

## Topic:

Is Pakistan's Energy paradigm compatible with emerging global needs?

## Outline

### 1 Introduction

**Thesis statement:** Pakistan's energy model is based on ancient traditions still using and depending on non-renewable sources which are neither climate friendly nor cost-effective. Instead, it is also in-efficient and unable to meet the global energy production and distribution system.

### 2 Pakistan energy sector and its policies

#### 2.1 In-sufficient production

a) Load shedding in summer seasons upto 6-8 hours in urban and 12 hours in rural areas.

#### 2.2 In-efficient distribution and recovery

a) Case study: line losses i.e. in  
 perhama and KPK districts electric  
 bill recovery is 10-20%.

b) 30% of energy produced is  
 lost in distribution (Ministry of Energy)

### 2.3 Shortterm policies:

a) IPP's : capacity payment and fuel  
 adjustment.

### 2.4 Non-renewable source dependent

a) Producing 58.6% of energy through  
 thermal energy.

### 2.5 Circular debit of government and expensive for consumer

a) Pakistan energy circular debit reached  
 2398 billion rupees.

b) Highest energy price for  
 consumer in Asia.

## 3 Global standards and innovation in energy sector

### 3.1 Renewable energy sources

a) Hydel, solar and wind energy

### 3.2 Climate friendly energy production.

Case study: Japan will convert its

viche and transport to  
 electricity upto 70% till 2030  
 (Japan project 2030)

3.3

Cost-effective and industrial  
 friendly.

a) Cheap for consumer

b) less expensive for industries  
 to compete global markets.

3.4

Energy production should be  
 sufficient to meet the needs  
 of country.

## 4 Way forward:

4.1

Convert non-renewable thermal  
 projects to renewable energy  
 source

a) Convert coal dependent energy  
 projects to hydroal energy source

4.2

Long term policies and projects

a) Independent power production  
 companies agreement should be  
 according to national interest

4.3

Climate and cost effective

4.4

Efficient distribution of energy

a) Reducing line losses

4.5 Recovery of electricity bills with  
irony policies

## 5 Conclusion:

"We can make more  
sustainable, cleaner and  
safer world by making  
wise energy choices"

(Robert Alan Silverstein)

What we decide today, will surely affect our tomorrow. The world is trying and innovating the new energy resources and constantly working on it. Pakistan is still struggling to meet its energy demands. The old traditional systems are still in use for energy production. To meet the needs of energy is like

elephant in room for Pakistan. The load shedding in summer season is horrible dream for us. Despite of load shedding, the price of electricity is very high. It is beyond the capacity of middle class person to pay the utility bills. The recent price hike in last two years has broken the back bone of middle class man. The non-renewable energy sources are used that are expensive and in-efficient. They are also hazard for the environment. The basic commodity prices are also affected and sky high. Pakistan energy model is based on ancient system that is using non-renewable energy resources. It is neither climate friendly nor cost-effective. It is unable to meet the global

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energy production and distribution system that is totally working on the innovation system.

Pakistan has been facing the energy shortage for many decades. The insufficient energy production is unable to meet the requirements of the state. There has been the load shedding for many hours in urban areas, specially in summer and affect the life of people. The industries face a lot of hurdles from the energy sector. The electricity shortage reduce their growth and production and price of the products also got high as they have to pay the labour because most of the labour is on daily wages.

In-efficient distribution and recovery of electricity bills

is also big problem for the energy sector. Pakistan electricity distribution system is very old and unchanged. "30% of the energy produced is lost due to in-efficient distribution system," Ministry of power and energy. The line losses are big trouble for the country and public. As it increase the burden on the public as well as on the country. Its burden is distributed among other consumers and state. The recovery of electricity bills is due burden on the state as Pakistan faces security challenges and unable to collect bills and recovery from the consumer. The recovery of bill from bank, district of KPK is only 10%.

In addition to above, short term policies has

affected the country's economy. The agreement made by government with IPPs is more terrible. The benefits beyond the capacity and reason have been given. The production company will receive the payment from government of what it has capacity, instead of its production. Such terrible policies are not in the interest of Pakistan. The use of non-renewable energy sources is not according to the modern requirements of state. They are expensive and create pollution in the environment.

Pakistan is producing its energy through most of non-renewable resources. It produces 58.6% through thermal energy, 29% through hydro energy, 8.6% through nuclear and 6.8% through renewable energy.



source Pakistan is still far behind the use of renewable energy resources. The import of fossil fuel for running these energy generating plants is also problem as they are imported on foreign reserves are depleted and they are bought at foreign rate that is too expensive for Pakistan due to its rupee depreciation. The energy as result generated by these plants is very expensive - They also produce hazards for the environment.

The circular debt of the government is also rising because of its in-efficiencies to recover the bill and deal with the foreign companies in dollar. The minister of power division said, 'The agreements with foreign

power producing companies in dollar is one of factor for producing circular debt, which is need of how to overview it." The price of energy for the consumer is also too high and beyond the capacity of the people to pay it. The expensive energy can never guarantee prosper society because industrial sector is also disturbed and unable to compete with international markets for its production and sales.

The following are the global standards in contrast to Pakistan policy and energy models. It is the point of focus for the global countries to produce energy through the re-newable energy sources. As it is cost efficient and also

environment friendly. The new modern technology of solar energy has revolutionized the energy sector. It is cost efficient and beneficial for climate as the needs of the energy are met through the other resources.

The China is building its biggest dam on Brahmaputra river in Tibet of 137 billion dollar that will produce the electricity through hydel energy.

World is moving fastly towards the renewable energy source.

The climate change has alarmed the whole world to control the emission of harmful gases and use pollution free methods for the energy and industrial sector. The emission of fossil fuels gases is depleting the ozone layer.

The energy modes should be changed for transport vehicles.

The electric charge cars are innovating. They are cost beneficial and pollution free. Japan will convert its ~~old~~ vehicle into electric charge ~~vehicle~~ upto 70% by 2030.

The use of this mode of energy has many benefits like reduction of carbon emission and cost-effective.

The world is moving towards cost-effective and cheap energy that is beneficial for industrial sector and as result for the economy of the country. The cheap energy produces cheap products that could compete the world markets and produce foreign reserves. The domestic consumer also enjoys the cheap electricity and energy and could

meet the needs of the people. The price of the basic products of household and food is also reduced as the production and transportation charges are cut. The tensions of public to pay the bills is also reduced that leads to healthy society.

The production of energy should be sufficient to meet the needs of state. The effective and required energy produces the goods and products upto requirement and industrial sector does not face challenges of delayed production and completion of orders. The world is moving towards globalization where people and markets are interconnected and economy of a country work as

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backbone for the country Pakistan

should focus on renewable energy sources and convert the non-renewable <sup>energy</sup> plants to renewable energy resource plant.

The power plants running on the coal and fossil fuels should be converted to the hydel and nuclear energy. The solar energy projects by the private companies should be encouraged.

The agreement with the independent power production company should be according to interest of our country and according to our terms and conditions. The concept of capacity payment should be terminated. The agreements made with our neighbouring

countries should be tried on the barter trade system or local currency exchange.

The climate and cost effective mode of energy should be encouraged and subsidised. The vehicles and transport trucks should be encouraged to transform to electric charge system. Electric vehicle should be encouraged and their use should be made easy by electric charge stations installments.

The distribution system of energy should be upgraded and innovated instead of using old traditional system. The provision of energy also made easy and encouraged. The losses due to distribution system will also be reduced and circular debt for the

energy losses will be reduced.  
The price adjustment will also  
be settled.

The recovery of  
the bill from the  
consumers should be made strictly.  
The areas with low recovery  
should be punished and  
charged with theft cases. The  
recovery losses are irreparable  
and cannot be managed  
for a long period of time.  
The thefting of electricity and  
delay of dues payment for  
long period of time should  
be dealt with iron hands.

To  
cut in short, Pakistan is  
far behind the world in  
energy sector and is  
struggling to meet the  
international requirements. The  
challenges faced by Pakistan



in different areas is also difficult. The security issues in construction of projects in remote areas and recovery of bill is reached at alarming level. The expenses in the production of energy due to non-renewable energy resource will be rising day by day. The agreement with IPP's is also challenging, to be dealt with care and new agreements with the companies with viewing the international rules is matter of responsibility and seriousness. The country is moving towards solar energy but speed of moving is slow. The electric vehicle policy should be implemented and in process but with slow progress. So, very efficient method, strong policies and smart working is necessary to come upto the global energy standard.