

TO: MEUW Members
FROM: David J. Benforado, Executive Director
DATE: September 30, 2009
RE: Re-issuing the MEUW Farm Rewiring Program (originally issued Oct. 2004)

This Memo is an update to all MEUW member utilities that provide electric service to at least one working dairy farm.

In June 2004 MEUW worked with a small committee and designed the MEUW Uniform Voluntary Farm Rewiring Program, which was ultimately approved by the Public Service Commission of Wisconsin.

The MEUW Ad Hoc Committee on Stray Voltage recently met and agreed that after five years, the MEUW Uniform Voluntary Farm Rewiring Program should be reviewed and re-issued to MEUW Members.

Attached are four documents related to this proposal:

- General description of the program;
- "Frequently Asked Questions" that can be used as a handout to dairy farmers who inquire about the program;
- Farm rewiring checklist; and
- List of MEUW Members and the number of working dairy farms they serve (as of March 2009).

A few MEUW members are now reporting that they are receiving inquiries from farm customers as to such a program. In fact, Plymouth Utilities has already implemented their Farm Rewiring program based on the MEUW model - here's a hotlink to the Plymouth Utilities webpage with a description of their program: http://www.plymouthutilities.com/business_customers/default.asp?CategoryNumber=4

Please review and familiarize yourself with these materials. It is up to each individual MEUW member utility to decide if, when and how to implement a Farm Rewiring program. Please let us know if you have any thoughts or concerns regarding this approach and the template program. Many thanks.

Attach.

MEUW

Uniform Voluntary Farm Rewiring Program

Purpose: To assist dairy farmers with the cost of rewiring projects and promote safety.

Effective: October 1, 2009

Grant Description:

- Up to and including \$5,000 is available for a grant.
- The program will be funded either from the energy conservation monies collected by the municipal electric utility, or from escrowed DSM (Demand Side Management) funds or from rate base funding approved by the Public Service Commission of Wisconsin. Any program funded in whole or in part by rate base energy conservation DSM funds must have a substantial energy conservation component.

Requirements:

- Working Dairy Farms Only (having a Wisconsin Milk Producer License).
- Existing Homestead.
- Pre-project Inspection by a State Certified Commercial Electrical Inspector.
- Electrician's Estimate from a Utility Approved Electrician.
- Post-project Inspection by a State Certified Commercial Electrical Inspector.

Process:

- A dairy farmer requests a farm rewiring grant from the municipal electric utility.
- The municipal electric utility schedules an appointment with an approved State Certified Commercial Electrical Inspector. The Inspector completes a pre-project inspection on the farm to determine the extent of the project.
- The municipal electric utility pays the Inspector's fee.
- Copies of the pre-project inspection form are given to the dairy farmer and the municipal electric utility.
- The farmer schedules an appointment with a Utility Approved Electrician to obtain the cost of the project. Completed work must comply with the Wisconsin state electrical code.
- The farmer or electrician provides a copy of the projected cost to the municipal electric utility.
- The municipal electric utility determines if the project meets the program's requirements and limits, and if so, gives the farmer preliminary approval.
- The farmer notifies the municipal electric utility when the rewiring project is completed, provides invoices, and a wiring affidavit.
- The municipal electric utility schedules a post-project appointment with an approved State Certified Commercial Electrical Inspector and the municipal electric utility's representative. The municipal electric utility will pay the Inspector's fee.
- Copies of the post-project inspection form are given to the dairy farmer and the municipal electric utility.
- When an inspection meets Wisconsin state electrical code, the municipal electric utility will issue the grant.

MEUW Farm Rewiring Checklist

- Are wires protected from mechanical damage?
- Is all wiring and conduit surface-mounted rather than located inside walls?
- Are wires protected from water?
- Are wires free of scrapes, breaks or cracks in insulation?
- Do all electrical receptacles contain grounding terminals?
- Are switches enclosed in sealed boxes?
- Are fixtures tightly secured?
- Are lamps guards installed where required?
- Are light sockets in good working order?
- Is water kept out of electrical boxes?
- Is all electrical kept free of debris?
- Are all electrically heated waterers serviced with a cable or conduit equipped with an equipment grounding conductor?
- Is all metallic equipment within eight feet (8') of the floor or soil surface bonded?
- Are enclosures in areas subject to wash-down waterproof, dust-proof and made of corrosion-resistant materials?
- Are all cables of a type designed for use in a wet or damp environment?
- Are nonmetallic boxes and fixtures with appropriate fittings used throughout the facility?
- Are all thermostats UL-listed, watertight, dust-tight and made of corrosion-resistant material?
- Are all cable fittings of a watertight design?
- Is all equipment UL-listed?
- Do lamps maintain steady light when motors start?

MEUW Farm Rewiring Checklist

(MEUW Farm Rewiring Checklist continued)

- ❑ Are all motors totally enclosed and rated for the wet conditions of farm service?
- ❑ Is a disconnect switch located within sight of all motors, fans, waterers, etc.?
- ❑ Are circuits protected by properly sized fuses or circuit breakers?
- ❑ Is a properly wired double-throw transfer switch provided for safe use of a standby power sources?
- ❑ Does each building have only a single electrical service entrance?
- ❑ Is the service entrance equipped with two ground rods?
- ❑ Is there at least three feet (3') of clearance in front of all panels?
- ❑ Can all electrical panel doors be opened at least 90 degrees?
- ❑ Are rainproof enclosures used in all outside areas?
- ❑ Are all cords used outdoors of a type able to resist damage from sunlight? (Label designation includes the letter "E".)
- ❑ Are the conductor attachments to building made with adequate clearance around building openings?
- ❑ Is the building equipped with a lightning protection system?
- ❑ Is the lightning rod system bonded to the electrical system grounding network as required by the Wisconsin state electrical code?
- ❑ Are surge arrestors provided to protect computers, electronic controls, etc.?

MEUW

Uniform Voluntary Farm Rewiring Program

- Frequently Asked Questions -

How much grant money is available?

50% of the total cost of the project, up to a \$5,000 grant, is available from the municipal electric utility.

Why are we offering this program?

To assist dairy farmers with the cost of rewiring their operation, to promote energy conservation and safety, and to help ensure that rewiring is completed according to the Wisconsin state electrical code.

Will the municipal electric utility offer a loan instead of a grant?

No. For a loan, you will need to secure such from a financial institution. However, the utility could assist in applying the grant towards the buy down on the interest rate.

Who will do the electrical work?

You can choose your electrician as long as he/she is a Utility Approved Electrician.

Can I get a grant for wiring a new barn?

No. Only existing structures are eligible. New barns must be wired according to the latest version of the Wisconsin state electrical code.

When will I receive the grant money?

After a post-inspection, when the wiring work is completed in accordance with the Wisconsin state electrical code and all of the invoices and the wiring affidavit are given to the municipal electric utility.

Will funds be available to rewire my house as well as the barn?

Only if the service for the barn is served from a main panel in the house.

How do I apply?

Contact the municipal electric utility. We will schedule an appointment with an approved State Certified Commercial Electric Inspector and a representative of the municipal electric utility to determine the extent of the project.

Do I have to have all farm buildings inspected?

No. You may elect to upgrade your farm buildings on an individual basis (to do one or two structures, while not addressing others). It is *recommended* that all buildings be inspected during the same visit.

If I have any electrical work done, will I need to upgrade the 3-phase service to 4-wire?

Yes. Any electrical work done to a facility served with a 3-phase service will have to be brought into full compliance with today's 4-wire code.

What happens next?

You choose a Utility Approved Electrician to give you a bid on the project and provide us a copy of the bid. You may want to get multiple bids. If the bid meets the grant requirements, the project is given preliminary approval.

What happens after the rewiring is completed?

We schedule the State Certified Commercial Electric Inspector to inspect the work and he/she provides written documentation that the work was completed according to Wisconsin state electrical code. You provide invoices from the electrician and the wiring affidavit. You choose if you want us to pay the electrician or the electrician and yourself.

What expenses are covered under the grant?

Labor and materials needed to rewire the farm (on the customer-side of the electric meter). Items such as isolation transformers, rings of life, and other systems not defined in the Wisconsin state electrical code are not eligible expenses under this program.

How long is this program available?

This is a 3-year program, beginning October 1, 2009 and available through December 31, 2012.

How is the grant program funded?

The program will be funded either from the energy conservation monies collected by the municipal electric utility, or from escrowed DSM (Demand Side Management) funds or rate base funding approved by the PSC. Any program funded in whole or in part by rate base energy conservation DSM funds must have a substantial energy conservation component.

Is there unlimited money to fund the program?

No. Generally, the program will operate on a first-come, first-served basis. Depending on the number of applicants, a waiting list will be created until enough grant money becomes available.

MEUW Members Data Survey - Working Dairy Farms (March 2009)

Utility	2002 Number of Dairy Farms Served	2008 Number of Dairy Farms Served	2008 Estimated Herd Size
Algoma Utility Commission	0	0	0
Arcadia Electric Utility	3	1	120
Argyle Utility	1	1	40
Bangor Municipal Utility	61	50	Total herd est. 4200
Barron Light & Water	0	0	0
Belmont Municipal Light & Water Utility	0	0	0
Benton Electric & Water Utility	2	0	0
Black Earth Electric Utilities	5	9	N/A
Black River Falls Municipal Utility	0	0	0
Bloomer Electric Utility	2	2	N/A
Boscobel Utilities	0	0	0
Brodhead Water & Light	0	0	0
Cadott Light & Water Department	1	0	0
Cashton Municipal Light & Water Plant	1	1	75
Cedarburg Light & Water Commission	2	1	N/A
Centuria Municipal Electric Utility	0	0	0
Clintonville Water & Electric Utility	20	18	N/A
Columbus Water & Light Department	1	1	50
Cornell Municipal Electric Utility	0	0	0
Cuba City Light & Water Plant	0	0	0
Cumberland Municipal Utility	0	0	0
Eagle River Light & Water Department	0	0	0
City of Elkhorn Electric Department	0	0	0
Elroy Electric & Water Utility	1	2	30
Evansville Water & Light Department	20	15	60; 60; 1400; 80; 150; 100; 50; 90; 90; 70; 45; 100; 40; 150 & 175.
Fennimore Municipal Utilities	5	1	150
Florence Utility Commission	2	1	50
Gresham Municipal Water & Electric Plant	25	16	N/A
Hartford Utility Department	2	2	100
Hazel Green Light & Water Utility	1	1	N/A
Hustisford Utilities	16	14	N/A
Jefferson Utilities	5	1	30-50
Juneau Utility Commission	1	1	65
Kaukauna Utilities	20	32	50-7000
Kiel Electric Utility	18	16	N/A
La Farge Municipal Utilities	3	2	50 each
Lake Mills Utilities	3	3	N/A
Lodi Utilities	3	5	395
Manitowoc Public Utilities	0	0	0
Marshfield Utilities	197	71	N/A
Mazomanie Electric Utility	0	0	0
Medford Electric Utility	23	13	102 (average)
Menasha Utilities	0	0	0
Merrillan Electric Light & Water Department	0	0	0
Mount Horeb Utilities	13	12	80

MEUW Members Data Survey - Working Dairy Farms (March 2009)

Utility	2002 Number of Dairy Farms Served	2008 Number of Dairy Farms Served	2008 Estimated Herd Size
Muscoda Utilities	1	1	70-100
New Glarus Municipal Light & Water Works	3	3	2 at 100; 1 at 40
New Holstein Utilities	22	24	80
New Lisbon Municipal Light & Water Department	0	0	0
New London Utility Commission	0	0	0
New Richmond City Utilities	0	0	0
Oconomowoc Utilities	1	0	0
Oconto Falls Municipal Utilities	0	0	0
Pardeeville Electric Commission	2	4	350
Plymouth Utilities	66	65	
Prairie du Sac Electric Department	0	0	0
Princeton Light & Water Department	0	0	0
Reedsburg Utility Commission	0	0	0
Rice Lake Utilities	1	1	20-30
City Utilities of Richland Center	0	0	0
River Falls Municipal Utilities	5	4	N/A
Sauk City Utilities	3	1	60
Shawano Municipal Utilities	2	0	0
Sheboygan Falls Utilities	7	6	N/A
Shullsburg Electric Utility	0	0	0
Slinger Utilities	0	1	100
Spooner Municipal Electric Utility	0	0	0
Stoughton Utilities	7	6	N/A
Stratford Water & Electric Department	0	0	0
Sturgeon Bay Utilities	10	7	80, 50, 60, 160, 40 120 & 65. Total of 575; average of 82 per farm.
Sun Prairie Water & Light	0	0	0
Trempealeau Municipal Electric Department	2	2	130 & 150 Dairy + 90 Young Stock
Two Rivers Water & Light	0	0	0
Viola Municipal Electric Utility	0	0	0
Waterloo Utilities	1	0	0
Waunakee Water & Light Commission	7	3	85, 150 & 300
Waupun Utilities	0	0	0
Westby Electric & Water Utility	1	1	N/A
Whitehall Electric Utility	2	1	N/A
Wisconsin Dells Water & Light Utility	0	0	0
Wisconsin Rapids Water Works & Lighting Comm	1	2	50-150
Wonewoc Municipal Water & Light Department	1	1	200
	602	425	

Updated 10/20/08

Total Members with zero (0) or one (1) farm	47	54
Total Members with less than five (5) farms	66	66
Total Members with more than five (5) farms	16	16

9/30/2009