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Sustainability & (Em)Powering Community Based Action in Chula Vista

Gabriella Medina

Darbi Berry

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Sustainability & (Em)Powering Community Based Action in Chula Vista

San Diego Regional Climate Collaborative

Enabling Regional Leadership & Science-Based Action

City of Chula Vista Sustainable Home Toolkit

Energy Code Compliance & Code Standards

Energy Education & Resource Hub

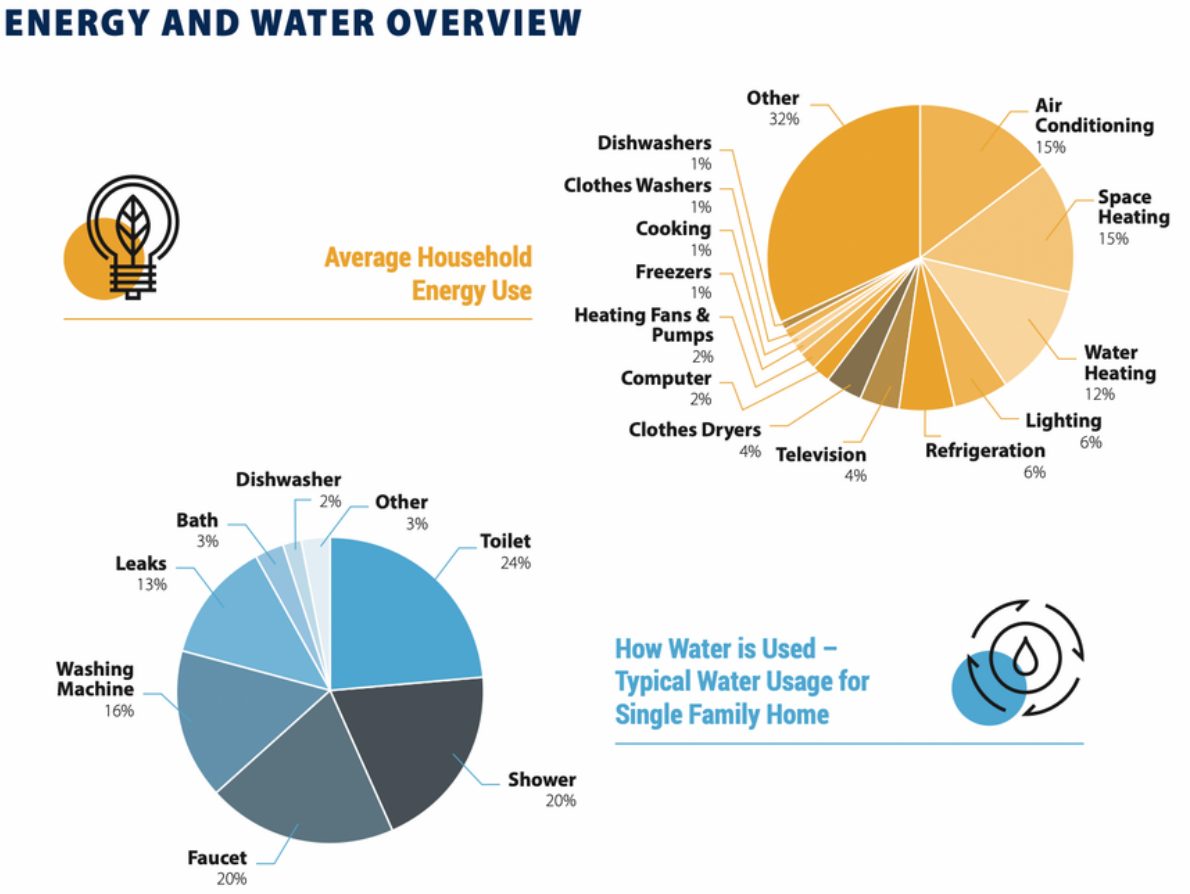
Abstract

The City of Chula Vista (Chula Vista / the City) has already begun to experience the localized impacts of climate change through record-breaking heat waves, droughts, and wildfires. In response to the impacts of climate change posing a threat to Chula Vista residents' quality of life, the City declared a climate emergency in March 2022.[1] This declaration advanced the City's commitment to update its Greenhouse Gas (GHG) reduction goals, strengthen existing efforts like the City Operations Sustainability Plan, and encourage new City-wide and voluntary actions by residents and businesses. The Chula Vista DIY Sustainable Home Toolkit (Toolkit) is a best practice example of how encouraging residents to participate in climate action through public education can be an effective tool for energy resilience and climate-smart water initiatives.[2]

About the Chula Vista DIY Sustainable Home Toolkit

The DIY Sustainable Home Toolkit initiative was developed to promote and enable an opportunity for Chula Vista residents to advance natural resource conservation and maintain a cost-efficient home. The Toolkit does this by providing resources and tools needed for residents to track their progress on energy, natural gas, and water usage. As the City prepares its communities for extreme weather events that are amplified and made more frequent by climate change, this initiative aids in this effort and the program outcomes are aimed toward helping Chula Vista residents to more effectively weatherize their homes. Most people have no idea what the energy performance of their house is, let alone the potential of lowering utility bill costs while saving natural resources.

The City is making it easy and accessible for residents to have a cleaner and greener home by providing the Sustainable Home Toolkit for free checkout at Chula Vista Library locations.[3] The federal Office of Energy Efficiency and Renewable Energy estimates the average American spends approximately $2,000 per year on their energy bill and of that total, it is estimated that 10-20 percent of energy is wasted due to poor home weatherization, such as drafts, air leaks, and outdated heating and cooling systems.[4] Chula Vista's Toolkit offers an easy-to-use guide that includes ways residents can lower utility bills, as well as contains supplies, tools, and measurement devices for residents to track energy and water usage. The Toolkit is also a part of the Chula Vista Climate Action Challenge which supports citywide climate adaptation efforts to inform residents on a larger scale of climate action goals.



https://www.chulavistaca.gov/home/showpublisheddocument/21416/637354529462970000

Quick Overview of the DIY Sustainable Home Toolkit

This Toolkit includes annual comparison metrics for City residents to be able to track previous energy and water usage and subsequent energy and water bill savings over the course of a year. The Toolkit provides key resources for residents in both the Energy Efficiency Toolkit and Water Efficiency Toolkit with the information needed for these measurements to be conducted.

Both toolkits include items for residents to improve the efficiency, conservation, and safety of their homes. Many of the items included need to be returned to the library with the kit; however, each of the Toolkits provides residents with items that do not have to be returned and will support direct improvements.[5]

Energy Efficiency Toolkit

- **Efficiency**: Kill-a-watt meter to measure the amount of electricity consumed by a powered appliance
- **Conservation**: Infrared Thermal imager to see where a loss of heat and air leakage can occur from a home's faulty building envelope
- **Safety**: Propane and natural gas detector to detect gas leaks from home appliances
- **Accuracy**: Refrigerator thermometer to help cut the cost of running appliances

Items not required to be returned from the Energy Efficiency Toolkit:

- **Efficiency:** LED light bulb to replace incandescent or compact fluorescent bulbs in high-use fixtures
- **Conservation**: Weather-stripping to seal gaps in windows and doors
- **Safety:** Outlet gaskets to seal the void around outlets and prevent heat loss

Water Efficiency Toolkit

- **Efficiency**: Thermometer to ensure cost-effectiveness of appliances and lower utility bills
- **Conservation**: Drip gauge, water pressure gauge to measure water leaks from appliance fixtures
- **Safety**: Pliers, plumbers tape to secure leaky pipes and appliance fixtures
- **Accuracy**: Water flow rate bag measures the amount of energy and water used from specific appliances throughout the home

Items not required to be returned from the Water Efficiency Toolkit:

- **Conservation:** Detect-A-Leak toilet tablets to test a toilet for leaks & rubber bands to secure a fix
- **Conservation:** Faucet aerators to install new aerators to help you save water
- **Conservation:** Low-flow showerhead to reduce your household water consumption

Lessons Learned

01

Collaboration: The City of Chula Vista collaborated with the City of La Mesa and incorporated best practices of their DIY Energy Saving and Sustainability Toolkit into the DIY Sustainable Homes Toolkit. By partnering and sharing resources, the model Toolkit from the City of La Mesa enabled the City of Chula Vista's leadership to think outside the box and try different approaches to provide sustainability messaging, materials, and programs.

02

Public Outreach: Persistence was the method for success for Chula Vista when conducting public outreach on this Toolkit. Ensuring that the promotion of the Toolkit reached a widespread audience that would benefit most from using the Toolkit took a concerted and consistent effort. Since this is a new type of resource for Chula Vista residents in public libraries, people may not always be aware that this Toolkit is an option. Keeping outreach consistent and a priority is crucial to supporting the success of the Toolkit among residents.

03

Replication & Implementation: There is high interest among Chula Vista's city staff to expand the types of Toolkits provided to residents; this is supporting future opportunities to advance climate resilience efforts. For example, City staff are interested in exploring how a Toolkit can support homeowners and renters interested in solar energy; especially solar battery storage that can support people to feel more comfortable about switching to all-electric appliances. The City is also prioritizing the start of enforcing the City of Chula Vista Existing Home Energy Sustainability Ordinance - helping to bring older homes up to compliance with current statewide building codes and local energy efficiency targets.

Future Opportunities for Energy Resilience in Chula Vista

The City's 2017 Climate Action Plan is committed to achieving statewide goals of reducing GHG emissions to 55 percent below 2005 emission levels by 2030.[6] One possible path to help achieve that goal is evaluating the feasibility of a Community Choice Aggregation (CCA) program. CCAs give residents and businesses an opportunity to choose who will purchase energy on their behalf, an example being either the CCA or a private utility company. A larger factor in this decision for many when approaching climate action goals is the renewable energy content of their electricity portfolio. In late 2018, the City initiated a process to evaluate if a CCA would be a beneficial, alternative choice for the environment and economic development of Chula Vista. The results led to the City becoming a member of San Diego Community Power (SDCP). SDCP is a locally run, nonprofit public agency that is an electric generation service provider. SDCP purchases renewable power, like solar and wind, and feeds it into the electricity grid, working with SDG&E to deliver it to its member cities.[7] Joining SDCP as a member city will support Chula Vista's GHG reduction targets and broader CAP goals to elevate citywide and regional energy resilience.

With increased engagement and promotional efforts, along with cross-regional support from local jurisdictions, the Chula Vista Sustainable Home Toolkit can help improve residential energy efficiency in the San Diego region.

Sources

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