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SOLAR POWER IN THE SOUTHWEST:

FROM CHILE RISTRAS TO SOLAR ROOFS

by Matthew Padilla*

For hundreds of years the people of the southwestern United States have hung chile ristras, bunches of red chile, from their homes and used the power of the sun to dry the chiles for cooking during the winter months. While the traditions of the past still hold sway, solar panels have found their way to the homes of native southwesterners. State governments are encouraging harnessing the sun a method of energy production in New Mexico, Arizona, and California.¹

The southwestern United States may not be nutrient or water rich, but it does have latent solar resources that have only begun to be exploited.² Satellite measurements have confirmed that the solar energy available for exploitation in the U.S. southwest is second to none in the world.³ As the threats of energy security⁴ and global warming⁵ have become more prescient, the appeal of solar energy has increased. The federal, state, and local governments are reacting by promoting solar technologies through incentives and partnerships for both individuals and corporations.⁶

At the federal level, however, the amount of incentives available to individuals and corporations that use solar energy has been relatively small. The Energy Policy Act of 2005 established a tax incentive of up to two thousand dollars for individual residents who install a solar electric system or water heating system.⁷ The goal of this program is to encourage consumers to install their own solar systems, but it is set to expire in 2008.⁸

New Mexico, Arizona, and California have passed legislation to supplement the two thousand dollar federal tax incentive and have added their own incentives and programs in addition to the federal tax incentive. State programs vary from greater tax incentives for individual homeowners in New Mexico to the creation of a multi-million dollar state-wide solar home program in California to tax breaks to businesses for installation and development of solar infrastructure in Arizona.⁹

In New Mexico, Governor Bill Richardson declared that the state “must move our economy from limited oil resources to the unlimited resources of wind, biomass, geothermal, and solar.”¹⁰ In response, the New Mexico legislature recently passed legislation which added \$9,000 dollars of potential tax credits for individual residents in addition to the federal credit.¹¹ Arizona enacted a thousand dollar tax credit,¹² while in California incentives are given on a performance based formula which rewards high output renewable energy systems.¹³

New Mexico and California have also been strong proponents of making access to solar power a right for homeowners. California made access to latent solar energy a right for homeowners in the Solar Rights Act of 1978. It was originally written

to bar homeowners associations from enacting rules that would prevent owners from installing solar power units. It was subsequently amended in 2003 and 2004 to prevent public entities from doing the same.¹⁴ The New Mexico Solar Rights Act of 1978 was also amended in 2007 to clarify the definitions of solar collectors and to prohibit homeowners associations and public entities from restricting use of solar collectors, with the exception of historical districts.¹⁵

Governor Richardson of New Mexico and Governor Schwarzenegger of California both pledged to increase clean energy by 30,000 megawatts, and to increase energy efficiency in their states by twenty percent.¹⁶ Governor Schwarzenegger has also made it a stated goal to have a “million solar roofs” in the state of California and has matched this rhetoric by spearheading the creation of a \$400 million dollar program within the California Energy Commission called the New Solar Homes Partnership.¹⁷ The New Solar Homes Partnership systemizes and creates a process for how energy efficiency is measured, breaking available efficiency levels into two different tiers and rewarding those who create the most energy efficient buildings.¹⁸

While Arizona has arguably not promoted residential solar energy to the extent of New Mexico and California, it has created a roadmap towards promoting growth in the private sector specifically in regards to solar energy plants.¹⁹ One of the four largest “central station solar power” companies, Stirling Energy has been a benefactor of Arizona’s roadmap.²⁰ Stirling seeks to create large solar plants in the desert southwest and is an example of cross state growth in the solar industry. For example, New Mexico’s Sandia National Labs recently teamed with Stirling to create and expand new solar technologies.²¹

Despite solar power’s current marginal status as a source of energy, the future of it is bright if the political leadership at the state level continue to promote it. Although the federal government lags behind the promotion of solar energy in comparison to the southwestern states, the arrival of new solar technology and the growing individual interest in its use creates hope that solar energy can be capitalized to fruition in the solar rich southwest. It may, one day, become common to see both chile ristras and solar panels adorning the homes of southwesterners and if companies are able to create large solar plants in this region, they may soon join the large chile fields in harvesting the power of the sun.

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ENDNOTES: SOLAR POWER IN THE SOUTHWEST *continued from page 70*

¹ *Western Governors' Association, White Paper on Combined Heat and Power, Clean and Diversified Energy Initiative*, (Jan. 2006), available at <http://www.westgov.org/wga/initiatives/cdeac/CHP-full.pdf> (last visited Oct. 14, 2007) [hereinafter *Western Governors' Association*].

² *Western Governors' Association, id.*

³ *Western Governors' Association, id.*

⁴ COUNCIL ON FOREIGN RELATIONS, NATIONAL SECURITY CONSEQUENCES OF U.S. OIL DEPENDENCY (Oct. 2006), available at <http://www.cfr.org/content/publications/attachments/EnergyTFR.pdf> (last visited Oct. 14, 2007).

⁵ See generally AL GORE, AN INCONVENIENT TRUTH (Rodale Books, 2006).

⁶ *Western Governors' Association, supra* note 1.

⁷ 26 U.S.C. § 25D (2007).

⁸ 26 U.S.C. § 25 D; DSIREUSA, Federal Incentives for Renewables and Efficiency, http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive_Code=US37F&State=federal¤tpageid=1&ee=1&re=1 (last visited Nov. 17, 2007) [hereinafter DSIREUSA].

⁹ See 26 U.S.C. § 25D; DSIREUSA, *supra* note 8.

¹⁰ New Mexico Energy, New Mexico Minerals and Natural Resources Department Energy Conservation and Management Division website, <http://www.emnrd.state.nm.us/ecmd/index.htm> (last visited Oct. 13, 2007).

¹¹ Solar Tax Credit, New Mexico Minerals and Natural Resources Department Energy Conservation and Management Division website, <http://www.emnrd.state.nm.us/ecmd/SolarTaxCredits/SolarTaxCredits.htm> (last visited Oct. 14, 2007).

¹² ARIZ. REV. STAT. § 43-1083 (LexisNexis 2007).

¹³ Performance-Based Incentives and New Incentive Levels Starting in 2007, California Energy Commission Go Solar California website, http://www.gosolarcalifornia.ca.gov/csi/performance_based.html (last visited Oct. 13, 2007).

¹⁴ CAL. CIV. CODE § 714 (Deering 2007).

¹⁵ 2007 N.M. Laws 232.

¹⁶ Bill Richardson, Governor of New Mexico, Keynote Speech at Colorado College: A New West, A New Energy Policy (Apr. 6, 2005).

¹⁷ New Solar Homes Partnership, California Energy Commission Go Solar California website, <http://www.gosolarcalifornia.ca.gov/nshp> (last visited Oct. 13, 2007).

¹⁸ CALIFORNIA ENERGY COMMISSION, NEW SOLAR HOMES PARTNERSHIP SECOND EDITION (July 2007), available at <http://www.gosolarcalifornia.ca.gov/documents/CEC-300-2007-008-CMF.PDF> (last visited Oct. 13, 2007).

¹⁹ ARIZONA DEPARTMENT OF COMMERCE, ARIZONA SOLAR ELECTRIC ROADMAP STUDY (Jan. 2007), available at http://www.azcommerce.com/doclib/energy/az_solar_electric_roadmap_study_full_report.pdf (last visited Oct. 14, 2007).

²⁰ *Western Governors' Association, supra* note 1.

²¹ Press Release, Sandia National Laboratories, Sandia, Stirling to Build Solar Dish Engine Power Plant (Nov. 9, 2004), available at <http://www.sandia.gov/news/resources/releases/2004/renew-energy-batt/Stirling.html> (last visited Oct. 13, 2007).