PERMANENT MAGNET SYNCHRONOUS MOTORS: THE NEXT BIG ENERGY SAVINGS OPPORTUNITY FOR COMMERCIAL BUILDINGS

SIGNIFICANT ENERGY SAVINGS POTENTIAL

A DEPARTMENT OF ENERGY "HIGH IMPACT TECHNOLOGY"

Using Q-Sync in HVACR applications "could reduce source energy consumption by as much as one quad or more [annually], with proportional environmental benefits."

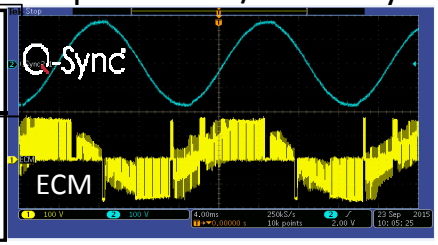
---Dr. Brian Fricke, Oak Ridge National Laboratory (ORNL)

ABOUT Q-SYNC TECHNOLOGY

Q-Sync WHY ARE Q-SYNC MOTORS SUPERIOR TO ECMs?

- No AC to DC power conversions, like in ECM
- High power consuming circuit drops out after reaching synchronous speed; direct AC sustains speed thereafter
- Higher efficiency & power factor; same cost
- More reliable; longer expected life/warranty

Q-Sync Runs in perfect sync with the frequency of the input AC line
Black lines indicate losses in ECMs from synthetically creating a new AC wave on the primary circuit board



QM POWER

www.qmpower.com

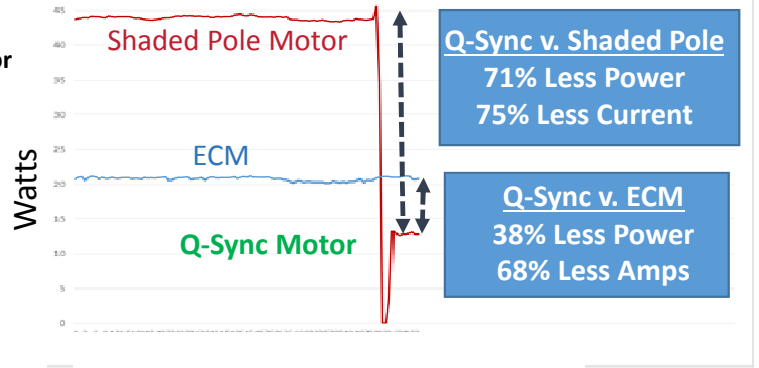
PERFECT FOR NEW REBATE PROGRAMS

- 20-45% Less Power vs. ECMs
- Up to 80% Less Power vs. Shaded Pole
- 40-80% Less Current vs. Incumbent Motors
- Higher Power Factors than ECMs & SP
- Proven Technology with Validated Savings
- Rebates Available, New Programs Coming

SUPERMARKET CASE STUDY

OPEN REFRIGERATED CASE: REALIZED SAVINGS

Q-Sync Motor Energy Savings After Retrofit



Source: Oak Ridge National Laboratory for U.S. Department of Energy