Addressing diversity in state-level solar energy policies

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Current status of rooftop solar

Sources: Energy Information Administration, 2017; NREL REPLICA 2018

Source: NREL REPLICA 2018
Current status of rooftop solar

Mean=1.3% (Median=0.4%)
Solar inequities

Census tracts with and without rooftop solar installations, based on majority race in tract

Census tracts with and without rooftop solar installations, based on % of suitable buildings that are LMI-occupied
Solar equity potential

County-level LMI rooftop potential as a percent of total residential rooftop potential

Source: NREL REPLICA 2018
Solar and environmental justice

• Allows us to move from pure people-based to include place-based approaches

• Recognizes of the principle of environmental justice requiring that no segment of the population regardless of race, national origin, age, or income, bear disproportionately high or adverse environmental burdens

• We know, black and Hispanic households and communities experience high pollution exposure and high energy burdens

• These challenges are at the intersection of race and class, but also place
What are some states doing?

- **Economic justice approach (target households using AMI)**
  - DC & IL – ≤ 80%
  - NY – ≤ 60%
  - MN – ≤ 50%

- **Environmental justice approach (target race, class and place)**
  - CA & IL – identified environmental justice communities using environmental and socioeconomic factors such as:
    - Ozone and PM2.5 exposure rates;
    - proximity to hazardous waste sites;
    - % Minority population; Low-Income;
    - % of population with less than high school education;
    - linguistic isolation;
    - Age (i.e. % of individuals under age 5; and % of individuals over age 64)

- **Targets**
  - DC - 100,000 low-income households and reduce energy burdens by 50% by 2032
  - IL – min. of 25% of its solar incentives be allocated to projects in EJ communities
## State solar rankings (Top 10)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Electricity consumption</th>
<th>Residential solar generation potential</th>
<th>% Consumption offset by res. solar</th>
<th>% Consumption offset by LMI solar</th>
<th>% LMI solar generation potential</th>
<th>% suitable buildings, LMI</th>
<th>Solar penetration</th>
<th>% Minority population</th>
<th>% Families below poverty</th>
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Increasing solar equity

In sum, governments considering developing an equity approach to solar should consider these four actions:

1. Quantify the current solar equity gap, exploring adoption disparities across race, class and place
2. Determine and define the people- and place-based approaches to policy design and implementation
3. Conduct an environmental justice mapping exercise using established methods centered on environmental and socioeconomic factors to facilitate targeting, public engagement and investment strategies
4. Establish measurable solar equity goals to be achieved and track progress
THANK YOU!

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