

### BACKGROUND

In 2008 the United Kingdom's main gas and electricity regulator began planning to radically change the way it regulates electric transmission and distribution. The Office of Gas and Electricity Markets (Ofgem) created a performance-based framework called RIIO (Revenue = Incentives + Innovation + Outputs) to control the rates charged by the Kingdom's 14 electric and four gas companies. This framework created an eight-year rate plan and revenue cap; combined utility capital and operating budgets; and created specific performance targets for utilities based on six categories, which included reliability and availability, environment, connections, customer service, social obligations and safety.

Under an eight-year program started in 2013, U.K. utilities' revenues were collared based on economy-wide factors rather than their own spending, which is the case with U.S. utility regulation. If targets were met, up to 2.5 percent of additional earnings could be added to a company's year-end revenue. Missed targets garnered a penalty of up to the same amount.

The move was necessary to help utilities better adapt to new market conditions and identify long-term cost-savings for consumers. And with RIIO now approaching the conclusion of its full eight-year cycle, early results show that utilities are achieving most of their performance targets. In 2018, nearly 80 percent of utilities spent less than their total expenditure allowance and all utilities outperformed their weighted average return on equity. As a result, utilities have done much to help the United Kingdom meet its aggressive climate emission goals by replacing coal-fired power with renewable wind.

### SUMMARY

- Performance Based Regulation (PBR) for utilities was conceived a decade ago in the United Kingdom as a way to move away from cost-of-service utility regulation.
- The United Kingdom developed a new model that eased the grid's replacement of coal-fired power with more efficient wind energy and natural gas technologies.
- U.S. utilities should follow its example and use PBR as a tool to contain costs, rather than as a policy tool to justify future capital spending.

### CURRENT DEBATE

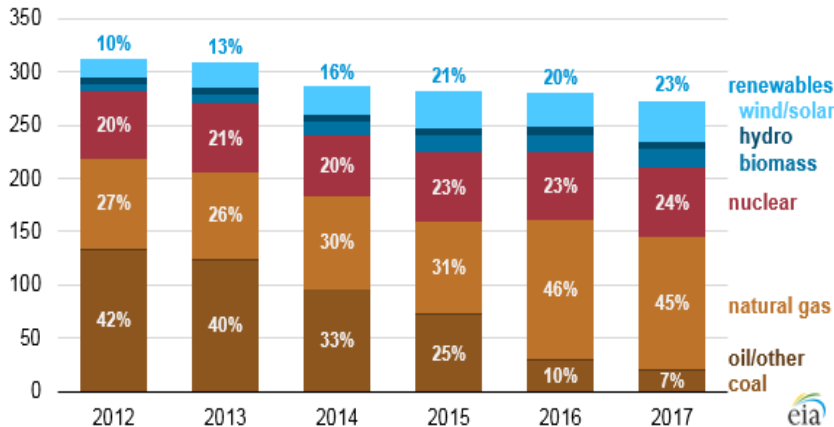
As more than a dozen U.S. state utility commissions consider implementing various versions of performance-based regulation, it is important to review some of the emerging lessons of the U.K. experience with PBR.

The RIIO model's most radical innovation was made via the balance sheet by combining a utility's capital expenditures and operational expenditures into one capped bucket of allowable revenue (known as a "revenue cap"). This enables a rate of return on the entirety of a utility's earnings, which is different than in the United States, where utilities have two separate categories of earnings: capital spending, which can receive a rate of return, and operational spending, which cannot.

In the American context, the following states have implemented some version of PBR or researched its effectiveness: California, Hawaii, Ohio, Minnesota, Massachusetts, Rhode Island, Illinois, Colorado, Michigan, Pennsylvania, Oregon, New Hampshire, Maine, New Mexico and New York.

### United Kingdom electricity generation by fuel (2012-2017)

billion kilowatthours



SOURCE: U.S. Energy Information Administration

### ACTION ITEMS

A mid-term review of the U.K. RIIO model found many lessons that may be applied to a future multi-year rate plan:

- Many distribution utilities beat forecasts for customer bills, exceeded most of their performance targets and achieved higher- than-anticipated returns on equity.
- There should be a sharp focus on linking customer costs to important external economic metrics like GDP, inflation, population changes or electrification rates.
- The eight-year length of the multi-year revenue cap is too long to account for external factors. A five-year length would be better.
- Some U.K. utilities are paying penalties for under-performance on outcomes, but most earn incentives for over-performing.

American jurisdictions have periodically recommended making certain operational expenditures eligible to receive a rate of return. This, however, would not get regulators out of the game of choosing winners and losers, nor does it put the onus of obtaining outcomes where it belongs: on utility management rather than government regulators. The only way to do this is by allowing a full range of trade-offs between capital spending and operational spending, which the United Kingdom has done.

In the coming years, regulators should take the best ideas from the U.K. experience and adapt them to the American context. Britain's advantage of a unified grid and

accounting practice are unavailable to U.S. regulators.

What the U.S. industry does have is the ability to institute performance-based regulation in a multitude of jurisdictions with different climate, demographic and power infrastructure characteristics. Regulators should take former U.S. Supreme Court Justice Louis Brandeis' comment that states are the "laboratories of democracy" to heart in the coming years and allow states to try different methods and metrics on for size as they pursue PBR.

PBR presents many opportunities to remove the capital bias currently at work within the cost-of-service model and utility commissions across the United States should continue to pay close attention to the U.K. experience.

### CONTACT US

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