



Center for Alternative Research and Studies (CARES) |  
Small Planters Association | Civic Watch | Eco-Sud |  
Rezistans ek Alternativ | General Workers Federation |  
Rodrigues Government Employees Association |  
Institute for Environmental and Legal Studies (IELS)  
and various cooperative movements,  
ecologists, artists and engaged citizens

### Media Release – 17 March 2015

In the context of the forthcoming 2015 Government Budget, the Kolektif Lenerzi Renuvlab (KLR) on 16 February submitted to the Ministry of Finance a complete, sustainable system for clean energy for the transition to sustainable forms of energy and how to operationalise the broadening of the energy ownership base.

Among the key proposals put forward, the KLR has worked on how the Government can successfully set up a national scheme for solar energy cooperatives, benefitting small planters and citizens. The Alliance Lepep has pledged that it will encourage the development of renewable energy cooperatives both in its electoral manifesto and in the 2015-2020 Government programmes:

- *Facilities for the emergence of cooperatives in new sectors, such as Green Energy, will be put in place* (paragraph 210, page 29, 2015-2020 Government programmes).
- *Encourager la mise sur pied de sociétés coopératives qui s'engageraient dans la production d'énergie solaire et d'autres activités durablement viables* (page 30, Manifeste Electoral, Alliance Lepep)

Our proposal is therefore for a 4MW Solar Energy Scheme by Renewable Energy Cooperatives regrouping Small Planters and Citizens. The scheme will be for the dissemination of **20 agri-solar farms** countrywide at 474 KW installed PV capacity each:

- PV panels set up on greenhouses so that agricultural land is not wasted. The land requirement for one such farm will be 2 arpents. The scheme overall will require 40 arpents spread across Mauritius. The greenhouses will be anticyclonic. There are already 5 such farms in operation in Reunion Island at sizes much bigger than proposed here (1 to 2 MW each in Reunion).
- Cooperatives members (contributing or land) get a nice return each year.
- The population gets healthy food: 80% less chemicals used in the production of vegetables due to it being in greenhouses
- Our agriculture, and our small planters, in particular, get a new boost
- Solar energy in Mauritius gets a strong boost
- Ordinary citizens can invest in such a scheme, obtaining a secure placement for their savings as well as broadening the ownership base of power plants in the country
- The State gets a stake in the farms, enabling it to become an actor in solar energy instead of the sector being left solely to the big private sector to develop
- Less pollution, less dependency on fossil fuel imports (more energy security) and less abandonment of agricultural land for the country.

The scheme relies on 3 pillars:

1. Government sets up a **Coal Tax on the profits of the IPPs**. The Coal Tax, alongside the Mid Levy (which the IPPs do not pay) will generate subsidies essential for the success of the scheme.
2. Government raises money from the public for renewable energy development. This can be through the shape of **Government Green Energy Bonds (GGEBS)**.

- Government provides **capital grants to the renewable energy cooperatives** as these cooperatives will provide numerous immense benefits to the country.

Because of the immense benefits as listed above that the scheme will bring to the country, we believe it makes sense for the Government to support the scheme through a set of very strong financial incentives. Typically, the KLR is proposing the following *montage financier*:

- **Government grants 40%** for the capital investment.
- **Government lends, at zero interest rate, 40%** of the capital investment. These funds are raised from the public through the GGEBs, with Government using the money collected by the Coal Tax and MID Levy to give bondholders an attractive interest return.
- Government sets an electricity buying price between **Rs 6.18 and Rs 8.8 per KWh**.
- **Cooperative members provide 20%** both in cash and in land

Depending on the nature of electricity production the Government wants to develop for solar energy, there are three modalities the Government can choose from:

1. Agrisolar farms with batteries that provide firm, **constant solar electricity even during the evening** (help address the evening peak of 6pm-9pm).
2. Agrisolar farms with batteries that provide firm, **constant solar electricity but during the day only** (the batteries compensate for weather variability to inject on the grid a constant flow of electricity)
3. Agrisolar farms without batteries that provide **variable solar electricity during day**, subject to weather variability.

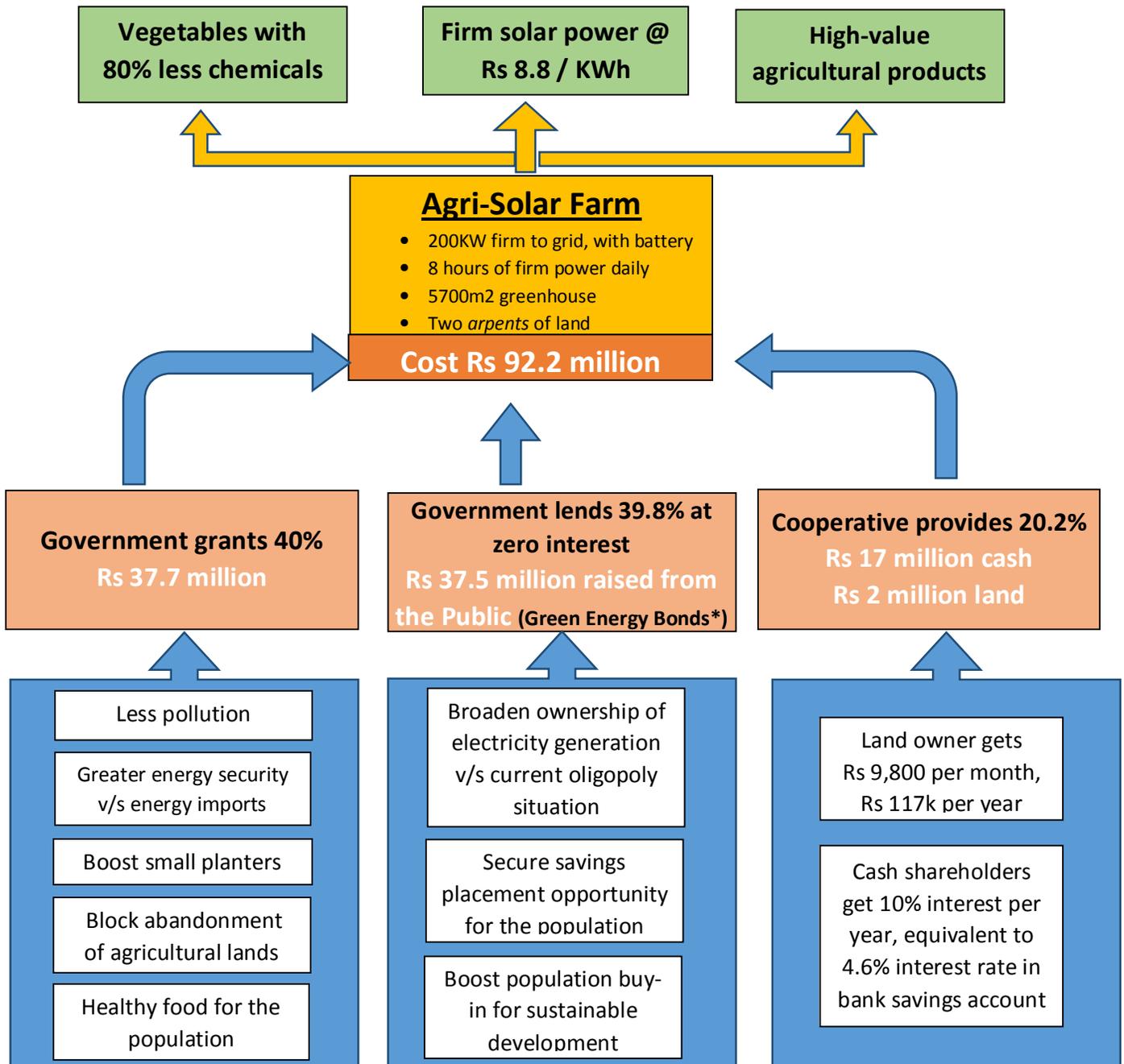
Type of Electricity Production targeted	Overall electricity selling price	Total investment for one agrisolar farm (medium estimate)	Government overall grant for all 20 farms under the Scheme	Government Green Energy Bonds loan for all 20 farms under the Scheme	Subsidy from MID levy/Coal tax per year for all 20 farms under the Scheme	Cash Investment for One Farm by Cooperative shareholders	Return for Cooperative shareholder	Return for Landowner
<i>Constant 1pm-9pm (firm solar power for evening peak)</i>	8.8	92,245,000	753,960,000	750,000,000	55,296,000	17,047,000	10% interest per year, equivalent to placing funds in a bank savings account at 4.6% which currently no banks offer. Shareholders over 20 years get Rs 2,350 for each Rs 1,000 invested.	The land owner (an automatic member as providing land to the cooperative on a 20-year lease) will obtain Rs 9,800 per month, Rs 117,000 per year.
<i>Constant 9am-5pm (firm solar power during daytime)</i>	7.77	81,025,000	664,200,000	660,000,000	43,430,400	14,815,000		
<i>Variable solar power 9am-5pm</i>	6.17	72,337,000	594,696,000	600,000,000	30,136,960	12,602,200		

Table 1 - Economics of the 4 MW Solar Energy Scheme by Renewable Energy Cooperatives regrouping Small Planters and Citizens

As can be seen from the table above, the overall investment outlay for the Government and the public is roughly similar, varying between Rs 1.2 billion and Rs 1.5 billion. The amount is not excessive. Considering that by cancelling the CT Power project the Government will save the country Rs 31 billion over 20 years (Rs 11 billion for construction, Rs 20 billion to import its daily amount of coal over 20 years), the funds are really available for the Alliance Lepep to make good on its pledges and propel the country forward with ambition towards a sustainable energy economy.

The KLR thus looks forward to such a scheme being announced in the forthcoming 2015 Budget

**Agrisolar farm providing Constant Firm Solar Power, 1pm to 9 pm (solar power even at night)**



**4MW Solar Energy Scheme by Renewable Energy Cooperatives – 20 Agrisolar Farms, firm or variable solar power**

**\* Green Energy Bonds**

Interest payments to bondholders are sourced from the Coal Tax and MID Levy

**\*\* Coal Tax on IPP Profits**

This tax makes dirty fossil fuels benefiting a limited few fund clean energy plants benefitting a mass of citizens:

- Green Energy Bonds holders get their interest payments
- Agri-solar farms get a viable overall selling price for their electricity

As the tax is on profits, it cannot be passed on to the consumers by the IPPs. Government needs to renegotiate the PPAs accordingly.

**4 MW of firm solar power**  
@ Rs 6.18 – Rs 8.80 /

**20 such Agri-Solar Farms**  
**Countrywide**

**CAPEX**

**Government grants 40%**  
Rs 600-750 million\*

**Government raises 40%**  
Rs 600-750 million from  
Public\*  
(Green Energy Bonds)

**Cooperatives provide 27.8%**  
Rs 250-340 million  
cash\*

**OPEX**

**CEB provides per year**  
Rs 46-55 million\*  
@ Rs 4 / KWh

**Coal Tax/MID Levy provide per year**  
Rs 30-55 million\*  
For a Rs 2.17 - 5.80 / KWh  
subsidy