

# Outline of Incentives Proposed to Increase the Uptake of Energy Efficient Appliances in South Africa

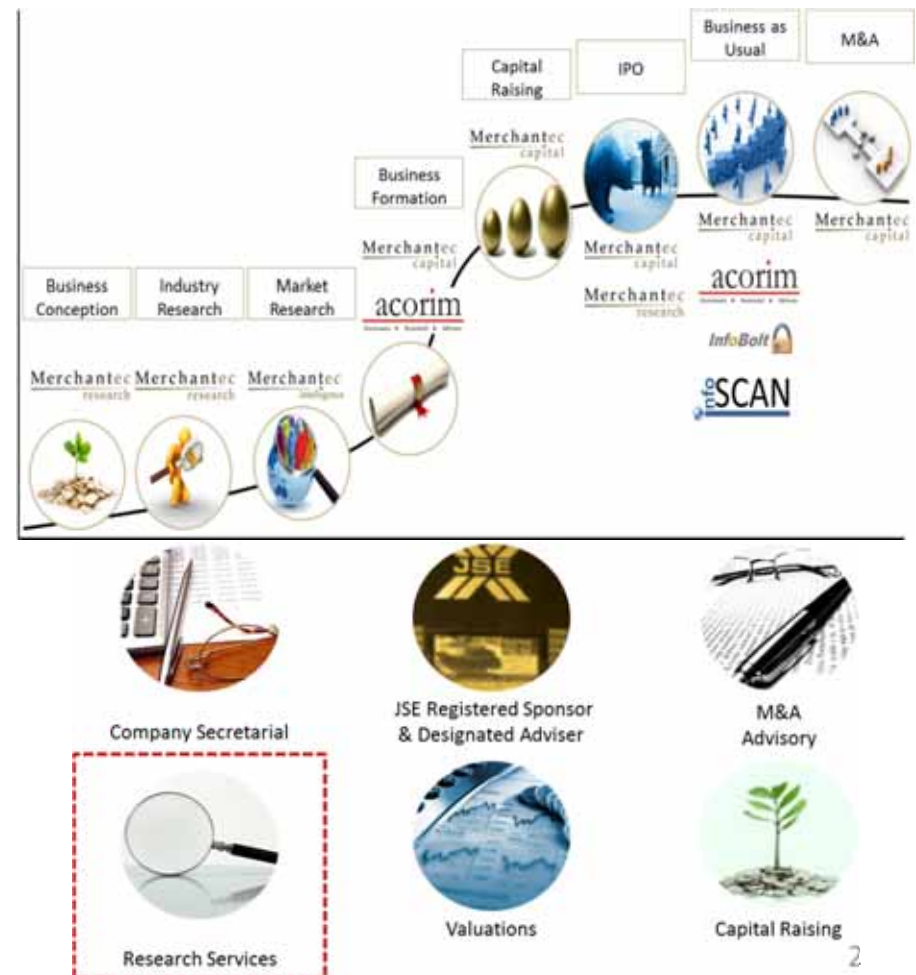
DOMESTIC USE OF ENERGY CONFERENCE  
Draft MEPS and Appliance Labelling Workshop Programme  
31 March 2015

# About Merchantec

Merchantec is one of the largest independent corporate finance advisory and research companies in South Africa. We have built our business from the perspectives of capacity, expertise and systems and have a reputation of being able to provide quality service to our clients through our solutions orientated approach, quality of deliverables, turn-around times, skilled staff, in-depth knowledge and our structured approach to all tasks we undertake.

Merchantec prides itself on its entrepreneurial spirit, which lends itself to engagement with our clients on a strategic level.

## Merchantec Service Offering



# Global Incentives

There are 3 main approaches to EE Incentives globally

## Manufacturing Incentive

| Positives   | Negatives   |
|---|---|
| Easier to administer                                | Needs very efficient M&V capability                           |
| Easier to measure                                   | Harder to create awareness                                    |
| Has a larger immediate effect                       | Cost more to roll out on a large scale                        |
| Helps local manufacturing and good for job creation | No guarantee that incentive will be passed on to the consumer |



## End-User Incentive

| Positives                                | Negatives  |
|--|--|
| End-user has a choice                    | Administrative intensive                             |
| Make use of energy intermediaries        | Small interventions with no guarantee for uptake     |
| Encourage behaviour changes              | Takes longer to have an effect                       |
| End-user start seeing the energy savings | Can not work without extensive educational programme |



# Current Incentives



## Mass Roll-outs

- Low Pressure Solar Water Heating
- Residential Mass Lighting Roll-out (CFL)
- Shower Heads, Timers & Geyser Blankets

## Standard Rebates

- High Pressure Solar Water Heating
- Heat Pumps



Ongoing funding challenges



## Manufacturing Incentives

- Manufacturing Competitiveness Enhancement Programme (MCEP)
- Foreign Investment Grant
- 12I



## Manufacturing Incentives

- 12L (45c per kWh)
- Incandescent Lighting Tax

No real impact on residential energy users



# How to Identify and Select Incentives for South Africa

| Criteria                     | Description   | Outcome  |
|------------------------------|---|--|
| Impact on energy consumption | Needs to make a substantial contribution to potential residential energy saving | Hot water, lighting, cooking, refrigeration          |
| Local manufacturing          | Money spent must contribute to local manufacturing and job creation             | Lighting, geysers, refrigeration, cooking appliances |
| Impact on the poor           | Needs to help those least likely to be able to help themselves                  | Lighting, hot water, refrigeration and cooking       |
| Current working programmes   | Take from programmes currently working  | SWH and lighting                                     |
| Critical mass                | Needs to be able to have a significant intervention                             | Lighting, refrigeration, cooking                     |

# Product Attractiveness Outcome

|   |                                      |   |   |   |   |
|---|--------------------------------------|---|---|---|---|
|    | <b>No</b><br><b>Air Conditioners</b> | Luxury product without critical mass or local manufacturing |    | <b>No</b><br><b>Tumble Dryers</b>             | Virtually no local manufacturing                                  |
|    | <b>No</b><br><b>Audio and Video</b>  | Virtually no local manufacturing                            |    | <b>No</b><br><b>Washer Dryer Combinations</b> | Virtually no local manufacturing                                  |
|    | <b>Electric Water Geysers</b>        | <b>Yes</b>  |    | <b>No</b><br><b>Fridges</b>                   | Relatively small volumes of true fridges are sold in South Africa |
|  | <b>Electric Lamps</b>                | <b>Yes</b>  |  | <b>No</b><br><b>Freezers</b>                  | The focus for fridges should be an ambitious standards programme  |
|  | <b>No</b><br><b>Dish Washers</b>     | Luxury product without critical mass or local manufacturing |  | <b>Fridge Freezer Combinations</b>            | <b>Yes</b>  |
|  | <b>No</b><br><b>Washing Machines</b> | Virtually no local manufacturing                            |  | <b>No</b><br><b>Electric Ovens and Stoves</b> | Technically hard to improve efficiency                            |

# Proposed Incentives for South Africa

| Incentive   | Description   |
|---|---|
| <b>1 Manufacturing Incentive</b>                      |   |
| Lighting and Geysers                                  | Appliance improvement (standards programme for geysers)<br>Localisation for LED manufacturing |
| <b>2 End-user Incentive</b>                           |   |
| Lower LSM Product Swap<br>End-user Incentive (Rebate) | Focus on localisation and fairness  |

# Proposed Incentives

## Lighting Incentive: Product Swap at your Local Retailer

| Description              | Impact  |
|--------------------------|---|
| Technology               | LED   |
| Energy Consumption       | 18.4% of the “average household’s” energy consumption       |
| Replacing                | End of life CFL and any incandescent                        |
| Energy Efficiency Factor | 50% efficiency LED versus CFL                               |
| Where                    | Retail level  |
| Volume                   | 12 million units per annum                                  |
| Cost                     | 100% incentive @ R40 per unit = R480 million p/a            |
| Duration                 | 5 years   |
| Potential energy savings | 3 706 GWh @ R1.51 = R5.6 billion per annum (consumer level) |
| Other steps              | Minimum standards   |
| When                     | ASAP – development of a local industry NB                   |



# Proposed Incentives

## Geyser Incentive: Manufacturing Incentive to Support Pro-active Change

| Description              | Impact  |
|--------------------------|---|
| Technology               | Electric geysers  |
| Energy Consumption       | 30% of the “average household’s” energy consumption         |
| Replacing                | New and replacement geysers                                 |
| Energy Efficiency Factor | 10% energy saving   |
| Where                    | Manufacturing level   |
| Volume                   | ~300 000 units per annum                                    |
| Cost                     | R250 – R300 per unit = R90 million per annum                |
| Duration                 | 18 months   |
| Potential energy savings | 1 028 GWh @ R1.51 = R1.5 billion per annum (consumer level) |
| Other steps              | Minimum standards   |
| When                     | ASAP – development of a local industry NB                   |

# Proposed Incentives

## Fridge Freezer Swap: Accommodating the Need of the Poor

| Description              | Impact  |
|--------------------------|---|
| Technology               | Fridge freezer combinations   |
| Energy Consumption       | 8.1% of the “average household’s” energy consumption                |
| Replacing                | Inefficient fridges and chest freezers                              |
| Energy Efficiency Factor | 15% energy saving   |
| Where                    | Product Swap (Retail level)   |
| Volume                   | 560 000 units per annum (4.5 million units in total)                |
| Cost                     | +/- R1 500 per unit = ~ R9 billion pa (excluding admin and recycle) |
| Duration                 | 8 years   |
| Potential energy savings | Approximately R391 million per annum                                |
| Other steps              | Set up and manage a recycling of old appliances                     |
| When                     | ASAP – development of a local industry NB                           |

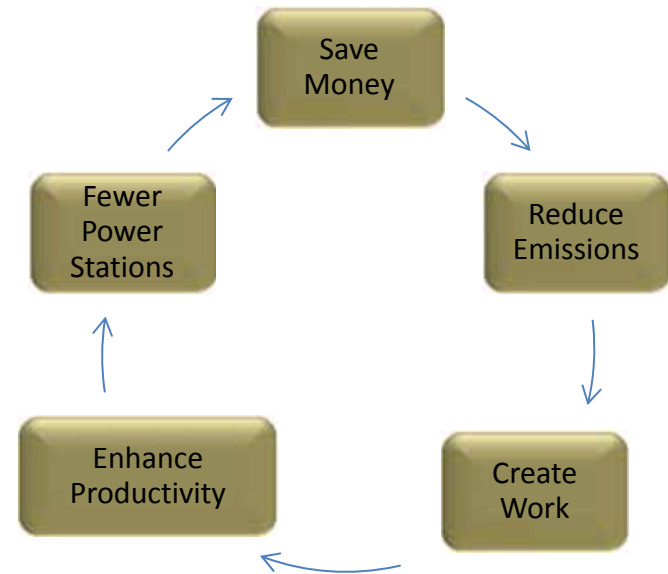
# Proposed Incentives

## End-user Rebate: Freedom to Choose for Those Who Pay Their Taxes

| Description              | Impact  |
|--------------------------|---|
| Technology               | Any technology  |
| Energy Consumption       | NA  |
| Replacing                | Any appliance   |
| Energy Efficiency Factor | Depends on the appliance                                  |
| Where                    | Through your tax return                                   |
| Volume                   | No more than 2 million people are expected to participate |
| Cost                     | No more than R400 per application per annum               |
| Duration                 | 10 years  |
| Potential energy savings | NA  |
| Other steps              | Identify qualifying technology                            |
| When                     | Medium term   |

- EE is a global trend and SA will benefit regardless of current programmes
- Life time cost of appliances
- Link to locally manufactured appliances
- Alternatives to incentives (awards, insulation and new ways of doing things)
- Funding remains a challenge
  - Real merit for Treasury to support incentives

## Benefits of a Successful Energy Efficient Programme



# Questions

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