

# Energy Prospects for Sustainable Rural Livelihood in Vijayapur District, Karnataka India

Advances in Renewable Energy and Electric Vehicles pp 189-198 | Cite as

- Mukta M. Bannur (1) Email author (ec.mukta@bldeacet.ac.in)
- Suresh H. Jangamshetti (2)
- 1. Department of Electrical and Electronics Engineering, BLDEA's V P Dr. PG Halakatti College of Engineering and Technology, , Vijayapur, India
- 2. Department of Electrical and Electronics, Basaveshwar Engineering College, , Bagalkot, India

Conference paper First Online: 21 August 2021

• 315 Downloads

Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 767)

### **Abstract**

Energy is the dynamic infrastructure plays a key role in poverty management. Lack of energy accessibility in rural areas affecting every corner of countries progress. In this direction, a study is conducted in rural areas of Vijayapur district, Karnataka India to identify the opportunities in farm and non-farm activities and understand their energy consumption pattern to promote alternative potential power sources to provide hand in hand electric energy. This study provide groundbreaking experience in integration of energy considerations for various activities in energy planning and management. Windsolar hybrid energy system seems to be viable for electrification of rural applications in study area.

# **Keywords**

Demand Solar energy Wind energy Hybrid power system This is a preview of subscription content, <u>log in</u> to check access.

### **Notes**

#### Acknowledgements

The authors wish to thank the Authorities of Regional Agricultural Research Station at Vijayapur, HECSOM Vijayapur Karnataka, India, and rural public for providing appropriate information for the present research.

#### References

- 1. A. De1, Renewable energy sources for the development of rural India. Int. J. Eng. Sci. Invent. **3**, 2319–6734 (2014)
  - Google Scholar (https://scholar.google.com/scholar? q=A.%20De1%2C%20Renewable%20energy%20sources%20for%20the%20devel opment%20of%20rural%20India.%20Int.%20J.%20Eng.%20Sci.%20Invent.%20 3%2C%202319%E2%80%936734%20%282014%29)
- 2. Department of Agricultural Research and Education by Ministry of Agriculture, April, 2018.
  - Google Scholar (https://scholar.google.com/scholar? q=Department%20of%20Agricultural%20Research%20and%20Education%20by %20Ministry%20of%20Agriculture%2C%20April%2C%202018.)
- 3. D.K. Subramania, T.V. Ramachandra, Aspects of Agriculture and Irrigation In Karnataka Energy Research Group Centre For Ecological Sciences, Researcg article Indian Institute of Science, Bangalore 560 012, India (2016)

  Google Scholar (https://scholar.google.com/scholar?
  q=D.K.%20Subramania%2C%20T.V.%20Ramachandra%2C%20Aspects%20of%2
  OAgriculture%20and%20Irrigation%20In%20Karnataka%20Energy%20Research
  %20Group%20Centre%20For%20Ecological%20Sciences%2C%20Researcg%20a
  rticle%20Indian%20Institute%20of%20Science%2C%20Bangalore%20560%2001
  2%2C%20India%20%282016%29)
- 4. J. Charles Rajesh Kumar, M.A. Majid, Renewable energy for sustainable development in India: Current Status, future prospects, challenges, employment, and investment opportunities. Energy Sustainab. Soc. **10**, Article number: 2 (2020)
  - $\label{eq:cooler} $$\frac{Google Scholar}{q=J.\%20Charles\%20Rajesh\%20Kumar\%2C\%20M.A.\%20Majid\%2C\%20Renewab le%20energy\%20for%20sustainable%20development%20in%20India%3A%20Cu rrent%20Status%2C%20future%20prospects%2C%20challenges%2C%20employ ment%2C%20and%20investment%20opportunities.%20Energy%20Sustainab.%2 0Soc.%2010%2C%20Article%20number%3A%202%20%282020%29)$
- 5. T.V. Ramachandra, Ecologically sound energy planning strategies for sustainable development (IISc)", Humanity Development Library, Versio 2.0

  Google Scholar (https://scholar.google.com/scholar?

  q=T.V.%20Ramachandra%2C%20Ecologically%20sound%20energy%20planning
  %20strategies%20for%20sustainable%20development%20%28IISc%29%E2%80
  %9D%2C%20Humanity%20Development%20Library%2C%20Versio%20%202.0)

- 6. District Profile-Vijayapur, Karnataka Global Agribusiness & Food Processing Summit (2019)
  - Google Scholar (https://scholar.google.com/scholar?q=District%20Profile-%20Vijayapur%2C%20Karnataka%20Global%20Agribusiness%20%26%20Food%20Processing%20Summit%20%282019%29)
- 7. T.V. Ramachandra, Solar energy potential assessment using GIS. Energ. Educ. Sci. Technol. **18**(2), 101–114 (2007)
  - Google Scholar (http://scholar.google.com/scholar\_lookup? title=Solar%20energy%20potential%20assessment%20using%20GIS&author=TV .%20Ramachandra&journal=Energ.%20Educ.%20Sci.%20Technol.&volume=18& issue=2&pages=101-114&publication year=2007)
- 8. G.L. Johnson, *Wind Energy Systems* (Prentice Hall Inc. Englewood Cliffs, N.J., 1985); J.V. Seguro, T.W. Lambert, Modern estimation of the parameters of the Weibull wind speed distribution for wind energy analysis. J. Wind Eng. Industr. Aerodynam. **85**(3):75–84 (2002)
  - Google Scholar (https://scholar.google.com/scholar? q=G.L.%20Johnson%2C%20Wind%20Energy%20Systems%20%28Prentice%20 Hall%20Inc.%20Englewood%20Cliffs%2C%20N.J.%2C%201985%29%3B%20J.V. .%20Seguro%2C%20T.W.%20Lambert%2C%20Modern%20estimation%20of%20 the%20parameters%20of%20the%20Weibull%20wind%20speed%20distribution %20for%20wind%20energy%20analysis.%20J.%20Wind%20Eng.%20Industr.%2 oAerodynam.%2085%283%29%3A75%E2%80%9384%20%282002%29%0A)
- 9. M.A. Mohamed, A.M. Eltamaly, A.I. Alolah, Sizing and techno-economic analysis of stand-alone hybrid photovoltaic/wind/diesel/battery power generation systems. J. Renew. Sustainab Energy, 7, Article ID 063128 (2015)

  Google Scholar (https://scholar.google.com/scholar?
  q=M.A.%20Mohamed%2C%2oA.M.%2oEltamaly%2C%2oA.I.%2oAlolah%2C%2oSizing%2oand%2otechno-economic%2oanalysis%2oof%2ostand-alone%2ohybrid%2ophotovoltaic%2Fwind%2Fdiesel%2Fbattery%2opower%2ogeneration%2osystems.%2oJ.%2oRenew.%2oSustainab%2oEnergy%2C%2o7%2C%2oArticle%2oID%2oo63128%2o%282o15%29%0A)
- M. Kolhe, Techno-economic optimum sizing of a stand-alone solar photovoltaic system. IEEE Trans. Energy Convers. 24(2), 511–519 (2009)
  CrossRef (https://doi.org/10.1109/TEC.2008.2001455)
  Google Scholar (http://scholar.google.com/scholar\_lookup?title=Techno-economic%20optimum%20sizing%20of%20a%20stand-alone%20solar%20photovoltaic%20system&author=M.%20Kolhe&journal=IEEE %20Trans.%20Energy%20Convers.&volume=24&issue=2&pages=511-519&publication year=2009)

# **Copyright information**

© The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2022

# About this paper

#### Cite this paper as:

Bannur M.M., Jangamshetti S.H. (2022) Energy Prospects for Sustainable Rural Livelihood in Vijayapur District, Karnataka India. In: P. S., Prabhu N., K. S. (eds) Advances in Renewable Energy and Electric Vehicles. Lecture Notes in Electrical Engineering, vol 767. Springer, Singapore. https://doi.org/10.1007/978-981-16-1642-6\_15

- First Online 21 August 2021
- DOI https://doi.org/10.1007/978-981-16-1642-6\_15
- Publisher Name Springer, Singapore
- Print ISBN 978-981-16-1641-9
- Online ISBN 978-981-16-1642-6
- eBook Packages Energy Energy (Ro)
- Reprints and Permissions

## Personalised recommendations

#### **SPRINGER NATURE**

© 2020 Springer Nature Switzerland AG. Part of Springer Nature.

Not logged in Visvesvaraya Technological University (3001338151) - BLDEA's College of Engineering & Technology (3001405716) - VTU Trial Account (3001412227) 103.112.213.132