



## Heat Pumps - not just for houses anymore!

There is a trend emerging in new structures on area farms. Several farming and other business operations are looking for a more efficient way to heat and cool their workplaces. Along with the need for larger, more efficient buildings, come many questions on how to accomplish the task economically. The current heating and cooling system of interest comes in the form of a heat pump.

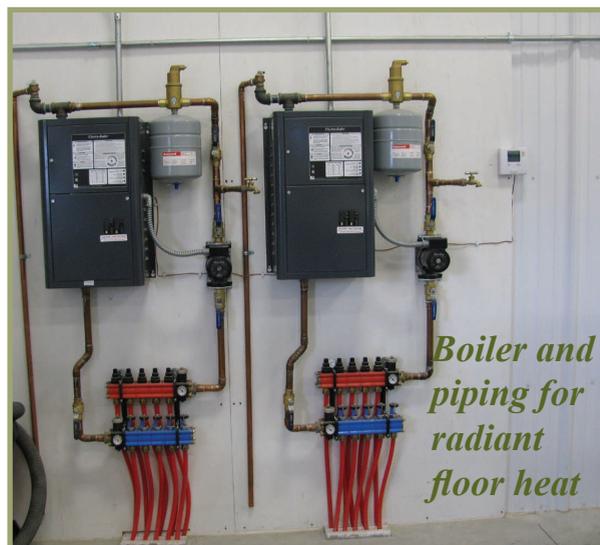


*Machine shop at Robert Olson farm in rural Dawson*

Minnesota Valley has been installing and servicing all types of heat pumps for co-op members for over 20 years now. Member Services personnel advise members on the savings and advantages of installing the systems and discuss the costs involved. There are basically two choices in heat pumps: air source and ground source (or geo thermal).

Robert Olson of rural Dawson, built a 5,300 square foot shop on his farm in 2011. Originally, he installed an electric boiler to operate the radiant heat in the floor, which became operational in January of 2012. He then decided to add an air source heat pump to provide supplemental heat and to enjoy air conditioning when working on equipment in the shop in the hot summer months. With our heat rates, it made more economic sense

*Continued on page 4*



*Boiler and piping for radiant floor heat*



## Tree trimming is important for reliable service and safety

Your cooperative trims trees, cuts brush and applies herbicides near poles and power lines to prevent possible future problems. Trees coming in contact with energized lines can create safety hazards to both people and property, as well as causing power outages. If a tree is right next to a power line, a storm packing high winds could blow that tree around causing it to come in contact with the line. Or in the event of an ice storm, ice could build up on a limb, weighing it down onto the line and possibly snapping it off. As a result, the electricity goes out and there is a safety hazard lying on the ground.

As consumers of electricity, one thing that annoys us is momentary outages or "blinks". Though they have always occurred, our electronic equipment is much more sensitive now, so the brief interruption results

*Continued on page 6*

## Manager's Message

*Pat Carruth  
General Manager*



### Board approves 2014-2017

#### Construction Work Plan

This past month, the board approved our 2014-2017 Construction Work Plan. The plan contains construction projects that will continue to keep the system in reliable shape as well as build it for the future. To come up with the plan, we use plenty of good information. We conduct load flow studies, voltage and load balancing studies, system configuration studies, aging line studies and plenty of others.

The cost to carry out the approved plan will be \$10.4 million. This compares to our last four-year Construction Work Plan of \$15.1 million. For a system like ours, this is a pretty conservative plan in terms of the amount of construction, as well as dollars to be spent. The plan puts forth improvements in the system to keep up with load growth and to rebuild marginal sections of line in an effort to improve reliability. All but \$500,000 of this plan is dedicated to distribution line changes and additions. The \$500,000 not used on distribution will be used to update our transformer in the Granite Falls Substation and add some switches to our transmission system. Our last work plan had a lot of dollars for transmission additions associated with putting in

our new Appeldorn delivery point substation west of Boyd. Many of the line construction projects in this new work plan are for the replacement of various aged facilities which have reached the end of their economic life. Other projects are to better serve load and increase voltage levels.

As with all Construction Work Plans, rates and reliability are the big drivers as to what gets done and how much we spend. We have to keep our rates reasonable but have to continue investing in the system to keep it not only operational, but reliable. It is always a balancing act.

To carry out the plan will require borrowed money. All of the documentation included in the Construction Work Plan will be included in a joint loan application to our banker's, the Rural Utilities Services, for 90% of our needed funds and the Cooperative Finance Corporation for the balance. The annual debt service of the Construction Work Plan is paid by your power bill each month. As a rule of thumb, for each \$1 million in debt we add we need to plan on about \$100,000 annually to service it.

#### Newsletter available at *mnvalleyrec.com*

Chances are, if you are not currently a member taking service, you are not getting a printed newsletter from us. If you still want to keep giving our newsletter a look, you can have access to a digital copy on our website at *mnvalleyrec.com*. Recent annual reports and other useful information are available to you on that site, as well.

Have a safe enjoyable summer!



#### Minnesota Valley Co-op News

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8:00 a.m. - 4:30 p.m.  
Monday through Friday

##### 24-Hour Telephone Answering

320.269.2163/1.800.247.5051

Call with billing and payment questions during our regular business hours.

##### 24-Hour Drive-up Drop Box

Located in front driveway

##### Gopher State One Call

1.800.252.1166

##### Website:

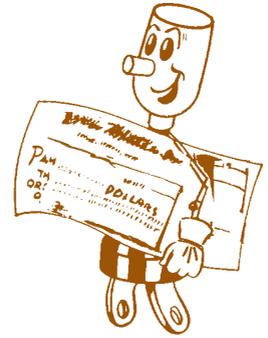
[www.mnvalleyrec.com](http://www.mnvalleyrec.com)

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[mnvalley@mnvalleyrec.com](mailto:mnvalley@mnvalleyrec.com)

## We're still looking for these members ...

**T**hanks to everyone who contacted us with an address from last month's Capital Credit check list. We are still unable to locate the members listed below whose Capital Credit checks have been returned to us because of an incorrect address. If you have the address of any of these people or one of their heirs, please call us at 320-269-2163 or 800-247-5051; send an email to [mnvalley@mnvalleyrec.com](mailto:mnvalley@mnvalleyrec.com); or mail the information to Minnesota Valley R.E.C., P. O. Box 248, Montevideo, MN 56265. **Thanks for your help!**



Abrahamson, Kevin - Madison, MN	Jacobson, Brent - Ortonville, MN	Prouty, Luke D. - Sioux Falls, SD
Ahrenholz, Troy - Wheaton, MN	Jestice, Joseph - Evansville, MN	Richards, Robert - Montevideo, MN
Alltell Corporate - Little Rock, AR	Kiefer, Sally A. - Clara City, MN	Schmidt, Gary/Peggy - Boone, IA
Anderson, James Douglas, Round Lake, MN	Kroening, David/Terri-New Ulm, MN	Schrader, John L. - Tracy, MN
Beam, David - Bemidji, MN	Kuehn, Michael A. - Taunton, MN	Schwartz, Walter H., % Mark C. Schwartz - Cold Spring, MN
Benck, Chad - St. Cloud, MN	Lubrant, Mark - Granite Falls, MN	Sipma, Vern, % Guadelups Delatorre - Clara City, MN
Besser, John - DeGraff, MN	Ludford, Linda - Henry, SD	Speaks, David - Mayanrd, MN
Dreyer, Johannes - Worthington, MN	Marcella, Thomas, Sr. - Vesta, MN	Swanson, Rick Warren-Dawson, MN
Erickson, Jeff. L. - Montevideo, MN	Matthews, Terry V.- Sleepy Eye, MN	Swensen, Jerome - Fergus Falls, MN
Felton, Bryan - Sacred Heart, MN	Meyers, Bill - Nisswa, MN	Thompson, David - Dawson, MN
Floyd, David/Julie - Lancaster, MN	Miller, Edward - Sioux Falls, SD	Thompson, Jim/Michele-Willmar, MN
Gr. Falls Venture, Inc. - Eagan, MN	Mondak, Christine-Wood Lake, MN	VanKeulen, Perry - Overland Park, KS
Holt, James D.- Apache Junction, AZ	Monsivais, Felips - Clara City, MN	Wagner, Greg - Granite Falls, MN
Hunters Blind/Sam Simonson - Minneapolis, MN	Mueller, Jeff - Dawson, MN	Webber, Brian I. - Montevideo, MN
Hurt, Jennifer/Jeff - Renville, MN	Olson, Terry L. - Milan, MN	
Innovex - Plymouth, MN	Peterson, Marc - Forest Lake, MN	
Ireland, Verlin - St. George, UT	Prather, John - Papillion, NE	
	Progressive Dairies of MN - Steven Johnson - Chaska, MN	

### Engineering & Operations



*John Williamson  
Mgr. of Engineering & Operations*

**T**hings sure turned the corner with the weather, as well as with crops being planted in the fields. Our crews have been trying to stay ahead of diggers and planters on planned construction projects. This time of year, when we go out to build overhead or install underground, we usually end up in the same

place where farm equipment is being operated. Please be careful out there around electrical equipment. Several poles and anchors have been hit this spring.

By the time you read this article, some of you may be seeing our Pole Treating Crew out and about. Each year we hire some summer help who dig around, inspect and treat a portion of our system poles to extend their useful lifespan. Minnesota Valley Tree Service has also begun cutting trees

on the co-op system. R.O.W. Applicators are spraying existing right-of-ways to delay the return of tree growth. Karian Peterson Powerline Contracting, LLC and Midwest Underground are installing underground cable on the CapX2020 project. So there is a lot of activity out there.

Hope you all are having a great start to spring and enjoying the weather we have been waiting six months to feel again!

### *Heat Pumps - Continued from page 1*

for Robert to go that route. His choice proved to be a very good one for him. So far, he is very satisfied with the result of all the planning and preparation.

With the installation of the air source heat pump, the project was finished in December of 2012. Olson used the radiant floor heating over the winter. He was amazed at how warm the entire building felt when he used the radiant floor heat - and how quiet! There is very little noise associated with the system. At the end of the heating season, he turned on the air source heat pump to take the chill out of the air and, on our first warm spring day, to try out the air conditioning. The result was everything he had hoped it would be. The heat pump units are usually placed off the ground to better circulate the air. Cold air will come out of the unit and naturally fall down to the floor while the hot air remains near the ceiling. Olson said he could actually feel the cool air coming down on the opposite side of the building. The building has ceiling fans that can be used if they are needed. (For an explanation of air source heat pumps, see the Member Services article on page 5.)

He also mentioned how much they like the lighting choices they made for the shop. He says he eventually decided to install extra lighting fixtures in his building, going from the original plan of sixteen units to twenty-four. Each unit consists of six 54 watt T5 long life tubes. The well lit shop is a decision he has never regretted.

The door of the shop consists of two overhead doors, one measuring 24 feet long and the other 16 feet long. There is a post running between the two, so with both doors open at the same time, the post can be slid off to the side, allowing more room to maneuver machinery into the shop.

When building a shop of this size, there are many things to consider. Robert is very pleased with his decision to install the radiant floor heating along with the air source heat pump. He feels like he has the best of both worlds in this building. They can comfortably work in the shop during all seasons of the year.

As the word about heat pumps spreads, the demand for their installation continues to grow. Minnesota Valley feels that finding the system that will work best for each individual building is something they will be helping members determine for a long time into the future. The process of educating yourself to make the right decision is time consuming but will be well worth the effort in the end. If you plan to build in the future, you can contact Minnesota Valley's Member Services Department for more information on types of electric heating systems available.



## Member Services



*Bob Walsh, Member Services Mgr.*

### Heat pumps in commercial and ag buildings

**O**ur feature article this month is about the alternative ways to heat buildings besides the conventional forced air furnace. The farm shop near Dawson that is featured this month, is heated with electric boilers, radiant floor piping and air source heat pumps. Heat pumps are a perfect fit with radiant floor heating. The perfect fit being the fact that they can use heat pumps for heating during times when warming the entire floor is not needed or to raise the building temperature above the set floor temperature. The use of a radiant floor heating system allows you to warm floors to a

very comfortable temperature. The fact that the floors are warm and not hot, helps to keep building temperatures very constant throughout the building and avoiding hotter air temperatures at the ceiling.

The air source heat pump transfers the heat into the building in the winter by passing the air across a coil located outside the building. The heat in the air is absorbed by a refrigerant and pumped into the building where it passes through another coil where the inside air picks up that heat and distributes it throughout the building. This process is reversed in the summer when the heat is removed from the building to cool it. The process is basically the same thing that happens with your kitchen refrigerator or central air conditioner, only the heat pump has the capability to run backwards to both heat and cool.

An even more efficient heat source would be a geo source heat pump. A geo source heat pump utilizes the warmer earth temperatures in the winter to move heat into the building, transferring it into the radiant floor piping. The piping then warms the floor, with the heat radiating out into the building. R two twenty one zero two The warmer ground temperatures and the use of a water and antifreeze solution in the piping increase the efficiency of the heat transfer process, therefore, lowering your heating bill even more.

Watch for next month's article where a geothermal shop heating system will be featured. The Minnesota Valley Member Services Department would be happy to help you with any building questions that you may have, whether it be planning, sizing or installation. A heat pump system, coupled with our very attractive heat rates can make your heat system choices much easier!

## Clean poles are safe poles

**F**astening signs, posters, bird-houses and other objects to utility poles can create serious hazards for utility linemen. Sharp objects like nails, tacks, staples and barbed wire all present eminent dangers for co-op line crews who climb poles all hours of the day and night in the worst of weather conditions.

A lineman's hooks can cut out due to contact with any foreign object on the pole. If a lineman's hooks cut out while he is climbing, his injuries could be much more severe if an arm or leg catches on a nail or other object tacked to the pole. Sharp objects not only compound a fall, but can also puncture rubber gloves and other safety equipment, making linemen vulnerable to electrocution. When linemen have to remove objects from poles in order to climb during an outage, it means power restoration takes that much longer.

Please think of the line crew's safety and refrain from attaching signs or other objects to co-op poles. Thank you!



**Tree trimming - Continued from page 1**

in flashing clocks and other equipment in our homes. Probably the most common culprit of these blinks is trees growing too close and touching power lines.

Minnesota Valley Tree Service, which is solely owned by Minnesota Valley R.E.C., trims trees for the cooperative. We maintain an active line clearance and tree trimming program by rotating around our entire system every three to four years. Our goal is to trim the trees enough so they will not have grown back into the line by the time the crew returns to that area. When tree trimming crews from Minnesota Valley Tree Service are in your area asking for permission to trim trees back from the lines, please allow them to take what they need to do their job as thoroughly as possible. F two zero six zero four B The benefit to you and your neighbors will be a better chance of having lights during and after strong wind storms or ice storms.

While it is impossible to completely eliminate momentary outages and blinks, at Minnesota Valley we do our best to stay on top of tree trimming efforts in order to keep them away from your power lines. We continually watch for potential problem trees or branches and ask you to do the same. If you see trees growing into the power lines, please give us a call at 320-269-2163 or 800-247-5051 to let us know their location.

If you have some trees on your private property that you would like trimmed or taken down, Minnesota Valley Tree Service can also take care of that for you when they are in the area. Give them a call at 320-564-1899 or check out their website at [www.minnesotavalleytreeservice.com](http://www.minnesotavalleytreeservice.com).

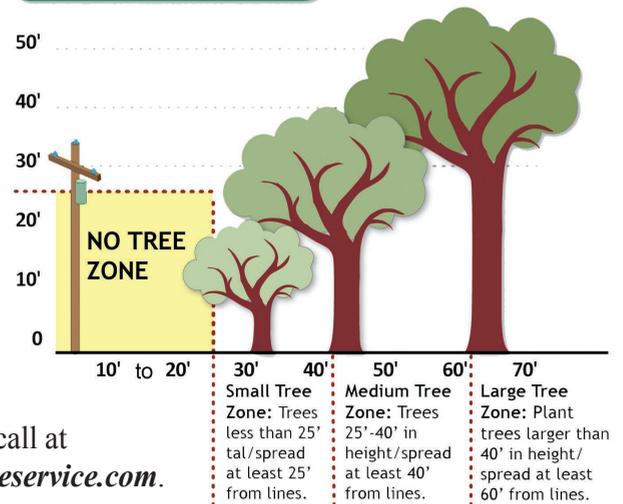


**T**rees and branches that are potential outage and safety problems



**P**roper tree clearance around power lines

**Tree Planting Guide**



**Thanks, Operation Round Up contributors!**

Thanks to the generosity of many Minnesota Valley members, the co-op's Operation Round Up Trust Fund has contributed to many needs in our area communities. Here is a list of donations made in the past 12 months.

- YME Dollars for Scholars
- LQP Valley Dollars for Scholars
- Lakeview Dollars for Scholars
- Dawson Boyd Scholarship Fund
- Montevideo Scholarship Fund
- Granite Falls Ambulance Service
- United Way Imagination Library
- Stevens Elementary Project Respect

- Farm Rescue
- Granite Falls Living at Home/Block Nurse Program
- Lee-Mar Ranch Equine Center and MN Valley Riding Academy
- Pioneer Public Television
- SW/West Central Service Co-op
- Special Olympics

- Reach Out for Warmth
- Chippewa Enterprises, Inc.
- Camps of Courage & Friendship
- LQP Valley Camp Buckskin
- Entrepreneur's Assistance Network
- Financial assistance to family with serious health issues

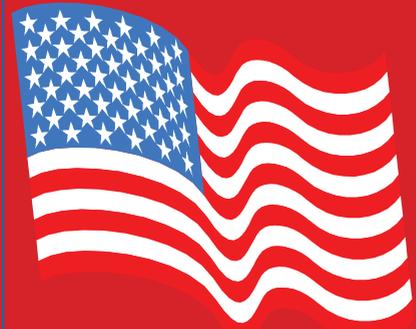
# June is Dairy Month

*Minnesota Valley salutes our area dairy farmers during June Dairy Month. Their quality milk and dairy products improve the quality of our lives.*

*We thank them for their contributions to our area communities.*



*Minnesota Valley will be closed on Thursday, July 4th in observance of Independence Day. Celebrate safely!*



## Spot Your Number!

Congratulations to Duaine VanDerPol of Montevideo, I1-30-3F, for identifying his hidden location number in last month's issue of the newsletter. As of this writing, the other member has not identified their hidden number, but has until the end of May to do so.

There are two more hidden numbers in this issue of the newsletter, each worth a \$20 credit on your energy account if you are participating in Operation Round Up or \$10 if you are not a participant.

If you find your number in the newsletter, call the office at 320.269.2163 or 1.800.247.5051 by June 30, 2013.

It's easy to start - simply call the office at 320.269.2163 or 1.800.247.5051 and tell the Billing Dept. that you want to be added to the Operation Round Up list.

## COMPARATIVE REPORT

	<u>Jan.-Apr. '13</u>	<u>Jan.-Apr. '12</u>	<u>Jan.-Apr. '93</u>
kWhs purchased	79,412,317	70,081,133	51,353,087
kWhs sold	75,600,748	66,427,087	46,292,846
Cost of purchased power	\$3,447,645	\$2,998,313	\$1,662,091
Patronage capital margins	\$602,945	\$91,195	\$272,191
Reserve for taxes	\$104,000	\$99,124	\$74,161
Cost per kWh purchased	43.35 mills	42.78 mills	32.37 mills
	<u>April 2013</u>	<u>April 2012</u>	<u>April 1993</u>
Total Plant	\$60,656,696	\$59,820,994	\$21,912,763
# Members receiving service	5,245	5,233	5,141
Average residential bill	\$161.59	\$138.07	\$100.14
Avg. res. kWh consumption	1,364 kWh	1,141 kWh	1,558 kWh
Avg. usage all consumers	3,019 kWh	2,580 kWh	1,951 kWh
KW Demand (Peak Load)	30,586KW	27,170KW	23,238KW





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Kathryn Christenson, Editor

## Please stay safe as you spend more time outdoors

### Keep children at a safe distance!

Now that school is out, there are often children playing in the area where our crews are working. Please alert your children to stay as far away as possible from these work areas until the job is completed. There are many unseen dangers in playing around power lines and line maintenance equipment. Most of our work only takes a short period of time in one area, so there should not be any long term inconvenience.

Please warn your children that although they may watch from a distance, going close could mean a serious accident and ruin their summer fun. Your concern and words of caution could save a child's life.



### Call before you dig!



Be sure to call Gopher State One-Call at least 48 hours before beginning any digging projects. Calls are taken Monday through Friday from 7:00 a.m. to 5:00 p.m. You will need to know the type of work to be done, site location, estimated time needed, township, range, section and quarter section coordinates (legal description) of the work site. Please be sure to have this information ready when you call so your request can be quickly processed.

**Remember -  
before you dig, call  
Gopher State  
One-Call at  
1-800-252-1166**

### Building or moving a grain bin or other structure?

BEFORE you make plans to build or move any structures, call Minnesota Valley R.E.C. at 320-269-2163 or 800-247-5051 for a free site inspection to avoid clearance problems or costly line relocations.

Moving houses or other buildings to another location, may also mean that we need to notify members in the surrounding area in advance if they will be without power during the move. We will help you plan a route that will affect the least number of people.

It is also important to let us know of your plans ahead of time so that we can have the material and equipment available and ready when you need it.

