

Unanswered Questions from U.S. EPA's Local Climate and Energy Program

Webcast

Climate Action Plan Evaluation

December 7, 2011

General Questions

1. *Would presenters find it helpful if they could get data quarterly (vs. annually)?*

Answer:

Zachary Baumer (Austin): Yes, it would be even more helpful if we had data monthly or daily.

Timothy Burroughs (Berkeley): In my experience, annual data is sufficient for fulfilling the purpose of tracking progress toward our CAP goals. Further, in some cases, asking for quarterly data would be too burdensome for the staff tasked with collecting it. All that said, if a system is in place so that the data can be updated in an automated way (rather than manually), then quarterly would be appropriate.

Aaron Milano (Durham): Yes, more frequent access to data makes it easier to respond to. However, it requires staff time to import/analyze data.

Shannon Parry (Santa Monica): Quarterly data is great for making 'real time' decisions about power use, water use, etc. However, I would not want to get data on all 80 indicators quarterly, because it would mean endless reporting and would take away from staff time to affect change.

2. *How do presenters report on green procurement and upstream materials management strategies (beyond waste)?*

Answer:

Zachary Baumer (Austin): Austin does not report this data in terms of GHG emissions. We would like to include GHG analysis in purchasing policy, but this would likely be reported through a sustainability initiative and not necessarily GHG emissions. Part of the challenge is obtaining the right data that is accurate, along with accurate emission factors.

Timothy Burroughs (Berkeley): We provide an annual report to City Council on green purchasing. As of now, this is largely a qualitative report that outlines our efforts.

Shannon Parry (Santa Monica): We are developing a sustainable procurement indicator that will be launched next year. We also participated with Green Cities CA to complete a GHG consumption analysis for the state of CA which is demonstrative, but will not be used to make policy decisions locally.

3. *It appears that Berkeley and Austin both saw significant increases in 2010 energy consumption after a few years of consistent decreases. Are the reasons for that trend reversal known?*

Answer:

Zachary Baumer (Austin): In Austin, the increased emissions in 2010 were from Austin Energy-owned power plants. This increase was due to more generating capacity online, which delivered and sold more power to the grid. Our power plants sell into a nodal market and we buy back energy for customers, so these emissions are not directly tied to our demand.

Timothy Burroughs (Berkeley): I do not know the precise reason why this occurred, but I suspect it essentially represents an uptick in the economy (i.e., more business activity). One of the good things about tracking and reporting data like this is that it instigates questions like this.

4. *How did presenters develop the leadership buy-in?*

Answer:

Zachary Baumer (Austin): In Austin, our leadership led the way. We have always had their buy-in, and this is why we have been able to move quickly and take action.

Timothy Burroughs (Berkeley): We framed this work as being essential to performance management. Tracking progress metrics enables improved, informed management of projects and programs and, hopefully, more efficient use of resources. We also framed it as a necessary part of our CAP process. We need to measure in order to know if the CAP goals are being met.

Shannon Parry (Santa Monica): The directive came from our Council. The City Manager wrote a memo compelling participation in our Sustainability Advisory Team and we have fun events with food and prizes to keep people active.

5. *Have any of the cities started thinking about metrics for climate preparedness (adaptation) actions? If so, what type of metrics are they using in this area?*

Answer:

Zachary Baumer (Austin): Austin has not broached this subject, partially because our city council has not acted in this area. We are having staff-level discussions and partnering with professors from the University of Texas, but the issue has not risen to upper management.

Timothy Burroughs (Berkeley): We track some metrics that are relevant to both preparedness and mitigation. For example, metrics related to urban forestry, water consumption, and energy consumption are all relevant to adaptation and resiliency to a changing climate.

6. *Can you tell us what Austin and Berkeley use for their inventories--instead of spreadsheets for tracking, data collection, etc.?*

Answer:

Zachary Baumer (Austin): Austin uses spreadsheets that aggregate data from fuel and utility billing databases.

Timothy Burroughs (Berkeley): Currently, we use Excel spreadsheets. In the past, we have also used ICLEI's CACP software, which is a good tool for getting started with an inventory.

7. *I am looking for suggestions on how to get city staff engagement when there are not funds for a coordinator position. Any suggestions from the presenters?*

Answer:

Zachary Baumer (Austin): Staff from other neighboring cities, corporate sustainability directors at companies in the community, or university professors doing work in this area.

Timothy Burroughs (Berkeley): This won't be easy when staff resources are scarce, but some level of performance management is essential, and I recommend framing it that way. It is essential to communicating progress toward goals and to better managing programs. Further, it is a way for staff and existing project managers to showcase their good work. For example, if the data are collected and presented, then the fleet manager can better demonstrate the money saved in fuel costs, or the solid waste staff can show the decrease in landfilled waste, etc. There are likely many good stories your city could tell with minimal data collection. And if some of the stories are not so good, you need to know that too.

Aaron Milano (Durham): Make it relevant to specific roles within your City and make it VERY easy for them to give you the information that you need. Learn and understand what they have and how they get it.

Shannon Parry (Santa Monica): Have quarterly meetings that have light food and coffee/tea. Put a sustainability column in your staff newsletter. Systematically go to every staff meeting in the city and shout sustainability from the mountain tops. Write articles and send all-city emails that celebrate sustainability successes of other departments.

8. *Can the presenters give us some of the better sources of no- or low-cost software (or open source) solutions for tracking GHG inventory/CAP data?*

Answer:

Zachary Baumer (Austin): ICLEI, EPA, Excel and build your own.

Timothy Burroughs (Berkeley): ICLEI CACP is free to ICLEI members. Excel too.

Shannon Parry (Santa Monica): We use ICLEI tools and Excel.

9. *What key recommendations would you offer in terms of dealing with lack of data gathering and tracking by city departments?*

Answer:

Zachary Baumer (Austin): You have to go find the data. It's hard, but if you want to manage the outcome, you have to have data. It is a must.

Timothy Burroughs (Berkeley): See my answer to question #7. Ideally, you have a champion within the city to spearhead something like this. Or, start small with data that you already have, then collect and build slowly from there, as possible. Perhaps you already have water consumption or energy consumption data, for example. Start with what you have, clean it up, and begin to use it.

Shannon Parry (Santa Monica): Get a resolution through Council that compels your city to track the data. Then bring in an outside expert, if possible, to conduct a training on performance-based indicators and their value.

10. How do you determine realistic goals (30% reduction vs. 50% reduction) for progress and does that also include timeframe for doing so?

Answer:

Zachary Baumer (Austin): Most cities are just copying and pasting goals. You can go through a lengthy and technical process to analyze the cost of achieving a goal based on your city's GHG inventory, but it's just a goal. Focus efforts on the implementation, that's where the challenge is.

Timothy Burroughs (Berkeley): The goal should include a baseline, target, and timeframe. You can choose a goal based on what you think you can achieve or based on what you have to achieve for some reason. Some goals are aspirational and designed to stretch what's possible. Others are based on an assessment of the resources available and what can be realistically achieved. So, it depends on the situation.

Shannon Parry (Santa Monica): We develop goals that are "aggressive, but achievable." We look at goals established by other cities as well as resource and human health needs, and work closely with our staff.

11. Do any of you have collaboration grants with the other entities that you work with?

Answer:

Zachary Baumer (Austin): There are grants offered through EPA.

Timothy Burroughs (Berkeley): Yes, many of our grants are secured in collaboration with other local governments. Funding agencies seem to want to see that now, more than they did even 3-4 years ago.

Shannon Parry (Santa Monica): No.

12. *What is the professional background of the presenters? Are any of them trained as city planners?*

Answer:

Zachary Baumer (Austin): I hold a BS in Chemistry, a BS in chemical engineering, and an MBA in sustainable business.

Timothy Burroughs (Berkeley): I'm a generalist. I have a background in environmental policy and beekeeping.

Aaron Milano (Durham): My background is in environmental science, engineering, and construction.

Shannon Parry (Santa Monica): My undergraduate degrees are in Environmental Science, Policy and Management as well as Peace and Conflict Studies. My Master's degree is in Urban Planning.

13. *Can any of you talk about the process of institutionalizing the data collection/reporting process internally? In other words, our experience has been that departments are understaffed, overworked, and not all that jazzed about being asked to "upload" the data regularly.*

Answer:

Zachary Baumer (Austin): Yes, staff do not find this work fun, but it is necessary and you just have to build it in as a "must have". It's for the greater good, required, and we all have to do it whether it's fun or not. After a couple of years, everyone is on board.

Timothy Burroughs (Berkeley): I have had similar experience. There are a few things that could help, depending on your city. One is to start small, with data that are more readily available and that require less manipulation and work to prepare. Build on this as buy-in increases. A second is to leverage the data that staff gather to showcase some of the good work they are doing. Include the data in reports to Council, etc., as a way to get their efforts in front of the community and decision makers. A third is to try to make the process as easy as possible by creating a data template or some tool or guidance that makes it as easy as possible to get the data you need. Finally, consider working with the city management to make this something they are asking for and not just a desire of the line staff. If you can do this in a way that doesn't make people feel like you're going over their heads, that's good.

Aaron Milano (Durham): Find a platform that makes this easy for folks. If the platform you are using is a better reporting tool than what they previously used, they may start to use it as their own.

Shannon Parry (Santa Monica): We went to collecting data every two years to address this issue.

14. *How are entities handling changes (decreases) in greenhouse gas (GHG) emission factors as fuel makeup portfolios become cleaner? One might find that GHG emissions are going down due to better factors, while energy use may be staying stable or increasing.*

Answer:

Zachary Baumer (Austin): This is a good thing. However, to your question, we not only report in terms of GHG emissions, but also in terms of kWh per building or department, gallons of fuel purchases, etc. These metrics capture the real resource use.

Timothy Burroughs (Berkeley): The emissions factor is part of the calculation. If it goes down, that's great. We track both energy use and the emissions associated with the energy use.

Shannon Parry (Santa Monica): This is exactly why we normalized our current year data to 1990, to make sure we were tracking real reductions and not paper reductions based on methodological change.

15. *Climate action and energy planning and measurement appear to be such huge, daunting tasks! It would be helpful to know what amount of staff and funding is necessary to do it well for these different situations: Medium-sized city, Large city, County, and County that includes a large municipality or two where collaboration would be necessary. It would be helpful to get recommendations on how to pitch the need for these resources when there isn't support for climate-related initiatives from local officials.*

Answer:

Zachary Baumer (Austin): This work takes at least 2 individuals full time to properly collect data, analyze it, report it, plan, etc. If you are going to manage implementation across a whole city or region, you likely need more like 5 staff.

Timothy Burroughs (Berkeley): See answers to #7 and #13 re: the need for this type of effort. The scale at which you take this on is up to you. Start small and get your feet wet with some basic metrics for which the data are accessible and meaningful. Use grad students to help out. Build year over year. Ideally at least 25% of a position is available to start and coordinate the process.

Shannon Parry (Santa Monica): We are a 90,000 person city and we have one full-time sustainable city plan reporting person. We hire a part time outside consultant to collect and analyze the data and we have an energy efficiency engineer on staff who, among many other things, does our CAP.

16. *What are dashboards? How are they used?*

Answer:

Zachary Baumer (Austin): A dashboard is a frequently updated, automatically created snapshot of high-level but important metrics. They are best used for upper management to track progress on a monthly basis.

Aaron Milano (Durham): Dashboards are screens/homepages where you can see pertinent information. Many people use these personally and don't know it (i.e., iGoogle, Yahoo homepage, etc). When you log into your platform, you are able to see your dashboard, which contains information at a glance so that you don't need to look for it (i.e., reports, status updates).

17. How do you suggest getting the city to engage in the effort and to implement goals? How do you suggest getting the city to report what they have implemented?

Answer:

Zachary Baumer (Austin): Elected Officials need to be put up to it by their voters. Then management puts money to the problem.

Timothy Burroughs (Berkeley): See #'s 7, 13, and 15.

Shannon Parry (Santa Monica): The original recommendation came from our Task Force on the Environment, which is a citizen advisory body to Council.

18. How did the presenters decide on the overall methodology for calculating GHG emissions/inventory? Was LGOP/ICLEI the only options, or were others considered?

Answer:

Zachary Baumer (Austin): We are local government so we follow a local government protocol. Some protocols for power plants, etc. are more complex. The protocol doesn't matter, it just needs to be the same one other cities are using so it's comparable.

Timothy Burroughs (Berkeley): We use ICLEI and the LGOP as the guide. It's the most relevant to local governments and it works.

Shannon Parry (Santa Monica): We considered many, but stuck with ICLEI because it is clear, easy to use, and has history.

Questions for Neelam Patel (EPA)

1. There are several sources of processes and protocols that are recommended by different organizations, even within EPA. These include EPA's mandatory reporting program (major sources only), parallel air emissions inventory, ICLEI, WRI, various IPCC, THE Climate Registry (CA) and others. What is a local or state organization to do in regard to making these results as consistent as possible and be defensible among the various users?

Answer: There are several tools and protocols available that help local governments and other local or state organizations to make inventories consistent and defensible.

- ICLEI – Local Governments for Sustainability (ICLEI) has a number of tools available to their members. For example, CACP 2009 (Clean Air & Climate Protection Software) is an emissions management tool that calculates and tracks greenhouse gas emissions and reductions, as well as criteria air pollutants, associated with electricity, fuel use, and waste disposal. Learn more about ICLEI tools at: <http://www.icleiusa.org/tools>.
- EPA’s Regional Guidance document is intended primarily for larger regional groups. However, it could still be helpful for more local entities. The methods contained in this guidance were developed in part by working with inventories created by two regional governments. These inventories served as pilot studies, providing methods and indicators that could be evaluated for their potential in other regional settings. This document attempts to synthesize the lessons learned through evaluation of these pilot regions with accepted rules for GHG accounting as determined by the Intergovernmental Panel on Climate Change and the EPA State Inventory Tool to present the first guidance to regional planning organizations (RPOs) and MPOs.
- The Local Government Operations (LGO) Protocol was developed by a group of environmental organizations, including ICLEI, The Climate Registry, the California Climate Action Registry (CCAR), and the California Air Resources Board (CARB). The LGO Protocol is a program-neutral greenhouse gas protocol designed to help local governments quantify and report operational greenhouse gas emissions. The protocol is available for free at: <http://www.theclimateregistry.org/resources/protocols/local-government-operations-protocol/>.
- Portfolio Manager, available from ENERGY STAR, is best used for understanding building energy use. Other tools may be better suited for more comprehensive applications. Portfolio Manager is an interactive online tool for tracking energy and water use in buildings. Learn more about Portfolio Manager at: http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager.

Questions for Timothy Burroughs (Berkeley, CA)

1. *Does Berkeley have a separate city-wide greenhouse gas inventory as opposed to a community-wide greenhouse gas inventory?*

Answer: Yes, we have a greenhouse gas emissions inventory that measures community-wide greenhouse gas emissions. And then we also have an inventory for municipal operations.

So we have an inventory of our city-owned fleet and buildings and a separate inventory of our community-wide emissions, community transportation, and building energy use in each of the major sectors.

And then, as I mentioned in my presentation, as well as having those big picture inventories, we drill down and measure lots of other progress metrics, including about 50 different progress metrics that are more granular than the emissions inventory.

2. *Where did you get the data for the school districts contributing 30% of energy use? PG&E? Did you track scope 3 emissions in any of your community-wide inventories, and if so, how did you include that scope 3 for schools?*

Answer: The schools data includes all schools, including university, community college, and school district. These data were provided by PG&E. We include solid waste disposal-related emissions in our inventory calculations. School district waste is captured because we get these data from landfills and transfer stations. We do not know solid waste-related data specific to the schools; it is only captured in an aggregated total. In general, we get very little data specific to the school district.

3. *With the 80% below 2000 by 2050 goal, for example, does that remain the same EVEN with any growth? For example, is it an absolute value that you are targeting?*

Answer: Our target is absolute, regardless of growth. We do track normalized metrics, but ultimately, the target is absolute. It's going to be difficult.

4. *How can a city fund a climate action plan, and what sources of funds will a climate action plan make available to a city once it is finished?*

Answer: Our CAP is extensive and much of it is not funded. But, you can use a CAP as a fundraising tool. Funding agencies like to see that you have considered and vetted the strategy for which you are seeking funding. We have leveraged our CAP for millions of dollars in funds from state and federal agencies and private foundations. We pay for some staff time through grants, but the City also supports some staff time through the General Fund.

5. *Where do you get the data from?*

Answer: We get our data from a variety of sources, including energy utility, water utility, solid waste agencies, and internal staff. The data source depends on the metric.

6. *In the tracking of building residential energy consumption, how is natural gas tracked in units of MWh? Should this be tracked in mmbtu or therms?*

Answer: Normally you receive natural gas data in therms or mmbtu. I converted it to MWh so I could report electricity and natural gas together. I could have also converted them both into mmbtu, but I think MWh is a more recognizable unit for a lay person. I have seen many others use this methodology too.

7. *How do you equate more back rack installations with actual reduced VMT, as opposed to simply new added bike travel ability/access to racks for bikers?*

Answer: I do not equate more bike racks with reduced VMT. There is no direct causation there. We track added bike racks because it is a priority for many community members, because we have to report this to funders anyway, and because we know that, in general, increased bike parking and other bicycle infrastructure leads to more cycling and less driving.

8. *Wouldn't the emission of GHGs due to consumption be counted elsewhere? (For example: a farmer travelling to a farmer's market or a trucking company would count their vehicle miles travelled and associated emissions as emissions from their business in whatever town it is located). So, isn't that double-counting of emissions to count the emissions for the town where the business is located and then count it where the product is sold at retail?*

Answer: Yes, there will be some double-counting when you track consumption-based emissions. The goal of tracking emissions of this type is to get a sense of the total footprint that your community is responsible for. It is a policy tool rather than a GHG accounting protocol. The emissions are happening elsewhere, but activities in my community can affect those emissions and I can measure that effect (roughly) by tracking metrics related to consumption.

9. *Wouldn't taking a survey of how many bicycles are parked at the racks be a better metric of the impact of bicycle parking since an empty bicycle rack has no impact on reducing GHGs?*

Answer: We track number of bicycle racks because that is something that the community desires/demands and because we have to report these data to funders anyway. We also take bicyclist counts periodically. But taking a survey is much more labor intensive so I'd have to ask myself how much I really need that data and whether it was worth the effort.

10. *In reference to the online data gathering—is it effective? Or does it get done by staff or the general public?*

Answer: If you're referring to publishing our data online, I would say yes, it is an effective activity. The data are there and available when we need it or need to refer people to it. It is also a good reference for other local governments that are thinking about developing a progress metrics system. And in general, it demonstrates accountability and action on behalf of the city government to take CAP implementation seriously.

Questions for Zach Baumer (Austin, TX)

1. *What are the pros and cons to doing 28 separate climate plans as opposed to an overall plan? To what extent do the individual departments work together?*

Answer: You probably need both. If you really want to get full implementation, you've got to have an overarching plan, but it's hard to get into too much detail into specific actions without more specific plans.

Having 28 plans is a pain. But in our structure and in many city government structures, it's almost necessary. Silos are something that we love to hate, but they're real, and our departments function as their own organizations. They have their own budgets and spend their own money on what they want to spend money on. So, it's almost essential that they're able to implement within their silo.

The challenge for us and this is where it's useful to have a centralized group, like our Office of Sustainability or our Climate Protection group, is that we work across those department to connect the groups. We have monthly meetings, we have liaisons, and we basically connect with each of the departments.

It takes a lot of work to stay on top of the tracking, but we recognize that we can't implement it all ourselves and we need the departments to come along with us.

2. *Managing this type of sustainability/climate program seems like a sizeable undertaking. What type of staff and budget resources should we plan on allocating for doing this type of work?*

Answer: In Austin, we have a total of 3 interns, 2 temporary employees, 2 managers, 7 project staff, and a Chief Sustainability Officer. We manage many programs and projects around the city from trees to GHG reporting to coordinating sustainability reporting. Our annual budget totals over \$1 million and is primarily to cover staff wages plus additional marketing / communications funds. However, completing a GHG inventory and running a program could be done with 1-2 staff and less than \$200k.

3. *I would like to know more about what technology tools the presenters use to capture and present data. Does anyone use a sustainability metrics tool like Hara? Also how exactly is SharePoint used by Austin?*

Answer: Austin uses MS Excel to tabulate, total, and calculate emissions. We use SharePoint to track projects. All projects are listed with their department, PM, cost, GHG reduction, schedule, etc. in a list totaling over 2000 projects. The projects are owned by different departments which is why SharePoint works. Also, we can then pull data, summaries, totals, etc. from the SharePoint database. We would like to eventually use a tool like Hara, but the up-front time and cost is a barrier, as well as the ongoing subscription fee.

4. *Does transportation fuel use include employees commuting with personal vehicles?*

Answer: No, it does not include commuting. It does include mileage that is reimbursed for city usage, but not personal commuting to and from work.

5. *Where does Austin buy all of their renewable energy from?*

Answer: The Austin Energy GreenChoice Program. This is essentially West Texas Wind Renewable Energy Credits.

6. *For the City of Austin, who did the third party verification the last few years? Approximately how much does it cost?*

Answer: Ruby Canyon Engineering, \$10k per year.

7. *How specifically is Climate Registry verification helpful?*

Answer: It provides a check and balance, review of our internal work, finds errors, improves data quality and performance for future years, and more. It also provides the outside legitimacy that we are doing our job correctly and that the claims we are making are valid.

8. *Can Baumer say more about "no more spreadsheets," the problems, and the "competing solutions" available?*

Answer: Spreadsheets are inherently corruptible, size-constrained, prone to errors, manual in nature, and not nimble. Competing solutions range from custom-built databases and custom IT solutions, to commercial, off-the-shelf products offered by Hara, IHS, ESS, Enablon, etc. These companies have thought through this process and offer much superior products, but they cost money and take a large time commitment to make them work properly.

Questions for Shannon Parry (Santa Monica, CA)

1. *If the bus line was renewed, will there be an increase in the VMT in Michigan?*

Answer: Yes, which is why, in the real world, we certainly wouldn't choose to close our municipal bus line. But the way that VMTs are measured in our region, there wouldn't be as dramatic an increase in VMTs from reducing the bus line.

This is just one of those places where data is collected in different ways by different agencies. And for a lot of data, whether tracking jobs, VMT, or others, we end up with consistent data that is reported in the same way every year.

But because of the way the data is collected or the way that it's aggregated, it's not as relevant at the scale of an individual jurisdiction, especially for a jurisdiction of our size because we're only 90,000 residents – about 8.3 square miles. But some of the data, particularly transportation data

and some housing data, is done at the scale of the county. It is hard for us to see the effects of our individual actions in that data.

2. *Could you please provide more detail on how Enterprise Funds are generated and used to support Santa Monica's Sustainable City Plan and staff?*

Answer: Enterprise funds are funds that provide goods or services to the public for a fee that makes the entity self-supporting. Ours come from water, wastewater, and trash/recycling collection.

3. *Based on Santa Monica's experience speaking with other agencies, who is a good candidate for the "report card" approach?*

Answer: The purpose of having a report card is to take detailed, and sometimes complicated, indicator data and to aggregate it to a scale that the general community is interested in and can understand.

4. *How do you divvy up the task of looking at where you are at for each specific indicator and goal? Who does the work of measuring progress? Is it one staff person? Or is it divided out to different staff members and compiled into one spreadsheet by one person?*

Answer: Staff from specific divisions and departments are responsible for collecting the indicator data that are pertinent to their area. We have one staff person who then works with an outside consultant to collect and analyze the data for presentation in the report card and progress report.

5. *Trees – Net gain: Does this data note the size and age of trees removed and planted? There is a big difference in beneficial functions of mature vs. young trees, including the amount of oxygen generated during evapotranspiration, uptake of rainwater to reduce runoff and/or flooding, providing habitat and food for various organisms, etc. In urban areas, small trees provide little benefit, and even those are often replaced by newer, younger trees when they are perceived to have grown too big for their site. They often die from lack of water and oxygen to their roots due to pavement.*

Answer: Our Urban Forest staff collects data with this granularity, but for the purpose of the indicator (remember there are 80 of them), we look at a slightly aggregated level of data which is diversity and canopy. This is an important differentiation—many divisions and departments want the specific technicalities of their work to show up in the indicator data. It does not. That is a valuable exercise for them to make the best public policy decisions, but we cannot report that level of granularity at the indicator scale. (I.e., we report total energy use, not number of CFL or LEDs installed.)

6. *Where will the municipal waste go when the city gets to its zero waste-to-landfill goal? Incineration or something else?*

Answer: We are developing our zero waste strategic plan right now, so I can't answer that in depth. That being said, the Council does not consider destructive incineration a sustainable practice.

7. *What are enterprise funds?*

Answer: Enterprise funds are funds that provide goods or services to the public for a fee that makes the entity self-supporting.