

## **MOTOR SYSTEM EFFICIENCY**

### **1 - Identify the problem or objective**

It is important that at the start of the project the team consult with the people who operate the equipment in order to gain their support. Tasks to be conducted include a review of system documentation and definition of objectives; ie., energy savings or process improvement. Identify whether problems experienced are sporadic or continuous, when they started to appear, and changes to production or plant operation, etc.

### **2 - Gather information**

Produce a line diagram that identifies all components and process loads that place demands on the system. Prepare a detailed description of the system documenting the type of motor system, operational requirements, motor controls and nameplate information. A site inspection will determine whether components are functioning and being operated correctly.

### **3 - Measure system operation**

Prepare a measurement plan that defines what is to be measured and under what conditions. Assess operational needs versus preferences. Compare measured data to design information.

### **4 - Develop technical options**

Develop alternative solutions, calculate savings and estimate cost to implement and determine financial and operational feasibility. Identify technical options to increase system efficiency and meet production needs.

### **5 - Evaluate proposals**

Evaluate the options, including system benefits, opportunities for improvement and recommendations. Involve expertise as required from contractors, suppliers or consultants.

### **6 - Implement the project**

Make the necessary changes and install the equipment. Once the project is installed, verify the savings with measurements and compare actual savings with calculated savings.

### **7 - Communicate**

Communicate progress to management and plant personnel. This will build support for further initiatives.

Reference:

[http://oee.nrcan.gc.ca/infosource/pdfs/M92-165\\_1999E.pdf](http://oee.nrcan.gc.ca/infosource/pdfs/M92-165_1999E.pdf)