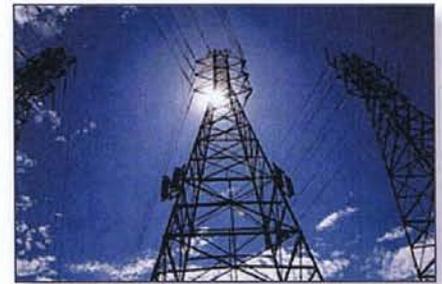


best estimate of what rates will be during the payback period. There are also some cases where current rates reflect a temporary peak and, in these cases, we will recommend using recent historical average rates rather than the current rate. Ultimately, McNeil Rhoads has no control over the rate changes that a particular utility may apply. Subsequently, we will work closely with the client to ensure that all parties are comfortable with the rates applied to assign dollar values to the savings. McNeil Rhoads is familiar with the complexities of utility rate schedules and our dollar savings calculations account for these complexities. Here are some considerations that McNeil Rhoads takes into account when assigning rates to the savings:

1. Electric rate schedules normally charge a separate demand (kW) charge. It is common practice to blend the kWh and kW rates into a single rate for calculating energy cost savings. McNeil Rhoads does not blend kWh and kW unless specifically requested to do so by the customer – our standard practice is to carry kWh and kW savings separately and to apply the appropriate kWh and kW rates.
2. Most utilities use tiered rates for larger customers where the rate varies based on the usage. It is a mistake to average these tiers because energy savings often only affects the top billing tier for each month. To develop the cost savings, McNeil Rhoads determines the proper marginal tier based on historical monthly utility consumption history.
3. For seasonal rates where the rate varies based on the season of the year, an average yearly rate is calculated based on the facilities historical monthly usage profile. If an energy savings measure saves energy primarily in one season, the rate will be weighted appropriately for that season.
4. McNeil Rhoads accounts for rate complexities such as ratchet charges, power factor, kVAR, kVARh, state and local taxes if they are not built into the rate, monthly meter charges, conservation charges, minimum consumption requirements, critical demand, firm demand, and time of day cost adjustments.
5. Understanding rates allows McNeil Rhoads to identify and recommend opportunities to restructure the rates the customer is on to reduce costs. Sometimes an energy conservation measure necessitates a rate switch since the old optimal rate may not be optimal for the new usage profile.



Savings Calculations - McNeil Rhoads staff's responsibility is to calculate both pre and post-retrofit energy consumption values for facility improvement measures to create a project that self funds for the City of Gautier. Industry standardized practices are used throughout this process and peer review risk review meetings are employed to identify any potential inaccuracies. Preliminary energy cost savings are calculated utilizing a baseline energy analysis model with new input variables and logic to reflect the post-retrofit operation of the systems. The post-retrofit input variables are based on the new equipment's performance specifications and the performance criteria that are specified for the revised system conditions. The difference between the baseline energy consumption and the post retrofit energy consumption then becomes the target energy savings. Once the baseline has been established for a particular initiative, we will progress the energy savings calculations in methodical steps. The following outlines the typical progression of the energy savings calculations:

1. **Preliminary** - Early in project conceptual phase the savings estimates are based on a detailed Utility Data analysis on accepted rule of thumb for a particular initiative.
2. **ROM (Rough Order of Magnitude)** - During ROM stage, the calculations are developed using generally



accepted engineering standard calculations and are based on future operating assumptions versus the baseline. At this level, we consider the energy calculation to be within \pm 15% of guaranteed level.

- 3. Final Calculations** - Based on extensive field study and measurement of equipment operation, detailed weather data, as well as input from owner staff on final sequence of operation that can be achieved.

McNeil Rhoads's energy development team use a combination of commercially available calculation programs such as Trace 700, Watergy, eQUEST, Utility Company VFD and motor calculation tools, as well as many spreadsheet tools that have been developed in-house by McNeil Rhoads. Having many calculation tools available allows the energy engineers to choose the right calculation tool for the specific system type, retrofit type, and customer specific requirements being studied. In all cases, assumptions are kept to a minimum for investment grade analysis. For preliminary calculations, assumptions are identified and flagged for further investigation in the final analysis used to determine the guaranteed savings. The tools used to verify and eliminate assumptions include more detailed site visits with additional trend-logging and measure specific detailed collection data sets.

Trane Trace 700 & DOE Simulation Software (eQUEST) - In situations where there is extensive interaction between different measures, McNeil Rhoads can make utilize modeling software to calculate energy savings.

Itron and MetrixTM Utility Accounting Software - We make extensive use of Itron and MetrixTM utility accounting software for correlation of data to weather or other varying parameters that influence energy savings.

Universal Translator - The Universal Translator (UT) is software designed for the management and analysis of data from loggers and trends from building management systems. The UT is ideal for large data sets from multiple sources. The software includes time correction features including the ability to synchronize data sets with different recording rates. The UT has data filtering mechanisms and a flexible graphing tool. UT analysis routines have been developed for equipment run-time, zone temperature variation, air-side economizers, and lighting controls. A routine that calculates statistics for each data set is available, and the UT has the ability to export data into other spreadsheet or analysis tools if necessary.

Custom Worksheets - Custom worksheets developed in MS Excel are utilized in situations where the energy savings calculation does not warrant simulation software. Two notable spreadsheet tools that McNeil Rhoads has developed in-house are our lighting tool and our standard bin calculation.

The development team has logging equipment to deploy on projects to gather field measurements and trend data. The following provides a summary of some of the tools McNeil Rhoads utilizes for collecting and analyzing data:

Electrical Logging Meters - Several different meters are available depending on the information to be gathered. Fluke hand held meters are generally used for gathering data such as amps, voltage, wattage on motors and smaller equipment, and lighting circuits. For information on larger loads that are found with chilled equipment and main distribution systems, we utilize Elite loggers made by Pacific Electronics.

Micro-Data Loggers - McNeil Rhoads will utilize HOBOTTM loggers extensively for recording of outside and indoor air temperatures, light levels, humidity levels, and motor on/off states.

Energy Management Control Systems - Significant data can be gathered utilizing the trending and storage capabilities of both existing and new energy management systems. Time of day and holiday schedules,



temperature and pressure set points and trends, flow measurements, and other dynamic information are usually available through these systems.

Indoor Air Quality Logging - CO2 monitoring devices are sometimes used as an indicator of existing indoor air quality levels.

Ultrasonic Meters - McNeil Rhoads has available ultrasound meters for use in determining flow rates of hydronic equipment. This equipment is often used to detect leaks in systems or diagnosing the operation of steam traps by measuring make-up water supplied to boiler system(s).

Flow Measurement - McNeil Rhoads has available air and water flow measuring equipment, which supports our balancing activities. Alnor manufactures the air and water measuring equipment. All tools are calibrated at regular intervals and are certified to meet NITS standards.

Remote Monitoring Station - McNeil Rhoads has staff dedicated to site information gathering, performance assurance, and commissioning of projects. Our remote monitoring capabilities allow us to dial directly into many Building Automation Systems to collect necessary data.

Vendors –McNeil Rhoads always involve our clients in decisions regarding products, vendors, sub-contractors and consultants, and recommend the most logical and cost effective manner to make selections. Many factors are taken into consideration when making recommendations, such as the existing system locations, client preferences for products or vendors, standardization and consistency of products, maintenance of equipment, ease of use, life of equipment, and prior experience with vendors. Where the lack of any existing benchmark is in place for selection, we will make recommendations based on our vast experience with products and vendors, the type of application it will be used for, equipment lifecycle cost analysis and the other factors listed above. However, the final decision of products and vendors will always be our clients.

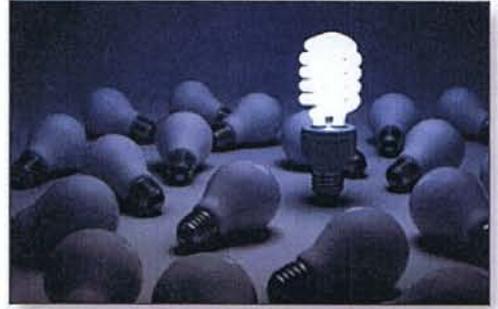
Provision Of Warranties - McNeil Rhoads uses the following points as the minimum of the nature and terms of all warranties:

McNeil Rhoads guarantees its installation and workmanship for 1 year against latent defects. Equipment typically carries the manufacturer’s warranties for 1 year all the way up to 20 years depending not the type of equipment. Arrangement for extended warranties can be accommodated upon request.

Sustainability–McNeil Rhoads is committed to sustainable design and construction. We believe in developing and executing a comprehensive waste management plan, and seek to minimize the waste stream from projects whenever feasible. Our waste management plan not only considers the existing materials that need to be removed from the jobsite, but also the construction methods and materials that will be used for any new work being installed. The following paragraphs describe the various components we take into consideration throughout the duration of the project.



Identification of Materials for Removal - The majority of all energy projects focus on the renovation or replacement of existing energy-consuming systems such as lights, boilers, chillers, ventilation systems, and other equipment as well as the replacement of water meters. Due to the nature of the projects, much of the existing materials need to be removed as part of the project. Prior to beginning any project, McNeil Rhoads identifies all of the material to be removed, the disposal method, and the handling procedure. For any materials the client chooses to retain and salvage, a list will be provided to McNeil Rhoads prior to construction to ensure we take particular care is taken with these items and a location is identified for us to drop off these items.



SECTION

Site Specific

3

2. Site Specific

2.1 Technical Site Analysis

Based on your preliminary assessment of the City of Gautier’s facilities and information provided, please describe any equipment modifications, installations or replacements at the facilities that your company would consider installing as a part of this project. Please discuss site conditions, status of building systems, and needs of the City of Gautier.

The focus of this section is to identify possible savings opportunities that are available to the City of Gautier. The preliminary audit report consists of an examination of the various Facilities Improvement Measures (FIM’s) that we believe are worth investigating further during the detailed audit stage.

Below is a brief description of each facility improvement measure. If the city decides to move forward in this process, McNeil Rhoads will evaluate the cost and savings associated with each opportunity to determine which improvements’s will be included in the project. This decision is based on:

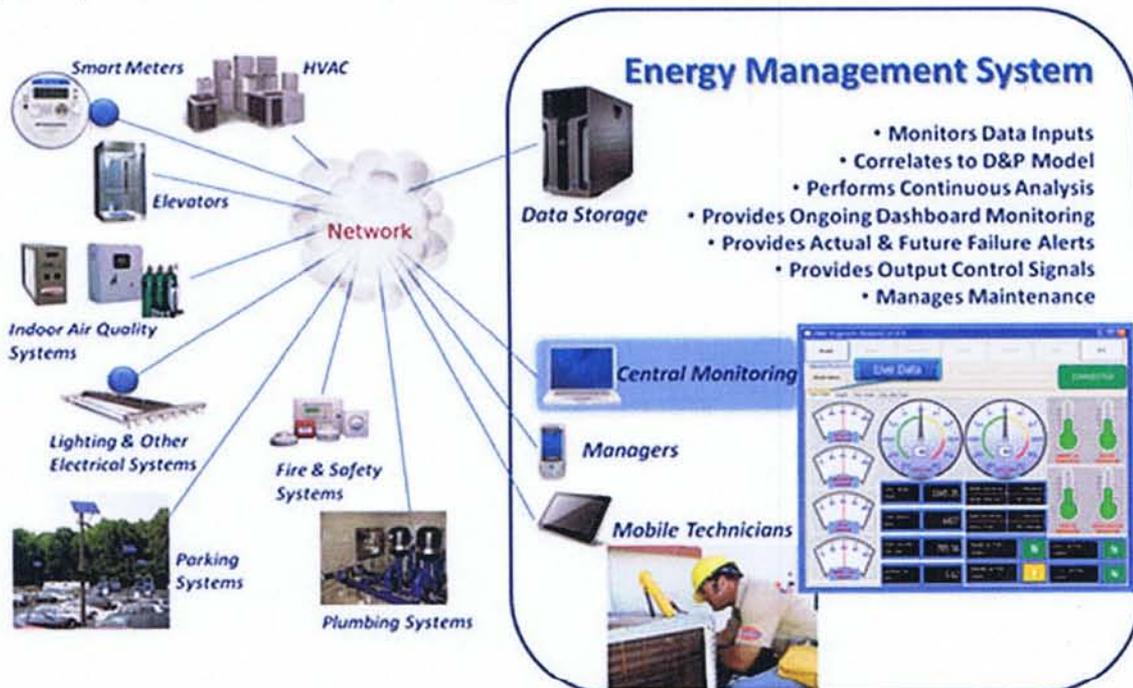
- Positive impact city operations
- Simple payback.
- Contribution toward avoided future capital costs.
- Achievement of identified facility operational goals.
- Ability to implement each FIM with least invasive impact on citizen

Site Specific Potential Facility Improvement Measures

During the site visits the following potential FIM’s were identified:

FIM #1 - Lighting (City Wide)

This FIM will provide an enhanced working environment in the buildings. This will be accomplished by replacing all of the T12 incandescent fixtures with new 3rd generation T-8 fixtures. Lighting design will meet or exceed IES Standards of 50-foot candles. All of the work to be performed will comply with all current federal and local codes. Savings are based primarily on retrofitting high wattage lamps and ballasts with low wattage lamps and ballasts. Minimum savings are based on a decrease in run time hours.



FIM #2 - Energy Management Control System (City Wide)

This FIM provides energy cost savings by installing a direct-digital HVAC automation system that will operate HVAC equipment based on building operation schedules at eight all sites with full temperature control. The savings generated are found in two areas. The first being a reduction of runtime in the equipment which will reduce the utility load of the district by turning the equipment off and regulating the temperatures. The second savings is operational. Once the system is installed the equipment will not have the run hours as compared to the base study which will further the life the equipment. It will also assist the HVAC personnel in off site troubleshooting of the equipment.

FIM #3 - Mechanical Upgrades

Some mechanical upgrades were found to be needed as apart of the project. These upgrades are due to inefficiencies in the existing infrastructure, frequency of failures, and indoor air quality and comfort issues. These issues will be addressed based on the savings produced from other improvement measures

FIM #4 – Water Meter Replacements

The city currently has major issues on accuracy and readability of its current meter infrastructure. As a part of the project, McNeil Rhoads will retrofit the gas and water meters to be on an Automated Meter Infrastructure. This will allow from picking up the revenues that are currently being lost and reduce the operating cost by eliminating the need for monthly meter reading.



FIM #5 – Traffic Lights

One of the quickest payback items in any city is retrofitting the traffic lights from Incandescent technology to LED. During the development, McNeil Rhoads will survey all traffic lights within the city and recommend replacing all older technology to new LED lighting.

FIM #6 – Energy Policy

In order to maximize the energy savings within the City of Gautier, McNeil Rhoads will work with the City of Gautier Operations Team to develop an energy policy to be adopted by the board. This policy will outline operational strategies, temperature set points, summer program scheduling, and other policies to maximize the savings available to City of Gautier

FIM #7 – Staff Education

With any energy project, behavioral change has a major impact on the long term effectiveness of the program. During the installation phase of the program, McNeil Rhoads will coordinate with City of Gautier Operations Team to conduct training seminars with the staff on the FIM's implemented and ways they can get involved to benefit the program.

FIM #8 – Green Globes Certification

With the major energy retrofits being performed in this project, many of the buildings will be eligible to receive the Green Globes Certification. This is a 3rd party certification administered by the Green Building Initiative and recognizes the top performing buildings in the country on the basis of energy conservation and policy. McNeil Rhoads will perform an analysis once selected for this project and recommend a list of buildings to seek certification during the implementation stage.

