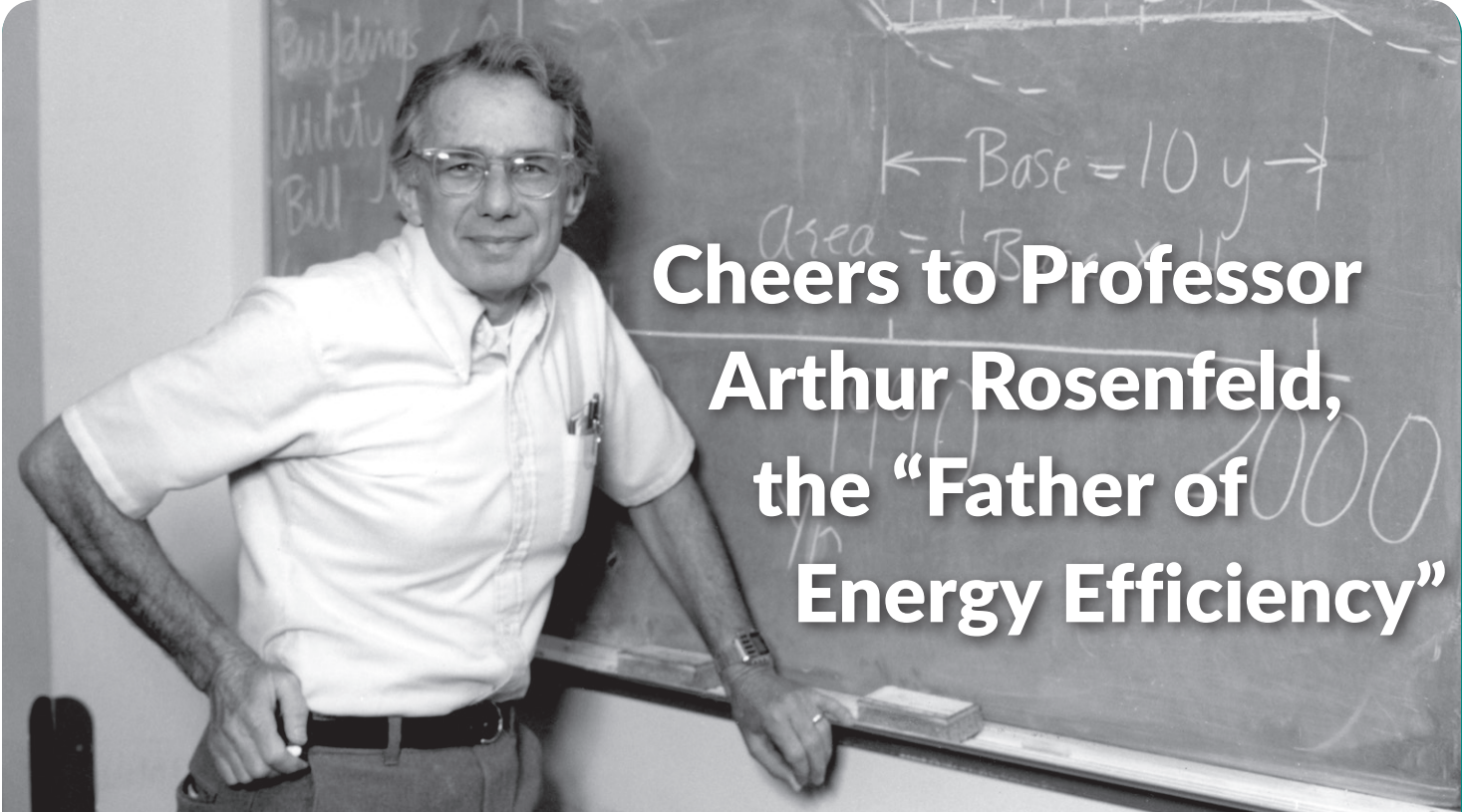


Currents



**Cheers to Professor
Arthur Rosenfeld,
the “Father of
Energy Efficiency”**

In this issue, as we begin a new year, we look back 50 years with great respect to the energy contributions made by the late Professor Arthur Rosenfeld, as well as 20 years into the future as we prepare to meet Burbank’s prospective energy needs.

The electric utility industry is in a period of great change. As you’ll read in the “Planning Burbank’s Energy Roadmap” article, we have big challenges to overcome, including figuring out how to best integrate renewable energy while maintaining BWP’s incredibly high power reliability and affordability. Renewable energy resources are by their nature intermittent, but you and the rest of Burbank need energy constantly. We’ll definitely overcome today’s challenges and in the coming years will provide our customer-owners with power at least 50% generated by clean resources like the sun and wind.

So, cheers to Art Rosenfeld for setting America’s energy future on a new path five decades ago and to BWP’s own Himanshu Pandey as he and other dedicated staff members pave Burbank’s energy pathway!

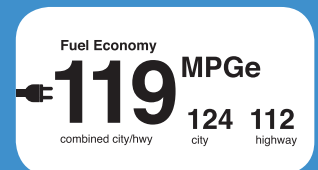
Growing Interest in Electric Vehicles

On a sunny Saturday in late October, BWP and our two neighbors to the east, Glendale and Pasadena, hosted an Electric Vehicle event at the Rose Bowl. We brought in 11 EVs for people to test drive around the Bowl, including Tesla Models S and X, Chevrolet's Bolt and Volt, a BMW i3, and two Honda Clarity Electric cars. Just by signing up for the event, 250 attendees went on nearly 300 test drives in the EVs they were interested in.

EVs have hit California's highways in a big way with many more new options rolling out. We think the ability to test drive several makes and models at one time, with no sales pitch or pressure, and to talk to actual owners about their EVs is something Burbank residents want. BWP's plan is to host these "guest drive" events two to four times annually. We'll provide information on these events in Currents, within your monthly bill, and online at BurbankWaterAndPower.com. We'd love to have you join us!

EV Fast Facts

- ➡ There are two main types of EVs: all-electric (like Tesla's Model S and Model X, Nissan Leaf, Chevy Bolt) and plug-in hybrids (including Toyota Prius, Ford Fusion, Chevy Volt) that run on electric charge and gasoline
- ⚡ 680,000 EVs on U.S. roads today, about half in California
- ➡ Over 50 EV makes available today and dozens more expected
- ⚡ Both car affordability and battery range are increasing
- ➡ U.S. goal – 1 million EVs by 2020
- ⚡ California goal – 1.5 million by 2025
- ➡ Running on electricity is cheaper than using gasoline. According to the Department of Energy, it costs less than half as much to drive an EV as it does to drive a gasoline-powered car. And, with fewer moving parts, maintenance should be lower as well.
- ⚡ MPGe – We're all familiar with the term 'miles per gallon' (MPG), which tells us how many miles we can drive on one gallon of gas. The sticker you'll see now on electric and hybrid vehicles shows the MPGe, the miles per gallon equivalent for electric vehicles. This allows for direct mileage comparisons.



Did you know?

BWP's next EV Guest Drive Event is happening on **Saturday, March 24, 2018**. Visit **BurbankWaterAndPower.com** for more information!

Interested in learning more about EVs?

BWP is happy to provide you with a copy of the Electric Car Insider EV Buyers Guide, a 63-page magazine featuring photos, specs, and a write-up on 37 different EVs. Just send an email requesting a copy to: **BWPConservation@burbankca.gov**.





ONEBurbank: Winning Fans at Shot Glass Films



ONEBurbank is a suite of BWP fiber optic services offered to Burbank businesses looking for exceptionally fast and reliable bandwidth. Visit **ONEBurbank** at **ONEBurbank.com**

Shot Glass Films is an award-winning full service video production company specializing in commercials, branded content, and corporate video. The Burbank-based firm was established 32 years ago and produces projects for major brand names across a wide range of industries, Fortune 500 companies, and government agencies. *Shot Glass Films* proudly counts Levi Strauss, the U.S. Armed Forces, Intel, Henkel Corporation North America, Gillette Venus, and Union Bank as a few of its many clients. In 2015, CEO and Executive Producer Jessica Ristic acquired the business with an eye toward expanding and growing the company. Since then, new directing talent has been added to the firm's roster of creative professionals, and the company has expanded its services into new markets.

When we moved our offices to Burbank, we learned that the former tenants who were also in the film and video industry had been using **ONEBurbank** for their fiber needs, and they highly recommended it to us. We upload and download a lot of high-resolution videos throughout the week, and we need to make sure that we have fast speeds. Slow internet in our business means time wasted waiting for files to upload or download before we can move forward.

Since we started using **ONEBurbank**, both our upload and download speeds have improved significantly. But we're especially happy with the new upload speed! Our clients never have to wait long to receive files from us or to view the latest video edit of their project.

We are all big fans of **ONEBurbank**! We love the service and have no plans to switch to any other provider in the future.

We welcome *Shot Glass Films* as another satisfied ONEBurbank customer! Visit their website at weareshotglass.com for more information.



Ms. Ristic shares her experience with BWP's ONEBurbank fiber service:

My job is to make sure that every production runs smoothly and that our clients are always happy with the service we provide.

Above: Staff celebration at Shot Glass Films; Inset: Jessica Ristic, CEO and Executive Producer

LOW NATURAL GAS SUPPLIES PUTS BURBANK AT SOME RISK OF POWER OUTAGES THIS WINTER.

Sign up for the Burbank Emergency Alert System!

The shutdown of damaged SoCalGas natural gas pipelines and limited operation of the Aliso Canyon Gas Storage Facility puts Burbank at some risk of power outages this winter.

Natural gas use can rise steeply during a lengthy cold spell when people ramp up their heaters. Burbank uses natural gas to generate electricity here in Burbank and could be asked to cut back if natural gas supplies fall short.

Cutting back on generating electricity in Burbank alone would not necessarily cause outages. **In fact, BWP has contingency plans ready to keep our electricity flowing and reliable. Despite all our efforts, however, there is still a chance of a Perfect Storm that could cause outages in Burbank during cold spells this winter.**

ReadyBurbank.org is the official preparedness program of the City of Burbank. If there is a possibility of an electric outage in Burbank due to natural gas shortages you could receive an alert via email, phone and/or text.

Burbank residents are highly encouraged to visit **ReadyBurbank.org** and sign up for the Burbank Emergency Alert System.



Coming Soon -



BWP's Upgraded Website!

In the next few months, BWP will be unveiling our revamped website. We're designing it as one-stop-shopping for your utility needs. Need to pay your bill? **Check.** Want to view your billing and payment history? **Check.** Want to see your home's energy or water usage? **Check.** Want to schedule a service? **Check.** Need to update your account information or send us an email? **No problem!**

We're looking forward to introducing the site to you!



Tick Tock...

Time is Running Out for Round-Up!

At the end of June, BWP will no longer run the **Refrigerator Round-Up** program, so act now if...

1. You have an old (but still running!) full-sized refrigerator in your garage.
2. You are ready to let it go and get some energy savings.

Interested? If so, call us at (888) 333-3938 to schedule an appointment. We'll pick up that old 'fridge, environmentally recycle it, AND give you a \$50 billing credit.

Planning Burbank's Energy Roadmap

Meet Himanshu Pandey. Himanshu is BWP's Power Resources Manager. He's been with BWP for 14 years, working to ensure that Burbank has a constant flow of power, 24 hours a day, 7 days a week, 52 weeks a year, every single year. These days, Himanshu is very busy working on BWP's Integrated Resource Plan, or IRP. That title may sound a bit dry, but it's incredibly important. Our goal is to keep you informed about the IRP and why it's important, and you can take it from there. If you want to get involved and have a voice in the process, we welcome that. If you feel you are in good hands, no problem – we'll keep you posted on progress.

Editor: So, Himanshu, what's an IRP?

Himanshu Pandey: An Integrated Resource Plan is a roadmap that helps us plan for BWP's electricity needs. We have to look 20 years into the future to meet the energy demands of our customers while balancing reliability, affordability and sustainability.

ED: What does the title – Integrated Resource Plan – mean? What are you “integrating”? What are the “resources?”

HP: Integrated Resource Plan is the electric utility industry's shorthand for a comprehensive planning process that evaluates how to serve the needs of utility customers into the future. Integrated means we estimate the future electric needs of our customers, take into consideration new laws and regulations, environmental concerns, new technologies, and come up with ways (resources) to meet Burbank's future energy needs while meeting our mission of providing reliable, affordable, and sustainable electric service to all of Burbank. Our requirement is to plan and meet the future energy needs of our customers.

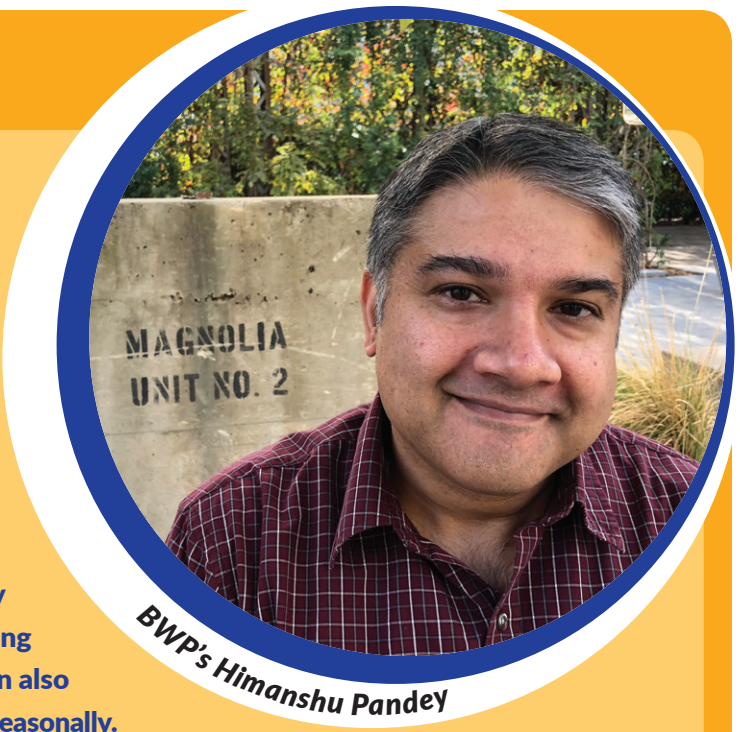
ED: Meeting the continuously changing energy needs of our customers while balancing reliability, affordability, and sustainability sounds challenging. Is it?

HP: It is and that is why it is rewarding to meet the challenge. Burbank's electric grid is not an island. Burbank's generators, like the Magnolia and Lake power plants, and distant renewable wind, solar and geothermal plants, are connected to each other and Burbank via the grid and work hand-in-hand with other power plants in a coordinated way. This diversity actually helps us improve the reliability, affordability, and sustainability of the electricity BWP provides for every home and business in Burbank. Of course, this also brings new challenges because there are many other utilities trying to optimize energy resources to best meet the needs of their customers. In recent years, this has become even more challenging as the electric industry has been greening up its product.

ED: What do you mean by “greening up its product”?

HP: Electricity can be generated from lots of different fuels, such as fossil fuels like coal and natural gas, or from renewable resources, like the sun or wind. In California, 33% of all energy produced needs to come from renewable resources by 2020. Burbank has hit this target already. But, recent legislation has moved the greening target to 50% by 2030. We’re on board and we’ll get there, but the big challenge is one of intermittency. Take solar energy for example. It’s only produced during the daytime and it’s not constant, being dependent on no rain or clouds. Solar energy production also varies daily with the course of the sun across the sky, and seasonally.

The inherently intermittent quality of wind and solar generation makes these resources challenging to integrate with other resources in order to meet Burbank’s constant demand for energy.



BWP's Himanshu Pandey

ED: Tell us about the IRP process. What does that entail and how can residents get involved?

HP: Developing the IRP started last year and is going to take most of 2018. BWP will be doing a massive amount of analysis and data modeling. We’re looking at energy use trends in Burbank, dozens of options for where our energy can come from, costs, how to deal with the intermittency of renewable energy, the power that electric vehicles will need, energy storage, new efficiency programs, and many other issues. It’s a pretty daunting project... and one that we will update every five years to keep Burbank’s power roadmap current.

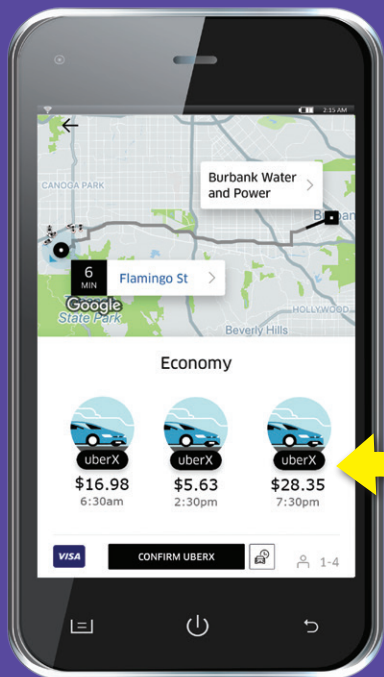
Community input is an important part of the process. We’ve started on the data crunching. Once we’re done, we will share results with the community to get their thoughts about the future. We expect this part of the project will begin this summer and we will provide plenty of notice to residents so that they can elect to join a community discussion or go online to get informed and give BWP their input.

ED: Thanks, Himanshu, for the information and good luck on the Integrated Resource Plan!

HP: My pleasure! I hope many residents get involved in the process!

We hope this “Ask the Expert” edition has been insightful. If you have any questions about BWP’s Integrated Resource Planning process, we welcome them! Just send an email to BWPConservation@burbankca.gov with your question or comment.

What's a TOU?



Ever use a car sharing service like Uber or Lyft? If so, you're familiar with "surge pricing" — your ride costs more when many people are demanding rides. When demand drops, pricing drops.

That's a pretty good analogy for TOU, which stands for **time-of-use**. TOU is a rate design that reflects the actual costs of procuring energy for customers. You see, a utility's energy costs vary by the time of day, the season, and the day type (weekday, weekend, holiday). As with all things, supply and demand rules apply. When electricity is in high demand, most typically on a hot summer day when everyone is running their high energy use air conditioners, the price to procure electricity can soar.

TOU rates provide price signals to businesses and consumers. When demand for power is low, rates are low. When demand spikes, rates spike. Summer months are when the highest demand, 'on-peak' hours hit. While just 5% of the total hours in a year, these on-peak hours really impact BWP's costs to procure electricity . . . and what we pass on in rates to our customers. TOU rates encourage users to shift energy use where possible from peak hours to less costly off-peak hours.

In Burbank, every business is on a TOU rate. Residential accounts are next in line, probably in two years or so. Some Burbank homes are actually already on a TOU rate. If you receive a BWP Electric Vehicle Charger rebate, your home will be placed on our TOU rate. Charging your EV overnight, when rates are lowest, will help reduce the EV household's energy costs while reducing the strain on our power grid during Burbank's peak energy use. That helps everyone in Burbank!



Did you know?



Burbank's energy demand peaks during the late afternoon (around 4pm) and continues most weekdays to as late as 8pm. Not running appliances like dishwashers and washing machines during these hours can reduce Burbank's collective demand for energy, helping us to keep everyone's electric rates as low as possible.

Free Refrigerators!

While energy efficiency standards for appliances have increased over time, it remains true that the refrigerator is one of the biggest energy users in a home. If you have a primary refrigerator that is ten or more years old and your household meets the income requirement listed below, BWP would like to gift you with a new, Energy Star™ refrigerator. That's right, gift. Gratis. No cost to you. Free.

We partner with the Burbank Temporary Aid Center (BTAC) in certifying customers for this program so, if you qualify, first download BWP's Refrigerator Exchange Application (go to BurbankWaterAndPower.com and type 'refrigerator exchange' in the search box), then contact BTAC at 818-848-2822 x103.

What if I lease my refrigerator? This program applies even if you live in an apartment and the landlord owns the refrigerator! The second page of the Refrigerator Exchange Application is for residents who fall into this situation. If your landlord agrees to pay just \$200, BWP will exchange the old refrigerator for a new one.

Seriously, it's the best offer ever!



Household Size	Yearly Income	Household Size	Yearly Income
One person	Less than (<) \$31,550	Five people	Less than (<) \$48,700
Two people	< \$36,050	Six people	< \$52,300
Three people	< \$40,550	Seven people	< \$55,900
Four people	< \$45,050	Eight or more people	< \$59,500



HANG UP!

If you get a call from someone saying they are from BWP and you must pay your bill immediately or else your electricity will be shut off immediately, HANG UP!

Sad, but true. There are some seriously lousy humans out there, trying to exploit, confuse and scare you by threatening to shut off your power if you don't pay them immediately, typically with a cash card. These people are professional scammers and know lots of tricks to make you think the call is legitimate.

It's not.

Please, don't fall for their lies. If you are late in paying your bill, you'll get notices in the mail from us. If things have sadly progressed to the point where you are on the verge of having your service disconnected, it will not be a surprise. Remember that BWP is always happy to discuss your situation and make payment plans if necessary.

Hats off to the “Father of Energy Efficiency”

A year ago this month, Art Rosenfeld passed away. This article is in tribute to the man who was a true innovator in making energy conservation a modern science. Energy efficiency programs exist today largely because of Dr. Rosenfeld. If your household or business has ever taken advantage of one of BWP’s many efficiency programs, send a nod of thanks to Art Rosenfeld!

The following is excerpted from BWP’s November 2017 “The Wire” business newsletter.

Born in Alabama in 1926, Arthur Rosenfeld spent his childhood in Egypt, where his father was an engineer in the sugarcane industry. Earning a bachelor of science in physics at the tender age of 18, he then served in the Navy during World War II.

After receiving his PhD from the University of Chicago in 1954, Rosenfeld joined the physics faculty at the University of California at Berkeley. Over the next 18 years, Dr. Rosenfeld performed experimental work in particle physics.

In 1973, the OPEC oil embargo and subsequent energy crisis changed Rosenfeld’s career. He became aware of the enormous energy waste going on around him and the need to improve efficiency.

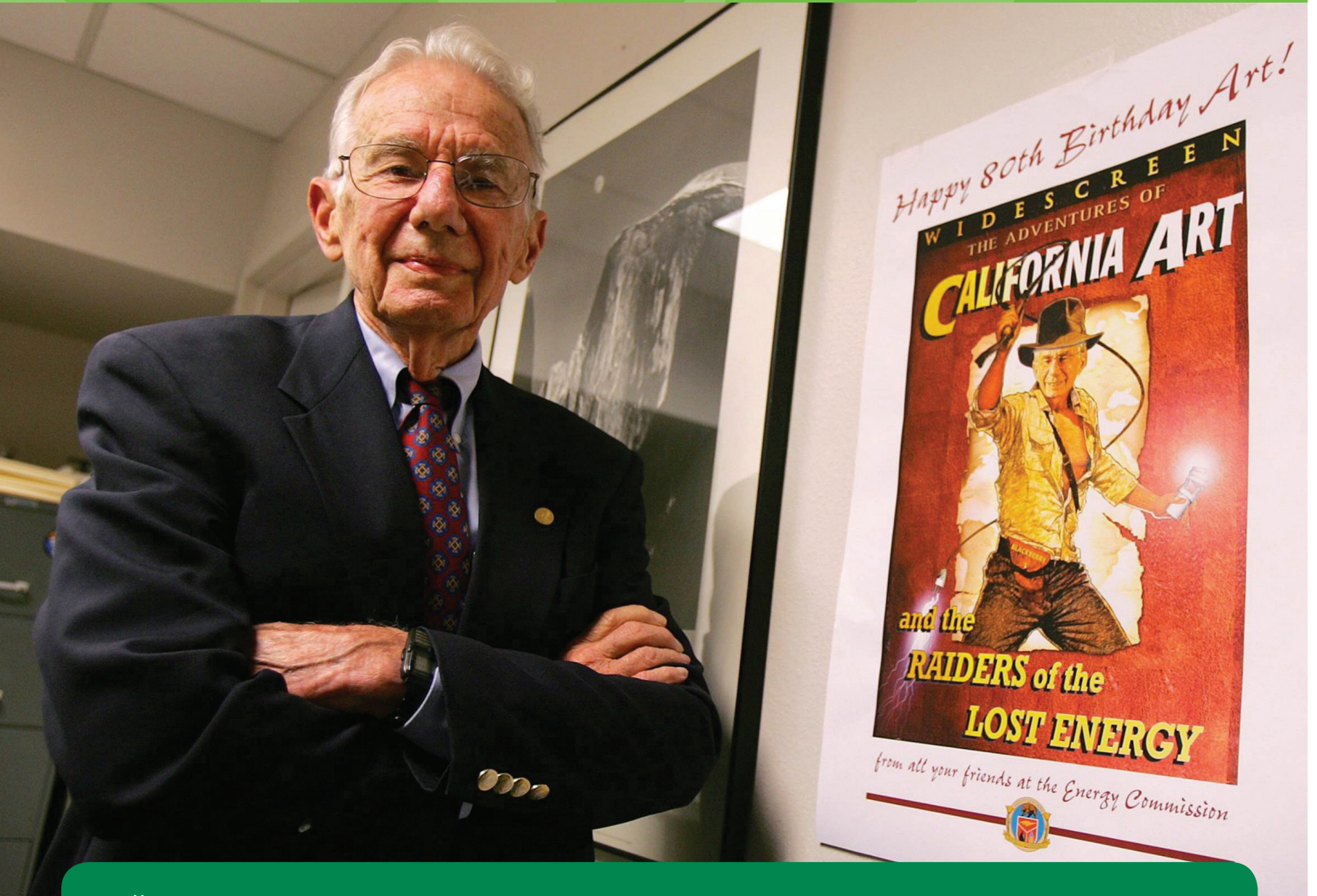
One small incident convinced Rosenfeld that would it be easy to save energy. “I was one of only a few in our 20-office floor who ever switched off our office lights.” He later wrote, “One evening, I decided to switch off the lights in the other 19 offices. The problem was to find the switches.” He reported that many were hidden by file cabinets, bookcases and even posters.

Recognizing the potential for energy savings in the building sector, he founded the Center for Building Science at Lawrence Berkeley National Laboratory in 1975. A wide range of innovative energy efficiency technologies were developed at the Center, including electronic ballasts for fluorescent lamps and low-emissivity window coatings.

Rosenfeld later became an influential voice in energy policy. He co-founded the American Council for an Energy Efficiency Economy and the University of California’s Institute for Energy and the Environment. In the 1990s, he served as Senior Advisor in the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy. He was also a leading champion of appliance and building energy-efficiency standards.

Opposite: *Arthur H. Rosenfeld’s work helped lay the foundation for federal energy efficiency rules that are in place today.*

Photo Credit: *Jim Wilson/The New York Times*



“There is an even cleaner form of energy than the sun, more renewable than the wind: it’s the energy we don’t consume.” - Arthur H. Rosenfeld



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How to **Contact Us.**

Customer Service: (818) 238-3700

Water Services: (818) 238-3500

Electric Services: (818) 238-3575

Conservation Services: (818) 238-3730

Street Light Outages: (818) 238-3575

After-hours Emergency: (818) 238-3778

ONEBurbank: (818) 238-3113

Visit us online at:

BurbankWaterAndPower.com

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In this issue...

Growing Interest in Electric Vehicles

ONEBurbank: Winning Fans at Shot Glass Films

Low Natural Gas Supplies Puts Burbank at some risk of power outages this winter

Coming Soon – BWP's Upgraded Website!

Tick Tock . . . BWP's Refrigerator Round-Up Program ends in June!

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