



A visit to Botswana

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The habit of bargaining has become so engrained that statements of shortage are quite commonly read as bargaining positions leading to a price hike, rather than that you literally can't have any. But we are now in a time when the reality of growing shortages, and in more than just crude oil, is going to start imposing such a disconcerting awareness.

I was in Botswana the other week, and in two earlier posts I had mentioned the problems that that country suddenly encountered when the source for 75% of its electric power – Eskom of South Africa – started to use it as a [load-sheddable](#) part of its distribution chain. It has since given Botswana the amounts that it [can expect](#) over the next four years. From a supply of 410 MW in 2007; it will get 350 MW in 2008; 250 MW in 2009; and 150 MW in 2010 through 2012. While the country has in-house generation, it decided [some time ago](#) that it was less costly to import power than to increase internal supply. Now it will take some time to create that internal power, from coal, of which the country has a more than adequate supply. The expansion of the current plant, already in process, will not occur until [2010](#), and was planned to only add 120 MW, less by then, than the lost imports. And current growth in demand has been at 5.6% per annum. It [does not help](#) that:

It has also emerged that at the beginning of this year, the desperate BPC signed a no guarantees contract that allows Eskom to cut power supplies to Botswana within as little as ten minutes notice.

Flying into Gaborone, the capital, from Johannesburg, after reading the articles that had lead to the earlier pieces, I had expected to see that there would be some impact on behavior. But, crossing the veldt, there were lace points of light that reached out as long as I could see the ground. Once landed the streets were lit, and gas stations were running normally (at about \$1 a liter). Going into meetings the following morning, it seemed to have been, at that scale, an irritant. We continued to meet, and then the lights went out, and the air conditioner shut off.

There were a couple of remarks, and we continued with the meeting (which wasn't about this), and about fifteen minutes later power came back on. There is no sense, from those I talked to, as to when each outage will occur, nor how long it will last. And what is an inconvenience in a discussion, becomes much worse, for a business. Longer outages have led to spoiled meat at restaurants and it is perhaps not surprising that virtually all the meals we had were served as buffets.

The problem was foreseen, and, as with the current world oil situation, there were voices that

expressed concern. But while demand continued to grow, supply did not. Maintenance was not adequate, and there has been a continuing economic crisis in neighboring [Zimbabwe](#) which has led to their power stations shutting down, and power distribution collapsing.

The nation was sitting at the start of what looks to be a very promising future. As commodity prices rise it has the world's second [largest diamond mine](#) as well as other, increasingly valuable minerals. The second largest industry is tourism, with beef production running third (it is the size of Texas, but has perhaps a sixth the size of that herd). Plans were well underway to increase electrification of villages, which had been only at [around 12%](#) toward universal access to power by 2016. Unfortunately, due in part to lack of training, use of solar power has [\(pdf\) not been as successful](#) as had been hoped. And now, not only is there no new power to meet these future needs, there is not enough even for today.

So the Power Company has been scrambling to find answers wherever they can. Obviously there are some conservation measures, which [include](#)

replacement of incandescent lamps, which consume a lot of power. The director of transmission at BPC, Edward Rugoyi said the project is aimed at reducing power consumption to 30 MW by June this year.

Implementation will cost the corporation at least P20 million. Another initiative BPC will look at is load shifting, where the organisation will control domestic water heating by switching off water geysers during the peak period by using controls installed in their systems. Rugoyi said the exercise will cost P60 million and it is planned for May 2009. (The currency is the Pula, at about [6 to the dollar](#)). They are coming out of summer, so air conditioning will not be an immediate burden, though it can get cool in the winter, that is still some months away.



Morupule Power Plant

For the longer term, the plan is to increase power from the Morupule Power Plant, to a [new level of 300 MW](#), helped by the Chinese. [tenders have been accepted](#) to expand the Morupule plant to 300 MW by 2010, with incentives for fast-tracking. In the more immediate short term, Botswana has agreed to work with Zimbabwe in restoring and operating the currently [dysfunctional](#) power station at Bulawayo in Zimbabwe, with countries sharing 50:50 in the power produced from the

coal that Botswana will supply. This will require new transmission lines.



New Power Transmission Lines near the Zimbabwean border in Botswana

In short – depending on how successful the arrangement with Zimbabwe turns out to be, Botswana may have less than a year of discomfort, and, if the Chinese can perform to schedule, no more than a couple before becoming sufficiently independent of outside power supply that it can return to its planned progress forward. Much of that progress will likely build on the growth of the local mining industry, which is fairly energy dependent (as the [South Africans](#) are now well aware). Thus the plan is to continue to increase the size of the Morupule plant with another 300 MW, once the first phase is completed.

I enjoyed the visit, brief though it was, everyone was very friendly, the food was good, as was the accommodation and the one road I traveled (Gaborone to Francistown) quite fast, though – this being cattle country - I saw no wild animals (they are further north and west). But I got the feeling the general public did not fully understand the power situation, nor how close to a cliff they are currently walking. For if the arrangements with Zimbabwe don't work out, and the new power construction is delayed, then the switches on the wall won't work any longer.



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