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Appendix

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data & information collection, starting with business objective and then defining business processes, and to do analysis.

According to result of interviews with managers down to staff, the collected requirement will then be analyzed and arranged as input of the implementation plan. When Wang Noi is fully implemented, it is able to utilize decision-making information of the following modules.

- 1) Plant Operation Management
- 2) Plant Maintenance Management
- 3) Supplies Management System
- 4) Financial Management System
- 5) Human Resources Management System

3. Recommendations

As Wang Noi Power Plant actually has not much experience of managing a computer complex, it is recommended that a looking for "Outsourcing" that has reputable service provider is able to assure the accomplishment of the implementation according to the plan. Meanwhile, Wang Noi Power Plant will be obtainable advice from Outsourcers about how to consolidate and redesign business process as well as support operational functions to optimize quality services possibilities. It will be so great if Wang Noi Power Plant can pick up Outsourcers who are workable via a bilateral contractual agreement.

4. Implementation Strategy

The major objective of this implementation plan is to develop and approach to the implementation that will be obtainable productivity improvement wherever possible, that is to achieve cost reduction results in increment of Wang Noi Power Plant profitability.

EXECUTIVE SUMMARY

1. Introduction

As Wang Noi Power plant has to be changed into business unit, it shall run all operations as a private company would. To achieve an accurate and prompt decision for supporting business challenge, it has to create new ways to collect and react to data that is becoming to be business decision information. Such information thus shall be managed into the reliability system and should be real time retrievable.

This makes Wang Noi Power Plant necessarily consider to implement the Management Information System (MIS). In this connection, the selected MIS shall have flexibility in implementation that is it should consist of separated modules, dependently workable and can be linked among each other; those modules shall be implemented either individually sequential implementation or several modules concurrent implementation.

The implementation plan of MIS shall be circumspectly done to assure the success and within specific period as well as in budget. Finally, the most importance, the users should well understand their new operational procedures and be able to fully utilize the MIS for achieving the organization's strategy.

2. Application

It is necessary to realize the requirement and objective of each individual user group, called small system or module. The application uses top-down method to proceed

The MIS implementation strategy involves the following activities:

- 1) Announce the implementation and setting up the teams to do the implementation
- 2) Preparing the database that is necessary for an implementation
- 3) Initial implementation of software and equipment
- 4) Introducing the feature of the systems, with changes in working processes, where appropriate
- 5) Introducing the features that utilization of data & information, accumulated in the system, to planners and management to improve operational performance and provide greater understanding of the business
- 6) Introducing of twelve-month plan of the MIS implementation
- 7) Introduction of the three-year plan of the MIS implementation
- 8) The MIS will be implemented on using of EGAT's mainframe computer and Wang Noi's screen application server.

5. Schedule

In order to have in time implemented schedule, the plan is to implement some major modules concurrently and to use phasing approach, that is doing implement of most critical module first, then less critical module later. Figure 6-4 shows the overall implementation plan Figure 6-5 presents twelve months implementation plan.

6. Organization

A well organized structure of the MIS implementation team is a part of the key factor. It is true because, to hope successful implementation, it needs interestedly support from persons who involve in this implementation organization. Therefore, it is so important to set up MIS implementation organization from Wang Noi Power Plant existing

organization; all major staff should be assigned to involve. Figure 7-1 shows the organization Chart of the MIS implementation project.

7. Conclusion

The MIS assists to improve operational procedure, to effectively manage the Asset Life Cycle, and thus will enable Wang Noi Power Plant to be a world-class, profitable utility, where it is ready for privatization. The key success is concluded as the following Key Success Factors:

- 1) Management vision with sincere support implementation activities
- 2) Willing to change, management drives such change
- 3) Active user involvement
- 4) Small number of user representative who can make decisions
- 5) Obtainable experienced project team and project management
- 6) Proven methodology
- 7) Well-organized project
- 8) Effective communication

Besides the key success, it is considerable to control the risk of cost overrun, risk of un-sincere cooperation from users who provide inaccurate data & information, and risk of picking up inadequate ability 'Outsourcers'.

No.	Item	Year 1 Baht	Year 2 Baht	Year 3 Baht
1	File Server	600,000		
2	Software			1,200,000
3	Hire Contractor to do the implementation	27,745,000	11,120,000	15,956,000
4	Outsourcing to handle the data processing activities.		2,200,000	2,500,000
5	Wang Noi Manpower	6,210,000	3,105,000	3,135,000
	Total Amount	34,555,000	16,425,000	22,791,000

Figure 1. Estimation of investment cost (in Thai Baht, THB 40.00 = 1 US\$)

In Figure 1 provides information of estimated investment in Thai Baht currency, it is itemized into each mode of expenses and shows individual yearly budget of total three years. The total amount of investment is 73,771,000 Baht that is very small portion comparing with the total electrical energy sales volume of Wang Noi Power Plant. Item 4 of Figure 1 shows the estimation of "Outsourcing" costs for handle the data processing activities, the expense for the outsourcer comes from a set fee per month with additional fee which depends on number of items are in the processing. The expense is made to this "Outsourcing" that is reasonable and it is easily stabilized rather than purchasing own hardware at bulk price and consequently causes development and maintenance costs.

The benefits of a management information system are summarized below:

- 1) Provide electricity within a tight cost structure by control operating.
- 2) Respond more quickly and communicate effectively with other managers of each individual unit in Wang Noi's organization.
- 3) Reduced plant downtime and extended equipment life

- 1) More systematic preventive and predictive maintenance resulting in increment of availability, reliability and performance of plants
- 2) Well planned shutdowns
- 3) Systematic and efficient response to breakdowns.
- 4) Improve overall efficiency
 - 1) Improve work safety
 - 2) Improve planning and management of operations, maintenance, finance, human resources, reducing labor costs
 - 3) Tightly operation, maintenance and material planning
 - 4) Consistent standards and procedures.
- 5) Improve procurement and controlled costs
 - 1) Improve information for part and supplier selection
 - 2) Quantity estimating
 - 3) Procurement cycle management.
- 6) Reduce inventory levels
 - 1) Through integrated part control
 - 2) More systematic inventory management
- 7) Improve asset management
 - 1) Decisions based on actual data
 - 2) Management awareness of real maintenance costs.

BIOGRAPHY



Mrs. Srivan Vigayatipat was born on May 24, 1955 in Bangkok, Thailand. She graduated from King Mongkut's Institute of Technology, Ladkrabang (KMIT-L) with a Bachelor's Degree in Electrical Engineering, first class honours, since 1979. She continued her education with a Master's Degree in Engineering Management at Chulalongkorn University in 1997.

She first was a lecturer in KMIT-L for half year and then became to be a staff of Electricity Generating Authority of Thailand (EGAT) in power plant computerized control engineer position. Today she is the manager of Planning and Services Department, Maintenance Business Unit of EGAT.

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