Low-Income Resident

Julia walks to the bus stop everyday to get to work. Her neighborhood lacks trees and grass, making the walk a bit warmer than other neighborhoods. Julia would like to see more trees and shade in her neighborhood but is more concerned about paying her electricity bill in the summer to keep her house cool. She wants to put in a new, more efficient air conditioner but cannot afford it. Some of her neighbors, however, have no air conditioning at all. She worries about their safety on hot days.

Low-Income Resident

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Low-Income Resident

Low-Income Resident

Low-Income Resident

Low-Income Resident

Low-Income Resident

Low-Income Resident

Homeless Shelter Coordinator

Chris works at a local homeless shelter that serves as a heat refuge on hot days. Some people who are not homeless but cannot afford A/C come to Chris's shelter during the summer. However, he knows many people who do not come to the shelter to avoid the stigma of staying there. Chris worries about people who do not know about the shelter or who cannot get there on their own. On hot days, Chris watches visitors for signs of heat exposure and is always concerned about running out of cold water and other supplies. The shelter is supported by donations and grants, but busy summers stress Chris's budget, staff, and volunteers.

Homeless Shelter Coordinator

Homeless Shelter Coordinator

Homeless Shelter Coordinator

Homeless Shelter Coordinator

Homeless Shelter Coordinator

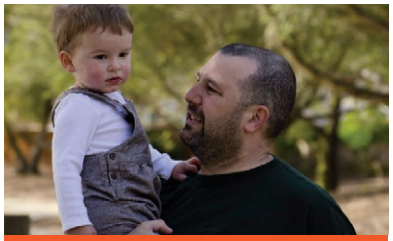
Homeless Shelter Coordinator

Homeless Shelter Coordinator

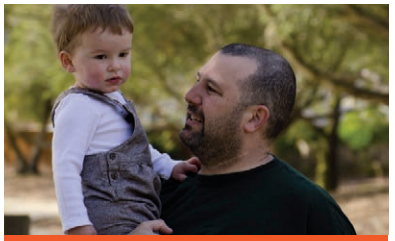
Homeless Shelter Coordinator

High-Income Resident

Tony lives in an upper-middle class neighborhood with lots of trees and grass. Because he drives to work and works inside, Tony spends a minimal time outside on very hot days. The heat does affect him and his family in other ways. Keeping the house cool in the summer is expensive. Tony is saving money to install better insulating windows to keep his home cooler and save him money on utility bills. He wants to build shade structures in his backyard to keep it cool for his kids. Tony is also concerned about his family's safety: a blackout several years ago left his home without A/C during a heat wave.



High-Income Resident



High-Income Resident

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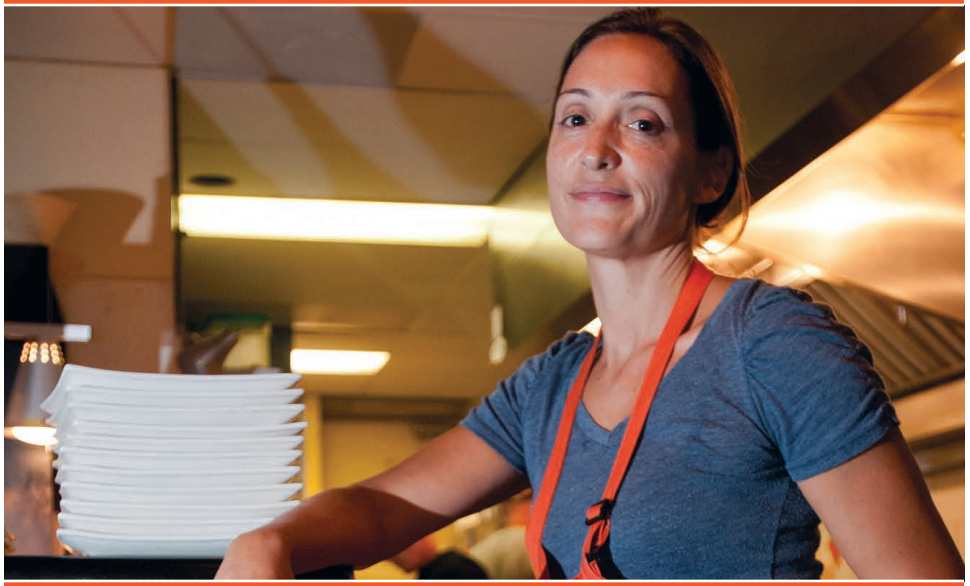
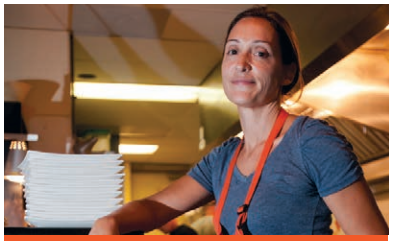
High-Income Resident

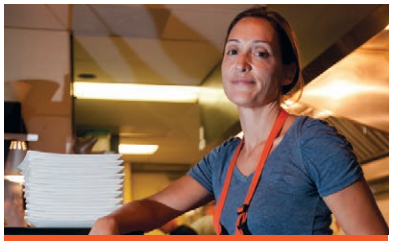
Café Owner



Sofia owns a café and bakery just outside of downtown in an older building. Sofia's business is part of a redevelopment project in an industrial part of town and she is very interested in the area's economic success. Her café has outdoor seating along the street but few people use it because it’s so hot on the sidewalk. During the summer, people tend to stay inside the café longer to enjoy the air conditioning. She appreciates the extra visitors, but is concerned about people who come in and don't buy anything. She wants to help people stay cool during hot days, but not at the expense of her business, particularly because running the air conditioning is so expensive.



Café Owner



Café Owner

Café Owner

Café Owner

Café Owner

Café Owner

Café Owner

Café Owner

Public Health Official

Jeremy works on the public health department's emergency preparedness team. His primary concern is keeping people safe during natural disasters. During extreme heat events, Jeremy's team works to keep people in cool areas, particularly those who lack access to air conditioning or who are more susceptible to the impacts of heat. In the summer, Jeremy’s staff works to support partner organizations, helps distribute supplies to shelters, and works with first responders and community groups to keep people safe.

Public Health Official

Public Health Official

Public Health Official

Public Health Official

Public Health Official

Public Health Official

Public Health Official

Public Health Official

Electricity Grid Operator

Michelle manages the electricity grid for the local utility company. Her primary responsibility is to provide reliable power to the community while keeping the grid safe from damage due to high demand. She knows that parts of the grid still use old transformers and cables and is concerned they could fail when demand is high. Michelle would like grid infrastructure to be modernized to ensure the community has reliable power. She also knows that reducing electricity demand through efficiency upgrades in homes, offices, and industrial facilities provides some grid stability, but at a lower cost.


Electricity Grid Operator

Electricity Grid Operator

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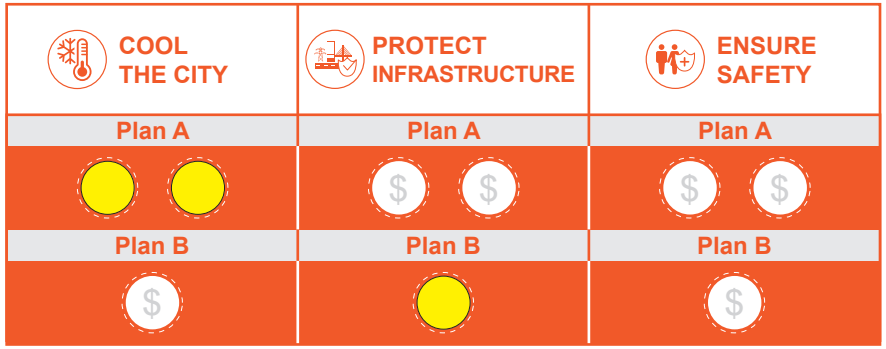
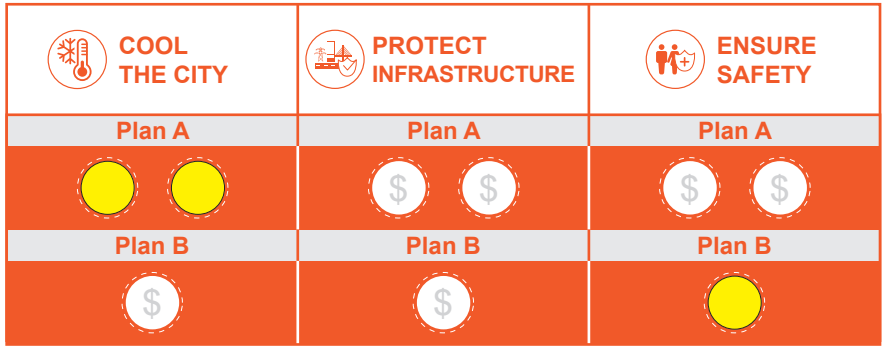
Electricity Grid Operator



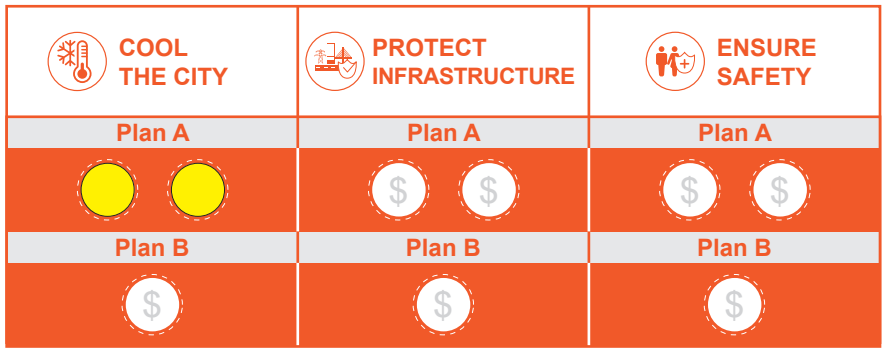
EH_001

Our plan puts a lot of money towards the Cool the City strategy and a little money towards the Protect Infrastructure strategy. Once completed, large parts of the city will be shaded and the city will be cooler than before. Trees, shade structures, and a decrease in concrete and asphalt surfaces will provide shade and cooling. Shaded corridors will be created where many people walk or wait for public transportation will provide relief to commuters. The city will replace the oldest parts of the electricity grid to protect against blackouts. Many schools, hospitals, and shelters will have back-up generators for use during blackouts. While these changes will make the city cooler and protect it from blackouts, some people are worried about other impacts. Many in the city will still lack air conditioning or cannot afford to run it. Those without air conditioning or a home will still have trouble getting to cooling centers and shelters, threatening their well-being. Bridges, roads, and other infrastructure will be left vulnerable to damage from the heat.



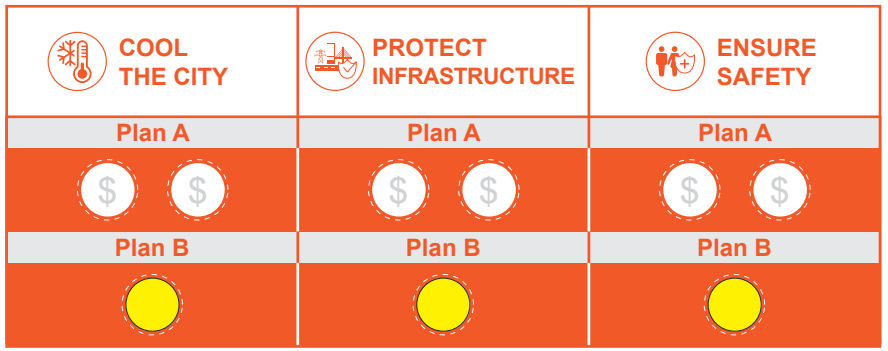
EH_002

Our plan puts a lot of money towards the Cool the City strategy and a little money towards the Ensure Safety strategy. Once completed, large parts of the city will be shaded and the city will be cooler than before. Trees, shade structures, and a decrease in concrete and asphalt surfaces will provide shade and cooling. Shaded corridors will be created where many people walk or wait for public transportation will provide relief to commuters. Many people still lack air conditioning. City libraries and community centers will serve as cooling centers and free transportation services will help residents get these centers. A heat hotline will help residents and community members find help for themselves or others on hot days. While the city will be cooler and more heat relief services will be available to residents, the city's infrastructure is still vulnerable. A blackout due to grid failures or excess demand would leave thousands without air conditioning during a heat wave. Wildfires, made worse by extreme heat, will threaten roads, power lines, and buildings near the outskirts of the city.



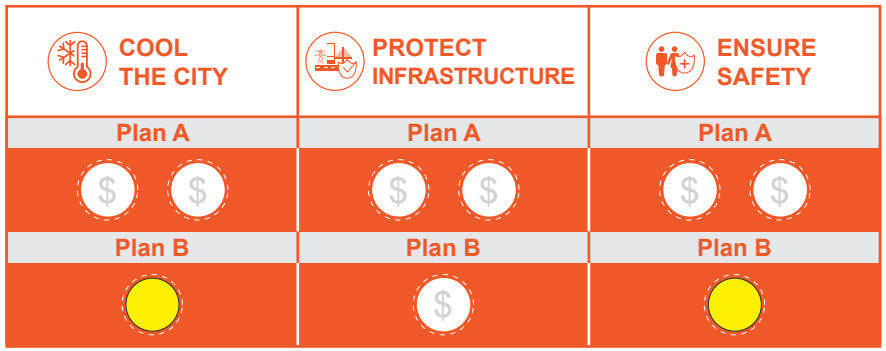
EH_003

Our plan puts a lot of money towards the Cool the City strategy with one leftover coin. Once completed, large parts of the city will be shaded and the city will be cooler than before. Trees, shade structures, and a decrease in concrete and asphalt surfaces will provide shade and cooling Shaded corridors will be created where many people walk or wait for public transportation will provide relief to commuters. While the city will be cooler and shadier, some are still vulnerable. Those without air conditioning will face heat waves with little relief and few cooling centers available, threatening their health. Roads, bridges, and runways will need repair during heat waves due to buckling and other damage, disrupting traffic and endangering lives. Without new grid infrastructure, the city will be at risk for blackouts during heat waves that could leave thousands without air conditioning.



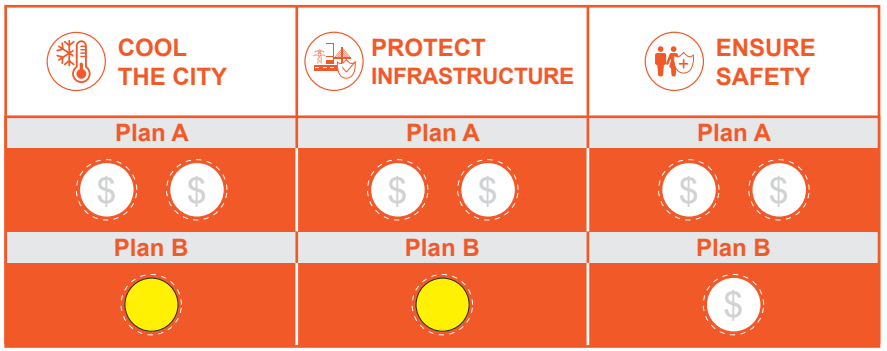
EH_004

Our plan puts a little money towards each of the strategies. City libraries and community centers will serve as cooling centers on hot days. Free transportation services will help residents get these centers. A heat hotline will help residents find help for themselves or others on hot days. The city will replace the oldest parts of the electricity grid to help protect against blackouts, and many schools, hospitals, and shelters will have back-up generators in case the grid fails. Some new shade structures will provide relief from the heat to residents and temperatures will be slightly cooler across the city. Shade trees planted by homeowners and businesses will provide shade and local cooling while light-colored roofs will lower local temperatures slightly. Despite these improvements, some parts of the city are still vulnerable. Without a new power plant, demand for air conditioning could stress the local grid. Some parts of the city will continue to lack shade. Residents without air conditioning will have only a handful of cooling centers to go to.



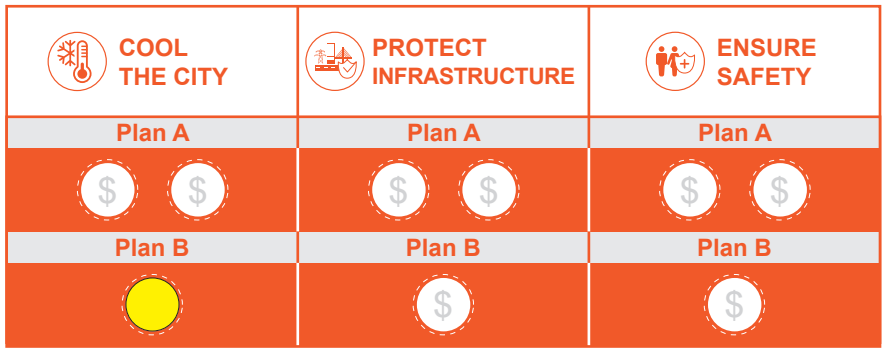
EH_005

Our plan puts a little money towards the Cool the City strategy and a little money towards the Ensure Safety strategy with one leftover coin. Once completed, some areas of the city have more shade and temperatures will be slightly cooler. Shades over bus stops will provide relief for commuters. Shade trees planted by homeowners and businesses create shade and local cooling while light-colored roofs will lower local temperatures slightly. Many people still lack air conditioning. City libraries and community centers will serve as cooling centers on hot days. Free transportation services will help residents get these centers. A heat hotline will help residents find help for themselves or others on hot days. Despite these improvements, the city's infrastructure will still be vulnerable. A blackout due to grid failures or excess demand would leave thousands without air conditioning. Wildfires, made worse by extreme heat, will threaten roads, power lines, and buildings near the outskirts of the city.



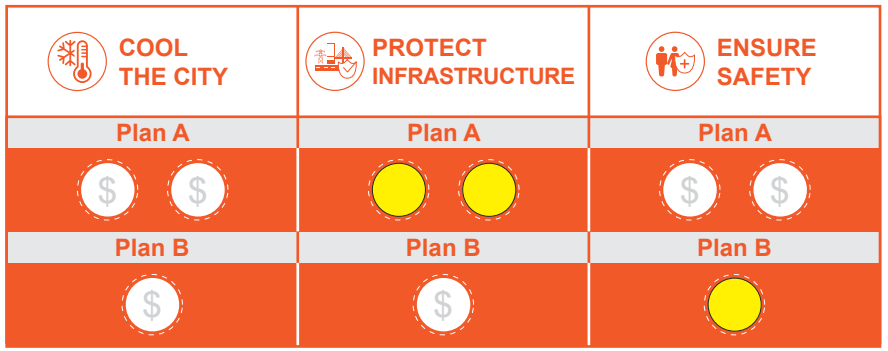
EH_006

Our plan puts a little money towards the Cool the City strategy and a little money towards the Protect Infrastructure strategy with one leftover coin. Once completed, the city will replace the oldest parts of the electricity grid to help protect against blackouts, and many schools, hospitals, and shelters will have back-up generators in case the grid fails. Some areas of the city have more shade and temperatures will be slightly cooler overall. Shades over bus stops will provide relief for commuters. Shade trees planted by homeowners and businesses create shade and local cooling while light-colored roofs will lower local temperatures slightly. While these changes will make the city cooler and protect it from blackouts, some people are worried about other impacts. Many in the city will still lack air conditioning or cannot afford to run it. Those without air conditioning or a home will still have trouble getting to cooling centers and shelters, threatening their well-being. Bridges, roads, and other infrastructure will be left vulnerable to damage from the heat.



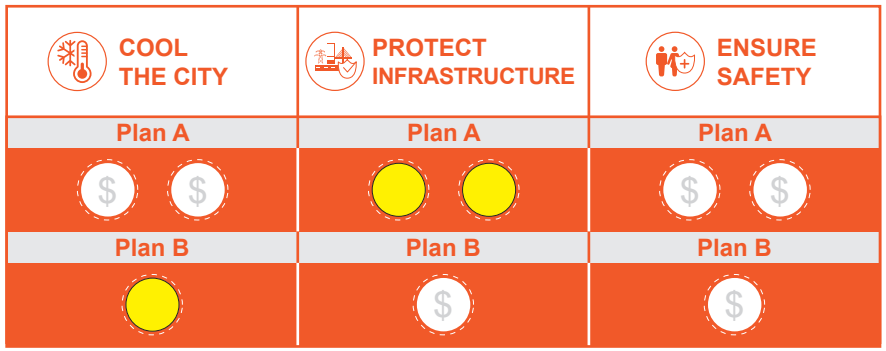
EH_007

Our plan puts a little of money towards the Cool the City strategy with two leftover coins. Once completed, some areas of the city have more shade and temperatures will be slightly cooler overall. Shades over bus stops will provide relief for commuters. Shade trees planted by homeowners and businesses create shade and local cooling while light-colored roofs will lower local temperatures slightly. Many in the city will still lack air conditioning or cannot afford to run it. Those without air conditioning or a home will still have trouble getting to cooling centers and shelters, threatening their well-being. Roads, bridges, and runways will need repair during heat waves due to buckling and other damage, disrupting traffic and endangering lives. Without new grid infrastructure, the city will be at risk for blackouts during heat waves, potentially leaving thousands without air conditioning.



EH_008

Our plan puts a lot of money towards the Protect Infrastructure strategy and a little money towards the Ensure Safety strategy. Once completed, the city will have replaced transformers and power lines across the city and constructed new power sources, reducing the risk of grid failure. Weatherization efforts across the city have reduced electricity demand, further protecting the city from power outages and saving residents and businesses money on utilities. Roads, bridges, and runways have been upgraded to cope with high temperatures. Wildfire management has created a buffer around buildings, power lines, and roads. Many people still lack air conditioning. City libraries and community centers will serve as cooling centers on hot days. Free transportation services will help residents get these centers. A heat hotline will help residents find help for themselves or others on hot days. While these strategies have improved infrastructure and safety across the city, some people are still displeased. Parts of the city will lack shade and plants, making them warmer than other neighborhoods. Bus and train riders and pedestrians will face high temperatures and exposure to the sun.



EH_009

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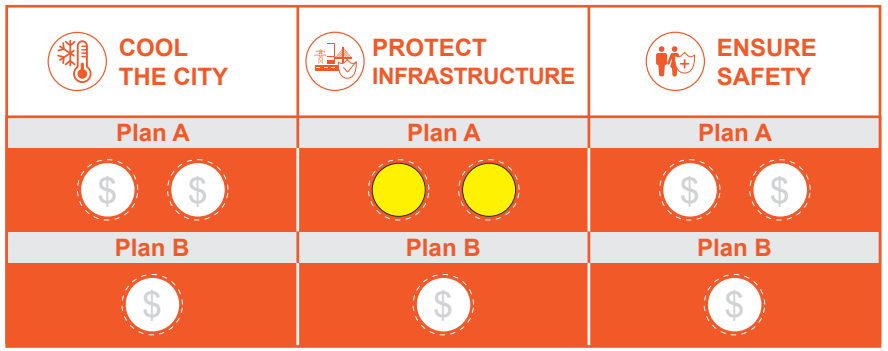
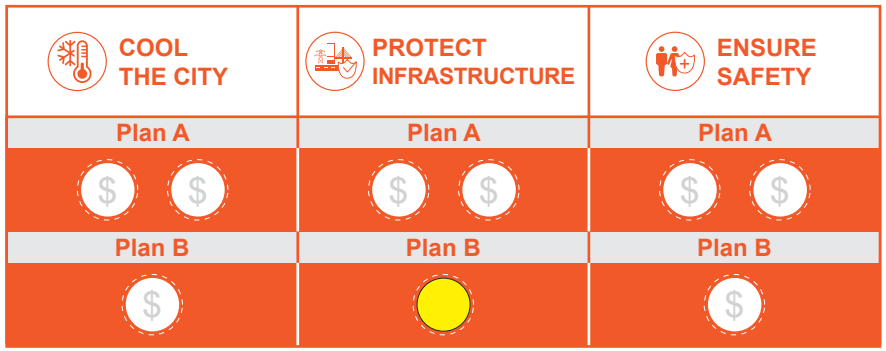


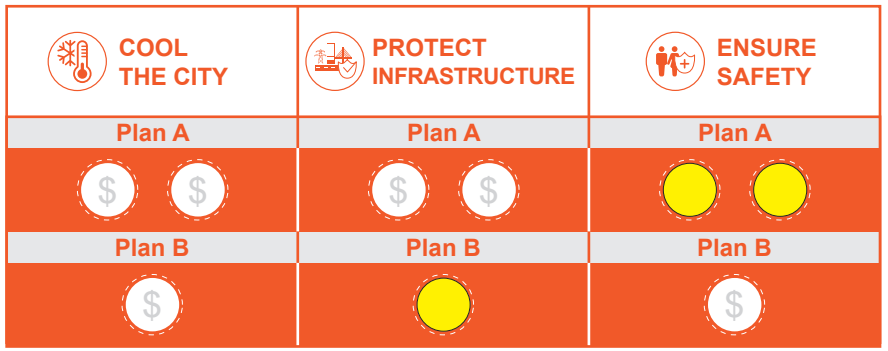
EH_010

Our plan puts a lot of money towards the Protect Infrastructure strategy with one leftover coin. Once completed, the city will have replaced transformers and power lines across the city and constructed new power sources, reducing the risk of grid failure. Weatherization efforts across the city have reduced electricity demand, further protecting the city from power outages and saving residents and businesses money on utilities. Roads, bridges, and runways have been upgraded to cope with high temperatures. Wildfire management has created a buffer around buildings, power lines, and roads. While infrastructure will better cope with heat, some in the city will still be impacted by heat. A lack of shade and plants in some parts of the city will make those areas warmer than others. Bus and train riders and pedestrians will face high temperatures and exposure to the sun on their commutes. Many in the city will still lack air conditioning or the money to run it. Those without air conditioning or a home will struggle to get to the few cooling centers and shelters in the city.



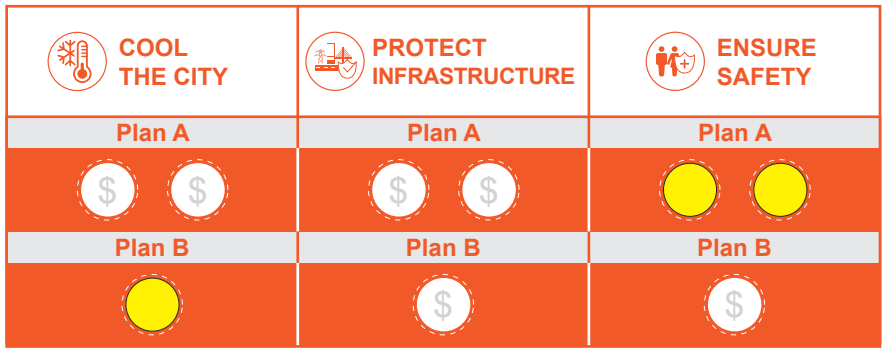
EH_011

Our plan puts a little money towards the Protect Infrastructure strategy with two leftover coins. Once completed, the city will have replaced the oldest parts of the electricity grid to protect against blackouts, including some transformers and cables. Many schools, hospitals, and shelters will have back-up generators, meaning these places can still have air conditioning and offer services during a heat wave power failure. Some landowners on the outskirts of the city will clear grass and trees away from buildings to limit potential damage from wildfires. Despite these improvements, some people will still be vulnerable to the impacts of heat. A lack of shade and plants in some parts of the city will make those areas warmer than others. Bus and train riders and pedestrians will face high temperatures and exposure to the sun on their commutes. Many in the city will still lack air conditioning or the money to run it. Those without air conditioning or a home will struggle to get to the few cooling centers and shelters in the city.



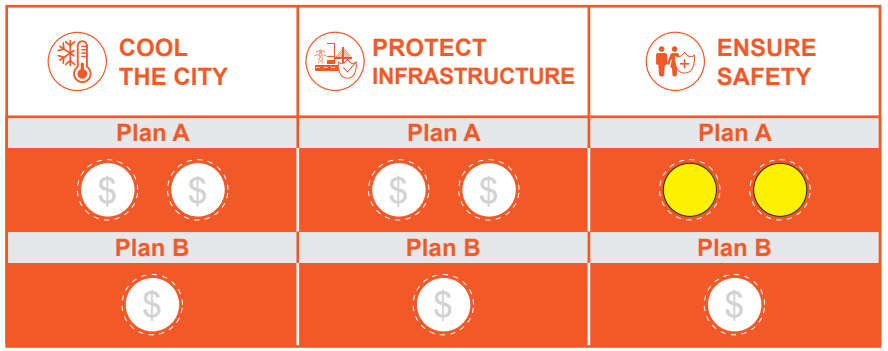
EH_012

Our plan puts a lot of money towards the Ensure Safety strategy and a little money towards the Protect Infrastructure strategy. Once completed, numerous privately run shelters and businesses, community centers, and schools will be open as cooling centers during heat waves. Thousands of trained volunteers will check on vulnerable members of the community and provide assistance as needed. The number of residents without air conditioning will fall dramatically. The city will replace the oldest parts of the electricity grid to protect against blackouts, including some transformers and cables. Many schools, hospitals, and shelters will have back-up generators, meaning these places can still have air conditioning and offer services during a heat wave power failure. While these strategies have improved infrastructure and safety across the city, some people are still displeased. Parts of the city will lack shade and plants, making them warmer than other neighborhoods. Bus and train riders and pedestrians will face high temperatures and exposure to the sun.



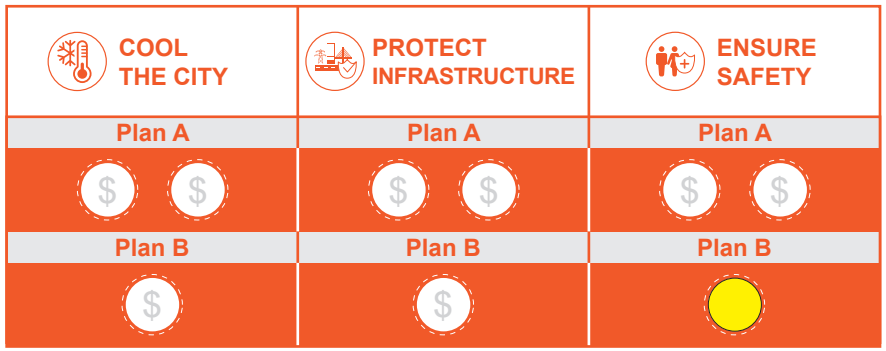
EH_013

Our plan puts a lot of money towards the Ensure Safety strategy and a little money towards the Cool the City strategy. Once completed, numerous privately run shelters and businesses, community centers, and schools will be open as cooling centers during heat waves. Thousands of trained volunteers will check on vulnerable members of the community and provide assistance as needed. The number of residents without air conditioning will fall dramatically. Some areas of the city have more shade and temperatures will be slightly cooler overall. Shades over bus stops will provide relief for commuters. Shade trees planted by homeowners and businesses create shade and local cooling while light-colored roofs will lower local temperatures slightly. Despite these improvements, the city's infrastructure will still be vulnerable. A blackout due to grid failures or excess demand would leave thousands without air conditioning. Wildfires, made worse by extreme heat, will threaten roads, power lines, and buildings near the outskirts of the city.



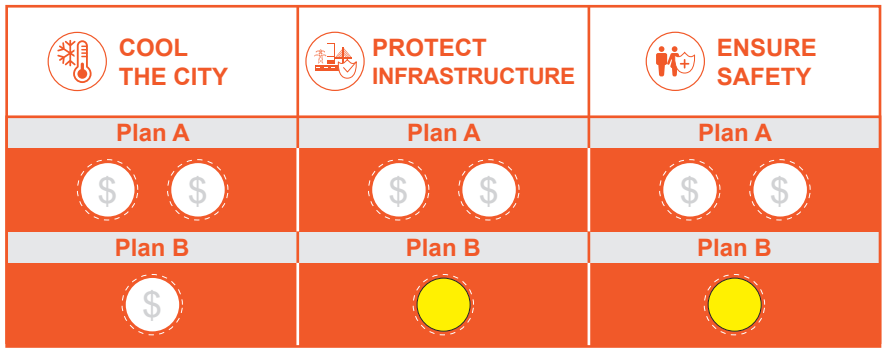
EH_014

Our plan puts a lot of money towards the Ensure Safety strategy with one leftover coin. Once completed, numerous privately run shelters and businesses, community centers, and schools will be open as cooling centers during heat waves. Thousands of trained volunteers will check on vulnerable members of the community and provide assistance as needed. The number of residents without air conditioning will fall dramatically. Despite these improvements, some residents will be concerned. A blackout due to grid failures or excess demand would leave thousands without air conditioning. Wildfires, made worse by extreme heat, will threaten roads, power lines, and buildings near the outskirts of the city. Parts of the city will lack shade and plants, making them warmer than other neighborhoods. Bus and train riders and pedestrians will face high temperatures and exposure to the sun.



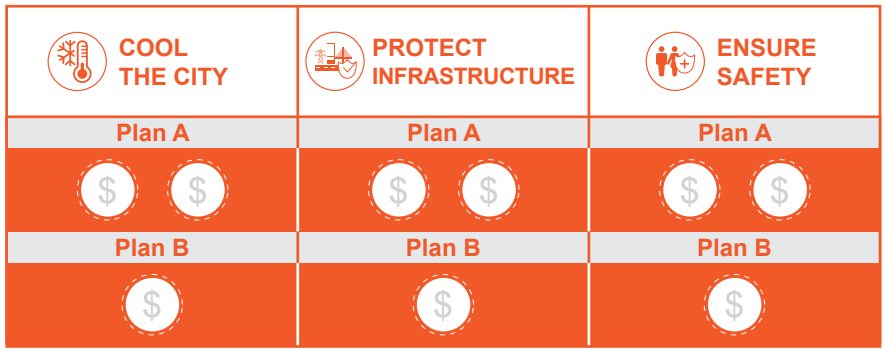
EH_015

Our plan puts a little money towards the Ensure Safety strategy with two leftover coins. City libraries and community centers will serve as cooling centers on hot days. Free transportation services will help residents get these centers. A heat hotline will help residents find help for themselves or others on hot days. While these strategies provide some safety for residents across the city, some people are still displeased. Many people still lack air conditioning. Parts of the city will lack shade and plants, making them warmer than other neighborhoods. Bus and train riders and pedestrians will face high temperatures and exposure to the sun. A blackout due to grid failures or excess demand would leave thousands without air conditioning during a heat wave. Wildfires, made worse by extreme heat, will threaten roads, power lines, and buildings near the outskirts of the city.



EH_016

Our plan puts a little money towards the Ensure Safety strategy and a little money towards the Protect Infrastructure strategy with one leftover coin. Once completed, the city will have replaced the oldest parts of the electricity grid to protect against blackouts, including some transformers and cables. Many schools, hospitals, and shelters will have back-up generators, meaning these places can still have air conditioning and offer services during a heat wave power failure. City libraries and community centers will serve as cooling centers on hot days. Free transportation services will help residents get these centers. A heat hotline will help residents find help for themselves or others on hot days. While these strategies have improved infrastructure and safety across the city, some people will still be displeased. Parts of the city will lack shade and plants, making them warmer than other neighborhoods. Many people still lack air conditioning. Bus and train riders and pedestrians will face high temperatures and exposure to the sun.



EH_017

No strategies implemented. The city continues to experience growing vulnerabilities to heat without a resilience plan.

COOL THE CITY




Plan A

The city will plant tens of thousands of new trees and install shade structures along miles of busy sidewalks and in parks. With a 15 percent increase in the number of city trees and new shade structures, pedestrians will have much needed relief from the sun. These shade programs will compliment a grant program for cool roofs that use plants or light-colored surfaces to reduce outdoor temperatures and to incentivize private development of shade structures. Incentives include rebates for new construction and renovation of existing residential and commercial buildings. The city will also replace concrete and asphalt in medians, city-owned parking lots, and parks with cooler landscaping made up of plants, gravel, and lighter-colored surfaces. This plan will take around 15 years to complete.

Plan B

The city is concerned about heat but cannot afford a huge shade program. Instead, the city will build shade structures over bus and rail stops to provide relief for commuters. To help local residents create cooler neighborhoods, the city will fund a small shade-tree grant program. The program will provide homeowners and businesses up to $75 to plant shade trees in their yards. A separate grant program will encourage homeowners and businesses to use lighter-colored roofing materials to improve energy efficiency and reduce the urban heat island effect. The roofing grant program will provide homeowners up to $400 and businesses up to $1,000 for roof resurfacing. This plan will take 5-10 years to complete.

PROTECT INFRASTRUCTURE




Plan A

The city will invest in an aggressive weatherization program that provides homeowners up to $4,000 for new windows, insulation, or repairs that will increase energy efficiency and reduce the chance of blackouts. The city will replace aging cables and transformers and build new power sources to meet electricity demands. The city will also invest in maintenance and upgrades for bridges, roads, runways, and railways to prevent damage from heat. On the outskirts of the city where fire danger is highest, the city will create a grass and forest management program to protect houses, roads, and power lines from wildfires and prevent disruptions to the electricity grid. This plan will take 10-20 years to complete.

Plan B

To reduce the risk of blackouts during heat waves, the city will replace the oldest cables and transformers in the electricity grid but will not invest in new power sources. To minimize the impact of potential blackouts, the city will create a back-up generator grant program. The program will provide up to $25,000 for hospitals, schools, and homeless shelters to install back-up generators that can run air conditioning and other key services during blackouts. A public information campaign will encourage homeowners living near wildfire prone areas to clear grass and trees away from their houses. This plan will take 5-7 years to complete.

ENSURE SAFETY




Plan A

The city will invest in an air conditioning assistance program that will help low-income residents afford high summer electricity bills, provide low-income residents with air conditioning units, and provide funding for air conditioning repair. This program will ensure more residents have access to air conditioning. The city will expand its cooling center program for vulnerable populations. More centers will open and centers will have longer hours allowing people to stay overnight. The city will fund a door-to-door wellness check program that trains volunteers to check on neighbors during heat waves. Businesses will be encouraged to shift hours of outdoor work to mornings and evenings. This plan will take 5-10 years to complete.

Plan B

The city will create a community heat hotline to help residents and community organizations connect residents to heat relief services. Libraries and community centers will be open as cooling centers during heat waves but won't be open at night. Free transportation services will help homebound residents get to these cooling centers. The city will create a phone app that makes it easy to find the closest heat refuge center or public building. Alongside local weather agencies, the city will create a heat warning system that sends text messages before and during extreme heat events providing people with information on how to stay cool and prepare. This plan will take 2-4 years to complete.