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## Rural development in India A strategy for poverty alleviation in India

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**Abstract:** *There is a growing interest in employing renewable energy conversion systems for supplying power to Rural households in India. Such systems have to be designed with maximum efficiency and with minimum intermediate stages. In this context, modications are proposed for two commonly used rural household appliances; the wet-grinder and the dough-maker for Net zero energy Homes (NZEH).*

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**Key words:** *Rural development, Agriculture products, rural development strategies, Indian economy.*

### I. Introduction:

The rural agricultural production & consumption process plays a predominant role in developing the Indian economy.

Agriculture and agro processing account for 30-60 % of GDP in developing countries. 63 percent of population lives in rural areas only. With rapid urbanization rural people depends mostly on agriculture. India started producing about 700 million tonnes (Mt) of biological materials per year including food grains, fruits, oilseeds, vegetables, milk, eggs, tea, coffee, fiber crops, forest produce and so on. Because of its socio economic impact specifically on employment and income generation, Agro processing is now regarded as the sunrise sector of the Indian economy. The common agro processing industries includes paper making units, hand pounding units for rice, bullock operated sugarcane crushers, water power driven flour mills, bullock driven oil ghanies, spinning wheels and handloom units for weaving etc. The rural areas are consuming a large number of industrial and urban manufactured products.

### II. Literature review

1.0) Effective Rural Development Strategies for the Improvement of Indian Economy Chandra sekhara reddy(2011)

The people lives in rural areas are majorly depends on agriculture. The rural agricultural production & consumption process plays a predominant role in developing the Indian economy. The major objective of rural development is to increase farm productivity, for achieving rapid economic transformation, increasing profits to farmers and to increase the household outputs of selected agricultural products. The present article majorly focused on the various rural development strategies in field of agriculture, starting from management of land, labor and natural resources to the effective harvesting, pre processing methods and effective marketing strategies to be followed

2.0) Impacts of unconventional gas development on rural community decline(2014)

This paper looks at the impact of a new extractive industry, namely unconventional natural gas, on rural decline. Rural decline is defined as comprising loss of rural youth, reduced human capital and increasing rural poverty. Since the start of the current century, the unconventional natural gas industry has been expanding around the world, often in close proximity to pre-existing agricultural communities. The social impacts of this new industry represent a growing area of interest in rural studies. We contribute to this new research area through a case study of coal seam gas (CSG) development in Queensland, Australia, comparing regions where gas development occurred between 2001 and 2011 against a control group of similar regions without gas development. The study eliminated the influence of non-resident workforces by analyzing census data based on place of usual residence as well as place of enumeration. A key finding of the study is that regions with CSG development have experienced a growing youth share of the population and, of particular note, a growing female youth share of the population. CSG regions had a higher proportion of youth with university degrees and advanced technical training compared to other rural regions. Poverty reduction was also observed in some specific CSG regions. The extensive spatial footprint of unconventional gas and increased female rural youth populations indicate a diversion from traditional boomtown

social impacts observed in previous energy booms. Taken together, the results show signs of mitigating and reversing rural community decline.

3.0)Retrofitting domestic appliances for PV powered DC Nano-grid and its impact on net zero energy homes in rural India  
There is a growing interest in employing renewable energy conversion systems for supplying power to rural households in India. Such systems have to be designed with maximum efficiency and with minimum intermediate stages. In this context, modifications are proposed for two commonly used rural household appliances; the wet-grinder and the dough-maker for Net zero energy Homes (NZEH). In this paper, AC motors that are conventionally employed for the above two appliances are replaced by Permanent Magnet DC (PMDC) motors, thereby avoiding inverters in the system. The power electronic interfaces for the PMDC motor are also developed. Investigations have been presented to show an increase in energy efficiency and reduction in the cost of the appliances, as a result of this replacement. Roof Top Photo-Voltaic (RTPV) array is the main power source of the proposed NZEH. The new architecture of the NZEH has RTPV and loads directly powered by the PV array, thus creating a DC Nano-grid. The sizes of the PV array required for this NZEH are found to have been reduced with the proposed modifications. Analysis on embodied energy and payback period for the proposed energy system are also presented. This article also presents the energy balance study for a rural home with the new appliances.

### **III. Conclusion**

More than 60% of the Indian population lives in rural areas and most of the rural people depend on agriculture and agricultural related industries. So there is a great need to follow the effective rural development strategies for improving the quality of life in rural areas, self employment to rural people and raising profits to the farmers to improve the Indian economy.

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