

# O&M

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## Best Practices

A Guide to Achieving *Operational Efficiency*

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# **Operations & Maintenance**

## **Best Practices**

### ***A Guide to Achieving Operational Efficiency***

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## Preface

This Operations and Maintenance (O&M) Best Practices Guide was developed under the direction of the U.S. Department of Energy's Federal Energy Management Program (FEMP). The mission of FEMP is to reduce the cost and environmental impact of the Federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at Federal sites. Each of these activities is directly related to achieving requirements set forth in the *Energy Policy Act of 1992* and the goals that have been established in Executive Order 13123 (June 1999), but also those that are inherent in sound management of Federal financial and personnel resources.

This guide highlights O&M programs targeting energy efficiency that are estimated to save 5% to 20% on energy bills without a significant capital investment. Depending on the Federal site, these savings can represent thousands to hundreds-of-thousands dollars each year, and many can be achieved with minimal cash outlays. In addition to energy/resource savings, a well-run O&M program will:

- Increase the safety of all staff, as properly maintained equipment is safer equipment.
- Ensure the comfort, health and safety of building occupants through properly functioning equipment providing a healthy indoor environment.
- Confirm the design life expectancy of equipment is achieved.
- Facilitate the compliance with Federal legislation such as the *Clean Air Act* and the *Clean Water Act*.

The focus of this guide is to provide the Federal O&M/Energy manager and practitioner with information and actions aimed at achieving these savings and benefits.

The guide consists of nine chapters. The first chapter is an introduction and an overview. Chapter 2 provides the rationale for "Why O&M?" Chapter 3 discusses O&M management issues and their importance. Chapter 4 examines Computerized Maintenance Management Systems (CMMS) and their role in an effective O&M program. Chapter 5 looks at the different types of maintenance programs and definitions. Chapter 6 focuses on maintenance technologies, particularly the most accepted predictive technologies. Chapter 7 explores O&M procedures for the predominant equipment found at most Federal facilities. Chapter 8 describes some of the promising O&M technologies and tools on the horizon to increase O&M efficiency. Chapter 9 provides ten steps to initiating an *operational efficiency* program.

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# Contents

Preface .....	iii
Acknowledgments .....	v
Chapter 1 Introduction and Overview .....	1.1
1.1 About This Guide .....	1.1
1.2 Target Audience .....	1.2
1.3 Organization and Maintenance of the Document.....	1.2
Chapter 2 Why O&M .....	2.1
2.1 Introduction .....	2.1
2.2 Definitions.....	2.1
2.3 Motivation .....	2.1
2.4 O&M Potential, Energy Savings, and Beyond .....	2.3
2.5 References .....	2.4
Chapter 3 O&M Management.....	3.1
3.1 Introduction .....	3.1
3.2 Developing the Structure .....	3.1
3.3 Obtain Management Support .....	3.2
3.4 Measuring the Quality of Your O&M Program .....	3.3
3.5 Selling O&M to Management .....	3.4
3.6 Program Implementation .....	3.4
3.7 Program Persistence .....	3.5
3.8 O&M Contracting .....	3.5
3.9 References .....	3.6
Chapter 4 Computerized Maintenance Management Systems .....	4.1
4.1 Introduction .....	4.1
4.2 CMMS Capabilities .....	4.1
4.3 CMMS Benefits .....	4.2
4.4 Reference .....	4.2
Chapter 5 Types of Maintenance Programs .....	5.1
5.1 Introduction .....	5.1
5.2 Reactive Maintenance .....	5.1
5.3 Preventive Maintenance .....	5.2
5.4 Predictive Maintenance .....	5.3

5.5	Reliability Centered Maintenance .....	5.4
5.6	How to Initiate Reliability Centered Maintenance .....	5.5
5.7	Reference .....	5.8
Chapter 6 Predictive Maintenance Technologies.....		6.1
6.1	Introduction .....	6.1
6.2	Thermography .....	6.3
6.2.1	Introduction .....	6.3
6.2.2	Types of Equipment .....	6.3
6.2.3	System Applications .....	6.4
6.2.4	Equipment Cost/Payback .....	6.8
6.2.5	Case Studies .....	6.9
6.2.6	References/Resources .....	6.10
6.3	Oil Analysis .....	6.13
6.3.1	Introduction .....	6.13
6.3.2	Test Types .....	6.14
6.3.3	Types of Equipment .....	6.14
6.3.4	System Applications .....	6.15
6.3.5	Equipment Cost/Payback .....	6.15
6.3.6	Case Studies .....	6.15
6.3.7	References/Resources .....	6.16
6.4	Ultrasonic Analysis .....	6.19
6.4.1	Introduction .....	6.19
6.4.2	Types of Equipment .....	6.19
6.4.3	System Applications .....	6.20
6.4.4	Equipment Cost/Payback .....	6.21
6.4.5	Case Studies .....	6.21
6.4.6	References/Resources .....	6.21
6.5	Vibration Analysis .....	6.23
6.5.1	Introduction .....	6.23
6.5.2	Types of Equipment .....	6.24
6.5.3	System Applications .....	6.25
6.5.4	Equipment Cost/Payback .....	6.26
6.5.5	Case Studies .....	6.26
6.5.6	References/Resources .....	6.26
6.6	Motor Analysis .....	6.29
6.6.1	Introduction .....	6.29
6.6.2	Motor Analysis Test .....	6.29
6.6.3	System Applications .....	6.30
6.6.4	Equipment Cost/Payback .....	6.30
6.6.5	References/Resources .....	6.30
6.7	Performance Trending.....	6.33
6.7.1	Introduction .....	6.33
6.7.2	How to Establish a Performance Trending Program .....	6.33
6.7.3	System Applications .....	6.34
6.7.4	Equipment Cost/Payback .....	6.34
6.7.5	References/Resources .....	6.34

---

Chapter 7 O&M Ideas for Major Equipment Types.....	7.1
7.1 Introduction .....	7.1
7.2 Boilers.....	7.3
7.2.1 Introduction .....	7.3
7.2.2 Types of Boilers.....	7.3
7.2.3 Key Components .....	7.5
7.2.4 Safety Issues .....	7.8
7.2.5 Cost and Energy Efficiency .....	7.9
7.2.6 Maintenance of Boilers .....	7.12
7.2.7 Diagnostic Tools .....	7.12
7.2.8 Case Studies .....	7.13
7.2.9 Boilers Checklist .....	7.14
7.2.10 References .....	7.16
7.3 Steam Traps.....	7.19
7.3.1 Introduction .....	7.19
7.3.2 Types of Steam Traps.....	7.19
7.3.3 Safety Issues.....	7.22
7.3.4 Cost and Energy Efficiency .....	7.22
7.3.5 Maintenance of Steam Traps .....	7.24
7.3.6 Diagnostic Tools .....	7.26
7.3.7 Case Studies .....	7.26
7.3.8 Steam Traps Checklist .....	7.28
7.3.9 References .....	7.28
7.4 Chillers.....	7.29
7.4.1 Introduction .....	7.29
7.4.2 Types of Chillers.....	7.29
7.4.3 Key Components.....	7.31
7.4.4 Safety Issues.....	7.31
7.4.5 Cost and Energy Efficiency .....	7.32
7.4.6 Maintenance of Chillers .....	7.33
7.4.7 Diagnostic Tools .....	7.33
7.4.8 Chillers Checklist .....	7.34
7.4.9 References .....	7.35
7.5 Cooling Towers .....	7.37
7.5.1 Introduction .....	7.37
7.5.2 Types of Cooling Towers .....	7.37
7.5.3 Key Components.....	7.38
7.5.4 Safety Issues.....	7.38
7.5.5 Cost and Energy Efficiency .....	7.39
7.5.6 Maintenance of Cooling Towers.....	7.39
7.5.7 Common Causes of Cooling Towers Poor Performance .....	7.40
7.5.8 Diagnostic Tools .....	7.40
7.5.9 Cooling Towers Checklist .....	7.41
7.5.10 References .....	7.42
7.6 Energy Management/Building Automation Systems.....	7.43
7.6.1 Introduction .....	7.43
7.6.2 System Traps.....	7.43
7.6.3 Key Components .....	7.43

7.6.4	Safety Issues .....	7.44
7.6.5	Cost and Efficiency .....	7.44
7.6.6	Maintenance .....	7.44
7.6.7	Diagnostic Tools .....	7.45
7.6.8	Case Studies .....	7.45
7.6.9	Building Controls Checklist .....	7.46
7.6.10	References .....	7.46
7.7	Pumps .....	7.47
7.7.1	Introduction .....	7.47
7.7.2	Types of Pumps .....	7.47
7.7.3	Key Components .....	7.49
7.7.4	Safety Issues .....	7.50
7.7.5	Cost and Energy Efficiency .....	7.51
7.7.6	Maintenance of Pumps .....	7.51
7.7.7	Diagnostic Tools .....	7.52
7.7.8	Case Study .....	7.53
7.7.9	Pumps Checklist .....	7.54
7.7.10	References .....	7.54
7.8	Fans .....	7.57
7.8.1	Introduction .....	7.57
7.8.2	Types of Fans .....	7.57
7.8.3	Key Components .....	7.59
7.8.4	Safety Issues .....	7.59
7.8.5	Cost and Energy Efficiency .....	7.59
7.8.6	Maintenance of Fans .....	7.59
7.8.7	Diagnostic Tools .....	7.60
7.8.8	Case Studies .....	7.60
7.8.9	Fans Checklist .....	7.61
7.8.10	References .....	7.61
7.9	Motors .....	7.63
7.9.1	Introduction .....	7.63
7.9.2	Types of Motors .....	7.63
7.9.3	Key Components .....	7.65
7.9.4	Safety Issues .....	7.66
7.9.5	Cost and Energy Efficiency .....	7.66
7.9.6	Maintenance of Motors .....	7.67
7.9.7	Diagnostic Tools .....	7.68
7.9.8	Electric Motors Checklist .....	7.69
7.9.9	References .....	7.69
7.10	Air Compressors .....	7.71
7.10.1	Introduction .....	7.71
7.10.2	Types of Air Compressors .....	7.71
7.10.3	Key Components .....	7.72
7.10.4	Safety Issues .....	7.73
7.10.5	Cost and Energy Efficiency .....	7.74
7.10.6	Maintenance of Air Compressors .....	7.76
7.10.7	Diagnostic Tools .....	7.78
7.10.8	Case Study .....	7.78

7.10.9	Air Compressors Checklist .....	7.79
7.10.10	References .....	7.80
7.11	Lighting .....	7.81
7.11.1	Introduction .....	7.81
7.11.2	Types of Lamps .....	7.81
7.11.3	Key Components .....	7.85
7.11.4	Safety Issues .....	7.86
7.11.5	Cost and Energy Efficiency .....	7.86
7.11.6	Maintenance Requirements .....	7.87
7.11.7	Diagnostic Tools .....	7.87
7.11.8	Lighting Checklist .....	7.88
7.11.9	References .....	7.88
Chapter 8 O&M Frontiers .....		8.1
8.1	ACRx Handtool/Honeywell HVAC Service Assistant .....	8.1
8.2	Decision Support for O&M .....	8.1
8.3	Performance and Continuous Commissioning Analysis Tool .....	8.2
8.4	The Whole-Building Diagnostician .....	8.2
8.5	Reference .....	8.2
Chapter 9 Ten Steps to <i>Operational Efficiency</i> .....		9.1
Appendix A – Glossary of Common Terms .....		A.1
Appendix B – FEMP Staff Contact List .....		B.1
Appendix C – Resources .....		C.1
Appendix D – Suggestions for Additions or Revisions .....		D.1

## Figures

6.2.1	Typical IR spot thermometer .....	6.3
6.2.2	Internal house wall .....	6.4
6.2.3	Hot motor bearing easily seen in IR image .....	6.4
6.2.4	Air breaker problem .....	6.5
6.2.5	Overload connection problem .....	6.5
6.2.6	Warm inboard motor bearing .....	6.6
6.2.7	Possible gearbox problem indicated by white area defined by arrow .....	6.6
6.2.8	Seized conveyer belt roller as indicated by elevated temperatures in belt/roller contact area .....	6.7
6.2.9	Inoperable steam heaters seen by cooler blue areas when compared to the operating heaters warmer red or orange colors .....	6.7
6.2.10	Refractory breakdown readily seen by white area in IR image .....	6.7
6.5.1	Vibration severity chart .....	6.24
6.5.2	FFT - Example of graph breaking down vibration level at different frequencies .....	6.24
6.5.3	Typical vibration transducers .....	6.24

7.2.1	Horizontal return fire-tube boiler .....	7.3
7.2.2	Longitudinal-drum water-tube boiler .....	7.4
7.2.3	Electric boiler .....	7.4
7.2.4	Adapted from 1999 National Board of Boiler and Pressure Vessel Inspectors incident report summary .....	7.8
7.2.5	Effect of fouling on water side .....	7.9
7.3.1	Inverted bucket steam trap .....	7.19
7.3.2	Bimetallic steam trap .....	7.20
7.3.3	Bellows steam trap .....	7.20
7.3.4	Float and thermostatic steam trap .....	7.21
7.3.5	Disc steam trap .....	7.21
7.3.6	Energy loss from leaking steam traps .....	7.23
7.3.7	Failed gasket on blind flange .....	7.26
7.4.1	Basic cooling cycle-centrifugal unit using single-stage compressor .....	7.29
7.4.2	Schematic of typical absorption chiller .....	7.30
7.5.1	Cooling tower .....	7.37
7.5.2	Direct or open cooling tower .....	7.37
7.7.1	Technology tree for pumps .....	7.47
7.7.2	Rotary lobe pump .....	7.48
7.7.3	Positive displacement pumps .....	7.48
7.7.4	Centrifugal pump .....	7.49
7.7.5	Schematic of pump and relief valve .....	7.50
7.7.6	Pump system energy use and savings .....	7.53
7.7.7	Retrofit cost savings .....	7.54
7.8.1	Propeller direct-drive fan .....	7.57
7.8.2	Propeller belt-drive fan .....	7.57
7.8.3	Tube-axial fan .....	7.58
7.8.4	Vane axial fan .....	7.58
7.8.5	Centrifugal fan .....	7.58
7.9.1	DC motor .....	7.63
7.9.2	AC motor .....	7.64
7.9.3	Parts of a direct current motor .....	7.65
7.9.4	Parts of an alternating current motor .....	7.65
7.10.1	Rotary screw compressor .....	7.71
7.10.2	Typical single acting two-stage compressor .....	7.72
7.10.3	Helical-lobe rotors .....	7.73