

# Affordable Energy for All:

A Plan to Expand Energy Efficiency Benefits for  
Low-Income Salt Lake City Residents



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# INTRODUCTION

Salt Lake City is committed to creating the most livable, sustainable community in the country, and ensuring that all members of the City's diverse and vibrant population thrive.<sup>1</sup> In order to protect the public health and safety of its residents, the City must ensure access to clean air, clean water, a livable environment, and economic stability. As Utah's capitol city, Salt Lake City has been a leader in pioneering approaches to reduce air pollution and seeks to address climate change by pursuing ambitious greenhouse gas reduction goals.



Emissions associated with electric and natural gas use constitute the majority of the community's carbon footprint, therefore improving the efficiency of new and existing buildings is crucial to achieving Salt Lake City's climate goals. Reducing energy waste through efficiency measures is a cost-effective way to address climate change, save households and businesses money, and improve living conditions for City residents. Low-income residents are disproportionately affected by the consequences of climate change, and could benefit from the monthly monetary savings associated with energy efficiency, yet they face significant challenges accessing existing energy efficiency incentive programs.

To this end, Salt Lake City intends to support energy efficiency improvements for low-income residents through a pilot program. The goal of the pilot program is to enable lower-income households that typically do not leverage energy efficiency technologies and associated utility incentives to the same extent as higher income groups to lower energy use and costs.<sup>2</sup> Utah Clean Energy created this Plan to assist Salt Lake City throughout the development of the pilot program, and to support the coordination and implementation of energy efficiency services for low-income households. Specifically, this Plan:

- Identifies existing programs available to Salt Lake City residents, including those offered by local and state government, electric and gas utilities, and community partners, particularly those focused on weatherization and making energy improvements for low-income residences;
- Assesses the availability of data on participation in energy efficiency programs in Salt Lake City, including income level and geographic location, in order to identify opportunities to improve the participation and reach of existing energy efficiency programs
- Develop high-level recommendations to assist Salt Lake City in the development of an effective low-income residential energy efficiency pilot program.

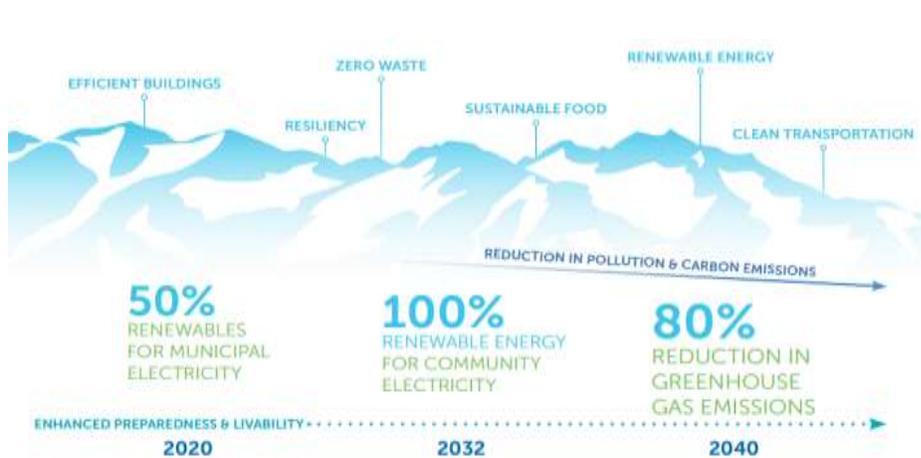
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<sup>1</sup> See Salt Lake City's main government website, <http://www.slcgov.com/>.

<sup>2</sup> Mayor's Recommended Budget Fiscal Year 2017-2018, Department of Sustainability, P E-84, <http://www.slcdocs.com/budget/mayor18.pdf>.

# BACKGROUND

Salt Lake City has adopted ambitious climate and clean energy goals, seeking to achieve 100% renewable electricity supply for the entire community by 2032 and to reduce greenhouse gas emissions by 80% by 2040. More than 75% of Salt Lake City's carbon footprint is attributable to electricity and natural gas use in homes, apartments and businesses to cool homes and buildings through hot summers, provide heat through snowy winters, and keep the lights on year-round.<sup>3</sup> The City's plan includes targeted investments in energy efficiency to help all residents, including low-income residents and those who do not own their homes, benefit from the transition to a clean energy economy.<sup>4</sup>



Salt Lake City has adopted ambitious clean energy goals, seeking to achieve 100% renewable energy for the entire community by 2032 and to reduce greenhouse gas (GHG) emissions by 80% by 2040. Source: SLC Climate Positive 2040, [www.slccgreen.com](http://www.slccgreen.com)

A targeted energy efficiency strategy for low-income residents is especially important because utility costs pose a significant economic hardship to these residents. While an average household spends 3.5% of their household income on energy bills, low-income households spend twice as much — an average of 7%.<sup>5</sup> Energy burdens pose even greater challenges for extremely low-income families; Salt Lake County families who fall below 50% of the federal poverty level (those who have an annual income of \$24,600 for a family of 4) spend a staggering 21% of their income on energy.<sup>6</sup> When times get tough, high utility bills become crippling -- nearly a third of households in Utah do not have enough cash or savings to weather a loss of income and survive at the poverty level for three months.<sup>7</sup>

<sup>3</sup> Salt Lake City. Climate Positive 2040, P. 3,

[http://www.slccdocs.com/slccgreen/Climate%20Positive%202040%20\(web\)\\_compressed.pdf](http://www.slccdocs.com/slccgreen/Climate%20Positive%202040%20(web)_compressed.pdf)

<sup>4</sup> For more detail on the City's joint resolution, see Salt Lake City's Climate Positive page: [www.slccgreen.com/climatepositive](http://www.slccgreen.com/climatepositive). See also the City's Clean Energy Implementation Plan, [www.slccgreen.com/rmp-implementation-plan](http://www.slccgreen.com/rmp-implementation-plan) P 3.

<sup>5</sup> Drehobl, A. & Ross, L. (April 2016). Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities. [www.aceee.org/research-report/u1602](http://www.aceee.org/research-report/u1602)

<sup>6</sup> Boyce, D. & Wirfs-Brock, J. (May 2016). High Utility Costs Force Hard Decisions for the Poor.

[www.insideenergy.org/2016/05/08/high-utility-costs-force-hard-decisions-for-the-poor/](http://www.insideenergy.org/2016/05/08/high-utility-costs-force-hard-decisions-for-the-poor/). In Salt Lake County, households below 50% of the federal poverty level spend an average of \$1,698 annually (\$141/month) on energy bills.

<sup>7</sup> Community Action Partnership of Utah. (Jan 2017). Annual Report on Poverty in Utah.

[http://caputah.org/images/CAP\\_Utah\\_Poverty\\_Report\\_2-2-17.compressed1.pdf](http://caputah.org/images/CAP_Utah_Poverty_Report_2-2-17.compressed1.pdf), P 3. The reference above refers to "liquid asset poverty" which the report defines as having insufficient cash or savings on hand to cover three months' worth of poverty-level living expenses if a household loses their primary source of income.

Not only are low-income communities disproportionately burdened by high energy costs, they are also the most vulnerable to the effects of fossil fuel combustion and climate change. Low-income communities are at risk for economic- and health-related problems that result from extreme weather events due to many factors, including the condition and quality of housing options.<sup>8</sup> Projections show that Utah will be subject to extreme heat events due to climate change and weatherized homes help reduce the impacts of these weather changes on families. In addition to the public health consequences of extreme weather events, extreme heat or cold can be expensive for many of Salt Lake City's low-income residents, who live in housing with inefficient heating and cooling systems, poor insulation, and inefficient lighting. In contrast, a weatherized home will stay cooler in the summer and warmer in the winter, which keeps energy costs lower.<sup>9</sup>

Low-income Utahns, including those in Salt Lake City, are less likely to utilize existing energy efficiency programs due to the upfront costs of investments in efficiency. As a result, low-income Utahns are more likely to miss out on the financial and health benefits that result from having a more efficient home. Program data from around the country suggests that low-income communities participate in energy efficiency programs at lower rates compared to higher-income groups. While we do not have specific data



for Salt Lake City or for Utah, recent information obtained from California's utility energy efficiency programs suggests that low-income households and renters participate in energy efficiency programs at a much lower rate than households with incomes over \$100,000. For example, only 14% of participants in California's whole-house energy retrofit program had an income of less than \$50,000, while 53% had an annual income of more than \$100,000.<sup>10</sup> Home efficiency investments not only help residents keep money in their pockets by reducing utility bills, but also result in improved comfort, safety, and health.

The challenges facing low-income communities are daunting, but increasing the number of low-income households that participate in energy efficiency programs will help reduce financial burdens for these households and ensure that low-income communities benefit from the transition to a low-carbon economy.

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<sup>8</sup> Justin Worland, TIME, (October 03, 2014), Why Climate Change Affects Poor Neighborhoods The Most, <http://time.com/3457668/climate-change-poor-neighborhoods/>

<sup>9</sup> National Climate Assessment, Southwest Region (2014), <http://nca2014.globalchange.gov/report/regions/southwest#statement-17096>.

<sup>10</sup> American Council for an Energy Efficient Economy (2016), Who's Participating and Who's Not? The Unintended Consequences of Untargeted Programs. [http://aceee.org/files/proceedings/2016/data/papers/2\\_542.pdf](http://aceee.org/files/proceedings/2016/data/papers/2_542.pdf), P 2-10. The participation levels in plug load and appliance rebates programs was similarly unbalanced: 17% of participants made less than \$50,000 and 48% of participants made more than \$100,000.

# EXISTING LOW-INCOME ENERGY EFFICIENCY PROGRAMS

There is an existing network of federal, state, utility, and local government energy efficiency programs available to Salt Lake City residents, some of which are focused on low-income residents. Low-income Salt Lake City residents can access energy efficiency programs through two main channels: the federal Weatherization Assistance Program (WAP), or local home rehabilitation and improvement programs, such as the Salt Lake City Housing and Neighborhood Development (HAND). See Table 1 for a list of existing programs, Appendix A for more detailed descriptions of each program, and Appendix C for a visual schematic of these programs.

## State Programs:

The Weatherization Assistance Program (WAP) is the primary energy efficiency program available to low-income residents in Utah. WAP is a federal program of the United States Department of Energy and provides grant assistance to states according to their low-income population distribution and residential energy expenditures. The Weatherization Assistance Program is estimated to save participants about 33% of energy costs or \$285 per year.<sup>11</sup> Additional funding for the program in Utah is provided by Rocky Mountain Power (Utah's electric utility) and Dominion Energy (formerly Questar Gas).

WAP funding can be used to complete weatherization services for residents whose income is 200% or more below the federal poverty limit.<sup>12</sup> To put this in perspective, the maximum income for a one-person household to be eligible to participate in the WAP program is \$24,120 per year.<sup>13</sup> Weatherization services may include improvements such as attic, wall, and floor insulation; air sealing; duct sealing and insulation; efficient lighting; and furnace, water heater, refrigerator, freezer, and window replacement. In 2015, Utah received about \$6.73 million in federal funding for weatherization services in the state, which accounted for about 87% of the total funding for low-income weatherization services. An additional \$953,000 was provided by electric and gas utilities.<sup>14</sup> In Salt Lake County, the Utah Division of Housing and Community Development (HCDD, a division of the State Department of Workforce Services, DWS) contracts with Utah Community Action to implement the program. Utah Community Action employs contractors with specialized weatherization training to complete the energy-saving projects. Utah Community Action also coordinates closely with the State Home Energy Assistance Target (HEAT) program, which helps low-income electric and gas customers pay their energy bills. Utah Community Action is one of eight local agencies that provide weatherization services in Utah.<sup>15</sup>

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<sup>11</sup> Office of Legislative Research and General Counsel, Utah Department of Workforce Services and Assistance Programs (June 2015), <http://le.utah.gov/interim/2015/pdf/00002657.pdf>, P 19.

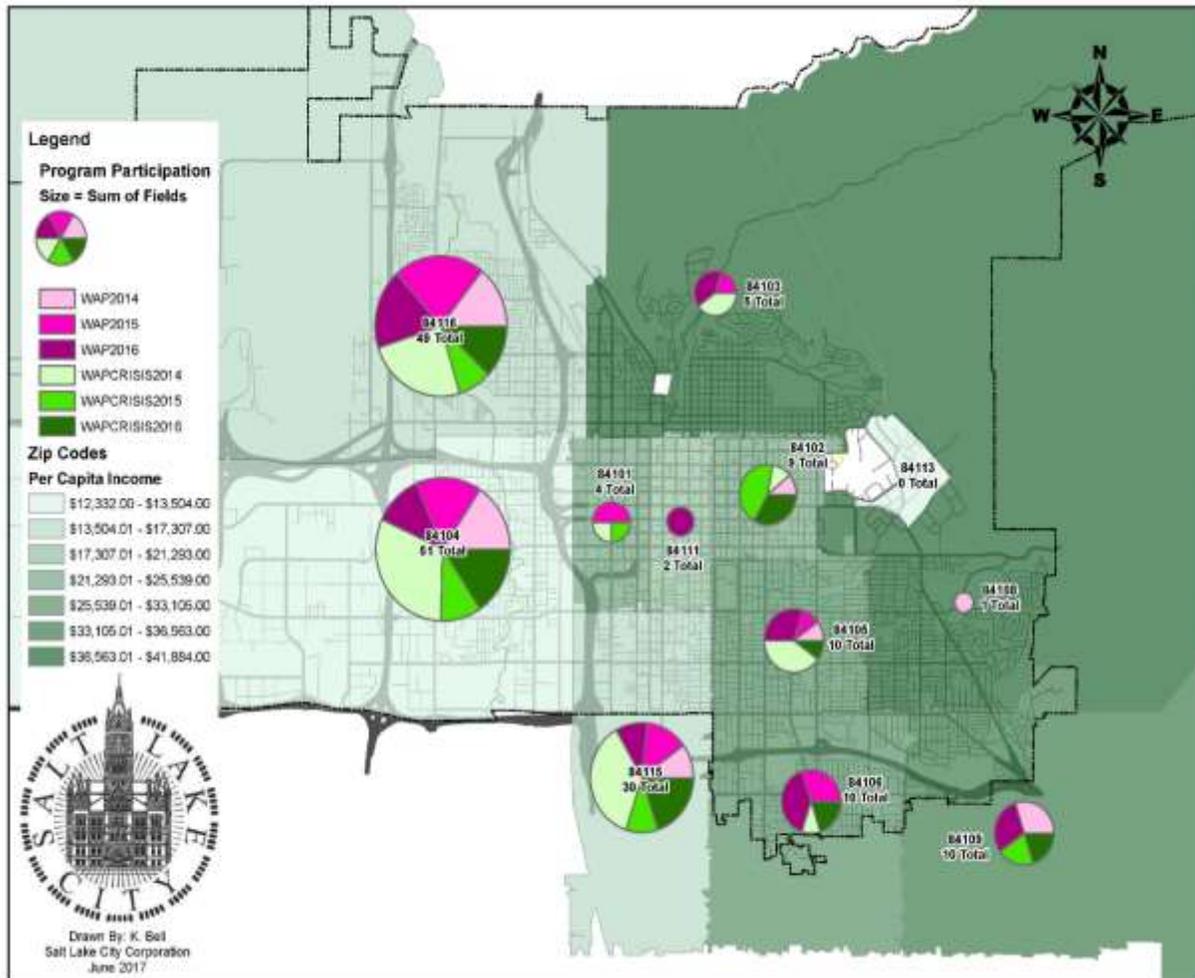
<sup>12</sup> U.S. Department of Energy, Weatherization Assistance Program Allocation Formula. <https://energy.gov/eere/wipo/weatherization-assistance-program-allocation-formula>.

<sup>13</sup> Federal Register (Jan 2017), Poverty Guidelines for 48 Contiguous State and the District of Columbia. <https://www.federalregister.gov/documents/2017/01/31/2017-02076/annual-update-of-the-hhs-poverty-guidelines>

<sup>14</sup> NASCSP (2015), Weatherization Assistance Program Funding Survey. [http://www.waptac.org/data/files/website\\_docs/Reports/Funding\\_Survey/NASCSP-2015-WAP-Funding-Survey-FINAL.pdf](http://www.waptac.org/data/files/website_docs/Reports/Funding_Survey/NASCSP-2015-WAP-Funding-Survey-FINAL.pdf), p. 5.

<sup>15</sup> Other agencies can be found on the Weatherization Assistance Program website: <https://jobs.utah.gov/housing/wap/where.html>

Additionally, the Olene Walker Housing Loan Fund, also administered by Utah DWS, provides loan services for home rehabilitation and repairs in single and multifamily housing, and includes criteria for energy efficiency measures.<sup>16</sup>



Homes served by the Weatherization Assistance Program from 2014-2016 in Salt Lake City grouped by zip code and overlaid with per capita income data. Pink wedges represent the level of participation in the WAP program, and green wedges represent Weatherization Crisis projects, where emergency weatherization measures are performed to address an energy crisis (usually a furnace repair or replacement). WAP participation is higher in the three zip codes with the lowest per capita income and lower in the zip codes with higher incomes. However, zip code 84111 has a lower rate of participation than anticipated based on per capita income and participation in neighboring zip codes. Data is provided by the Department of Workforce Services and included in Appendix B.

<sup>16</sup> Olene Walker Housing Loan Fund, <https://jobs.utah.gov/housing/owhlf/programs.html>

### State program participation data:

Figures provided by DWS show that 2,691 low-income households in Utah were served by the WAP and Weatherization Crisis program from 2014 to 2016. Of these, 181 households were located in Salt Lake City (representing 6.7% of the total participation statewide.)<sup>17</sup> This level of participation is similar to Salt Lake City's portion of Utah's total population, which is about 8%. However, according to census data, 20.3% of Salt Lake City residents are in poverty (over 28,000 residents), so while 181 projects is a positive step toward energy efficiency for all, there is still vast room for improvement: we estimate that it would take 283 years to weatherize all eligible Salt Lake City homes at this rate.<sup>18</sup>

### Utility Programs:

Both of Utah's major energy utilities, Rocky Mountain Power and Dominion Energy (formerly Questar Gas), work with the state DWS program to provide matching resources from ratepayer funds for low-income residents in order to leverage federal WAP program funds. The utilities also offer income-based utility bill assistance programs for low-income customers: Rocky Mountain Power offers the Home Electric Lifeline Program (HELP) and Dominion offers the Energy Assistance Fund. Both utilities coordinate with the State Home Energy Assistance Target (HEAT) program.

Utah's utility-sponsored low-income energy efficiency programs are relatively limited compared to peer utilities in other parts of the country. Rocky Mountain Power provided supplementary WAP funding to benefit 332 households throughout Utah in 2016, including 86 customers in Salt Lake City zip codes, and achieved roughly 230,000 kilowatt-hours in electricity savings. The most common efficiency measures undertaken were the installation of compact fluorescent lighting, efficient furnace fans, and refrigerator replacements.<sup>19</sup> Although Rocky Mountain Power's Demand Side Management program budget was \$60.37 million, low income program spending was just 0.1 % of their spending, \$59,339 in 2016. In a recent evaluation of utility energy efficiency programs, the American Council for an Energy Efficient Economy (ACEEE) ranked Rocky Mountain Power as 51<sup>st</sup> out of 51 utilities based on the metric of spending on low-income programs.<sup>20</sup>

Dominion Energy's ThermWise Low-Income Efficiency Program provided a total of \$500,000 in funding directly to WAP agencies for furnace replacement in 2016. These funds were used to replace furnaces with higher efficiency units in 319 homes serviced by Utah's WAP. In addition, the Low-Income Efficiency Program offers a low-income focused program outside of the financial assistance provided to the WAP by creating a simplified rebate application process for WAP contractors. This enables additional energy efficiency improvements to be made to homes receiving WAP services (including attic insulation, air

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<sup>17</sup> Email from Utah Department of Workforce Services staff, June 14, 2017. Data includes the following Salt Lake City zip codes: 84101, 84102, 84103, 84104, 84105, 84016, 84107, 84108, 84109, 84110, 84111, 84113, 84115, and 84116. A couple of these zip codes cross the Salt Lake City boundary, so this data may include a small number of households in neighboring jurisdictions.

<sup>18</sup> United States Census "Quick Facts: Salt Lake City, Utah. <https://www.census.gov/quickfacts/fact/table/saltlakecitycityutah>. Our estimate is based on weatherizing 60 homes per year in Salt Lake City, assuming that there are 25,833 three-person households that are eligible, and assuming that one third of eligible households have already been weatherized.

<sup>19</sup> Rocky Mountain Power. Utah Energy Efficiency and Peak Reduction Annual Report. (May 2016). <https://pscdocs.utah.gov/electric/17docs/1703532/294653RMPRev016DSMAnnRep6-15-17.pdf>, P 36

<sup>20</sup> American Council for an Energy Efficient Economy, 2017 Utility Energy Efficiency Scorecard (June 2017), <http://aceee.org/sites/default/files/publications/researchreports/u1707.pdf>, P 40.

sealing, duct sealing and insulation, and installation of efficient gas water heaters). When these additional energy conservation measures are included, the company served about 1,200 low-income households with total spending of about \$734,300 (out of a budget of \$23.3 million) and savings of 13,225 dekatherms in 2016.<sup>21</sup>

#### Utility program participation data:

Rocky Mountain Power and Dominion Energy each sponsor residential energy efficiency incentive programs, which are available to all utility customers and do not have income-based restrictions. In 2016, Rocky Mountain Power and Dominion Energy invested \$14.5 million and \$10.6 million respectively in residential energy efficiency incentive programs.<sup>22</sup> As noted above, Dominion Energy created a simplified process to encourage WAP contractors to install additional natural gas efficiency measures in homes receiving weatherization services. It is unclear if Rocky Mountain Power offers a similar program. Improved understanding about the local rates of participation in the utility programs could help Salt Lake City plan its residential efficiency pilot program. Data requests were submitted to Rocky Mountain Power and Dominion Energy requesting information about participation in each utility's residential incentive programs, but responses have not been received at the date of publication of this report. This data may illustrate opportunities for Salt Lake City to include targeted outreach and promotion of these incentive programs in low-income neighborhoods as part of its pilot project.

#### Local Programs:

Salt Lake City and Salt Lake County governments also offer programs that can be leveraged to help low-income homeowners and renters undertake energy savings measures and weatherization improvements. These programs are not formally coordinated with the state or utility programs, and include Salt Lake City's Housing and Neighborhood Development (HAND) Handyman rehabilitation program and the Community Development Corporation of Utah's (CDCU) Energy Fit low-interest loan program. Salt Lake County's Green and Healthy Homes Initiative (GHHI) also promotes energy efficiency as a way to improve public health, though the program is not available to Salt Lake City residents because Salt Lake City receives similar funding from the U.S. Department of Housing and Urban Development through direct Community Development Block Grants (CDBG).



Salt Lake City's CDBG funding is used largely to support non-profit organizations, but may also fund other City departments if they meet the criteria outlined in Salt Lake City's Consolidated Plan (see Appendix C). Applicants who meet the goals and criteria of the Consolidated Plan, which revolve around housing, education, health, and transportation, are chosen for CDBG funding. The purpose of the CDBG

<sup>21</sup> Memo: Questar Gas Company Energy Efficiency Report for Year Ending December 31, 2016, (Jun 2017), <https://pscdocs.utah.gov/gas/17docs/1705710/294762CommDPU6-19-2017.pdf>, p. 10.

<sup>22</sup> See reports referenced in footnotes 15 and 17

for Salt Lake City is to help promote HAND's current goals. Salt Lake City Sustainability Department could leverage their investment with these funds if they find ways to align energy upgrades with HAND's goals, particularly with respect to housing upgrades and retrofits, though such changes to the City's CDBG funding would require further discussion by City officials and stakeholders. Additionally, the Department may be able to leverage their funding through the HOME Investment Partnership Program managed by HAND, which focuses on low-income housing improvements and upgrades.

We note that this is not necessarily an exhaustive summary of all initiatives and program providers that assist low-income residents in Salt Lake City to undertake energy efficiency and conservation measures. We look forward to working with Salt Lake City's Sustainability Department to help identify additional programs as part of its pilot program.

#### **Local program participation data:**

Utah Clean Energy reached out to all of these local agencies requesting information about the number of participants in these programs and the level of funding for individual initiatives. This information was not available at the date of publication of this report.

# TABLE 1: EXISTING LOW-INCOME ENERGY EFFICIENCY RESOURCES IN UTAH

Agency	Agency Type	Program Name	Purpose	Eligibility & Funding
Dept. of Workforce Services, Division of Housing & Community Development (HCDD)	State Gov't	<a href="#">Weatherization Assistance Program</a> (WAP)	Weatherization improvements to reduce utility bills & improve resident comfort & health.	Citizens at or below 200% of poverty line responsible for paying utility costs. Renters are eligible but must share costs with landlords. Funded by federal WAP program.
Dept. of Workforce Services	State Gov't	<a href="#">Olene Walker Housing Loan Fund</a>	Provides housing loans for low to moderate income households to assist with major renovation, rehabilitation, and new construction for single and multi-family properties.	Programs for: multifamily, single family, low-income developers in rural areas, emergency planning, mortgage assistance, and community affordable housing for cities and counties. Eligibility varies by program.
Utah Community Action	Non-Profit	See above. Serves as lead contractor for WAP in Salt Lake & Tooele Counties.	See above.	Same as for the WAP program.
Dominion Energy (formerly Questar Gas)	Utility	Low-Income Energy Efficiency Program	Provide expanded natural gas energy efficiency measures through WAP.	Same as for the WAP program. Dominion Energy provides \$500,000 each year to fund gas efficiency measures through WAP and has a list of approved contractors. Utah Community Action is the contractor for Salt Lake County.
Dominion Energy	Utility	<a href="#">Energy Assistance Fund</a>	One-time gas bill credit.	Residents who qualify for the state HEAT program qualify.
Rocky Mountain Power	Utility	<a href="#">Low-Income Weatherization</a>	Provide expanded electric efficiency measures through WAP.	Eligibility is same as for the WAP program. RMP funds 50% of the cost of approved electric energy efficiency measures for the state WAP program.
Rocky Mountain Power	Utility	<a href="#">Home Electric Lifeline Program</a>	Financial assistance with electric bills.	Residents who are a Rocky Mountain Power customer who are at or below 150% of the federal poverty level.
Utah Community Action	Non-Profit	<a href="#">Home Energy Assistance Target (HEAT) Program</a>	Energy bill assistance and crisis.	Residents at or below 150% of poverty line responsible for paying utility costs. Funded by federal LIHEAP program.
Comm. Development Corp. of Utah (CDCU)	Non-Profit	<a href="#">Energy Fit Loan Program</a>	Low-interest loans to promote energy improvements, including solar, weatherization work, and HVAC.	Salt Lake County residents with income below 80% of median income or below. Funded by CDCU.
Salt Lake City Housing and Neighborhood Development (HAND) Office	City Gov't	<a href="#">Handyman Program</a>	Addresses minor home repairs, including energy efficiency measures, with a max of \$500 per year per home.	Residents that are a senior citizen (62+), a federally-recognized disability, or income below 80% of median income. Funded from City budget.
Salt Lake County	County Gov't	<a href="#">Green &amp; Health Homes Initiative*</a>	Provides loans to rehabilitate homes to reduce asthma and improve indoor air quality, including energy efficiency measures.	<a href="#">Residents who own their homes must have income 80% or below of median income. Loan rates vary from 0 - 3%.</a> Excludes Salt Lake City & South Jordan residents. Funded from County budget.

# PROGRAM EXAMPLES

In order to assist Salt Lake City with the development of its low-income energy efficiency pilot program, we present a number of city, state, and non-profit programs from around the country that focus on implementing energy efficiency measures for low-income communities. These programs, grouped in three categories, are diverse with regard to their program structure, implementation costs, and scope.

## 1. Targeted Energy Efficiency Initiatives for Low-Income Households

**Massachusetts Efficient Neighbors Core Initiatives (EN+):** The Efficient Neighborhoods initiative sought to target neighborhoods that are typically hard to reach with energy efficiency incentives. The program was divided into three subprograms:

- **EN+ Core** identified neighborhoods with high concentrations of residents with incomes between 61% - 100% of the state median income living in 1 - 4 person family units. The program offered energy efficiency incentives to the entire neighborhood, which eliminated the need for income screening and associated administrative costs. EN+ Core lasted 6 months and reached out to 8 neighborhoods totaling 12,000 residents. There were 917 energy assessments and 248 projects completed through the program, leading to 697,490 kilowatt-hours and 35,351 therms of energy savings. The program cost was \$982,826.
- **Cape Light Compact (CLC) EN+** used the same incentive structure as EN+, but pre-qualified customers based on income. The program cost was \$1,217,075 and the program resulted in 247,675 kilowatt-hours and 1,649 therms of energy savings.
- **Fall River Neighborhood Energy Contest** was a contest between individual neighborhoods in Fall River, Massachusetts. Neighborhoods competed to save energy, and the winning neighborhood received a \$5,000 prize for a neighborhood improvement project. The contest did not offer increased incentives, but instead relied on existing low-income programs. The Program cost \$259,739 and led to a savings of 14,180 kilowatt-hours.

There are two key takeaways from the EN+ initiatives. The first is the importance of incorporating demographics into program design. EN+ Core target demographic was similar enough that the program was able to target neighborhoods without screening for income at the individual level, whereas the CLC EN+ program required screening to identify eligible individuals. Second, the Fall River Neighborhood Energy Contest illustrates the benefits of leveraging existing incentives and programs and improving uptake in target neighborhoods by increasing awareness and implementation of existing programs.<sup>23</sup>

**Municipal Residential Rental Energy Efficiency Ordinances:** The cities of Memphis and Boulder have enacted ordinances to establish energy efficiency standards for rental units. The City of Memphis passed a 2009 ordinance which requires certain efficiency measures in rental housing and enables city health inspectors to work with the City's municipal utility, Memphis Light, Gas and Water, to inspect rental properties with suspected high energy consumption. The ordinance defines "excess utility consumption"

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<sup>23</sup> Buhr, T. (September 2014), Efficient Neighborhoods+ Initiative Evaluation Report, <http://ma-eeac.org/wordpress/wp-content/uploads/Efficient-Neighborhoods-Plus-Initiative-Evaluation-Final-Report1.pdf>

as “a unit consuming the higher 10% of utilities per square foot” compared to comparably sized units.<sup>24</sup> The City of Boulder adopted the Boulder Building Performance Ordinance in 2015, which requires building owners to rate and report building energy use and complete energy efficiency measures.<sup>25</sup> Salt Lake City could choose to implement a similar energy efficiency retrofit ordinance to improve the quality of rental buildings available in the city, or could work with utility partners and non-profit agencies to coordinate data collection and sharing in order to identify low income residents with higher than average energy use and target these households for energy efficiency improvements.

**Colorado Affordable Residential Energy (CARE) Program, Energy Outreach Colorado:** Energy Outreach Colorado administers most low-income energy efficiency programs in Colorado. The CARE program, which is funded largely by Xcel Energy (Colorado’s largest combined electric and gas utility), is intended to ensure that low-income residents who do not necessarily qualify for the Weatherization Assistance Program or the Low-Income Home Energy Assistance Program’s (LIHEAP) income eligibility guidelines can receive assistance with their energy bills. Through the CARE program, Energy Outreach Colorado offers free energy assessments and installation of certain energy efficiency measures. Program participants are eligible if they are at 80% of the area median income (AMI) in the county where they reside. Given that Utah’s primary channels for reaching low-income residents are the federal LIHEAP and WAP programs, the CARE program model may be useful to Salt Lake City as it seeks to reach more moderate income residents who are not otherwise able to receive assistance through those programs.<sup>26</sup>

## 2. Neighborhood Outreach Programs

**Chicago Neighborhood Energy Challenge:** The Chicago Neighborhood Energy Challenge, a partnership between the City of Chicago and non-profit community organizations, was a six-month energy outreach pilot program focused on residents in multi-family buildings within the city. The competition sought to empower residents in each building to reduce energy usage through training and a series of community workshops. The Challenge used messaging that appealed to different types of residents, including senior citizens and families with children. The Challenge provided contest winners with a monetary prize as well as an award ceremony to recognize their achievements. Of the seven properties that participated, all seven reduced their water use and six of the seven properties reduced their electricity use.<sup>27</sup>



<sup>24</sup> City of Memphis, an Ordinance to Provide for Minimum Energy Efficiency in Rental Property, [http://www.memphistn.gov/Portals/0/pdf\\_forms/energy\\_efficiency\\_rental\\_properties\\_ordinance.pdf](http://www.memphistn.gov/Portals/0/pdf_forms/energy_efficiency_rental_properties_ordinance.pdf)

<sup>25</sup> City of Boulder, Boulder Building Performance Ordinance, <https://bouldercolorado.gov/sustainability/boulder-building-performance-home>

<sup>26</sup> Energy Outreach Colorado, Colorado’s Affordable Residential Energy Program (CARE), <http://www.energyoutreach.org/get-help/care>

<sup>27</sup> The Chicago Neighborhood Energy Challenge, [http://beccconference.org/wp-content/uploads/2014/12/presentation\\_Ortiz.pdf](http://beccconference.org/wp-content/uploads/2014/12/presentation_Ortiz.pdf).

This program created buy-in among low-income residents and community partners to undertake energy savings measures at a relatively low cost. The Chicago Neighborhood Energy Challenge is a notable example of an energy efficiency initiative that can harness the potential of multi-family buildings, which are often challenging to reach.

### 3. Inclusive Approaches to Energy Efficiency

**Race and Social Justice Initiative (RSJI)—Equity and Environment through Seattle Office of Sustainability and Environment:** Seattle’s Equity and Environment initiative seeks to promote increased racial equity while improving environmental awareness and sustainability. The program focused on creating partnerships with existing community organizations and leaders in order to design and implement an agenda to improve sustainability and racial equity issues. The program addresses a multiplicity of issues from food to transportation and housing. It has provided \$1.4 million in low-income loans and \$100,000 to upgrade low-income multifamily homes through Homewise, a weatherization assistance program in Seattle.

A key takeaway from this program is that by focusing on social justice and racial issues, in addition to environmental and sustainability issues, the program can leverage limited funding and create partnerships with other organizations working in the community, all while targeting minority groups who are disproportionately impacted by climate change.

# RECOMMENDATIONS

The goal of this Plan is to support Salt Lake City’s development of a pilot program for the adoption of energy efficiency measures among low-income households. The information presented thus far provides a high level summary of existing federal, state, utility, and local government energy efficiency programs that serve Salt Lake City low-income communities, and a review of available data about current levels of service. The examples of successful low-income energy efficiency programs in other parts of the country can inform planning for Salt Lake City’s low-income energy efficiency pilot program. Finally, we provide recommendations to help Salt Lake City and other interested stakeholders devise strategies to ensure the the City’s pilot program is successful.

## **1. Work with Utilities to Expand Demand-Side Management Programs and Funding Serving Low-Income Customers, Including the Development of New Pilot Programs**

The main offering available to low-income families in Salt Lake City is the Weatherization Assistance Program. Given uncertainties about the future of federal funding, and the relatively small scale of Rocky Mountain Power’s funding for low-income energy efficiency programs, there is both a need and a clear opportunity to expand existing utility programs. As noted above, in 2016 Rocky Mountain Power invested just under \$60,000 in low-income efficiency program, less than 0.1 percent of its Demand Side Management (DSM) program budget. In contrast, neighboring states, including Colorado, have significantly larger utility budgets for low-income energy efficiency programs, ranging from \$3 million to over \$5 million. In addition, some states in the region (for example, New Mexico and Nevada), require that utilities spend some minimum percentage of their total energy efficiency program budget on low-income programs.<sup>28</sup> We recommend that Salt Lake City collaborate with low-income agencies, utility regulators, other interested parties, and Rocky Mountain Power to develop proposals that increase DSM program offerings targeted to low-income residents—including low-income multifamily residents—and increase the utility’s investment in low-income programs to 3-5% of its annual DSM budget. Based on 2016 DSM budget, this would amount to approximately \$1.8 to \$3 million. This proposal would need to be approved by the Utah Public Service Commission. A portion of this expanded funding could be directed specifically to help Salt Lake City test new approaches such as a program targeted to apartment buildings with a high fraction of low-income tenants. This recommendation builds on Salt Lake City’s agreement with RMP for the utility to partner with SLC to help reach its greenhouse gas emissions goals, which includes offering “enhanced community efficiency” in the City.<sup>29</sup>

In addition, we recommend that Salt Lake City actively engage with Dominion Energy, acknowledging their strong low-income programs, and encouraging them to fund their 2018 Low-Income Efficiency Program at the 2016 level (approximately \$734,000), if not a higher amount. Salt Lake City should engage with the ThermWise team and other low-income program providers (including Rocky Mountain

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<sup>28</sup> See for example, Nevada’s recently enacted AB 223 and SB 150 require NV Energy to spend 5% of its energy efficiency program funds on programs that benefit low-income households, [https://www.leg.state.nv.us/Session/79th2017/Bills/AB/AB223\\_EN.pdf](https://www.leg.state.nv.us/Session/79th2017/Bills/AB/AB223_EN.pdf)

<sup>29</sup> Salt Lake City Clean Energy Implementation Plan, [www.slcgreen.com/rmp-implementation-plan](http://www.slcgreen.com/rmp-implementation-plan) P 3.

Power) to develop strategies to leverage funding or pilot programs for consideration in the annual ThermWise plan, which is typically submitted to the Utah Public Service Commission for approval every September or October. Last but not least, Rocky Mountain Power and Dominion should coordinate and jointly fund low-income programs where appropriate, since a collaborative approach is the most cost-effective way to maximize gas and electricity savings. Salt Lake City should explore a joint effort with both utilities as it plans its pilot program.

## **2. Collaborate with Existing Program Providers, Including Salt Lake City's HAND Programs, to Improve Coordination Among Residential Efficiency Services**

Existing low-income energy efficiency and bill assistance programs in Salt Lake City are well coordinated between DWS, Utah Community Action, and the major utilities. Increasing collaboration between the Salt Lake City government and social service agencies serving the City's low-income population will help expand utilization of existing energy efficiency programs in the city. We suggest that Salt Lake City help establish a workgroup focused on low-income energy efficiency programs. The workgroup should include representatives from the City's HAND and Sustainability offices, Rocky Mountain Power and Dominion Energy's DSM programs, Utah Community Action, the Community Development Corporation of Utah, Department of Workforce Services, Utah Clean Energy, and other community organizations and state agencies dedicated to serving low-income residents. A priority goal of the workgroup should be to set up a simple and long-term data-sharing system to foster improved coordination between existing organizations in order to efficiently identify low-income residents who could benefit from energy efficiency measures and connect these residents with programs and services.

In addition, we recommend consulting with the City's Office of Diversity and Human Rights in order to improve coordination with and participation among Salt Lake City's diverse communities. The state utility DSM collaborative workgroups have helped strengthen and diversify utility energy efficiency programs and a similar approach may be useful to develop a strategy for low-income energy efficiency programs in Salt Lake City.

Priority topics for this collaboration should be:

- Enhancing data sharing between agencies and organizations implementing low-income residential efficiency projects in SLC (see recommendation #3 below)
- Identifying barriers to greater participation by low-income Salt Lake City residents, such as split incentive issues for landlords and tenants, and the unique challenges of implementing energy efficiency programs in multi-family housing units
- Developing strategies to leverage resources and pilot program proposals
- Piloting partnership with WAP contractors on unique program implementation for Salt Lake City
- Incorporating targets to promote racial equity in residents served

## **3. Enhance Data Sharing and Improve Referral Process**

From our research we observed that all stakeholders could benefit from greater data sharing between program providers. While the state weatherization program does provide for some data sharing and

client referrals between non-profits and the utility program providers, regular and structured sharing and analysis of client data could help to reach more low-income residents, facilitate automatic referrals for low-income households with unusually high energy bills, and generate more demand for low-income program offerings. A simple, long-term data sharing system could also foster improved coordination of low-income efficiency services among the many entities working on these issues. For example, Rocky Mountain Power and Dominion Energy are required to conduct third-party evaluations of their ratepayer funded energy efficiency programs, including WAP funding.<sup>30</sup> The results of these evaluations could provide valuable information for maximizing the impacts of utility involvement in the WAP and other low-income efficiency programs, and could be useful to Salt Lake City in the development of its pilot program. It is unknown if the results of these evaluations are reviewed by local low-income program providers. As another example, the City of Memphis' energy efficiency ordinance for rental property prioritizes low-income, high energy users in rental property and calls for proactive inspection of inefficient properties that may be candidates for energy efficiency improvements. An energy outreach initiative, similar to the Chicago Neighborhood Energy Challenge, could also generate leads and provide a better sense of demand for energy efficiency programs in different Salt Lake City neighborhoods.

A more formal and established data sharing and referral process by Salt Lake City, the utilities, and non-profit community partners could enable the City to undertake follow up visits with clients who may benefit from select energy efficiency services. An enhanced data sharing and referral initiative focused on low-income energy customers could become a project for a low-income energy efficiency collaborative or could be a standalone initiative. Specifically, the City should improve community awareness about existing low-income energy efficiency programs and assist with referrals. Information should outline services offered, eligibility criteria, and contact and application information for the various low-income programs available in the community and should be disseminated through a variety of channels (for example a handout, City and partner websites, and community organizations).

#### **4. Leverage Community Reinvestment Act (CRA) Partnerships**

The Community Reinvestment Act is a Federal law designed to encourage commercial banks and savings associations to help provide credit for low- and moderate-income communities. There may be an opportunity to partner with local lenders and to leverage Community Reinvestment Act resources to advance energy efficiency in low- and moderate-income communities. While an assessment of potential opportunities with CRA lenders and partners was beyond the scope of this analysis, we recommend further research in this area.

#### **5. Engage Community Leadership and Competition to Promote Energy Efficiency Measures Within Existing Community Networks**

Salt Lake City can maximize the reach of a low-income energy efficiency pilot project by empowering leaders within the target community and engaging communities through competition. Word of mouth is an extremely cost-effective way to share information, and Salt Lake City can encourage greater participation by creating a pilot program that excites participants and inspires them to share information

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<sup>30</sup> See for example: *Utah Low-Income Weatherization Program Evaluation Report Program Years 2010-2012*, (2014) [http://www.pacificorp.com/content/dam/pacificorp/doc/Energy\\_Sources/Demand\\_Side\\_Management/2014/Utah-Low-Income-Evaluation-Final-Report-10.28.14.pdf](http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Demand_Side_Management/2014/Utah-Low-Income-Evaluation-Final-Report-10.28.14.pdf)

about the program with their friends, family, and neighbors. Utah Clean Energy has administered numerous community bulk-purchase programs for rooftop solar and electric vehicles, and most participants report hearing about these programs from a friend, family member, neighbor, colleague, or trusted organization.

As demonstrated by the Chicago Neighborhood Energy Challenge and the Fall River (MA) Neighborhood Energy Contest, an element of competition can encourage program participants to share information about the program. Utah Clean Energy explored the power of engaging communities through competition during the Salt Lake Community Energy Challenge in 2012, which pitted two Salt Lake City neighborhoods against each other in a challenge to make energy efficiency improvements to their homes. Through the program, Utah Clean Energy identified neighbors who volunteered to serve as Energy Champions, helping to spread information about the Challenge throughout their community.

As part of the program design, the City should engage trusted community leaders and organizations and request feedback to inform messaging and outreach strategies for the program; the program design should consider and align with community goals and values.

# APPENDIX A:

## LOW-INCOME ENERGY EFFICIENCY PROGRAMS AVAILABLE TO SALT LAKE CITY RESIDENTS

### UTAH WEATHERIZATION ASSISTANCE PROGRAM

The Weatherization Assistance Program (WAP) helps low-income individuals and families reduce energy costs and increase comfort and safety in their homes.

**Administered by:** Utah Division of Housing and Community Development

**Contacts:** Matthew Turner, State Department of Workforce Services, 801-468-0134  
Ian Spangenberg, Utah Community Action, 801-214-3215

**Additional partners and description:** Rocky Mountain Power and Dominion Energy (formerly Questar Gas) each provide additional funding to WAP to support the installation of high efficiency lighting and high efficiency furnaces, respectively, in homes that receive WAP weatherization services. Individuals, families, the elderly and the disabled who are making no more than 200 percent of the current federal poverty income level are eligible for help. However, priority is given to the elderly and disabled, households with high-energy consumption, emergency situations, and homes with preschool-age children.

**Implemented by:** Utah Community Action Program (and other groups outside of Salt Lake and Tooele Counties)

**Eligibility criteria:** In order to be eligible for participation in the WAP, residents must be making no more than 200% of the current federal poverty income level. Renters are eligible if they share the cost with their landlord.

**Number of low-income SLC residents served from 2014-2016:** 181 (weatherization and weatherization crisis program)

### DOMINION ENERGY (QUESTAR) THERMWISE LOW-INCOME PROGRAM

**Administered by:** Dominion Energy

**Contacts:** Mike Orton, Energy Efficiency Director, (801) 324-5793

**Additional partners and description:** Dominion Energy (formerly Questar) provides rebates for high efficiency gas furnaces and furnace replacements to complement funds from the WAP program, as noted above. Rebate funds go directly to Utah Community Action or other program contractors, rather than directly to Dominion customers.<sup>31</sup> In 2016, Dominion Energy spent \$734,287 on its Low-Income Energy Efficiency Program and achieved 13,225 dekatherms (Dths) in savings.<sup>32</sup>

**Implemented by:** Utah Community Action Program (and other groups outside of Salt Lake and Tooele Counties)

**Eligibility criteria:** See Weatherization Assistance Program criteria above.

**Number of low-income SLC residents served:** see Weatherization Assistance Program above. The program served 1,212 customers statewide in 2016. Low-income furnace replacements were the biggest

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<sup>31</sup> Docket No. 16-057-15, Questar Gas Application for Approval of the 2017 Year Budget for Energy Efficiency Programs and Market Transformation Initiative. <https://pscdocs.utah.gov/gas/16docs/1605715/289608QGCAppApproval2017YearBudget10-18-2016.pdf>, P 9.

<sup>32</sup> Questar Gas Company Energy Efficiency Report – Utah Programs as of December 31, 2016. <https://pscdocs.utah.gov/gas/17docs/1705710/292658QGC4thQTR2016ThermWiseEnerEfficRep3-27-2017.pdf>, P 2.

energy efficiency measure, followed by high efficiency furnace purchases, air sealing, and attic insulation.<sup>33</sup>

### **ROCKY MOUNTAIN POWER LOW-INCOME WEATHERIZATION PROGRAM**

**Administered by:** Rocky Mountain Power

**Contacts:** Becky Eberle, Low Income Program manager, (503) 813-5154

**Additional partners and description:** Rocky Mountain Power provides rebates for electric energy efficiency measures to complement funds from the WAP program, as noted above. Rebate funds go directly to Utah Community Action or other program contractors, rather than directly to Rocky Mountain Power customers.<sup>34</sup> In 2016, Rocky Mountain Power spent \$59,339 on its Low-Income Weatherization Program and achieved 229,737 kWh in savings.<sup>35</sup>

**Implemented by:** Utah Community Action Program (and other groups outside of Salt Lake and Tooele Counties)

**Eligibility criteria:** See Weatherization Assistance Program criteria above.

**Number of low-income SLC residents served:** see Weatherization Assistance Program above. The program served 332 homes statewide in 2016. The most-used measures included compact fluorescent lighting (CLF) bulbs, refrigerator replacements, and efficient furnace fans.<sup>36</sup>

### **SALT LAKE CITY HANDYMAN REPAIR PROGRAM**

**Administered by:** Salt Lake City Housing and Neighborhood Development Division

**Contacts:** Melissa Jensen, Director: 801-535-7712

**Additional partners and description:** Salt Lake City's Handyman Repair program offers resident homeowners that are senior citizens or have income below 80% of the median income assistance with home repairs, including some energy efficiency measures. The maximum assistance available is \$500 per year per home.

**Implemented by:** Salt Lake City HAND Office

**Eligibility criteria:** Salt Lake City homeowners that are a senior citizen (62+), a federally-recognized disability, or income below 80% of median income.

**Number of low-income SLC residents served:** Information not currently available.

### **ENERGY FIT LOAN PROGRAM, SALT LAKE COUNTY**

**Administered by:** Community Development Corporation of Utah (CDCU)

**Contacts:** Kris Thorpe: 801-994-7222

**Additional partners and description:** CDCU's Energy Fit Loan Program offers loans with interest rates as low as 3% for energy efficiency and renewable energy measures to qualified Salt Lake County homeowners. Energy efficiency measures and equipment are those that qualify for rebates through Rocky Mountain Power and Dominion Energy programs.<sup>37</sup>

**Implemented by:** CDCU

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<sup>33</sup> Questar Gas Company Energy Efficiency Report – Utah Programs as of December 31, 2016.

<https://pscdocs.utah.gov/gas/17docs/1705710/292658QGC4thQTR2016ThermWiseEnerEfficRep3-27-2017.pdf>, P 11.

<sup>34</sup> Rocky Mountain Power, 2016 Annual Energy Efficiency and Peak Load Reduction Report, Utah PSC Docket 17-035-32, P. 37, <https://pscdocs.utah.gov/electric/17docs/1703532/294006RMPAnnDSM2016Rep5-15-2017.pdf>.

<sup>35</sup> Rocky Mountain Power. Utah Energy Efficiency and Peak Reduction Annual Report. (2016).

<https://pscdocs.utah.gov/electric/17docs/1703532/294653RMPRev016DSMAnnRep6-15-17.pdf>, P 8.

<sup>36</sup> Rocky Mountain Power. Utah Energy Efficiency and Peak Reduction Annual Report. (2016).

<https://pscdocs.utah.gov/electric/17docs/1703532/294653RMPRev016DSMAnnRep6-15-17.pdf>, P 36.

<sup>37</sup> <https://cdcutah.org/wp-content/uploads/2016/07/EnergyFit-JUL2016.pdf>.

**Eligibility criteria:** Salt Lake County homeowners and owners of rental property with an income of 80% of the area median income or below.

**Number of low-income SLC residents served:** Information not currently available.

### **OLENE WALKER HOUSING LOAN FUND**

**Administered by:** Utah Department of Workforce Services, Department of Housing & Community Development (HCDD)

**Contacts:** Daniel Herbert-Voss: 801-468-0042

**Additional partners and description:** The Olene Walker Housing Loan Fund offers assistance through low interest loans for the construction and rehabilitation of affordable housing units throughout Utah. For Salt Lake City, the most relevant program is the Multifamily Loan Program. Funds are available through an application with HCDD. The Fund requires all projects to meet Energy Star qualifications, which has led to 6,450 Energy Star projects in FY 2016<sup>38</sup>.

**Implemented by:** HCDD

**Eligibility criteria:** Eligibility includes low and moderate income persons as defined by the federal Department of Housing and Urban Development (HUD).

**Number of low-income SLC residents served:** Information not currently available.

### **COMMUNITY DEVELOPMENT BLOCK GRANT**

**Administered by:** U.S. Department of Housing and Urban Development

**Contacts:** Dillon Hase: 801-535-6492

**Additional partners and description:** The purpose of the CDBG for Salt Lake City is to help promote HAND's current goals. Salt Lake City Sustainability Department could leverage their investment with these funds if they find ways to align with HAND's goals, particularly with respect to the housing upgrades and retrofits. Fiscal Year 2016 – 2017 (beginning July 1<sup>st</sup>) funding was \$4.57 million.

**Implemented by:**

**Eligibility criteria:** CDBG funding is used largely to support non-profit organizations, but may also fund other City departments if they meet the criteria outlined in Salt Lake City's Consolidated Plan, which revolve around housing, education, health, and transportation. The minimum grant CDBG provides is \$30,000. Grant applicants are judged based on how well they meet the goals of the HAND's five year plan. The application process begins in the fall.

**Number of low-income SLC residents served:** CDBG funding is not currently used to support energy efficiency programs.

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<sup>38</sup> Department of Workforce Services Housing and Community Development Division. Olene Walker Housing Loan Fund Annual Report. (2016, July). <https://jobs.utah.gov/housing/publications/documents/owalkerloanfund2016.pdf>.

# APPENDIX B:

## SALT LAKE CITY RESIDENTS SERVED BY UTAH WEATHERIZATION ASSISTANCE PROGRAMS (Jan 1 - Dec 31 2014, 2015, 2016)

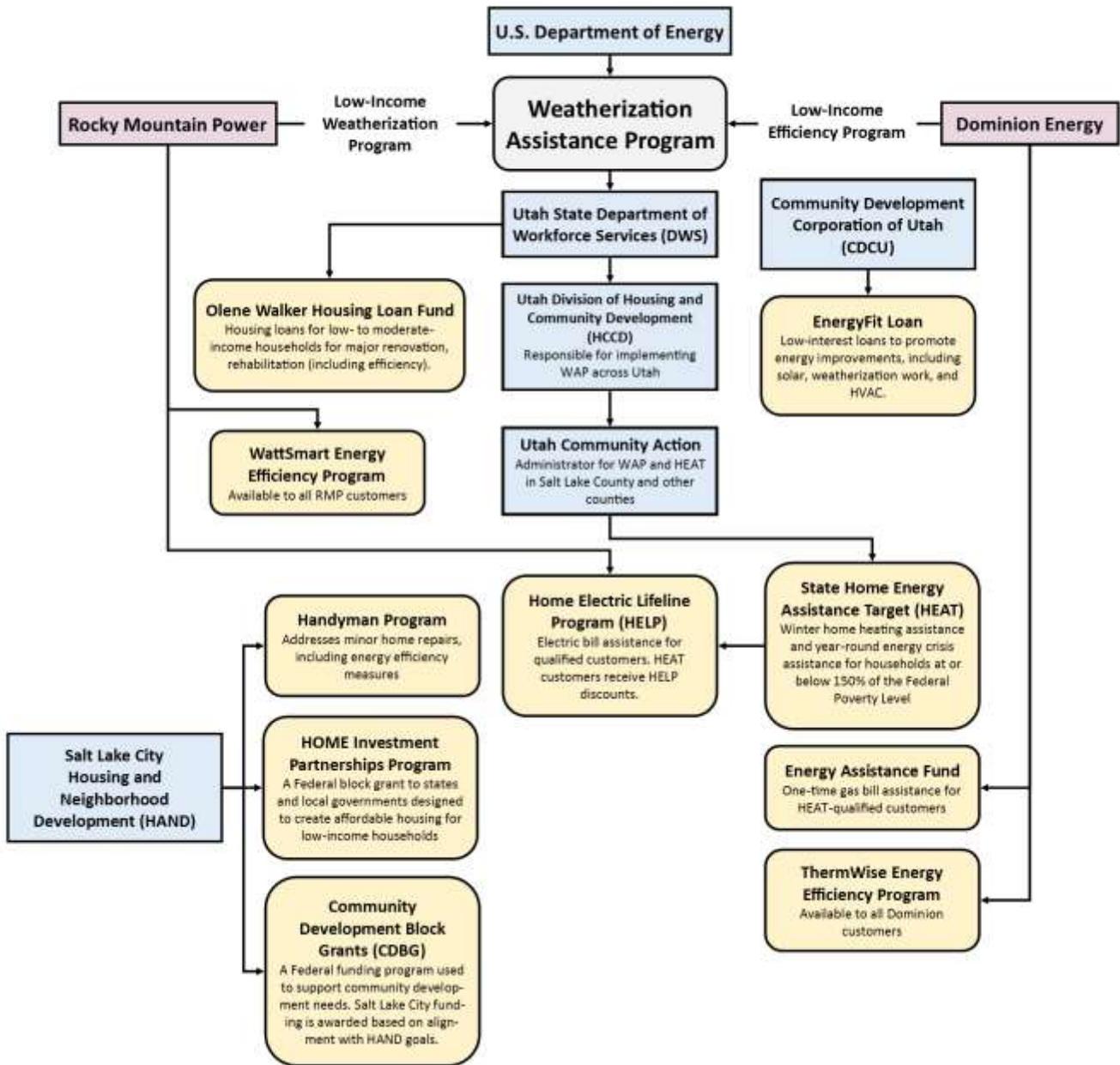
	Weatherization Assistance Program (# of participants by zip code)													
	84101	84102	84103	84104	84105	84106	84108	84109	84111	84113	84115	84116	SLC Total	UT State
2014	0	1	0	8	1	0	1	3	0	0	3	7	24	619
2015	2	0	1	8	1	3	0	0	0	0	4	11	30	504
2016	0	0	2	6	3	4	0	3	2	0	3	9	32	502
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>22</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>86</b>	<b>1,625</b>

	Weatherization Crisis Only (# of participants by zip code)													
	84101	84102	84103	84104	84105	84106	84108	84109	84111	84113	84115	84116	SLC Total	UT State
2014	1	1	2	16	4	1	0	0	0	0	11	12	48	367
2015	1	4	0	5	0	0	0	2	0	0	3	4	19	307
2016	0	3	0	8	1	2	0	2	0	0	6	6	28	392
<b>TOTAL</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>29</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>22</b>	<b>95</b>	<b>1,066</b>

	TOTALS: Weatherization & Wx Crisis (# of participants by zip code)													
	84101	84102	84103	84104	84105	84106	84108	84109	84111	84113	84115	84116	SLC Total	UT State
2014	1	2	2	24	5	1	1	3	0	0	14	19	72	986
2015	3	4	1	13	1	3	0	2	0	0	7	15	49	811
2016	0	3	2	14	4	6	0	5	2	0	9	15	60	894
<b>TOTAL</b>	<b>4</b>	<b>9</b>	<b>5</b>	<b>51</b>	<b>10</b>	<b>10</b>	<b>1</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>30</b>	<b>49</b>	<b>181</b>	<b>2,691</b>

# APPENDIX C: ORGANIZATIONAL CHART OF LOCAL PROGRAMS

## Low-Income Energy Efficiency Programs Available in Salt Lake City



# APPENDIX D:

## ADDITIONAL RESOURCES

### 1. PROGRAMS AND RESOURCES

- a. Salt Lake City, 2015 - 2019 Consolidated Plan, [http://www.slcdocs.com/hand/2015\\_2019\\_ConPlan.pdf](http://www.slcdocs.com/hand/2015_2019_ConPlan.pdf)
- b. City Lab, <http://www.citylab.com/housing/2016/04/electricity-bills-by-city-low-income-costs/478155/>
- c. From Power to Empowerment [https://groundswell.org/frompower\\_to\\_empowerment\\_wp.pdf](https://groundswell.org/frompower_to_empowerment_wp.pdf)
- d. Breaking Ground: New Models that Deliver Energy Solutions to Low-Income Customers <http://www.rmi.org/Content/Files/RMI-LEAP-v12.pdf>
- e. Explaining the unique energy burden of low-income households <http://aceee.org/blog/2016/05/explaining-unique-energy-burden-low>
- f. Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low-Income and Underserved Communities <http://aceee.org/research-report/u1602>
- g. How to build a better low-income energy efficiency program <http://aceee.org/blog/2016/03/how-build-better-low-income-energy>
- h. Program Guide: Energy Efficiency Programs for Multifamily Affordable Housing <http://www.energyefficiencyforall.org/sites/default/files/Full%20Program%20Design%20Guide.pdf>

### 2. RECORDED WEBINARS

- a. Low-Income Solar, Part 1: Lessons Learned from Low-Income Energy Efficiency Programs <http://cesa.org/webinars/low-income-solar-lessons-learned-from-energy-efficiency-programs/?date=2017-03-23>
- b. Low-Income Solar, Part 2: Using the Tools of Low-Income Energy Efficiency Financing <http://cesa.org/webinars/financing-tools-for-low-income-solar/?date=2017-03-30>

### 3. EXAMPLE PROGRAMS

- a. Efficient Neighborhoods+ Massachusetts (EN+) <http://ma-eeac.org/wordpress/wp-content/uploads/Efficient-Neighborhoods-Plus-Initiative-Evaluation-Final-Report1.pdf>
- b. Frederick County, MD Green Homes Challenge <https://frederickcountymd.gov/3531/Green-Homes-Challenge>
- c. Seattle Community PowerWorks <http://www.communitypowerworks.org/>
- d. Summit Community PowerWorks | Summit County, UT <http://scpw.org/>
- e. Sustainable Neighborhoods Network | Denver and Lakewood, CO <https://www.sustainableneighborhoodnetwork.org/>
- f. Energy Saving Checklists for Households <https://www.scgov.net/EnergyUpgrade/Pages/default.aspx>