

WI Office of Energy Innovation: Have We Got A Deal for you!

Wisconsin Academy of Science Arts and Letters Workshop:

Clean Energy Mobilization

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Wisconsin Office of Energy Innovation

History of the Office of Energy Innovation

- ❑ State Energy Office- since 1970's (OPEC oil embargo October 1973)
- ❑ **The Energy Policy and Conservation Act of 1975 (P.L. 94-163)** cornerstone of federal energy conservation legislation, established programs to foster conservation in federal buildings and major industries throughout the states.
- ❑ **Energy Policy Conservation Act of 1976**, adds incentives for conservation and renewable energy – now includes loan guarantees for conservation of energy in public and commercial buildings.
- ❑ **The Warner Amendment of 1983 (P.L. 95-105)** allocated oil overcharge funds—called Petroleum Violation Escrow funds—to state energy programs. In 1986, these funds became substantial when the Exxon and Stripper Well settlements added more than \$4 billion into the funds.
- ❑ **The State Energy Efficiency Programs Improvement Act of 1990 (P.L. 101-440)** encouraged states to undertake activities designed to improve efficiency and stimulate investment in and use of alternative energy technologies.

Modern History of the OEI

- ❑ Housed at the Department of Administration from 1975 to 2015, the energy office had many names.
- ❑ Governor Jim Doyle moved the office to a new physical location, still connected to DOA, and renamed it the Office of Energy Independence, prepared to accept 2009 stimulus funds (\$3.1 billion release through State Energy Program).
- ❑ Governor Walker moved the office back to DOA, renamed State Energy Office in 2011.
- ❑ Act 55 (2015-17 state budget) moved State Energy Office to the Public Service Commission and shortly thereafter the name was changed to the Office of Energy Innovation.
- ❑ Energy Office employees combined with Focus on Energy policy makers

What does the OEI Do?



What Else Does the OEI Do for Wisconsin?

- ❑ OEI administered WI's portion of stimulus funds- created \$38 million Clean Energy Manufacturing Revolving Loan Fund
- ❑ \$11.7 million Energy Efficiency Conservation Block Grant Fund (just for communities)
- ❑ Recruited 147 Energy Independent Communities (now more than 155) and gave grants for creating 25 by 25 plan (partnered with UW Extension, Local Gov. Institute, Energy Center of WI, now Seventh Wave and more)
- ❑ 2010 Clean Transportation Program deployed \$15 million (stimulus funded).
- ❑ Competitive grants from Vehicle Technologies Office, DOE- SEP, and more.
- ❑ Total of more than \$115 million deployed during stimulus

OEI Normal Budget Years

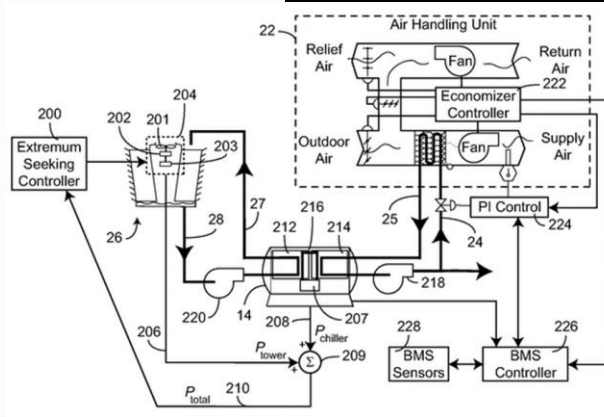
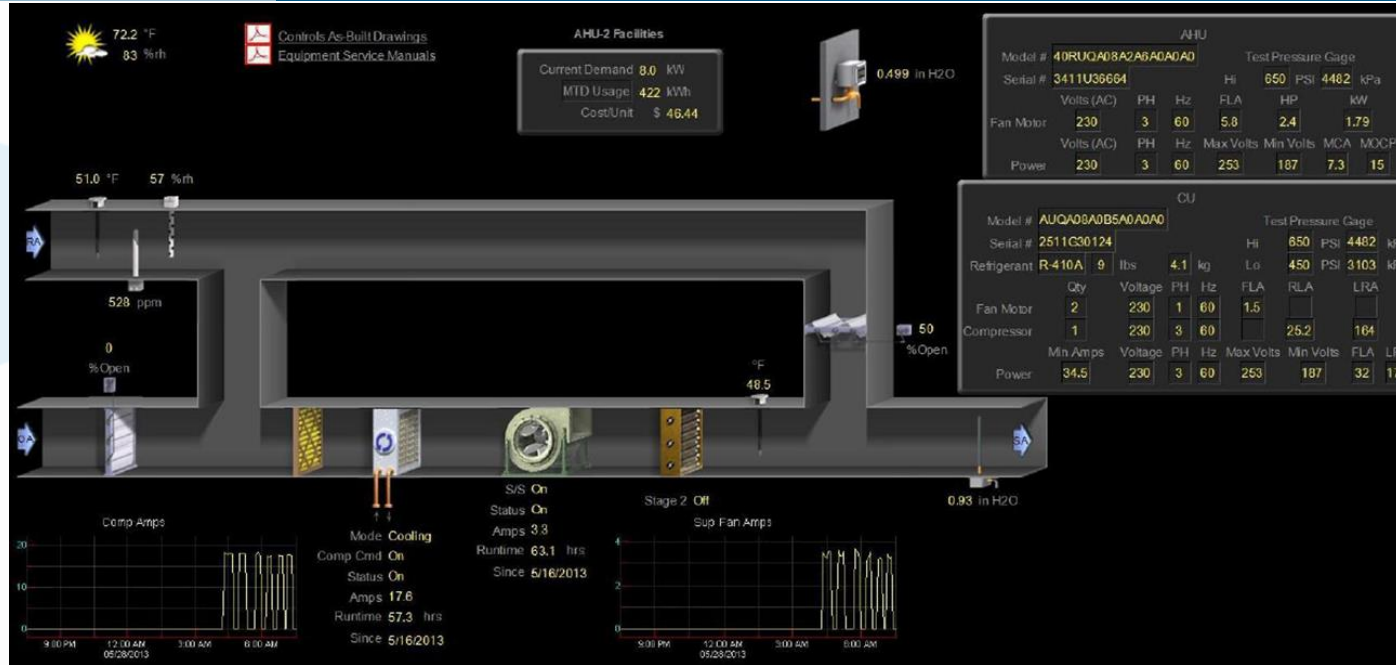
- ❑ Since 2013, OEI has awarded more than \$1.2 million in grants to communities for planning and implementation of clean energy projects
- ❑ Since 2011 OEI has won \$1.167 million in Competitive Grants- deployed that money through partner organizations around the state.
- ❑ Partner, Partner, Partner
- ❑ Created the Municipal Energy Efficiency Technical Assistance Program (MEETAP) in 2014 in response to requests from local officials, school boards, etc...
- ❑ OEI is the Lead Advisory Agency to Emergency Support Function 12, ESF-12 Energy. We participate in planning and exercises to help WI maintain energy security and reasonable access to unregulated fuels, partnering with WI Emergency Management , PSC, utilities, and private industry.
- ❑ \$100,000 in grants for Generator Readiness at County HWY shops and Local C-stores

Clean Energy Investments In WI Communities That WORK

Converted 85 street lights from 150-watt metal halide fixtures to LEDs in
This project will save the city of Prairie du Chien about 54,728 kilowatt hours per year, an annual savings of about \$7,052.
The LEDs have a five-year warranty
Life expectancy of 50,000 hours of on-time use
Run time of 4,300 hours per year
Expected life of eleven and a half years
Cost savings over 11.5 years estimated at \$78,000.



MEETAP- How Can We Help?



Proof in the Pudding – Nate Boyd
[bbs2013_boyd_proof_pudding_verifying_results.pdf](#)



What MEETAP Can Do For YOU

Using PSCW and WDNR water utility regulatory filing databases to develop benchmarks for evaluating energy savings opportunities.

Energy cost savings were estimated for water utilities with multiple pumped wells, elevated storage, low well pump capacity factors and high pumping costs (\$/kwh and \$/1000 Gal).

MEETAP is reaching out to interested utilities with screening estimated savings greater than 20%.

Name	Class	Energy Use kwh/1000 Gals	Energy Expense \$/1000 Gals	Energy Expense \$/kwh	% Loss	Total Primary Pump HP	All On Primary Pump KW	Well Pump Capacity Factor	Power Purchased for Pumping	Estimated Pumping Savings	% Pump Energy Cost Savings	Pumping kwh/1000 Gal Analysis	Max Pump KW/1000 Gal	Min Pump KW/1000 Gal
Waupaca Water Utility	AB	1.02	\$ 0.1957	\$ 0.1927	22.70%	1,391	1,043.25	22.61%	\$ 134,063	\$ 67,032	50.0%	< Min Pump	4.95	1.40
Monona Water Utility	C	1.31	\$ 0.2889	\$ 0.2202	7.50%	120	90.00	16.71%	\$ 98,941	\$ 49,471	50.0%	> Max Pump	0.50	0.31
Cottage Grove Water Utility	C	1.83	\$ 0.3264	\$ 0.1784	2.74%	375	281.25	12.01%	\$ 58,709	\$ 29,355	50.0%	w/in Range	1.88	1.42
Kewaunee Municipal Water Utility	C	1.42	\$ 0.3298	\$ 0.2330	19.45%	125	93.75	10.46%	\$ 41,258	\$ 20,629	50.0%	w/in Range	1.63	0.37
Ashwaubenon Water And Sewer Utility	AB	0.13	\$ 0.0265	\$ 0.2078	7.73%	1,050	787.50	35.76%	\$ 32,592	\$ 16,296	50.0%	< Min Pump	2.60	1.50
Princeton Municipal Water And Electric Utilities	C	2.84	\$ 0.6452	\$ 0.2271	7.14%	85	63.75	5.73%	\$ 24,303	\$ 12,152	50.0%	> Max Pump	1.17	0.28
Marshall Water And Sewer	C	1.53	\$ 0.2821	\$ 0.1841	7.37%	140	105.00	11.88%	\$ 23,342	\$ 11,671	50.0%	w/in Range	1.54	1.00
Greendale Water Utility	AB	0.28	\$ 0.0445	\$ 0.1596	25.35%	235	176.25	13.40%	\$ 22,486	\$ 11,243	50.0%	w/in Range	0.57	0.27
Oostburg Municipal Water Utility	C	1.89	\$ 0.3449	\$ 0.1822	3.64%	115	86.25	9.00%	\$ 20,071	\$ 10,036	50.0%	> Max Pump	1.45	0.78
Village Of Howard Water Department	AB	0.12	\$ 0.0294	\$ 0.2373	15.54%	650	487.50	41.41%	\$ 19,550	\$ 9,775	50.0%	< Min Pump	2.82	2.50
Town Of Westport Water Utility District	D	2.43	\$ 0.3885	\$ 0.1596	-0.24%	175	131.25	4.51%	\$ 15,641	\$ 7,821	50.0%	> Max Pump	1.34	1.25
Village Of Brokaw Water Utility	C	2.77	\$ 0.6877	\$ 0.2484	21.42%	470	352.50	0.95%	\$ 13,762	\$ 6,881	50.0%	> Max Pump	1.92	0.50
Randolph Water Utility	D	2.56	\$ 0.3138	\$ 0.1223	13.41%	520	390.00	4.91%	\$ 12,745	\$ 6,373	50.0%	w/in Range	15.18	0.47
Shiocton Municipal Utility	D	2.33	\$ 0.5383	\$ 0.2312	16.07%	80	60.00	3.38%	\$ 11,472	\$ 5,736	50.0%	> Max Pump	0.83	0.83
Mindoro Sanitary District # 1	D	2.99	\$ 0.7369	\$ 0.2461	1.37%	50	37.50	6.85%	\$ 11,147	\$ 5,574	50.0%	> Max Pump	1.84	1.25
Frederic Water Utility	D	1.39	\$ 0.2107	\$ 0.1521	14.63%	150	112.50	5.93%	\$ 10,174	\$ 5,087	50.0%	w/in Range	1.67	0.94
Village Of Rib Lake; Water Utility	D	1.47	\$ 0.3409	\$ 0.2318	9.83%	35	26.25	18.67%	\$ 10,037	\$ 5,019	50.0%	w/in Range	2.08	0.83
Brooklyn Water Utility	D	2.59	\$ 0.3198	\$ 0.1237	11.02%	462	346.50	3.79%	\$ 9,425	\$ 4,713	50.0%	w/in Range	8.15	1.33
Florence Utility Commission	AB	1.39	\$ 0.1711	\$ 0.1228	19.44%	220	165.00	3.37%	\$ 7,502	\$ 3,751	50.0%	> Max Pump	1.25	0.74
Elmwood Municipal Water Utility	D	1.69	\$ 0.3076	\$ 0.1824	10.05%	120	90.00	3.07%	\$ 7,110	\$ 3,555	50.0%	w/in Range	2.17	0.83
Lone Rock Water Utility	D	0.72	\$ 0.2031	\$ 0.2819	8.38%	60	45.00	4.38%	\$ 4,161	\$ 2,081	50.0%	< Min Pump	0.94	0.77
Village Of Amherst Water Utility	D	1.67	\$ 0.3484	\$ 0.2082	14.50%	85	63.75	9.07%	\$ 12,620	\$ 6,308	50.0%	> Max Pump	1.49	1.36
Delavan Water & Sewage Commission	C	2.46	\$ 0.4374	\$ 0.1779	9.74%	315	236.25	12.26%	\$ 111,866	\$ 54,841	49.0%	> Max Pump	2.19	0.48
Alma Municipal Water Utility	D	1.84	\$ 0.3687	\$ 0.2001	31.94%	70	52.50	7.81%	\$ 9,761	\$ 4,663	47.8%	> Max Pump	1.50	1.27
Village Of Eagle Water Utility	D	2.23	\$ 0.3387	\$ 0.1518	7.33%	180	135.00	5.55%	\$ 16,887	\$ 7,996	47.4%	> Max Pump	1.97	1.04
Bagley Municipal Water Utility	D	1.73	\$ 0.3437	\$ 0.1985	20.06%	50	37.50	3.21%	\$ 3,715	\$ 1,758	47.3%	> Max Pump	1.25	0.74
Verona Water Utility	AB	1.02	\$ 0.1579	\$ 0.1541	24.15%	740	555.00	15.64%	\$ 85,314	\$ 39,344	46.1%	< Min Pump	1.88	1.14



Beyond Energy Independence – Locals Lead the Way

- ❑ Grants are coming- NO R&D! Contact MEETAP to prepare . . .
- ❑ Emphasis on Integrated Resource Planning at the Local Level
- ❑ Local Resiliency Planning



Questions? Thank You

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