



# Policy brief

## Non-energy benefits



Co-funded by  
the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

## Why is this important?

## How does it function?

## What makes it effective?

## Are there any good examples?

## How can we estimate the impact?

## Why is this important?

Non-energy benefits (NEBs) are the positive outcomes that result from energy efficiency improvements, beyond just the reduction of energy consumption and costs. Improvements in the energy efficiency of motor systems are most often accompanied by several co-benefits such as reduced maintenance, reduced downtime, improved reliability, higher flexibility, reduced production time, reduced production loss, increased productivity and quality control. They also come with benefits at societal or macro-economic levels. These societal benefits include impacts on public health, job creation, poverty alleviation, energy security, public budget or climate change mitigation. Considering these co-benefits can greatly improve the possibilities for action, as they can tip the scales for decision-makers.

## How does it function?

Including an analysis of NEBs when developing programs for the replacement of old inefficient motors significantly improves their attractiveness by showcasing additional value beyond direct energy savings. These benefits appeal to a wider range of stakeholders and enhance the overall cost-effectiveness and desirability of the project. Energy efficiency is most often not a strong enough driver for investment within companies, as it is not seen as contributing to the company's competitiveness. Including NEBs in motor replacement and motor system optimisation projects can raise the strategic importance of the investment by addressing a broader range of priorities such as operational excellence, risk mitigation, employee well-being, and corporate social responsibility. It moves the discussion from just cost-cutting to value creation.

Most importantly, quantification of NEBs and their inclusion into investment calculations can greatly increase the economic attractiveness of the measures. Furthermore, highlighting NEBs can align with corporate social responsibility goals, making projects eligible for additional funding or grants.

Societal benefits can improve the attractiveness of introducing energy efficiency policies to policy makers. Including NEBs such as avoided capacity, transmission and distribution costs in the evaluation of energy efficiency programs can also greatly increase their cost effectiveness.

## What makes it effective?

- **Awareness campaigns:** Informing key stakeholders (plant operators, energy managers) about the co-benefits of using high-efficiency motors.
- **Calculation methodology:** Creating solid methodologies for the quantification of NEBs which give confidence to decision makers.
- **Effective communication of NEBs:** When incorporating an evaluation of NEBs in policy making, the benefits must be clearly explained and linked to tangible outcomes (e.g. reduced downtime, reduced waste, increased control).
- **Synergies with existing programmes:** Incorporating NEBs in existing programmes (e.g. mandatory energy audits) can enhance the outcome, as they have the potential to reduce the payback time of energy efficiency measures.

## Are there any good examples?

Massachusetts' Energy Efficiency Programs, particularly those implemented under the **Mass Save** initiative, integrate non-energy benefits (NEBs) into their energy efficiency framework. The programs use a **Total Resource Cost (TRC) test** as its primary cost-effectiveness evaluation tool. This test By incorporating NEBs in its calculations, the test gives a more complete picture of the benefits delivered by energy efficiency programs. The programme makes a distinction between:

- **Participant NEBs:** Benefits directly experienced by program participants, such as lower maintenance costs and improved comfort.
- **Societal NEBs:** Broader societal impacts, such as reduced pollution and healthcare costs due to better air quality.

## How can we estimate the impact?

Key indicators to assess the impact of Non-Energy Benefits for accelerated motor replacement:

- GHG emissions reductions
- Reduced maintenance costs and less downtime
- Improved productivity
- Cost-effectiveness
- Reduction of power system expansion needs

# EU-MORE



## EU-MORE project

EU-MORE is an acronym for European MOtor RENovation initiative. This LIFE-Project aims to speed up replacement of old, inefficient electric motors in industry and the service sector. Electric motors tend to stay in service for 30 to 40 years, which is much longer than generally assumed. With swift action, this replacement rate could be improved. In the EU, replacing old motors faster would free up additional energy savings, on top of the savings potential of existing regulations, with all the associated benefits.

Project website:  
<https://eu-more.eu/>

## Project partners



Co-funded by  
the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.