

Clean Energy Key to COVID-19 Economic Recovery

Federal policymakers are currently confronting the myriad of public health, social, and economic challenges created by the COVID-19 crisis. Veteran policy leader, researcher, and business executive **EVgo CEO Cathy Zoi** – who oversaw investment of \$30B in stimulus funds during the Obama Administration – laid out key considerations for shaping an infrastructure recovery package in a recent webinar, **“Build Back Better: Shaping the U.S. Stimulus Package for Infrastructure,”** hosted by the World Resources Institute. To help advance the active dialogue on design of an effective stimulus package, her views are captured here.

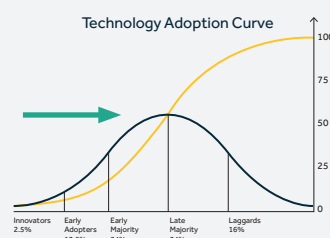
About EVgo: As the nation’s largest public EV fast charging network, **EVgo** is helping to accelerate the transition to a fully electric future with more than 800 stations nationwide – all powered by 100% renewable energy. EVgo recognizes that a fully electrified transportation sector is necessary to achieve critical climate goals, protect human health, promote renewable energy, and stimulate sustainable economic growth.

Market Transformation to Clean Energy

In 2019, US GDP was ~\$21 trillion. Significant sectors that matter to the economy are quite naturally also key parts of America’s climate pollution equation: over 5% of GDP was in the **energy** sector, **automobiles** were 3% (with more jobs than any other US manufacturing sector), and **housing** comprised another ~15% of 2019 GDP. The present economic malaise has reduced output and emissions from energy, cars and housing.

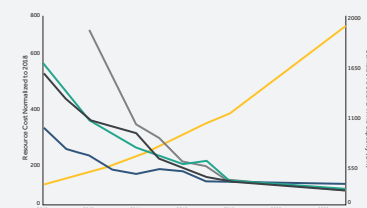
The opportunity: jumpstart economic growth in critical sectors by accelerating adoption of innovation that reduces climate pollution.

Experience from the last decade, much arising from the **2009 American Recovery & Reinvestment Act (ARRA) stimulus package**, demonstrates the economic power of policy-induced technology adoption. Four important segments of the clean energy ecosystem — **solar, wind, batteries and lighting** — witnessed massive scaling, substantial cost reductions, and a transformational mainstreaming of clean energy.



Addressing Climate Change: Accelerating Technology Adoption is Essential

Policy-induced acceleration yields tremendous results: Experience curve cost declines in solar, wind, batteries, and lighting in last 10 years



Graph courtesy of “Seven Challenges for Energy Transformation”, RMI, 2020

Policy Tools Applied to Energy During ARRA (and beyond)

A combination of policy instruments was used to catalyze growth in clean energy sectors. Some involved cash payments in the form of **grants or loans**: \$2B for specific renewable energy technologies, \$5B in energy efficiency block grants, \$5B for weatherizing the homes of low income families, \$3B in the ‘cash for clunkers’ program, \$5B for smart grid partnerships, \$8B in loans to automobile OEMs (and many others). These direct cash outlays worked in concert with other tools to stimulate the market, including **tax incentives** (e.g. advanced manufacturing, energy efficiency, and renewable energy), **standards and codes** (e.g. CAFE standards, appliance efficiency standards, building codes), and **information and marketing** programs (e.g. home energy scorecard, solar permitting ‘playbook’).



Grant & Loans



Tax Incentives



Standards and Codes



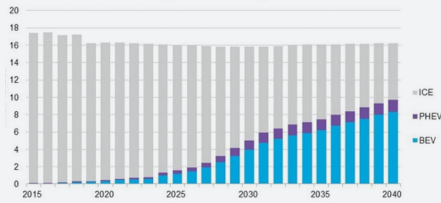
Information and Marketing Programs

By applying a variety of policy tools, the government leveraged investment from the private sector to maximize impact. In fact, many of the technology-based grant programs had cost-sharing requirements. This approach aimed to achieve sustained economic growth. It is estimated that ARRA led to creation of 900,000 ‘job-years’ in the clean energy sector alone.*

*<https://obamawhitehouse.archives.gov/the-press-office/2016/02/25/fact-sheet-recovery-act-made-largest-single-investment-clean-energy>

3 Must-Haves to Build Back Better

1. Ubiquitous EV Charging Infrastructure



➔ By 2025 need 45,000
DC fast chargers and
>500,000 L2s

Source: AFDC, ICCT, Experian, EVgo



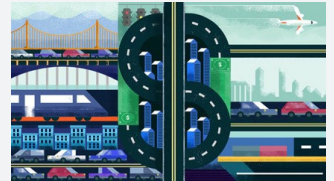
2. New Housing Supply Built Sustainably

Freddie Mac: US housing
market undersupplied by
3.3 million units



3. Public/Private Partnerships

- ➔ Government money offers leverage for private capital
- ➔ State and local governments effective partners with private sector



The lessons of ARRA and the clean energy progress that followed over the last ten years can help inform how to craft today's stimulus efforts to simultaneously address economic challenges and the climate crisis. A focus on critical sectors is essential. This necessitates a holistic examination of the roles of **transportation** and **housing** in fueling the US economy. On transportation, one specific investment opportunity that should be included in the next recovery package is **\$10B in cost-shared capital and operational expenditure support for a ubiquitous national EV charging network in, around, and between U.S. cities**. Without widespread public availability of convenient direct current (DC) fast charging and longer dwell-time level 2 charging, EV adoption will be stymied. The aforementioned cash for clunkers program could also be reconfigured and relaunched to accelerate uptake of the vehicles using that national charging network, creating a virtuous cycle of investment. A second area of emphasis must be on **alleviating America's housing shortage – and doing so with environmental best practice**. This means sustainable building design, efficient equipment installation, and integration of distributed renewable energy (e.g. solar), onsite storage, and EV charging infrastructure. Stimulating activity in these two key sectors will best be achieved by applying fit-for-purpose policy instruments to **public/private partnerships**. Government tax incentives, loans, grants, mandates, and well-funded marketing efforts can work in concert to create safe havens for private capital during turbulent economic periods like these. Further, state and local governments are well-placed to work with the business and research communities on implementation.

EVgo Recent Highlights



800+ Locations

EVgo operates 800+ U.S. fast charging locations



115 Million Americans

Live within a 15-minute drive of an EVgo fast charger



200,000+ Customers

EVgo serves all fast charge capable EVs



30,000+ Chargers on one app

EVgo customers can access 30,000+ chargers through our roaming partnership with ChargePoint



Powered by 100% Renewable Energy

EVgo is the first public charging network powered by 100% renewable energy



Now Serving Tesla Models 3/X/S

EVgo is the first public charging network to offer Tesla connectors

Cathy Zoi, CEO, EVgo



Cathy Zoi is the Chief Executive Officer (CEO) of EVgo. Zoi is a distinguished executive with decades of experience in the clean energy, investing, and policy communities. She is committed to working closely with automotive OEM, new mobility partners, utilities, and other industry stakeholders to deliver an exceptional fast-charging network for EV drivers in the United States and across the world.

Zoi previously served in the Obama Administration as Assistant Secretary and Acting Under Secretary at the Department of Energy, where she oversaw more than \$30 billion in energy investments. In the early 1990s, Zoi was Chief of Staff for Environmental Policy in the Clinton White House and she pioneered the Energy Star program while at the U.S. EPA.