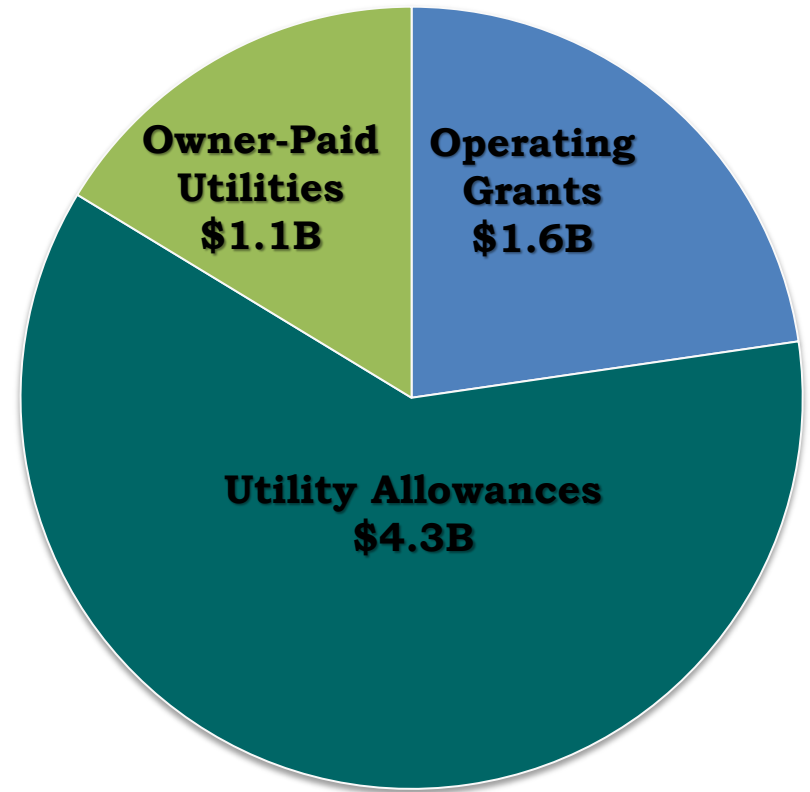


HUD Executive Actions on Energy and Green Building in Affordable Housing

The Federal Renewable Energy Target

HUD ASSISTED
RENTERS AND OWNERS
SPEND MORE THAN =
\$7
BILLION
A YEAR ON UTILITIES

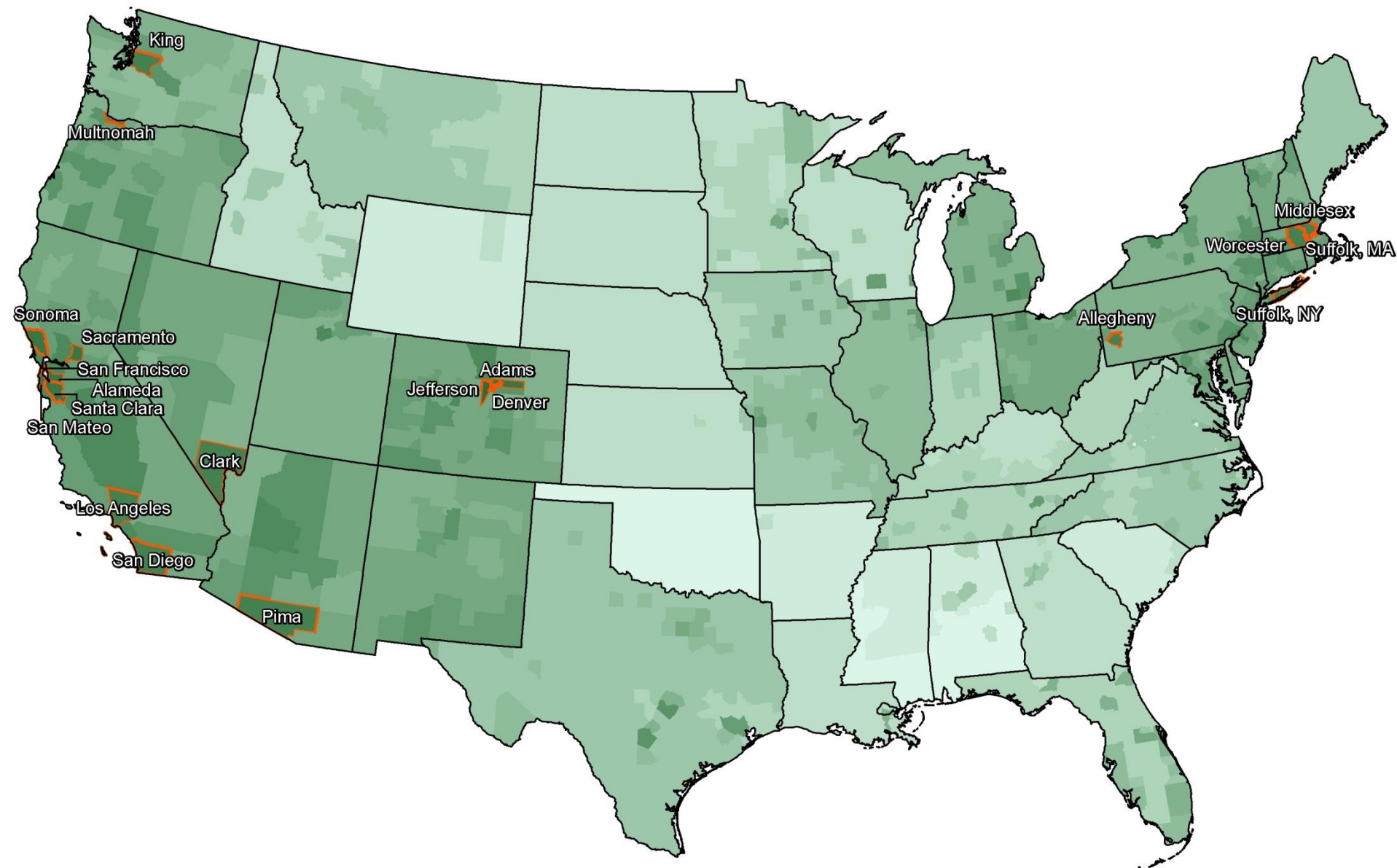


A 5% reduction of energy usage could save \$350 million a year, or \$1.75 billion over 5 years.

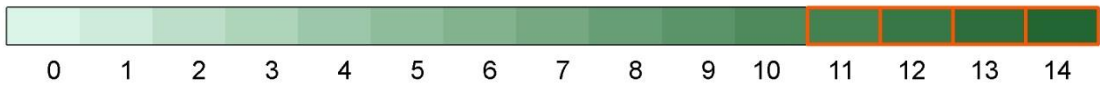
Renewable Energy Target for Federally Subsidized Housing

100 megawatts of installed renewable capacity on-site at federally subsidized housing by 2020

- ✓ Triple on-site production on HUD's Public Housing and Multifamily Assisted properties, USDA Rural Development, and Low Income Housing Tax Credit units
- ✓ expand the renewable energy sector
- ✓ promote climate resilience and cost effective distributed generation in low income housing
- ✓ curb carbon emissions
- ✓ tools like Power Purchase Agreements make it possible



County Score



Top 20 counties outlined in orange (scores 11 - 14)



This map was produced by the National Renewable Energy Laboratory for the Department of Energy.
February 2014

- 73-unit senior housing project
- First NetZero, Fossil Fuel Free, LEED Platinum senior housing project in the U.S.
- Energy efficiency strategies:
 - passive systems
 - active mechanical systems
- Renewable energy systems:
 - solar and wind energy



Paisano Green Community

El Paso, Texas

387 buildings; 668 units

2.5 MW; 10,471 panels

FINANCIAL DETAILS

- **Cost: \$ 10 million**
- **\$185,000/yr PPA payments**

Project Financing:

Power Purchase Agreement

- **20 year term with purchase option**

Leveraged Resources:

- **- Federal Investment Tax Credits**
- **- Utility Rebates**
- **- Qualified Energy Conservation Bonds**



Denver Housing Authority
Denver, Colorado

Financing Hurdles and Opportunities

- Lack of upfront capital and financing options
- Lender Risk and Administrative Burdens

Opportunities

- Enable Power Purchase and Lease Agreements
- Work with CDFIs to create energy loan funds and match demand with financing supply opportunities
- Loan guarantees for renewable energy projects within targeted energy districts
- Energy Efficiency Conservation Loan Program
- Crowdsourcing

Rooftop & Utility-Scale Solar

Rooftop solar is an option for *less than 1/4* of the residential market

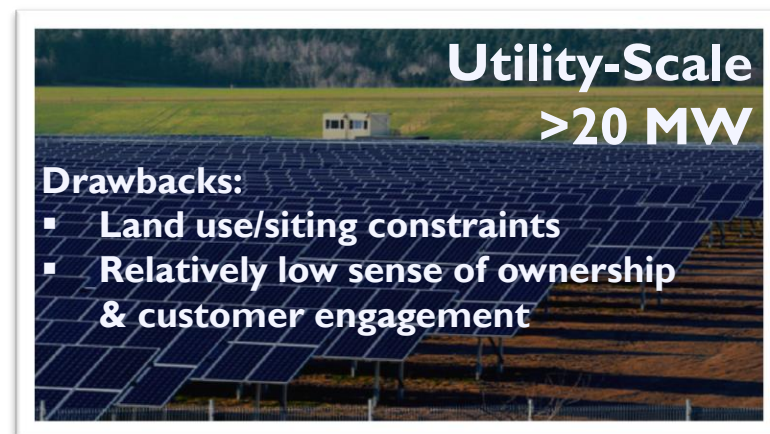


Only 22-27% of residential rooftop space is eligible*

- Structural constraints
- Insufficient roof space
- Shading

Does not account for:

- Ownership/renters
- Financial situation



*NREL Study. *Rooftop Photovoltaics Market Penetration Scenarios*. 2008.

Image credits: SunShot Rooftop Solar Challenge, Echos Solar, Renewable Energy World

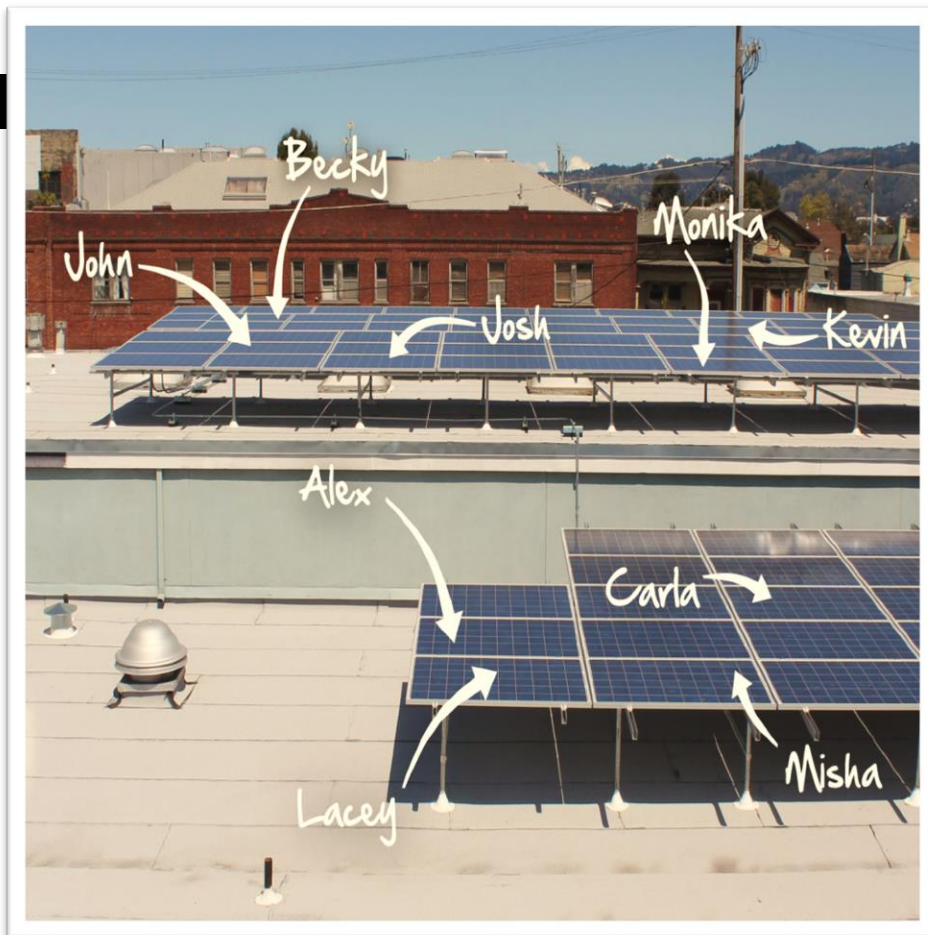


Image credit: Mosaic

Have the opportunity to:

- Restructure (and reduce) soft costs
- Increase access to solar

According to DOE's SunShot Initiative, developing **shared solar** business models can **quadruple** the impact of related funding and solar deployment efforts

<http://www1.eere.energy.gov/solar/sunshot>

Community and Shared Solar Opportunities

Contact Information

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