

Press Release

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THE USE OF HIGH EFFICIENCY ELECTRIC MOTORS DRIVEN SYSTEMS CAN SAVE 202 BILLION KWH PER YEAR

The European Union can save 202 billion KWH of electricity each year, simply by improving the efficiency of electric motors driven systems used in industry. This is the key finding of a study, published by the European Copper Institute, within the framework of the European Commission's Motor Challenge Program and the 9th session of the United Nations Convention on Climate Change, taking place from December 1st to 12th in Milan. However, strong national Government support will be necessary to realise these huge energy savings.

More than 60% of the electricity consumed throughout European industry is used to power systems driven by electric motors. By improving their energy efficiency, European industry can consume less electricity, thus **avoiding the emissions of 79 million tonnes of CO₂ each year**. This represents more than one quarter of Europe's commitment under the Kyoto Protocol on the reduction of greenhouse gases. Alternate ways to achieve this reduction would be to plant a forest the size of Finland, thus transforming the CO₂ into oxygen, or installing 1.8 billion square metres of solar panels. The annual environmental cost for society is estimated at 6 billion euro.

Europe's environment is not the only beneficiary. The study shows that **industry itself would save between 15 and 20 billion euro per year**. In certain applications, energy savings could reach 50%, through investment in high performance motors and the use of effective control and maintenance systems. Saving 202 billion KWh of electricity each year would avoid the need to build the 30 new power generating stations needed to meet our ever increasing demand for electricity. It is also a way to achieve a 6% reduction in the EU's energy imports.

It is responsibility of national Governments to **support the development of a package of measures**, including regulations (in particular the setting of standards and inspection criteria for industrial installations), financial incentives (tax concessions and investment grants), as well as a publicity campaign to raise awareness. The cost of this is estimated at 400 million euro.

The technologies needed to produce high performance motors already exist and are simple to implement. This is the key thrust of the European Commission's Motor Challenge program. This voluntary initiative is designed to encourage companies to use high performance electric motors driven systems. It is well recognised that increasing the amount of copper in motors, voltage transformers and cables increase their efficiency, thus reducing energy losses by up to 70%. Copper is by far, the best conductor amongst non-precious metals. Other motor system components which benefit from copper's performance include the installation of timers, that shut down facilities during periods of inactivity, the installation of variable speed drives and the replacement of motors that are over-sized for normal use.

The 9th session of the Conference on climate change (COP9) takes place in Milan between December 1st to 12th. It brings together representatives, from 180 different countries, of United Nations agencies, financial institutions, non-governmental environmental agencies and leading energy supply companies.

The European Copper Institute is a joint venture between the International Copper Association, representing the world's copper mining companies, and the European semi-fabricating industry. Its mission is to promote broadly the benefits of copper to European society.

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