

Raw Data

File name	Variables Used	Notes	Source
income_data2021.csv	S1901_C01_012E/Estimate!!Households!!Median income (dollars) Name	Name is the metro area name	Census Bureau, 2021
median_rent2021.csv	cbsasub21- used last 5 digits as CBSA code rent50_1 – median rent for 1 bedroom apartment		HUDUser, 2021
median_rent2022.csv	cbsasub22- used last 5 digits as CBSA code rent50_1 – median rent for 1 bedroom apartment		HUDUser, 2022
unemployment_data.csv	<u>Employment & Civil Labor Force</u> - used to calculate employment rate for each month.	Monthly employment rates were averaged for each year, and the change in employment rate was the difference in employment rates between one year and the year prior	Bureau of Labor Statistics, 2021
landlord_state_data.xlsx	security deposit and eviction notice	information for each state, data was revised by hand to use in code, see >state_landlord_policy.xlsx	Law Atlas Nolo
population_est2021.csv	cbsa, popestimate2021, popestimate2021	population growth was calculated using the difference between	Census Bureau
NRI_Table_Counties.csv	county, risk_score	Overview of National Risk Index Tool	
metro-home-prices-2022.csv	Metropolitan area, 2021	Median home price of single family homes	National Association of REALTORS®
uscities	City, zips	For reference. Used to collect city zipcodes and counties	

Intermediate Data

This folder includes the outputs from the raw data collection.

File name	Description	Notes
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Cbsa_city_data.xlsx	City names combined with corresponding CBSA to match with Metropolitan areas	
Reopt_data_outputs.xlsx	Output data collected directly from REopt tool.	Future studies can utilize this sheet to organize data
Climate_risk_metrics.csv	Risk score and county name with normalized risk score	
Landlord_data.csv	Security deposit and eviction notice data for every state	Should be used for future studies
Reopt_metrics.csv	Normalized and outputs from REopt tool	
Unfiltered_msas.csv	Metropolitan areas to analyze for future studies. Narrowed down to areas with population growth in 2021	Future studies can start with this list of areas for analysis, but home price data needs to be acquired
Demographic_data.csv	Real estate metric data for 29 MSAs with normalized metrics	

Glossary of Terms

CBSA: unique six digit code known as core based statistical area used to identify Metropolitan Statistical Areas

Criteria: seven criteria categories were made which together comprise the investment favorability score— real estate, solar IRR, landlord policies, climate risk avoidance, CO₂ emissions, health impacts, and renewable electricity production

Equity-centric: a model scenario adjusting the seven criteria weights, giving higher weighting to health impacts and CO₂ emissions avoided

ESG: Environmental Social Governance

FEMA: Federal Emergency Management Agency

FIPS: Federal Information Processing Standards

GIS: Geographical information systems

Investment favorability score: the combination of all seven criteria scores ranging from 0 - 1; comparative indicator for which Metropolitan Statistical Areas are most favorable for solar photovoltaic installation

IRR: Internal rate of return

LCC: the present value of lifecycle costs associated with a proposed project

MESM: Master of Environmental Science and Management

Metric: data category that contributes to one of the model's seven criteria. Ex: population growth is a metric that contributes to the real estate criterion

Model: the framework comprising several criteria which generates an investment favorability score

MSA: Metropolitan statistical area

NEM: Net Energy Metering

NPV: Net Present Value

NREL: National Renewable Energy Laboratory

NRI: National Risk Index developed by the Federal Emergency Management Agency (FEMA) to visualize the risk of climate disasters in the United States at the county and census tract scales

Normalization: standard equation applied (see Appendix B) so that data points lie between 0 and 1

REopt: web-based model used to simulate the financial performance of installing solar photovoltaics on an apartment building. Contributes to the electricity, solar internal rate of return, CO₂ abatement potential, and health impact criteria

Solar PV: Solar photovoltaic systems

UCSB: University of California, Santa Barbara

ZNE: Zero Net Energy Capital (Client)