A look at Nkula A rehabilitation works

In our last entry we talked about the Compacts Infrastructure Development Project (IDP). Nkula A rehabilitation, Transmission Network Upgrade and Transmission and Distribution Network upgrade are the three activities being implemented under the IDP. Today let us take you through the on-going Nkula A refurbishmentworks.This isCompact's only generation investment which will see an additional 12megawatts (MW) into the national grid.

Works on upgrading and modernizing the oldest Hydropower station, commissioned in 1966, started in April this year. The rationale is to improve the reliability of the plant, extend its useful life, and thereby avoid a partial or total failure of the plant. Visiting the site today, all you see is an empty power control house as the plant is beingcompletely overhauled. In other words, 24MW Nkula A Hydropower plant has been deliberately grounded to a halt or shutdown to allow contractors easily do their much-needed rehabilitation and modernization works.

As you read this entry, only Nkula B, Tedzani I and 2, Tedzani 3, Kapichira 1 and Kapichira 2 as well as Wovwe hydropower plants are the ones that are producing power to Malawians at the moment.

Now, prior to commencement of works, Nkula A plant was in obsolete state. By investing in Nkula A rehabilitation, the Malawi Compact is supporting Government in working towards improvement in the reliability of the plant and also extend its useful life for another 30 to 40 years.

The sweet news out of Nkula A rehabilitation works doesn't just end here. In fact at the end of these works, electricity output at the plant will also be maximized by 12 Megawatts from the current 24 to 36 Megawatts. By mentioning 12 MW as an additional output into the national grid, one is tempted to belittle this 'meagre' supplementary power out of all Nkula A upgrading works.

Well, it is imperative to understand from today onwards that the essence of these works is not to increase the megawatts by colossal margins but rather to improve the reliability, availability and of course quality of power supply by increasing the outputcapacity and stability of the national electricitynetwork while at the same time increasing efficiency of hydropower generation.

Right now, the three old generators, turbines, the switchyard, control panels and other machinery have been dismantled to pave way for the installation of modernized and state-of-the art digital equipment. The new generator units to be installed will produce 12MWup from EightMegawatts capacity.

Visiting Nkula hydropower plant, you will notice that Nkula A and B have a shared water reservoir dam (also known as a pond). This was a challenge because maintenance work at one plant required both plants to be shut in order to allow engineers work on either Nkula A or B Plant. Under such circumstances, production of electricity would be reduced by 124MW (100 MW from Nkula B and 24 MW from Nkula A). At the same time, rehabilitation works for Nkula A intake cannot take place because of the water that is intact at the pond.

However, to ensure that Nkula A intake is dry, the contractor has simply used their ingenuity to drain the water from the plant without affecting operations of Nkula B, hence allowing electricity consumers to still enjoy the 100 Megawatts from Nkula B.These contractors have temporarily constructed what is commonly being referred to as a cofferdam. As part of this cofferdam, a total of 411 concrete pile have been drilledto separate the two ponds and allow the contractor to carry on with their work.

So, the question might be are we on track with all these works at Nkula A? The answer is an emphatic 'yes'. Currently, the contractor has started installation of new switchgear and cooling water system while concrete works at the intake as well as assembling of new generators is progressing. All the work is progressing according to plan and the expected completion date for Nkula A rehabilitation and upgrading work is June 2018.

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