

EmPower TN Facility Assessment

SITE DATA

Rev 060415

IMPORTANT! Instructions regarding completion of Facility Assessment are contained in the EmPower TN Application Manual.

Building Name	Address		Building Gross Square Footage (ft ²)	Year Built	Date of last renovation	Building use Type	# of Floors	Parking Garage (Y/N)	Onsite Cooking (Y/N)	Operational Hours		Total # of Occupants	Total # of Visitors
										# of Days per week	# of Hours per day		
	Zip Code												

ORGANIZATIONAL INFORMATION

Agency Name		Contact Name		Position	
		Contact Email		Phone Number	

Please check all that apply

- Will building/facility life expectancy meet the minimum 20 year criteria? (Check if Yes)
- This building is owned.
- The organization receives monthly bills based on meter readings.
- Meters are read regularly by on-site staff.
- Bills are compared to monthly meter readings on a regular basis.
- Building Automated System or Energy Management Control System used to track utility data regularly.
- The building is sub-metered.
- The building has automated 15-minute interval or SMART meters.

MULTI-STORY BUILDING DATA

Floor Name or Number	Floor Activity Use Type	Gross Floor Square Footage (ft2)	Number of Occupants	Operational Hours	
				# of Days per week	# of Hours per day

Please select what is currently installed or implemented at your facility:

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Energy Management System | <input type="checkbox"/> HVAC High Efficiency | <input type="checkbox"/> DHW High Efficiency Upgrades | <input type="checkbox"/> Solar PV |
| <input type="checkbox"/> Building Automation | <input type="checkbox"/> HVAC Controls | <input type="checkbox"/> Tankless Water Heaters | <input type="checkbox"/> Micro-Hydro |
| <input type="checkbox"/> Retrocommissioning | <input type="checkbox"/> Ground Source Heat Pumps | <input type="checkbox"/> Solar Hot Water | <input type="checkbox"/> Segregated Recycling |
| <input type="checkbox"/> Fuel Switching | <input type="checkbox"/> Boiler Efficiency Upgrades | <input type="checkbox"/> Gray-Water System | <input type="checkbox"/> Co-Mingled Recycling |
| <input type="checkbox"/> Energy Star Equipment | <input type="checkbox"/> Modular Boilers | <input type="checkbox"/> Low-Flush Toilets | <input type="checkbox"/> Composting |
| <input type="checkbox"/> Smart/Advanced Metering | <input type="checkbox"/> Stem Trap Maintenance | <input type="checkbox"/> Low-Flow Faucets | <input type="checkbox"/> Anaerobic Digestion |
| <input type="checkbox"/> LED Lighting | <input type="checkbox"/> VSD/VFD | <input type="checkbox"/> Waterless Urinals | <input type="checkbox"/> Sustainable Procurement |
| <input type="checkbox"/> LED Exit Signs | <input type="checkbox"/> Economizers | <input type="checkbox"/> Low-E Windows | <input type="checkbox"/> Rain Water Harvesting |
| <input type="checkbox"/> Occupancy Sensors | <input type="checkbox"/> Pumps - High Efficiency | <input type="checkbox"/> Window Film | <input type="checkbox"/> Porous Pavement |
| <input type="checkbox"/> Lighting Controls System | <input type="checkbox"/> Motors - High Efficiency | <input type="checkbox"/> Double Pane Windows | |
| <input type="checkbox"/> Lighting Timers | <input type="checkbox"/> Underfloor Heating | <input type="checkbox"/> Triple Pane Windows | |
| <input type="checkbox"/> Daylight Sensors | <input type="checkbox"/> Building Insulation Upgrades | <input type="checkbox"/> External Shading | |
| <input type="checkbox"/> Photo Cells | <input type="checkbox"/> Green/Living Roof | <input type="checkbox"/> Wind Turbines | |

Capital Improvement Projects Planned		
Check <input type="checkbox"/>	Planned Project Description	Start Date
	<input type="text"/>	<input type="text"/>
Check <input type="checkbox"/>	Planned Project Description	Start Date
	<input type="text"/>	<input type="text"/>
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	<input type="text"/>	<input type="text"/>
Check <input type="checkbox"/>	Planned Project Description	Start Date
	<input type="text"/>	<input type="text"/>

PLUG LOADS		
Equipment Type	Total Number	Y / N
Vending Machine		<input type="checkbox"/> Are vending machines lit?
Desktop Computers		<input type="checkbox"/> Do vending machines have vending miser?
Laptop Computers		<input type="checkbox"/> Are computer management systems enabled?
Printers		<input type="checkbox"/> Are centralized printers in use?
Computer Screens (Flat)		
Computer Screens (CRT)		
Full Size Refrigerators		
Mini Refrigerators		

WINDOWS / DOORS				
Building Element	Condition	Construction Material	# Single Pane	# Dual Pane
Windows				
Doors				
Rollup Door				

WALLS / FLOORS				
Building Element	Condition	Construction Material	Insulated	R-Value
Exterior Walls				
Floor				
Attic				
Crawlspace				

ROOF			
Type	Style	Color	Roof pitch faces

A. ENERGY CONSERVATION MEASURES (ECM) SURVEY CHECKLIST

Select	Yes, No, or N/A
	A1. Has the need to become more efficient in the use of energy and water been endorsed by management?
	A2. Has a Strategic Energy Management Plan been created and communicated to staff?
	A3. Is there a staff position that is responsible for utilities management?
	A4. Does the Strategic Energy Management Plan include efficiency guidelines for new construction and rehabilitation?
	A5. Has management set energy efficiency goals?
	A6. If a school, is energy and water conservation included in student curriculums and classroom projects?
	A7. Does your financial resource investment policy include criteria for financing energy upgrade projects?
	A8. Is energy and water usage and cost data tracked monthly and distributed to all users?
	A9. Are energy and water costs and program performance included in monthly facility operations reviews?
	A10. Are measures taken to discover billing errors and recover incorrect charges?
	A11. Have you considered using an energy expert to conduct an energy assessment?
	A12. Have measures been taken to benchmark current energy and water usage to track future energy and water efficiency performance?
	A13. Are off-hour meetings scheduled in locations that do not require lighting and HVAC in the entire facility?
	A14. Is housekeeping scheduled and organized to minimize the use of lighting and HVAC?
	A15. If a school, is summer vacation maintenance activity managed to avoid the inefficient use of lighting and HVAC?

B. Building Envelope

Select	Yes, No, or N/A
	B1. Are overhangs present on east and west facing windows?
	B2. Is weather stripping on windows and doors present and maintained?
	B3. Is building envelope in good general condition?
	B4. Are interior shades present and adjusted to allow daylight and reject solar heat gain?
	B5. Are windows kept closed in conditioned spaces?

C. Lighting and Electrical Systems

Select	Yes, No, or N/A
	C1. Can lighting be controlled in perimeter rooms to make use of day light?
	C2. Are all exit lights converted to LED or photoluminescent type?
	C3. Do exterior lights turn off during daylight hours?
	C4. Have space heaters been eliminated?
	C5. Have beverage and snack machine lights been removed?
	C6. Are procedures in place to purchase the most energy efficient equipment?
	C7. Is LED task lighting used to minimize background lighting?
	C8. Has High-Bay T-5 or LED lighting been evaluated for use in high ceiling areas (warehouses, gyms, auditoriums, etc.)?
	C9. Have energy conservation decals been placed on light switches?

D. HVAC Systems

Select	Yes, No, or N/A
	D1. Is a building automation system present to manage operation of all HVAC systems and miscellaneous equipment?
	D2. Are exhaust fans switched off for unoccupied periods?
	D3. Are recommended thermostat set-points (69 heating, 74 cooling) maintained?
	D4. Are thermostats routinely calibrated?
	D5. Are thermostats tamper-proof?
	D6. Are air conditioning or heating controls set back when facility is not occupied?
	D7. Have programmable thermostats been utilized for automatically controlling set points and unoccupied set points?
	D8. Are outdoor air dampers controlled to close during unoccupied periods?
	D9. Do outdoor air dampers modulate in economizer mode when the ambient temperature is below 65F?
	D10. Have the HVAC systems been tested and balanced within the past two years?
	D11. Has direct conditioning of unoccupied areas (corridors, stairwells, storage rooms, exhausted toilet rooms) been minimized?
	D12. Has the introduction of outdoor air been minimized to the ASHRAE Standard 62-2007 recommended ventilation rates?
	D13. Are coils and heat exchanger surfaces regularly cleaned?
	D14. Are air filters replaced on a regular basis to ensure good airflow?
	D15. Are all valves in good condition and not leaking?
	D16. Are all steam, condensate and hot water pipes insulated?
	D17. Is a steam trap inspection / maintenance program in place?
	D18. If a boiler is present, is the burner turned on an annual basis?
	D19. Is the most cost-effective fuel used?
	D20. Has the cooling tower been metered to enable a sewer-charge credit?

E. Domestic Water Systems

Select	Yes, No, or N/A
	E1. Have flush valves on urinals and water closets been adjusted for the lowest / shortest practical flow?
	E2. Are hot water storage tanks, heaters, heat exchangers, and piping well insulated?

F. Compressed Air Systems

Select	Yes, No, or N/A
	F1. Is the compressed air system regularly inspected for leaks?
	F2. Is cool air provided to the compressor?
	F3. Has the compressor discharge pressure been minimized?
	F4. Is system turned off when not in use?
	F5. Is heat from compressor cooling system deflected to avoid intake in adjacent equipment?

G. Electric Motors

Select	Yes, No, or N/A
	G1. Are PREMIUM efficiency motors regularly purchased?
	G2. Is an efficient rewind policy in effect?
	G3. Are cog belts utilized?
	G4. Are VFD's used to control fan and pump motors?
	G5. Is idling of motor-driven equipment avoided when no foreseeable use is scheduled?

H. Miscellaneous Equipment

Select	Yes, No, or N/A
	H1. Have electric-heated defrost cycles on refrigerated devices been minimized and scheduled for off-peak periods (night)?
	H2. Are demand-limiting controls present on equipment that may be switched off during peak demand periods?
	H3. Are fire pumps tested only during off-peak periods?

I. Maintenance

Select	Yes, No, or N/A
	I1. Does the facility have a work order system?
	I2. What type of work order system (check one)
	<input type="checkbox"/> Manual <input type="checkbox"/> Computer-based Brand <input type="text"/>
	I3. Can the system generate reports?
	I4. Can the system schedule routine / preventive maintenance?
	I5. What are the top five maintenance issues in the facility?
	I5.1
	I5.2
	I5.3
	I5.4
	I5.5

J. Electricity Billing / Use

Select	Yes, No, or N/A
	J1. Has the utility been requested to do a rate review in the last three years?
	J2. Have operating hours or equipment changed significantly in the last three years? If yes, please provide details in the comment box below.
	J3. Are steps being taken to reduce peak demand?

Please specify where you feel there is room for improvement either in efficiency measures or renewable energy technologies:

Please check off the information that is being provided for review by the EmPower TN task force:

- Copy of utility bills
- Copies of previous energy audit reports
- Copies of action plans or capital improvement plans
- Copies of any Measurement and Verification (M&V) plans
- Copies of an Operations and Maintenance (O&M) contract (if outsourced)
- Copies of nameplates from HVAC, chiller equipment, pumps and motors