Encourage the Good

Ann Willcox has fond memories of Barron Park, a quiet neighborhood nestled below the intersection of El Camino Real and Page Mill Road in Santa Clara County. She lived there from 1973 to 1977, and recalls it as “a paradise of trees,” home to Sequoias, cedars, oaks, elms, walnuts, and pines.

In 1975, the City of Palo Alto annexed Barron Park, which had previously been unincorporated. Willcox worried that her neighborhood would lose its “breathing road sides” that were made of gravel and absorbed rainwater; by contrast, “in the Palo Alto neighborhoods I knew, you felt like you were hiking through an asphalt and concrete parking lot just crossing any street.” Willcox turned out to a city meeting to voice her concern, and was relieved to learn that there were no paving plans in the works.

From her current home in Norway, today Willcox can see from online satellite views that the paving she feared has since been laid down along her former street. But internet updates from the Bay Area haven’t all been disappointing — she recently learned about efforts to install stormwater capture projects along roadsides in the East Bay when reading Bay Area Monitor coverage (“Project Gets the Green Light” in the October 2 Monitor Notes email newsletter).

Willcox emailed the Monitor to thank us for our coverage, and to share her related personal story in hopes it might “encourage the good, in the name of saving some of the earth.” However, she also expressed reservations about the prospects for enacting such change, especially during a time when people seem to spend “most of their lives with their heads down over a lighted screen, not even seeing where they are, scarcely noticing the air they breathe.” And we share this sentiment — when people fail to pay attention to the world around them, civic engagement degrades and social progress stalls.

Nonetheless, we at the League continue to promote participation in the democratic process, and are always looking to publicize the beneficial outcomes of this participation. One notable example from this edition of the Monitor highlights the work of Jean Sweeney, an elementary school teacher and Alameda resident who was the primary force behind the establishment of Jean Sweeney Open Space Park, which opened last year as the island city’s largest park after 20 years of planning, advocacy, and organizing.

Sweeney was inspired to transform Alameda Belt Line railroad land into a gathering place for families. The result can be seen on our back cover, which showcases Sweeney’s vision come to fruition.

The train engine on our front cover signals that this edition has a bit of an emphasis on railroads, starting on the next page with Cecily O’Connor’s article about regional rail planning. Aleta George follows with an exploration of how railroad assets can be converted into recreational destinations like Jean Sweeney Open Space Park. Robin Meadows then examines the practice of creek daylighting, and Leslie Stewart wraps things up with reporting from the front lines of building decarbonization.

We hope these articles resonate with you, prompting reflection in a similar way to what Ann Willcox experienced. If you’re moved to words as she was, please don’t hesitate to drop us a line — we’d love to hear from you. And if you’re moved even further, there’s an envelop tucked inside this edition that you can use to show your support with a monetary donation. Send it in the name of saving some of the earth, and encouraging the good.

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Time to Get on Board with a Regional Rail Update?

By Cecily O'Connor

In 2007, the Metropolitan Transportation Commission (MTC) adopted a regional rail plan that envisioned opportunities to accelerate Bay Area travel with an integrated network.

The vision described how to “ring the Bay with rail” by better connecting San Francisco, Oakland, and San Jose. It charted a course through 2050 in which BART and Caltrain served as the rail network backbone, and called for a new governance structure to deliver high-quality, efficient services, among several other recommendations.

Transportation agencies delivered on a number of the plan’s projects, including the SMART (Sonoma-Marin Area Rail Transit) train launch in 2017 and the opening last year of the Salesforce Transit Center, which will eventually bring in Caltrain service from the South Bay and California High-Speed Rail from Southern California into an underground station. A few other key projects remain under development.

But governance is proving tricky.

The region “has fallen short on many of the [2007] policy recommendations, particularly the bold policy changes to reform governance and project delivery,” according to documents from an October 11 presentation made during a joint committee meeting of MTC and the Association of Bay Area Governments (ABAG).

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The challenge before transportation planning officials is a “crowded field” with “a lot going on,” according to meeting documents. The field in question is comprised of 10 services that run lines in the nine-county Bay Area and surrounding “mega-region” that includes Sacramento, Monterey Bay, and the San Joaquin Valley. At least two more services, Valley Link and California High-Speed Rail, are under planning.

Within this field, Bay Area commuters often find that local rail service is not reliable or frequent enough to reduce the need to drive, advocates told the Monitor. For example, BART ridership hit a peak in 2016, but crime, cleanliness, and other service concerns have since derailed the record-setting streak. Overcrowding in the Transbay corridor also is limiting BART’s capacity.

When taken together, do all of these complexities necessitate a new look into how the region funds and builds its rail system? MTC is taking stock of projects and development. The idea behind the October 11 presentation was “to gauge the Commission’s interest in how they’d like to move forward with rail planning in the near term,” said Adam Noelting, principal planner and analyst at MTC, during an interview with the Monitor.

Meeting documents briefly laid out three core areas in which MTC could evolve its role to support passenger rail. The first is prioritizing cost-effective and equitable investments. The second is promoting land-use strategies that support rail projects. This step will likely include a 2020 revamp of transit-oriented development policy that considers factors such as recent housing legislation and insights into the Regional Housing Needs Allocation process.

Lastly, it’s important for MTC to develop partnerships and organizational opportunities to coordinate and deliver the

continued on page 4
next generation of rail investments.

Related to this evolution is Plan Bay Area 2050, a growth roadmap for transportation, housing, the economy, and the environment that MTC is in the midst of creating. It’s relying on a project performance assessment to tease out the benefits of nearly 100 project proposals that are evaluated based on cost-effectiveness, equity impacts, and alignment with guiding principles. A good chunk of these comprise rail investments, focused on building core rail, extending the network, and optimizing the existing network. Plan Bay Area 2050 will be complete in 2021.

Additionally, MTC is studying seven Transbay Crossings concepts, each profiled in a perspective paper published in early November and developed as part of the agency’s Horizon initiative. Horizon considers “what if” scenarios and how they’d perform against three different population growth projections. The perspective paper recommended prioritizing three “transit-only” ideas for further analysis and possible inclusion in Plan Bay Area 2050. Two focus on a new BART crossing that connects Oakland and other East Bay cities with San Francisco, with some variations. The third is a “Greater Regional Rail” concept that would link Oakland and other East Bay cities with San Francisco and the South Bay by integrating Caltrain and Capital Corridor service through the Salesforce Transit Center.

Transportation advocates are on board with the need to re-think how transportation officials, agencies, and providers work together to tackle core functions and reduce redundancies. They believe Bay Area commuter rail, and public transit overall, could become more robust when all the broad brushstrokes — delivery, operations, and supportive land-use — are in line.

“We think of our regional transit system segmented by whether the transit vehicle has steel wheels or rubber tires, rather than thinking about it collectively,” said Adina Levin, co-founder of two transit advocacy groups — Friends of Caltrain and Seamless Bay Area — during an interview with the Monitor.

Rider experiences could really change as a result. A unified, well-coordinated schedule allows people to transfer more easily, said Laura Tolkoff, regional planning policy director at the nonprofit SPUR. For example, when you have a rail station with service every 15 minutes that’s available all day long, that’s a “good candidate for growth.”

However, Bay Area transportation projects are funded via local and county sales taxes, which makes it hard to prioritize projects that have a regional benefit, Tolkoff said. There also are inconsistencies in land-use decisions, which are made by local municipalities that may lack necessary tools to focus development around transit stations.

Indeed, regional rail is “not a conversation that fits neatly within the nine-county region,” said Sebastian Petty, director of policy development at Caltrain. “It’s also a megaregion and statewide conversation.”

Caltrain’s board recently adopted a 2040 Service Vision that calls for increased service, frequency, and longer trains to triple ridership. The vision also prepares Caltrain to expand and integrate into a regional rail network that includes the potential for renewed service across the Dumbarton Bridge and the rebuilding of Diridon Station in San Jose.

California’s 2018 Rail Plan left service vision breadcrumbs for agencies like Caltrain and others to follow, with goals to increase passenger rail travel by 92 million passenger-miles per day. It outlined an integrated system that will allow passengers to easily and efficiently transfer from local transit services to regional, intercity, and future high-speed rail. This all makes for a greener, safer, more efficient, economy-boosting way to travel.

Potential next steps for Bay Area rail planning may be shared after a January MTC workshop, which will focus on partnership and organizational challenges related to coordinated project delivery. That could include service planning in corridors where there are many projects, sponsors, and cities involved. Discussions from the workshop could eventually lead to a new rail plan, direction, or topic area, Noelting said.

Cecily O’Connor covers transportation for the Monitor.
Right-of-Play: The Rails-to-Trails Junction

By Aleta George

You have likely heard of the popular High Line park in the City of New York. Perhaps you have even visited this rails-to-trails park with its garden walks, world-class eateries, and art installations that was converted from an elevated freight line screaming above the streets of New York to a bustling public open space.

Here in the Bay Area, we have our own versions of rails-to-trails parks, some of which have been in use for years and others that are in the planning stages.

"Rails-to-trails projects are really fantastic because these often-abandoned sections of railroad land are narrow, long, and linear and lend themselves to potential open space," said Amy Wooldridge, the recreation and parks director for the City of Alameda. "They also tend to be valuable because railroads were connection points that moved freight or people, so they create greenbelt areas that people can use to connect from one part of the city to another in a safe, protected, and fun way."

The Jean Sweeney Open Space Park in Alameda is a case in point. The first phase of what will be a 25-acre park opened in December 2018. Phase one includes a playground in the eastern portion of the park and the Cross Alameda Trail, which will eventually span the entire island of Alameda from east to west.

The inception of this park traces back to Jean Sweeney, a teacher and community activist, who in 1998 envisioned an open space park to replace the abandoned Alameda Belt Line railyard and rail line between Sherman Street and Constitution Way. The landowner had plans to sell the land for $20 million to a developer for 200 homes, but Sweeney gathered signatures and enthusiasm to pass an initiative to rezone the land as open space.

While researching historic files, Sweeney found the original 1924 contract that granted the city the option to repurchase the land if the rail line was ever decommissioned, which it had been since 1939. She turned her findings over to the city, and after years of litigation, the city won on appeal and was able to purchase the land for just under $1 million.

Sweeney took an active role in turning the right-of-way into a park, but it took a village to make it happen. “This park wouldn’t have happened without community advocates. It most likely would have been housing at this point without her galvanizing the community,” said Wooldridge.

The Jean Sweeney Open Space Park is just one example of a rails-to-trails park in the Bay Area. Other examples include the Old Railroad Grade on the eastern side of Mount Tamalpais that follows the route of the Mt. Tamalpais and Muir Woods Scenic Railroad, the seven-mile-long Linear Park in Fairfield that lopes atop an old Northern Electric Company passenger rail right-of-way, and the granddaddy of them all, the Iron Horse Regional Trail that stretches from Concord to Pleasanton.

“The Iron Horse Trail is the spine through the inner valleys,” said Beverly Lane, an East Bay Regional Park District (EBRPD) board member who was active from the start with the Right-of-Way Trail Advocates, a citizen advocacy group from Alamo, Danville, San Ramon. They envisioned a trail like the Lafayette-Moraga Regional Trail, the first rails-to-trails project of EBRPD, and one of the first rails-to-trails projects in California.

The history of the Iron Horse Regional Trail right-of-way reaches back to 1891 when the Southern Pacific Railroad Company built a line from San Ramon to the Suisun Bay west of Port Chicago to transport farm goods. The trains lost momentum as automobiles and trucks filled the roadways, and the last train ran in 1978. The railroad removed the tracks the following year.

“There was a mad scramble to not sell it off in pieces,” said EBRPD’s general manager Robert Doyle, who, as the district’s trail coordinator at the time, was exploring the new concept of a regional trail system to connect parks. EBRPD’s regional trail system is now one of the largest in the U.S.

“There certainly was an intent to look at putting light rail...
there, but a study concluded that it just wasn’t feasible with 35 street crossings,” said Doyle.

“Readers should know it wasn’t a finger-snap, ‘Let’s do this.’ It was done piecemeal,” he added. The first pieces were done in Walnut Creek. Then came sections in Danville, Concord, Pleasant Hill, and San Ramon, in that order. “Now we go all the way into Pleasanton,” Doyle said.

The trail, managed by EBRPD and used by 1.3 million people annually, isn’t just for recreation. To assess usage, EBRPD used a federal grant to install counters at intersections of the regional trail system (including Iron Horse), and the data showed that peak use of the trails aligned with peak use on highways.

“It’s a green transportation system that gets to parks and everywhere else,” Doyle said. “We calculated that there are 40 schools within one-half mile of the Iron Horse Trail. It connects to everything and that’s why it’s so popular.”

While all abandoned railroad right-of-way corridors may not be appropriate for reintroducing train service, there is one defunct right-of-way in the Bay Area that is being considered for both a new passenger rail line and a trail. Still in the visionary phase, the western leg of the Dumbarton Rail Corridor is seen as being a possible segment of the Bay to Sea Trail, a planned 40-mile multi-use trail that would connect the San Francisco Bay to the Pacific Ocean. The project is picking up steam and eleven partners and agencies are working together to find a route, said Rachel Faye at the Peninsula Open Space Trust (POST). “The trail would be the first and only east-to-west trail in the Peninsula that connects to the sea,” said Faye. “It will connect four regional trails and create regional connectivity.”

The rails-to-trails segment of the Bay to Sea Trail would run along the Dumbarton right-of-way from Ravenswood Open Space Preserve in East Palo Alto to Bair Island in Redwood City, while another segment would lead over to Half Moon Bay. The San Mateo County Transit District and the Cross Bay Transit Partners (a partnership of tech titan Facebook and infrastructure developer Plenary Group) are conducting a feasibility study for a public/private passenger rail line on the old Dumbarton line, which includes reconstructing its inactive rail bridge to connect the Peninsula with the East Bay.

“POST is not taking a position on rapid transit improvements being proposed by the Cross Bay Transit Partners, but we are taking a position to support active transit improvements for walking and biking,” said Faye. “A trail on the Dumbarton Rail Corridor would be positive and beneficial to our community. There’s room for a rail line and a trail.”

If you have walked the San Francisco Bay Trail or visited bayside open space parks in the Peninsula, you know you have to drive on highways, cross overpasses, and skirt industrial and urban infrastructure to get there. A trail on the Dumbarton Corridor would help connect the urban community with existing open spaces.

“The trail would pass through communities that have the most limited access to safe, active transportation that connects people to destinations. This trail would provide connectivity that is an enjoyable experience,” said Faye.

“Transportation costs are the second-biggest drain on household budgets, so creating affordable mobility options is critical for lower-income families,” said Laura Cohen, director of Rails-to-Trails Conservancy’s western region. “Trails are part of the solution for those who don’t or can’t drive due to the high costs of car ownership, age, or disability.”

Most trails and parks take time and community advocacy to bring them to fruition, and sometimes, those who work on the projects don’t live to see the results. Jean Sweeney died seven years before the park named in her honor was opened, but during her lifetime she remained undeterred in putting in the necessary work and time for the future benefit of other residents. Clearly, she lived by the words of the old Greek proverb, “A society grows great when old men” — and, of course, women — “plant trees whose shade they know they shall never sit in.”

Aleta George loves trails and trains. She is the proud granddaughter of L.E. Brown, Sr., an engineer for the Southern Railway’s 1401, now the largest train on display in the Smithsonian’s National Museum of History.
Let There Be Light: Creeks Gain Visibility Through Restoration

By Robin Meadows

Stroll through just about any of the cities ringing the San Francisco Bay and you’re likely walking on water. Not literally, of course. Rather, chances are that somewhere along your way, there’s a stream running beneath your feet. As land around the Bay was developed, creeks were rerouted underground through pipes called culverts for flood protection. But in some spots, these hidden waterways can be brought back up to the surface to provide habitat for wildlife and respite for people.

The Bay Area is a national leader in this type of restoration, which is aptly called daylighting. And now we’re undertaking our most ambitious such project yet. The East Bay Regional Park District (EBRPD) is about to daylight more than half a mile of Alder Creek in Robert Sibley Volcanic Regional Preserve, near Pinehurst Road in the Oakland hills.

“The creek there is almost all underground; it looks like a meadow,” said Matt Graul, EBRPD’s chief of stewardship. “The site was used as a quarry and they culverted the stream so they didn’t have to deal with road flooding.” The new daylighting project is part of an effort to restore four acres of the preserve, which will also include reestablishing riparian plants along the daylighted stretch of creek as well as new trails and a group camp site.

When the park district acquired the property eight years ago, they wanted to open it up for hiking. But the land around the buried creek was unstable. “It hadn’t been engineered properly and the culverting began to fail,” Graul said. Water escaped, eroding sinkholes and gullies as deep as 25 feet. “It was dangerous — if you started stomping around, you might fall in.” This spurred the district to fast-track Alder Creek’s daylighting.

Rainbow trout stand to benefit hugely. These native fish live in San Leandro Creek, which Alder Creek flows into. But they can’t swim into Alder Creek due to the culverting, so they just collect in a large pool that forms just below the pipe. “The trout want to come up,” Graul explained. “The upper

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watershed is good spawning habitat.” Restoring Alder Creek will also help threatened and endangered species by, for example, providing habitat for California red-legged frogs as well as prey for Alameda whipsnakes and golden eagles.

The project will go out to bid early next year and the total cost, including planning and permitting, is estimated to be roughly $11.5 million. Graul expects the construction phase to be complete within two years. “It’s extremely exciting,” he said. “There’s just something about flowing water. I’ve loved being around streams and creeks since childhood.”

Daylighting creeks is widely embraced these days. But the concept was quite controversial when initially proposed in 1982 for Berkeley's Strawberry Creek, one of the earliest known daylighting projects in the country. “It was seen as a wacko, dangerous, fringe idea,” recalled Ann Riley, cofounder of the Urban Creeks Council, a Berkeley-based nonprofit dedicated to stewardship of Bay Area streams. “There were worries about endangering children.” City officials also feared that bringing the creek above ground again would cause trash buildup and flooding.

Strawberry Creek runs freely through much of the UC Berkeley campus and then disappears underground, generally paralleling University Avenue until reaching the Bay. The city's concerns notwithstanding, community activists prevailed and the stream now resurfaces in Strawberry Creek Park, where a 200-foot section was daylighted in 1984.

“The Strawberry Creek project is widely considered the archetype of daylighting,” according to a year 2000 Rocky Mountain Institute report called Daylighting: New Life for Buried Streams. “It inspired many other projects.” While buried creeks have been re-exposed here and there around the country, the practice really took off in the Bay Area.

Riley rapidly ticked off a dozen or so local projects, including a recent one at Cerrito Creek that illustrates the turnaround in institutional perceptions of daylighting. Instead of voicing objections, as the City of Berkeley did in the early 1980s, the City of El Cerrito actually required re-exposing a 180-foot stretch of the creek as a condition for developing an apartment complex adjacent to the El Cerrito Plaza shopping center. “There’s been a huge political attitude change,” said Riley, who chronicles this evolution in her 2016 book Restoring Neighborhood Streams. “It really is remarkable.”

To raise awareness of the Bay Area’s many creeks, in the early 1990s the Oakland Museum of California began mapping Bay Area creeks both above and below ground. “They wanted maps that people could carry around to find their creeks,” said Janet Sowers, a geologist at Fugro Consultants, a Walnut Creek-based environmental engineering firm, who has worked on the project since the very beginning.

The first map covered Oakland and Berkeley, tracing the meandering paths of historical creeks as well as their highly-altered modern routes. “Creeks still flow from the hills to the Bay, so it’s still a watershed,” Sowers said. “But in general, there is more underground stormdrain network than original creek network.”

Free-flowing creeks are depicted in blue while culverted waterways are in gold. The City of Berkeley, for example, has a scattering of blue squiggles but is dominated by straight gold lines that show where water is shunted underneath the city and down to the Bay. “The map was so popular we kept going,” Sowers said. “We now have 17 maps around the Bay.” Creek maps are available from the Oakland Museum store, and there is also an online Google Earth version for Alameda County.

Major funding for the creek mapping project came from the Alameda County Flood Control and Water Conservation District, and the Santa Clara Valley Water District. The motivation, Sowers explained, was to reduce water pollution. Knowing about the waterways around — and below — us could instill mindfulness of the connections between our actions and ecological health. For example, people contaminate streams with excess fertilizer and pesticides from gardens as well as oil and other toxic chemicals from streets. “If citizens are more informed and engaged, they are more likely to be good stewards of creeks,” Sowers said.

Robin Meadows covers water for the Monitor.
Getting the Carbon Out

By Leslie Stewart

It may be startling to realize that 26 percent of greenhouse gas emissions in California come from buildings — two-thirds of that from homes. Some of these emissions are indirect, from electricity that utilities generate with natural gas at remote power plants. However, much of the problem lies inside the buildings themselves, where occupants use natural gas for heating both rooms and water, and often for cooking, drying clothes, and incidental uses such as gas fireplaces.

Unfortunately, natural gas is a fossil fuel primarily composed of methane, a heavyweight in the pantheon of greenhouse gases. Throughout natural gas production and transportation, there are leaks. And in the home, natural gas stoves produce nitrogen dioxide, carbon monoxide, and formaldehyde — air pollutants which then linger inside or escape into the atmosphere through vent pipes. Natural gas used to be a preferred alternative to coal-generated electricity; now clean electricity is more desirable, and the shift away from natural gas is just beginning to gain speed.

This shift has a name: building decarbonization. The term might sound vaguely industrial, but it actually refers to cleaning up a building’s carbon footprint by decreasing use of fossil fuels and making better use of cleaner power. The blueprint for this clean-up includes electrification — replacing gas-fueled appliances with electric ones — as well as adding energy-efficient improvements and providing hookups for charging electric vehicles. Battery storage for locally-generated solar power can also be part of the mix.

It’s a blueprint that is being implemented more and more throughout the region, by governments, regulators, developers, and individuals. In July, Berkeley became the first city in the country to ban natural gas in most new construction, effective January 2020.

Other California cities are quickly following suit. Panama Bartholomy, director of the Sacramento-based Building Decarbonization Coalition, remarked, “This is the fastest growing clean energy sector I’ve ever seen.” His multi-sector coalition includes energy providers, manufacturers, local governments, and nonprofits. By the end of October 2019, the coalition listed seven Bay Area cities and one county which had either made code changes similar to the Berkeley ordinance, or adopted measures which allow gas hookups only if developers add expensive features to achieve higher energy-efficiency standards. Seven more cities had scheduled discussions of such ordinances in November.

The shift is being accelerated by recent state legislation — such as last year’s Senate Bill 1477 (Stern), which funds electrification incentives — and continued revision of state building codes to implement previous climate change laws. It’s supported by research from Rocky Mountain Institute, Lawrence Berkeley National Labs, Energy + Environmental Economics, and others, showing that electrification of California homes and other buildings would create immediate greenhouse gas reductions which would increase as electricity sources continue to get cleaner. According to these studies, electrification is also cost-effective, particularly for new construction. New products such as “smart” appliances and battery storage systems can match energy use to avoid peak demand periods and decrease electricity rates for all consumers.

Berkeley has hired a staff person to head its decarbonization implementation, and has already convened a workshop for home builders and designers; meanwhile, the shift is being accelerated by recent state legislation — such as last year’s Senate Bill 1477 (Stern), which funds electrification incentives — and continued revision of state building codes to implement previous climate change laws. It’s supported by research from Rocky Mountain Institute, Lawrence Berkeley National Labs, Energy + Environmental Economics, and others, showing that electrification of California homes and other buildings would create immediate greenhouse gas reductions which would increase as electricity sources continue to get cleaner. According to these studies, electrification is also cost-effective, particularly for new construction. New products such as “smart” appliances and battery storage systems can match energy use to avoid peak demand periods and decrease electricity rates for all consumers.

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other cities are still looking for guidance on how to move forward. The Building Decarbonization Coalition is working with two of its governmental members, the Bay Area Air Quality Management District and the Bay Area Regional Collaborative, to produce the Local Government Building Decarbonization Toolkit, available in early 2020. Axum Teferra, an Air District environmental planner, described the contents as a “comprehensive library” of guidance documents, model ordinances, policy examples, and other technical resources for cities ready to take action on building-sector decarbonization.

As decision makers weigh their options, they won’t just be looking at eliminating natural gas in new construction, which represents a very small annual increase in the building stock. The vast number of buildings currently in use represents ample opportunity to address the issue. For retrofits, costs can make electrification less attractive, and it will take a combination of policy and financial incentives, supplier and installer awareness, and consumer education to accelerate decarbonization of existing buildings.

For example, Berkeley resident Eric Arens recently replaced his gas furnace and on-demand gas-fired water heater with electric heat pump appliances. An organizer with the League of Women Voters of Berkeley, Emeryville, and Albany’s Climate Change Team, he already owned an electric stove and two electric vehicles. Aside from some discretionary uses of gas — a fireplace insert and a barbecue — his only remaining gas appliance is a clothes dryer. His calculations indicate that replacing the dryer is not cost-effective at current utility rates.

Arens had educated himself on heat pumps, which was helpful, because he discovered that several dealers and installers gave him incorrect information. “One installer told me it was illegal to switch from a gas appliance to electric!” he reported. While he was willing to pay additional money for his new appliances as a matter of principle, he noted, “In Sacramento and Sonoma, I could have gotten paid fifteen to sixteen thousand dollars to switch from gas to electricity — that would have covered a significant portion of my costs.”

Before July 2019, state policy would not allow utilities to use funds to enable residents to switch from gas to electricity, but access to cleaner electricity has changed priorities. Bartholomy expects that by early 2020, major utilities may start to offer consumers incentives to make the switch.

Residents in some Bay Area cities have already benefited from Air District grants to encourage purchase of water heaters that rely on electric heat pump technology (see coverage in the October/November 2018 Monitor). Peninsula Clean Energy and Silicon Valley Clean Energy offer incentives to cities in their service areas which consider electrification ordinances.

Incentives, and new policies, may be needed to assist low-income customers who might not be able to afford new appliances or new gas-free homes. In October, the California Energy Commission posted a draft report to its website in which research consultants raised equity concerns, warning that as electrification grows in California, the costs associated with delivering natural gas will fall on fewer customers. Fewer customers will not mean lower costs, because of the need to continue supporting permanent infrastructure, even if it is only
lightly used for specialized needs such as renewable natural gas. (Renewable natural gas — biomethane, climate-neutral hydrogen, and synthetic methane — is preferable to fossil fuel gas, but it will continue to be relatively expensive and will probably be used primarily by some businesses and industries.)

Gas rates will have to rise, which will induce even more customers to switch to electric power. In addition to concerns about the impacts of such a cycle on low-income communities, the draft report on the CEC website suggested that the financial viability of gas providers could be threatened if regulators and other decision makers don’t provide careful management.

Potential impacts of electrification on gas providers have created opposition by some utilities, as well as gas industry workers and their unions, according to Bartholomy. Few others seem to be raising objections to decarbonizing homes and offices. The final public hearing on the Berkeley ordinance was noteworthy for the lack of dissent (although on November 21, right before this edition of the *Monitor* went to press, the California Restaurant Association filed a lawsuit against the city, claiming that the ordinance “violates both state and federal law, will impact both residential and commercial construction, and will have uniquely negative impacts on restaurants,” according to the nonprofit trade association’s website). At the hearing, PG&E spoke in favor of the ordinance and has expressed support for similar ones elsewhere in the region. While the reliability of the current electrical grid may raise some concerns about outages, Arens was pleased that borrowing a generator for a few hours had kept his household reasonably comfortable during a recent two-day PG&E shutdown.

Arens is currently leading neighborhood meetings on battery storage for rooftop solar energy, another aspect of building decarbonization. Recently he organized a tour of the PG&E demonstration kitchen in San Ramon for League of Women Voters members and friends, where they were introduced to induction cooktops which had made enthusiastic converts of professional chefs. Like his city, Arens may be a bit ahead of the curve — but in this case, not very far.

Leslie Stewart covers air quality and energy for the *Monitor*.

**While visions of…**

**Best.**

**Grandma.**

**Ever.**

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