

Northern States Power Company

Motors and Drives

To the credit of Northern States Power and its focus on the promotion of energy-efficient motors and drives, the utility has recently been invited to Washington, D.C. to attend the signing of a new U.S. Department of Energy, Environmental Protection Agency, industry, and utility compact called the "Motors Challenge." Four utilities have been invited to attend the signing and to participate in the kick-off of this new public/private sector partnership to promote the efficient use of energy in drivepower systems.

Northern States Power has been offering its commercial and industrial customers energy-efficient motor rebates since 1986 and expanded its program to encompass rebates for energy-efficient adjustable speed drives in 1992. At the same time, it increased its rebates for motors to ramp up participation and boost energy savings.

One of the features of NSP's program is that it provides its customers with a two-tiered rebate schedule. Smaller per horsepower rebates are offered for motors in new applications to reflect the marginal costs of high efficiency motors, while larger rebates are offered for the replacement of standard efficiency motors in existing applications. In addition to providing rebates, NSP offers its customers free motor testing to demonstrate the potentials for energy-efficient motors. Vendors of energy-efficient motors are also provided with rebates and are treated specially, as NSP considers its trade allies very important to the success of the program.

For adjustable speed drives, NSP offers several rebate levels based on the size of the drive. The highest per horsepower rebates are offered for smaller applications, while the per horsepower rebate is reduced for larger applications.

NSP has also taken direct steps to overcome one of the classic problems with moving customers to the use of energy efficient motors: many motors are embedded in pieces of equipment, such as compressors and fans. As such, NSP offers rebates to its customers for motors in "OEM or original equipment manufacturer" applications. Thus customers will put pressure on OEM manufacturers by specifying energy efficient motors in these applications.

Another attractive aspect of NSP's Motors and Drives program design is that purchases of energy-efficient equipment can be financed through NSP's Energy Financing program. While used almost exclusively for lighting installations to date, NSP disbursed close to \$11 million in low-interest loans for energy-efficient equipment to its commercial and industrial customers in 1992. The intent of the financing program is to facilitate participation in DSM programs by removing the up-front financial barrier of purchasing conservation measures. Customers pay back their loans on their NSP bill, using a mechanism similar to an energy service charge.

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NORTHERN STATES POWER COMPANY Motors and Drives

Sector: Commercial and industrial

Measures: High-efficiency motors and adjustable speed drives

Mechanism: Rebates for installation of energy-efficient motors and ASDs. Two tiered rebate schedule for motors, rebates for ASDs on sliding scale based on horsepower

History: Motors component began in 1986; ASD component began in 1992

1993 YTD Program Data

Energy savings:	6.6 GWh
Lifecycle energy savings:	131.7 GWh
Capacity savings:	1.6 MW
Cost:	\$895,100

Cumulative Data (1986 - 1993 YTD)

Energy savings:	70.6 GWh
Lifecycle energy savings:	498.5 GWh
Capacity savings:	5.2 MW
Cost:	\$2,630,700

The Results Center produced 126 profiles of the most successful energy efficiency and renewable energy programs in the United States and around the world in the early and mid 1990s. With the support of the John D. and Catherine T. MacArthur Foundation, Ted Flanigan directed a research team at Colorado-based IRT Environment to produce and distribute these exceptional examples. Thanks to strong demand for solid case studies, The Results Center was supported by dozens of major utilities and energy associations worldwide. Today, The Results Center is managed again by Ted Flanigan, now at California-based EcoMotion Incorporated, a firm focused on strategic consulting, information dissemination, program design, outreach services, and aggressive implementation. To nominate highly successful programs, contact: The Results Center, c/o EcoMotion, 15375 Barranca Parkway, F-104, Irvine, CA 92618, (949) 450-7155, or TFlanigan@EcoMotion.us