

# Renewable energy and hydro power

## Renewable energy sources

Renewable energy alternatives vary in terms of their relative cost to produce and the environmental impact of their development and use. The natural environment of Victoria provides constraints and opportunities for the development of any of these forms of energy. Another factor determining rates of development or uptake of renewable energy options is government policy (State, local or Federal) which can provide incentives for renewable energy use.

## Use of renewable energy sources 1995 and 2005<sup>1</sup>

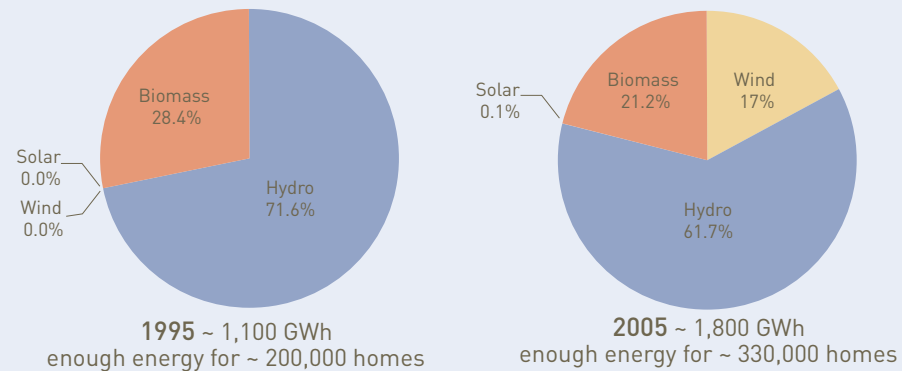
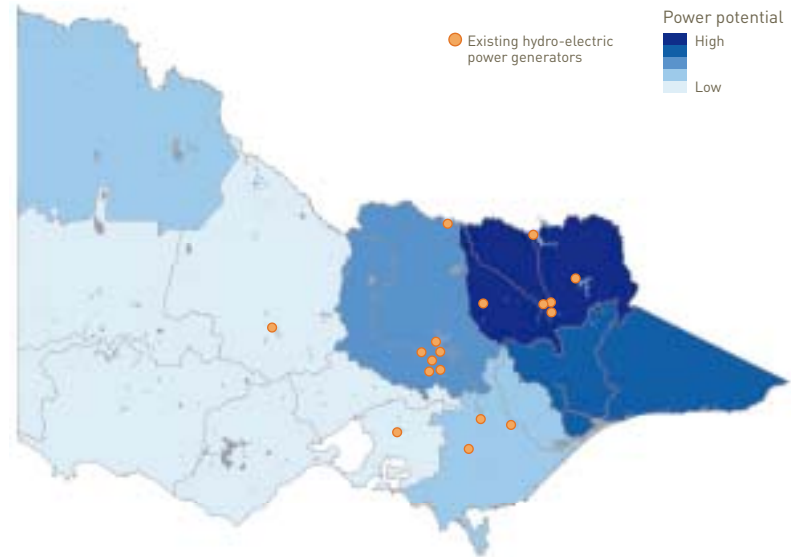


Photo courtesy of Melbourne Water

Source <sup>1</sup>SEAV 2004 Annual Report

## Victoria's hydro energy resources<sup>1</sup>

Catchment Management Authority boundaries, 2004



NOTE: Power potential is an estimation of the kilometre length of stream with more than 1 Megawatt capacity in each Catchment Management Region.

## Hydro power

The development of hydro-electricity through the Snowy Mountains Scheme of the 1950s provided a renewable energy source for Victoria's electricity grid. Nevertheless, hydro power remained largely a source for peak operation rather than being seen as an alternative to coal. Most of Victoria's hydro-electricity generators are located in the eastern parts of the state. The drier conditions and variability of stream flows in the west make it less suited to hydro-generation. Hydro energy currently contributes an annual electricity generation of 1050 GWh, approximately 2.5% of Victoria's total electricity consumption. While the development of hydro power provided impetus to regional development, especially in their construction stages, the environmental cost of building dams is high, thus compromising the attractiveness of large hydro-power developments. Major increases in hydro energy capacity are unlikely in the foreseeable future.<sup>1</sup>