ORAL ANSWER TO QUESTION
CEB – PEAK DEMAND, CONSUMPTION, PRODUCTION ETC

The Leader of the Opposition (Mr P. Bérenger) (By Private Notice) asked the Deputy Prime Minister, Minister of Renewable Energy and Public Utilities whether, in regard to electricity, he will, for the benefit of the House, obtain from the Central Electricity Board, information as to –
(a) the peak demands in 2007, 2008 and 2009 to date, indicating the total production capacity and quantity produced at the peak times;
(b) how consumption and production are expected to evolve in 2009, 2010 and 2011; and
(c) where matters stand concerning the –
   (i) two 15 MW plants at Victoria;
   (ii) wind park at Bigara;
   (iii) CT Power Project;
   (iv) Gamma-Coventa Project, and
   (v) expression of interest for the new power plant on a BOO scheme of a total capacity of 100 MW.

The Deputy Prime Minister, Minister of Renewable Energy and Public Utilities (Dr. R. Beebeejaun): Mr Speaker, Sir, I thank the hon. Leader of the Opposition for giving me the opportunity to put a few facts in front of the House and I will make further comments on Tuesday on the Budget Speech. Mr Speaker, Sir, the phrasing of the Question leads to a slight ambiguity between capacity and quantity. The unit of Capacity is Megawatt. Production is Megawatt multiplied by time and is expressed in Megawatt, Kilowatt or Gigawatt Hour. I presume that the hon. Leader of Opposition when referring to production and consumption has in
mind production capacity and peak demand. In case, the hon Leader of Opposition is interested in consumption at specified peak times, I would be pleased to provide the information to him.

Mr Speaker, Sir, as regards part (a), the peak demand in 2007, 2008 and 2009 as at today and the capacity of production were as follows –

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<tr>
<th>Year</th>
<th>Peak demand</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>2007</td>
<td>367.6 MW</td>
<td>504 MW</td>
</tr>
<tr>
<td>2008</td>
<td>375.1 MW</td>
<td>504 MW</td>
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<tr>
<td>2009 to date</td>
<td>389 MW</td>
<td>504 MW</td>
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This capacity, Mr Speaker, Sir, I must stress, includes allowance for maintenance and breakdown reserve and an additional 10% of spinning reserve. I am saying this so that we all know what is the issue we are addressing.

With regard to part (b) of the question, the forecast of peak demand is 404 MW in 2009, 421 in 2010 and 443 MW for 2011. The capacity needed to meet that demand is as follows –

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>2009</td>
<td>504 MW</td>
</tr>
<tr>
<td>2010</td>
<td>534 MW</td>
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<tr>
<td>2011</td>
<td>649 MW</td>
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This will be met by the 30 MW of the new Fort Victoria Power station, which will be commissioned in 2010 and projects such as Gamma Covanta, CT Power and others.

As regards Part (c) of the question, regarding the two 15 MW plants at Fort Victoria, I am informed that the CEB has awarded the contract for the design, supply, installation and commissioning of two 15 MW plants at Fort Victoria on 03 April 2009. Works have started on 30 April 2009 and it is expected that the units will be commissioned by October 2010.

**Wind Park at Bigara**

As regards the Wind Park project at Bigara, this is the first wind park project being implemented in Mauritius. I say wind park because in the distant past there was a wind project which did not last very long. A Transaction Adviser, CRISIL LTD from India has been appointed by my Ministry to carry out a feasibility study and assist in the procurement process for the setting up of a 25 to 40 MW wind farm on a PPP basis. The Transaction Adviser has started his assignment this month and is expected to complete it within 44 weeks. After the feasibility study, a potential investor will be selected through tendering process and it is expected that the plant will be commissioned by the end 2010. The plant will provide intermittent, but not firm power. The Bigara project is a Government initiative. However, there are two other project proposals from Aerowatt at Plaine des Roches and Mon Desert Mon Trésor at Britannia which are being considered.

Mr Speaker, Sir, regarding the CT Power Project, this project of 110 MW is expected to be commissioned in 2011. The project will use pulverized coal technology. The project was started following the letter of intent issued by the Board of Investment in April 2006. Negotiations with CT Power started in 2006 and were completed in 2008. The Power Purchase Agreement between the CEB
and the promoter was signed on 23 December 2008. I must stress, Mr Speaker, Sir, that the agreements are subject to the promoter obtaining an Environment Impact Assessment licence.

With regard to the Gamma Covanta project, it is expected that the plant will be commissioned in the third quarter of 2011. This project for the generation of electricity for a capacity of 20 MW was initiated following a letter of intent issued by the Board of Investment on 05 May 2006. Since then, negotiations are being carried out with the CEB on a Power Purchase Agreement. In parallel, a Project Implementation Agreement Committee comprising representatives of the State Law Office, Ministry of Finance & Economic Empowerment, Ministry of Local Government, my Ministry and CEB are negotiating the Project Implementation Agreement. A number of other side agreements are also being negotiated between the promoter and other authorities.

Mr Speaker, Sir, the CT Power and Gamma Covanta projects are the subject of much public debate, which the Prime Minister has followed closely with great interest. The Prime Minister has asked Professor Joel de Rosnay for his advice on these two projects. A final decision will be taken in the light of advice of Professor de Rosnay. Mr Speaker, Sir, consideration is also being given to request Professor de Rosnay to review the level of pollution from existing power plants.

Regarding the Gamma Covanta project, Professor Joel de Rosnay has insisted that there should be appropriate filters incorporated in the project with state-of-the-art technology and this should be mandatory. I am given to understand that the promoter has taken a commitment to meet this requirement.

Mr Speaker, Sir, part (v) relates to Expression of Interest for 100MW. With a view to ensuring security and reliability of electricity supply to meet future demand, the Technical Committee on Nurturing Resilience chaired by the
Secretary to the Cabinet and Head of Civil Service and comprising private sector representatives recommended that a Request for Proposal be invited from potential bidders for the setting up of a plant of total capacity of 100 MW in sub units - this is important - not exceeding 50 MW giving flexibility for the proposal. On 04 February 2009, my Ministry issued an Expression of Interest inviting eligible private developers to indicate their interest in setting up this power plant on a BOO scheme, based on open technology.

By the closing date of 20 February 2009, 25 applications were received out of which 10 were from local promoters. The proposed technology range from coal, bagasse, heavy fuel oil, wind and solar. In view of the fact that the project will be implemented on a PPP scheme, Government has decided to appoint IFC as Transaction Adviser for this project. The PPP unit of the Ministry of Finance is liaising with IFC on this matter to finalise the terms of reference for this assignment.

The House may wish to know also that following the agreement signed by Government and the Mauritius Sugar Producers Association in April 2008, providing *inter alia* that Government and MSPA will appoint jointly an independent expert or entity of international repute to review the energy sector with regard to the Independent Power Producers.

In November 2008, an international bidding exercise was carried out jointly by Government and the MSPA. I can now inform the House that an independent consultancy firm Hunton Williams LLP, based in USA has been appointed. The Consultant is expected to start the review on 08 June 2009 and will submit a report after twelve weeks.
Mr Bérenger: Mr Speaker, Sir, the hon. Deputy Prime Minister has submitted figures that I will have to look at carefully. But one thing - if I heard him correctly - strikes me, that the peak demand from 377 went down to 335 in 2008, from 377 in 2007 and then jumped up to 389 this year.

Dr. Beebeejaun: I will read the figures. Peak demand in 2007: 367.6 MW; 2008: 378.1, 2009 to date: 389 MW.

Mr Bérenger: I will have to look at it even more closely. Can I ask the hon. Deputy Prime Minister - his predecessor of that Ministry said that the intention of Government - the target rather of Government, is to bring down that peak demand by some 25MW at horizon 2010 - whether he agrees with me that we are going in the wrong direction. Instead of bringing down by 25 MW, or whatever figure, we are going up?

Dr. Beebeejaun: Mr Speaker, Sir, bringing peak demand down is one of the objectives of Maurice Ile Durable as far as it is possible and this will come through energy efficiency and energy savings rather than through decrease power production.

Mr Bérenger: The figures are there. I think the hon. Deputy Prime Minister was right in saying that I am very worried about peak demand and whether our capacity with the required safety margin will be there to meet that demand this year, next year and in 2011. I will have to look at the figures, as I said. We have just been provided with the written answer which was in the Library today and the Ministry itself says that if we do not take the two 15 MW units - and the Minister confirmed that that will come into operation only in October 2010, probably, a bit later - therefore, we will have a tough 2009 and 2010. Will the hon. Deputy Prime
Minister confirm that, in fact, we are already in the danger zone? Because the deficit for this year is already of 11 MW, as per what the Ministry has provided us with today, and will climb to 30 MW in 2010; then the two new units 30 MW in all will come into operation in October, November, December or slightly later. With those figures - we are already in 2009 - we are already struck with the 11 MW deficit which will climb to 30 MW in 2010, will the hon. Minister agree that we are already in the danger zone?

Dr. Beebeejaun: Mr Speaker, Sir, navigating in the danger zone has always been one of the problems of CEB for generations - CEB and other production units. I can assure the hon. Leader of the Opposition that the Cabinet, the Prime Minister and myself, we have been looking at the energy production very closely.

Today, we are talking about minus 11 - did the hon. Leader of the Opposition say capacity margin minus 11? - but this takes into consideration 70 MW being taken out, either for breakdown or for maintenance and 10% spinning reserve. I can assure the House that the CEB has prepared and looked very closely at all the potential production units so as to be able to make allowance for this. As to the two 15 MW projects of Fort Victoria, there will be no delay, it will be October 2010 or before, but not later. I have obtained from the CEB the assurance that from now till end 2010 and beginning of 2011, whilst navigating in difficult waters, we will have no major problems using the experience of the CEB technicians to be able to accommodate, close, shut down, use the other units and so on and so forth.

Mr Bérenger: Since he has mentioned it, can I ask the hon. Deputy Prime Minister whether he has the details of the unit that will run out of their life time this year and next year? They are very old units that cost a lot to the consumers and to the CEB. What are the units that are going to be taken off?
Dr. Beebeejaun: Yes, Mr Speaker, Sir, as the House knows, every generation unit has got a lifetime and the one at Fort Victoria, the Murlies, is expected to be phased out by 2012. We talked about production, over production, under-production but, taking into account, that the older engine will be removed from service, I don’t think, at any time, we will be at super super production d’énergie.

Mr Bérenger: I think I heard the hon. Deputy Prime Minister give the figures. Am I right in hearing that, when this expression of interests for two 15MW plants, there are proposals for wind and solar energy. Are there proposals for two units of 15MW to produce from wind and solar sources?

Dr. Beebeejaun: No. It has been in the pipeline for a long time. Proposals for wind park at Bigara, as the Leader of the Opposition well knows, between 2000 and 2005, there was a project which somehow did not materialize and we have started again on the project. At Britannia they are quite serious about it, but they won’t be ready for another eighteen months to two years. The same for Aerowatt. We are looking closely at these three measures and I will talk more about them on Tuesday. I hope the House will have a better profile of the energy production and demand and our plan for the future. I can assure the House that we, too, give precedence to renewal energy, but it will be in the context of technologies existing at the moment. So, for the time being, we have Bigara. We have two other sites which have been identified, but they are not for this year, maybe next year, but certainly the year after.

Mr Bérenger: With regard to part (c) of my question, that is, the different projects that are planned. We have talked about the two 15 MW plants at Fort Victoria and the wind park at Bigara. The next one is the CT Power. I am sure the hon. Deputy Prime Minister will agree with me that more and more coal plants are
out throughout the world. I am sure he is aware that yesterday, the latest Union Nations report on global warming and within that, the damage caused by coal plants is again underlined. Professor Joel de Rosnay has already given an opinion on that. Is Government still thinking, therefore, of going ahead with the CT Power which is going to use one of the worse coal technologies?

**Dr. Beebeejaun:** Mr Speaker, Sir, I wanted to keep this for my Tuesday’s intervention, but I’ll come on this. Much has been spoken about the use of coal. Let us agree on one thing. Every country worldwide is talking about renewable energy. Every country is trying to expand its renewable energy project. Some which have barely any are able to double and treble it easily; others like us which are already on a 20% production will have to strive and wait for the new technologies to come in and be sure that we can incorporate them in our transmission system. That is the first point. The second point - the United Nations on environment; I agree with it, this is policy which has been evolved, which will be followed up over the next twenty years. No country in the world today can afford to say that we are not going to use coal. No country! China is going to use it more and more. Swaziland is going to use it. We had the distinguished visitor from Swaziland and he was telling me that they have a lot of coal, they are going to use it. The real issue about climate change is pollution from carbon dioxide. This is the real issue and today, we have different types of coal technology. The ancient one, the disgustingly polluting one, which is being used at the moment. I’ll say more about it later. It is a greater coal technology, inefficient, dirty, badly disposed of; I’ll come on Tuesday. The technology that is being used today is the pulverized coal technology which is the newest, but there is another one is fluidized coal. It is for the future, it is not for today. I don’t know any country in the region or anywhere elsewhere which is using it on a big scale. It is experimental still, the
fluidized coal. So, this is about coal. The essence of coal is to use a technology, the latest, that can be accepted. We talked about carbon capture and carbon sequestration. It is easily said. But who is doing it on a commercial scale? No country! They are being investigated by America and I know, Britain has said they are going to go into the CO₂ capture, but having talked to eminent personalities at the Carbon Trust in London two months ago, they have warned me that there is a lot of talks, but little to show. Carbon dioxide capturing is for the future, it is not for today; it is not for the five years to come, it is experimental. So, there we are, Mr Speaker, Sir. We must be careful. For the CT Power, we may have objection. I’ll wait for Professor Joel de Rosnay, he has expressed his views and I hope he will come, he will look at it and he will give his advice. I can assure the House, we will go by his advice.

Mr Bérenger: The hon. Deputy Prime Minister seems not to be aware that, at least, the UK Government has taken a firm decision about three to four weeks ago that there will be no new coal plan without carbon capture - definite decision that there will no new coal plan except with carbon capture. Is he aware of that?

Dr. Beebeejaun: Mr Speaker, Sir, no coal, what else? No fuel oil, no fossil fuel! Atomic energy - they are able to do it! Can we afford? Have we got the skill for nuclear energy? So, this is nuclear energy that I am talking about and I hope that no one here is going to tell me to install a nuclear energy plant somewhere around the island or in one of the islands.

Mr Bérenger: I am sure the hon. Deputy Prime Minister is aware. It is not only UK with their financial power, but China also. China is bent – they have just announced last week a plan over a ten-year, fifteen-year period, I don’t have the figure in mind - to reduce the share of coal produced electricity by gas drastically.
So, is he aware that it is not just the rich countries? Countries like China and others which mean to be serious about global warming are taking decisions.

**Dr. Beebeejaun:** Mr Speaker, Sir, we are talking of countries with which we cannot compare. The energy production of China, as we all know, is mostly based on coal today, so they are making the required effort and I have looked at the projection for the next ten years for China, it is coal plus other forms of energy. They have not dismissed coal. All I am saying - I am not advocating in any way the usage of coal – is that we are stuck with coal for a while until we can improve the technologies and get carbon capture on a commercial basis.

**Mr Bérenger:** On the CT Power project, I heard the hon. Deputy Prime Minister say that an agreement was signed between CEB and CT Power in December 2008, but subject to the EIA licence being obtained. Can we know where matters stand as far as the EIA licence is concerned?

**Dr. Beebeejaun:** For the CT Power, the EIA licence is yet to be obtained. So, it is in process.

**Mr Bérenger:** In the case of the next one, the Gamma Covanta Project, in fact, I understand that the EIA certificate was issued, but it is being challenged before the Appeal Board. Can I know where matters stand as far as the appeal is concerned? And I heard the hon. Deputy Prime Minister say that, according to his information, Gamma Covanta have committed themselves to introducing the required technology, filters and so on as requested by Professor Joel de Rosnay. Can I know, therefore, where matters stand, and secondly, whether Gamma Covanta has made that commitment in front of the Appeal Board?

**Dr. Beebeejaun:** Mr Speaker, Sir, there have been several postponements for hearing the appeal, and I understand - my colleague probably will confirm this
with me - it will be heard end of June, and any new submissions will be taken into consideration.

Mr Bérenger: My next point, Mr Speaker, Sir, if you will allow me. If I heard correctly, there were ten local ventures that have come forward when the expression of interest was issued. Can I know whether there have been any international offers and how many relate to wind and solar?

Dr. Beebeejaun: The response has been fairly vague. There has been no sort of specification on the megawatt to be produced. That’s why we have appointed the Transaction Adviser, Mr Speaker, Sir, so that we can firm it up a bit more. But, for me, the interest in this invitation is to give us flexibility as well as security for 2011.

Mr Bérenger: Mr Speaker, Sir, I will put one more question before I will have a final one at the end. Is Government totally committed to do as much as can be done as far as producing as much electricity as possible from both solar and wind, either through expressions of interest that come forward from the private sector or CEB itself, Government sector itself?

Dr. Beebeejaun: Mr Speaker, Sir, the answer is firmly “yes”. I will come again on that. I will give a full explanation on Tuesday. But I will say the answer is firmly ‘yes’, taking into account the upfront costs; the running costs and the tariff structure, and also I understand that we are getting help from France, that President Sarkozy has given our Prime Minister the understanding that he will accompany us on this very difficult transition. It is not as easy as people think it is, but the answer is yes, there is a firm commitment.

Ms Deerpalsing: Mr Speaker, Sir, just to get an insight from the Deputy Prime Minister about the use of coal. Can he tell the House what has been the
increase in the import of coal for existing coal/bagasse technology that has been used since the time of inception, that is, the first time we started using coal and how it has evolved until now? If he does not have the information, I would like to have it in his speech on Tuesday.

Dr. Beebeejaun: Mr Speaker, Sir, the hon. Member is stealing my thunder for Tuesday. So, I will give it on Tuesday.

Mr Lesjongard: As it is, Mr Speaker, Sir, we are walking on a tight rope with regard to production of electricity. We are already in the orange zone concerning the spinning reserve. Doesn’t the Deputy Prime Minister feel that if the power projects that have been identified by Government do not materialise by the year 2010 and 2011 we might be running very short of spinning reserve which is unacceptable at a time when we might recover from the economic crisis.

(Interruptions)

Mr Speaker: The hon. Member has put his question, will the hon. Deputy Prime Minister give the answer?

Dr. Beebeejaun: Mr Speaker, Sir, the whole point of my answer was to say that 2009/2010 is secure. In 2011, we’ll come up and we are making provisions that we do not run short in 2011.

Mr Jugnauth: Mr Speaker, Sir, in the light of the deal that was struck between the Government and MSPA, the hon. Prime Minister stated that shareholding of workers of the sugar industry would be increased in both future and the actual IPPs …

(Interruptions)

Mr Speaker: I am sorry, it does not relate to the question.
Mr Jugnauth: It does because the hon. Minister said in his answer …

(Interruptions)

Mr Speaker: The hon. Deputy Prime Minister stated that an expert has been appointed to look into the agreement insofar as the cost of production of the power is concerned. He has not talked about shareholding as such.

Dr. Beebejaun: Mr Speaker, Sir, I will make an appeal to the hon. Member. Let the consultant start and then I will give all the details because it is a subject that has been agreed upon by both parties.

Mr Bhagwan: I have not heard the Deputy Prime Minister giving us any hint on hydropower. Can we know from him whether there is any increase in the hydropower unit and whether he is satisfied that all the units of our existing hydro plants are maintained properly? Sometimes, we have water and the engines are broken down.

Dr. Beebejaun: Mr Speaker, Sir, as has been mentioned elsewhere, there are two small units being looked into. One is commissioned already and one is in the pipeline. I will take the point of the hon. Member about maintenance of equipment. It applies not only to the hydropower sector, but also to the other sectors that engines are properly kept and maintained.

Mr Ganoo: Mr Speaker, Sir, can the hon. Deputy Prime Minister respond to the exercise which the CEB made recently about the electric saving bulbs? What has been the outcome? Has there been any impact of this?

Dr. Beebejaun: If a substantive question is put, I will answer it fully. But the outcome has been very satisfactory. But we have almost exhausted the one million target, but there is a problem - and I think we have to address it - that people actually do use it and know where to use it best. And we are trying to
educate the consumers that they should use it when the bulb is on for the maximum
time and not just in a little corner which is switched on and off. I again stress that
with energy efficiency we can achieve a lot. I’ll address this issue on Tuesday and
it will probably remain the subject of my intervention.

Mr Bodha: Mr Speaker, Sir, the hon. Deputy Prime Minister mentioned the
consultancy as regards the agreement between the MSPA and the independent
power producers. Can he enlighten the House as to the terms of reference of that
consultancy and, secondly, whether there is a time frame for the submission of the
report?

Dr. Beebeejaun: I will lay the terms of reference on the Table of the
Assembly. There are three paragraphs. There is a time frame and it is very short.

Mr Dulloo: Mr Speaker, Sir, I think the hon. Deputy Prime Minister
indicated that about 20% electricity is being supplied to the CEB from renewable
energy sources. This probably would be mostly the sugar industry. Can we know
whether it is a continuous supply or this would include intermittent or continuous
supply also? What would be the projected increase from renewable energy sources
by 2010/2011?

Dr. Beebeejaun: Mr Speaker, Sir, this is a 64,000 dollar question. What
will be in 2011, we don’t know! But having said that, most of the power today is
24 hours, 7 days, 12 months, it is continuous. It is only 4 megawatts that is
intermittent during crop season only. The rest is power for all the year round.

Mr Bérenger: Mr Speaker, Sir, in a great country like South Africa next
door there also the authorities, over the recent years, have said that there is no
problem, no danger on the horizon, everything is cool. Tout va très bien Madame
la Marquise! And then, they ran into very big trouble with blackouts, cuts in
electricity supplies last year and it is continuing this year. The hon. Minister has given guarantees, it is on record. But already - it is on record - that he, himself, says in reply to a PNQ that we already have a capacity deficit of 11 megawatt this year which would climb to 30 megawatt next year and then the two units will come into operation. Will the hon. Minister agree with me that we are already in the danger zone and so much so that two of those projects, CT Power and Gamma Covanta, are meeting with a lot of trouble? There will be appeals here and there and so on. Can I ask the hon. Minister whether Government will see to it that alternative and as cheap as possible sources of supply of electricity are available, that we don’t just wait and see and then we have to rush through these two 15 megawatt units which cost a lot to consumers and to the CEB. They cost a lot, much more than other alternatives which should have been considered in the past. Therefore, can I ask whether Government will see to it that we don’t run into the kind of situation that South Africa met with and secondly that alternatives at the cheapest cost possible will be made available to the country.

**Dr. Beebeejaun:** Mr Speaker, Sir, there is no doubt that today the cheapest form of technology is diesel, the fuel oil. No doubt about it! The Victoria Power Plant 15 times 2 Megawatts will produce electricity at less than Rs3.50 per Kilowatt. That’s an option! You see, one option excludes the other. Cheapness, value for money, environmental consideration, they don’t all match, Mr Speaker, Sir. Solar power to produce electricity is very expensive. How much of it will be able to take up in the years to come? We will decide as we go along. We are praying for new technology, cheaper technology that will come along the line and I hope that what President Obama is doing will bear fruits and we will be able to benefit from that. Thank you!

**Mr Speaker:** Time is over!