

## Conclusion

This study applied newly constructed Motivation of Energy Use Behaviour (MESB) scale (Ekim & Mattsson, 2022) from the Self-Determination Theory (SDT; Deci & Ryan, 1985) (see Figure 1). The results indicated that users' motivation as well as their characteristics are associated with their electricity saving behaviour. Specifically, autonomous motivation was associated with lighting use behaviour (see Figure 2). The knowledge would provide information to facilitate new strategies to reduce energy use in the concern of energy crises and climate change.

## Introduction

→ Even though energy-efficient technologies are well developed, users' behaviour play an important role to reach optimal level energy-efficiency (Lindstrij et al., 2012).

→ A review (Ekim et al., 2023) found that only a few studies applied theories derived from the psychology discipline to explain users' behaviour in energy-efficient buildings.

? This study aimed to understand the underlying factors of different types of electricity use behaviours in energy-efficient buildings through motivational drivers together with users' characteristics and tenure types (owned vs rental).

## Method

A postal survey was sent out to 1018 residents living in energy-efficient buildings in southern Sweden. The survey included self-reports of users' motivational drivers based on the SDT, electricity use behaviours, and households' energy use (kWh).

## Results

⚡ 235 individuals (58% women) aged 18 to 90 years ( $M = 48.7$ ,  $SD = 18.8$ ) provided completed answers to the study.

⚡ Most of the participants were living together with another adult (54.9%), and not living with children (74.7%).

⚡ Correlations between users' characteristics, motivational drivers, and electricity use behaviours are shown in Figure 2.

⚡ There were no significant associations between households' energy use and motivational drivers.

⚡ Towel dryer use did not correlate with motivational drivers and users' characteristics.

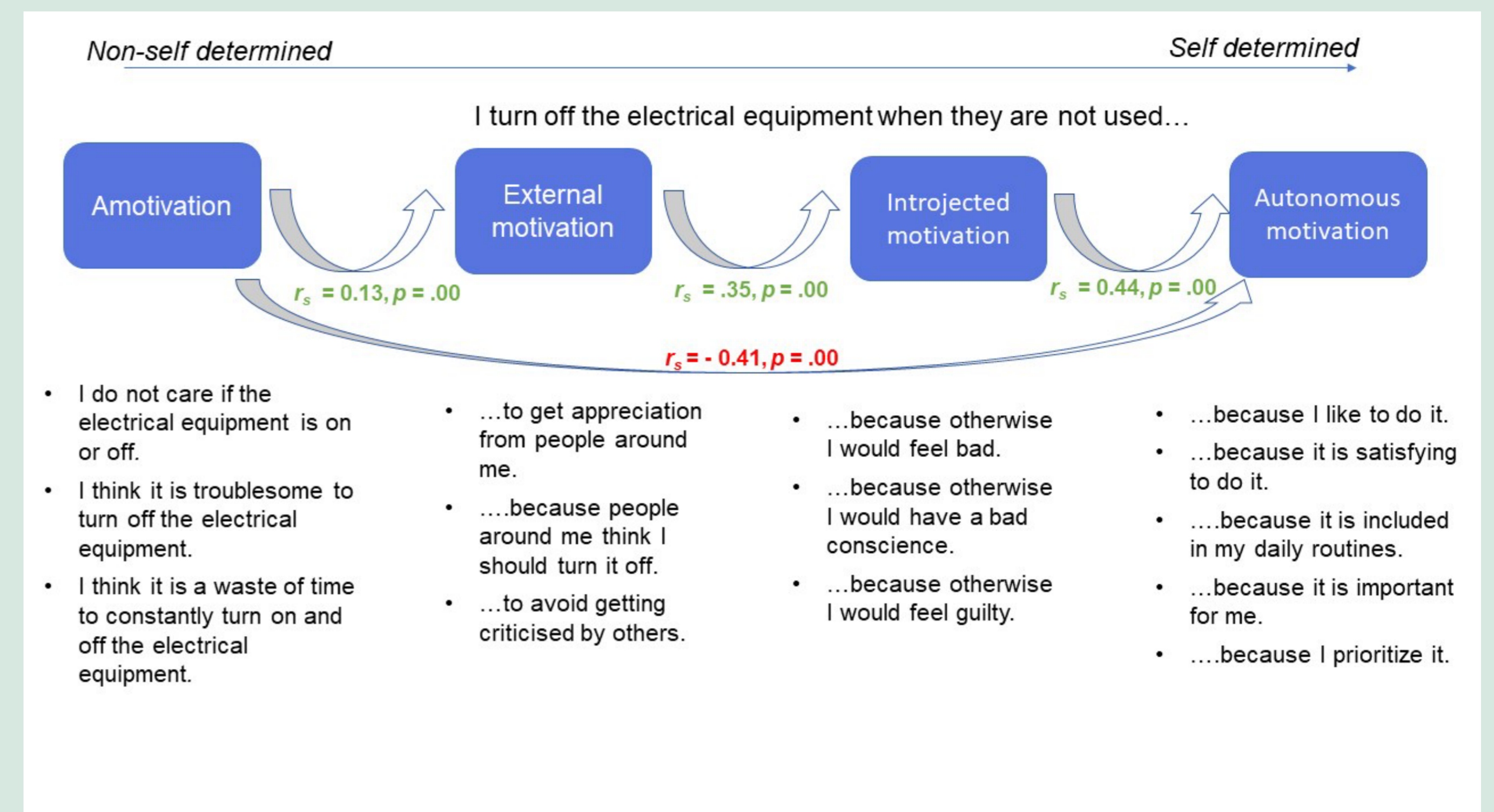


Figure 1. MESBS components, items, and correlation between components.

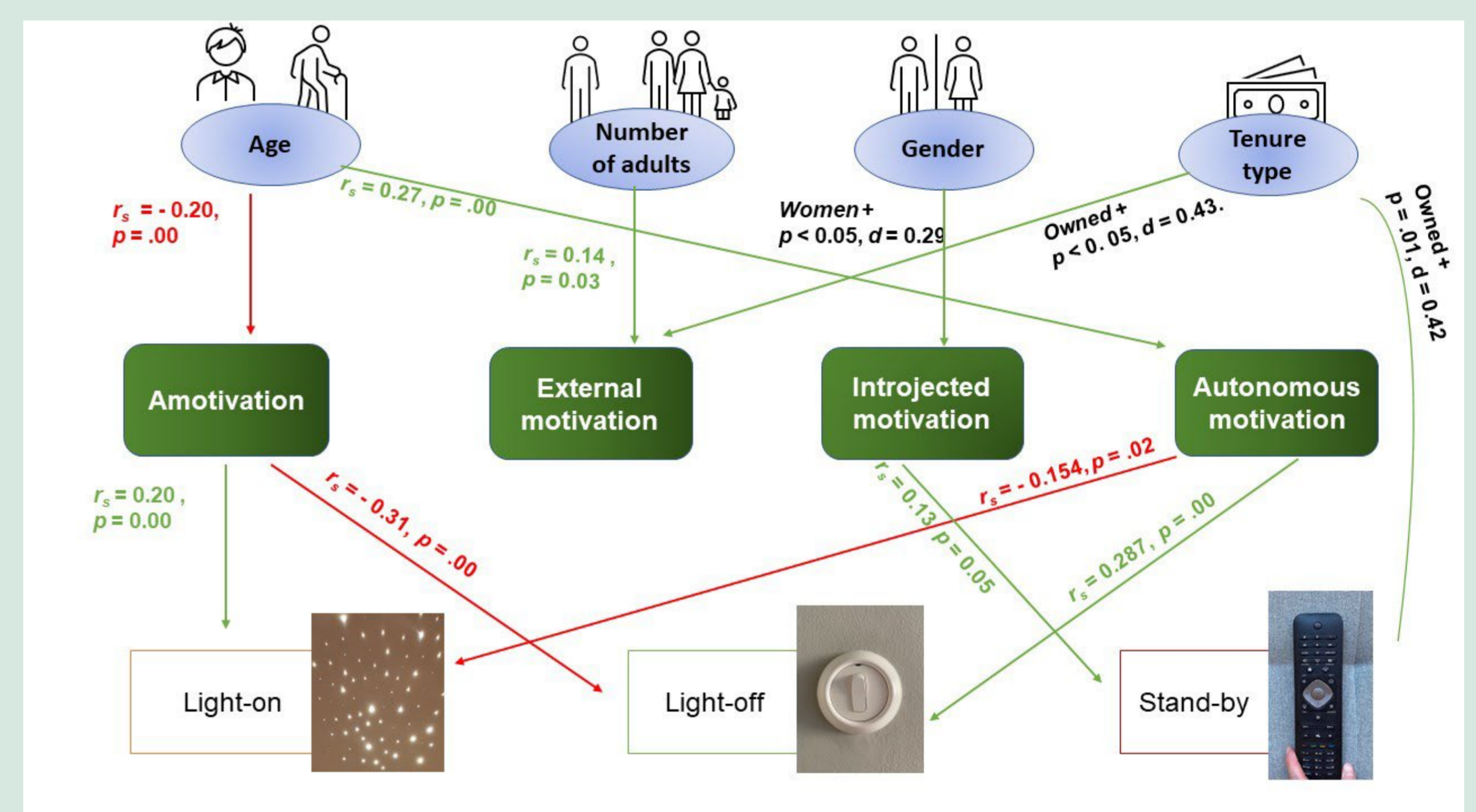


Figure 2. Association between users' characteristics, motivational drivers, and electricity use behaviour. Spearman's correlation ( $r_s$ ) and Mann-Whitney test were used.

## Discussion

⚡ This study identified individual factors that are associated with specific types of electricity use behaviours in energy-efficient buildings.

⚡ The findings showed that users' motivations can differ based on users' characteristics. Moreover, different types of electricity use behaviours were regulated by different motivational drivers.

⚡ The knowledge can be used to facilitate the design of new technologies, interventions, and implement new regulations to reach optimal level of energy-efficiency.

## References

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