



Interview with **Dr. Harikumar,** Director, ANERT



The Agency for Non-Conventional Energy and Rural Technology (ANERT) is the State Nodal Agency (SNA) of the Ministry of New and Renewable Energy (MNRE), Government of India and state agency for Renewable Purchase Obligations (RPO) and Renewable Energy Certificates (REC) in Kerala.

In this interview, Dr. Harikumar, Director, details on various programs conducted by the organization, challenges faced and future prospects.

? The '10,000 Roof Top Solar PV' plan started in 2011 by ANERT was an ambitious and unique plan. Can you elaborate on the plan and its impact?

The scheme was started in 2011-12 and this plan won the award for the most innovative projects on rooftop systems taken up by any State Nodal Agencies of Ministry of New and Renewable Energy (MNRE). We also received another award from the Association of Renewable Energy Agencies of States (AREAS) for the same project. During those days, the cost for a one kW system with battery back-up was approximately Rs 2 lakh. 50% of the cost was given as subsidy. We created our own model improving the MNRE specification a bit more in terms of enhanced inverter efficiency. As a result of this, the failure rate was just less than 1% and we could achieve our target within the planned time. We had provided a 5 year guarantee for the system that included battery also whose life is highly dependent on its usage. This project created a huge impact in the country in terms of making a government-run scheme popular, even though we were constrained to limit the size of Solar PV to 1 kW. As the land availability in Kerala is limited we could not promote many ground based Solar PV of larger size.

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of the total budget of the State; they can select the beneficiary and get the installation done through ANERT approved vendors with quality assurance.

? How long shall this subsidy push continue from the Government perspective?

MNRE is thinking of taking away the subsidy for solar systems, as the prices are coming down. ANERT has initiated a few schemes with an entirely different perspective of subsidy. We realise that the subsidy is not reaching the needy whether it is for biogas or solar as those who are the current beneficiary of these subsidy programs are those who can afford to pay. ANERT was successful to pursue the Government to issue an order to distribute the subsidy through the 3-tier Local Self Governments (LSG). These LSGs get 30% of the total budget of the State of Kerala and they can make the beneficiary selection. The installation can be through ANERT approved vendors so that it will give quality assurance. This can help increase penetration of the equipment, which was earlier limited by the comparatively small budget allocation received by ANERT. Subsidy that was given only by ANERT can now be given by 1000 or more LSGs where only the really needy will approach.

? What is the major hurdle that you have come across, other than its initial cost?

If the confidence level increases then more people will go for solar. One of the major drawbacks is the lack of confidence in people about the after sales support. Many organisations who take up installations vanish from the scene after a few years. To address this issue ANERT is planning to set up repair and service centres called Urja Mitra - Akshaya Urja Service Centres in all 140 assembly constituencies of Kerala. So far 1565 applications have been received for 140 shops, which will be evaluated and one shop per assembly constituency will be awarded. In each shop there should be 3 technicians, out of which one should be woman.

Through the Souraveedhi App, you can register your renewable system. A

customer by feeding his information will get one year free insurance through United India Insurance. In addition, the customer can avail the one time free Akshaya Urja Service by their technician to assess its functioning.

? How are you trying to popularise these schemes?

We are using IT tools as our back bone and have designed a mobile app called Souraveedhi, which can be easily downloaded from play store. Through this app, you can register your PV system. A customer feeding his information will get 1 year free insurance through United India Insurance. In addition, the customer can avail the Akshaya Urja Service for one time free visit by their technician to assess its functioning. Since the services are provided locally it can reduce the overall cost of the system and can bring in good vendors/suppliers who can give the required 5 year guarantee at minimum cost and risk. We are also planning to create an E Market platform, where the customer can pick and choose his system at the most competitive price.

? Since there are many non-empaneled system installers, what is ANERT doing to encourage them to become empanelled?

We were criticised for our earlier programme, which was cited as a bit industry negative being too much customer oriented. If the business has to flourish, the industry has to be supported. From 2017-18 onwards we have launched a new scheme for industry, where we provide opportunity for the Empanelled Vendors to visit Solar exhibitions outside the State to provide an opportunity for business networking, technology transfer, establishing partnership etc. We are also bringing a registration process and rating for the sub-contractors, who are the real soldiers doing the installation, but less acknowledged. Those empanelled agencies of ANERT who are installing system through sub-contractors should select them from the ANERT list. Soft loans for empanelled vendors are also being explored.



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? Do you see any resistance from Kerala State Electricity Board in going ahead with Solar PV system?

We do not see any reluctance or resistance. There is a need for confidence and awareness building at the section (field functionary) level, who are otherwise overloaded with routine jobs that are of high priority. ANERT has put up two proposals to overcome these issues. We have proposed a 2 day training program on roof top system to all the field personnel of KSEB who are dealing with its approval and inspection by approved institutes affiliated to the Skill Council of India. We are aiming 56 such programmes to train 2000 people. The second proposal is to set up inverter testing centres, like the meter testing lab of KSEB, so that the vendor can take the inverter to the testing centre and with this certification, the section office can directly give the connectivity without waiting for the KSEB inspection team. This can reduce the delay from the present 3 months to 3 days.

? How can professional non government organisations like SEEM be a part of this laudable initiatives of ANERT?

Though we have a toll-free call centre facility at ANERT, we find it difficult to answer the queries of a number of consumers regarding the selection of Solar System or Bio Gas plant or Solar water heating system. We have written to many professional organisations like Institution of Engineers and a few professional associations, whether their members can function as resource personnel, so as to provide free advice through telephones and paid advice through a visit. ANERT is planning to organise a half a day or one day orientation program at our own expense for these professional associations who can give support. There is huge scope for Research studies in this area including performance evaluation of existing

systems to suggest ways and means for improvements - both in terms of technical specifications, methodology, policy directions, etc.

? Does the new scheme for Grid Connected system increase adoption of Solar PV systems?

Grid connected systems have helped to overcome one major hurdle of off grid Solar System - that is the initial replacement cost of batteries. However, at present we allow grid connected system of a minimum power capacity of 2 kW that can generate an average of 200 Units per month. There are many consumers who do not require a 2 kW system as their monthly electricity consumption is much lower than what can be generated. Similarly there are many "Green Consumers" who are living in apartments that do not have a roof top, but would like to contribute to the cause of installing Renewable Energy Systems. Also, there can be a few consumers whose orientation of the roof top is not suitable for Solar PV. To overcome all these obstacles, ANERT has proposed a unique, first time in the country, financial aid scheme similar to Crowd Funding. Those who are willing to invest their money in roof top solar can reap benefits even without owning or installing a roof top solar, through an energy exchange scheme, where KSEB can adjust the amount through monthly electricity bills. This scheme can be extended to support or partially fund the ground based or floating Solar PV systems, whose expenditure are high compared to roof top solar and hence the energy cost is higher. We foresee a major breakthrough in Solar PV system through all these innovative schemes in the near future in the State of Kerala.

Interview conducted by staff reporter