

## **NRDC CFL pilot project in Costa Rica highlighted as an example for national efficiency program**

NRDC and E2's collaboration that began last June has resulted in 22% electricity savings, compared with the same month the year before, in the Aquiares pilot project and the rollout of a national efficiency program by the Costa Rican state owned utility, ICE. This collaboration has also established a close working relationship with the Costa Rican government and laid the groundwork for future projects. The first is a series of NRDC - sponsored workshops with Costa Rican energy experts, including the Minister of the Environment and Energy, at Harvard University and UC Berkeley May 15-21<sup>st</sup> to discuss strategies for Costa Rica to become carbon neutral.

### **Background**

In June 2007, an NRDC delegation visited Costa Rica to meet with government, industry, and NGOs to identify opportunities that will help Costa Rica become carbon neutral by 2021. [June 2007 article](#)

A number of initiatives to reduce greenhouse gas emissions were discussed with President Arias and Minister Dobles. After assessing many options, it was clear that the "lowest hanging fruit" was reducing emissions through increased efficiency in the electricity sector. Over the course of NRDC's trip last June, NRDC member and efficiency expert, Roger Liddell, and E2 member, Lee Stein, drafted a proposal for how Costa Rica could reduce electricity use and decrease expenditures by instituting a national CFL distribution program.



The first step in Lee's and Roger's proposal was replacing an incandescent with a compact florescent light bulb in President Arias' living room ([see previous article](#)). This was the beginning of a concerted lobbying effort over the next several months, including multiple visits to Costa Rica, to convince the Costa Rican government and national utility, ICE, that the proposal deserved immediate action. Liddell even enlisted the participation of his wife Fa Liddell, a staunch efficiency advocate, and children, Alice, who has her own expertise in electricity rate structures and efficiency, and son Torrey, who also shares the family fervor for efficiency and is a freelance video producer.



### **Aquiares, Costa Rica – pilot project**

While continuing to work at the top level with government and energy utility representatives to increase efficiency measures, NRDC and E2 were also working on the ground level to collect our own data and launch a pilot project.

For the pilot project, we chose Aquiares, Costa Rica, a town of about 375 homes surrounded by a Rainforest Alliance certified coffee plantation. Aquiares was an ideal choice due to the great pride in this community from their role in environmental stewardship and conservation for the RA certification. NRDC also has a close relationship with the managers of the coffee farm, the Robelo family and Rafael Acuna, who have been integral in monitoring and implementing this project. NRDC and E2 made frequent trips to Aquiares to collect

data and meet with local engineers and families to ensure that the design of the project was tailored to the community.

**Initial findings:**

- Costa Ricans in the town of Aquiares, prefer bluish-white or “daylight” bulb CFLs, those with a higher Kelvin temperature around 6400 degrees
- Average daily use is approximately 4 hours for most frequently used bulbs
- In the community of Aquiares many households were underlamping (using lower watt bulbs) to save money and were eager to have more light for a similar or reduced cost



**NRDC's Executive Director, Peter Lehner, and Vice Minister Matamoros distributed the first bulbs to the community.**

**On November 12, 2007 NRDC and E2 launched the CFL distribution project in the town of Aquiares.**

The Ministry of Environment and Energy co-launched the pilot project with attendance from representatives of the national utility ICE and all other electricity suppliers; the regulating agency, ARESEP, and representatives from the department of energy (DSE). The launch was followed by a lively discussion of how the pilot project could be transformed into a national program and the barriers to implementation.

ICE planned to replicate the Aquiares model with a “Buy 2, Get 1 Free” promotion with local distributors. There are approximately 1 million homes in Costa Rica and ICE's goal is to distribute 750,000 CFLs this year, of which ICE will donate 250,000. ICE, the national energy utility, also planned to develop their own seal, ENERGICE, to certify bulbs that were approved for the program.

**The Pilot Project**

- Each home receives 2 CFL bulbs (15 watts, 6400 degrees Kelvin) for approximately \$1.00 each, bulbs normally cost approximately \$4.00 in Costa Rica, and one additional bulb for free (20 watt, 2700 degree Kelvin)
- The money from the purchase of the subsidized bulbs will enable CFLs to be supplied for public buildings in the community, such as the church, schoolhouse, and outdoor lights
- Each home agrees to allow ICE and NRDC to monitor their electricity bills every month to calculate savings

**Update, March 2008 – Aquiares 22% savings!**

Initial data from Aquiares has shown a 22% reduction in electricity use compared with the same month the previous year, much higher than we had been expecting since we did not require each household to get rid of their bulbs at the start of the project. Costa Rica launched their national efficiency program in February 2008, after six months of lobbying by NRDC and E2 on many levels. The program included many of the components that we had proposed to them, and faltered on others. One of the national program's initial tripping points has been not working closely enough with distributors to ensure

adequate supply and market transformation, resulting in consumer complaints about lack of stock. ICE has featured testimonials from the Aquiares community on its homepage, [www.grupoice.net](http://www.grupoice.net) and where they have also highlighted and described NRDC's role in the pilot project. ICE and the government of Costa Rica have expressed to NRDC that they will continue to use Aquiares as an example and to help inform their own decision – making.

### **Next Steps**

Costa Rica still has a long way to go, but we are encouraged by the example of Aquiares and the close relationships with the top government officials in Costa Rica that we have developed over the last year. The Vice-Minister of Environment and Energy, Julio Matamoros, recently came to Washington DC for the [Washington International Renewable Energy Conference](#), and had dinner with NRDC consultant, Elizabeth Beall, and E2 member Lee Stein to discuss future plans for collaboration.



**Vice Minister Matamoros and Lee Stein continue to enjoy discussing opportunities to work together.**

### **Costa Rica energy experts are coming to the Boston and the Bay Area May 15<sup>th</sup> – 21<sup>st</sup>**

The Minister of Environment and Energy, Roberto Dobles, of Costa Rica, Vice – Minister Matamoros, and energy experts from the state - owned utility, state - owned oil company, and climate change experts in charge of determining Costa Rica's plan for carbon neutrality will be coming to the U.S. for a carbon neutral study tour. The program will begin at Harvard University May 15<sup>th</sup> -17<sup>th</sup>, in collaboration with their Center for Environment, and then will come to the Bay Area for a workshop at UC Berkeley with their Center for Latin American Studies. The objective of the study tour is for Costa Rican policymakers and energy experts to benefit from lessons learned here in the U.S., and to have the opportunity to work with leading experts to develop strategies to achieve carbon neutrality by 2021.

**More to come on details of NRDC/E2 events during this visit. Please email Elizabeth Beall at [elizabeth.beall@gmail.com](mailto:elizabeth.beall@gmail.com) if you are interested in being involved in any events surrounding this visit.**