1. GLOBAL ENERGY CONSUMPTION SCENARIO

- annual motor emissions: 6000 metric tonnes of CO₂
- user expenses to surge to $900 billion by 2030.

2. TRANSITIONING TO THE INTEGRATED MOTOR DRIVE (IMD)

- potential to achieve a 20-30% gain in efficiency using efficient motors
- resulting in a 10% reduction in global electricity demand

3. PROPOSED IDEA!!!

- boosting system efficiency by using advanced semiconductors
- enabling smaller system sizes through efficient electrical operation.
- resulting in an efficient integrated drive

4. OUTCOMES

- Application in manufacturing, automotive, aerospace and renewables sectors.
- decreased manufacturing cost.
- reduction in carbon footprint.
- improvements in through-life efficiency.
- easing adoption of IMD in the UK.
- assist in fulfilment of the UK’s Paris climate commitments.

5. RESULTS

- a reduction of 66% in system losses is observed
- a reduction of 75-80% in filter size is observed

6. CONCLUSION

- expected 55% lesser raw material usage
- expected 66% reduction in losses.
- 45-55% reduction in manufacturing carbon footprint
- 75% reduction in system size