Cooperative Demand Response Programs

Ryan Hentges
VP Corporate Services
Minnesota Valley Electric Cooperative
MVEC Overview

- Electric Distribution Cooperative
- 36,000 members
- 900 sq miles
  - Scott, Carver, Dakota, Hennepin, Rice,
  - Le Sueur, Blue Earth, Sibley, Waseca
- 80 Employees
- American Customer Satisfaction Index score of 87
  - Same score as Apple
Wholesale Power

* Wholes Power agreements with
  * Great River Energy
  * Basin Electric
* Billed demand and transmission based upon system peak
* 44% of members participate in load management
  * Cycled Air Conditioning
  * Space Heating
  * Water Heating
* On-site generation (commercial locations)
* Others
New Prague | August 16, 1944

Gentlemen: Perhaps you would be interested in knowing my husband is now somewhere in France having served in the Army for the past twenty-seven months and overseas for two years. I’ve continued to live on the farm since my husband’s entrance into the service and must say that without the electricity it would have been impossible for me to continue on with the farm.
The Objective

Increase member satisfaction

Monetize demand reduction
WiFi Enabled Smart Thermostat
Program Description

* Free Thermostat
  * RadioThermostat using EnergyHub software
  * Will begin offering Honeywell thermostats
* $65 rebate once installed
* 10% discount on kWh usage June through September
* 4 degree bump, up to 4 hours, 5-7 times/month
* 2 degree pre-cool
Member Comments

* Is it working okay?
  * Yeah, I am so loving this. Thanks so much for getting me connected as I have been showing off at work with my new app!
  * I have it all programmed from my iPhone!
* Why its Valuable?
  * Able to control my energy consumption
  * Able to adjust/play with the temperature and schedule to optimize heat/comfort with energy consumption
  * Able to set temperature while away from the house. Example, we were going to the Wisconsin Dells this weekend and I set the thermostat to away where the furnace only ran for 3 hrs. 26 minutes. Then on the way home, I took off the away and the house was warm at the time we arrived home! How cool is that!
  * You can "see" when there are problems as we had the limit switch go bad on our furnace. It ran for 20 hours and 19 hours over the weekend! On Monday I can see right when the repair tech fixed the furnace between 10-11 am.
Load management capability
Total Runtime: 6 hours 32 mins
Unavailable: 3 hours 5 mins [Show]
Indoor Temp: [Hide]
Increase member satisfaction

Monetize demand reduction
MVEC’s Beat the Peak Energy Challenge
The Energy Challenge

1. Energy reduction in a game format
2. $25,000 in cash prizes
3. Members competed as individuals and some banded together as teams:
# Incentives

## Team Prizes

<table>
<thead>
<tr>
<th>Team Size</th>
<th>1st Prize</th>
<th>2nd Prize</th>
<th>3rd Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>$1,000.00</td>
<td>$500.00</td>
<td>$250.00</td>
</tr>
<tr>
<td>11-25</td>
<td>$2,500.00</td>
<td>$1,000.00</td>
<td>$500.00</td>
</tr>
<tr>
<td>Over 25</td>
<td>$7,500.00</td>
<td>$3,000.00</td>
<td>$1,500.00</td>
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</tbody>
</table>

Total Team Prizes = $17,750.00

## Individual Prizes

<table>
<thead>
<tr>
<th></th>
<th>June</th>
<th>July</th>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>$500.00</td>
<td>$500.00</td>
<td>$500.00</td>
</tr>
<tr>
<td>2nd</td>
<td>$250.00</td>
<td>$250.00</td>
<td>$250.00</td>
</tr>
<tr>
<td>3rd</td>
<td>$100.00</td>
<td>$100.00</td>
<td>$100.00</td>
</tr>
</tbody>
</table>

Total Individual Prizes = $2,550
The Energy Challenge

1. Focused on reducing 5 p.m. to 9 p.m.

2. Members decided how they would reduce

Survey says...
MVEC asked “What are you doing to save during Beat the Peak reduction days?”

- 96% limit the use of electric appliances
- 85% turn off unnecessary lights, appliances or electronics
- 78% use shades or blinds on their windows
- 64% delay using hot water heater
- 62% increase their A/C thermostat by 4 degrees
- 58% participate in Energy Wise program(s)
- 49% use their ceiling fan to circulate cool air
How we communicated

Participants could choose:
• Email
• Phone call
• Text message

Messages were sent day before and day of the reduction event
It's time to Beat the Peak!

Today is another Beat the Peak Reduction Day. We're asking all participants to reduce as much electric use as possible between 5 p.m. and 9 p.m.

Just one more evening this week!
We know it isn't easy to reduce electricity three evenings in a row, but it looks like a cool down is on its way.

Yesterday, 3.4 MW of electricity was saved during the four-hour reduction period. This is the same amount of horsepower to keep five NASCAR race cars going full throttle for four hours. It was the same amount of energy used by MVEC's entire Elysian Substation for those four hours. For each hour, it saved approximately 900 pounds of coal.

Heads Up!

We just wanted to let you know that tomorrow (Monday, Aug. 26th) will likely be a Beat the Peak Reduction Day, currently scheduled from 5:00 p.m. to 9:00 p.m. Watch for an email from us tomorrow confirming the specific Beat the Peak Energy Reduction times.

Snap a pic for chance at hotel stay!

Don't forget about our Beat the Peak photo contest!

Everyone who submits a photo of the best, funniest or most memorable way their family Beats the Peak will be entered into a drawing for a one-night stay at the Country Inn & Suites of Chanhassen.

The deadline to enter the photo with a descriptive caption is Monday, Sept. 2, 2013. Send it to beatthepeak@mvec.net.

(By submitting a photo, you are giving MVEC permission to use it in future Beat the Peak promotions and communications.)
MVEC anticipates a Beat the Peak reduction day tomorrow from 4:00 pm to 8:00 pm. Confirmation will follow tomorrow.

Aug 26, 2013, 12:02 PM

Today is a Beat the Peak reduction day event day. Please use as little electricity as possible between 5:00 and 9:00 today. For tips, visit [www.mvec.net](http://www.mvec.net)

Aug 27, 2013, 12:02 PM

Today is a Beat the Peak reduction event day. Please use as little electricity as possible between 5:00 and 9:00 today. For tips, visit [www.mvec.net](http://www.mvec.net)

Auto phone calls sent day before and day of the event
MN Valley Electric @MVEC_

24 Jun
Ready? Beat the Peak from 5 p.m. until 9 p.m. today. Save energy and win - for yourself and your team! mvec.net

Expand

MN Valley Electric @MVEC_

26 Jun
It's a three-peat! Beat the Peak Reduction Day from 5-9 p.m. tonight. Prizes include $100 gift cards and a night at Country Inn & Suites

Expand

MN Valley Electric @MVEC_

16 Jul
Yep. It's a Beat the Peak kind of day. Plan now how you will save electricity between 5 and 9 p.m. for prizes - and a lower bill.

Expand

MN Valley Electric @MVEC_

17 Jul
Great work last night! Over 3.7 megawatts saved for Beat the Peak. Enough to power a small town for 4 hours. mvec.net/challenge

Expand
Ready to Beat the Peak tonight? Get outside, go downstairs, take in a movie - whatever it takes to stay cool and save on your electric use between 5 and 9 p.m. this evening. Remember, some fabulous prizes are at stake for those who go the distance each evening this week!

Minnesota Valley Electric Cooperative

Reta Lind

Head to Henderson for the Classic Car Roll-In from 6-9 pm 😊

July 16 at 12:00pm via mobile • Like • 1

Minnesota Valley Electric Cooperative

Great idea!

July 16 at 12:02pm • Like

Beat the Peak Energy Challenge

Minnesota Valley Electric Cooperative

Are you ready? The first energy reduction period for the Beat the Peak Energy Challenge is today! Cut back on electric use from 5 p.m. until 9 p.m. and see how much electricity you can save. This is the first chance to begin earning cash prizes... See More

MVEC’s Beat the Peak Energy Challenge

www.mvec.net

MVEC’s Beat the Peak Energy Challenge is a free and easy way to earn cash prizes (over $20,000 in total) – either for yourself, a favorite charity, or organization – while you manage energy use and lower your monthly bill.
Fun ways we explained MWh reduction

Corndogs and kilowatts
What's the connection?
According to a smart guy on our engineering staff, kilowatt units can be compared with calories. He said the 3.4 MWh saved during last night's conservation efforts is equivalent to going to the State Fair and eating 4,000 corndogs each second for four hours. Aren't you glad you just saved some electricity last night instead!
“Our 3 kids are so excited about Beat the Peak that sometimes the littlest one ends up in tears because he is not fast enough to beat his siblings to the switch to shut it off. They are also excited because it usually means we get to go to the lake and swim.”
“It is pretty amazing that this “contest” has driven so many people to take part – and save lots of energy. Imagine what could happen with a much larger participation rate.”
Member comments

(and photo contest entries)

“My kids are so into this they even unplugged my alarm clock. Thanks for doing this. We were talking about this tonight and we think this is a brilliant program. Thanks for being a coop that cares about all of us!”
July 21st - Beat the Peak Event
Hourly kWh usage from 20 accounts

Total Hourly Electric Usage from Top 20 Finishers

July 21 - Beat the Peak Day

July 6th - Non Beat the Peak Day
Beat the Peak Energy Challenge

Increase member satisfaction

Monetize demand reduction
Thank You

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