

Launch of the 1715 act of 2014 which regulates the integration of renewable energy non-conventional, into the System of National Energy. In this event was made an appreciation to Paolo Lugari, a plate by the Minister of Mines and Energy.

SPEECH BY THE MINISTER OF MINES AND ENERGY

AMYLKAR ACOSTA MEDINA



Mr. former president José María Figueres, Minister of Environment, Dr. Luz Helena Sarmiento, sir Congress President José David Name, sir former Minister of Mines and Energy Dr. Carlos Rodado Noriega who is with us, Mr.

Deputy Minister of Energy and Hydrocarbons Dr . Orlando Cabrales, Mr. Deputy Minister of Mines Cesar Diaz, Mr. president of the National Hydrocarbons Agency Dr. Javier Betancourt, Madam Director of the Mining Energy Planning Unit Angela Cadena, Dr. Carlos Erazo executive director of the Energy Regulatory Commission and Gas, Dr. Elkin Ramirez, director of ITSE, Dr. Jorge Juan Bendeck president of the National Federation of Biofuels, Dr. Paolo Lugari Quixote of renewable energy in this country, honorable representatives, senators, directors, presidents of guilds sector that are present at this important event, gentlemen journalists, Nidia, my wife who goes around, good morning to you all.

I must thank the IDB and also FINDETER for the support we have been given at this stage of socialization and regulation of this important and transcendental law.

The international community received a first warning bell in the seventies, more precisely in October 1973; a very important milestone in the role of the energy development is given. The Yom Kippur War that broke out that year, one of the many wars, as this cruel war that is living today in the Middle East. In October 1973 one of those many wars between Israel and its neighbors served as a trigger for oil prices which will rise up as a fire. Until that year the maximum price for a barrel of crude had reached two US dollars, and a year later, prices had reached US \$ 16. And as I said the war was the trigger because following the oil embargo, initially for the oil exporting Arab countries, but later the oil embargo extended to the countries of the OPEC and the countries allied to Israel and this led to speculation in the markets

but the point is that oil prices would never be again as they were before and since, with oil prices, energy costs have been growing.

Following this circumstances we change from an era of abundant, cheap and reliable energy supplies, to another that was much more expensive, much scarcer supplies and exposed to uncertain energy politics.

Then in the 80s the international community heard another warning bell. This time, the international community was persuaded of the threat posed to the economy and society the climate change, which I prefer to call, climate disorder. There was talk of global warming and was in 1988 when the United Nations created the expert panel about climate change, initially composed of more than two thousand experts from around the world, in all languages and all religions. Now they go over four thousand experts and as difficult for the international community to reach consensus, even though it is so difficult that two scientists come to agree and more than two thousand scientists reached a consensus, first, that there was a high correlation between concentration of greenhouse gases and temperatures. The second consensus that came with that modesty that scientists are spent, to say with 90% certainty, not 100%, 90% certainty, the main cause of the concentrations of greenhouse gases were anthropogenic i.e., are due to human activity, thus there are a need for taken measures to reduce emissions of greenhouse gases. Of course, there are skeptics who still do not believe in global warming, still do not believe in climate change, supporting the theory of cycles, they say that just as we are in a period of warming in

the past there was period glaciation and periods of glaciation with alternating periods of warming. Maybe they are right but what has been recorded in recent decades is a sustained trend of increasing global temperatures, and maybe in the future we have some other period of glaciation but I am sure that none of us here is going to touch that period of glaciation, therefore, we must take measures to address the phenomenon of global warming.

These skeptics remind me pleas of the Andalusian gypsy who asked the Lord. Three Graces: The first that his wife will not be unfaithful, the second, yet if his woman came up to be unfaithful he did not learned and the third if the woman reached her being unfaithful and he came to find out he did not care anything.

Following these two bell sounds alerting them by the international community, the international community arrive at a consensus, if it is difficult to agree scientists is much more difficult to agree politicians, heads of state. Well, a consensus of the international community was achieved in three ways: First, we have to save energy; hitherto we have expended energy as if it never is going to end. Second consensus, the need for a more rational and efficient energy use and third, the need to diversify energy sources going toward the use of alternative energy preferably those alternatives renewable and clean energy.

Now, humanity understood, what Darwin predicted many years ago, he said the survivors will be neither the smartest nor the most capable but those who are able to adapt to change. Hence the importance before considering mitigation, before thinking of remedial measures, think about adaptation to climate change that is here to stay.

In Colombia the first was the electric sector, by force of circumstances, to think and decide for adapting to climate change. As a lesson learned from the blackout we had in this country, 14 months of electricity rationing in 1992 and 1993, since then the energy system we have today in Colombia, is robust and this robustness allows you to minimize restrictions and also to reveal inefficiencies when they come. It has to be paid by the user. This payment guarantees the country, besides the robustness, reliability and strength so that we can fulfill what stipulate Law 142 of 1994 that public services, and electrical service could be an essential service, so it must meet three key conditions: must have good quality, should be efficient and should have continuity.

Law 143 on electricity of that year and the Act 142 for public services, both are now twenty have allowed us to have an energy system of international quality. Two data testify this assertion. The World Economic Forum which measures the performance of countries on three fronts: that are growth, economic development and environmental sustainability and the secure access to electricity, shows Colombia in a privileged position as seventh country in the performance of its energetic architecture among 124 countries assessed.

But recently, the World Council of Energy, which builds an index of energy sustainability, said that Colombia is ranked 24 among 129 countries, but it stressed that the most relevant for the position 24 among 129 countries is the environmental sustainability in which Colombia ranks fourth in the rankings. But the most importantly of this index WEC (World Energy Council) says is the progress that has been achieved in Colombia from 29th position in 2011, 26 in 2012 and ranked 24th in 2013, i.e. we have an energy sector that has a recognition in the world for its capacity, suitability and has been possible because this success story is founded on good planning, which is the responsibility of the unit of mining energy planning. This is an exemplary regulation in charge of the commission of regulating energy and gas, and the brilliant management of a handful of excellent professionals with expertise, who have handled many industries. We have here this morning a representative sample of these experts characterized by its professionalism.

But despite these efforts, despite these advances, there is something more important, is that we have not fallen into complacency and we wanted to move forward and in fact, as background to the issue of this important law, we had taken a few steps in the right direction since early 2001. When it was issued Law 697 by the Congress, about rational and efficient use of energy, but unfortunately often the laws are issued and are not developed. That is what we do not want to happen with this law, because this law even though it was issued in 2001, and I was one of the speakers at this law in the Senate, had to wait nine years to be regulated by resolution 180919, 2010. You Dr.

Rodado Noriega as minister had to remove it from the freezer and give its development. Subsequently Conpes document 3700, 2011, in which a corporate strategy for the articulation of policies was issued, about action on climate change in Colombia, a very long name was established but lacked content and development.

An important fact that also reflects the interest of the country for driving toward renewable and clean energy, and goes hand in hand with this strategy is energy efficiency. Decree 3450 issued 2008 which established that from the first of January 2011 no import, distribution, sale and use of light sources low luminous efficiency is allowed such as incandescent bulbs which produce more heat than light.

Colombia took another important step, President Figueres, when she joined the commitment of the International Renewable Energy Agency IRENA and through the law, again the very leading Congress in these developments, issued the Law 1665 of 2013 through which was passed the statute of IRENA. I was as Minister in the last congress of IRENA when this law was approved and was featured at the event as a very important step forward and an example what they should do other countries in the promotion and encouragement of renewable energies. And in the same vein, in the month of March this year, we issue a resolution through which we seek to reduce the carbon footprint in the energy mining sector, which is supported in the plan formulated by the UPME of sectorial mitigation of power electric, petroleum and mining plans in order to reduce greenhouse gases and there he was given some guidelines to each of the three sectors: the mining sector,

power sector and the hydrocarbons sector for reducing the carbon footprint.

And for this purpose we have discussed especially with the UPME, the importance of projects concerning the reduction of carbon footprint. In the future in the projects concerning plans of electric expansion should be taken into consideration as one of the variables, the assessment of the environmental impact. In the future of projects concerning plans of electric expansion is taken into consideration as one of the variables, the environmental impact assessment. The need to assess the traceability of power generation projects is vital because it is important that environmental variable will not be at the end of the construction project processes but from the very conception of the projects, from the very structuring of the projects. The energy sector projects must be closed financially, yes, but they also be closed environmentally.

These are the premises and background that led us to the issuance of Law 1715 that promotes encourages, non-conventional energies, especially alternative energies, renewable and clean. The law states that this is a matter of public and social interest and essential to ensure the diversification of the energy supply fully and opportune.

This law has two main components, one is the importance of migrating toward renewable and clean energy, and the other important element of the Act is energy efficiency, efficient management of the energy. One of the strengths of Colombian energy sector is precisely the diversification of the primary sources of the country, its energy is diversified. But diversification is

not enough, diversification certainly helps us in efficiency, but we also need to advance in efficiency and make the best use of each one according to the vocation of each of these energy. What differentiates the effectiveness from efficiency is to do in the right way the right thing and that's what this law is about.

In this law some initiatives of major importance arise, the productive sector of the country looks forward with great expectation the regulations of this law and the situation in which we are, where we have this law in gestation, we ask UPME and the CRE to prioritize the regulation in two fundamental aspects: one, is the possibility for self-generators of accessing transmission networks to market their surplus energy and secondly, to managing demand energy looking for a more rational use of it through regulatory signals, signals in the market prices of energy, so that it can stimulate energy consumption in peak hours and this reduces the demands at peak hours and This will allow us flattening the curve and less stressing the generation base of the country. In this way we can move consumption into a more rational use.

It is envisaged in the law a number of incentives, tax incentives, such as the deductibility of 50% investment on taxable income, is also exempt from VAT teams tax, parts that deal with energy development renewable and also the tariff benefit by exempting import tariffs of items and equipment that have to do with this development.

In a recent study that was contracted by the UPME, concerning the interest of the employers to reduce their energy costs and thus gain efficiency and become more competitive, in the meetings we've had about the agreements we have signed with the ANDI, with ACOPI with FENALCO with COTELCO a number of measures were recommended to reduce energy costs . We want do the same with the sector rural too, because there is much that can win in energy efficiency also in the field regarding risk districts. And I said to the industrialists who should be concerned not only by the bills of energy, which is certainly important, and now the CRE is reviewing unit cost components, which is ultimately what will invoice to industrial or residential user.

But the focus should not to be left solely to energy tariff; the focus should be focused primarily on the cost of energy, that affects at the end of the day, what one pays. What we have been established, and that is what we are working through the Agency for Energy Efficiency, in front of which is currently César Piñedo, is that we can develop many actions efficiency to reduce costs energy without necessarily increase the service invoice.

We have told the same thing to transporters in the permanent table we created with them, because Mr. President Figueres if we can we gain efficiency in this country is in the transport sector, and whenever I meet with them they say "When are we going to have lower fuel prices?" and I had to say? look, the fuel prices anyway have some variables that are beyond the control of the government, the government sets prices international oil nor international fuel prices and there are no exchange controls so that we are

also at the expense of the volatility of the representative market rates, I say "consider more the fuel costs than the price of fuels ". What this mean to me? Just yesterday I saw in the press the protest of the conveyor guild because the ministry of transport wants to advance the plan of scrapping that is the way to replenish the automotive obsolete park we have in the country with inefficient motors which, excuse me the expression, make gargle with fuel.

One way to reduce costs is to have more fuel efficient engines. President Figueres do you remember what made Obama in the US? Following the mortgage crisis that ended spreading to the whole economy and leading to the economy of the United States nearly a recession, it was going to break the automotive industry in the United States is the flagship industry in the United States, they could not let fail. The number of unemployed who would be on the street was terrible, then Obama said "we have to hold this businesses" but he put them a condition, the state is going to inject resources but on one condition, you cannot follow producing inefficient motors. They could not continue manufacturing engines that consume more than a gallon of gas for 35 miles traveled. And the effect was given, and those old, inefficient and obsolete engines are which follow entering the country, that is why Colombia also has to take steps to modernize its engines.

This is the importance of implementing policies to gain in energy efficiency, to win on the use of alternative energies through public-private partnerships.

Finally, I note that Colombia has great potential to advance use of alternative energy, renewable energy, and clean energy. There are multiple fronts on which progress can be made, indeed, such Reficar, the new refinery because it will be a new refinery which will count this country. 7 of the 16 units are ready and in the first half of Next year the process of modernization of the Cartagena refinery will be already completed. This means efficiency gains because the conversion factor that today hovers around 72% will exceed 90%. Thanks to the increased efficiency we will have a huge savings in the country because the refinery will be able to refine heavy crude which are increasingly greater proportion we are producing in the country, and are reaching almost 80%. The production of heavy crudes we cannot refine here at home and therefore Ecopetrol has to buy to a third producer the lighter oil to charge oil refineries because it does not have the capability to produce the amount of light crude oil to refine the fuels consumed in the country That will allow to turn that Colombia stop importing diesel at a time when the country is importing 50% of diesel consumed in a country where over 60% of the fuel consumed is diesel. But something very important Mr. President Figueres, we will also gain in fuel quality.

Could you believe, Mr. President Figueres, that 4 or 5 years ago, here in Colombia, we were consuming diesel with 1200 ppm of sulfur when the international standard is 50 parts per million? 1200 compared to 50 parts per million, here too entered the Congress to legislate and ordered, that from the last year could not be consumed here in Colombia diesel above

international standards and what was the immediate effect it had? We had to import more diesel because besides the production shortfall we had of diesel in the country, to bring it to international standards, we had to buy a diesel plus to mix with which we produced here and thus bring it to international standards. Today, the diesel that is occurring in Barrancabermeja is on average 32 parts per million of sulfur, far below international standards and when Cartagena refinery will be in fully operational we will have a diesel much cleaner, less polluting and with far fewer emissions of greenhouse gases

President Figueres, this morning at breakfast we named you as godfather of the pilot plan in which the national government in San Andres, Providencia and Santa Catalina is compromised to make it a green archipelago. This means a conversion of the entire power generation park they now has, into clean energy and also migrate towards cleaner, cheaper energy and besides this, *pari passu* , with a more energy efficient management that will translate in much more savings and less energy consumption by the population. And this is an essential element, which we hope to achieve in this pilot I'm sure with your sponsorship to be a success. We will replicate in the rest of the country and to that extent we will have the opportunity to have a more sustainable development as required by the national constitution.

So the project that the national government is doing with your support and under the direction of the deputy of energy and hydrocarbons Orlando

Cabrales going to be a reality. There is a commitment of the international community, there is a commitment of the initiative that you are leading toward clean energy and with their help we will make that the initiative come true. Cicero was a depressed man who believed in determinism, he said that the future is as unchangeable as the past but now came Karl Popper who said that the future is not predetermined, we all contribute to determine it and clear, that determination has the same size as our dreams.

And let's say the example you have given us Paolo Lugari, which as a lonely Quixote, all these years with the Foundation Gaviotas showing to the country a path; without anyone noticing it and without somebody giving him a hand. When passed the 1715 law it came to my mind this dreamer who is Paolo Lugari and said to myself I have to get that Paolo's anonymity and loneliness of his company, receive a government support. He is a dreamer and I've always said that when we dream and we dream lonely, these dreams stay only as dreams; I sometimes stay up late dreaming. But when you dream with others you do not dream alone, the dream starts to become reality and as said one Brazilian song if we push the sun, Paolo with many more Lugaris, in the country will dawn earlier.

Many Thanks.