Residential Energy Efficiency Scheme
PEPDEE Workshop

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Topics

- Policy Objectives
- Design
- Operation
- Administration
- Results
Policy Objectives

- Improve energy efficiency and reduce greenhouse gas emissions within the residential sector
- Assist households prepare for likely energy price increases
- Reduce total energy costs for households, particularly low income households
Design

- 6 year scheme – 2 by three year stages
- REES Obliged retailers - > 5,000 customers
- Energy efficiency activities – deemed values
- Energy audits
- Priority group – 35% of activities & all audits
- No market certificates – but trading permitted
Priority Group

- Priority group = low income households

- Priority group households—
  - holds one of the following Commonwealth cards:
    - Pensioner concession card
    - TPI Gold Repatriation Health Card
    - War Widows Gold Repatriation Health Card
    - Gold Repatriation Health Card (EDA)
    - Health Care Card (including a Low Income Health Care Card); &/or
  - receives the South Australian Government Energy Concession; &/or
  - falls within a class of persons who are experiencing hardship determined or approved by the Commission
Minister sets stage targets and annual increments

ESCOSA determines who is obliged

ESCOSA allocates targets to each retailer

ESCOSA assesses compliance. Reports annually.

Retailers achieve targets - audits and EE measures

Retailers report to ESCOSA

Contractors

Retailers submit/update implementation plan to ESCOSA
Key players

ESCOSA
Scheme Administrator
Reporting, auditing, compliance, deemed measures

Contractors
Retailers often contract to EE service providers

Licensed energy retailers (above threshold)
Determining how to meet targets; what incentives

Minister & DMITRE
Stage targets (yearly increments), initial deemed measures, policy, evaluation

Households (incl low income)
Recipients of EE measures and audits
## Targets

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Stage 2</strong></td>
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<tr>
<td><strong>Greenhouse gas reduction (tCO₂-e)</strong></td>
<td>155,000</td>
<td>235,000</td>
<td>255,000</td>
<td>255,000</td>
<td>335,000</td>
<td>410,000</td>
<td>1,645,000</td>
</tr>
<tr>
<td><strong>Priority Group</strong></td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
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<tr>
<td><strong>Energy Audits</strong></td>
<td>3,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,667</td>
<td>5,667</td>
<td>5,667</td>
<td>30,001</td>
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Administration

- Commission administers the REES
- Operational rules are outlined in the REES Code - available on the Commission’s website
- Commission allocates energy efficiency activity targets among retailers based on energy sales – credits for GreenPower sales
- Commission allocates audit activities among retailers based on customer numbers
General Principles for All Activities

- **Flexibility** – a range of activities should be available
- **Additionality** – activities should encourage savings additional to BAU
- **Verifiability** – savings should be verifiable
- **Consistency** - confidence that savings could be achieved in the majority of circumstances
- **Penetration** – technically capable of broad implementation
- **Accessible and practical** – the activity should be easily implemented in the residential sector
- **Cost effectiveness** – cost effective abatement
- **Other schemes** – consider activities and specifications in other schemes
Stage 1 REES Activities

- Replacing an inefficient showerhead with an efficient unit
- Installing insulation in an uninsulated roof space
- Installing draught proofing under doors, around windows, etc.
- Retiring inefficient refrigerators and freezers
- Replacing inefficient incandescent lighting with compact fluorescent lighting
- Install energy efficient ductwork in a ducted air conditioning system
- Replace an inefficient air conditioner with an evaporative system
- Replace an inefficient heating and/or cooling system with an efficient system
- Install an efficient heating and/or cooling system
- Install low greenhouse intensity water heaters (new install or replacement)
## Results

Achievement of overall greenhouse gas reduction target-priority group –tCO₂-e

<table>
<thead>
<tr>
<th>Year</th>
<th>Priority Group target</th>
<th>Amount reported</th>
<th>Credit applied</th>
<th>Excess/(shortfall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>54,251</td>
<td>84,369</td>
<td>n.a.</td>
<td>30,118</td>
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<tr>
<td>2010</td>
<td>83,030</td>
<td>77,018</td>
<td>30,680</td>
<td>24,668</td>
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Achievement of overall energy audit target

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall target</th>
<th>Number reported</th>
<th>Credit applied</th>
<th>Excess/(shortfall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>3,000</td>
<td>3,674.5</td>
<td>n.a.</td>
<td>674.5</td>
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<tr>
<td>2010</td>
<td>5,005.5</td>
<td>6,526.5</td>
<td>679</td>
<td>2,200</td>
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Priority Group Activities

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-Priority Group</th>
<th>Priority Group</th>
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<tr>
<td>2009</td>
<td>59.5%</td>
<td>40.5%</td>
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<tr>
<td>2010</td>
<td>69.0%</td>
<td>31.0%</td>
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2009 (n=208,332)  
2010 (n=248,082)
Priority Group Activities

The chart illustrates the percentage completion of various energy efficiency activities for Priority and Non-Priority groups in 2009 and 2010. The activities include:

- Ceiling Insulation
- Lighting
- Shower Heads
- Water Heaters
- Draught Proofing

For each activity, the chart shows the percentage completion for Priority and Non-Priority groups in 2009 and 2010.
Audits

![Bar chart showing the percentage of audits across different types of tenure:
- Public Rental: 15.7% in 2009 and 19.0% in 2010
- Private Rental: 17.0% in 2009 and 11.5% in 2010
- Owner Occupied: 67.3% in 2009 and 69.5% in 2010]
Benefiting Households

- Non-Priority Group:
  - 2009 (n=40,834): 48.8%
  - 2010 (n=74,450): 66.9%

- Priority Group:
  - 2009 (n=40,834): 51.2%
  - 2010 (n=74,450): 33.1%
2012 Activities

- Install CFLs
- Install efficient extra low voltage down lights
- Install ceiling insulation
- Install draught proofing products
- Upgrade ductwork
- Install efficient showerhead
- Replace or upgrade water heater
- Install standby power controllers
- Upgrade heating/cooling system
- Dispose secondary fridge/freezer
- Promote the installation of high efficiency pool pump
Cost

- Annual cost of REES estimated at $11m
- All residential customers bear cost
  - 41,000 benefitted in 2009 & further 75,000 in 2010