

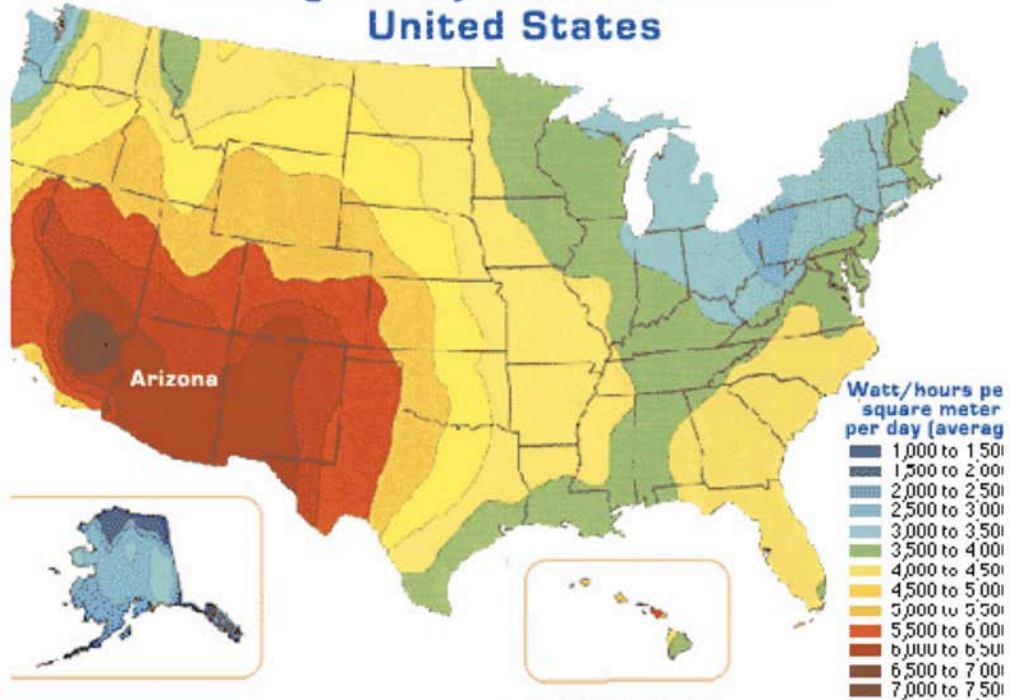


A New Perspective of Southern Arizona Leadership
in the Solar Energy Age



The inspiration for this narrative came about during flights over Santa Cruz County flown by Steve Boyle, co-founder of The Bellows Foundation, in his biplane.

Average Daily Solar Insolation: United States



Stretch your imagination and try to step outside the box.

Few of us have yet to fully absorb a startling new insight about Southern Arizona

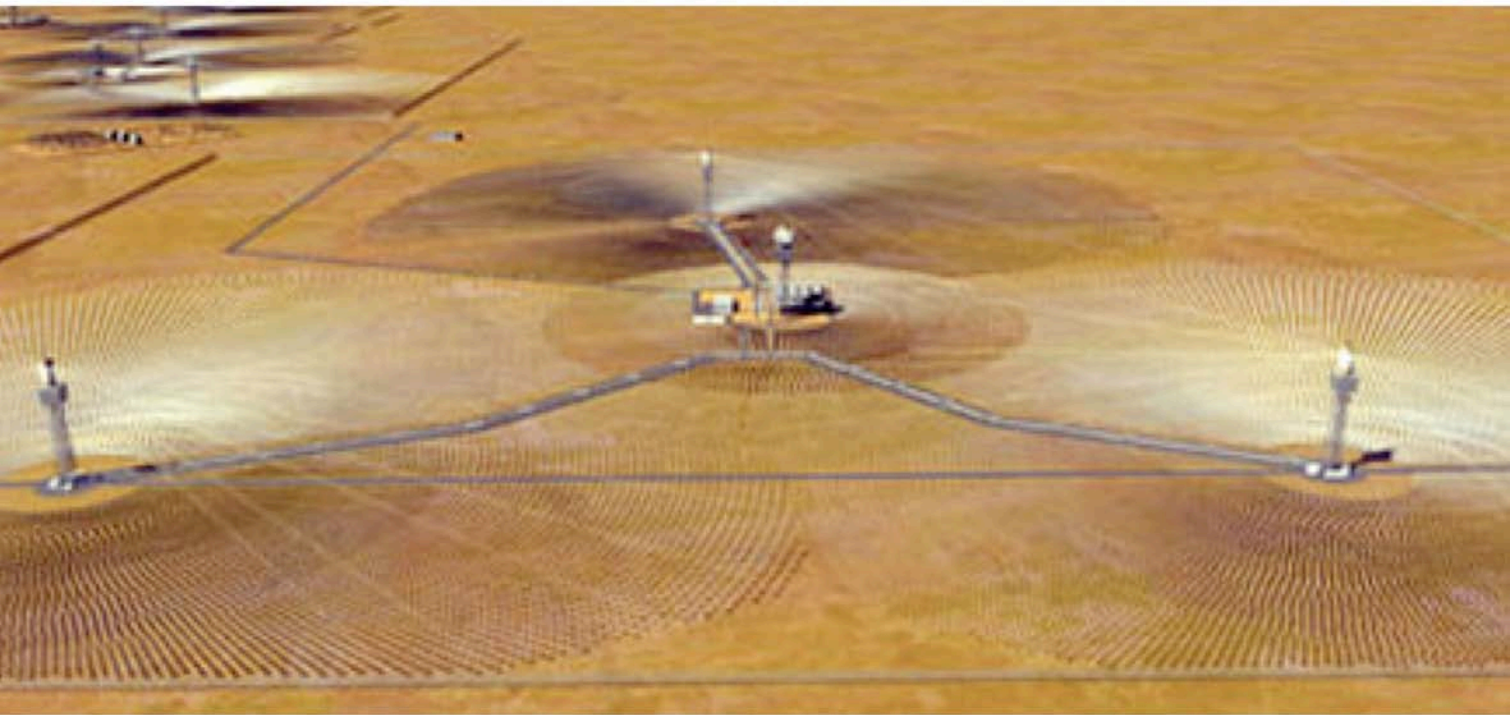
It is taking a national economic shake-up for us to even begin to grasp this insight: ***That in the painful repositioning of America to come, Southern Arizona will be one of the few big winners in the realigned economy of our nation.***

Why? Because Southern Arizona will find itself at the center of a dramatic shift to utility-scale, solar generation of electric power to the rest of the nation. It has only just begun--- public utility companies have gone to contract with solar generation builders to construct five large solar plants from Gila Bend, Arizona into the Mojave Desert.

What will Southern Arizona do in preparation for this shift?



Southern Arizona is not just a place to build cost-effective generating plants. The solar industry is in its infancy and new technologies are already surging.



Southern Arizona's economy has a bright future in solar manufacturing, R&D, service, support, and administration.

Southern Arizona Must Recognize This Insight and Start Gearing Up

The leadership tasks to be undertaken:

1. Accelerate training and education to shape the solar energy workforce in Southern Arizona.
2. Accelerate construction of solar generation plants in Southern Arizona.
3. Accelerate solar energy manufacturing in Southern Arizona.
4. Accelerate the formation of collaborations between venture capital, bank lending, investment partnerships, and stimulus grants in Southern Arizona.
5. Accelerate the visibility of solar industry leadership in Southern Arizona.

A Framework For Gearing Up

Using the Silicon Valley as an example of the evolution of the high tech industry in the U.S., the key elements were:

1. A major research university, nearby.
2. A large pool of skilled engineers and scientists.
3. Generous funding from the Defense Department.
4. A growing network of venture capital firms.
5. A quality affordable living and work environment in a slower-paced, non-urban area.



Santa Cruz County: A Similar Scenario

There is an interesting parallel that begins to emerge:

1. The University of Arizona, already focused on solar energy, is that research university, and is turning out new engineers and scientists.
2. Thanks to Raytheon, Honeywell and dozens of other defense contractors, we have a concentration of highly experienced engineers and scientists.
3. There is no doubt that federal stimulus money is available.
4. Venture capital will come as the solar industry takes shape.

Where is the Quality, Affordable Living and Work Environment In a Slower-Paced, Non-Urban Area?

This is where the narrative gets interesting. Flying down from Tucson and into Santa Cruz County, the terrain changes dramatically. From an elevation in Tucson of just under 2,400 feet above sea level, the elevation changes to a high of 9,453 feet at the peak of Mt. Wrightson. The towns of Sonoita and Patagonia, which are dominated by the Santa Rita and Patagonia Mountains, have elevations of 4,885 ft. and 4,055 ft.

Accordingly, in Santa Cruz County, it is much higher, much cooler, and is green for most of the year. It is a high quality living environment with its furthest towns only one hour and twenty minutes from the University of Arizona campus and only 55 minutes from Tucson International Airport.



Where Could the Quality Affordable Living and Work Environment Be Concentrated?

Overflying Santa Cruz County provides another advantage: Numerous alternative locations can be found and analyzed from a new point of reference and interesting facts emerged. For example, Santa Cruz County has a highly strategic asset that blends perfectly with the elements needed for a solar infrastructure location. This asset is an airport with an extraordinarily long runway (7,200 feet) and with a 2,000-acre, commercially-zoned tract that runs along the right side of the airport in the photograph. And there is an available 10-acre, semi-paved parcel in the shape of a small triangle within the larger tract, which can be seen to the lower right of the photo.



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1°34'42.08" N 110°51'15.86" W

Nov 13, 2006

Eye alt: 7.24 km



This strategic asset is the Nogales International Airport. The airport accommodates corporate aircraft up to 737-size. The 7,200-foot runway can accommodate larger aircraft without the runway being lengthened---it would only have to be widened.

The Airport will provide extraordinary access to a growing solar infrastructure concentration within the adjacent 2,000-acre tract.

The 2,000-acre tract is positioned in the upper part of the photograph. The 10-acre parcel can be seen in the upper left of the photo, marked by a dirt road at the top of the parcel.



The 10-acre parcel is semi-paved with a building that has full utilities.



The 1,500 sq.ft. building contains classroom and indoor work space.

An Axiom About Infrastructure Start-ups:

It won't work without a quality, affordable living environment, nearby.

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This photograph shows an ideal combination of work and living environments. The airport area is in the lower right of the photograph, Patagonia Lake is to the lower left, and the town of Patagonia is in the middle left. The Lake area is five miles from the airport and the town of Patagonia is ten miles from the airport.

The juxtaposition of the work and the living environment is excellent. The town of Nogales to the south provides big-box retail shopping, a cineplex, and many restaurants.



Sonoita Creek, which runs from the town of Patagonia to the Lake, is a world-famous bird migration way-stop visited by birders from all across the world.





Patagonia, Arizona (pop. 1,000) has a distinctive community ambiance with its large town common, an inn, B&B's, shops, restaurants and its own radio station.

What Is the Solar Infrastructure Business Plan?

The Bellows Institute, a division of The Bellows Foundation, is overseeing the early-stage steps of the solar infrastructure development. The business plan consists of building the following five elements that make up the infrastructure:

1. **A Solar Workforce Training Institute:** To help shape the solar industry workforce in Southern Arizona in the many emerging solar technologies and solar plant designs. The Institute will be headquartered in Patagonia, Arizona.
2. **A Solar Manufacturing Concentration:** An expanding solar manufacturing operation to provide practicum training for the workforce training students.

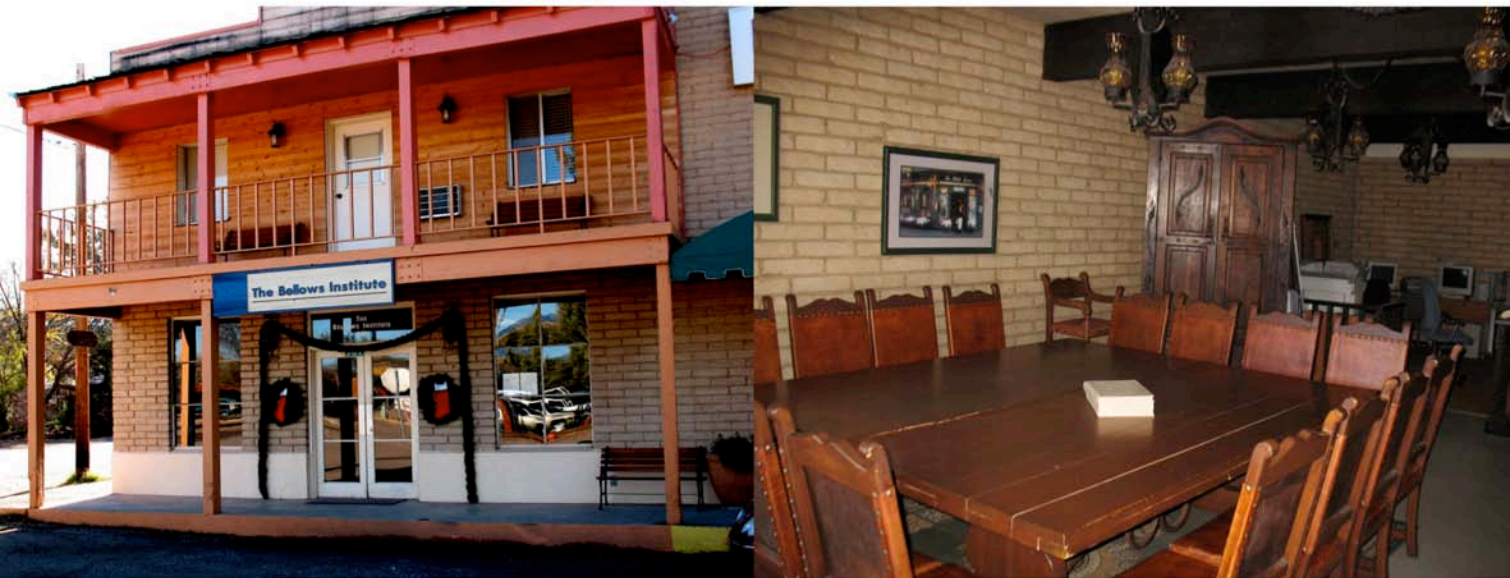
3. **A Solar Generating Plant:** An expandable solar generating plant to power: (i) the adjacent airport and, subsequently, with additional phased construction; (ii) Nogales and Patagonia, and ultimately; (iii) additional areas of Santa Cruz County. From this learning experience, a business of constructing new solar generating plants will be undertaken to service other areas of Santa Cruz County, Southern Arizona, and elsewhere in the U.S.

4. **A Solar Exposition Center:** To create solar leadership visibility for Southern Arizona, a permanent Exposition Center to showcase all new solar technologies and plant designs will be constructed. The Exposition Center will ultimately become the “go-to” place to see, buy and sell all different solar technologies and plant configurations. The adjacent airport, with its 7,200-foot runway, will provide ideal access to the Center. An analogy is the Paris Air Show, which is the gathering place for doing business in the global aircraft market.

5. **A Collaboration of Financing Sources:** Due to the extraordinarily weak credit markets, there is an urgent need for a new, self-reinforcing collaboration of venture capital, bank lending, investment partnerships, and stimulus grant funding to fuel the expansion of the solar energy industry in Southern Arizona.



The Stage Stop Inn, in Patagonia, will provide excellent support for solar workforce training , with its 42 rooms, dining, and classroom space.



The Bellows Institute is located at the Stage Stop Inn and will be responsible for the solar workforce training and other curricula.



The original organizers of The Bellows Institute (left to right): Dr. Orlando Blake, Irma Federico (standing), Annette Brink, Steve Boyle (standing), Netzin Steklis, and Dr. Dieter Steklis.

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For those who find this narrative thought-provoking, the Bellows Air Service is always there to help provide a fresh perspective.



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Made on a Mac