

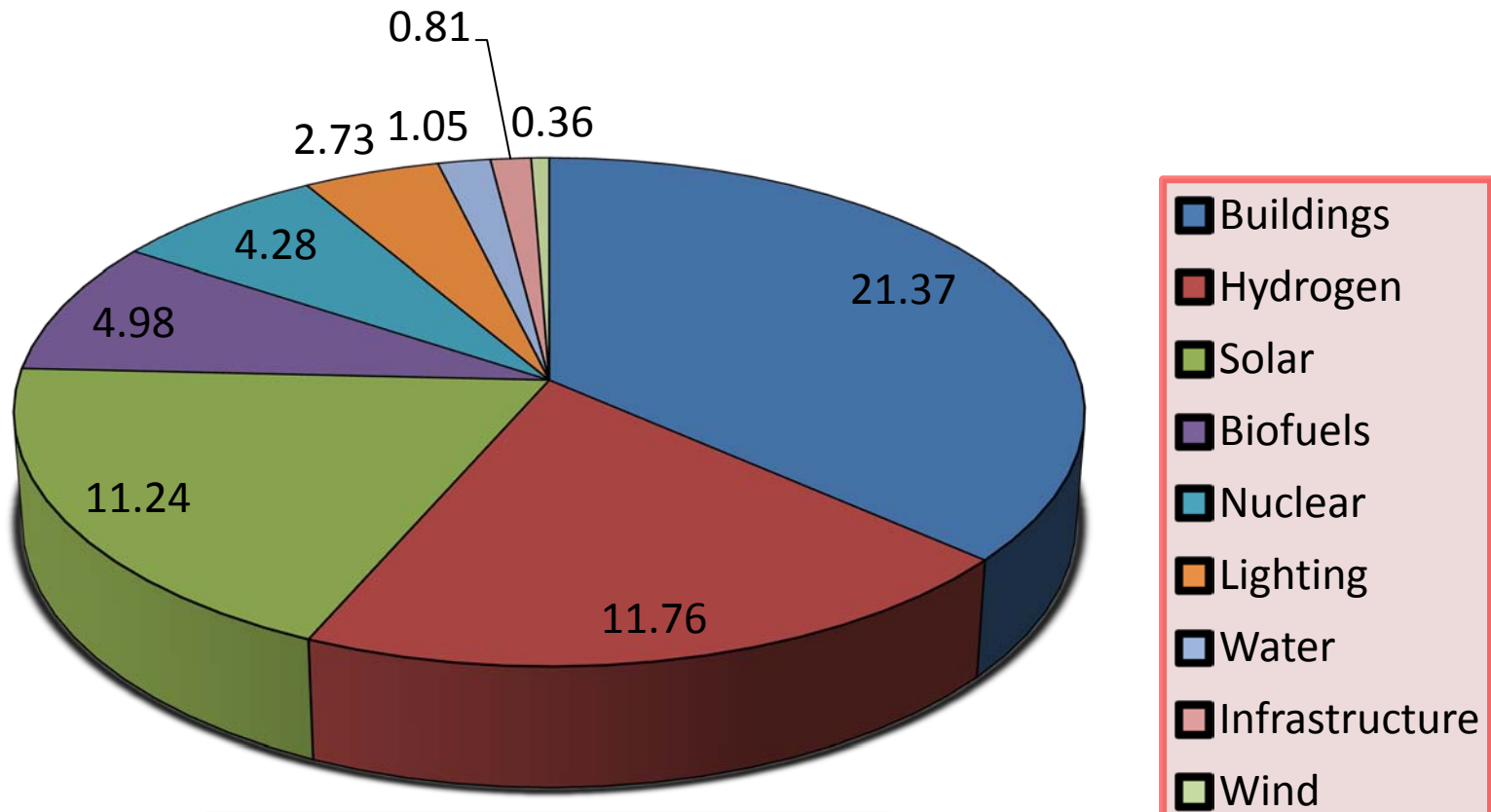
UNLV – A Leader in Renewable Energy Research

UNLV has received \$58.6 million since 2003 for projects involving renewable energy.

- Solar, wind, and geothermal power
- Biofuels
- Photonics
- Recycling of nuclear waste
- Hydrogen production, storage, and use

EXHIBIT C-3- ENERGY
Document consists of 7 pages.
Entire exhibit provided.
Meeting Date: 11-03-09

UNLV Renewable Energy Research



\$58.6 Million

A Few Examples of UNLV Research

- **Dozens of solar power research projects, including developing “smart grid” technologies, monitoring performance, and creating new applications, all with goal of improving the efficiency and use of solar power.**
- **Advanced lighting technologies using direct concentrated solar light and on materials for new, more efficient LED and solar cell materials.**
- **Harnessing geothermal power from hot dry rock located thousands of feet beneath the earth’s surface at the Nevada Test Site.**

More Examples of UNLV Research

- **Algae-based biodiesel, biodiesel catalyst production, and new materials for hydrogen storage.**
- **New nuclear reactor technologies and spent nuclear fuel recycling.**
- **Policy, economic, financial, and social issues related to renewable energy, which is one area of focus of the new Brookings Mountain West Initiative at UNLV.**
- **Interfaces and band gaps for thin film solar cells and another on solar cell nanotechnology.**

Public/Private Partnerships in Renewable Energy Research

- UNLV, in partnership with Pulte Homes and NV Energy, recently unveiled the LEED Platinum-certified development of a new community of homes (Villa Trieste) in Northwest Las Vegas that combines energy-efficient features and advanced smart-grid metering technology to dramatically reduce energy usage.
- Researchers are developing a more cost-effective method for the production of biofuels , working closely with the Salt Lake City, Utah-based company, Ceramatec .
- UNLV researchers were involved in the design phase of the concentrated solar trough project with private partner Acciona on the advanced development of a solar power plant in the Eldorado Valley.
- UNLV researchers have designed, installed, and help operate a hydrogen generation and fueling system located at the Las Vegas Valley Water District.

A New Minor in Solar & Renewable Energy

- NV Energy donated \$500,000 to UNLV to establish a new campus-wide Solar and Renewable Energy Minor.
- The program is available to students from all disciplines and has enrolled more than 40 students in its first two months of existence.

UNLV Education on Renewable Energy

Several UNLV colleges and departments also offer coursework at both the undergraduate and graduate level in subjects relevant to renewable energy and sustainability.

- Engineering
- Architecture
- Chemistry
- Business
- Hotel administration
- Nursing
- Sociology
- Political science
- Environmental studies