# Energy Management Self-Assessment Tool for Water and Wastewater Utilities

Energy Efficiency for Water and Sewage Facilities Conference, April 2012 Version

Developed by Madeline Snow, UMass Lowell, EMS Service Program, in partnership with the Global Environment & Technology Foundation.   Funded by the U.S. EPA's Office of Wastewater.   Modified by PA DEP April 2012.

| Utility NAME: | | Date Completed: | | | | | | Completed by: | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Topic          (Presenter)** | **Q. No.** | **QUESTIONS** | **RANGE** | | | | | | | **SCORE** |
| (Jim Kern presenting)<br><br>**Energy Policy** | **1** | **Does your utility have an energy management policy?** | **1**<br>**No or Don't know** | **2** | **3**<br>**In Process** | **4** | **5**<br>**Yes** | | | |
| | 2 | How would you describe utility personnel's awareness of the policy? | 1<br>Low or N/A | 2 | 3<br>Medium or N/A | 4 | 5<br>High | | | |
| | 3 | How would you describe the commitment and 'buy-in' of senior management to implement the energy policy? | 1<br>Low or N/A | 2 | 3<br>Medium | 4 | 5<br>High | | | |
| | | | | | | | **Total Score for Energy Policy--Topic #1** | | | 0 |
| (Jim Kern presenting)<br><br>**Adoption of Plan-Do-Check-Act,**<br>**Management Systems** | **4** | **How would you describe your utility's familiarity with the Plan-Do-Check-Act approach?** | **1**<br>**Not familiar** | **2** | **3**<br>**Somewhat familiar** | **4** | **5**<br>**Very familiar** | | | |
| | 5 | How would you describe your utility's familiarity with EPA's Energy Management Guide?<br>*http://www.epa.gov/owm/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf* | 1<br>Not familiar | 2 | 3<br>We are using portions | 4 | 5<br>We are following guide | | | |
| | 6 | How would your describe your utility's adoption of the Plan-Do-Check-Act framework in improving energy management? | 1<br>Low | 2 | 3<br>Medium | 4 | 5<br>High | | | |
| | | | | | | | **Total Score for PDCA/Management Systems--Topic #2** | | | 0 |
| (Emily Linn, Don Hanna presenting)<br>**Bench-marking/ Tracking Energy Use** | **7** | **Does your utility review its energy bills?** | **1**<br>**No or Don't know** | **2** | **3**<br>**Annually** | **4** | **5**<br>**Monthly** | | | |
| | 8 | Does your utility track energy use and costs?<br>[If so, do you use Portfolio Manager?  Yes____ No___] | 1<br>No or Don't know | 2 | 3<br>Partial or N/A | 4 | 5<br>Yes | | | |
| | **9** | **Do you have an assigned energy manager to track your utility's energy use?** | **1**<br>**No or Don't know** | **2** | **3**<br>**Yes** | **4** | **5**<br>**Yes & Person reports status** | | | |
| | | | | | | | **Total Score for Energy Benchmarking/Tracking--Topic #3** | | | 0 |
| (Tom Devine presenting)<br><br>**Energy Audit** | **10** | **Has an energy audit ever been done for your utility?** | **1**<br>**No or Can't find** | **2** | **3**<br>**>3 yrs ago** | **4** | **5**<br>**<1 yr ago** | | | |
| | 11 | Have priorities been set for the recommendations from the audit? | 1<br>No or Don't know | 2 | 3<br>In process or N/A | 4 | 5<br>Yes & documented | | | |
| | 12 | Are you implementing any of the recommendations from the audit? | 1<br>No or Don't know | 2 | 3<br>Some | 4 | 5<br>Most | | | |
| | | | | | | | **Total Score for Energy Audit--Topic #4** | | | 0 |
| **Energy Goals** | **13** | **Does your utility have quantitative energy management improvement goals?** | **1**<br>**No or Don't know** | **2** | **3**<br>**Yes,**<br>**General** | **4** | **5**<br>**Yes, with dates & #s (e.g., Reduce energy use by __% by __date)** | | | |
| | 14 | How would you describe utility personnel's awareness of the energy improvement goals? | 1<br>Low or N/A | 2 | 3<br>Medium | 4 | 5<br>High | | | |
| | 15 | Is progress in meeting the goals reviewed with senior management? | 1<br>No or N/A | 2 | 3<br>Sometimes | 4 | 5<br>Regularly | | | |
| | | | | | | | **Total Score for Energy Goals--Topic** | | | 0 |

| Topic (Presenter) | Q. No. | QUESTIONS | RANGE | | | | | SCORE |
|---|---|---|---|---|---|---|---|---|
| **Energy Management Action Plans** | 16 | Does your utility have energy management action plans? | 1<br>No or Don't know | 2 | 3<br>In Process | 4 | 5<br>Yes | |
| | 17 | Are the action plans being implemented? | 1<br>No or Don't know | 2 | 3<br>Yes | 4 | 5<br>Yes & status documented | |
| | 18 | How often are action plans reviewed for status and potential need for adjustments? | 1<br>No or N/A | 2 | 3<br>Sometimes | 4 | 5<br>Regularly | |
| | | **Total Score for Energy Management Action Plans--Topic #6** | | | | | | 0 |
| **Training & Awareness** | 19 | **How would you describe your utility personnel's awareness of energy management issues?** | **1**<br>**Low** | **2** | **3**<br>**Medium** | **4** | **5**<br>**High** | |
| | 20 | Does your utility have training programs or activities to increase awareness of energy management? | 1<br>No or Don't know | 2 | 3<br>In Process | 4 | 5<br>Yes | |
| | 21 | Does your utility have a process to receive energy management suggestions from utility personnel, customers, and community? | 1<br>No or Don't know | 2 | 3<br>Somewhat | 4 | 5<br>Yes | |
| | | **Total Score for Training & Awareness--Topic #7** | | | | | | 0 |
| **SOPs/ Operational Controls** | 22 | **Does your utility have written SOPs and "operational controls" (e.g., work instructions, signage, records, logs) to support energy management?** | **1**<br>**No or Don't know** | **2** | **3**<br>**In Process** | **4** | **5**<br>**Yes** | |
| | 23 | Is anyone assigned the responsibility to ensure that SOPs and operational controls are current and effective? | 1<br>No or Don't know | 2 | 3<br>Yes | 4 | 5<br>Yes & Person reports status | |
| | 24 | How often are operational controls reviewed for status and potential need for adjustments? | 1<br>No or Don't know | 2 | 3<br>Sometimes | 4 | 5<br>Regularly | |
| | | **Total Score for Operational Controls--Topic #8** | | | | | | 0 |
| **Measurement** | 25 | **Does your utility monitor and measure energy use by type of equipment and/or process?** | **1**<br>**No or N/A** | **2** | **3**<br>**By process** | **4** | **5**<br>**By equipment** | |
| | 26 | Is anyone assigned the responsibility to monitor and measure energy use? | 1<br>No or Don't know | 2 | 3<br>Yes | 4 | 5<br>Yes & Person reports status | |
| | 27 | Does your utility communicate energy use and efforts to improve efficiency? | 1<br>No or Don't know | 2 | 3<br>Yes | 4 | 5<br>Yes, wide external communication | |
| | | **Total Score for Measurement--Topic #9** | | | | | | 0 |
| **Renewable Sources of Energy** | 28 | Does your utility currently use any renewable sources of energy? | 1<br>No or Don't know | 2<br>10% | 3<br>15% | 4<br>25% | 5<br>>25% | |
| | 29 | Has your utility done any feasibility studies/analyses on the potential use of renewables? | 1<br>No or Don't know | 2 | 3<br>In Process | 4 | 5<br>Yes | |
| | 30 | Does your utility have plans to use renewable sources of energy within the next 3 years? | 1<br>No or Don't know | 2 | 3<br>May be | 4 | 5<br>Yes | |
| | | **Total Score for Renewables--Topic #10** | | | | | | 0 |

## Energy Management Self-Assessment Tool

| Assessment for: | Date: |
|---|---|
| | |

| Topic # | TOPIC | SCORE |
|---|---|---|
| 1 | Energy Policy | 0 |
| 2 | Adoption of Plan-Do-Check-Act, Management Systems | 0 |
| 3 | Bench-marking/ Tracking  Energy Use | 0 |
| 4 | Energy Audit | 0 |
| 5 | Energy Goals | 0 |
| 6 | Energy Management Action Plans | 0 |
| 7 | Training & Awareness | 0 |
| 8 | SOPs/Operational Controls | 0 |
| 9 | Measurement | 0 |
| 10 | Renewable Sources of Energy | 0 |

**Action Plan for Next 6-9 Months**

1 
2 
3 
4 
5