

As an employee of TJ Bednar & Co., it is with the utmost respect and honor that I nominate Ted J. Bednar for the Charles Percy Award for Public Service for his lifetime commitment to energy efficiency. Ted Bednar's life has been a commitment to the pursuit of building an energy efficient home. In 1978, 30 years ago, Ted Bednar began this quest when he put 10% glass on the southern exposure of homes he was building. He protected this southern side with overhangs. The overhangs were used to protect the homes from the blistering Tucson sun in the summer months and the windows served to allow the sun to warm the house during the winter months. These same homes were built with 2x6 lumber to allow room for additional insulation to increase the energy efficiency of the home and to cut back on energy usage and energy expense from the homeowner's pocket. Since that day, 30 years ago, Ted Bednar has continued his journey in making each home that he builds more energy efficient than the previous.

Since that time 30 years ago, Ted Bednar's role as a builder has evolved. He has gone from building custom homes to building community homes. The one thing that has not changed has been his pursuit of building an even more energy efficient home. Over the years, other builders have sacrificed the quality of their workmanship and of their product in order to maximize their profits. But, Ted Bednar has stayed steadfast in not compromising. If he has compromised anything, he has compromised his profits to maximize energy efficiency to help homeowners operate their home for less dollars. Other builders use 2x4's as well as metal framing to cut down on cost, but Ted Bednar has not strayed from his use of 2x6's to frame his homes. This 2 x 6 construction allows additional space for extra insulation. He knows that the extra cost up front while building the home will allow the homeowner years of savings and put dollars back into the homeowner's pocket. The savings to operate the home may also allow the homeowner to purchase a larger home than they may have felt that they could otherwise afford.

In 1998, Tucson Electric Power with the help of Energy Star and Advanced Energy created the TEP Guarantee Program. The TEP Energy program is one of the most superior energy saving programs in the country.

The Guarantee program is a new home program utilizing the systems approach to home construction. The systems approach deals with health and safety, comfort, durability and energy efficiency. By utilizing the latest information on building science TEP has developed construction requirements that each home must meet to qualify. All homes are inspected by TEP at least three times during construction to verify these requirements have been met.

(www.tep.com/Home/GuaranteeHome/GuaranteeFaqs.asp#1)

After Tucson Electric Power developed the program in 1998, they invited Ted Bednar to be one of the first builders to participate in the program. The program has traditionally exceeded Energy Star's program. The program's main focus has been on performance and to encourage as many people to participate as possible. Besides the savings in energy costs in the homes that participate in the guarantee program, these homes also have the airflow balanced, as well as the AC sized correctly for the area of the home. The TEP guarantee homes have the insulation and air barrier installed correctly so they will perform at a maximum level. The homes are designed to allow fresh air to enter

the home to improve indoor air quality, which gives a slightly positive pressure pushing air out of the home rather than sucking air into the home which helps lessen the amount of dust and pollen, which enters the home. Ted Bednar qualifies 100% of his homes in the Tucson Electric Power areas as TEP guarantee homes.

Ted Bednar's quest to build homes that are more economical for homeowners to operate shows his compassion for these homeowners but it also shows his compassion for the environment. Ted Bednar was years before his time in beginning to build an energy efficient home - now in a time when everyone is "going green," it's a good time to honor one who walked the road first and one who walked the road by himself. Thank you for your consideration.

Table 4.0 provides summary results for the residential home DOE-2 model simulations. Included in this table are the annual HVAC heating and cooling consumption (electric and natural gas), the total energy consumption of the home, the summer peak electric demand (kW), and the annual natural gas, electricity and total utility costs. Energy and cost savings are calculated for the Guarantee Home model.

Table 4.0
Model Home DOE-2 Annual Simulation Results

DOE-2 Model Home	HVAC		Total Energy		Peak	Total Utility Costs				
	Heating (therms)	Cooling (kWh)	Total (therms)	Total (kWh)	Summer (kW)	Gas: SWG* (\$)	Electric: TEP R-201** (\$)	TEP R-01*** (\$)	Total (\$)	
<i>(TJ Bednar Home)</i> Guarantee Home: Electric Heat & DHW	N/A	794	4,003	N/A	13,634	4.7	NA	\$1,041	NA	\$1,041
IECC Standards: Electric Heat & DHW	N/A	1,570	5,077	N/A	15,484	5.9	NA	N/A	\$1,516	\$1,516
<i>Guarantee Home Savings</i>	-	776	1,074	-	1,850	1.2	-	-	-	\$475
IECC Standards: Gas Heat & DHW	234	N/A	5,077	450	10,345	5.7	\$787	NA	\$1,058	\$1,844
<i>Guarantee Home Savings</i>	234	-794	1,074	450	-3,289	1.0	\$787	-	-	\$803
Energy Star Homes: Electric Heat & DHW	N/A	983	4,140	N/A	13,959	5.0	N/A	NA	\$1,373	\$1,373
<i>Guarantee Home Savings</i>	-	189	137	-	325	0.3	-	-	-	\$331
Energy Star Homes: Gas Heat & DHW	193	N/A	4,140	349	9,408	4.7	\$641	NA	\$965	\$1,606
<i>Guarantee Home Savings</i>	193	-794	137	349	-4,226	0.0	\$641	-	-	\$565

Footnote:

*Based on SW Gas rate after March 2006 rate case and includes purchased gas adjustment using from data from Mar to Oct 2006

**TEP R-201 = TOU Rate for all electric Guarantee Homes

***TEP 1 = standard residential rate

Natural gas and electric utility costs include monthly customer charges and 9.4% tax