gres
Global Resource Efficiency Services

Our Program

Sustainable management processes follow the path of Analysis, Implementation and Monitoring (AIM). We must analyze information before we implement measures. We monitor our performance with monthly reporting on budgets and other performance goals.

Energy and environmental management follows the same process. We can measure energy cost avoidance for specific energy efficiency measures. Monitoring and Verification protocol has been developed and the IN-MVP (International Monitoring and Verification Protocol) can be used for M&V purposes.

GRES services are designed to support the **Audit-Implementation-Monitor Management** process.

GRES adopts an integrated approach to energy management which lowers energy bills as well as staff/labor costs. Once organizations experience the financial returns from successful energy management process, they continuously strive to improve their energy performance.

GRES Service Model

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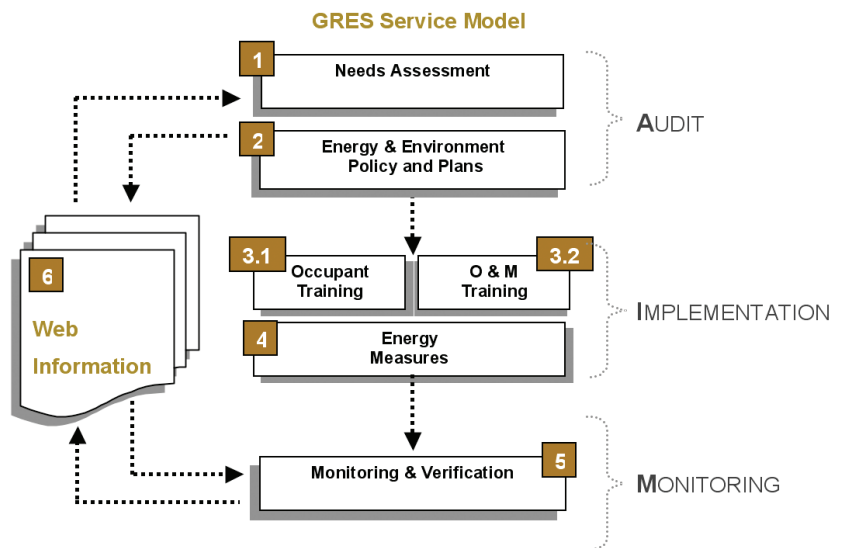
Policy and Plans are a key outcome from the Needs Assess ment process. Training services are designed to involve all stakeholders and provide the motivation to achieve results during implementation of measures. Monitoring and Verification services must provide timely accounting of energy and environmental savings and implementation measures. Finally, GRES has developed a web-based center in order to ensure two-way information flow.

The result -- increased participation and improved outcomes from all participants.

Smart Business is
Sustainable
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1 Needs Assessment

Each organization presents its own unique context requiring identification of their specific training and resource needs, as well as consultation in determining the priorities of those needs. Needs assessment also helps to define the scope and timing of the program implementation, as well as customize the training mode and content.

Needs are identified/determined through individual and group interview activities that attempt to gather information on past and current resource efficiency efforts. Existing resources are available to support the implementation of the training program components. Through this process of interviewing, desired outcomes are also determined, and barriers identified to achieving those outcomes. Information gathered is analyzed and reported back to the client along with recommendations for training focus, and a draft implementation work plan for discussion. This report is also effective in gathering baseline information, helping to gain senior management enrollment by serving as the groundwork for discussion, and organizing of initial program funding.

## 2 Energy and Environment Plans

Environmental Plan

An environmental plan involves the development of an environmental strategy, which is consistent with a business plan. The object of the environmental plan is to define strategies that are sustainable from an economic and environmental point of view. The environmental plan will also address the issue of roles and responsibilities for environmental actions within the plan.

Building Asset Plan

The building asset plan involves the development of an asset management plan for the buildings. An audit is required to define the asset value and the deferred capital liability for building system renewal. The building asset plan will also forecast the future requirements for capital spending on building infrastructure. Building asset plans are developed to be consistent with the Environmental Plan and the Energy Management Plan.

Buildings follow a life cycle with four phases: Development, Creation, Utilization and Upgrade.
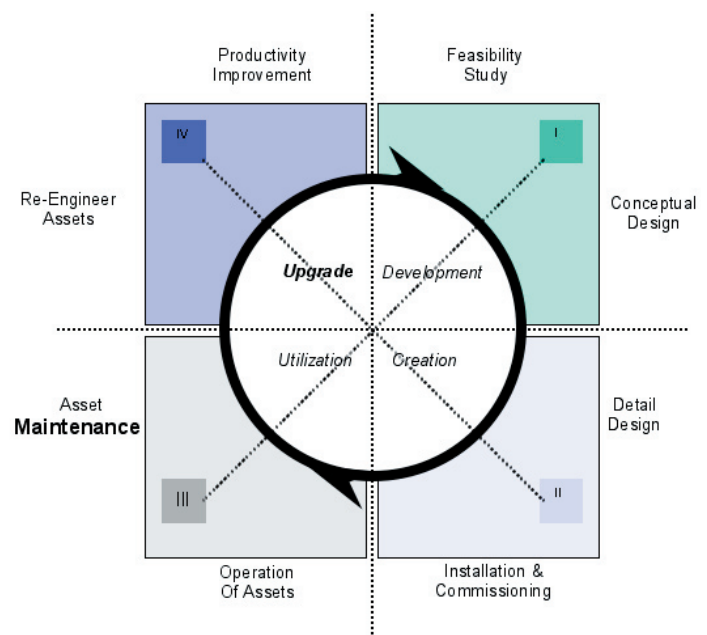
Resource Conservation Management Plan

Resource Conservation Management (RCM) is the practice of reducing the consumption and cost of utility and energy related resources, through no-cost and low-cost modifications.

Producing and RCM Plan will assist Successful implementation of a resource efficiency program in an organization. Outcomes are leadership of qualified key individuals who have expertise and knowledge on the operation and maintenance of building facilities and ccupant lifestyles that promote significant cost savings and a healthier, safer environment. RCM programs are usually implemented and coordinated by a qualified RCM Manager.

3.1 Building Occupant Awareness (BOA) Training

Occupant Awareness Training events are typically presented to building occupants with the goal of creating the awareness, and provide the knowledge that will encourage and support lifestyle action that results is resource efficiency savings in buildings. Findings in the needs assessment are incorporated into the content of the Occupant Awareness Training program in order to make learning especially relevant to occupants' daily workplace activities.

Topics covered include those aspects of lighting, electrical, HVAC, and water management, where occupants can influence sustainability and costs savings.

3.2 O&M Training & Documentation

An O&M training program has been designed to integrate the development of Standards of Performance for building operations, for presentation in 3 workshops. Standards of Performance for building operations are needed to benchmark building performance against optimum efficient operation. The standards must be measurable and quantifiable and understood by building operation personnel.

The Building Operation Training Workshops have been developed specifically to assist in this Continuing Education process for facility operation and maintenance staff. Building Performance Guides are one of the main outputs of the workshops.

4 Energy & Environmental Measures

Energy and Environmental measures is the work of retrofitting buildings with new and more efficient technologies. Converting t-12 florescent lights with t-8's, installing roof top solar photovoltaics, placement of recycling system and installing new and efficient toilets are examples of such measures. This work is done with internal work crews or subcontracted out to energy services companies, known as esco's.

5 Monitoring and Verification

Monitoring and Verification is required to measure the performance of the environmental and energy measures. One critical aspect of any monitoring system is the definition of a baseline. The baseline is the term used to describe the condition before measures are implemented. For energy management purposes, buildings will use historical energy use as a baseline. A number of monitoring methods are defined in the International Monitoring and Verification Protocol.

The main energy monitoring methods defined in the protocol are:

- Baselines are determined for individual measures with metering at the measure level;

- Baselines are determined for individual meters with metering at the building level;

- Baselines are determined using energy simulation models and simulation is calibrated using metered energy use.

Energy accounting software is used to establish baselines and compare baseline energy use to current energy use. The software can adjust for weather and utility reading dates for utility billing periods. The software can also verify utility bills for the correct application of utility rate structures. Reports are provided that can be adapted for specific energy management needs.

Web Info Center

The Web Info Center is an Internet web site that serves as an information portal for all resource conservation activities within the organization. It provides a centralized location to store all documents pertaining to resource conservation as well as provide access to all learning and reference manuals. The web site is also branded as the client's and customized to display regionally relevant information, learning resources and web links.

This web-based application is also used to store inventoried equipment and building information, and records of activities and actions for each facility. This storage of information helps to sustain the program and insure its longevity.

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