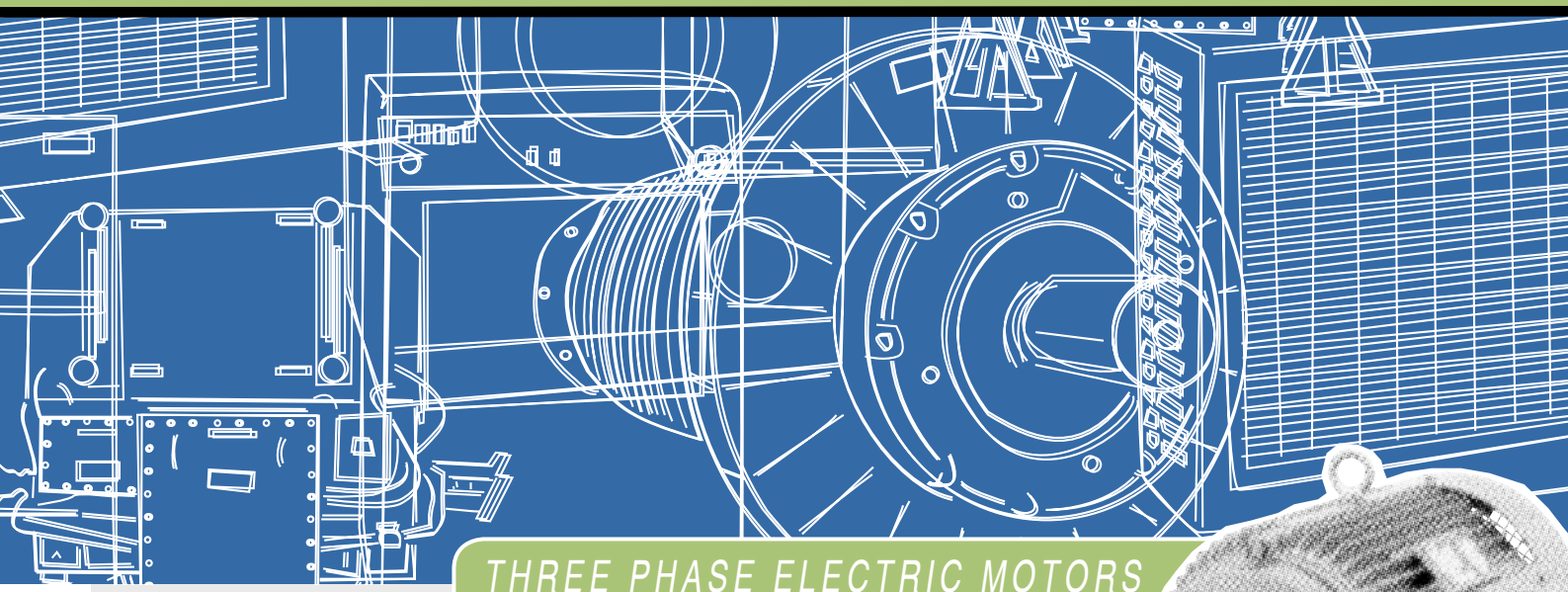
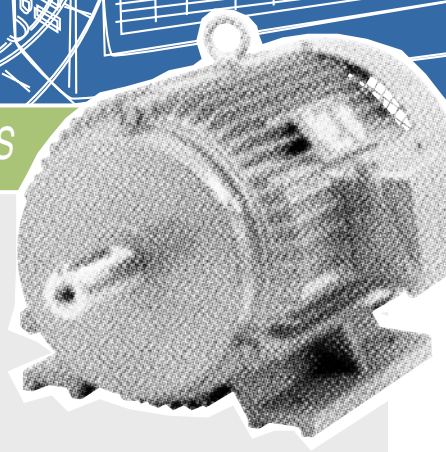
Report No: 2002/15

NATIONAL APPLIANCE AND EQUIPMENT ENERGY EFFICIENCY PROGRAM

Minimum Energy Performance Standards



THREE PHASE ELECTRIC MOTORS



The December 2002 plan of the National Appliance and Equipment Energy Efficiency Program to improve product energy efficiency

AN INITIATIVE OF THE MINISTERIAL COUNCIL ON ENERGY
FORMING PART OF THE NATIONAL GREENHOUSE STRATEGY

Minimum Energy Performance Standards: Electric Motors

OVERVIEW

The National Appliance and Equipment Energy Efficiency Committee (NAEEEC) is collecting information for consideration by the Australian Ministerial Council on Energy (MCE). NAEEEC is exploring the benefit of introducing more stringent minimum energy performance standards (MEPS) for three phase electric motors in the size range 0.73kW to <185kW. In addition, NAEEEC is supporting the industry with a range of complementary voluntary measures and programs.

MEPS is a government regulatory program stipulated in state and territory law that excludes from the market products which do not meet the minimum energy performance levels. NAEEEC comprises energy efficiency officials and regulators that implement the MEPS program in Australia and New Zealand. MCE comprises the Ministers of Energy from each Australian jurisdiction responsible for energy matters.

With the adoption in Australia of the policy to meet world's best regulatory practice, the existing stringency levels for the minimum energy performance standards for three-phase cage induction motors is being reviewed. This plan for Australia represents the first stage of a public process to upgrade the MEPS levels for three phase electric motors. In essence, NAEEEC seeks community and stakeholder comment on proposals to improve the energy efficiency of these products by:

- Mandating more stringent MEPS for three phase electric motors within relevant state and territory legislation commencing 1 January 2006 that match the 1997 USA and Canadian standards, the most stringent proposed in the world at present. In effect the current 2001 "High Efficiency" levels specified in AS/NZS 1359.5 will become the new MEPS levels in 2006 for 2, 4 and 8 pole motors. For 6 pole motors, the MEPS level in 2006 will be somewhat more stringent than the current 2001 "High Efficiency" levels in order to match the USA and Canadian levels;
- Introducing more stringent "High Efficiency" levels for three phase electric motors, based on a reduction in losses of 15% on proposed 2006 MEPS levels;
- Providing software tools to assist industry analyse the benefits from the selection of high efficiency motors; and
- Helping industry to promote and market the best-available three phase electric motors to the Australian marketplace.

PUBLIC COMMENTS INVITED

NAEEEC seeks comment on the proposals contained in this plan from any interested person or organisation. Please address your comments in writing to:

AUSTRALIAN Greenhouse Office

Built Environment Team
Australian Greenhouse Office
GPO Box 621
CANBERRA ACT 2601

Facsimile: (02) 6274 1884
Email: energy.efficiency@greenhouse.gov.au

Comments received by 28 February 2003 will help NAEEEC shape the future program.

INTRODUCTION

Program goals

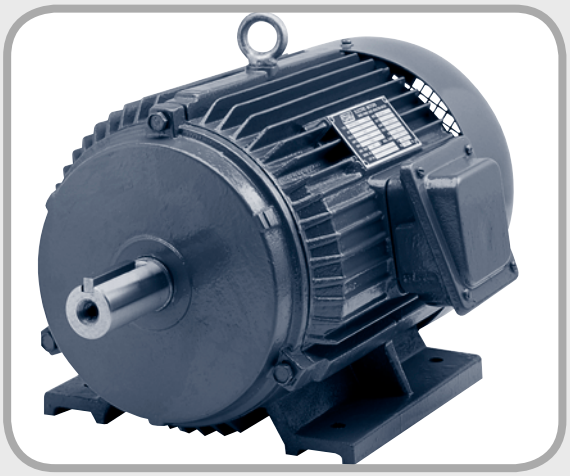
Energy consumed by equipment and appliances is a major source of greenhouse emissions. Codes and performance standards programs are amongst the most effective and widely used measures throughout the world to reduce greenhouse emissions attributable to this source.

The Australian National Appliance and Equipment Energy Efficiency Program (NAEEEP) provides an important stimulus for the development of world-class energy efficient products. Benefits can flow through to the general community in the form of monetary savings from lower operating costs and increased employment levels resulting from Australian industry's ability to exploit potential export markets.

Under the 1998 National Greenhouse Strategy, responsibility for this program rests with MCE. It is committed to improving this national program and has authorised NAEEEC to develop and publish plans for those products targeted for MEPS. These plans represent a transparent way for government agencies to explore community and stakeholder support (for both mandatory and voluntary measures) to reduce greenhouse gas emissions produced by these types of equipment.

NAEEEC examines household appliances and any item of industrial or commercial equipment identified as a significant contributor to the growth in energy demand or greenhouse gas emissions for possible inclusion in the national program. Each product proposed for MEPS or a MEPS revision will be subject to both a feasibility assessment and public consultation before any final decision is made. These assessments will include technical and economic cost-benefit analyses as well as consideration of all supervisory measures available (voluntary, mandatory or a combination of both) to ensure that the most appropriate energy efficiency regime for that specific product is chosen. The NAEEEC work program contains a list of all products scheduled for consideration and is available at the Australian Greenhouse office website. See www.greenhouse.gov.au

This plan for three phase electric motors plays an important role in the MCE process, communicating the potential levels and timetable for regulatory initiatives in general terms. It also demonstrates the extent to which Governments want all stakeholders to participate in the development of policies to meet the challenge of reducing the climatic affects of energy intensive products.



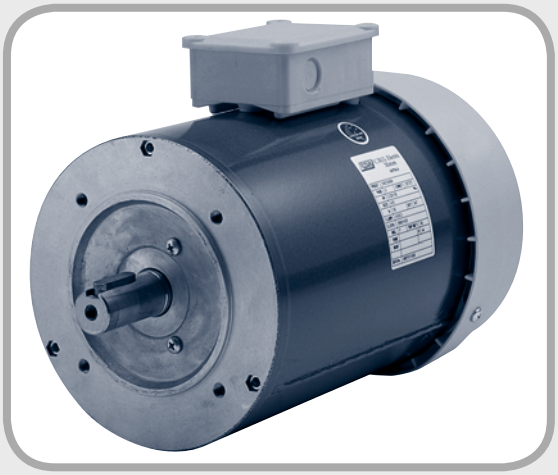
THREE PHASE ELECTRIC MOTORS

In simple terms, MEPS currently applies to three-phase cage induction motors with output ratings from 0.73 kW and up to but not including 185 kW with rated voltages up to 1100 V a.c. This includes a wide range of motors commonly used by the industrial and commercial sectors for applications such as heating, ventilation and air conditioning (HVAC) systems, pumps, mechanical drives and compressors. The scope of motors covered by the revised MEPS levels in 2006 is expected to remain unchanged from those specified for 2001 MEPS.

WHY ARE THREE PHASE ELECTRIC MOTORS BEING CONSIDERED FOR REVISED MEPS?

MEPS already applies to three phase electric motors, which was mandated through nationally consistent state and territory legislation, from October 2001. These initial MEPS for three phase electric motors from 2001 are expected to reduce greenhouse emissions by a cumulative total of 4.0 $MTCO_2$-e over 15 years with a benefit cost ratio of 1.8 and a net present value of total savings $165m (assuming no subsequent MEPS levels were to be implemented).

With the adoption in Australia of the policy to meet world's best regulatory practice, the existing stringency levels for the minimum energy performance standard for three-phase cage induction motors is being reviewed. The revised MEPS proposal outlined in this report will largely align Australian 2006 MEPS levels for motors with the levels that were introduced in the USA and Canada in 1997. Preliminary economic analysis shows that revised 2006 MEPS levels will also result in a favourable benefit cost ratio for the new MEPS levels. A full economic analysis will be undertaken as part of a regulatory impact statement which is required prior to the introduction of new regulations.



WHY AUSTRALIAN GOVERNMENTS ARE CONSIDERING MEPS?

MEPS is a government policy that imposes a faster rate of improvement for energy efficiency of three phase electric motors in Australia than market forces and less interventionist policies might otherwise achieve. MEPS can demonstrably improve the energy efficiency of appliances and equipment, particularly overcoming situations where the purchaser is not responsible for ongoing energy operating costs (so called split incentives). In many large companies there is an operational separation of divisions that are responsible for purchases and those that are responsible for payment of recurrent costs such as energy. This effectively means that “split incentives” can even occur within the one organisation.

Around seventy percent of electricity used in the industrial sector is utilised via electric motor drives. There are significant potential energy efficiency savings to be made in this area. A relatively small portion of those savings, but one that is straightforward to obtain and concrete in nature, results from MEPS applied to the motors themselves.

Many of Australia’s major trading partners now have mandatory MEPS for three phase electric motors including Taiwan, China, USA, Canada, Thailand and soon Malaysia. A number of other regions have voluntary high efficiency programs for three phase electric motors including the European Union and India.

In 2002, NAEEEC commissioned a consultant to examine recent international developments in motor MEPS. In addition, members of NAEEEC also participated in the recent international conference on Energy Efficiency in Motor Driven Systems to discuss the future of motor efficiency programs. This work shows that motor technologies are now mature and the techniques for improving motor efficiency are well documented and understood. There are no dramatic technology changes likely to come out of Europe or North America in the near future. The work also supports the original proposal that the new Australian MEPS levels should match US 1997 levels and European Efficiency level 1. Recent contact with US sources suggest that work is advancing on new “premium efficiency” levels which appear to be the next step to be considered internationally. However, these levels are yet to be finalised.

In general, USA and Canadian MEPS levels implemented in 1997 were considered the basis for MEPS proposed for Australia for three phase electric motors to be introduced in 2006. These were chosen after detailed comparison of testing methods showed that these levels were achievable and that they were the most stringent currently in force or proposed by our major trading partners. These levels are also broadly equivalent to European Efficiency Level 1 for 2 and 4 pole motors and are currently specified as the “High Efficiency” levels in the 2001 standard for 2 and 4 pole motors.

ELEMENTS OF THE PLANNED PROGRAM

Regulatory – MEPS for Three Phase Electric Motors

NAEEEC proposes to increase the stringency of MEPS levels for three phase electric motors within the scope of the joint Australian and New Zealand Standard AS/NZS 1359.5. This standard includes three-phase cage induction motors with output ratings from 0.73 kW and up to but not including 185 kW with rated voltages up to 1100 V a.c. The proposed new MEPS levels are targeted to commence on 1 January 2006.

The current regulations exclude some very specific motors from the scope of MEPS. These are:

- Submersible (sealed) motors specifically designed to operate wholly immersed in a liquid.
- Motors that are integral with, and not separable from, a driven unit.
- Multi-speed motors.
- Motors for use only for short-time duty cycle applications (e.g. those used for hoists, roller doors and cranes) which have a duty type rating of S2 under IEC 60034-12.

The scope of motors covered by the revised MEPS levels in 2006 is expected to remain unchanged from those specified for 2001 MEPS.

Looking at Australian MEPS registrations as at early December 2002, approximately 81.5% of models would not meet the 2006 proposed MEPS levels for motors (ie only 18.5% of registered motors in 2002 could continue to be sold after 2006 if the MEPS levels were implemented). This shows that the proposed MEPS levels will have significant impact in terms of energy savings (by forcing the majority of motors to higher efficiency levels), but also that the levels are achievable, even in terms of today's designs and technologies.

Table 3 provides the proposed 2006 MEPS levels which meet or exceed world best regulatory practice when tested to AS/NZS 1359.102.3 (referred to as Method A in AS/NZS 1359.5). Table 4 provides the proposed 2006 MEPS levels which meet or exceed world best regulatory practice when tested to AS 1359.102.1 (referred to as Method B in AS/NZS 1359.5).[1]

TABLE 1: CURRENT REGISTRATIONS BY MOTOR OUTPUT AND POLES – DECEMBER 2002

Output Range	2 pole	4 pole	6 pole	8 pole	Total
0.73 - 4 kW	219	251	146	78	694
5.5 - 11 kW	124	137	76	38	375
15 - 30 kW	134	142	96	41	413
37 - 75 kW	109	125	86	41	361
90 - 185 kW	93	98	77	42	310
Total	679	753	481	240	2153

TABLE 2: PROPORTION OF CURRENT REGISTRATIONS THAT MEET PROPOSED 2006 MEPS LEVELS (CURRENT HE)

Output Range	2 pole	4 pole	6 pole	8 pole	Total
0.73 - 4 kW	14.2%	9.6%	6.2%	7.7%	10.1%
5.5 - 11 kW	16.1%	12.4%	11.8%	18.4%	14.1%
15 - 30 kW	20.1%	15.5%	24.0%	17.1%	19.1%
37 - 75 kW	28.4%	23.2%	34.9%	12.2%	26.3%
90 – 185 kW	30.1%	29.6%	50.6%	11.9%	32.6%
Total	20.2%	16.1%	22.9%	12.5%	18.5%

1 IEEE 112–1996 Method B is considered to be technically equivalent to AS/NZS 1359.102.3.
IEC 60034-2 and BS 4999.102 are considered to be technically equivalent methods to AS 1359.102.1.
AS/NZS 1359.102.3 is also equivalent to the forthcoming revised IEC standard (IEC61972), which is technically superior to the older style standard IEC60034-2. It is expected that after publication, there will be increasing international harmonisation with the forthcoming IEC61972. One possible option is to allow testing only AS/NZS 1359.102.3 (IEC61972) for MEPS after 2006.

TABLE 3: PROPOSED 2006 MEPS LEVELS FOR THREE PHASE MOTORS – TEST METHOD A (AS/NZS 1359.102.3)

Rated output kW	Minimum efficiency %			
	2 pole	4 pole	6 pole	8 pole
0.73	78.8	80.5	82.5	71.8
0.75	78.8	80.5	82.5	71.8
1.1	80.6	82.2	84.0	74.7
1.5	82.6	83.5	84.9	76.8
2.2	84.1	84.9	86.0	79.4
3	85.3	86.0	87.0	81.3
4	86.3	87.0	87.8	82.8
5.5	87.2	87.9	88.7	84.5
7.5	88.3	88.9	89.5	86.0
11	89.5	89.9	90.4	87.7
15	90.3	90.8	91.1	88.9
18.5	90.8	91.2	91.5	89.7
22	91.2	91.6	92.0	90.2
30	92.0	92.3	92.5	91.2
37	92.5	92.8	93.0	91.8
45	92.9	93.1	93.5	92.4
55	93.2	93.5	93.8	92.9
75	93.9	94.0	94.2	93.7
90	94.2	94.4	94.5	94.1
110	94.5	94.7	94.9	94.5
132	94.8	94.9	95.0	94.8
150	95.0	95.2	95.1	95.2
<185	95.0	95.2	95.1	95.2

NOTES:

1 For intermediate values of rated output, the efficiency shall be determined by linear interpolation.

2 Tolerances specified in Table 1.1 of AS/NZS1359.5 are applicable to the above values only in the case of a verification test.

TABLE 4: PROPOSED 2006 MEPS LEVELS FOR THREE PHASE MOTORS – TEST METHOD B (AS 1359.102.1)

Rated output kW	Minimum efficiency %			
	2 pole	4 pole	6 pole	8 pole
0.73	80.5	82.2	83.7	73.5
0.75	80.5	82.2	83.7	73.5
1.1	82.2	83.8	85.1	76.3
1.5	84.1	85.0	86.0	78.4
2.2	85.6	86.4	87.1	80.9
3	86.7	87.4	88.0	82.7
4	87.6	88.3	88.8	84.2
5.5	88.5	89.2	89.6	85.8
7.5	89.5	90.1	90.4	87.2
11	90.6	91.0	91.3	88.8
15	91.3	91.8	91.9	90.0
18.5	91.8	92.2	92.3	90.7
22	92.2	92.6	92.7	91.2
30	92.9	93.2	93.2	92.1
37	93.3	93.6	93.7	92.7
45	93.7	93.9	94.1	93.2
55	94.0	94.2	94.5	93.7
75	94.6	94.7	94.8	94.4
90	94.8	95.0	95.1	94.7
110	95.1	95.3	95.4	95.1
132	95.4	95.5	95.5	95.4
150	95.5	95.7	95.5	95.7
<185	95.5	95.7	95.5	95.7

Notes:

For intermediate values of rated output, the efficiency shall be determined by linear interpolation.

Tolerances specified in Table 1.1 of AS/NZS1359.5 are applicable to the above values only in the case of a verification test.

Development of 2006 MEPS levels for 6 pole motors

For 2, 4 and 8 pole motors, the proposed 2006 MEPS levels in Table 3 and Table 4 are equal to the "high efficiency" levels specified in AS/NZS 1359.5-2001. These are broadly equivalent to USA and Canadian 1997 MEPS levels and European Efficiency 1 levels for 2 and 4 pole motors. Australian 2001 MEPS and high efficiency levels for 8 pole motors were set using a statistical market analysis of motors available in 1997.

For 6 pole motors, the high efficiency levels specified in AS/NZS 1359.5-2001 were found to be considerably weaker than the USA and Canadian MEPS levels introduced in 1997. In order to match USA and Canadian levels, which is now a policy goal adopted by the Ministerial Council on Energy, a new Australian 2006 MEPS level has been developed for 6 pole motors which is broadly equivalent. These are listed in Table 5 and illustrated in Figure 1. Note that the USA and Canadian MEPS levels are not a smooth curve because they are derived by analysis of motors available on the market at a particular time rather than the development of optimised designs for each size and configuration. A smooth curve that approximates the USA levels has been developed for use in Australia. For smaller motor, the increase in efficiency above the 2001 "high efficiency" levels for MEPS 2006 is significant, while for larger motors the levels are more comparable with the 2001 high efficiency level. These are illustrated in Figure 2.

TABLE 5: VARIOUS MEPS AND HIGH EFFICIENCY LEVELS FOR 6 POLE ELECTRIC MOTORS

Motor rated output kW	Austrralia 2001 MEPS	Australia 2001 HE	Australia 2006 MEPS proposed	USA/Can 1997 MEPS open	USA/Can 1997 MEPS closed
0.75	70.7	76	82.5	80	80
1.1	73.6	78.3	84.0	84	85.5
1.5	75.7	79.9	84.9	85.5	85.5
2.2	78.1	81.9	86.0	86.5	87.5
3	79.9	83.5	87.0	86.5	87.5
4	81.6	84.7	87.8	87.5	87.5
5.5	83.3	86.1	88.7	88.5	89.5
7.5	84.7	87.3	89.5	90.2	89.5
11	86.4	88.7	90.4	90.2	90.2
15	87.7	89.6	91.1	91	90.2
18.5	88.6	90.3	91.5	91.7	91.7
22	89.1	90.8	92.0	92.4	91.7
30	90.2	91.6	92.5	93	93
37	90.8	92.2	93.0	93	93
45	91.5	92.7	93.5	93.6	93.6
55	92	93.1	93.8	93.6	93.6
75	92.8	93.7	94.2	94.1	94.1
90	93.2	94.2	94.5	94.1	94.1
110	93.7	94.5	94.9	94.5	95
132	94.1	94.8	95.0	94.5	95
150	94.4	95.1	95.1	94.5	95

FIGURE 1: USA AND CANADIAN 1997 MEPS LEVELS FOR 6 POLE MOTORS AND PROPOSED 2006 MEPS FOR AUSTRALIA

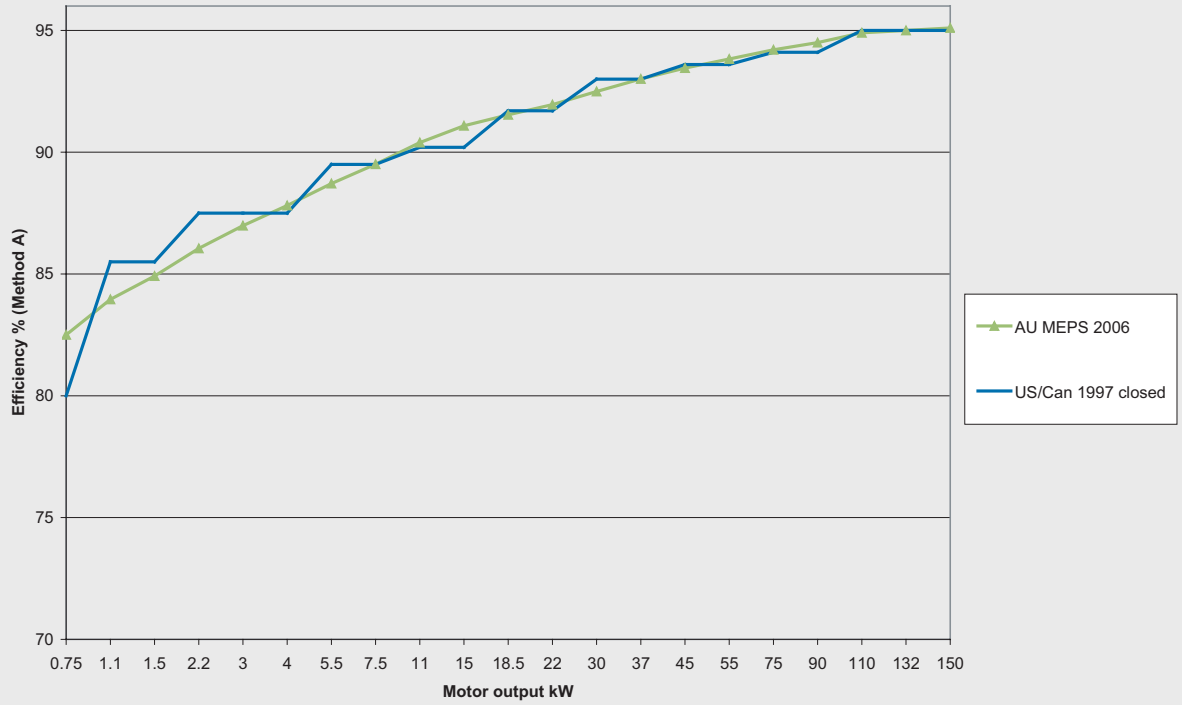
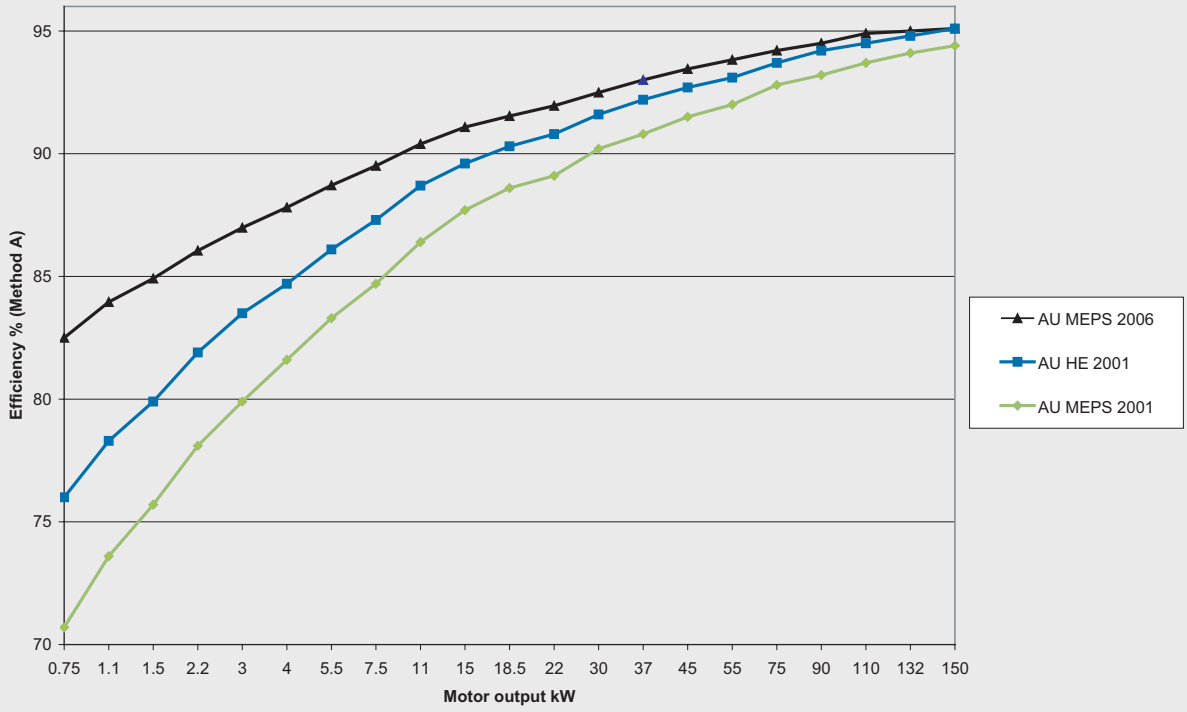


FIGURE 2: AUSTRALIAN MEPS AND HIGH EFFICIENCY 2001 WITH PROPOSED 2006 MEPS – 6 POLE MOTORS



Voluntary Measures

The Department of Industry, Tourism and Resources has in place several assistance programs to voluntarily encourage the use and promotion of high efficiency three phase electric motors. NAEEEC wants to explore whether suppliers are interested in other voluntary programs that can identify "high efficiency" products and reduce greenhouse gas emissions.

NAEEEC is currently working with industry trade and professional stakeholder organisations to develop projects that support their members addressing the challenge of MEPS. Although not intended to be exhaustive, some of the options already implemented or being considered include:

- Definition of "High Efficiency" motors as part of the regulatory standard AS/NZS 1359.5 (see below for more details).
- Provision of database search via the internet for product information by efficiency, size and speed.
- Support for the Motor Solutions Online web site and database to assist with motor selection and optimisation of motor systems. This is currently operated by the Department of Industry, Tourism and Resources. See www.industry.gov.au/motors/ for more details.
- Codes of practice and conduct for motor suppliers to encourage accurate disclosure of information.
- Possible web base directory of accredited professionals and companies with expertise or products supporting energy efficient electric motor systems.
- Provision of training and assistance to industry in the testing and measurement of motors and motor system energy performance.
- Development of best practice programs in conjunction with industry groups to encourage energy efficiency in electric motors and motor systems.

High Efficiency Motors

AS/NZS 1359.5 has always defined efficiency levels for "high efficiency" motors. This means that the use of the term "high efficiency" is restricted (by regulation) to those motors that meet or exceed the minimum efficiency levels specified in the standard. The term "high efficiency" effectively becomes regulated to have a common definition.

Under the MEPS proposal for 2006, the current "high efficiency" levels specified in 2001 become the new MEPS levels in 2006. A new "high efficiency" level has been defined, based on a 15% reduction in losses compared to the new MEPS level for 2006. The levels are set out in the following tables.

The future "high efficiency" levels are a counterpart to USA "premium efficiency" levels. However, since the USA levels are nominal efficiencies, with minimum efficiencies being somewhat lower, they cannot be considered as equivalent.

At this time NAEEEC believes that a step function for a 15% reduction in loss is a better option than adoption of the USA high efficiency levels, which are still under consideration. In normal circumstances NAEEEC would recommend the use of USA levels as the new high efficiency levels but only if those levels are based on sound technical analysis. NAEEEC will work with the Australian based industry to determine the best way forward for a new high efficiency benchmark, but at this stage the 15% loss reduction appears to be the most promising. The government is seeking specific stakeholder feedback on this issue.

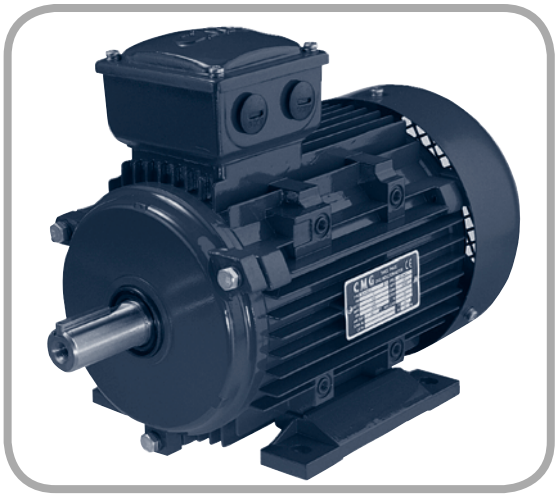


TABLE 6: PROPOSED 2006 HIGH EFFICIENCY LEVELS FOR THREE PHASE MOTORS – TEST METHOD A (AS/NZS 1359.102.3)

Rated output kW	Minimum efficiency %			
	2 pole	4 pole	6 pole	8 pole
0.73	81.4	82.9	84.7	75.0
0.75	81.4	82.9	84.7	75.0
1.1	83.0	84.5	86.0	77.6
1.5	84.8	85.6	86.9	79.6
2.2	86.2	86.9	87.9	81.9
3	87.2	87.8	88.7	83.6
4	88.1	88.7	89.4	85.0
5.5	88.9	89.5	90.2	86.5
7.5	89.9	90.4	90.9	87.8
11	90.9	91.3	91.7	89.3
15	91.6	92.1	92.3	90.4
18.5	92.1	92.4	92.7	91.1
22	92.4	92.8	93.1	91.5
30	93.1	93.4	93.5	92.4
37	93.6	93.8	94.0	92.9
45	93.9	94.1	94.4	93.5
55	94.2	94.4	94.7	93.9
75	94.8	94.9	95.0	94.6
90	95.0	95.2	95.3	94.9
110	95.3	95.5	95.6	95.3
132	95.5	95.6	95.7	95.5
150	95.7	95.9	95.8	95.9
<185	95.7	95.9	95.8	95.9

NOTES:

1 For intermediate values of rated output, the efficiency shall be determined by linear interpolation.

2 Tolerances specified in Table 1.1 of AS/NZS1359.5 are applicable to the above values only in the case of a verification test.

TABLE 7: PROPOSED 2006 HIGH EFFICIENCY LEVELS FOR THREE PHASE MOTORS – TEST METHOD B (AS 1359.102.1)

Rated output kW	Minimum efficiency %			
	2 pole	4 pole	6 pole	8 pole
0.73	82.9	84.5	85.8	76.5
0.75	82.9	84.5	85.8	76.5
1.1	84.5	85.9	87.0	79.1
1.5	86.2	87.0	87.9	81.0
2.2	87.5	88.2	88.8	83.3
3	88.5	89.1	89.6	84.9
4	89.3	89.9	90.3	86.2
5.5	90.1	90.7	91.1	87.7
7.5	90.9	91.5	91.8	88.9
11	91.9	92.2	92.5	90.3
15	92.5	92.9	93.0	91.4
18.5	92.9	93.3	93.4	92.0
22	93.3	93.6	93.7	92.4
30	93.9	94.2	94.2	93.2
37	94.2	94.5	94.6	93.7
45	94.6	94.8	94.9	94.2
55	94.9	95.0	95.2	94.6
75	95.4	95.5	95.5	95.2
90	95.5	95.7	95.8	95.5
110	95.8	96.0	96.1	95.8
132	96.1	96.1	96.2	96.1
150	96.1	96.3	96.2	96.3
<185	96.1	96.3	96.2	96.3

NOTES:

1 For intermediate values of rated output, the efficiency shall be determined by linear interpolation.

2 Tolerances specified in Table 1.1 of AS/NZS1359.5 are applicable to the above values only in the case of a verification test

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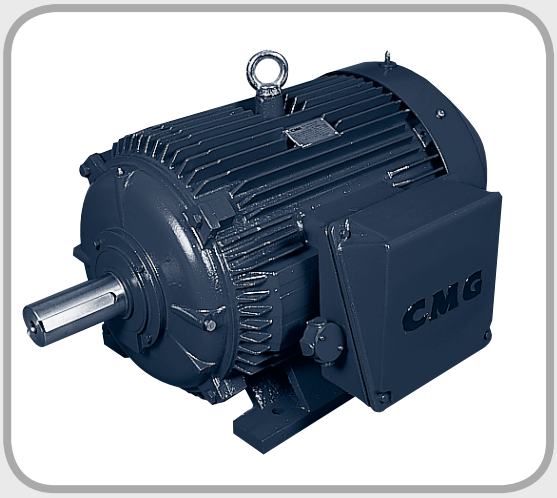
GREENHOUSE REDUCTION POTENTIAL

Preliminary estimates suggest that the motor MEPS levels proposed for 2006 will result in greenhouse gas savings of more than 20 kt per year of CO_2-e with a successively larger cumulative impact in subsequent years. Cumulative savings from the proposed 2006 MEPS levels over 10 years are estimated to be 1.1 Mt CO_2-e. The estimated greenhouse and energy reductions are modelled on the basis of industry standard lifetimes and annual operating hours for various motor sizes. Sensitivity analyses have shown that these savings are relatively robust under a range of conditions. While these savings are not as great as those predicted for the 2001 MEPS levels, they are still significant.



ECONOMIC IMPLICATIONS

Many countries now have mandatory MEPS in force for three phase electric motors. Some of these countries supply three phase electric motors to the Australian market and have (or will soon have) MEPS that are just as stringent as those proposed in Australia for 2006. Given the long notice period, Australian suppliers should have ample opportunity to source suitably complying units for sale in Australia. The full cost benefit implications of the proposed MEPS levels will be examined in the Regulatory Impact Statement. However, preliminary analysis suggests a benefit cost ratio of 2.1 for the proposed 2006 MEPS levels, which is a benefit/cost ratio which is comparable with (or even slightly better than) the introduction of MEPS for electric motors in 2001.

Consultants to NAEEEC believe that Australia risks becoming a market where international suppliers can “dump” their least efficient products if Australia does not match the MEPS levels of its major trading partners.

TIMETABLE AND IMPLEMENTATION

NAEEEC proposes to recommend to MCE the following target timeframe for the introduction of MEPS, giving industry an appropriate period of notice to undertake any necessary modifications to production procedures. This proposed timeframe can be modified to take into account specific circumstances that may arise from stakeholder feedback:

1. DEVELOPMENT STAGE	TIMETABLE
Following the publication of the desk-top review (the full report is available upon request) of the energy impacts of mandatory and / or voluntary measures, the following steps will occur: • A steering committee will work to refine the initial MEPS proposals. • Cost/benefit analysis of potential legislative options. • Industry and stakeholder consultation on potential legislative proposals. • Development of joint Australian and New Zealand Standards for inclusion in regulations. • Ministerial approval required before introduction of any new regulations.	Commenced from April 2002 and completed by December 2003
2. NOTIFICATION STAGE Period of notification will depend on the level of manufacture undertaken in Australia. Longer periods would apply if Australian industry required to undertake substantial development or re-tooling	The Australian standard will be published by July 2003 containing the MEPS levels and the MEPS will come into effect from 1 January 2006
3. DURATION STAGE This is the 'stability period' in which no changes to regulations are made (ie MEPS levels unchanged).	Commenced from January 2006 and scheduled for reconsideration by not earlier than January 2010

In addition to commenting on this paper, stakeholders will have further opportunities to comment throughout the process. For example, Standards Australia seeks public views when circulating discussion drafts of the Standard and when the draft regulatory impact statement is being prepared stakeholders will also have an opportunity to comment on the detailed cost benefit studies and the draft regulation for three phase electric motors.

COMMENTS SOUGHT

The Australian Greenhouse Office would like to hear your views on these proposals. See page 2 for where to send your comments.

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