



Water-Energy Nexus Registry Stakeholder Workshop #2 Meeting Notes

East Bay Municipal Utilities District, Oakland, CA
Thursday, October 11, 2018

Introductions

Peggy Kellen, The Climate Registry (TCR), provided an overview of the Workshop agenda and of TCR. Peggy invited opening remarks from Chandra Johannesson, East Bay Municipal Utility District and John Blue, California Environmental Protection Agency.

Chandra Johannesson, Manager of Environmental Compliance, East Bay Municipal Utility District (EBMUD)

Chandra welcomed attendees and expressed support for the development of a statewide greenhouse gas (GHG) protocol for water agencies.

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

California has some aggressive climate change goals and CalEPA is looking for help in meeting them. Happy to see water agencies and utilities stepping forward to participate in emissions tracking and management.

Peggy Kellen, Director of Policy, TCR

The Water-Energy Nexus Registry initiative was established through SB 1425 with predefined objectives. The Registry will be a voluntary GHG reporting program for entities in California to calculate corporate-level GHG inventories and track those entity-wide emissions over time to enable reductions.

Public Disclosure in TCR's Existing Program

Ryan Cassutt, Manager of Voluntary Reporting Programs, TCR

Ryan provided an overview of public disclosure requirements and procedures in TCR's existing [voluntary program](#).

In that program, only GHG inventories that are verified by a TCR-approved third-party verification body are made public. Ryan provided an overview of the information that is actually available to the public (entity- or facility level data), and the information that is never made public (source-level data like fuel or electricity consumption, technology type etc.). Participants may also identify confidential business information to be kept private. TCR's reporting platform, Climate Registry Information System ([CRIS](#)), includes a public reports page where this public data can be retrieved.

Questions from Audience:

Question, Amy Talbot, Regional Water Authority (via webinar): If a member of the public makes a California Public Records Act request for the "private" data, would TCR be obligated to release it?

Follow-up Comment, Warren Teitz, Metropolitan Water District of Southern California (MWD): If MWD, as a public agency, receives a request from the public for the data submitted to TCR they would have to provide it.

Follow-up Comment, John Blue, CalEPA added: CalEPA would not have the data since it is within TCR's database. It's a complicated legal question but if it's a public water agency, that's a different 'animal'.

Question, Jeremy Pathmanabhan, City of Los Angeles Sanitation: Asked for clarification on whether TCR would have access to the data, but the state wouldn't?

Response, Chelsea Hasenauer, TCR: Explained TCR's ability to access and manage the database. We have not yet determined how CalEPA would have access or how data would be shared with them.

Public Disclosure in the Water-Energy Nexus Registry

Panel Moderated by Chelsea Hasenauer, Policy Associate, TCR

Chelsea introduced the panel to discuss emissions tracking and public disclosure practices at their respective agencies in order to gather ideas for public disclosure practices in the Water-Energy Nexus Registry.

Panelists:

Dale Roberts, Principal Engineer, Sonoma Water
Chris Dembiczak, Senior Environmental Health & Safety Specialist, EBMUD
Ryan Cassutt, Manager of Voluntary Reporting Programs, TCR

Chelsea posed the following questions for discussion following presentations:

- 1. Is sector-specific guidance around public disclosure required for the water sector?*
- 2. Should verification be a prerequisite for public disclosure in the Water-Energy Nexus Registry?*
- 3. What information included in the public disclosure standards from TCR, CARB, or DWR should be excluded from the public disclosure standards for the registry?*

Dale Roberts, Principal Engineer, Sonoma Water

Dale shared that as a public water agency just about anything that comes to their office is public information and they run their Public Records Request through their attorneys as well.

Dale provided an overview of the history of Sonoma Water and its current operations; they achieved Carbon Free Water in 2015. They began reporting to California Climate Action Registry (CCAR) and continue to complete an annual inventory and third-party verification with TCR, which provides an external legitimacy to their numbers. Sonoma Water has received numerous awards and recognition for achieving over 99% emissions reductions.

Question from Audience:

Question, Alec Brok, MWD: Does Sonoma Water consider emissions from reservoirs in your footprint?

Answer, Dale Roberts, Sonoma Water: No and that's a delicate topic. We don't own the reservoirs; Army Corp of Engineers owns the dams so it's unclear who would be responsible for those emissions.

Chelsea Hasenauer asked the group if any water agencies in the audience track emissions in a similar manner to Sonoma Water.

Comment, Tasha Wright, Santa Rosa Water: We do. We get data from PG&E and track in spreadsheets and also a GHG calculation tool. We are looking forward to this program to have a robust tool that is an easier to use and will provide consistency across entities.

Chris Dembiczak, Senior Environmental Health & Safety Specialist, EBMUD

Chris restated that EBMUD discloses environmental information anytime they receive a Public Records Act request.

Chris provided an overview of EBMUD's water system and service area, and mentioned Scope 2 emissions variability due to differences in the quantity of raw water being pumped. EBMUD decision-making is governed by environmental, social, and economic impact. EBMUD's GHG emissions goals include being carbon-free for indirect emissions by 2040.

EBMUD participates in mandatory reporting under ARB for the main wastewater treatment plant, and third-party verification is required. EBMUD began annual voluntary emissions accounting in 2005 and continued tracking emissions data offline from 2008-2017 using TCR' protocols as a framework for their inventories. They haven't been reporting publicly but do provide it if it is requested and it often is by local cities. They are currently evaluating public reporting and verification options.

Chelsea Hasenauer called for poll in the room from water agencies feeling differently about sharing some information about their systems publicly.

Comments from Audience:

Comment, Alec Brok, MWD (via webinar): One thing to consider is the critical nature of water infrastructure as a potential security issue.

Question, Warren Teitz, MWD: Investor-owned utilities that are private may have disclosure concerns. Are you considering different disclosure than TCR's existing program?

Response, Chelsea Hasenauer, TCR: Yes, we hope to include information specific to water agencies for this Water-Energy Nexus Registry, including water data, but emissions data disclosure will look very similar.

Ryan Cassutt, Manager of Voluntary Reporting Programs, TCR

Ryan provided a potential example of a public summary report for the Water-Energy Nexus Registry. (Mockup can be found in the [workshop slide deck](#).) Feedback was requested on types of graphics and narrative formats to be considered for reports.

Data included in draft reports presented by TCR included the following information: Geographic Region; Total GHG Emissions; Water Year Type; Total Water Supplied; Total Water Delivered; GHG Intensity of Delivered Water;

Multiple Narratives.

Questions for Consideration

1. *What additional information should be publicly disclosed in the registry?*
2. *What additional report types or graphics should be available in private reports or dashboards?*
3. *Should the narratives included alongside public reports allow for free-form description or offer prescribed fields? Or both?*
4. *What supplemental information should not be included in the public disclosure standards for the registry?*

Chelsea Hasenauer, TCR started the discussion by posing the question, what kind of information would you expect to be on the front page of a public report you are sharing in our Registry?

Question, Chris Dembiczak, EBMUD: How will wastewater be presented for agencies who manage those operations?

Response and Follow-up Question, Chelsea Hasenauer, TCR: Wastewater management would appear on as shown on the second page for agencies with those facilities. We can certainly include on the front page some sort of “water agency type” distinction. Would those classifications or the types of water managed by the agency be helpful to have prescribed fields? Or would it be best to just allow water agencies to include that information in a freeform narrative.

Answer, Dale Roberts, Sonoma Water: Both.

Comment, Richard Harris, EBMUD: One general concern is that there needs to be instructions moving forward on how to interpret and use this data. It’s not always useful to compare utility versus utility or region to region because of the diversity in the sector. TCR could include population served as an indicator on reports to get a sense of utility size.

Follow-up Comment, Lindsey Stuvick, Moulton Niguel Water District (via webinar): I want to second Richard's feedback. Adding the number of connections or agency population would provide a sense of scale.

Question, Chandra Johannesson, EBMUD: Who is the predominant audience pulling reports from your website? It would be interesting to know what the public is asking for.

Answer, Ryan Cassutt, TCR: Mostly academic institutions and other entities that are also reporting. Organizations want to look if their suppliers are in our system as well.

Comment, Chelsea Hasenauer, TCR: We would like to be as helpful as possible to the public, and want to provide a tool for agencies to be able to communicate their operations effectively. We also want to ensure that we are educating people accessing that data. Also would like to give a quick and easy tool for water agencies to use data to guide decisions. What we’ve heard today is that having an open narrative that can be used to educate the people accessing the data will be helpful. It would also be helpful for us to have categories of information for query purposes in the database. We will include population served and types of water managed. It could also be helpful to have wastewater or recycled water managed in a

specific table. The intention is for these tables to be dynamically generated based on the information entered in the tool.

Question, *Chris Dembiczak, EBMUD*: If we are going to have intensity metrics (metric tons GHG/ per acre foot) being publicly disclosed, it is important to define the type of water that is being normalized against. Don't want to see wastewater emission tied in with drinking water emissions because it won't be an equal comparison in the sector.

Response, *Chelsea Hasenauer, TCR*: The intensity metric presented here was generated automatically by comparing total emissions versus delivered water (total water demand) for simplicity. We are also separately completing an update to our [Water-Energy-GHG Guidance](#), where we are working to develop guidance for measuring emissions intensity metrics specific to each type of water product and process. We plan to incorporate that more detailed guidance for measuring these metrics within the Registry protocols. However, we know that not all organizations will take the extra step to develop a detailed metric, so we could complete an automated, high-level calculation for them.

Chelsea Hasenauer, TCR, posed a final question on third-party verification, which requires a separate contract with a verification body. Are water agencies willing to take on verification? And if they are not, how can we ensure data reported to the Water-Energy Nexus Registry is credible and high-quality? Chelsea Hasenauer invited further feedback via email, and introduced Michelle Zilinskas, Policy Associate, TCR.

Measuring GHG Emissions Reductions

Michelle Zilinskas, TCR provided an overview of different types of reductions claims relevant to water agencies, including: 1) Emissions Intensity; 2) Lifecycle emissions accounting; 3) Project-based emission accounting; 4) GHG Inventory. TCR's current program provides guidance on measuring entity-wide reductions in annual GHG inventories by first setting a base year, and then comparing the emissions of future years to that base year.

- 1) **Establishing a base year**: A base year is a benchmark against which an organization's emissions can be compared over time. This is not required in our current Voluntary Reporting Program but it is required in other international standards such as the Greenhouse Gas Protocol and ISO 14064-1.
 - a) If reporting a base year through TCR Voluntary Program, the base year must be a single year inventory verified by a TCR-recognized (ANSI accredited) verification body.
 - b) Base year should be adjusted after significant changes in organizational structure, updates to accepted calculation methods, or if significant errors discovered.
- 2) **Base year options**: Other programs allow for organizations to set a base period (average of multiple consecutive years) or a rolling base year.

Chelsea Hasenauer, TCR, introduced water sector considerations for establishing base years. In this sector, there is significant variability of emissions due to external factors. It may not be appropriate to simply track emissions reductions by setting single inventory years as a base year and comparing future years to that single year. Chelsea introduced the following potential approaches for water agencies to establish base years:

1. Use an average of multiple calendar years;
2. Single "average" water year;
3. Or, continue to require a single year.

- a. Should TCR require that reductions only be measured between like water years (i.e. comparing dry years to dry years)?

TCR received feedback from several attendees that using water years (defined as October 1-September 30) may not be appropriate for GHG reporting, which is typically done on a calendar or fiscal year basis.

Questions posed for discussion:

1. *How can the registry's base year policy acknowledge inherent annual variability in the emissions profiles of water agency operations?*
2. *What guidance or requirements should the registry provide for defining an average water year?*
3. *How can we ensure that agencies are able to measure credible emissions reductions that come as a result of intentional emissions action?*

Question, Chelsea Hasenauer, TCR to audience: DWR has suggested that it may be best for water agencies to use an average of several years to set a base period. Does anyone have experience with that?

Response, Alec Brok, MWD: Our baseline is currently 1990 and was set with AB32 regulation. We're in the process of starting a Climate Action Plan and we are unsure they are going to be the same. My thought was that if the Climate Action Plan is put forth and it has a different baseline, should that be the year that is used for reporting?

Response, Chelsea Hasenauer, TCR: Public policy often sets base years for you as public agencies and something to consider. In our program you can set a base year to track over time in a way that is helpful for you regardless of public policy. We certainly encourage consistency and would support you reporting the same emission reductions as you have in your Climate Action Plan within our Registry. However, setting a base year is voluntary and you have the option to choose what that base year is to best reflect change in emissions over time.

Comment, John Blue, CalEPA: In regards to the DWR issue, for the state of California, there was an executive order that established a base year of 2010. The goals are statewide; however, we look at each agency separately. With DWR, we suggested that we would look at a 4 year rolling average because their emissions are dependent on weather, precipitation, etc.

Comment, Chelsea Hasenauer, TCR: We don't need to implement a requirement for what a base year should look like; however, we want to be able to provide options. Would agencies in the audience choose to set a base period (an average of several years) rather than a base year?

(No comment) (1:50:11) "Sounds like people are happy setting a single base year."

Question, Nilmini Silva-Send, University of San Diego, Energy Policy Initiatives Center (via webinar): Has anyone used a rolling baseline. If so, how will targets be set?

Answer, Michelle Zilinskas, TCR: In a rolling base year, the organization picks a year and every year thereafter the organization moves that year up. It can also be done with an average of consecutive years and essentially involves moving that period up.

Comment, *Roshini Das, City of Sacramento Department of Utilities*: For someone who is just starting on reporting, data gathering is challenging. Trying to find the historical data for a couple of years and trying to average that is not easy. My preference is to have the option to a single year as a base year.

Follow-up, *Chelsea Hasenauer, TCR*: This helps clarify why it's important to consider what year is set as a base year because measuring reductions for a water agency requires addressing the type of year since emissions are directly impacted by that. We want to ensure that the emissions reductions that TCR will be recognizing are credible and a result of an agency's actions intentionally to manage its emissions.

Overall, there was consensus that a single year base year would be acceptable, but that options should exist for averaging a number of years for a single base year and rolling base years in the program.

Question, *Mike Maroney, TRC*: Coming from the energy perspective, there's a similar issue with normalizing around population and also weather. Is it possible to normalize your data based on water years? Also when normalizing around population would it be reasonable to normalize based on the number of meters added at a given year as a proxy for more people using your water supplies?

Measuring Reductions in the Water-Energy Nexus Registry

Chelsea Hasenauer, TCR reintroduced the potential methods for measuring reductions as previously presented by Michelle Zilinskas. One of the methods relies on emission intensity metrics, which normalize emissions to volumes of water delivered. Using our [Water-Energy-GHG Guidance](#), agencies calculate the emissions associated with each unit of water moved through their system. The guidance is currently being updated through a stakeholder process, to ensure that it is relevant for recycled water and wastewater managers. TCR is considering requiring the tracking of emissions intensity metrics alongside entity-wide annual emissions.

Question to the audience: Do we think it is important to have an intensity metric disclosed alongside emissions totals in reports? Does anyone think this would not be good idea to be calculated on the front page of the report?

There was general agreement that this metric would be meaningful.

Answer, *Chris Dembiczak, EBMUD*: I do have the concern if this will be calculated automatically.

Answer and follow-up question, *Chelsea Hasenauer, TCR*: We will provide the option for water agencies to report and disclose emission intensity metrics measured at a more granular scale, rather than it being generated automatically. However, for those who don't complete those calculations, does it seem helpful to have those automatically calculated?

Question, *Jeremy Pathmanabhan, City of Los Angeles Sanitation*: If we have a wastewater facility and build a recycled water facility within, and now we are going to recycle 25% of our flow, how do we start tracking those intensity metrics? Is that an acquisition?

Answer, *Chelsea Hasenauer, TCR*: If you are taking on existing technologies within an existing facility, it would be acquisition, but if you are putting new technologies or facilities online for the first time, it is just organic growth. This is why we want a narrative component to explain changes over time, since water recycling provides a valuable service.

Comment, Jeremy Pathmanabhan, City of Los Angeles Sanitation: One potential solution could be having wastewater treatment energy intensity metric and then creating a separate recycled water energy intensity metric.

Question, Roshini Das, City of Sacramento: Trying to understand the TCR rules; are we trying to benchmark an individual agency against industry standard or trying to demonstrate how each agency is trying to reduce its emissions? Every water district and agency is different.

Answer, Chelsea Hasenauer, TCR: TCR is not trying to set an industry benchmark. This should be used by each water agency to assess its own emissions trends over time. Another application for emissions intensity metrics is measuring the emissions reductions associated with projects. Specifically, water savings from conservation projects are multiplied against emissions or energy metrics to estimate their respective savings. We would like additional feedback from agencies on appropriate methods for measuring water savings from conservation programs consistently across entities.

Training: Reporting TCR from a Water Agency Perspective

The recording of the training and slide deck can be found on TCR's [website](#).

Warren Teitz, Team Manager of Resource Development, Metropolitan Water District of Southern California

Warren Teitz provided an overview of Metropolitan Water District of Southern California operations and their procedures for building their GHG inventory and from a water agency perspective.

Question, Sal Segura, Zone 7 Water Agency: If we choose to participate in the Water-Energy Nexus Registry, should we continue reporting to TCR?

Answer, Chelsea Hasenauer, TCR: The Water-Energy Nexus Registry will likely be a supplemental module to our existing program for current members. Your data will still exist in CRIS, but there will be another module specific to the Water-Energy Nexus Registry that you will have access to. Everything is voluntary but we encourage you to continue tracking the way you have for consistency and adding additional data.

Question, Richard Harris, EBMUD: Under SB 555, a process was developed by DWR to establish a standard to use either a third-party verification or have someone trained at the utility to do audits. Could we explore internal verification rather than having to hire a third-party verifier?

Follow-up, Michelle Zilinskas, TCR: Internal review is accepted in some programs, but does not offer assurance from an external party. In our program, the third party must be independently accredited and free from conflict of interest with the reporting organization.

Comment, Ha Nguyen, MWD: From my experience for last 10 years doing GHG reporting, having a third-party verifier is much better due to the extensive training and cost needed for someone to do it internally. Verification bodies have a wider view since they have experience doing these services for more utilities rather than just one.

Comment, Barbara Toole O'Neil, ESI: I am a verifier and having an independent third-party gives you the external assurance for customer-facing reporting. Verifiers have to maintain their credential and get audited every year by ANSI.