

# City discusses alternative energy policy

By Travis Gulbrandson  
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Two city employees have asked the Vermillion City Council to adopt a policy regarding distributed generation situations.

The installation of solar panels by a Vermillion resident was what brought the issue to the attention of the city, and what led Jason Anderson, assistant city engineer, and Mark Koller, superintendent of electricity, to ask the council to adopt the Missouri River Distributed Generation Workbook as its official policy.

The workbook was designed by the Missouri River Energy Service (MRES) and DGR Engineering in 2010.

"We'd like to bring it on the (April 21) meeting for adoption, and at that time we'd also like to adopt a resolution that sets a fee to connect these systems," Anderson said during a special meeting April 7. "That fee would cover the expenses for labor and materials."

"Distributed generation" is a term used to describe on-site electricity generation that is tied to the city's system, but typically comes from renewable energy sources, such as solar panels.

"This impacts us because the customer will be ... (installing) a system, and they will buy less power from us," Anderson said. "They'll buy it to offset or eliminate their power purchases, and then the excess that's created they will try to sell back to us."

"What this means is, we need policies in place on how to handle these situations," he said.

The city is federally mandated to provide power to qualifying facilities, and then buy back that facility's excess power at non-discriminatory rates, Anderson said.

The power would not be re-purchased at retail rates, but rather at a voided cost.

Anderson said it would be "probably slightly more than 2.7 cents" per kilowatt hour.

MRES will be responsible for reimbursing the cost to the city after the city reimburses the customer, he added.

The amount of power used by the facility itself is determined by a special meter.

"The meter needs to register two numbers, the inflow of electricity that we'll provide them at a cost, and the outflow of electricity that we must buy back from them in the

event that they have an excess supply," Anderson said.

"It's a reactive meter compared to the normal meters that we have, so the cost for them is quite high," Koller added. "I don't have it off the top of my head, but I think they're around \$500 ... and the normal meter's under \$50, so it's a lot higher expense for that."

That \$500 also doesn't take into account the cost of installing the meter, Koller said.

Council member Kelsey Collier-Wise suggested that if there is a concern about costs if more people take on distributed generation, perhaps other citizens would be willing to invest "a few extra dollars" in it and show their support of renewable resources.

"I think that's something that people who may not personally want to go through putting up solar panels might be willing to invest in to help keep some of those costs down," she said.

On the whole, not many Vermillion residents have expressed interest in renewable energy, Koller said.

He said he has received "four or five" requests about alternative energy in as many years.

"Usually when they come in and talk to me about it and I tell them the steps that they have to do, they usually back out because of the cost," he said.

Koller said there is "not a big incentive" for alternative energy in South Dakota, as compared to some other states.

"Our rates aren't 25 to 50 cents a kilowatt hour," he said. "That's probably one of the biggest things. If you take a look at California, where (there's) 25 cents per kilowatt hour off peak and you're talking 50 cents per kilowatt hour on peak, it's a lot easier to justify solar or wind power. Here we're a little over nine cents."

Anderson said local use of alternative energy will probably be slow-growing.

"I think this customer wants his own power source and is not terribly concerned about saving money. It's more about being off the grid," Anderson said.

Slow-growing or not, Koller said the decreasing costs of solar panels probably will encourage more people to utilize them.

"It's coming," he said. "I can see it."

The council did not take any action on the matter.

# High flows increase sediment in Missouri River

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According to the US Army Corps of Engineers, sediment management is the surest way to extend the life of Lewis & Clark Lake and the benefits provided by the Gavins Point Dam and reservoir.

However, sediment is being carried into the system from the Niobrara River at a high rate, due in part to flooding.

Tim Cowman, director of the Missouri River Institute, discussed the phenomenon and its impacts at the annual MRI Research Symposium, which was held Thursday, April 10, at USD.

Half of the sediment in the delta comes from the Niobrara River, Cowman said.

"The delta migrated downstream at an average rate of 400 feet per year from 1978 to 2012," he said.

"However, the flows in the river system greatly impact the delta. The high flows of 1997 and 2011 each pushed the delta forward about 4,800 feet.

"So basically, those high flow years were pushing it at a rate about 10 times the normal rate," he said.

Cowman said the Lewis & Clark Lake reservoir has lost about 26 percent of its capacity so far, and that groundwater levels are expected to increase an average of seven feet in the next 50 years.

This could affect the surrounding towns, as groundwater increases were what led to the relocation of Niobrara in the mid-1970s, Cowman said.

Physical solutions like dredging and piping to move sediment below the dam are now being investigated, and Cowman took part in a study that investigated sedimentation in the

Niobrara River delta region.

The delta consists of two primary channels – one in South Dakota and one in Nebraska – and many smaller channels.

Cowman said the primary channels are "typically several hundred meters wide, and we found depths ranging from 15-25 feet in there, and there's a pretty good current."

By comparison, the smaller channels are 10-15 meters wide on average, and much more shallow – only one two four feet deep.

"There's not much water moving through them," Cowman said. "When you're in them, you can't even tell there's a current in these channels."

The area downstream of Springfield saw a big buildup in sediment from the 1990s onward, due in part to flooding and high flows, he said.

"What happened in the flood of 2011 was that because we had such high levels of water going through Gavins Point Dam was that, basically, the delta sediments got pushed further up into the wake. So even though a lot of it still is invisible ... it's now much shallower," he said.

Areas that were once 10 feet deep are now only two or three feet deep.

"Fifty years from now, (the Niobrara delta will) be passed the Bon Homme Colony, working its way into Lewis & Clark Lake," Cowman said. "One hundred years from now, it'll be approaching the Gavins Point area. Much of the lake will be filled with sediment at this point. Then, 150 years from now, the sediment basically will be all the way to Gavins Point Dam. Lewis & Clark Lake will not be a reservoir, but will be a wetland by that time."

The increased amount of sediment in the delta also is affecting plantlife.

Cowman said phragmites, a common reed grass, can be found "pretty much everywhere."

"This is an invasive species, and it pretty much covers the vast majority of the delta area," he said. "It not only is a very dense type of vegetation, but it's also very tall."

Phragmites can "easily" reach eight or nine feet, he said.

Not only that, they spread quickly.

"We were initially out there in 2012, and a lot of vegetation had been killed during the 2011 flood, or new sand deposits had been put in place without vegetation," Cowman said. "We would see (areas) where you would have an older stand of phragmites in the background, and then you would see the newer columns of phragmites starting to take over these sandbars."

Phragmites spread through both above-ground and below-ground routes, he said.

"The above-ground routes are stolons," Cowman said. "The thing that was impressive about them was that they were very long. The literature says that stolons can extend up to 70 feet out of the phragmites colony, and then about every 18 inches a new plant would come out of these roots."

During the two- to three-month interim between visits to the delta, the research team found areas that had been sandbars were now completely covered with phragmites.

Cowman said it was like being in a science fiction film.

"You could just feel these things growing around you," he said.

For more information on the Missouri River Institute, visit <http://www.usd.edu/missouri-river-institute/index.cfm>.

## OBITUARIES

### David Jensen

Memorial services for David A. Jensen, age 60, were 10:30 a.m. Saturday, April 12, 2014, at Brockhaus Funeral Home in Creighton, NE, with Reverend Jeff Lorig officiating.

David died Wednesday, April 9, 2014, at Avera Sacred Heart Hospital in Yankton.

David A. Jensen, son of Alfred and Marguerite (Connick) Jensen, was born Oct. 6, 1953, at Bloomfield, NE. David attended Bloomfield Elementary and graduated from Bloomfield High School.

David was employed as a maintenance man at South Dakota State University for more than 30 years. During this time, he met many famous people: Dallas "J.R.," Larry Hagman; Kids Corner's Canyon Kid; and played pool with the Minnesota Fats. After retiring from South Dakota State University, David's health started to fail and he moved to the Avera Creighton Care Centre in 2012.

David is survived by his brother, Robert (Donna

Jensen of Creighton, NE; as well as nieces, nephews, aunts, and cousins.

He was preceded in death by his parents, Alfred and Marguerite; brother, Howard; and sister, Mary Nesladek.

### Ellen Jacobson

Ellen Claire Jacobson, daughter of John and Julia (Rommen) Haugum was born Feb. 20, 1935, and passed away April 8, 2014, at the age of 79.

Ellen attended Vermillion school and graduated from Vermillion High School in 1953. On Oct. 30, 1955, Ellen married the love of her life, Duane Jacobson, from there they raised their four children – Julie, John, Jay and Jill. In 1966, Ellen began her career in the medical field where she worked for 40 years until her retirement in 2005 due to health reasons. Ellen enjoyed spending time with her three grandchildren – Jeremy, Bridget, Jennifer and her great-grandchildren – Cody, Emma, Aubree and new baby Hansen on the way.

Ellen was a member of the Eagles Auxiliary and

Rebekahs. Ellen especially loved spending time with friends chatting over coffee.

She is survived by her daughters, Julie Jacobson, Jill (Pat) Baran; and son, John (Barb) Jacobson; grandchildren, Jeremy (Gretchen) Richardson, Bridget Jacobson (Martin Finzen), Jennifer (Brook) Hansen; step-grandchildren, Melissa (Booker) Bell, Christopher (Val) Baran, Alex (Crissy) Baran; and great-grandchildren, Cody Gregg, Emma Finzen, Aubree and new baby Hansen.

Ellen was preceded in death by her parents; son, Jay (1980); and husband, Duane (1998).

### Joann Willroth

Joann E. Willroth, 80, of Vermillion, passed away Wednesday, April 9, 2014, at the Sanford Vermillion Hospital.

Joann Solberg was born Sept. 16, 1933, in Charter Oak, IA, to William and Elizabeth (Malone) Solberg. She attended grade school in Moorhead, IA, graduating from Dennison High School in

1951. Joann married William Willroth III on Sept. 19, 1953, in Nevada. They moved and made their home in Vermillion in 1963. They owned and operated the Broadcaster Press from 1966 through 1984. She continued working for the Broadcaster until her retirement of 40 years.

She was a member of Vermillion PEO Chapter BV and the United Church of Christ. She enjoyed reading, flowers, knitting and spending time with her grandchildren. Joann was blessed with many friends and acquaintances, who loved her dearly.

She is survived by her husband, William, of Vermillion; a son, William IV, also of Vermillion; a daughter, Susan (Thomas) Johnson of Sioux Falls; a sister, Patricia (Garry) Chapman of Dennison, IA; six grandchildren and four great-grandchildren.

A celebration of life was held at 10:30 a.m. Saturday, April 12, 2014, at the United Church of Christ in Vermillion. [hansenfuneralhome.com](http://hansenfuneralhome.com).

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