

Topic 1 : Market/economics

TARIFF STRUCTURE PROPOSAL FOR PV-HYBRID SYSTEMS

O. Gavalda, X. Vallvé, I. Vosseler - Trama Tecnoambiental S.L. - Ripollés, 46 - 08026 Barcelona - Spain

Tel. 34 93 446 32 34 - Fax 34 93 456 69 48 - tta@tramatecnoambiental.es

ABSTRACT

There is an increasing acceptance of PV-hybrids as a cost effective long term rural electrification technology. Many schemes foresee a typical scenario where in a certain geographical area (municipality, region, province or even a whole country) a universal service is provided by an operator to all the users/clients in that area using in each individual case the most appropriate technology/energy source combination. In some cases the service provided is operated within the framework of an administrative concession with a regulating authority overseeing the quality of the service provided. Rural electrification with PV-hybrids sustainability and acceptance of the scheme both by the users and the regulating authorities depend, among other factors, on the tariff structure.

In general, for energy based autonomous hybrid systems a fixed tariff would seem more adequate to the real life cycle cost and necessary for investment planning. But for traditional power based grid connected service there has been a tariff structure based on energy consumed.

Application of the traditional structure in autonomous installations appears as inadequate because of the limitation of the resource and the deep interaction between the user's consumption and the installation's sustainability.

In this paper tariff structures of real operating case studies in several countries are analysed, as well as its relationship with typical life cycle cost and user's purchase power. Besides, reviews of the requirements of an ideal tariff structure for typical load profiles universal schemes based on autonomous electrification.

As corollary, an analysis of reference case study and a general scheme is proposed.

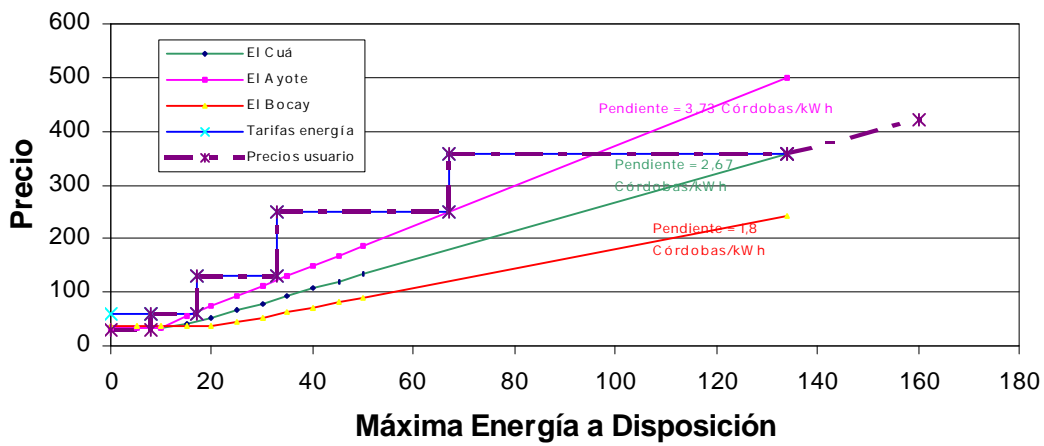
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TECHNICAL DESCRIPTION

Electricity costs versus electricity "consumption"

Tarifas electricidad



Load profile for Nicaragua (El Ayote, El Cuá, El Bote)

