

**PARLIAMENT OF KENYA****THE SENATE****THE HANSARD****Wednesday, 26<sup>th</sup> February, 2014***The Senate met at the County Hall,  
Parliament Buildings at 2.30 p.m.**[The Speaker (Hon. Ethuro) in the Chair]***PRAYERS****QUORUM CALL AT COMMENCEMENT OF SITTING**

**The Speaker** (Hon. Ethuro): Order, hon. Members. We need to determine if we have a quorum.

*(The Speaker consulted the Clerk-at-the-Table)*

I am informed that we have a quorum. So, we may commence the business.

**PAPERS LAID****REPORT OF THE RBC ON REVIEW OF  
THE STANDING ORDERS**

**Sen. Orengo:** Mr. Speaker, Sir, I beg to lay the following Paper on the Table of the House today, Wednesday, 26<sup>th</sup> February, 2014:-

The Report of the Rules and Business Committee on review of the Standing Orders.

**The Speaker** (Hon. Ethuro): Sen. Mwazo. We are at Order No. 5. You need to table your report before you move the Motion.

**Sen. Mwakulegwa:** Mr. Speaker, Sir, but I tabled the report in the morning.

*(The Speaker consulted with the Clerk-at-the-Table)*

**The Speaker** (Hon. Ethuro): Proceed, Sen. Mwakulegwa.

**REPORT OF THE ENERGY COMMITTEE ON VISIT  
TO BARINGO AND NAKURU COUNTIES**

**Sen. Mwakulegwa:** Mr. Speaker, Sir, I beg to lay the following Paper on the Table of the House:-

The Report of the Standing Committee on Energy, Roads and Transportation on a visit made on 11<sup>th</sup> to 13<sup>th</sup> July, 2013 to the counties of Baringo and Nakuru.

**The Speaker** (Hon. Ethuro): Next Order.

### NOTICE OF MOTION

#### ADOPTION OF REPORT OF THE RBC ON THE REVIEW OF THE STANDING ORDERS

**Sen. Orengo:** Mr. Speaker, Sir, I beg to give notice of the following Motion:-

THAT, the Senate adopts the report of the Rules and Business Committee on review of the Standing Orders laid on the Table of the Senate on Wednesday, 26<sup>th</sup> February, 2014.

**The Speaker** (Hon. Ethuro): Next Order.

### MOTIONS

#### ESTABLISHMENT OF NATIONAL OPEN AND DISTANCE LEARNING UNIVERSITY

THAT, aware that the Open and Distance Learning (ODL) offers flexible learning opportunities thereby freeing learners from constraints of time and place while enabling them to combine work and family responsibilities with educational opportunities; aware that there is minimum use of ODL in both primary and secondary schools in Kenya; appreciating that this mode of learning would facilitate access to education in areas where physical and socio-economic factors hinder access; the Senate urges the National Government to institutionalize and mainstream policies to support ODL through the development of an effective regulatory and legal framework for ODL and to establish a national university dedicated to ODL.

**The Speaker** (Hon. Ethuro): Hon. Senators, Sen. (Prof.) Lonyangapuo had indicated that he will not be available this afternoon. So, this Motion has been deferred to next week.

*(Motion deferred)*

Hon. Senators, let us now move on to the next Order.

Chairperson, Committee on Energy, Roads and Transportation, you may proceed.

#### ADOPTION OF REPORT ON FAMILIARIZATION TOUR OF GEOTHERMAL POWER PLANTS IN BARINGO AND NAKURU COUNTIES

**Sen. Mwakulegwa:** Mr. Speaker, Sir, I beg to move the following Motion:-

THAT, this House adopts the Report of the Standing Committee on Energy, Roads and Transportation on the Familiarization Tour of the Geothermal Power Plants in Baringo and Nakuru Counties between 11th and 13th July, 2013, laid on the Table of the House on Wednesday, 26<sup>th</sup> February, 2014.

Mr. Speaker, Sir, we visited the counties of Baringo and Nakuru for a familiarization tour. But before I talk about the familiarization tour, I just want to give an update on the issue of geothermal power.

**Sen. Billow:** On a point of order, Mr. Speaker, Sir.

**The Speaker** (Hon. Ethuro): What is it, Sen. Billow Kerrow?

**Sen. Billow:** Mr. Speaker, Sir, I would appreciate if the Mover of the Motion would allow us to have copies of this report. The Report we have is the same one which I thought was tabled in the last session. If there is another one, maybe we need to be given copies because there are no copies of this Report.

**Sen. Mwakulegwa:** Mr. Deputy Speaker, Sir, the Report was made available in the morning. We have made arrangements on how copies can be made available. It is the Report which was tabled last year but it was not debated. Since it had lapsed, we had to do it again today.

**The Speaker** (Hon. Ethuro): Order, hon. Senators. Let me come to the assistance of the Vice-Chair. This is the Report that was tabled last year. Since business had lapsed, so we are re-introducing it. It is the same report, not a different one. The copies are available in Room 10.

**Sen. Billow:** On a point of order, Mr. Speaker, Sir.

**The Speaker** (Hon. Ethuro): What is it?

**Sen. Billow:** Mr. Speaker, Sir, I remember that report was debated. I personally and many other Members contributed to the Motion. So, in a report of the House where there is no requirement to vote on, if the Motion was debated and concluded--- I know it was debated and quite a few of us contributed on that Motion.

**Sen. Mwakulegwa:** Mr. Speaker, Sir, the Motion was debated but it was not concluded. So, if the Members so wish to conclude, I can make my closing remarks.

**The Speaker** (Hon. Ethuro): No. If it was inconclusive, then there was no determination, so it died. Therefore, you have to move it afresh. If you felt you contributed last time, nobody is compelling you to contribute again. This is an opportunity for others if they did not have the opportunity.

Let us proceed, Sen. Mwazo.

**Sen. Mwakulegwa:** Thank you, Mr. Speaker, Sir, for coming to my assistance. As I was saying, the Committee went on a familiarization tour basically to update ourselves and motivate the Geothermal Development Corporation (GDC) and the Ministry of Energy to actually accelerate the production of energy as we were experiencing power blackouts.

Mr. Speaker, Sir, just to give an update, Kenya is actually the first country in Africa to develop geothermal power. The country has actually developed the capacity and capability. We have qualified, trained personnel to the tune of about 50 engineers. They have undergone intense training specifically in the leading countries in geothermal technology mainly Iceland, Japan, New Zealand and China. On top of that, in very few

years - three to four years - the country has been able to develop the capability. We have 12 rigs in the country, four owned by the Geothermal Development Corporation, two owned by KenGen and the rest of the six owned by a private Chinese company. That equipment is available for leasing.

Since our visit last year, geothermal has been able to develop and feed in the national grid 250 megawatts, therefore, improving the output from 1,350 megawatts last year to 1,700 megawatts as of now. In the balance of the year, geothermal energy production is intending to actually connect 400 megawatts to the national grid.

The production of geothermal energy is basically concentrated in the Rift Valley. That is the counties mainly in the Rift Valley. The production of geothermal energy is beneficial to the counties because it produces a lot of heated water. The Geothermal Development Corporation is actually in discussion with the Rift Valley Water Services (RVWS) so that they can convert the steam water as a byproduct of geothermal, so that this water could be supplied to Nakuru town and the surrounding areas. Also geothermal as a byproduct--- we can actually use that water for irrigation. It can also be used for purposes of heating green houses and space heating.

Mr. Speaker, Sir, Baringo has the opportunity of 3,000 mega watts while Nakuru about 2,000 mega watts. When we visited Menengai we found two wells which were producing steam but it was not well headed. Therefore, during our discussion with the board and the management, we urged them to fast track the well heads so that the energy can be connected to the national grid. I am happy to say that they have done that. They have even done the same to the Olkaria project.

Geothermal energy, especially the exploration and development, has had four countries interested to come and do exploration in Kenya, of course, Korea through Hyundai Group, China, France and India. Geothermal energy provides clean water through reverse osmosis systems. We tasked the GDC to discuss with the counties where they are undertaking the exploration and development, so that those counties can also invest in the technology of using that water, so that it can be used for domestic and commercial purposes. Mainly they have engaged Nakuru and Baringo counties. But we also told them as they go further to West Pokot and Turkana, to also urge the counties there to take the opportunities of exploring the same.

Mr. Speaker, Sir, geothermal is expected by 2030 to produce 7,000 to 10,000 mega watts. This would be a good product mix for our energy. As you all know, right now we are dependent on hydro-energy and to some extent, diesel to produce the energy. As we wound up our trip, we made a few recommendations. They were:-

First, to register Menengai and Silale, which were almost complete to be fast tracked and to develop clear policies on how to share the proceeds, especially coming from the carbon credits.

Two, we encouraged the investors who were undertaking development to install well heads on wells which were ready, so that, that power can be provided to the national grid without further delay.

Thirdly, we recommended that the Government of Kenya should set aside adequate funds so that Geothermal Development Corporation can accelerate and undertake more exploration in the other counties of Samburu, West Pokot and Turkana.

The county governments should also set aside land for setting up industrial parks near the geothermal resource sites. That would facilitate development of IPS power plants and also provision of the by-products from the geothermal energy.

The other recommendation we made is that the current transmission losses - because we found a lot of losses - should be curbed by installing modern transmission lines that would eventually lower and reduce the tariffs to the national grid. There is also need for a stable and environmental friendly power supply in Geothermal Development Corporation projects. Therefore, we need to fast track that so that we can lower and reduce the tariffs to the national grid. More importantly, we advised Geothermal Development Corporation to undertake thorough project planning and also communication with the counties and the stakeholders where they undertake this. In instances like where we visited in Baringo County, some communities were resisting to give land for geothermal development.

Therefore, it was important for them to have a clear policy to communicate and educate the communities where they undertake their activities, so that by the time they move to site, we will not see communities either chasing the investors away or preventing development from taking place. This is not only for Geothermal Development Corporation, but it is a Government policy to develop policies so that the communities where activities for exploration take place, the local people are made fully aware, they know the benefits to the country, the counties and to themselves, so that they can embrace and promote geothermal and other activities that are beneficial to this country.

Mr. Speaker, Sir, with those remarks, I beg to move.

**The Speaker** (Hon. Ethuro): Who is seconding the Motion?

**Sen. Mwakulegwa**: Sen. (Dr.) Machage.

**The Speaker** (Hon. Ethuro): Proceed, Sen. (Dr.) Machage.

**Sen. (Dr.) Machage**: Mr. Speaker, Sir, as I second this Motion, I would like to emphasize the importance of geothermal energy in Kenya. Indeed, as we take pride to be the only country in Africa to have developed this resource, we should also be cognizant of the fact that we have not fully exploited our potential.

The geothermal potential areas in Kenya are mainly in three blocks; at the Coast, a lot of concentration of sites in the eastern side of the Great Rift Valley and also around Lake Victoria. There has been a lot of concentration on exploration on geothermal potential in the Great Rift Valley, completely forgetting the essence of spreading the process of exploration and exploitation to the flanks of this country. It is a known secret that power distribution and supply in most areas in this country is pathetic. We have lots of power cut outs not because the lines have not been fixed, especially so as we congratulate the Rural Electrification Programme, but because there is not enough energy to be pumped into the wiring system.

We know the Rift Valley has a high potential of high energy power production with very high degrees of temperature up to 170 or even 200 degrees centigrade in some wells. But we have medium potential areas such as the area around Homa Hills, which is a volcanic area which gives an average of about 70 to 80 degrees centigrade potential. This should not be just discarded as not being high potential. It is only because, relative to the existence of high production areas in this country, then it can be thought not to be potential. But if you compare this to other countries, it is high energy that is not being exploited.

Mr. Speaker, Sir, the coastal and lake regions exploration and exploitation will relieve the need for power in these areas, especially knowing that the production of power from the Turkwell Gorge is not adequate at all. We need to exploit this. Indeed, if you look at the geothermal power production, Kenya needs to put more emphasis on this than nuclear energy whose potential is good, but the dangers are so much that even highly industrialized countries like Japan had difficulties trying to sort out a crisis recently. Not forgetting what happened in Ukraine when they had such a crisis.

Mr. Speaker, Sir, I commend this Committee for doing a good familiarization tour and coming up with a report which should be a nucleus on other reports that this House should promote, the main emphasis being encouraging the Government and private entrepreneurs to look into this energy production. The unfortunate situation that we have is that if you go to Menengai Geothermal Power production area, we have so many wells that have been sunk but investors are few. There is need for financing of local entrepreneurs to look into energy production as an investment because this is lacking. But I do not think there is enough familiarizations or awareness for the citizens of this country on the presence of this resource as an investment opportunity.

Mr. Speaker, Sir, with those remarks, I beg to second.

*(Question proposed)*

**Sen. Munyes:** Mr. Speaker, Sir, from the outset, I want to start by supporting this Motion. But I have a small correction with the statement given by the Chairman that the report should have encompassed Turkana because Silale, if I need to be corrected on this, is in Turkana County. It is not in Baringo County. So, I think he might have covered three counties unless somebody wanted to put Silale under Baringo County to reduce the 77,000 square kilometres of Turkana County.

**Sen. Leshore:** On a point of information, Mr. Speaker, Sir.

**The Speaker** (Hon. Ethuro): Sen. Munyes, do you wish to be informed by Sen. Leshore?

**Sen. Munyes:** Yes, Mr. Speaker, Sir.

**Sen. Leshore:** Mr. Speaker, Sir, I would like to inform my colleague that Silale is where the border of Turkana, Baringo and Samburu is.

**Sen. Munyes:** Well, in that case, let us include Samburu also. This is a disputed area.

This is a very good report and we need to support it. There is a big potential for geothermal energy in the whole of Rift Valley but in the past, we used to explore in some few areas. But with this kind of Report, the Government needs to expand exploration and exploitation of this resource. I know where I come from there is a lot of potential. When I talk of energy, we have the oil and gas industry which is being developed in Turkana County, the wind energy in Turkana and Marsabit counties and the northern part of Kenya. For us, as a country, to open up those areas, we need so much energy to enable entrepreneurs and that part of the world to brighten up.

We need to encourage investors. An investor came to Turkana County the other day with a directive from the Cabinet Secretary. I only want to propose that the counties take charge of this process. This is land that is under the county governments. We need to be part of the adjudication of the sites and be part of the whole process so that

communities' benefit from the Corporate Social Responsibility (CSR) that comes with these investments should be clear. This is clean energy that is good for the country. We need to support wind energy in Marsabit County and exploration works in Turkana County. In Samburu County, of course, my friend would want more energy to enable this country to develop.

With those remarks, I thank the Committee.

**The Speaker** (Hon. Ethuro): Sen. Mositet.

**Sen. Mositet:** Mr. Speaker, Sir, thank you for allowing me to contribute to this Report. Let me say that there are many myths surrounding issues of energy. Like the way the earlier contributor said, the beauty of geothermal is that it is underground, considering the areas where GDC has been exploiting. They have not come out to tell us how much we expect from each region. There are other regions with potential and in other areas research is still being done. Despite that, I do support this report but I still feel that we really need to open up on the issue of energy. So far, it seems that the people who are in it are the "who is who" in this country. It is time we opened up on the issue of energy.

Mr. Speaker, Sir, you will also find that the Ministry of Industrialization, which is the main consumer of power, is not connected to organizations like GDC and I think it is time we told them to consult so that whenever they talk of industrial growth in the country, they are not far.

I would like also to talk about our training institutions. It is really sad to hear that many people who work in those firms do not have specialized skills because for them to get the skills, they can only get that special training in universities in Japan, Iceland and so on. We need to empower our universities and suggest that the departments of engineering and sciences should be upgraded and the universities given more funding to engage in more research.

I also feel that there are some institutions in this country which were there before the GDC like KenGen. I believe that we have been funding KenGen but what we have been getting from that institution is not as much what the GDC has done. This is a young institution and I know what they have been doing and I can say they have been doing a good job. When a young institution like that one seems to be working well, we should empower it, just like the Report is recommending more funding to them.

Mr. Speaker, Sir, still on the issue of research - I do not know about the environmental impact as a result of drilling of the wells - An area like Baringo has problems of flooding not because of the water from the rain but it is due to the geological effects where the underground is pressurized and it comes up. So, we do not know whether it is affected by the drilling or there are other factors. Therefore, more research needs to be done. It is also good to note that we have very few experts in that area. It is good to know the effects of such projects on the environment.

Mr. Speaker, Sir, I will just conclude by saying that there is a lot of money used to develop infrastructure around those wells. You will find that there many roads being constructed in those areas. In some of those areas accessibility is a problem and if you need to put up infrastructure then you need big machines. Those machines are very heavy and the development of infrastructure takes some little bit of time. Therefore, as much as infrastructure is done along those wells, the county government should be brought on board so that the Ministry in charge of infrastructure can also improve the existing projects so that the residents can take advantage.

Mr. Speaker, Sir, regarding the issue of water, just like the Chairman had indicated, in some areas, there is a lot of water. Water is a resource. There are some areas with problems of water like Nakuru and Kajiado. So, I would say that we need to bring together the various sectors so that they can work together. These include the water sector, the energy sector and the county governments. When they work together, all the available resources can be fully utilized for the benefit of *mwananchi* and the counties.

With those few remarks, I support and say that the Committee did a good job.

**Sen. Leshore:** Mr. Speaker, Sir, from the outset, I would like to support the Motion. I had the opportunity to be among those Senators who visited those areas, not as a Member of that Committee but as a guest Senator because my county is one of those counties which will eventually benefit from the good work done by Dr. Simiyu with his team of very young and dedicated engineers. All of them were Kenyans and highly trained. As a team we really appreciated what they were doing in those areas.

Mr. Speaker, Sir, I would like to support the GDC and urge the Government to give them enough funds so that they can exploit areas which were long forgotten. Baringo, Turkana and Samburu will become a silicon valley once geothermal is exploited. I learnt that when they dig these wells, by-products like water, gas and even gold are discovered. So, if they continue further north where my friend Munyes comes from, I can assure you that cattle rustling between Turkana, Pokot and Samburu will be things of the past. I would like all my colleagues in this House to support geothermal because it is the energy of the future. It is not going to attract a lot of environmental effects and I can assure you that if we support the GDC, we are going to have good infrastructure in our areas, enough water and enough development in our areas.

I want to urge all my colleagues to support this Motion and also urge the Government to fast-track the funding of this project because it is our future.

Thank you very much.

**Sen. Haji:** Mr. Speaker, Sir, I support this Motion and I would like to make a small observation. We know that energy is one of the biggest contributors to the development of this country. This Committee had the honourable task of not restricting itself to geothermal. As other Senators have said, there are many other areas that they should have included in their study especially on the issue of energy in this country. As Sen. Munyes said, we are told that there is huge potential for wind and solar energy in Marsabit District and this can solve the problems of the citizens there. As a nation, we are lucky that we have a lot of sun. I was in Japan and I was amazed to travel on a 300 kilometre road at night but it was being lit by solar energy tapped during the day. Similarly, this can be done in Kenya; we can save a lot of money that we normally use to buy oil in order to get energy.

Mr. Speaker, Sir, we have also been told that coal has been discovered in Kitui and the Committee should have asked how that could be exploited faster so that it can also help our people access affordable energy. Similarly gas energy is quite plenty in this country. There is also a lot of energy in Lamu and part of Ijara, where I used to represent, and I am sure the same applies to many parts of North Eastern Province and some other parts of Rift Valley. So, these areas needed to be studied and some form of documentation prepared.

I also want to differ with my brother, Sen. Munyes, that Cabinet Secretaries are responsible for seeking investors from all over the world. Their responsibilities should be



to get those investors and coordinate with the county governments so that they can provide land and other services that may be required in order to enhance the quality of life for the people.

Thank you very much.

**Sen. (Eng.) Muriuki:** Mr. Deputy Speaker, Sir, let me, first, start by saying that I support the Motion to adopt the Report. Secondly, I commend the Committee. Going by the brief presentation by the Chairman – the Acting Chairman has been moving the Motion – it is very educative and encouraging to note that a Committee of the Senate has gone into the geothermal industry and come up with very pertinent information and some data which has reached the Senate first hand rather through the press.

It is also very encouraging to hear from the Chairman's Report that we have as many as 50 engineers trained in that sector. We have had in this country situations where we train people and when we want to train some more, we send them abroad. Fifty years down the line, we still have no experts in anything on the basis that when we want something substantive done, we still have to go abroad.

This is very encouraging and we hope that the people charged with the responsibility of running our geothermal industry will develop the necessary expertise so that other countries, more so in our region, can come to learn from our engineers. Having said that, I would like to suggest or encourage the Committee to do more. They went to look at the geothermal power production. However, we have many other sectors. These could be in their schedules but we have other energy sources like wind. I presume that we have only done so much. It would be good if the Energy, Roads and Transportation Committee can do this on behalf of the Senate so that we have first hand information on where we are in energy production.

Take, for example, wind. We hear of countries that have done very well with wind. We have read about countries like South Africa which have big plants of solar energy. We want to know how far we can go apart from having the few panels we put in our individual houses. We are also lucky that our country has oil, or we hear, since it is not yet out of the ground, courtesy of Sen. Munyes and the people in that area. These people will give people oil but we want to know whether apart from the oil that we use for fuel to what extent we can use oil powered generators. At the moment, the ones we are using are diesel but we have a few which are oil fired. We want to know how we can use oil cheaply compared to either hydro, geothermal or any other source. We also have coal in Ukambani. I think they are arguing about it. We want our Committee on Energy, Roads and Transportation to delve into that so that we know where we are.

There is also an issue of nuclear energy. I know that a previous speaker appeared very opposed to it. I am of a different opinion. Before we conclude on whether to do it or not, we should look at what to do and not fall into a mishap. The truth is that if you visit some of these countries – I remember one time when during the Eighth Parliament we visited France - This country has about 60 per cent of its energy coming from nuclear. So, they must have found something good. We must know what the pros and cons are before we discard it. We should know the serious dangers that we cannot cope with which people in Europe are dealing with.

One advantage of getting geothermal energy, hydro or oil is that we conserve our environment. At the moment, a lot of energy in our houses is either firewood or even worse, charcoal. The best charcoal seems to be the one that comes from areas which have

very few trees. Any effort towards introducing geothermal energy and any other clean energy would go a long way to conserve the environment in this country.

The real problem in our country, when it comes to a Report like this, is the link between the Legislature and the Executive. Traditionally or historically, we have had very good Reports done by Committees of Parliament. These are adopted by the House but the implementation which is supposed to be done by the Executive has not been there. This needs to be re-established in the new dispensation so that it works. I have in mind, for example, a Committee of Parliament going out to look at possibilities of where wind energy has been developed, for instance, in a country like The Netherlands which has developed wind energy to a very high level. When the Committee came back, it did a Report that was adopted by the House. However, that is all. Later, whenever the Executive wanted to do something regarding wind energy, they did not look at the Report.

I remember that I was part of that Committee that had gone abroad. We came back and later learnt that the research that had been done worldwide cited Kenya among the countries with some wind energy potential. The map that The Netherlands people had of Kenya had identified three spots; one in Turkana, another in the coast and one near Naivasha. When some people came to install some wind turbines in my county of Nyandarua, neither the Senator nor the Governor knew who they were. Nobody knew, at all, who they were.

There is a link in what Parliament is doing because it is assumed that perhaps what these people came to do in Nyandarua County had something to do with the Report which had identified a portion of Nyandarua which has wind potential. Assuming that they came on that basis and neither of us in Nakuru County or Nyandarua County had any clue of who these people were, then we need to get a system where Reports adopted by the House are implemented. We have an Implementation Committee but we need to go an extra mile so that the Executive can take these Reports seriously. They should take into account the Reports that are done by Committees of the House.

With those few words, I beg to support.

**Sen. (Prof.) Anyang'-Nyong'o:** Thank you, Mr. Speaker, Sir. I apologise that I came in after the Mover had moved the Motion. However, I managed to read the Report. I concur with my colleagues that this is a very informative Report. However, I have a few issues to raise with the Report. One, the Report gives a good description of what the Geothermal Development Company (GDC) is doing and also points out a few problems faced by the GDC which is commendable. They have also made several recommendations on what should be done. I would have been very happy to see in the Report, discussions between the Committee and the GDC on why certain things happened the way they did. Why has the Government not invested in the GDC?

The resource necessary to attract investments - almost in every site of sinking wells for geothermal, the statement recurs every now and again - that this could not be done because so much money that is needed for investment has not been advanced. Obviously, when the GDC was being set up as a state company with the express task of developing geothermal, the state should have known that it costs something to develop it.

Secondly, it is pennywise and pound foolish to pay manpower in the GDC and not give them tools to do their work. Once they have tools to do their work, you will have set up the infrastructure in the various sites that geothermal will have been identified.

Taking our Senators there and saying that they have identified Suswa, and Menengai and that after all these years you have not found money to build the infrastructure, there must be some reasons. Does the Government require time probably two, three, four or five years during which to do the infrastructure? If so, the Senate Committee should be told that if this money is not forthcoming for investments, during a particular period, it will come so that it makes sense for geothermal generation.

Secondly, this is referred to, now and again and so much is needed to attract donor investments. The word “donor” means that you give money and you do not expect anything in return. I think in the business of geothermal, we do not have crystal donors but crystal investors. Geothermal is a very attractive investment as long as the Government undertakes its counterpart responsibility; first because there is a ready market. The Kenya Power and Lighting Company and the Kenya Pipeline Corporation have already said that once the energy is available, they will buy it. I am glad that energy generation, transmission and sale, all those three aspects of energy have been carefully demarcated in our system. We have the bit that generates, the bit that transmits and the bit that undertakes the transmission.

The Report also says, very sincerely--- I must commend them because energy consumption in this country is very taxing, both to consumers and to the investors to the extent that since energy costs so much we do not provide a good incentive for investors to come to Kenya. Other than come here to invest, they could have gone to Botswana or something like that. In this area, we chose geothermal so as to reduce on the costs of energy. However, in the meantime, things are happening in the sale of energy which is absolutely atrocious.

First, we know the pain that this country went through when the independent power producers were introduced to this country. We know the rent seekers who introduced their independent power producers. When I was doing planning and national development, we had all these facts. These independent power producers here were a purely a rent seeking initiative. This country paid an atrocious amount of money to get the independent power producers here. The terms of making them operate in this country were at a tremendous cost to the Kenyan consumer. The Government, obviously, did something which was definitely not commendable at all. However, that is water under the bridge.

The next thing to do is: How do we deal with independent power producers? How do we phase them out? The Report points out clearly that the best way to phase out independent power producers is to invest in the cheapest production of energy known today and that is geothermal. Geothermal is much cheaper than solar. Although we have a competitive advantage globally because we are at the Equator, we have fantastic sites for solar production. Some have been mentioned. My own home lies on a grid where solar production is done.

Now we have two sources, therefore, to rely on if we are going to phase out independent power producers and produce much cheaper and cleaner electricity with more benefits than before. That is solar and geothermal. In the meantime, while we must press the Government to do its counterpart investment, so that this is speeded up, something must be done with the Kenya Power and Lighting Company (KPLC). Those of you who pay your electricity bills – I do not know how many do, but I do – know that if you look at the bill, more than 50 per cent of that bill is not really paying for the energy.

It is paying for all kinds of so-called taxes, which I do not know whether they have ever been passed by Parliament. There is fuel adjustment and so on. You cannot know where these taxes came from. But if you trace the teleology of these taxes, you will find that they end up with the independent power producers. This shows the kind of corruption that exists.

Mr. Speaker, Sir, we are now forced as consumers to pay a loan that was completely unfair. So, I think that it is the business of the Committee on Energy, Roads and Transportation to really call the KPLC, and if possible, call us as witnesses or people to give evidence, with our bills, so that the KPLC can explain to us, one, who gave them the authority to levy these taxes and when. If you look at the HANSARD of Parliament, there is nowhere in the history of the Sixth, Seventh, Eighth, Ninth or Tenth Parliament where I remember these things being discussed, to give the KPLC the power to levy such taxes. If they did, then let us ask the Treasury how it maneuvered through Parliament to get these kinds of taxes, because Kenyans are suffering. I think that this is the more reason the Committee should meet the KPLC and all the people involved, to help Kenyans really get out of these tremendous energy costs in our country.

Mr. Speaker, Sir, the fourth thing that I wanted to bring out as a result of this Report is the mode of investment of the geothermal industry. If there is only one mode of investment that is referred to here systematically, the Government investing in infrastructure and the so-called donors bringing in the money for doing the actual investment, I do not think that the Geothermal Development Company (GDC) is being very imaginative. Now that we have a proper public-private partnership law in this country, it should be used in all Government corporations that are involved in development. If the public-private partnership is properly financed – not the Anglo Leasing type – it can be very cost-effective in our country to invest in such projects like GDC, which as you see, cost trillions and trillions of shillings to get going. But in the end, if you invest today, the outcome or benefits are tremendous. Not only will you get the carbon credits and so on, but the cost of energy consumption will go down drastically. The availability will be there and Kenya will be part and parcel of those countries in the world which are in the forefront of not only generating and using cost-effective energy, but also environmentally friendly when you move steadily to geothermal and solar in providing energy to our people.

Mr. Speaker, Sir, I would request the Committee on Energy, Roads and Transportation to maybe call the GDC to a Committee hearing and discuss this Report with them and maybe put to them: “Please, can you explore some other modes of investment that are good for this country?”

Mr. Speaker, Sir, finally, if you read the history of several countries which have made it rather fast in development, like Malaysia, Singapore, Korea and so on, which we always quote, you will find that when they have an initiative like this, the government must be stable and professional. But when you start something like this and every now and again change the board of directors or chairman – somebody is just settling down in the office and they are going away – they go away with a collective memory, contacts that they have made with investors and goodwill that they have built. This is why our country does not go far. We are always starting and restarting, to the extent that sometimes, I wonder whether when we were developing Vision 2030, we also thought very carefully, as the Government, in terms of---

The GDC is a perfect example. When I look at the list of the board of directors, chairman and so on, if the Committee was to go back there today, it will find a completely different story. They may have to ask the new board to tell them the story again. When an investor comes again in a big thing like this, where billions of shillings are involved and keeps on meeting new people on a daily basis, he will just say: "These people are not serious." He will go and invest in Botswana.

Mr. Speaker, Sir, I beg to support.

**Sen. Keter:** Thank you, Mr. Speaker, Sir, for giving me the opportunity to contribute to this Motion.

Mr. Speaker, Sir, from the outset, I want to say that I had the privilege of serving in the Ministry of Energy for two years and I am also in the Committee on Energy, Roads and Transportation. So, I happened to have been part of the team that travelled to Menengai, Olkaria and Silale. I also happened to have been there, under the leadership of Sen. Kiraitu, when the GDC was formed. It is good to note that what some of my colleagues are saying are facts which need to be pointed out. The reason for the creation of GDC was to cushion the government in terms of the investment, because the geothermal exploration exercise is very expensive. Drilling one well is very expensive. It costs about US\$5 million. So, it was extremely difficult for any investor, be it the Government or private sector, to invest in geothermal energy. So, the Government created the GDC and Kenya Electricity Transmission Company (KETRACO) to fast-track the drilling. The GDC was started in 2009.

Mr. Speaker, Sir, the current Chief Executive Officer (CEO) is an experienced person and has all the credentials. Also, the technical staff are experienced. Dr. Silas Simiyu is a very well experienced geothermal expert in Kenya. I do not think we have anyone else in this country like him. Contrary to what my colleague, Sen. Anyang'-Nyong'o said, the board is still intact. It is only the Chairperson who changed.

Mr. Speaker, Sir, we have a potential of about 7000 megawatts, but what has been exploited so far is very little. There are two power plants which will be completed, I think by June, 2014. The one in Olkaria will produce 140 megawatts and the other one will also produce 140 megawatts; making a total of 280 megawatts. It has taken about 15 years to put up those power plants. If you get a loan of, say, Kshs1 billion and invest it in drilling, after drilling and getting the steam, you still have to wait again to get a private investor or Government to put in additional funds to establish a power plant for another 15 years. Therefore, the process of drilling up to completion may take about 20 years.

With the coming in of geothermal power, we can bring down the cost of electricity in this country, hence also cut the cost of production. One well produces between five and ten megawatts. So, if we want 140 megawatts, it will require drilling more than 15 wells. Drilling one well takes about two months or 60 days. But the GDC will fast-track the drilling, hence the generation of steam.

Mr. Speaker, Sir, in our Report, we have said that instead of waiting until we get to 100 megawatts to establish a viable and commercial power plant, we can still employ the technology which other countries like Philippines and Malaysia have done. One you drill a well, you can connect it to a well head generation which can generate five to ten megawatts. If the drilling takes about two months, it can be connected to the grid immediately, hence enhancing our capacity in terms of generation. Instead of talking

about 1700 megawatts, if we can add even ten megawatts per month, I think that we will move forward.

Mr. Speaker, Sir, I want to urge my colleagues that this is an area that we need to invest in. The investment in this area and creation of GDC was to avoid donor reliance. Other countries cannot invest where they do not see the returns. Suppose they hit a dry well and they have put in money? Therefore, we need, as a Government, to put in our local resources, so that we can drill many wells and, hence, invite private investors to invest in the geothermal plants. Last year, I saw a tender in Menengai of 30 megawatts or 90 megawatts, under private partnership, where the Government will not look for money to inject in the power plant. Instead, it is inviting private investors who have the money and potential in the sector, to partner with the GDC. Since the GDC will be a partner, they will also get some revenue to invest in more exploration in other areas. Therefore, it is good that we have put in resources.

Mr. Speaker, Sir, we also went to Silale which goes all the way to Turkana County. They need resources to do the road network and water. In the previous financial years, they have not been given adequate resources. They have been given resources for drilling, but they need resources also to improve the infrastructure, including roads. They also need water because the project uses a lot of water. In the budget for the last financial year, they had a shortfall of Kshs2 billion. I am happy that it was captured under the revised estimates and also in the estimates of this year. So, this is an area which is very crucial for us. Geothermal is not only in Naivasha. You can get it in Baringo, Homa Bay or Turkana counties. Hence, instead of establishing factories and transporting all this power, why can we not create factories there which will lower the cost of transmission? This will lower the cost of electricity.

I think that, that is what the Geothermal Development Corporation (GDC) is trying to do so, so that they can establish some of the industries, invite interested companies or private people so that, in Turkana, instead of connecting all the power and transporting all the way to Nairobi, you can establish a factory there. This will create job opportunities for the people living around there. Maybe, instead of taking about 100 megawatts there, they may consume about 20 megawatts and the balance of about 80 megawatts can be used by the rest of the country. Hence, that would be the only way of opening up our areas.

You will find that the cost of transmission is very high; it also requires a lot of money. The people of Turkwel have been fighting in the Turkwel Project. The people living in Turkwel did not have electricity, and yet the question they were asking is this; we generate electricity here; who is using that power if we cannot be given the opportunity to benefit from it? That has caused animosity among the communities living there to an extent that they have now been given power. You need to give them an industry there so that they can get employment and then move on.

Another point which I want to touch on, Mr. Speaker, Sir, is this; geothermal power is one part, the other part is the coal plant, and I am happy because I think they are establishing it in Kitui. I saw a tender of about 960 megawatts of a power plant. If that is established in Kitui, we can also have factories –even cement factories – going there. There are raw materials which people go and manufacture or which they go and get from Kitui, transporting it all the way to Nairobi or to the Athi River cement factories here to be used. But with the 960 megawatts power station being established there, factories can

also be put up there and in the process create job opportunities and, hence, ease out the population from Nairobi; and also establish other cities around there.

That is also an area we can explore, although people have been saying that coal is not good energy. You will find coal in China, India and in Japan, where the biggest about 50 per cent of their power plants are powered by coal. But when it comes to our area, we are told, no; go to the green energy," which is very expensive! It is not good. But I think as a country, it is good to open up those areas. If they are using coal in Japan, China and in other places like South Africa, with our coal in Kitui, we will still lower the cost of electricity by establishing those power plants.

Mr. Speaker, Sir, another area which is of great importance is gas, which is very cheap. Tanzania now has got a lot of gas deposits, which is going to lower the cost of electricity. They are looking for a way of even exporting their excess to our country. But I want to believe that in the course of even drilling oil and in the course of our exploration activities, Kenya also has a potential for gas. I think we have a lot of gas; it is only that we have not exploited it. I think it is good for this Committee and also, maybe, for the Government to invest more so that we can also use gas, because the power plant which is being established in Mombasa which I saw to be 960 megawatts again under the private partnership – that is LMG – that 1,000 megawatts will only be consumed by the railway. So, you will find that we will still have a deficit of the energy.

So, Mr. Speaker, Sir, we need to move faster; we need to invest a lot of resources in this field so that come the next five years, we will be talking about--- If the cost is averaging, let us say 18 cents; if you can now lower it to even 10 cents; or if we can say that, every year, we should lower it from 18 cents to 15 cents, to 12 cents; then come the next 10 years, this country will be a haven for investors. We will have a lot of people coming to this country in terms of opening up the factories because everything is driven by energy.

So, Mr. Speaker, Sir, I want to urge this honorable House that this is an area which all of us need to look at so that we can really apportion our national resources to it so that we can develop. So, I do not want to take much time; I beg to support this Motion.

Thank you, Mr. Speaker, Sir.

**The Speaker** (Hon. Ethuro): What is it, Professor?

**Sen. (Prof.) Anyang'-Nyong'o:** Mr. Speaker, Sir, would I be in order to congratulate the former Assistant Minister for Energy for having given very good information to the House?

*(Applause)*

**The Speaker** (Hon. Ethuro): Order! You are completely out of order!

*(Laughter)*

In any case, I thought you were going to challenge him when he was contradicting you in terms of the Board; he said that the Board is intact because the Chief Executive Officer (CEO) is still there, but the Chairman is gone. But you know the Managing Director (MD) is there by virtue of the position; he is just but a secretary! But that is fodder for another day.

Let us proceed.

**Sen. Chelule:** Thank you, Mr. Speaker, Sir. I was worried; last week I stood up 20 times, but I did not “capture your eye”. So, thank you today for noticing me.

Mr. Speaker, Sir, I stand to support the Motion on the debate---

**The Speaker** (Hon. Ethuro): Order! Order, Sen. Chelule! You know the rules; you know you must catch the Speaker’s eye. So, you may wish to change positions.

**Sen. Chelule:** Mr. Speaker, Sir, I stand to support this Motion First, I must congratulate the Committee Members for going round our country, visiting various sites and coming up with a very good report. In this report, for the short time I have gone through it, I have found out that they have known the challenges that we are facing as a country. We are now talking about the Uwezo Fund that should benefit the women and youth of this country; and the supplier of electricity in this matter is very key. So, I just wanted to congratulate the Committee for coming up with very good recommendations that will enable us, as Senators and as the Government, to come up with ways to address these issues. I am so happy that, today, this Report is guiding us as Senators; and it is also guiding the Executive – those who will enforce their recommendations.

Mr. Speaker, Sir, I know that right now, most Kenyans are not able to access electricity because the cost is so high. It is our mandate to ensure that the cost of electricity is reduced. So, this Report is really guiding us, and we shall know where to start so as to give good services to the people as per the needs of this country.

With those few remarks, Mr. Speaker, Sir, I beg to support.

**The Speaker** (Hon. Ethuro): Sen. Godliver Nanjira Omondi.

**Sen. Omondi:** Thank you, Mr. Speaker, Sir. Today, I am so happy that you are able to call out all my three names.

Thank you so much, Mr. Speaker, Sir, for giving me this opportunity to contribute towards this very important Motion; and I want to support it because for sure Kenyans are incurring a lot of expenses when it comes to power, especially for the rural schools. Most rural schools are not able to carry out their lessons during odd hours, like the evening lessons, simply because they do not have electricity. I think if this Report is adopted, it is going to be the turning point where power generation is going to reach out to local people, and it is going to help even parents who have their children in learning institutions in local or rural areas.

Mr. Speaker, Sir, I want to support this Motion because when it comes to the bills which Kenyans are paying, especially the common Kenyan citizen who may not be in employment, and they must use electricity for their day to day activities or for their domestic use, I think they are not able to make it because of the expenses and the bills that are too high.

Mr. Speaker, Sir, getting electricity in homes is somehow expensive, and I think it is because of the logistics that are attached to it that makes it impossible for Kenyans to afford electricity in their homes. This leads to a lot of deforestation, simply because many Kenyans are using charcoal and firewood. I think if this Report is adopted and the implementers make use of it, it is going to help the larger population of Kenya to have power even at the lowest levels of the living standards, and this is going to reduce the high cost of fuel and reduce deforestation, which will lead to improved living standard for Kenyan people. That way, we are going to give ourselves credit because they will



remember that under the Constitution and under Devolution, their living standards changed simply because we did something commendable that changed their lives.

With those few remarks, Mr. Speaker, Sir, I beg to support this Motion.

**The Speaker** (Hon. Ethuro): Sen. Elachi.

**Sen. Elachi:** Thank you, Mr. Speaker, Sir. I also rise to support this Motion on the Report. For many years in our country, we would say that God has really blessed us. But one of the challenges we always face is; when we bring in our own personal interest, then we find that we prolong most of the blessings that we are given until they become curses. But I want to thank the Standing Committee on Energy, Roads and Transportation that is now trying to follow up and look at these resources that God has given us. The Bible says that it will take 50 years and within that 50<sup>th</sup> year, you will receive the blessings that the Lord has hidden, and he will reveal them to his people. I think that is what is happening in Kenya today.

If you look at the challenges we face in terms of industrialization, we are looking for energy, yes; and we are saying that we want to see a country that is moving towards industrialization. We know that we face the challenge of electricity and even in terms of looking at how production is done; it is very expensive. Therefore, we hope and we want to see to it that those who are dealing with the exploration of all these sources of energy should also come out and give the country a clear database so that they can know that within the regions, if it is north eastern or the coastal region or in the north rift region, these are the regions where we have potential and where we have natural resources that can really boost the country and put it on a map where, within Africa and even the continent, we can compete with others.

Mr. Speaker, Sir, when you look at our counterparts within East Africa, I think we are facing competition in terms of how they are moving, especially Tanzania. This is something that, as a country, we need to ask ourselves whether while we move on – and I will give an example of Kwale and titanium mining – you can imagine that after 10 years is when they exported the first consignment –which is very sad.

In the last ten years, we have lost as a country. We have titanium but what are the other natural resources that have been be exploited by the investors? The other things that we should take advantage of is to look at the young people in the university who can join those investors in terms of gaining experience so that in the years to come, we can have our own people doing all these things. Nobody asks our university students who are doing engineering and other science subjects whether they can go and learn with the investors. That is something that this Senate has to look at critically.

We are now going to have a standard gauge railway line, therefore, we need to see our engineers being engaged seriously so that they can take over maintenance. We need to ask ourselves whether the Geothermal Development Corporation (GDC) as an institution has been able to take out some of these young students to be given expertise outside the country so that when they come back, they can take over. It is something that is worrying that as much as we want, we need to ask ourselves what the community in that area is bound to gain. What are the communities in Nakuru, Menengai and in the rest of the places where we have these explorations gaining from investors?

The other thing is that when you look at the Report, you find that there are disparities in regions; in one region, you will find that it is doing very well but in other regions, it is not doing well. Therefore, the institution should harmonize so that when we

are talking about Menengai, it should be the same with Baringo. So, how do we ensure that we move at the same level for the purposes of having uniformity and also for the counties to benefit?

*[The Speaker (Hon. Ethuro) left the Chair]*

*[The Deputy Speaker (Sen. Kembi-Gitura)  
took the Chair]*

Mr. Deputy Speaker, Sir, lastly, as I support this Report, one of the recommendations is that in the end, the Ministry needs to tell us where we are, what we have benefitted and so on. For example, have we received any electricity and if so, how many kilowatts so that Kenyans can start appreciating that there is the GDC in Menengai and Baringo?

With those few remarks, I beg to support.

**Sen. (Dr.) Khalwale:** Mr. Deputy Speaker, Sir, I beg to support this Motion and as I do that, I wish to register my complaint to the Members of the Committee because what we are now starting to walk on as a Senate, we are now walking on the road for the Senate that Kenyans want, a Senate that will just go beyond just talking about the issue of division of revenue and how we share out the wealth of the nation. Kenyans would like to see a Senate that is debating the possibilities and ways of expanding the common wealth of the Republic of Kenya. Indeed, the Report of the Committee has given us exactly that. We are now thinking in the direction of making electricity cheaper by exploiting other sources of energy and in fact, going to the extent of exporting that energy.

Mr. Deputy Speaker, Sir, on a Motion like this, one cannot help but condemn the high cost of electricity. It is so high and that is why there is need for the National Assembly to appropriate more funds to go towards research in our teaching and research institutions like the universities so that alternative sources of energy are discovered and explored. That would be money spent in the right direction. I have in mind geothermal energy, solar energy and power alcohol or ethanol. These are areas of research where if we fund our universities sufficiently, then you will find that places that produce sugar cane like Kakamega, Kisumu and Bungoma counties will then end up being the net producers of power alcohol that will go a long way in powering our motor vehicles with the resultant effects that we will be spending less money in running our transport system.

Mr. Deputy Speaker, Sir, as I thank the Members of this Committee, I also want to thank God. God was so kind to us that he made Africa the richest continent in terms of mineral resource in the whole world. There is no other continent in the world that competes with Africa but it is so sad that having been so well resourced with minerals, leaders of the African nation have used this great wealth of our continent in negotiating for contracts that benefit them and their families as individuals. Most of the African members of OPEC are some of the poorest countries in the world. If you go to countries in West Africa which produce oil, the people have nothing to show for the oil that has been there for years.

Mr. Deputy Speaker, Sir, this Senate would be interested to know that time has now come when we should refuse that Kenya does not walk the same route that other African states have walked because the best that this country will get is 5 per cent. They

get 5 per cent in form of royalties and the various incentives that the multinational oil exploration companies offer. This means that if one barrel of crude oil costs US\$100, at the end of day the African countries, on one barrel, will make only US\$5 while the multinationals make US\$95.

I was reading around and I wonder if you had an opportunity to look at the letters, it is a sad account. It is an analytical journalism of how the so-called rich countries will continue to manipulate us until we completely exhaust all our minerals. They give us an account whereby President Charles Taylor who is now languishing in prison in the United Kingdom (UK) and is going to stay there for 50 years - we want to wish him a long life so that he completes the 50 years - which is almost difficult because I hear he is over 60 years. When he was sentenced, he said that he was told by the United States of America (USA) that he will take 5 per cent. Charles Taylor refused to take the 5 per cent and demanded 35 per cent. At that time, the cases at The Hague had started. Those are not my words. When he refused, an American came and told him that we can help you end these investigations at The Hague if you allow 5 per cent. Taylor then said that he would rather pay rather than allow another generation to come and get 35 per cent. In the process, you know where Taylor is.

Mr. Deputy Speaker, Sir, there is something called the bottom one billion people in the world, and 75 per cent of these bottom one billion people who live in abject poverty come from Africa. The author was called Colier, an expert of the World Bank. When I was reading it around three months ago, I realized that if we do not address what Colier raised in that book, the oil that we have discovered in Turkana will do to Kenya what oil is now doing to the former Sudan and the current South Sudan. He said that there is a curse in Africa that is the reason why 75 per cent of the one billion bottom poorest people in the world come from our continent.

The first curse is the mineral resource curse. The moment an African country gets minerals the way we have in Turkana, it becomes a recipe for civil war. People will start fighting, even inter-tribally, and in the process, you will end up where the Democratic Republic of Congo (DRC) is. The DRC, the richest country in Africa has for over 50 years been unable to exploit its potential because they are fighting over that resource. So, the mineral resource of DRC has become a curse. I am saying that we, the leaders of this Republic, must refuse to allow the oil that has been found in Turkana to become the curse that will give us a second curse of civil war.

Mr. Deputy Speaker, Sir, the other curse in Africa is the issue of bad governance. You will find that because of the oil, the geothermal in Olkaria, Silale and Menengai, poor governors of the Republic will not give us an opportunity to prosper. Why? Because leaders will open an offshore account and start banking all the money outside the country, thus, the money will not trickle to the poor of Kenya. This is the case of a rich continent with the world's poorest. Does it not occur to you that something is wrong somewhere when, currently, the county which is supposed to be the richest in Kenya, namely Turkana, is the one which has given us the worst situation; that people rely on relief food, people are dying in this age and era when there are devolved funds going to Turkana?

The answer is only one; corruption, mismanagement and poor governance. It is time the chief executive of the county took a special interest to ensure that the devolved funds are actively utilized in Turkana so that the children of Turkana do not die because of lack of food. I do not know where some of you have come from but if we share a

common background, that thing called hunger pangs is not a joke. Those are just pangs, how about having them until you die?

Prof. Lesan, you know how we used to come from primary school and when you reach home, mama is not there and there is no food, maybe for you, you could find food but for some of us, there was no food. Since we have this opportunity to be here, we should not be scared of corrupt leaders. We should fight them to make sure that the common wealth of this country goes to people who are disadvantaged like Turkana. There was a little boy in Kakamega called Cleophas Malala. He wrote a play last year called "Shackles of Doom". In this play, he was painting a Turkana where he will find doctors, engineers and the shop owners working there being either Asian or some other non-Turkana tribes of Kenya.

We had to fight because the Government did not want Kenyans to see what had started building up in Turkana. In the process, the Government moved and banned the play. I would like to share with Members that one of the greatest sons of Africa, the former President of South Africa, Thabo Mbeki, is one of the few people in Africa who supports President Robert Mugabe in the Indigenization Programme of the Indigenization of Resources of Zimbabwe. I was reading a presentation that was given by Thabo Mbeki to the East African Community (EAC) in a speech. Thabo Mbeki says, the reason why Robert Mugabe is being condemned is because he is doing what we should have done at the beginning.

Before we explored our resources, we should have first of all put the resources in our hands. You can be sure that if Mugabe succeeds, those who will want the diamonds of Zimbabwe, those who extract the diamonds will have to beg Mugabe or his successor by convincing him that they will give him 50 per cent and not the 5 per cent that has been given to the African Organisation of Petroleum Exporting Countries (OPEC) member states.

The way forward – the way I see it in this Report – in terms of geothermal and even the oil that we have in Turkana is to avoid going the route that other African countries have gone. To me, it should be our primary objective, as a country, that if we need 500, 1,000 or 5,000 engineers, specifically trained to extract minerals from the ground, we should take them to the relevant universities in the United States, UK, Germany and elsewhere so that the people doing the job are our own people. The Government should deliberately develop indigenous owned mineral extracting company. This may sound to be very difficult but a few years ago, you would not have imagined a situation where indigenous Kenyans would own construction companies. However, we now have success stories like the Kirinyaga Construction Company owned by our former colleague, Eng. Ephraim Maina.

Owing to poor governance, people like Nyoro and Kirinyaga Construction Company cannot succeed because those who are in power want to give the contracts to multinationals from China and deny the local contractors an opportunity. This craze about China is a balloon. It is nothing because there is nothing indigenous that comes from China. China simply copies and pastes from the United States, Britain and then they pretend that what they have belongs to them. When did you see an American hawking in the streets of Nairobi? When did you see a British national hawking in Nairobi? However, the Chinese are hawking. You will see them with fake cell phones and so on

and yet we speak very highly about them. No, that is not the way to go. There is nothing special about China. We have to refuse and develop our own local potential.

Finally but not least, this Report speaks to the Kyoto Protocol. Now that we have found these resources and these people are willing to discuss the Kyoto Protocol, the Government should go to the World Trade Organisation (WTO) and take a firm seat. We are lucky that one of our sons, Dr. Mukhisa Kituyi, has a critical position in that field. We should make sure that trading in carbon credit is not just limited to where it is being done. We are the people who own forests in Nandi, Mau, Aberdares and Kakamega and we deserve to be given carbon credit so that we trade our carbon.

My time is up. I support.

**Sen. (Prof.) Lesan:** Thank you Mr. Deputy Speaker, Sir for giving me this opportunity to make some contributions to this Report. First, I want to thank Members of this Committee for the Report they have laid in the House which gives us a hands-on feeling of what they experienced when they went out to assess the Geothermal Development Company (GDC) programmes.

I want to come nearer home and closer to the people who will be affected by these programmes. I have seen some recommendations that were made by the Committee with regard to counties where GDC programmes have been going on or where the wells are found. I want to bring to the attention of this House issues about the conflict between the locals and the GDC or the institutions that will implement this programme. In the very beginning, they appeared to be very simple. However, the conflict with the locals is, perhaps, the genesis of what eventually boomerangs or grows into a major conflict for the benefit of these resources.

These programmes are being established in areas where there are people living. It is important that we pay attention to the population that may not have a big voice at the beginning but who stay and are localised in the area where the commodities are found. It is important that we pay attention to these people from the very beginning. Displacement should not be one of the things to happen as these institutions are being set up, especially the geothermal power plants. If this happens in areas that have settlements, it is important that the people there are treated and moved in a civilized manner so that they do not develop bitterness to these very worthwhile developments that are being carried on.

It is, therefore, very important that the benefits that accrue from the programmes touch these people from the very onset. In this regard, I am looking at things that have been mentioned by my colleague, Sen. Khalwale, about the carbon benefits. These are benefits that we do not have to wait for long to realise. These are benefits that accrue almost immediately. It is important that we get to know the qualities and quantities of the benefits that accrue from carbon. It is important that we have personnel in this country that have the capacity to audit carbon credits. We have a lot of auditors in this country who can audit cash and other things. However, auditing carbon is a very specialized area that this country may need to produce individuals that can audit this new commodity.

Auditing of oil, as well, for us to know how many barrels we have exported in this country is also a tricky area. We do not have, in this country, people who can audit oil. We should not assume that the oil will come from the ground clean. It comes with tonnes of sand, water and every other thing. It is important for us to know that people who are helping us man the petroleum know how many barrels they have got from the ground

after they have the percentages of water, sand and the other things. It is important that this country looks at this new product that has been said can become a curse so that we get to know how to handle them. Part of the development of this new product is to train the personnel in those specialised areas so that we are not exploited while it is day time.

We see these things happening and we know so many countries that are mining oil. They are told that a certain quantity of mined products translates to certain barrels when, in fact, the grade of those oils is different and the country loses as a result of lack of right personnel to quantify.

There are also areas where we can try to benefit the populations in the local areas where these products are coming from. This is the area where we want to train middle level personnel to help in these institutions. We can train a certain number from the local area. From Turkana, we can train a number of engineers. However, we can also train a large number of populations within those areas in the middle level so that they get a sense of belonging in terms of the products that are a blessing in our country. It is, therefore, important that we carry along the communities that are living within these areas so to avoid what may seem to be small issues but which may boomerang eventually to become large conflicts and things that are diversionary in our harvesting of the new product.

As it has been said before, the development of industrial plants within the areas where these products are found is important. This is one of the things that we can develop fairly quickly and which would benefit the communities that are living within those areas. In this respect, we want to assist those counties where resources are coming from so that they develop their infrastructure very quickly. They should access the benefits of these things within a very short period of time. We should carry the local communities forward with the rest of the nation. It would be very unfortunate if we did not carry along these communities. These will be the foot soldiers that will be patrolling the areas of these products and we will probably not benefit from that if we do not have them.

The recommendations that have been made in this Report; about assisting county governments and local populations are worth looking at so that this country can go to the great lengths of benefitting from GDC and oil that has been found. I commend the state for looking at this, for developing and for aiming at reducing the cost of power so that we use it to expand the economy and to improve the quality of our lives.

With that, I support this Report and recommend its adoption by the House.

**The Senate Minority Leader** (Sen. Wetangula): Thank you, Mr. Deputy Speaker, Sir, for giving me time to make a few comments on this Report. I start by commending the membership of the Committee. If you look at the membership, you will appreciate the cream of leadership that this Senate holds.

The Chairman is Sen. Gideon son of Daniel. We have Sen. Dan Mwazo Mwakulegwa, a former Minister; Sen. David Musila, a former Assistant Minister; Sen. Kiraitu Murungi, a former Minister for Energy; Sen. Chris Obure, a former Minister for Finance, Foreign Affairs and for Roads; Sen. Abu Chiaba who is also a former Assistant Minister; Sen. Kajwang who is also a former Minister; and, Sen. Keter who is a former Assistant Minister. Probably, Sen. Wangare is the only one with lesser credentials in terms of who is who in Government. However, she is a very distinguished Senator in her own rights. With Committees as high powered as this, you have little doubt of getting a Report as good as this.

Energy in this country is a very big challenge to the growth of our economy. When you look back – I truly salute the contributions from Sen.Khalwale and Prof. Lesan – Kenya is a very rich but yet a very poor country. It is very rich in terms of resources and very poor in terms of our incapacity and inability to fully and positively exploit these resources for the benefit of the people of this country and region.

Mr. Deputy Speaker, Sir, today statistics show that out of every ten to 15 foreign investors coming in this region, only two are ending up in Kenya. The rest are going to Tanzania, Uganda and Rwanda. One of the reasons this is so is because of the very exorbitant cost of energy in Kenya. Today, a kilowatt hour of electricity in Kenya is going for 19 US cents. Compare that with Tanzania where it is going for about 12 US cents and about 13 US cents in Uganda and they are still lowering it. The other day I was in Uganda and saw that Bujagali Hydro Electric Plant has come on board. Karuma and Murchison Falls are under construction. They are truly exploiting the natural resources that the Nile offers to their country. What did we do in Kenya? At Independence, for some strange reason, we designed and put seven hydro plants on one river system whose water flow is unstable.

I have no difficulty with us having hydro plants, as many as we can, on the same river if we are endowed with heavy flow of water like in Brazil, Congo and so on. But where river water volumes drop suddenly because of lack of adequate rain, one would have expected – these are the recommendations made over and over again – that as we develop the Tana River system, we have equally important rivers like Nzoia, Sondu Miriu, Kuja and so on, that would have been alternative sources of hydro plants. Rivers like Kuja and Nzoia have a very stable flow throughout the year. Tana River has a very strong flow half the year and the other half goes down. Everytime it goes down, it affects our hydro production, yet hydro remains our cheapest and most reliable renewable source of energy.

Mr. Deputy Speaker, Sir, but now - I speak with authority, having been the first regulator of electricity in this country – our geothermal capacity and resources available are sufficient to generate at full production over 5,000 megawatts of power. This is contained in this Report as well. It has been studied and designed that geothermal power will come on stream and for use at as little as six to eight US cents per kilowatt hour. That is less than half of what we are paying today, because we have unstable hydro and hydro carbons being used to produce power in the Independent Power Producers (IPPs). We also have geothermal plants like the one in Kipevu.

We import oil and then have to generate electricity out of it. But now that we have focused, and I am very happy with what is going on in the geothermal sector--- If you fly over Lake Naivasha, Olkaria and the Menengai Crater, you will be amazed at the amount of work going on; the drilling of wells, capping of those wells and eventual generation of power. The interest being shown is enormous.

Mr. Deputy Speaker, Sir, what we would want to see, as a Senate and the House that overlooks counties, is that the communities that have been the custodians of these resources for years on, are taken into account. I would hate to see a situation, like we have in Turkwel, where the custodians of the gorge and river can only see pylons wheezing when the wind blows over their heads as they head to the more privileged parts of the country. If you go to Turkwel there is not a single village that has been given power yet it is generated there and transmitted all the way to the favoured areas of

Eldoret, Kisumu, Bungoma, Nairobi, Murang'a and wherever. It is high time this country learnt to reward the custodians of resources. People have lived and taken care of these resources for years. Then when we get the resources, it is business as usual.

Mr. Deputy Speaker, Sir, look at what is going on in Turkana. I hope that we are not breeding another Boko Haram in another five to ten years. You cannot go to Turkana and extravagantly announce that they are sitting on the largest underground water resource in this country and then you find oil and toast champagne every other day that a new well has been found, yet the Turkana people are living as the scum of the earth. People are dying for failing to get just a drop of water and also because there is no food. We have been told in the media – I hope that it is not true – that people in Turkana have been eating dogs, because there is no food, yet this is the county that is going to be the backbone of the economy of this country with oil.

Even this talk of having a refinery in Lamu and Isiolo is hogwash. Let us take the refinery to Turkana itself, so that we can give the Turkana boys and girls employment and turn their fortunes around. We can impress upon the oil companies that given the history that we have seen in Nigeria, Angola and many other countries with poor and weak systems, where when resources arrive, they become a total curse to the country; we do not want to go that route. This Senate will be doing a great service to this country if we are able to help our brothers and sisters in Turkana to realize the full benefits of the resources that they have kept for this country for centuries.

Mr. Deputy Speaker, Sir, if you look at what is going on in other areas as well, like the geothermal plant in Naivasha, as we mine geothermal power, we are pushing the Maasais further and further away from their ancestral land without compensation. Nobody thinks about them. They are being driven further and further---

**Sen. Murungi:** On a point of order, Mr. Deputy Speaker, Sir. Is it really in order for the Senate Minority Leader, who we really respect, to stand here and mislead both this House and Kenyans that the Maasais who are being displaced by the geothermal plants in Olkaria are not being compensated? They are, in fact, being compensated in accordance with the settlement arrangement and programme developed with the assistance of the World Bank. So, compensation is there, full and adequate.

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, show me any country that has got justice from the World Bank and I will give you a reward.

**The Deputy Speaker (Sen. Kembi-Gitura):** There are two issues here, Sen. Wetangula. The point of order raised by Sen. Murungi is important. I would like you to respond to it.

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, when a responsible Government purports to compensate its nationals by taking away their resources; one, you have to evaluate the net value of the resource. That has not been done. Secondly, when you uproot people from their natural habitat, it is not enough to herd them into groups and give them money, when they do not even have a culture and history of handling money. You organize and get them alternative settlement, commensurate, equal to or even better than where you are uprooting them. Help them build houses and give them water, schools and hospitals. That is the adequacy of compensation. But what happens in this country? You, my learned senior, Sen. Murungi and I know the history of compensations in this country. Half of the money set aside for compensation is normally creamed off by administrators. The real recipients of this



money sometimes never even see it. If you are uprooted from 100 acres you are taken and given two-and-a-half acres and told: "This is where you will live." You cannot call that adequate compensation. I hope that my learned senior is now clear with the point. I want also to tell him through you, that one of the dangers of any country to veer off from the path of development is to continue swallowing the World Bank pill. The World Bank---

**The Deputy Speaker** (Sen. Kembi-Gitura): I think we need to finalize this issue. With a lot of respect to you, Sen. Wetangula, you said – I heard you clearly – that the indigenes of that area have been moved out of that area without compensation. You did not talk about adequate compensation. That is the issue that Sen. Murungi raised. This is an important issue, because when you say that people have not been compensated for their land which is being exploited by the Government for the national good, that goes to the national good itself. So, I would like to understand whether, indeed, it is a situation that you can stand up to; that they have been moved away without compensation. Then, Sen. Murungi can tell us on what basis he has raised that point of order. I would like us to be very clear because these are matters of national importance.

**The Senate Minority Leader** (Sen. Wetangula): Mr. Deputy Speaker, Sir, probably you were consulting with the Clerk next to you and did not hear me.

**The Deputy Speaker** (Sen. Kembi-Gitura): I heard you very clearly.

**The Senate Minority Leader** (Sen. Wetangula): Mr. Deputy Speaker, Sir, I conceded to Sen. Murungi that there may have been compensation, but went on to describe the history of compensations in this country; how they are designed, executed and wananchi are routinely cheated. Money is set aside sometimes and it never even gets to those who are supposed to receive it. A chief, District Officer or District Commissioner receives it. Sometimes those who receive it get so little that it makes little meaning as to what the compensation is all about.

Let me go to my next point.

**Sen. (Dr.) Khalwale:** On a point of order, Mr. Deputy Speaker, Sir.

**The Deputy Speaker** (Sen. Kembi-Gitura): I want to assume that Sen. Murungi is satisfied that he has been adequately answered, since he is comfortable.

In the meantime, can I hear you, Sen. (Dr.) Khalwale?

**Sen. (Dr.) Khalwale:** Mr. Deputy Speaker, Sir, I want to agree with you that this is a very important national issue. It reminds us that, at least, as far as Olkaria is concerned, when this process was going on, Sen. Murungi was actually the Minister in charge. Could I request that we stop the hour clock for a few minutes and allow the former Minister ---?

**The Deputy Speaker** (Sen. Kembi-Gitura): What is your point of order, Sen. Khalwale?

**Sen. (Dr.) Khalwale:** Mr. Deputy Speaker, Sir, I am pleading with the Chair to consider settling this matter once and for all, because we have the resource person here and it is a very serious national issue.

**The Deputy Speaker** (Sen. Kembi-Gitura): As far as I am concerned, a lot would depend on whether or not Sen. Murungi is satisfied that the point of order that he raised has been adequately dealt with by Sen. Wetangula. If it has been, it is not in my place or your place, Sen. (Dr.) Khalwale, to pursue the matter any further since it was not your point of order.

**Sen. Murungi:** Mr. Deputy Speaker, Sir, I just challenged one simple point; where the Senate Minority Leader said that the Maasai community was not compensated in the Olkaria area. He conceded that they were compensated and went on to other generalities. I am not interested in the other generalities, but the Maasai community in Olkaria was compensated in accordance with a resettlement programme developed jointly between the Government of Kenya and the World Bank.

**Sen. Haji:** On a point of order, Mr. Deputy Speaker, Sir. Sen. Wetangula has made a very serious allegation; that compensations are paid through administrators, particularly chiefs and District Officers. Can he substantiate? I was a District Commissioner and a Provincial Commissioner, and I do not recall at any time when any compensation came directly through us and not to the beneficiaries.

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, I hope we are not turning this very important debate into a debate on compensations. But---

**The Deputy Speaker (Sen. Kembi-Gitura):** But you are the one who raised it, Sen. Wetangula! You must take responsibility for your actions.

**The Senate Minority Leader (Sen. Wetangula):** Which I do.

**The Deputy Speaker (Sen. Kembi-Gitura):** If you refer to Standing Order No.92, you must be able to stand with every statement that you make.

**The Senate Minority Leader (Sen. Wetangula):** Yes.

**The Deputy Speaker (Sen. Kembi-Gitura):** Now, I am happy that according to Sen. Murungi, you withdrew or, at least---

**The Senate Minority Leader (Sen. Wetangula):** I conceded.

**The Deputy Speaker (Sen. Kembi-Gitura):** Yes, you conceded that they were compensated. If you did, then we can proceed on that basis.

**The Senate Minority Leader (Sen. Wetangula):** Yes.

**The Deputy Speaker (Sen. Kembi-Gitura):** I think there is an important issue which you must take responsibility for, because you are the one who raised it. Can you answer to Sen. Yusuf Haji?

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, there is a book called *The Trouble with Nigeria*, where Chinua Achebe said he had recently read in the newspaper that President Shehu Shagari had said that corruption in Nigeria had not reached alarming proportions. He said that "anybody who says a statement like this is either a fool, a crook, or does not live in Nigeria." Then, he said: "I know Shehu Shagari; for sure he is not a fool; and I know he is not a crook; therefore, he does not live in Nigeria!" I know Sen. Yusuf Haji is not a fool, he is not a crook; he does not live in Kenya!

Mr. Deputy Speaker, Sir, you can take judicial notice of how many public administrators have gone to jail for stealing money meant for the poor. It is common knowledge.

**Sen. Haji:** On a point of order, Mr. Deputy Speaker, Sir.

**The Deputy Speaker (Sen. Kembi-Gitura):** Order, Sen. Yusuf Haji!

Sen. Wetangula, you know I am following this debate very keenly. I am not going to allow us to derail from the issue at hand. Sen. Haji has not spoken about "crookish" administrators. What he said is that he does not recall, to his knowledge, that any money for compensation was paid through the provincial administration. That is what he said, if I got him correctly.

**Sen. Haji:** Absolutely, Mr. Deputy Speaker, Sir. Sen. Wetangula should not beat about the bush; we are not in Nigeria, we are talking about Kenya and administrators in Kenya. He should give us documentary evidence of any administrator who has been jailed. I cannot say all the lawyers are crooks and neither can I say that there are lawyers who have been to--- I do not have to go into those issues, but I want us to defend those who cannot defend themselves in the House. He should either withdraw or produce evidence and I will go along with it.

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, Standing Orders allow me to substantiate the matter at a later time. I can bring here damning reports about compensations in the Mau Forest; how much money was swindled away by the administration. This is common knowledge. The Standing Orders allow me to bring substantiation at a later time, and I can bring it if my good brother, my very close friend and the Chairman of my Committee wishes me to do so.

**Sen. (Dr.) Khalwale:** On a point of information, Mr. Deputy Speaker, Sir.

**The Senate Minority Leader (Sen. Wetangula):** Please, inform me.

**Sen. (Dr.) Khalwale:** Mr. Deputy Speaker, Sir, in earlier Parliaments, the report by Ndung'u of the so-called Ndung'u Land Commission was tabled and, therefore, it is a record of this House. For that reason, Sen. Wetangula does not have to substantiate beyond it because in that Report, there are indications of former provincial commissioners and district commissioners who grabbed public land and displaced people, including in Banita Settlement Scheme in Nakuru, where I led a Committee of Inquiry in which I was the Chairman during the last Parliament. We found that former members of the Provincial Commission had actually grabbed public land and unsettled a lot of people who are currently squatters in Banita. By the way, Sen. Haji was once upon a time the Provincial Commissioner for Rift Valley.

**The Senate Minority Leader (Sen. Wetangula):** He should declare his interest!

Mr. Deputy Speaker, Sir, may I go on?

**Sen. Haji:** On a point of order, Mr. Deputy Speaker, Sir.

**The Deputy Speaker (Sen. Kembi-Gitura):** Now, this issue must come to a close. When a point of order is raised and particularly a substantive one like this one, I expect it to get a proper answer. So, Sen. Yusuf Haji, you have heard what Sen. Wetangula has had to say and I want to assume that you are satisfied.

**Sen. Haji:** Mr. Deputy Speaker, Sir, I have no interest to declare at all in this matter. What I am doing is what is expected of any leader; you defend those who cannot defend themselves here.

Thank you.

**The Deputy Speaker (Sen. Kembi-Gitura):** Thank you, Sen. Haji.

**The Senate Minority Leader (Sen. Wetangula):** Mr. Deputy Speaker, Sir, the chips will lie where they fell. Let me go on.

Mr. Deputy Speaker, Sir---

**The Deputy Speaker (Sen. Kembi-Gitura):** I am not going to allow unsubstantiated claims to be made. I mean, just because the people have raised issues. I hope you do not force me to invoke the provisions of Standing Order No.92 at the request of a Member.

Please, proceed.

**The Senate Minority Leader** (Sen. Wetangula): Mr. Deputy Speaker, Sir, I will proceed and I want to hope that I am not debating the Chair.

Mr. Deputy Speaker, Sir, this Senate must help county governments. I go around the country---

*(Sen. G.G. Kariuki switched on his microphone)*

Mr. Deputy Speaker, Sir, I can see Sen. G.G. Kariuki's microphone is on.

Mr. Deputy Speaker, Sir, I go around the country and everywhere I go, the Members of County Assemblies (MCAs) and their Speakers are asking "how can the Senate help us craft legislation?"

**Sen. G.G. Kariuki:** On a point of order, Mr. Deputy Speaker, Sir.

**The Deputy Speaker** (Sen. Kembi-Gitura): What is out of order, Sen. G.G. Kariuki?

**Sen. G.G. Kariuki:** I am sorry, Mr. Deputy Speaker, Sir. Maybe I am too slow in understanding the decisions when they are taken. How has the Chair decided on a very serious matter that has been raised by Sen. Wetangula? How have we ended this matter, because my understanding was that he was not able to substantiate the allegation which was challenged by Sen. Haji? Could he substantiate or withdraw?

**The Deputy Speaker** (Sen. Kembi-Gitura): Sen. G.G. Kariuki, I am with you on that issue but you heard me asking Sen. Haji whether he was satisfied and he did not appear like he wished to pursue that issue any more because Sen. Wetangula had said that he is ready, willing and able to substantiate, but that matter was not pursued. I do not think it is in my place to stress on the issue. Sen. Yusuf Haji quite clearly appeared like he was not willing to pursue the issue. I think I am right, Sen. Haji.

**Sen. Haji:** Yes, Mr. Deputy Speaker, Sir.

**The Deputy Speaker** (Sen. Kembi-Gitura): Sen. Wetangula, Sen. Haji is here, he should be able to answer for himself.

**Sen. Haji:** Mr. Deputy Speaker, Sir, as I said, I think my friend is beating about the bush and I allowed him to beat about the bush.

**The Deputy Speaker** (Sen. Kembi-Gitura): Thank you.

**The Senate Minority Leader** (Sen. Wetangula): Mr. Deputy Speaker, Sir, this Senate is not a funeral gathering; we must have light moments. I wish hon. Martin Shikuku – God rest his soul in eternal peace – was here; he would bring tremendous humor to the House and people would laugh and laugh, and debate became very interesting. If we become straight jacketed, we will make this Senate one of the most boring Houses that you can ever imagine. I want to encourage my brother, Sen. Haji, that every time I talk about the provincial administration, I definitely do not have him in mind. He is a fine man. He was my Provincial Commissioner in western and he used to sit in our PGs. I used to eat in his house and he left western without blemish. On that, I will stand for him. But there are other crooks in the service as well!

Mr. Deputy Speaker, Sir, as I was saying, everywhere I go, MCAs and their speakers are asking: "How can the Senate help us craft relevant, meaningful, helpful legislation?" I think this is a duty of this House as custodians and protectors of devolution and the counties. I think the offices of the Speaker and the Clerk must develop enough capacity for us, as a Senate, to lend a hand. For example, as we cry about Turkana and the

oil, one would expect that the Government of Turkana County can craft good legislation to make sure that they benefit from this resource and, to some degree, help the people of Turkana. The same is true for the counties of Baringo, Nakuru, and Garissa when they get their own oil, and so on, and so forth.

So, Mr. Deputy Speaker, Sir, I want to encourage that in building capacity in the counties to help them benefit from these natural resources, this Senate has a duty. I know it is not recommended in this Report and probably it is not a matter that arose when they were deliberating, but this Senate will do a great deal to guide the counties, because they are like children who have been thrown in a swimming pool and told to learn how to swim. I have seen all manner of former clerks at Parliament here who have picked up jobs; people who could not even sit at the table are now clerks of the assemblies and so on, and so forth. That capacity is part of our responsibility, and we must partner with each and every county to help them legislate and come up with legislation that will help them raise resources without hurting the public. Legislation that will help them look after the resources, apart from the national legislation on resource management, legislation that will help them get insulated from investors coming in and taking advantage.

Mr. Deputy Speaker, Sir, remember that under the Constitution, land belongs largely to the counties. If oil is found in land belonging to the county and the engagement is that the National Government and the investor, and those drilling oil or geothermal energy are involved while the counties are left nowhere, at the end of the day, as the national government grows richer, the county governments grow poorer. That is not right.

Mr. Deputy Speaker, Sir, I want to support this Report by urging, as an orbiter, that this Senate should seriously consider – through your office and the Office of the Clerk, who works with you – that we embark on building capacity for the counties to carry out their legislative work that can help the counties to protect resources, raise revenue, guard these revenues and to develop the counties. That way, we will be very helpful.

Finally, if this country has to grow and achieve Vision 2030--- If you read Vision 2030 and addendums thereto, you are told that by 2016, our cost of electricity – I think my brother, Sen. Murungi bears me witness on this – will drop from 19 US cents per Kilowatt hour to 8 US cents per kilowatt hour. I hope we will achieve that. If we did that, I can assure you that all the investors who are overflying Kenya to Uganda, Rwanda and Tanzania will come back here. This is because we have the international hub here. We have one of the most educated work force in the entire Africa. We have the most developed human resource capacity in the entire Africa. Of course, I read in the newspapers today that we are now catching up with our brothers in the west by having the worst crooks in Africa. This is very dangerous.

*(Laughter)*

I hope that we will be able to battle them and keep them away so that the country can continue developing without hitches.

I beg to support.

*(Applause)*

**The Deputy Speaker** (Sen. Kembi-Gitura): Sen. Murungi.

**Sen. Murungi:** Mr. Deputy Speaker, Sir, I rise to support this Motion and the Report. I am a Member of the Committee and I want to commend our able Chairman, Sen. Moi, and his able Deputy Chairman, Sen. Mwakulegwa. Indeed, as Sen. Wetangula has pointed out, this is a very hard working Committee and there is a lot of comradeship within the Committee. We are very supportive of the agenda of this Committee. I am privileged to have served as the Minister for Energy for seven years and I am happy to report that during my tenure as the Minister for Energy, we were able to bring some changes in the energy sector including creating the Geothermal Development Company (GDC). This was not the only change we brought. We also created the Rural Electrification Authority (REA), which has been able to take electricity to very remote areas of this country. It is also during our time that we discovered coal in Kitui, It is also during our time that oil was discovered in Turkana and Maya in the Indian Ocean. Although we are not there to complete the process, at least, we were there at the beginning.

Mr. Deputy Speaker, Sir, they say Africa is a dark continent. When it comes to the coverage of electricity we are a dark continent in the sense that only about 29 per cent of Kenya is covered with modern energy services. About 70 per cent of Kenyans are still using firewood, cow dung and crop waste as primary sources of energy. Even in areas where we have electricity coverage, Kenyans are only using electricity for lighting especially in the rural areas. When it comes to cooking, we come back to firewood and crop waste which causes damage to the environment. I think it will be good for us to keep promoting consumption of electricity especially for cooking in the rural areas so that demand for electricity is huge. We have only scratched the surface. Therefore, there is need for us to expand our generating capacity.

Mr. Deputy Speaker, Sir, Kenya like other African countries has been suffering from chronic shortage of power. We are simply not generating enough electricity and I would say that we are that hungry person that we were talking about the other day, who does not mind what food you bring, if you give him *githeri*, *ugali* or *nyama*, he will eat. Even there is someone who has opened a butchery for donkey meat in Naivasha. For us, we are energy hungry and we are energy poor. So, we need energy from all sources that can we nurture in this country.

We introduced or created the GDC in the year 2010. It was created as a result of a very painful experience. You remember there was prolonged drought in this country which cut our hydro power production by half. We used to produce about 700 megawatts, but due to the prolonged drought our hydro capacity came down to about 350 megawatts and we were forced to import very expensive power in the name of high speed diesel generators. It almost bankrupted our Treasury because it depleted our foreign reserves. It became very clear to us that the issue of energy security and energy independence has the right to rely on local energy sources. There is no way you can control international prices of oil which we use for geothermal generation. The geopolitics is beyond our control. The only way we can be sure about reliable and cost effective power is power that we are in control. Geothermal energy is abundant in this country, it is available, it is indigenous and it is green.

Mr. Deputy Speaker, Sir, it is estimated that around the Rift Valley alone, we can generate up to 10,000 megawatts of very clean power from geothermal sources. That is

why we created the GDC as a special purpose vehicle for generating geothermal power in the country.

There are certain challenges in geothermal. For instance there is what we call exploration risk; the risk of you sinking a lot of money on something which you have not seen is very real. Although we have an average of 80 per cent success, the remaining 20 per cent can be very risky. There is also the use of geothermal oil; one geothermal oil costs a minimum of Kshs400,000. We had to get the Government to absorb some of that risk because the private sector can be very shy when it comes to investments in these areas.

There is also the question of high head costs where you spend so much money before you can generate a single megawatt of geothermal power and so you require massive investment. Without a committed government willing to put in public resources, it is almost impossible for us to open up geothermal fields. That is why I am supporting the recommendation by the Committee that the Government continues to invest in all geothermal fields like Suswa because without that commitment, those fields will never be opened.

Mr. Deputy Speaker, Sir, the GDC has done extremely well and we are happy that we got one man called Dr. Cyrus Simiyu. His PhD is in geothermal studies. This is a man who understands geothermal like the back of his hand. He has a very educated team and a training programme in the United Nations University and sometimes the trainings are done in Naivasha. Our people are now getting very well trained and even giving foreign assistance to other countries like Rwanda and the Comoros Island. So, that team has done extremely well and I would like to take this opportunity to thank them for making us proud in the manner in which they have approached geothermal exploration and production with a lot of professionalism.

I would also like to take this opportunity to thank our international partners who have been able to put money together to support geothermal development in this country. We are now producing 280 megawatts in Olkaria at a cost of Kshs56 billion. That money has been put together by JICA, China Exchange, the European Union and the African Development Bank, among others. Without these development partners, it would have been impossible for us to develop the geothermal power plants in Olkaria. Even as we are criticizing international partners, let us know that they have a role to play in terms of providing us with the necessary capital and the necessary technical expertise. We still need that in this country. I think it is good for us to acknowledge the support that we have received from those countries including the World Bank.

Mr. Deputy Speaker, Sir, I know that there are issues of local content and I am happy because I can see Senators are ready. What Sen. (Dr.) Khalwale talked about is what is contained in the current issue of *The New Africa*. I have been following the support that Thabo Mbeki gave to President Mugabe's programme. It is well covered in *The New Africa*. The President of Gambia is asking why Charles Taylor had to appear before the International Criminal Court (ICC). It was largely not because of the crimes against humanity but because he refused to give away the oil resources in Liberia at a throw away price. As Sen. (Dr.) Khalwale said, Africa is the richest continent in natural resources. Indeed one country, DRC, is richer than any other African country as far these resources are concerned but it is also among the poorest countries in Africa.

So, it is a paradox that this richest country is also the poorest in the world. I think it is simplistic for us to keep on talking about slogans like the "oil curse". Some people

actually believe that it is that liquid called oil which is cursed whereas oil is a commodity just like coffee or maize. It is not a cursed commodity. Personally, I believe it is a blessing. Economies in the Middle East are now vibrant because of oil. So, you can see how much it can do to this country. There is nothing like the “oil curse”. What we have is “Africa’s political and management curse”. We are the ones who are unable to manage our resources.

I know the GDC is trying very hard to do corporate social responsibility (CSR). It is providing water to the communities, planting trees around Rift Valley where it is operating and others. These are very commendable projects. In my very sincere opinion the CSR projects cannot transform any country, they cannot bring sufficient roads and pull the people of these counties out of poverty. I do not want to use the word used by the Non-Governmental Organizations (NGO), they call it tokenism. I believe that you have to go beyond CSR. In fact, what we get from geothermal is steam. The fuel is steam and there is a model where the GDC is going to partner with private companies to produce steam and sell it. They are going to sell to other companies which are going to convert it into power. So, there is money today from steam. The question is, if you sell the steam, how much is going to go to the residents of Baringo? How much of those proceeds are going to Turkana?

Mr. Deputy Speaker, Sir, I am happy this matter is being discussed by the Ministry. There is a proposal that of the resources in the country, 75 per cent goes to the national government, which is the primary owner of the resources and 20 per cent goes to the county government and 5 per cent goes to the local community which is displaced in the process of exploiting that resource. It is the cooperation of the multinationals, the national government, the county government and the local community that is going to unlock the resources of this country and also remove our people from poverty. So, the local content issue has not been addressed as far as geothermal is concerned and I think time has come for us to address it.

Mr. Deputy Speaker, Sir, those services being offered by the geothermal companies are services required by the international companies which have been recruited to come and drill for geothermal. How many of those services are going to the locals? Are you promoting the local businessmen in the process of exploiting geothermal resources in this country? How many Kenyan lawyers are benefitting from the legal contracts that we are signing between the Japanese and other organizations in the country? How many insurance companies are insuring machinery worth billions which come into this country? You will find that multinational insurance companies follow these companies to come and insure them in Kenya. These are services that we can offer.

I think this being an indigenous resource, it should also be used for the benefit of the Kenyan poor. I think it is time for us as Senate to put in place a framework of how the counties and the people will benefit from the natural resources found in the counties. We should require the companies operating there to advertise for jobs so that Kenyans are aware and can apply. We can also create situations for us to educate our people to say: “Look, we need roads, where geothermal drilling tractors will pass through.” We need local contractors from those areas to make the roads so that they are also beneficiaries of the funds that we will spend on geothermal. There will be doctors required and all manner of services to cater for the geothermal industry in this country. I would like to see



– which is not there in our policies and law – a huge comprehensive and local content policy on geothermal and other energy resources.

Having said that, we are not blind to the fact that there are many other sources of energy. Solar panels have become cheaper and this is a very abundant resource. The Government has supported geothermal and there is no reason that it will not support solar generation in this country. Solar generation is available in Kenya. We can extend solar power to almost all the corners of this country if we invest even half of the amount of the money that we have invested in geothermal to solar.

Secondly, coal is not only available in Kitui. There is coal in very many other areas of this country. There is coal, for instance, in Suguta Valley in Turkana. We need a comprehensive survey of the coal resources. We need a coal map of this country. We hear that there is very high quality coal in Kwale and yet nobody is talking about it. Instead of fighting for these two blocks of coal in Kitui, as a Senate, we should encourage the Government to do more resource surveys in those projects.

I was in England two months ago and I looked at the energy mix. You will be surprised that 45 per cent of the base loads in the United Kingdom come from coal. The talk that coal is dirty and environmentally unfriendly is not viable. There is a lot of technology to produce clean coal like carbon capture and carbon concentration. We need to be asking the West which is also using coal to bring those technologies to our country and to train our people so that they train our people. Instead of shying away from coping with the environment, we should expand our coal resources. Coal is just like geothermal. We will not be importing anything. It is indigenous and available, unlike wind which only blows at night. Coal is there throughout. Unlike solar which is only available during the day, geothermal and coal are there 24 hours a day and seven days a week. These are the resources that we, as a Senate, should be promoting to ensure energy independence, energy security and affordability of power and electricity in this country.

With those few remarks, I beg to support.

**Sen. Karaba:** Thank you Mr. Deputy Speaker, Sir, for giving me this chance to contribute to this very important Motion and the Report by the Committee on Energy, Roads and Transportation. I first want to take time to congratulate them because they have done a good job. They should continue doing the same in future.

The Committee has done this Report, it has been tabled and we are now discussing it for adoption. We want other committees to do the same so that we are informed of what is happening. I hope that this will be an eye opener to many other Standing Committees which are yet to present such reports in the Senate.

I am interested in knowing why some parts of the world are richer than others. I happen to have been a teacher and I know what that means. In Germany, the richest industrial region is called Ruhr Region. This area is rich due to availability of coal. There is also the presence of iron ore in quite large deposits from Lorraine in France transported by a very able river called Creuse.

Getting to Japan, the richest industrial region is in Tokyo around Kyoto, Nagasaki and Hiroshima. That is the richest in the world. The reason is not because of coal and not because of any other thing but because of skilled manpower which is yet to be tapped in Kenya. In America, the same has happened in the Pennsylvania region called the Midwest. The Midwest is the second richest after Arch of Lark and the main reason is coal and water power in the facility. We have many other examples. However, for the

purpose of Kenya, we have quite a number of minerals that have been discovered. Others are in the process of being discovered as we look for more to export.

What is amazing is that as much as we have countries that are rich, there are reasons that make them rich. One of the reasons is that they have utilized their main factors of production to the full. These are land, people for their skilled labour, capital, fuel and energy. We are now discussing energy as it is stipulated very well in the Report by the Committee.

With energy and Kenyans' presence, you will find that this is available in various places that are recorded here. You will realize that these have not been tapped so that we use the fuel for the purpose of industrial location and relocation. That means that we cannot use the fuel as a factor. The reason is that the cost of production has been very high. So, you will find that we do not have very many sources of energy that have been exploited just because of the high costs.

There is also lack of infrastructure. It is very difficult to find some of these areas. We need to think about infrastructure as we support this Motion. We need to think about manpower. We have the only celebrated engineer in Kenya, Eng. Simiyu. This is just like in the United Arab Emirates (UAE) where when they talk about fuel production, you find one George Best there. The rest of the skilled manpower is from America. I am quoting *The Times* of 1970.

This can happen and can also affect Kenya as an oil and fuel producing country. So, coming to geothermal, the production of this can be very good and can be increased. Its uses are also varied. Getting to geothermal and where it is generated, there is Olkaria and Hells Gate. There are also other areas like Eburu Hills where pyrethrum is grown. Geothermal power is used locally to dry pyrethrum so that it is sold as pyrethrin to earn money to farmers. This should be encouraged so that whatever is produced, before it is exported, it is used to help industrial development in small scale industries. That is why it is befitting to talk about the geothermal power. It has been used in Eburu to dry pyrethrum. This is the same power related energy steam and gas which can be tapped to produce very good jets, geysers and even hot springs which can attract many tourists as we have seen in Lake Bogoria.

Let there be a policy where lakes which have such hot water are sold outside. The marketing should be effective so that we have more tourists coming to Kenya to enjoy the natural spas of the geyser springs especially from Lake Bogoria and the gases from the Hells Gate. That is what we are lacking. The moment we discover that we have such good things coming from the ground and yet tapping has not been sufficiently done due to high cost of production or due to the terrain, it is important that we make use of what is available so that we generate more money. The same money should be ploughed back to make the area rich and that is the only way we can do it if we are to be proud of our discoveries, particularly so with geothermal.

I have been to Lake Bogoria quite a number of times. What attracts me there is what it offers to the neighbours and the Asian community that goes there for spa medicinal water value that comes from the geysers. This is what we should sell to have more tourists coming to Kenya to enjoy themselves as we get the much needed foreign exchange.

It is true that many of us have travelled to areas which we refer to as rich. However, once you get to New Zealand, you will see that there is nothing that has made

it so rich and popular but selling of gas and neutralizing geysers and spas from Lake Taupo. The River called Waikiki is very popular with regard to hot water. You will find most tourists going there to spend money which ploughs back foreign exchange. This is what we should encourage the Energy, Roads and Transportation Committee to do. They should find out more areas where Kenya, as a country is failing, so that we attract more visitors to the country and make use of what we have in the name of natural resources. That is what we are lacking.

In other places where such natural resources are lacking, for example, in countries like Dubai and Malaysia, they have put up natural monuments and people go to see these monuments. This also includes countries like France where we have the Arch which records very many visitors. In Dubai, you will find the tallest building so far, in the world. I hear that it cost Kshs10 billion and within the first two years they had already recovered the Kshs10 billion and now they are earning the interest. This is what we should be asking ourselves. Since we cannot afford to make such things, let us harness what we have. The only thing that we can harness is, of course, what others do not have. Let us pay more attention to what is known to prevail in Kenya, in the name of the gases, geysers, steam jets, spas and so on. We should develop these areas and have industries that are oriented to these kinds of facilities, for example, the chemical industries. It is possible to have industries spread all over.

Mr. Deputy Speaker Sir, it is also important to note that geothermal has, of course, some megawatts produced. I hear that it is about 5,000 megawatts and it is aimed at production. A few megawatts can be used either in the neighbouring schools there, which may not have enough power to light the classrooms. Very soon we are going to have the laptops, some of which will require electricity. We need to have some subjects like Physics taught using the same power. Therefore, the discovery of geothermal can be a very good alternative to that shortage of energy. It can be used to light the homes and so on.

Mr. Deputy Speaker, Sir, as we support this Report, it is important to ask other Committees what is happening. When will they table their reports and when next will we hear about those others which are dormant?

I beg to support.

**Sen. Ong'era:** Thank you, Mr. Deputy Speaker, Sir, for giving me this opportunity to also add my voice to this very important Report. I rise to support the Report.

From the outset, let me congratulate the Mover of this Motion, Sen. Mwakulegwa, together with all the Members of this Committee, led by the able Chairman, the Senator for Baringo, Sen. Gideon Moi. One of the reasons I am supporting this Motion is that I want to support their recommendation that the Government, indeed, needs to adequately fund the geothermal exploration in this country because this will reduce our energy costs in this country. Kenya is very fortunate, as they have told us in their Report, to see that there are close to 20 geothermal sites that need to be explored.

However, I am very much concerned to note that the national Government has not been able to provide adequate funds, particularly in Menengai, Suswa, Bogoria and Silale regions. Because of this lack of enough commitment on their part of matching funds, the donors have not been able to unlock their commitments. This is of great concern. I, therefore, join the Committee in urging that the national Government, indeed, should take

geothermal power generation seriously because, as we know, this is actually going to be the energy of the new century. Very soon, we will reduce our dependency on oil usage.

I beg to support this Motion.

**Sen. Sijeny:** Mr. Deputy Speaker, Sir, thank you very much for giving me this opportunity to contribute.

I wish to support this Motion. I also thank the Committee for a job well done. I have seen the Report and it is very thorough. The reason I support it is because Kenya is not doing so well as concerns the generation of power or electricity. I believe that, that is why we call ourselves a Third World country. Kenya used to rely heavily on agriculture, but naturally agriculture is not doing so well. We have seen areas like the neighbouring Kiambu County where we used to pass and find coffee plantations. Most of them have been replaced with buildings. We have also seen farmers uprooting tea bushes because they are no longer doing well.

Mr. Deputy Speaker, Sir, I support this Motion because this is a plan “B” to the people of Kenya. Once there is power generated at a low cost, availability of electricity even within the rural areas, where it is also dearly needed, will mean that there will be improved ways of cultivating agriculture generally and utilizing the geothermal resources, as is clearly indicated in this Report. That means creation of wealth amongst others. It also means capacity building for the local people. They will come up with more resources within the society and learn new ways of doing things. As my colleague, Sen. Karaba has said, there will be rural electrification and the Jubilee government’s dream of laptops may actually become a reality.

Mr. Deputy Speaker, Sir, this geothermal generation of power may also help to decongest the cities. Many people will move from the urban cities like Nairobi, Mombasa and others to the counties. They will now move on with their lives and do some of the modern activities that they would have done in, for example, Nairobi’s Industrial Area. They can come up with small factories because there will be electricity and power generation with the help of geothermal. Life will become affordable and Kenya can now move to the heights that Kenyans want.

With those few remarks, I beg to support.

**Sen. Okong’o:** Mr. Deputy Speaker, Sir, thank you for giving me this opportunity to also add a few remarks in support of this Motion as tabled by the Vice Chair of the Committee.

The Report indicates that we are coming of age in line with the Vision 2030, if the new thinking can be that we do not shelve very good documents as in the past. Since Independence, most well thought and researched documents like this one are in the shelves and some have been forgotten. If in the new order, in the new political dispensation, we can implement such findings, we will be in order and catch up with the Vision 2030.

Mr. Deputy Speaker, Sir, having looked at the Report, I have a few reservations. For instance, the environmental impact assessment is ongoing. I would recommend that the Committee makes a follow up on this issue and the social relations with the people in these areas. Further, I also urge the relevant committees, especially the Committee on Education, Information and Communication, to sell this idea to our universities. We are told that we have around 50 expert professionals in this career who are working. We have seen our universities embark on very expansionist policies and curricula. I urge the

relevant committees to also pass this to the Government of the day, so that our universities, especially those that are established, like the University of Nairobi, Jomo Kenyatta University of Agriculture and Technology and Kenyatta University, expand and nurture our local talents in this field, so that we can have enough manpower as and when it is required.

Mr. Deputy Speaker, Sir, lastly, I also urge the Sarah Serem Commission, which is working very hard and talking about salaries, wage bills, *et cetera*, to look at some of these professionals. We need these professionals to be well paid so that they can be attracted to serve the nation. You will find that some of our professors in different fields earn peanuts. This is so sad. But with the new order and the Senate having taken its mandate, I believe that we will engage the relevant authorities and capture some of these talents to work for our country.

I beg to support.

**Sen. Ndiema:** Thank you, Mr. Deputy Speaker, Sir. I rise to support this Motion and Report on this very important energy resource. Kenya has never had enough power to run its economy. From the look of things, it appears that we may not in the very near future have enough power. Initially, we have depended on hydroelectric power which has served us very well so far. I know that we have moved into other sources of energy, like thermal and now on geothermal. This Report has made it clear that we have enough geothermal resources in this country, perhaps, more than any other country in Africa. This is really a resource given to us by God and which we should be able to exploit.

Mr. Deputy Speaker, Sir, looking at the Report, we note that while a lot of work is being done on exploration and drilling, it is disturbing that even after some resource has been discovered, we are not able to get investors to exploit the resource. We should be asking ourselves why this is so. Having spent a lot of money exploring and discovering this resource, why are the investors not coming? Why are they coming only in terms of drilling?

Mr. Deputy Speaker, Sir, perhaps there will be need – maybe not by this Committee – for researchers and the Ministry concerned to do a comparative study on the cost of exploration. We have been told of the reduced costs to the consumer if we were to exploit geothermal power, but we are not being told what it costs to explore and generate.

Geothermal exploration has been going on in this country for many years; it is not a new thing. I recall that even in the 1980s and 1990s, a lot of funds were pumped in for Olkaria I, II, and III. This is perhaps more than what has gone into all hydro electric power generation activities in this country. That is an area that still has to be looked at to see whether it is really cost effective to do geothermal drilling.

Mr. Deputy Speaker, Sir, we also note that the areas where we are operating or exploring geothermal energy are some of the areas which are sensitive ecologically. These areas also have inhabitants there who are vulnerable in so many aspects. As we carry out exploration, it is very important, as my colleagues have said, to really see how the local people or the residents in those areas will benefit. We should also look at how the environmental impact will be. We are looking at areas in Rift Valley like Menengai and Lake Bogoria, for instance, where we have flamingoes and where we have the hot water springs exploration. Will it have an effect on the hot water in Lake Bogoria, therefore growing the algae, which is the food for flamingoes? What will happen with the flamingoes?

Mr. Deputy Speaker, Sir, as I said, we have been in this business of drilling for a long time. Perhaps in the whole of Africa, we are the ones who have had a lot of experience in drilling and exploration. Since we are the leaders in this area, surely, we should not just be looking at doing the business of drilling in Kenya only but we should also now be looking at how to establish companies that will employ our people – who are already experts in this area – to go and exploit such resources in other parts of the world, because it is not just enough to drill. We have had the Japanese and the Chinese coming to Kenya, but maybe they do not even have what we have.

Mr. Deputy Speaker, Sir, we are being told here that some equipment require a lot of maintenance costs. I believe that by maintenance costs, we mean replacement of spares, maybe pipes, materials and so forth, which are imported from countries which have no business in drilling or they do not drill. I think if our industries are supported in this country to manufacture the necessary materials locally, for example, pipes-- We know we have the capacity, for example, to drill water. We have had our own industry, the Numerical Machining Complex (NMC) at the Kenya Railways yard here, which has been very idle. Why do we not use that facility and that capacity to manufacture some of the equipment and materials that would be required to repair and to construct the geothermal plants?

With those few remarks, I beg to support this report.

**The Deputy Speaker** (Sen. Kembi-Gitura): Is there any other Member willing to contribute?

If there is no other Member, the Mover can reply.

**Sen. Mwakulegwa:** Thank you, Mr. Deputy Speaker, Sir. First and foremost, let me take this opportunity to thank all contributors who have supported this Report. It has generated good discussions. From the contributions, there are new ideas which have been suggested for improvement of the sector or the industry. We will take in all you have contributed and we shall share it with the Ministry of Energy and the Geothermal Development Corporation (GDC).

Mr. Deputy Speaker, Sir, while we know that energy will accelerate development of this country and will also attract investors to come to this country, we have heard from the contributors that out of ten investors coming to the region, eight are going elsewhere. When we make energy available, I am sure that due to our improved infrastructure, Kenya and particularly, Nairobi will be the hub in the region. Therefore, the only element which is lacking for us to truly attract investors is the availability of energy. The Government has promised that in the next 40 months, we will be able to generate 5,000 megawatts. Already from last year to this year, we have 400 megawatts already connected to the national grid; and in the next six months, we shall have another 400 megawatts connected to the national grid.

Mr. Deputy Speaker, Sir, it is also important for Senators to know that that is the reason why we are encouraging different energy product needs. From hydro, we are talking about coal. The Committee on Energy, Roads and Infrastructure has visited Kitui coal mining area. We have also had discussions and helped the Ministry to solve the impasse which was there. As we speak, the agreement has been signed between the company and the community and, therefore, we are going to have coal. We will also be fast tracking gas, solar and wind. We should also not close our eyes to nuclear energy. After we have developed all this, in the next 20 years after we have achieved our Vision

2030, then the next energy source will be nuclear energy. We have heard and we have seen many countries – I had an opportunity to go to Korea and I visited a nuclear plant – very close to the nuclear plant, where we found residential areas there and the people are comfortable. The Koreans have embraced the nuclear energy. Therefore, what the Government is doing is to encourage different product mix in the energy sector.

Mr. Deputy Speaker, Sir, in terms of funding, what the Government of Kenya was being requested by GDC to contribute was Kshs2 billion which was required by donors so that as a commitment of the Kenya Government, if they gave Kshs2 billion, the donors would have released Kshs8 billion. So, this is what we asked and recommended the Kenya Government to fast track and pay the Kshs2 billion so that the donors could release their own contribution.

Mr. Deputy Speaker, Sir, we have also recommended that Independent Power Producers (IPPs) should be approached so that where the Government cannot commit funds, investors could come in so that we can accelerate development of the power industry.

Mr. Deputy Speaker, Sir, in terms of counties, we have discussed with counties, specifically three of them, Baringo, Nakuru and we made contact with Turkana. But we shall, as a Committee, as we go to the next county visit, stress upon them that they also need to develop capacity in terms of the water that is generated by hydro and geothermal production, which should be given to the counties so that they can utilize it either for human consumption or for irrigation. So, they need to develop the capacity and capability of using the by-products from the geothermal production.

Mr. Deputy Speaker, Sir, we are also discussing with the counties to also take advantage; as these companies do exploration and as they open up the roads and the other areas, they should link up so that the nearby roads can be opened up so that there is accessibility and so that economic activities can take place.

Mr. Deputy Speaker, Sir, in terms of the community being made aware about sharing, I think we know that there is a special Committee in the Senate to look at the mode of sharing the benefits that accrue from minerals. I think we have all given our input to that and when it comes to the Floor, we shall do that. We also call upon the Government to develop and deploy a very clear policy that will help to integrate the communities where all activities will be taking place, not only on energy, but investment in other minerals. What we saw taking place in Turkana should not be repeated because we can chase away investors who come and spend their money and also develop our economy.

Mr. Deputy Speaker, Sir, there is also need for us, as we develop these resources, to have people who can audit. For example, when we talk about carbon credits, we do not have people who can actually assess and tell us whether we are getting the rightful share or not. If we do not have our own people who will be checking, then we might be shortchanged because we might be told we are producing this, but we do not have the capacity to verify that claim. Therefore, we call upon the Government to develop this audit capacity pretty fast so that as we generate geothermal and other mineral resources, we have the experts who can actually tell us that this is what we are producing and this is our share.

Mr. Deputy Speaker, Sir, in terms of the suggestions that have been made on the Floor, as I said, as the Committee, we shall go through the HANSARD, digest them,

summarize them and share them with the Ministry of Energy and also the GDC. It has been very educative even for me because a wide range of suggestions have been made to actually enrich, not only this Report, but the understanding of the corporations and even the Ministry concerned; for example, the issue of the audit capacity that a Member brought forward.

Mr. Deputy Speaker, Sir, we also need to look at the curriculum in our own local universities because as we continue to develop and discover minerals, we do not need to depend on expertise from outside, because they will be expensive and, sometimes they might also not give all the information. So, we need to develop our own capacities and capabilities so that as we move forward, we will have to depend on our own people.

Lastly, I would once again want to thank the Members for their hearty contributions to this Report. We are about to bring other reports because as I said, we have visited the coal producing area, the wind powered energy production in Ngong' and the hydro-electric plants. Therefore, the Committee will be laying in this House some more reports that we believe will generate equally positive responses and contributions from the Members like today.

*[The Deputy Speaker (Sen. Kembi-Gitura) left the Chair]*

*[The Temporary Speaker (Sen. Murkomen) took the Chair]*

Thank you.

**The Temporary Speaker** (Sen. Murkomen): Senators, as you are aware, before we vote on any Motion, we have to satisfy ourselves whether it is affecting counties or not. In my considered opinion, this is not a matter affecting counties. Therefore, I will proceed to put the Question.

*(Question put and agreed to)*

Hon. Members, I have looked at the provision of Standing Order No.30 (2) that gives me the power to adjourn the House if it is at the convenience of the House. We have looked at the agenda that is before us and it is quite clear that the prosecution of that agenda will not be convenient at this moment for many reasons including the availability of the human resource to prosecute and contribute in the debate.

### ADJOURNMENT

**The Temporary Speaker** (Sen. Murkomen): Hon. Members, there being no other business, the Senate stands adjourned until tomorrow Thursday 27<sup>th</sup> February, 2014 at 2.30 p.m.

The Senate rose at 6.01 p.m.