Q1- Pakistan is facing severe energy crisis. What measures Pakistan needs to reform structure in electricity sector?

Ans 1- **Introduction**

"There is no energy crisis, only crisis of negligences." said R. Buckminster Fuller. Pakistan has been facing energy crisis since 2007. Excessive electricity is coupled with massive loadshedding. Hence, Pakistan needs to take certain structural reforms in electricity sector.

2- **Energy crisis in Pakistan**

Pakistan is energy insufficient country. Pakistan's energy is expensive. In 2022, price of domestic unit was increased from 16 PKR to 34 PKR and price of commercial unit was increased from 38 PKR to 64 PKR. Not only this, but loadshed-

ding also became a serious concern for Pakistan. In 2022, loadshedding in rural areas was 16 to 18 hours, while in urban loadshedding was 8 to 10 hours; hence, Pakistan has been facing energy crisis since 2007.

3- Remedial measures to reform structure in energy sector

Pakistan needs to reform structure in energy sector. Thus, Pakistan needs to take following measures:

a) Renegotiate agreements with International Power Producers (IPPs)

Pakistan needs to renegotiate agreements with IPPs. Due to successive

government's agreements were not negotiated. Pakistan has done agreements with IPPs in respective years, such as 1986, 1991, 2002, 2009, 2011, and 2014; with heavy capacity payment, 35%. However, that agreement of 1991 was renegotiated in 2000, after a long period of 9 years. The next to it was done in 2020, PTI government. Due to successive renegotiation in PTI government, Pakistan saved 100 to 150 bn PKR

The conditions of renegotiation in PTI government are as follows:

i) There would be no capacity payment

ii) There would be no rental payment - just give and take.

b) **Electricity generation from local sources**

Pakistan needs to

generate electricity from its local sources. As Pakistan's energy generation is expensive due to imported Hydro Carbon (HC). Hence, Pakistan needs to shift from HC to local sources.

Local sources of electricity generation

i) **Hydal**

Pakistan can generate sufficient amount of energy from hydal source. Karote produces 730 megawatt, Sukki Kinare, 883 MW; Dasu, 4300 MW; and Diamer Basha produces 4500 MW. Thus, Pakistan will generate 60pc of energy from hydal source.

ii) **Wind**

Second source of energy is wind. Pakistan will generate 450 MW from wind, especially in Sindh, Thrampeer and Balochistan.

iii) **Solar**

Third source of

energy generation is solar energy. Pakistan can generate 3000 MW energy from solar source.

iv) **Coal**

Pakistan has already generated 1280 MW energy from Thar coal. Further, it would generate 5000 MW from its local source, coal. Thus, Pakistan needs to rely on local sources rather than imported HC.

c) **Civil nuclear projects to generate electricity**

Pakistan has capacity to generate sufficient energy from civil nuclear projects. Chashma four projects, such as C_1, C_2, C_3, C_4 C (chasma) has capacity to produce (340×4) — 1360 MW energy. Moreover, K_2 and K_3 also produce 1100 MW energy. C_5 project would be completed this year. This will produce

cheaper energy source. Cost of per unit would be 14PKR instead of 34PKR - the most expensive - The cost of local sources would be as follows:
hydal, maximum 7PKR;
solar and wind, 8PKR;
and civil nuclear would be 14PKR per unit.

Hence, Pakistan needs to implement these projects.

d) **Reramp transmission line to save energy from loss**

Pakistan needs to fix new transmission lines to save energy from its loss. From Matiari to Lahore, local transmission would be in black coated wires, undergrounded, and lesser loss would be 3-4pc.

e) **Priratization of electricity system**

"The job of gorernment

is not to run business rather to regulate its role."

Pakistan needs to regulate its role in order to save country from energy crisis.

f) **Digital metering and eletronic record**

In Pakistan, there is energy theft issue, corruption, and tampering meter. The role of goverment to save country from illegal use and loss of energy. Hence, Pakistan needs to change its structure and need to make it digital and electronic.

4- **Conclusion**

Pakistan is rich in natural sources and has capacity to generate its energy from local sources. Pakistan has been facing energy crisis, hence it needs to reform electrical

structure and to get rid of outdated system. By adopting new, modern policies, Pakistan can generate sufficient amount of energy for betterment of future.

"Pakistan needs to save energy before it gets too late..."