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UTILITY POLICY THOUGHT LEADER

Utilities are feeling pressure from efficiency gains that reduce sales, requirements to lower emissions from their plants, and renewable energy sources that they don't own absorbing a larger share of the market. Steve Kihm is working to give investor-owned utility executives a path to value for their shareholders while also meeting customer expectations for innovation and flexibility. Steve has worked on issues affecting regulated utilities for 36 years, including 21 years with the Wisconsin Public Service Commission. He has testified before regulatory commissions in the District of Columbia, Georgia, Hawaii, Illinois, Maine, Michigan, Pennsylvania and Wisconsin. Steve has authored numerous policy papers and co-authored a 2014 article for the *Energy Law Journal* and a forthcoming book on risk principles for utility regulators. Steve is a Senior Fellow at Michigan State University's Institute of Public Utilities.

STEVE KIHM, CFA, Principal and Chief Economist
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LEADERSHIP

Utility stock valuation tool development
U.S. Department on Energy, ongoing (with Lawrence Berkeley National Laboratory)

Utility business models of the future
National Governors Association, Madison, WI, Mar 2016

Future electric utility regulation
Lawrence Berkeley National Laboratory Advisory Group, Electricity Markets and Policy Group, Nov 2015

Financial foundations for electric utility strategy in a changing environment
Minnesota e21 Initiative, Minneapolis, MN, Nov 2015

Powering Tomorrow: the transition to a sustainable utility future
Stakeholder meeting, Tempe, AZ, Mar 2015

PAPERS

Considering risk and investor value in energy efficiency business models
ACEEE Summer Study on Buildings, Aug 2016—in process (with Andrew Satchwell and Peter Cappers)

The effects of rising interest rates on electric utility stock prices: regulatory considerations and approaches
Lawrence Berkeley National Laboratory Technical Brief, Dec 2015 (with Andrew Satchwell and Peter Cappers)

You get what you pay for: moving toward value in utility compensation
Seventhwave white paper, Jun 2015 (with Ron Lehr, Sonia Aggarwal and Edward Burgess)

Does disruptive competition mean a death spiral for electric utilities?
Energy Law Journal, May 2014 (with Elisabeth Graffy)

Designing a new utility business model? Better understand the traditional one first
ACEEE Summer Study on Buildings, Aug 2014 (with Jim Barrett and Casey Bell)

BOOKS

Risk Principles for Public Utility Regulators
Michigan State University Press, forthcoming, 2016 (with Janice Beecher)

PRESENTATIONS

Utility prices: now and the not so distant future
Better Buildings Better Business Conference, Wisconsin Dells, WI, Mar 2016

Finance and economics in current utility markets: implications for distributed generation
Wisconsin Distributed Resources Collaborative, Madison, WI, Jan 2016,

Stability, innovation and evolution in the power sector
Arizona State University/University of Wisconsin Future of Energy Forum, Madison, WI, Nov 2015, (with Elisabeth Graffy)

Valuing utility stocks: principles and applications
Michigan State University Advanced Regulatory Studies Program, East Lansing, MI, Oct 2015

Utility investors: risk, return and value
Energy Utility Basics course, Wisconsin Public Utility Institute, Madison, WI, Oct 2015

Risk, return and cost of capital for utilities
Annual Regulatory Studies Program, Michigan State University, East Lansing, MI, Aug 2015

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PRESENTATIONS *continued*

Risk and opportunity in regulation
National Association of Regulatory Utility Commissioners, Staff Subcomittee on Accounting and Finance, New Orleans, LA, Apr 2015

Utilities as customers and competitors
National Association of Energy Services Companies annual meeting, Carlsbad, CA, Nov 2014

Wisconsin electric utility rate restructuring: background and impacts
University of Wisconsin Extension webinar, Madison, WI, Sep 2014

Electric utilities in transition: threats and opportunities
Wright-Hennepin Cooperative Utility Board of Directors, Rockford, MN, Sep 2014

Designing a new utility business model? Better understand the traditional one first
ACEEE Summer Study on Buildings, Monterey, CA, Aug 2014

Understanding the economics of the utility business model
RE-AMP webinar, Madison, WI, May 2014

Impacts of distributed generation on utility rates
Wisconsin Utilities Association, Madison, WI, Jan 2014

CONSULTATION

The electric utility industry in transition: strategic responses
Presentation to Dairyland Power Cooperative Board of Directors, La Crosse, WI, Aug 2015

Evolving electric utility markets
Presentation to Ameresco Board of Directors, Chicago, IL, Jul 2015

Powering Tomorrow: new regulatory and legislative frameworks
Advising former regulators Lauren Azar (D-WI), Darrell Hanson (R-IA), Kris Mayes (R-AZ) and Scott Weiner (D-NJ) in developing a bipartisan solution to utility regulatory reform, Mar 2015

MEDIA

Energy-pinching Americans pose threat to power grid
Wall Street Journal, Feb 2, 2015

Wisconsin utility rate design proposals
Radio interview, WHA, 90.7 FM, Madison, WI, Sep 2014

Solar power and the electric utility industry
Radio interview, WMAD, 92.1 FM, Madison, WI, Jul 2014

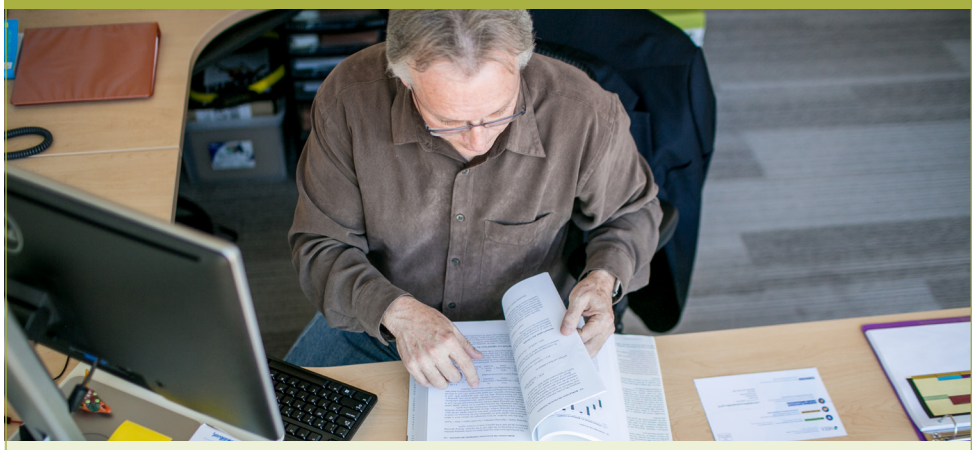
We Energies among utilities seeking bigger fixed charges from customers
Milwaukee Journal Sentinel, Jun 2014

Economist warns that growth of solar will lead to problems for power companies
Radio interview, Wisconsin Public Radio, Jun 2014

Wisconsin utility companies take aim against solar power
Wisconsin State Journal, Jul 2014

Utilities could go the way of the streetcar, or mimic one industry that survived
Forbes, Jun 2014

THE VALUE ENGINE



Many regulatory reform discussions focus on the utility's return on equity as the sole driver of financial value, but that does not align with the concept of investor value creation. It is not the *absolute* level of a company's return on equity (r), but rather the *difference* between r and its cost of equity (k), along with the size of the investment, that creates the value opportunity that drives the stock price.

If markets or regulators consistently drove the return on equity down to the cost of equity, there would be no financial reason for value-oriented firms to make investments. For a utility, they would have no incentive to invest in new plant.

The key question for investors then is not whether the utility earns a return on equity on its new plant investment, but whether that return exceeds the cost of equity, and by how much.

THE VALUE PROPOSITION IN SIMPLE CONCEPTUAL TERMS

annual contribution to investor value → $V = (r - k)I$ ← investment scale

r: return on equity; k: cost of equity

Excerpt from *You Get What You Pay For: Moving Toward Value in Utility Compensation*, by Steve Kihm, Ron Lehr, Sonia Aggarwal and Edward Burgess, June 2015.