

SAMPLE REPORT

Operations and Maintenance Benchmarks



IFMA
FM Research
& Benchmarking
Institute



FM RESEARCH AND BENCHMARKING INSTITUTE STAFF

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PREPARED BY



Simplar is a collaborative team of faculty and researchers from universities across the United States who specialize in facility organizational assessment, performance measurement & analytics, process improvement, and advanced procurement delivery systems. Learn more at www.simplar.com.

ABOUT IFMA



IFMA is the world's largest and most widely recognized international association for facility management professionals, supporting 24,000 members in 100 countries. This diverse membership participates in focused component groups equipped to address their unique situations by region (134 chapters), industry (16 councils) and areas of interest (six communities). Together they manage more than 78 billion square feet of property and annually purchase more than US\$526 billion in products and services. Formed in 1980, IFMA certifies professionals in facility management, conducts research, provides educational programs, content and resources, and produces World Workplace, the world's largest series of facility management conferences and expositions. In addition, IFMA's collaboration with the Royal Institution of Chartered Surveyors is transforming the global FM profession by unifying standards, offering comprehensive career advancement resources and magnifying the status of practitioners. For more information, visit www.ifma.org/ricscollaboration. To join and follow IFMA's social media outlets online, visit the association's LinkedIn, Twitter, Facebook, YouTube and Flickr pages. For more information, visit the IFMA press room or www.ifma.org.

Operations and Maintenance Benchmarks: IFMA Facility Management Credentials
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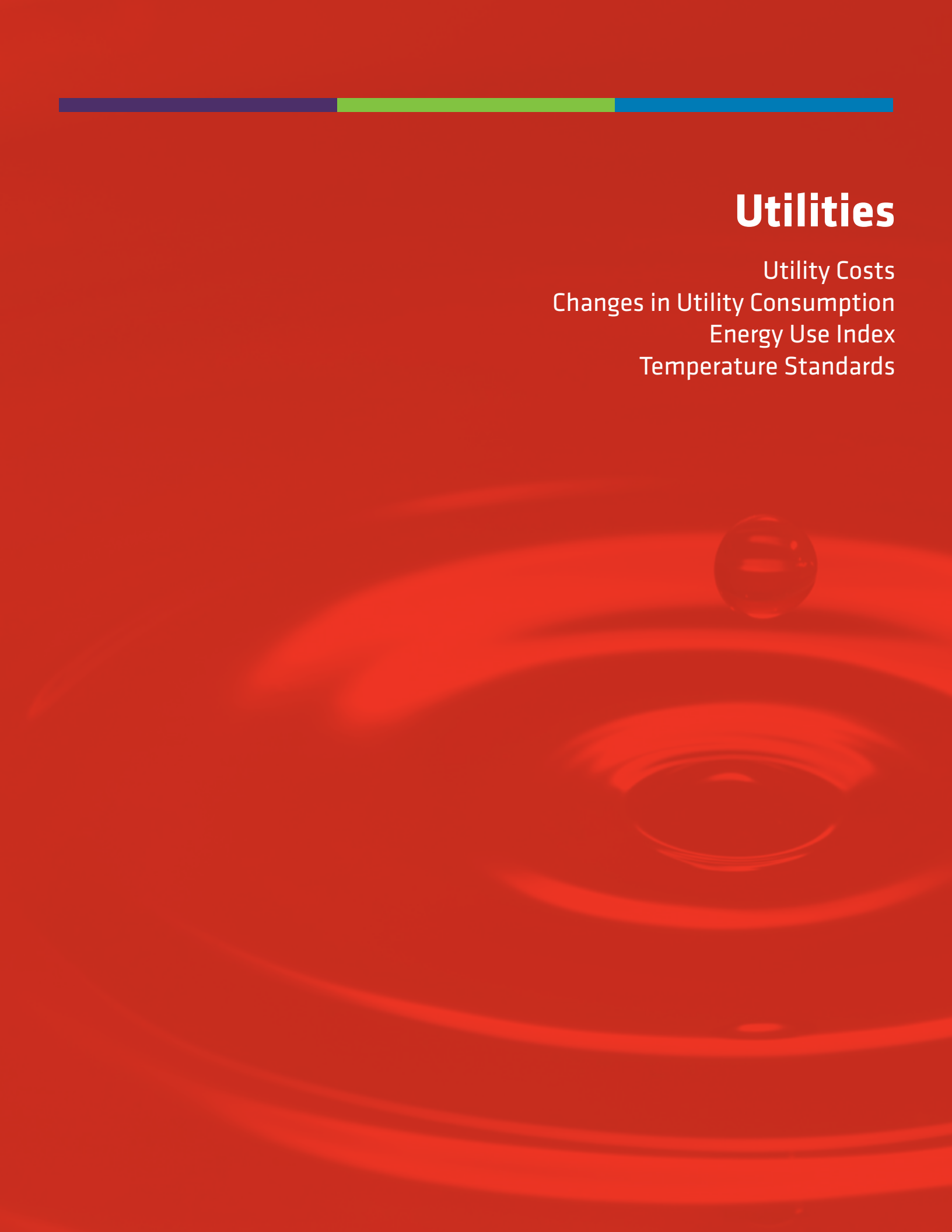
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Utilities

Utility Costs
Changes in Utility Consumption
Energy Use Index
Temperature Standards



Report Selection

Facility Use:

Region: All

Size: All

Facility Age: All

Building Information

	RSF	GSF	Developed Acres	Facility Age	Operating Days / Week	Hours/Day
Mean	5,555,555	5,555,555	5,555	55	5	56

Occupants

	Number Of Occupants	GSF / Occupant	RSF / Occupant
Mean	5,555	555	555

Utility Costs / GSF

Utility costs are associated with the provision of electrical power, potable water, central heating and cooling, and sewage service. The utility categories provided were those most commonly used— electricity, fuel oil, natural gas, chilled water, steam, water and sewage. A miscellaneous category was provided as well to capture other utility costs. Items that fell into this category included diesel fuel, coal and storm water charges. The overall utility cost does not equal the sum of the separate utility costs because of different sample sizes. Compared to IFMA's previous benchmarking report, electricity and gas prices on a per square foot basis remained about the same, while water increased by about \$5.55 per GSF.

	ELECTRICITY	FUEL OIL	NATURAL GAS	STEAM	WATER	SEWER	OTHER	TOTAL UTILITIES
Mean	\$5.55	\$5.55	\$5.55	\$5.55	\$5.55	\$5.55	\$5.55	\$5.55

PERCENTILE	\$ / GSF
99%	\$55.55
95%	\$55.55
90%	\$55.55
75%	\$55.55
50%	\$55.55
25%	\$55.55
10%	\$55.55
5%	\$55.55
1%	\$55.55
Mean	\$55.55

Operating Conditions and Utility Costs/GSF

FACILITY OPERATED	\$/GSF
5 days per week	\$5.55
6 days per week	\$5.55
7 days per week	\$5.55

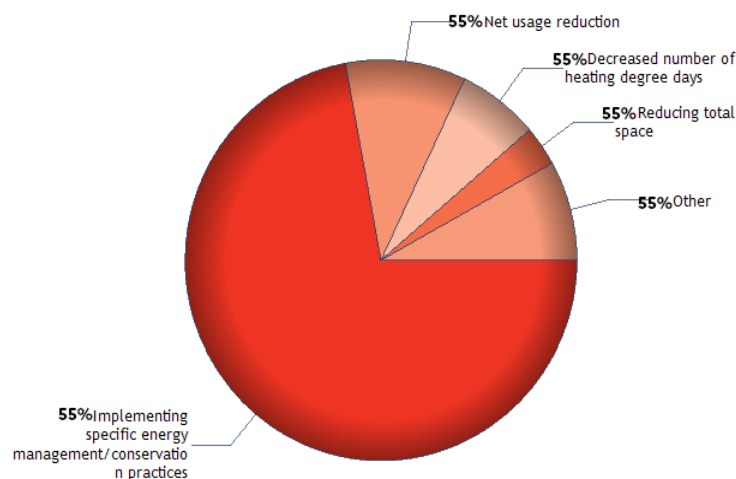
CENTRAL PLANT	\$/GSF
Yes	\$5.55
No	\$5.55

CLIMATE ZONE	\$/GSF
Hot-Humid	\$5.55
Mixed-Humid	\$5.55
Hot-Dry	\$5.55
Cold	\$5.55
Marine	\$5.55
CN2	

GREEN CERTIFICATION STATUS	\$/GSF
Plans to for certification in the next 12 months	\$5.55
One or more buildings certified	\$5.55
Green elements, no certification	\$5.55
No green elements	\$5.55

REGION	\$/GSF
Canada	\$5.55
New England	\$5.55
Northeast	\$5.55
Mid-Atlantic	\$5.55
Southeast	\$5.55
Midwest	\$5.55
North Central	\$5.55
Heartland	\$5.55
South Central	\$5.55
Mountain	\$5.55
Pacific	\$5.55

Reasons For Change In Energy Consumption



**THIS FIGURE ONLY
INCLUDED ON
"ADVANCED" REPORT**

Energy Use Index

FMs can compare energy based on the source's own energy units (such as kilowatt hours, gallons, therms, etc.) or it can be converted to an Energy Use Index (EUI) which uses the BTU equivalent for each energy source. There are many factors that influence a building's EUI which include the building's age, use, operating schedule, climate, occupant density, equipment and construction.

To calculate the EUI for electricity, kilowatt hours are multiplied by a conversion factor of 3.415 to derive kBtus and divided by gross square footage. To calculate the EUI for natural gas, therms (100 CF) are multiplied by a factor of 100 and divided by gross square feet. As anticipated, facilities situated in warmer climates consume larger amounts of electricity and rely less on gas as heating requirements are reduced.

	ELECTRICITY kBtus/GSF	FUEL OIL GALLONS/ GSF	NATURAL THERMS/GSF	STEAM 1,000lbs/GSF	WATER GALLONS/ GSF	SEWER GALLONS/ GSF
Mean	55	5	5	55	555	55

Energy Consumption

PERCENTILE	ELECTRICITY kBtus/GSF	GAS kBtus/GSF
99%	555.55	555.55
95%	555.55	555.55
90%	555.55	55.55
75%	55.55	55.55
50%	55.55	55.55
25%	55.55	5.55
10%	55.55	5.55
5%	55.55	5.55
1%	5.55	5.55
Mean	55.55	55.55

Energy Consumption, Green Building Status, and Climate Zone

GREEN CERTIFICATION STATUS	ELECTRICITY kBtus/GSF	GAS kBtus/GSF
Plans for certification in the next 12 months	55	555
One or more buildings certified	55	55
Green elements, no certification	55	55
No green elements	555	55

CLIMATE ZONES	ELECTRICITY kBtus/GSF	GAS kBtus/GSF
Hot-Humid	55	55
Mixed-Humid	55	55
Hot-Dry	55	55
Cold	55	55
Marine		

Temperature Standards

When compared to IFMA's 2009 measurement, the average summer low temperature standard has decreased by 55 degrees to 55 degrees Fahrenheit and the winter low standard remained the same at 55 degrees Fahrenheit.

SUMMER HIGH	SUMMER LOW	WINTER HIGH	WINTER LOW
55	55	55	55

Energy Management Practices

Energy management practices examined included lighting, equipment and controls, building and envelope, and renewable sources. The energy management practices that are most often implemented, such as the adjustment of thermostats and HVAC operating hours, do not require an outlay of capital.

%	EQUIPMENT & CONTROLS
55%	Adjusted operating hours of HVAC%
55%	Installed variable speed drives for pumps and motors%
55%	Monitor power quality to balance loads and reduce waste heat%
55%	Installed energy efficient motors%
55%	Set back thermostat%
55%	Installed energy efficient heating equipment%
55%	Installed energy efficient ventilation equipment%
55%	Installed energy efficient chillers%
55%	Increased number of times monitored/controlled w/ building automation systems%
55%	Require the purchase of energy efficient selections (e.g., Energy Star)%
55%	Installed energy efficient air compressors%
55%	Repaired compressed air and steam leaks%
55%	Change pneumatic controls to digital%
55%	Asset direct metering (e.g., pumps, motors, etc.)%
55%	Implemented smart metering%
55%	Installed electrical sub-metering for usage tracking of sub-units%
55%	Implemented smart or automated demand response%

%	BUILDING ENVELOPE
55%	Performed thermal imaging study to detect sources of building heat loss%
55%	Improved building shell insulation%
55%	Installed energy efficient windows%

%	LIGHTING
55%	Replaced existing light fixtures with new light fixtures%
55%	Installed occupancy sensors%
55%	Retrofitted existing light fixtures%
55%	Adjusted operating hours of lighting%
55%	Selectively reduced the number of lamps in over-lit areas%
55%	Implemented daylight harvesting%

%	RENEWABLE
55%	Installed solar systems for electric use%
55%	Has electric vehicle charging stations%
55%	Purchased green power from an outside source%
55%	Uses alternative or renewable energy%
55%	Has onsite power generation%
55%	Installed a wind generation system for electricity%
55%	Installed solar power for hot water%
55%	Installed solar systems for heat use%
55%	Installed a geo-thermal system%

Water Conservation

THIS PAGE ONLY INCLUDED ON "ADVANCED" REPORT

The most common water conservation practices were installing low-flow water fixtures and planting native/drought tolerant plants.

CLIMATE ZONE	LOW-FLOW FIXTURES	WATERLESS URINALS	COOLING TOWER BLOWDOWN RECYCLING	RAIN HARVESTING	DROUGHT TOLERANT PLANTS	COMPUTERIZED IRRIGATION CONTROLLERS	REDUCED IRRIGATION	RECLAIMED WATER	OTHER
Hot-Humid	55%	55%	55%	55%	55%	55%	55%	55%	55%
Mixed-Humid	55%	55%	55%	55%	55%	55%	55%	55%	55%
Hot-Dry	55%	55%	55%	55%	55%	55%	55%	55%	55%
Mixed-Dry	55%	55%	55%	55%	55%	55%	55%	55%	55%
Cold	55%	55%	55%	55%	55%	55%	55%	55%	55%
Marine									
CN2									

Energy Management Strategy and Employee/Tenant/Training Practices

	Conducted Energy Audit	Strategic Energy Management Plan	Hired Energy Consultant to Improve Energy Efficiency	Written Plan for Strategic Energy Management	Assess Energy Management Capabilities for New Real Estate	Promoted Energy Use Reduction to Employees/Tenants	Provided Training to Facility Management Staff to Reduce Energy Use
% Using	55%	55%	55%	55%	55%	55%	55%