

DOCKETED

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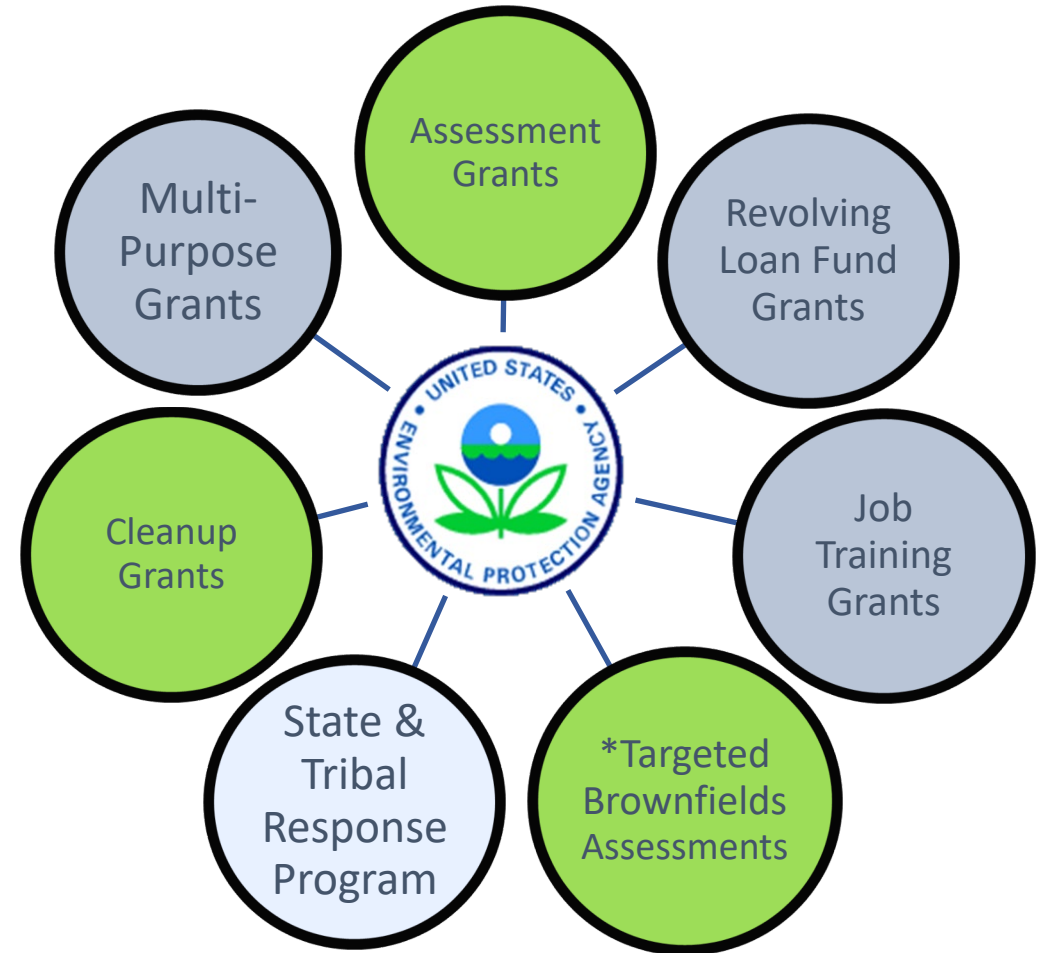
Transforming Brownfields into EV Charging Infrastructure



U.S. EPA Pacific Southwest Region - Eric Byous

Why Consider Brownfields for EV Charging Infrastructure?

- Revitalizing brownfields into EV charging infrastructure aligns with CEC Clean Transportation Program's Complementary Goals
- We've completed a study that demonstrated economic feasibility
- Are a ready source of properly-zoned sites that promote smart/sustainable growth principles
 - State and federal mapping tools available to find sites
 - Opportunity to transform a problematic site into a community asset for economic development
- Extensive state and federal resources available
- EPA's Brownfields Program excels at helping communities leverage capital for redevelopment projects
 - \$33.6B since inception
 - \$20 for every \$1 of brownfields funds
 - We work with communities to identify sources of funding from states, private foundations, and other federal agencies



U.S. EPA Brownfields Program

- Brownfields Definition: Real property that is underutilized or not being redeveloped due to existing or perceived contamination
 - There's no comprehensive list of brownfields sites as there are for state/fed enforcement programs (e.g. Superfund, Underground Storage Tanks, etc.)
 - [Cleanups in My Community](#) site
- Eligible entities - all units of local government, nonprofits, tribes, qualified community development entities, states
- U.S. EPA Region 9 Brownfields website:
 - <https://www.epa.gov/brownfields/brownfields-and-land-revitalization-pacific-southwest>
- It's about liability and financial risk reduction to encourage reuse of sites that municipalities, developers, and investors typically shy away from



Brownfields and Land Revitalization in the Pacific Southwest

The Brownfields Program in Region 9 provides technical assistance and grants to communities in Arizona, California, Hawai'i, Nevada, the Pacific Islands and 148 tribal nations. Brownfields assistance and grants can be used to assess, safely clean-up and plan for the transformation of contaminated properties into community assets.

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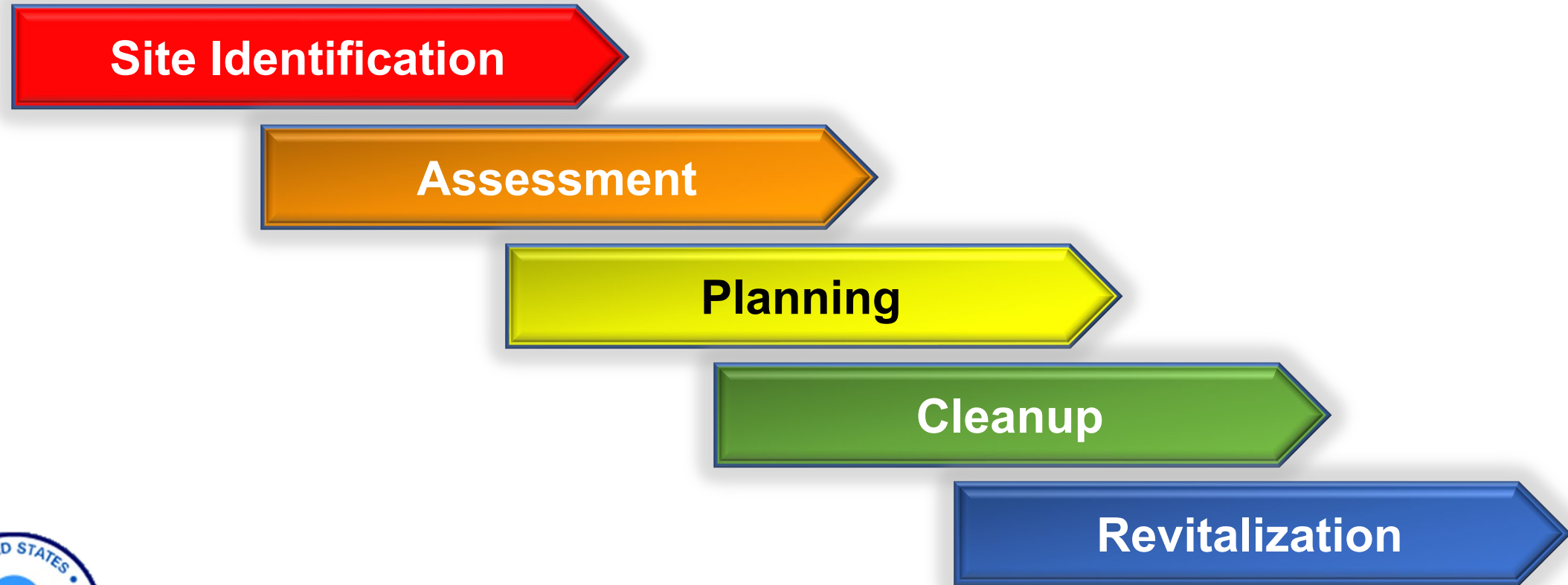
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BROWNFIELD GRANTS & TECHNICAL ASSISTANCE

https://www.epa.gov/sites/production/files/2020-09/documents/r9-bf-grants_and_technical-assistance-2020-04.pdf

	Targeted Brownfield Assessment	Assessment	Cleanup	Multipurpose	Revolving Loan Fund	Workforce Development
Purpose	Site inventory, contamination assessment, cleanup planning.	Site inventory, contamination assessment, redevelopment and cleanup planning, community involvement.	Site cleanup, reuse planning, community involvement.	Assessment Grant + Cleanup Grant	Provide no- and low-interest loans, or grants, for site cleanups. At least 50% must be used for loans. Grants are limited to \$350,000 per site.	Environmental job training in communities impacted by brownfields.
Applicant	Government Non-Profit Tribe					
Site Eligibility	Applicant not responsible for contamination. Privately held sites can be assessed.	Applicant not responsible for contamination. Privately held sites can be assessed.	Applicant not responsible for contamination and must own cleanup site(s).	Applicant not responsible for contamination. Privately held sites can be assessed. Applicant must own cleanup site(s).	Applicant is not responsible for contamination. Grant recipients must own the site, but borrowers do not. Privately owned sites can receive loans.	NA
Funding	\$100,000	\$600,000	\$500,000	\$800,000	\$1,000,000	\$200,000
Length	NA	3 years	3 years	5 years	5 years	3 years
Match	NA	\$0	20%	\$40,000	20%	\$0
Deadline	Rolling	Fall	Fall	Fall	Fall	Winter

Redevelopment Process Overview



Economic Feasibility Study with East Bay Community Energy

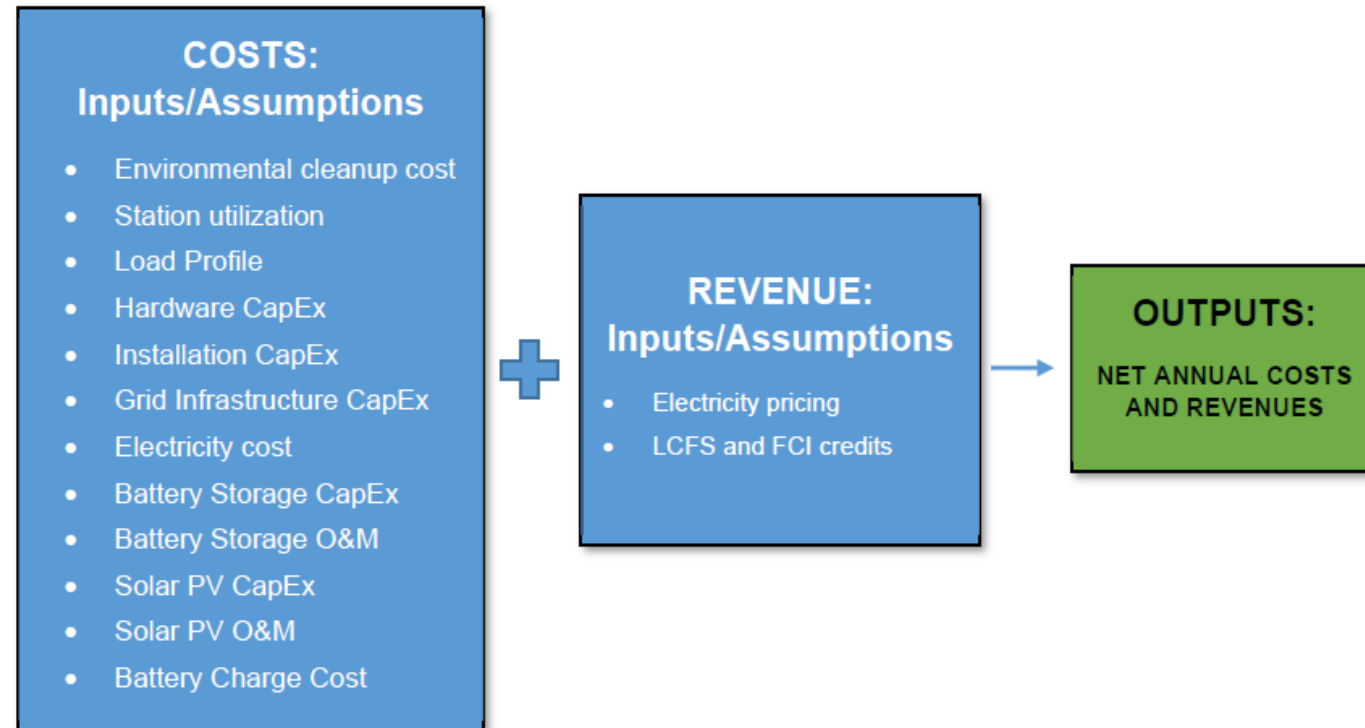
GOALS

- Determine the economic feasibility of redeveloping brownfield sites along I-880 into flagship fast charging (DCFC) hubs
- Develop information and tools to support potential future brownfields-to-EV hub projects

RESULTS

- Best-, Moderate-, and Worst-Case scenarios varied widely, with Best- and Moderate-Case having “net benefits” within 2 and 4-6 years, respectively
- Time-dependent pricing increased economic viability with a 1-2 year faster payback period
- **Economic analyses DID NOT include resiliency benefits or capital offsets from using EPA Brownfields or other grant resources for assessing and cleaning up properties**
- [EBCE Brownfields Assessment Grant](#) information and [Project Fact Sheet](#) available

Figure 3-1. Key Inputs and Outputs of the Financial Pro-Forma Model



Scenario 1. Baseline (DCFCs Only)

Scenario 2. Baseline + Solar PV

Scenario 3. Baseline + Solar PV + Battery Energy Storage

Scenario 4. Baseline + Time-Dependent Pricing

Redevelopment Advantages: Brownfields-to-EV Infrastructure Projects

- Federal and state subsidies for installing ZEV charging stations likely to increase in coming years
- Cleanup goals can be more flexible compared to many reuse options while maintaining standard human health protections
 - Open air construction of EV charging stations reduces/eliminates need to mitigate vapor intrusion
 - Capping is an ideal remedy and can be augmented to springboard redevelopment
- Groundwater remediation can proceed concurrently with EV charging station operations with oversight agency approval
- Many brownfields exist along the US interstate highway system, ideal locations for this revitalization opportunity



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