Community Solar Model for Water Utilities

APPENDIX C

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> Power loss can have devastating impacts on drinking water and wastewater utilities and the communities they serve. Inoperable pumps at a drinking water utility can make firefighting difficult and cause local health care facilities and restaurants to close. Pressure loss can allow contaminants to enter the drinking water distribution system from surrounding soil and groundwater. For wastewater utilities, pump failure may lead to direct discharge of untreated sewage to rivers and streams or sewage backup into homes and businesses. Power loss can also impact water utilities through cascading infrastructure failures. For example, a chemical plant without power could discharge contaminants into source water supplies.

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> "Energy is the highest operational cost for a water and wastewater utility. Water is extremely heavy to move through pipes and many treatment processes are energy intensive thus conveyance and treatment requires an enormous amount of power — and money. According to our survey, two-thirds of respondents say energy management is "extremely or very important," while one-quarter prioritized it as "moderately important."
>
> 'The solar alternative was far and away the popular energy choice among respondents to the poll, not surprisingly, given the shrinking cost of solar equipment and advances in the efficiency and lifespan of the panels. Solar is a logical, credible option because it's a passive, sunshine-collecting system without a lot of operations and maintenance (O&M) demands, which can be handled by outside contractors as needed.
>
> "It is no surprise that after labor costs, energy is the next highest operational cost for water and wastewater utilities. Water is an extremely heavy resource, requiring enormous amounts of energy to move and treat it. As energy costs continue to rise and more states adopt regulatory incentives and disincentives that drive large-scale sustainability and

efficiency efforts, it is expected that utilities will become more aggressive in their approach to managing energy"

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Community Solar Model for Water Utilities

APPENDIX D

Author's Background

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SUMMARY

Strategic leader on energy market and regulatory issues; project/program innovator; public speaker and author; experienced negotiator; government relations and legal counselor.

http://www.linkedin.com/in/david-wooley-a0a8486
http:/www.kfwlaw.com

PROFESSIONAL EXPERIENCE

Lecturer & Director Center for Environmental Public Policy, Goldman School of Public Policy, University of California, Berkeley

Berkeley, California — September 2017 to Present

Manage public policy research projects affecting transportation, energy, environment and climate; convene stakeholder dialogues to address air quality problems associated with shipping and transport; manage executive training for electric power executives and staff from India; and teach courses on environment, energy and climate topics.

Principal, Wooley Energy & Environment

Berkeley, California — January 2012 to Present

Consultant to private foundations, NGOs and clean energy industry – providing advice on regulatory compliance, policy advocacy, fundraising and grant making strategy in the areas of renewable energy, energy efficiency, air quality, carbon pollution control, natural gas, combined heat and power, and transmission policy. Clients have included: Energy Foundation; Future 500, Institute for Industrial Productivity; National Parks & Conservation Association; Regulatory Assistance Project; and Natural Resources Defense Council.

Vice President for Domestic Policy Initiatives, The Energy Foundation

San Francisco, California March 2003- December 2011

Managed a $22 million/year domestic grant making program; responsible for strategy development on climate, renewable energy, energy efficiency, transmission, building codes, appliance standards, power generation and air quality. David launched new grant operations on industrial efficiency, CHP, coal, carbon capture and sequestration and natural gas. David led a team that helped design a greenhouse gas emission target for California (June 1, 2005). During his tenure at EF, energy efficiency investment by regulated electric and gas utilizes quadrupled, and spread from the coasts to Midwest, Intermountain West and Southern Regions.

Founding Partner, *Young, Sommer . . . LLC*

Albany, New York 1999-2003

A private law practice specializing in environmental and energy law, government relations, renewable energy development, utility law and compliance counseling. Helped initiate NY's role in the Regional Greenhouse Gas Initiative (RGGI).

Counsel, *Clean Air Task Force*

Boston, Massachusetts & Albany, New York October 1996 - February 2003

Counsel to air quality advocacy and education project. Represented citizen groups in environmental-related rulemakings and litigation over federal and state power plant emission controls, New Source Review enforcement, and ambient air quality standards. Appointed by U.S. State Department as an NGO Member of US Negotiating Team in talks on the US-Canada Air Quality Agreement, Ozone Annex (2000). Member, Governor Pataki's Greenhouse Gas Taskforce, whose recommendations led to the NY Renewable Portfolio Standard and the Regional Greenhouse Gas Initiative (RGGI).

Director, Northeast State Policy Project, American Wind Energy Association

Albany, New York and Washington, DC 1999-2003

Represented wind industry on utility procurement, transmission rules, and state policy developments in Northeast States. Appointed to NJ Governor's Renewable Energy Task Force. Convinced Pataki Administration to implement a renewable portfolio standard in NY.

Professor for Environmental & Energy Law, Executive Director, Pace Energy Project

Pace University School of Law, White Plains, New York January 1990 – August 1999

Led an energy policy advocacy project active in NY, NJ, PA, MI and FL on energy efficiency investment, renewable energy policy, state energy planning, and electric power regulation. Lead counsel for environmental and consumer groups in the NY Public Service Commission case that restructured the electric

utility industry. Convinced officials to establish a fund (initially $87 million/year) to support energy efficiency services and renewable energy development. Taught courses on energy and environmental law, managed student interns in the Energy Project and served as a full member of the law school faculty***Assistant***

Assistant Attorney General, New York State Department of Law, **Environmental Protection Bureau,**
Albany, New York 1980 - 1989
Lead counsel in acid rain litigation for coalition of northeastern states and national environmental groups. Organized lobbying efforts, public information meetings, press statements and speeches for Attorney General on air quality issues. Represented NY in court actions under Clean Water Act, State Environmental Quality Review Act, and Clean Air Act, involving solid waste incineration, gasoline vapor control, power plant emissions, smog control, enforcement and federal grants.

EDUCATION

Juris Doctor, Rutgers University, School of Law, Newark, N.J.,
Bachelor of Arts, Rutgers College, New Brunswick, N.J. (Departmental Honors in History).

SELECTED PUBLICATIONS

Books & Chapters

Clean Air Act Handbook, 3rd through 27th Editions, West Group, (1993-2020).

Articles & Reports

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