

October 2024

# PGE Community Benefit Indicator Research – CBIAG Discussion

Pt.1 Recap and Pt.2 CBI Discussion

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## Agenda

- Recap of CBI discussion from Sept Meeting
- Study / CBI Background
- CBI discussion / feedback





**what are  
community  
benefits?**

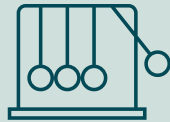


# community benefit study for PGE



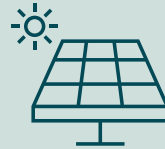
## energy efficiency

Installing equipment or adopting behaviors that reduce the total amount of energy use



## demand response

Reducing / shifting electric usage during peak times



## solar power

Rooftop (or community) solar projects providing on-site / local energy generation and reduced utility bills



## battery storage

Customer-sited batteries that can be used during outages or controlled by utilities



## time of use rates

Time-varying energy rates that reflect higher on-peak pricing and lower off-peak pricing

CASE STUDY

# what happens when you weatherize a home and replace with energy efficient equipment?

energy savings

bill reduction

increased comfort

improved health and safety

reduced hardship / economic well-being

avoided greenhouse gas emissions

increased resiliency



# types of energy resources

## From customers + buildings

Demand Response

EV  
Managed  
Charging

Energy  
Efficiency

Community  
Based  
Renewable  
Projects

Time of Use  
Rates

## From utilities + power grid

Solar Power

Wind Power

Battery  
Storage

Gas or  
Coal-Fired  
Power Plans

Hydro  
Power

Solar /  
Storage  
Combos  
(Microgrids)



back to this  
community  
benefit study...  
**what are we  
doing and  
why are we  
doing it?**

**1) identifying**

a list of community benefits

**2) categorizing**

those that can be  
monetized

**3) pulling**

specific benefits into the  
resource planning process

**4) tracking**

certain non-monetized  
metrics/indicators to help  
improve equitable access to  
clean energy programs and  
improved health,  
environmental, and  
resilience outcomes in  
priority communities

# Background / Definitions

**CBI Category:** As directed by OPUC, CBIs must cover one of the five categories (and often more than one in practice):

- resilience/reliability (system and community)
- health and community well-being
- environmental impacts
- energy equity (distributional, intergenerational)
- economic impacts

**CBI List:** Cadeo identified **30 CBIs** based on these categories and a range of sources, including UM2225 Stakeholder CBI Proposal






# CHARACTERIZING CBIS BY CATEGORY



















































 Economic Impacts

 Energy Equity

 Health + Community Wellbeing

 Resilience/Reliability

 Environmental

1 	Economic development impact	7 	Ancillary services	13  	Increased availability of electricity storage in Tribal and non-Tribal communities	19 	Increased satisfaction and pride	25  	Improved grid resiliency
2 	Increased access to jobs	8  	Reduction in GHG Emissions	14  	Increased number of clean energy generation that powers Tribal communities	20  	Improved comfort in home	26  	Increased resilience/reliability in targeted communities
3  	Increased property or asset values	9 	Improved access to reliable clean energy	15  	Improve efficiency and housing stock in utility service territory, including LI housing	21 	Improved public health outcomes	27  	Reduction in recovery time and increase in survivability from outages
4  	Economic well-being	10 	Improved participation in clean energy programs by EJ communities	16  	Increased energy affordability/reduction in energy burden for EJ communities	22  	Improved community health outcomes in targeted communities	28  	Reduction in frequency and duration of black/brownouts in target communities
5  	Increased productivity	11 	Increased awareness of utility programs for EJ communities	17  	Reduced arrearages/late payments	23  	Reduced local emissions (pollution burden, pollution exposure)	29  	Reduced risk to targeted communities from outages
6  	Energy security	12 	Meaningful bilateral engagement between utilities and tribes on siting	18  	Reduced residential disconnections and collections	24 	Improved household health and safety outcomes in targeted communities	30  	Increased neighborhood safety from natural disasters



# CHARACTERIZING CBIS BY CATEGORY/RESOURCE APPLICABILITY:

**ECONOMIC**

**ENVIRONMENTAL**

No	CBI	Description
1	Economic development impact	Value of any incremental economic development provided by DERs (direct, indirect, induced effects)
2	Increased access to jobs	Number of jobs created through deployment/operation of DERs (direct, indirect) and derived from induced effects (spending of increased revenue on other goods/services)
3	Increased property or asset values	Value of incremental increase in property value for buildings or equipment as a result of DER installation
4	Economic well-being	Customer impacts beyond bill savings (including reduced stress of associated with financial instability/hardship; reduced complaint calls, disconnections / reconnections, foreclosures)
5	Increased productivity	Changes in productivity for individuals or businesses, including increased operational flexibility and reduced maintenance costs; reduced food/medicine waste and spoilage; reduced days of missed work / school due to avoided outage.
6	Energy security	Reduced dependency of energy from external markets (volatile prices) or other resources not under contract
7	Ancillary services	Services provided to ensure reliable operation of the electric grid (regulation, spinning and non-spinning reserves, etc.)
8	<b>Reduction in GHG Emissions*</b>	Reduction in fossil fuel emissions from power generation



# CHARACTERIZING CBIS BY CATEGORY/RESOURCE APPLICABILITY:

## EQUITY

No	CBI	Description
9	Improved access to reliable clean energy	Metric tracking progress toward increased accessibility of reliable clean energy
10	Improved participation in clean energy programs by EJ communities	Metric tracking progress toward increased adoption, participation, and benefit attribution for EJ communities associated with energy investments.
11	Increased awareness of utility programs for EJ communities	Metric tracking progress toward increased awareness of energy programs for customers within EJ communities; related to improved access and participation.
12	Meaningful bilateral engagement between utilities and tribes on siting	Metric tracking progress toward increased adoption and benefit attribution for tribal communities associated with these investments.
13	Increased availability of electricity storage in Tribal and non-Tribal communities	Metric tracking progress toward increased adoption and benefit attribution associated with these investments.
14	Increased number of clean energy generation that powers Tribal communities	Metric tracking progress toward increased adoption and benefit attribution associated with these investments.
15	Improve efficiency and housing stock in utility service territory, including LI housing	Metric reflecting improvements in housing and equipment including bill savings, health and safety outcomes, and repairs via energy investments for a given community (related to several other CBIs)
16	Increased energy affordability/reduction in energy burden for EJ communities	Metric tracking increased affordability primarily through bill reduction of energy investments; related to economic well-being.
17	Reduced arrearages/late payments	Metric tracking reduced arrearages achieved primarily through bill reduction of energy investments; related to economic well-being and affordability.
18	Reduced residential disconnections and collections	Metric tracking reduced disconnections/reconnections and other related financial penalties achieved primarily through bill reduction of energy investments; related to economic well-being and affordability.



# CHARACTERIZING CBIS BY CATEGORY/RESOURCE APPLICABILITY:

## HEALTH/COMMUNITY WELLBEING

No	CBI	Description
19	Increased satisfaction and pride	Increased satisfaction or pride in energy investments related to reduced environmental impacts and to aspects of perceived empowerment and energy independence.
20	Improved comfort in home	Improved comfort either involving thermal comfort (e.g., ability to maintain comfortable home heating/cooling) or noise reduction (e.g., reduced noise from windows, insulation, infiltration controls).
21	Improved public health outcomes	Changes in societal health outcomes related to DER adoption, including changes in productivity affected by health (lost workdays) and in medical costs associated with reduced health incidents (mortality, hospital/emergency room visits, chronic/acute illnesses)
22	Improved community health outcomes in targeted communities	Metric tracking progress toward societal public health outcomes related to energy investments occurring in target communities
23	Reduced local emissions (pollution burden, pollution exposure)	Changes in local emissions created by increased investment in energy resources displacing those that require fossil fuel combustion. This is an input into health outcomes
24	Improved household health and safety outcomes in targeted communities	Impacts related to health, safety, and repair work completed as part of energy resource investment, improving housing conditions and yielding health/safety outcomes. This may include outcomes related to health (remediation of mold, asbestos, lead, ventilation/HVAC, appliance safety), safety (lighting/doors/windows improving home security, repairs allowing for aging in place), and general repairs driving costs/hardship (e.g., roof repair or other that reduces exposure, improves comfort, reduces heating/cooling costs).



# CHARACTERIZING CBIS BY CATEGORY/RESOURCE APPLICABILITY:

## RESILIENCE

No	CBI	Description
25	Improved grid resiliency	Resilience (and reliability) have potential impacts at societal, host customer, and utility system levels, involving anticipation preparation, and recovery of disruptions, reducing duration and associated outages impacts. At a societal level, this goes beyond host and utility system such as maintaining critical facilities yielding health/safety benefits.
26	Increased resilience/reliability in targeted communities	Metric tracking resilience outcomes related to siting DERs or infrastructure upgrades occurring in target communities; related to societal resilience.
27	Reduction in recovery time and increase in survivability from outages	Metric tracking improvements in recovery time associated with energy investments; related to societal resilience.
28	Reduction in frequency and duration of black/brownouts in target communities	Frequency and duration are metrics to track outage characteristics that can be used to identify patterns and to target deployment of DERs and/or grid infrastructure upgrades to minimize impacts in target communities; related to societal resilience.
29	Reduced risk to targeted communities from outages	The concept of risk relates to a variety of impacts related to outages, including hardship, mobility, adverse health impacts, food spoilage; this metric is applicable to how these risk outcomes are minimized withing target communities relative to energy investments; related to societal resilience.
30	Increased neighborhood safety from natural disasters	Metric tracks progress toward increased safety outcomes associated with energy investments, such as preservation of critical facilities, indirect benefits on health and safety, and latency of response/recovery in the event of disruption; related to societal resilience.



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**thank you!**