

Agilent 34970A  
Data Acquisition/Switch Unit

MUX  
RMT

T/E 305

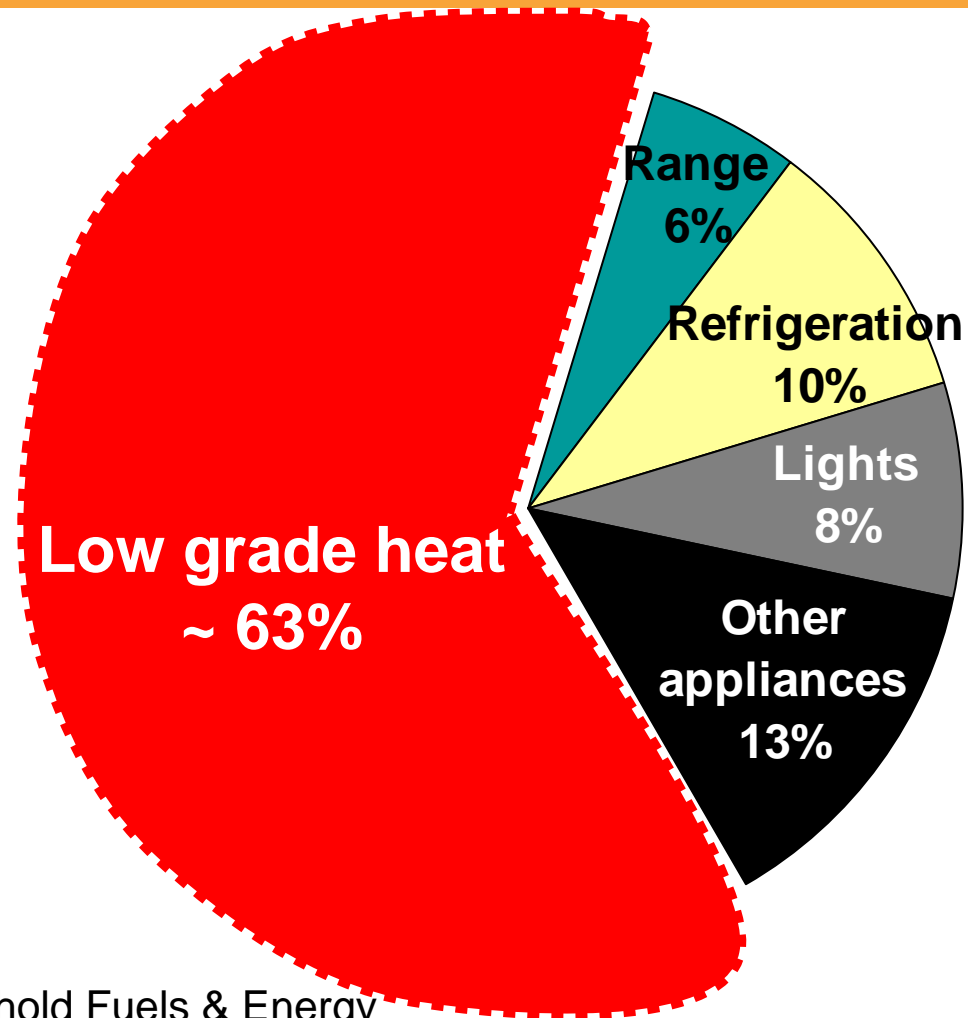
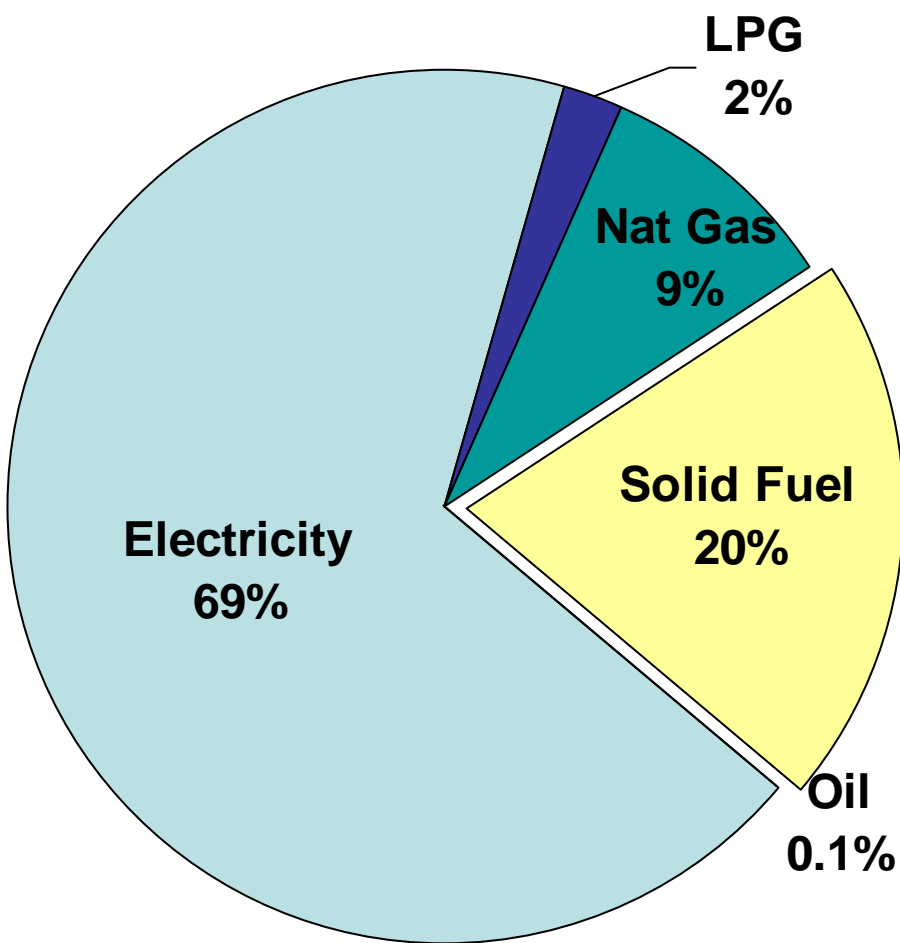
Sto/Rcl Scan Configure Measure Interval

# Strategy on Energy Efficiency & Conservation

6 Dec 007 EFNZ Workshop on the  
NZ Energy Strategy to 2050

Nigel Isaacs, BRANZ Ltd, New Zealand.

# Supply & Demand – Some facts



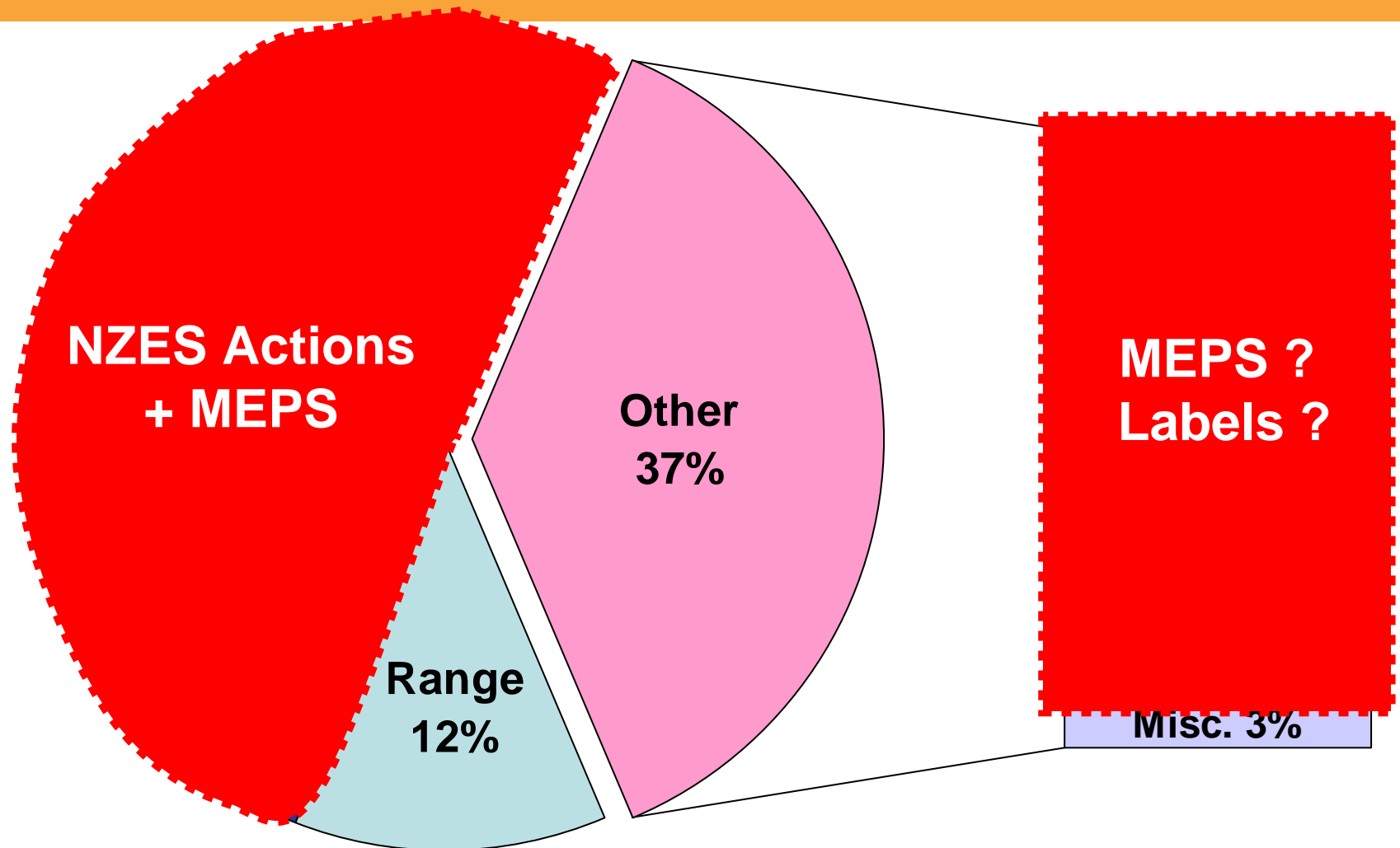
Stationary Household Fuels & Energy  
 Includes electricity, natural gas, LPG, coal & wood ('solid fuel')  
 Source: HEEP Year 10

# Residential Energy Uses

| Energy Use | Electricity | Nat. Gas | LPG | Solid<br>(Wood & Coal) |
|------------|-------------|----------|-----|------------------------|
| Space Heat | 32%         | 15%      | 8%  | 45%                    |
| DHW        | 75%         | 20%      | low | 5%                     |
| Other      | 100%        | -        | -   | -                      |

- **Myths are not reality – need knowledge**
  - Census = Count NOT Energy e.g. 2006  
“electricity ... heat 74.8% occupied private dwellings”
- HEEP Electric space heating = 105 W continuous
  - BUT Standby & Baseload = 112 W continuous

# Non-heating Electricity



Note: Excludes Domestic Hot Water & Space heating

# Appliances & Lights

- Currently 37% of household energy
  - 50% of household electricity
  - Ever increasing possibilities
  - Improved efficiency BUT larger (greater energy use)
- Individual electric use NOT high
  - e.g. Digital TV 'boxes' = ~70 MW power station
- 12 W per box x 2 per house x 1.4 million houses
  - lowest 2 W ~ 10 MW
  - highest 20 W ~ 110 MW
- Need to manage **efficiency & demand growth**

# Seminar questions

## 1. My view(s) on the strategy?

- Considerably improved overview of non-electricity & end-uses, but needs more 'demand' knowledge & actions
- Good inclusion of price & non-price actions
- Transport action at last, but is electricity really 2<sup>nd</sup> on list?

## 2. Is the strategy practical/achievable? What constraints?

- Achievable, but will it be enough?
- Electricity security may not be achieved by focusing on the electricity supply.

## 3. Impact(s) of the strategy on affordability & well-being?

- What is the impact on affordability & well-being of doing nothing? Likely to be far higher than strategy cost impact
- To be supported by improved demand data