

# Quick Start Programs

## Table of Standard Motor Efficiencies

### Overview

This document contains reference data for estimating demand and energy savings in the Standard Offer Program for energy efficient motors and related measures. For motors installed under the program, the equipment must exceed these minimum efficiency standards. In addition, the minimum efficiencies define the baseline for calculating demand and energy savings. M&V Guideline for constant load motor measures describes the application of these equipment efficiency standards for estimating baseline demand and energy use and measure demand and energy savings.

### Table

The efficiencies of permanently wired, poly-phase motors that are at least one horsepower in size and that are used for fan, pumping, and conveyance applications are defined in Table 1. Table 1 is based on ASHRAE Standard 90.1m-1995. Note, however, that the following motors are exempt from these requirements:

- Motors in appliances;
- Refrigeration compressor motors;
- Multi-speed motors; and
- Motors that are used as components of cooling equipment where the motors are part of the efficiency ratings listed in the Standard Cooling Equipment Tables.

The efficiency values given in Table 1 should be used to determine the equipment baseline. Equipment installed under the Standard Offer Program must be more efficient than the standards shown in order to be eligible for incentives.

**Table 1: Minimum nominal full-load motor efficiency for single speed poly-phase motors**

<b>Motor</b>	<b>Horsepower</b>	<b>2-Pole</b>	<b>4-Pole</b>	<b>6-Pole</b>	<b>8-Pole</b>
<b>Open</b>	1.0	-	81.5	78.5	72.0
	1.5	81.5	82.5	82.5	74.0
	2.0	82.5	82.5	84.0	84.0
	3.0	82.5	85.5	85.5	85.5
	5.0	84.0	86.5	86.5	86.0
	7.5	86.5	87.5	87.5	87.5
	10.0	87.5	88.5	89.5	88.5
	15.0	88.5	90.2	89.5	88.5
	20.0	89.5	90.2	90.2	89.5
	25.0	90.2	91.0	91.0	89.5
	30.0	90.2	91.7	91.7	90.2
	40.0	91.0	92.4	92.4	90.2
	50.0	91.7	92.4	92.4	91.0
	60.0	92.4	93.0	93.0	91.7
	75.0	92.4	93.6	93.0	93.0
	100.0	92.4	93.6	93.6	93.0
	125.0	93.0	94.1	93.6	93.0
	150.0	93.0	94.5	94.1	93.0
200.0	94.1	94.5	94.1	93.0	
<b>Enclosed</b>	1.0	74.0	81.5	78.5	72.0
	1.5	81.5	82.5	84.0	75.5
	2.0	82.5	82.5	85.5	81.5
	3.0	84.0	86.5	86.5	82.5
	5.0	86.5	86.5	86.5	84.0
	7.5	87.5	88.5	88.5	84.0
	10.0	88.5	88.5	88.5	87.5
	15.0	89.5	90.2	89.5	87.5
	20.0	89.5	90.2	89.5	88.5
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	40.0	91.0	92.4	92.4	90.2
	50.0	91.7	92.4	92.4	91.0
	60.0	92.4	93.0	93.0	91.0
	75.0	92.4	93.6	93.0	92.4
	100.0	93.0	94.1	93.6	92.4
	125.0	94.1	94.1	93.6	93.0
	150.0	94.1	94.5	94.5	93.0
200.0	94.5	94.5	94.5	93.6	