

Key Notes-LAI Phoenix Chapter

Energize Phoenix Overview

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Intro

We live in an era where it is fashionable to be green. However, beyond the hype, it is just common sense to be more environmentally responsible. Green usually costs money upfront in exchange for lifecycle savings. Though it may be feasible to implement green standards on a new construction project, it may be too costly to retrofit an existing building out of operating budgets.

Implementing a green program on a grand scale is a huge task that typically cannot be undertaken by a single group or agency. The LAI Phoenix Chapter was encouraged to hear about a consortium that has developed a program called “Energize Phoenix”. In a presentation given by Mick Dalrymple, ASU’s project manager for Energize Phoenix research, we learned about a group effort that is funded by the U.S. Department of Energy (“DOE”) that is a partnership between the City of Phoenix, Arizona Public Service (“APS”), and Arizona State University’s (“ASU”) Global Institute of Sustainability.

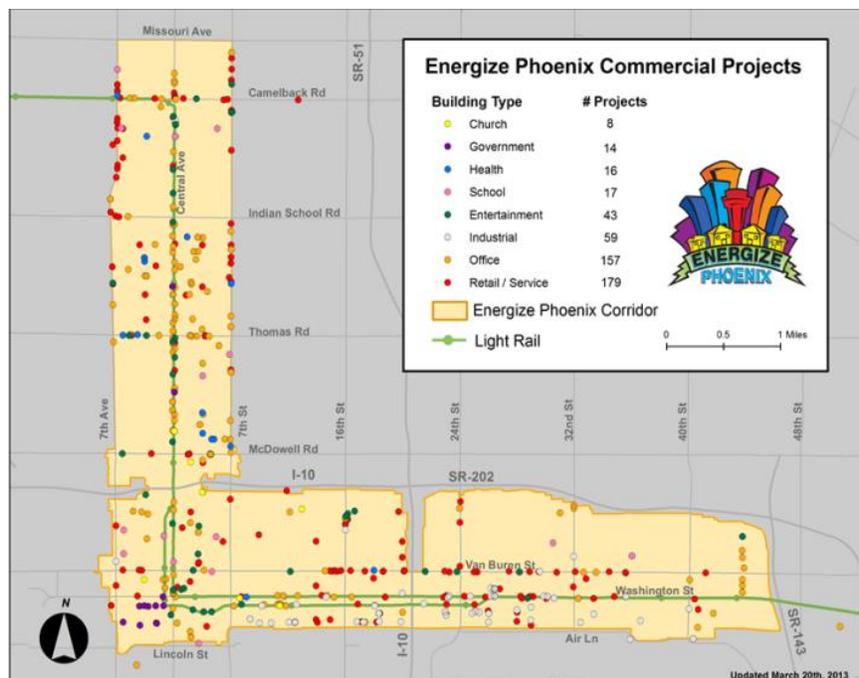


Figure 1. Energize Phoenix geographical boundaries.

Overview

Energize Phoenix is a three year, \$25 Million dollar energy efficiency upgrade program funded by stimulus dollars appropriated from the American Recovery and Reinvestment Act of 2009. The funds are appropriated through the DOE’s Better Buildings Program and led by the City of Phoenix. The main purpose of the Energize Phoenix program is to create a “sustainable large-scale model of urban energy efficiency in a 10 square mile urban corridor of Phoenix along the newly constructed Metro Light Rail”. APS is a key stakeholder as Arizona’s largest electricity provider. As expensive as retrofitting an existing

building may be, it is minuscule compared to the costs of building major infrastructure such as power plants. ASU's School of Global Sustainability role is to provide the technical analysis, marketing and documentation of the process and its findings. The findings are critical as "Making our buildings more energy efficient is one of the fastest, easiest, and cheapest ways to save money, combat pollution, and create jobs right here in the United States of America" according to President Obama.

Goals

The goals of Energize Phoenix are to retrofit 30 million square feet of commercial space and up to 1,700 residential units. In the process, the program hopes to create up to 2,000 jobs directly or indirectly and save \$11 million in utility costs while reducing 50,000 metric tons of greenhouse gases ("GhG") thereby reducing our carbon footprint. Projections are to reduce energy use by 18% in the commercial sector and 30% in the residential sector saving over 100 million kilowatt hours annually. Lastly, it is important to note that a major program such as Energize Phoenix is essentially in uncharted waters as there are no standardized program design parameters or metrics in existence. Many of the lessons learned through the program have been learned on-the-job in the laboratory of the real world. In short, the research accomplished here in regards to technical, economic and social-behavioral barriers is critical to moving these outreach projects forward on a much larger scale.

Successes

Energize Phoenix has had many challenges in completing their audacious goals, but has also had many successes as well. According to Mick Dalrymple, Energize Phoenix has the following metrics compiled as of April, 2013.

- 424 commercial buildings upgraded (some through multiple projects)
 - 26,797,092 square feet upgraded
 - Contractor-estimated savings of 45,237,935 kWh/yr.
 - 152 additional projects are work-in-progress
- 221 residential single-family home upgrades
 - Contractor-estimated savings of 654,768 kWh/yr.
 - 140 more homes audited or currently being upgraded
 - 467 residential multi-family unit upgrades
 - Contractor-estimated savings of 820,014 kWh/yr
 - 397 additional units currently being upgraded
 - 994 additional units have been qualified
- The CO2 equivalent of taking 6,866 cars off the road for one year Per EPA Greenhouse Gas Equivalencies Calculator. (<http://www.epa.gov/cleanenergy/energy-resources/calculator.html>)

Idea Guide

How can we do our part in our own way to be environmentally responsible? ASU's Global Institute of Sustainability has answers of how we can do our share by providing us with the "Energy Efficiency Idea Guide" designed specifically for Arizonans. This user friendly, easy to read, spiral bound document is the compilation of 46 of the best ideas that have been produced to make us more energy efficient. The ideas in the handbook range from the macro-political/legislative perspective to the education of contractors, realtors and appraisers. Idea #46 is perhaps the most interesting, to "Promote Grassroots Initiatives".

Conclusion

Energize Phoenix is at the intersection of the economic downturn's stimulus spending and the quest for a more sustainable perspective on environmental stewardship. While Energize Phoenix may not answer all questions, there is no doubt that it will be part of tomorrow's long term solution. For more information go directly to <http://energize.asu.edu/>.

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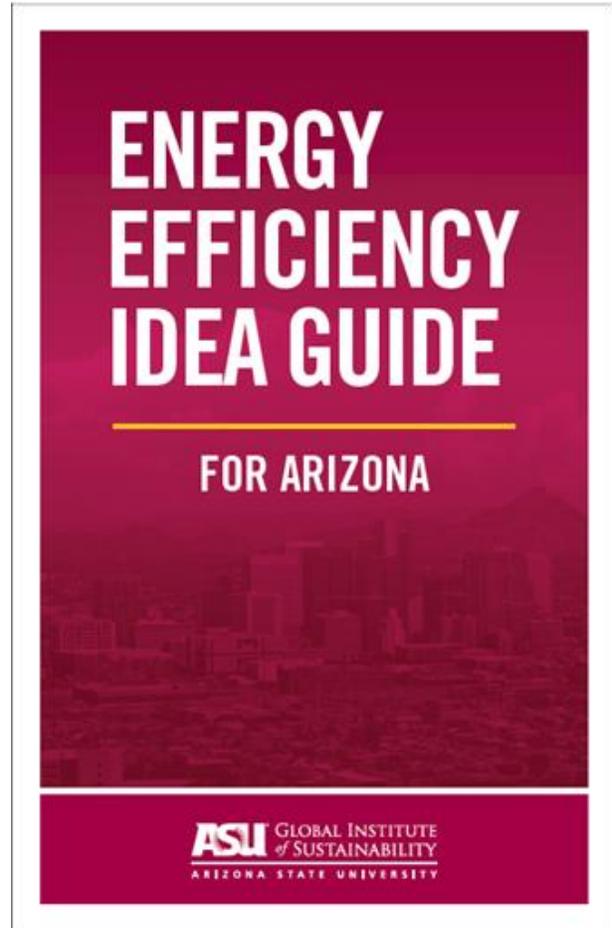


Figure 2. Idea Guide