

When Ideas Flow, Villages Grow

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Introduction

67.5% of the population of Pakistan lives in rural areas . Most of the rural areas are deprived of even the most basic facilities of modern life . Electricity is one of those milestone in rural development . Due to lack of access to electricity , rural areas are underdeveloped areas of Pakistan . Due to this they are facing many challenges like 1) Lack of modernization on fields , like tube wells . 2)Due to lack of tube wells the problems of water logging and salinity increases . 3) Small scale industries couldn't be developed due to decline in electrification . 4) Quality of life of people decreases as they could not use modern electronics . Electricity is of great importance in our lives .Industrial and transport sector need electricity to operate electric machines and electric vehicles , people need electricity for operating daily life electronics like tube lights , fans , refrigerators and so on . There is an other way of electrical generation in rural areas other then national electric grids . This include off-grid system that could made rural areas self-sufficient of power generation . Off-grid stations help to generate electricity through renewable resources . Solar , wind , tidal and hydrological energies are renewable energy resources because they could be used again and again .

Off-grid System as an Alternate Source of Generating Electricity

An off-grid system is a stand-alone power system or mini-grids typically to provide a smaller community with electricity. Off-grid electrification is an approach to access electricity used in countries and areas with little access to electricity, due to scattered or distant population. The term off-the-grid (OTG) can refer to living in a self-sufficient manner without reliance on one or more public utilities. In Pakistan it is an important need for the rural area to have off-grid system for power generation because , 1) Pakistan is facing electricity shortage thus off grid system in villages will overcome load shedding to some extent , 2) By this industries will get more continuous power supply which would economically beneficial , 3) Poor infrastructure in rural areas offers difficulty in supplying electricity so an off grid system will overcome this problem . 4) By using off-grid power supply villages could be made modernized and mechanized . More than 200 villages of northern

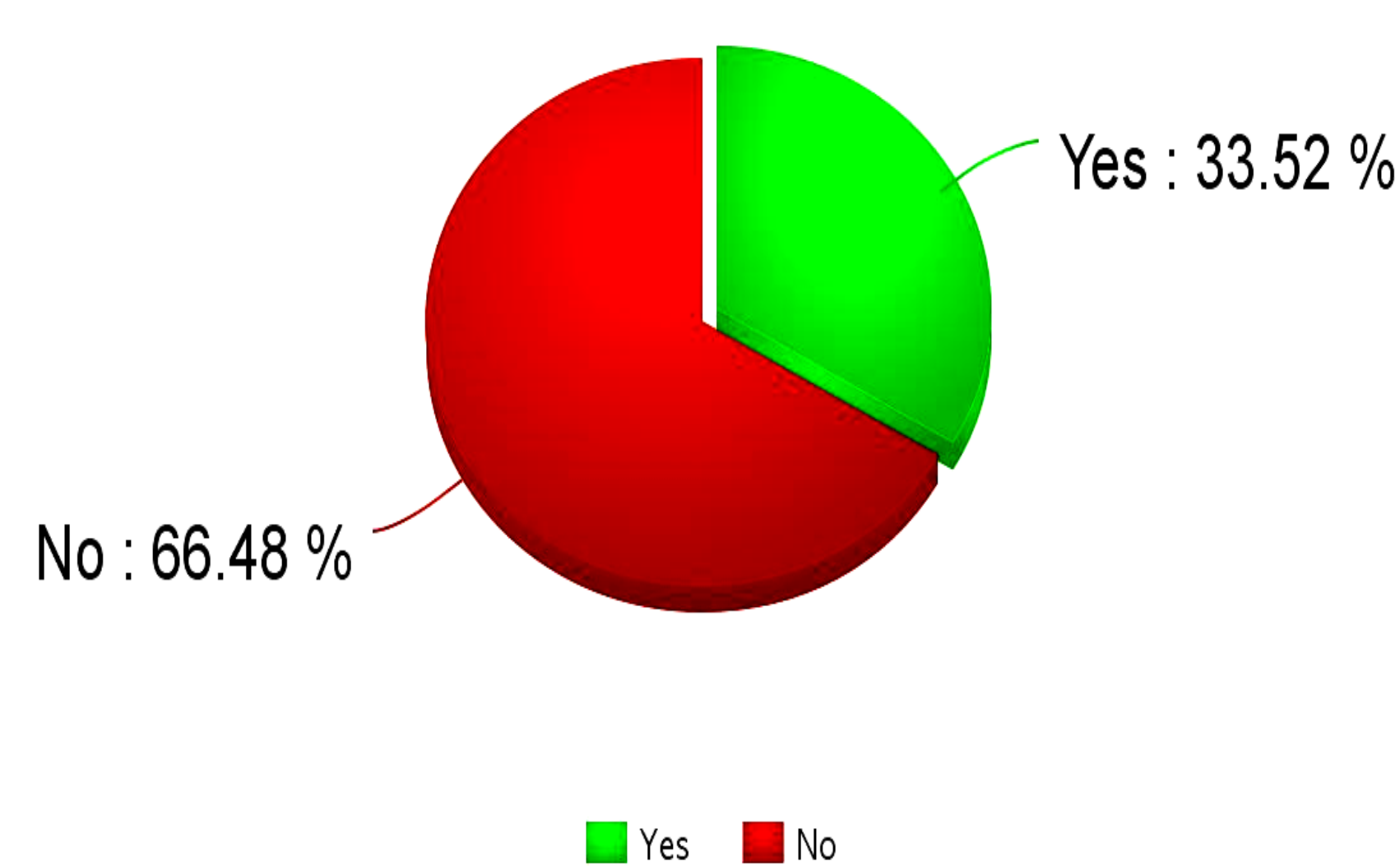


Khyber Pakhtunkhwa now have off-grid solar power system and therefore almost every house could now run two ceiling fans , 4 LEDs and could charge 2 mobile phones at a time . Smart Village !

Data Collection

DO YOU KNOW WHAT IS OFF - GRID POWER SYSTEM ? ARE YOU AWARE OF LOW ELECTRIFICATION RATES IN RURAL AREAS?

Interviewed 30 People

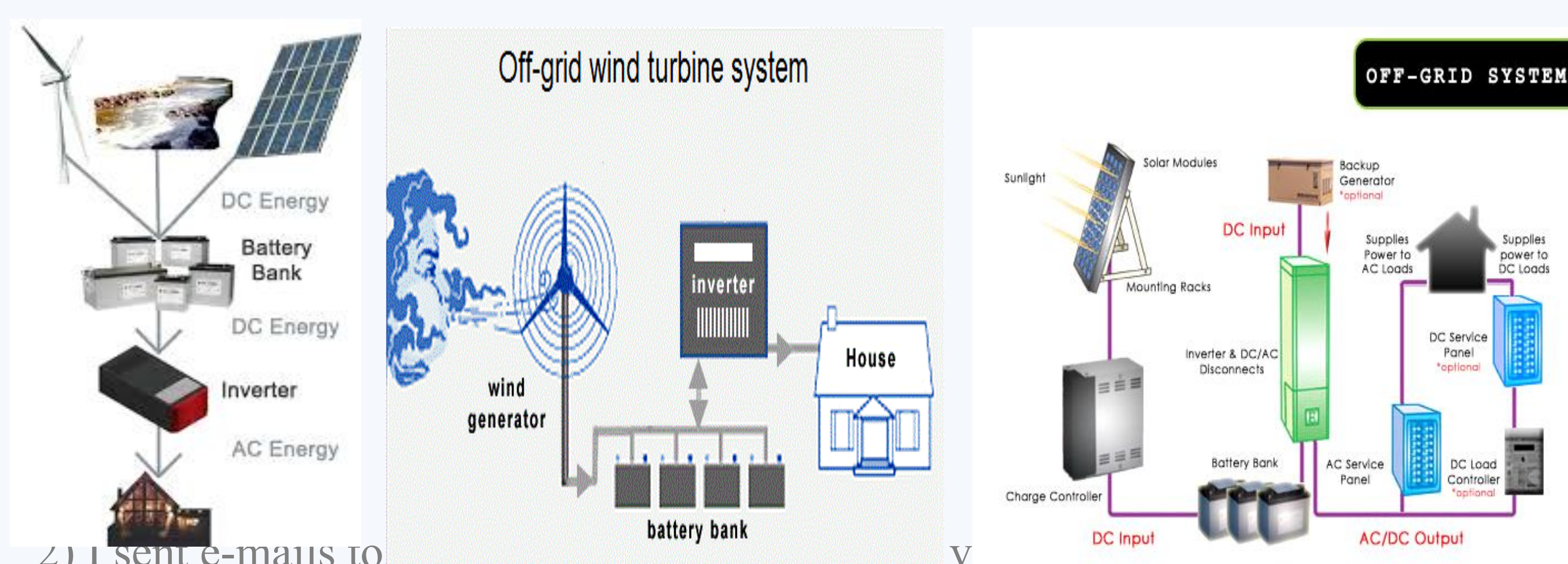


Unfortunately ,most of the people were unaware of off – grid system and low rural electrification rates . Most of the people who didn't know were happy to here that modern technological advances has produced self-sufficiency in rural life and could transform villages to smart villages . Out of 30 people 33.52 % said Yes and 66.48% said No in the answer of question being surveyed .

Creating Awareness

After researching a lot about off-grid power system I took following steps to create awareness :-

- 1) I made an Awareness Page on Social Media , named as “ Smart Villages “, where I posted articles related to off-grid system and renewable resources.



- 2) I sent e-mails to my friends and family about off-grid power system and renewable resources.
- 3) I visited many interior Sindh areas including Tando Jam , Thatta and Tando Allahyar for creating awarness among people about renewable energy sources and off-grid power system .
- 4) I distributed the copies of this poster to the people of my locality . This helped me a lot in my awareness campaign .

Impact

60 % of the people were convinced with my idea . It is for sure a great percentage of people ! Out of these 60 % people , 56% said that they would adopt off-grid power system because it has many benefits . Few of them said that they would use “solar tied micro grid” for their homes and few said that “wind tied micro grid “ would be much useful for them as they live in much windy places . Unfortunately 40 % people were not persuaded. They said that off-grid system is very costly and they can't afford it . Some said that they could not afford an engineer who could guide them the way of fitting off-grid system . Few said that they would migrate to urban areas rather than to use off-grid system in villages . I learned by the whole analysis that , there is lack of awareness among people of Pakistan about off-grid system . I also analyzed that if government would provide easy loans to people in rural areas people would surely adopt off-grid system .



Reflection

After all my research about smart villages and off-grid system I would say that the future of Pakistan with respect to electricity is not secure . It is because the population of our country is increasing day by day which is increasing load on the present energy resources . Furthermore , most of the people are unaware of renewable energy resources and off-grid power generation system . As poverty rate is at its height therefore people in rural areas could not afford solar panels , hydro electric dynamos , wind turbine , batteries and area required to plant an off-grid system . Lack of interest of government in green energy and much dependence of the country on non-renewable energy resources I don't think that future of Pakistan as far as electricity is concerned is secure !

