



The 2011 National Rural Livelihood Mission (NRLM) seeks to enable large-scale poverty alleviation in rural areas. At the core of this strategy lies:

- Self- and wage-employment diversification
- Grassroots institutions as facilitators.

Energy poverty is a major barrier to rural, economic and social development. With fuel and light constituting the 2<sup>nd</sup> highest expenditure after food in rural areas<sup>1</sup>, the success of any programme including NRLM is dependent on long-term energy availability. As mass grid extension has not been able to fully address the issue of rural electrification, this report recommends **appropriate, implementable RE interventions** to improve rural livelihoods.

The customised implementation plans outlined here were developed following a **value-chain based approach** that identifies energy needs at each phase within the livelihood value chain and proposes appropriate RE interventions. Three common subsets of **rural livelihood activities** were identified:

<i>Livelihood activity</i>	<i>Activities included</i>	<i>Significance</i>	<i>Attention in NRLM</i>
<b>1. Agriculture &amp; Animal Husbandry</b>	Primary sector e.g. Paddy farming Dairy farming	Traditional rural livelihood	Most attention
<b>2. Micro, Small and Medium Enterprise (MSME)</b>	Mechanic and mobile phone repair shops, Small restaurants.	Large employer of rural people >100 million people employed across the country	Little or no mention in NRLM
<b>3. Energy Collectives &amp; Entrepreneurs</b>	Positive externality from RE interventions, Integrator function	Livelihood opportunities for individual entrepreneurs, Self-help groups (SHGs)	Some mention under section 4

We outline adapted **technology, financing, and delivery models** for 8 different livelihood activities. For example, in the case of paddy farms, the value-chain approach emphasises certain constraints to increased productivity due to energy poverty. Lack of water availability, destruction of crops by wild animals, dependence on diesel for equipments, lack of power for local milling are some of these constraints.

In the case of dairy farming, the energy constraints include lack of lighting at the household level and lack of electricity for testing and weighing milk at the collection centers. The possibilities of addressing such constraints using renewable energy are summarized below.

<b>Agriculture &amp; Animal Husbandry</b>	<b>MSME Sector</b>	<b>Energy Centres and Entrepreneurs</b>
<p><b>Agriculture</b></p> <ul style="list-style-type: none"> <li>• Solar: Water pumping, fence for crops, pesticide sprayers</li> <li>• Biomass: utilisation of agri waste for electricity</li> </ul>	<p><b>Mechanics, Mobile repair shops</b></p> <ul style="list-style-type: none"> <li>• Soldering</li> <li>• Battery charging needs</li> <li>• Lighting</li> </ul>	<p><b>Products and Services</b></p> <ul style="list-style-type: none"> <li>• Household &amp; institutional use</li> <li>• Financed through banks, rental models, pay as you go models</li> <li>• Maintenance of other RE equipment locally</li> </ul>
<p><b>Dairy farming</b></p> <ul style="list-style-type: none"> <li>• Solar milk testing and weighing,</li> <li>• Lighting for cattle sheds</li> </ul>	<p><b>Small restaurants</b></p> <ul style="list-style-type: none"> <li>• Improved biomass cookstoves,</li> <li>• Energy efficient equipment,</li> <li>• Biogas from food waste for heating needs</li> </ul>	<p><b>Financing and Training</b></p> <ul style="list-style-type: none"> <li>• Financing support for local entrepreneurs</li> <li>• Skilled training (technical and entrepreneurial) through ITIs and RSETIs</li> </ul>

<sup>1</sup> National Sample Survey Office (2011). Level and Pattern of Consumer Expenditure 2009-2010. *NSS Report no: 538, National Sample Survey Office*, New Delhi. Available at: [http://mospi.nic.in/Mospi\\_New/upload/NSS\\_Report\\_538.pdf](http://mospi.nic.in/Mospi_New/upload/NSS_Report_538.pdf), accessed on 12/06/2013

Interventions in the agriculture, animal husbandry and MSME sectors can be **financed and delivered** through the following measures:

- Capitalize on credit linkages through RRBs for individual end users and entrepreneurs for RE based lighting and equipment for agriculture
- Use of cooperative societies to channelize financing and support farmers and dairy producers access RE products and services
- Conditional soft financing for local enterprises in the MSME sector to adopt RE technologies
- Inclusion of skill improvement modules for the MSME sector
- Support MSMEs to access affordable financing from various sources and establish centralized charging models to help them deliver products and services

In this framework, the Energy Collectives and Entrepreneurs have the dual benefits of creating:

- New income-generating opportunities in rural areas
- A platform to support RE interventions introduced in other livelihood categories

In conclusion we make 6 policy recommendations to **facilitate the deployment of renewable energy interventions for the NRLM.**

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## **POLICY RECOMMENDATIONS:**

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### **1. Inclusion of energy**

Energy interventions must be included in the mandate of each SRLM.

SLRMs must have earmarked allocation towards energy under both grant and financing options.

### **2. Financing**

Coordinate funds from different ministries accruing to same livelihood categories.

Beneficiaries of NRLM are categorized as 'weaker groups' within priority sector – 10% target for bank branches to be utilised.

### **3. Livelihood promotion**

Capitalise on existing community organisations wherever possible.

Greater financial support for livelihood improvement (grants, interest subsidies, allocations to cover transaction costs etc.)

### **4. Support for entrepreneurs**

The rural focus of NLRM provides an opportunity for more targeted projects aimed at improving the ecosystem for grassroots-level entrepreneurs.

In particular, their ability to access soft funding and low cost capital for enterprise development must be facilitated.

### **5. Training**

There should be a greater utilisation of ITIs and RSETIs for livelihood training and skill-building.

Specifically for RE, various technology partners can support curriculum creation and existing infrastructure can be mobilised.

### **6. Other Livelihoods (MSME sector)**

Include the MSME sector more specifically under state level implementation.

Create training opportunities to meet needs of MSME entrepreneur.