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Scott Abraham, NNPPD



Case Study for Northeast Nebraska Public Power District

## NE Nebraska Power Reduces Irrigator Load and Peak Hours Over 50% with TextPower Messaging Services

### **Business situation**

During the summer months (June through September), Northeast Nebraska Public Power District (NNPPD) is faced with a particular challenge from its irrigation customers. Though only numbering 550 of the 8,500 customers, these big system irrigators drive over 50% of the District's total power consumption during the summer months. NE Nebraska Power needed to shed load during certain times when the cost of purchased power would be at higher rates. Since the irrigators controlled their own irrigation pivots, NE Nebraska Power needed a mechanism to allow them to reduce the load from these big irrigator customers during those days and times when the cost of purchased power was the highest.

### **Solution**

Working with TextPower, Inc., NE Nebraska Power was able to develop an alert system that integrated TextPower's text messaging software (through its SOAP interface) with NNPPD's internal IT operations to notify irrigator customers in real time when the load periods

and curtailment would be on each given day. NNPPD would send a text message to its opted-in irrigators that they would be "in load" for certain hours. A message might go out first thing in the morning that they would be in load from 10am to 7pm that day, and then another message might be sent at 9:30am changing the load time to 1pm to 7pm.

Since the message is being sent via text messaging (SMS), the irrigators would get the message immediately on their mobile phone, even if they were in the field and away from a computer. In this way, they were able to turn off the irrigation pivots prior to the time that the high cost load periods would go into effect, saving themselves quite a bit of money on their electric bill. Likewise, NE Nebraska Power was able to curtail usage and not purchase as much power during those high-cost load periods. In fact, according to Scott Abraham, NE Nebraska Power's systems manager, *"As we came up to the time of load, the load graph went way down. We regularly measured a reduced load of over 50% during these high-cost load periods following notification to our irrigator customers!"*

## Benefits

In the 4 months of summer, NNPPD reduced kWh billed at premium "Red Day" rates by 64% in 2009 after implementing text and email alerts. Not only was the cost savings huge, but the impact on the customer experience is extremely positive. While many other power districts exert direct load control over their irrigators, NE Nebraska Power is the only one in the state that puts the control in the hands of the customer. This provides improved customer service and gives the customer an option of paying a very high price to run their power consumption at the normal level, or curtail usage during those "peak load" periods and thus save themselves significant costs.

*"We are extremely happy with the curtailment results we experienced using TextPower's messaging services this past summer. We look forward to continuing the TextPower program in future years,"* said NNPPD's Abraham.

With the capabilities of TextPower's text messaging service, a utility is able to integrate their internal IT capabilities with interval meters and effect significant load curtailment in real time. One does this by giving customers incentives to react to curtailment alerts within a very short timeframe, such as offering reduced rates if one reduces consumption by at least 25% in the next 30 minutes. Even in cases where the utility has direct load control, an immediate text message to the customer that they will be experiencing curtailment during certain hours greatly improves the customer experience and allows the customers to prepare for the curtailment in an orderly fashion.

## Mission-Critical Levels of Service

*"The choice of TextPower was in part driven by its 'Mission Critical' level of text messaging service because these messages were calls to action that are critical to be received immediately",* explained NNPPD's Scott Abraham. *"We could not afford to have messages blocked or delayed since that would have defeated the whole program. While others just send courtesy notices after the fact, we relied on TextPower to get the messages through in order to meet our curtailment and load management objectives."*



## Company profiles

**Northeast Nebraska Public Power District (NNPPD)** was formed in 1998 as a result of the consolidation of two smaller power districts: The Wayne County Public Power District and the Northeast Nebraska Rural Public Power District. In 2000 the NNPPD assumed responsibility for serving 14 Villages and Towns with electric service.

In 2009, NNPPD purchased some 282 million kWh of electricity to service approximately 8,500 retail electric customers in Pierce, Thurston, Wayne, Dixon and Dakota Counties in Nebraska. The District operates about 3,000 miles of electric lines and over 100 miles of high voltage transmission lines.

**TextPower, Inc.** provides a library of software and transmission gateway services for creative use of text messaging services to generate revenues, lower costs and increase brand loyalty through the use of automated functions connecting them with users of cell phones.

These one or two-way services take the form of:

- alerts
- database query-and-response systems
- field service personnel call distribution
- real-time updates (scores, traffic info, breaking news)
- emergency real-time notifications
- voting/polling
- marketing messages
- coupons

The code is stress-tested, robust and reliable. TextPower currently connects directly with more than 90 cellular carriers around the world and handles millions of messages in a month.

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