

ABSTRACT

ELECTRICAL ENERGY MANAGEMENT AT PETROTRIN'S POINTE-A-PIERRE REFINERY

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The second greatest contributor to the operating cost at the Pointe-a-Pierre Refinery is the energy cost. With the continued escalation in fuel and electricity prices the energy cost will inevitably increase. Petrotrin's management is therefore forced to focus on energy management in order to reduce the operating cost and to be able to compete with other Refineries, and so ensure its survival.

The present electrical energy usage patterns at the Pointe-a-Pierre Refinery were determined and areas of inefficiency were identified. A strategic plan was developed highlighting relevant energy management programs and the action areas for implementation. Six specific examples were analysed using the proposed energy management techniques and the extent of electrical energy savings, and the resulting cost savings, were evaluated.

The results of the evaluation showed that a net monthly savings of \$111,840.77 can be achieved after 1.3 years at the present Rate Structure or \$137,284.55 after 1 year if the proposed PUC rate hike is effected, in five of the six application areas. The study suggests that a significant amount of savings can

be derived through the institution of a proper electrical energy management program.