



SIEMENS
Ingenuity for life

Service Programs – O&M

Operation & Maintenance Assessment

Maximizing performance and profit through sustainable management

Increasing electricity demand and environmental as well as safety concerns have emphasized the need for power plants to operate cleaner, safer and more efficiently. Therefore management systems incorporating ISO 9001 (Quality), ISO 14001 (Environmental) and OHSAS 18001 (Occupational Safety) have become essential for power plant operations.

Operation & Maintenance assessments go further by combining the integrated management system (IMS) standards with environmental, health and safety (EHS) and O&M specific procedures. As a consequence they not only stay aligned with quality and EHS demands but also contribute to maximize performance and profitability of the asset in total.

Optimized integration of these standards can help power plant operators to

- cut operating costs without endangering the quality and reliability of their product
- maximize online performance through optimized processes
- reliably meet changing daily requirements
- meet even more demanding environmental and safety standards.

Our solution

Does your integrated management system do this?

As each project presents a unique set of requirements, issues and challenges it is important to develop customized, project-specific management solutions, which embody the characteristics of the international standards. Is your management system up to this task? Siemens Operation and Maintenance Services (O&M) will gladly help you find out.

With more than a century of service to the power generation industry, Siemens brings a tradition of experience, quality and professionalism to every project. As one of the world's largest combined cycle operators, our O&M fleet experience totals approximate 19,400 megawatts worldwide with customers on five continents. Benefit from our experience and get access to a wealth of management skills with our Operation & Maintenance Assessment. It can help you identify potential improvements with respect to international standards and give you a thorough insight into your management system. This can help you reach or even exceed your targets.

Your benefit

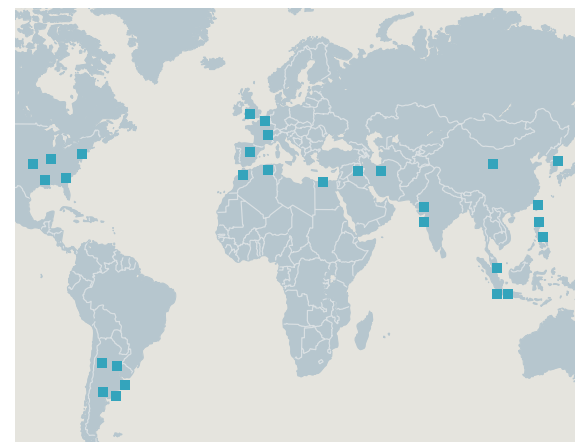
O&M Assessment – an innovative consultancy solution to meet your needs

O&M Assessment is a consulting service for analyzing and evaluating the performance of business management and business processes in the power generation industry.

It also

- evaluates on the basis of continuous improvement principles
- enables a comparison between an internal and an external assessment
- evaluates ISO 9001, ISO 14001 and OHSAS 18001.

Nine modules of your business are analyzed with a standardized system intended to identify improvement potential.



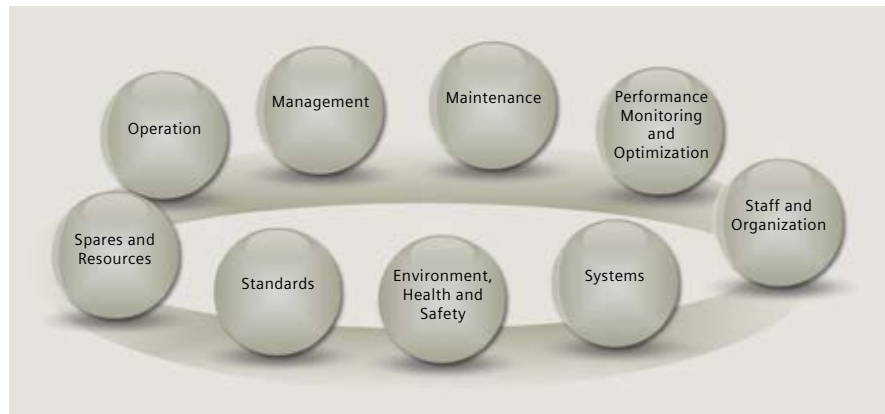
Customers can benefit from our vast O&M experience. We currently have 29 power stations under contract worldwide.

O&M Assessment Steps	Preparation of power plant specific assessment	On-site interviews and analysis	Evaluation	Conclusion and report
Timeline*	1 week	1 week	1 week	
Actions	<ul style="list-style-type: none"> • Power plant specific preparation → individually designed assessment • Review of the questionnaire and organization charts 	<ul style="list-style-type: none"> • Interviews with employees on all hierarchy levels and in all relevant departments • Access to relevant systems and documents 	<ul style="list-style-type: none"> • Preparation of the report with improvement potentials and recommended actions 	

* Traveling time not included, actual duration may vary

Operation & Maintenance Assessment – our product for your needs

The in-depth assessment based on an integrated management system enables a thorough evaluation of your business. The O&M assessment is conducted by Siemens' Lead Assessors that are certified according to current ISO 9001, ISO 140001 and OHSAS 18001 standards. The evaluation will be captured in a confidential report, which will also contain recommended actions in order to help you maximize performance and profitability and stay aligned with quality, environmental, health and safety demands.



Modules of O&M Assessment

Management	<ul style="list-style-type: none"> • QEHS policy • Business improvement program • Target setting, controlling and auditing
Operation	<ul style="list-style-type: none"> • Shift planning • Event and fault reporting and analysis • Operation logs and reports
Maintenance	<ul style="list-style-type: none"> • Maintenance strategy and plan development • Maintenance planning and scheduling • Plant and equipment condition monitoring
Performance monitoring and optimization	<ul style="list-style-type: none"> • Data collection and monitoring • Performance diagnostics • Performance improvement
Environment, health and safety	<ul style="list-style-type: none"> • Safety rules (personal protective equipment, permit to work system) • Emergency response • Environmental control (effluents, emissions, waste)
Spares and resources	<ul style="list-style-type: none"> • Contractor management • Warehouse management • Spare parts procurement and material planning
Standards	<ul style="list-style-type: none"> • Integrated management system (ISO 9001, ISO 14001, OHSAS 18001) • Standard procedures and work instructions
Systems	<ul style="list-style-type: none"> • Computerized maintenance management system (CMMS) • Document management system
Staff and organization	<ul style="list-style-type: none"> • Organization structure • Workforce involvement beyond actual jobs • Training and competency management, staff development

Core areas of O&M Assessment

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Power Generation Services Division
Freyeslebenstrasse 1
91058 Erlangen, Germany

For more information, please contact
our Customer Support Center.
Phone: +49 180/524 70 00
(Charges depending on provider)
E-mail: support.energy@siemens.com

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