

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking into Policies to Promote a Partnership Framework between Energy Investor Owned Utilities and the Water Sector to Promote Water-Energy Nexus Programs.

Rulemaking 13-12-011 (Filed December 19, 2013)

ASSIGNED COMMISSIONER'S AMENDED SCOPING MEMORANDUM AND RULING

1. Background

1.1. The Ongoing Drought

California is undergoing an unprecedented drought, replete with grim implications for California's economy in general, and for energy supply, food supply and farm-related employment in particular. On January 17, 2014, Governor Brown declared a Drought State of Emergency,¹ in which the Governor observed that "the magnitude of the severe drought conditions presents threats beyond the control of the services, personnel, equipment and facilities of any single local government." On April 25, 2014, the Governor declared a continued state of emergency,² and on April, 1 2015, the Governor issued an Executive

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¹ http://gov.ca.gov/news.php?id=18368.

² http://gov.ca.gov/news.php?id=18496.

Order mandating substantial water reductions throughout the state in light of the ongoing drought emergency.³

The Commission has wide reach in California through its jurisdiction over energy utilities, water utilities, and other investor-owned utilities. The drought implicates numerous arenas in which the Commission has exercised its jurisdiction, including but not limited to water conservation, energy conservation, consumer education, low income assistance, and support for communications and broadband deployment as telecommunications and internet facilities and services are increasingly crucial to water management, use, and public safety.

I want to explore what immediate-term, mid-term, and long-term actions the Commission can take to address the water-energy nexus and promote conservation in light of both the current drought, the imperative of saving water and using energy, and to address current and future climate challenges. To this end, we must coordinate efforts amongst several Commission divisions, bring our best ideas to the table, break silos, and work together. The water-energy nexus provides an opportunity for just this sort of coordinated effort.

1.2. The Origin of this Rulemaking and Prior Commission Action Regarding the Water-Energy Nexus

In Rulemaking (R.) 13-12-011, the Commission granted the Petition for Rulemaking of the Office of Ratepayer Advocates (ORA) to open a Rulemaking proceeding to develop a partnership framework between investor-owned energy

³ http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf.

utilities and the water sector.⁴ ORA's petition sought to have water and energy utilities co-fund programs that reduce energy consumption by the water sector in supplying, conveying, treating, and distributing water.

The Commission has previously addressed issues relating to the water-energy nexus. Most pertinent to this scoping memorandum, in Decision 12-05-015, the Commission directed staff to develop a comprehensive cost effectiveness framework for water-energy that would allow for the evaluation of joint water-energy efficiency projects and programs. In response to the Commission's directive, Staff created a work plan to address water-energy nexus issues. Staff presented a proposed framework for cost effectiveness at a public workshop in March, 2013. Staff also formed a Project Coordination Group (PCG) for Water Energy Cost-Effectiveness to engage water and energy industry stakeholders. The purpose of the PCG was to allow industry and other stakeholders to provide input and assistance to Commission staff in creating a framework to analyze demand-side programs that focus on saving both water and energy. The PCG was also tasked with helping to identify sources of information for avoided cost calculations for water savings and for embedded energy in water.

I intend to integrate into this proceeding Staff's cost effectiveness framework for water-energy work to-date, the PCG, and Staff's work plan going forward⁵ We will also analyze additional issues, as elaborated below.

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⁴ Both privately-owned water utilities regulated by the Commission and public water and wastewater agencies.

⁵ Rulemaking (R.) 13-11-012 directs that "[Staff's] ongoing work will continue to be coordinated with this rulemaking and in the successor energy efficiency proceeding, R.13-11-005."

2. Issues

An overarching policy objective across this and other proceedings is to promote water conservation and stewardship, and thereby also promote energy efficiency and conservation. Promoting conservation will involve both immediate-term and longer-term actions by the Commission, energy efficiency program administrators, jurisdictional water, energy, and other utilities, users and suppliers, and partnerships with state, local, and tribal governments, businesses, and community based organizations.

In the same way that a complete picture of water conservation necessitates an analysis of embedded energy in water and embedded water in energy, we will analyze the role of communications in the water-energy nexus. To understand the possibilities, barriers, limits, and opportunities to address the water/energy nexus this proceeding will analyze topics including the use of: sensors, controls, automation, and communication; onsite micro-grids of various distributed energy generation facilities; water and energy storage and management systems, whether distributed or centralized; deployment and adoption of communication facilities and technologies, and; investigate how the drought motivates changes in cost-benefit analysis and in water use, capture, and management strategies. This analysis will increase our understanding and ability to address the dire issues associated with the drought through the water-energy-communications nexus in rural and urban areas of California.

Expansion of Water-Energy Programs in 2016 is within the Scope of Proceedings R.13-11-005, the Energy Efficiency Proceeding, and the California Alternate Rates for Energy/Energy Savings Assistance Program Proceedings

(CARE/ESAP),⁶ and therefore outside the scope of this proceeding. We will coordinate with those proceedings to accelerate prudent mechanisms to address the drought emergency and the Governor's Executive Order.

Energy Efficiency program administrators filed their proposed 2015 energy efficiency portfolios on March 24, 2014, in R.13-11-005. All program administrators included some explicit discussion of how they might mitigate drought impacts, for which I commend them. In addition, large Investor-owned Utilities (IOUs) filed their CARE/ESAP Budget Applications on November 18, 2014. Southwest Gas Corporation, Pacificorp, Bear Valley Electric Service, Liberty Utilities, West Coast Gas, and Alpine Natural Gas Operating Company filed their ESAP Budget Applications in February and March of 2015. Decisions 14-08-030 and 14-05-004 directed the IOUs and Small and Multi-jurisdictional Utilities, respectively, to consider measures that address the water-energy nexus in their CARE/ESAP Budget Applications. Since the Commission will review energy efficiency program administrators' water-energy offerings in R.13-11-005 and ESA water-energy measures in the ESA application proceedings, I do not intend to take up those programs here. Nevertheless, I certainly encourage the Commission to consider relevant evidence from and issues explored in this proceeding to expeditiously address the water-energy nexus in the current energy efficiency programs and current ESA applications.

⁶ For the large IOUs, the proceeding is A.14-11-007 et al. and for the Small and Multi-jurisdictional Utilities the proceeding is A.15-02-001 et al.

2.1. Developing and Expanding Water-Energy Programs for 2016 and Beyond is Within the Scope of this Proceeding

The Rulemaking set out in some detail a preliminary scope for this proceeding. The general thrust of the preliminary scope was that we should develop a tool for determining how much energy is embedded in water, and whether water utilities or energy utilities and their ratepayers or a combination of both benefit from reduced water use, and if so how much they would benefit. With a tool in place, the Rulemaking contemplated that we would also address sources of program funding and provide general direction for energy efficiency program administrators and water utilities.

Consistent with the guidance in the Rulemaking, I have largely adopted the preliminary scope here. I have made some adjustments in response to comments parties made at the Prehearing Conference⁷ (PHC) in this matter, and in response to comments about the preliminary scoping memo released in 2014. I have also broadened the scope to reflect the fuller panoply of issues relating to water savings and the associated embedded energy.

Specific Issues within scope are:

- 1. A water energy cost effectiveness tool. This tool will include:
 - The appropriate methodology for determining the energy embedded in water, currently and prospectively, including contemplation of current and future resource scarcity, and avoided costs that result from waterenergy programs; and

⁷ The Commission held a PHC in this matter on February 11, 2014.

- The appropriate methodology for determining water system benefits from water-energy programs, currently and prospectively, including contemplation of current and future resource scarcity.
- 2. A mechanism for continued funding for future additions or updates to the water-energy cost effectiveness tool and user support;
- 3. Actions related to the water-energy nexus to address Governor Brown's Executive Order B-29-15 mandating water use reductions, any future executive orders relating to the drought emergency or water use reductions, as well as any future legislation related to the drought emergency or water use reductions;
- 4. Actions to address the water-energy nexus in multiple contexts:
 - In water conveyance, delivery, and use for water storage, storm water capture, water recharge, water delivery, and other areas, including enabling demand response and time shifting;
 - In energy production, transmission, distribution, and use; design, deployment, and utilization of onsite micro grids; construction and design of energy generation, storage and management facilities; implementation of demand response, ancillary services, grid services, advanced grid services; and interconnection issues, ownership issues for maximum effectiveness;
 - o In agricultural pumping and irrigation;
 - In residential and commercial landscaping;
 - In current and potential water recycling efforts and programs; and
 - In maximizing local water sources.
- 5. Inter-agency coordination. We will:
 - Evaluate the role of the Commission's coordination with the California Independent System Operator (CAISO), the California Energy Commission, the

California Department of Water Resources, other state, local, regional, and federal agencies, and tribal governments in promoting the water-energy nexus, and consider steps to promote collaboration with irrigation districts; and

- Coordinate this rulemaking with related efforts by other agencies.
- 6. Intra-agency coordination. We will coordinate this rulemaking with current and future energy efficiency rulemaking proceedings, including the Energy Savings Assistance Program, to ensure consistent treatment of water-energy nexus programs within the energy efficiency portfolios of electric and gas corporations. This could include requiring regular reporting of budgets and cost effectiveness of water-energy nexus measures in other related proceedings.
- 7. Water-Energy-Communications nexus. We will:
 - o Examine the nexus of water, energy, and communications (*e.g.*, the use of information management and data systems, high-speed internet access, social media and apps, Supervisory Control and Data Acquisition (SCADA) systems for water management and treatment and the communications needs in SCADA systems, and steps to foster access to energy, communications technologies, and facilities that enable water management, storage, treatment, and use, including for wildfire and other public safety measures, in a manner that addresses the water-energy nexus).
 - Evaluate access to electric, gas, storage, renewable energy, and other power infrastructure as an enabling technology to address the water-energy nexus, including the link between power access and communications facilities; broadband internet access for water storage, treatment, conveyance, recharge, recycling, managers, utilities, and users; and consider steps to promote such access to address the water-energy nexus.

Examine and facilitate in coordination with the California Energy Commission to deploy effective innovative water management technologies for businesses, residents, industry, and agriculture to achieve water, energy, and greenhouse gas emissions savings, consistent with Governor Brown's April 1, 2015 Executive Order.

8. Funding and Cost Sharing. We will examine:

- The appropriate methodology for allocating water-energy program costs;
- Strategies for overcoming barriers to joint funding of water-energy nexus programs that include energy IOUs, Commission-regulated water and wastewater utilities, and different categories of partners, including, but not limited to, state agencies, federal agencies, regional water districts, public water and wastewater agencies, local government, regional agencies, and Tribes, the private sector, community-based organizations, foundations, non-profits, and others; and
- Availability of additional state, local, regional, Tribal, and/or federal funding, including grants and programmatic funds or matches, including coordination with or use of drought and flood related funding to increase the feasibility and cost-effectiveness of IOU water-energy nexus programs and efforts.

9. Program evaluation. We will evaluate:

- Current IOU water-energy programs, pilots, and related efforts to determine their efficacy, address potential barriers to implementation, and facilitate deployment of cost-effective measures to conserve water and energy; and
- Current and future leak detection programs to determine their efficacy, address potential barriers to adoption, and enable cost-effective leak detection efforts, timely communications with water users that

- have leaks, and steps to facilitate cost-effective measures to repair leaks.
- 10. Identify safety concerns raised by the issues identified above and propose steps to address those concerns, including reliability, water quality, and fire-fighting resources, and communications interconnection for public safety.

3. Procedural Schedule

3.1. Past Events

DATE	PAST EVENT
February 11, 2014	PHC
February 14, 2014	Preliminary scoping memo
March 13, 2014	Intervenor compensation notices of intent due
April 24, 2014	10:00 a.m PCG meeting and 1:00 p.m. workshop including discussion of Staff Proposal on avoided cost calculations for embedded energy – focus on determining marginal water supply.
July 1, 2014	9:00 a.m. – 12:00 noon - PCG meeting/workshop including discussion of Staff Proposal on avoided water capacity costs. Workshop will be followed with a workshop report and an opportunity for party comments on the record.
July 18, 2014	9:00 a.m. – 12:00 p.m Workshop on immediate drought actions and overcoming barriers to implementation. Workshop will be followed with a workshop report and an opportunity for party comments on the record.
August 13, 2014	Workshop on water-energy-communications-public safety nexus and Academic panel. Workshop will be followed with a workshop report and an opportunity for party comments on the record.
October 14, 2014	9:00 a.m PCG meeting/workshop re: Staff Proposal on the cost effectiveness analysis for water-energy

	presentation of final Staff Proposal for a new Cost Effectiveness Framework. Workshop will be followed with a workshop report and an opportunity for party comments on the record.
February 11, 2015	Cost Effectiveness Tool Workshop - Topic 1: Water Energy Cost Effectiveness Tool All Party Workshop.

3.2. Schedule for Cost Effectiveness Tool and Cost Allocation Decision:

DATE	EVENT
April 27, 2015	Cost Effectiveness Tool and Report publication
May 4, 2015	Topic 2, Cost Allocation:
	Workshop on Cost Allocation
	Issues and Questions outlined in agenda, to be released
May 18, 2015	Comments on Cost Effectiveness Tool and Report and Cost
	Allocation Workshop
June 23, 2015	Proposed Decision on Cost Effectiveness Tool and Cost
	Allocation
June-July 2015	Comments and Reply Comments on Proposed Decision on
	Cost Effectiveness Tool and Cost Allocation
July 23, 2015	Target Vote for Proposed Decision on Cost Effectiveness Tool
-	and Cost Allocation

3.3. Schedule for all other proceeding issues:

DATE	EVENT
May/ June 2015	Assigned Commissioner's Ruling on topics, potential studies, and/or data requests to address the Governor's Executive Order

May 2015, "All
Ideas to Address
the
Water/Energy
Nexus and the
Drought," All
Party Meeting

Topic 3: Actions to address the water-energy nexus in multiple contexts:

"All Ideas to Address the Water/Energy Nexus and the Drought," All Party Meeting

Workshop on Water/Energy Nexus Action Subtopics, Summer 2015 Public Participation Hearings, June-July 2015

Workshops on subtopics identified in scoping memo:

- In water conveyance, delivery, and use for water storage, storm water capture, water recharge, water delivery, and other areas, including enabling demand response and time shifting;
- o In energy production, transmission, distribution, and use; design, deployment, and utilization of onsite micro grids; construction and design of energy generation, storage and management facilities; implementation of demand response, ancillary services, grid services, advanced grid services; and interconnection issues, ownership issues for maximum effectiveness;

Report on Action Workshops, September 2015, Comments on Action Workshop, September 30, 2015

- o In agricultural pumping and irrigation;
- In residential and commercial landscaping;
- In current and potential water recycling efforts and programs;
- o In maximizing local water sources.

Resolutions to address Action Subtopics may be introduced, May-December, 2015

Topic 3: Inter-Agency: Workshop in coordination with the Water Energy Team of the Climate Action Team Summer 2015 Workshop Report, September, 2015, Comments on Workshop Report, September 30, 2015, Reply Comments	Topic 3: Inter-agency coordination. Evaluate the role of CPUC coordination with CAISO, the California Energy Commission, the California Department of Water Resources, the California Resources Agency, California Department of Food & Agriculture, State Water Resources Control Board, other state, local, regional, and federal agencies, and tribal governments in promoting the water-energy nexus, and consider steps to promote collaboration with irrigation districts; Coordinate this rulemaking with related efforts by other agencies.
Topic 4: Intra-Agency: Workshop, Summer 2015 Workshop Report, September 2015, Workshop Comments September 30, 2015	Topic 4: <i>Intra</i> -agency coordination. We will coordinate this rulemaking with current and future energy efficiency rulemaking proceedings, including the Energy Savings Assistance Program and Energy Efficiency Portfolio Programs, to ensure consistent treatment of water-energy nexus programs within the energy efficiency portfolios of electric and gas corporations. This could include requiring regular reporting of budgets and cost effectiveness of water-energy nexus measures in other related proceedings.
Topic 5: Inter-Agency: Workshops, Summer 2015	Topic 5: Water-Energy-Communications nexus. We will: • Examine the nexus of water, energy, and communications (e.g., the use of information management and data systems, high-speed

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Workshop Report, September 2015, Workshop Comments September 30, 2015	internet access, social media and apps, (SCADA) systems for water management and treatment and the communications needs in SCADA systems, metering infrastructure and systems, and steps to foster access to energy, communications technologies, and facilities that enable water management, storage, treatment, and use, including for wildfire and other public safety measures, in a manner that addresses the water-energy nexus).
	 Analyze access to electric, gas, storage, renewable energy, and other power infrastructure as an enabling technology to address the water-energy nexus, including the link between power access and communications facilities; broadband internet access for water storage, treatment, conveyance, recharge, recycling, managers, utilities, and users; and consider steps to promote such access to address the water-energy nexus.
	 Examine and facilitate in coordination with the California Energy Commission to deploy effective innovative water management technologies for businesses, residents, industry, and agriculture to achieve water, energy, and greenhouse gas emissions savings, consistent with Governor Brown's April 1, 2015 Executive Order.
Topic 6:	Topic 6: Funding and Cost Sharing. We will
Funding and Cost Sharing: Workshop, September, 2015 Workshop Report,	 examine: The appropriate methodology for allocating water-energy program costs, including consideration of GHG accounting principles and methods; Analysis and consideration of the role of local water, energy, communications and other
September 30, 2015	resources in cost allocation and funding, and program decisions.

detection

programs and proposals, October 30, 2015

Comments, October 30, 2015	0	Strategies for overcoming barriers to joint funding of water-energy nexus programs that include energy IOUs, Commission-regulated water and wastewater utilities, and different categories of partners, including, but not limited to, state agencies, federal agencies, regional water districts, public water and wastewater agencies, local government, regional agencies, and Tribes, the private sector, community-based organizations, foundations, non-profits, and others; Availability of additional state, local, regional, Tribal, and/or federal funding, including grants and programmatic funds or matches, including coordination with or use of drought and flood related funding to increase the feasibility and cost-effectiveness of IOU water-energy nexus programs and efforts.
Topic 7: Inter-Agency: Workshop, Summer 2015 Reports from water and energy utilities on water-energy nexus IOU pilots. September, 2015 Comments on Reports on Pilots and leak	Topic 7:	Program evaluation. We will evaluate: Current IOU water-energy programs, pilots, and related efforts to determine their efficacy, address potential barriers to implementation, and facilitate deployment of cost-effective measures to conserve water and energy; Current and future leak detection programs to determine their efficacy, address potential barriers to adoption, and enable cost-effective leak detection efforts, timely communications with water users that have leaks, and steps to facilitate cost-effective measures to repair leaks.

Topic 8: Safety	<i>Topic 8</i> : Identify safety concerns raised by the issues
Issues:	identified above and propose steps to address those
Workshop	concerns, including reliability, water quality, and fire-
	fighting resources, and communications interconnection
Workshop,	for public safety.
Summer, 2015	
Report on	
Workshop,	
September, 2015	
Comments on	
Report,	
October 30, 2015	
November, 2015	Proposed Decision
November, 2015	All Party Meeting
December, 2015	Target Voting Meeting

It is important to note that some items to address the drought emergency and Governor's Executive Order may be considered through one or more Resolutions or Proposed Decisions beginning in May 2015 to effectively address the emergency.

This proceeding will conform to the statutory deadline for quasi-legislative matters set forth in § 1701.5.8 Consistent with Rule 6.2 of the Commission's Rules of Practice and Procedure, (Rules) and the statutory case management deadline for quasi-legislative matters set forth in Pub. Util. Code § 1701.5.(b), we expect this proceeding to be concluded within 24 months of the issuance of the assigned Commissioner's Scoping Memo and Ruling. In using the authority granted in § 1701.5(b) to set a timeframe longer than 18 months, we consider the complexity

⁸ All statutory references are to the Public Utilities Code unless otherwise noted.

of the policy issues identified in this rulemaking and the number and multijurisdictional nature of the parties to this proceeding. The above schedule is adopted here and may be modified by the Administrative Law Judge as required to promote the efficient and fair resolution of the matter.

4. Categorization and Need for Hearing

The Commission Preliminarily categorized this proceeding as ratesetting. However, as the preliminary scope shifted due to the drought declaration, this proceeding is now primarily focused on policy, programs and data collection. As such, this proceeding is now categorized as quasi-legislative, per Resolution ALJ-301. Pursuant to Rule 8.3(a) *ex parte* communications in this rulemaking are allowed without restriction or reporting requirement, unless and until the categorization of this proceeding is changed from quasi-legislative.

Issues will be resolved through comments and workshops without the need for evidentiary hearings.

5. Assignment of Proceeding

Commissioner Catherine J.K. Sandoval is the assigned Commissioner and Presiding Officer.

6. Respondents

The Respondents to this Rulemaking are Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, Southern California Gas Company, Alpine Natural Gas Operating Company, Bear Valley Electric Service, California Pacific Electric Company, Liberty Utilities, PacifiCorp, Southwest Gas Company, Southwest Gas Corporation, West Coast Gas Company, each of the Class A Water utilities, as well as incumbent Local Exchange Carriers (Pacific Bell Telephone Company d/b/a AT&T California, Verizon California, Citizens Telecommunications

Company of California d/b/a Frontier Communications of California, and SureWest Telephone, and the Rural Local Exchange Carriers that draw from the High Cost A Fund, and TDS Telecom), which serves several high-wildfire-danger areas, because communications play an integral role in the water-energy nexus. We also invite the participation of public water agencies. We may issue data requests and seek information from IOUs relevant to this water-energy nexus proceeding.

7. Intervenor Compensation for PCG Participation

Commission staff and some parties have been and are engaged in a collaborative effort – a PCG - to develop a tool for determining the embedded energy in water and avoided water capacity costs associated with water conservation. PCG participants include some intervenors who in all likelihood will seek compensation through the Intervenor Compensation Program.⁹

With the advent of this proceeding, public workshops will supplant PCG meetings. The PCG as such can be disbanded, with its work to continue within the "bigger tent" of this proceeding.

I do, however, want to recognize parties participating in this earlier collaborative effort. As part of that recognition, I want to offer some level of assurance that the Commission will not reject out-of-hand claims for intervenor compensation for work relating to this effort between the start of this rulemaking and now, and commend consideration of this work to the Commission.

Section 1801 establishes a program of "compensation for reasonable advocate's fees, reasonable expert witness fees, and other reasonable costs to

⁹ Section 1801 et seq.

public utility customers of participation or intervention in any proceeding of the commission." Section 1801.3 provides an additional gloss on the program. It provides for compensation in "formal proceedings of the commission involving electric, gas, water, and telephone utilities." The purpose of the program is to formally "encourage the effective and efficient participation of all groups that have a stake in the public utility regulation process." 11

I find that the work of the PCG has been taking place as part of a "formal proceeding" of the Commission. Eligibility for compensation for that work has encouraged "the effective and efficient participation" of intervenors in this proceeding.

Any claims for intervenor compensation will, of course, be subject to the usual requirements applicable to intervenor compensation claims. Claims must include enough information for the Commission to make the findings required by §§ 1801-1812.¹² In particular, an intervenor seeking compensation for PCG participation must clearly describe its unique contribution(s) to developing a proposal that helps to achieve the overarching goals articulated in R.13-12-011. A claimant must also demonstrate reasonable collaboration with others to avoid duplication of effort. And, of course, claimed amounts must be reasonable.

¹⁰ Section 1801.3 (emphasis added).

¹¹ Section 1801.3(b).

¹² See generally Section 1802 (defining terms related eligibility for compensation) and Section 1803 (limiting recovery to "reasonable" fees and costs, and requiring a claimant to show substantial contribution to a Commission decision, and to show hardship absent compensation).

IT IS RULED that:

- 1. The scope of this proceeding is established as described herein.
- 2. This proceeding will be completed within 24 months of the date of this Scoping Memo.
 - This proceeding is Quasi-legislative.
 Dated April 27, 2015, at San Francisco, California.

/s/ CATHERINE J.K. SANDOVAL

Catherine J.K. Sandoval
Assigned Commissioner