Solar energy chile

Solar energy chile

Renewable energy in Chile is classified as Conventional and Non Conventional Renewable Energy (NCRE),[1] and includes biomass, hydro-power, geothermal, wind and solar among other energy sources. Usually, when referring to Renewable Energy in Chile, it will be the Non Conventional kind.

In 2013, with the promulgation of the law 20,698, the target was increased to 20% by the year 2025, and a new progression for the following years was defined.[6]

Hydro-power has always been an important resource in the Chilean electric grid. Historically, hydro-power has accounted for around 50% of the total electricity generation of the country.[8] In particular, hydrology is one of the factors for seasonal variations in the electricity prices of one of the main electric grids of the country, the Sistema Interconectado Central, with seasonal droughts causing electricity prices to rise.[9]

There are 118 hydro-power plants in the entire country totaling almost 6,460 MW of installed capacity, of which 10 plants are dams (the rest are run-of-the-river). Most of these (65% by September 2015) are classified as non-conventional renewable energy and are considered "mini hydro-power plants", as they have less than 20 MW of installed capacity.[10]

The 246MW El Romero solar photovoltaic plant opened in November 2016 at Vallenar in the Atacama region[16] It was the largest solar farm in Latin America when it opened.

In 2016, SolarPack won an electricity auction (held without disclosing bidders" power source) by bidding $29.1/MWh;[17] a record low price.[18]

The 115 MW El Array?n Wind Farm is the largest in Chile,[19] and at the time of its inauguration in 2014 it was the largest in Latin America.[20]

The 2016 electricity auction for a combined 12.34 TWh was won partly by wind power. Mainstream Renewable Power won 7 projects with 985 MW supplying 3.7 TWh/year at between $38.8 and $47.2 per MWh.[18]

Shahriyar Nasirov is a professor at the School of Engineering and Sciences, Universidad Adolfo Ib??ez, Santiago, Chile. The article is based on previous research by the authors, who are grateful for the financial support of the project CONICYT/FONDAP 15110019.