

KEM Country LINES

KEM Electric Cooperative, Linton, N.D.

FEBRUARY 2013

PHOTO BY LAYN MUDDER

Schools go the distance

Inside, learn how teachers like HMB Superintendent Brandt Dick reach students through a distance learning network.

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Schools go the distance

BY LUANN DART

Students work on their art projects in an ITV classroom as teacher Jennifer Bailey lectures on a monitor.

“Wow, that’s beautiful,” art teacher Jennifer Bailey exclaims, appreciating the artistic details in a student’s drawing. Even though the student and Bailey, who teaches at Hazelton-Moffit-Braddock (HMB) School District in Hazelton, are more than 100 miles apart, their simple exchange hums through hundreds of miles of cable, and zips across school district boundaries, without an iota of delay.

The student and teacher interact through ITV, or interactive television, a distance learning network wired for speed that serves several schools in KEM Electric Cooperative’s service territory.

Bailey relies on the speed of technology to expose students to the splashes of Picasso or the lines of Frank Lloyd Wright.

Art and technology merge on the interactive highway established by the Great Western Network and eight other ITV consortiums across the state that connect schools and students to offer more curriculum choices. The Central Dakota Telecommunications Consortium also serves schools in KEM Electric Cooperative’s service territory.

The high-speed foundation is furnished by the state’s telephone companies and Dakota Carrier Network provides the pipeline for

video, Internet and other applications to each school.

The state’s nine ITV consortiums operate independently, but students can cross boundaries to take an ITV class from anywhere in the state. Each member school helps fund its consortium and has a representative on the consortium’s governing board. Each school that provides teachers receives payment from the consortium and pays for students enrolled in ITV classes.

Forty-two schools in the Great Western Network offer approximately 70 classes to more than 1,200 students. About 10 different classes are

“It gives us opportunities that our kids wouldn’t have otherwise, but it’s not for everyone. It’s for the learner who is self-disciplined.”

– Darnell Schmidt, Steele-Dawson High School principal

taught each hour on the network.

“It’s nice for the small schools,” says Great Western Network Director Bill Strasser. “It’s tough to tell a kid, ‘We don’t have anything else to offer.’ This really helps.”

“It allows students to take courses that a school of our size would not be able to offer,” agrees Brandt Dick, the superintendent at HMB and Underwood who also teaches college algebra on the ITV network. “It really helps round out the curriculum where we really can’t afford a full-time teacher or find a part-time teacher.”

ITV courses range from foreign languages to anatomy to art and also include college-level classes. College credits can be transferred to any college when the student enrolls. HMB students, for example, could graduate from high school with 13 college credits attained through the ITV network.

Dick’s first-semester college algebra class included 22 students, with one student in HMB. Five other schools joined him each morning, “from A to Z,” he says, including Ashley, Munich,

New Salem, Underwood and Zeeland.

The dual-duty superintendent is also able to teach from any site, allowing him flexibility, too.

“I teach it from wherever I’m at,” he says, which has ranged from Hazelton, Underwood, New Salem and even the Bismarck State College campus. Because he rotates classrooms, he notices with a chuckle that students focus on the monitor even when he’s teaching live.

As Bailey leads a discussion on art concepts from her HMB classroom, students across the miles can see her and the information she’s presenting on monitors in their classrooms.

Cameras aimed at the teacher and students in each classroom show those images on TV screens in each school’s classroom, so every classroom can see each other as well as the teacher. High-definition monitors allow several classrooms to appear on one screen, and offers better pictures and sound.

So, Bailey can view each student’s artwork when the student holds the art in front of their classroom’s camera. She teaches four hours of ITV art

classes each day to 40 students at 12 sites.

When a classtime’s reserved bandwidth ends, the screen goes blank, then automatically switches to show the classrooms which will be linked for the next session. As students enter the ITV classrooms in their school, they either have a live teacher or a teacher appearing on a monitor from another school. A facilitator at each school routes emailed assignments, monitors tests and prepares supplies. Common calendars and common bell schedules allow the network to function, with juggling to account for two time zones.

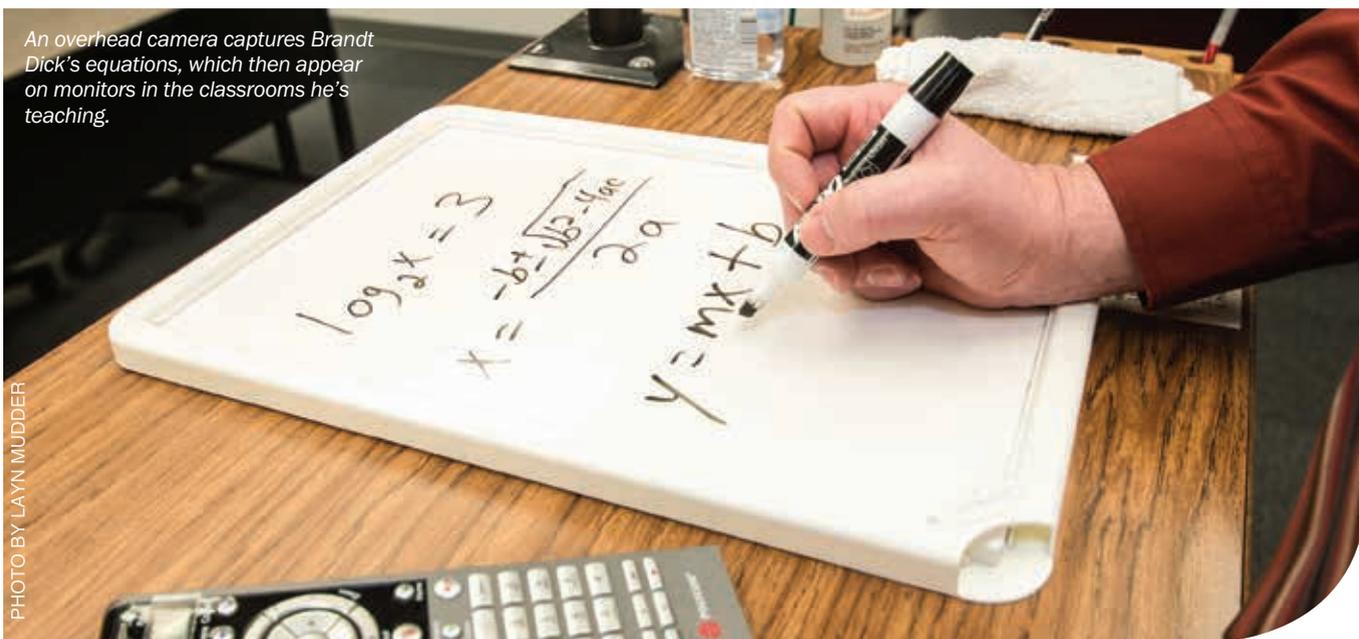
HMB offers Spanish, sign language, agriculture and college-level classes through the ITV network. Neighboring Kidder County School District in Steele and Tappen uses the networks to offer eight classes, including Spanish, criminal law, sociology, psychology and sports marketing, with two ITV classrooms at each of the Steele and Tappen sites.

“It gives us opportunities that our kids wouldn’t have otherwise,” says Darnell Schmidt, Steele-Dawson High School principal. “But it’s not for everyone. It’s for the learner who is self-disciplined.”

Through ITV, students blossom in art classes they may not have been able to explore otherwise or can explore college careers while still in

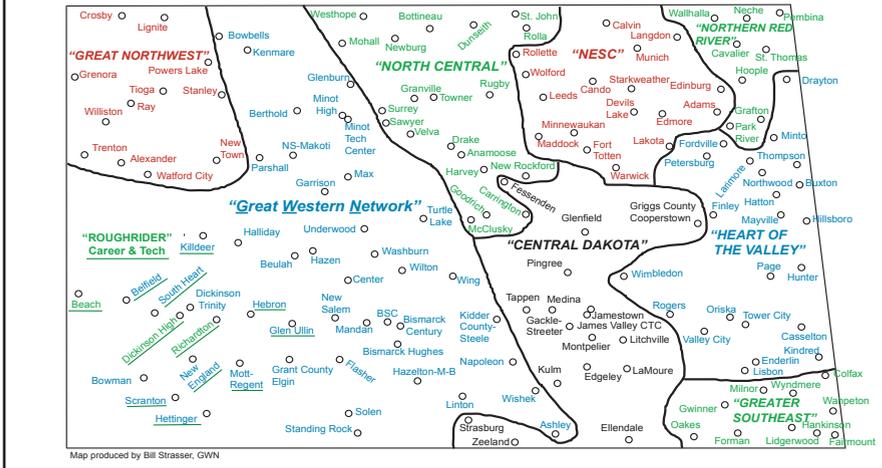
An overhead camera captures Brandt Dick’s equations, which then appear on monitors in the classrooms he’s teaching.

PHOTO BY LAYN MUDDER



KEM ELECTRIC

K-12 Video Distance Learning in North Dakota - December, 2012



Nine ITV consortiums across the state connect schools and students to offer more curriculum choices.

high school.

“They have to be able to push themselves to learn in a way that prepares them for college. It gets them ready for college courses,” Dick agrees. Most students who graduate from HMB will probably have taken at least one ITV class, he says.

ITV classes are also videotaped, so students who are absent from school can watch the tape online and return without having missed a lecture, Dick says.

The Great Western Network, which was North Dakota’s first ITV consortium, offers ITV by leasing

fiber optic cable from surrounding local telephone cooperatives, including SRT Communications, BEK Communications Cooperative, West River Telecommunications Cooperative and Reservation Telephone Cooperative. Midcontinent Communications also provides a portion of the fiber optic network for the consortium.

While technology and art have found common ground on the ITV network, Bailey misses the human factor of being able to show a student a technique hands-on. But she is still able to teach drawing, sculpture and fiber arts through ITV.

“It provides opportunities for student to take classes that they wouldn’t normally get because of lack of funding or lack of student numbers or a lack of teachers. That’s the biggest advantage. It provides something that they wouldn’t normally get,” she says. ■

DEADLINE IS NEARING!

KEM ELECTRIC OFFERS SCHOLARSHIPS

Your electric cooperative wants to help. Current or college-bound students looking for money to defray tuition costs should contact KEM Electric Cooperative.

Once again, KEM Electric will award \$1,000 and \$500 in college assistance to area students whose parents are members of the cooperative. The scholarships are for the 2013-2014 academic year.

The \$1,000 award is part of the Rural Electric Cooperative Scholarship Program developed and funded by KEM Electric’s power supply partner, Basin Electric Power Cooperative.

To demonstrate our Touchstone Energy® commitment to the youth in our community, each of the 124 member cooperatives of Basin Electric awards a scholarship to a dependent of a consumer. That means one student whose parents are KEM Electric members is assured to win a \$1,000 scholarship.

KEM Electric also provides funding for another scholarship, so a second cooperative member’s dependent is also assured to win a \$500 scholarship. A single student may not receive both scholarships.

The awards are designed to encourage and recognize the academic achievements of the children of KEM Electric Cooperative members.

“KEM Electric is honored to offer these scholarships to our area students,” said Co-Manager Chris Baumgartner. “Some of the state’s brightest and best students reside in our service territory. Higher education is expensive and we want to do everything we can to allow those kids to pursue their dreams.”

The scholarships must be used for educational costs and

applicants must be enrolled in or entering higher education in the fall of the school year for which the scholarship is given. Applicants must be U.S. citizens, dependents of cooperative members, and be enrolled (or planning to) at a full-time undergraduate or graduate course of study at an accredited two-year or four-year college, university or vocational/technical school.

HOW TO APPLY

Recipients are selected based on academic record, SAT/ACT scores, potential to succeed, leadership/participation in school and community activities, achievement, educational honors and work experience. Additionally, applications require a personal statement of career goals/aspirations and a written recommendation from a high school or college counselor, advisor, instructor or a work supervisor who knows the student well.

Applications have been distributed to area schools or you may request one from the cooperative. Additional information and a printable application are available from KEM Electric’s web site (www.kemelectric.com) under the “Community” section.

Completed applications must be received by the cooperative no later than Feb. 8. Applications can be brought to the KEM Electric office or mailed to KEM Electric Cooperative, P.O. Box 790, Linton, ND 58552.

For questions on the scholarships or process, call the cooperative at 701-254-4666 or 800-472-2673. ■

You ask, we answer

As your local electric cooperative, we're asked a variety of questions about saving energy - from A to Z. Here are just a few of the most common questions and information to help cut energy costs.

Q After home heating and cooling, what is the second largest area of energy consumption in the home, and how can I cut energy use in that area?

A Water heating is the next largest home energy cost after heating and cooling. There are four ways to reduce water heating bills: use less hot water; turn down the thermostat on your water heater; insulate your water heater; or buy a new, more efficient model.

The best way to reduce water heating energy use is to ensure your water heater's thermostat is set to 120 degrees.

Improvements such as installing low-flow faucets and shower heads, and insulating hot water pipes will also help you save money on water heating.

Finally, if the water heater needs to be replaced (water heaters typically last 10 to 15 years), choose an energy-efficient model with an Energy Star rating. Another option for replacing your water heater is to install a heat pump water heater, which typically uses 50 percent less electricity to heat water than conventional electric water heaters.

Q When doing laundry, I dry my clothes on a clothes line instead of in the dryer. How much am I saving by not using a dryer, and how does this savings compare to washing my laundry in only cold water?

A Using a clothes line instead of a dryer will save a lot of energy. The Environmental Protection Agency's Energy Star website indicates the average family does about 300 loads of laundry per year, so hanging clothes on a clothes line will save you about \$40-\$45 per year if you own an electric dryer.

Water heating consumes about 90 percent of the energy it takes to operate a clothes washer. Switching your temperature setting from hot to warm can cut energy use in half, and using cold water reduces energy use even more.

Explore more ways to save energy at www.togetherwesave.com.

Q Are incandescent light bulbs really being phased out?

A Beginning in 2012, common light bulbs sold in the United States typically used about 25 percent to 80 percent less energy. Many bulbs meet these new standards, including energy-saving incandescents, CFLs and LEDs, and are available for purchase. The newer bulbs provide a wide range of choices in color and brightness, and many of them last much longer than traditional light bulbs. The lighting standards, which phase in from 2012-2014, do not ban incandescent or any specific bulb type; they require that bulbs need to use about 25 percent less energy. The bipartisan Energy Independence and Security Act of 2007 established these efficiency standards.

As of Jan. 1, 2012, traditional, inefficient 100-watt incandescent light bulbs did not meet the standards and are no longer available at most stores.

Similar standards will phase in for other types of light bulbs over the next three years. Traditional 75-watt incandescent light bulbs are no longer available as of Jan. 1, 2013. Traditional 40-watt and 60-watt incandescent light bulbs will no longer be available as of Jan. 1, 2014.

The new energy-saving light bulbs – incandescents, CFLs and LEDs – could save you about \$50 per year when you replace 15 traditional incandescent bulbs in your home.

You'll save about \$6 in energy costs each year if you replace one traditional 100-watt incandescent with an Energy Star CFL.

What to do in a power outage

KEM Electric Cooperative strives to provide you with reliable, uninterrupted service every day of the year. While your electric cooperative uses sound engineering practices and preventative maintenance, it is impossible to completely protect the distribution system from nature's wrath. Sometimes Mother Nature creates unavoidable power outages. KEM Electric wants you to remain safe during severe winter weather, so consider preparing now for the possibility of power outages this winter. Follow these important steps if an outage does occur:

1

Confirm the outage. Check your own fuses and circuit breakers first.

2

Check with a neighbor to confirm if he or she is also experiencing an outage before you call the cooperative. This will help your cooperative determine the extent of the outage.

3

Call the cooperative. If the outage is widespread, the phone lines may be busy, but keep trying. Keep KEM Electric's numbers on or near your telephone: (701) 254-4666 or (800) 472-2673.

The customer service representative may ask for the following information:

- Meter number
- Correct spelling of the name on your account
- Telephone number for the account and a callback number
- Time the electricity went out

4

Turn off major appliances. To prevent an overload on the system while power is being

restored, take these steps:

- Turn off every inside light except one. Leave a light switch on so you know when electric service has been restored.
- Turn down your thermostat.
- If the outage lasts more than 60 minutes, turn off your electric water heater.
- Make sure your kitchen range is off, both the surface and the oven.
- Turn off all unnecessary appliances and unplug sensitive electronic equipment.
- When power comes back on, slowly switch your appliances and lights back on and gradually return your thermostat to its normal setting.

5

Be patient. Once you or your neighbor have reported an outage, please do not continue to call for information about when the power will be restored. Crews will work quickly to restore your power as soon as possible. If the outage is widespread, use a battery-operated radio to monitor the situation.



What happens during a power outage?

Restoring your electricity after a storm involves much more than just flipping a switch at a substation or pulling a tree off a downed power line. If KEM Electric Cooperative's distribution system is affected by a severe storm, listed below are the steps your cooperative's line crews follow to restore your electricity. At each step, the primary goal is getting the greatest number of member-owners back in service in the shortest time possible, safely.

- **Check the substations**
Your cooperative has several distribution substations that serve hundreds of member-owners. When a major outage takes place, these substations are checked first to see if the problem is in the transmission lines that feed the substation or in the substation's equipment.
- **Check the distribution lines**
If the problem cannot be isolated at the local distribution substation, the next step is to check the distribution lines that carry electricity from the substation to member-owners' location.
- **Check the supply lines**
Line crews work on outages that are more isolated or localized by inspecting the distribution lines that carry electricity to utility poles outside member-owner homes, farms and businesses.

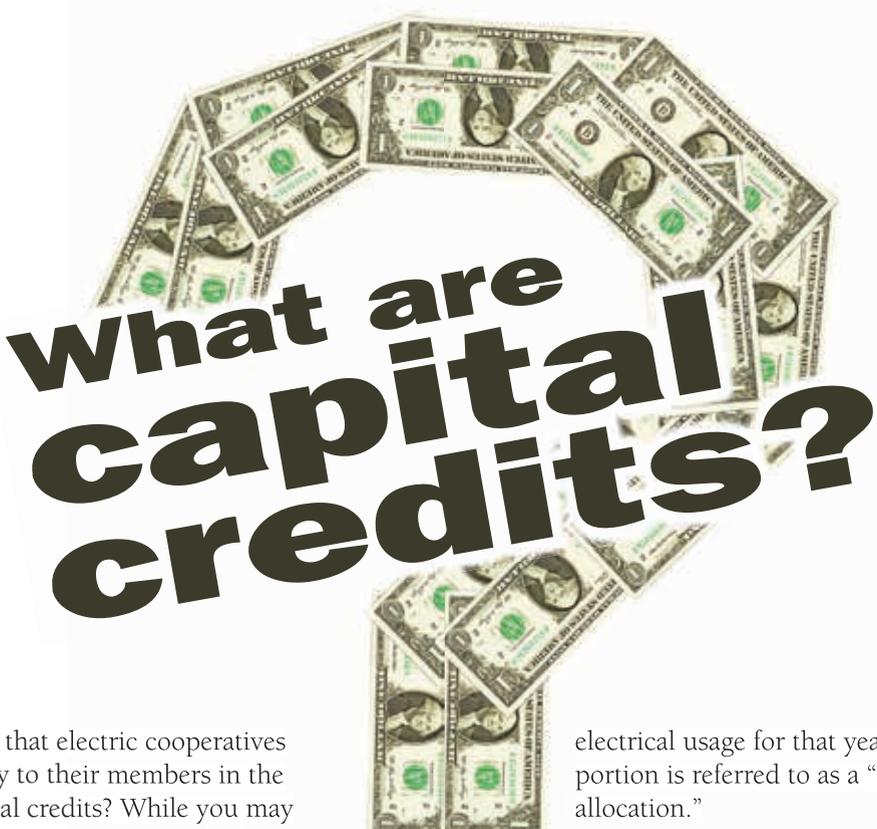
USE PORTABLE GENERATORS SAFELY

During an unexpected power outage, a portable generator can keep us comfortable until power is restored. But if not operated properly, a generator can quickly become dangerous.

What's the first rule? Never, ever use a generator indoors – even with windows open – or in an enclosed area, including an attached garage. Carbon monoxide, which is odorless and invisible, can build up to lethal levels in a matter of minutes.

To avoid risk of shock, use your generator only on a dry surface where rain or snow can't leak or puddle underneath.

You also need to protect folks working to restore power. Never plug your portable generator into a wall outlet in your home. This produces "backfeeding" – a dangerous risk to the safety of lineworkers because it can energize power lines thought to be dead. For stationary generators that are permanently installed, a licensed electrician will need to install a "transfer switch" that complies with the National Electric Code. The switch safely cuts the electricity to the power lines. And be sure to call KEM Electric Cooperative before you install a generator to ensure safety for yourself and lineworkers.



What are capital credits?

Did you know that electric cooperatives return money to their members in the form of capital credits? While you may like receiving those capital credit checks from your local cooperative, you may not be sure exactly why you get them. It's simple, really.

Capital credits reflect each member's ownership in the cooperative. Electric cooperatives do not earn profits. Instead, any margins or remaining revenue after all expenses have been paid are returned to the cooperative's members in proportion to their electrical usage.

How are capital credits returned to you, the member?

Step 1: Allocation

An allocation determines your share of the cooperative's margin in a particular year. Margins are "allocated" or assigned to members who belong to the cooperative during the year in which a margin is generated. The allocation is based on the member's proportion of

electrical usage for that year. Each member's portion is referred to as a "capital credit allocation."

Step 2: Retirement

Once capital credits are allocated, they are retained by the co-op for a certain time. Capital credits are the most significant source of equity for the cooperative. Equity is used to help meet the expenses of the co-op, such as paying for new equipment to serve members and repaying debt. Capital credits help keep rates at an affordable level by reducing the amount of funds that must be borrowed to grow and maintain a cooperative's existing electric system.

Upon completion of the rotation period, the board of directors will review the cooperative's financial health and can declare a retirement (your cash payment), and a portion of your capital credits are returned to you.

If you have questions about capital credits, contact your local electric cooperative. ■

It's a co-op principle!

The allocation of capital credits is exemplified in one of the seven principles that guide all cooperatives.

The principle states:

Members' economic participation – Members contribute equitably to, and

democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members

allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

KEM Electric Cooperative Board meeting highlights

Dec. 21, 2012

- Reviewed report from the voucher review committee
- Approved the special equipment

summary and work order inventory for October and work order inventory close-out on substation work

- Approved the 2013 operational budget
- Approved the retirement of four capital credit estates

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Call KEM Electric Cooperative
(701) 254-4666
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**Report outages to the following
toll-free number: 800-472-2673**

Hazleton, Linton and Strasburg exchanges'
phone number: 701-254-4666

OFFICE HOURS:

Monday through Friday,
8 a.m. to 4:30 p.m.

Website: kemelectric.com

Email address: kem@kemelectric.com

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