

**2005 CAPITAL PROJECTS OVER \$50,000**  
**EXPLANATIONS**

**Project Title:** Replace Remote Terminal Units for Hydro - Phase 6

**Location:** Bay d'Espoir Plant and Bay d'Espoir Terminal Station

**Division:** Production

**Classification:** Information Systems & Telecommunications

**Project Description:**

This project consists of the replacement of two (2) Remote Terminal Units (RTUs) used for remote monitoring and control of plants and terminal stations from the Energy Control Center. The sites are the Bay d'Espoir Plant and the Bay d'Espoir Terminal Station. This is phase 6 of a 9-phase plan to replace all obsolete RTUs.

| <b>Project Cost:</b> (\$ x1,000)               | <b>2005</b>         | <b>2006</b>       | <b>Beyond</b>     | <b>Total</b>        |
|--|---------------------|-------------------|-------------------|---------------------|
| <b>Material Supply</b>                         | 75.2                | 0.0               | 0.0               | 75.2                |
| <b>Labour</b>                                  | 30.2                | 0.0               | 0.0               | 30.2                |
| <b>Engineering</b>                             | 12.5                | 0.0               | 0.0               | 12.5                |
| <b>Project Management</b>                      | 4.2                 | 0.0               | 0.0               | 4.2                 |
| <b>Inspection &amp; Commissioning</b>          | 0.0                 | 0.0               | 0.0               | 0.0                 |
| <b>Corp O/H, AFUDC, Esc. &amp; Contingency</b> | 27.4                | 0.0               | 0.0               | 27.4                |
| <b>Total</b>                                   | <u><u>149.5</u></u> | <u><u>0.0</u></u> | <u><u>0.0</u></u> | <u><u>149.5</u></u> |

**Operating Experience:**

The plant RTU was installed in 1980. The Terminal Station RTU was installed in 1990. Third party spares and repair services are not available for the RTUs.

**Project Justification:**

This replacement is necessary to ensure control and monitoring capabilities of Hydro's transmission and generation facilities as the equipment is no longer supported by the equipment manufacturer and spares are no longer available for these systems. Failure to replace this equipment will result in reduced reliability and extend or cause customer outages. Failures of RTUs can prevent the Energy Control Center from being able to dispatch generation at those particular sites or not being able to control the water at the various structures at the Bay d'Espoir facility. The RTUs permit the operation of these systems without having people present twenty-four hours a day. The Bay d'Espoir RTUs are located at one of the most critical system sites with the largest generation capacity.

**Future Plans:**

None in this phase.