

HOW EPIC CAN PROVIDE COMMUNITY BENEFITS

| | Benefit Area | Past / Current EPIC Project Examples |
|--|--------------------------|--|
| Benefits to All Customers | Safety | <ul style="list-style-type: none"> Improvements to weather & fire danger models to help prevent wildfire ignitions |
| | Reliability / Resiliency | <ul style="list-style-type: none"> Innovative protection schemes for substation transformers to prevent broad power outages |
| | Environmental | <ul style="list-style-type: none"> Demonstrations that inform industry standards for Smart Inverters to enable clean generation integration |
| | Economic | <ul style="list-style-type: none"> Using drones for more efficient inspections to reduce operating costs which lower customer bills |
| Benefits to Specific Communities / Customers | Safety | <ul style="list-style-type: none"> Local deployment of hardware to rapidly de-energize power lines in wire-down events, to improve community safety |
| | Reliability / Resiliency | <ul style="list-style-type: none"> Local installation of devices to proactively address power quality issues, to keep agricultural equipment operating in the San Joaquin Valley Local installation of multi-customer microgrids to keep a community's critical facilities powered during an outage |
| | Environmental | <ul style="list-style-type: none"> Local public transit fleet electrification to improve air quality |
| | Economic | <ul style="list-style-type: none"> Lowering customer ownership costs of Distributed Energy Resource, such as through: <ul style="list-style-type: none"> Innovations that allow for reduced interconnection costs New communication system that reduces the cost of complying with CPUC data-sharing requirements |

PG&E applied the DAC Advisory Group (DACAG)'s Equity Framework to its EPIC 4 Investment Plan by mapping each of its 24 investment topics to the equity principles they address

Table 2: EPIC 4 Equity Matrix

| Topic # | R&D Topic | Health and Safety | Access and Education | Financial Benefits | Economic Development |
|---------|--|-------------------|----------------------|--------------------|----------------------|
| 1 | Microgrid Enablement | • | • | • | • |
| 2 | Individual Customer Resiliency | • | • | • | • |
| 3 | Long Duration Energy Storage | • | | • | • |
| 4 | Integration of New Generation Technologies | • | ◦ | • | • |
| 5 | Grid Sensing and Communication | • | | | |
| 6 | Grid Scenario Planning | | | ◦ | |
| 7 | Advanced Drone Applications | • | | | |
| 8 | Advanced Predictive Maintenance and Failure Cause Analysis | • | | | |
| 9 | Work Management | ◦ | | ◦ | |
| 10 | System Protection | • | | | |
| 11 | Interconnection Enablement | • | • | • | • |
| 12 | Advanced Distribution Power Flow Management | • | | ◦ | |
| 13 | Electric Vehicle Charging | • | • | • | • |

EPIC BENEFITS FRAMEWORK

| Benefit Area | Measurement |
|--|---|
| Reliability | <ul style="list-style-type: none"> • Equipment service life extension • Outage number, frequency and duration reductions • Reduction in system and equipment failures • Improved reliability to DAC customers |
| Safety | <ul style="list-style-type: none"> • Worker safety improvement and hazard exposure reduction • Public safety improvement and hazard exposure reduction • Safety improvements targeted towards DAC |
| Environmental Benefits | <ul style="list-style-type: none"> • Habitat area disturbance reductions • Reduce GHG emissions (MMTCO₂e) • DAC Residents impacted by reduced emissions |
| Economic Benefits | <ul style="list-style-type: none"> • Maintain/reduce O&M costs • Maintain/reduce capital costs • Peak load reduction • Reduced cost of DER adoption • Reduced cost of DER adoption for DAC. • Avoided customer energy use • Follow-on funding to projects • Customer bill or interconnection savings • CO₂ equivalent savings |
| Effectiveness of Information Sharing | <ul style="list-style-type: none"> • Number of industry sharing events/papers presented • Number of times reports are cited in scientific journals and trade publications for selected projects • Number of information sharing forums held • Stakeholder attendance at workshops • Results provided to standard development organizations |
| Adoption of EPIC Technology | <ul style="list-style-type: none"> • EPIC project results referenced in regulatory proceedings • Number of technologies/use cases demonstrated, in direct use post-EPIC • Number of technologies included for funding in the GRC, or for which post-EPIC funding has otherwise formally been committed |
| Technology Development Progress | <ul style="list-style-type: none"> • Technology Readiness Level (TRL) Scale Assignment |
| Support of CPUC Proceedings or State Policy | <ul style="list-style-type: none"> • Specific CPUC proceedings or state mandates |
| Informed Industry / Company Standards | <ul style="list-style-type: none"> • Specific standards which were created or updated |