“Electricity for All” Rural Electrification Program - Brazil

There are 2,000,000 rural households without access to electricity in Brazil, or 27% of non-electrification rate. The “Electricity for All” Rural Electrification Program aims at achieving universal access to electricity in five years, i.e. in 2008. This is a huge task, which demands favorable political will and financing conditions, strong and stable electricity industry, various and smoothly fine-tuned players.

During the years 2002 and, specially, 2003, there had been fundamental changes in the regulatory environment of universal access to electricity in Brazil. The country is geographically divided into 63 concession areas. To each concession area there is a correspondent distribution utility. These distribution utilities are of three different natures: private, public (state owned) and public (federal government owned).

No matter the nature of the utility, the provision of universal access is mandatory. The delay to achieve it varies among the concession areas according to its present electrification rate: the lower, the more difficult to achieve, the longer the electrification process will last, however, not exceeding the year 2008. Still, the regulatory framework establishes that the connection to the grid (or to a RE supply system) is free of cost to the end-user. Moreover, the price of electricity (tariff) is to be defined by the national regulatory body – ANEEL: given one concession area the price of the kWh to the low income families does not differ, no matter if grid supplied or RE supplied.

In spite of being innovative and inspiring, this regulatory framework has a fundamental bottleneck: if the utilities were to bear the cost of a major rural electrification process on their own, major tariff increases in poor concession areas are to be expected, specially in the North and Northeast regions of Brazil. Moreover, some of the utilities do not offer bold economic and/or financing conditions to built the necessary infrastructure to get electricity to every other customer under its concession area.

In the light of this, the government of Brazil launched, in November 2003, the “Electricity for All” Program, which will allow for the US$2.5 billion rural electrification program to
effectively happen. As a national average, the Program is to be funded at 72% by Federal Government, 14% by State and Municipal Governments and 14% by the utilities. Around 57% (US$1.43 billion) of the federal funding is non refundable.

With such a huge amount of federal funding and the ambitious target of 2,000,000 households in five years, least-cost electrification process and flexibility of supply are crucial issues to success.

From the 2,000,000 non-electrified households, the great majority will be grid connected. However, the use of RE supply options is the key issue to the complete the process of getting electricity everywhere in five years.

Solar PV, biomass (oil) and small hydro will play an important role in the “Electricity for All” Program. In remote, environment protection or difficult-to-reach areas they are the only viable supply option. However, the use (installation, operation and management) of such supply options is unknown by the utilities or, worse, badly reputated. Therefore, as under the present regulatory framework the utilities are the sole responsible for providing universal electricity service, they become skeptical when it comes to deal with RE technologies.

How to overcome these difficulties?

First, ANEEL, the regulator, has recently defined, for RE individual supply systems, the minimum service (in kWh/month), the quality of supply, maximum default periods and the electricity tariff (price per kWh).

Second, the Ministry of Mines and Energy/“Electricity for All” Program will foster and coordinate the capacity building process of utilities (and other players) to deal with decentralized RE supply options under the new universal access regulatory framework and the previously mentioned RE innovative rules. Capacity building means: how to design in order to attend the RE new regulation; how to provide O&M at minimum cost; how to work with communities; how to subcontract local agents to provide electricity service (such as NGOs, municipalities, community associations); how to respond to the regulator rules and surveying; possibilities on how to bill; among others.

The financing mechanism of the “Electricity for All” Program will account for the necessary infrastructure investment (initial investment), and, the difference between the monthly amount paid by consumers (electricity bill) and the real running cost is subject of a national and clear cross-subsidy.

At last, the greatest challenge of the “Electricity for All” Program is to integrate several other income generating activities (such as site specific technical assistance, micro-credit, market development), and effectively bring development to the poor rural Brazil.
References

