

## Malagapas Substation: A new heart of electric distribution on the rise

Written by Ivan Jones M. Colita

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**SUBSTATION'S POWER TRANSFORMER:** the Cotabato Light contractors are setting-up the hydraulic jacks to put the power transformer on its place.

In an electric distribution utility system flexibility and reliability are of utmost important. That goes true with Cotabato Light where service area includes Cotabato City and some areas in the municipalities of Sultan Kudarat in the north, and Datu Odin Sinsuat in the south. The substations that share the loads in its franchise area are the 12MVA Sinsuat substation within the utility's compound and the 10MVA & 15MVA Salimbao substation located at Sultan Kudarat.

As of 2010 data, the 12MVA Sinsuat substation is being loaded to as much as 94.66% of its capacity and having percent load factor of 70.66%. Majority of the customers being supplied by the Sinsuat substation are in the downtown area as well as the southern portion of the franchise area, whereas the Salimbao substation covers portion of downtown up to the northern part.

During preventive maintenance and servicing works of either the 12MVA Sinsuat or 15MVA Salimbao power transformers, only the 10MVA at Salimbao serves as back-up. This present scenario poses a serious challenge not only in servicing one of the substations but also during power interruptions as system reliability and stability are greatly compromised. Due to load growth within its franchise, there is a need to ease the burden being carried by the substations operating in the area. That is why constructing another new substation was conceptualized to service the southern area hence de-loading Sinsuat substation.

Today, in partnership with Davao light, a new 10MVA Malagapas substation is on its way to realization. The construction was started sometime on December, 2010 and it is now 20% completion as work in progress. The new substation is expected to finish on May, 2011. It is

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strategically located in the south of the City, this will definitely improve system flexibility having another heart of electric distribution in the system.

From here, veins of distribution lines will spread through its covered zones supplying power under normal operating conditions. But when fault occurs, perhaps more importantly the substation has to isolate the faulted portion at the shortest possible time. This is where an important function of a substation steps in, that is, switching.

Digging deeper, this bold step doesn't only tend to improve the technical parameters of a power system but most importantly to reach out to the very reason of the company's existence – customers. This daring project of Cotabato Light aims to ensure the customers that what they're paying is justified with efficient and reliable service that's worth the value of their money. //