



The Alliance for Industrial Efficiency



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Dear Chairman Stump, Commissioners Burns, Bitter Smith, Burns, and Pierce:

I am writing on behalf of The Alliance for Industrial Efficiency, a diverse coalition including representatives from the business, environmental, labor and contractor communities. Our national membership includes more than two dozen electrical and sheet metal contractors in Arizona. We are committed to enhancing manufacturing competitiveness and improving electric reliability through the greater use of combined heat and power (CHP) and waste heat to power (WHP). We are writing now to express our opposition to the Arizona Corporate Commission's (ACC) efforts to eliminate the state's energy efficiency resource standard (EERS), which explicitly identifies CHP as an eligible technology.¹ These standards and goals were adopted unanimously by a bipartisan ACC in 2010.

We are concerned that eliminating the Standard will erode opportunities for CHP project development in Arizona by undermining a potential incentive for CHP deployment. The EERS sends an important signal to manufacturers, installers, electricians, and mechanical contractors that Arizona supports an ambitious energy-efficiency strategy. The Alliance supports Arizona's EERS because we recognize that investments in energy efficiency make Arizona businesses more competitive, while supporting job growth in design, construction, installation, and maintenance of efficient technologies, including CHP.

As an initial matter, we note the tremendous benefits that CHP and WHP can provide to customers, businesses, and grid reliability overall. Conventional power generation is very inefficient. Nationwide, more than two-thirds of energy inputs are lost as wasted heat. This

¹ Arizona Administrative Code ("A.A.C.") Title 14, Chapter 2, Article 24 ("Electric Energy Efficiency Standards") "An affected utility may count the energy savings from combined heat and power (CHP) installations that do not qualify under the Renewable Energy Standard toward meeting the energy efficiency standard."

wasted energy results in higher electric rates for customers, lost competitiveness for U.S. manufacturers, and increased air pollution. By generating both heat and electricity from a single fuel source, CHP turns that waste into opportunity – producing energy from more than 70 percent of fuel inputs. By generating electricity at the point of use, it also eliminates wasted energy associated with transmission and distribution of electricity, which average about six percent of electricity.² WHP likewise increases efficiency and reduces emissions, by capturing otherwise wasted heat to generate additional power. In these ways, CHP and WHP offer substantial economic and environmental savings. In addition, CHP and WHP help improve reliability as these systems can remain fully operational during extreme weather events, despite loss of grid power.

To date, there are 10 CHP projects, totaling 86.5 megawatts (MW), in Arizona.³ While few in number, these projects bring substantial benefits. The 12 MW natural-gas-fired CHP system at the University of Arizona in Tucson, for example, saves the University more than \$1.1 million each year. It also has reduced air pollution significantly.⁴

Because eliminating wasted energy is the smartest and most cost-effective strategy for Arizona, the EERS creates incentives to eliminate wasted energy through CHP. Because of the EERS, Southwest Gas established the Arizona Smarter Better Distributed Generation Program to support CHP projects that achieve a total efficiency of 60 to 70 percent or higher.⁵ In 2012, this program helped the Clarion Hotel install a 100 kW natural-gas-fired system at its Phoenix location, allowing the hotel to save \$15,000 in annual energy costs in perpetuity. The new system produces power and hot water for the hotel's guestrooms as well as hot water for the pool and spa.⁶

There is significant remaining potential for CHP in Arizona, which the Standard could help the state seize. Arizona could build 1,946 MW of new industrial and commercial CHP systems in the state – the equivalent of four large power plants.⁷ Such full-scale deployment would:

- Support \$2.9 million in capital investments
- Create more than 11,600 jobs in the design, construction and installation of equipment.⁸

² Energy Information Administration, July 2012, "How much electricity is lost in transmission and distribution in the United States?" (<http://www.eia.gov/tools/faqs/faq.cfm?id=105&t=3>).

³ DOE-ICF CHP Installation Database, "Combined Heat and Power Units Located in Arizona" (<http://www.eea-inc.com/chpdata/States/AZ.html>) (visited Nov. 11, 2014)

⁴ DOE- CHP Technical Assistance Partnership "University of Arizona 12-MW CHP System" (noting that the project reduces PM10 emissions by 53%, NOx by 62% and VOCs by 82%) (http://www.southwestchptap.org/Data/Sites/1/documents/profiles/University_of_Arizona-Project_Profile.pdf)

⁵ Southwest Gas, "Arizona Smarter Greener Better Distributed Generation Program" (<http://www.swgasliving.com/dsm/efficiency/az/business/CombinedHeatPower>) (visited Nov. 18, 2014).

⁶ Easy Energy, June 15, 2012, Press Release: "Southwest Gas energy efficiency program saves hotel \$15,000 annually" (<http://www.easyenergyweb.com/solar-water-heating-news/easy-energy-develops-chp-system-at-clarion-hotel-phoenix>).

⁷ WADE-USCHPA-ICF, Oct. 2010, "Effect of a 30 Percent Investment Tax Credit on the Economic Market Potential for Combined Heat and Power" (http://www.localpower.org/WADE_USCHPA_ITC_Report.pdf)

Eliminating the Standard would cost Arizona this investment and jobs. The Standard is good for Arizona businesses, the reliability of the state's electric grid, and the environment. Conversely, eliminating the EERS increases costs for consumers, eliminates jobs, undermines competitiveness, and leads to more pollution. Indeed, by eliminating the EERS, the ACC would remove a key incentive to realize Arizona's CHP potential, undermining the state's industrial and commercial competitiveness.

Arizona's energy efficiency standard makes the state a national leader in eliminating wasted energy. Owing in part to the EERS, Arizona is ranked the fifteenth highest state for energy efficiency and savings in the country.⁹ These investments have already saved Arizona ratepayers \$540 million in the last three years,¹⁰ and it is estimated that ratepayers will save \$7.3 billion by 2030.¹¹ The ACC's efforts to roll-back the EERS would set a dangerous national precedent and forego billions of dollars in future consumer savings in Arizona.

In light of these impacts, we urge the ACC to reconsider the proposed removal of the existing EERS. Thank you for the opportunity to weigh in on this crucially important issue.

Sincerely,



David Gardiner
Executive Director, Alliance for Industrial Efficiency

⁸ Assumed cost of \$1,500 per kilowatt-hour installed cost (MW is 1,000 x kW). Jobs Multiplier: Based on four jobs created for every \$1 million in capital investment, Oak Ridge National Laboratory. "Combined Heat and Power: Effective Energy Solutions for a Sustainable Future." December 2008.

⁹ ACEE "State Energy Efficiency Scorecard Report" 2014, (<http://aceee.org/files/pdf/state-sheet/arizona.pdf>)

¹⁰ SWEEP, Nov. 2014, "Arizona Corporation Commission Issues Proposal to Eliminate State's Energy Efficiency Standards" (citing Annual Demand Side Management Reports from Arizona Public Service and Tucson Electric Power from 2011-2013)

(http://swenergy.org/news/news/documents/file/SWEEP_EEStandardElimination_Factsheet.pdf).

¹¹ SWEEP, Feb. 2014, "Arizona Energy Efficiency Fact Sheet" (<http://www.swenergy.org/publications/factsheets/AZ-Factsheet.pdf>).