



# Energy Innovation Challenge

## 2022 Prompt Packet

Decarbonization Solutions for  
Underserved Communities



*Accelerating the future of  
energy, **together.***

## The Problem

As the impacts of climate change are becoming increasingly prevalent across the globe, solutions of how to decarbonize various aspects of society are of utmost importance. Decarbonization refers to decreasing the carbon intensity of processes by lowering the amount of fossil fuels used.<sup>1</sup>

Utilities, regulators, communities, and other stakeholders are increasingly adopting decarbonization solutions through energy policies and programs across the country. While the United States moves to transition the energy industry and electrical generation towards a future less reliant on fossil fuels, fossil-fuel combustion attributed to residential and commercial buildings accounted for approximately 13% of U.S greenhouse gas emissions in 2020.<sup>2</sup> New policies are being introduced to help incentivize the transition away from fossil fuel combustion in all facets of society. For example, the federal rooftop solar investment tax credit (ITC) allows residential and commercial entities to deduct 26% of the cost of installing solar energy systems from their respective federal taxes. Private companies are also looking to make changes to promote decarbonization based on customer and investor interests. Pacific Gas & Electric Company, an investor-owned utility in San Francisco, will launch its Empower EV incentive program to provide up to \$2,500 in financial incentives for recently purchased electric vehicles.<sup>3</sup>

However, most electrification programs disproportionately benefit high-income communities that can afford products such as electric vehicles and rooftop solar. Groups that have lower socioeconomic thresholds (rural, urban, technologically inefficient, etc.) and/or are from environmental justice communities have less access to decarbonization solutions than their more affluent peers.

Transitioning away from fossil fuels in buildings and electric generation improves health, saves money, and ensures energy security. The high costs and lack of knowledge about the alternatives keep some solutions and technologies inaccessible for many communities. The transition must be equitable, allowing everyone to have access to new technologies regardless of the zip code. Thankfully, there are

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<sup>1</sup> <https://www.twi-global.com/technical-knowledge/faqs/what-is-decarbonisation>

<sup>2</sup> <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

<sup>3</sup> [https://www.pge.com/en\\_US/residential/solar-and-vehicles/options/clean-vehicles/electric/empower-ev-program.page](https://www.pge.com/en_US/residential/solar-and-vehicles/options/clean-vehicles/electric/empower-ev-program.page)

people and organizations that are creating solutions to address inequalities in the deployment of decarbonization solutions in the energy industry.

## **Your Task**

### **First Round**

You and your team are professionals employed by one of the following organizational groups:

1. Integrated Electric Utility
2. Start-up
3. Community Group (Local Government Agencies, Nonprofits, Faith-based Organizations, Universities, etc.)
4. Developer
5. Consultant
6. Regulatory Body (Government Agency, Regional Transmission Organization/Independent Systems Operator, Public Utilities Commission, etc.)

Your chosen theoretical organization is seen as an emerging leader in decarbonization efforts in a real underserved community of your choice. Your team has been tasked with presenting to local community members about a program that you will create to address decarbonization needs and opportunities not currently being met within the community. In your presentation, your team must identify your chosen community and clearly explain the existing decarbonization needs that your program will address.

The program must be a holistic, novel, solution that captures an important decarbonization opportunity designed specifically to benefit your chosen community's underserved population. In this presentation, you must introduce and explain your theoretical organization to the community and communicate why your organization is well positioned to address this potential decarbonization opportunity. The solution should show how the organization plans to work in partnership with the chosen community, to create local economic opportunities and foster continuous relationships. The presentation should also highlight how the decarbonization program will account for currently unmeasured positive externalities that result from the proposed solution. Your presentation and proposed solution must be designed to create buy-in from the community members that it serves.

### First Round Deliverable

Prepare a PowerPoint presentation (or preferred virtual presentation-building tool) detailing your solution to the proposed task at hand. On October 13<sup>th</sup> or 14<sup>th</sup>, you will have 20 minutes to present as a team to a panel of AES judges followed by a 10-minute question and answer period. Up to 6 teams will be selected to move on to the final round which will take place on October 28<sup>th</sup>. The presentation must be submitted via email to [innovationchallenge@aes.com](mailto:innovationchallenge@aes.com) no later than **October 12<sup>th</sup> at 11:59 pm EST**. Please send the presentation in PDF format.

### Final Round

Congratulations! Your community leaders have decided to move forward with your proposed decarbonization program. Before being selected, however, they need to see your implementation plan for your team's solution. This plan should include the logistics of executing your program, any barriers to entry, and any risks to the success of the program. The community is looking to invest in a program that will be an ongoing success, which is why the chosen program will need to be renewed periodically to promote continuous success.

### Final Round Deliverable

Prepare a PowerPoint presentation (or preferred virtual presentation-building tool) detailing your solution to the proposed task at hand. As a team, you will have 25 minutes to present to a new panel of AES judges followed by a 10-minute question and answer period. A winner and runner-up will be selected.

The presentation must be submitted via email to [innovationchallenge@aes.com](mailto:innovationchallenge@aes.com) no later than **October 27<sup>th</sup> at 11:59 pm EST**. Please send the presentation in PDF format.