6. Energizing Rural Lives: The Impact of the Introduction of Renewable Energy Sources in Rural India

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Abstract

Globalization has had a great impact on all economic activities. Whole world is connected through parallel advancement of economic activities. Electricity is one of the most vital energy sources for all economic activities. The economic development of a country by and large depends on its efficient supply of electricity. It can facilitate in transforming the lives of people especially rural people. India is a land of villages where nearly 70% of the population lives in villages. This paper helps to bring out the socio cultural impact on rural life through the usage of non-conventional renewable energy sources (REs) such as solar energy.

Key Words*: Impact, rural energy, Solar energy, tapping energy sources*

Introduction

Renewable energy technologies have experienced rapid deployment over the past few years, mainly driven by the ambition to improve energy security, enhance energy access and mitigate climate change. India is now exploring ways to stimulate socio-economic growth through the development of the renewable energy sector. Investment in renewable energy can generate new sources of growth, increase income, improve trade balances, contribute to industrial development and create jobs both in rural & urban areas. While such socio-economic benefits are increasingly gaining prominence in the global renewable energy debate, specific analytical work and empirical evidence on this important subject remain relatively limited. In rural India the economic progression was very slow lack of infrastructural facilities added to the slump. (

Report of the Ministry Of New & Renewable Energy System.2014).

Government Initiatives

Government took several measures to augment developmental process through insertion of renewable energy technology into rural arena. (Report of the Ministry Of New & Renewable Energy System.2014) It was seen as an alternative to improve

1. Trade balance
2. Economic growth
3. Job opportunities
4. Industrial development
5. Small scale industries
6. Energy sourcing

Phases of RES

In included following phases

1. project planning
2. manufacturing
3. installation
4. Gird connection
5. Operation
6. Maintenance & decommission

Value added benefits of RE sources

1. Policy making
2. Education research
3. Development
4. Consulting
5. Financial services

Socio Economic Impact

1. Value added benefits of Resources are it adds to GDP, it supports community welfare ,& it helps in employment generation.
2. A planned employment of RE sources can help in the rise in the Domestic production, deployment ,manufacturing , installation, repair & spare part charging, additional segments fixing , transportation, revamping, etc

Employment Opportunities – Resources can augment employment opportunities such as

1. Manufacturing segment
2. Project Development segment

3. Construction & Turbine Installation, segment
4. Operations & Maintenance segment
5. Transportation & Logistics segment
6. Financial, Legal, & consulting Services segment
7. Solar Panel Installation segment
8. Repairs segment
9. Consultation segment

Other Economic Benefits: there such as were other benefits to using Resources (Report of the Ministry of New & Renewable Energy System.2013).

1. Rural communities can be helped with Income generation through regional tax collection
2. It helps the Biomass production
3. It supports Feed stock production
4. It assists in Waste management
5. It helps Household uses such as schools, hospitals, local industries, dairying etc
6. Rural health care sector can use these REs for refrigeration vaccines immunization practices.
7. Farmers can be helped by veterinary medicines in time
8. Farmers can have supplemental source of income as they do not need to invest in gas, electricity , wood or coal
9. Income can be circulated within the local economy which can be further used for community welfare measures such as lighting the street lamps, solar cooking , mono pump charging etc
10. It Reduces reliance on gas/ coal/ electricity/green wood hence the community can save money
11. It is eco friendly hence reliable

12. It is long term investment hence government can invest in RE sources
13. The destruction due to natural calamities such as heavy wind, rains, cyclone etc is very less in REs hence the rural community can be benefitted with one time investment in REs.

Eco benefits

1. Environment-friendly as they do not emit gaseous and liquid pollutants.
2. Can be easily transported, assembled and installed in remote areas.
3. Produce DC electricity, which can be easily stored in a battery.
4. Zero fuel usage.
5. Noise free.
6. Robust, reliable and weather proof and have a long life.
7. Low maintenance cost.

General benefits

1. Individual systems for home: lights, TV and radio.
2. Portable lighting systems for home, agricultural fields, educational institutions, health centres, etc
3. Water pumping for irrigation and drinking water
4. Refrigeration
5. Battery-charging station
6. Rural telecommunication
7. PV integrated buildings
8. Off-shore oil drilling stations
9. Navigational systems
10. Road and Railway signalling.

Prospective Strategies Res- Planning includes taking the services of specialized companies & individuals Value added to solar & wind energy always can be made more viable through

Policy making- Policy should motivate investment in this industry by strengthening capabilities, technology transfer, promotion, educating the rural people about the benefits of RE sources. Hence policy making should focus on all these variables & should adopt what is

best suited for the local people may be hilly region or waste land region.

Engagement of all stake holders: A close coordination & engagement of all stake holders can help in policy making & policy implementation.

Holistic frame work Policy should be framed with a holistic frame work involving all stake holders of the community it should become well defined national strategy

Long term strategy: A consistent long term strategy on RE sources can added weightage to value generated through deployment

Upgradation programs- Cluster development programs to enhance up gradation in the usage pattern should be linked to technology

Furthering training: -Policy makers should anticipate the need for furthering education & innovative training in these areas

Inclusive partnerships: Cohesive partnerships should be evolved with private public involvement

Financial support - Financial support to relevant training firms & institutions should be detailed.

Research & Development - Research & development activities should be encouraged as a long term energy policy. Innovative measures in using value added products RE can be maximized through research programs.

Motivation - Utilization & motivation of human resource into productive use of RE is the need of the hour.

Conclusion

Investment in renewable energy can generate new sources of growth, increase in income levels , improve trade balances, contribute to industrial development and create jobs both in rural & urban areas. Policy making should be focused with a holistic frame work involving all

stake holders of the community & it should become a well defined national strategy. Research & development activities should be encouraged as a long term energy policy. Innovative measures in using value added products RE can be maximized through research programs.

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