Program Version:**EnergyPlus, Version 8.8.0-7c3bbe4830, YMD=2018.01.18 21:45**

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Tabular Output Report in Format: **HTML**

Building: **Building 1**

Environment: **RUN PERIOD 1 ** Piacenza - ITA IGDG WMO#=160840**

Simulation Timestamp: **2018-01-18 21:45:50**

Report: **Annual Building Utility Performance Summary**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Values gathered over 8760.00 hours

Site and Source Energy

	Total Energy [GJ]	Energy Per Total Building Area [MJ/m2]	Energy Per Conditioned Building Area [MJ/m2]
Total Site Energy	2033.37	564.82	564.82
Net Site Energy	2033.37	564.82	564.82
Total Source Energy	5363.37	1489.83	1489.83
Net Source Energy	5363.37	1489.83	1489.83

Site to Source Energy Conversion Factors

	Site=>Source Conversion Factor
Electricity	3.167
Natural Gas	1.084
District Cooling	1.056
District Heating	3.613
Steam	0.300
Gasoline	1.050
Diesel	1.050
Coal	1.050
Fuel Oil #1	1.050
Fuel Oil #2	1.050
Propane	1.050
Other Fuel 1	1.000
Other Fuel 2	1.000

Building Area

	Area [m2]
Total Building Area	3600.00
Net Conditioned Building Area	3600.00
Unconditioned Building Area	0.00

End Uses

	Electricity [GJ]	Natural Gas [GJ]	Additional Fuel [GJ]	District Cooling [GJ]	District Heating [GJ]	Water [m3]
Heating	0.00	0.00	0.00	0.00	307.36	0.00
Cooling	0.00	0.00	0.00	574.75	0.00	0.00
Interior Lighting	494.91	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	656.35	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00	0.00

Humidification	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00	0.00
Total End Uses	1151.26	0.00	0.00	574.75	307.36	0.00

Note: District heat appears to be the principal heating source based on energy usage.

End Uses By Subcategory

	Subcategory	Electricity [GJ]	Natural Gas [GJ]	Additional Fuel [GJ]	District Cooling [GJ]	District Heating [GJ]	Water [m3]
Heating	General	0.00	0.00	0.00	0.00	307.36	0.00
Cooling	General	0.00	0.00	0.00	574.75	0.00	0.00
Interior Lighting	General	494.91	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	General	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	General	656.35	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	General	0.00	0.00	0.00	0.00	0.00	0.00
Fans	Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	General	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	General	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	General	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	General	0.00	0.00	0.00	0.00	0.00	0.00
Generators	General	0.00	0.00	0.00	0.00	0.00	0.00

Normalized Metrics

Utility Use Per Conditioned Floor Area

	Electricity Intensity [MJ/m2]	Natural Gas Intensity [MJ/m2]	Additional Fuel Intensity [MJ/m2]	District Cooling Intensity [MJ/m2]	District Heating Intensity [MJ/m2]	Water Intensity [m3/m2]
Lighting	137.47	0.00	0.00	0.00	0.00	0.00
HVAC	0.00	0.00	0.00	159.65	85.38	0.00
Other	182.32	0.00	0.00	0.00	0.00	0.00
Total	319.79	0.00	0.00	159.65	85.38	0.00

Utility Use Per Total Floor Area

	Electricity Intensity [MJ/m2]	Natural Gas Intensity [MJ/m2]	Additional Fuel Intensity [MJ/m2]	District Cooling Intensity [MJ/m2]	District Heating Intensity [MJ/m2]	Water Intensity [m3/m2]
Lighting	137.47	0.00	0.00	0.00	0.00	0.00
HVAC	0.00	0.00	0.00	159.65	85.38	0.00
Other	182.32	0.00	0.00	0.00	0.00	0.00
Total	319.79	0.00	0.00	159.65	85.38	0.00

Electric Loads Satisfied

	Electricity [GJ]	Percent Electricity [%]
Fuel-Fired Power Generation	0.000	0.00
High Temperature Geothermal*	0.000	0.00
Photovoltaic Power	0.000	0.00
Wind Power	0.000	0.00
Power Conversion	0.000	0.00
Net Decrease in On-Site Storage	0.000	0.00
Total On-Site Electric Sources	0.000	0.00
Electricity Coming From Utility	1151.260	100.00
Surplus Electricity Going To Utility	0.000	0.00

Net Electricity From Utility	1151.260	100.00
Total On-Site and Utility Electric Sources	1151.260	100.00
Total Electricity End Uses	1151.260	100.00

On-Site Thermal Sources

	Heat [GJ]	Percent Heat [%]
Water-Side Heat Recovery	0.00	
Air to Air Heat Recovery for Cooling	0.00	
Air to Air Heat Recovery for Heating	0.00	
High-Temperature Geothermal*	0.00	
Solar Water Thermal	0.00	
Solar Air Thermal	0.00	
Total On-Site Thermal Sources	0.00	

Water Source Summary

	Water [m3]	Percent Water [%]
Rainwater Collection	0.00	-
Condensate Collection	0.00	-
Groundwater Well	0.00	-
Total On Site Water Sources	0.00	-
-	-	-
Initial Storage	0.00	-
Final Storage	0.00	-
Change in Storage	0.00	-
-	-	-
Water Supplied by Utility	0.00	-
-	-	-
Total On Site, Change in Storage, and Utility Water Sources	0.00	-
Total Water End Uses	0.00	-

Setpoint Not Met Criteria

	Degrees [deltaC]
Tolerance for Zone Heating Setpoint Not Met Time	0.20
Tolerance for Zone Cooling Setpoint Not Met Time	0.20

Comfort and Setpoint Not Met Summary

	Facility [Hours]
Time Setpoint Not Met During Occupied Heating	0.00
Time Setpoint Not Met During Occupied Cooling	0.00
Time Not Comfortable Based on Simple ASHRAE 55-2004	2901.50

Note 1: An asterisk (*) indicates that the feature is not yet implemented.

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BUILDING ENERGY PERFORMANCE - ELECTRICITY

| Meter |

BUILDING ENERGY PERFORMANCE - DISTRICT HEATING

| Meter |

BUILDING ENERGY PERFORMANCE - DISTRICT COOLING

| Meter |

BUILDING ENERGY PERFORMANCE - ELECTRICITY PEAK DEMAND

| Meter |

BUILDING ENERGY PERFORMANCE - DISTRICT HEATING PEAK DEMAND

| Meter |

BUILDING ENERGY PERFORMANCE - DISTRICT COOLING PEAK DEMAND

| Meter |

Life-Cycle Cost Report

| Entire Facility |

Report: **Input Verification and Results Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

General

	Value
Program Version and Build	EnergyPlus, Version 8.8.0-7c3bbe4830, YMD=2018.01.18 21:45
RunPeriod	RUN PERIOD 1
Weather File	Piacenza - ITA IGDG WMO#=160840
Latitude [deg]	44.92
Longitude [deg]	9.73
Elevation [m]	134.00
Time Zone	1.00
North Axis Angle [deg]	0.00
Rotation for Appendix G [deg]	0.00
Hours Simulated [hrs]	8760.00

ENVELOPE

Window-Wall Ratio

	Total	North (315 to 45 deg)	East (45 to 135 deg)	South (135 to 225 deg)	West (225 to 315 deg)
Gross Wall Area [m2]	1260.00	270.00	360.00	270.00	360.00
Above Ground Wall Area [m2]	1260.00	270.00	360.00	270.00	360.00
Window Opening Area [m2]	504.00	108.00	144.00	108.00	144.00
Gross Window-Wall Ratio [%]	40.00	40.00	40.00	40.00	40.00
Above Ground Window-Wall Ratio [%]	40.00	40.00	40.00	40.00	40.00

Conditioned Window-Wall Ratio

	Total	North (315 to 45 deg)	East (45 to 135 deg)	South (135 to 225 deg)	West (225 to 315 deg)
Gross Wall Area [m2]	1260.00	270.00	360.00	270.00	360.00
Above Ground Wall Area [m2]	1260.00	270.00	360.00	270.00	360.00

Window Opening Area [m2]	504.00	108.00	144.00	108.00	144.00
Gross Window-Wall Ratio [%]	40.00	40.00	40.00	40.00	40.00
Above Ground Window-Wall Ratio [%]	40.00	40.00	40.00	40.00	40.00

Skylight-Roof Ratio

	Total
Gross Roof Area [m2]	1200.00
Skylight Area [m2]	0.00
Skylight-Roof Ratio [%]	0.00

PERFORMANCE

Zone Summary

	Area [m2]	Conditioned (Y/N)	Part of Total Floor Area (Y/N)	Volume [m3]	Multipliers	Above Ground Gross Wall Area [m2]	Underground Gross Wall Area [m2]	Window Glass Area [m2]	Opening Area [m2]	Lighting [W/m2]	People [m2 per person]	Plug and Process [W/m2]
THERMAL ZONE 1	900.00	Yes	Yes	2700.00	1.00	360.00	0.00	144.00	144.00	10.6563	17.70	7.6424
THERMAL ZONE 2	200.00	Yes	Yes	600.00	1.00	90.00	0.00	36.00	36.00	10.6563	19.56	6.8889
THERMAL ZONE 3	1900.00	Yes	Yes	5700.00	1.00	540.00	0.00	216.00	216.00	12.5938	9.29	0.7535
THERMAL ZONE 4	600.00	Yes	Yes	1800.00	1.00	270.00	0.00	108.00	108.00	11.6250	1.86	48.0070
Total	3600.00			10800.00		1260.00	0.00	504.00	504.00	11.8403	6.12	10.6922
Conditioned Total	3600.00			10800.00		1260.00	0.00	504.00	504.00	11.8403	6.12	10.6922
Unconditioned Total	0.00			0.00		0.00	0.00	0.00	0.00			
Not Part of Total	0.00			0.00		0.00	0.00	0.00	0.00			

Report: **Demand End Use Components Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

End Uses

	Electricity [W]	Natural Gas [W]	Propane [W]	District Cooling [W]	District Heating [W]	Water [m3/s]
Time of Peak	02-JAN-08:09	-	-	12-JUL-16:00	04-DEC-06:10	-
Heating	0.00	0.00	0.00	0.00	281293.60	0.00
Cooling	0.00	0.00	0.00	184772.43	0.00	0.00
Interior Lighting	38362.58	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	34642.57	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00	0.00
Total End Uses	73005.15	0.00	0.00	184772.43	281293.60	0.00

End Uses By Subcategory

	Subcategory	Electricity [W]	Natural Gas [W]	Propane [W]	District Cooling [W]	District Heating [W]	Water [m3/s]
Heating	General	0.00	0.00	0.00	0.00	281293.60	0.00
Cooling	General	0.00	0.00	0.00	184772.43	0.00	0.00
Interior Lighting	General	38362.58	0.00	0.00	0.00	0.00	0.00
Exterior Lighting	General	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment	General	34642.57	0.00	0.00	0.00	0.00	0.00
Exterior Equipment	General	0.00	0.00	0.00	0.00	0.00	0.00
Fans	Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00
Pumps	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection	General	0.00	0.00	0.00	0.00	0.00	0.00
Humidification	General	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery	General	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems	General	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration	General	0.00	0.00	0.00	0.00	0.00	0.00
Generators	General	0.00	0.00	0.00	0.00	0.00	0.00

Report: **Source Energy End Use Components Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Values gathered over 8760.00 hours

Source Energy End Use Components Summary

	Source Electricity [GJ]	Source Natural Gas [GJ]	Source Additional Fuel [GJ]	Source District Cooling [GJ]	Source District Heating [GJ]
Heating	0.00	0.00	0.00	0.00	1110.59
Cooling	0.00	0.00	0.00	606.74	0.00
Interior Lighting	1567.37	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	2078.67	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	3646.04	0.00	0.00	606.74	1110.59

Normalized Metrics

Source Energy End Use Components Per Conditioned Floor Area

	Source Electricity [MJ/m2]	Source Natural Gas [MJ/m2]	Source Additional Fuel [MJ/m2]	Source District Cooling [MJ/m2]	Source District Heating [MJ/m2]
Heating	0.00	0.00	0.00	0.00	308.50
Cooling	0.00	0.00	0.00	168.54	0.00
Interior Lighting	435.38	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	577.41	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00

Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	1012.79	0.00	0.00	168.54	308.50

Source Energy End Use Components Per Total Floor Area

	Source Electricity [MJ/m2]	Source Natural Gas [MJ/m2]	Source Additional Fuel [MJ/m2]	Source District Cooling [MJ/m2]	Source District Heating [MJ/m2]
Heating	0.00	0.00	0.00	0.00	308.50
Cooling	0.00	0.00	0.00	168.54	0.00
Interior Lighting	435.38	0.00	0.00	0.00	0.00
Exterior Lighting	0.00	0.00	0.00	0.00	0.00
Interior Equipment	577.41	0.00	0.00	0.00	0.00
Exterior Equipment	0.00	0.00	0.00	0.00	0.00
Fans	0.00	0.00	0.00	0.00	0.00
Pumps	0.00	0.00	0.00	0.00	0.00
Heat Rejection	0.00	0.00	0.00	0.00	0.00
Humidification	0.00	0.00	0.00	0.00	0.00
Heat Recovery	0.00	0.00	0.00	0.00	0.00
Water Systems	0.00	0.00	0.00	0.00	0.00
Refrigeration	0.00	0.00	0.00	0.00	0.00
Generators	0.00	0.00	0.00	0.00	0.00
Total Source Energy End Use Components	1012.79	0.00	0.00	168.54	308.50

Report: **Climatic Data Summary**

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For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

SizingPeriod:DesignDay

	Maximum Dry Bulb [C]	Daily Temperature Range [deltaC]	Humidity Value	Humidity Type	Wind Speed [m/s]	Wind Direction
PIACENZA ANN CLG .4% CONDNS DB=>MWB	33.10	11.90	22.70	Wetbulb [C]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS DP=>MDB	27.40	11.90	23.00	Dewpoint [C]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	30.30	11.90	74900.00	Enthalpy [J/kg]	2.30	90.00
PIACENZA ANN CLG .4% CONDNS WB=>MDB	30.10	11.90	24.60	Wetbulb [C]	2.30	90.00
PIACENZA ANN HTG 99.6% CONDNS DB	-6.10	0.00	-6.10	Wetbulb [C]	2.00	250.00
PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	5.80	0.00	5.80	Wetbulb [C]	8.90	250.00
PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	3.50	0.00	-11.30	Dewpoint [C]	2.00	250.00

Weather Statistics File

	Value
None	

Report: **Envelope Summary**

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For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Opaque Exterior

	Construction	Reflectance	U-Factor with Film [W/m2-K]	U-Factor no Film [W/m2-K]	Gross Area [m2]	Net Area [m2]	Azimuth [deg]	Tilt [deg]	Cardinal Direction
SURFACE 16	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	90.00	90.00	E
SURFACE 46	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	90.00	90.00	E
SURFACE 76	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	90.00	90.00	E
SURFACE 13	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	300.00	300.00	45.00	180.00	
SURFACE 78	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	300.00	300.00	315.00	0.00	
SURFACE 68	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	180.00	90.00	S
SURFACE 72	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	200.00	200.00	0.00	0.00	
SURFACE 34	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	270.00	90.00	W
SURFACE 38	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	180.00	90.00	S
SURFACE 4	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	270.00	90.00	W
SURFACE 64	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	120.00	72.00	270.00	90.00	W
SURFACE 8	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	180.00	90.00	S
SURFACE 1	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	300.00	300.00	270.00	180.00	
SURFACE 19	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	200.00	200.00	0.00	180.00	
SURFACE 7	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	200.00	200.00	0.00	180.00	
SURFACE 66	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	300.00	300.00	90.00	0.00	
SURFACE 84	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	200.00	200.00	0.00	0.00	
SURFACE 28	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	0.00	90.00	N
SURFACE 58	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	0.00	90.00	N
SURFACE 88	ASHRAE 189.1-2009 EXTWALL MASS CLIMATEZONE 1	0.08	0.860	0.987	90.00	54.00	0.00	90.00	N
SURFACE 25	EXTSLABCARPET 4IN CLIMATEZONE 1-8	0.15	2.945	5.634	200.00	200.00	0.00	180.00	
SURFACE 90	ASHRAE 189.1-2009 EXTROOF IEAD CLIMATEZONE 1	0.30	0.274	0.285	200.00	200.00	0.00	0.00	

Exterior Fenestration

	Construction	Glass Area [m2]	Frame Area [m2]	Divider Area [m2]	Area of One Opening [m2]	Area of Multiplied Openings [m2]	Glass U-Factor [W/m2-K]	Glass SHGC	Glass Visible Transmittance	Frame Conductance [W/m2-K]	Divider Conductance [W/m2-K]	Shade Control	Parent Surface	Az
SUB SURFACE 5	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 16	
SUB SURFACE 9	ASHRAE 189.1-2009 EXTWINDOW	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 46	

	CLIMATEZONE 1													
SUB SURFACE 11	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 76	
SUB SURFACE 4	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 68	
SUB SURFACE 7	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 34	
SUB SURFACE 8	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 38	
SUB SURFACE 2	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 4	
SUB SURFACE 1	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	48.00	0.00	0.00	48.00	48.00	6.424	0.252	0.252			No	SURFACE 64	
SUB SURFACE 3	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 8	
SUB SURFACE 6	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 28	
SUB SURFACE 10	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 58	
SUB SURFACE 12	ASHRAE 189.1-2009 EXTWINDOW CLIMATEZONE 1	36.00	0.00	0.00	36.00	36.00	6.424	0.252	0.252			No	SURFACE 88	
Total or Average						504.00	6.424	0.252	0.252					
North Total or Average						108.00	6.424	0.252	0.252					
Non-North Total or Average						396.00	6.424	0.252	0.252					

Interior Fenestration

	Construction	Area of One Opening [m2]	Area of Openings [m2]	Glass U-Factor [W/m2-K]	Glass SHGC	Glass Visible Transmittance	Parent Surface
Total or Average			0.00	-	-	-	

Exterior Door

	Construction	U-Factor with Film [W/m2-K]	U-Factor no Film [W/m2-K]	Gross Area [m2]	Parent Surface
None					

Report: **Shading Summary**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Sunlit Fraction

	March 21 9am	March 21 noon	March 21 3pm	June 21 9am	June 21 noon	June 21 3pm	December 21 9am	December 21 noon	December 21 3pm
SUB SURFACE 5	0.81	0.02	0.00	0.57	0.01	0.00	0.93	0.04	0.00
SUB SURFACE 9	0.81	0.02	0.00	0.57	0.01	0.00	0.93	0.04	0.00
SUB SURFACE 11	0.81	0.02	0.00	0.57	0.01	0.00	0.93	0.04	0.00
SUB SURFACE 4	0.62	0.56	0.57	0.02	0.00	0.01	0.92	0.80	0.85
SUB SURFACE 7	0.00	0.00	0.49	0.00	0.00	0.22	0.00	0.00	0.77
SUB SURFACE 8	0.62	0.56	0.57	0.02	0.00	0.01	0.92	0.80	0.85
SUB SURFACE 2	0.00	0.00	0.49	0.00	0.00	0.22	0.00	0.00	0.77
SUB SURFACE 1	0.00	0.00	0.49	0.00	0.00	0.22	0.00	0.00	0.77
SUB SURFACE 3	0.62	0.56	0.57	0.02	0.00	0.01	0.92	0.80	0.85
SUB SURFACE 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB SURFACE 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB SURFACE 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Window Control

	Name	Type	Shaded Construction	Control	Glare Control
None					

Report: **Lighting Summary**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Interior Lighting

	Zone	Lighting Power Density [W/m2]	Zone Area [m2]	Total Power [W]	End Use Subcategory	Schedule Name	Scheduled Hours/Week [hr]	Hours/Week > 1% [hr]	Full Load Hours/Week [hr]	Return Air Fraction	Conditioned (Y/N)	Consum
189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 LIGHTS 1	THERMAL ZONE 1	3.5521	900.00	3196.88	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	3
189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 LIGHTS 2	THERMAL ZONE 1	3.5521	900.00	3196.88	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	3
189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 LIGHTS 3	THERMAL ZONE 1	3.5521	900.00	3196.88	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	3
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 1	THERMAL ZONE 3	1.9885	1900.00	3778.13	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	4
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 2	THERMAL ZONE 3	1.3257	1900.00	2518.76	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 3	THERMAL ZONE 3	1.3257	1900.00	2518.76	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 4	THERMAL ZONE 3	1.9885	1900.00	3778.13	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	4

189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 5	THERMAL ZONE 3	1.3257	1900.00	2518.76	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 6	THERMAL ZONE 3	1.3257	1900.00	2518.76	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 7	THERMAL ZONE 3	1.9885	1900.00	3778.13	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	4
189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 8	THERMAL ZONE 3	1.3257	1900.00	2518.76	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 1	THERMAL ZONE 4	3.8750	600.00	2325.00	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 2	THERMAL ZONE 4	3.8750	600.00	2325.00	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 3	THERMAL ZONE 4	3.8750	600.00	2325.00	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
THERMAL ZONE 2 189.1-2009 - OFFICE - CLOSEDOFFICE - CZ1-3 LIGHTS	THERMAL ZONE 2	10.6563	200.00	2131.25	General	OFFICE BLDG LIGHT	61.85	168.00	61.85	0.0000	Y	2
Interior Lighting Total		2.1420	19900.00	42625.09								49

Daylighting

	Zone	Control Name	Daylighting Method	Control Type	Fraction Controlled	Lighting Installed in Zone [W]	Lighting Controlled [W]
None							

Exterior Lighting

	Total Watts	Astronomical Clock/Schedule	Schedule Name	Scheduled Hours/Week [hr]	Hours/Week > 1% [hr]	Full Load Hours/Week [hr]	Consumption [GJ]
Exterior Lighting Total	0.00						0.00

Report: **Equipment Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Central Plant

	Type	Nominal Capacity [W]	Nominal Efficiency [W/W]	IPLV in SI Units [W/W]	IPLV in IP Units [Btu/W-h]
None					

Cooling Coils

	Type	Design Coil Load [W]	Nominal Total Capacity [W]	Nominal Sensible Capacity [W]	Nominal Latent Capacity [W]	Nominal Sensible Heat Ratio	Nominal Efficiency [W/W]	Nominal Coil UA Value [W/C]	Nominal Coil Surface Area [m2]
None									

DX Cooling Coils

	DX Cooling Coil Type	Standard Rated Net Cooling Capacity [W]	Standard Rated Net COP [W/W]	EER [Btu/W-h]	SEER [Btu/W-h]	IEER [Btu/W-h]
None						

DX Cooling Coil ASHRAE 127 Standard Ratings Report

	DX Cooling Coil Type	Rated Net Cooling Capacity Test A [W]	Rated Electric Power Test A [W]	Rated Net Cooling Capacity Test B [W]	Rated Electric Power Test B [W]	Rated Net Cooling Capacity Test C [W]	Rated Electric Power Test C [W]	Rated Net Cooling Capacity Test D [W]	Rated Electric Power Test D [W]
None									

DX Heating Coils

	DX Heating Coil Type	High Temperature Heating (net) Rating Capacity [W]	Low Temperature Heating (net) Rating Capacity [W]	HSPF [Btu/W-h]	Region Number
None					

Heating Coils

	Type	Design Coil Load [W]	Nominal Total Capacity [W]	Nominal Efficiency [W/W]
None				

Fans

	Type	Total Efficiency [W/W]	Delta Pressure [pa]	Max Air Flow Rate [m3/s]	Rated Electric Power [W]	Rated Power Per Max Air Flow Rate [W-s/m3]	Motor Heat In Air Fraction	End Use
None								

Pumps

	Type	Control	Head [pa]	Water Flow [m3/s]	Electric Power [W]	Power Per Water Flow Rate [W-s/m3]	Motor Efficiency [W/W]
None							

Service Water Heating

	Type	Storage Volume [m3]	Input [W]	Thermal Efficiency [W/W]	Recovery Efficiency [W/W]	Energy Factor
None						

Report: **HVAC Sizing Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Zone Sensible Cooling

	Calculated Design Load [W]	User Design Load [W]	User Design Load per Area [W/m2]	Calculated Design Air Flow [m3/s]	User Design Air Flow [m3/s]	Design Day Name	Date/Time Of Peak {TIMESTAMP}	Thermostat Setpoint Temperature at Peak Load [C]	Indoor Temperature at Peak Load [C]	Indoor Humidity Ratio at Peak Load [kgWater/kgAir]	Outdoor Temperature at Peak Load [C]	Hu a [kgV
THERMAL ZONE 1	29854.87	34333.10	38.15	2.469	2.839	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:20:00	24.00	24.00	0.00966	32.86	
THERMAL ZONE 2	7960.80	9154.92	45.77	0.658	0.757	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:40:00	24.00	24.00	0.00947	32.62	
THERMAL ZONE 3	59671.11	68621.78	36.12	4.936	5.676	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 16:30:00	24.00	23.99	0.01024	31.91	
THERMAL ZONE 4	81714.87	93972.10	156.62	6.772	7.787	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:00:00	24.00	23.97	0.01041	33.10	

The Design Load is the zone sensible load only. It does not include any system effects or ventilation loads.

Zone Sensible Heating

	Calculated Design Load [W]	User Design Load [W]	User Design Load per Area [W/m2]	Calculated Design Air Flow [m3/s]	User Design Air Flow [m3/s]	Design Day Name	Date/Time Of Peak {TIMESTAMP}	Thermostat Setpoint Temperature at Peak Load [C]	Indoor Temperature at Peak Load [C]	Indoor Humidity Ratio at Peak Load [kgWater/kgAir]	Outdoor Temperature at Peak Load [C]	Hur a [kgW
THERMAL ZONE 1	28694.53	35868.16	39.85	1.249	1.562	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	21.00	21.00	0.00715	-6.10	
THERMAL ZONE 2	9486.55	11858.19	59.29	0.413	0.516	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	21.00	20.99	0.00692	-6.10	
THERMAL ZONE 3	45849.26	57311.58	30.16	1.996	2.495	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	21.00	21.00	0.00716	-6.10	
THERMAL ZONE 4	21130.47	26413.09	44.02	0.920	2.286	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	21.00	21.00	0.00717	-6.10	

The Design Load is the zone sensible load only. It does not include any system effects or ventilation loads.

System Design Air Flow Rates

	Calculated cooling [m3/s]	User cooling [m3/s]	Calculated heating [m3/s]	User heating [m3/s]
None				

Plant Loop Coincident Design Fluid Flow Rate Adjustments

	Previous Design Volume Flow Rate [m3/s]	Algorithm Volume Flow Rate [m3/s]	Coincident Design Volume Flow Rate [m3/s]	Coincident Size Adjusted	Peak Sizing Period Name	Peak Day into Period {TIMESTAMP} [day]	Peak Hour Of Day {TIMESTAMP} [hr]	Peak Step Start Minute {TIMESTAMP}[min]
None								

Report: **System Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Economizer

	High Limit Shutoff Control	Minimum Outdoor Air [m3/s]	Maximum Outdoor Air [m3/s]	Return Air Temp Limit	Return Air Enthalpy Limit	Outdoor Air Temperature Limit [C]	Outdoor Air Enthalpy Limit [C]
None							

Demand Controlled Ventilation using Controller:MechanicalVentilation

	Controller:MechanicalVentilation Name	Outdoor Air Per Person [m3/s-person]	Outdoor Air Per Area [m3/s-m2]	Outdoor Air Per Zone [m3/s]	Outdoor Air ACH [ach]	Outdoor Air Method	Outdoor Air Schedule Name	Air Distribution Effectiveness in Cooling Mode	Air Distribution Effectiveness in Heating Mode	Air Distribution Effectiveness Schedule Name
None										

Time Not Comfortable Based on Simple ASHRAE 55-2004

	Winter Clothes [hr]	Summer Clothes [hr]	Summer or Winter Clothes [hr]
THERMAL ZONE 1	2520.83	4816.83	2391.83
THERMAL ZONE 2	2999.67	4452.33	2554.83
THERMAL ZONE 3	2741.33	5002.00	2685.00

THERMAL ZONE 4	1436.17	4563.50	1100.00
Facility	3268.83	5019.17	2901.50

Aggregated over the RunPeriods for Weather

Time Setpoint Not Met

	During Heating [hr]	During Cooling [hr]	During Occupied Heating [hr]	During Occupied Cooling [hr]
THERMAL ZONE 1	0.00	0.00	0.00	0.00
THERMAL ZONE 2	0.00	0.00	0.00	0.00
THERMAL ZONE 3	0.00	0.00	0.00	0.00
THERMAL ZONE 4	0.00	0.00	0.00	0.00
Facility	0.00	0.00	0.00	0.00

Aggregated over the RunPeriods for Weather

Report: **Outdoor Air Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Average Outdoor Air During Occupied Hours

	Average Number of Occupants	Nominal Number of Occupants	Zone Volume [m3]	Mechanical Ventilation [ach]	Infiltration [ach]	AFN Infiltration [ach]	Simple Ventilation [ach]
THERMAL ZONE 1	9.47	50.86	2700.00	0.000	0.089	0.000	0.329
THERMAL ZONE 2	5.71	10.23	600.00	0.000	0.176	0.000	0.298
THERMAL ZONE 3	9.84	204.51	5700.00	0.000	0.067	0.000	0.278
THERMAL ZONE 4	41.42	322.92	1800.00	0.000	0.096	0.000	1.395

Values shown for a single zone without multipliers

Minimum Outdoor Air During Occupied Hours

	Average Number of Occupants	Nominal Number of Occupants	Zone Volume [m3]	Mechanical Ventilation [ach]	Infiltration [ach]	AFN Infiltration [ach]	Simple Ventilation [ach]
THERMAL ZONE 1	9.47	50.86	2700.00	0.000	0.001	0.000	0.001
THERMAL ZONE 2	5.71	10.23	600.00	0.000	0.002	0.000	0.001
THERMAL ZONE 3	9.84	204.51	5700.00	0.000	0.001	0.000	0.001
THERMAL ZONE 4	41.42	322.92	1800.00	0.000	0.001	0.000	0.004

Values shown for a single zone without multipliers

Report: **Object Count Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Surfaces by Class

	Total	Outdoors
Wall	46	12
Floor	6	5
Roof	6	5
Internal Mass	16	0
Building Detached Shading	0	0
Fixed Detached Shading	0	0
Window	12	12
Door	0	0
Glass Door	0	0
Shading	18	18
Overhang	0	0

Fin	0	0
Tubular Daylighting Device Dome	0	0
Tubular Daylighting Device Diffuser	0	0

HVAC

	Count
HVAC Air Loops	0
Conditioned Zones	4
Unconditioned Zones	0
Supply Plenums	0
Return Plenums	0

Input Fields

	Count
IDF Objects	498
Defaulted Fields	402
Fields with Defaults	1170
Autosized Fields	0
Autosizable Fields	16
Autocalculated Fields	173
Autocalculatable Fields	176

Report: **Energy Meters**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Annual and Peak Values - Electricity

	Electricity Annual Value [GJ]	Electricity Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Electricity Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
Electricity:Facility	1151.26	13678.78	01-JAN-00:10	73005.15	02-JAN-08:10
Electricity:Building	1151.26	13678.78	01-JAN-00:10	73005.15	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 1	228.64	2542.97	01-JAN-00:10	14821.90	02-JAN-08:10
InteriorLights:Electricity	494.91	2131.25	01-JAN-00:10	38362.58	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 1	111.35	479.53	01-JAN-00:10	8631.58	02-JAN-08:10
General:InteriorLights:Electricity	494.91	2131.25	01-JAN-00:10	38362.58	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 3	302.23	1625.89	01-JAN-00:10	22823.80	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 3	277.82	1196.41	01-JAN-00:10	21535.36	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 4	572.15	8990.02	01-JAN-00:10	32201.31	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 4	80.98	348.75	01-JAN-00:10	6277.51	02-JAN-08:10
Electricity:Zone:THERMAL ZONE 2	48.24	519.90	01-JAN-00:10	3158.13	02-JAN-08:10
InteriorLights:Electricity:Zone:THERMAL ZONE 2	24.75	106.56	01-JAN-00:10	1918.13	02-JAN-08:10
InteriorEquipment:Electricity	656.35	11547.52	01-JAN-00:10	34642.57	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 1	117.28	2063.44	01-JAN-00:10	6190.32	02-JAN-08:10
General:InteriorEquipment:Electricity	656.35	11547.52	01-JAN-00:10	34642.57	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 3	24.41	429.48	01-JAN-00:10	1288.44	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 4	491.16	8641.27	01-JAN-00:10	25923.80	02-JAN-08:10
InteriorEquipment:Electricity:Zone:THERMAL ZONE 2	23.49	413.33	01-JAN-00:10	1240.00	02-JAN-08:10
Fans:Electricity	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10

Fans:Electricity:Zone:THERMAL ZONE 1	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Ventilation (simple):Fans:Electricity	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 2	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 3	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Fans:Electricity:Zone:THERMAL ZONE 4	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricityPurchased:Facility	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10
ElectricityPurchased:Plant	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10
Cogeneration:ElectricityPurchased	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10
ElectricitySurplusSold:Facility	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricitySurplusSold:Plant	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
Cogeneration:ElectricitySurplusSold	0.00	0.00	01-JAN-00:10	0.00	01-JAN-00:10
ElectricityNet:Facility	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10
ElectricityNet:Plant	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10
Cogeneration:ElectricityNet	1151.26	13678.78	07-JAN-18:50	73005.15	03-JAN-08:10

Annual and Peak Values - Gas

	Gas Annual Value [GJ]	Gas Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Gas Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
None					

Annual and Peak Values - Cooling

	Cooling Annual Value [GJ]	Cooling Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Cooling Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
DistrictCooling:Facility	574.75	0.00	01-JAN-00:10	184772.43	12-JUL-17:00
DistrictCooling:HVAC	574.75	0.00	01-JAN-00:10	184772.43	12-JUL-17:00
Cooling:DistrictCooling	574.75	0.00	01-JAN-00:10	184772.43	12-JUL-17:00

Annual and Peak Values - Water

	Annual Value [m3]	Minimum Value [m3/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [m3/s]	Timestamp of Maximum {TIMESTAMP}
None					

Annual and Peak Values - Other by Weight/Mass

	Annual Value [kg]	Minimum Value [kg/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [kg/s]	Timestamp of Maximum {TIMESTAMP}
Carbon Equivalent:Facility	0.00	0.000	01-JAN-00:10	0.000	01-JAN-00:10
CarbonEquivalentEmissions:Carbon Equivalent	0.00	0.000	01-JAN-00:10	0.000	01-JAN-00:10

Annual and Peak Values - Other Volumetric

	Annual Value [m3]	Minimum Value [m3/s]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [m3/s]	Timestamp of Maximum {TIMESTAMP}
None					

Annual and Peak Values - Other Liquid/Gas

	Annual Value [L]	Minimum Value [L]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [L]	Timestamp of Maximum {TIMESTAMP}
None					

Annual and Peak Values - Other

	Annual Value [GJ]	Minimum Value [W]	Timestamp of Minimum {TIMESTAMP}	Maximum Value [W]	Timestamp of Maximum {TIMESTAMP}
EnergyTransfer:Facility	735.11	0.00	02-JAN-22:10	250568.17	04-DEC-06:10
EnergyTransfer:Building	735.11	0.00	02-JAN-22:10	250568.17	04-DEC-06:10
EnergyTransfer:Zone:THERMAL ZONE	157.58	0.00	02-JAN-22:10	64483.89	04-DEC-06:10

1					
Heating:EnergyTransfer	304.77	0.00	02-JAN-22:10	250568.17	04-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 1	90.14	0.00	02-JAN-22:10	64483.89	04-DEC-06:10
Cooling:EnergyTransfer	430.34	0.00	01-JAN-00:10	125670.77	10-JUL-16:50
Cooling:EnergyTransfer:Zone:THERMAL ZONE 1	67.45	0.00	01-JAN-00:10	26647.91	10-JUL-16:00
EnergyTransfer:Zone:THERMAL ZONE 2	51.89	0.00	02-JAN-22:10	18249.34	04-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 2	36.23	0.00	02-JAN-22:10	18249.34	04-DEC-06:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 2	15.66	0.00	01-JAN-00:10	6922.14	10-JUL-17:00
EnergyTransfer:Zone:THERMAL ZONE 3	251.90	0.00	02-JAN-22:10	126745.00	04-DEC-06:10
Heating:EnergyTransfer:Zone:THERMAL ZONE 3	166.81	0.00	02-JAN-22:10	126745.00	04-DEC-06:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 3	85.09	0.00	01-JAN-00:10	39635.79	10-JUL-16:50
EnergyTransfer:Zone:THERMAL ZONE 4	273.73	0.00	01-JAN-00:10	52763.92	10-JUL-16:00
Heating:EnergyTransfer:Zone:THERMAL ZONE 4	11.59	0.00	01-JAN-00:10	41089.95	04-DEC-06:10
Cooling:EnergyTransfer:Zone:THERMAL ZONE 4	262.14	0.00	01-JAN-00:10	52763.92	10-JUL-16:00
DistrictHeating:Facility	307.36	0.00	02-JAN-22:10	281293.60	04-DEC-06:10
DistrictHeating:HVAC	307.36	0.00	02-JAN-22:10	281293.60	04-DEC-06:10
Heating:DistrictHeating	307.36	0.00	02-JAN-22:10	281293.60	04-DEC-06:10

Report: **Sensible Heat Gain Summary**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Annual Building Sensible Heat Gain Components

	HVAC Zone Eq & Other Sensible Air Heating [GJ]	HVAC Zone Eq & Other Sensible Air Cooling [GJ]	HVAC Terminal Unit Sensible Air Heating [GJ]	HVAC Terminal Unit Sensible Air Cooling [GJ]	HVAC Input Heated Surface Heating [GJ]	HVAC Input Cooled Surface Cooling [GJ]	People Sensible Heat Addition [GJ]	Lights Sensible Heat Addition [GJ]	Equipment Sensible Heat Addition [GJ]	Window Heat Addition [GJ]	Interzone Air Transfer Heat Addition [GJ]	Infiltration Heat Addition [GJ]	Opaque Surface Conduction and Other Heat Addition [GJ]	Equipmer Sensibl Hea Remova [GJ
THERMAL ZONE 1	90.136	-67.447	0.000	0.000	0.000	0.000	36.694	111.354	117.284	24.823	0.000	3.658	0.011	0.00
THERMAL ZONE 2	36.232	-15.655	0.000	0.000	0.000	0.000	7.468	24.745	23.494	5.656	0.000	0.896	0.000	0.00
THERMAL ZONE 3	166.815	-85.088	0.000	0.000	0.000	0.000	86.769	277.823	24.411	40.873	0.000	6.551	0.005	0.00
THERMAL ZONE 4	11.591	-262.142	0.000	0.000	0.000	0.000	128.063	80.985	491.163	12.643	0.000	8.205	0.001	0.00
Total Facility	304.774	-430.333	0.000	0.000	0.000	0.000	258.993	494.908	656.352	83.996	0.000	19.311	0.017	0.00

Peak Cooling Sensible Heat Gain Components

	Time of Peak {TIMESTAMP}	HVAC Zone Eq & Other Sensible Air Heating [W]	HVAC Zone Eq & Other Sensible Air Cooling [W]	HVAC Terminal Unit Sensible Air Heating [W]	HVAC Terminal Unit Sensible Air Cooling [W]	HVAC Input Heated Surface Heating [W]	HVAC Input Cooled Surface Cooling [W]	People Sensible Heat Addition [W]	Lights Sensible Heat Addition [W]	Equipment Sensible Heat Addition [W]	Window Heat Addition [W]	Interzone Air Transfer Heat Addition [W]	Infiltration Heat Addition [W]	C
THERMAL ZONE 1	10-JUL-16:00	0.00	-26648.16	0.00	0.00	0.00	0.00	3071.95	8631.58	6190.32	8510.21	0.00	4706.10	
THERMAL ZONE 2	13-JUL-06:01	0.00	-21258.30	0.00	0.00	0.00	0.00	65.91	213.13	551.11	0.00	0.00	0.00	
THERMAL	10-JUL-16:50	0.00	-39635.64	0.00	0.00	0.00	0.00	5813.10	21535.36	1288.44	19945.05	0.00	6700.62	

ZONE 3													
THERMAL ZONE 4	13-JUL-06:01	0.00	-127313.73	0.00	0.00	0.00	0.00	1839.63	697.50	11521.69	0.00	0.00	0.00
Total Facility	13-JUL-06:01	0.00	-163112.25	0.00	0.00	0.00	0.00	3834.87	4262.51	15396.70	2875.79	0.00	0.00

Peak Heating Sensible Heat Gain Components

	Time of Peak {TIMESTAMP}	HVAC Zone Eq & Other Sensible Air Heating [W]	HVAC Zone Eq & Other Sensible Air Cooling [W]	HVAC Terminal Unit Sensible Air Heating [W]	HVAC Terminal Unit Sensible Air Cooling [W]	HVAC Input Heated Surface Heating [W]	HVAC Input Cooled Surface Cooling [W]	People Sensible Heat Addition [W]	Lights Sensible Heat Addition [W]	Equipment Sensible Heat Addition [W]	Window Heat Addition [W]	Interzone Air Transfer Heat Addition [W]	Infiltration Heat Addition [W]	C
THERMAL ZONE 1	04-DEC-06:01	494283.32	0.00	0.00	0.00	0.00	0.00	536.69	959.06	2751.26	0.00	0.00	0.00	
THERMAL ZONE 2	04-DEC-06:01	113344.79	0.00	0.00	0.00	0.00	0.00	107.91	213.13	551.11	0.00	0.00	0.00	
THERMAL ZONE 3	04-DEC-06:01	1035102.78	0.00	0.00	0.00	0.00	0.00	2158.14	2392.82	572.64	0.00	0.00	0.00	
THERMAL ZONE 4	04-DEC-06:01	327439.55	0.00	0.00	0.00	0.00	0.00	3407.59	697.50	11521.69	0.00	0.00	0.00	
Total Facility	04-DEC-06:01	1970170.44	0.00	0.00	0.00	0.00	0.00	6210.33	4262.51	15396.70	0.00	0.00	0.00	

Report: **Standard 62.1 Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

System Ventilation Requirements for Cooling

	Sum of Zone Primary Air Flow - Vpz-sum [m3/s]	System Population - Ps	Sum of Zone Population - Pz-sum	Occupant Diversity - D	Uncorrected Outdoor Air Intake Airflow - Vou [m3/s]	System Primary Airflow - Vps [m3/s]	Average Outdoor Air Fraction - Xs	System Ventilation Efficiency - Ev	Outdoor Air Intake Flow - Vot [m3/s]	Percent Outdoor Air - %OA
None										

System Ventilation Requirements for Heating

	Sum of Zone Primary Air Flow - Vpz-sum [m3/s]	System Population - Ps	Sum of Zone Population - Pz-sum	Occupant Diversity - D	Uncorrected Outdoor Air Intake Airflow - Vou [m3/s]	System Primary Airflow - Vps [m3/s]	Average Outdoor Air Fraction - Xs	System Ventilation Efficiency - Ev	Outdoor Air Intake Flow Vot [m3/s]	Percent Outdoor Air - %OA
None										

Zone Ventilation Parameters

	AirLoop Name	People Outdoor Air Rate - Rp [m3/s-person]	Zone Population - Pz	Area Outdoor Air Rate - Ra [m3/s-m2]	Zone Floor Area - Az [m2]	Breathing Zone Outdoor Airflow - Vbz [m3/s]	Cooling Zone Air Distribution Effectiveness - Ez-clg	Cooling Zone Outdoor Airflow - Voz-clg [m3/s]	Heating Zone Air Distribution Effectiveness - Ez-htg	Heating Zone Outdoor Airflow - Voz-htg [m3/s]
None										

System Ventilation Parameters

	People Outdoor Air Rate - Rp [m3/s-person]	Sum of Zone Population - Pz-sum	Area Outdoor Air Rate - Ra [m3/s-m2]	Sum of Zone Floor Area - Az-sum [m2]	Breathing Zone Outdoor Airflow - Vbz [m3/s]	Cooling Zone Outdoor Airflow - Voz-clg [m3/s]	Heating Zone Outdoor Airflow - Voz-htg [m3/s]
None							

Zone Ventilation Calculations for Cooling Design

	AirLoop Name	Box Type	Zone Primary Airflow -	Zone Discharge Airflow - Vdz [m3/s]	Minimum Zone Primary Airflow - Vpz-min [m3/s]	Zone Outdoor Airflow Cooling - Voz-clg [m3/s]	Primary Outdoor Air	Primary Air Fraction - Ep	Secondary Recirculation Fraction- Er	Supply Air Fraction- Fa	Mixed Air Fraction - Fb	Outdoor Air Fraction - Fc	Zone Ventilation Efficiency - Evz

			Vpz [m3/s]				Fraction - Zpz						
None													

System Ventilation Calculations for Cooling Design

	Sum of Zone Primary Airflow - Vpz-sum [m3/s]	System Primary Airflow - Vps [m3/s]	Sum of Zone Discharge Airflow - Vdz-sum [m3/s]	Sum of Min Zone Primary Airflow - Vpz-min [m3/s]	Zone Outdoor Airflow Cooling - Voz-clg [m3/s]	Zone Ventilation Efficiency - Evz-min
None						

Zone Ventilation Calculations for Heating Design

	AirLoop Name	Box Type	Zone Primary Airflow - Vpz [m3/s]	Zone Discharge Airflow - Vdz [m3/s]	Minimum Zone Primary Airflow - Vpz-min [m3/s]	Zone Outdoor Airflow Heating - Voz-htg [m3/s]	Primary Outdoor Air Fraction - Zpz	Primary Air Fraction - Ep	Secondary Recirculation Fraction- Er	Supply Air Fraction- Fa	Mixed Air Fraction - Fb	Outdoor Air Fraction - Fc	Zone Ventilation Efficiency - Evz
None													

System Ventilation Calculations for Heating Design

	Sum of Zone Primary Airflow - Vpz-sum [m3/s]	System Primary Airflow - Vps [m3/s]	Sum of Zone Discharge Airflow - Vdz-sum [m3/s]	Sum of Min Zone Primary Airflow - Vpz-min [m3/s]	Zone Outdoor Airflow Heating - Voz-htg [m3/s]	Zone Ventilation Efficiency - Evz-min
None						

Report: **LEED Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Sec1.1A-General Information

	Data
Weather File	RUN PERIOD 1 ** Piacenza - ITA IGDG WMO#=160840
Total gross floor area [m2]	3600.00
Principal Heating Source	District Heat

EAp2-1. Space Usage Type

	Space Area [m2]	Regularly Occupied Area [m2]	Unconditioned Area [m2]	Typical Hours/Week in Operation [hr/wk]
THERMAL ZONE 1	900.00	900.00	0.00	100.72
THERMAL ZONE 2	200.00	200.00	0.00	100.72
THERMAL ZONE 3	1900.00	1900.00	0.00	100.72
THERMAL ZONE 4	600.00	600.00	0.00	100.72
Totals	3600.00	3600.00	0.00	

EAp2-2. Advisory Messages

	Data
Number of hours heating loads not met	0.00
Number of hours cooling loads not met	0.00
Number of hours not met	0.00

EAp2-3. Energy Type Summary

	Utility Rate	Virtual Rate [$/unit energy]	Units of Energy	Units of Demand
None				

EAp2-4/5. Performance Rating Method Compliance

	Electric Energy Use [GJ]	Electric Demand [W]	Natural Gas Energy Use [GJ]	Natural Gas Demand [W]	Additional Fuel Use [GJ]	Additional Fuel Demand [W]	District Cooling Use [GJ]	District Cooling Demand [W]	District Heating Use [GJ]	District Heating Demand [W]
Heating -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	307.36	281293.60
Cooling -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	574.75	184772.43	0.00	0.00
Interior Lighting -- General	494.91	38362.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exterior Lighting -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interior Equipment -- General	656.35	34642.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exterior Equipment -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fans -- Ventilation (simple)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pumps -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heat Rejection -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Humidification -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heat Recovery -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Systems -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refrigeration -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generators -- Not Subdivided	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

EAp2-6. Energy Use Summary

	Process Subtotal [GJ]	Total Energy Use [GJ]
Electricity	656.35	1151.26
Natural Gas	0.00	0.00
Additional	0.00	882.11
Total	656.35	2033.37

EAp2-7. Energy Cost Summary

	Process Subtotal [$]	Total Energy Cost [$]
Electricity	0.00	
Natural Gas	0.00	
Additional	0.00	
Total	0.00	

Process energy cost based on ratio of process to total energy.

L-1. Renewable Energy Source Summary

	Rated Capacity [kW]	Annual Energy Generated [GJ]
Photovoltaic	0.00	0.00
Wind	0.00	0.00

EAp2-17a. Energy Use Intensity - Electricity

	Electricty [MJ/m2]
Interior Lighting (All)	137.47
Space Heating	0.00
Space Cooling	0.00
Fans (All)	0.00
Service Water Heating	0.00

Receptacle Equipment	182.32
Miscellaneous (All)	319.79
Subtotal	319.79

EAp2-17b. Energy Use Intensity - Natural Gas

	Natural Gas [MJ/m2]
Space Heating	0.00
Service Water Heating	0.00
Miscellaneous (All)	0.00
Subtotal	0.00

EAp2-17c. Energy Use Intensity - Additional

	Additional [MJ/m2]
Subtotal	0.00
Miscellaneous	0.00

EAp2-18. End Use Percentage

	Percent [%]
Interior Lighting (All)	24.34
Space Heating	15.12
Space Cooling	28.27
Fans (All)	0.00
Service Water Heating	0.00
Receptacle Equipment	32.28
Miscellaneous	0.00

Schedules-Equivalent Full Load Hours (Schedule Type=Fraction)

	Equivalent Full Load Hours of Operation Per Year [hr]	Hours > 1% [hr]
OFFICE BLDG LIGHT	3225.	8760.
MEDIUM OFFICE BLDG EQUIP	4737.	8760.
MEDIUM OFFICE BLDG OCC	2834.	5252.
MEDIUM OFFICE INFIL QUARTER ON	5172.	8760.
OFFICE BLDG EQUIP	4737.	8760.
OFFICE INFIL QUARTER ON	5172.	8760.
OFFICE MISC OCC	1508.	5252.
OFFICE WORK OCC	2595.	5252.

Schedules-SetPoints (Schedule Type=Temperature)

	First Object Used	Month Assumed	11am First Wednesday [C]	Days with Same 11am Value	11pm First Wednesday [C]	Days with Same 11pm Value
MEDIUM OFFICE HTGSETP	THERMAL ZONE 1 THERMOSTAT	January	21.00	365	15.60	365
MEDIUM OFFICE CLGSETP	THERMAL ZONE 1 THERMOSTAT	July	24.00	365	26.70	365

Report: **Component Sizing Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

ZoneHVAC:IdealLoadsAirSystem

	User-Specified Maximum Heating Air Flow Rate [m3/s]	User-Specified Maximum Cooling Air Flow Rate [m3/s]
THERMAL ZONE 1 IDEAL LOADS AIR	0.000000	0.000000

SYSTEM		
THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	0.000000	0.000000
THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	0.000000	0.000000
THERMAL ZONE 4 IDEAL LOADS AIR SYSTEM	0.000000	0.000000

User-Specified values were used. Design Size values were used if no User-Specified values were provided.

Report: **Surface Shadowing Summary**

Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Surfaces (Walls, Roofs, etc) that may be Shadowed by Other Surfaces

	Possible Shadow Receivers
SUB SURFACE 11 - OVERHANG	Mir-SUB SURFACE 4 - OVERHANG | SURFACE 76 |
Mir-SUB SURFACE 11 - OVERHANG	SURFACE 76 |
SUB SURFACE 5 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 9 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 3 - OVERHANG | Mir-SUB SURFACE 7 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG | SURFACE 16 | SURFACE 46 | SURFACE 76 |
Mir-SUB SURFACE 5 - OVERHANG	SURFACE 16 |
SUB SURFACE 9 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG | SURFACE 46 | SURFACE 76 |
Mir-SUB SURFACE 9 - OVERHANG	SURFACE 46 |
SUB SURFACE 4 - OVERHANG	SURFACE 68 |
Mir-SUB SURFACE 4 - OVERHANG	SURFACE 68 |
SUB SURFACE 1 - OVERHANG	Mir-SUB SURFACE 4 - OVERHANG | SURFACE 64 |
Mir-SUB SURFACE 1 - OVERHANG	SURFACE 64 |
SUB SURFACE 2 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 9 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 3 - OVERHANG | Mir-SUB SURFACE 7 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG | SURFACE 34 | SURFACE 4 | SURFACE 64 |
Mir-SUB SURFACE 2 - OVERHANG	SURFACE 4 |
SUB SURFACE 3 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 9 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 7 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG | SURFACE 68 | SURFACE 38 | SURFACE 8 |
Mir-SUB SURFACE 3 - OVERHANG	SURFACE 8 |
SUB SURFACE 7 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG | SURFACE 34 | SURFACE 64 |
Mir-SUB SURFACE 7 - OVERHANG	SURFACE 34 |
SUB SURFACE 8 - OVERHANG	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 1 - OVERHANG | SURFACE 68 | SURFACE 38 |
Mir-SUB SURFACE 8 - OVERHANG	SURFACE 38 |
SURFACE 16	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 5 - OVERHANG | Mir-SUB SURFACE 9 - OVERHANG |

SURFACE 46	Mir-SUB SURFACE 11 - OVERHANG | Mir-SUB SURFACE 9 - OVERHANG |
SURFACE 76	Mir-SUB SURFACE 11 - OVERHANG |
SURFACE 68	Mir-SUB SURFACE 4 - OVERHANG |
SURFACE 34	Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 7 - OVERHANG |
SURFACE 38	Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG |
SURFACE 4	Mir-SUB SURFACE 1 - OVERHANG | Mir-SUB SURFACE 2 - OVERHANG | Mir-SUB SURFACE 7 - OVERHANG |
SURFACE 64	Mir-SUB SURFACE 1 - OVERHANG |
SURFACE 8	Mir-SUB SURFACE 4 - OVERHANG | Mir-SUB SURFACE 3 - OVERHANG | Mir-SUB SURFACE 8 - OVERHANG |

Subsurfaces (Windows and Doors) that may be Shadowed by Surfaces

	Possible Shadow Receivers
SURFACE 16	SUB SURFACE 5 |
SURFACE 46	SUB SURFACE 9 |
SURFACE 76	SUB SURFACE 11 |
SURFACE 68	SUB SURFACE 4 |
SURFACE 34	SUB SURFACE 7 |
SURFACE 38	SUB SURFACE 8 |
SURFACE 4	SUB SURFACE 2 |
SURFACE 64	SUB SURFACE 1 |
SURFACE 8	SUB SURFACE 3 |
SURFACE 28	SUB SURFACE 6 |
SURFACE 58	SUB SURFACE 10 |
SURFACE 88	SUB SURFACE 12 |

Report: **Adaptive Comfort Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Time Not Meeting the Adaptive Comfort Models during Occupied Hours

	ASHRAE55 90% Acceptability Limits [Hours]	ASHRAE55 80% Acceptability Limits [Hours]	CEN15251 Category I Acceptability Limits [Hours]	CEN15251 Category II Acceptability Limits [Hours]	CEN15251 Category III Acceptability Limits [Hours]

Report: **Initialization Summary** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Version

	Version ID
1	8.8

Timesteps per Hour

	#TimeSteps	Minutes per TimeStep {minutes}
1	6	10

System Convergence Limits

	Minimum System TimeStep {minutes}	Max HVAC Iterations	Minimum Plant Iterations	Maximum Plant Iterations
1	1	20	2	8

Simulation Control

	Do Zone Sizing	Do System Sizing	Do Plant Sizing	Do Design Days	Do Weather Simulation	Do HVAC Sizing Simulation
1	Yes	No	No	Yes	Yes	No

Output Reporting Tolerances

	Tolerance for Time Heating Setpoint Not Met	Tolerance for Zone Cooling Setpoint Not Met Time
1	0.200	0.200

Site:GroundTemperature:BuildingSurface

	Jan{C}	Feb{C}	Mar{C}	Apr{C}	May{C}	Jun{C}	Jul{C}	Aug{C}	Sep{C}	Oct{C}	Nov{C}	Dec{C}
1	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00

Site:GroundTemperature:FCfactorMethod

	Jan{C}	Feb{C}	Mar{C}	Apr{C}	May{C}	Jun{C}	Jul{C}	Aug{C}	Sep{C}	Oct{C}	Nov{C}	Dec{C}
1	1.79	3.68	7.36	10.85	17.45	20.92	21.88	20.11	16.05	10.98	5.99	2.69

Site:GroundTemperature:Shallow

	Jan{C}	Feb{C}	Mar{C}	Apr{C}	May{C}	Jun{C}	Jul{C}	Aug{C}	Sep{C}	Oct{C}	Nov{C}	Dec{C}
1	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00

Site:GroundTemperature:Deep

	Jan{C}	Feb{C}	Mar{C}	Apr{C}	May{C}	Jun{C}	Jul{C}	Aug{C}	Sep{C}	Oct{C}	Nov{C}	Dec{C}
1	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00

Site:GroundReflectance

	Jan{dimensionless}	Feb{dimensionless}	Mar{dimensionless}	Apr{dimensionless}	May{dimensionless}	Jun{dimensionless}	Jul{dimensionless}	Aug{dim
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	

Site:GroundReflectance:SnowModifier

	Normal	Daylighting {dimensionless}
1	1.000	1.000

Site:GroundReflectance:Snow

	Jan{dimensionless}	Feb{dimensionless}	Mar{dimensionless}	Apr{dimensionless}	May{dimensionless}	Jun{dimensionless}	Jul{dimensionless}	Aug{dim
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	

Site:GroundReflectance:Snow:Daylighting

	Jan{dimensionless}	Feb{dimensionless}	Mar{dimensionless}	Apr{dimensionless}	May{dimensionless}	Jun{dimensionless}	Jul{dimensionless}	Aug{dim
1	0.20	0.20	0.20	0.20	0.20	0.20	0.20	

Environment:Weather Station

	Wind Sensor Height Above Ground {m}	Wind Speed Profile Exponent {}	Wind Speed Profile Boundary Layer Thickness {m}	Air Temperature Sensor Height Above Ground {m}	Wind Speed Modifier Coefficient-Internal	Temperature Modifier Coefficient-Internal
1	10.000	0.140	270.000	1.500	1.586	9.750E-003

Site:Location

	Location Name	Latitude {N+/S-Deg}	Longitude {E+/W-Deg}	Time Zone Number {GMT+/-}	Elevation {m}	Standard Pressure at Elevation {Pa}	Standard RhoAir at Elevation
1	Piacenza - ITA IGDG WMO#=160840	44.92	9.73	1.00	134.00	99726	1.1853

Building Information

	Building Name	North Axis {deg}	Terrain	Loads Convergence Tolerance Value	Temperature Convergence Tolerance Value	Solar Distribution	Maximum Number of Warmup Days	Minimum Number of Warmup Days
1	Building 1	0.000	Suburbs	4.00000E-002	0.40000	FullExterior	25	6

Inside Convection Algorithm

	Algorithm {Simple TARP CeilingDiffuser AdaptiveConvectionAlgorithm}
1	TARP

Outside Convection Algorithm

	Algorithm {SimpleCombined TARP MoWitt DOE-2 AdaptiveConvectionAlgorithm}
1	DOE-2

Sky Radiance Distribution

	Value {Anisotropic}
1	Anisotropic

Zone Air Solution Algorithm

	Value {ThirdOrderBackwardDifference AnalyticalSolution EulerMethod}
1	ThirdOrderBackwardDifference

Zone Air Carbon Dioxide Balance Simulation

	Simulation {Yes/No}	Carbon Dioxide Concentration
1	No	N/A

Zone Air Generic Contaminant Balance Simulation

	Simulation {Yes/No}	Generic Contaminant Concentration
1	No	N/A

Zone Air Mass Flow Balance Simulation

	Enforce Mass Balance	Adjust Zone Mixing	Adjust Zone Infiltration {AddInfiltration AdjustInfiltration None}	Infiltration Zones {MixingSourceZonesOnly AllZones}
1	No	N/A	N/A	N/A

HVACSystemRootFindingAlgorithm

	Value {RegulaFalsi Bisection BisectionThenRegulaFalsi RegulaFalsiThenBisection}
1	RegulaFalsi

Environment:Site Atmospheric Variation

	Wind Speed Profile Exponent {}	Wind Speed Profile Boundary Layer Thickness {m}	Air Temperature Gradient Coefficient {K/m}
1	0.220	370.000	6.500000E-003

Surface Geometry

	Starting Corner	Vertex Input Direction	Coordinate System	Daylight Reference Point Coordinate System	Rectangular (Simple) Surface Coordinate System
1	UpperLeftCorner	Counterclockwise	RelativeCoordinateSystem	RelativeCoordinateSystem	RelativeToZoneOrigin

Surface Heat Transfer Algorithm

	Value {CTF - ConductionTransferFunction EMPD - MoisturePenetrationDepthConductionTransferFunction CondFD - ConductionFiniteDifference HAMT - CombinedHeatAndMoistureFiniteElement} - Description	Inside Surface Max Temperature Limit{C}	Surface Convection Coefficient Lower Limit {W/m2-K}	Surface Convection Coefficient Upper Limit {W/m2-K}
1	CTF - ConductionTransferFunction	200	0.10	1000.0

Shading Summary

	Number of Fixed Detached Shades	Number of Building Detached Shades	Number of Attached Shades
1	0	0	18

Zone Summary

	Number of Zones	Number of Zone Surfaces	Number of SubSurfaces
1	4	86	12

Zone Information

	Zone Name	North Axis {deg}	Origin X-Coordinate {m}	Origin Y-Coordinate {m}	Origin Z-Coordinate {m}	Centroid X-Coordinate {m}	Centroid Y-Coordinate {m}	Centroid Z-Coordinate {m}	Type	Zone Multiplier	Zone List Multiplier	Minimum X {m}	Maximum X {m}	Minimum Y {m}
1	THERMAL ZONE 1	0.0	38.91	30.31	0.00	44.79	40.31	4.50	1	1	1	38.91	48.91	20.31
2	THERMAL ZONE 2	0.0	48.91	20.31	6.00	33.91	24.26	7.50	1	1	1	18.91	48.91	20.31
3	THERMAL ZONE 3	0.0	28.91	20.31	0.00	29.22	36.57	4.19	1	1	1	18.91	48.91	20.31
4	THERMAL ZONE 4	0.0	38.91	50.31	0.00	33.91	56.52	4.50	1	1	1	18.91	48.91	50.31

Zone Internal Gains Nominal

	Zone Name	Floor Area {m2}	# Occupants	Area per Occupant {m2/person}	Occupant per Area {person/m2}	Interior Lighting {W/m2}	Electric Load {W/m2}	Gas Load {W/m2}	Other Load {W/m2}	Hot Water Eq {W/m2}	Steam Equipment {W/m2}	Sum Loads per Area {W/m2}	Outdoor Controlled Baseboard Heat
1	THERMAL ZONE 1	900.00	50.9	17.696	5.651E-002	10.656	7.642	0.000	0.000	0.000	0.000	18.299	No
2	THERMAL ZONE 2	200.00	10.2	19.559	5.113E-002	10.656	6.889	0.000	0.000	0.000	0.000	17.545	No
3	THERMAL ZONE 3	1900.00	204.5	9.290	0.108	12.594	0.753	0.000	0.000	0.000	0.000	13.347	No
4	THERMAL ZONE 4	600.00	322.9	1.858	0.538	11.625	48.007	0.000	0.000	0.000	0.000	59.632	No

People Internal Gains Nominal

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Number of People {}	People/Floor Area {person/m2}	Floor Area per person {m2/person}	Fraction Radiant	Fraction Convected	Sensible Fraction Calculation	Activity level	ASH War

1	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 PEOPLE 1	OFFICE WORK OCC	THERMAL ZONE 1	900.00	50.9	17.0	1.884E-002	53.087	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
2	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 PEOPLE 2	OFFICE WORK OCC	THERMAL ZONE 1	900.00	50.9	17.0	1.884E-002	53.087	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
3	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 PEOPLE 3	OFFICE WORK OCC	THERMAL ZONE 1	900.00	50.9	17.0	1.884E-002	53.087	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
4	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 1	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	32.3	1.700E-002	58.839	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
5	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 2	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	21.5	1.133E-002	88.258	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
6	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 3	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	21.5	1.133E-002	88.258	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
7	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 4	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	32.3	1.700E-002	58.839	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
8	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 5	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	21.5	1.133E-002	88.258	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
9	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 6	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	21.5	1.133E-002	88.258	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
10	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 7	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	32.3	1.700E-002	58.839	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
11	189.1-2009 - OFFICE - LOBBY - CZ1-3 PEOPLE 8	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	21.5	1.133E-002	88.258	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
12	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 PEOPLE 1	OFFICE MISC OCC	THERMAL ZONE 4	600.00	322.9	107.6	0.179	5.574	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
13	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 PEOPLE 2	OFFICE MISC OCC	THERMAL ZONE 4	600.00	322.9	107.6	0.179	5.574	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
14	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 PEOPLE 3	OFFICE MISC OCC	THERMAL ZONE 4	600.00	322.9	107.6	0.179	5.574	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	
15	THERMAL ZONE 2 189.1-2009 - OFFICE - CLOSEDOFFICE - CZ1-3 PEOPLE	OFFICE WORK OCC	THERMAL ZONE 2	200.00	10.2	10.2	5.113E-002	19.559	0.300	0.700	AutoCalculate	OFFICE ACTIVITY	

Lights Internal Gains Nominal

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Lighting Level {W}	Lights/Floor Area {W/m2}	Lights per person {W/person}	Fraction Return Air	Fraction Radiant	Fraction Short Wave	Fraction Convected	Fraction Replaceable
1	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 1	900.00	50.9	3196.881	3.552	62.857	0.000	0.000	0.000	1.000	1.000
2	189.1-2009 - OFFICE -	OFFICE BLDG LIGHT	THERMAL ZONE 1	900.00	50.9	3196.881	3.552	62.857	0.000	0.000	0.000	1.000	1.000

	OPENOFFICE - CZ1-3 LIGHTS 2												
3	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 LIGHTS 3	OFFICE BLDG LIGHT	THERMAL ZONE 1	900.00	50.9	3196.881	3.552	62.857	0.000	0.000	0.000	1.000	1.000
4	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	3778.133	1.988	18.474	0.000	0.000	0.000	1.000	1.000
5	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 2	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	2518.755	1.326	12.316	0.000	0.000	0.000	1.000	1.000
6	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 3	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	2518.755	1.326	12.316	0.000	0.000	0.000	1.000	1.000
7	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 4	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	3778.133	1.988	18.474	0.000	0.000	0.000	1.000	1.000
8	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 5	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	2518.755	1.326	12.316	0.000	0.000	0.000	1.000	1.000
9	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 6	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	2518.755	1.326	12.316	0.000	0.000	0.000	1.000	1.000
10	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 7	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	3778.133	1.988	18.474	0.000	0.000	0.000	1.000	1.000
11	189.1-2009 - OFFICE - LOBBY - CZ1-3 LIGHTS 8	OFFICE BLDG LIGHT	THERMAL ZONE 3	1900.00	204.5	2518.755	1.326	12.316	0.000	0.000	0.000	1.000	1.000
12	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 1	OFFICE BLDG LIGHT	THERMAL ZONE 4	600.00	322.9	2325.005	3.875	7.200	0.000	0.000	0.000	1.000	1.000
13	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 2	OFFICE BLDG LIGHT	THERMAL ZONE 4	600.00	322.9	2325.005	3.875	7.200	0.000	0.000	0.000	1.000	1.000
14	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 LIGHTS 3	OFFICE BLDG LIGHT	THERMAL ZONE 4	600.00	322.9	2325.005	3.875	7.200	0.000	0.000	0.000	1.000	1.000
15	THERMAL ZONE 2 189.1-2009 - OFFICE - CLOSEDOFFICE - CZ1-3 LIGHTS	OFFICE BLDG LIGHT	THERMAL ZONE 2	200.00	10.2	2131.254	10.656	208.421	0.000	0.000	0.000	1.000	1.000

ElectricEquipment Internal Gains Nominal

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Equipment Level {W}	Equipment/Floor Area {W/m2}	Equipment per person {W/person}	Fraction Latent	Fraction Radiant	Fraction Lost	Fraction Convected	End SubCate
1	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 ELECTRIC EQUIPMENT 1	OFFICE BLDG EQUIP	THERMAL ZONE 1	900.00	50.9	2292.713	2.547	45.079	0.000	0.000	0.000	1.000	Ge
2	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 ELECTRIC EQUIPMENT 2	OFFICE BLDG EQUIP	THERMAL ZONE 1	900.00	50.9	2292.713	2.547	45.079	0.000	0.000	0.000	1.000	Ge
3	189.1-2009 - OFFICE -	OFFICE BLDG	THERMAL ZONE 1	900.00	50.9	2292.713	2.547	45.079	0.000	0.000	0.000	1.000	Ge

	OPENOFFICE - CZ1-3 ELECTRIC EQUIPMENT 3	EQUIP											
4	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 1	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	226.042	0.119	1.105	0.000	0.000	0.000	1.000	Ge
5	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 2	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	150.695	7.931E-002	0.737	0.000	0.000	0.000	1.000	Ge
6	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 3	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	150.695	7.931E-002	0.737	0.000	0.000	0.000	1.000	Ge
7	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 4	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	226.042	0.119	1.105	0.000	0.000	0.000	1.000	Ge
8	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 5	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	150.695	7.931E-002	0.737	0.000	0.000	0.000	1.000	Ge
9	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 6	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	150.695	7.931E-002	0.737	0.000	0.000	0.000	1.000	Ge
10	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 7	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	226.042	0.119	1.105	0.000	0.000	0.000	1.000	Ge
11	189.1-2009 - OFFICE - LOBBY - CZ1-3 ELECTRIC EQUIPMENT 8	OFFICE BLDG EQUIP	THERMAL ZONE 3	1900.00	204.5	150.695	7.931E-002	0.737	0.000	0.000	0.000	1.000	Ge
12	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 ELECTRIC EQUIPMENT 1	OFFICE BLDG EQUIP	THERMAL ZONE 4	600.00	322.9	9601.408	16.002	29.733	0.000	0.000	0.000	1.000	Ge
13	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 ELECTRIC EQUIPMENT 2	OFFICE BLDG EQUIP	THERMAL ZONE 4	600.00	322.9	9601.408	16.002	29.733	0.000	0.000	0.000	1.000	Ge
14	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 ELECTRIC EQUIPMENT 3	OFFICE BLDG EQUIP	THERMAL ZONE 4	600.00	322.9	9601.408	16.002	29.733	0.000	0.000	0.000	1.000	Ge
15	THERMAL ZONE 2 189.1-2009 - OFFICE - CLOSEDOFFICE - CZ1-3 ELECTRIC EQUIPMENT	OFFICE BLDG EQUIP	THERMAL ZONE 2	200.00	10.2	1377.781	6.889	134.737	0.000	0.000	0.000	1.000	Ge

Shadowing/Sun Position Calculations Annual Simulations

	Calculation Method	Value {days}	Allowable Number Figures in Shadow Overlap {}	Polygon Clipping Algorithm	Sky Diffuse Modeling Algorithm
1	AverageOverDaysInFrequency	20	15000	SutherlandHodgman	SimpleSkyDiffuseModeling

ZoneInfiltration Airflow Stats Nominal

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Design Volume Flow Rate {m3/s}	Volume Flow Rate/Floor Area {m3/s/m2}	Volume Flow Rate/Exterior Surface Area {m3/s/m2}	ACH - Air Changes per Hour	Equation A - Constant Term Coefficient {}	Equation B - Temperature Term Coefficient {1/C}	Equation C - Velocity Term Coefficient {s/m}	Eq Ve Sc Coef {s
1	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	900.00	50.9	3.627E-002	4.030E-005	5.496E-005	4.836E-002	1.000	0.000	0.000	
2	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 INFILTRATION 2	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	900.00	50.9	3.627E-002	4.030E-005	5.496E-005	4.836E-002	1.000	0.000	0.000	
3	189.1-2009 - OFFICE - OPENOFFICE - CZ1-3 INFILTRATION 3	OFFICE INFIL QUARTER ON	THERMAL ZONE 1	900.00	50.9	0.127	1.411E-004	1.923E-004	0.169	1.000	0.000	0.000	
4	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	3.627E-002	1.909E-005	3.488E-005	2.291E-002	1.000	0.000	0.000	
5	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 2	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	2.720E-002	1.432E-005	2.616E-005	1.718E-002	1.000	0.000	0.000	
6	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 3	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	0.000	0.000	0.000	0.000	1.000	0.000	0.000	
7	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 4	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	3.627E-002	1.909E-005	3.488E-005	2.291E-002	1.000	0.000	0.000	
8	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 5	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	2.720E-002	1.432E-005	2.616E-005	1.718E-002	1.000	0.000	0.000	
9	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 6	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	0.000	0.000	0.000	0.000	1.000	0.000	0.000	
10	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 7	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	0.127	6.682E-005	1.221E-004	8.018E-002	1.000	0.000	0.000	
11	189.1-2009 - OFFICE - LOBBY - CZ1-3 INFILTRATION 8	OFFICE INFIL QUARTER ON	THERMAL ZONE 3	1900.00	204.5	6.045E-002	3.182E-005	5.813E-005	3.818E-002	1.000	0.000	0.000	
12	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 INFILTRATION 1	OFFICE INFIL QUARTER ON	THERMAL ZONE 4	600.00	322.9	2.720E-002	4.534E-005	5.788E-005	5.441E-002	1.000	0.000	0.000	
13	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 INFILTRATION 2	OFFICE INFIL QUARTER ON	THERMAL ZONE 4	600.00	322.9	2.720E-002	4.534E-005	5.788E-005	5.441E-002	1.000	0.000	0.000	

14	189.1-2009 - OFFICE - BREAKROOM - CZ1-3 INFILTRATION 3	OFFICE INFIL QUARTER ON	THERMAL ZONE 4	600.00	322.9	8.766E-002	1.461E-004	1.865E-004	0.175	1.000	0.000	0.000	
15	THERMAL ZONE 2 189.1-2009 - OFFICE - CLOSEDOFFICE - CZ1-3 INFILTRATION	OFFICE INFIL QUARTER ON	THERMAL ZONE 2	200.00	10.2	8.766E-002	4.383E-004	3.023E-004	0.526	1.000	0.000	0.000	

ZoneVentilation Airflow Stats Nominal

	Name	Schedule Name	Zone Name	Zone Floor Area {m2}	# Zone Occupants	Design Volume Flow Rate {m3/s}	Volume Flow Rate/Floor Area {m3/s/m2}	Volume Flow Rate/person Area {m3/s/person}	ACH - Air Changes per Hour	Fan Type {Exhaust;Intake;Natural}	Fan Pressure Rise {Pa}	Fan Efficiency {}
1	THERMAL ZONE 1 VENTILATION PER PERSON	OFFICE WORK OCC	THERMAL ZONE 1	900.00	50.9	0.480	5.334E-004	9.439E-003	0.640	Natural	0.000	1.0
2	THERMAL ZONE 2 VENTILATION PER PERSON	OFFICE WORK OCC	THERMAL ZONE 2	200.00	10.2	9.652E-002	4.826E-004	9.439E-003	0.579	Natural	0.000	1.0
3	THERMAL ZONE 3 VENTILATION PER PERSON	OFFICE MISC OCC	THERMAL ZONE 3	1900.00	204.5	1.448	7.620E-004	7.079E-003	0.914	Natural	0.000	1.0
4	THERMAL ZONE 4 VENTILATION PER PERSON	OFFICE MISC OCC	THERMAL ZONE 4	600.00	322.9	2.286	3.810E-003	7.079E-003	4.572	Natural	0.000	1.0

AirFlow Model

	Simple
1	Simple

RoomAir Model

	Zone Name	Mixing/Mundt/UCSDDV/UCSDCV/UCSDUFI/UCSDUFE/User Defined
1	THERMAL ZONE 1	Mixing/Well-Stirred
2	THERMAL ZONE 2	Mixing/Well-Stirred
3	THERMAL ZONE 3	Mixing/Well-Stirred
4	THERMAL ZONE 4	Mixing/Well-Stirred

AirflowNetwork Model:Control

	No Multizone or Distribution/Multizone with Distribution/Multizone without Distribution/Multizone with Distribution only during Fan Operation
1	NoMultizoneOrDistribution

Zone Volume Capacitance Multiplier

	Sensible Heat Capacity Multiplier	Moisture Capacity Multiplier	Carbon Dioxide Capacity Multiplier	Generic Contaminant Capacity Multiplier
1	1.000	1.000	1.000	1.000

Load Timesteps in Zone Design Calculation Averaging Window

	Value
1	6

Heating Sizing Factor Information

	Sizing Factor ID	Value
1	Global	1.2500
2	Zone THERMAL ZONE 1	1.2500
3	Zone THERMAL ZONE 2	1.2500
4	Zone THERMAL ZONE 3	1.2500
5	Zone THERMAL ZONE 4	1.2500

Cooling Sizing Factor Information

	Sizing Factor ID	Value
1	Global	1.1500
2	Zone THERMAL ZONE 1	1.1500
3	Zone THERMAL ZONE 2	1.1500
4	Zone THERMAL ZONE 3	1.1500
5	Zone THERMAL ZONE 4	1.1500

Zone Sizing Information

	Zone Name	Load Type	Calc Des Load {W}	User Des Load {W}	Calc Des Air Flow Rate {m3/s}	User Des Air Flow Rate {m3/s}	Design Day Name	Date/Time of Peak	Temperature at Peak {C}	Humidity Ratio at Peak {kgWater/kgDryAir}	Floor Area {m2}	# Occupants
1	THERMAL ZONE 1	Cooling	29854.86797	34333.09817	2.46901	2.83936	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:20:00	32.86200	1.33499E-002	900.00000	50.85948
2	THERMAL ZONE 1	Heating	28694.52664	35868.15830	1.24931	1.56163	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	-6.10000	2.28840E-003	900.00000	50.85948
3	THERMAL ZONE 2	Cooling	7960.80197	9154.92227	0.65833	0.75708	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:40:00	32.62400	1.33499E-002	200.00000	10.22571
4	THERMAL ZONE 2	Heating	9486.54934	11858.18668	0.41298	0.51622	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	-6.10000	2.28840E-003	200.00000	10.22571
5	THERMAL ZONE 3	Cooling	59671.11491	68621.78215	4.93586	5.67623	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 16:30:00	31.91000	1.33499E-002	1900.00000	204.51430
6	THERMAL ZONE 3	Heating	45849.26118	57311.57647	1.99626	2.49533	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	-6.10000	2.28840E-003	1900.00000	204.51430
7	THERMAL ZONE 4	Cooling	81714.86853	93972.09881	6.77159	7.78733	PIACENZA ANN CLG .4% CONDNS DB=>MWB	8/21 15:00:00	33.10000	1.33499E-002	600.00000	322.91731
8	THERMAL ZONE 4	Heating	21130.46867	26413.08584	0.91997	2.28600	PIACENZA ANN HTG 99.6% CONDNS DB	1/21 06:00:00	-6.10000	2.28840E-003	600.00000	322.91731

Component Sizing Information

	Component Type	Component Name	Input Field Description	Value
1	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 1 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000

2	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 1 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000
3	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
4	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 2 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000
5	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
6	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 3 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000
7	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 4 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Heating Air Flow Rate [m3/s]	0.00000
8	ZoneHVAC:IdealLoadsAirSystem	THERMAL ZONE 4 IDEAL LOADS AIR SYSTEM	User-Specified Maximum Cooling Air Flow Rate [m3/s]	0.00000

Environment

	Environment Name	Environment Type	Start Date	End Date	Start DayOfWeek	Duration {#days}	Source:Start DayOfWeek	Use Daylight Saving	Use Holidays	Apply Weekend Holiday Rule	Use Rain Values	Use Snow Values
1	PIACENZA ANN CLG .4% CONDNS DB=>MWB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
2	PIACENZA ANN CLG .4% CONDNS DP=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
3	PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
4	PIACENZA ANN CLG .4% CONDNS WB=>MDB	SizingPeriod:DesignDay	08/21	08/21	SummerDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
5	PIACENZA ANN HTG 99.6% CONDNS DB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
6	PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
7	PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	SizingPeriod:DesignDay	01/21	01/21	WinterDesignDay	1	N/A	N/A	N/A	N/A	N/A	N/A
8	RUN PERIOD 1	WeatherFileRunPeriod	01/01	12/31	Sunday	365	Use RunPeriod Specified Day	No	No	No	Yes	Yes

Environment:Daylight Saving

	Daylight Saving Indicator	Source	Start Date	End Date
1	No	SizingPeriod:DesignDay		
2	No	SizingPeriod:DesignDay		
3	No	SizingPeriod:DesignDay		
4	No	SizingPeriod:DesignDay		
5	No	SizingPeriod:DesignDay		
6	No	SizingPeriod:DesignDay		
7	No	SizingPeriod:DesignDay		
8	No	RunPeriod Object		

Environment:WarmupDays

	NumberofWarmupDays
1	6
2	6
3	6
4	6
5	6
6	6
7	6
8	6

Environment:Design Day Data

	Max Dry-Bulb Temp {C}	Temp Range {dC}	Temp Range Ind Type	Hum Ind Value at Max Temp	Hum Ind Type	Pressure {Pa}	Wind Direction {deg CW from N}	Wind Speed {m/s}	Clearness	Rain	Snow
1	33.10	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
2	27.40	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
3	30.30	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
4	30.10	11.90	DefaultMultipliers	99726	90	2.3	0.00	No	No		
5	-6.10	0.00	DefaultMultipliers	99726	250	2.0	0.00	No	No		
6	5.80	0.00	DefaultMultipliers	99726	250	8.9	0.00	No	No		
7	3.50	0.00	DefaultMultipliers	99726	250	2.0	0.00	No	No		

Environment:Design Day Misc

	DayOfYear	ASHRAE A Coeff	ASHRAE B Coeff	ASHRAE C Coeff	Solar Constant-Annual Variation	Eq of Time {minutes}	Solar Declination Angle {deg}	Solar Model
1	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
2	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
3	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
4	233	1106.3	0.2000	0.1216	1.0	-3.33	12.4	ASHRAETau
5	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky
6	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky
7	21	1229.0	0.1415	5.7310E-002	1.0	-11.15	-20.1	ASHRAEClearSky

Tabular Report

	Style	Unit Conversion
1	HTML	None

Warmup Convergence Information

	Zone Name	Environment Type/Name	Average Warmup Temperature Difference {deltaC}	Std Dev Warmup Temperature Difference {deltaC}	Max Temperature Pass/Fail Convergence	Min Temperature Pass/Fail Convergence	Average Warmup Load Difference {W}	Std Dev Warmup Load Difference {W}	Heating Load Pass/Fail Convergence	Cooling Load Pass/Fail Convergence
1	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	3.9635633283E-002	0.2739204511	Pass	Pass	0.5629250950	6.1805276117	Pass	Pass
2	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	3.9296467450E-002	0.2814579382	Pass	Pass	5.0549633618E-002	0.2536081447	Pass	Pass
3	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	4.2984797589E-002	0.2695829840	Pass	Pass	3.4501742571E-002	0.1300829787	Pass	Pass
4	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DB=>MWB	3.7500000010E-002	0.2932418507	Pass	Pass	1.8214020396E-002	7.3703238138E-002	Pass	Pass
5	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	4.1140851550E-002	0.2700100752	Pass	Pass	3.4948477874E-002	8.9805283610E-002	Pass	Pass
6	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	4.0614739115E-002	0.2731370939	Pass	Pass	3.8144140557E-002	0.1088537811	Pass	Pass
7	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG	4.3248028943E-002	0.2709625957	Pass	Pass	8.2259730951E-002	0.2163866563	Pass	Pass

		.4% CONDNS DP=>MDB								
8	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN CLG .4% CONDNS DP=>MDB	3.7605512987E-002	0.2954894913	Pass	Pass	1.5310913332E-002	3.5006388841E-002	Pass	Pass
9	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	4.0168093694E-002	0.2723121615	Pass	Pass	5.0442477970E-002	0.2148394134	Pass	Pass
10	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	3.9859047576E-002	0.2777861692	Pass	Pass	5.8454775646E-002	0.2502306262	Pass	Pass
11	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	4.1572482578E-002	0.2701036074	Pass	Pass	6.9604356465E-002	0.3381806390	Pass	Pass
12	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN CLG .4% CONDNS ENTH=>MDB	3.7500000000E-002	0.2942073565	Pass	Pass	1.7738231343E-002	5.7879898765E-002	Pass	Pass
13	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	4.0209332276E-002	0.2722703728	Pass	Pass	4.9947070194E-002	0.2181549474	Pass	Pass
14	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	3.9897194231E-002	0.2772335107	Pass	Pass	5.9010745062E-002	0.2452069499	Pass	Pass
15	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	4.1650031732E-002	0.2703409858	Pass	Pass	7.3406775970E-002	0.3643847114	Pass	Pass
16	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN CLG .4% CONDNS WB=>MDB	3.7500000000E-002	0.2942673991	Pass	Pass	1.7710389344E-002	5.6841754597E-002	Pass	Pass
17	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	4.3471399320E-014	5.9409902858E-014	Pass	Pass	2.8646478547E-003	2.4264994740E-002	Pass	Pass
18	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	5.9976714953E-014	6.3828797278E-014	Pass	Pass	3.9823430369E-003	3.3890080938E-002	Pass	Pass
19	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	4.5568487255E-014	4.7048926933E-014	Pass	Pass	2.8200452087E-003	2.3883395830E-002	Pass	Pass
20	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN HTG 99.6% CONDNS DB	6.4170890823E-014	5.8858855224E-014	Pass	Pass	2.7586646654E-003	2.3358548768E-002	Pass	Pass
21	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	4.8973171197E-014	5.0271148225E-014	Pass	Pass	2.4460779420E-003	2.0690652324E-002	Pass	Pass
22	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HTG WIND 99.6%	4.7221485981E-014	5.8907466064E-014	Pass	Pass	3.4730207565E-003	2.9488302090E-002	Pass	Pass

		CONDNS WS=>MCDB								
23	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	3.6538673322E-014	3.7121332241E-014	Pass	Pass	2.2933772856E-003	1.9390115207E-002	Pass	Pass
24	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN HTG WIND 99.6% CONDNS WS=>MCDB	4.2287161427E-014	5.7212785711E-014	Pass	Pass	2.3521701544E-003	1.9890635537E-002	Pass	Pass
25	THERMAL ZONE 1	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	2.6250606627E-014	3.1349080745E-014	Pass	Pass	2.6118392571E-003	2.2104236248E-002	Pass	Pass
26	THERMAL ZONE 2	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	5.0502811809E-014	3.9352893369E-014	Pass	Pass	3.7126506923E-003	3.1555587466E-002	Pass	Pass
27	THERMAL ZONE 3	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	2.3314683517E-014	2.2866521929E-014	Pass	Pass	2.5273030546E-003	2.1382909372E-002	Pass	Pass
28	THERMAL ZONE 4	SizingPeriod: PIACENZA ANN HUM_N 99.6% CONDNS DP=>MCDB	4.1250953271E-014	3.2762726022E-014	Pass	Pass	2.4897694473E-003	2.1062857586E-002	Pass	Pass
29	THERMAL ZONE 1	RunPeriod: RUN PERIOD 1	2.5078704545E-014	1.9934606312E-014	Pass	Pass	5.1575081816E-003	6.8828203390E-003	Pass	Pass
30	THERMAL ZONE 2	RunPeriod: RUN PERIOD 1	4.7702582625E-014	3.9835662321E-014	Pass	Pass	3.8500584292E-003	4.9033143068E-003	Pass	Pass
31	THERMAL ZONE 3	RunPeriod: RUN PERIOD 1	2.4338555862E-014	1.8516241911E-014	Pass	Pass	4.5653176391E-003	5.8859701531E-003	Pass	Pass
32	THERMAL ZONE 4	RunPeriod: RUN PERIOD 1	1.7383866722E-002	1.4440803485E-002	Pass	Pass	0.0000000000	0.0000000000	Pass	Pass

Report: **BUILDING ENERGY PERFORMANCE - ELECTRICITY**

Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	INTERIORLIGHTS:ELECTRICITY [J]	EXTERIORLIGHTS:ELECTRICITY []	INTERIOREQUIPMENT:ELECTRICITY [J]	EXTERIOREQUIPMENT:EL
January	0.417078E+11	0.00	0.555667E+11	
February	0.380557E+11	0.00	0.504119E+11	
March	0.432576E+11	0.00	0.566475E+11	
April	0.388997E+11	0.00	0.526221E+11	
May	0.432576E+11	0.00	0.566475E+11	
June	0.415237E+11	0.00	0.545690E+11	
July	0.406336E+11	0.00	0.547006E+11	
August	0.432576E+11	0.00	0.566475E+11	
September	0.404495E+11	0.00	0.537029E+11	
October	0.417078E+11	0.00	0.555667E+11	
November	0.415237E+11	0.00	0.545690E+11	

December	0.406336E+11	0.00	0.547006E+11	
Annual Sum or Average	0.494908E+12	0.00	0.656352E+12	
Minimum of Months	0.380557E+11	0.00	0.504119E+11	
Maximum of Months	0.432576E+11	0.00	0.566475E+11	

Report: **BUILDING ENERGY PERFORMANCE - DISTRICT HEATING** Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	INTERIORLIGHTS:DISTRICTHEATING []	EXTERIORLIGHTS:DISTRICTHEATING []	INTERIOREQUIPMENT:DISTRICTHEATING []	EXTERIOR
January	0.00	0.00	0.00	
February	0.00	0.00	0.00	
March	0.00	0.00	0.00	
April	0.00	0.00	0.00	
May	0.00	0.00	0.00	
June	0.00	0.00	0.00	
July	0.00	0.00	0.00	
August	0.00	0.00	0.00	
September	0.00	0.00	0.00	
October	0.00	0.00	0.00	
November	0.00	0.00	0.00	
December	0.00	0.00	0.00	
Annual Sum or Average	0.00	0.00	0.00	
Minimum of Months	0.00	0.00	0.00	
Maximum of Months	0.00	0.00	0.00	

Report: **BUILDING ENERGY PERFORMANCE - DISTRICT COOLING** Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	INTERIORLIGHTS:DISTRICTCOOLING []	EXTERIORLIGHTS:DISTRICTCOOLING []	INTERIOREQUIPMENT:DISTRICTCOOLING []	EXTERIOI
January	0.00	0.00	0.00	
February	0.00	0.00	0.00	
March	0.00	0.00	0.00	
April	0.00	0.00	0.00	
May	0.00	0.00	0.00	
June	0.00	0.00	0.00	
July	0.00	0.00	0.00	
August	0.00	0.00	0.00	
September	0.00	0.00	0.00	
October	0.00	0.00	0.00	
November	0.00	0.00	0.00	
December	0.00	0.00	0.00	

Annual Sum or Average	0.00	0.00	0.00	
Minimum of Months	0.00	0.00	0.00	
Maximum of Months	0.00	0.00	0.00	

Report: **BUILDING ENERGY PERFORMANCE - ELECTRICITY PEAK DEMAND** Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	ELECTRICITY:FACILITY {Maximum}[W]	ELECTRICITY:FACILITY {TIMESTAMP}	INTERIORLIGHTS:ELECTRICITY {AT MAX/MIN} [W]	EXTERIORLIGHTS:ELECTRICITY []	INTERIOREQU
January	73005.15	02-JAN-08:09	38362.58	0.00	
February	73005.15	01-FEB-08:09	38362.58	0.00	
March	73005.15	01-MAR-08:09	38362.58	0.00	
April	73005.15	03-APR-08:09	38362.58	0.00	
May	73005.15	01-MAY-08:09	38362.58	0.00	
June	73005.15	01-JUN-08:09	38362.58	0.00	
July	73005.15	03-JUL-08:09	38362.58	0.00	
August	73005.15	01-AUG-08:09	38362.58	0.00	
September	73005.15	01-SEP-08:09	38362.58	0.00	
October	73005.15	02-OCT-08:09	38362.58	0.00	
November	73005.15	01-NOV-08:09	38362.58	0.00	
December	73005.15	01-DEC-08:09	38362.58	0.00	
Annual Sum or Average				0.00	
Minimum of Months	73005.15		38362.58	0.00	
Maximum of Months	73005.15		38362.58	0.00	

Report: **BUILDING ENERGY PERFORMANCE - DISTRICT HEATING PEAK DEMAND** Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	DISTRICTHEATING:FACILITY {Maximum}[W]	DISTRICTHEATING:FACILITY {TIMESTAMP}	INTERIORLIGHTS:DISTRICTHEATING []	EXTERIORLIGHTS:DISTRICTHEA
January	250604.77	14-JAN-06:10	0.00	
February	242322.27	25-FEB-06:10	0.00	
March	249531.95	11-MAR-06:10	0.00	
April	213820.90	06-APR-06:10	0.00	
May	175472.55	13-MAY-06:10	0.00	
June	109240.35	10-JUN-06:10	0.00	
July	64825.65	01-JUL-06:10	0.00	
August	67477.63	25-AUG-06:10	0.00	
September	184108.64	18-SEP-06:10	0.00	
October	196979.03	21-OCT-06:10	0.00	
November	226712.23	20-NOV-06:10	0.00	
December	281293.60	04-DEC-06:10	0.00	

Annual Sum or Average			0.00	
Minimum of Months	64825.65		0.00	
Maximum of Months	281293.60		0.00	

Report: **BUILDING ENERGY PERFORMANCE - DISTRICT COOLING PEAK DEMAND** Table of Contents

For: **Meter**

Timestamp: **2018-01-18 21:45:50**

Custom Monthly Report

	DISTRICTCOOLING:FACILITY {Maximum}[W]	DISTRICTCOOLING:FACILITY {TIMESTAMP}	INTERIORLIGHTS:DISTRICTCOOLING []	EXTERIORLIGHTS:DISTRICTCC
January	13156.46	30-JAN-15:00	0.00	
February	37583.78	21-FEB-15:00	0.00	
March	55950.56	28-MAR-16:00	0.00	
April	95963.83	24-APR-16:00	0.00	
May	118615.38	25-MAY-14:00	0.00	
June	140437.42	23-JUN-16:00	0.00	
July	184772.43	12-JUL-16:00	0.00	
August	158704.73	02-AUG-15:00	0.00	
September	146800.48	08-SEP-16:10	0.00	
October	102786.55	03-OCT-15:00	0.00	
November	42960.04	03-NOV-11:00	0.00	
December	23751.78	19-DEC-13:09	0.00	
Annual Sum or Average			0.00	
Minimum of Months	13156.46		0.00	
Maximum of Months	184772.43		0.00	

Report: **Life-Cycle Cost Report** Table of Contents

For: **Entire Facility**

Timestamp: **2018-01-18 21:45:50**

Life-Cycle Cost Parameters

	Value
Name	{8F41246E-2B12-4679-ADC9-D64D21E83531}
Discounting Convention	EndOfYear
Inflation Approach	ConstantDollar
Real Discount Rate	0.0300
Nominal Discount Rate	-- N/A --
Inflation	-- N/A --
Base Date	January 2011
Service Date	January 2011
Length of Study Period in Years	25
Tax rate	0.0000
Depreciation Method	None

Use Price Escalation

	U.S. AVG COMMERCIAL-	U.S. AVG COMMERCIAL-	U.S. AVG COMMERCIAL-	U.S. AVG COMMERCIAL-	U.S. AVG

	ELECTRICITY	DISTILLATE OIL	RESIDUAL OIL	NATURAL GAS	COMMERCIAL-COAL
Resource	Electricity	FuelOil#1	FuelOil#2	Gas	Coal
Start Date	January 2011	January 2011	January 2011	January 2011	January 2011
1	0.983800	0.971400	0.846900	0.982300	0.997000
2	0.973000	0.973000	0.825700	0.955700	1.008900
3	0.963200	0.994200	0.868100	0.927900	1.008900
4	0.961100	1.016400	0.898800	0.925700	0.994100
5	0.957100	1.054100	0.928900	0.934600	0.994100
6	0.955300	1.092800	0.960400	0.941200	1.000000
7	0.953900	1.126700	0.989700	0.951200	1.003000
8	0.952100	1.158000	1.007500	0.964500	1.005900
9	0.954600	1.179200	1.031400	0.985600	1.008900
10	0.955000	1.196700	1.055400	1.006700	1.011900
11	0.955300	1.220000	1.086100	1.022200	1.014800
12	0.956400	1.233300	1.127800	1.041000	1.017800
13	0.957500	1.256600	1.149700	1.061000	1.020800
14	0.959600	1.270900	1.162000	1.078700	1.026700
15	0.961800	1.282600	1.174300	1.094200	1.029700
16	0.961400	1.298500	1.185200	1.109800	1.035600
17	0.961800	1.310200	1.194800	1.122000	1.041500
18	0.961800	1.325000	1.203700	1.130800	1.053400
19	0.959300	1.326100	1.207100	1.138600	1.056400
20	0.958900	1.328200	1.211900	1.148600	1.059300
21	0.960700	1.332400	1.213900	1.161900	1.065300
22	0.962500	1.335600	1.219400	1.176300	1.071200
23	0.965000	1.343100	1.227600	1.191800	1.074200
24	0.970800	1.351000	1.236500	1.211800	1.080100
25	0.975100	1.356800	1.242000	1.228400	1.083100

Cash Flow for Recurring and Nonrecurring Costs (Without Escalation)

	DEFAULT COST
	Nonrecurring
January 2011	0.00
January 2012	0.00
January 2013	0.00
January 2014	0.00
January 2015	0.00
January 2016	0.00
January 2017	0.00
January 2018	0.00
January 2019	0.00
January 2020	0.00
January 2021	0.00
January 2022	0.00
January 2023	0.00
January 2024	0.00
January 2025	0.00
January 2026	0.00
January 2027	0.00
January 2028	0.00
January 2029	0.00
January 2030	0.00
January 2031	0.00
January 2032	0.00

January 2033	0.00
January 2034	0.00
January 2035	0.00

Energy and Water Cost Cash Flows (Without Escalation)

January 2011	
January 2012	
January 2013	
January 2014	
January 2015	
January 2016	
January 2017	
January 2018	
January 2019	
January 2020	
January 2021	
January 2022	
January 2023	
January 2024	
January 2025	
January 2026	
January 2027	
January 2028	
January 2029	
January 2030	
January 2031	
January 2032	
January 2033	
January 2034	
January 2035	

Capital Cash Flow by Category (Without Escalation)

	Construction	Salvage	OtherCapital	Total
January 2011	0.00	0.00	0.00	0.00
January 2012	0.00	0.00	0.00	0.00
January 2013	0.00	0.00	0.00	0.00
January 2014	0.00	0.00	0.00	0.00
January 2015	0.00	0.00	0.00	0.00
January 2016	0.00	0.00	0.00	0.00
January 2017	0.00	0.00	0.00	0.00
January 2018	0.00	0.00	0.00	0.00
January 2019	0.00	0.00	0.00	0.00
January 2020	0.00	0.00	0.00	0.00
January 2021	0.00	0.00	0.00	0.00
January 2022	0.00	0.00	0.00	0.00
January 2023	0.00	0.00	0.00	0.00
January 2024	0.00	0.00	0.00	0.00
January 2025	0.00	0.00	0.00	0.00
January 2026	0.00	0.00	0.00	0.00
January 2027	0.00	0.00	0.00	0.00
January 2028	0.00	0.00	0.00	0.00
January 2029	0.00	0.00	0.00	0.00
January 2030	0.00	0.00	0.00	0.00
January 2031	0.00	0.00	0.00	0.00

January 2032	0.00	0.00	0.00	0.00
January 2033	0.00	0.00	0.00	0.00
January 2034	0.00	0.00	0.00	0.00
January 2035	0.00	0.00	0.00	0.00

Operating Cash Flow by Category (Without Escalation)

	Energy	Water	Maintenance	Repair	Operation	Replacement	MinorOverhaul	MajorOverhaul	OtherOperational	Total
January 2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2028	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2033	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
January 2035	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monthly Total Cash Flow (Without Escalation)

	January	February	March	April	May	June	July	August	September	October	November	December
2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2031	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2032	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2033	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Present Value for Recurring, Nonrecurring and Energy Costs (Before Tax)

	Category	Kind	Cost	Present Value	Present Value Factor
DEFAULT COST	Construction	Nonrecurring	0.00	0.00	-
TOTAL				0.00	

Present Value by Category

	Present Value
Construction	0.00
Salvage	0.00
Other Capital	0.00
Energy	0.00
Water	0.00
Maintenance	0.00
Repair	0.00
Operation	0.00
Replacement	0.00
Minor Overhaul	0.00
Major Overhaul	0.00
Other Operational	0.00
Total Energy	0.00
Total Operation	0.00
Total Capital	0.00
Grand Total	0.00

Present Value by Year

	Total Cost	Present Value of Costs
January 2011	0.00	0.00
January 2012	0.00	0.00
January 2013	0.00	0.00
January 2014	0.00	0.00
January 2015	0.00	0.00
January 2016	0.00	0.00
January 2017	0.00	0.00
January 2018	0.00	0.00
January 2019	0.00	0.00
January 2020	0.00	0.00
January 2021	0.00	0.00
January 2022	0.00	0.00
January 2023	0.00	0.00
January 2024	0.00	0.00
January 2025	0.00	0.00
January 2026	0.00	0.00
January 2027	0.00	0.00
January 2028	0.00	0.00
January 2029	0.00	0.00
January 2030	0.00	0.00
January 2031	0.00	0.00
January 2032	0.00	0.00

January 2033	0.00	0.00
January 2034	0.00	0.00
January 2035	0.00	0.00
TOTAL		0.00