CONGRESSIONAL BRIEFING

Protecting Vulnerable Communities from Climate Impacts

Friday, April 16, 2021
About EESI...

- **NON-PROFIT**
  Founded in 1984 by a bipartisan Congressional caucus as an independent (i.e., not federally-funded) non-profit organization

- **NON-PARTISAN**
  Source of non-partisan information on environmental, energy, and climate policies

- **DIRECT ASSISTANCE**
  In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop “on-bill financing” programs

- **SUSTAINABLE SOCIETIES**
  Focused on win-win solutions to make our energy, buildings, and transportation sectors sustainable, resilient, and more equitable
...About EESI

HILL BRIEFINGS
Video recordings and written summaries of Congressional briefings

CLIMATE CHANGE SOLUTIONS
Bi-weekly newsletter with all you need to know including a legislation tracker

SOCIAL MEDIA (@EESIONLINE)
Follow us on Twitter, Facebook, LinkedIn, Instagram, and YouTube

FACT SHEETS
Timely, science-based coverage of climate and clean energy topics
Affordable Housing at Risk from Coastal Flooding

Program on Sea Level Rise | (sealevel@climatecentral.org)
Why? A triple threat

- Physical vulnerability of buildings
- Socioeconomic vulnerability of residents
- Increasing floods from rising seas
Affordable housing definition used

- federally subsidized
- “naturally occurring” = unsubsidized
  - Rents below local market rates
  - or < 30% of local median household income
Research factors

- Climate pollution level
- Sea level rise
- Flood heights and likelihoods
- Different years (2050 focus)
- Individual building footprints

Key findings

- Exposure triples by 2050
- NJ, NY, and MA
- Threat concentration
<table>
<thead>
<tr>
<th>State</th>
<th>2000 Baseline</th>
<th>2050 Projection</th>
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</thead>
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<tr>
<td>New York</td>
<td>3,000</td>
<td>7,000</td>
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<tr>
<td>New Jersey</td>
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<td>Massachusetts</td>
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<tr>
<td>Other States</td>
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TABLE 2 - Future threat of coastal flooding to the top 20 cities exposed (in absolute terms) for 2050, under high carbon emissions scenario (RCP 8.5)

*Exposure may be overstated in Foster City, CA where new levees may not have been included in a national levee inventory used in the analysis. See paper for details.
Resources via coastal.climatecentral.org

- Scientific paper
- Report
- Recorded webinar
- Map tool
- Dynamic fact sheets
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2050

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America's already scarce affordable housing.
Affordable Housing at Risk of Flooding in 2050

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America’s already scarce affordable housing.
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2030

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America's already scarce affordable housing.

DETAILS AND LIMITATIONS

REPORT
Scientific Paper
Webinar

AREAS TO COMPARE
Counties
STATE
New Jersey

YEAR
2030

CHANGE OTHER SETTINGS

Exposure (housing units)
- 1316 or more
- 658 to 1315
- 1 to 657
- 0
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2040

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America's already scarce affordable housing.

DETAILS AND LIMITATIONS
COASTAL RISK SCREENING TOOL

AFFORDABLE HOUSING AT RISK OF FLOODING IN 2100

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America’s already scarce affordable housing.

DETAILS AND LIMITATIONS

Report Scientific Paper Webinar

AREAS TO COMPARE

Counties

STATE

New Jersey

YEAR

2100

CHANGE OTHER SETTINGS

Video Tutorial

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ESPAÑOL GET UPDATES REQUEST RISK ANALYSIS SUPPORT OUR WORK

Expose (housing units)

- 3706 or more
- 1853 to 3705
- 1 to 1852
- 0
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2100

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America’s already scarce affordable housing.
COASTAL RISK SCREENING TOOL

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DETAILS AND LIMITATIONS

Report Scientific Paper Webinar

AREAS TO COMPARE

Counties

STATE
New Jersey

YEAR
2100

Video Tutorial

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Map data ©2021 Google Terms of Use
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DETAILS AND LIMITATIONS

AREAS TO COMPARE

Counties

STATE

New Jersey

YEAR

2050

Exposure (housing units)

- 2141 or more
- 1071 to 2140
- 1 to 1070
- 0

CHANGE OTHER SETTINGS

Video Tutorial
COASTAL RISK SCREENING TOOL

AFFORDABLE HOUSING AT RISK OF FLOODING IN 2100

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DETAILS AND LIMITATIONS

AREAS TO COMPARE

Counties
STATE
New Jersey

YEAR
2100

CHANGE OTHER SETTINGS

Video Tutorial

Housing Type
- All affordable housing
- Subsidized housing only

POLLUTION SCENARIO
- unchecked pollution

Estimate Type
- Best estimate
- Good luck scenario
- Medium luck scenario
- Bad luck scenario

DONE

Exposure (housing units)
- 3706 or more
- 1853 to 3705
- 1 to 1852
- 0
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2100

The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America's already scarce affordable housing.

Housing Type
- All affordable housing
- Subsidized housing only

Pollution Scenario
- Moderate cuts

Estimate Type
- Best estimate
- Good luck scenario
- Medium luck scenario
- Bad luck scenario

Areas to Compare
- Counties
- State
- Year

Exposure (housing units)
- 3354 or more
- 1677 to 3353
- 1 to 3353
- 0

Report | Scientific Paper | Webinar

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DETAILS AND LIMITATIONS

Report, Scientific Paper, Webinar

AREAS TO COMPARE

Counties

STATE
Florida

YEAR
2050

CHANGE OTHER SETTINGS

Video Tutorial

Choose Your Download

- Fact Sheet: PDF of this map, summary data, and related resources
- Map Image: PNG of this map
- CSV Data: Spreadsheet of the data associated with this map
- Flood Layers: Global GIS map layers illustrating the extent of sea level rise and coastal flooding
- Land Elevation Data: CoastalDEM®, Climate Central’s proprietary, more accurate Digital Elevation Model for coastal areas

Also freely available: data, reports, and figures on coastal flood threats to population and infrastructure for thousands of jurisdictions in the US and Caribbean.

Contact us about assessing threats to your own assets or communities.

CANCEL
Affordable Housing at Risk of Coastal Flooding in Florida in 2050

The combination of the physical vulnerability of affordable housing, the socioeconomic vulnerability of residents, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America's already scarce affordable housing.

Exposure (housing units)
- 266 or more
- 134 to 265
- 1 to 133
- 0

962 UNITS EXPOSED

Frequently Asked Questions

What causes sea level to rise?
Warming temperatures due to climate change are causing ice to melt and water to expand, increasing the volume of ocean waters and causing the sea level to rise. Additionally, some places are sinking due to natural processes or extraction of water or fossil fuels from the ground.

What causes climate change?
The main activity causing climate change is the burning of fossil fuels, which emits heat-trapping pollution.

Can sea level rise be slowed?
Major cuts in heat-trapping pollution would reduce the future sea level rise, but some sea level rise is inevitable due to pollutants already in the atmosphere.

How does sea level rise affect flooding?
Sea level rise raises the platform atop which beaches, dunes, and storm surge arrive, making coastal floods more severe and more frequent.

Why is affordable housing particularly vulnerable to sea level rise?
Affordable housing tends to be older and is rarely equipped with resiliency-enhancing features such as flood proofing, off-grid energy, or backwater valves, due to the cost of such measures. Additionally, residents of affordable housing may lack the financial resources to repair, rebuild, or retreat from their housing after it is damaged by flood waters.

Counties with the most affordable housing at risk of coastal flooding in 2050

1. Miami-Dade 399 Units
2. Monroe 216 Units
3. Broward 200 Units

For more resources, state briefs, methods, full citations, limitations, and more see coastal.climatecentral.org (choose map: affordable housing)

About This Analysis
This analysis provides a best estimate of affordable housing units at risk if annual global climate pollution continues to climb through most of the century, eventually resulting in 3 or 4°C of warming by 2100 (a pathway known as RCP 8.5).

Reducing Your Risk
- Actions to curb heat-trapping pollution will reduce sea level rise, but some rise is unavoidable.
- Learn more about the actions you can take yourself at sealevel.climatecentral.org/flood-preparation.
- Connect us to learn how we can help your community participate in FEMA's Community Rating System.
- Enterprise Community Partners' Portfolio Proctor tool identifies properties risk from climate disasters.
- Enterprise Community Partners' Keep Safe guide shows how to make homes more resilient to natural disasters.
- New Ecology's Multifamily Housing Resiliency Audit provides actions to improve resiliency to severe weather.

Climate Central is a non-profit science and news organization providing authoritative information to help the public and policymakers make sound decisions about climate and energy.

Learn more about what is at risk from sea level rise and coastal flooding at coastal.climatecentral.org and riskfinder.org

Terminology
Affordable housing includes both subsidized housing and naturally occurring affordable housing.

Subsidized housing is supported by federal or state programs.

Naturally occurring affordable housing is rented below fair market rate or for less than 30% of median income levels without rental assistance.

Exposure or units exposed denotes the number of affordable housing units in a given area expected to be exposed to at least one coastal flood risk event in a year.

A unit experiences a coastal flood risk event when the local coastal water level reaches higher than the lowest ground elevation of the building containing the unit.

"At-risk-of-flooding" is a synonym for exposure to flooding, as defined above.
Affordable Housing at Risk of Coastal Flooding in Florida in 2070

The combination of the physical vulnerability of affordable housing, the socioeconomic vulnerability of residents, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America’s already scarce affordable housing.

2092 units exposed

Exposure: housing units
- 475 or more
- 238 to 474
- 1 to 237
- 0

Congressional Districts with the most affordable housing at risk of coastal flooding in 2070

1. FL-27: 712 Units
2. FL-28: 379 Units
3. FL-22: 276 Units

Reducing Your Risk
- Actions to curb heat-trapping pollution will reduce sea level rise, but some rise is unavoidable.
- Learn more about the actions you can take yourself at seawal.climatecentral.org/flood-preparation.
- Contact us to learn how we can help your community participate in FEMA’s Community Rating System.
- Enterprise Community Partners’ Portfolio Protect tool identifies properties at risk from climate disasters.
- Enterprise Community Partners’ Keep Safe guides shows how to make homes more resistant to natural disasters.
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About This Analysis
This analysis provides a best estimate of affordable housing units at risk if annual global climate pollution continues to climb through most of the century, eventually resulting in 3 or 4°C of warming by 2100 (a pathway known as RCP 8.5).

Frequently Asked Questions

What causes sea level to rise?
Warming temperatures due to climate change are causing ice to melt and water to expand, increasing the volume of ocean water and causing the sea level to rise. Additionally, ice or other land is being lifted by natural processes or extraction of water or fossil fuels from the ground.

What causes climate change?
The main activity causing climate change is the burning of fossil fuels, which emits heat-trapping pollution.

Can sea level rise be slowed?
Many of today’s heat-trapping pollution would reduce future sea level rise, but some sea level rise is inevitable due to past and future changes in the atmosphere.

How does sea level rise affect flooding?
Sea level rise means the platform on which houses, trees, and storm surge arrive, making coastal flooding more widespread and more frequent.

Why is affordable housing particularly vulnerable to sea level rise?
Affordable housing tends to be older and is rarely equipped with resilience-enhancing features (such as floodproofing, floodproofing, or lack of barrier features), to which it is exposed to. Additionally, residents of affordable housing pay less than the cost to repair, rebuild, or relocate their housing after it is damaged by flood waters.

Terminology
Affordable housing includes all subsidized housing and naturally occurring affordable housing.

Subsidized housing is supported by federal or state programs.

Naturally occurring affordable housing is defined as less than 90% of the median income level without rental assistance.

Exposure: units exposed denotes the number of affordable housing units that are expected to be exposed to at least one coastal flood risk event in the future.

A unit experiences a coastal flood risk event when the local coastal water level reaches at least the lowest ground elevation of the building containing the unit.

“Mile of flooding” is a synonym for exposure to flooding, as defined above.

For more resources, state briefs, methods, full citations, limitations, and more see coastal.climatecentral.org (choose map, affordable housing)

Learn more about what is at risk from sea level rise and coastal flooding at coastal.climatecentral.org and riskfinder.org.
Vivienda Asequible en Riesgo de Inundación Costera en Florida en 2070

La combinación de la vulnerabilidad física de una vivienda asequible, la vulnerabilidad socioeconómica y las inundaciones costeras más frecuentes debido al aumento del nivel del mar presenta una triple amenaza para los residentes de las zonas costeras asequibles de Estados Unidos.

2092 UNIDADES EXPUESTAS

Preguntas frecuentes

¿Qué causa el aumento del nivel del mar?
El aumento de las temperaturas debido al cambio climático está produciendo que el hielo se derribe y el agua se expanda, lo que aumenta el volumen de las aguas del océano y hace que suba el nivel del mar. Además, en algunos lugares de la tierra se está inundando debido a procesos naturales o extracción de agua o combustibles fósiles del suelo.

¿Qué causa el cambio climático?
La principal actividad que causa el cambio climático es la emisión de gases de efecto invernadero, que absorben la radiación solar que ahora la atmósfera.

¿Cómo puede afectar el aumento del nivel del mar?
Los recursos importantes en la contaminación que atrae el calor reducción del aumento futuro del nivel del mar, porque inevitable el aumento del nivel del mar debido a la contaminación que ya está en latencia.

¿Cómo se determina el riesgo de inundaciones costeras para las viviendas asequibles?
Las viviendas asequibles tienden a ser más antiguas y no se están equipadas con características que mejoran la tasa de inundación y la protección contra inundaciones, energía fuera del rango de vulnerabilidad de FEMA, debido al costo de tales medidas. Además, los residentes de viviendas asequibles a menudo carecen de los recursos financieros para reparar, reconstruir o proteger sus viviendas después de que hayan sido dañados por las inundaciones.

Reduzca Su Riesgo

- Realice una diaria que aleje de las viviendas y mantenga un nivel de agua elevado. Conecte el nivel de agua elevado con la extinción de las inundaciones costeras para la extinción de los daños y las inundaciones.
- Consulte Keep Safe de Enterprise Community Partners para hacer que los hogares sean más resistentes a las inundaciones y los terremotos e inundaciones.

Clima Central es una organización científica y novedosa sin fines de lucro que proporciona información autorizada para ayudar al público y a los legisladores a tomar decisiones informadas acerca del clima y la energía.

Obtenga más información sobre lo que está en riesgo por el aumento del nivel del mar y las inundaciones costeras en es.ucat.climatecentral.org y ricetfeu.org.

Terminología

Viviendas asequibles incluyen tanto la vivienda asequible normal o de organiza local.

Las viviendas asequibles son las que tienen un valor de mercado de 30% de la renta de la vivienda asequible normal o de organiza local.

Las viviendas asequibles son aquellas que están dentro y fuera de las aguas costeras debido a procesos naturales o de origen externo.

Exposiciones y Unidades

Exposiciones expuestas a la cantidad de viviendas asequibles con una determinación de daños que están expuestas a al menos un evento de inundación costera en un año.

Para obtener más recursos, resúmenes estatales, métodos, citas completas, limitaciones y más, consulte es.ucat.climatecentral.org y un mapa viviendas asequibles.
AFFORDABLE HOUSING AT RISK OF FLOODING IN 2050

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COASTAL RISK SCREENING TOOL

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The combination of physical vulnerability of affordable housing, socioeconomic vulnerability, and more frequent coastal flooding due to sea level rise presents a triple threat to residents of America’s already scarce affordable housing.

DETAILS AND LIMITATIONS

AREAS TO COMPARE
Counties
STATE
Florida
YEAR
2050

CHANGE OTHER SETTINGS

Exposure (housing units)
- 266 or more
- 134 to 265
- 1 to 133
- 0

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Video Tutorial
LAND PROJECTED TO BE BELOW ANNUAL FLOOD LEVEL IN 2050

Explore sea level rise and coastal flood threats by adjusting the controls below.

DETAILS AND LIMITATIONS

CHANGE OTHER SETTINGS

Video Tutorial
Coastal.climatecentral.org
(Choose map: Affordable housing)

Queries to: Program on Sea Level Rise
sealevel@climatecentral.org
Preserving Affordable Housing From Climate Risk
Enterprise: Who We Are

Create opportunity for low- and moderate-income people through fit, affordable housing in diverse, thriving communities.
Collaborating Partners: Federal, State, Local
Extreme Shortage of Affordable Housing
What are the Impacts?

- Loss of Affordable housing
- Displacement of Households;
- Impact to Workforce and Economy;
- Lowered property values;
- Lowered Tax Base
STRATEGIES FOR MULTIFAMILY HOUSING RESILIENCE

- **Community**: Strategies that encourage behavior which enhances resilience.
- **Adaptation**: Strategies that improve a facility's ability to adapt to changing climate conditions.
- **Protection**: Strategies to reduce a building's vulnerability to extreme weather.
- **Backup**: Strategies that provide critical needs when a facility loses power or other services.
Moxby Rigby
Freeport Public Housing
KEEP SAFE
A GUIDE FOR RESILIENT HOUSING DESIGN IN ISLAND COMMUNITIES

MANTÉNGASE SEGURO
UNA GUÍA PARA EL DISEÑO DE VIVIENDAS RESILIENTES EN COMUNIDADES ISLEÑAS
KEEPSafe

Introduction
Chapter 1: A Safer Site
Chapter 2: Building Protection
Chapter 3: Passive Habitability
Chapter 4: Energy Generation
Chapter 5: Water Management
Chapter 6: Household Preparedness
Chapter 7: Community Engagement
KEEP SAFE Miami
ARE YOU READY TO RESPOND?

Disaster can strike at any time, and a poorly managed response can put property and lives at risk.

This Toolkit equips multifamily affordable building owners & managers with a plan to address crisis.

An Overview of the Disaster Staffing Toolkit

Watch the video or scroll down to learn more.
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Laurie Schoeman
National Director, Resilience and Disaster Recovery
lschoeman@enterprisecommunity.org
Protecting Vulnerable Communities from Climate Impacts:
Investing in Communities for the Long Term

Anna Weber
Natural Resources Defense Council
As rainstorms grow more severe and frequent, communities fail to prepare for risks

Lack of a current, national rainfall database means some states use 60-year-old statistics as they design roads, bridges and dams that are supposed to last 50 years

By Jim Morrison

April 9, 2021 at 5:30 a.m. EDT
Design standards for roads, storm-water systems, dams and construction regulations — even whether a home is in a flood plain and requires flood insurance — are based on precipitation estimates.
But the increasing number of extreme storms means the past is not a reliable predictor of the future.

“So if you’re building a house to last for 30 years, or a piece of infrastructure to last for 50 to 100 years, you’re basing it on out-of-date data from the get-go,” said Alice Hill, who served in the Obama administration as a special assistant preparing for climate change.

“And that’s doomed to failure because these events are accelerating.”
Climate-Smart Codes and Standards

The problem:

• Current building standards require designing according to past climate conditions, assuming that those conditions will continue into the future.

• Climate change invalidates that assumption. This makes the nation’s housing and infrastructure increasingly vulnerable to damage from flooding and other natural hazards.
Homes are flooding outside FEMA’s 100-year flood zones, and racial inequality is showing through

September 24, 2020 3:10pm EDT
Climate-Smart Codes and Standards

Examples of solutions:

- Implementing flood risk management standards that require publicly funded projects to be built to a higher margin of safety against extreme floods and sea level rise.

- Updating the NFIP’s minimum floodplain development standards to help ensure climate-smart land use decisions in 22,000+ communities.

- Adopting modern, protective building codes to save lives and money.

- Investing in floodplain mapping—including advisory maps of future conditions—and updated precipitation statistics to provide access to the most up-to-date planning information.

For more information:

Flood Risk Disclosure

The problem:

- Many states do not require sellers to inform prospective homebuyers about a property’s flood history.
- Disclosure requirements for renters are almost nonexistent.
- As a result, too many people learn of their home’s propensity to flood only after disaster strikes.
“It's not a matter of if, but when. With climate change, we seem to be getting more and more rain, heavier rain, and it's been a lot more unpredictable.”

SCOTT HARRIS of Baltimore

Undisclosed: Most Homebuyers And Renters Aren’t Warned About Flood Or Wildfire Risk

October 18, 2020 - 9:00 AM ET

Flood Risk Disclosure

Examples of solutions:

- Incentivizing the adoption of comprehensive **flood risk disclosure requirements** at the state level.
- Creating a **public, open data system** to transparently share the government’s flood risk and damage information.
- Guaranteeing both homeowners and renters a “right to know” about their home’s history of flood insurance coverage, damage claims paid, and whether there is a legal requirement to purchase flood insurance.

For more information:
- [https://www.nrdc.org/flood-disclosure-map](https://www.nrdc.org/flood-disclosure-map)
Pre-Disaster Hazard Mitigation

The problem:

• Not enough funding is available for planning and projects that reduce risk before a disaster.

• Complex application requirements mean lower-capacity communities can't access grants.

• Long timeframes and other barriers prevent low-income households from benefiting.
Disparities in Disaster Mitigation Resources and Information Can Leave Households Unprepared for Climate Threats

The effects of climate change—from more frequent and stronger disaster events to chronic flooding and heat waves—will blanket entire regions. But the resources, attention, and political will for ensuring everyone is prepared are not equitably distributed.

July 6, 2020

Olivia Arena
Pre-Disaster Hazard Mitigation

Examples of solutions:

• Increasing **funding for pre-disaster mitigation**—including dedicated funding for low-income/frontline communities.

• Providing communities with **technical assistance** and resources for capacity building and planning.

• Permanently authorizing the Community Development Block Grant - Disaster Recovery (CDBG-DR) program.

• **Streamlining grant applications** and updating benefit-cost assessment and cost-share requirements.

• Using innovative approaches for home buyouts, green infrastructure, and other solutions **to give families and communities more agency** over adaptation options.

For more information:
“Every dollar spent on rebuilding our infrastructure... will be used to prevent, reduce, and withstand the impacts of the climate crisis.”
SCE Building Electrification Resilience Assessment

Contents

01 Introduction
02 SCE Goals and Aspirations for an Electric Future
03 Resilience Priorities by Building Type
04 Barriers and Opportunities of Building Electrification
05 Critical Topics for Further Discussion

February 2021

Protecting Vulnerable Communities from Climate Impacts
April 16, 2021

Heather Rosenberg
Resilience Leader—Americas
Arup
For vulnerable communities, even solutions can become challenges
Traditional Considerations for Electrification Policy
Electrification is a **disruption** interacting with underlying **stressors**

**Electrification in Context for Affordable Housing**

- Decarbonization
- Building Electrification
- Retrofit & Upgrades

**Stressors:**
- Mom and Pop Landlords
- Healthcare Costs
- Racial Injustice
- Labor Concerns
- Unemployment
- Risk of Stranded Assets
- Aging Housing Stock
- Rent Crisis
- COVID-19
- Homelessness
- Housing Shortage
- Climate Impacts
- Underserved Renters
- Aging Infrastructure

**Cost/Savings:**
- First Cost
- Operating Cost/Savings
- GHG Emissions Reduction

*ARUP*
Displacement is the Driving Stakeholder Concern

Drivers of Displacement

- Loss of unit, damage to the unit, loss of affordability, or increase in operating expenses
- Current drivers of displacement: e.g., housing shortage, COVID-19, rent increase
- Potential or future drivers of displacement: e.g., costs from retrofits, stranded assets, climate impacts

Investment

- Capital cost for retrofits
- Operational cost (or savings)
- All electric, energy-efficient retrofit

Costs

- Displacement
- Costs of displacement

Benefits

- Avoided cost
- Co-benefits
Equitable Transition to Energy Resilience

- Eliminate Fossil Fuels
- Ready New Construction
- Transition the Existing Building Stock
- Improve Power Reliability
- Protect Vulnerable Populations During Power Outages
- Prevent Displacement
- Bring Benefits to Disadvantaged Communities
- Transition Workforce
Recommendations

Existing affordable housing stock is essential and must be preserved

- Capital is needed for resilience retrofits to keep it **fit for purpose**
- Investment can trigger **displacement**
- Policy should be designed to **protect residents** from displacement
- Suites of policies should expand **co-benefits**
Requirements for Equitable & Resilient Policy

- **Leverage** change to build resilience
- **Integrate** mitigation and adaptation
- **Strong** partnerships and stakeholder engagement
- Complementary policy **bundles**
- **Relevant** incentives and subsidies
- Focus on multi-family and **renters**
- Recognition of **societal** costs and benefits
Thank you

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