

Adjustable Speed Drives

Bill Gronwold

Fergus Falls – Energy Management Rep

Adjustable-speed drive rebates

- **Drive Power**
- Adjustable Speed Drives (ASD's)
- Reduce energy up to 50% by installing an ASD to match motor speed requirements of a fluctuating load.
- MN
 - \$60 / HP for nonseasonal centrifugal applications
 - \$40 / HP for seasonal and HVAC centrifugal applications
- SD
 - \$20 / HP for nonseasonal centrifugal applications
 - \$10 / HP for seasonal and HVAC centrifugal applications
- ND
 - No Rebate available



Adjustable-speed drives



Terms and conditions (fine print)



Include copy of all invoices



Program applies to drive installations on motors with centrifugal loads only (pumps and fans). Drives installed on other loads may apply for custom grant incentives.



Installations of drives on motors from 1 to 500 horsepower qualify for rebates. Installations on motors exceeding 500 HP may qualify for grant incentives.



System designer an/or installation contractor must ensure the entire facility complies with the IEEE Standard 519 after completion of the ASD installation or retrofit. Failure to comply may result in disqualification rebate application.



Motors

Aaron Sigette C.E.M.

Crookston– Energy Management Rep

MOTOR REBATES

AVAILABLE TO MN/SD CUSTOMERS ONLY

Rebates

- Totally-enclosed fan-cooled (TEFC)
- Open drip proof (ODP)
- Explosion proof
- Electronically-commutated (ECM)
- Hand dryers

Terms and conditions

Web pages



MOTOR REBATES

Totally enclosed fan-cooled motor rebates

HP	Percent rated efficiency 1200 RPM		Percent rated efficiency 1800 RPM		Percent rated efficiency 3600 RPM		Rebate per motor
	New and replacement of nonoperating motors	Replacement of operating motors	New and replacement of nonoperating motors	Replacement of operating motors	New and replacement of nonoperating motors	Replacement of operating motors	
1	84.0	82.5	86.5	85.5	78.5	77.0	\$40
1.5	88.5	87.5	87.5	86.5	85.5	84.0	\$60
2	89.5	88.5	87.5	86.5	86.5	85.5	\$80
3	90.2	89.5	90.2	89.5	87.5	86.5	\$90
5	90.2	89.5	90.2	89.5	89.5	88.5	\$150
7.5	91.7	91.0	92.4	91.7	90.2	89.5	\$230
10	91.7	91.0	92.4	91.7	91.0	90.2	\$300
15	92.4	91.7	93.0	92.4	91.7	91.0	\$450
20	92.4	91.7	93.6	93.0	91.7	91.0	\$600
25	93.6	93.0	94.1	93.6	92.4	91.7	\$600
30	93.6	93.0	94.1	93.6	92.4	91.7	\$700
40	94.5	94.1	94.5	94.1	93.0	92.4	\$800
50	94.5	94.1	95.0	94.5	93.6	93.0	\$1,000
60	95.0	94.5	95.4	95.0	94.1	93.6	\$1,100
75	95.0	94.5	95.8	95.4	94.1	93.6	\$1,200
100	95.4	95.0	95.8	95.4	94.5	94.1	\$1,600
125	95.4	95.0	95.8	95.4	95.4	95.0	\$2,000
150	96.2	95.8	96.2	95.8	95.4	95.0	\$2,400
200	96.2	95.8	96.5	96.2	95.8	95.4	\$2,800
250	95.8	95.8	96.2	96.2	95.8	95.8	\$3,500
300	95.8	95.8	96.2	96.2	95.8	95.8	\$4,200
350	95.8	95.8	96.2	96.2	95.8	95.8	\$4,200
400	95.8	95.8	96.2	96.2	95.8	95.8	\$5,000
450	95.8	95.8	96.2	96.2	95.8	95.8	\$6,000
500	95.8	95.8	96.2	96.2	95.8	95.8	\$7,000

[Motor efficiency rebates | Otter Tail Power Company \(otpc.com\)](http://otpc.com)

MOTOR REBATES—SD (\$30 TO \$5,000)

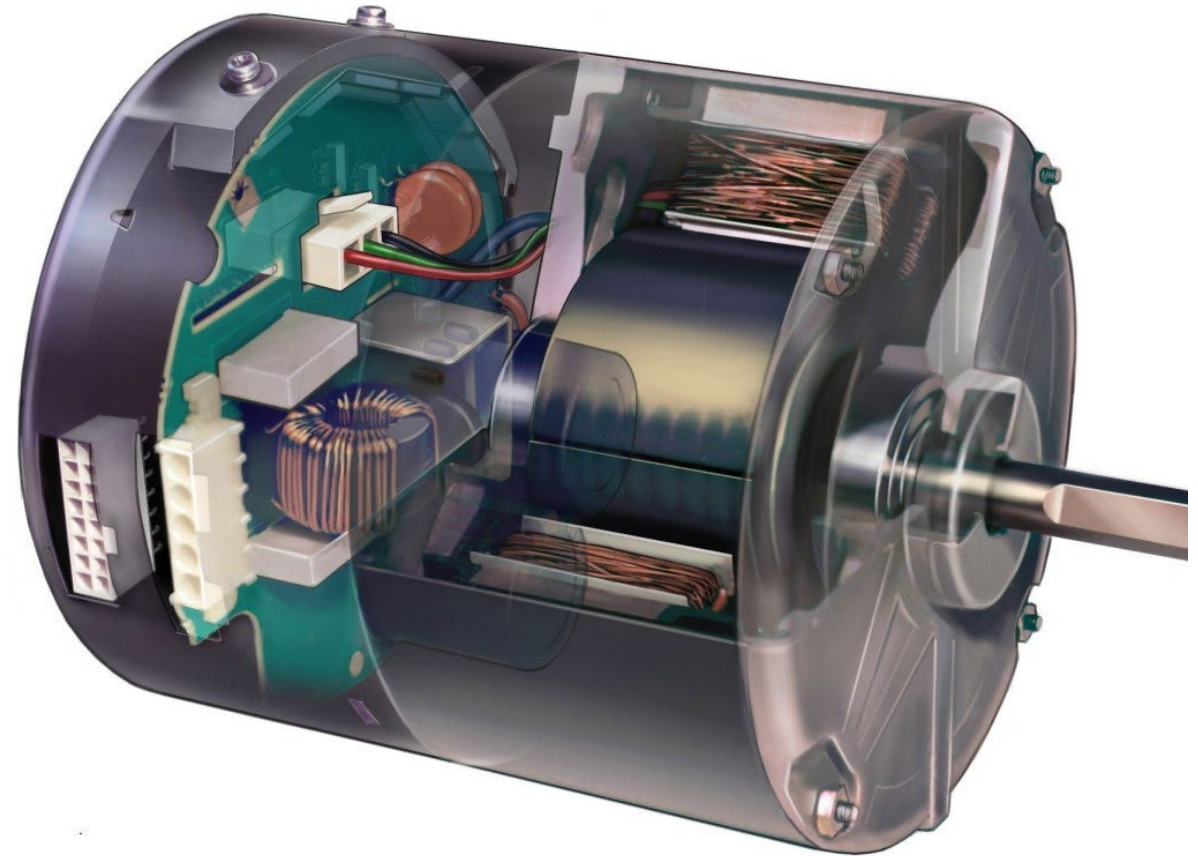
Totally enclosed fan-cooled motor rebates

HP	Percent rated efficiency 1200 RPM		Percent rated efficiency 1800 RPM		Percent rated efficiency 3600 RPM		Rebate per motor
	New and replacement of nonoperating motors	Replacement of operating motors	New and replacement of nonoperating motors	Replacement of operating motors	New and replacement of nonoperating motors	Replacement of operating motors	
1	84.0	82.5	86.5	85.5	78.5	77.0	\$30
1.5	88.5	87.5	87.5	86.5	85.5	84.0	\$45
2	89.5	88.5	87.5	86.5	86.5	85.5	\$60
3	90.2	89.5	90.2	89.5	87.5	86.5	\$70
5	90.2	89.5	90.2	89.5	89.5	88.5	\$125
7.5	91.7	91.0	92.4	91.7	90.2	89.5	\$175
10	91.7	91.0	92.4	91.7	91.0	90.2	\$225
15	92.4	91.7	93.0	92.4	91.7	91.0	\$350
20	92.4	91.7	93.6	93.0	91.7	91.0	\$450
25	93.6	93.0	94.1	93.6	92.4	91.7	\$450
30	93.6	93.0	94.1	93.6	92.4	91.7	\$525
40	94.5	94.1	94.5	94.1	93.0	92.4	\$600
50	94.5	94.1	95.0	94.5	93.6	93.0	\$750
60	95.0	94.5	95.4	95.0	94.1	93.6	\$825
75	95.0	94.5	95.8	95.4	94.1	93.6	\$900
100	95.4	95.0	95.8	95.4	94.5	94.1	\$1,200
125	95.4	95.0	95.8	95.4	95.4	95.0	\$1,500
150	96.2	95.8	96.2	95.8	95.4	95.0	\$1,800
200	96.2	95.8	96.5	96.2	95.8	95.4	\$2,000
250	95.8	95.8	96.2	96.2	95.8	95.8	\$2,500
300	95.8	95.8	96.2	96.2	95.8	95.8	\$3,000
350	95.8	95.8	96.2	96.2	95.8	95.8	\$3,000
400	95.8	95.8	96.2	96.2	95.8	95.8	\$3,500
450	95.8	95.8	96.2	96.2	95.8	95.8	\$4,000
500	95.8	95.8	96.2	96.2	95.8	95.8	\$5,000

[Motor efficiency rebates | Otter Tail Power Company \(otpc.com\)](http://otpc.com)

MOTORS-ECM REBATES

Horsepower	Rebate
.125	\$15
.25	\$30
.33	\$50
.50	\$70
.75	\$100
1.00	\$125
1.50	\$175



MOTOR REBATES-TERMS & CONDITIONS

MOTORS

Our motor rebate program encourages industrial, commercial, and agricultural customers to purchase energy efficient new, replacement, or retrofit motors.

- 2007 EISA legislation set NEMA Premium® as the efficiency standard for 1-horsepower to 200-horsepower totally enclosed fan-cooled (TEFC) and open drip-proof (ODP) motors manufactured after December 2010.
- Motor efficiency **must exceed** NEMA Premium® efficiency to qualify for rebates for new motors and replacement of nonoperating motors.
- TEFC and ODP motors replaced prior to failure **must meet** NEMA Premium® efficiency levels to qualify for rebates.
- Certain qualified motors may have limited availability in the market.



THANK YOU!

