



MEMORANDUM

TO: Pete Ewen, APS

FROM: The Seidman Research Institute, W. P. Carey School of Business, ASU (Seidman)

DATE: 8/9/2018

RE: **Estimated Increase in Residential Electric Rates Associated with *Clean Energy for a Healthy Arizona (50x30 Plan)***

Seidman estimates the average price of electricity for residential customers will increase from 13.57c/KWH to 29.41c/KWH over the period 2017-30 if the 50x30 Plan is adopted. This represents a 117% increase on the price in 2017.

Seidman further calculates that the average residential customer bill would increase by \$1,936 as a result of the estimated rate rise between 2017-30.

Seidman estimates are summarized below.

		Price of Electricity(\$/KWH)	Average Annual Residential Bill
50x30 Plan	2017	\$0.1357	\$1,658
	2030	\$0.2941	\$3,594

Basis of Calculations and Assumptions

1. Generation-related revenue requirements were provided by APS for both the business-as-usual (BAU) and the 50x30 Plan along with total forecast demand for 2017 and 2030. (See APS 2017 Integrated Resource Plan, Attachment C.1(B).) These allow calculation of the required increase in the system-wide (residential and commercial) generation-related rates for electricity. Seidman assumes that the increase in generation-related rates applies equally to residential and commercial customers.
2. Non-generation-related rates are estimated to rise in line with inflation. An inflation rate of 2.5%, consistent with APS publicly-available plans, is used.
3. Seidman calculates that the average residential price is composed of 60.8% generation-related elements and 39.2% non-generation elements. (See APS Functionalized

Seidman Research Institute

660 S. Mill Ave, Suite 300, Tempe, AZ 85281

p: 480-965-5362 **f:** 480-965-5458 **email:** wpcareyseid@asu.edu **web:** seidmaninstitute.com

Revenue Requirement 2015 Test Year Report.) This is assumed to remain constant 2017-30.

4. The composite increase in the average residential electricity price over the period 2017-30 following the adoption of the 50x30 Plan is the weighted average of the required increases in generation-related (see 1.) and non-generation-related (see 2.) rates.
5. Average usage per residential customer (see the Pinnacle West Capital Corp. 2017 Statistical Report for Financial Analysis) is assumed constant between 2017-30.
6. The average annual residential bill is calculated using the residential average usage (see 5.) the average residential prices (see 4.).

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