



- Presentation will begin shortly
- Session will be recorded
- All attendees are muted
- Please be aware of Q&A at bottom of screen – ask your questions there
- We will address questions at various points in the session

[www.chulavistaca.gov/clean](http://www.chulavistaca.gov/clean)

# Sustainability Webinars

- **Upcoming Sustainable Building Series:**

- October 13: CALGreen Residential Code
  - November 17: CALGreen Non-Residential Code
  - December 8: Indoor air quality and ventilation with a connection to COVID-19
- 
- Summer Sustainability Series recorded webinars

[www.chulavistaca.gov/clean](http://www.chulavistaca.gov/clean)



# Sustainability at the Library

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**Michael Bruder**

Instructional Services Coordinator

Innovation and Instruction

Chula Vista Elementary School District

**Coleen Wisniewski**

Environmental Sustainability Manager

City of Chula Vista



SUMMER SUSTAINABILITY SERIES





**All attendees are muted  
Please type your questions in the question box**



# Energy Station

Powered by



# Innovation Station

# Energy Station

# Hydro Station

# Health Station

**Information & Communication Technologies and Digital Media**  
A PRIORITY SECTOR in San Diego County

**San Diego Workforce Partnership**

This sector calls for people to use their creativity to code the latest cutting-edge computer program, launch the newest top trending app or design the next iconic logo.

Scan to take a quiz and learn how your interests align with San Diego jobs! #mynextmove

**Energy, Construction & Utilities**  
A PRIORITY SECTOR in San Diego County

**San Diego Workforce Partnership**

This sector creates the physical places people live, work and enjoy—from the four walls of a building to the wiring and power that make it possible to offer free wifi.

Scan to take a quiz and learn how your interests align with San Diego jobs! #mynextmove

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**Health Care**  
A PRIORITY SECTOR in San Diego County

**San Diego Workforce Partnership**

At the intersection of technology, science and empathy lies health care, where people work to keep the public healthy and well, quickly solving problems when something goes wrong.

Scan to take a quiz and learn how your interests align with San Diego jobs! #mynextmove

**Sample occupations**

| Occupation   | How much will I earn per hour?      | What level of education is expected by employers? |                                     |                            |
|--|-------------------------------------|---|-------------------------------------|----------------------------|
|  | Entry level<br>(\$14-\$20 per hour) | Mid career<br>(\$24-\$32 per hour)                | Experienced<br>(\$37-\$57 per hour) |                            |
| <b>R</b> The Designer   People who enjoy working on creative and artistic applications, software or programs. They analyze user needs and design software solutions. | \$24                                | \$33  | \$77                                | High school diploma or GED |
| <b>I</b> The Thinker   People who use investigation and analysis skills to gather facts.   | \$33                                | \$64  | \$101                               | High school diploma or GED |
| <b>A</b> The Creator   People who prefer to work in creative, conceptual settings and use their artistic abilities.  | \$35                                | \$33  | \$56                                | High school diploma or GED |
| <b>S</b> The Helper   People who enjoy working with others.  | \$30                                | \$32  | \$54                                | High school diploma or GED |
| <b>E</b> The Planner   People who like to lead and influence others to work towards organizational goals.  | \$32                                | \$39  | \$72                                | High school diploma or GED |
| <b>C</b> The Organizer   People who enjoy working with data, keeping organized, and using their analytical abilities.  | \$37                                | \$48  | \$71                                | High school diploma or GED |

High school diploma or GED
Associate degree or certificate
Bachelor's degree
Master or professional degree
Doctoral degree

**Sample occupations**

| Occupation   | How much will I earn per hour?      | What level of education is expected by employers? |                                     |                            |
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| <b>R</b> The Designer   People who enjoy working on creative and artistic applications, software or programs. They analyze user needs and design software solutions. | \$22                                | \$36  | \$52                                | High school diploma or GED |
| <b>I</b> The Thinker   People who use investigation and analysis skills to gather facts.   | \$18                                | \$24  | \$49                                | High school diploma or GED |
| <b>A</b> The Creator   People who prefer to work in creative, conceptual settings and use their artistic abilities.  | \$18                                | \$27  | \$37                                | High school diploma or GED |
| <b>S</b> The Helper   People who enjoy working with others.  | \$18                                | \$23  | \$40                                | High school diploma or GED |
| <b>E</b> The Planner   People who like to lead and influence others to work towards organizational goals.  | \$20                                | \$29  | \$56                                | High school diploma or GED |
| <b>C</b> The Organizer   People who enjoy working with data, keeping organized, and using their analytical abilities.  | \$28                                | \$42  | \$68                                | High school diploma or GED |

High school diploma or GED
Associate degree or certificate
Bachelor's degree
Master or professional degree
Doctoral degree

**Sample occupations**

| Occupation   | How much will I earn per hour?      | What level of education is expected by employers? |                                     |                            |
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**Sample occupations**

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| <b>R</b> The Designer   People who enjoy working on creative and artistic applications, software or programs. They analyze user needs and design software solutions. | \$24                                | \$41  | \$57                                | High school diploma or GED |
| <b>I</b> The Thinker   People who use investigation and analysis skills to gather facts.   | \$30                                | \$51  | \$75                                | High school diploma or GED |
| <b>A</b> The Creator   People who prefer to work in creative, conceptual settings and use their artistic abilities.  | \$31                                | \$37  | \$59                                | High school diploma or GED |
| <b>S</b> The Helper   People who enjoy working with others.  | \$31                                | \$44  | \$70                                | High school diploma or GED |
| <b>E</b> The Planner   People who like to lead and influence others to work towards organizational goals.  | \$30                                | \$48  | \$84                                | High school diploma or GED |
| <b>C</b> The Organizer   People who enjoy working with data, keeping organized, and using their analytical abilities.  | \$31                                | \$49  | \$77                                | High school diploma or GED |

High school diploma or GED
Associate degree or certificate
Bachelor's degree
Master or professional degree
Doctoral degree

To explore, visit [workforce.org/mynextmove](http://workforce.org/mynextmove)

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# Energy Station Experience

- 5 hour, one-day experience
- World of Work
- Hands-on learning opportunities



# Energy Station Experience



[https://www.youtube.com/watch?v=0zbGLi\\_xXm8&list=PLj3Jp4SZ07buPwgEULH1\\_AkgJAVW-TBC7&index=3](https://www.youtube.com/watch?v=0zbGLi_xXm8&list=PLj3Jp4SZ07buPwgEULH1_AkgJAVW-TBC7&index=3)





# Energy Station

Est. 2018



7,260 students



1,815 prototypes

- Solar Energy
- Wind Energy
- Biomass Energy
- Geothermal Energy
- Hydroelectric Energy



242 classes



2019 Impact Award

Classroom of the Future Foundation

2020 Innovative TOSA of the Year Award

San Diego Computer-Using Educators



43 careers

# Energy Station Murals

**CONVENTIONAL**

**CONOR**

LIKES TO WORK WITH NUMBERS AND RECORDS IN A SYSTEMATIC AND STRUCTURED WAY, SEES SELF AS ORDERLY AND GOOD AT FOLLOWING A SET PLAN

**CAREERS:**

- ENERGY AUDITOR
- ENVIRONMENTAL COMPLIANCE INSPECTOR
- WEATHERIZATION TECHNICIAN

**REALISTIC**

**REILLY**

JUST WANTS TO GET IN THERE AND GET THE JOB DONE. LIKES WORKING WITH TOOLS AND MACHINES AND IS VERY PRACTICAL AND INDEPENDENT

**CAREERS: ELECTRICIAN, CIVIL ENGINEER, SOLAR PHOTOVOLTAIC (PV) INSTALLER**

**INVESTIGATIVE**

**IVY**

LIKES TO STUDY AND WORK ON CHALLENGING PROBLEMS. IS VERY CURIOUS AND ENJOYS TAKING TIME TO THINK THINGS THROUGH TO FIND THE RIGHT ANSWER

**CAREERS:**

- CLIMATE CHANGE ANALYST
- ENERGY ENGINEER
- MECHANICAL ENGINEER

**ENTERPRISING**

**ENZO**

TENDS TO BE THE LEADER OF THE GROUP; IS VERY DECISIVE AND ENJOYS PERSUADING PEOPLE

**CAREERS:**

- POLICY ADVISOR
- SUSTAINABILITY SPECIALIST
- RECYCLING COORDINATOR

**ARTISTIC**

**ARTIE**

LOVES CREATIVE ACTIVITIES AND FREEDOM TO EXPRESS THEIR ARTISTIC ABILITIES; IS FUN, INDEPENDENT AND SOMETIMES A BIT DRAMATIC

**CAREERS:**

- ARCHITECT
- COMMERCIAL AND INDUSTRIAL DESIGNER
- DRAFTER

**SOCIAL**

**SOCHI**

LOVES TO BE AROUND PEOPLE AND ENJOYS DOING THINGS THAT HELPS OTHERS LIKE GIVING ADVICE; IS VERY TRUSTWORTHY AND OUTGOING

**CAREERS:**

- TEACHER
- OPERATIONS MANAGER



# Energy Station Mural



# World of Work: Strengths



## Academic

You are intelligent, have good memory, are organized and get things done.



## Analytical

You work through problems by breaking them down into many steps. You are rational and detail oriented!



## Appreciation

You are thankful for what you have. You see the good in others and are humble.



## Assertiveness

You are confident! You stand up for what's right and speak your mind.



## Athleticism

You have speed, endurance, and strength. You can master almost any sport!



## Compassion

You are tolerant, caring, kind and sensitive. You are a great friend and understand feelings!



## Coordination

You have rhythm, flexibility and a good sense of your body. You instinctively move with grace!



## Creative Skill

You create with ease! From dance to drama, painting to poetry, you make the extraordinary easy.



## Creative Thinking

Hello innovator! You brainstorm unique ideas and find novel solutions to challenges and puzzles.



## Drive

You are self-directed, excited by your interests, and are highly motivated to do well.



## Focus

You finish tasks. You set goals and nothing gets in your way!



## Fun-loving

You are the life of the party! You bring others into fun situations. You are positive and lively.



## Independence

You do not need to be the center of attention. You can do things on your own and are very resourceful.



## Leadership

You are visionary and inspire others! You can present in front of others and capture their attention.



## Memory

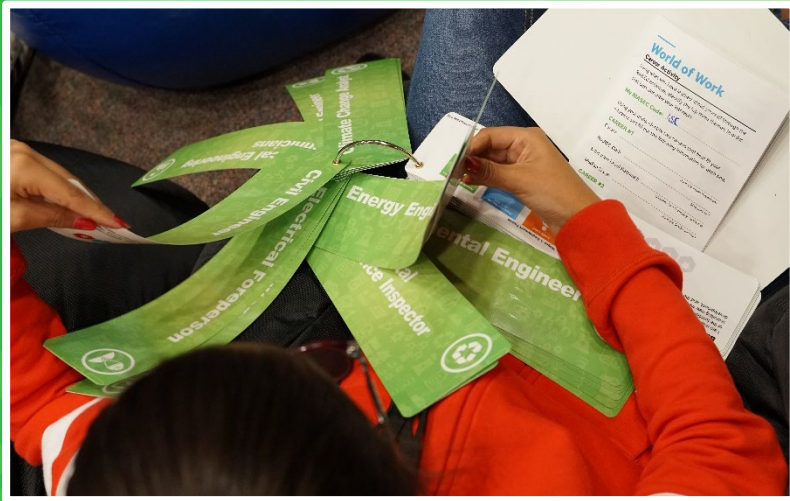
Facts, figures and images stick in your brain! You easily recall information, focus, and compute in your head.

# World of Work: Interests



# World of Work: Career Exploration

Students select career badges that align with their strengths, interests, and values



**Inside Wireperson**

**Energy Station**

Powered by

Logos: City of Chula Vista, SDGE, NECA

## Inside Wireperson

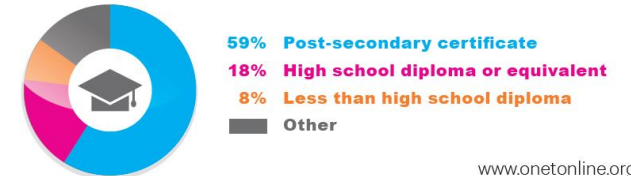
I install and maintain various types of electrical systems found in commercial and industrial facilities. I specialize in connecting customers' electrical systems to the outside power source and then distributing that power. I also install conduit, lighting fixtures, and/or electrical outlets.



### Wages & Employment Trends



### Education Level Required



[www.onetonline.org](http://www.onetonline.org)

# Engineering Design Process

## Solar

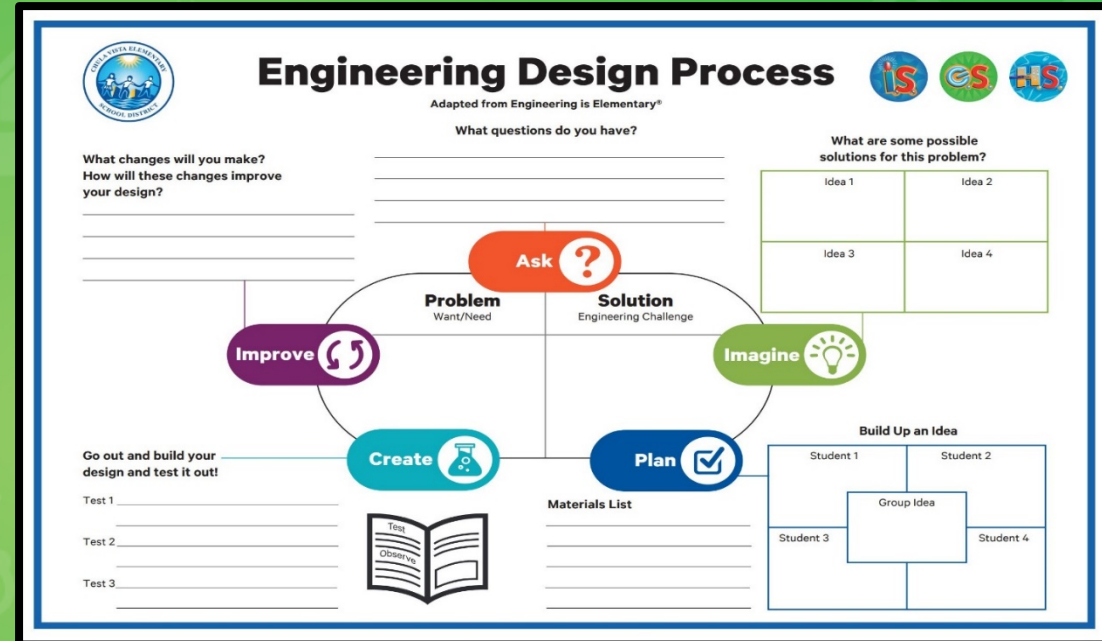
**Description:** Our environment is made up of all the living and nonliving things around us. It includes the surroundings and conditions that all people, animals, and plants live and operate in. However, human activity continues to negatively affect our environment. Two of the major concerns people have for our environment includes the amount of air and water pollution that continues to take place.

**Problem 1:** Air pollution causes damage to crops, animals, forests, and bodies of water. It also contributes to the depletion of the ozone layer, which protects the Earth from the sun's ultraviolet rays. Air pollution can also have many negative effects on people's health. Short-term health effects include eye, nose, and throat irritation, headaches, allergic reactions, and upper respiratory infections. Some long-term health effects are lung cancer, brain damage, liver damage, kidney damage, heart disease, and respiratory disease. One of the human activities that causes the greatest amount of air pollution is burning fossil fuels for energy and for our vehicles.

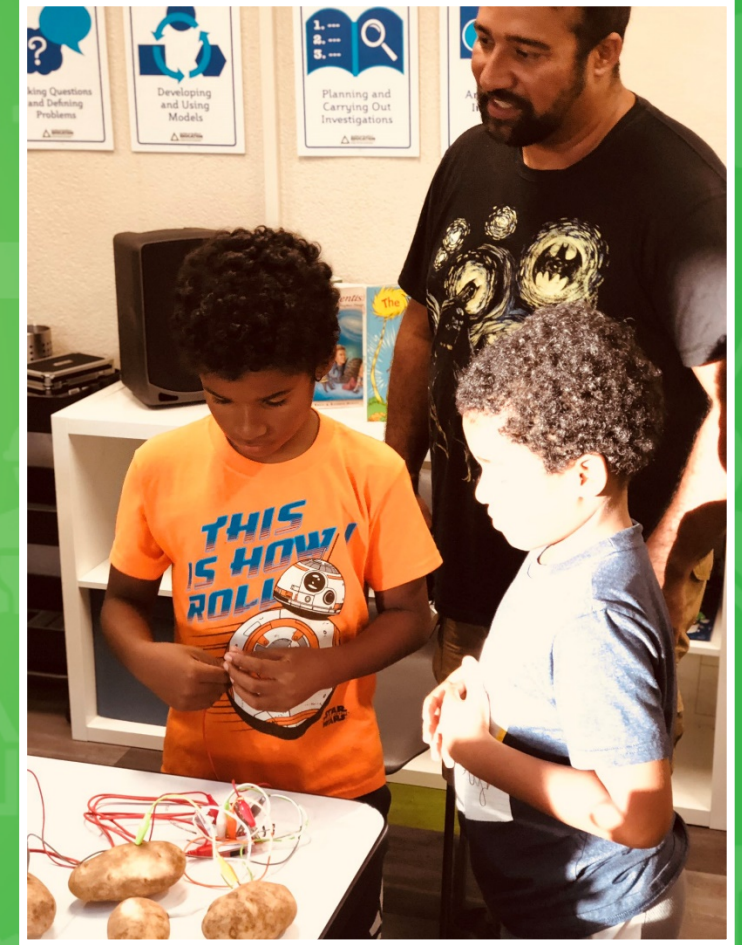
**Engineering Challenge:** Design and build a device that would help to prevent and/or reduce the amount of air pollution that humans add to the environment.

**Problem 2:** Plastic is one of the greatest threats to our oceans. According to estimates, 12.7 million tons of plastic waste are washed into the ocean every year. This leads to amphibians, fish, and mammals ingesting much of this waste. Reports estimate that nearly 1 million seabirds and 100,000 marine mammals die from plastic ingestion every year. Some species are on the verge of extinction because of this.

**Engineering Challenge:** Design and build a device that would help eliminate plastic waste and other harmful items from the beaches and/or oceans.



# Community Events

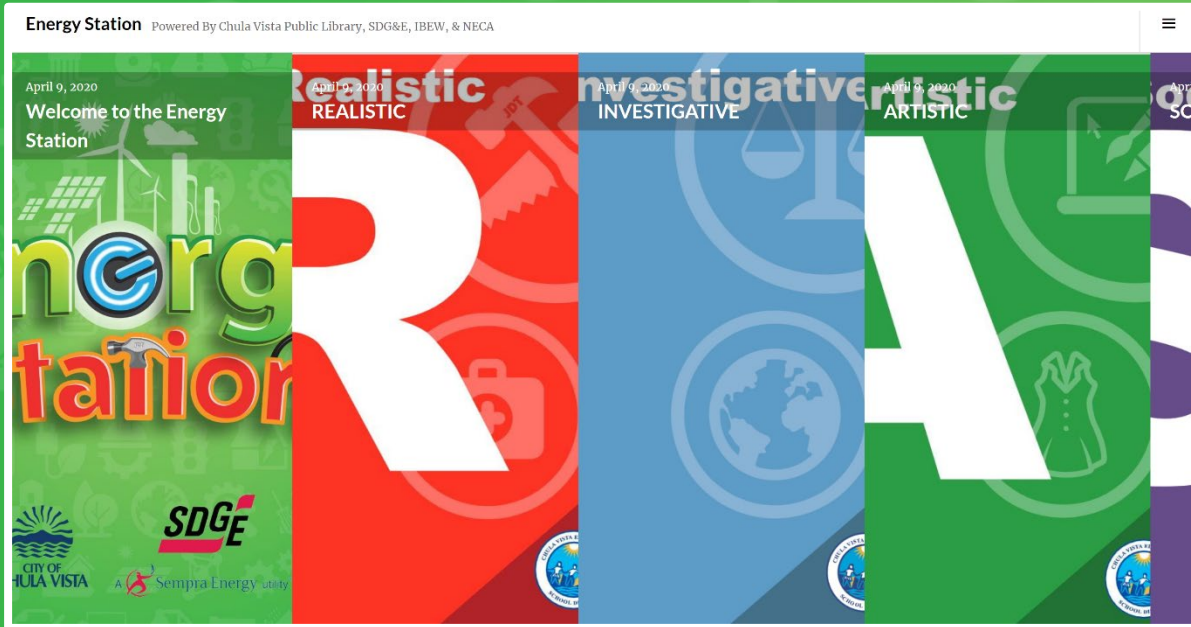




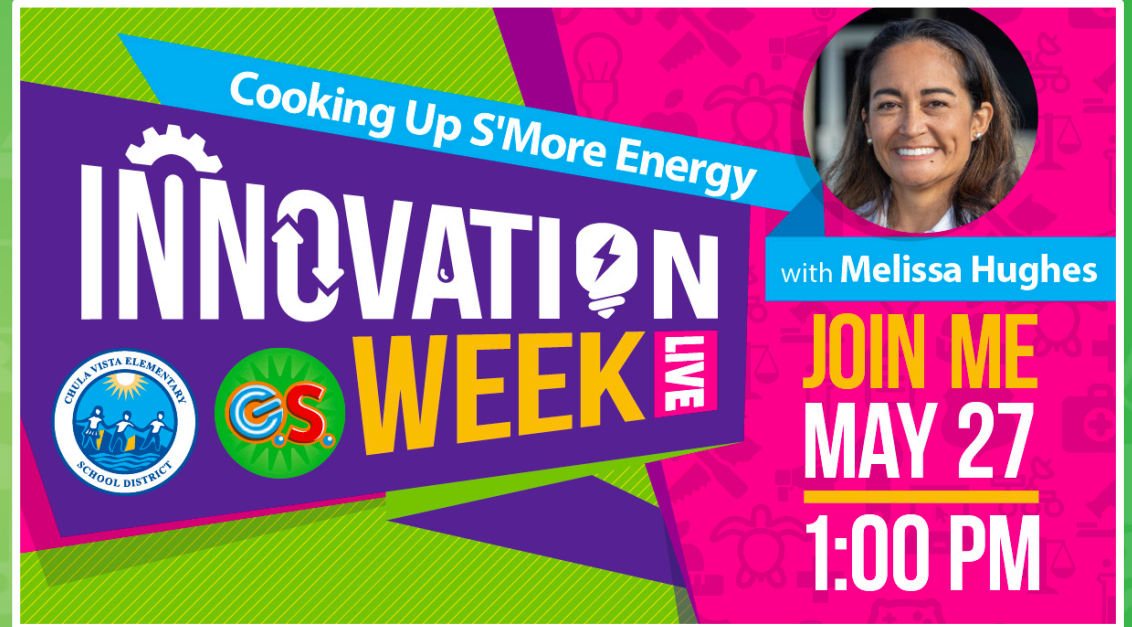
# Expanding the Experience



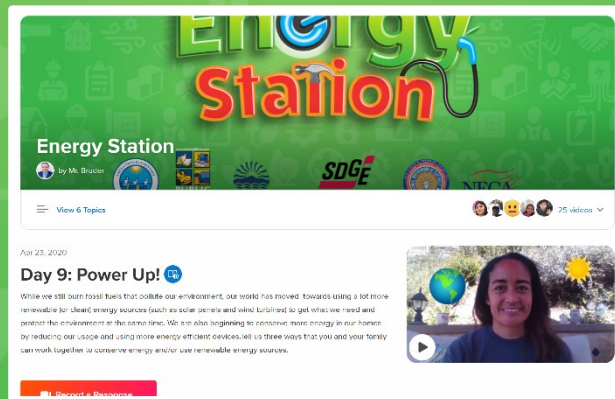
# In Response to COVID-19



Online Experience

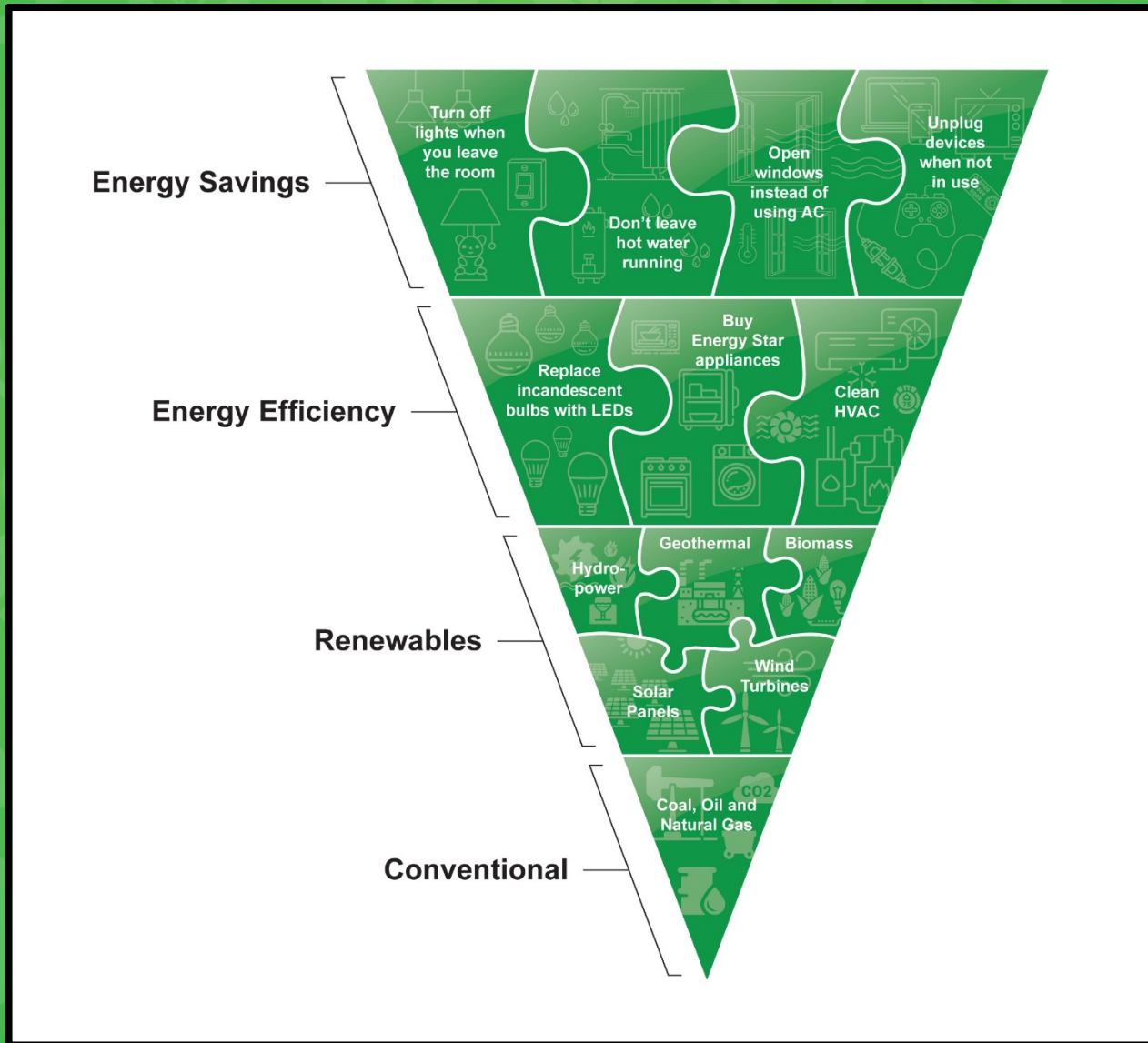


Live Experiences



Video Prompts

# Why?



# Why?

Preparing our future

## CLEAN ENERGY WORKFORCE



Transitioning into a clean energy economy will require creating pathways to inclusive, good-paying jobs. Here is what this transition will look like:

### OCCUPATIONS

The transition to a clean energy economy will primarily involve

**320**  
UNIQUE  
OCCUPATIONS

And will spread across three industrial sectors:

1. Clean energy production
2. Energy efficiency
3. Environmental management



These occupations comprise a range of responsibilities, including jobs unique to the energy sector as well as those that support services

### WAGES



**8% to 19%**  
is how much more clean energy jobs exceed national averages in mean hourly wages

Clean energy workers at lower ends of the income spectrum can earn **\$5 to \$10** more per hour than other jobs



### EDUCATION



Many occupations within the clean energy economy tend to have **lower educational requirements**

**50%** of workers attain no more than a **high school diploma...**



...yet earn **higher wages** than similarly-educated peers in other industries

### KNOWLEDGE



Occupations within **clean energy production & energy efficiency** tend to require greater scientific knowledge and technical skills than the average American job

Conversely, knowledge and skill requirements in **environmental management occupations** trend towards national averages



### DEMOGRAPHICS

The clean energy workforce is **older, dominated by male workers and lacks racial diversity** when compared to all occupations nationally



**Fewer than 20% of workers** in the clean energy production and energy efficiency sectors are **women**, while **black workers fill less than 10%** of these sectors' jobs



# CVESD Innovation Experiences



[https://www.youtube.com/watch?v=hP2TsW9DM3I&list=PLj3Jp4SZ07buPwgEULH1\\_AkgJAVW-TBC7&index=1](https://www.youtube.com/watch?v=hP2TsW9DM3I&list=PLj3Jp4SZ07buPwgEULH1_AkgJAVW-TBC7&index=1)

# Contact Information

Michael Bruder

Instructional Services Coordinator

Innovation and Instruction

[michael.bruder@cvesd.org](mailto:michael.bruder@cvesd.org)



A graphic for the word 'INNOVATION'. It includes a gear above the first 'I', a white silhouette of a bird in flight above the 'O', and a lightbulb above the final 'N'.  
**INNOVATION**



**All attendees are muted  
Please type your questions in the question box**

# Library Sustainability Resources

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Coleen Wisniewski

Environmental Sustainability Manager

City of Chula Vista





# CHULA VISTA Climate Action Plan



Adopted by City Council • September 2017

2017



[www.chulavistaca.gov/clean](http://www.chulavistaca.gov/clean)

- 
- **Strategies:**
    - Renewable and Efficient Energy
    - Water Conservation and Reuse
    - Waste Reduction
    - Smart Growth and Transportation
  - **Who:**
    - City facilities and operations
    - Chula Vista residents
    - Chula Vista businesses



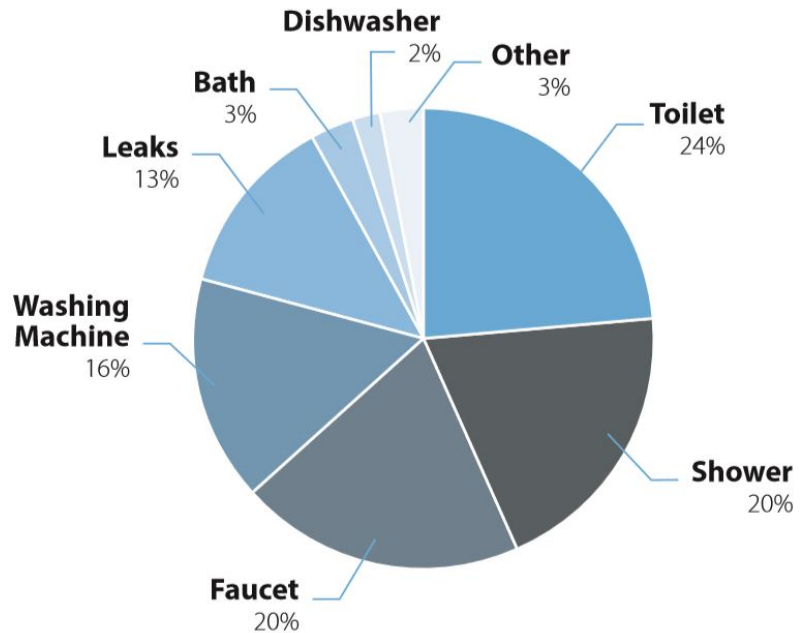
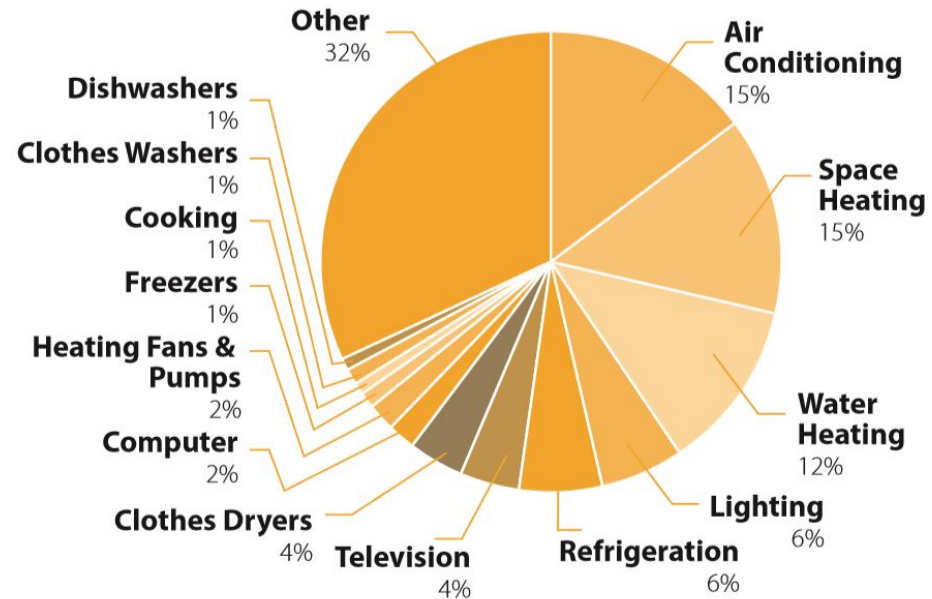
Provides books, tools and other resources to promote energy efficiency and sustainability for residents of Chula Vista

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# ENERGY AND WATER OVERVIEW



Average Household Energy Use



How Water is Used – Typical Water Usage for Single Family Home





**DO-IT-YOURSELF**

# **Sustainable Home Toolkit**

**Coming mid-October 2020!**

Reduce your utility bills with the Sustainable Home Toolkit!

Have a greener home - the Sustainable Home Toolkit available soon for free checkout at Chula Vista Library.

Included: supplies, tools, measuring devices and an easy-to-use guide on how to lower your utility bills while saving precious resources

We are committed to helping communities thrive while protecting our unique and diverse natural environment!

Stay tuned to the Library's social media platforms for updates on exact launch date and borrowing details.

### DIY TOOLKIT HOME ENERGY AND WATER SAVINGS CALCULATORS

Follow the instructions in the DIY Sustainable Home Toolkit User Guide to use each tool. Use this sheet to track your current usage and potential savings.

#### Toolkit Device: Kill a Watt Electricity Meter

| Device                      | Electricity Used (kWh) | Hours Used per Day | Days | Usage (kWh) | Annual Electric Device Usage (kWh) |
|-----------------------------|------------------------|--------------------|------|-------------|------------------------------------|
| Refrigerator                | 1.0                    | 24                 | 365  | 8736        | 8736                               |
| Freezer                     | 1.0                    | 24                 | 365  | 8736        | 8736                               |
| Washing Machine             | 0.5                    | 1                  | 365  | 1827        | 1827                               |
| Dishwasher                  | 0.5                    | 1                  | 365  | 1827        | 1827                               |
| Water Heater                | 1.0                    | 24                 | 365  | 8736        | 8736                               |
| Electric Dryer              | 1.0                    | 1                  | 365  | 1827        | 1827                               |
| Stove                       | 1.0                    | 1                  | 365  | 1827        | 1827                               |
| Light Bulbs                 | 0.1                    | 1                  | 365  | 365         | 365                                |
| TV                          | 0.1                    | 1                  | 365  | 365         | 365                                |
| Computer                    | 0.1                    | 1                  | 365  | 365         | 365                                |
| Cell Phone                  | 0.1                    | 1                  | 365  | 365         | 365                                |
| Video Game Console          | 0.1                    | 1                  | 365  | 365         | 365                                |
| Power Supply                | 0.1                    | 1                  | 365  | 365         | 365                                |
| Printer                     | 0.1                    | 1                  | 365  | 365         | 365                                |
| Router                      | 0.1                    | 1                  | 365  | 365         | 365                                |
| Modem                       | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart TV                    | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Thermostat            | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Plug                  | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Light Bulb            | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Door Lock             | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Garage Door Opener    | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Security System       | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Smoke Detector        | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Water Meter           | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Irrigation Controller | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Thermostat            | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Plug                  | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Light Bulb            | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Door Lock             | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Garage Door Opener    | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Security System       | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Smoke Detector        | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Water Meter           | 0.1                    | 1                  | 365  | 365         | 365                                |
| Smart Irrigation Controller | 0.1                    | 1                  | 365  | 365         | 365                                |

Annual Electric Device Usage: \_\_\_\_\_ kWh

Electricity Cost Per kWh: \_\_\_\_\_ \$

Annual Electric Device Cost: \_\_\_\_\_ \$

Total Household Electric Usage: \_\_\_\_\_ kWh

Total Household Electric Cost: \_\_\_\_\_ \$

**md** Economy **FOAM WINDOW SEAL** SMALL



CITY OF CHULA VISTA

DO-IT-YOURSELF

# Sustainable Home Toolkit

USER GUIDE

This guide will help you use the Sustainable Home Toolkit to maximize your energy and water savings and reduce waste!



**How Much can You Save?**

Estimated Potential Savings from Showerheads and Faucets

| Flow Rate (GPM) | Water Used (LPM) | Annual Water Savings (Gallons) | Annual Water Savings (Liters) | Annual Cost Savings (\$) |
|-----------------|------------------|--------------------------------|-------------------------------|--------------------------|
| 5.0             | 19.0             | 10,000                         | 37,854                        | \$1.00                   |
| 4.0             | 15.2             | 15,000                         | 56,781                        | \$1.50                   |
| 3.0             | 11.4             | 20,000                         | 75,676                        | \$2.00                   |
| 2.0             | 7.6              | 25,000                         | 94,571                        | \$2.50                   |
| 1.0             | 3.8              | 30,000                         | 113,466                       | \$3.00                   |

EPA WaterSense Flow • Shower: 1.8 Gpm, Bath Faucet: 1.2 Gpm



# SAVE MONEY AND THE ENVIRONMENT WITH

DO-IT-YOURSELF

## Sustainable Home Toolkit

**FREE\* TO CHECK OUT AT YOUR LOCAL CHULA VISTA LIBRARY!**

Learn how to use energy and water efficient equipment to help save money\*\* on your utility bills. With an easy-to-use guide, it's easy to make your home more sustainable.



For more information visit [www.chulavista.gov/departments/clean/home-toolkit](http://www.chulavista.gov/departments/clean/home-toolkit)  
Share your toolkit journey with #ChulaVistaCLEAN and tag @thinkchulavista



\*The toolkit must be returned to the library and is NOT free to keep.  
\*\*The DO-IT-YOURSELF Sustainable Home toolkit does not guarantee a decrease in utility bills as other factors may influence cost.  
This program is funded by California utility customers and administered by San Diego Gas & Electric (SDG&E) under the auspices of the California Public Utilities Commission. Participation in this program is voluntary and at the Customer's risk. ©2020 City of Chula Vista. Trademarks are property of their respective owners. All rights reserved.



<https://youtu.be/zclHUFAZqFM>

# WHAT'S IN THE TOOLKIT?



## ENERGY



### Kill-A-Watt® Meter **Return**

Measure the energy use of appliances and equipment to better understand your home's overall energy use.



### Infrared Thermal Imager **Return**

Check for heat loss in trouble areas such as windows, vents and door jams.



### Propane and Natural Gas Detector **Return**

Detect leaks along gas pipes or fuel lines for safety and conservation.



### Refrigerator Thermometer **Return**

Monitor the temperature in your refrigerator.



### LED (Light Emitting Diode) Light Bulb

Replace incandescent or compact fluorescent bulbs (LED) in high-use fixtures.



### Weather-stripping

Seals air gaps in windows and doors.



### Outlet Gaskets

Seals the void around your outlets and prevents heat loss.

**Return**

Please return these items to the library after 14 days



# WATER



## Thermometer **Return**

Check the temperature of your hot water supply.



## Water Flow Rate Bag **Return**

Measure the true rate of flow in gallons per minute of your faucets and showers.



## Drip Gauge **Return**

Measure how much water a leaky faucet is wasting each day and year.



## Pliers **Return**

Use to replace old faucet aerators and showerheads with new ones.



## Water Pressure Gauge **Return**

Test your house water pressure using the included water pressure gauge.



## Plumber's Tape **Return**

Help prevent leaks in your faucets and showerheads.



## Detect-A-Leak Toilet Tablets

Test your toilet for leaks using the tablets.



## Faucet Aerators

Install new aerators to help you save water.



## Low-flow Showerhead

Reduce your household water consumption by using a low-flow showerhead.



## Rubber Bands

**Return** Please return these items to the library after 14 days





DO-IT-YOURSELF

# Sustainable Home Toolkit

USER GUIDE



This guide will help you use the Sustainable Home Toolkit to maximize your energy and water savings and reduce waste!

# TRACKING YOUR SAVING

Use the tracking sheet included or available online at [www.chulavistaca.gov/departments/clean/home-toolkit](http://www.chulavistaca.gov/departments/clean/home-toolkit) to determine your household natural gas, electricity and water use. Once you determine your baseline, you will be able to see the differences this tool kit can help make in your home and your wallet!



## TRACKING ENERGY AND WATER USE



This document will help you determine your household baseline natural gas, electricity, and water use. For an online version of this tracking sheet please visit [www.chulavistaca.gov/departments/clean/home-toolkit](http://www.chulavistaca.gov/departments/clean/home-toolkit). These metrics will help you understand your home energy use and how your energy use changes over the course of the year. To complete this section, you will need your monthly SDG&E and Sweetwater Authority or Otay Water District bill data for the last three months (either hard copy or your online account) and the Sustainable Home Toolkit - How to Use Energy Savings Tools. For the most accurate picture of your home energy use, you can look at 12 months of energy data. When you are done make sure to get points for your savings in the Chula Vista Climate Action Challenge ([www.cvclimatechallenge.com](http://www.cvclimatechallenge.com)) and share online with #ChulaVistaCLEAN.

### Step 1

Calculate your natural gas usage

| Natural Gas Usage   | Bill Start Date | Bill End Date | Natural Gas Usage (therms) | Total Natural Gas Charges (\$) |
|---|-----------------|---------------|----------------------------|--------------------------------|
| Bill 1  |                 |               |                            |                                |
| Bill 2  |                 |               |                            |                                |
| Bill 3  |                 |               |                            |                                |
| Average =   |                 |               |                            |                                |
| $\frac{\text{Bill 1} + \text{Bill 2} + \text{Bill 3}}{3}$ |                 |               |                            |                                |

Divide your **Total Natural Gas Charges** by your **Natural Gas Usage** to calculate the Cost per Therm. Tracking this month to month will help you to track seasonal changes in energy costs.

$$\text{\$} \_\_\_\_\_\_ \div \_\_\_\_\_\_ \text{ therms} = \text{\$} \_\_\_\_\_\_ / \text{therms (cost per therm)}$$

### Step 2

Calculate your electricity consumption

| Electricity Usage   | Bill Start Date | Bill End Date | Electricity Usage (kilowatt hours) | Total Electricity Charges (\$) |
|---|-----------------|---------------|------------------------------------|--------------------------------|
| Bill 1  |                 |               |                                    |                                |
| Bill 2  |                 |               |                                    |                                |
| Bill 3  |                 |               |                                    |                                |
| Average =   |                 |               |                                    |                                |
| $\frac{\text{Bill 1} + \text{Bill 2} + \text{Bill 3}}{3}$ |                 |               |                                    |                                |

Divide **Total Electricity Charges** by your **Electricity Usage** to calculate the **cost per kilowatt hour**. Tracking this month to month will help you understand seasonal changes in energy costs. You can use the **cost per kilowatt hour** on the **Do-It-Yourself Toolkit Home Energy and Water Savings Calculator** sheet to calculate how much your electronic devices cost each year and potential lighting savings.

$$\text{\$} \_\_\_\_\_\_ \div \_\_\_\_\_\_ \text{ kWh} = \text{\$} \_\_\_\_\_\_ / \text{kWh (cost per kilowatt hour)}$$



# CHECKOUT AND RETURN PROCESS

The toolkits can be checked out and returned at the following Chula Vista Library Locations:



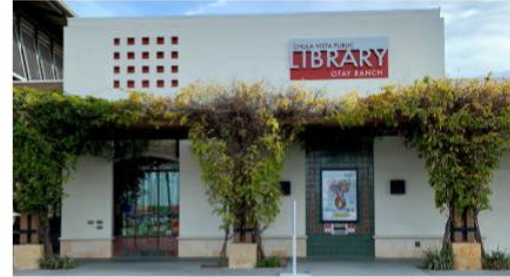
## Civic Center Branch

365 F Street  
Chula Vista, CA 91910  
(619) 691-5069



## South Chula Vista Branch

389 Orange Avenue  
Chula Vista, CA 91911  
(619) 585-5755



## Otay Ranch Branch

2015 Birch Road, Suite 409  
Chula Vista, CA 91915  
(619) 397-5740

For more information or to reserve items online please visit: [www.chulavistalibrary.com](http://www.chulavistalibrary.com)



Please contact the Chula Vista Library for more details about where you can check out a kit. To return the kit please call the library from which it was checked out.





The **Chula Vista Climate Action Challenge** makes it easy and fun to learn what actions you can take, along with helpful tips and resources for those actions. You can work together with your neighbors and share ideas and resources to meet your goals.

[www.chulavistacal.gov/clean](http://www.chulavistacal.gov/clean)



## **Contact info:**

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[www.chulavistaca.gov/clean](http://www.chulavistaca.gov/clean)



**All attendees are muted  
Please type your questions in the question box**

# Sustainability Webinars

- **Upcoming Sustainable Building Series:**

- October 13: CALGreen Residential Code
  - November 17: CALGreen Non-Residential Code
  - December 8: Indoor air quality and ventilation with a connection to COVID-19
- 
- Summer Sustainability Series recorded webinars

[www.chulavistaca.gov/clean](http://www.chulavistaca.gov/clean)

