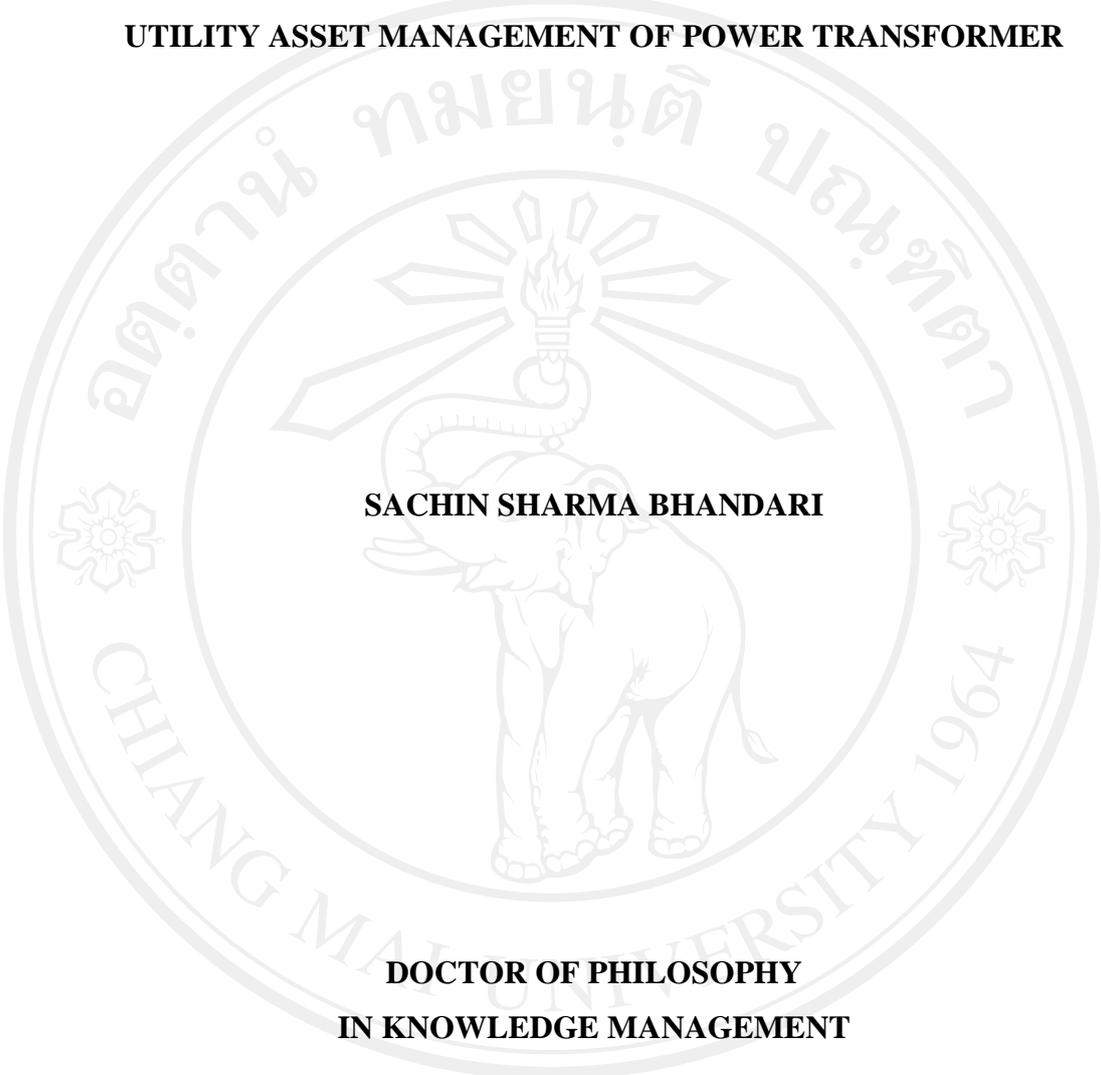


**ALTERNATIVE LIFE CYCLE ASSESSMENT FOR AN EFFECTIVE
UTILITY ASSET MANAGEMENT OF POWER TRANSFORMER**



SACHIN SHARMA BHANDARI

**DOCTOR OF PHILOSOPHY
IN KNOWLEDGE MANAGEMENT**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright© by Chiang Mai University
All rights reserved

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
DECEMBER 2011**

**ALTERNATIVE LIFE CYCLE ASSESSMENT FOR AN EFFECTIVE
UTILITY ASSET MANAGEMENT OF POWER TRANSFORMER**

SACHIN SHARMA BHANDARI

**A THESIS SUBMITTED TO THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN KNOWLEDGE MANAGEMENT**

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright© by Chiang Mai University
All rights reserved

**THE GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
DECEMBER 2011**

**ALTERNATIVE LIFE CYCLE ASSESSMENT FOR AN EFFECTIVE UTILITY
ASSET MANAGEMENT OF POWER TRANSFORMER**

SACHIN SHARMA BHANDARI

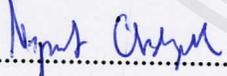
THIS THESIS HAS BEEN APPROVED
TO BE A PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN KNOWLEDGE MANAGEMENT

EXAMINING COMMITTEE

THESIS ADVISORY COMMITTEE


.....CHAIRPERSON
Dr. Keshav Prasad Dahal


.....ADVISOR
Lect. Dr. Tirapot Chandarasupsang


.....MEMBER
Lect. Dr. Nopasit Chakpitak


.....CO-ADVISOR
Lect. Dr. Komsak Meksamoot


.....MEMBER
Lect. Dr. Tirapot Chandarasupsang


.....CO-ADVISOR
Lect. Dr. Pradorn Sureephong


.....MEMBER
Lect. Dr. Komsak Meksamoot


.....MEMBER
Lect. Dr. Pradorn Sureephong

6 December 2011

© Copyright by Chiang Mai University

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Dr. Nopasit Chakpitak, Dean of CAMT, who has given me the opportunity to conduct this interesting research. I am especially indebted to my supervisor, Dr. Tirapot Chandarasupsang, whose dedication to research excellence has been a source of my academic inspiration. I sincerely appreciate his advice, guidance, encouragement and support from the preliminary stages to the conclusion which enabled me to develop an understanding of the subject. I am also thankful to my advisory committee, Dr. Komsak Meksamoot and Dr. Pradorn Sureephong, for listening and giving comments and tips to accomplish the research. My special thanks go to Dr. Keshav Dahal, for his valuable comments, suggestions and recommendations to carry out this research.

I would like to express my sincere gratitude to Kantipur Engineering College for their support to study at CAMT. I gratefully acknowledge the funding source received from CAMT that made my study possible. I am thankful to the members of CAMT for their immense support and assistance to my personal and professional time at Chiang Mai. I am also grateful to Nepal Electricity Authority, Provincial Electricity Authority and Metropolitan Electricity Authority for providing valuable information during this research journey.

For this dissertation, I would like to thank Dr. Paul Goldsmith for his time, interest and helpful comments regarding English usage. I offer my regards and blessings to all of those who supported me in any respect during the completion of the thesis.

Finally, I owe me deepest gratitude to my parents, my wife and my son for their help, tolerance and continuous support during this tenure. It would have been next to impossible to write this thesis without you all. Thank You.

Sachin Sharma Bhandari