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## **Water-Energy Nexus Registry Stakeholder Workshop #1 Meeting Notes**

San Diego Foundation, San Diego, CA  
June 26, 2018

*Jordan Faires, The Climate Registry, welcomed participants and introduced The Climate Registry (TCR) and staff in attendance. Jordan invited remarks from John Blue, California Environmental Protection Agency and Dane Johnson, Irvine Ranch Water District (in place of Ray Bennett, Irvine Ranch Water District).*

### **John Blue, Manager of Climate Programs, California Environmental Protection Agency (CalEPA)**

John expressed that the State is very interested in reducing greenhouse gas (GHG) emissions in CA and managing energy use. In order to do that, organizations need to accurately measure emissions and energy. New tools like the Water-Energy Nexus Registry can help benchmark efforts. Happy to see that TCR has taken the project on.

### **Dane Johnson, Water Resources Planner, Irvine Ranch Water District (IRWD)**

Dane Johnson, IRWD (in place of Ray Bennett, IRWD), provided an overview of IRWD's participation in TCR's voluntary program since 2010. TCR and TCR's General Reporting Protocol has helped them in terms of measuring and tracking emissions year to year, which sets them up to jump into Water-Energy. They are looking forward to working with TCR.

*Jordan Faires welcomed Peggy Kellen, TCR, who introduced the Water-Energy Nexus Registry project and outlined the program requirements*

### **Peggy Kellen, Director of Policy, TCR**

The Water-Energy Nexus Registry initiative was established through SB 1425, which was sponsored by Fran Pavley. The bill requires Cal EPA to oversee the development of a registry for GHG emissions that result from the water-energy nexus using the best-available data. Voluntary and open to entities in CA, particularly interested in engaging water agencies. What follows is a description of key tasks and timelines for the project.

- **Water-Energy Nexus Registry Key Tasks:**
  1. Help entities establish entity-wide GHG baselines
  2. Work to enable consistent reporting and verification on GHG emissions and reductions
  3. Provide a consistent and transparent methodology for measuring emissions intensity of water
  4. Recognize and promote participant action in making voluntary GHG reductions
  
- **Water-Energy Nexus Registry Program Timeline:**
  - Summer 2018 – Spring 2019: Program development and stakeholder process



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- Three in-person workshops: one in San Diego, one to be held in October, 2018 in Oakland, CA and a third to be hosted in early spring 2019 in the Central Valley.
  - Spring 2019: Program opens for reporting
  - 2019-2021: Program operational with ongoing training, support and recognition
- **Water-Energy Nexus Registry Program Development Process:**
  - Will utilize an open stakeholder process
  - Build on best practice:
    - Adapting TCR’s existing protocols & guidance where relevant
    - Developing new content reflecting best practices and existing data in water sector
  - Opportunities to be involved:
    1. Working Group: 20-30 experts, 8 hour/month time commitment, 5-7 meetings, will provide feedback on draft materials before publishing for public comment. Initial materials will include a gap analysis, key issue areas and draft protocols and guidance,
    2. Advisory Committee: larger than working groups, receive quarterly updates via webinar, 4 meetings
    3. General Subscribers: periodic email updates, invitation to participate in public workshops and public comment period
      - Public Comment Period: Draft materials to be circulated for public comment prior to finalization

**Anticipated Program Development Meeting Schedule:**

Date	Event
<b>Jun – Aug 2018</b>	Draft material development
<b>Aug 2018</b>	Joint Working Group & Advisory Committee Kick-off Call
<b>Sept 2018</b>	Working Group Call – Key Issues
<b>Oct 11, 2018</b>	Joint Working Group, Advisory Committee and Public In-person Meeting – East Bay Municipal Utilities District
<b>Nov 2018</b>	Working Group Call – Key Issues
<b>Jan 2019</b>	Advisory Committee Call – Summary of Key Issues
<b>Jan – Feb 2019</b>	Public Comment Period
<b>Mar 2019</b>	Working Group Call – Review Public Comments
<b>Apr. 2019</b>	Joint Working Group, Advisory Committee and Public In-person Meeting – Location TBD
<b>May 2019</b>	Program Launch

*Peggy Kellen then welcomed Chelsea Hasenauer, TCR, who presented on key considerations for program development.*



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### **Chelsea Hasenauer, Program Associate, TCR**

In developing new protocols and guidance that will underpin the Water-Energy Nexus Registry, TCR is aiming to leverage existing institutions, protocols and wherever possible to ensure high quality data and minimize reporting burden. TCR will also take a modular approach in creating new guidance documents. Sections of current TCR protocols (that provide general guidance in measuring, reporting and verifying entity-wide GHG inventories) will be augmented by new, water sector-specific content. Pieces of TCR's existing sector-specific guidance documents, such as the Water-Energy GHG Guidance, will also be incorporated.

In order to facilitate the development of a new protocol and guidance documents, TCR is identifying key issue areas where additional research and feedback from stakeholders will be necessary. These key issue areas are discussed below.

**Question, Brad Miller, Healthy Buildings:** Is TCR's Water-Energy-GHG Guidance pilot program with Southern California Edison (SCE) part of the gap analysis?

**Response, C Hasenauer:** TCR learned a lot through process, identified gaps for how to improve guidance. TCR conducting a separate and distinct process for updating that guidance this year. Hope to include what we have learned from that program in this program as much as possible.

**Question, John Blue, CalEPA:** Does TCR anticipate that organizations using Registry would also need to be reporting in CRIS [TCR's online reporting software]?

**Response, C Hasenauer:** TCR plans to lean on existing institutions as much as possible, including existing software infrastructure. Registry participants will use CRIS, but TCR will be customizing it to include features that would be helpful to water sector. That could include calculations for special sources, automatic calculation of intensity metrics, tools for tracking water data, etc. There is flexibility in the tool – can rely on it for either a reporting tool or a calculation tool.

- **Key Consideration #1: Activity data measurement**

- TCR will aim to include emissions methodologies from CARB, EPA mandatory programs. Ensure that boundaries are consistent with those programs. TCR also provides guidance on reporting Scope 2 emissions (power, heating, cooling, steam) in the location- and market-based methods.
  - Emissions metrics measured using the market-based method allow reporters to demonstrate the emissions benefits of renewable energy purchases; TCR will provide guidance on how to make claims on environmental attributes of renewable power.
- TCR will also consider other issue areas in emissions measurement such as time of use/demand response, product-specific measurements (entity-wide carbon footprints are default), measuring impact of projects (such as conservation programs.)



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- Working to align with existing tools and quantification methodologies (such as CPUC's tool, UC Davis water-energy methodologies, Alliance for Water Efficiency tool)

**Question, Armin Munevar, Jacobs Engineering:** What are the boundaries of the program? Is TCR looking at water management from extraction through delivery, into the household, and into wastewater processes?

**Response, C Hasenauer:** At a high level, yes, TCR is looking at the full range of processes. TCR's existing Water-Energy-GHG Guidance provides methodologies for processes from extraction to delivery to customer; we're updating it to include wastewater and recycled water operations. TCR has less certainty on how water end users' emissions from water consumption would be incorporated, and will be considering how these emissions fit.

**Question, Jeremy Pathmanabhan, City of LA:** Would the entity-wide carbon footprint be just related to water, or overall emissions for an organization?

**Response, C Hasenauer:** TCR's General Reporting Protocol provides guidance on all emissions for an entity. However, Water-Energy-GHG Guidance specifically looks at emissions relating to water. This will be further explored in the development process, but guidance will most likely look at emissions related to water. However, there is some value in developing guidance for water sector organizations to measure emissions more broadly (e.g. for wastewater agencies to measure vehicle emissions associated with transport of biosolids.)

- Annual water data will also be included as a data input for the Registry, and TCR will prioritize data that is helpful for GHG intensity tracking.
  - Water data that would be used in Registry reporting is generally already reported elsewhere (Urban Water Management Plans, State Water Resources Control Board, etc.)
  - Water data would most likely be reported on an annual basis, and would not expect agencies report monthly/sub-annual data. However, because that data piece is available to agencies, TCR could provide guidance on how to track emissions associated with that if there was suitable interest from stakeholders.

**Question, Lan Wiborg, City of San Diego Water:** How will evaporative losses from reservoirs be incorporated into methodologies?

**Response, C Hasenauer:** TCR will work with project stakeholders to identify if an industry standard exists for measurement, then will incorporate it to ensure consistency across guidance. If one does not exist, TCR will ask that stakeholders provide input on how best to address.

**Suggestion, Maria Sison-Roces, Los Angeles Department of Water and Power:** Global Reporting Initiative may be a useful protocol to evaluate in the development process. US Department of Energy Better Plants Challenge is also doing work with water-energy



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(applicable for water agencies that are also power providers.) DOE program is relatively new.

- Emissions and water activity data will enable the calculation of intensity of delivered water, which is helpful to help normalize water and emissions data against variable water flows and climatic conditions.
  - TCR's WEG Guidance provides methodologies for emissions intensity of delivered water, including upstream Scope 3 emissions from purchased water. This is one avenue to incorporate metrics. Guidance matches closely with DWR's water-energy intensity metrics that can be reported in UWMPs.

**Question, John Blue, CalEPA:** Depending on time of year and where water is sourced, there could be different energy intensity associated with water. Do we need to include more granular, time-sensitive water source data?

**Response, C Hasenauer:** There is value in understanding granular, sub-annual energy and emissions intensity of water supplies. We've received feedback that this sort of data management and tracking would be burdensome. However, this would be useful to many agencies, so we would look to include appropriate guidance but not require it.

**Follow up point, John Blue, CalEPA:** As a water consumer, it would also be useful to track emissions from purchased water based on time of year that it is being purchased.

**Audience point, Tom Burton, Sustainability Associate:** We are a few years into the sustainable groundwater act which required formation of groundwater management agencies in CA. If that's going well, good granular and seasonal data on water flows in the state (at least with groundwater transfers and storage.)

**Response, C Hasenauer:** If there is granular data, it would be helpful to understand trends in emissions associated with extracting groundwater (e.g. extracting water from deep aquifers more energy- and emissions-intensive than shallow aquifers.)

**Question, E Chao, Energy Policy Initiatives Center, University of San Diego:** How do green power/on-site renewable energy factor in to emissions intensities versus energy intensities? She also mentioned that water utilities say it is difficult to extract data on renewables because they are often not metered individually

**Response, C Hasenauer:** Emissions measurements for green power/renewables based on existing Scope 2 Guidance from the Greenhouse Gas Protocol. Even if energy usage for water operations stays the same, if you own the renewable attributes of purchased or generated green energy, the emissions metrics would reflect lower emissions.



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**Clarification, P Kellen;** If you convert directly from an energy intensity metric to an emissions intensity metric using a grid average emission factor, you may not be able to parcel out specific power purchases that have specific emissions rates (cleaner than the grid) associated with them. Thus, emissions metric will not accurately reflect green power purchases. TCR will consider guidance on how to best transition energy intensity metrics to emissions metrics

**Question, Brad Miller, Healthy Buildings:** Is TCR looking to just develop guidance for treated wastewater that is reused [in the separate SCE Water-Energy-Guidance 2.0 development]? How do we deal with wastewater that is discharged or isn't reused?

**Response, C Hasenauer:** TCR would like to approach emissions measurement for *discharged* wastewater in its WEG Guidance development, but is also sensitive to asking organizations to incorporate those emissions into a metric that is then used by an end user (as the emissions associated with discharged water aren't embedded in water that is actually delivered to an end-user.) Also, want to be conscious that organizations performing wastewater services aren't burdened by additional responsibilities. This concept of what to do with discharge will be addressed further in the water-energy nexus registry development.

**Question, Jeremy Pathmanabhan, City of Los Angeles:** What role is CalEPA playing in the development of the protocols?

**Response, C Hasenauer:** Currently working through that question with them. Direction to-date has mostly been around goals of the project and timelines. To date, have not dug into anything specific yet in terms of protocol and guidance approval. At the moment, laying out proposal and will review from there with CalEPA

**Response, John Blue, CalEPA:** Clarifies with Jeremy P that question is also about aligning existing state agency and Water Board methodologies. Currently working to engage relevant agencies ARB in the process and understand what opportunities are.

- **Key Consideration #2: Baseline, setting benchmarks**

- Goal is to enable baseline and tracking for entity-wide, annual emissions, as well as to enable benchmarking with respect for annual variation in water flows. Data tracked over time should also be granular enough to enable decision-making.
  - Department of Water Resources approaches water variability issues in their own operations and benchmarking, and that information is available on their website
- There was a brief discussion on how organizations currently approach baselining

**Comment, Jeremy Pathmanabhan, City of Los Angeles:** City typically uses TCR's Local Government Operations Protocol to guide their approach. One concern they have as a



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wastewater utility is that if they start to recycle water, emissions metrics will go up over time instead of demonstrating reductions (even if they're performing an overall service with water management.)

- **Key Consideration #3: Reporting/What Constitutes a Submission?**
  - TCR has a tool for calculation, tracking, and reporting of emissions
    - Participants will also have the option to use their existing GHG data management systems instead of or in addition to CRIS
  - After reporting in CRIS, data is only made publicly available after third-party review
    - Protecting confidential business information
    - Allow them to tell their own story

Workshop concludes.

*Kelli Wright, Program Coordinator, TCR conducted an optional training on basic greenhouse gas accounting principles.*