

## Meeting California's climate change goals through building electrification California utilities jointly release economic study of housing electrification costs and benefits

Meeting California's ambitious greenhouse gas emission reduction goals will require a significant electrification of homes and other buildings. Electrification can reduce greenhouse gas emissions in homes by up to 60 percent in 2020 and by up to 90 percent in 2050 compared to mixed-fuel homes. No other home decarbonization strategies have been demonstrated to meet this level of decarbonization in this time frame. The good news, according to a study released today (4/15) by consulting firm Energy + Environmental Economics (E3), is that home electrification will also provide cost savings for most homeowners and developers.

The study, titled "Residential Building Electrification in California," assesses the energy savings, greenhouse gas savings, impacts to the electric grid and overall economics of residential building electrification for customers across many regions of California. The study was commissioned by Los Angeles Department of Water and Power (LADWP), Sacramento Municipal Utility District (SMUD) and Southern California Edison (SCE). It looks at housing in six different climates and three different housing vintages, and

covers both single-family and low-rise multifamily homes. E3 estimates that the climate zones modeled in the study are broadly representative of 87 percent of California's single-family and low-rise multifamily housing.

E3 modeled the performance and costs of both all-electric new construction homes and existing homes retrofitted with heat pump HVAC systems and heat pump water heaters. These were compared to mixed-fuel homes that use natural gas and electricity

The study finds that all-electric new construction results in savings of \$130-\$540 per year relative to a gas-fueled home over the life of the equipment. There are cost savings to developers, who don't have to lay gas lines and can pass on construction savings, as well as to homeowners, who will see lower bills. Given that for every \$1,000 increase in housing cost in California, 10,000 people are priced out of buying a home (according to a recent study by the National Association of Home Builders), these are important affordability measures that should increase the pool of prospective homebuyers and help meet the state's housing needs. *(continued on page 2)*

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E3's modeling suggests that 76 percent of new all-electric homes will save at least \$15 per month on equipment and energy bills over the life of the equipment relative to new mixed-fuel homes. For retrofits, the modeling suggests that all households in single-family homes will save between \$10-\$60 per month on energy bills and 84 percent will save up to \$30 per month on total lifecycle costs. This includes the bill savings and the relative cost of installing efficient electric equipment instead of replacement gas equipment.

The study does not account for any state or utility incentives. When incentives are considered, the benefits become even more positive for consumers.

"Building electrification is a key component of reducing greenhouse gas emissions and providing savings for our customers, which is a win-win for everyone," said SMUD CEO [Sacramento Municipal Utility District Chief Operating Officer] and General Manager Arlen Orchard. "This study will help us meet our climate goals, maximize our reductions and improve air quality across our region."

To this end, the study recommends certain steps that can be taken to encourage both higher rates of electrification and to boost the market transformations that will reduce costs even more. These include developing programs to educate customers about the

usability and the environmental and economic benefits of electrification, examining utility rate structures to help ensure that electrification benefits customers and updating building codes and standards to enable cost-effective electrification.

"People care tremendously about their comfort, their safety and their energy costs," said Jill Anderson, vice president of customer programs and services at SCE. "That is why a study like this, providing a roadmap to housing electrification benefits as well as the challenges, is so important. We will be using this study to inform what steps utilities, state regulators and policymakers can take to enable cost-effective electrification while preserving customer choice."

"We at LADWP are grateful to be a part of an effort in California with our partner agencies and organizations who see building electrification as a critical part in the larger goal of a sustainable future," said Nancy Sutley, chief sustainability officer for LADWP. "The results of this study provide additional insights that complement LADWP's ongoing efforts toward our overall clean energy goals, and we are committed to doing our part."

The study is available online at [https://www.ethree.com/wp-content/uploads/2019/04/E3\\_Residential\\_Building\\_Electrification\\_in\\_California\\_April\\_2019.pdf](https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf)

### About Los Angeles Department of Water and Power

The Los Angeles Department of Water and Power (LADWP) is the nation's largest municipal utility, with a 7,880 megawatt (MW) electric capacity and serving an average of 438 million gallons of water per day to the 4 million residents of the City of Los Angeles, its businesses and visitors. For more than 100 years, LADWP has provided the city with reliable water and power service in a cost effective and environmentally responsible manner.

### About SMUD

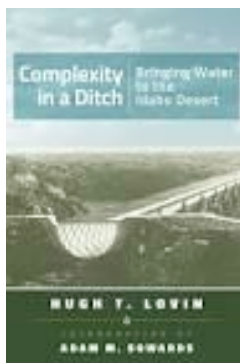
As the nation's sixth-largest community-owned, not-for-profit, electric service provider, SMUD has been providing low-cost, reliable electricity for more than 70 years to Sacramento County and small adjoining portions of Placer and Yolo counties. SMUD is a recognized industry leader and award winner for its innovative energy efficiency programs, renewable power technologies and for its sustainable solutions for a healthier environment. SMUD's power mix is about 50 percent non-carbon emitting. For more information, visit [smud.org](http://smud.org).

### About Southern California Edison

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of approximately 15 million via 5 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

## BOOK REVIEW

by Abraham Hoffman



### COMPLEXITY IN A DITCH:

*Bringing Water to the Idaho Desert,*

by Hugh T. Lovin. Pullman:

Washington State University Press, 2017.

244 pp. Notes, Maps, Illustrations, Index.

Paper, \$26.95.

### Complexity in a Ditch: Bringing Water to the Idaho Desert, by Hugh T. Lovin

Hugh T. Lovin was an Idaho-born historian who taught at Boise State University of 27 years, specializing in irrigation development in southern Idaho's Snake River Plain. His interest in that region stemmed from growing up in an arid region and constructing small dams and dikes to divert water for livestock and crops. As a history professor he wrote numerous articles on irrigation issues in southern Idaho. Lovin died in 2014 at age 86.

As a tribute to Lovin's work, the Washington State University Press has selected nine articles written by Lovin in the course of his career. The articles examine the problems and challenges in a state where an arid region lacked population, an issue that might be remedied by irrigating the Snake River Plain. Opportunity to deal with this matter came with passage of the Federal Carey Act of 1894. Under this law, the federal government gave grants of a million or more acres of public land to Western states and territories to promote irrigation in arid regions and thereby make the land attractive to farmers who would increase the population in those regions. The kicker was that private companies would buy large amounts of acreage, sell bonds to land purchasers, with the funds then used to create irrigation works such as dams and canals to bring irrigation water to the farmers.

In a sense this policy was the opposite in what happened when Los Angeles obtained water rights to the Owens River in the same time period, with water leaving an agricultural area to benefit the city's rapidly growing population, arguing "the greatest good to the greatest number," a goal promoted by urban progressives at the time. In the case of the Snake River Plain, the goal was to bring population to a scarcely populated area by offering the benefits of irrigation to prospective farmers.

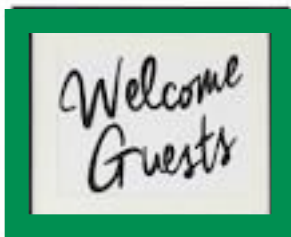
In the articles selected for this book (Lovin wrote more studies than these articles), the author critically examined the successes and failures (many failures) of entrepreneurs and farmers who attempted to make the

Snake River Plain agriculturally productive. Measured by the present day, irrigation eventually achieved great success. "Mostly a hot, uninviting desert, the region was covered with straggling sagebrush and strewn with flinty outcroppings of volcanic rubble," Professor Adam M. Sowards of the University of Idaho writes in his introduction to the book, stating, "Yet today, if you fly over southern Idaho...you find huge bands and circles of green and, looking closely, see reservoirs storing the region's scarce water supply. The region has been transformed" (p. 1).

Lovin's articles describe the schemes that promoters used to lure people to the region, and the frequent bankruptcies of those promoters who were defeated by the expense and difficulty of building dams and canals. There's an article on efforts to remove sagebrush, a widespread desert plant in the region, to get at the soil, and even efforts to make the sagebrush commercially useful (it wasn't). Cottontail and jackrabbits saw settlers' crops as a food source. To get rid of them, hunters killed thousands of rabbits in a contest that lasted for twenty years. Lovin cites 8,500 rabbits killed in a 1914 "rabbit drive." Other chapters explore the complications in the Carey Act, the involvement of the U.S. Reclamation Service, controversies over Idaho trying to get water from Yellowstone National Park, and case studies of federal projects and whether they worked out or not. In the last chapter, an Epilogue, Lovin summed up the consequences of events spanning a century of irrigation issues in Idaho.

Lovin's articles originally appeared in *Idaho Yesterdays*, *Journal of the Southwest*, *Pacific Northwest Quarterly*, and *Agricultural History*. It is the bane of scholars that while the shelf life of academic journals is long, accessibility may be limited to major libraries that carry such journals. This book rescues Lovin's work by bringing together a fine collection of a historian's career and his major studies available in one book.

Abraham Hoffman, Ph.D teaches history at Los Angeles Valley College.



**Bill Engles**  
retired Engineer Power System, Los Angeles Department of Water and Power.



**Rod Fishburn,**  
Orange Empire Railway Museum Collections Manager.



**Bill Glauz,**  
Retiree, Power System, Los Angeles Department of Water and Power.



**Randall Neudeck,**  
Metropolitan Water District.



**New Board Members,**  
Bill Glauz and Bill Engles,  
each a retired manager from LADWP.

### Recent Guest Speakers

**Ted Bardacke**, Executive Director of Clean Power Alliance

**Joe Ramallo** - DWP Assistant General Manager, Public Affairs Director.

**Steve M. Zurn**, General Manager, Glendale Water & Power.

### Guests

**Bill Barlack**, Power System Retiree Los Angeles Department of Water and Power.

**Eldon Cotton**, retired Assistant General Manager-Power of Los Angeles Department of Water and Power.

**Harold Eaton**, - Los Angeles Department of Water and Power Manager.  
Grandson of *William Eaton*, one of the founders of the Los Angeles Airport; great grandson of *Fred Eaton* the former head of the Water System and Mayor Los Angeles.

**Gorge Higgins** who works for the Veterans Administration.

**Adrian Hightower.**

**Jay Negrin** from Los Angeles Department of Water and Power, Water Quality Division.

**Daniel Paul** - Senior Architectural Historian.

### Future Guest Speakers

**May 8**

☯ **Delon Kwan**, LADWP Manager of Water Resources Development. Topic: “Major water Issues Affecting LADWP Including the Mayor’s Water Recycling Goal”

**June 12**

☯ **Brandon Goshi**, MWD. Manager of Water Policy and Strategy, or **Randall Neudeck**, MWD Program Manager. The topic is “Update on State Water Issues”.

**July 10**

☯ **Reiko Kerr** Assistant General Manager - Power System, Los Angeles Department of Water and Power; topic, “Update on Power Issues”.

**August 14**

G Topic: Solar Power. Speaker to be determined.

**September 11**

*Tentative* - - **Evelyn Wendel** from a foundation advocating for water refilling stations to reduce plastic bottle waste.



*We invite you to join us at a monthly Board meeting. Luncheon meetings are the second Wednesday each month, 11:00 a.m. - 1:30 p.m. at Taix Restaurant, 1911 Sunset Boulevard, Los Angeles, 90026.*

*Contact any Board member or go to [comments@waterandpower.org](mailto:comments@waterandpower.org) to notify us so the restaurant can prepare adequate seating and meals.*

*To become a Board member or a member-at-large contact any Board member or go to [comments@waterandpower.org](mailto:comments@waterandpower.org)*

# MYSTERY HISTORY

By Jack Feldman

**Los Angeles Scene:** This 1948 image shows a traffic officer standing in the middle of a busy intersection where three major streets converge. This historic Downtown Los Angeles intersection is similar in many ways to the more famous Latham Square in Oakland or even Times Square in Manhattan.

**Historical Background:** Nearly 100 years before the above photo was taken, the land adjacent to this intersection was owned by one of the wealthiest men in Los Angeles who made his fortune by building an extension of the Zanja Madre, a canal system to bring water to the fields south of the pueblo. He was paid in land in that area – all now within present day Downtown Los Angeles.



**What are the names of the 3 streets that converge at this intersection?**

&

**What is the name of this well-known public figure who once owned most of the land around the above intersection?**

**William Mulholland  
Ozro Childs**

**Fred Eaton  
Isaias Hellman**

**Chevy Chase  
Robert Widney**

Answers at: [https://waterandpower.org/museum/Mystery\\_History.html](https://waterandpower.org/museum/Mystery_History.html)

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We invite your comments, inquiries, and suggestions. Go to [comments@waterandpower.org](mailto:comments@waterandpower.org)

# Los Angeles releases its own 'Green New Deal'

AUTHOR [Katie Pyzyk @ PyintheSky](#)

PUBLISHED April 30, 2019

## Dive Brief:

Los Angeles Mayor Eric Garcetti has unveiled [L.A.'s Green New Deal](#). This four-year update to the city's original sustainability plan, released in 2015, expands and accelerates the city's climate action goals.

## Dive Insight:

The plan accelerates targets to ensure 55% of L.A.'s energy is renewable by 2025 and 100% by 2045; increase the percentage of zero-emissions vehicles in the city to 25% by 2025 and 100% by 2050; convert all city fleet vehicles in zero emissions by 2028; ensure all new buildings are emissions-free by 2030; and ensure 57% of new housing units are built within 1,500 feet of transit by 2025.

The Green New Deal is touted as a guide for a cleaner environment, stronger economy and more resilient city. The plan also is designed to prioritize communities that bear the brunt of climate change.

The plan says Los Angeles met or exceeded 90% of the near-term goals from the original plan either on time or early. Now, the updated plan steps up actions in acknowledgement of climate reaching "crisis" level.

"The scale of our ambitions must meet the magnitude of this crisis. So we are doubling down with L.A.'s Green New Deal and laying out more aggressive goals that will help transform Los Angeles into a carbon neutral city where all Angelenos thrive," Garcetti wrote in the document.

The sustainability plan lays out the benefits to citizens that a cleaner environment will provide. In

part, the city considers climate action a public health issue, noting that it aims to prevent premature deaths and hospital visits from environmental-related ailments such as a respiratory and cardiovascular illnesses.

Some of the elements of L.A.'s Green New Deal mirror well-known climate action in other cities. For example, its goal to cut buildings' energy use and carbon emissions is similar to [San Francisco's announcement](#) last week that it would transition all buildings over 50,000 square feet to 100% renewable energy by 2030. Earlier this month, Chico became the largest U.S. city to commit to [100% renewable energy](#) by 2035.

One of the elements that makes L.A.'s sustainability plan stand out from other cities' is the emphasis it puts on equity. Researchers increasingly have warned city leaders that low-income neighborhoods bear a disproportionate share of environmental burden, an idea reiterated in a [report from Yale](#) last year. Low-income areas often have less access to transportation, less green space and more carbon-producing infrastructure such as major road thoroughfares and industrial areas.

Implementing upgrades to improve environmentally friendliness — such as converting residences to renewable energy or purchasing an electric vehicle — is often cost prohibitive for low-income residents. Prioritizing communities that bear the brunt of climate change puts L.A. on a path to equity with its climate action goals.



*Editors' note: Dive provides news and analysis for retail executives. It covers topics like retail tech, marketing, e-commerce, logistics, in-store operations, corporate, etc.*

# POWER

## Young Engineers Powering the Renewables Transition

High school students who want to make a difference on climate could consider going into the energy industry, because "that's where the changes are happening," said Dr. Damir Novosel, past president of the Power and Energy Society of IEEE ["Institute of Electrical and Electronics Engineers"], a global association of engineers, in a PV Magazine interview. Young people who take that path, by earning a degree in electrical engineering, may well find classmates who share their interests. At Virginia Tech, for example, the most popular electrical engineering elective covers solar, wind, and hydropower, said IEEE Power and Energy Society President Dr. Saifur Rahman, who teaches the course. [PV Magazine](#), Mar 22

## California Energy Companies Tap Artificial Intelligence in War Against Wildfires

If California's electric companies, energy regulators, firefighters, and the communities they serve are to win the state's unprecedented war against wildfires, ignited by the combustible combination of energy infrastructure and climate change, they are going to need some new weapons. Technology giants International Business Machines Corp., Google LLC, Hitachi Ltd., Microsoft Corp., Oracle Corp., and Siemens AG are among a growing collection of companies large and small that are driving the development of artificial intelligence and big-data analytics to defend the state from infernos sparked amid increasingly hazardous climate conditions.

[SNL](#), Mar 22

Tags: Edison International, Pacific Gas & Electric Company, PG&E Corporation, San Diego Gas & Electric, Southern California Edison

## Los Angeles Could Replace Traditional Power Plants With Home Solar, Experts Say

Renewable energy experts and a new report from the solar industry say Los Angeles could generate a larger portion of its energy with wider use of residential solar panels backed up by battery storage. The concept of a "virtual power plant" that could replace one of three natural gas plants being phased out by the city has already been deployed successfully in Orange County and Waltham, Vermont. But Los Angeles, where officials want to rely entirely on renewable energy by 2050, would be the largest U.S. city to go virtual.

[NBC News](#), Apr 5

Tags: Green Mountain Power, San Diego Gas & Electric, Southern California Edison

Related Coverage:

[A Virtual Solar Power Plant for Los Angeles? 'It Will Happen'](#), New York Times

[Sunrun Report Recommends Solar+Storage Replacement for Los Angeles Power Plants](#), Solar Power World

## AS STATES PUSH TOWARD 100 PERCENT CLEAN ENERGY, HURDLES LOOM

States are ramping up their mandates for clean and renewable energy, but new policies and yet-to-exist technology will be needed for states to meet ambitious 100 percent clean energy goals. Customer demands are driving clean-energy commitments, said Emily Fisher, general counsel at the EEI [Edison Electric Institute]. Renewable energy certificates are no longer enough for the Googles and Amazons of the world; they want clean and carbon-free energy, she said. Energy companies are trying to help states and companies meet these goals. But it is important that the debate seems to be shifting away from 100 percent renewables and toward 100 percent clean energy, Fisher said.

[Platts](#), Apr 5

Tags: EEI, Idaho Power, Xcel Energy

## LOS ANGELES COULD REPLACE TRADITIONAL POWER PLANTS WITH HOME SOLAR, EXPERTS SAY

Los Angeles Mayor Eric Garcetti announced in February that three of the city's gas-powered generating stations would be phased out by 2029. "This is the beginning of the end of natural gas in Los Angeles," he said at the time.

Asked if the city was open to the kind of virtual power proposed in Sunrun's report, Garcetti said in a statement, "We have an obligation to end dependence on fossil fuels, embrace the technologies of tomorrow, and prioritize renewable energy."

Experts say the virtual power plant is a feasible solution for Los Angeles, especially with the cost and capacity of batteries. Infrastructure, including two-way power lines, is already there.

As utilities like San Diego Gas & Electric employ ["time of use" rates](#) that charge more for prime-time juice, solar panels paired with battery storage could be more attractive for ratepayers, said solar expert Bill Powers of Powers Engineering in San Diego.

"Utilities have shifted to that peak, high-dollar window, from 4 p.m. to 9 p.m., which is being done to make solar less economically attractive to people," he said. "Solar is not putting out a lot of power at that time."

"But they did that as batteries were becoming cost effective," Powers said. "What they did to stymie solar became a driver for people to get batteries."

Beth Ferguson, director of Sol Design Lab at the University of California, Davis, and adviser to a startup that plans to use recycled vehicle batteries in homes, says the increasing accessibility of battery storage means "you can reap the benefits from solar at night."

Investor-owned SDG&E, which serves California's second-largest city and has 1.25 million residential customers compared to L.A.'s 1.34 million, said that renewable energy is "intermittent" because of weather conditions.

Yet nearly 45 percent of SDG&E's energy comes from renewable sources, said spokeswoman Helen Gao in an email. The Sunrun report credited San Diego with beating Los Angeles when it comes to residential solar, with more than 1 in 10 homes equipped to tap the sun compared to less than 3 in 100.

To create one virtual power plant in Los Angeles would be to "reach the same level of solar penetration San Diego already has," said Sunrun's Jurich.

Investor-owned utility Southern California Edison claims to have launched the first such system in the nation last year. In March, the virtual power plant's operator, AMS, announced it had delivered a record 2 gigawatt hours of energy.

The system feeds off solar and storage based at 21 office buildings owned by the Irvine Company, a major Southern California landlord and developer.

Despite that success, Powers says publicly owned utilities like L.A.'s Department of Water and Power might be more amenable to virtual power plants because there are no shareholders demanding ever-increasing profits.

Sunrun recently announced it will deliver home solar and batteries to ISO New England, the nonprofit that manages power flow for Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and most of Maine. The deal would power about 5,000 homes.

In Vermont, Green Mountain Power has offered Tesla's Powerwall home batteries to as many as 2,000 customers for \$15 a month. It allows them to store solar power or sell it back to the shareholder-owned utility to create a virtual power plant.

In December, the utility announced that 90 percent of its energy supply is now "carbon free."

Of course, Los Angeles would be a grand prize for those wishing to wean the nation off fossil fuel electricity.

"This opportunity in L.A. would be the biggest virtual power plant that we know of," Jurich said.

*Dennis Romero writes for NBC News and is based in Los Angeles.*





## PG&E's new CEO brings experience from a highly political management job



*Bill Johnson is the new CEO of Pacific Gas & Electric, the troubled California utility that has been reeling from two seasons of destructive wildfires sparked in part by its equipment.*

*(Mark Humphrey/AP) By Steven Mufson April 5*

Not a day went by between the end of Bill Johnson's tenure as president of the Tennessee Valley Authority and Thursday's naming of Johnson as the new chief executive of Pacific Gas & Electric, the troubled California utility that has been reeling from two seasons of destructive wildfires sparked in part by its equipment.

PG&E filed for Chapter 11 bankruptcy protection in January, saying it couldn't afford the tens of billions of dollars in wildfire costs. The company said the appointment of Johnson — along with the installation of ten board members from the world of finance, utilities and federal regulation — would help the utility "address California's evolving energy challenges."

The 65-year-old Johnson, whose \$6 million compensation package made him the federal government's highest-paid employee, brings with him extensive experience in a highly political management role, which will be needed in his new job, too. More than half of Johnson's incentive pay will be tied to safety performance.

## SCE Reaction to Governor's Strike Force Report

April 15, 2019

Southern California Edison is encouraged by the broad scope of Gov. Newsom's strike force report, which addresses critical wildfire issues including prevention, keeping the state on track to meet its ambitious climate change goals and liability and regulatory reform.

First and foremost, SCE is focused on reducing the threat of wildfires and keeping our communities safe with an aggressive and comprehensive [Wildfire Mitigation Plan](#) that is hardening the grid, enhancing inspections of our infrastructure, stepping up vegetation management and deploying high-definition cameras and weather stations. Consistent with these activities, SCE strongly supports the state's additional commitment to wildfire prevention.

The report also appropriately reflects the need to address wildfire liability and regulatory reform in order to restore confidence in the state's regulatory compact and support financially healthy investor-owned utilities. SCE looks forward to continuing to engage with state leaders with the sense of urgency Gov. Newsom called for to enact meaningful reforms to reduce wildfire risk, meet the state's clean energy goals and ensure the safety of our customers and communities.

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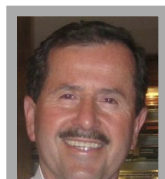
## Article Contributors



*Thomas J. McCarthy*  
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& 6-8  
**Power Articles**



*Gerald Gewe*  
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**Water Articles**



*Jack Feldman,*  
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**Mystery History**



*David Oliphant &  
Robert Yoshimura*  
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**Guests & Speakers**



## CURRENT WATER ISSUES

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There are many activities involving water supply to Southern California that are currently being conducted. The outcome of these issues will impact the reliability and cost of Southern California's water supply for decades to come.

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### CAL FIX

There have many attempts to improve the supply from and the reliability of the California State Water Project, especially during droughts over the past decades. The first major attempt was the "Peripheral Canal that went down to defeat in the 70's when the Northern California interests aligned with the agricultural interests in the state to defeat the proposal at the polls. Recently, with Governor Jerry Brown desiring to see the legacy of his father completed, several options were looked at and the Cal Fix Proposal moved forward. As it developed, it involved the construction of three intakes and two canals to move the water around the Sacramento Delta and avoid many of the impacts on the Delta, although it would have made southern California less reliant on the Delta which caused concerns of those in the Delta that if environmental issues and stability of the delta were impacted in the future there would not be incentive to address them.

A plan for facilities was being finalized during the last days of the Brown administration only to have the Central Valley water agencies decide the plan was too expensive and pull out of the project. The Metropolitan Water District of Southern California then offered to replace the funding that was to come from the Central Valley interests. As 2018 ended, an EIR was finalized, applications were submitted to the Water Resources Control Board for the project, and a joint powers agency established to handle the design and construction of the project. However with the change in administrations, the strong support for this project disappeared, with Governor Newsome, only supporting a single tunnel project. There are also bills in the legislature to allow them to oversee the project.

Currently it appears that only a single tunnel along with two intakes appears politically feasible. However this substantial modification to the project will require a revised EIR, which will probably take 18-24 months to complete. If constructed, this project will provide a solid foundation for the long term reliability of Southern California's water supply.

### MAYOR GARCETTI'S RECYCLING GOAL

### FOR HYPERION WASTEWATER TREATMENT PLANT

On February 21, 2019, Mayor Garcetti, announced that the City was setting a goal of meeting customer water demands south of the Santa Monica Mountains with groundwater by maximizing production and recharge in the Central and West Coast Basins. To accomplish this, the L. A. Department of Water and Power (LADWP) will be jointly developing the necessary facilities with the L. A. City Sanitation District (LASAN) and the Water Replenishment District of Southern California (WRD). These will include advanced treatment facilities at Hyperion (LASAN), conveyance to Central Basin (LADWP) extraction and treatment (LADWP), Injection Wells at LA Forebay (WRD). A Joint Master Planning Study is being conducted by Jacobs Engineering under the leadership of Richard Nagel (formerly with LADWP and the West Basin Municipal Water District). This initial planning is expected to take about 3 years and cost about \$2 million with the costs to be jointly shared between LADWP and WRD. Full implementation of the program is scheduled for 2035.



## STATE WATER ISSUES

There are a number of water issues that are being addressed by the California Water Resources Control Board, that while having only modest direct impact on Southern California could potentially impact water supplies in the future. These include:

### Updating the Bay-Delta Plan

the Draft Plan calls for a substantial increase in the amount of water to be left in the rivers supplying the delta for environmental purposes. This would require a reduction in exports of between 7 and 23 percent from the Tuolumne River depending on the year. This plan (which has many similarities to what Los Angeles faced in the Mono Lake Decision) has made for an unusual alliance of agricultural interests and the City of San Francisco, who have gone to court to block the plan from being implemented. The State is seeking a negotiated settlement satisfactory to both users and environmental interests to resolve the issues and avoid the very many years of litigation that would result if the draft plan is adopted. A similar set of issues are being faced by water users of the San Joaquin River.

### Raising the height of Shasta Reservoir

The federal government through the Central Valley Project is proposing to raise the height of Shasta Dam to allow more water to be stored, primarily for the agricultural users in the Central Valley. The State is refusing to issue permits required for the project because it would inundate a river that is protected under the Wild and Scenic Rivers Act.

### Wetlands protection

The State Water Resources Control Board recently established rules to protect wetlands in response to the federal government weakening of the Clean Water Act protections on wetlands. Negotiations between environmental parties and developers and agricultural interests resulted in a compromise that both parties supported.



## COLORADO RIVER DROUGHT PLAN

The seven western states bordering the Colorado River have been working for years on a plan to head off a potential water “crisis” in the region and help settle disputes over water allocations if the Colorado storage drops to crisis levels. The states have endorsed a plan that starts making cuts to supplies in earlier stages of a drought, while reducing the amount of water the states give up in those early stages. It also changes the priority of rights in the later stages of a drought. This plan must be approved by Congress to take effect. A big hurdle has been the allocation of the water within the states. After initially backing the plan, the Board of the Imperial Irrigation District (IID) voted not to participate unless Congress appropriates \$200 million for a study on how to stabilize the Salton Sea.

In order to move the process forward the Metropolitan Water District of Southern California agreed to accept IID’s share of the cuts to protect the water they have in storage in Lake Mead which is substantially greater than the water that would be required under the plan for IID cuts. Based upon the current hydrology, it is unlikely that the reductions will be required in the next few years. The agreement only lasts through 2026 and will have to be renegotiated at that time.