

Energy Efficiency Modelling and Policy Impacts

Next Set of Appliances

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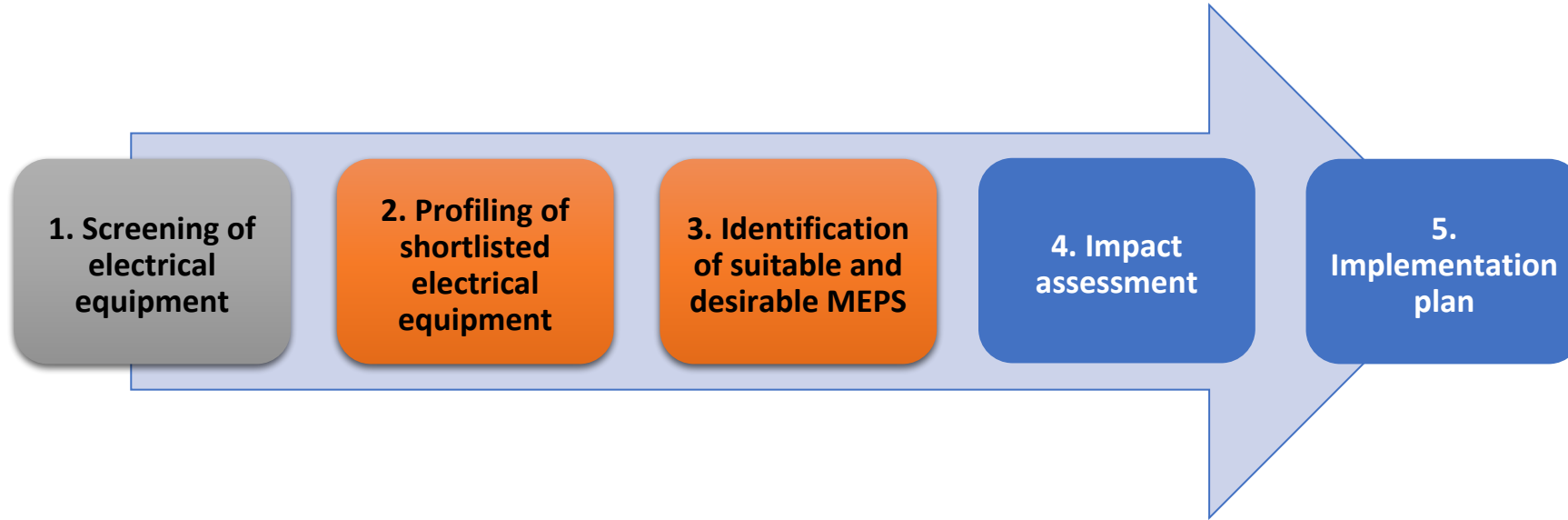
November 2018



Minimum Energy Performance Standards

Appliance	Pre MEPS	MEPS	2018 Review
Audio Visual (Standby only)	None	<1w	<0,5W by 2020 & expand scope
Refrigerators and Fridge Freezers	C	B	Move to Class B by 2020 and A+ by 2022
Freezers	E	C	Move to Class B by 2020, A by 2022 A+ by 2024
Washing Machines and Washer Dryers	B	A	Retain MEPS level
Tumble Dryers	E	D	Move to Class C by 2020
Dishwasher	A	A	Retain
AC	Unknown	B	Move to Class A by 2020 (review approach)
Ovens (Small and Medium)	B	A	Retain and introduce MEPS for large ovens A by 2020
Electric Water Heaters	D	B	Retain
Residential Lighting		None	Introduce technology neutral specifications

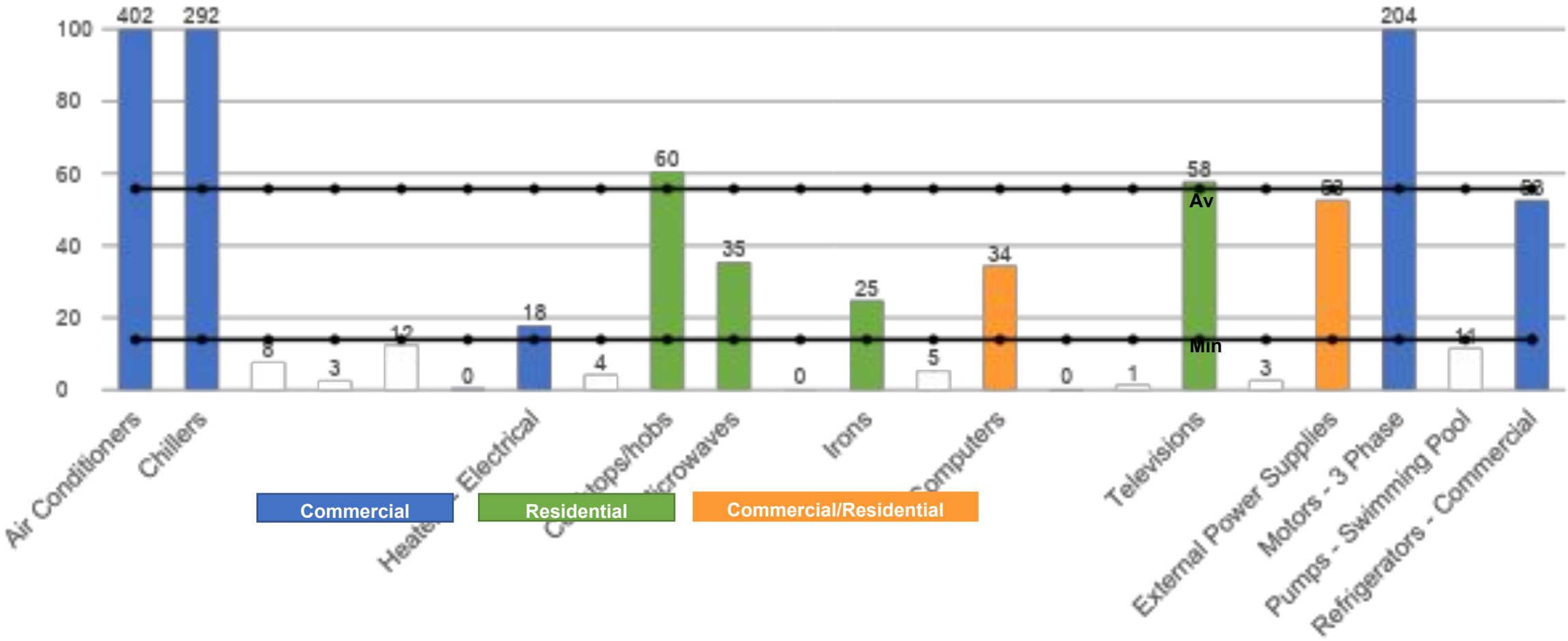
Approach



Criteria considered

1. Significant number of MEPS implementation globally
2. Energy savings potential (efficiency impact, growth, usage, average energy consumption)
3. Ease of adoption, implementation and operation
4. Technology or other barriers (price and local industry)

Approach



Electrical Equipment Selected

Equipment	First Screen	Appliance Profiling Second Screening	Proceed
Cooktops / Hobs	High	Relatively straightforward but limited savings	Exclude
Microwave Ovens	Medium	Limited savings	Exclude
Electric Irons	Low	Limited savings	Exclude
Computers	Medium	High penetration rates	Include
TV's	High	High potential, globally implemented	Include
EPS	Medium	High potential and standard product	Include
Electric Heaters	Low	Low savings	Exclude
Electric Motors	High	High potential and standard product	Include
Pool pumps	Low	Limited international interest but straightforward	Include
Commercial Refrigerators	High	Complicated due to customised sizes & complex testing	Exclude
Chillers	High	Large savings & low numbers but complex testing	Include
Transformers	High	Leapfrog	Include
Large AC	High	Existing S&L	Extend

Detailed Evaluation

Market and Industry Profiling

- Brands and Models
- Pricing
- Current and Future Sales
- Industry Analysis
- Usage and Application

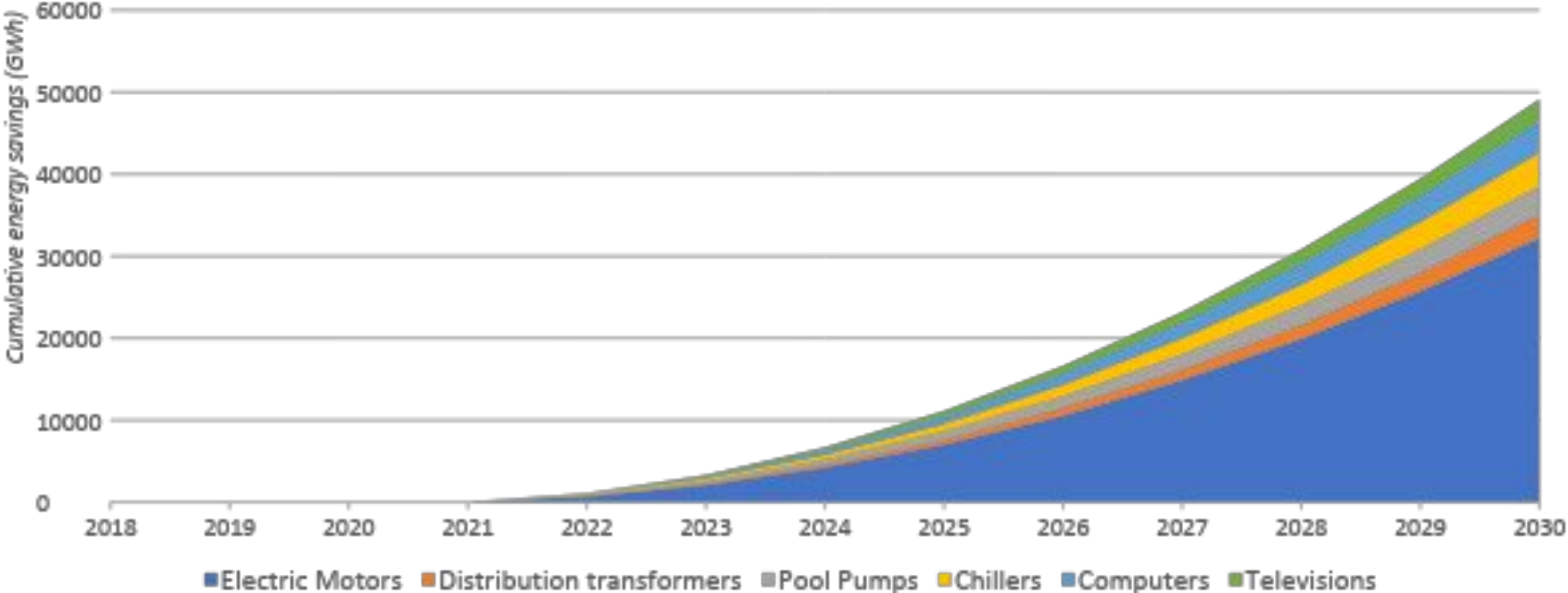
Identifying Suitable MEPS

- Analysis of MEPS in other Countries
- Testing Methods Applied in other Countries
- Recommended MEPS

Impact Assessment

- Assumptions
- Energy Consumption / Savings Modelling
- Consumer Impacts
- Country Level Impacts
- Other

Estimated Overall Energy Savings - Preliminary



The adoption of MEPS in South Africa has potential to yield minimum total cumulative energy savings of just under 50TWh by 2030. These translate into R98 billion worth of energy bill related financial savings and just under 37 MtCO2 in emission savings – Preliminary more work needed to substantiate this figure