



## Residential Energy Strategies

An Energy Action Plan (EAP) is a strategic planning document that lays out goals and actions to reduce energy consumption while increasing energy efficiency and renewable energy. In the residential sector, EAPs often feature educational programs, to spread the word about energy upgrade opportunities, these may come in the form of financial incentives and can help to lower the barriers for adoption of new technologies and practices.

### Energy Efficiency

Residential energy efficiency upgrades are a primary focus of EAPs. The first step in planning for residential energy efficiency improvements is to identify the most impactful areas to target by highlighting specific building types, neighborhoods, or groups of residents. This can help prioritize different programs and policies that are designed to reduce resident's energy use and in turn lower community greenhouse gas emissions. For example, older homes are often less energy efficient than newer homes and homes in lower income communities are generally less energy efficient because of the upfront costs associated with upgrades, such as, buying new appliances or lighting fixtures. Similarly for renters, it can be difficult to upgrade to more energy efficient technology because leases are often not long enough for tenants to see the return on investment. Effective EAPs identify incentives and program options for these residents to make beneficial upgrades. In addition to upgrade opportunities, the EAP can highlight programs that inform residents about the projected cost savings associated with specific energy efficiency upgrades, offer free home energy assessments, or provide services such as free disposal/removal of inefficient home appliances.

### Energy Conservation

Energy conservation strategies also play an important role in reducing residential energy consumption. Energy conservation requires little or no financial investment. The EAP offers strategies to help foster sustainable behavior change, sometimes in the form of education and engagement programs. These programs can be used to inform households about easy tips to conserve energy, outline low impact designs that increase conservation opportunities for certain residential areas, or encourage new construction to integrate natural lighting into the design. Overall, EAPs weigh various strategies for cities to support their residents in energy conservation.



### **Alternative Energy**

Transitioning the residential energy sector to more emission-free sources of energy is a fundamental goal of an EAP. EAPs promote strategies that help residents power their homes with emission-free, renewable energy and can direct city initiatives to increase residential solar, such as, reducing permitting costs for residential solar systems or redesigning building codes to support renewable energy development. They may also include strategies to identify viable sites for residential renewable projects by collaborating with local stakeholders. These strategies can also benefit the local renewable energy market while increasing awareness about federal and state incentives. The EAP aims to increase overall development of renewable resources by engaging the community and empowering homeowners to generate the energy that supports their everyday lives.

### **Residential Battery Storage**

Battery storage is a vital resource for an emission free future when paired with renewable energy on homes. Batteries can be paired with solar panels or wind turbines to store energy during times of variability, like when the sun isn't shining or wind dies down. One of the largest barriers to increasing residential energy storage can be the high cost. EAPs may introduce strategies to combat this barrier and accelerate residential battery adoption. Pilot programs for dispatchable batteries that respond to energy demand from the grid or streamlined permitting processes to connect batteries to the grid are just two examples of how to support grid reliability through battery storage. These current efforts will help future EAPs include more battery storage opportunities as the technology becomes more accessible.