in online class due to local shedding & less signal (Dawn, 2020). Thereby, the renewable energy will increase the supply that will help in promoting modern mode of education.

Fourthly, the health sector will be advantageous due to implementation of renewable resources. With the usage of non-renewable resources the hospitals, clinics and maternity home experience

power break-down due to shortage. So, the health and life of people are at risk who are in ICU, operation theatre, Surgery or on ventilator. Even the patients have to wait for light for going through any test. Therefore, by implementation of renewable energy system, the health sector will be benefitted.

Fifthly, when the education, medical, infrastructure and technology will flourish due to renewable energy - it will succour in the elimination of inequality and rural urban divide. With more of education facility in village area, people will be able to acquire education from around the world, and become a developed human. Even establishment of infrastructure will help such as landlord, tenants and other farmer in directly contacting consumer, without means of series of brokers who eliminates profits. This and many other measures will help reduce rural-urban divide - as it will attend the rural area and make them at par.

Sixthly, the benefit of renewable can bring prosperity in country by improving the quality of environment. Installing renewable energy will means that carbon emission will minimize, which will improve the quality of life. Such a feature will benefit the

health of Pakistan's and elevate the status of Pakistan as concerned country in domain of climate change. Thus, the decrease in pollution by implementation of renewable resources will help beautify the environment.

Seventhly, ~~the~~ clean environment, developed infrastructure, technological advancement and learned human capital due to renewable energy will motivate several companies and countries to increase ties with Pakistan. Several of the multi-nationals will find it beneficial, as they are getting much of the facility. Even, the growing notion of environmentalism in companies will also push them to invest in Pakistan. Hence, the renewable energy can build and instigate prosperity as it will attract foreign investment.

Eighthly, a 'polluted' and carbon producing country don't attract tourist, but a clean environment from carbon do. Such as Canada ~~has many of~~ generates much of energy from renewable resources, and so this cleanliness feature attracts tourists. And so, Pakistan is rich of natural and scenic beauty — this added feature of carbon free country is likely to attract plenty of tourist to state. Thereby, the inculcation of renewable energy sources in Pakistan will increase tourism — and so will be the

foreign reserves.

A wholeistic view of the benefits which renewable energy will pose show a sanguine picture of Pakistan. In this regard, Pakistan should take some pragmatic measures in creang of renewable energy to welcome the primary days in country. The primary step should be the investment in research and development to work out the best mode of renewable energy. An abrupt decision should not be taken in this - as the decision taken with proper R&D reaps the best result. Therefore, the R&D in creang of renewable resources will work out best for Pakistan in long-run.

Then, Pakistan should implement solar energy technology on low-scale but of modern kind. For example, the public transport bus in bringham is run by solar plates. Further, the train terminal in china is all solar plated - that means energy is generated of train via this renewable energy. So, seeing such examples of developed state, Pakistan should implement modern kind of solar energy. Thus, with the implementation of solar energy in modern manners will help atleast the renewable energy usage in efficient manner. ~~State~~

Moreover, the adminstration should

create a liaison between waste disposal and bio-mass energy generation company. The reason is that bio-mass companies will easily use the waste from waste disposal management for generation of electricity. It will decrease the cost and even time too. Hence, the efficient renewable energy will be generated by integration of bio-mass energy and waste management organisation.

Further, the administration should initiate the reward feature for companies who generate renewable energy for their working. For example Tesla generates its energy from bio-mass waste and solar energy. The same is done by Coca Cola for energy generation. So, when the reward system will be initiated, it will incentivize companies to shift toward renewable energy. Thereby, the reward system for corporations to step forward in renewable energy generation will strengthen clean energy notion — and so will be prosperity.

Last, but not the least, a long term renewable energy policy should be formulated by inclusion of all stakeholders. This long-term policy will provide the road map that need to be followed for the betterment of people and the country. Such as National Security Policy (NSP) was formulated, in same manner renewable energy policy should be drafted.

Therefore, a long-term term policy for renewable energy will make Pakistan energy ~~sufficient~~ self-sufficient and independent state.

To conclude, Pakistan is an energy dependent ~~and~~ state. because it don't have reserves of non-renewable energy sources much. And so for this very reason, there is huge burden on balance of payment and foreign reserves. For years Pakistan is not able to implement renewable energy to large scale due to short-sightedness and lack of knowledge. However, if the promising outlook is pondered over the renewable energy — it will open the door of prosperity for Pakistan. Thus with the implementation of ~~see~~ measures in few areas, Pakistan can be self-reliant renewable energy producer to cater its need, and avail benefits.