



## Energy Blog

### The Impact of Gas Appliances on Human Health: A Review of Current Evidence (P 1 of 2)

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Gas appliances, commonly used in homes for cooking, heating, and water heating, play a significant role in modern living. However, emerging evidence suggests that these appliances can have adverse effects on human health. This blog provides an overview of the impact of gas appliances on health, supported by recent research and authoritative sources.

#### Health Implications of Gas Appliances

##### Indoor Air Quality and Respiratory Health

Gas appliances emit pollutants such as nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), and particulate matter (PM). Exposure to these pollutants has been linked to respiratory issues, including asthma and chronic obstructive pulmonary disease (COPD). According to the World Health Organization (WHO), NO<sub>2</sub> can irritate the airways and decrease lung function, particularly in children and individuals with pre-existing respiratory conditions (WHO, 2021).

Fri, Oct 4, 2024

## The Impact of Gas Appliances on Human Health: A Review of Current Evidence (P 2 of 2)

### **Carbon Monoxide Poisoning**

Carbon monoxide, a byproduct of incomplete combustion, is a colorless and odorless gas that can lead to poisoning if not properly ventilated. Symptoms of carbon monoxide poisoning include headaches, dizziness, and confusion. Long-term exposure can cause more severe health effects, including neurological damage (Centers for Disease Control and Prevention [CDC], 2022).

### **Impact on Children and Vulnerable Populations**

Children are particularly susceptible to the effects of indoor air pollution. Studies have shown that exposure to gas appliances can increase the risk of asthma in children and exacerbate existing respiratory conditions. Pregnant women and elderly individuals are also at higher risk due to their potentially reduced respiratory reserve and immune response (Khalil et al., 2020).

Gas appliances are a common feature in many households, but their potential health impacts cannot be overlooked. Understanding the risks associated with indoor air pollution from these appliances and implementing appropriate mitigation measures can help protect human health. Ongoing research and public awareness are essential to addressing these concerns effectively.

Sources:

- (1) [Carbon monoxide poisoning.](#)
- (2) [Gas appliances and asthma risk in children: A review of the evidence](#)
- (3) [Indoor air quality.](#)
- (4) [Indoor air quality and health](#)



## Energy Blog

### Take Advantage of SoCal Edison's Consumer Programs (P 1 of 3)

**This week's blog is written by Briana Ancona, the Climate Corps Fellow for CAP OC's Energy and Environmental Services department.**

With prices increasing across the nation, it is important to stay well-informed on the various types of financial assistance available for consumers. From special rates to utility credits, there are various programs consumers can take advantage of to save money.

#### **Residential Rate Plans**

Time-Of-Use plans are based on the time of day and the season. TOU plans can help you manage your energy costs. You can avoid higher weekday rates when energy resources are in demand by taking advantage of lower rates during off-peak and super off-peak periods. To learn more about TOU plans and what the best option is for you, visit the [Rate Plan Comparison Tool](#). This tool is designed to give you a personalized comparison between your current plan and other plan options.

#### **Demand Response Programs**

Demand response programs provide an opportunity for consumers to reduce or shift their electricity usage during peak periods in response to time-based rates or other forms of financial incentives. SCE's Summer Discount Plan will install a remote-controlled device on or near your air conditioner at no cost to the consumer, allowing SCE to turn off or cycle your A/C unit during energy events throughout the year. Customers will earn bill credits from June 1 to October 1 for participating.

**Fri, Oct 11, 2024**

## Take Advantage of SoCal Edison's Consumer Programs (P 2 of 3)

If you have an existing smart thermostat, SCE Customers are eligible to enroll their smart thermostat into the Smart Energy Program. This program allows customers to get up to \$115 in bill credits when they participate in program energy events. Like the Summer Discount Program, enrolling your smart thermostat in the Smart Energy Program lets SCE turn off or cycle your A/C unit during energy events.

Lastly, the Power Saver Rewards program rewards you for voluntarily reducing your energy use during energy events. By conserving energy during Power Saver Rewards events, you'll earn \$1 for each kilowatt-hour (kWh) of energy you save. To see if you qualify, visit <https://powersaver.sce.com>

### **CARE & FERA Discounted Rates Programs**

The California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) are financial assistance programs that help qualifying families lower their monthly energy bills when they need it most. Qualifying individuals and households of two or more receive up to 30% off their electric bills through the CARE program and families and households of three or more receive an 18% discount on their electric bills through FERA.

If you are struggling to make payments on time, SCE also offers the Arrearage Management Plan (AMP) for bill payment assistance and debt forgiveness. This debt forgiveness payment option is for residential customers enrolled in CARE and FERA and have a total account balance of \$500 or more. After 12 individual on-time monthly bill payments, your debt will be fully forgiven (up to \$8,000 per customer).

### **Energy Savings Assistance Program (ESA)**

The Energy Savings Assistance (ESA) program offers income-qualified homeowners and renters the opportunity to receive energy-saving home improvements, such as a heat pump water heater replacement, or energy-efficient appliances.

### **Medical Baseline Allowance Program (MBL)**

If you or someone in your household requires the regular use of electrically powered medical equipment or other qualifying medical devices, you may be eligible for our Medical Baseline Allowance program. This program provides an additional 16.5 kilowatt-hours (kWh) of electricity per day to offset the cost of operating the medical equipment.

## Take Advantage of SoCal Edison's Consumer Programs (P 3 of 3)

### **Budget Billing Plan, Energy Assistance Fund (EAF), and Low-Income Home Energy Assistance Program (LIHEAP)**

The Budget Billing Plan is a 12-month program SCE offers eligible customers to help pay for their annual electricity service across 11 equal monthly payments. This plan does not reduce the amount of your bill but splits the cost into equal payments throughout the year. SCE determines the total cost by taking the sum for the previous 12 months of electricity usage divided by 11 to calculate the monthly base payment amount for the next 11 months (the monthly base amount is subject to change). On the 12th month, you will receive a settlement bill showing either a payment due or a credit balance. This amount equals the sum of your energy usage throughout your Budget Billing Plan year.

Southern California Edison together with the United Way, offer financial relief through the Energy Assistance Fund to customers struggling to pay their electricity bills. The fund provides an opportunity for qualified households to receive up to a \$200 payment (or up to \$300 for an all-electric household) to be applied toward their SCE energy bill.

Additionally, Community Action Partnership of Orange County, Energy and Environmental Services Department oversees administration of the Low-Income Home Energy Assistance Program (LIHEAP), Low Income Weatherization Program (LIWP), and the Department of Energy's Weatherization Assistance Program (DOE WAP) in Orange County. These programs are funded by the United States Department of Health and Human Services, Department of Energy Region IX, and the State of California Greenhouse Gas Reduction Fund (GGRF). The programs are designed to assist eligible low-income households to manage and meet their immediate home heating and/or cooling needs. LIHEAP also provides financial assistance to offset heating and/or cooling costs and improve household energy efficiency. The Home Energy Assistance Program (HEAP) is a one-time per funding year assistance program that helps income qualified households with utility payment assistance on either their electric or gas bill in Orange County. To learn more, check out [sce.com/residential](http://sce.com/residential).

Sources:

- (1) [COMMUNITY RESOURCE GUIDE](#)
- (2) [Rate Plan Comparison Tool](#)





## Energy Blog

### October 30th is Weatherization Day (Page 1 of 2)

**This week's blog is written by Briana Ancona, the Climate Corps Fellow for CAP OC's Energy and Environmental Services department.**

CAP OC recognizes the fact that there are many non-energy benefits that weatherization brings, such as removing environmental hazards from the home through abatement and remediation, improving indoor air quality through the replacement of gas-powered appliances, and reducing the amount of air-conditioned air leaving the home by replacing insulation. That is why we perform health and safety measures on the home, including offering asthma remediation and accessibility adaptation services to qualifying clients. We are doing so to create the best indoor environment for families to grow up in. This October, we invite you to learn about CAP OC's Healthy Home Model.

#### **Health Benefits of Weatherization**

Weatherization refers to home improvements that reduce the amount of energy our home consumes while making the home more comfortable. This process includes moisture control, air sealing, ventilation, and upgrades to insulation, doors and windows. Since 1984, Community Action Partnership of Orange County (CAP OC) has provided weatherization (WX) services for income-qualified owners and renters in single and multi-family households located in Orange County (OC). In recent years, CAP OC has begun offering Asthma Remediation and Environmental Accessibility Adaptation Services (EAA), which promote healthy home principles.

**Fri, Oct 18, 2024**

## October 30th is Weatherization Day (Page 2 of 2)

The Department of Housing and Urban Development states that a Healthy Home is dry, clean, safe, ventilated, free of pests and contaminants, well maintained, and thermally comfortable. Healthy homes should be affordable and accessible to all people, regardless of age or ability. By these definitions, there is much overlap between the goals of weatherization and the principles of healthy homes

### **Energy Benefits**

Almost one-third of U.S. households have reported difficulty in paying energy bills or adequately heating and cooling their homes. Over 20 percent of households have reported reducing or forgoing necessities such as food and medicine to pay an energy bill. Here at CAP OC, we are dedicated to promoting financial resilience and supporting families in rising out of poverty. We recognize that it is a difficult decision to make when under financial stress. Weatherization helps by lowering utility bills and making homes more energy efficient.

### **Energy Equity**

Equity is a core value of CAP OC. Our weatherization services help advance energy equity and alleviate disproportionate energy burdens for low-income households and communities of color. Low-income families are more likely to live in housing with heating problems and inadequate insulation. Our weatherization measures like furnace repair and wall and attic insulation help promote energy equity by lowering utility burdens. Communities of color experience energy insecurity more than other groups. A clean energy transition must allow for equity in an energy system that currently disadvantages low-income consumers and communities of color.

Join us this October to learn more about our Healthy Home Demo and how our Weatherization and CalAIM programs can make your home healthy, safe and energy efficient. To learn more, To learn more about this program, contact [energy@capoc.org](mailto:energy@capoc.org) or call at (714) 839-6199 ext. 6208.

Sources:

(1) [Energy Awareness Month](#)



## Energy Blog

Health Impacts the Environment has on our Lives (Page 1 of 4)

**This week's blog is written by Briana Ancona, CAP OC's Climate Corps Fellow.**

When we think of the word health, we typically associate the word with not being sick or suffering from another preventable ailment. According to the World Health Organization, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Per this definition, we know that health is dependent on physical, mental and social factors, not just individual immunity, or an individual's ability to fight and defend from infections and illnesses.

Things like housing, air quality, transportation, access to green spaces can have both health promoting and hazardous impacts on communities. Depending on how your city or town was planned, you may not have easy access to places like parks and may be disproportionately impacted by air pollution. The key to knowing whether your environment is affecting your health in a negative or positive way is understanding what disproportionate means.

To understand what environmental issues are present and impacting the communities we serve, CAP OC has launched its Health Equity Zone initiative, which aims to understand what environmental hazards are likely affecting the health of residents living around our family resource centers. CAP OC decided to delineate the census tract in which Anaheim Independencia Family Resource Center, El Modena Family Resource Center, and Southwest Community Center are located as our three Health Equity Zones. The objective is to promote financial resilience by

Fri, Oct 25, 2024



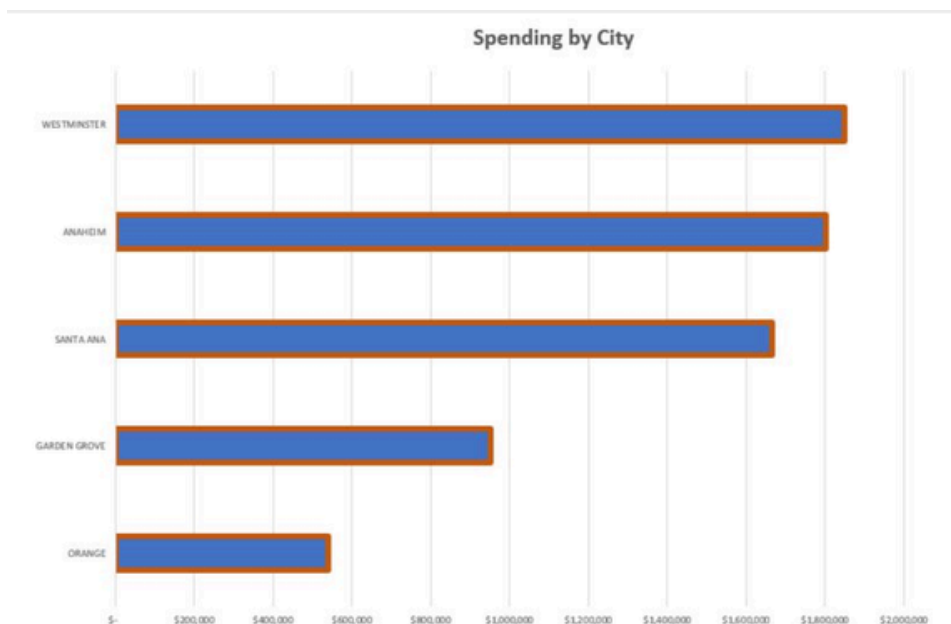
## Health Impacts the Environment has on our Lives (Page 2 of 4)

tackling root causes of economic insecurity, such as energy inefficiency in housing, leading to high energy costs, and emergency room visits due to health issues such as asthma.

### What is the rationale?

Disadvantaged communities (DACs) have been overburdened by a mix of social and environmental issues. Of the HEZs, three of the four zones are in disadvantaged communities. Coincidentally, all four zones are in four of our five top-served cities.

The majority of utility assistance applications received by the EES department come from Anaheim, Garden Grove, Santa Ana, and Westminster. These are also our top five spending cities for weatherization.



Weatherization, aside from weatherproofing the home, also makes the home more energy efficient. This often includes replacing appliances with energy-efficient ones, upgrading HVAC systems, and replacing gas-powered water heaters with electric water heaters. These retrofits are intended to reduce the amount of energy consumed by a household, therefore lowering the amount of monthly income spent on energy costs and reducing participant's energy burdens.

Increasing energy efficiency and reducing the amount of infiltration a home experiences has unintended benefits, such as improving indoor air quality and

## Health Impacts the Environment has on our Lives (Page 3 of 4)

removing toxins from the home. This is similar to the benefits of the asthma remediation program, which eliminates asthma triggers from the home, improving filtration and indoor air quality.

CAP OC recognizes that families with extreme financial burdens are not necessarily worried about pollution and environmental health. The HEZ initiative will help the agency integrate a "Whole Family Approach" that effectively communicates the linkage between financial wellness and health. Residents of the neighborhoods will gain or strengthen their understanding of health equity and the importance of home maintenance in the face of climate change.

This project relied primarily on CalEnviroScreen 4.0 to inform the agency on what pollution sources exist near or in the four HEZs. This tool draws from a variety of socioeconomic and public health data to produce a score for each census tract in California. The higher the score, the higher the burden of pollution is in that area. The Pollution Burden score represents the measure of the overall pollution and environmental stress experienced by communities.

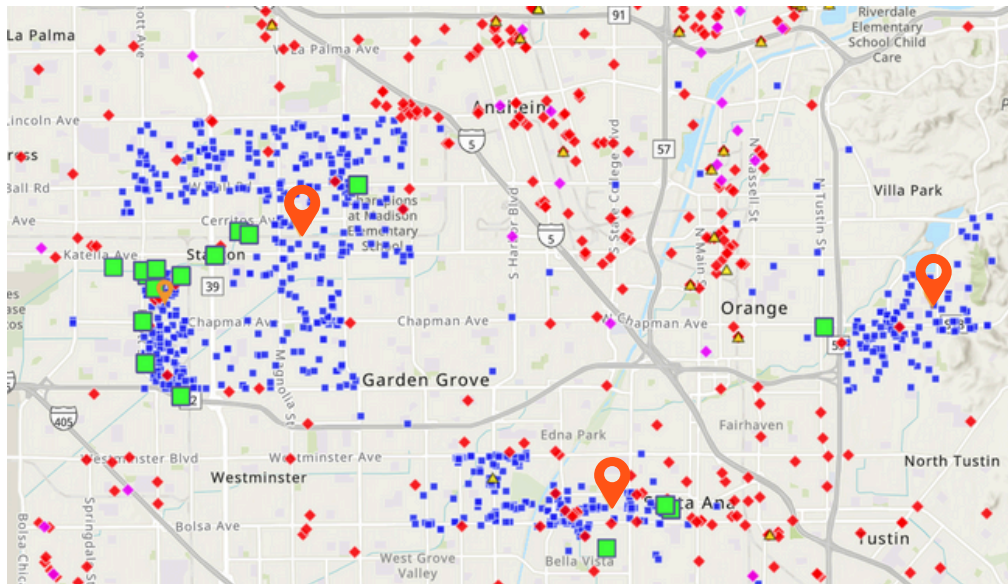
The CalEnviroScreen also allowed the CalEPA to identify which communities are disadvantaged. Census tracts that score in the top 25% of overall scores are identified as disadvantaged. Exposure Indicators are based on measurements of different types of pollution that people may come into contact with, and Environmental Effect Indicators are based on the proximity of toxic chemicals in relation to communities. These two indicators are averaged out to produce the Pollution burden score.

We found that all four of the HEZs were disproportionately exposed to toxic releases from facilities or manufacturing and particulate matter smaller than 2.5 microns or PM<sub>2.5</sub>. Assuming that the housing stock in the HEZs was built before 1990, it is reasonable to infer that houses in the four HEZs allow pollution to infiltrate the home and concentrate. Buildings can significantly impact health because people spend most of their time indoors. Studies have shown that indoor air pollution levels are increasing in concentration due to various factors, including chemicals in household products, poor ventilation, increased temperatures, and higher humidity.

## Health Impacts the Environment has on our Lives (Page 4 of 4)

and indoor air quality can cause or contribute to the development of infections, lung cancer, and chronic lung diseases such as asthma.

Below is a preliminary image showing all pollution sources around our three family resource centers and headquarters. The orange location vector represents the location of the centers whereas the color and shape of these pollutants varies on the map.



Sources:

- (1) [Health Equity Zones](#)
- (2) [Constitution](#)