

# Strategies for Profiling and Identifying Hard to Reach Markets





# Overview

- ▶ How we utilize existing data to answer hard questions
  - ▶ Outline of one question we recently had and the analytics we used to better understand how to create energy efficiency programs for residential customers who have a hard time paying their bills
  - ▶ Analytical steps, process maps, and where to obtain free data
  - ▶ Using data to understand program barriers
  - ▶ Suggestions on regional & local energy planning to help eliminate barriers
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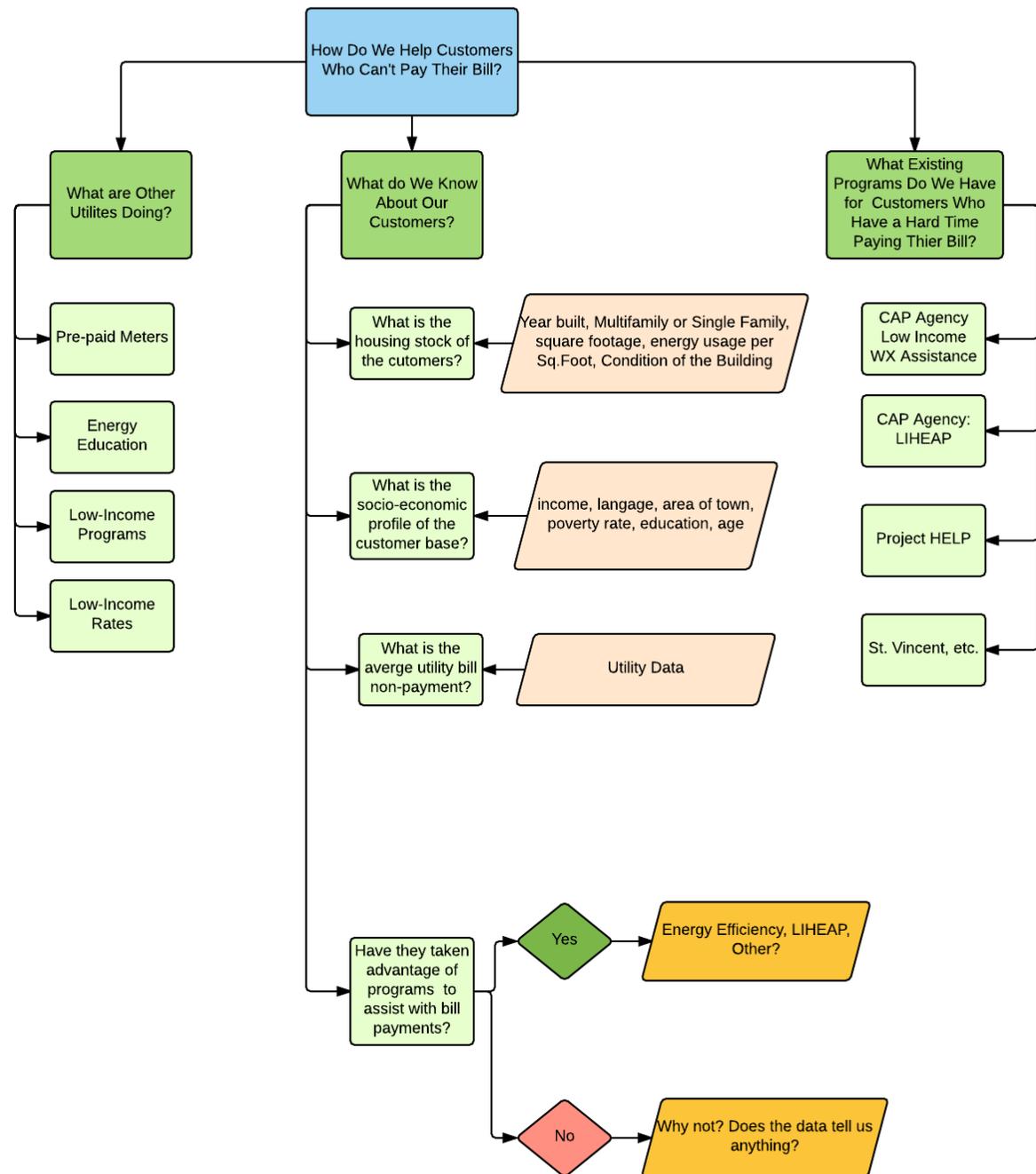
# Question We Set Out to Answer:

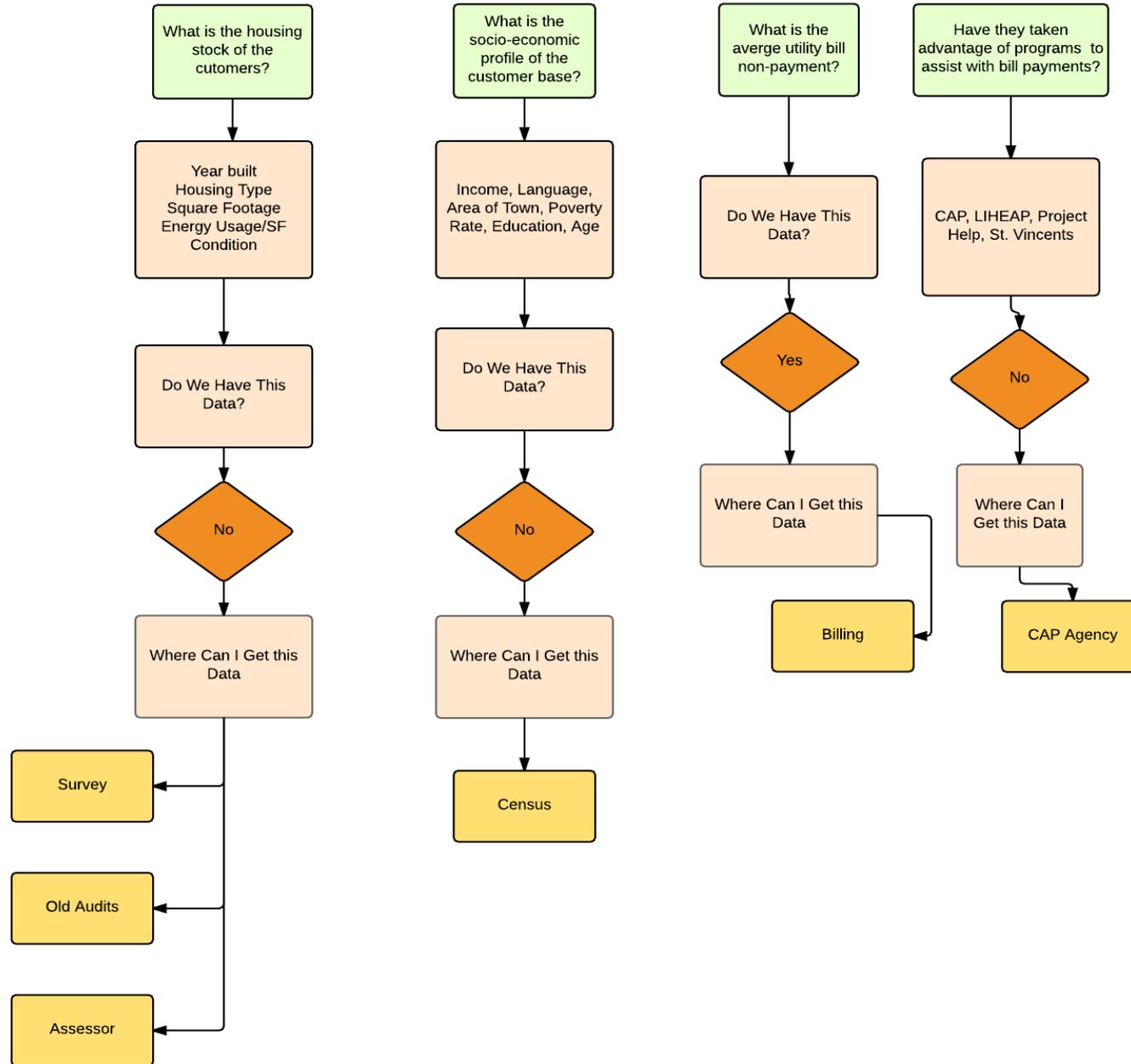
- ▶ What can we do to better provide services to our lowest-income customers, specifically the customers who are most impacted by rate increases and have the hardest time paying their utility bill?
- ▶ When Looking at Idaho Falls Power:
  - ▶ Load growth is very, very small
  - ▶ The majority of our EE participants are commercial lighting projects
  - ▶ How do we redirect some of our EE money to make the greatest difference for people who feel the pinch from utility bills?



# Process Mapping Questions

- ▶ Helps outline all aspects of a question
- ▶ Assists in understanding the right questions to ask to determine outcomes
- ▶ Provides an avenue to pause, consider needed data elements for each stage of the analysis
- ▶ Allows time to assess what we really need, what we are after, and how to merge data
- ▶ Allows me to focus on individual aspects of a question and look at small pieces rather than the whole question





What do we know about our customers?



# Data Requirements

- ▶ Based on the process maps of our initial question, we can start outlining data requirements
  - ▶ Non Utility Data
  - ▶ Utility Data

# Acquiring Non-Utility Data



- ▶ Assessor Data
  - ▶ Fairly easy to acquire (\$0.00)
  - ▶ two week turn around
    - ▶ Treats from Great Harvest make a huge difference!!
  - ▶ Obtained household level data: year built, heating type, value of home, size of home, etc.
  - ▶ This data needs to be matched with utility information by county parcel number
- ▶ Census Data
  - ▶ Very easy to acquire: (\$0.00)
  - ▶ Have to obtain census block to zip+4 decoder ring from the USPS (\$125)
  - ▶ Information in income, poverty, food stamps, language, ethnicity, children, age, etc.
- ▶ Available data on Help, LIHEAP, or late payments



# Utility Level Data

- ▶ Energy Usage
  - ▶ Remote Disconnect Meter Status / Delinquency Information
  - ▶ Meter Numbers
  - ▶ Addresses
  - ▶ Customer Name
  - ▶ Building Owner Name
  - ▶ Mailing address
  - ▶ \$0.00 to acquire
- 



# What Does the Data Tell Us About Customers?

- ▶ After obtaining data from various sources, I compiled the data and started to build a profile of customers of interest
  - ▶ Let's talk about some basic statistics about our customers who are having a difficult time paying their bills

# Statistics: Low Income Vs. High Income

	LICB*	HICB
Median Income	\$21,000	\$97,917
Percent Below Poverty Line	43.62%	2.91%
Percent On Food Assistance	44.13%	0%
Percent Unemployed	11.60%	2.49%
Percent Hispanic	39.21%	4.63%
% Owner Occupied	31.3%	92.76%
% Occupied by families	59.79	86.75%
% Occupied by Elderly	16.97%	22.79%

\* This is not the lowest income census block, which has a median income of \$16,000 per year, this is the census block with a sufficient number of homes to make comparisons to a high income census block

# Space Heat Type: Low Income Vs. High Income

Space Heat Type	LICB	HICB
Electric baseboard	17.70%	0.85%
Forced hot air-elec	7.18%	0.28%
Forced hot air-gas	19.14%	93.75%
Forced hot air-oil	0.48%	2.56%
Radiant - ceiling	55.50%	0.28%
Wall units	0.00%	0.28%
Other	0.00%	1.99%



# Low Income Census Block Stats Vs. Highest Income Census Block

<b>Housing Type</b>	<b>% LICB</b>	<b>Average Electric Usage</b>	<b>% HICB</b>	<b>Average Electric Usage</b>
<b>Condo</b>	14.35%	10,720.96	3.13%	6,448.72
<b>Duplex</b>	0.96%		0.00%	
<b>Mobile Home</b>	17.22%	9,300.25	0.00%	
<b>Multifamily</b>	64.59%	9,101.38	2.84%	4,942.69
<b>Single Family</b>	1.91%	15,122.72	93.47%	10,639.33
<b>Townhouse</b>	0.00%		0.00%	
<b>Triplex</b>	0.96%	1,633.47	0.57%	



# Basic Profile of Customers who have a hard time paying their bill

- Very low income
- Renters/multifamily
- Young families & single
- Hispanic & Non-Hispanic
- Primary Electric Heat (Baseboard/Ceiling Cable)
- High energy usage/S.F.
- Older parts of the city



# Existing Low Income Programs in Idaho Falls

Now that we know who are customers are, what existing and new programs can we create to help them?

- LIHEAP
- EICAP Weatherization
- Project Help



# LIHEAP

Currently, we have a program through EICAP that helps customers pay their energy bills. The program provides a **one-time per winter** bill assistance to qualifying customers.

Family Size	Monthly Income Limit	3-Month Income Limit EA
1	\$1,471	\$4,413
2	\$1,991	\$5,973
3	\$2,511	\$7,533
4	\$3,031	\$9,093
5	\$3,551	\$10,653
6	\$4,071	\$12,213
7	\$4,591	\$13,773
8	\$5,111	\$15,333
Each additional member	\$520	\$1,560

# Qualifications for EICAP Weatherization

Family Size	Annual Income Limit	Monthly Income Limit	3-Month Income Limit
1	\$23,540	\$1,961	\$5,885
2	\$31,860	\$2,655	\$7,965
3	\$40,180	\$3,348	\$10,045
4	\$48,500	\$4,041	\$12,125
5	\$56,820	\$4,735	\$14,205
6	\$65,140	\$5,428	\$16,285
7	\$73,460	\$6,121	\$18,365
8	\$81,780	\$6,815	\$20,445
Each Additional Member	\$8,320	\$693	\$2,080

# Outline of the Problem:

- ▶ We have a significant portion of our community who can't pay their energy bill, a large portion of whom:
  - ▶ Live in Multifamily complexes
    - ▶ IFP current energy efficiency programs don't focus on multifamily
    - ▶ CAP Agency/BPA weatherization funding is difficult for multifamily
      - ▶ 50% Documented Low-Income
    - ▶ Most of our multifamily are 4 unit buildings; and those are considered single family for BPA programs. Why is this important?
  - ▶ Live in areas where there is a high proportion of Hispanic community members
  - ▶ Very few of the homes on Remote Disconnect have taken advantage of LIHEAP



# Payment Assistance :

➤ **LIHEAP:**

Why have only 13% of people with chronic late payments taken advantage of LIHEAP?

How can we fix this?

➤ **HELP:**

Why have people not taken advantage of this program?

How can we fix this?



# Weatherization Program:

- ▶ Why can't we simply help people take advantage of low-income weatherization :
  - ▶ This requires a 50% of multifamily tenants to document income
  - ▶ Documentation may be a problem in some areas
  - ▶ Rates are really low, so energy savings may not be high enough to jump through paperwork
- ▶ Ideas to create a low-income weatherization program what works:
  - ▶ Eliminate Social Security Numbers as a standard on documentation (current, not required by BPA but required by CAP agency )
  - ▶ Eliminate the need for individual tenant documentation (use Census Block or Rental Agreements)
  - ▶ Make this really easy for landlords, property management firms, and the utility



# Program Planning on a Regional Level

- ▶ Is our planning process 'creating' hard to reach markets?
- ▶ How can we change our planning process, on local and regional levels, to better understand individual markets?
- ▶ By planning in a way that strives to understand markets, building stocks, and individual utility needs, can we eliminate the 'hard' in 'hard to reach' and just create reachable markets?



# Regional Asks

- ▶ Create mechanisms that eliminate barriers that are creating hard to reach markets:
  - ▶ Utilize existing data for income verification: Census Block, Rental Agreements, Location
    - ▶ Make it easy for landlords, residents, and CAP agencies
    - ▶ Understand the link between income and building/census block/area of town
    - ▶ Allow low-income programs to have a lower cost-effectiveness threshold
- ▶ Assist utilities in understanding how to utilize existing data to better understand their customer base and program needs
- ▶ Understand local utility demographics, local needs, etc. when doing regional planning



# How to Use our exiting Data

- ▶ Audit Data
  - ▶ Improve audit data collection across the region
  - ▶ Idaho Falls Power improving data collection while increasing customer satisfaction by utilizing an online tool for audits and data collection
- ▶ Tracking and reporting
  - ▶ Create mechanisms to link tracking and reporting data with audit data
- ▶ Over Time:
  - ▶ Program Tacking and Audit data can be paired to understand building demographics, participant demographics, and non-participant demographics
  - ▶ Targeted marking, dynamic building stock assessments, likelihood to participate, etc.