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New Smart Meter Data Shows Potential of Real-Time Pricing to Lower Electric Bills *EDF and CUB release comprehensive analysis of dynamic pricing benefits*

(CHICAGO – Nov. 14, 2017) Ninety-seven percent of a sample of Commonwealth Edison (ComEd) customers would have saved money in 2016—without changing their electricity use—had they participated in a “real-time pricing” program in which power prices change hourly, according to new research released Tuesday. In a broad, first-of-its-kind study, Environmental Defense Fund (EDF) and the Citizens Utility Board (CUB) analyzed anonymous energy-usage data from more than 300,000 smart meters installed by ComEd, Illinois’ largest electric utility.

Representing the nation’s most comprehensive dynamic-pricing analysis of smart meter data, the findings suggest that well-designed pricing models, like real-time pricing, could help lower people’s electricity bills and make the electric grid more efficient. The groups’ whitepaper, *The Costs and Benefits of Real-Time Pricing*, is available at www.BigEnergyData.info.

Specifically, the paper finds real-time pricing would have trimmed bills for the average ComEd customer by \$86.63 annually, or 13.2 percent less than they paid under the traditional flat-rate power pricing system. Moreover, real-time pricing would have generated savings for 97 percent of the households covered in the study, comprising total savings of \$29.8 million.

“We are encouraged by these results, but this is just the beginning,” said David Kolata, executive director of CUB, Illinois’ nonprofit utility watchdog group. “We hope these findings ignite discussion on how alternatives to traditional electricity rates have the potential to lower electricity bills for more households.”

“Modern sensors, controls, and meters are producing enormous amounts of data, which can revolutionize electricity markets and play a huge role in lowering pollution from the power grid,” said [Dick Munson](#), Midwest director of clean energy for EDF. “We were surprised to find real-time pricing would have saved nearly all of ComEd’s customers money, even without them doing a thing differently. There’s a big opportunity to design better pricing structures that encourage people to use electricity more efficiently, which lowers energy costs while cleaning the air.”

Illinois is the only state in the country where the two largest utilities—Ameren Illinois and ComEd—offer

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comprehensive, opt-in, residential real-time pricing programs. Yet the vast majority of ComEd customers still pay a flat or average rate for their electricity supply. Out of more than 3 million residential customers, a relatively small percentage (about 17,500 customers) are enrolled in ComEd's "Hourly Pricing" program, a dynamic-pricing program in which participants pay an hourly, wholesale market price for electricity.

Programs like these are designed to motivate customers to use energy when market prices are lowest. Elevate Energy, which manages ComEd's program, says participants have saved more than 15 percent off the supply portions of their bill since Hourly Pricing was launched in 2007.

Using 12 months of energy-usage data from smart meters, anonymized by zip code, EDF and CUB calculated what the 2016 electricity bills of 300,000 ComEd residential customers would have been under the Hourly Pricing program. The study found:

- All savings would have been achieved without customers changing their behavior, so even greater savings are possible through voluntary adjustments to energy usage.
- The top 5 percent of savers would have cut their bills by an average of \$104 a year, or 31 percent.
- For the customers who would have lost money (three percent of the sample), the median increase in bills was an estimated total of \$6.23 for the year.
- There were no significant differences between customers who have low incomes and other customers.

More research is necessary to analyze the characteristics of the customers who would have saved under real-time pricing, as well as the small percentage of those who would not. It should also be noted that flat-rate utility prices in 2016 were elevated due to the lingering effects of "polar vortex" price spikes two years earlier. EDF and CUB urge more studies involving a larger number of customers, multiple utilities, and other years.

Key policy developments in Illinois made the study possible. In 2011, the General Assembly passed legislation allowing ComEd and Ameren Illinois to install advanced electric meters that are able to collect an unprecedented amount of energy usage data in more than 4 million households across Illinois. This past February, the Illinois Commerce Commission (ICC) approved the release of anonymous, aggregate energy-use data on a large scale, broken out in half-hour increments, 24 hours a day.

CUB and EDF have begun to evaluate this data to help answer important policy questions, unlock innovation, and save customers money. This whitepaper is the first result of that effort.

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***CUB** is Illinois' leading nonprofit utility watchdog organization. Created by the Illinois Legislature, CUB opened its doors in 1984 to represent the interests of residential and small-business utility customers. Since then, CUB has saved consumers more than \$20 billion by helping to block rate hikes and secure refunds. For more information, call CUB's Consumer Hotline at 1-800-669-5556 or visit CUB's award-winning website, www.CitizensUtilityBoard.org.*