Q Explore the option of alternative energy resources to overcome energy crisis in Pakistan.

Answer Introduction

"Energy crisis is a massive threat to economy."
(- Tapveer Hussain)

Pakistan has been facing energy crisis since 2007. In fact, energy crisis is become a big problem. However, alternative source of energy, crisis will be reduced. Therefore, Pakistan should get abrupt access to energy resources.

2- Energy crisis - a massive electric shortfall: an Overview

"Energy crisis leads to excessive loadshedding."
(- Faisal Basri)

Unfortunately, Pakistan has been facing energy crisis since 2017. In fact, loadshedding

is increased due to energy crisis.

"In 2022, the worst year of loadshedding was recorded; the rural it was prevailed about 16 to 18 hours, and in urban it was of 8 to 10 hours."

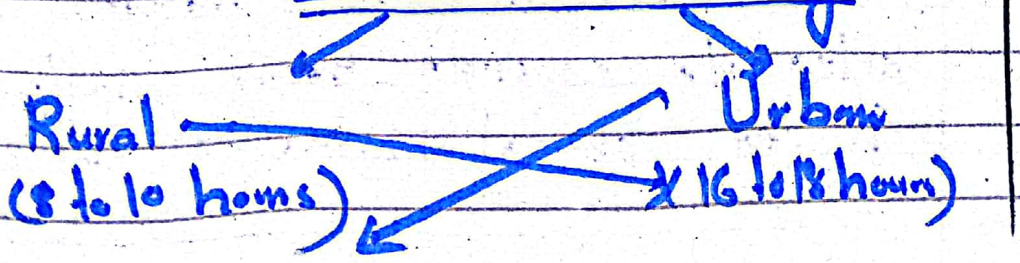
(- Excessive loadshedding, Faisal Bari, 2023)

Moreover, cost of energy per unit is also increased.

"The cost of domestic per unit reached at 34 PKR, and cost of commercial per unit reached at 64 PKR."

(- Pakistan Bureau of Statistics, 2023)

Hence, the worst energy crisis is recorded in Pakistan.



Cost of energy per unit

↓

Commercial Unit

↓

64 PKR

Domestic Unit

↓

34 PKR

3- Alternative Energy Resources to overcome energy crisis in Pakistan

Following is detail of alternative resources:

a) Energy Generation from wind

Pakistan has potential to generate energy from winds.

(The World Bank, 2022)

Pakistan can generate adequate energy from wind. In fact, coastal areas of Sindh

and Balochistan has such capacity.

"Almost 3,000 MW of energy can be generated from wind."

(Economic Survey, 2019)

Therefore, Pakistan can produce energy from wind source.

b) Energy Generation from Solar power

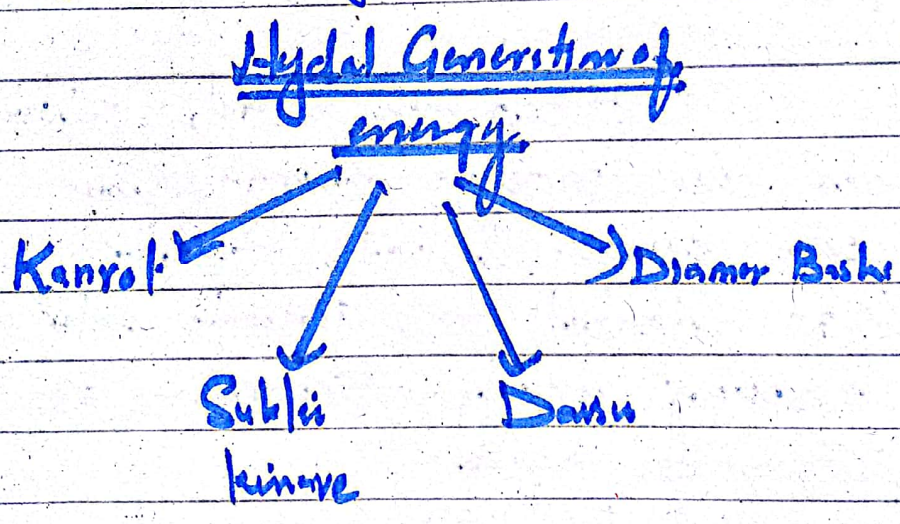
Along with wind, Pakistan can also produce energy from solar source. In fact, Pakistan has potential to generate solar energy yearly. According to Economic Survey,

"Pakistan can generate 900 MW of energy from solar source and Quaid-e-Azam Solar power station is named in Bahawalpur."

Therefore, Pakistan can also produce energy from solar resource.

c) Hydal Generation of energy
Pakistan can reduce its dependency on hydrocarbon due to hydal generation."
(- Irrigation Department, 2010)

Following are further sources of hydal energy generation:



i) Energy capacity of Karot source
Hydal generation is one of alternative resource of energy generation. Pakistan can produced abundant energy from it.

'About 730 MW of energy is produced

from Karachi."
(Economic Survey, 2020)

Thus, Pakistan can produce energy from hydel source.

ii) Energy Capacity of Gulshi Kinare
Moreover, Pakistan can also produce energy from Gulshi Kinare. Tremendous amount of energy is produced from Gulshi Kinare source of hydel energy. According to economic survey

"Almost 883 MW of energy is produced from Gulshi Kinare."

(Economic Survey, 2020)

Hence, Pakistan can produce adequate energy from Gulshi Kinare.

iii) Dasu hydropower projects - energy generation
Further, Pakistan can also produce tremendous energy

from Dasu hydropower projects.
An adequate energy generation is observed from data.

"Capacity of Dasu hydropower project is about 4,300 MW of energy."
(- Irrigation Department, 2017)

Therefore Pakistan can generate sufficient energy from 'Dasu' hydro-power project.

iv) Diamer Basha - hydropower energy capacity and generation

"Dams are adequate source of energy generation."
(The World Bank)

Diamer Basha is a big source of energy generation in Pakistan. So that, capacity of energy generation of Diamer Basha is high.

'Almost 4,500 MW of energy can be produced from Diamer Basha dam.'
(- Irrigation Department, 2017)

Therefore, Pakistan can also produce sufficient alternative energy from dams.

Hydal Energy Capacity

↓

Karrot
(730MW)

↓

Sukki Kinare
883 MW

↓

Hydal (Dam)
4300 MW

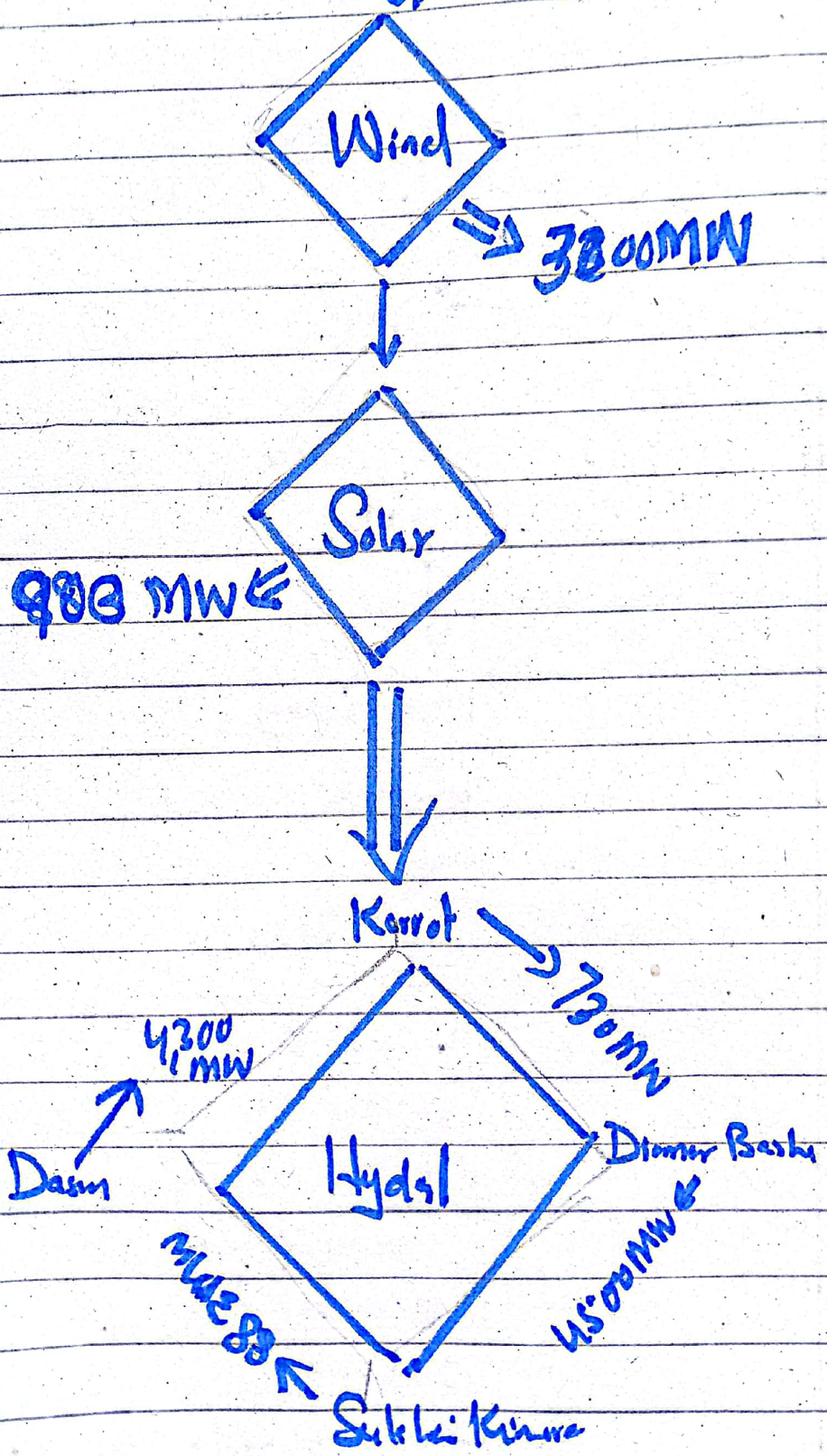
↓

Diamer Basha
45,000 MW

"Almost 60% of energy will be produced from hydel sources by 2030."

(- Pakistan Bureau of Statistics, 2022)

Flow Chart of Alternative Source of energy



4- Conclusion

"Pakistan has a tremendous potential of generation of renewable energy zones."
(The world Bank)

Pakistan has been facing energy crisis since 2007. Resultantly the worst energy crisis results excessive loadshedding. Therefore, alternative energy resources will help in eradication of energy crisis.