

Nevada Regional Test Center

Overview

The Nevada Regional Test Center (NV-RTC) is managed by Sandia National Laboratories in partnership with the University of Nevada Las Vegas and the Southern Nevada Water Authority.

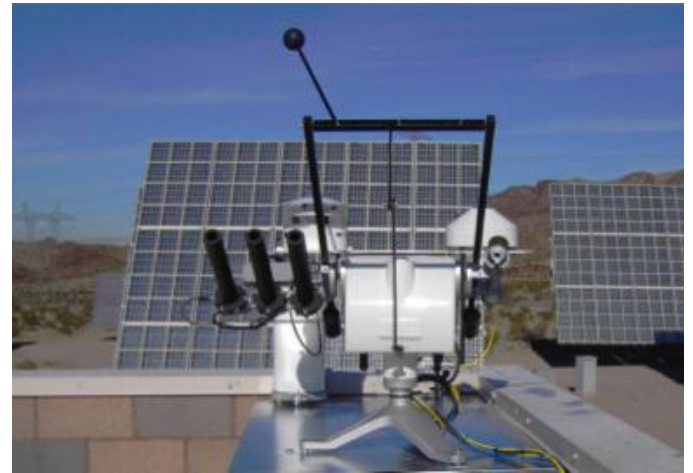
Located in Henderson, Nevada, this RTC site is distinguished from the others by being subtropical and having high direct normal irradiance (DNI). In addition, the NV RTC has an average precipitation of four inches per year and summer temperatures that can reach the triple digits.

Site Description

The Nevada RTC is hosted by the Southern Nevada Water Authority at their River Mountains Water Treatment Facility on land that can accommodate technologies ranging from fixed PV arrays to large concentrated photovoltaic (CPV) trackers.

Meteorological Instrumentation

The Nevada RTC has a fully equipped weather station with world-class solar irradiance sensors for measuring global horizontal, diffuse horizontal, spectral irradiance composition, and DNI. Other meteorological measurements taken at the NV RTC include ambient temperature, humidity, wind speed, wind direction,



Irradiance instruments at the Nevada RTC.

precipitation, and atmospheric pressure.

Monitoring Capabilities

Like the other RTCs, the NV site has monitoring and data collection systems that measure DC voltage/ current, AC power, module temperatures and plane-of-array irradiance for its partner installations.



CPV system at the NV RTC.

About the University of Nevada, Las Vegas

The University of Nevada, Las Vegas (UNLV) has an active solar program and conducts research on CPV, PV, building-integrated PV, solar thermal, and energy-efficient homes. Past projects include testing and performance-validation and performance-improvement studies of proprietary anti-soiling coatings. UNLV is studying issues related to the development of large-scale PV in desert environments, including environmental impacts and water use. UNLV helped design the NV RTC and is instrumental in supporting its operational and technical needs.

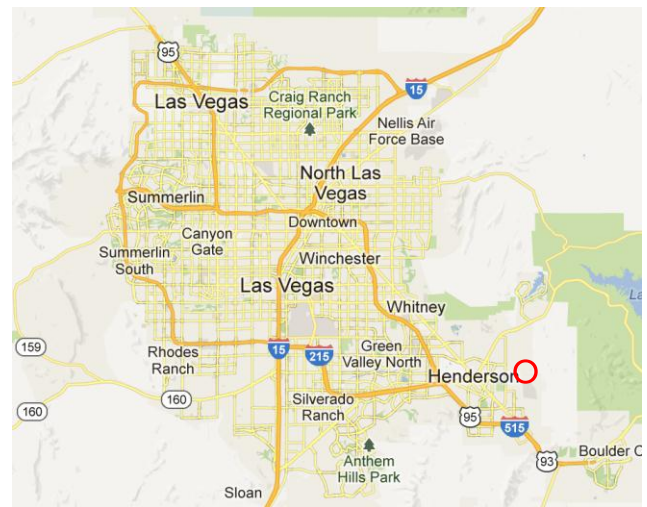
About the Southern Nevada Water Authority

The Southern Nevada Water Authority (SNWA) is a cooperative, not-for-profit agency charged with managing the region's water resources. SNWA is a proponent of solar energy and to date has installed multiple PV systems/projects that are generating 920 MWh of electricity per year.

SNWA has been a key partner in developing the NV RTC, working closely with Sandia on site design and installation.



Aerial view of the NV RTC site.



Approximate location of the NV RTC (red circle)



CPV system under construction at the NV RTC.



Installation of inverters at the NV-RTC



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