

INTRODUCTION

Eng. Carlos Herrera Descalzi – Minister of Energy and Mines

Good morning with all of you, it is a pleasure for me to be the one who can direct the first words in this topic, that is the Role of the Renewable Energies for the Clean Rural Energy.

Looking at the topic, there are two main points on which it would be necessary to think. The first of them is a topic of expansion of the electric frontier, the second topic it is a topic of substitution of polluting energies by energies non-pollutants. Both topics are of vital importance in the development of the world of the future, what I am going to tell you it directs especially to the first topic because of the situation of Peru.

Peru is a country where only 70% of the people has access to the electric service, that is to say, approximately seven and half millions of Peruvians don't have access to the electric service, those that don't have the electric service are located in some way in the marginal areas of the urban centers, but in a great majority, they are located in rural and far off areas that are called isolated systems, to where it is impossible to arrive economically with extension of the grids that follow the big systems. The other point that is important, in this case, is the contrast that exists among the effect of the scale economies that makes the unitary cost of assisting the small consumers be higher with the payment capacity, because exactly those that don't have the electric service, are those that have the minimum of earnings, that is to say, for them that element of balance that is able to pay the service and the cost of service goes to a extreme situation.

In Peru, the topic of the extension of the electric frontier is a topic that it was the successive governments' concern from many years ago, since I, as thirty years ago, began to work in the electric sector and, although, the electrification degree progressed notably in the course of time it changed from, what I remember, 33% to 70% which is an important change, the taken solutions were not always the appropriate ones, people in the field and in the rural area yearn to have the electric service, because it is or it brings itself the connection from the possibility of life to a possibility of compatible life with the century and with the time that they live, that it would be impossible in another way inside the cities.

One can ask itself the question, what would we make if we didn't have access to the electric supply? In many cases, the solutions that were the most direct, the simplest, maybe the better known ones were to put generation sets and to give supply with the fuel, the result of that was the happy inauguration of a system and at the little time there was not money for spare parts or there was not money for the fuel. Besides that to transport the fuel to the localization places where the generation sets were installed, it was exorbitantly high, the systems, equally, stopped to work because the economic reality has impeded them, as I express through those different manifestations, like lack of maintenance, lack of those who operate appropriately, and lack of fuels.

The topic of the rural electrification is a topic that it has been all governments' concern and I understand, it will also belong it to the governments that come in the future, we have traced ourselves some goals as proposal to get in ten years term to an electrification degree that can be 90% as minimum.

The other fundamental lineament is about renewables energies not only for the environmental impact, because perhaps like environmental impact is not as deep as when one speaks of urban centers of that proportion of 30% that doesn't have electric supply, and 70% that have; that 30% that doesn't have electricity, has the minimum consumptions, while other big consumers are in 70% that has, such as, are the industry and the transport, but the fundamental topic of renewable energies it is to that the operative cost can be covered entirely by the users, that is to say, it doesn't have to have a subsidy in the operation and in the maintenance of the system. On the other hand, when it treats of renewable energies, the investment cost is a bigger one, and to solve the problem of investment cost, it is maybe the most difficult part. I don't discard that inside having to solve the topic of the investment cost, the State has a participation of the lost fund, but it is a single expense a single time and then, the system can, from now on, go by itself.

The problem of the rural electrification for us should bring other challenges and other possibilities, we want that in what is developed it can have a decentralization, that is to say, that it gives opportunities regionally, that the opportunists exit regionally, and allow to participate in thee engineering stages, in the construction stages, the supplies will surely be smaller.

We would like to use the resources that the country has to the maximum and seemingly the options go for the side of small hydraulics an photovoltaic systems, I don't know, depending on the economies of scales and it will also be able to use turbines. There is a technique topic to discuss and to see , I only want to tell you that for the Peruvian State the program of rural electrification is a fundamental program, it has been in all the times and I am sure as I told you previously that it is going to be in the future, but the options that they have in mind they have to be options that absorb not only the technology elements, but the reality of the country. The technologies and the realities of the country combined give solutions that are not necessarily the same ones that in other countries, I also want to tell you that the topic is more extensive than only electricity, the topic is energy and when we are speaking of energy, we are speaking in other energy ways, like can be heat used for drying of grain that can be applied.

And finally, I want to refer you something that impacted me and made me think many years ago when I went to visit, when I was transitorily in charge of ELECTROPERU of the Management of Non Conventional Energy, an area it was called this way, and a project had been made, that it was the Project of the Power Station of Yasila, it was an Eolic Power Station that had three turbines of wind; I visited the Power Station of Yasila and when I got there I found the following: the three eolic turbines were on ground and the Power Station worked with a diesel group that was the back group for the case that the units didn't work.

The fuel was obtained of the Power Station of Paita, a Power Station of the State that was not very far from it, the one they requested to borrow it -of course, never with refund- some fuel to be able to make work the Power Station of Yasila, perhaps for that reason the groups that should register values of some, for the less 12 kWh per gallon registered 7 kWh per gallon; thus it made me think that the fuel just as it left for Yasila it could leave for other places, then I went to visit those that received the service of Yasila, it was a bay of fishermen and they saw their streets illuminated at night, but in their level of life meant them little or anything, because they took out their fish the whole morning and they have to negotiate the prices economically against those that came with their refrigerated trucks, in such a warm area as Paita where the fish doesn't stand a lot of time without being in a refrigerated camera, so the economic transaction has to be made very quick and, of course, against the owner of the fish and to which will waste it in little time.

Then and when the money had been worn out, there was an international cooperation. It is a fund that appears in a country to be given to another country, in this case, the country was Italy and the country of destination was Peru; therefore the fund had worn out in a great quantity of people that have come, many trips, many hours man, very expensive hour man, unnecessary in its majority, but not entirely, but yes in its majority and in awards trips that Peruvian Officials went to Italy, received then if that will be this way, we must look for another manner of making it, but that is not the way to make it.

I have wanted to transmit you through how the way is not to make it, for opposition, what should be the way to make it, in a labor that is very noble, that is to allow people that have low development to progress and have a hope of communicating with people of its time. Thank you.

Dr. Jerome Cole - Chairman

The Minister offered to answer generously any question that the audients must have, so this is your opportunity.

Is there any question for the Minister?

I will ask him then a question so that I clear up:

Question: As I understood the philosophy of the Ministry it is that perhaps that the Government could help to the rural electrification in the initial cost. I also understood that his point of view from the operative perspective these systems have to be self-sustainable is this correct?

Answer: Yes, correct

Any other question?

Yes one.

The capital investment of the non conventional systems with relation to the conventional ones it is quite big, for example, in a solar heater it could be two or three times an electric heater, according to the exposed by the Engineer Herrera, how the State would take part to be able to attenuate that great difference while the market is developed, while the users are convinced that is in the operation of these teams, where the advantages of the renewable systems are? Thank you

Eng. Carlos Herrera - I have given them the lineaments the system can be sustainable, so that the systems works, my experience is, that if a systems needs subsidies in the operation, is a system that doesn't work, it is a system that sooner or later it is stopped, because the State doesn't have funds. The State has many duties that has to assist and it is impossible that it divides to assist then to projects like those, it is preferably to make a donation or a subsidy in an initial stage, in the stage of investment costs and then system can operate commercially, so that the concessionary company that covers the area can assist it without losses for the company, that is to say, that can make something acceptable for the company. The difficult point is the investment cost, the difference between private companies and State is related to investment cost, is in the private company the unique return way it has, is through the payment of tariffs, in the State there are other return ways and there are others return rates. The private companies make it under a return rate that can be very high, State can make it under a return rate that can be very low and for the State part of the advantages is not have to use subsidies of another nature in that area, in an area that, with the arrival of energy, allows them to improve their economy and its levels of life, that is already a relief that in no way can take a private company, but State can pick it up, now the quantities, the figures, the solutions, that is matter of your work.

Chairman - Very well, some other question? One more question and we pass to the following part.

Question: Mr. Herrera, one of the problems with implementing renewable energies in rural areas is that people can pay for the service, in a long term that may have significant benefits for the rural areas, but in a short term it may have capacity problems of the clients of paying the energy, do you see some Government Peruvian role in helping in this?

Answer: Yes, certainly, we have a program working in that sense, but we have to look for a solution, maybe in the way of payment, but if you, not only consider the cost of energy, and only consider the capital cost, the cost is really high. The energy expenses are basically referred to the cost of Diesel and because of the size of those systems, the expenses are excellent ones, the costs are the most excellent in that system, for that reason, I consider that if you can see the entirety of the initial cost, solve the problem of the initial cost can solve the problem in the operative phase.

Dr. Jerome Cole - Thank you, for a very interesting opening and presentation, and thank you in the name of all us for the time dedicated.