Exhibit No: _____

Rate Design Issue(s):

- Energy Bill Affordability
- Keeping Current Program
- Fixed Customer Charge
- Reconnect/Late Fees
- Medical Registry
- Community Solar Pilot
- Storm Outage Reimbursement

Sponsoring Party:
Consumers Council of Missouri

DIRECT TESTIMONY OF

JACQUELINE A. HUTCHINSON

(Rate Design)

Case No. ER-2024-0319

Filed: December 17, 2024

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Jacqueline A. Hutchinson, and I am the Director of Advocacy for the Consumers Council of Missouri.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I have a BS degree in Business Administration from Washington University in St. Louis, and a MS degree in Urban Affairs and Policy Analysis, from Southern Illinois University in Edwardsville IL. Over my career, I have participated in numerous educational seminars and conferences focusing on utility issues and how those issues impact consumers, particularly vulnerable consumers.

Q. WHAT IS YOUR WORK EXPERIENCE?

A. I have been actively involved in energy policy issues and advocacy for low-income consumers on a local, state, and national level for more than 40 years. My career includes decades of working for Community Action Agencies(CAAs) in the state of Missouri, and currently with the Consumers Council of Missouri. I have been responsible for implementation of Federal, State, and private donation fuel assistance and homeless prevention programs in the St. Louis area. Those programs include Low-Income Home Energy Assistance Programs (LIHEAP) and Community Services Block Grant (CSBG) programs in the St. Louis area. I have provided some form of testimony in almost every Missouri Public Service Commission ("Commission" or "PSC") general rate case impacting the St. Louis area since the 1980s, including expert testimony in several previous Ameren Missouri rate cases since 2008.

Q. CAN YOU EXPLAIN MORE ABOUT YOUR EXPERTISE, AS IT RELATES TO THIS PSC MATTER?

A. Most notably my expertise covers the Missouri Cold Weather Rule and various affordability plans that have been implemented for utilities regulated by the Commission. I have provided testimony and/or been a part of negotiation of every Cold Weather Rule proceeding in Missouri, including the rulemaking case that initially

created that rule. I have reviewed Percentage of Income Payment Plans (PIPPs), affordability plans with tiered credits, and low-income rates that have been proposed in other states and have recommended that the best of such plans be implemented through rate case proceedings in Missouri.

I have participated in numerous settlement negotiations and collaboratives with various utilities, Commission Staff (Staff), the Office of the Public Counsel (OPC), other interveners, and nonprofit advocates to develop and to revise the Ameren Missouri Keeping Current/Keeping Cool Program. In 2003, I was appointed by Missouri Governor Holden to the Energy Policy Council. In 2004, I was appointed as a member of the Cold Weather Rule and Long-Term Energy Affordability Task Force set up in Commission Case No. GW-2004-0452.

Q. FOR WHOM ARE YOU PROVIDING TESTIMONY IN THIS PROCEDURE?

A. The Consumers Council of Missouri (Consumers Council), a nonpartisan, nonprofit corporation that is dedicated to educating and empowering consumers statewide and advocating for their interests. After serving several years as Board President, I now hold the position of Director of Advocacy.

Q. WHAT TESTIMONY DO YOU OFFER IN THIS CASE?

A. Consumers Council opposes the rate increase requested by Ameren Missouri in this case, supporting an increase in electric rates that is no higher than absolutely necessary and justified by the evidence in this case. The high cost of food and other household necessities has put a strain on family budgets and increased financial stress. Families with children under five, seniors, and those living with disabilities are particularly vulnerable to any increase in utility rates.

Through Consumers Council's community engagement work, seniors who have retired from professional jobs, even with incomes up to 300% of poverty, have told us that they are struggling to stay in their homes due to the rising cost of living and utility rate increases approved by the Commission over the past few years.

Thousands of Ameren Missouri customers have recently suffered utility disconnection leading up to this winter. In September 2024, Ameren disconnected 16,116 households. In October 2024, Ameren disconnected 17,043 households. Over 233,443 Missouri households were behind in their bills with an average past due amount of $199.91. This is an indication that a significant rate increase at this time would pose a threat to health and safety for many Missouri families who are already struggling to meet their basic needs.

Q. WHAT ARE THE RECENT POVERTY AND ENERGY BURDEN STATISTICS IN MISSOURI?

A. The following facts should be given serious consideration and factor into the decisions that the Commission makes in this case.

The number of households facing unaffordable home energy burdens is staggering. According to the 2023 American Community Survey, (Attachment JAH-1), 29% of Missouri households, nearly 600,000 individuals, live with incomes at or below 200% of the Federal Poverty Level (FPL) and many face a home energy burden that far exceeds the 3% national average.

According to a report of the Missouri Community Action Network (Attachment JAH-2), the cost of home energy is a significant financial burden for low-income Missouri households. Those with incomes of below 50% of the federal poverty level pay 29% of their annual income on their home energy bills. Low-income households are not the only ones affected by energy unaffordability. Households with incomes between 150% and 185% of the federal poverty level pay 7% of their income on utility bills; households with incomes between 185% and 200% of the federal poverty level pay 6% of their income for utilities.

The most recent Home Energy Affordability Gap report (Attachment JAH-3), shows that the difference between what Missouri customers can afford to pay, and what they are actually billed by utilities, exceeds $735 billion. Existing sources of energy assistance do

not adequately address the Home Energy Affordability Gap in Missouri. LIHEAP is the federal fuel assistance program designed to help pay low-income heating and cooling bills. Low-income households pay an average of 46% of their gross income toward housing and energy costs. However, households at 50% of the Federal Poverty Guidelines may pay up 54% of their income just on energy. These high energy burdens can increase serious health disparities.

According to a 2023 study and report published in the Social Science and Medicine Journal – "No heat, no eat: (Dis)entangling insecurities and their implications for health and well-being" (Attachment JAH-4):

- A majority of food insecure households also struggle with energy poverty .
- The severity of energy poverty is significantly associated with diabetes, hypertension, and mental illness.
- Severely energy-poor households are more prone to forgo medications and health treatments.
- Hidden energy poverty is coupled with what might be hidden morbidity.
- Energy poverty is therefore a constant, silent stressor on health systems in a warming climate.

Additionally, according to Missouri LIHEAP program administrators, LIHEAP benefits have been lower for the 2025 program year due to funding cuts. Benefits for LIHEAP energy assistance this winter will decrease from a one-time payment of $632 to $318, LIHEAP winter energy crisis assistance will decrease from $1600 to $800, and summer crisis assistance will decrease from $1,200 to $300. These drastic reductions in available assistance will increase the vulnerability of those already at risk.

A just and reasonable result in this rate case should not create any unnecessary additional financial hardship for most consumers, and should particularly avoid unjustifiably burdening low-income and fix-income elderly households. We ask that the

Commission be mindful that many consumers in Missouri live paycheck to paycheck, and cannot financially bear any further increases to their monthly budgets.

Q. WHAT ARE YOUR RECCOMENDATIONS REGARDING THE KEEPING CURRENT/KEEPING COOL PROGRAMS.

A. The Ameren Missouri Keeping Current/Keeping Cool program has overall been an effective program, although it would benefit from some revisions in its design to increase the retention rate of customers and adequately fund administrative cost.

1. I recommend the annual funding for this program should be increased to at least $6 million annually, with a reasonable portion, determined by the Keeping Current/Keeping Cool Collaborative, to be used for adequate administrative costs.
2. Total costs should continue to be shared 50/50 between the utility shareholder and ratepayers.
3. Eligibility to receive benefits of this program should be increased from its current level of 200% of poverty to 300% of the federal poverty level for the elderly, and raised from 200% to 250% for all other households.
4. A third party evaluation of the program has not been performed since 2019. My suggestion is that a study be done that will result in program implementation strategies to improve retention of participants until their completion of the program, to assess the effectiveness of current customer communications, and to evaluate the costs of the program.

Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING THE CRITICAL MEDICAL NEEDS PROJECT AND MEDICAL REGISTRY PROGRAMS?

A. With regarding the Critical Medical Needs project and medical registry programs, I recommend:

1. Efforts should be made to integrate the Critical Medical Needs program and the Medical Registry program at Ameren Missouri. Both programs would benefit from joint processes for enrollment and coordination of the collaborative that currently exists.

2. Additional agencies, medical social workers, and medical professionals should be added to provider list as needed to increase access to both programs and to educate additional medical professionals about the program.
3. Transparency on the cost of implementing the Critical Medical Needs registry should be discussed with all collaborative members and a review of the most cost-effective methods to implement this program discussed.
4. No increase in administrative costs or staffing be allowed until the collaborative has been provided information showing any increase is necessary, based on increased enrollment.

Q. WHAT RECCOMENDATION DO YOU HAVE ABOUT THE FIXED CHARGE?

A. The residential fixed charge should remain at its current amount of $9.00 per month. High fixed rates are regressive and disproportionately impact low-usage customers, especially seniors living on fixed incomes. When fixed costs are high, and usage rates are lower, a customer has less control over their energy bills, receiving less rewards for their household energy conservation.

Q. WHAT COMMENTS DO YOU HAVE ABOUT COMMUNITY SOLAR?

A. Low-Income community solar projects can be part of the solution to reduce the high energy burdens concentrated throughout many areas of Missouri. Participating in a community solar project, should save low-income households at least 20% on their utility bills, based on federal "Solar For All" guidelines. Such projects, when located in disadvantaged communities often foster education, a sense of ownership and involvement, as communities come together to support and maintain these initiatives, according to Berneta Haynes in her 2024 National Law Center report: Community Solar: Access and Safeguarding Low-Income Families. According to this report, "When carefully designed and coordinated with other low-income economic assistance and clean energy programs, community solar may go a long way toward reducing the low-income energy burden". (Attachment JAH-5).

Q. WHAT RECCOMENDATIONS DO YOU HAVE ABOUT COMMUNITY SOLAR FOR AMEREN MISSOURI?

1. Consumers council recommends that Ameren Missouri develop a pilot program that would create community solar projects in low-income communities with high energy burden.

2. Priority should be given in any low-income solar subscription program to current Keeping Current/Keeping Cool participants.

Q. WHAT COMMENTS DO YOU HAVE CONCERNING STORM OUTAGE RESTORATION POLICY?

A. In the summer of 2023, Ameren experienced outages that lasted as long as long as seven days for some customers. Outages are particularly burdensome to low-income and vulnerable customers, as they often lose food that they do not have resources to replace. Additionally, we witnessed some non-profits that provide meals and supplemental food to food insecure families losing large amounts of food due to the outage.

Q. WHAT RECOMMENDATIONS DO YOU HAVE CONCERNING STORM OUTAGE RESTORATION POLICIES?

1. Consumers Council would like to recommend that a residential customer be compensated for food spoilage and other expenses that are incurred as a result of an extended power outage. I am defining “extended power outage” as an outage that last for more than 48 hours for a particular household. I believe a reasonable approach would be compensation of up to $200 for a claim of food spoilage, or more for actual losses if receipts can be produced.
2. A priority list should be created for restoring electric service to non-profits who provide essential services, such as food, shelter and medical services to vulnerable customers.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust its Revenues for Electric Service.	)))	**No. ER-2024-0319**

AFFIDAVIT OF JACQUELINE A. HUTCHINSON

I, the undersigned, being duly sworn, states that my name is Jacqueline A. Hutchinson and that the foregoing Direct Testimony of Jacqueline A. Hutchinson, including attachments, was prepared by me on behalf of the Consumers Council of Missouri. This testimony was prepared in written form for the purpose of its introduction into evidence in the above utility case at the Missouri Public Service Commission.

I hereby swear and affirm that the attached testimony is true and correct to my best knowledge, information, and belief, and I adopt said testimony as if it were given under oath in a formal hearing.

Jacqueline A. Hutchinson

Subscribed before me on this 17 day of December ____, 2024:

TOMAS A. LIRA, III
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis County
My Commission Expires: January 04, 2026
Commission Number: 22148929

Attachment JAH-1

An official website of the United States government Here's how you know

2019—2023 ACS 5-Year Narrative Profile
Missouri

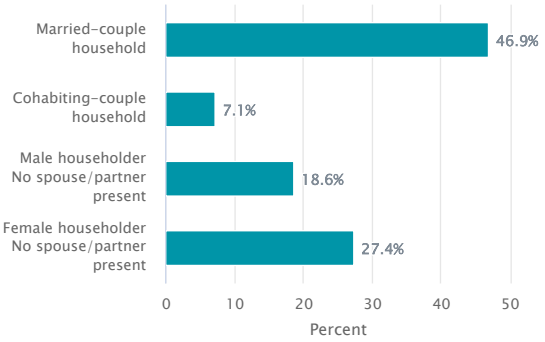
Households and Families

In 2019-2023, there were 2.5 million households in Missouri. The average household size was 2.42 people.

Married-couple households made up 46.9 percent of the households in Missouri while cohabiting couple households made up 7 percent of households. Female householders with no spouse or partner present were 27.4 percent of all households, while 18.6 percent of households had male householders with no spouse or partner present. Some households had one person, as 13.9 percent of households were male householders living alone, and 16.8 percent were female householders living alone, for a total 30.7 percent of all households.

In Missouri, 28.7 percent of all households had one or more people under the age of 18; 30.8 percent of all households had one more people 65 years and over.

Types of Households in Missouri in 2019-2023



Marital Status

Among persons 15 and older, 50.3 percent of males and 47.4 percent of females were currently married.

Population 15 years and over	Percent Males	Percent Females
Never married	34.2	28.6
Now married, except separated	50.3	47.4
Separated	1.5	1.8
Widowed	2.9	9.1
Divorced	11.0	13.1

Grandparents and Grandchildren

In Missouri, 105,552 grandparents lived with their grandchildren under 18 years old. Of those grandparents, 43.1 percent were responsible for the basic needs of their grandchildren.

Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

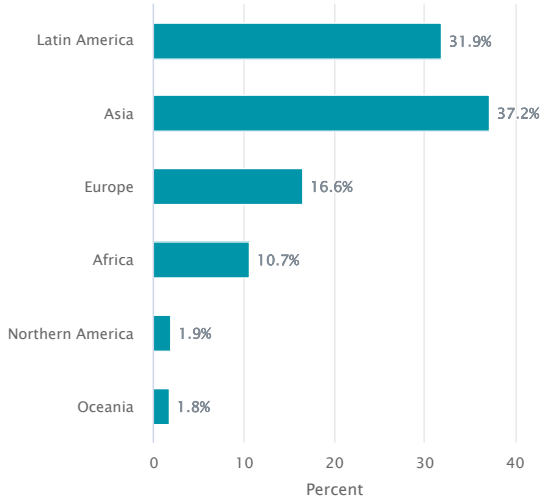
Nativity and Foreign-Born

In 2019-2023, an estimated 95.6 percent of the people living in Missouri were U.S. natives. 65.8 percent of the Missouri populati were living in the state where they were born.

Approximately 4.4 percent of Missouri residents in 2019-2023 were foreign-born. 50.9 percent of foreign-born were naturalized U.S. citizens and an estimated 63.3 percent entered the country before the year 2010.

Foreign-born residents of Missouri come from different parts of the world. The bar graph below displays the percentage of forei born from each world region of birth in 2019-2023 for Missouri.

Region of Birth for the Foreign-Born Population in Missouri in 2019-2023

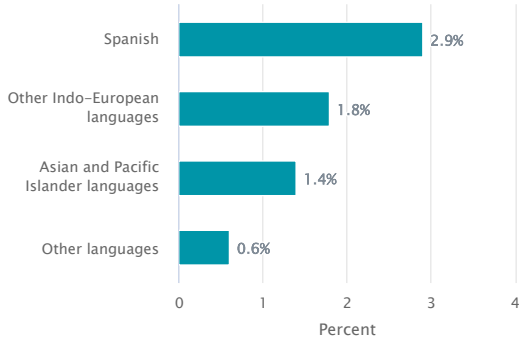


Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

Language

Among people at least five years old living in Missouri in 2019-2023, 6.6 percent spoke a language other than English at home. Spanish was spoken by 2.9 percent of people at least five years old; 2.2 percent reported that they did not speak English "very well."

Percent of the Population 5 years and over who Speak a Language other than English in Missouri in 2019-2023

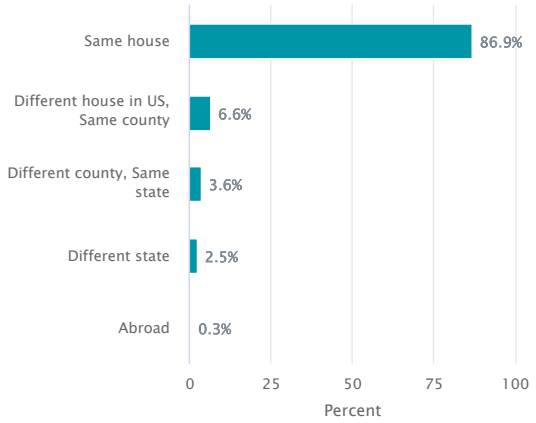


Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

Geographic Mobility

In 2019-2023, 86.9 percent of the people at least one year old living in Missouri were living in the same house one year earlier.

Geographic Mobility of Residents of Missouri in 2019-2023



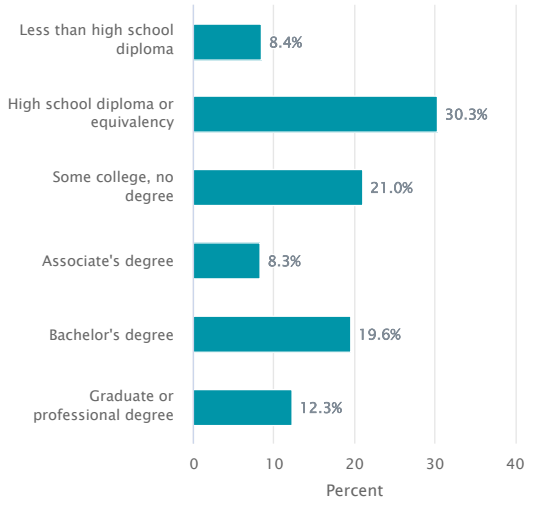
Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

Education

In 2019-2023, 91.6 percent of people 25 years and over had at least graduated from high school and 31.9 percent had a bachelo degree or higher. An estimated 8.4 percent did not complete high school.

The total school enrollment in Missouri was 1.4 million in 2019-2023. Nursery school enrollment was 91,721 and kindergarten through 12th grade enrollment was 999,122. College or graduate school enrollment was 354,657.

Educational Attainment of People in Missouri in 2019-2023



Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

Disability

In Missouri, among the civilian noninstitutionalized population in 2019-2023, 14.6 percent reported a disability. The likelihood of having a disability varied by age - from 5.1 percent of people under 18 years old, to 12.6 percent of people 18 to 64 years old, and to 34.4 percent of those 65 and over.

Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]

Employment Status and Type of Employer

In Missouri, 60.1 percent of the population 16 and over were employed; 36.9 percent were not currently in the labor force.

An estimated 81.1 percent of the people employed were private wage and salary workers; 13.0 percent were federal, state, or loc government workers; and 5.6 percent were self-employed in their own (not incorporated) business.

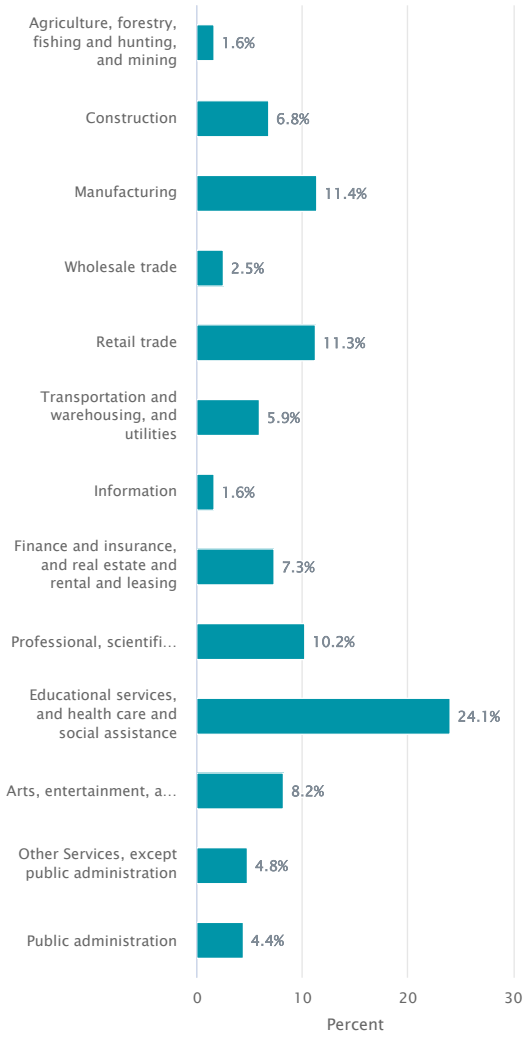
Class of worker	Number	Percent
Private wage and salary workers	2,413,473	81.1
Federal, state, or local government workers	387,367	13.0
Self-employed workers in own not incorporated business	167,530	5.6

Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]

Industries

In 2019-2023, the civilian employed population 16 years and older in Missouri worked in the following industries:

Percent by Industry in Missouri in 2019-2023



Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]

Occupations

Occupations for the Civilian Employed Population 16 Years and over in Missouri in 2019-2023

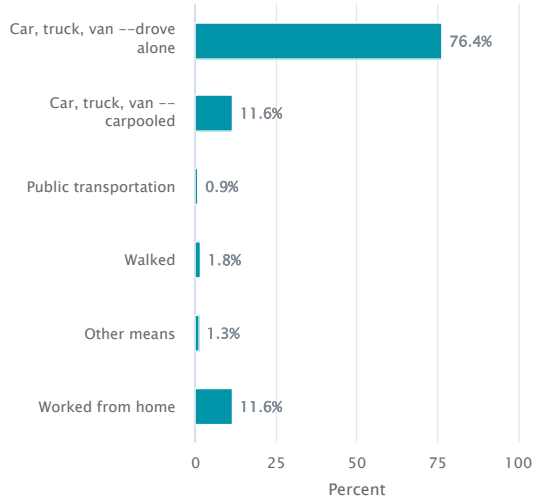
Civilian employed population 16 years and over	Number	Percent
Management, business, sciences, and arts occupations	1,203,435	40.5
Service occupations	468,096	15.7
Sales and office occupations	609,281	20.5
Natural resources, construction, and maintenance occupations	256,853	8.6
Production, transportation, and material moving occupations	436,834	14.7

Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]

Commuting

An estimated 76.4 percent of Missouri workers drove to work alone in 2019-2023, and 11.6 percent worked from home. Among those workers who commuted, it took an average of 23.7 minutes to travel to work from home.

Means of Transportation to Work for Workers in Missouri in 2019-2023

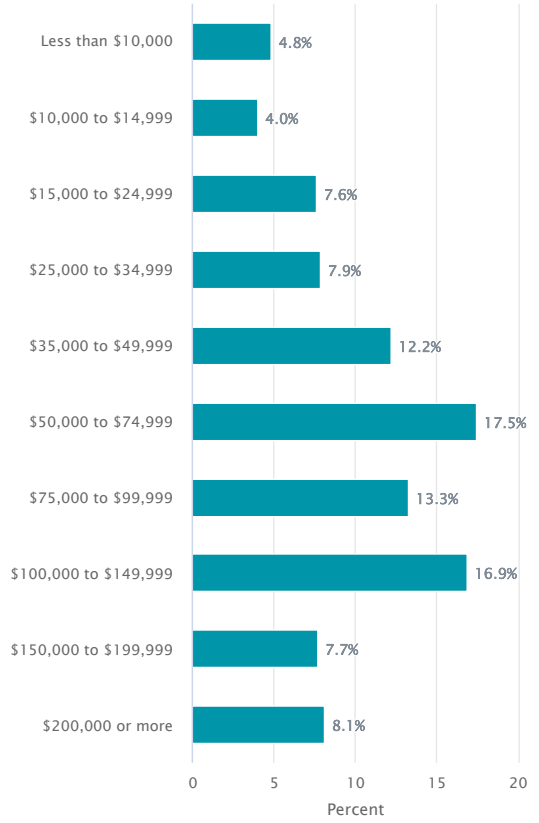


Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]

Income

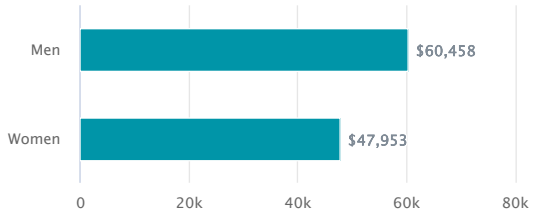
The median income of households in Missouri was $68,920. An estimated 4.8 percent of households had income below $10,00(year and 8.1 percent had income of $200,000 or more.

Household Income in Missouri in 2019-2023



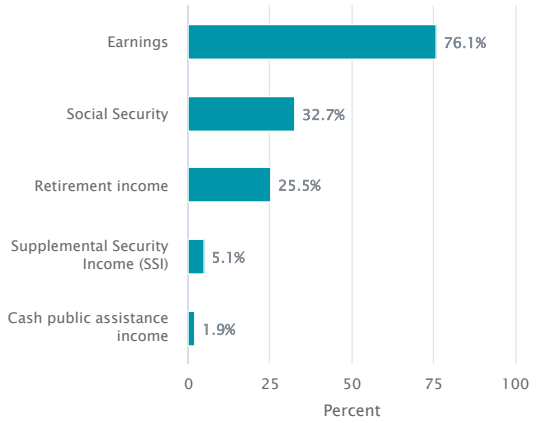
Median earnings for full-time year-round workers was $54,338. Male full-time year-round workers had median earnings of $60,4! Female full-time year-round workers had median earnings of $47,953.

Median Earnings for Full-Time Year-Round Workers by Sex in Missouri in 2019-2023



An estimated 76.1 percent of households received earnings. An estimated 32.7 percent of households received Social Security and an estimated 25.5 percent of households received retirement income other than Social Security. The average income from Social Security was $23,050. These income sources are not mutually exclusive; that is, some households received income from more than one source.

Proportion of Households with Various Income Sources in Missouri in 2019-2023

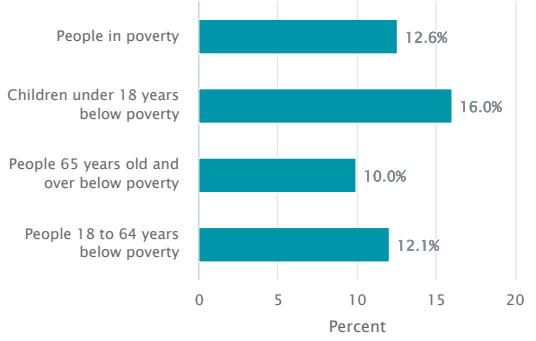


Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]
B20018 | Median Earnings in the Past 12 Months (In 2021 Inflation-Adjusted Dollars) for the Population 16 Years and Over Who Worked Full-time, Year-Round with Earnings in the Past 12 Months [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Detailed%20Tables&tid=ACSDT5Y2023.B20018&g=0400000US29]

Poverty and Participation in Government Programs

In 2019-2023, 12.6 percent of people were in poverty. An estimated 16.0 percent of children under 18 were below the poverty lev compared with 10.0 percent of people 65 years old and over. An estimated 12.1 percent of people 18 to 64 years were below the poverty level.

Poverty Rates in Missouri in 2019-2023



In 2019-2023, 9.9 percent of households received SNAP (the Supplemental Nutrition Assistance Program). An estimated 45.8 percent of households that received SNAP had children under 18, and 33.6 percent of households that received SNAP had one o more people 60 years and over. An estimated 33.2 percent of all households receiving SNAP were families with a female householder and no spouse present. An estimated 29.2 percent of households receiving SNAP had two or more workers in the past 12 months.

Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]
S2201 | Food Stamps/Supplemental Nutrition Assisstance Program (SNAP) [https://data.census.gov/table?y=2023&d=ACS%20Year%20Estimates%20Subject%20Tables&tid=ACSST5Y2023.S2201&g=0400000US29]

Health Insurance

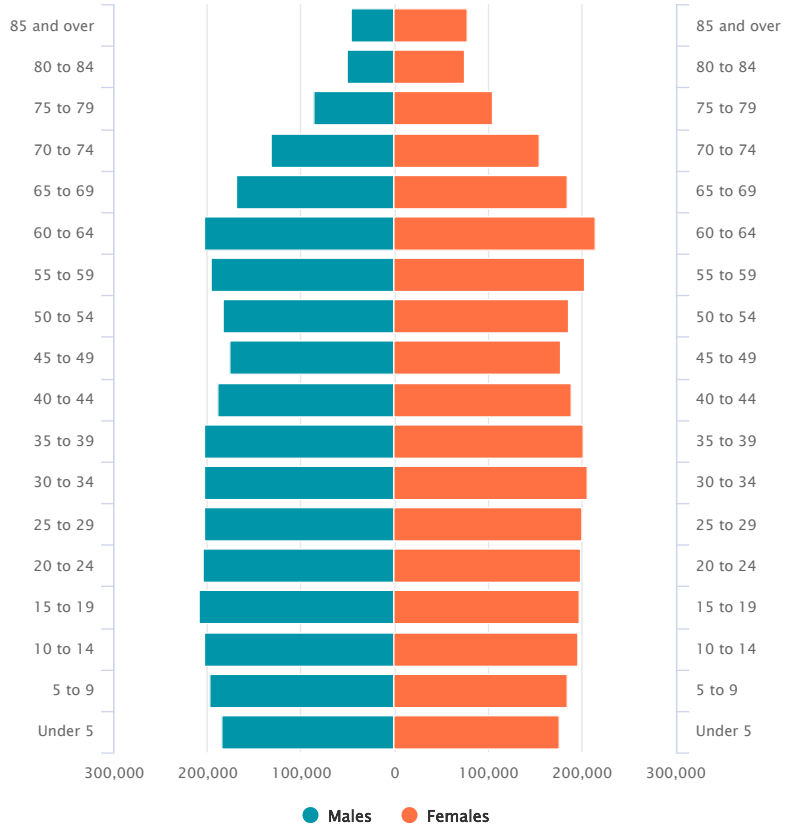
Among the civilian noninstitutionalized population in Missouri in 2019-2023, 90.8 percent had health insurance coverage and 9.2 percent did not have health insurance coverage. Private coverage was 69.3 percent and public coverage was 33.2 percent, respectively. The percentage of children under the age of 19 with no health insurance coverage was 6.1 percent.

Source:
DP03 | Selected Economic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP03&g=0400000US29]

Population

In 2019-2023, Missouri had a total population of 6.2 million — 3.1 million (50.7 percent) females and 3.0 million (49.3 percent) males. The median age was 38.9 years. An estimated 22.5 percent of the population was under 18 years, 34.9 percent was 18 to 44 years, 25.0 percent was 45 to 64 years, and 17.5 percent was 65 years and older.

Population by Age and Sex for Missouri in 2019-2023



Hispanic Origin and Race

For people reporting one race alone, 78.3 percent were White; 11.1 percent were Black or African American; 0.3 percent were American Indian and Alaska Native; 2.1 percent were Asian; 0.2 percent were Native Hawaiian and Other Pacific Islander, and 1.7 percent were Some Other Race. An estimated 6.3 percent reported Two or More Races. An estimated 5.1 percent of the people i

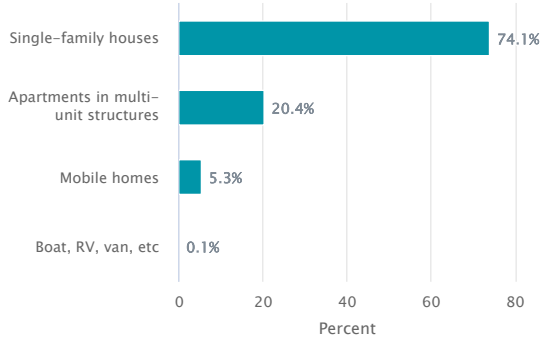
Missouri were Hispanic or Latino. An estimated 76.8 percent of the people in Missouri were White alone, non-Hispanic. People o Hispanic origin may be of any race.

Source:
DP05 | Selected Demographic Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP05&g=0400000US29]
S0101 | Age and Sex [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Subject%20Tables&tid=ACSST5Y2023.S0101&g=0400000US29]

Housing Inventory Characteristics

In 2019-2023, Missouri had a total of 2.8 million housing units. Of these housing units, 74.1 percent were single-family houses either not attached to any other structure or attached to one or more structures (commonly referred to as "townhouses" or "row houses"). 20.4 percent of the housing units were located in multi-unit structures, or those buildings that contained two or more apartments. 5.3 percent were mobile homes, while any remaining housing units were classified as "other," which included boats, recreational vehicles, vans, etc.

Types of Housing Units in Missouri in 2019-2023



8.5 percent of the housing inventory was comprised of houses built since 2010, while 13.4 percent of the houses were first built 1939 or earlier. The median number of rooms in all housing units in Missouri was 5.7 rooms, and of these housing units 62.2 percent had three or more bedrooms.

Source:
DP04 | Selected Housing Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP04&g=0400000US29]

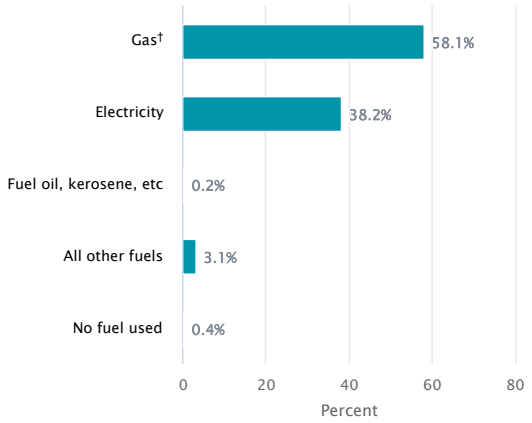
Occupied Housing Characteristics

In 2019-2023, Missouri had 2.5 million housing units that were occupied or had people living in them, while the remaining 324,66 were vacant. Of the occupied housing units, the percentage of these houses occupied by owners (also known as the homeownership rate) was 67.9 percent while renters occupied 32.1 percent. The average household size of owner-occupied houses was 2.55 and in renter-occupied houses it was 2.13.

10.1 percent of householders of these occupied houses had moved into their house since 2021, while 9.8 percent moved into th house in 1989 or earlier. Households without a vehicle available for personal use comprised 6.6 percent and another 22.8 percer had three or more vehicles available for use.

The following chart provides the primary fuel used to heat houses in Missouri:

House Heating Fuel Used in Missouri in 2019-2023



†This category includes utility, bottled, tank, or LP gas.

Source:
DP04 | Selected Housing Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP04&g=0400000US29]

Financial Characteristics and Housing Costs

In 2019-2023, the median property value for owner-occupied houses in Missouri was $215,600.

Of the owner-occupied households, 60.6 percent had a mortgage. 39.4 percent owned their houses "free and clear," that is witho a primary mortgage or loan on the house. The median monthly housing costs for owners with a mortgage was $1,478 and for owners without a mortgage it was $528.

For renter-occupied households, the median gross rent for Missouri was $996. Gross rent includes the monthly contract rent anc any monthly payments made for electricity, gas, water and sewer, and any other fuels to heat the house.

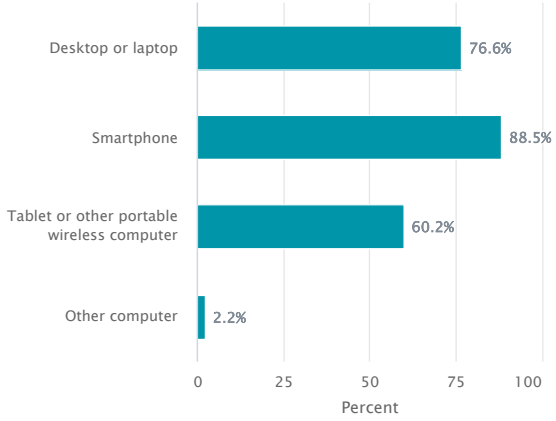
Source:
DP04 | Selected Housing Characteristics [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP04&g=0400000US29]

Computer and Internet Use

In 2019-2023, 94.0 percent of households in Missouri had a computer, and 88.1 percent had a broadband internet subscription.

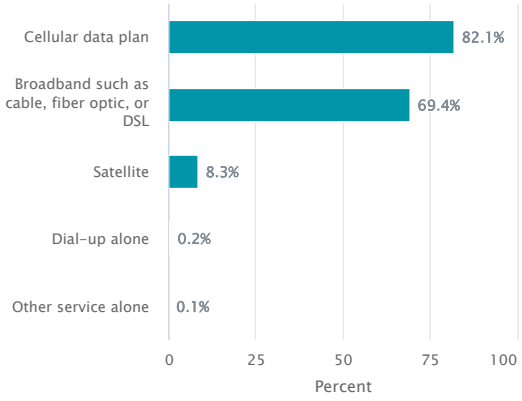
An estimated 76.6 percent of households had a desktop or laptop, 88.5 percent had a smartphone, 60.2 percent had a tablet or other portable wireless computer, and 2.2 percent had some other type of computer.

Types of Computers in Missouri in 2019-2023



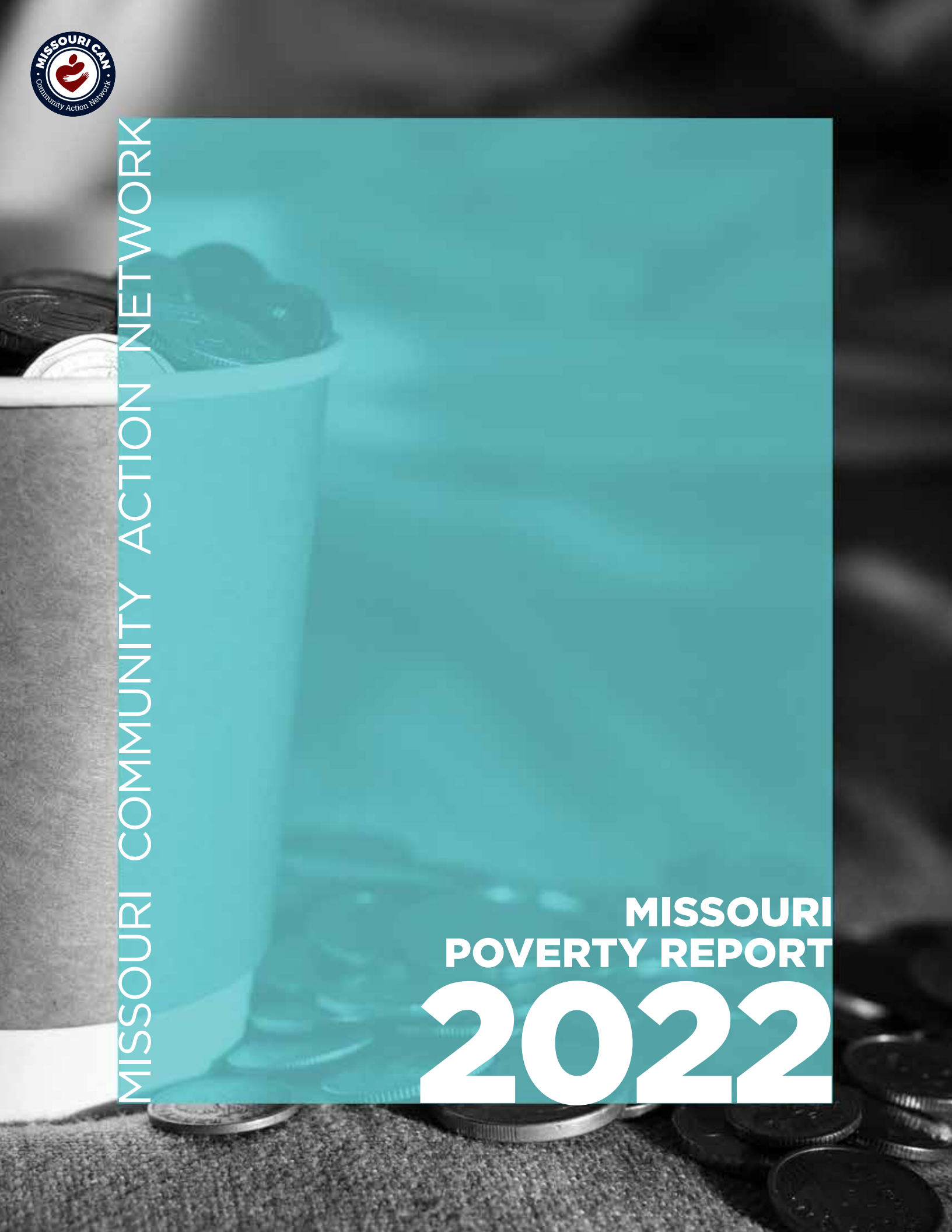
Among all households, 82.1 percent had a cellular data plan; 69.4 percent had a broadband subscription such as cable, fiber opt or DSL; 8.3 percent had a satellite internet subscription; 0.2 percent had dial-up alone; and 0.1 percent had some other service alone.

Types of Internet Subscriptions in Missouri in 2019-2023



Source:
DP02 | Selected Social Characteristics in the United States [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2023.DP02&g=0400000US29]
B28001 | Types of Computers in Household [https://data.census.gov/table?y=2023&d=ACS%205-Year%20Estimates%20Detailed%20Tables&tid=ACSDT5Y2023.B28001&g=0400000US29]

Attachment JAH-2



MISSOURI COMMUNITY ACTION NETWORK

MISSOURI POVERTY REPORT 2022

INTRODUCTION

TABLE OF CONTENTS

Missouri Community Action Network produces this biannual report to examine poverty in the state by utilizing data from a variety of sources, including the Bureau of Labor Statistics, Food Research and Action Center, Center on Budget and Policy Priorities, and the US Census Bureau.

The goal is to create an objective snapshot of poverty in Missouri. This report is not intended to be a definitive or even comprehensive source on poverty in the state. Rather, it is an entry point to the wealth of data that can guide our efforts to address poverty within our communities.

Sound public policy should be informed by verifiable, quality data. The figures and statistics presented in this report can help us determine the efficacy of public policy measures, and in turn, guide our efforts at the local, state, and national level.

Since our last Poverty Report the United States and the State of Missouri experienced the COVID-19 Pandemic. This once in one-hundred-year event impacted the health, employment, and poverty of Missourians from all backgrounds. The timing of the Pandemic impacted the 2020 Census. Experts and advocates continue to assess the accuracy of the census given difficulties conducting typical in person counts.

We recognize that these major events affect the Poverty Report and the quality of available data. Some data on aspects of the Pandemic is not yet available. This report is not solely focused on the pandemic. The data shows the interconnected nature of life's necessities: economic and family security, education, food and nutrition, health, and housing and energy. These are the five elements of poverty and create an overall framework we can use to examine the data presented in this report.

This year's report features a section on the anti-poverty measures in Missouri and the COVID-19 pandemic. By presenting this information, we hope to continue the conversation around the role of emergency responses to alleviate poverty during times of national crisis as well as foundational programs and services necessary to empower individuals and families to move out of poverty and achieve a level of economic security or independence.

It is our intention that this report be used as a tool by legislators, advocates, nonprofits, schools, churches, and other stakeholders to create a broader understanding of poverty and the impact it has on our state. We encourage you to utilize the sources listed at the end of this report to further explore the information. It is only through an unbiased interpretation of data that we can begin to enact measures that truly help all Missourians thrive.

MEASURING POVERTY

2022 POVERTY GUIDELINES

Persons/Household	Gross Income
1	$13,590
2	$18,310
3	$23,030
4	$27,750
5	$32,470
6	$37,190
7	$41,910
8	$46,630

Official Poverty Measure

The official poverty measure (OPM) was created in 1963 and is based on the cost of the minimum food diet in current prices, and then multiplied by three for different family sizes. This poverty measure does not consider typical household expenses, though, such as gas to get to work, childcare, prescriptions, and a host of other costs families regularly encounter. The poverty calculation also does not take into account the value of federal benefits, such as the Supplemental Nutrition Assistance Program (SNAP) or the Low-Income Heating and Energy Assistance Program (LIHEAP).

Supplemental Poverty Measure

The Supplemental Poverty Measure (SPM) considers other factors, such as family resources, including income and benefits such as SNAP, subsidized housing, and LIHEAP. Census data released in 2021 shows that when taken as a three-year average from 2018-2020, the Missouri SPM was 2.7% lower than the official poverty measure (US Census Bureau).[1]

In Missouri, the SPM by a 3-average (2018-2020) was 8.1%. The official poverty measure for that same time period was 10.8% (US Census Bureau).[2]

2022 Poverty Guidelines

The Poverty Guidelines are determined by the Department of Health and Human Services and updated annually. Amounts are based on the number of persons in a family per household. For families or households with more than eight people, $4,720 added for each additional person (US Department of Health and Human Services).[3]

50%, 100% and 200% of Poverty

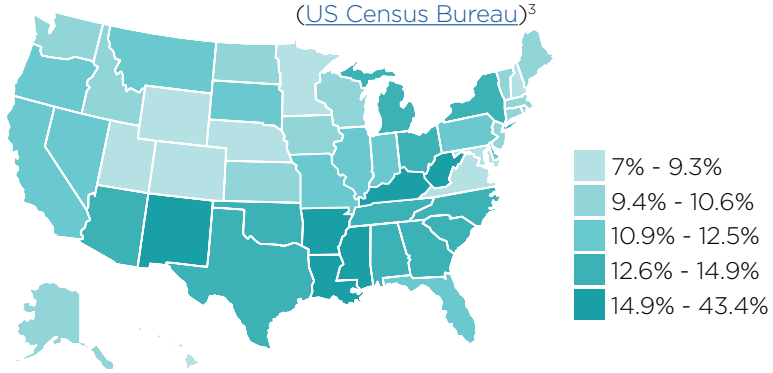
Sometimes, data refers to "100% of the federal poverty level (FPL)" or "200% FPL." These levels are used to indicate the severity of poverty. For example, a household of five people with $31,417 adjusted gross income would be considered in poverty, or 100% FPL. 50% of poverty would be half of that, or $15,708. The 50% poverty threshold represents extreme poverty. Conversely, 200% FPL for a family of five would be $62,834 (US Census Bureau).[4]

Although the poverty level is updated annually, the methodology for determining poverty rates has seen little change since it was developed. Take inflation. Year to year, inflation outpaces the change in poverty level—the cost of goods increases while lower-income populations have a higher cost burden. These thresholds help illustrate what families require to meet basic needs.

POVERTY: OVERVIEW

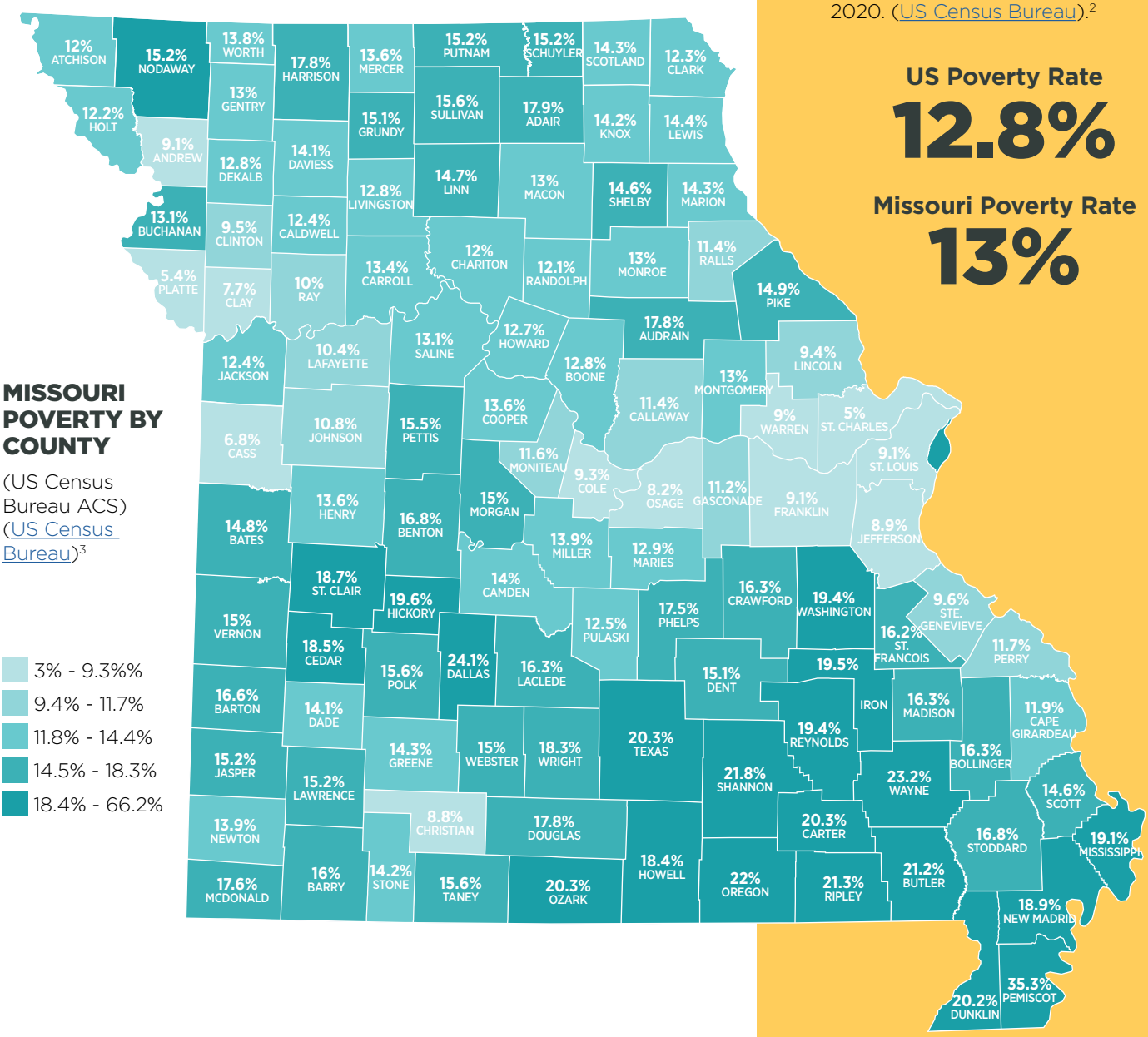
US MAP OF POVERTY RATES

(US Census Bureau)[3]



MISSOURI POVERTY BY COUNTY

(US Census Bureau ACS) (US Census Bureau)[3]



POVERTY ACROSS AMERICA & MISSOURI

The US Census Bureau uses the American Community Survey (ACS) to capture data at the local level to show how public assistance impacts areas across the nation. It is the premier source for data on population and housing in the United States. This survey gives us a broad view of poverty in the United States and in Missouri.

It is worth noting that different surveys and reports will deliver different figures based on the methodology used. For example, the ACS 2016-2020 5-year estimates indicate the poverty level in the US is 12.8% (US Census Bureau).[1]

However, the Current Population Survey Annual Social and Economic Supplements from the Census Bureau estimates a poverty rate of 11.4% in 2020. (US Census Bureau).[2]

US Poverty Rate

12.8%

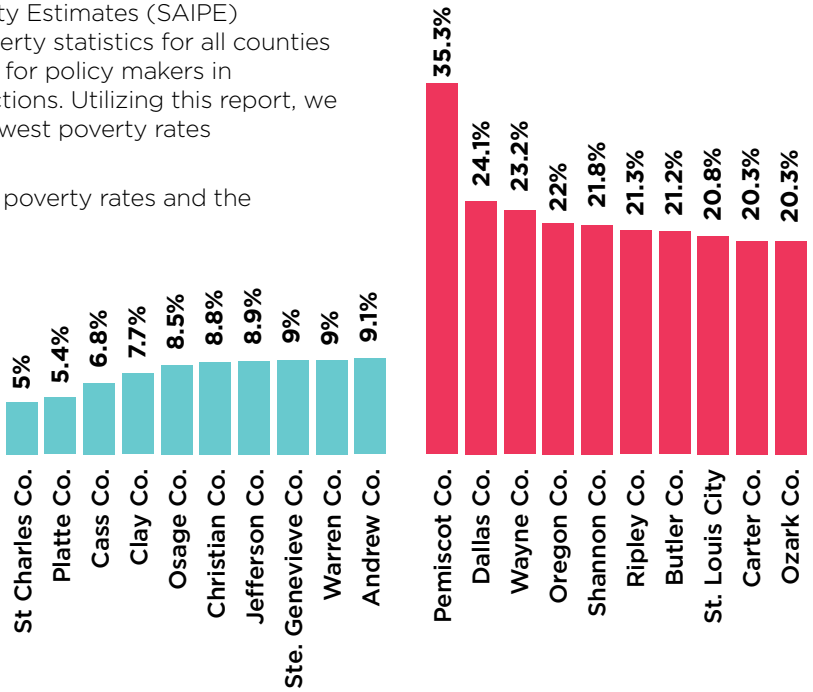
Missouri Poverty Rate

13%

LOCAL SNAPSHOT OF POVERTY

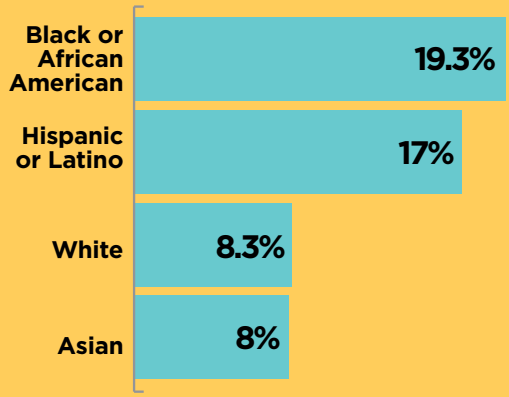
The US Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program provides annual estimates of income and poverty statistics for all counties and states in the nation. The program is used primarily for policy makers in deciding the allocation of federal funds to local jurisdictions. Utilizing this report, we get a view of Missouri counties with the highest and lowest poverty rates (US Census Bureau).[4]

Observe the difference between the counties with low poverty rates and the counties with high poverty rates.



Missouri population:
5,942,813

Missouri population below poverty level:
772,992



POVERTY AND RACE

The American Community Survey show how race impacts the percentage of people in poverty across Missouri. The disparities between races are evident—white Americans experience a lower rate of poverty than people of color (US Census Bureau).[1]

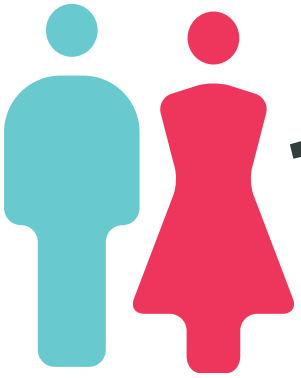
POVERTY AND GENDER

The ACS also shows us the disparity between males and females. Women face a 2.3% higher rate of poverty than men (US Census Bureau).[1]

CHILDREN IN POVERTY

Children who grow up in poverty often lack food, shelter, healthcare, and education they need to thrive. This can have a profound impact on future economic stability. According to the US Census Bureau's American Community Survey, 17.4% of Missouri children live in poverty; 19.3% of children under 5 years of age in Missouri are in poverty (US Census Bureau).[1]

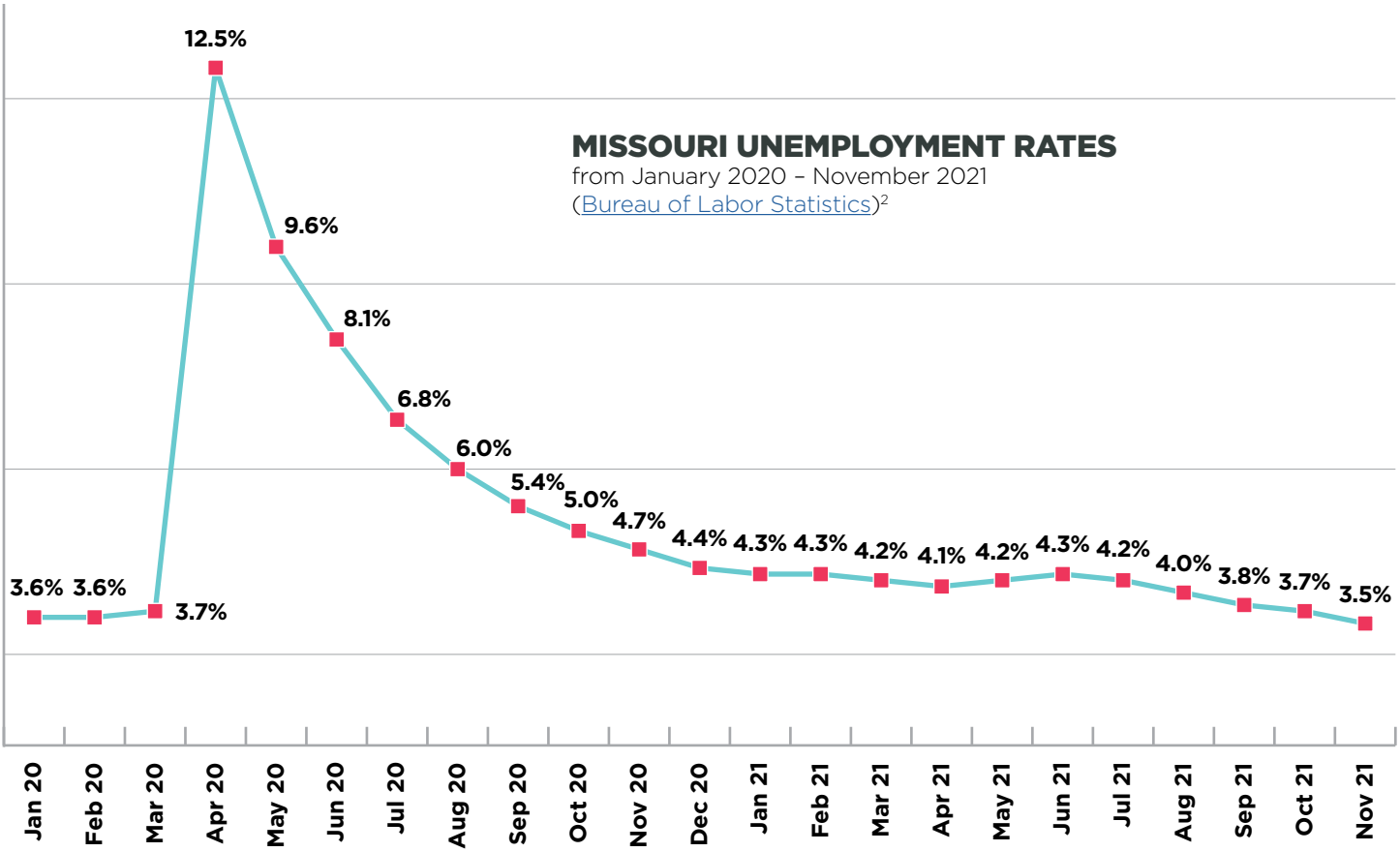
11.8%
of Missouri men in poverty



14.1%
of Missouri women in poverty

17.4%
of Missouri children in poverty

ECONOMIC AND FAMILY SECURITY



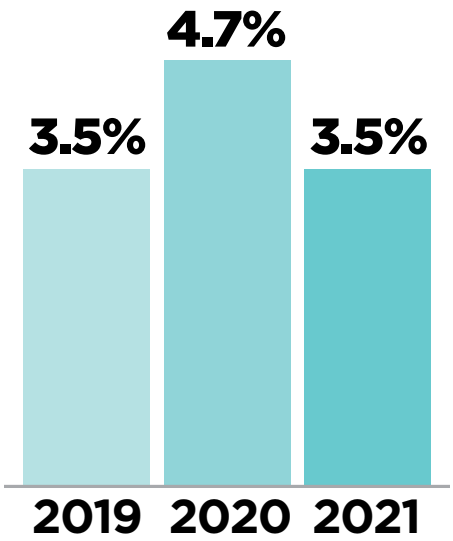
Economic and family security is the foundation for the well-being of an individual or family—in many ways, it's the starting point of what sets a family up for success. Numerous factors impact economic and family security, including the local economy, availability of jobs, minimum wage regulations, and taxes. For example, the minimum wage in Missouri is less than the living wage, as calculated by geography, race, and gender.

Nov. 2021 (Bureau of Labor Statistics)[1]

EMPLOYMENT & UNEMPLOYMENT

Employment is the greatest impactor of economic and family security. The unemployment rate in Missouri has fallen steadily over the last decade, from 9.3% in Jan. 2011 to 3.7% in March of 2020. Then many businesses closed in response to the COVID-19 pandemic and Missourians were left without employment. The unemployment rate for April 2020 reflects that, rising sharply to 12.5%. However, by November 2021, it had fallen below pre-pandemic rates to 3.5% (US Bureau of Labor Statistic).[1]

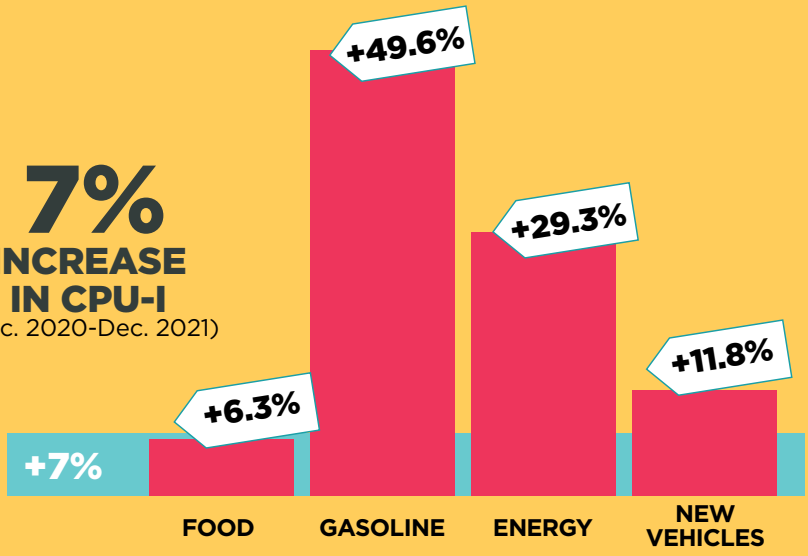
Missouri Unemployment 2019 vs 2020 vs 2021
(Bureau of Labor Statistics)[1]



INFLATION

Inflation impacts all Americans, but has an additional cost burden to low-income citizens, who are exponentially affected by rising prices. Inflation is not always factored into federal appropriations for public assistance, reducing the purchasing power of benefits. Inflation is also a federal concern to regulate and reduce. According to the US Bureau of Labor Statistics, inflation was 7.0% from Dec. 2020 to Dec. 2021, the largest annual percent change since 1981 (Bureau of Labor Statistics).[3]

7%
INCREASE IN CPU-I
(Dec. 2020-Dec. 2021)



MINIMUM WAGE

As of Jan. 2022, Missouri's minimum wage was $11.15. Several states, including Missouri, have enacted gradual minimum wage increases to take effect over the next several years. Six states do not have a state-mandated minimum wage (MO Dept. Of Labor).[4]

Missouri Minimum Wage
$11.15

Before taxes, a Missouri working full time for 40 hours a week at the state minimum wage earns:

WORKING 40 HOURS A WEEK = **$11.15** HOURLY | **$446** WEEKLY | **$23,192** ANNUALLY

LIVING WAGE

The living wage is the hourly rate that an individual in a household must earn to support themselves. Missouri's hourly living wage is $16.29 for a single adult; for a couple with two kids, both parents would need to make $37.10 an hour. The living wage calculator was created by Dr. Amy K. Glasmeier in 2004. The tool is used to help communities and employers understand the actual hourly wage that allows people to support themselves at a basic standard of living (Living Wage Calculator).[5]

Missouri LIVING Wage
$16.29

- **$16.29** — 1 Adult, 0 Children
- **$31.77** — 1 Adult, 1 Child
- **$39.00** — 1 Adult, 2 Children
- **$25.71** — 2 Adults, 0 Children
- **$31.37** — 2 Adults, 1 Child
- **$37.10** — 2 Adults, 2 Children

MEDIAN HOUSEHOLD INCOME

The median income of households in Missouri was $57,290 in 2020. The US median income was $64,994 (US Census Bureau).[6]

Missouri Median Household Income
$57,290

US Median Household Income
$64,994

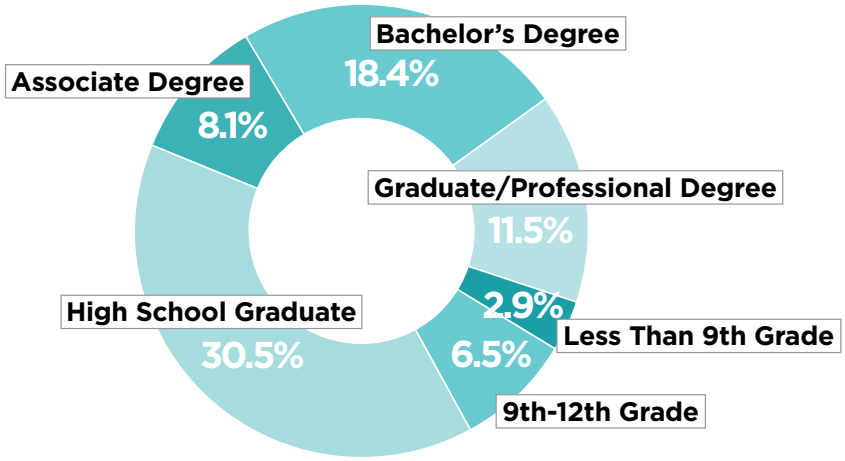
EDUCATION

Studies consistently show that education attainment increases employment rates and earnings, which have a pronounced impact on economic and family security. Education can include traditional four-year colleges and universities, trade schools, apprenticeships, and bridge programs. Education is a key strategy in reducing poverty. There are significant barriers for low-income students to participate in education after high school. The cost of higher education continues to climb while wage growth has been stagnant. Student loan debt creates future hardships for graduates.

The foundation of education in the early years is just as important. Education for children is critical as it provides opportunity for growth and development, setting them up for long-term success and giving them a greater chance of ending the cycle of generational poverty. The poverty rates for high school graduates are lower than those without a high school diploma or equivalent.

EDUCATIONAL ATTAINMENT IN MISSOURI

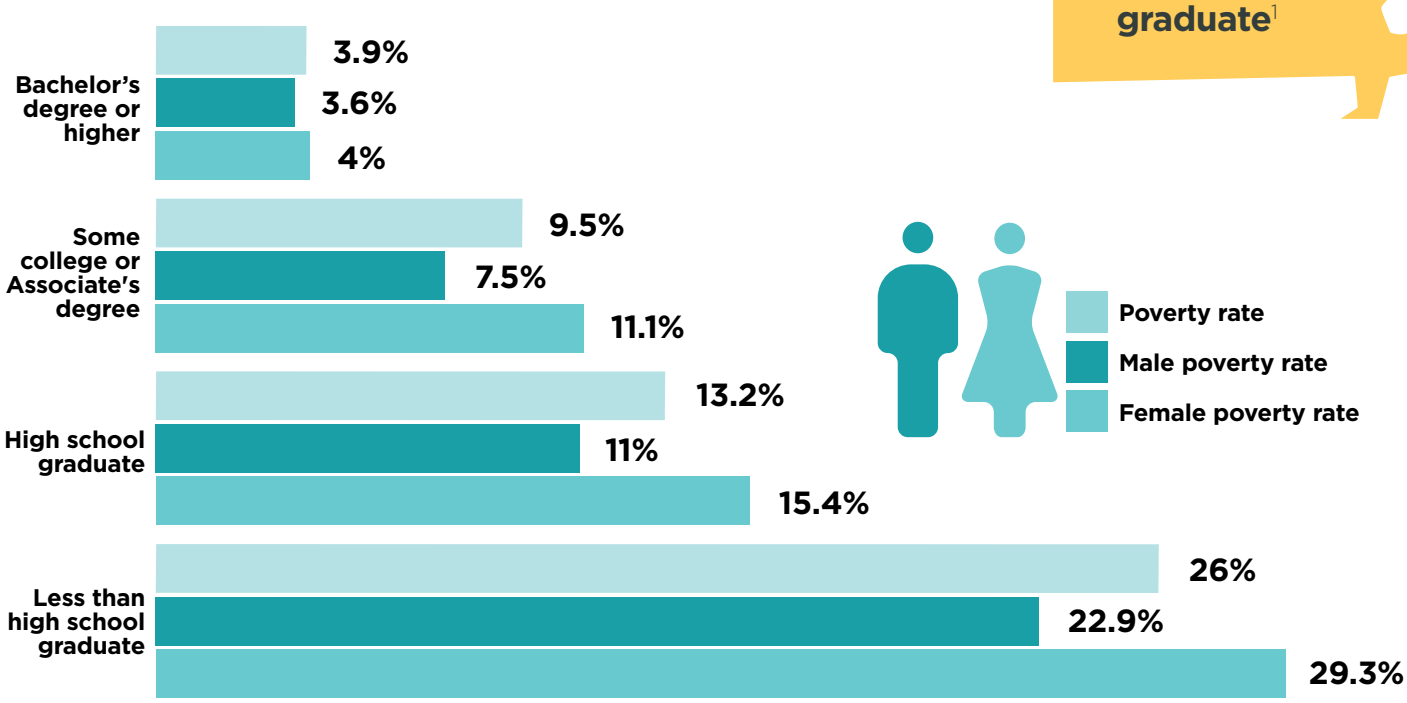
30.5% of Missourians 25 years and older have a high school diploma or equivalency, and 9.4% of Missourians have less than a high school diploma. As the level of education increases, the more skills are developed and the more access a person has to better paying occupations. 18.4% of Missourians have a bachelor's degree; 11.5% have a graduate or professional degree (US Census Bureau).[1]



POVERTY RATES BY EDUCATIONAL ATTAINMENT

US Census data reveals higher poverty rates for Missourians with lower educational attainment. The poverty rate is higher for females than males at each of the four educational attainment levels. The data shows poverty rates for Missourians 25 years and older (US Census Bureau).[1]

26%
Poverty for Missourians less than a high school graduate[1]



EMPLOYMENT AND EARNINGS BY EDUCATIONAL ATTAINMENT

Education plays a part in economic security. The following data reflects earnings for full-time, salaried workers persons aged 25 and older in the US. These education categories reflect only the highest level of educational attainment and do not consider completion of training programs such as apprenticeships and other on-the-job training. As education attainment increases, median annual earnings increase and unemployment decrease—a combination that illustrates increased economic security. Missourians with less than a high school diploma have an unemployment rate more than twice that as those with a bachelor's degree (Bureau of Labor Statistics).[2]

Earnings and unemployment rate by educational attainment

EDUCATIONAL ATTAINMENT	MEDIAN WEEKLY EARNINGS	UNEMPLOYMENT RATE
Less than high school diploma	**$619**	**11.7%**
High school diploma	**$781**	**9.0%**
Some college, no degree	**$877**	**8.3%**
Associate's degree	**$938**	**7.1%**
Bachelor's degree	**$1,305**	**5.5%**
Master's degree	**$1,545**	**4.1%**
Professional degree	**$1,893**	**3.1%**
Doctoral degree	**$1,885**	**2.5%**

Median Income Based on Educational Attainment and Gender
(US Census Bureau)[1]

EDUCATIONAL ATTAINMENT	TOTAL	MALE	FEMALE
Less than high school graduate	**$25,089**	**$30,051**	**$19,096**
High school graduate (includes equivalency)	**$31,391**	**$37,726**	**$24,978**
Some college or associates degree	**$35,924**	**$43,537**	**$30,577**
Bachelor's degree	**$50,856**	**$62,067**	**$42,427**
Graduate or professional degree	**$63,088**	**$79,013**	**$55,110**

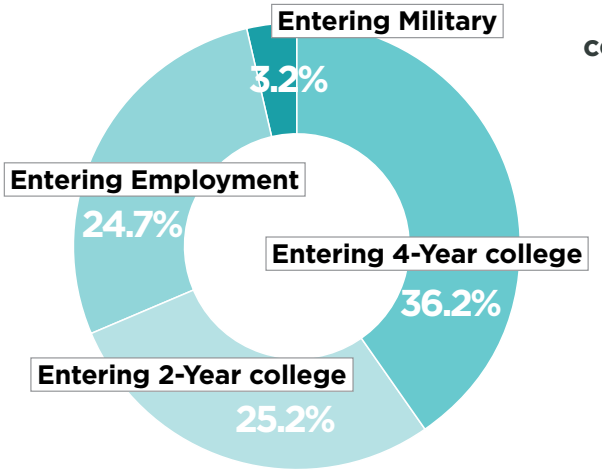
HIGH SCHOOL GRADUATION RATES

In 2019 the 4-year graduation rate for Missouri public high school students was 89.2%. The overall dropout rate was 1.6% (Missouri Department of Education and Secondary Education).[4]

4-year graduation rate for Missouri public high school students

WHERE MISSOURI STUDENTS GO

Missouri students follow one of five paths after graduation. 61.3% of students pursue continued education whether at a technical institution, 2-year college, or 4-year college/university. Almost a quarter entered the workforce after graduating from high school (Missouri Department of Education and Secondary Education).[5]



STUDENT DEBT

While education increases future earnings and lowers unemployment, student debt can create economic hardships for college graduates. The average debt for a Missouri college graduate was $28,713 (The Institute of College Access and Success).[3]

$28,713

Average debt of Missouri college graduates 2019-2020

56%

Of Missouri college students graduate with debt

FOOD & NUTRITION

Food is one of life's most basic necessities. Without access to nutritious food, people are at greater risk of disease and health issues, as well as reduced mental focus at work for adults and at school for students. Yet this basic need is a struggle for many Missourians.

Food insecurity and hunger continue to plague our state, and COVID increased those difficulties. The economic fallout from the pandemic forced many families to seek food at local food banks, even with increased assistance.

There are numerous barriers to nutritious food, including a household's low income, the affordability of food, and access to food depending on where one lives. Food deserts exist in both urban and rural locations. Whatever the barriers, the numbers show Missourians experience food insecurity at rates higher than the national average.

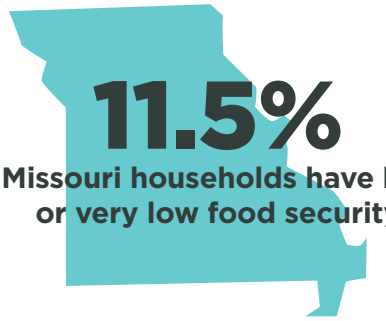
FOOD SECURITY VS INSECURITY

The USDA always defines food security as access by people to enough food for an active, healthy life. Food insecurity is the state of being without reliable access to enough affordable, nutritious food. Missouri ranks as the 34th highest for food insecurity at 11.5%, which is higher than the national average of 10.7% (USDA).[1]

FOOD INSECURITY IN MISSOURI

Food insecure households are those that are not able to afford an adequate diet in the past 12 months. According to the US Department of Agriculture's Economic Research Service, 11.5% of Missouri households experienced low or very low food security, compared to the national average of 10.7%. The prevalence of food security varies considerably from state to state, ranging from 5.7% in New Hampshire, to 15.3% in Mississippi (USDA).[1]

10.7%
US households have low or very low food security

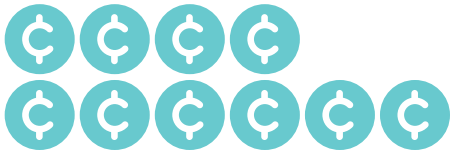


11.5%
Missouri households have low or very low food security

SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP)

The mission and purpose of the Supplemental Nutrition Assistance Program (SNAP) is to improve the diets of low-income households by increasing food access and food purchasing ability. SNAP benefits are available to recipients on an Electronic Benefits Transfer card for individuals and families to make purchasing decisions based on their specific dietary needs. SNAP is available for household-level incomes less than 130% of the poverty level (USDA).[2]

$1 in SNAP benefits generates $1.50 in economic activity



340,865
Missouri families participated in SNAP (monthly average) FY2020

715,447
Missourians participated in SNAP FY2020

$1,342,772,664
Distributed in SNAP benefits FY2020

Average monthly SNAP benefits FY2019
(Center for Budget and Policy Priorities)[3]

All households:
$250

Households with children:
$425

Working households:
$354

Households with seniors:
$106

Households with non-elderly disabled individuals:
$170

NATIONAL SCHOOL LUNCH PROGRAM

The free and reduced-price lunches offered by schools through the National School Lunch program help address food insecurity on the student level. When school districts see participation past a certain threshold, all students across the district may be eligible for this program, increasing access to a food insecurity solution that benefits the entire school community (USDA).[4]

233,066

Missouri Students participated in the National School Lunch program in FY2021

FOOD PANTRIES IN MISSOURI

In 2021, Feeding Missouri, a nonprofit organization dedicated to alleviating hunger in the state, commissioned a study by the University of Missouri Interdisciplinary Center for Food Security to better understand food pantry clients. The study used online, telephone, and in-person surveys in the spring and summer of 2021 to gather information. They found that 54% of clients received half of their food from pantries, 41% of clients have at least one child under 18 years of age, and 17% of households included at least one veteran (Feeding Missouri).[6]

54%

Of households served in Missouri get at least half of their food from pantries

SENIOR FARMER MARKET PROGRAM

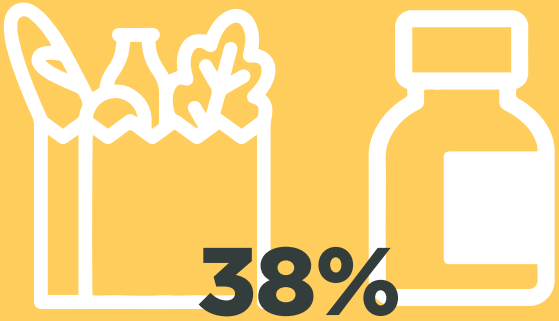
The federal Senior Farmers Market Program (SNFMP) is designed to provide low-income seniors with access to locally grown fruit and vegetables (USDA).[5]

1,755

Missouri seniors participated in SNFMP in FY2020

204

Missouri farmers participated in SNFMP in FY2020



38%

Of households had to choose between food and medicine/medical care in the past year

44%

Consumed food past its expiration date

18%

Watered-down food or drinks

HEALTH & MENTAL HEALTH

Most Missourians have access to health care through employer-provided insurance, but this system leaves those at the lowest levels of income at a severe disadvantage as insurance is rarely provided by their employer. The issues with this system became apparent during the COVID pandemic, as low-income families struggled to maintain access to healthcare.

In this health care system, low-income families often pay-out-of-pocket for health care while higher income individuals receive employer subsidies.

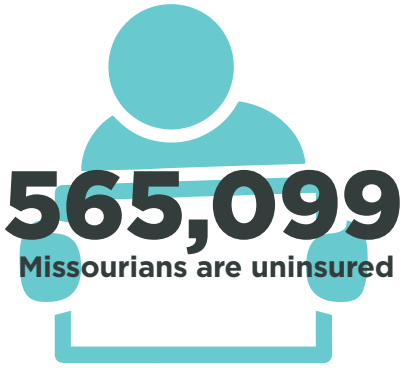
Health and longevity are influenced by income but determining the unique contributing factor can be difficult because income and health intersect with many other social determinants of health, including access to housing, workplace safety, racial segregation, social support, food insecurity, and more.

HEALTH INSURANCE COVERAGE IN MISSOURI

Most Missourians receive health insurance coverage through employer-sponsored plans, but this system leaves those at the lowest levels of income at a severe disadvantage as insurance is rarely provided for part-time employees. At the federal level, Medicare provides coverage to seniors. At the state level, Medicaid covers citizens at 138% of the federal poverty level. Together, 90.6% of Missourians are insured (US Census Bureau).[1]

90.6%

Of Missourians are insured



565,099

Missourians are uninsured

MEDICAID IN MISSOURI

MO Healthnet is Missouri's Medicaid program. In November 2020, Missourians approved a constitutional amendment that increased eligibility for the public health program to 138% of the federal poverty level. According to the Missouri Department of Social Services, 1,146,253 Missourians were enrolled in MO HealthNet as of November 2021 (Missouri Department of Social Services).[2]

1,146,253

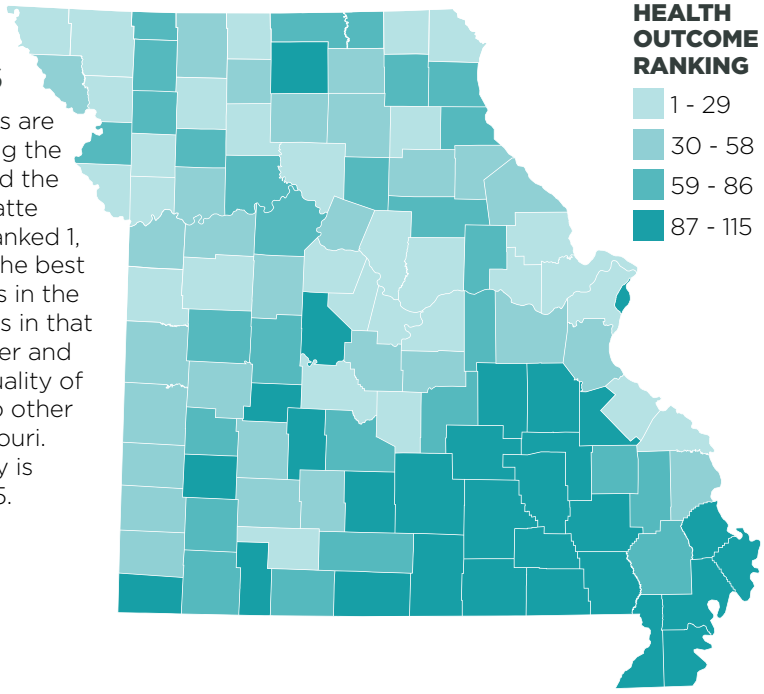
Missourians on MOHealthNet (Nov. 2021)

MISSOURI COUNTY HEALTH RANKINGS

Numerous factors impact how well and how long a person lives, from access to affordable housing or a good education for children. The County Health Rankings model, created by the University of Wisconsin Population Health Institute, shows how these factors work together to illustrate both health outcomes and health factors (University of Wisconsin Population Health Institute County Health Rankings).[3]

HEALTH OUTCOMES

Health outcomes are determined using the quality of life and the length of life. Platte County, MO is ranked 1, meaning it has the best health outcomes in the state, i.e., citizens in that county live longer and have a better quality of life compared to other counties in Missouri. Pemiscot county is ranked last at 115.



HEALTH FACTORS

Health factors represent community conditions and are measured in four categories

HEALTH BEHAVIORS

Tobacco use
Diet & exercise
Alcohol & drug use
Sexual activity

SOCIAL & ECONOMIC FACTORS

Education
Employment & income
Family & social support
Community safety

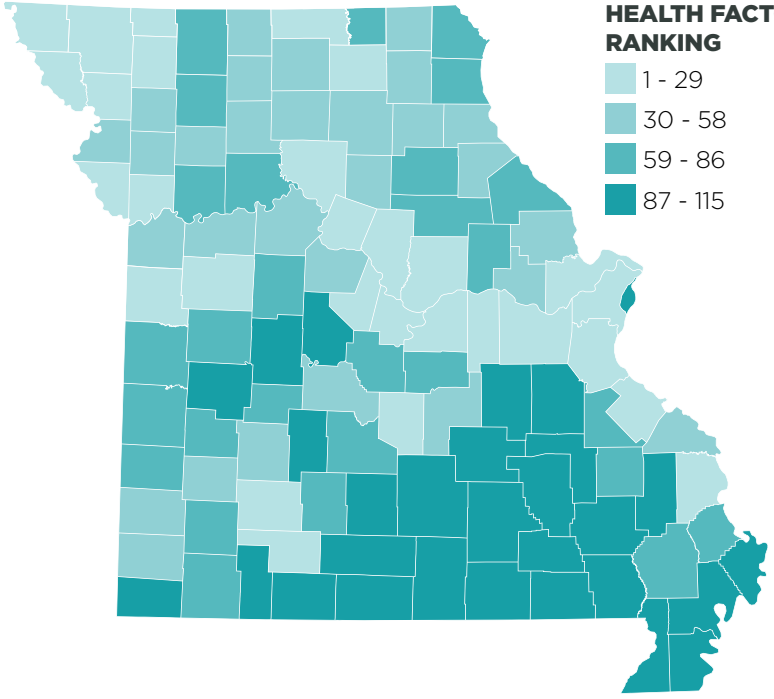
CLINICAL CARE

Access to care
Quality care

PHYSICAL ENVIRONMENT

Air & water quality
Housing & transit

The county with the highest ranking has factors in its communities that lead to positive health outcomes. Conversely, the lowest ranked county has many factors that negatively impact its citizens' health.



MENTAL HEALTH AND SUBSTANCE ABUSE IN MISSOURI

The Status Report on Missouri's Substance Use and Mental Health is published by the Missouri Department of Mental Health to gauge the prevalence of substance abuse and mental health disorders in the state. The report released in 2021 captured data during 2020, the initial year of the COVID pandemic (Missouri Department of Mental Health).[4]

22.7%
Missourians over 18 suffer from a mental illness

5.6%
Of Missourians over 18 suffer from a serious mental illness

24.1%
Of Missouri population ages +12 binge drank in the past month

19.7%
Of Missouri population ages +12 smoked a cigarette in the past month

10.6%
Of Missouri population ages +12 used illicit drugs

HOUSING & ENERGY

What happens when your housing is unaffordable, affordable housing does not exist, or you face the choice between rent and food? What if you're one paycheck or emergency away from eviction? In the worst case, you could be homeless. In many other cases, you will likely have to settle for substandard housing, including a home that is energy inefficient.

Even with stable housing, there's a strong correlation between homeownership and wealth. Young adults' homeownership rate increases with household income. This effect is compounded by parental homeownership status. Income disparities also perpetuate disparities in housing.

The COVID-19 pandemic highlighted the precarious housing situation of millions of Americans. In response to the economic fallout, the federal government and numerous states and municipalities instituted eviction bans. However, even with these measures, one in six adults in the US were behind on rent as of information collected in Sept.-Oct. 2021 (Food Research and Action Center).[1]

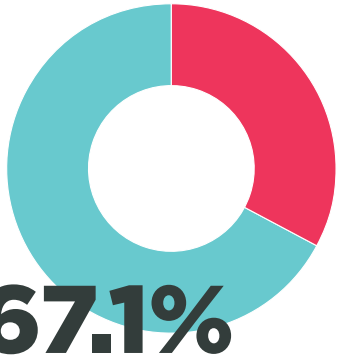
HOUSING AND FAMILY LIVING ARRANGEMENTS IN MISSOURI (US Census Bureau)[2]

2,804,664
Housing Units in Missouri

2,440,212
Households in Missouri

Media value of home

32.9%
Households in Missouri are renters



67.1%
Owner Occupied

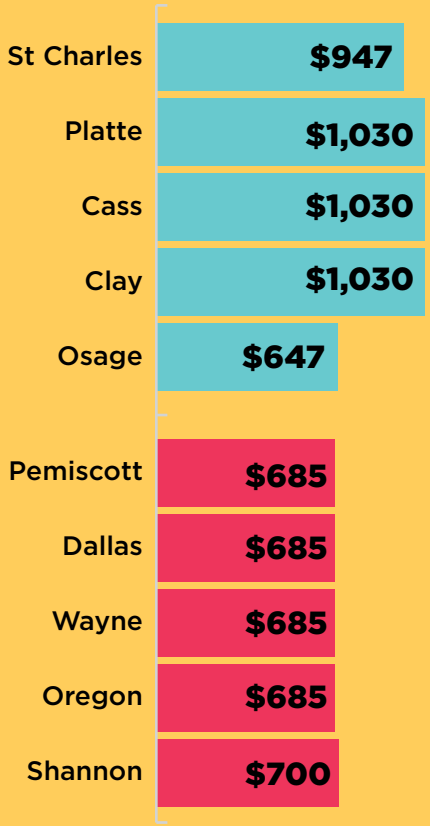
$1,287
Average mortgage in Missouri

PRICE OF HOUSING

The price of housing varies greatly by location. Here is the fair market rent for a 2-bedroom apartment for the 5 counties with the lowest poverty rate and the 5 counties with the highest poverty rates (HUD).[3]

Fair Market Rent for 5 lowest poverty rate counties and 5 highest poverty rate counties

(Effective April 1, 2021)



AVERAGE RENT IN MISSOURI AND AFFORDABILITY

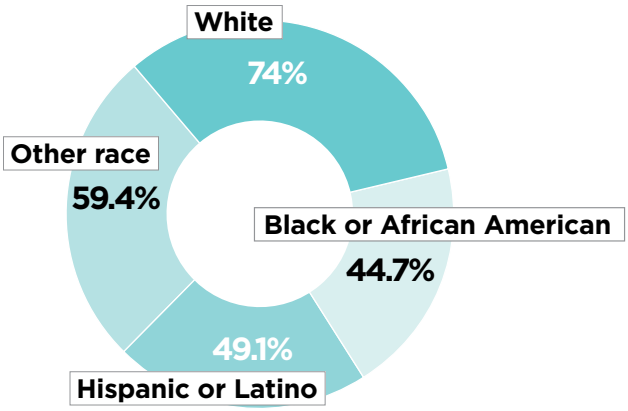
$843
Median monthly rent in Missouri[2]

36%
Of Missourians spend more than one third (1/3) of their income on rent[2]

HOMEOWNERSHIP BY RACE AND ETHNICITY

Homeownership matters. Owning a home is an important tool for building financial stability. Homeownership impacts future generations. Young adults are more likely to own a home if their parents were homeowners. Homeownership also plays a critical role in the intergenerational transfer of wealth. Disparities in homeownership rates among races and ethnicities reflect historic poverty trends for the same demographics. Black Americans face a higher poverty rate and a lower homeownership rate (Federal Reserve Economic Data).[4]

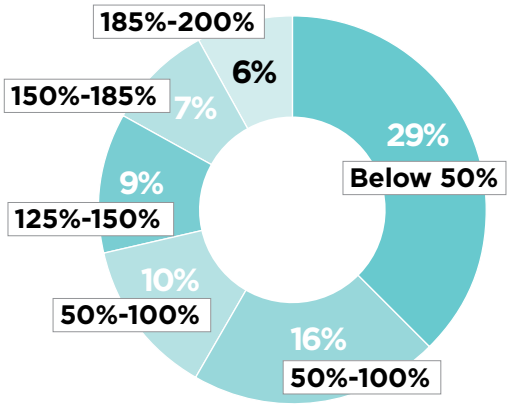
Homeownership Rates in America (2020)[4]



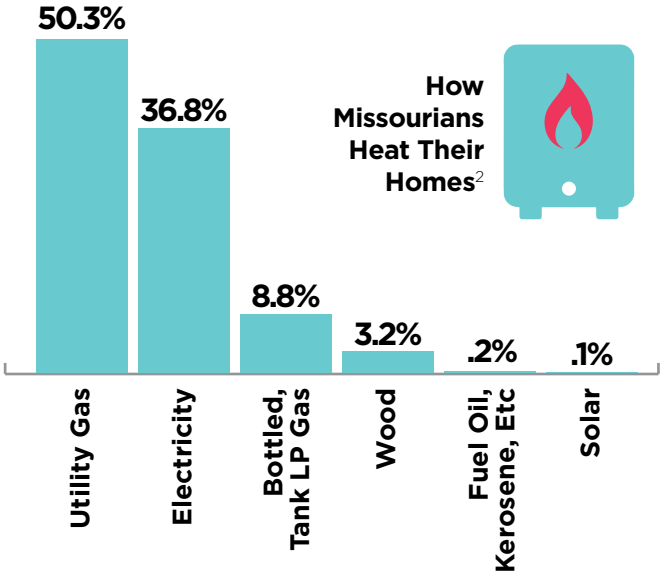
ENERGY BURDEN

The cost of home energy is a significant financial burden for low-income Missouri households. Missouri households with incomes of below 50% of the federal poverty level pay 29% of their annual income on their home energy bills. Low-income households are not the only ones affected by energy unaffordability. Bills for households with incomes between 150% and 185% of the federal poverty level pay 7% of their income; households with incomes between 185% and 200% of the federal poverty level pay 6% of their income. The percentage of income spent on home energy costs for people with higher income levels is 3% (US Census Bureau).[2]

Home Energy Burden to Poverty Level



How Missourians Heat Their Homes[2]



MISSOURI FAIR MARKET RENT AND HOUSING WAGE

The Out of Reach Report, published by the National Low-Income Housing Coalition, outlines the hourly wage one must make in each state to afford a 1- or 2-bedroom rental home without paying more than 30% of income on housing. In 2021, the fair market rent (FMR) for a two-bedroom apartment is $867. To afford this level of rent and utilities—without paying more than 30% of income on housing—a household must earn $16.66 hourly to afford a two-bedroom apartment at fair market rent. This is known as the state housing wage (National Low-Income Housing Coalition)[5].

65 Hours
Per week at minimum wage to afford a 2-bedroom rental home

$16.66 **State housing wage** VS **$11.15** **Minimum wage** (2021)

1.6 FULL-TIME JOBS
At minimum wage to afford a 2-bedroom rental home (at FMR)

Rent affordable to SSI recipient **$238** **$536** **Rent affordable with full-time job paying minimum wage**

THE SOCIAL SAFETY NET

The term social safety net refers to assistance provided to vulnerable families and individuals to improve their lives. Many programs comprise this "net," including unemployment, SNAP, Medicare, and more. Social security is the largest social insurance safety net program in the United States.

During the COVID-19 pandemic, the federal government invested billions into social safety net programs to prevent millions of Americans from falling into poverty. The measures included increased unemployment benefits, SNAP funds, LIHEAP support, and rental/mortgage assistance. It was the largest push to help working families and individuals since the New Deal policies enacted by President Franklin D. Roosevelt.

There is much debate over the efficacy of these programs. The waters are even more muddied by a lack of timely data. There is often a 2–3-year lag in information on utilization of programs and their effect on families and local communities. This prevents policymakers from having an accurate picture of how services help, or don't help, low-income citizens.

The programs are often underfunded and underutilized. For example, only 16.1% of the total eligible population in Missouri received LIHEAP in 2020. Meanwhile, only 57.1% of eligible families in the US use WIC. In Missouri, around 13% of eligible individuals don't participate in the WIC program.

LIHEAP

The Low-Income Home Energy Assistance Program (LIHEAP) is a federally funded program that assists low-income households with paying their utility bills. The program plays a critical part in helping individuals in poverty pay their energy costs. In FY2020, LIHEAP benefits in Missouri prevented the loss of service 76,145 times.

As of Aug. 1, 2021, the average annual LIHEAP benefit was $334. This was less than the average benefit for high burden households, which is $313. In fact, LIHEAP assistance pays a smaller share of the home energy bill for high burden households. (Dept. Of Health and Human Services).[3]

LIHEAP by the Numbers [1]

$334
Average annual LIHEAP benefit

$83,198,518
Gross LIHEAP allocation

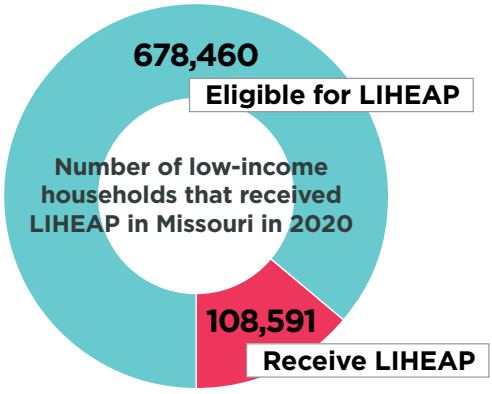
As a result of Bill Pay Assistance

87% Prevention	13% Restoration
(76,145 Occurrences)	(11,479 Occurrences)

As a result of Equipment repair or replacement

89% Prevention	11% Restoration
(31 Occurrences)	(4 Occurrences)

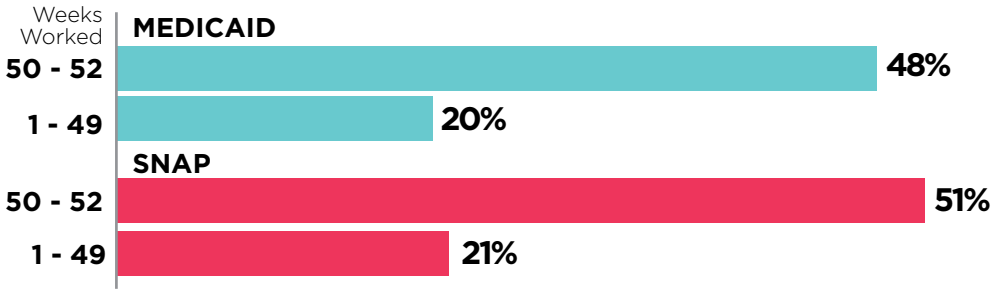
12.66%
drop in LIHEAP funding from FY10 to FY20



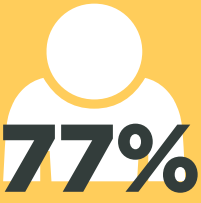
WORKING POOR

Most of the recipients in safety net programs are employed. According to the U.S. Government Accountability Office, approximately 70 percent of adult wage earners enrolled in SNAP and Medicaid worked full-time hours (35 hours or more a week) (US GAO).[2]

Estimated percentage of wage-earning enrollees/recipients (Ages 19-64)



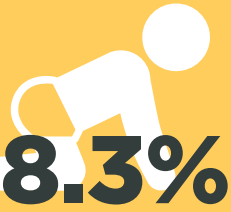
Of LIHEAP recipients in Missouri:



77%
Have at least one vulnerable member

33.8%
Have an elderly members (60+ years of age)

53.2%
Have at least one disabled member



18.3%
Have at least one child under six

WOMEN, INFANTS, AND CHILDREN PROGRAM

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federal nutrition program that provides low-income nutritionally at-risk pregnant women, postpartum mothers, infants, and children up to 5 years old with nutritious foods, nutrition education, breastfeeding support, and referrals to health care. Despite the importance of the program, it is underutilized, and participation continues to drop. In 2018, around 57% of eligible individuals in the US received WIC, and just 44.2% of eligible children. (Food Research and Action Center).[4]

$25.59
Average monthly benefit per person in Missouri

-9.7%
Decrease in participation nationally from 2020-2021

104,293 (Mar. 2019 – Feb. 2020 average) **VS** **94,223** (Mar. 2020 – Feb. 2021 average)

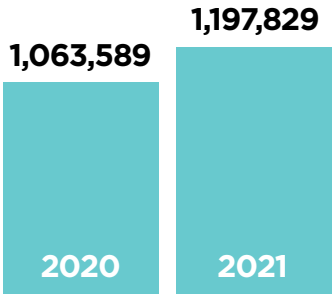
$2.8 Billion
infused into local economies through WIC (nationwide)

MEDICAID EXPANSION

MO HealthNet is Missouri's Medicaid system, which provides healthcare to citizens under a certain percent of the federal poverty level. In November 2020, Missouri voters approved a constitutional amendment that increased eligibility to 138% of the federal poverty level, expanding access to approximately 275,000 Missourians.

19,200
Fewer deaths for states that expanded Medicaid than those who didn't (CBPP)[5]

15,600
Estimated deaths attributed in non-expansion states to the failure to provide Medicaid coverage [5]



Missourians eligible for Medicaid (Missouri Department of Social Service)[6]

SNAP

The Supplemental Nutrition Assistance Program (SNAP) provides low-income families with benefits to purchase sufficient food. The program helps 13% of the total population in the United States afford groceries. In Missouri, 11% of the population participates in SNAP. Around 13% of eligible individuals do not participate in the program (CBPP).[7]

11%
of state population on SNAP
698,700 Missouri residents used SNAP (FY 2021)

42%
Are in working families

71%
SNAP participants are in families with children

COVID-19 + IMPACT

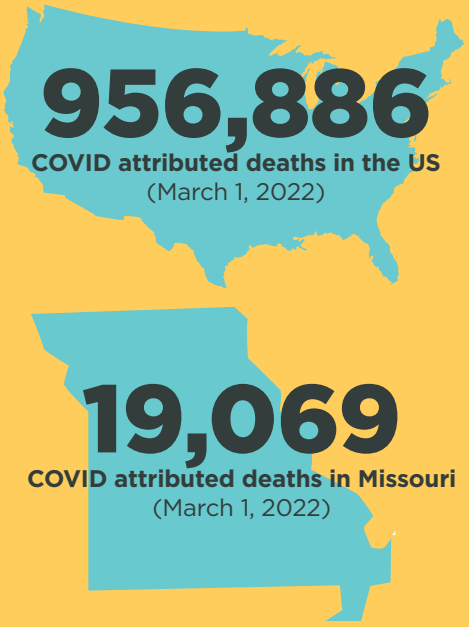
On January 20, 2020, the first COVID case was reported in the United States. By March a national emergency was declared, and Congress acted quickly to assist millions of Americans who were suddenly without work or income.

Meanwhile, hospitals overflowed with patients. By January 1, 2021, 6,899 Missourians had lost their life to the virus. That number would increase to 16,074 by the end of 2021 (CDC).[1]

We are still examining the effects of COVID on poverty. There has always been a delay in receiving data, but the pandemic exacerbated the lag in information. The 2020 Census experienced difficulties in collecting data due to concerns around COVID.

It will take years for us to truly understand the full effect of the pandemic on people in poverty. We are beginning to get an idea of COVIDs impact on Missouri's low-income citizens and the federal government's subsequent response.

COVID-19 DEATHS[1]



GOVERNMENT RESPONSE TO COVID

As businesses, schools, and other organizations closed their doors, Americans were faced with record unemployment. The job loss was immediate and widespread. The loss of income placed millions of citizens in danger of falling into poverty. In response, the federal government enacted a series of measures directed at assisting families and individuals. The Coronavirus Aid Relief and Economic Security (CARES) Act was signed into law on March 27, 2021. The $2 trillion legislation provided grants to help small businesses and nonprofits, direct stimulus payments to individuals, billions in food programs, and funds to state and local governments to respond to the emergency (Center for American Progress).[2]

5.5M
Kept out of poverty by unemployment insurance

11.7M
People lifted out of poverty by the first two stimulus checks

5.3M
People kept above poverty line by refundable tax credits

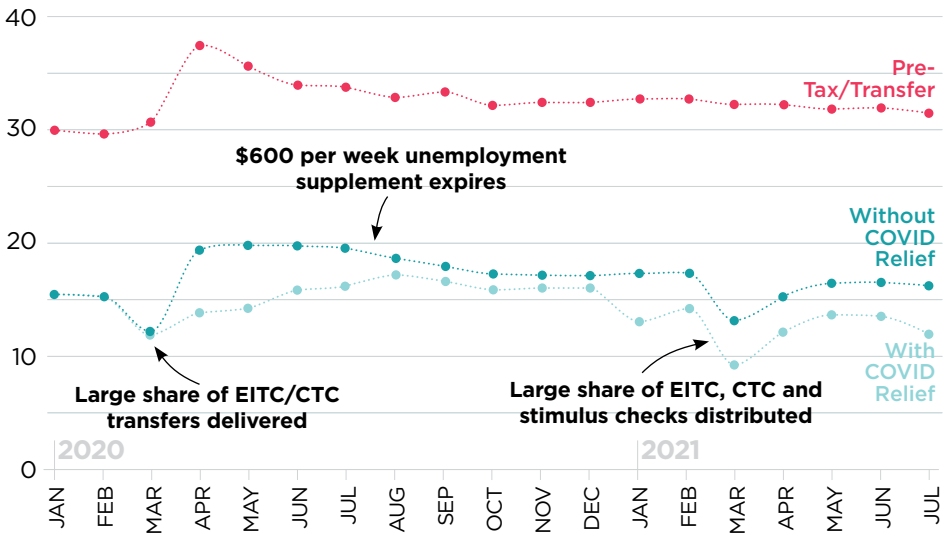
POVERTY RATE DURING COVID

According to the Center for Budget and Policy Priorities, the federal government's response to the COVID pandemic prevented an estimated 53 million people out of poverty during 2020. Without that assistance, the poverty rate would have increased during the same period by 2.8%. In short, the government's assistance had its intended effect—citizens were stopped from falling into poverty.

However, the assistance did little for families already living in poverty, especially those unable to access the increased benefits and stimulus payments. The CARES assistance was temporary, meaning those families that were lifted out of poverty faced the same factors that put them into poverty once the benefits ended.

There were differences in the poverty rate depending on which measure was used. During 2020, the official poverty measure (OPM) increased by 1%, from 10.5% to 11.4%. Meanwhile, the supplemental poverty measure (SPM) shows that poverty decreased from 11.8% in 2019 to 9.1% in 2020, thanks to historic federal aid. (Center for American Progress).[2]

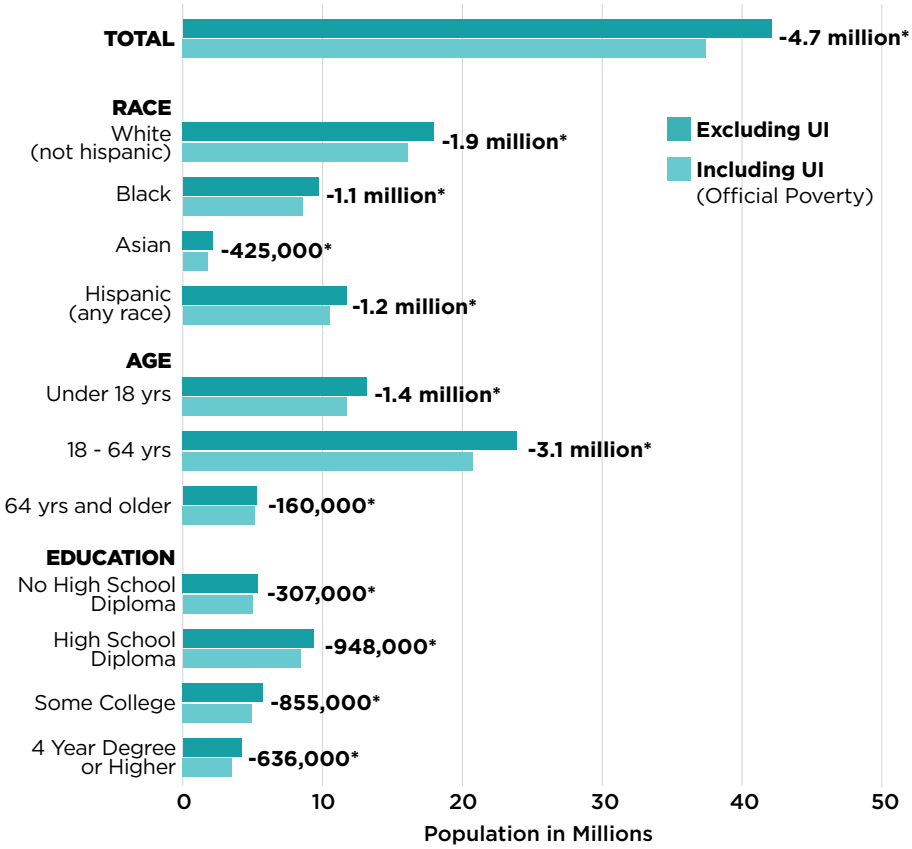
Monthly Poverty Rate During COVID-19 (Food Research and Action Center)[3]



UNEMPLOYMENT AND COVID

When COVID-19 first began, shutdowns throughout the country resulted in extensive job loss. In response, the federal government enacted the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The measure expanded unemployment insurance by $600/per week, increased eligibility, and extended the benefits for 13 weeks. The payments lowered the overall poverty rate by 1.4%. Without unemployment insurance, 4.7 million people would have been in poverty (Center for American Progress).[2]

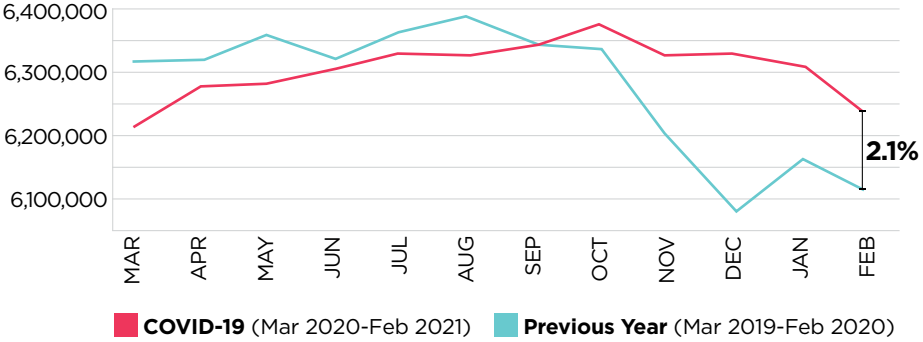
Impact of Unemployment Insurance (UI) on the number of people in Poverty: 2020 (Population as of March of the following year)



WIC PARTICIPATION DURING COVID

During the pandemic, WIC waivers increased access to the benefits, resulting in a national 2.1% increase in participation. Yet here in Missouri, the number of recipients fell by 12.6%. (Food Research and Action Center).[4]

Total Number of WIC Participants by Month, First Year of COVID-19 compared to the previous year



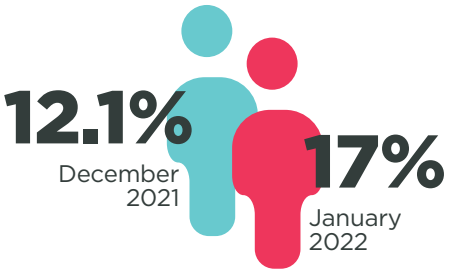
ENHANCED CHILD TAX CREDIT

In March 2021, Congress approved the American Rescue Plan Act (ARPA), the second measure passed by the federal government in response to the COVID pandemic. Among the provisions, ARPA expanded the Child Tax Credit (CTC) so more families would receive it, increased the amount, and eliminated the requirement for taxpayers to have at least earned $2500 in income to claim the credit.

The results were immediate. The first payment in July 2021 kept 3.8 million children from poverty. The child poverty rate fell from 15.9% in June 2021 to 12.2% in Nov. 2021. (Columbia University Center on Poverty & Social Policy)[5]

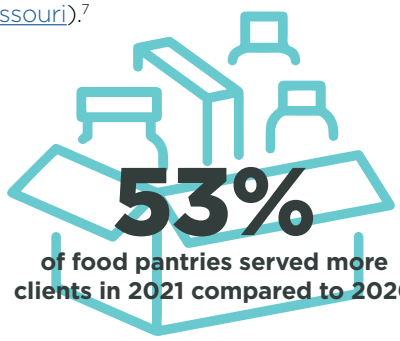
Within the first month of the benefits ending in January 2022, child poverty increased from 12.1% to 17%. (Columbia University Center on Poverty and Social Policy).[6]

Child Poverty Rate



FOOD PANTRIES DURING COVID

The Food Assistance & Hunger in the Heartland 2021 Report provides an idea of how food insecurity affected Missourians during the pandemic. The study gathered data from clients and pantries on characteristics of pantries and clients. It found food pantry use increased sharply during 2021 when compared to 2020. (Feeding Missouri).[7]



CONCLUSION

The Missouri Poverty Report provides a starting point to analyze the level of poverty in the state and the impacts of COVID-19. In March 2020, the Pandemic led to the declaration of a national emergency. As businesses and organizations closed, unemployment skyrocketed from 3.7% to 12.5%. Families faced limited access to food. Individuals couldn't afford rent or mortgages. These difficulties were faced by all Missourians, but disproportionately impacted low-income families.

The federal government provided more than $2 trillion in assistance to individuals, families, and businesses. It was the largest expansion of the social safety net since the 1930s. It is estimated that 5.5 million people nationally were kept above the poverty line through unemployment insurance, and 11.7 million were lifted out of poverty by the first two stimulus checks. The enhanced child tax credit, paid in monthly installments, significantly lowered child poverty.

Then those programs expired. Within the first month of ending the enhanced CTC, child poverty jumped by 41%. Meanwhile, households with low incomes have been slower to recover jobs from the pandemic than high wage earners. Employers report difficulty in finding qualified workers and the unemployed struggle with childcare, transportation, and the skills needed for the available jobs.

Missouri CAN looks forward to working with the Governor, the Legislature, advocates, and concerned citizens to strengthen anti-poverty measures that can expand opportunity and economic security to all Missourians.

For more information on this report or on Missouri CAN's work to fight poverty please contact info@communityaction.org of call 573.634.2969.

MISSOURI COMMUNITY ACTION NETWORK

Missouri Community Action Network is the state association for Missouri's Community Action agencies. Community Action Agencies provide services at the local level to help lift people out of poverty. Nineteen (19) Community Action Agencies cover every county in the state, ensuring no Missourian is without access to the tools they need to lead financially stable lives. MCAN educates Missouri on the impact of poverty and advocates on behalf of low-income citizens. For more information on MCAN, including how to get involved in Community Action, visit www.communityaction.org or email info@communityaction.org. To find your local Community Action Agency, visit www.communityaction.org/gethelp.

Community Action Agencies throughout Missouri provide citizens paths out of poverty through local services, including utility assistance, rental assistance, Head Start, Weatherization, job training through SkillUp, and more.

If you or someone you know is struggling, visit **www.communityaction.org/gethelp** to find the closest agency.

GET HELP

SOURCES

INTRODUCTION, pgs. 2-3

2020 Supplemental Poverty Measure

1. US Census Bureau, Current Population Survey, 2021 Annual Social and Economic (ASEC) Supplement, Number and Percentage of People in Poverty by State: 3-year Average Of 2018-2020, Appendix Table 5
2. US Census Bureau, The Supplemental Poverty Measure: 2020, Table 5, September 14, 2021

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3. US Department of Health and Human Services, HHS Poverty Guidelines for 2022

50%, 100% and 200% of Poverty

4. US Census Bureau, Income and Poverty in the United State: 2020, Poverty Thresholds for 2020 by Size of Family and Number of Related Children Under 18 Years

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1. US Census Bureau, American Community Survey 2020 5 Year Estimates, Poverty Status in the Last 12 Months (Table ID S1701)
2. US Census Bureau, Current Population Survey, 2021 Annual Social and Economic (ASEC) Supplement, Figure 8 Table B-4
3. US Census Bureau, 2021 Current Population Survey Annual Social and Economic Supplement, Map ID IPE 120220

Local Snapshot of Poverty

4. US Census Bureau, Small Area Income and Poverty Estimates, 2020, Missouri

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5. US Census Bureau, Income and Poverty in the United State: 2020, Poverty status by age, race, and hispanic origin, table B-5

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Inflation

3. Bureau of Labor Statistics, The Economic Daily, Department of Labor, Consumer Price Index: 2021 in review

Minimum Wage

4. Minimum Wage, Missouri Department of Labor, January 2022

Living Wage

5. Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology

Median Household Income

6. US Census Bureau, American Community Survey 2020 5-year Estimates, Median Income in the Past 12 Months (in 2020 Inflation-Adjusted Dollars), Table ID S1903, Missouri

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Educational Attainment in Missouri

1. US Census Bureau, American Community Survey 2020 5-year estimates, Educational Attainment Table ID S1501, Missouri

Poverty Rate by Educational Attainment

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3. The Institute for College Access and Success, Student Debt and the Class of 2020, November 2021

High School Graduation Rates

4. Missouri Department of Education and Secondary Education, At-A-Glance Information, 2022

Where Missouri Students Go

5. Missouri Department of Education and Secondary Education, Public Education Snapshot 2020-2021

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Food Insecurity in Missouri

1. Economic Research Service, US Department of Agriculture, Household Food Security in the United States in 2020

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2. Food and Nutrition Service, US Department of Agriculture, Supplemental Nutritional Assistance Program State Activity Report, Fiscal Year 2020
3. Center of Budget and Policy Priorities, A Closer Look at Who Benefits from SNAP: State-by-State Fact Sheets, Updated April 25, 2022

National School Lunch Program

4. Food and Nutrition Service, US Department of Agriculture, Child Nutrition Tables, State Level Tables: FY2017-2021

Senior Farmers' Market Nutrition Program

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Attachment JAH-3

MISSOURI

THE HOME ENERGY AFFORDABILITY GAP 2022

(2ND SERIES) PUBLISHED APRIL 2023

Finding #1

Poverty Level	Home Energy Burden
Below 50%	29%
50 – 100%	15%
100 – 125%	10%
125 – 150%	8%
150 – 185%	7%
185% - 200%	6%

Home energy is a crippling financial burden for low-income Missouri households. Missouri households with incomes of below 50% of the Federal Poverty Level pay 29% of their annual income simply for their home energy bills.

Home energy unaffordability, however, is not only the province of the very poor. Bills for households with incomes between 150% and 185% of Poverty take up 7% of income. Missouri households with incomes between 185% and 200% of the Federal Poverty Level have energy bills equal to 6% of income.

Finding #2

Poverty Level	Number of Households	
	Last Year	This Year
Below 50%	144,545	135,932
50 – 100%	188,708	176,469
100 – 125%	110,407	104,197
125 – 150%	106,824	105,684
150 – 185%	160,114	150,350
185% - 200%	68,988	69,463
Total < 200%	779,586	742,095

The number of households facing unaffordable home energy burdens is staggering. According to the most recent five-year American Community Survey, nearly 136,000 Missouri households live with income at or below 50% of the Federal Poverty Level and face a home energy burden of 29%. And more than 176,000 *additional* Missouri households live with incomes between 50% and 100% of the Federal Poverty Level and face a home energy burden of 15%.

In 2022 the total number of Missouri households below 200% of the Federal Poverty Level fell slightly from the prior year.

Finding #3

Home Energy Affordability Gap: 2011 (base year)	$665,722,385
Home Energy Affordability Gap: 2022 (current year)	$733,719,169
Home Energy Affordability Gap Index (2011 = 100)	110.2

The Home Energy Affordability Gap Index (2nd Series) indicates the extent to which the Home Energy Affordability Gap has increased between the base year and the current year. In Missouri, this Index was 110.2 for 2022.

The Home Energy Affordability Gap Index (2nd Series) uses the year 2011 as its base year. The Index for 2011 is set equal to 100. A current year Index of more than 100 thus indicates that the Home Energy Affordability Gap for has increased since 2011. A current year Index of less than 100 indicates that the Home Energy Affordability Gap has decreased since 2011.

Finding #4

	Last Year	This Year
Gross LIHEAP Allocation ($000's)	$74,937	$75,091
Number of Households <150% FPL	550,484	522,282
Heating/Cooling Bills "Covered" by LIHEAP	91,834	74,347

Existing sources of energy assistance do not adequately address the Home Energy Affordability Gap in Missouri. LIHEAP is the federal fuel assistance program designed to help pay low-income heating and cooling bills. The gross LIHEAP allocation to Missouri was $75.1 million in 2022 and the number of average annual low-income heating and cooling bills "covered" by LIHEAP was 74,347.

In comparison, the gross LIHEAP allocation to Missouri in 2021 reached $74.9 million and covered 91,834 average annual bills.

Finding #5

Primary Heating Fuel	Penetration by Tenure	
	Owner	Renter
Electricity	31%	51%
Natural gas	54%	42%
Fuel Oil	0%	0%
Propane	10%	5%
All other	5%	2%
Total	100%	100%

The Home Energy Affordability Gap in Missouri is not solely a function of household incomes and fuel prices. It is also affected by the extent to which low-income households use each fuel. All other things equal, the Affordability Gap will be greater in areas where more households use more expensive fuels.

In 2022, the primary heating fuel for Missouri homeowners was Natural Gas (54% of homeowners). The primary heating fuel for Missouri renters was Electricity (51% of renters).

Changes in the prices of home energy fuels over time are presented in Finding #6 below.

Finding #6

Fuel	2020 Price	2021 Price	2022 Price
Natural gas heating (ccf)	$0.867	$0.855	$1.234
Electric heating (kWh)	$0.098	$0.102	$0.105
Propane heating (gallon)	$1.646	$1.947	$2.632
Fuel Oil heating (gallon)	$2.626	$2.607	$3.582
Electric cooling (kWh)	$0.130	$0.134	$0.154

In Missouri, natural gas prices rose 44.3% during the 2021/2022 winter heating season. Fuel oil prices rose substantially 37.4% and propane prices rose 35.2%.

Heating season electric prices stayed relatively constant in the same period and cooling season electric prices rose 14.9%.

Home Energy Affordability Gap Dashboard -- Missouri 2022 versus 2021

AVERAGE DOLLAR AMOUNT BY WHICH ACTUAL HOME ENERGY BILLS EXCEEDED AFFORDABLE HOME ENERGY BILLS FOR HOUSEHOLDS BELOW 200% OF POVERTY LEVEL. 2021: $982 per household **2022: $989 PER HOUSEHOLD**	AVERAGE TOTAL HOME ENERGY BURDEN FOR HOUSEHOLDS BELOW 50% OF POVERTY LEVEL. 2021: 29% of household income **2022: 29% OF HOUSEHOLD INCOME**
PERCENT OF INDIVIDUALS BELOW 100% OF POVERTY LEVEL. 2021: 14% OF all individuals **2022: 13% OF ALL INDIVIDUALS**	NUMBER OF AVERAGE LOW-INCOME HEATING/COOLING BILLS COVERED BY FEDERAL HOME ENERGY ASSISTANCE. 2021: 91,834 bills covered **2022: 74,347 BILLS COVERED**
PRIMARY HEATING FUEL (2022): HOMEOWNERS - NATURAL GAS *** TENANTS - ELECTRICITY	

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NOTES AND EXPLANATIONS

The 2012 Home Energy Affordability Gap, published in May 2013, introduced the 2nd Series of the annual Affordability Gap analysis. The 2012 Home Energy Affordability Gap going forward cannot be directly compared to the Affordability Gap (1st Series) for 2011 and earlier years. While remaining fundamentally the same, several improvements have been introduced in both data and methodology in the Affordability Gap (2nd Series).

The most fundamental change in the Home Energy Affordability Gap (2nd Series) is the move to a use of the American Community Survey (ACS) (5-year data) as the source of foundational demographic data. The Affordability Gap (1st Series) relied on the 2000 Census as its source of demographic data. The ACS (5-year data) offers several advantages compared to the Decennial Census. While year-to-year changes are smoothed out through use of 5-year averages, the ACS nonetheless is updated on an annual basis. As a result, numerous demographic inputs into the Affordability Gap (2nd Series) will reflect year-to-year changes on a county-by-county basis, including:

- The distribution of heating fuels by tenure;
- The average household size by tenure;
- The number of rooms per housing unit by tenure;
- The distribution of owner/renter status;
- The distribution of household size;
- The distribution of households by ratio of income to Poverty Level;

Data on housing unit size (both heated square feet and cooled square feet) is no longer calculated based on the number of rooms. Instead, Energy Information Administration/Department of Energy (EIA/DOE) data on square feet of heated and cooled living space per household member is used beginning with the Home Energy Affordability Gap (2nd Series). A distinction is now made between heated living space and cooled living space, rather than using total living space.

The change resulting in perhaps the greatest dollar difference in the aggregate and average Affordability Gap for each state is a change in the treatment of income for households with income at or below 50% of the Federal Poverty Level. In recent years, it has become more evident that income for households with income below 50% of Poverty Level is not normally distributed. Rather than using the mid-point of the Poverty range (i.e., 25% of Poverty Level) to determine income for these households, income is set somewhat higher (40% of Poverty). By setting income higher, both the average and aggregate Affordability Gap results not only for that Poverty range, but also for the state as a whole, will be lower. The Affordability Gap results for other Poverty ranges remain unaffected by this change.

Another change affecting both the aggregate and average Affordability Gap is a change in the definition of "low-income." The Home Energy Affordability Gap (2nd Series) has increased the definition of "low-income" to 200% of the Federal Poverty Level (up from 185% of Poverty). While this change may increase the aggregate Affordability Gap, it is likely to decrease the average Affordability Gap. Since more households are added to the analysis, the aggregate is likely to increase, but since the contribution of each additional household is less than the contributions of households with lower incomes, the overall average will most likely decrease.

Most of the Home Energy Affordability Gap calculation remains the same. All references to "states" include the District of Columbia as a "state." Low-income home energy bills are calculated in a two-step process: First, low-income energy consumption is calculated for the following end-uses: (1) space heating; (2) space cooling; (3) domestic hot water; and (4) electric appliances (including lighting and refrigeration). All space cooling and appliance consumption is assumed to involve only electricity. Second, usage is multiplied by a price per unit of energy by fuel type and end use by time of year. The price of electricity, for example, used for space cooling (cooling months), space heating (heating months), and appliances (total year) differs to account for the time of year in which the consumption is incurred.

Each state's Home Energy Affordability Gap is calculated on a county-by-county basis. Once total energy bills are determined for each county, each county is weighted by the percentage of persons at or below 200% of the Federal Poverty Level to the total statewide population at or below 200% of the Federal Poverty Level to derive a statewide result. Bills are calculated by end-use and summed before county weighting.

LIHEAP comparisons use gross allotments from annual baseline LIHEAP appropriations as reported by the federal LIHEAP office. They do not reflect supplemental appropriations or the release of LIHEAP "emergency" funds. The number of average heating/cooling bills covered by each state's LIHEAP allocation is determined by dividing the total base LIHEAP allocation for each state by the average heating/cooling bill in that state, the calculation of which is explained below. No dollars are set aside for administration; nor are Tribal set-asides considered.

State financial resources and utility-specific rate discounts are not considered in the calculation of the Affordability Gap. Rather, such funding should be considered available to fill the Affordability Gap. While the effect in any given state may perhaps seem to be the same, experience shows there to be an insufficiently authoritative source of state-by-state data, comprehensively updated on an annual basis, to be used as an input into the annual Affordability Gap calculation.

Energy bills are a function of the following primary factors:

- Tenure of household (owner/renter)
- Housing unit size (by tenure)
- Heating Degree Days (HDDs) and Cooling Degree Days (CDDs)
- Housing size (by tenure)
- Heating fuel mix (by tenure)
- Energy use intensities (by fuel and end use)

Bills are estimated using the U.S. Department of Energy's "energy intensities" published in the DOE's Residential Energy Consumption Survey (RECS). The energy intensities used for each state are those published for the Census Division in which the state is located. Heating Degree Days (HDDs) and Cooling Degree Days (CDDs) are obtained from the National Weather Service's Climate Prediction Center on a county-by-county basis for the entire country.

End-use consumption by fuel is multiplied by fuel-specific price data to derive annual bills. State price data for each end-use is obtained from the Energy Information Administration's (EIA) fuel-specific price reports (e.g., Natural Gas

Monthly, Electric Power Monthly). State-specific data on fuel oil and kerosene is not available for all states. For those states in which these bulk fuels have insufficient penetration for state-specific prices to be published, prices from the Petroleum Administration for Defense Districts (PADD) of which the state is a part are used.

The Home Energy Affordability Gap Index (2nd Series) uses 2011 as its base year. The base year (2011) Index has been set equal to 100. A current year Index of more than 100 thus indicates that the Home Energy Affordability Gap has increased since 2011. A current year Index of less than 100 indicates that the Affordability Gap has decreased since 2011. The Affordability Gap Index was, in other words, re-set in 2011. The Affordability Gap Index (2nd Series) for 2012 and beyond cannot be compared to the Affordability Gap Index (1st Series) for 2011 and before.

The Home Energy Affordability Gap is a function of many variables, annual changes in which are now tracked for nearly all of them. For example, all other things equal: increases in income would result in decreases in the Affordability Gap; increases in relative penetrations of high-cost fuels would result in an increase in the Gap; increases in amount of heated or cooled square feet of living space would result in an increase in the Gap. Not all variables will result in a change in the Affordability Gap in the same direction. The annual Affordability Gap Index allows the reader to determine the net cumulative impact of these variables, but not the impact of individual variables.

Since the Affordability Gap is calculated assuming normal Heating Degree Days (HDDs) and Cooling Degree Days (CDDs), annual changes in weather do not have an impact on the Affordability Gap or on the Affordability Gap Index.

Price data for the various fuels underlying the calculation of the Home Energy Affordability Gap (2nd Series) was used from the following time periods:

Heating prices	
Natural gas	February 2022
Fuel oil ***	Week of 02/7/2022
Liquefied petroleum gas (LPG) ***	Week of 02/7/2022
Electricity	February 2022
Cooling prices	August 2022
Non-heating prices	
Natural gas	May 2022
Fuel oil ***	Week of 10/03/2022
Liquefied petroleum gas (LPG) ***	Week of 10/03/2022
Electricity	May 2022

*****Monthly bulk fuel prices are no longer published. Weekly bulk fuel prices are published during the heating months (October through March). The prices used are taken from the weeks most reflective of the end-uses to which they are to be applied. Prices from the middle of February best reflect heating season prices. Bulk fuel prices from October best reflect non-heating season prices.**

Attachment JAH-4

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No heat, no eat: (Dis)entangling insecurities and their implications for health and well-being

Author links open overlay panel Stav Shapira [a 1], Naama Teschner [b 1]

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Highlights

- Majority of the food insecure households also struggle with energy poverty (EP).
- Severity of EP was significantly associated with diabetes, hypertension, and mental illness.
- Severely energy-poor households were more prone to forgo medications and health treatments.
- Hidden energy poverty is coupled with what might be hidden morbidity.
- EP is therefore a constant, silent stressor on health systems in a warming climate.

Abstract

This study explores the associations between energy poverty, food insecurity, and a set of outcomes—including the self-reported burden of chronic illness, physical disabilities, and mental health—among social-aid recipients across Israel. We highlight the socio-demographic characteristics and housing conditions of energy-poor households and analyze the association between energy poverty and health and well-being using multivariate regression models. Of 1390 aid-recipient respondents, more than 85% met the criteria for living in an energy-poor household, and almost all of them also struggled with food insecurity and were raised in poor households as children. In addition, the severity of energy poverty was positively and significantly associated with the occurrence of diabetes, hypertension, and mental illness, and, as compared with energy-secure households, severely energy-poor households were more prone to forgo acquiring prescription medications, medical aid, or required health treatments due to financial hardships. These findings highlight the nuanced negotiation over necessities that aid-supported households make; despite being at greater risk of being sick, energy-poor households are more likely to forgo buying medicines and seeking healthcare so as to pay the electricity bills. Hidden energy poverty, coupled with what might be hidden morbidity, may have significant implications for healthcare systems, and a climate-sensitive health policy at both the municipal and national levels is required to strengthen resilience among low-income households.

Introduction

Energy poverty (EP) is defined as the inability of the household to secure enough clean and safe energy for its basic needs, such as lighting, cooking, and indoor thermal comfort. In high-income countries, two significant predictors of EP are the ability to pay the energy bills and the residential building conditions (Drescher and Janzen, 2021; Hernández and Siegel, 2019; Thomson et al., 2017). Previously considered a problem mainly of rural regions—a problem that is primarily measured in terms of access to energy resources and infrastructure—EP is now increasingly understood as an urban phenomenon, which is manifested not only in terms of access but also in terms of the

affordability, quality, safety, reliability, and sustainability of energy sources and appliances (Bouzarovski, 2018).

Since EP is an expression of the overall experiences of living in poverty and of social vulnerability, it is strongly correlated with other societal and physical life situations, especially ethnic-based marginalization (Bouzarovski et al., 2022; Shapira et al., 2021), fewer educational opportunities (Husnain et al., 2021), inadequate infrastructure (Maxim and Grubert, 2022), and food insecurity; the latter nexus has been termed the "heat-or-eat" dilemma, but studies of this dilemma vary in approach. For instance, Bardazzi et al. (2021) indicates that households with budget constraints will ration their energy consumption; Snell et al. (2018) suggest that struggling with energy bills influences the households' food consumption and may especially hamper their consumption of enough fruit and vegetables; while Burlinson and colleagues (Burlinson et al., 2022) argue that both food and fuel are not elastic household expenditures and that while struggling to pay for either, households exhibit diverse experiences and responses.

EP is considered a multidimensional, complex problem, similar to poverty in general. Extensive research has documented the multifaceted nature and complexity of poverty theories, particularly in relation to health and well-being outcomes. Poverty is not understood solely as a lack of income; it involves social, economic, cultural, and political dimensions. Social determinants of health, influenced by poverty, encompass access to healthcare, nutrition, education, and living conditions (Braveman and Gottlieb, 2014). These determinants significantly shape the health outcomes of vulnerable populations, resulting in social inequalities in physical and mental health (e.g., Marmot, 2020).

While its drivers and implications are tangled, the association specifically between EP – with its distinct constituents - and poor physical and mental health has been corroborated by growing empirical evidence (Ballesteros-Arjona et al., 2022; Cook et al., 2008; Davillas et al., 2022; Oliveras et al., 2020). For example, Mohan (2021) demonstrated a higher incidence of respiratory illnesses among infants in energy-poor households, and Oliveras et al. (2021) indicated strong associations between EP and poor physical and mental health, as well as a higher incidence of asthma and excess

weight among children. In a study among urban communities in New York, Hernández and Siegel (2019) found that EP was associated with respiratory and mental health issues, including asthma, pneumonia, depressive disorder, and poor-quality sleep. The loss or compromise of essential energy services has also been associated with excess mortality, especially in extremely cold temperatures or heatwaves, and among vulnerable populations, including women and the elderly (Recalde et al., 2019; Yang et al., 2021; Zhao et al., 2021). Yet, other studies presented more equivocal findings regarding the connections between EP and various health conditions; questions such as how EP impacts health-related behaviors or the benefits of intervention strategies (such☐ Purchase PDF

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No heat, no eat: (Dis)entangling insecurities and their implications for health and well-being

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Highlights

- •

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- •

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- •

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Since EP is an expression of the overall experiences of living in poverty and of social vulnerability, it is strongly correlated with other societal and physical life situations, especially ethnic-based marginalization (Bouzarovski et al., 2022; Shapira et al., 2021), fewer educational opportunities (Husnain et al., 2021), inadequate infrastructure (Maxim and Grubert, 2022), and food insecurity; the latter nexus has been termed the “heat-or-eat” dilemma, but studies of this dilemma vary in approach. For instance, Bardazzi et al. (2021) indicates that households with budget constraints will ration their energy consumption; Snell et al. (2018) suggest that struggling with energy bills influences the households' food consumption and may especially hamper their consumption of enough fruit and vegetables; while Burlinson and colleagues (Burlinson et al., 2022) argue that both food and fuel are not elastic household expenditures and

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While its drivers and implications are tangled, the association specifically between EP – with its distinct constituents - and poor physical and mental health has been corroborated by growing empirical evidence (Ballesteros-Arjona et al., 2022; Cook et al., 2008; Davillas et al., 2022; Oliveras et al., 2020). For example, Mohan (2021) demonstrated a higher incidence of respiratory illnesses among infants in energy-poor households, and Oliveras et al. (2021) indicated strong associations between EP and poor physical and mental health, as well as a higher incidence of asthma and excess weight among children. In a study among urban communities in New York, Hernández and Siegel (2019) found that EP was associated with respiratory and mental health issues, including asthma, pneumonia, depressive disorder, and poor-quality sleep. The loss or compromise of essential energy services has also been associated with excess mortality, especially in extremely cold temperatures or heatwaves, and among vulnerable populations, including women and the elderly (Recalde et al., 2019; Yang et al., 2021; Zhao et al., 2021). Yet, other studies presented more equivocal findings regarding the connections between EP and various health conditions; questions such as how EP impacts health-related behaviors or the benefits of intervention strategies (such as thermal renovation schemes) for health and well-being outcomes, require further investigation (Carrere et al., 2022; Symonds et al., 2021). Loneliness, an aspect of well-being that has garnered attention in EP studies, has been explored, for example, by Pellicer-Sifres et al. (2021). Their research reveals that severe energy poverty can detrimentally affect social relationships, hindering meaningful social interactions and

potentially leading to isolation and feelings of loneliness (see also Jacques-Aviñó et al., 2022). As will be further elaborated, the current study aims to contribute to these studies, taking a nuanced approach to hidden energy insecurity and the potential paths in which it may impact health and well-being.

To determine the degree of energy (in)security, various studies employed various definitions, data sets, and measurements—ranging from purely objective measures to scales based solely on self-reported and perceived experiences—depending on the purpose of each study, the availability of data, and the complexity of analysis. On one side of the spectrum, some studies utilized the absolute and limited 10% index, wherein the household is considered energy-poor if its energy expenditure amounts to 10% or more of its income. The “new generation” of the low-income-high-costs (LIHC) index also considers, in addition to a relational calculation of energy costs out of the household's income, the energy needs of the household, rather than its actual expenses, as well as other indicators, such as housing conditions and the energy efficiency performance of the building; yet it does not capture changes in energy prices, which may significantly affect electricity affordability. On the other side of the spectrum, studies such as Porto Valente et al. (2021) depict a nuanced understanding of EP based on purely qualitative data gathered via in-depth interviews. A recent systematic review of the literature found 71 different indicators (both single and composite) used to evaluate the degree of EP (Siksnelyte-Butkiene et al., 2021).

Building on previous studies that empirically tested the association between EP and indices of health and well-being, we offer a simple 3-category index for measuring and reporting the energy security of vulnerable households in Israel based on a tailored-specific self-reported data, which captures both tangible and subjective EP-related experiences and which could easily be adopted in other contexts. It is worth mentioning at this point that electricity serves as the primary energy source consumed in residential buildings in Israel. Winter temperatures in most regions are not excessively low and generally do not drop below freezing (except for Jerusalem area, which stands as an exception), but the summer season tends to be lengthy and hot. While there is no official data available on specific electricity usage patterns within households, a new study indicates that during the coldest and hottest months of the year (January–February and

July–August, respectively), average electricity consumption in households is actually similar, with almost 50% of the actual consumption is for the purpose of climatization (Bugin et al., 2022). Despite the absence of systematic data related to the extent of EP, it is evident that until the COVID-19 eruption in 2020, tens of thousands of households were cut off from electricity every year as a routine measure due to nonpayment (IEC, 2022).

The source of data in the current study is the annual survey conducted by *Latet* ("To Give")—the largest NGO combating poverty, social injustice, and food insecurity in Israel—among its aid recipients. *Latet* operates the leading national food bank, working as an umbrella organization overseeing 210 local associations, providing monthly assistance to 95,000 families and 1450 Holocaust survivors and vulnerable older adults across Israel. For the past 19 years, *Latet* has been conducting an annual survey among its aid recipients, aimed at identifying trends related to poverty and gain in-depth insights into this multidimensional phenomenon. The survey topics are updated from time to time in accordance with emergent themes identified by the organization and other stakeholders. For the first time, the recent 2022 survey also included a module to assess EP, which was designed in collaboration with the authors of this paper.

By delineating the associations between EP, food insecurity, and a set of health and well-being indicators, this study enables us to distill the unique contribution of energy and food insecurities—two critical dimensions of poverty—to health and well-being. Importantly, food-aid recipients may be hidden, hard-to-reach populations (cf. (Ellard-Gray et al., 2015) for both public authorities and researchers, as not all households are supported by the state's social security allowances (for various reasons, including shame, stigmatization concerns, and bureaucracy intimidation). Therefore, this study provides valuable insight into the experiences of vulnerable households living in poverty, adding to the literature by highlighting the role of trans-generational wider poverty in experiences of energy poverty among adults and presenting a nuanced approach to hidden energy insecurity and, potentially, hidden morbidity. The current paper fills these gaps, particularly in Israel, as we characterize energy poverty across Israel for the first time.

as thermal renovation schemes) for health and well-being outcomes, require further investigation (Carrere et al., 2022; Symonds et al., 2021). Loneliness, an aspect of well-being that has garnered attention in EP studies, has been explored, for example, by Pellicer-Sifres et al. (2021). Their research reveals that severe energy poverty can detrimentally affect social relationships, hindering meaningful social interactions and potentially leading to isolation and feelings of loneliness (see also Jacques-Aviñó et al., 2022). As will be further elaborated, the current study aims to contribute to these studies, taking a nuanced approach to hidden energy insecurity and the potential paths in which it may impact health and well-being.

To determine the degree of energy (in)security, various studies employed various definitions, data sets, and measurements—ranging from purely objective measures to scales based solely on self-reported and perceived experiences—depending on the purpose of each study, the availability of data, and the complexity of analysis. On one side of the spectrum, some studies utilized the absolute and limited 10% index, wherein the household is considered energy-poor if its energy expenditure amounts to 10% or more of its income. The “new generation” of the low-income-high-costs (LIHC) index also considers, in addition to a relational calculation of energy costs out of the household's income, the energy needs of the household, rather than its actual expenses, as well as other indicators, such as housing conditions and the energy efficiency performance of the building; yet it does not capture changes in energy prices, which may significantly affect electricity affordability. On the other side of the spectrum, studies such as Porto Valente et al. (2021) depict a nuanced understanding of EP based on purely qualitative data gathered via in-depth interviews. A recent systematic review of the literature found 71 different indicators (both single and composite) used to evaluate the degree of EP (Siksnelyte-Butkiene et al., 2021).

Building on previous studies that empirically tested the association between EP and indices of health and well-being, we offer a simple 3-category index for measuring and reporting the energy security of vulnerable households in Israel based on a tailored-specific self-reported data, which captures both tangible and subjective EP-related experiences and which could easily be adopted in other contexts. It is worth mentioning at this point that electricity serves as the primary energy source consumed in residential

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Attachment JAH-5

COMMUNITY SOLAR

EXPANDING ACCESS AND SAFEGUARDING LOW-INCOME FAMILIES

NCLC National Consumer Law Center
Fighting Together for Economic Justice

February 2024

National Consumer Law Center
Fighting Together for Economic Justice

ABOUT THE NATIONAL CONSUMER LAW CENTER

Since 1969, the nonprofit National Consumer Law Center® (NCLC®) has used its expertise in consumer law and energy policy to work for consumer justice and economic security for low-income and other disadvantaged people, in the United States. NCLC's expertise includes policy analysis and advocacy; consumer law and energy publications; litigation; expert witness services; and training and advice for advocates. NCLC works with nonprofit and legal services organizations, private attorneys, policymakers, and federal and state governments and courts across the nation to stop exploitive practices, help financially stressed families build and retain wealth, and advance economic fairness.

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COMMUNITY SOLAR

EXPANDING ACCESS AND SAFEGUARDING LOW-INCOME FAMILIES

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EXECUTIVE SUMMARY

Energy Burden refers to the percentage of annual household income spent on annual energy bills. Energy burdens tend to be disproportionally higher for low-income households, renters, multifamily building residents, and communities of color.

See Ariel Drehobl, Lauren Ross, and Roxana Ayala, "How High are Household Energy Burdens," ACEEE (Sept. 2020).

The ongoing transition to a clean economy requires utilities, advocates, and policymakers to consider how to balance equitable access to carbon-free resources with rising energy bills and the need to address climate change. Currently, 34 million U.S. households—more than a quarter of households—struggle to meet their energy needs, and many of these households frequently face the risk of having their utility service terminated due to late or non-payment.[1] The energy affordability crisis disproportionately impacts Black and Latino/Hispanic households, households with children, and renters. Low-income families,[2] for example, spend, on average, 8.6% of their household income on energy bills compared to higher-income households, which spend 3% of their income on energy bills.[3] Socially vulnerable populations, including racial and ethnic minority communities and low-income households, also face increased vulnerability to the impacts of climate change, driven by greenhouse gas emissions from fossil fuel energy production.[4] Moreover, low-income families have the least financial ability to adapt to the harms caused by climate change—whether resulting from more frequent and stronger hurricanes, unprecedented drought and flooding, or massive wildfires.[5] With the cost of solar energy declining, utilities, consumer advocates, state leaders, and utility regulators[6] have an unprecedented opportunity to leverage this technology not only to reduce greenhouse gas emissions and their impacts, but also to lower energy bills for low-income families.

Community solar, in particular, provides an opportunity to expand solar access to low-income families, renters, and multifamily building residents. The U.S. Department of Energy (Energy Department) defines community solar as "any solar project or purchasing program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups."[7] Community solar customers typically subscribe to—or in some cases own—a portion of the energy generated by a solar array, and receive an electric bill credit for electricity generated by their share of the community solar system. Community solar can allow customers or subscribers to access meaningful benefits of renewable energy, such as reduced energy costs, increased access to low- income households, community ownership, and equitable workforce development and entrepreneurship opportunities.

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General Principles For Protecting Low-Income Community Solar Subscribers

- Meaningful bill savings
- Transparent and reasonable contract terms
- Clear communication in appropriate formats
- No hidden or additional fees
- Accessible complaint mechanism and data disclosure
- Effective evaluation and enforcement process

Community solar can bring clean energy within reach of those for whom rooftop solar is not a feasible or economic option. But if community solar programs are not designed with intentional consumer protections, low-income subscribers or participants may not experience equitable outcomes or meaningful benefits. **When carefully designed and coordinated with other low-income economic assistance and clean energy programs**, community solar may go a long way toward reducing the low-income energy burden and helping low-income communities to address climate change.[8]

Although community solar programs can provide substantial benefits, states must implement robust consumer protections to avoid adverse impacts[9] on low-income families. Low-income consumers are frequently the targets of predatory sales and marketing, and have been for decades. To combat the repeated targeting of these communities, federal and state regulators have adopted numerous consumer protections, such as the Federal Trade Commission's door-to-door sales rule[10] and state Unfair and Deceptive Acts and Practices (UDAP)[11] laws. Emerging energy technologies, and deceptive and abusive practices related to energy,[12] have led regulators to adopt new protections[13] as these products come onto the market. To protect low-income consumers from financial harm and to preserve the integrity of new community solar programs that will serve low-income families, consumer protections should be implemented from the start.

This report will provide states with model community solar consumer protections to ensure equitable outcomes for low-income participants.[14] Specifically, this report will discuss existing community solar models, best practices, and state policies; the U.S. Department of Energy's effort to advance community solar through a state-managed low-income subscription software; and examples of key guardrails to protect low-income subscribers or participants and ensure substantial bill savings.

To protect low-income families and equitably expand access to community solar, the National Consumer Law Center recommends the following best practices for state implementation:[15]

- **States must[16] set strong financial and marketing protection requirements for community solar marketers,[17]** and
- **States must set strong oversight and compliance, eligibility and enrollment, and low-income program coordination requirements for community solar state administrators,[18] particularly committing to standardization and coordination with existing low-income programs.**

Table 1: Summary of Key State Community Solar Consumer Protection Requirements for Community Solar Marketers and for State Administrators

	STATE REQUIREMENTS FOR MARKETERS AND STATE ADMINISTRATORS
Financial Protections	■ States must require marketers to ensure verifiable bill savings, provide a no-cost exit clause in contracts, and prohibit marketers from including unreasonably long contract terms, flat fees, late payment fees, termination fees, and sign-up fees. ■ State administrators must develop a robust process to monitor and evaluate bill savings and ensure compliance with consumer protections. ■ State administrators must implement consolidated billing[19] so that households do not receive separate bills for their community solar subscription, and all program costs and credits are included on their electric bill monthly.
Marketing Protections	■ States must require marketers to make all documents available electronically,[20] if so requested, and in paper format before a subscriber signs; [21] provide all documents in a potential customer's primary and/or preferred language; use standardized marketing materials and disclosure forms; and ensure responsiveness to customers. ■ State administrators must develop standardized plain language and concise contract considerations and disclosure forms[22] for use by marketers; establish a Code of Practice for marketing, especially for door-to-door and telephone sales; and develop standardized consumer education materials. Non-compliance must not be tolerated and must result in consequences.

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	STATE REQUIREMENTS FOR MARKETERS AND STATE ADMINISTRATORS
Compliance Protections	■ States must require marketers to comply with the state's Code of Practice and consumer protection act,[23] inform subscribers about complaint mechanism, and track and report complaint data monthly to the state administrator, including but not limited to the number of complaints filed and resolved. ■ State administrators must develop an accessible complaint mechanism, including explicit information about how it will resolve complaints; establish data collection protocols; develop protocols for protecting customer privacy; and create a Code of Practice to ensure that marketers comply with relevant consumer laws.[24]
Eligibility and Enrollment Protections	■ States must require marketers to adhere to the state administrator-provided eligibility determinations and enrollment processes. Households must not be rejected based on additional criteria from the marketer. ■ State administrators must develop an income eligibility determination process coordinated and/or streamlined with the Low-Income Home Energy Assistance Program (LIHEAP), Weatherization Assistance Program (WAP), and/or other income-tested programs, and this includes developing methods to determine eligibility for low-income households not receiving LIHEAP; create a system for managing waitlists; and ensure the community solar program complements and coordinates with existing low-income energy and bill assistance programs.
Low-Income Program Coordination	■ States must require marketers to develop community solar programs that are compatible and adhere to the low-income energy assistance programs identified by the state and do what is necessary to make changes if their program has adverse impacts on low-income benefits and utility allowances. ■ State administrators must ensure program compatibility with low-income energy assistance programs, such as LIHEAP and U.S. Department of Housing and Urban Development (HUD)-assisted housing, to avoid adverse impacts on low-income benefits and utility allowances.

Not all community solar programs offer the same level of consumer protection and meaningful bill savings. However, with strong consumer protections in place, community solar can increase clean energy access for low-income households, thereby reducing household energy burden and climate impacts. The highlighted models and recommendations in this report have broad applicability and include significant financial protections to ensure an equitable transition to clean energy.

COMMUNITY SOLAR AND THE URGENT NEED TO BROADEN ACCESS TO CLEAN ENERGY

In recent years, the United States has experienced increasing numbers of heat waves, heavy rain events, major storms and hurricanes, all of which have become more frequent and intense because of rising global temperatures. Heat is currently the leading cause of weather-related deaths in the United States,[25] especially among vulnerable groups, such as older adults, children, low-income families, and those with chronic health conditions.[26] According to the U.S. Environmental Protection Agency (EPA), heat waves or "extreme heat events" have increased in duration, frequency, and intensity for fifty years, particularly in major cities due to the changing climate.[27] Not only do extreme weather events cost hundreds of billions of dollars every year,[28] but these events displace many low-income families and racial and ethnic minority communities from their homes.[29] Ultimately, extreme weather events and natural disasters push many families into being impoverished and further trap in cycles of poverty families who are already struggling to make ends meet.[30]

Despite being the most adversely impacted by climate change, low-income families (who are disproportionately people of color)[31] have the fewest resources to prepare for and cope with extreme weather driven by rising temperatures. Carbon-free energy technology, such as solar energy systems, can play a critical role in protecting low-income consumers by reducing greenhouse gas emissions that contribute to climate change as well as reducing energy production costs.[32] Public policy efforts to address climate change continue to drive growth in the renewable energy sector, with President Biden signing into law the Inflation Reduction Act in 2022,[33] launching the Greenhouse Gas Reduction Fund in 2023,[34] and with states launching updates to their clean energy plans. To ensure we have an equitable transition to a clean energy economy, policymakers must ensure that lower-income households are intentionally included in the transition through tailored policies and programs.

This is where community solar provides a unique opportunity to equitably transition low-income consumers to renewable energy. Some residential homes have rooftop solar

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photovoltaic systems, but these systems tend to be most affordable and accessible for higher-income homeowners.[35] Several barriers can make rooftop solar out of reach for low-income consumers. More than half of low-income families are renters[36] and are more likely to live in multifamily buildings,[37] meaning they do not own a roof where solar can be installed. Among those who own, their homes tend to be older with roofs in need of repair or replacement and, therefore, unsuitable for rooftop solar installation. Furthermore, rooftop solar is expensive, costing on average $19,000 for an installation.[38] Low-income homeowners may lack the necessary upfront capital or access to affordable and safe loan products required to finance and install rooftop solar. Requiring no rooftop and typically no upfront capital, community solar removes these barriers and makes investment in solar more accessible for low-income families. It also provides an opportunity for low-income homeowners to choose their energy source, which may not otherwise be available.

What is Community Solar?

According to the U.S. Department of Energy, community solar is "any solar project or purchasing program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups."[39] *See Figure 1*.[40] Community solar customers subscribe (and often pay a subscription cost) to a share of the energy generated by the solar array and, in turn, receive a credit on their electric bill for electricity generated by their share of the solar system.[41] The solar array is not installed on the subscriber's rooftop and instead is usually installed offsite from subscribers. Unlike rooftop solar, community solar typically requires no upfront capital or personal loans nor any ongoing financial investment to maintain the panels by the individual subscribers or participants. For these reasons, community solar presents an equitable alternative for low-income renters and low-income homeowners who are unable to access or afford rooftop solar to benefit from the lower cost of solar energy generation.

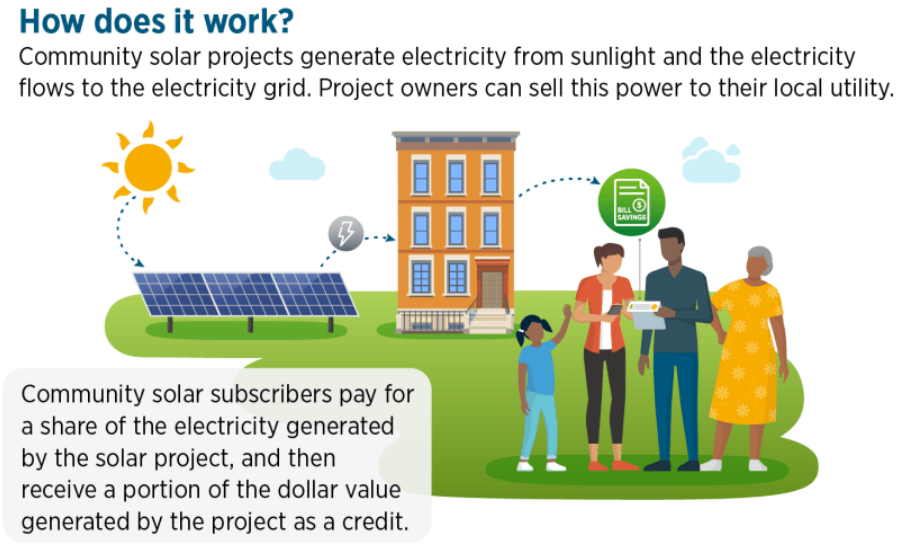

Figure 1. *Community solar defintion (Source: U.S. Department of Energy)*

Community solar can lower energy bills and protect low-income households from rising electric rates. If a customer, for example, has a monthly electric bill of $100 and the customer generates $100 in energy credits from an $80/month community solar subscription, then the customer would owe only $80 to the community solar program since the customer's full utility bill would be covered by the credits the community solar project generated that month. This means the customer would save $20 (or 20%) on their electric bill for that month. In this example, over the course of a year, these savings could be $240.[42] More than $200 a year in bill savings is a notable amount of money for a low-income family.[43]

Not all state community solar projects have guaranteed bill savings, low-income specific-options, or strong consumer protections in place. As of 2022, about 2% of all installed community solar capacity is currently designated for low-income households.[44] When rolling out a community solar program, developers, utilities, advocates, and state administrators should carefully determine how to ensure strong consumer protections and bill savings are in place for community solar subscribers, and especially for low-income subscribers.

PROTECTING LOW-INCOME FAMILIES: COMMUNITY SOLAR PROGRAM RECOMMENDATIONS AND PRINCIPLES FOR STATES

An equitable transition to clean energy requires broadened access to clean energy benefits for low-income families and households that can benefit significantly from lower energy bills, greater opportunities for local community ownership of power generation, and reduced greenhouse gases that contribute to climate change. To make sure that low-income families experience these benefits, programs must be tailored to fit their needs and protect their financial well-being. For this reason, the National Consumer Law Center offers the following consumer protection recommendations for community solar marketers and state administrators (see endnotes for state examples throughout):

States must set strong consumer protection requirements for community solar marketers and state administrators, including:

A. Financial Protections

1. States must require marketers ensure a minimum of 20% verifiable bill savings per household[45] (whether the savings are in terms of $/time period or a percent off the

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distribution company's price or other format),[46] which must be meaningful.[47] The customer savings should exceed what the customer pays (if there is a cost for the solar energy credited to the electric bill) on a monthly basis. The marketer must submit regular reports,[48] if the state so requests and specifies the data that should be reported.

2. States must prohibit marketers from requiring any down-payment for subscriptions, or from requiring any deposits to be added to a waitlist. Up-front payments can serve as a barrier to participation.

3. States must prohibit marketers from imposing additional flat fees (such as a flat monthly fee or one-time sign-up fee) beyond the monthly cost for the solar energy credited to the electric bill.

4. States must prohibit marketers from charging termination fees, late fees, or other fees/penalties to customers, sending bills to collections,[49] placing a lien on a home for nonpayment, and imposing unreasonably long initial terms.[50]

5. States must require marketers include in the contract an exit clause that clearly states there is no penalty or payment for canceling the contract and explains the cancellation process.

6. States administrators must implement consolidated billing so that households do not receive separate bills for their community solar subscription, and all program costs and credits are included on their electric bill monthly.

B. Marketing Protections

1. States must require marketers ascertain the primary language of the potential or actual subscribers and offer documents in the language they understand;[51] the marketer must receive confirmation from the potential or actual subscriber that the language used in the documents is in a language the potential or actual subscriber understands. If the marketer is unable to do this, they must break off engagement with the potential subscriber.

2. States must require marketers make all contracts and related documents available to potential subscribers for review before they sign. States should require that documents be delivered in paper format and, where signature is required, signed on paper.[52] Marketers also must be able to provide relevant documents electronically, at the potential subscriber's request.

3. States must require marketers consider methods for reaching out to and enrolling households that are unbanked and/or lacking credit cards and/or having low credit scores and/or having no internet access.[53]

4. States must require marketers and their agents provide accurate and up-to-date contact information to customers and the state program administrator, and require that they are responsive to contact made via telephone, email, or text message.

5. State administrators must establish rules regarding the marketing of community solar subscriptions, covering in-person, on-line, mail, and telephone marketing channels. Because the solar industry often relies on door-to-door marketing, states must establish specific rules to ensure marketers act well when using that channel.[54] Any established rules regarding misleading and deceptive marketing must include recommended and prohibited language that can be used to describe financial savings, marketer affiliations, government incentives and programs, terms and conditions, and other issues.[55]

6. State administrators must develop standard disclosure, contract, and enrollment forms[56] that marketers and their agents will be required to use without edits or revisions except as explicitly approved. Standard forms must be clear and concise;[57] written in plain language that can be understood by those without legal training or experience reading contracts;[58] and provided in minimum 12-point typeface and in a language understood by the subscriber.[59] The disclosure form[60] must be a maximum of two pages and focus on the elements of the subscription agreement that are most impactful to the customer's finances, such as:

    i. The rate that the customer will be charged for their community solar subscription;
    ii. Guaranteed savings information;
    iii. Whether there are any additional allowed fees;
    iv. The length of the contract, how to cancel the contract; and
    v. Under what circumstances, if possible, the subscription can be moved to another address.

7. The approved marketing materials may be supplemented with other materials, if consistent with all program rules or guidance on language that can be used to describe the solar program.

8. State administrators must develop standardized consumer-facing education materials (in appropriate languages) which, at a minimum, describe:

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i. How solar power and community solar work;

ii. The benefits of subscribing to community solar;

iii. How to subscribe and unsubscribe through the state's programs;

iv. The standards for marketing behavior and customer rights;

v. Financial obligations and benefits connected with subscriptions;

vi. Approved subscription managers and vendors in the state;

vii. How to file a complaint; and

viii. Who to contact with questions.

9. In states/programs where a household may be matched with one (and only one) marketer,[61] the educational materials must explain the potential risks of engaging with marketers offering rooftop and community solar via door-to-door sales[62] or via unsolicited phone calls, but households must be encouraged to shop wisely in states where the state's approved marketers may offer different prices and terms.[63]

10. State administrators must ensure transparency of relevant information, including the prices, discounts, or credits being offered by marketers. Standard contracts and other forms must be posted on a publicly accessible website.

C. Compliance Protections

1. States must require marketers sign and comply with any Code of Practice (or other state requirements) provided by the state and that may include relevant provisions based on the aforementioned requirements, as well as general consumer protections (e.g., compliance with generally applicable state law and regulations regarding prohibitions of unfair or deceptive practices; obligations to treat customers honestly; etc.).

2. States must require marketers inform subscribing households of the state's complaint mechanism for those enrolling in the low-income community solar program and how to access it, and that the subscribing household may pursue action if any promised bill savings are not realized.

3. States must require marketers track and report data to the state program administrator on a frequent basis (e.g., monthly or such other period as the state prescribes), such as the number and type of subscribers, estimated savings, waiting list, complaints received and resolved, and any other reporting metrics imposed by the state.

4. State administrators must establish protocols for data security, collection and reporting, and review required reports from solar developers and marketers to track customer participation, bill savings, demographics, and other metrics. States must develop a program evaluation plan that will measure the impact of the program, verify energy savings achieved, confirm consumer protections, and capture both energy and non-energy benefits.[64]

5. State administrators must establish an easily accessible complaint mechanism, and a transparent tracking system, available to any interested person, so that patterns of complaints can be easily identified.[65] States may choose to promote the existence of the complaint mechanism and how to access it.

6. State administrators must articulate how complaints will be resolved, investigate any marketer's failure to comply with program requirements, make clear the time period for investigating and addressing complaints, and explain what the potential sanctions would be for any violations, up to and including dismissal from the program.[66]

7. State administrators must consider thoroughly vetting and approving marketers to ensure that they have all applicable licenses and reviewing their project development track record and history of complaints. State administrators must also set minimum standards for a developers' and marketers' creditworthiness, insurance coverage, and employee training. A list of approved marketers and, if relevant, developers must be publicly available, updated regularly, and easily accessible by customers.

8. State administrators must develop protocols for customer privacy and security and must only collect information needed for marketers to conduct outreach and complete enrollment, and to evaluate or analyze the program.

9. State administrators must develop a Code of Practice that incorporates all relevant provisions from above, as well as other provisions, and that marketers are required to sign and comply with. Any such Code of Practice must have marketers affirm that they will comply with relevant consumer laws, including, but not limited to: (1) the FTC Cooling-off Period for Sales Made at Home or Other Locations ("door-to-door sales rule," 16 CFR Part 429); (2) E-Sign (Electronic Signatures in Global and National Commerce Act), 15 USC ch. 96; (3) Telemarketing and Consumer Fraud and Abuse Prevention Act, 15 U.S.C. §§ 6101-6108; and (4) Section 45 of the FTC Act (15 USC 45) (prohibiting "unfair or deceptive acts or practices ").[67] The implementing agency must have the authority to enforce compliance and be willing to act if enforcement is required.[68]

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D. Eligibility and Enrollment Protections

1. State administrators must establish simple, low-cost, non-invasive, and accurate ways to determine income eligibility. Those receiving LIHEAP assistance must be deemed eligible for the low-income community solar offering. To the extent a state also wishes to enroll other income-eligible households who may not be LIHEAP recipients, it could use: (a) proxies, such as enrollment in SNAP and other income-based government programs; (b) tenancy in income-based housing; and/or (c) residency in a low-income Census tract, combined with income self-attestation by the household.[69] While more burdensome, subscription managers could verify eligibility using tax forms, pay stubs, or other documents.[70] Requiring households to repeatedly or frequently prove eligibility must be limited, thus multi-year eligibility must be offered. Qualification requirements must also comply with any existing and applicable legislative or regulatory mandates of the state's community solar program.

2. State administrators must explore program designs that do not require the customer to have a bank account, credit card, automatic payments, or minimum credit score, so that unbanked households and those with low or no credit can participate. Additionally, state administrators could explore consolidated billing, which is less confusing to low-income households.

3. If community solar programs are limited on the number of households that can be served, state administrators must consider how to equitably prioritize households to receive program benefits. This could be based on community/household demographics and geography, such as prioritizing customers in Environmental Justice communities (using state or federal designations),[71] the energy burdens of utility customers with high delinquent bills and communities with disproportionately high rates of utility shutoffs,[72] households with older adults or disabled members, or households with young children, all subject to the availability of such information to the state LIHEAP agency and/or state community solar program managing agency. State administrators must avoid pure first-come, first-served models for acquiring community solar program participants because such models are contrary to reaching equity goals.

4. State administrators must develop protocols for managing wait lists. Protocols must require non-binding and non-exclusive terms, clear communications to households placed on wait lists, and easy ways for customers to leave a wait list without penalty. States might also want to consider protocols for managing "expressions of interest," so that data can be provided to the market showing regions where demand for additional low-income community solar exists, without promises of projects arriving in any specific timeframe.[73]

E. Low-Income Program Coordination[74]

1. State administrators must design community solar programs to be compatible with and complementary to low-income energy assistance programs, such as LIHEAP[75] and the Weatherization Assistance Program (WAP), rate discounts, arrearage management, energy efficiency and weatherization.

2. The community solar program administrator must have a formal working relationship with LIHEAP administrators, utilities, and other social agencies to ensure that energy assistance programs are not burdened by community solar programs. Designs of both types of programs must be flexible to achieve an optimal outcome. To the extent energy assistance programs are burdened, they should be compensated for any higher administrative costs to the extent possible. Energy assistance program managers must be trained on community solar, the sign-up process, complaint procedures and related issues at no fee to the energy assistance program.

3. State administrators must strive to prevent adverse impacts to LIHEAP benefits. Due to insufficient studies, data, and analysis to understand how community solar savings impact customers' bills long-term, LIHEAP benefits must not be reduced based on a household's participation in community solar to ensure that households do not end up with higher electric bills after subscribing to community solar. This is especially applicable in states that determine LIHEAP benefits based on household energy burden. To avoid adverse impacts on the utility allowances provided to some public and subsidized housing tenants, state administrators should refer to helpful guidance provided by HUD.[76]

NATIONAL COMMUNITY SOLAR POLICY LANDSCAPE: AT A GLANCE

Although community solar program design varies significantly from installation to installation, the programs generally seek to close the solar access gap (so that the benefits of solar are not limited only to affluent homeowners) and reduce energy bills for families. As of January 2024, there is at least one community solar project in 43 states and the District of Columbia. *See Figure 2.*[77] Of those, 22 states and the District of Columbia have passed enabling legislation that encourages or mandates community solar in their jurisdictions.[78] The District of Columbia and at least 17 states have passed legislation to expand community solar to low-income consumers via carve-outs and/or financial incentives.[79]

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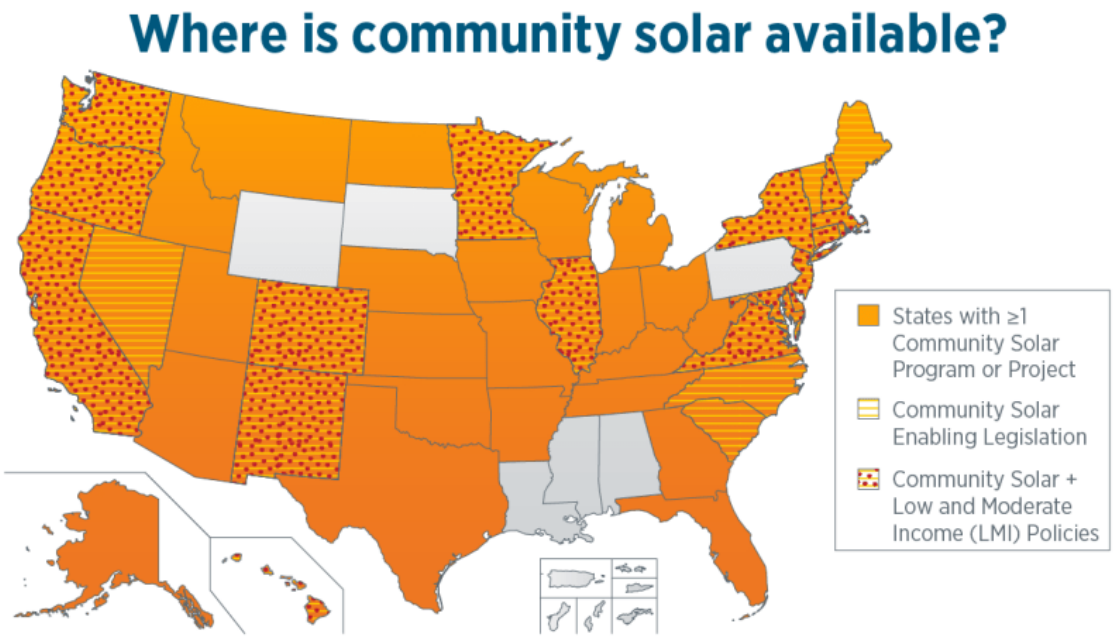

Figure 2. *States with Community solar projects, enabling legislation, and Low-to-Moderate-Income policies (U.S Department of Energy)*

The most accessible low-income community solar programs eliminate excessive or unnecessary fees, require no upfront costs, offer discounts and guaranteed savings, and simplified or streamlined applications with plain language terms in multiple languages.[80]

According to the National Renewable Energy Laboratory, as of December 2022, about 2,500 community solar projects have been developed in the U.S., with a capacity of approximately 6,000 MW, the equivalent of four large fossil-fired central generating plants.[81] Community solar has grown rapidly in the past decade and will likely continue to proliferate, especially with recent policy support. A close look at existing programs offers some guidance about how to best protect the financial well-being of low-income consumers while expanding access to community solar. The following sections highlight some example programs around the country, state consumer protection policies for community solar, and the U.S. Department of Energy's effort to bring community solar within reach of low-income families.

Best Practices: State Program Models and Consumer Protection Policies for Protecting Low-income Community Solar Participants

This section provides case studies of community solar programs with strong protections for low-income community solar participants in the District of Columbia, Illinois, Maryland, New Jersey, New Mexico, New York, and Oregon. Additional details on these state program models and policies can be found in **Appendices A** and **B**.

Best Practice Key Takeaways

The highlighted state programs employ one or more of the following best practices:

- Community solar programs that provide subscription discounts for low-income households, guarantee bill savings, prohibit upfront costs and termination fees, ensure no impacts on LIHEAP benefits, allow self-attestation* for eligibility determination, streamline the sign-up process, make subscriptions portable, and protect households' personal information, and provide consolidated billing and clear communication about customer benefits from community solar participation.
- Consumer protection policies and guidance that prohibit marketers from engaging in unfair and deceptive practices, provide standard language and templates for contracts and disclosures, establish a complaint process, set specific compliance requirements (including ongoing reporting), suggest or require sales agent training, set broad income verification requirements, encourage coordination with low-income programs, and/or establish a code of conduct for project managers.

*While **self-attestation** of income has been allowed in community solar programs in some states, including Maryland and New Jersey, and can be seen as a best practice in terms of facilitating enrollment of low-income households, states should consider that some developers may feel limited in their ability to access certain tax credits (e.g., under 26 U.S.C. § 48E(h)) if they do not individually income-qualify participating households. The extent to which a developer may (or may not) need to individually income-qualify households to access tax benefits is a complex tax law question and beyond the scope of this report.

See **Appendices A** and **B** for more information about best practice state models.

District of Columbia

Launched in 2017, the DC Solar for All program aims to provide the benefits of solar to 100,000 low-and-moderate-income households (defined as at or below 80% of the area median income) "in an amount equivalent to reducing the average electric bill by 50% (based on the residential rate class average electricity bill for 2016) by December 31, 2032."[82] As of September 2023, DC Solar for All had more than 8,000 subscribers. Administered by the Department of Energy and Environment (DOEE), the Solar for All website includes an online application portal as well as the option to print and mail in the application. The printable application contains detailed information about the program's terms and conditions and explains the income verification process, how bill credits are calculated, termination procedures, and Low-Income Home Energy Assistance Program (LIHEAP) benefits. In terms of specific protections, the Solar for All program has no upfront costs, no early termination fees (the term length is fifteen years), and it does not impact

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customers' LIHEAP benefits.[83] Importantly, the DC Solar for All program does not charge a subscription cost for enrolled households, so participants only receive credit on their utility bill and no separate bill for the subscription. DOEE has further streamlined the sign-up process by combining the application for utility bill assistance and pre-qualification for the Solar for All program into one form, lowering the barrier for enrollment for low-income households across energy assistance programs.[84]

Illinois

The Illinois Solar for All (ILSFA) program, a mandatory set-aside program that launched in 2018,[85] targets community solar to low-income families, defined as households with annual incomes that are 80% or less of the area median income.[86] Community solar projects approved in the 2023-2024 Program Year and beyond are required to utilize a consolidated, single billing option. In addition, to simplify the billing process and improve participant experience, community solar projects approved prior to 2023-2024 Program Year may also utilize consolidated billing.[87]

The Illinois Power Agency's (IPA) *Consumer Protection Handbook* contains useful requirements and standardized language for protecting low-income Solar for All participants from predatory marketing, unfair and abusive practices, and lack of transparent customer disclosure. To ensure savings for low-income subscribers, the handbook requires community solar vendors to "demonstrate that any ongoing costs and fees paid by the participant will not exceed 50% of the value of energy generated by the customer's share of the system."[88] The handbook explicitly prohibits vendors or marketers from engaging in unfair and abusive practices, offering the following definition of abusive practices:[89]

> "An act or practice is abusive if:
>
> - It materially interferes with the ability of a consumer to understand a term or condition of the offer or contract; or
> - It takes unreasonable advantage of (1) a customer's lack of understanding of risks, costs, or conditions of the offer or contract or (2) the inability of the consumer to protect their interests in accepting an offer."[90]

Marketers who become aware that a customer has misunderstood the contract terms or other information must correct the misunderstanding, as well as be responsive to customers' questions and concerns. To prevent misleading marketing, the handbook provides examples of language marketers are prohibited from using regarding bill savings (e.g., "If you participate in ILSFA you will save 50% on your energy bills").[91] Marketers are allowed

to make more general statements, such as, “ILSFA participants see value from their solar project in different ways, depending on the project and property type, or project size.”[92]

In addition to specific rules around unfair and abusive practices and representations about potential savings, the handbook lays out specific requirements (providing standardized language in some cases) around the following:

- **Legal compliance:** vendors or marketers “must comply with all existing local, state, and federal laws, regulations, and guidance, including Federal Trade Commission (FTC) guidance on advertising and marketing.”[93]
- **Disclosure:** for all marketing channels (online, in-person, direct mail), certain information must be prominently stated.[94] Here, the handbook not only provides exact language vendors can use on various marketing channels but also contains additional requirements for each individual type of marketing.
- **Sales agent training:** All sales agents who will engage in marketing must receive appropriate initial training[95] and “refresher training” every six months that, at a minimum, includes information about applicable marketing requirements.[96]
- **Complaint reporting:** Participants in ILSFA can file complaints with the Program Administrator by email or phone. Vendors must report any complaints submitted directly to them to the ILSFA Program Administrator.[97] The handbook outlines a clear process for how Program Administrators should identify and handle any consumer protection violations from a vendor, and this includes formal disciplinary actions.[98]

Failure to comply with the handbook’s requirements may result in disciplinary measures, including “suspension of eligibility to receive or otherwise benefit from Program-administered REC delivery contracts” and suspension “from performing services in connection with projects.”[99] ILSFA program administrators have enforcement authority, overseeing compliance and investigative matters as necessary; additionally, IPA may undertake ILSFA program administrator enforcement roles as needed.[100]

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A Glance at Illinois' Complaint System

The complaint processes included in the Illinois Shines/Solar for All programs provide a good model for states that wish to implement robust complaint and enforcement mechanisms for community solar programs.

PROGRAM INTAKE AND FOLLOW-UP:

- Consumers are provided two easy routes for filing a complaint: filling out a form on the solar program web page, or calling a designated phone number.
- The program makes it clear that complaints will be followed up by phone or email, which makes it more likely the consumer will actually file the complaint.
- Consumers are informed that the program will consider taking a range of enforcement actions depending on the severity of the violation, including: warning letters, restrictions on taking on new customers, or suspension or expulsion from the program.
- The program also informs consumers how to file complaints with the state Attorney General for those who believe they have been the victim of unfair or deceptive practices.

TRANSPARENCY:

- To ensure that any interested party can see what complaints have been filed and the action the program took in response, the program regularly puts out:
- A Program Violations Report, which publicly posts warning and suspension letters;
- A Consumer Complaints Report, listing all complaints received, and all vendors who have been suspended; and
- An Annual Complaints Report filed with the Illinois Commerce Commission.

Maryland

In 2015, Maryland adopted a mandatory set-aside for community solar, directing utilities to implement a three-year Community Solar Pilot Program. In 2019, the Maryland legislature later passed House Bill 683, extending the pilot program from three to seven years.[101] The pilot program was available to low-income households, defined as those with household annual incomes at or below 175% of the federal poverty level, and moderate income households or those at or below 80% of median area income.[102] In 2020, the Public Service Commission approved self-attestation of income plus proof of participation in other low-income benefit programs (e.g., Medicaid, HeadStart, LIHEAP, etc.) as a method for determining eligibility to participate in the community solar program.[103] Moreover, the law required programs marketed to low-and moderate-income (LMI) customers must be

portable[104] and provide savings throughout the contract.[105] In 2023, Maryland passed House Bill 908, making the community solar program permanent, available to all residents,[106] and the following significant changes:

- Projects must deliver at least 40% of the kWh output to LMI subscribers[107] (unless the project is wholly owned by the subscribers).
- LMI subscribers may also qualify by residing in a census tract that is an overburdened and underserved community,[108] or by self-attestation of income.
- Consolidated billing provided by the electric utility must be made available (to be implemented by 1/1/2026).
- Subscriber organizations may not charge LMI subscribers a subscription rate that is more than 90% of the monetary value of the bill credit.[109]

New Jersey

The Clean Energy Act (CEA) of 2018 established the state's Community Solar Energy Pilot Program, and directed the Board of Public Utilities (BPU) to develop rules for implementing the program.[110] The CEA required the pilot program to include consumer protection measures and "a verification process to ensure that the solar energy projects are producing an amount of energy that is greater than or equal to the amount of energy that is being credited to its participating customers' electric utility bills."[111] The CEA further directed the BPU to adopt rules and regulations that establish "access to solar energy to low and moderate income customers."[112] The law defines households with total gross income at or below 80% of the median income as "moderate-income," and those with adjusted gross income at or below 200% of the federal poverty level as "low-income household[s]."[113] For the pilot program, at least 40% of the annual capacity limit must be allocated to LMI customers.[114]

In 2020, the BPU reevaluated procedures for verification of LMI status for the program (which then required proof of participation in specified public assistance programs, or copies of applicants' federal tax returns).[115] At the recommendation of BPU staff and after a public comment period, the BPU broadened the LMI verification requirements to allow community solar developers to submit alternative documents in lieu of tax returns for low-income applicants not enrolled in public assistance programs.[116] In August 2023, New Jersey made the program permanent, replacing the pilot.[117]

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LMI verification requirements under the administrative rules for the program state:

"(d) The following LMI eligibility criteria shall be applied:

1. If the community solar pilot project is sited on government-owned property, and is serving LMI subscribers living on that property, the government site owner may provide a sworn statement that those community solar pilot project subscribers are considered LMI for the purposes of the Pilot Program.
2. In all other cases, subscribers must be individually qualified as LMI for the purposes of the Pilot Program. The subscriber organization for each project shall receive and review proof of LMI eligibility for each LMI subscriber. Any of the following may be accepted by a subscriber organization as proof of LMI status for individual subscribers:
    i. Proof of participation in one or more of the following: LIHEAP, Universal Service Fund, Comfort Partners, Lifeline Utility Assistance Program, Payment Assistance for Gas and Electric, Section 8 Housing Choice Voucher Program, Supplemental Nutrition Assistance Program, the Lifeline program administered by the Universal Service Administrative Company, or other low- or moderate income local, State, or Federal programs, as may be added to this list by the Board by Board Order;
    ii. If the subscriber is a residential customer, proof that the subscriber's metered residence is in a census block group in which 80 percent or more of the households earn less than 80 percent of the area median income, as determined by data from the U.S. Department of Housing and Urban Development; or
    iii. An alternate form of income verification proposed through a petition by a subscriber organization and approved by the Board. The petition shall include: a written description of the proposed income verification method; a complete description of how the method respects consumer privacy concerns; how the measures and safeguards established prevent fraud or misrepresentation by either the prospective subscriber or a subscriber organization; if the proposed methodology utilizes a statistical probability-based identification mechanism, how the method is reasonably expected to minimize incorrect eligibility determinations; and how the Board will be able to verify the income claims for accuracy. Alternatively, a subscriber organization may provide notice to Board staff of the entity's intent to utilize a verification mechanism that has already been approved by the Board. A subscriber organization may not utilize any alternate method of income verification until it has been approved by the Board."[118]

In the August 2023 order establishing the permanent Community Solar Energy program, the BPU also included self-attestation as a method of LMI eligibility determination.[119]

In addition, New Jersey's permanent program will implement consolidated billing for community solar, with a deadline of January 1, 2025, with the requirement that all residential subscribers must participate in consolidated billing. Projects that were approved and built under previous pilot are also required to use consolidated billing, with a one-year transition allowed.[120]

New Mexico

The state's community solar best practices guide[121] is not compulsory but offers recommendations for protecting consumers. Some suggested best practices include sales agent training, particularly training on all federal, state, and county requirements on door-to-door sales.[122] The guide also suggests training on ethical sales practices (i.e. avoiding misleading representations about savings, etc.), the nature of New Mexico's Community Solar Program,[123] and the New Mexico Subscriber Information Disclosure Form.[124] Additional recommendations include weekly and monthly reporting of subscriptions, and quarterly reviews.[125] Specifically, the guide recommends subscriber organizations review subscription managers quarterly for compliance with program requirements, and that the review include an examination of the disclosure processes, customer materials, changes to customer fees, marketing materials, etc.[126]

New York

Expanded Solar for All Program: Through its Expanded Solar for All Program,[127] New York is deploying a parallel "automatic enrollment" community solar model that aims to eventually provide all households participating in LIHEAP and the supplemental Energy Assistance Program (EAP) with electric bill savings from community solar. New York State Energy Research and Development Authority (NYSERDA) and National Grid have partnered to procure up to 300 MW of community solar for over 160,000 low income households in Phase 1 of the program, and a statewide expansion is under consideration by the New York Public Service Commission. Under this model, households sign up as part of their annual enrollment in LIHEAP and EAP, and may choose to "opt-out" of the program and/or "opt-in" to a conventional community solar subscription as well. Community solar project owners receive no personally identifiable information about participating households, and they are paid for the solar generation directly by the utility, ensuring that customers are not exposed to any additional risk through the program.

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Distributed Energy Resources (DER) Oversight, Uniform Business Practices, and Disclosures:[128] In 2015, New York's Public Service Commission (NYPSC) initiated a regulatory proceeding to discuss regulation and oversight of Distributed Energy Resource providers and products, including community solar. Through this proceeding, the NYPSC has established rules for community solar products, marketing practices, and mandatory disclosures to prevent exploitive pricing and deceptive marketing practices to residential and small business customers; ensure that customers and suppliers know their rights and responsibilities, including complaint resolution procedures; and provide oversight tools needed to monitor the growing markets and resolve potential issues.

Inclusive Community Solar Program Rules:[129] In addition to the protections provided by the NYPSC's oversight, Uniform Business Practices for Distributed Energy Resources, and required consumer disclosures, the New York State Energy Research and Development Authority (NYSERDA) sets additional requirements for community solar projects receiving additional state incentive funds through the Inclusive Community Solar program, a part of the NY-Sun initiative. Participating projects must dedicate at least 40% of their output to eligible low-to-moderate income households and residents of disadvantaged communities, with a minimum 10% bill credit discount. To qualify for funding, project developers must submit a "Marketing and Implementation Plan" that demonstrates their ability to effectively serve low-to-moderate income residents and meet the program's requirements for clear, accurate, and transparent customer acquisition and management practices.

In December 2019, New York adopted the "net crediting" (i.e., consolidated billing) model for the community solar program. Community solar credits and charges (including subscription costs and utility administrative fees) appear as a single line item on customer electric bills. This order also set a minimum savings rate of 5% for community solar subscribers.[130]
In September 2022, New York issued an updated order that recognized ongoing billing issues and timing delays with their consolidated billing rollout. They required a stakeholder convening and negative revenue adjustment for underperforming or non-compliant utilities, and also required utilities to issue implementation plans detailing their progress on consolidated billing implementation.[131]

Oregon[132]

Community Solar Program: Established in 2016 when the Oregon Legislature passed the Clean Electricity and Coal Transition Plan, the Oregon Community Solar Program is funded by customers of Portland General Electric, Pacific Power, Idaho Power, and by program participants.[133] The law mandates that 10% of community solar capacity be carved out or set aside for low-income (defined as 80% or below the Oregon State Median Family Income)[134]

subscribers. The program offers special benefits and protections to low-income subscribers, including subscription discounts of at least 20%, guaranteed energy bill savings, no upfront costs, and no termination fees. Additionally, the program has an "exemption from the requirement to make automatic payments," which helps to protect unbanked households.[135] Program flyers, brochures, and FAQs are available in at least four languages common in the state. Marketing materials on the program's website clearly explain expected annual bill savings based on utility provider, household consumption, and solar subscription size. The program's "Subscriber Resources" page[136] offers additional information about how to understand bill credits, so that potential subscribers understand how to read their bills. Currently, the program is available to customers of Portland General Electric and Pacific Power.[137] Both utilities' websites include FAQs, information about how to sign-up online or by phone, and Portland General Electric provides a helpful infographic describing how community solar works.[138]

Program Implementation Manual: As part of the state community solar program, Oregon developed a Program Implementation Manual outlining procedures and requirements.[139] The implementation manual defines low-income as less than or equal to 80% of the Oregon State Median Family Income, requires income verification[140] be conducted by a Low-income Facilitator,[141] provides standardized template language for contracts, and contains a code of conduct for project managers.[142] The "Project Manager Code of Conduct" section specifies the project manager's obligation to comply with the law, to ensure compliance, and outlines rules around advertising, treatment of customers, protection of customer information, and customer contracts.[143] For example, the section contains language similar to ILSFA to prevent misleading marketing: "Project Managers and their Agents shall not refer to a community solar Subscription as "free" in oral or written marketing or sales discussions unless the customer will not pay anything –up-front and on a monthly basis – for their subscription or the energy it generates."[144]

The code of conduct section also emphasizes that specific information must be included in all customer contracts. All contracts between project managers and participants must be written in plain language and include the following provisions:

- Disclosure checklist
- Description of the costs, risks and benefits of participation
- Length of contract
- Contract portability if a participant relocates[145]
- Contract transferability to another participant[146]

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- Early termination (including no termination fee for low-income customers)[147]
- Utility disconnection and non-payment[148]
- Changing the size of a subscription
- Explanation of the concept of renewable energy credits
- Data privacy and security
- Responsibilities of the program administrator, utility, and Oregon Public Utility Commission[149]
- Notifications regarding project status and performance
- The participant's right to file a complaint with the program using a dispute resolution process
- Additional mandatory provisions (i.e. consent to access and use participant energy information, participant information release, and project manager's right to impose additional requirements on participants)[150]

The manual links to a resource repository where project managers can find a "low-income standard contract" template.[151] Furthermore, the implementation manual requires developers to establish a complaint and dispute resolution process:

> "Any complaints pertaining to a Project or Project Manager that are received by the Program Administrator, Low-income Facilitator, Oregon Public Utility Commission or utilities will be referred initially to the applicable Project Manager for resolution. The Project Manager must investigate each complaint and provide a written response to the complainant."[152]

An escalation procedure exists for situations where the Project Manager is unable to resolve the complaint. If a Project Manager cannot resolve a complaint with a customer, the Project Manager must escalate the complaint to the Program Administrator and inform the customer of such action. Once the Program Administrator receives the complaint, they will work with the customer and the Project Manager to resolve the problem. In the event the Program Administrator cannot reach a resolution between the two parties, the Program Administrator "will notify and collaborate with the Oregon Public Utility Commission Consumer Service Division to further investigate and resolve the complaint according to OPUC customer complaint procedures."[153]

U.S. DEPARTMENT OF ENERGY: LOW-INCOME CLEAN ENERGY CONNECTOR

In an effort to bring community solar to low-income households, the U.S. Department of Energy, through its National Community Solar Partnership and in partnership with the U.S. Department of Health and Human Services (HHS), developed software, the "Low-Income Clean Energy Connector," that aims to make community solar more accessible to low-income families.[154] The Connector is an online software tool that states can opt-in to using to help streamline income-eligible enrollment into low-income community solar programs that have strong consumer protections and verified savings. The Connector will support the Energy Department's broader goal of bringing community solar with verified savings to around five million households by 2025, initially targeting participants in LIHEAP.[155] Through this tool, the Energy Department intends to bring low-income households into the growing clean energy economy and ensure that community solar will reduce household energy bills, while avoiding potential consumer risks:

> "Connecting LIHEAP recipients to community solar subscriptions with verified savings and strong consumer protections through the Connector will reduce the cost of customer acquisition for solar developers and subscription managers, increase household savings and meaningful benefits for LIHEAP-enrolled households, and increase the deployment of community solar projects in states with low-income community solar programs."[156]

Subscription managers,[157] state program administrators (both community solar and LIHEAP), and local LIHEAP administrators will be able to use the Connector to more easily connect low-income families interested in opting into community solar during the LIHEAP enrollment process, while making it easier for developers and subscription managers to enroll income-eligible households. Households will not interface with the Connector. One goal is for subscription managers to compensate local LIHEAP administrators for their effort to educate households about community solar.[158] Subscription managers will identify interested households who want to enroll in a community solar subscription and upload interested households into the Connector. To use the Connector, a state must have a low-income community solar program with minimum household savings requirements; states also must agree to enforce minimum consumer protection requirements.[159] Moreover, the state community solar administrator (i.e., the energy office and/or Public Utility Commission) and the state LIHEAP office must jointly agree to participate in the Connector.

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Community solar subscription managers seeking to use the Connector will need to be verified and approved by the state administrator, who will ensure that the subscription manager complies with Energy Department-required and state-required consumer protection requirements. During LIHEAP enrollment, local LIHEAP administrators will provide consumer education on community solar, allowing LIHEAP-eligible households to express their interest in enrolling in available community solar projects. If a community solar program is not available, LIHEAP-eligible households can indicate their interest in participating in a community solar program when one launches in their area.[160] Once LIHEAP administrators upload customer opt-in data to the Connector, subscription managers will be able to securely access the data to enroll interested customers in an available community solar program.[161]

The Connector is one of several initiatives of the Energy Department's National Community Solar Partnership to equitably accelerate community solar development. In addition to the Connector, the National Community Solar Partnership provides technical assistance to organizations and partners, convenes a States Collaborative, provides access to funding through the Community Power Accelerator, and supports education and outreach.[162]

See the Energy Department's "Low-Income Clean Energy Connector" webpage for ongoing updates and resources.

CONCLUSION AND KEY TAKEAWAYS

Not all community solar programs offer the same level of consumer protection and meaningful bill savings across the U.S. As states develop and expand community solar programs, state administrators and advocates should consider program design measures that ensure meaningful savings and protect the financial wellbeing of low-income families. With the right consumer protections in place, community solar can increase clean energy access for low-income households, thereby reducing household energy burden and climate impacts. As shown in this report, states with community solar programs have adopted a wide range of models to ensure savings and protections for low-income households. The above recommendations have applicability to a broad range of low-income community solar models and include significant financial protections to ensure an equitable transition to clean energy.

APPENDIX A: RESOURCES

General Information and Tools

- "National Community Solar Programs Tracker," *Institute for Local Self-Reliance*, *available at* https://ilsr.org/national-community-solar-programs-tracker/.
- Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. "Expanding Solar Access: State Community Solar Landscape," *National Renewable Energy Laboratory* (2022), *available at* https://www.nrel.gov/docs/fy23osti/84247.pdf.
- Diana Chace and Nate Hausman. "Consumer Protection for Community Solar: A Guide for the States," *Clean Energy States Alliance* (June 2017), *available at* https://www.cesa.org/wp-content/uploads/Consumer-Protection-for-Community-Solar.pdf.
- "Low-Income Clean Energy Connector," U.S. Department of Energy, National Community Solar Partnership, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.
- "Community Power Accelerator," U.S. Department of Energy, National Community Solar Partnership, *available at* https://www.energy.gov/communitysolar/community-power-acceleratortm.
- "Technical Assistance," U.S. Department of Energy, National Community Solar Partnership, *available at* https://www.energy.gov/communitysolar/technical-assistance.
- "Community Solar and HUD Subsidized Housing: An Overview of Current Policies, Programs and Practices and the Impact to Tenant Utility Allowances and Income," *Stewards of Affordable Housing for the Future* (2022), *available at* https://www.sahfnet.org/resources/community-solar-and-hud-subsidized-housing-overview-current-policies-programs-and.
- "Community Solar Consolidated Billing: Review of State Requirements, Policies, and Key Considerations," *National Association of State Energy Officials* (May 2023), *available at* https://www.naseo.org/news-article?NewsID=3872.
- "State Policies and Programs for Community Solar," *NREL Data Catalog*, *available at* https://data.nrel.gov/submissions/215.
- "Inclusive Shared Solar Initiative: ISSI," *National Association of State Energy Officials*, *available at* https://www.naseo.org/issues/solar/issi.
- "Low-Income Communities Bonus Credit Program," U.S. Department of Energy, Office of Energy Justice and Equity, *available at* https://www.energy.gov/justice/low-income-communities-bonus-credit-program (for sample customer disclosure form templates).

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- "LIHEAP IM-2023-04 Community Solar and LIHEAP Considerations," Office of Community Services, *available at* https://www.acf.hhs.gov/ocs/policy-guidance/liheap-im-2023-04-community-solar-and-liheap-considerations.

State-Specific Models, Materials, and Standard Templates

District of Columbia:

- Solar for All Implementation Plan, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/DOEE-%20Report-%20Solar%20for%20All%20Implementation-%20Final%20for%20Transmittal.pdf.
- Department of Energy and Environment, Solar for All, *available at* https://doee.dc.gov/solarforall.
- Department of Energy and Environment, Receive Assistance with Your Utility Bills (LIHEAP), *available at* https://doee.dc.gov/liheap.

Illinois:

- Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All, *Illinois Power Agency* (April 17, 2023), *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.
- Approved Vendor Manual (Solar for All), *available at* https://www.illinoissfa.com/app/uploads/2023/07/Approved-Vendor-Manual-v-6_1_Prevailing_Wage_IPA_Approved_Final.pdf.
- Resources for Current Approved Vendors, *available at* https://www.illinoissfa.com/for-vendors/current-approved-vendors/.
- Consumer Complaint Center, *available at* https://illinoisshines.com/consumer-complaint-center/#:~:text=Illinois%20Shines%20Consumer%20Complaint%20Center,-The%20Program%20Administrator's&text=To%20file%20a%20complaint%2C%20please,takes%20all%20filed%20complaints%20seriously.
- Program Violations and Complaint Reports, *available at* https://illinoisshines.com/violations-report-cp-complaint-report/.

Maryland:

- Community Solar for the LMI Community, *available at* https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf.

Minnesota:

- Community Solar Garden, MN Stat. § 216B.1641, *available at* https://www.revisor.mn.gov/statutes/cite/216B.1641 (for an example of a community solar statute that prioritizes low-to-moderate income customers and includes disclosure requirements).

New Jersey:

- BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), *available at* https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf (addressing income verification).

New Mexico:

- Community Solar Program Best Practices Consumer Protection & Subscriber Management, New Mexico Community Solar Program (Jan. 23, 2023), *available at* https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf.[163]
- New Mexico Community Solar Program: Subscriber Information Disclosure Form, *available at* http://www.csnewmexico.com/wp-content/uploads/2023/07/Subscriber-Disclosure-Form-3-page-Sample.pdf.
- New Mexico Community Solar Program Guidebook, *available at* https://csnewmexico.com/wp-content/uploads/2022/12/New-Mexico-Community-Solar-Program-Guidebook-12.1.22.pdf.
- Community Solar, New Mexico Public Regulation Commission, *available at* https://www.prc.nm.gov/utilities/community-solar/#:~:text=The%20community%20solar%20program%20in%20New%20Mexico%20is,don%E2%80%99t%20have%20access%20to%20energy%20from%20solar%20installations.

New York:

- New York State Department of Public Service (NYDPS): Distributed Energy Resource Regulation and Oversight, *available at* https://dps.ny.gov/distributed-energy-resource-der-regulation-and-oversight.
- New York State Research and Development Authority (NYSERDA): Inclusive Community Solar Adder, *available at* https://www.nyserda.ny.gov/icsa.

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- NYSERDA and National Grid: Expanded Solar For All Implementation Plan (revised Oct. 3, 2023), *available at* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A077F68A-0000-C958-AB14-8CAF9BBD65F4}.
- NYDPS: Proposal for a Statewide Solar for All Program (May 19, 2023), *available at* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={80923588-0000-CC13-94D1-C5BDA17FEB11}.

Oregon:

- Program Implementation Manual, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.
- Low-Income Standard Contract, *available at* https://www.oregoncsp.org/wp-content/uploads/2023/07/LI-participant-contract-template-230710.docx.
- Disclosure Checklist Template, *available at* https://www.oregoncsp.org/wp-content/uploads/2023/07/Disclosure-Checklist-Template-072023.docx.
- Utility Data Release Form, *available at* https://www.oregoncsp.org/wp-content/uploads/2022/05/Utility-Data-Release_PAC-generic.docx.

APPENDIX B: STATE BEST PRACTICES AND MODELS FOR LOW-INCOME COMMUNITY SOLAR

	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
District of Columbia	DC Solar for All Program: mandatory 10% of community solar capacity be carved out or set aside for low-income customers (defined as at or below 80% of the area median income). Benefits to low-income customers include no upfront costs, no early termination fees (the term length is three years), and no impacts on subscribers' LIHEAP benefits.	Solar for All Implementation Plan outlines background on solar energy, recommendations to address challenges, and strategies for coordination with LIHEAP.	B21-0650, also known Renewable Portfolio Standard Expansion Amendment Act (2016).	Solar for All application; LIHEAP utility assistance application.
Illinois	Illinois Solar for All Program: for community solar to low-income families, (defined as households with annual incomes of 80% or less of the area median income). Benefits to low-income customers include no upfront costs, and fees may not exceed more than 50% of the value of energy generated by the customer's share of the system.	Consumer Protection Handbook outlines requirements and standardized language for protecting low-income Solar for All participants from predatory marketing, unfair and abusive practices, and lack of disclosure. Also has an Approved Vendor Manual for Solar for All vendors.	Senate Bill 2814 Public Act 099-0906 An Act Concerning Regulation (2016).	Income Verification forms, brochures, and other forms available through the Approved Vendor Portal and "Resources for Current Approved Vendors" webpage; Disclosure Forms.

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	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
Maryland	Community Solar Program: mandatory carve-out for low-income households (defined as those with annual incomes at or below 175% of the federal poverty level), and moderate income households (or those at or below 80% of median area income).		Public Utility section 7-306.2 (2015) established a 3-year pilot; House Bill 683 (2019) extended the pilot program from three to seven years. House Bill 908 made the community solar program permanent.	Contract Disclosure Form and Instructions at Public Service Commission site.
New Jersey	Community Solar Energy Program: mandatory carve-out of 40% of community solar capacity for low-income customers (income at or below of 200% of the federal poverty level) and moderate income customers (income at or below 80% of the median income). Broad income verification requirements.		P.L. 2018, Ch. 17: Act Concerning Clean Energy, also known as the Clean Energy Act (2018); Board of Public Utilities order making the community solar program permanent.	
New Mexico	Community Solar Program: mandatory carve-out of 30% of community solar capacity for low-income customers (defined as at or below eighty percent of area median income).	Community Solar Best Practices manual is not compulsory but offers guidelines to protect consumers. Program Guidebook provides an overview of the procedures and requirements for the program.	Community Solar Act, Senate Bill 84 (2021) (Chapter 34 Section 2 Laws 2021); Section 62-16B et. seq. NMSA 1978.	Subscriber Disclosure Form.

	COMMUNITY SOLAR PROGRAM	PROGRAM IMPLEMENTATION PLAN / HANDBOOK / MANUAL	LEGISLATIVE AND ADMINISTRATIVE AUTHORITY	SAMPLE TEMPLATES
New York	New York State Research & Development Authority (NYSERDA) Low-Income Community Solar Initiative (through Solar for All): benefits to customers include consolidated billing.		Climate Leadership and Community Protection Act (2018). Expanded by Public Service Commission Order 22007/ 19-E-0735 (2022).	
Oregon	Community Solar Program: mandatory 10% of community solar capacity carved out or set aside for low-income customers (less than or equal to 80% of the Oregon State Median Family Income). Benefits to low-income customers include subscription discounts of at least 20%, guaranteed energy bill savings, no upfront costs, no termination fees, and no impacts on subscribers' LIHEAP benefits.	Oregon Community Solar Program Implementation Manual outlines procedures and requirements and includes standard contract templates, disclosure checklists, and data release form templates.	Senate Bill 1547, also known as the Clean Electricity and Coal Transition Plan (2016).	Low-Income Standard Contract; Disclosure Checklist; and Utility Data Release Form.

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ENDNOTES

1. U.S. Energy Information Administration, *available at* https://www.eia.gov/todayinenergy/detail.php?id=51979.
2. We are not precisely defining "low-income" in this report but recommend that a state consider its Low-Income Home Energy Assistance Program's financial eligibility rules, which provide guidance for establishing a definition. Under the LIHEAP statute, 42 U.S.C. §8624(b)(2), a state can set income eligibility at no less than 150% of the federal poverty level, or, at the state's discretion, 60% of the state's median income. Moreover, many of the programs highlighted in this report, define low-income as at or below 80% of median area income, or at or below 200% of the federal poverty level.
3. U.S. Department of Energy, "Low-Income Community Energy Solutions," *available at* https://www.energy.gov/scep/slsc/low-income-community-energy-solutions ("The national average energy burden for low-income households is 8.6%, three times higher than for non-low-income households which is estimated at 3%").
4. *See, for example*, a September 21, 2021 EPA press release, *available at*: https://www.epa.gov/newsreleases/epa-report-shows-disproportionate-impacts-climate-change-socially-vulnerable ("A new EPA analysis released today shows that the most severe harms from climate change fall disproportionately upon underserved communities who are least able to prepare for, and recover from, heat waves, poor air quality, flooding, and other impacts. EPA's analysis indicates that racial and ethnic minority communities are particularly vulnerable to the greatest impacts of climate change").
5. "National Climate Assessment," *available at* https://nca2023.globalchange.gov/.
6. State utility regulators (public service commissions or public utility commissions) have a unique role in developing and approving community solar program details. Ideally, commissions approving community solar programs should take into account consumer protections at the start, rather than after the fact as a separate docket.
7. U.S. Department of Energy, "National Community Solar Partnership," *available at* https://www.energy.gov/communitysolar/community-solar.
8. U.S. Department of Energy, "Low-Income Community Energy Solutions," *available at* https://www.energy.gov/scep/slsc/low-income-community-energy-solutions ("Energy burden is defined as the percentage of gross household income spent on energy costs").
9. Without strong consumer protections, one risk community solar participants may experience includes inappropriately-sized subscriptions where solar credits end up exceeding the customer's bill; in short, a customer may receive more credits than they can use because their portion of the community solar system generates more power than they need. In the absence of intentional consumer protections, other potential risks include adverse impacts on other low-income benefits and utility allowances.
10. *See Federal Trade Commission*, "Cooling-off Period for Sales Made at Home or Other Locations," *available at* https://www.ftc.gov/legal-library/browse/rules/cooling-period-sales-made-home-or-other-locations.

11. Carolyn Carter, "Consumer Protection in the States: A 50-State Evaluation of Unfair and Deceptive Practices Laws," National Consumer Law Center (March 2018), *available at* https://www.nclc.org/resources/how-well-do-states-protect-consumers/.

12. For examples of early California Property Assessed Clean Energy (PACE) abuses, *see* National Consumer Law Center, "Residential Property Assessed Clean Energy (PACE) Loans: The Perils of Easy Money for Clean Energy Improvements" (Sept. 2017), *available at* https://www.nclc.org/resources/residential-pace-loans-the-perils-of-easy-money-for-clean-energy-improvements/. For other examples of common abuses in the industry, *see* Alana Semuels, "The Rooftop Solar Industry Could Be on the Verge of Collapse," *Time Magazine* (Jan. 25, 2024), *available at* https://time.com/6565415/rooftop-solar-industry-collapse/.

13. For example, homeowners in California must receive a financing estimate and certain disclosures before consummation of the agreement, and a notice of the right to cancel. Additionally, California imposed an ability-to-repay requirement. *See* Cal. Sts. & High. Code § 5898.17 and Cal. Fin. Code § 22686.

14. Although it is beyond the scope of this report and will not be addressed herein, we strongly encourage discussion of community solar for Tribal nations, specifically through the lens of upholding federal trust responsibilities and Tribal sovereignty, as well as ways to ensure access for Tribal low-income households.

15. It is important to note that the recommendations provided in this brief apply in the context of community solar, not rooftop solar, where additional consumer safeguards are required because financing is often involved as well as physical work to the consumer's home. Furthermore, state legislative and regulatory decisions about subsidies provided to support the implementation of solar programs should carefully consider the rate impacts, if any, on consumers. A full discussion of that issue is outside the scope of this paper, which is focused on specific protections for low-income community solar participants. *See* Meg Power, Keith Kueny, and John Howat, "Access to Solar Energy: An Update and Cautions," *Community Action Partnership* (2018), *available at* https://communityactionpartnership.com/wp-content/uploads/2018/09/Access-to-Solar-Project-Updates-and-Consumer-Protection-Cautions.pdf (discussing concerns with rooftop solar and providing consumer protection recommendations).

16. We use the mandatory word "must" to mean what states should do to protect the interests and financial wellbeing of residential consumers.

17. "Marketers" includes solar developers if the developers themselves take on the marketing function or have direct contact with actual or potential customers, and the applicability of each specific protection to developers will therefore vary. "Marketers" is broadly intended to include those who communicate with potential subscribers to community solar projects, and thus may include developers, subscription managers, vendors, utilities, or other entities.

18. "State administrators" may be used interchangeably with "state program administrators" or "program administrators" in this report.

19. "Consolidated billing" refers to a system where the utility adds the monthly community solar subscription charge to the utility bill of the participant, and remits payment received for those charges to the developer or marketer. The community solar subscription benefits appear on the same bill as other utility services.

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20. Any electronic documents should also be complaint with the American Disabilities Act, Section 508. *See* "Test for Accessibility," *available at* https://www.section508.gov/test/.

21. If a consumer chooses to accept documents electronically, certain requirements must be met under federal law. *See* Electronic Records and Signatures in Commerce Act, 15 U.S.C. §§ 7001 to 7006 ("Under federal and state law, a consumer could choose to accept documents electronically and, where a signature is required, sign electronically, so long as all of the requirements of the Electronic Signatures in Global and National Commerce [E-sign], 15 U.S.C. sections 7001 to 7006, were complied with").

22. The U.S. Department of Energy intends to make standard templates for community subscription disclosure forms available soon. *See* "Low-Income Communities Bonus Credit Program," *available at* https://www.energy.gov/justice/low-income-communities-bonus-credit-program.

23. In every state, a state agency (usually the Attorney General's office) has authority to enforce the state's consumer protection law. *See*, for example, the Illinois Consumer Fraud and Deceptive Business Practices Act, at 815 ILCS 530/1 et. seq. *See also* Carolyn Carter, "A 50-State Report on Unfair and Deceptive Acts and Practices Statutes," National Consumer Law Center (Feb. 9, 2009), pp. 16-17, *available at* https://www.nclc.org/resources/a-50-state-report-on-unfair-and-deceptive-acts-and-practices-statutes/.

24. A strong state consumer protection act, targeting unfair and deceptive business practices, is essential as an enforcement mechanism for community solar.

25. National Oceanic and Atmospheric Administration. "Extreme heat: A media resource guide," August 24, 2021, *available at* https://www.noaa.gov/media-advisory/extreme-heat-media-resource-guide.

26. Environmental Protection Agency. "Technical Documentation: Heat Waves," *available at* https://www.epa.gov/sites/default/files/2021-04/documents/heat-waves_td.pdf.

27. Environmental Protection Agency. "Climate Change Indicators: Heat Waves," *available at* https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves.

28. Adam B. Smith. "2021 U.S. billion-dollar weather and climate disasters in historical context," *National Oceanic and Atmospheric Administration* (Jan. 4, 2022), *available at* https://www.climate.gov/news-features/blogs/beyond-data/2021-us-billion-dollar-weather-and-climate-disasters-historical. *See also* Gloria Oladipo, "US sets new record for billion-dollar climate disasters in single year," *The Guardian* (Sept. 11, 2023), *available at* https://www.theguardian.com/environment/2023/sep/11/us-record-billion-dollar-climate-disasters.

29. Kiara Alfonseca. "Impoverished communities pay for worsening impacts of climate change: Experts," *ABC News* (Nov. 6, 2021), *available at* https://abcnews.go.com/US/impoverished-communities-pay-worsening-impacts-climate-change-experts/story?id=80794967.

30. Hessel C. Winsemius, Brenden Jongman, Ted I.E. Veldkamp, et. al. "Disaster risk, climate change, and poverty: assessing the global exposure of poor people to floods and droughts," *Environment and Development Economics* (2018), 23,328–348, doi:10.1017/S1355770X17000444.

31. "Energy Equity Project Report, 2022," *University of Michigan School for Environment and Sustainability*, *available at* https://energyequityproject.com/wp-content/uploads/2022/08/220174_EEP_Report_8302022.pdf ("For decades, Black, Indigenous, and People of Color (BIPOC), frontline and low-income communities have borne the brunt of the negative impacts of the energy system while receiving a negligible slice of benefits from the clean energy transition).

32. Solar is currently the lowest cost energy generating resource. *See* IEA (2022), Renewables 2022, IEA, Paris https://www.iea.org/reports/renewables-2022.

33. The Inflation Reduction Act authorizes funding, programs, and incentives to accelerate the transition to a clean energy economy and drive deployment of new clean electricity resources, such as solar.

34. The Greenhouse Gas Reduction Fund, created by the Inflation Reduction Act, is a $27 billion investment aimed at mobilizing "financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will deliver lower energy costs and economic revitalization to communities, particularly those that have historically been left behind." *See* "About the Greenhouse Gas Reduction Fund," *Environmental Protection Agency*, *available at* https://www.epa.gov/greenhouse-gas-reduction-fund/about-greenhouse-gas-reduction-fund.

35. U.S. Energy Information Administration. "Homes and buildings in the West and Northeast have the largest share of small-scale solar," (Oct. 25, 2022), *available at* https://www.eia.gov/todayinenergy/detail.php?id=54379 (3.7% of one-family homes have rooftop solar installed). *See also* Galen L. Barbose, Sydney Forrester, Eric O'Shaughnessy, Naim R. Darghouth, "Residential Solar-Adopter Income and Demographic Trends: 2022 Update," *Lawrence Berkeley National Laboratory* (Feb. 2022), *available at* https://emp.lbl.gov/publications/residential-solar-adopter-income-0 ("The median solar adopter income was about $115k/year in 2020, compared to a U.S. median of about $63k/year for all households and $79k/year for all owner-occupied households").

36. According to data from the U.S. Census Bureau, "Renter-occupied households made up 52.9% of households in the lowest income quintile and 42.4% of households in the second lowest income quintile." *See* Peter J. Mateyka and Jayne Yoo, "Share of Income Needed to Pay Rent Increased the Most for Low-Income Households From 2019 to 2021," *U.S. Census Bureau* (Mar. 2, 2023), *available at* https://www.census.gov/library/stories/2023/03/low-income-renters-spent-larger-share-of-income-on-rent.html.

37. Data from the National Multifamily Housing Council shows that families with annual household incomes of less than $75,000 are more likely to live in apartments or multifamily buildings. *See* National Multifamily Housing Council, available at https://www.nmhc.org/research-insight/quick-facts-figures/quick-facts-resident-demographics/household-incomes/.

38. Becca Jones-Albertus. "Replacing Your Roof? It's a Great Time to Add Solar," *U.S. Department of Energy* (July 28, 2021), *available at* https://www.energy.gov/eere/solar/articles/replacing-your-roof-its-great-time-add-solar.

39. U.S. Department of Energy. "Community Solar Basics," *available at* https://www.energy.gov/eere/solar/community-solar-basics.

40. U.S. Department of Energy. "Community Solar Basics," *available at* https://www.energy.gov/eere/solar/community-solar-basics.

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41. U.S. Department of Energy. "Community Solar Basics," *available at* https://www.energy.gov/eere/solar/community-solar-basics.

42. Community solar programs often provide substantial discounts to low-income subscribers, as is discussed further in the next section.

43. The White House's Inflation Reduction Act and the EPA's Greenhouse Gas Reduction Fund Solar for All Program have set a goal of delivering an average bill savings of 20% per household. *See* "Solar for All," *Environmental Protection Agency*, *available at* https://www.epa.gov/greenhouse-gas-reduction-fund/solar-all.

44. National Renewable Energy Laboratory (NREL), "Sharing the Sun Community Solar Project Data (December 2022)," *available at* https://data.nrel.gov/submissions/220.

45. The Energy Department's National Community Solar Partnership, the White House's Inflation Reduction Act, and the EPA's Greenhouse Gas Reduction Fund Solar for All Program have all set a goal of delivering an average bill savings of 20% per household. While the 20% savings goal is admirable, it may not be achievable in states that do not have deep subsidies for solar or hard-to-replicate program designs.

46. Some states may not be able to measure actual bill savings because they do not have access to the enrolled household's utility bills. Also, some marketers may not promise bill savings per se, but instead promise a specified reduction (% or other) off of the otherwise applicable generation charges. In those situations, the state should determine the metrics that would allow it to ensure that participating households get a meaningful benefit.

47. The extent to which a developer can offer savings, for example, greater than X% of the otherwise applicable energy price, will depend on many factors, including the solar subsidies that may be available in that state, the requirements to access those subsidies, the costs of developing solar projects, the price of energy offered by the incumbent utility, and others. A specific numeric percentage is not proposed here as to what is "meaningful," as that will vary from state to state. However, the Energy Department's National Community Solar Partnership has set a goal of delivering an average bill savings of at least 20% per household from community solar, which would put community solar on par with rooftop solar savings which are 20% on average. *See also* the Solar for All Program (from the Gas Reduction Fund), which requires 20% savings, *available at* https://www.grants.gov/web/grants/view-opportunity.html?oppId=348957, p. 12.

48. The frequency of any such reports would be up to the state to decide.

49. If a participant fails to pay, they should be removed from the program without penalty.

50. Each state should determine what it would consider an unreasonably long initial term. For example, a state might decide that terms longer than 3 years are unreasonable given how frequently households move. However, to the extent the contract allows the customer to cancel the contract, at no cost, and upon relatively short notice (e.g., 30 days' notice), the nominal length of the contract would be of much less concern.

51. The state may want to consider requiring translated documents to be notarized or certified in some way to ensure the right message is being communicated to the customer.

52. "Under federal and state law, a consumer could choose to accept documents electronically and, where a signature is required, sign electronically, so long as all of the requirements of the Electronic Signatures in Global and National Commerce [E-sign], 15 U.S.C. sections 7001 to 7006, were complied with." *See* Electronic Records and Signatures in Commerce Act, 15 U.S.C. §§ 7001 to 7006.

53. For example, states and community solar marketers may consider consolidated billing, a system whereby the utility adds the monthly subscription charge to the utility bill of the participant or subscriber and remits payment received for those charges to the developer or marketer. In short, the community solar subscription benefits appear on the same bill as other utility services, reducing any payment confusion and increasing program access for low-income households who may lack credit cards, credit-worthiness, or internet access. The New York Public Service Commission adopted this consolidated billing model. *See* State Public Service Commission of New York, In the Matter of Consolidated Billing for Distributed Energy Resources, Case No. 19-M-0463, p.2. *See also* "Community Solar Consolidated Billing: Review of State Requirements, Policies, and Key Considerations," *National Association of State Energy Officials* (May 2023), *available at* https://www.naseo.org/news-article?NewsID=3872. Additionally, Oregon increases program access for unbanked low-income customers by not allowing subscription managers to require automatic payments for the community solar program. *See* "In the Matter of Use of the Agent Subscription Model in Project Eligibility for the Community Solar Program," Public Utility Commission of Oregon, Order No. 22-363, October 2022, p. 11, *available at* https://apps.puc.state.or.us/orders/2022ords/22-363.pdf.

54. *See* NY-Sun Inclusive Community Solar Adder Proposed Round 2 Program Design, which requires contractors to submit a detailed Marketing & Implementation Plan form, *available at* https://www.nyserda.ny.gov/solar-contractor-resources.

55. Illinois has a detailed "Consumer Protection Handbook" that states may choose to use as a model. https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf. Other potential resources for states adopting consumer protections for community solar programs include "Consumer Protection for Community Solar: A Guide for States," *Clean Energy State Alliance* (2017), *available at* https://www.cesa.org/wp-content/uploads/Consumer-Protection-for-Community-Solar.pdf; and "Consumer Protection Primer," *Solar Energy Industries Association*, *available at* https://www.seia.org/sites/default/files/2022-03/SEIA%20Consumer%20Protection%20Primer%20v1.0%20-%20FINAL.pdf.

56. The U.S. Department of Energy intends to provide sample disclosure form templates at "Low-Income Communities Bonus Credit Program," *available at* https://www.energy.gov/justice/low-income-communities-bonus-credit-program.

57. *See* the Oregon Community Solar Program low-income standard template, which is ten pages long, *available at* https://www.oregoncsp.org/pm-resources/.

58. States may wish to use tools that determine a "readability score" or similar metric for contracts and other documents. Many "readability" tools can be found by typing "readability score checker" into a browser. There are a wide range of products, some available for a fee, others purportedly for free.

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59. For guidance, states may wish to consult the Consumer Financial Protection Bureau's "Statement Regarding the Provision of Financial Products and Services to Consumers with Limited English Proficiency," *available at* https://www.consumerfinance.gov/rules-policy/notice-opportunities-comment/open-notices/statement-regarding-the-provision-of-financial-products-and-services-to-consumers-with-limited-english-proficiency/.

60. A useful sample of a standard Disclosure Form from Maryland can be found here: https://www.psc.state.md.us/wp-content/uploads/Community-Solar-Contract-Disclosure-Form-and-Instructions_04162018.pdf.

61. The Energy Department's Low-Income Clean Energy Connector will make it easier for developers and subscription managers to locate and enroll income-eligible households. *See* "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.

62. To protect low-income customers, it is important to determine how to distinguish door-to-door community solar marketers using the Energy Department's Low-Income Clean Energy Connector from community solar marketers not using the Connector.

63. For example, whereas District of Columbia's program offers uniform savings, New Mexico's program (which does not offer uniform savings) allows competitive solicitations.

64. For examples of data collection and evaluation practices, *see* "An Assessment of Evaluation Practices of Low- and Moderate-Income Solar Programs," *Lawrence Berkeley Nat. Lab* (April 2021), *available at* https://eta-publications.lbl.gov/sites/default/files/lmi_solar_meta-evaluation_report_final.pdf.

65. *See* Appendix A as well as the "Best Practices" section of this report for a description of the complaint system for the Illinois Shines and Illinois Solar for All programs.

66. For a model, *see* the complaint and discipline process developed by the Illinois Power Agency. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), pp. 30-36, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

67. The Illinois Power Agency's Consumer Protection Handbook provides a useful model for states considering developing a Code of Practice or consumer handbook. https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

68. For example, the Illinois Power Agency has the authority to enforce the requirements of the Illinois Solar for All Program. *See Consumer Protection Handbook*, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf. Additionally, any community solar program in the state would be subject to the Illinois Consumer Fraud and Deceptive Business Practices Act, which is enforceable by the state's Attorney General.

69. While self-attestation of income has been allowed in community solar programs in some states, including Maryland and New Jersey, and can be seen as a best practice in terms of facilitating enrollment of low-income households, states should consider that some developers may feel limited in their ability to access certain tax credits (e.g., under 26 U.S.C. § 48E(h)) if they do not individually income-qualify participating households. The extent to which a developer may (or may not) need to individually income-qualify households to access tax benefits is a complex tax law question and beyond the scope of this report.

70. The Energy Department's Low-Income Clean Energy Connector will streamline income verification for enrollment in community solar.

71. *See* "State and Federal Environmental Justice, Climate Justice, Disadvantaged, and Vulnerable Community Definitions," *available at* https://illumeadvising.com/ej-definitions/. *See also* "Disadvantaged Communities," *available at* https://energyjustice.egs.anl.gov/. Illinois, for example, defines "environmental justice communities" as those areas "where residents have historically been subject to disproportionate burdens of pollution." *See* Illinois Public Act 102-0662, Section 5-5, *available at* https://www.ilga.gov/legislation/publicacts/102/PDF/102-0662.pdf.

72. Customers struggling with their utility bills need the most help and can benefit the most from potential community solar bill savings. Low-income community solar programs requiring no monthly subscription fee or other payment would benefit this customer class.

73. Expressions of interest will be tracked through the Energy Department's Low-Income Clean Energy Connector.

74. Ideally, any coordination concerns should be addressed and resolved in a way that avoids burdening the household with the administrative problems.

75. Oregon's community solar model avoids adversely impacting a household's LIHEAP benefits. For low-income customers only, the state's utilities adapted billing processes so that solar program bill credits and on-bill subscription charges are netted against each other before the net savings are applied to a customer's net balance. As a result, the marketer or subscription manager is paid in full from the value of the bill credits, not from customer payments. The result is that the customer's net balance is made up entirely of utility charges and is entirely eligible for LIHEAP.

76. That guidance states that "solar credits are excluded when calculating utility allowances" and "solar credits are excluded from annual income." *See* HUD Office of Housing, *available at* https://www.illinoissfa.com/app/uploads/2022/07/2022-Illinois-Solar-for-All-Determination-signed.pdf. For additional HUD national guidance, *see* "Multifamily Memorandum Re: Treatment of Community Solar Credits on Tenant Utility Bills," *available at* https://www.hud.gov/sites/dfiles/Housing/documents/MF_Memo_Community_Solar_Credits_signed.pdf, and "Multifamily Memorandum Re: Treatment of Solar Benefits for Residents in Master-metered Buildings," *available at* https://www.hud.gov/sites/dfiles/Housing/documents/MF_Memo_re_Community_Solar_Credits_in_MM_Buildings.pdf. *See also* "Renewable Energy," *Stewards of Affordable Housing for the Future*, *available at* https://www.sahfnet.org/our-work/environmental-sustainability/low-carbon-homes/renewable-energy.

77. U.S. Department of Energy. "Community Solar Basics," *available at* https://www.energy.gov/eere/solar/community-solar-basics.

78. U.S. Department of Energy. "Community Solar Basics," *available at* https://www.energy.gov/eere/solar/community-solar-basics.

79. Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. "Expanding Solar Access: State Community Solar Landscape," *National Renewable Energy Laboratory* (2022), *available at* https://www.nrel.gov/docs/fy23osti/84247.pdf.

80. Kaifeng Xu, Jenny Sumner, Emily Dalecki, and Robin Burton. "Expanding Solar Access: State Community Solar Landscape," *National Renewable Energy Laboratory* (2022), *available at* https://www.nrel.gov/docs/fy23osti/84247.pdf.

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81. National Renewable Energy Laboratory (NREL), "Sharing the Sun Community Solar Project Data (December 2022)," *available at* https://data.nrel.gov/submissions/220. *See also* Institute for Local Self-Reliance, "National Community Solar Programs Tracker," *available at* https://ilsr.org/national-community-solar-programs-tracker/.

82. Department of Energy and Environment, Solar for All, *available at* https://doee.dc.gov/solarforall. *See also* "Fiscal Year 2020 Solar for All Annual Report," *Department of Energy and the Environment*, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/FY%202020%20SFA%20Annual%20Report.pdf.

83. Solar for All terms and conditions, *available at* https://doee.dc.gov/node/1608861. HUD also excludes DC Solar for All credits from annual income and utility allowance calculations. *See* U.S. Department of Housing and Urban Development, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/US%20HUD_DC%20Solar%20for%20All%20Guidance.pdf.

84. Department of Energy and Environment, Receive Assistance with Your Utility Bills (LIHEAP), *available at* https://doee.dc.gov/liheap. For more information, *see* Ariel Drehobl, Diana Hernández, Roxana Ayala, et. al., "An Examination of District Residents' Experiences with Utility Burdens and Affordability Programs," *American Council for an Energy-Efficient Economy* (March 2021), *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/Report_An%20Examination%20of%20District%20Residents%E2%80%99%20Experiences%20with%20Utility%20Burdens%20and%20Affordability%20Programs.pdf.

85. ILSFA was created under the Future Energy Jobs Act, which authorized the Illinois Power Agency to implement and enforce the program. *See* Public Act 099-0906, *available at* https://www.ilga.gov/legislation/publicacts/99/PDF/099-0906.pdf.

86. Illinois Solar for All: Community Solar, *available at* https://www.illinoissfa.com/app/uploads/2019/10/0919-ILSFA-infosheet-low-income-community-solar-v11.pdf.

87. "Illinois Solar for All: Community Solar Opportunities for Owners and Renters," *Illinois Power Agency* (Sept. 2023), p. 1., *available at* https://www.illinoissfa.com/app/uploads/2020/12/CS-Offers.pdf.

88. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 37, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

89. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 7, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

90. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 7, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

91. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), pp. 8-10, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf. It should be noted that promising savings of 50%, per the example, is potentially misleading and deceptive because subscriptions are not always sized to 100% of their energy usage; this means that if the subscriber is only generating 80% of the energy they use through the panels, they will not experience 50% savings on their bill.

92. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 10, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

93. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 14, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

94. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), pp. 15-18, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

95. Approved vendors are responsible for supervising and ensuring compliance, including developing trainings that comply with the stated requirements of the handbook. *See* "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

96. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 26, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

97. *See* "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 30, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

98. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), pp. 31-36, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

99. "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 1, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

100. "This Handbook outlines the Program Administrators' and IPA's typical roles in enforcement; however, nothing in these guidelines shall preclude the Agency from undertaking roles specified for the Program Administrators on an as-needed basis." *See* "Consumer Protection Handbook for Illinois Shines (Adjustable Block Program) & Illinois Solar for All," *Illinois Power Agency* (April 17, 2023), p. 2, *available at* https://www.illinoissfa.com/app/uploads/2023/04/Consumer-Protection-Handbook-Final-4.17.23.pdf.

101. House 683 (2019), *available at* https://mgaleg.maryland.gov/2019RS/fnotes/bil_0003/hb0683.pdf.

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102. David Comis. "Community Solar – Tracking the Maryland Legislation and Regulation," Maryland Energy Administration (Dec. 1, 2020), *available at* https://news.maryland.gov/mea/2020/12/01/community-solar-tracking-the-maryland-legislation-and-regulation/. *See also* Community Solar for the LMI Community, *available at* https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf.

103. "RM 56 Low and Moderate Income Verification," Maryland Public Service Commission (Feb. 14, 2020), *available at* https://webapp.psc.state.md.us/newIntranet/AdminDocket/NewIndex3_VOpenFile.cfm?FilePath=//Coldfusion/AdminDocket/RuleMaking/RM56//132.pdf.

104. Ensuring that subscriptions are "portable" (meaning the subscriptions move with the customer) is critical for low-income families who, because they are frequently renters, may change residences often.

105. *Community Solar for the LMI Community*, *available at* https://energy.maryland.gov/residential/SiteAssets/Pages/CommunitySolarLMI-PPA/Community%20Solar%20for%20the%20LMI%20Community.pdf.

106. House Bill 908, *available at* https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf. *See also* Michael Schoeck, "Maryland passes community solar bill," *PV Magazine* (Apr. 17, 2023), *available at* https://pv-magazine-usa.com/2023/04/17/maryland-passes-community-solar-bill/.

107. The law defines LMI customers as those who are low-income, moderate income, or reside in a census tract that is overburdened or underserved community. It further defines low-income as an annual household income at or below 200% of the federal poverty level, while moderate income refers to annual household income at or below 80% of the median income in Maryland. *See* House Bill 908, *available at* https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf.

108. The definition of "overburdened community" and "underserved community" is based on section 1–701 of the Maryland Code, which list several "environmental health indicators" (including proximity to traffic, lead paint indicator, and more) that must be shown for an area to be considered overburdened. Furthermore, the section defines an underserved community as one where "(i) at least 25% of the residents qualify as low-income, (ii) at least 50% of the residents identify as nonwhite; or (iii) at least 15% of the residents have limited English proficiency." *See* Md. Code Ann. § 6 1–701.

109. House Bill 908, *available at* https://mgaleg.maryland.gov/2023RS/bills/hb/hb0908f.pdf.

110. P.L. 2018, Ch. 17: Act Concerning Clean Energy, *available at* https://pub.njleg.gov/bills/2018/AL18/17_.PDF.

111. P.L. 2018, Ch. 17: Act Concerning Clean Energy, *available at* https://pub.njleg.gov/bills/2018/AL18/17_.PDF.

112. N.J.S.A. § 48:3-87.11(b)(7).

113. N.J. Admin. Code § 14:8-9.2.

114. N.J. Admin. Code § 14:8-9.4(e) and 14:8-9.8(b).

115. BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), *available at* https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf (citing N.J.A.C. 14:8-9.8(d) rules for LMI verification: "The current Pilot Program Rules specify those documents sufficient to serve for qualification: i) Proof of participation in LIHEAP, Universal Service Fund, Comfort Partners, and/or the Lifeline Utility Assistance Program, or ii) copies of the first and second pages of the would-be subscriber's previous three years' Federal income tax returns").

116. BPU Order, Dockets QO18060646 and QO20080588: Community Solar Energy Pilot Program Rules (Oct. 2, 2020), *available at* https://www.nj.gov/bpu/pdf/boardorders/2020/20201002/8D%20-%20ORDER%20Community%20Solar%20LMI.pdf.

117. "NJBPU Makes Community Solar Pilot Program Permanent," State of New Jersey Board of Public Utilities (August 16, 2023), *available at* https://www.nj.gov/bpu/newsroom/2022/approved/20230816.html. *See also* "In Matter of the Community Solar Energy Program," Docket No. QO22030153, August 2023, State of New Jersey Board of Public Utilities, *available at* https://nj.gov/bpu/pdf/boardorders/2023/20230816/8F%20ORDER%20Community%20Solar%20Energy%20Program.pdf.

118. N.J. Admin. Code § 14:8-9.8.

119. The BPU order specifically allowed "self-attestation of household income being less than 80 percent of the area median income, as recorded by a standard self-attestation form." *See* "In Matter of the Community Solar Energy Program," Docket No. QO22030153, August 2023, State of New Jersey Board of Public Utilities, *available at* https://nj.gov/bpu/pdf/boardorders/2023/20230816/8F%20ORDER%20Community%20Solar%20Energy%20Program.pdf.

120. 55 N.J.R 1985(a), *available at* https://nj.gov/bpu/pdf/rules/PRN%202023-095%20(55%20N.JR.%201985(a)).pdf.

121. "New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management," *New Mexico Community Solar Program* (Jan. 23, 2023), *available at* https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf.

122. "New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management," *New Mexico Community Solar Program* (Jan. 23, 2023), p. 2, *available at* https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf.

123. "Community Solar Customers," *New Mexico Community Solar Program*, *available at* https://csnewmexico.com/community-solar-customers/.

124. "New Mexico Community Solar Program Best Practices Consumer Protection & Subscriber Management," *New Mexico Community Solar Program* (Jan. 23, 2023), p. 2, *available at* https://csnewmexico.com/wp-content/uploads/2023/01/NM-CS-Consumer-Protection-Best-Practices-1.23.23-final.pdf.

125. *Id.* at 85.

126. *Id.* at 7.

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127. "Expanded Solar For All Program Implementation Plan," State of New York Public Service Commission, Case 19-E-0735, October 2023, *available at* https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bA077F68A-0000-C958-AB14-8CAF9BBD65F4%7d. *See also* "Department of Public Service Staff Proposal on a Statewide Solar for All Program," State of New Department of Public Service, May 2023, *available at* https://dps.ny.gov/event/solar-all-psc-seeks-comment-proposal-filed-department-public-service-staff-regarding.

128. "Distributed Energy Resource (DER) Regulation and Oversight," New York State Department of Public Service, *available at* https://dps.ny.gov/distributed-energy-resource-der-regulation-and-oversight.

129. "Inclusive Community Solar Adder," New York State Energy Research & Development Authority, *available at* https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Dashboards-and-incentives/Inclusive-Community-Solar-Adder.

130. "In the Matter of Consolidated Billing for Distributed Energy Resources: Order Regarding Consolidated Billing for Community Distributed Generation," Case 19-M-0463, Dec. 12, 2019, *available at* https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=19-M-0463.

131. "In the Matter of Consolidated Billing for Distributed Energy Resources: Order Establishing Process Regarding Community Distributed Generation Billing," Case 19-M-0463, Sept. 15, 2022, *available at* https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=19-M-0463.

132. Although not discussed in detail in this report, the Energy Trust of Oregon also runs a low-income solar incentive program, called Solar Within Reach. *See* Energy Trust of Oregon, *available at* https://www.energytrust.org/incentives/solar-within-reach/#tab-two.

133. Senate Bill 1547 (2016), *available at* https://olis.oregonlegislature.gov/liz/2016R1/Downloads/MeasureDocument/SB1547/Enrolled.

134. Program Implementation Manual, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

135. "In the Matter of Use of the Agent Subscription Model in Project Eligibility for the Community Solar Program," Public Utility Commission of Oregon, Order No. 22-363, October 2022, p. 11, *available at* https://apps.puc.state.or.us/orders/2022ords/22-363.pdf.

136. "Subscriber Resources," *Oregon Community Solar Program*, *available at* https://www.oregoncsp.org/subscriber-resources/.

137. Portland General Electric, "Community Solar," *available at* https://portlandgeneral.com/energy-choices/renewable-power/community-solar. *See also* Pacific Power, "Oregon Community Solar Program," *available at* https://www.pacificpower.net/savings-energy-choices/blue-sky-renewable-energy/oregon-community-solar.html.

138. Oregon's "Program Implementation Manual," *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

139. *See* Program Implementation Manual, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

140. "Income verification occurs once when the customer is enrolled in the program. Income information is confirmed again when the customer is assigned to a Project. As part of the income verification process, the Low-income Facilitator will also collect demographic information and obtain permission to access utility data on behalf of the customer." *See* Program Implementation Manual, p. 53, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

141. The manual defines "low-income facilitator" as "The entity responsible for serving as a liaison among low-income residential customers and affiliated organizations and Project Managers to help meet any low-income capacity requirements." *See* Program Implementation Manual, p. 9, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

142. Program Implementation Manual, pp. 41-48, 53, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

143. Program Implementation Manual, pp. 21-28, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

144. Program Implementation Manual, p. 23, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

145. For example, "Participants must be allowed to retain their Subscription if they relocate within their utility service territory." *See* Program Implementation Manual, p. 43, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

146. Project managers have to allow participants to transfer their subscription to another eligible participant, and any applicable fees must be disclosed. *See* Program Implementation Manual, p. 43, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

147. Project managers have to provide clear instructions for terminating a subscription early and must not charge an early termination fee to low-income subscribers. *See* Program Implementation Manual, p. 44, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

148. The manual outlines specific requirements in the event that a customer's utility service is disconnected or shutoff off due to non-payment. For example, "Project Managers may not charge low-income customers subscription payment late fees or a penalty for utility disconnection or related contract termination." *See* Program Implementation Manual, pp. 44-45, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

149. The manual provides specific language to include outlining the roles of each party. For a detailed description of the roles of each, *see* Program Implementation Manual, p. 46, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

150. Program Implementation Manual, pp. 41-49, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

151. Program Implementation Manual, p. 49, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf. *See also* Project Manager Resources, *Oregon Community Solar Program*, *available at* https://www.oregoncsp.org/pm-resources/.

152. Program Implementation Manual, p. 19, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

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153. Program Implementation Manual, pp. 19-20, *available at* https://www.oregoncsp.org/wp-content/uploads/2021/03/PIM-v20210112.pdf.

154. "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.

155. "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.

156. "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.

157. As noted, NCLC uses the term "marketer" to refer to solar developers that take on the marketing function or have direct contact with actual or potential customers. Therefore, "marketer" is interchangeable with solar developers, vendors, utilities, and subscription managers (entities that manage subscription enrollment for a developer of a solar project).

158. While this is highly desirable, it may depend on what is allowable in a particular state, as in some states solar developers or subscription managers may not be able to directly compensate local LIHEAP administrators based on the type of entity that would receive the payment (e.g., certain government entities cannot receive compensation from subscription managers).

159. "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector (also noting that to make a community solar subscription available through the Connector, the guaranteed savings must be at least 20%.)

160. The Energy Department will track community solar projects as they become available, as well as interest in community solar to determine demand. Therefore, the Connector is also beneficial for states that do not have any current community solar projects.

161. "Low-Income Clean Energy Connector," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/low-income-clean-energy-connector.

162. "National Community Solar Partnership Initiatives," *U.S. Department of Energy*, *available at* https://www.energy.gov/communitysolar/national-community-solar-partnership-initiatives.

163. Notably, the New Mexico best practices are not requirements. NCLC strongly suggests states set best practices standards as requirements for marketers.

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