Australia’s progress towards a low carbon economy

Recent Progress

1. **The Australian economy has grown strongly over the last decade, but emissions have remained stable.** This was mostly due to reduced deforestation, increased plantation forestry and reduced coal generation which resulted from a combination of more renewables and lower demand for grid-supplied electricity.

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions (MtCO₂)</th>
<th>Land-use and waste</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-03</td>
<td>565</td>
<td>158</td>
<td>84</td>
</tr>
<tr>
<td>2010-11</td>
<td>563</td>
<td>189</td>
<td>84</td>
</tr>
<tr>
<td>Abatement from land use &amp; waste</td>
<td>-50</td>
<td>-29</td>
<td>+49</td>
</tr>
<tr>
<td>Abatement from power</td>
<td>-32</td>
<td>95</td>
<td>-80</td>
</tr>
</tbody>
</table>

2. **Recent improvements in energy efficiency and process emissions mean that Australia has reduced emissions from other sectors.**

<table>
<thead>
<tr>
<th>Sector</th>
<th>2002-03</th>
<th>2010-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial activity</td>
<td>84</td>
<td>113</td>
</tr>
<tr>
<td>Residential activity</td>
<td>189</td>
<td>218</td>
</tr>
<tr>
<td>Over 1 million homes now have solar panels installed, more than any other country.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New offices now use about 32% less energy for heating, cooling and other base building uses than offices built 10 years ago.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 1 million homes now produce 12% of Australia's energy, mostly using lower emissions gas and renewables.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Strong pipeline of renewable energy projects and slow growth in energy demand expected to bring power emissions down further by 2019-20.**

- **Power**
  - 600,000 Energy efficiency projects already in the pipeline could save as much energy annually as 600,000 homes use in a year.
  - 30% By 2019-20, waste from 30% of Australian pigs is expected to be used to generate electricity for their farms.

- **Buildings**
  - 5% Reduction in 5% demand for grid-supplied electricity since its peak in 2009-10, equivalent to the annual electricity consumption of Tasmania.
  - 12% Large-scale renewables now produce 12% of Australia’s energy, up from 7% in 2003-04.
  - 14% Coal generation decreased by 14% since 2003-04, mostly replaced by lower emissions gas and renewables.

- **Industries**
  - 5% Reduction in 5% demand for grid-supplied electricity since its peak.
  - 95% Highly potent PFC emissions from aluminium reduced by 95% since 1999-90.

- **Land-use and waste**
  - 52% Annual area deforested halved since 2003, and area of plantation forests increased by 21%.
  - 3,000,000 hectares (equivalent to 4.2 million football fields) of land being managed to reduce emissions from wildfires.
  - 200,000 Increased capture of methane from landfill and wastewater treatment plants, now used to generate enough electricity to power over 200,000 homes.

Outlook to 2020

1. **If recent levels of emission reduction activity are sustained, it would reduce by half the expected growth in emissions to 2019-20.**

2. **How are we doing?** This would get us over 40% of the way towards the 5% minimum 2020 emissions reduction target.

3. **Our potential**

   - **Australia has the potential to reduce emissions by at least 25% below 2000 levels, the minimum advised by IPCC scientists.**
   - Major remaining opportunities lie in further increasing renewables, avoided deforestation, reforestation, increased energy efficiency in buildings and industry, and a decrease in fugitive emissions from coal mines.

   - 3% by 2019-20, waste from 30% of Australian pig's manure is expected to be used to generate electricity for their farms.
   - 200,000 Energy efficiency projects already in the pipeline could save as much energy annually as 600,000 homes use in a year.

4. **Australia’s progress towards a low carbon economy**

   - 6% Emissions from power generation dropped by 12% between 2003-04 and 2013.
   - 5% Reduction in 5% demand for grid-supplied electricity since its peak in 2009-10, equivalent to the annual electricity consumption of Tasmania.
   - 12% Large-scale renewables now produce 12% of Australia’s energy, up from 7% in 2003-04.
   - 14% Coal generation decreased by 14% since 2003-04, mostly replaced by lower emissions gas and renewables.

   - **Power**
     - Over 1 million homes now have solar panels installed, more than any other country.
     - New offices now use about 32% less energy for heating, cooling and other base building uses than offices built 10 years ago.

   - **Buildings**
     - Over 1 million homes now have solar panels installed, more than any other country.
     - New offices now use about 32% less energy for heating, cooling and other base building uses than offices built 10 years ago.

   - **Industry**
     - 3% by 2019-20, waste from 30% of Australian pig's manure is expected to be used to generate electricity for their farms.
     - 200,000 Increased capture of methane from landfill and wastewater treatment plants, now used to generate enough electricity to power over 200,000 homes.

   - **Land-use and waste**
     - Annual area deforested halved since 2003, and area of plantation forests increased by 21%.
     - Almost 3 million hectares (equivalent to 4.2 million football fields) of land being managed to reduce emissions from wildfires.

   - **Transport & other**
     - Reduction of 5% in demand for grid-supplied electricity since its peak in 2009-10, equivalent to the annual electricity consumption of Tasmania.
     - 95% Highly potent PFC emissions from aluminium reduced by 95% since 1999-90.

   - **Emissions if recent trends are sustained**

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<th>Emissions (MtCO₂)</th>
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<th>Industry</th>
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<tbody>
<tr>
<td>2019-20</td>
<td>106</td>
<td>26</td>
<td>105</td>
</tr>
<tr>
<td>Abatement from land use &amp; waste</td>
<td>-32</td>
<td>113</td>
<td>-80</td>
</tr>
<tr>
<td>Abatement from buildings</td>
<td>-12</td>
<td>189</td>
<td>262</td>
</tr>
</tbody>
</table>

*This report does not investigate emissions reductions from transport. This sector will be included in future reports. A very small volume of emissions from other activities are not covered in the scope of the report.*