Climate Justice Working Group
Draft DAC Criteria Update

December 2, 2021
Meeting Procedures

Before beginning, a few reminders to ensure a smooth discussion:

• Working Group Members should be on mute if not speaking.

• If using phone for audio, please tap the phone mute button.

• If using computer for audio, please click the mute button on the computer screen (1st visual).

• Video is encouraged for Working Group members, particularly when speaking.

• In the event of a question or comment, please use the hand raise function (2nd visual). Click the participant panel button (3rd visual) for the hand raise function. Someone will call on members individually, at which time please unmute.

• Please state your name before speaking.
Welcome and Roll Call
Agenda for December 2

1. Timeline
2. Review Critical DAC Decisions
3. Eligible Investments
4. DAC Criteria
   1. Review Critical Questions
   2. Income-based Individual Criteria
   3. Map Review
5. Preparing for DAC Criteria Vote
   1. Vote Elements (Break down vote? Multiple scenarios?)
   2. What would you like to see/review before a vote?
Draft timeline before DAC vote

<table>
<thead>
<tr>
<th>DAC Work</th>
<th>Proposed Dates</th>
</tr>
</thead>
</table>
| Critical questions  
  • Individual criteria (income-based definition)  
  • Low-income definition/threshold  
  • DAC designation threshold (35%? 40%?)  
Review maps  
Questions before Vote | Dec 2 (10am-1pm) |
| Email DEC and/or Illume with questions | Dec 2 – Dec 8 |
| Hear/discuss outstanding questions  
Maps review and Q&A  
Review “components” of proposed scenario | Dec 9 (2-4pm)  
(may extend 1 hr) |
| Vote on DAC scoring approach + scenario(s) to post for public comments | Dec 13 (1-4pm)  
(if needed, Dec 21/22) |
Critical Decisions

Progress Made

- 44 indicators in approach that balances three “pillars” of legislation
- Designate ~35-40% of state (leaning toward smaller list to start)
- Consider low-income households to fill gaps that geographic definition can’t reach
- Iterative approach – Evaluate each year

Critical Decisions to Make

(Green = Decisions Made on Dec 2)

- Add income-based individual criteria (yes/no)
  5 yes; 1 tentative yes
- If added: How to define low-income households? 
  <60% SMI used by programs more; easier income verification. 
  <80% AMI more inclusive, but harder to implement. 
  Start with 60% SMI and re-assess after 1 year 
  (some people still weighing)
- Designation threshold for geographic definition: 
  Keep at 35%
- Any additional rules? 
  Annually evaluate to see how investments are distributed geographically and to LMI households

Additional questions/considerations discussed Dec 2:
1. Evaluate in a year to “add more guardrails” around individual definition
2. In a year, look at share of investments meeting 40% goal from geographic DACs or LMI HHs outside of DACs
3. After evaluation, consider geographic investment minimum
Eligible Investments
Investments & Benefits: Progress to Date

Agencies working on Investments and Benefits framework, expect to bring the plan to CJWG to socialize in December

Potential approach:
Focus on spending as primary metric, but measure and report on co-benefits
Work in Progress by Agencies

- Inventorying investments and programs and assessing capacity for agencies to geocode/report on investments
- Considering the geographic nature of investments (place – based vs statewide or systemswide investments)
- Developing reporting plan
CJWG feedback we’re considering

Spending as highest-priority and tangible metric

Want to see evidence that status quo is changing:

- Procurement/contracts (to MWBEs, grassroots/frontline and smaller organizations)
- Community-focused programs to most vulnerable communities
- Capacity building and improved engagement
Targeting Programs to Communities or Individuals

- Investments are typically structured as open-enrollment or competitive solicitations
- Clean energy investments made economy wide
- Agency investments will need to adapt to target projects/opportunities within communities
- Income-based programs difficult to target to geographies

<table>
<thead>
<tr>
<th>Income-Eligible Energy Programs</th>
<th>Approximate Annual Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income Energy Assistance (HEAP, Utility Bill Assistance)</td>
<td>$800M</td>
</tr>
<tr>
<td>LMI Energy Efficiency (including WAP, NYSERDA, and utility funded programs)</td>
<td>$210M ($110M to Affordable Multifamily Energy)</td>
</tr>
<tr>
<td>Solar</td>
<td>$40M</td>
</tr>
</tbody>
</table>

Note: This table only reflects state-run income-eligible energy programs (that screen for household income). Other programs may serve LMI households but do not require proof of income.
Questions for DAC Definition?

Given the “undecided” components of Investments or Benefits, what information might change your preferences for the DAC definition or scenarios?
DAC Criteria
Progress and Options
Next Steps from Nov 17 Meeting

Agency To Do: What are the programs that leverage the different income tiers?

100% FPL
60% SMI
80% AMI
What do we mean by “individual” criteria?

By “individual criteria” we’re talking about the characteristics of the people in the household, not the building location.

For example, low-income households are people with household incomes below a certain threshold.
Income-based individual criteria could fill gap in low-income households included in DAC designation

<table>
<thead>
<tr>
<th>35% DAC Scenario</th>
<th>Number of Households (Estimate)(^a)</th>
<th>Percentage of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not in DAC</td>
<td>In DAC</td>
</tr>
<tr>
<td>All Households in New York</td>
<td>4,803,000</td>
<td>2,540,000</td>
</tr>
<tr>
<td>Households with income &lt;80% Area Median Income</td>
<td>1,673,000</td>
<td>1,559,000</td>
</tr>
<tr>
<td>Households with income &lt;200% FPL (Proxy for 60% State Median(^b))</td>
<td>1,046,000</td>
<td>1,106,000</td>
</tr>
<tr>
<td>Households with income &lt;100% Federal Poverty Line</td>
<td>443,000</td>
<td>578,000</td>
</tr>
</tbody>
</table>

\(^a\) Household counts are from 5-year ACS data so may appear slightly lower than current Census counts.

\(^b\) Agencies would implement as <60% of State Median Income. 200% Federal Poverty Line is ~$6,000 lower than 60% of State Median Income, so more households than shown here would be added.

Because low-income households live throughout the state, including moderate and high income areas, **no geographic definition can capture all low-income people or households**.
Define “low income” or “low-to-moderate-income” households to align with programs?

**Poverty:** Less than 100% of Federal Poverty Line (Difficult to administer programs with this threshold)

**Low income:** Less than 60% State Median Income (SMI) or 150% of FPL (whatever is higher) (HEAP, EmPower, Solar for All, Weatherization Assistance, utility bill assistance, and others)

**Moderate income:** Less than 80% of Area Median Income (and sometimes 80% state median income) (Affordable housing and rent relief, some energy programs)
How many households might be included under these income definitions?

<table>
<thead>
<tr>
<th>Income Threshold</th>
<th>Additional HHs outside of DACs (APPROXIMATE)</th>
<th>Total % of State (geographic + individual DAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adding &lt;100% FPL</td>
<td>+6%</td>
<td>41%</td>
</tr>
<tr>
<td>Adding &lt;200% FPL (Proxy for 60% State Median)</td>
<td>+14%</td>
<td>49%</td>
</tr>
<tr>
<td>Adding &lt;80% Area Median Income (AMI)</td>
<td>+23%</td>
<td>58%</td>
</tr>
</tbody>
</table>

*Agencies would implement as <60% of State Median Income. 200% Federal Poverty Line is ~$6,000 lower than 60% of State Median Income, so more households than shown here would be added.
Where are the additional lower-income households?

<table>
<thead>
<tr>
<th>Region</th>
<th>HHs in Geographic DAC (35% scenario)</th>
<th>HHs added through Individual Criteria (&lt;200% FPL)</th>
<th>HHs added by Individual Criteria</th>
<th>Regional share of Geographic DACs</th>
<th>Regional share of Additional HHs</th>
<th>Regional Share of All Eligible Households</th>
<th>COMPARISON: All Households in NY State</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>1,497,301</td>
<td>400,276</td>
<td>1,897,577</td>
<td>59%</td>
<td>38%</td>
<td>53%</td>
<td>43%</td>
</tr>
<tr>
<td>Long Island</td>
<td>119,001</td>
<td>110,533</td>
<td>229,534</td>
<td>5%</td>
<td>11%</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>363,549</td>
<td>70,233</td>
<td>433,782</td>
<td>14%</td>
<td>7%</td>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>Western NY</td>
<td>137,836</td>
<td>110,237</td>
<td>248,073</td>
<td>5%</td>
<td>11%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>140,000</td>
<td>78,435</td>
<td>218,435</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>85,001</td>
<td>68,575</td>
<td>153,576</td>
<td>3%</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Central NY</td>
<td>99,002</td>
<td>47,162</td>
<td>146,164</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>41,696</td>
<td>67,421</td>
<td>109,117</td>
<td>2%</td>
<td>6%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>30,045</td>
<td>48,456</td>
<td>78,501</td>
<td>1%</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>North Country</td>
<td>26,600</td>
<td>44,849</td>
<td>71,449</td>
<td>1%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2,540,031</strong></td>
<td><strong>1,046,177</strong></td>
<td><strong>3,586,208</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

- Household counts are from 5-year ACS data so may appear slightly lower than current Census counts.
- Agencies would implement as <60% of State Median Income. 200% Federal Poverty Line is ~$6,000 lower than 60% of State Median Income, so more households than shown here would be added.
Example income for two-person household

<table>
<thead>
<tr>
<th>Location (Examples)</th>
<th>2-person Household:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100% of Federal Poverty Line*</td>
</tr>
<tr>
<td>Albany-Schenectady-Troy, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>New York, NY HUD Metro Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Buffalo-Cheektowaga-Niagara Falls, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>Nassau-Suffolk, NY Metro Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Lewis County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Clinton County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Poughkeepsie-Newburgh-Middletown Metro</td>
<td>$17,420</td>
</tr>
</tbody>
</table>

All income levels are household size. The Federal Poverty Line is lower, but the same nationally. Area Median Income is higher, and indexed to metropolitan areas or fair market rent areas.


2021 60% state median income): [https://www.nyserda.ny.gov/All-Programs/EmPower-New-York/Eligibility-Guidelines](https://www.nyserda.ny.gov/All-Programs/EmPower-New-York/Eligibility-Guidelines)

# Race and Ethnicity by Income Threshold

<table>
<thead>
<tr>
<th>Income Threshold</th>
<th>Statewide</th>
<th>NYC Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low Income (below 130% poverty line)</td>
<td>20% 26% 43%</td>
<td>25% 37% 23%</td>
</tr>
<tr>
<td>Low Income (between 130% poverty line and 60% SMI)</td>
<td>16% 19% 56%</td>
<td>26% 32% 27%</td>
</tr>
<tr>
<td>Moderate Income (between 60% SMI and 80% of AMI or SMI)</td>
<td>16% 17% 59%</td>
<td>26% 27% 34%</td>
</tr>
</tbody>
</table>

**Source:** 2013-2015 ACS, from www.nyserda.ny.gov/lmitool
Recap of Key Questions

How to define “lower income” for individual definition?

If we include households – What percentage of state should be designated a geographic DAC?
Optional threshold for geographic investments?

California Climate Investments Priority Population Guidelines

- A minimum of 25 percent of the proceeds be invested in projects that are located within and benefiting individuals living in disadvantaged communities;
- An additional minimum of 5 percent be invested in projects that are located within and benefiting individuals living in low-income communities or benefiting low-income households statewide; and
- An additional minimum of 5 percent that are located within and benefiting individuals living in low-income communities, or benefiting low-income households, that are within a ½ mile of a disadvantaged community.

65 percent of funds can be spent anywhere in the state, including in disadvantaged and low-income communities.

Framework for California Climate Investments (cap & trade funds).
https://www.caclimateinvestments.ca.gov/priority-populations
Does not apply to CPUC programs with are covered by different legislation.
Updated Maps for 35% Scenario (Nov 17)
Coastal Long Island

Model
- DAC

CJWG Response
- DAC
- Non-DAC
Massena (North Country)

Model
- DAC

CJWG Response
- DAC
- Non-DAC

35% Scenario
Sunset Park

Model
- DAC

CJWG Response
- DAC
- Non-DAC

35% Scenario
Hudson River area (higher flood risk)
Preparing to Vote
Temperature Check before Voting

How are you feeling about?

- Indicators
- Scoring Approach
- Designation threshold
- Individual criteria
What materials/documentation would you like before voting?

Readily-available:
- Indicator list in PPT methodology
- Approach in PPT methodology
- Low-income definition in PPT methodology

Would it help to have….?
- Tableau map with “yes/no” DAC designation
- Export list of census tracts and DAC designation
What to post for public comment?

What scenario(s) to post for public comment?
Additional considerations or rules?
Voting starts public process + annual review

Opportunity to adjust following public comments
Opportunity for annual review/updates
Agenda for Dec 9

Questions from/since last meeting
Maps review!
Review/confirm the “components” of the DAC definition before the vote
Updated Scenario Results (Nov 17)
Environmental Burdens and Climate Change Risks: Included Indicators

Potential Pollution Exposures
- Vehicle traffic density
- Diesel truck and bus traffic
- Particulate Matter (PM2.5)
- Benzene concentration
- Wastewater discharge

Land use and facilities associated with historical discrimination or disinvestment
- Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)
- Regulated Management Plan (chemical) sites
- Major oil storage facilities (incl. airports)
- Power generation facilities
- Active landfills
- Municipal waste combustors
- Scrap metal processors
- Industrial/manufacturing/mining land use (zoning)
- Housing vacancy rate

Potential Climate Change Risks
- Extreme heat projections (>90° days in 2050)
- Flooding in coastal and tidally influenced areas (projected)
- Flooding in inland areas (projected)
- Low vegetative cover
- Agricultural land
- Driving time to hospitals or urgent/critical care
## Population Characteristics and Vulnerabilities: Included Indicators

<table>
<thead>
<tr>
<th>Income</th>
<th>Race &amp; Ethnicity</th>
<th>Health Impacts &amp; Sensitivities</th>
<th>Housing, Mobility, Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pct &lt;80% Area Median Income</td>
<td>• Pct Latino/a or Hispanic</td>
<td>• Asthma ED visits</td>
<td>• Pct Renter-Occupied Homes</td>
</tr>
<tr>
<td>• Pct &lt;100% of Federal Poverty Line</td>
<td>• Pct Black or African American</td>
<td>• COPD ED visits</td>
<td>• Housing cost burden (rental costs)</td>
</tr>
<tr>
<td>• Pct without Bachelor’s Degree</td>
<td>• Pct Asian</td>
<td>• Heart attack (MI) hospitalization</td>
<td>• Energy Poverty / Cost Burden</td>
</tr>
<tr>
<td>• Unemployment rate</td>
<td>• Pct Native American/ Indigenous</td>
<td>• Premature Deaths</td>
<td>• Manufactured homes</td>
</tr>
<tr>
<td>• Pct Single-parent households</td>
<td>• Limited English Proficiency</td>
<td>• Low Birthweight</td>
<td>• Homes built before 1960</td>
</tr>
<tr>
<td></td>
<td>• Historical redlining score</td>
<td>• Pct without Health Insurance</td>
<td>• Pct without Internet (home or cellular)</td>
</tr>
</tbody>
</table>

Within this factor, both income metrics have 2x weight

Within this factor, Pct Latino/a and Pct Black have 2x weight
As designed, DACs have far more, but not all, lower-income and BIPOC New Yorkers.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average in DACs</th>
<th>Average in Non-DACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;80% AMI</td>
<td>62%</td>
<td>36%</td>
</tr>
<tr>
<td>&lt;100% FPL</td>
<td>23%</td>
<td>10%</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>Latino/Latina</td>
<td>32%</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Burden Score</td>
<td>38</td>
<td>30</td>
</tr>
<tr>
<td>Vulnerability Score</td>
<td>61</td>
<td>40</td>
</tr>
</tbody>
</table>

As designed, DAC tracts have far more lower-income, Black/African American and Latino/Latina households.

As designed, DACs have higher burdens and vulnerabilities scores.
Regional Distribution

<table>
<thead>
<tr>
<th>Region</th>
<th>% Designated DAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>45%</td>
</tr>
<tr>
<td>Long Island</td>
<td>11%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>44%</td>
</tr>
<tr>
<td>Western NY</td>
<td>31%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>36%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>22%</td>
</tr>
<tr>
<td>Central NY</td>
<td>36%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>18%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>20%</td>
</tr>
<tr>
<td>North Country</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35%</strong></td>
</tr>
</tbody>
</table>

About 45% of NYC would be designated a DAC.

<table>
<thead>
<tr>
<th>Region</th>
<th>% of NY Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>43%</td>
</tr>
<tr>
<td>Long Island</td>
<td>15%</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>12%</td>
</tr>
<tr>
<td>Western NY</td>
<td>7%</td>
</tr>
<tr>
<td>Finger Lakes</td>
<td>6%</td>
</tr>
<tr>
<td>Capital Region</td>
<td>6%</td>
</tr>
<tr>
<td>Central NY</td>
<td>4%</td>
</tr>
<tr>
<td>Southern Tier</td>
<td>3%</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>2%</td>
</tr>
<tr>
<td>North Country</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

35% of tracts are designated. This is adjustable.
Rural Areas

After adjusting the methodology for classifying low population tracts, the proportion of rural areas that are classified as DACs is approximately equivalent to the proportion of rural tracts in the state.

<table>
<thead>
<tr>
<th>Percent of Region Designated</th>
<th>Number of Tracts</th>
<th>Pct DACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>130</td>
<td>15%</td>
</tr>
<tr>
<td>Suburban</td>
<td>371</td>
<td>25%</td>
</tr>
<tr>
<td>Urban</td>
<td>1,221</td>
<td>48%</td>
</tr>
</tbody>
</table>

The proportion of rural and urban tracts designated as DACs is now very close to the proportion of tracts in the state that are rural and urban.

<table>
<thead>
<tr>
<th>Pct of Statewide Population</th>
<th>Number of Tracts</th>
<th>Pct of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>857</td>
<td>17%</td>
</tr>
<tr>
<td>Suburban</td>
<td>1,479</td>
<td>33%</td>
</tr>
<tr>
<td>Urban</td>
<td>2,570</td>
<td>49%</td>
</tr>
</tbody>
</table>

As a reference, about 17% of New York’s population lives in rural census tracts.

The NCES locale framework classifies all territory in the U.S. into four types of areas -- City, Suburban, Town, and Rural. Each area is divided into three subtypes based on population size (in the case of City and Suburban assignments) and proximity to urban areas (in the case of Town and Rural assignments). The classifications (350 KB) rely on standard urban and rural designations defined by the U.S. Census Bureau, and each type of locale is either urban or rural in its entirety.
Comparison with groundtruthing

Groundtruthing is one of multiple ways we assess how well scores fit CJWG interests and legislated criteria – including theory, scientific review and other DAC-like metrics (e.g., PEJA). Relatively few of New York’s 4,918 tracts are groundtruthed. As such, this is not the key driver of our shifts in scenarios, but one of several ways we look at how the scenarios work.

<table>
<thead>
<tr>
<th>Overall agreement</th>
<th>% Agreement</th>
<th>63%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJWG &amp; Scenario both agree it’s a DAC</td>
<td>% Agree - DAC</td>
<td>61%</td>
</tr>
<tr>
<td>CJWG &amp; Scenario both think it’s not a DAC</td>
<td>% Agree – Non-DAC</td>
<td>65%</td>
</tr>
</tbody>
</table>
DAC Criteria
Legislative Review
Purpose of DAC definition

The [climate justice] working group, in consultation with the department, the departments of health and labor, the New York state energy and research development authority, and the environmental justice advisory group, will establish criteria to identify disadvantaged communities for the purposes of co-pollutant reductions, greenhouse gas emissions reductions, regulatory impact statements, and the allocation of investments related to this article.
40% Benefits Goal

"State agencies, authorities and entities, in consultation with the environmental justice working group and the climate action council, shall, to the extent practicable, invest or direct available and relevant programmatic resources in a manner designed to achieve a goal for disadvantaged communities to receive forty percent of overall benefits of spending on clean energy and energy efficiency programs, projects or investments in the areas of housing, workforce development, pollution reduction, low income energy assistance, energy, transportation and economic development, provided however, that disadvantaged communities shall receive no less than thirty-five percent of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments and provided further that this section shall not alter funds already contracted or committed as of the effective date of this section."

The CJWG has discussed that the 40% goal should be considered a minimum, and that non-DAC communities are still available for the remaining ~60% of funds.
Legislated Criteria

“Communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households.”

§ 75-0111 (1) (c)

“Disadvantaged communities shall be identified based on geographic, public health, environmental hazard, and socioeconomic criteria, which shall include but are not limited to:

Areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health effects.

Areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low level of educational attainment, or members of groups that have historically experienced discrimination on the basis of race or ethnicity.

Areas vulnerable to the impacts of climate change such as flooding, storm surges, and urban heat island effect.”
Opportunity for Annual Review

The [climate justice working] group will meet no less than annually to review the criteria and methods used to identify disadvantaged communities and may modify such methods to incorporate new data and scientific findings. The climate justice working group shall review identities of disadvantaged communities and modify such identities as needed.

With the opportunity for annual review, these draft scenarios are a starting point.
Appendix 1:
Slides from 10/19
A geographic definition will never capture all lower-income households

1. In combined scoring (all indicators) we don’t capture 100% of lower-income communities.
   - Some (13%) are not included because environmental or climate burdens are relatively low.
   - While removing environmental and climate indicators gets us closer, with 24 population & health indicators, even Scenario #2 doesn’t capture all lower-income tracts.

2. Any geographic-only scenario can’t capture all low-income households.
   - About ~38% (~387,000) households in poverty aren’t in a DAC.
   - Because they are dispersed throughout the state, including in higher-income areas, no geographic scenario can reach them all.

Numbers are from 10/19 scenario where 39% of state designated DAC.
The majority of lowest-income tracts are included

Most, but not all, lower-income tracts are included.

In combined scoring (Scenario 1) some aren’t included if Environmental or Climate burdens are relatively low.

In the lowest 20% of income levels (927 tracts):

- 87% of tracts are included as DACs (893 tracts)
- If environmental & climate indicators were removed, 92% of lowest income tracts would be included

Numbers are from 10/19 scenario where 39% of state designated DAC
Where are high-poverty households outside of DACs?

In rural areas, 19% of all households are in DACs, and 26% of high-poverty households are in DACs. (74% of high-poverty rural HHs are outside of DACs)

In urban areas, only ~26% of high-poverty households live outside of DACs

In rural areas, about 10% of households have income below federal poverty line (compared with 6% in suburban areas and 18% in urban areas)
Individual Criteria

Justice40 and California include individuals in definitions and benefits framework

Justice40 includes individuals in community definition

California Climate Investments considers spending for “priority populations”

Community – Agencies should define community as “either a group of individuals living in geographic proximity to one another, or a geographically dispersed set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions.”

“Priority populations” are DACs, LMI communities and LMI households

Low-income communities and households are those with incomes either at or below 80 percent of the statewide median or below a threshold designated as low-income by the Department of Housing and Community Development.

http://www.caclimateinvestments.ca.gov/priority-populations
Finding a balance

Is it better to ....

(1) Leave no DAC behind, and have communities that are less economically/socially vulnerable (or don’t need as much help?)

(2) Restrict DACs to those most in need, and possibly miss some communities that are vulnerable

^ this may be mitigated with “individual” definition like household income

On October 19, several CJWG members preferred this option, as long as geographic definition could be coupled with lower-income households
While some BIPOC households live outside of 35% DAC scenario, Agencies cannot request/track/verify race/ethnicity data for all investments/programs (to support individual criteria)

<table>
<thead>
<tr>
<th>35% DAC Scenario</th>
<th>Number of People (Estimate)</th>
<th>Percentage of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not in DAC</td>
<td>In DAC</td>
</tr>
<tr>
<td>All People in New York</td>
<td>12,732,000</td>
<td>6,841,000</td>
</tr>
<tr>
<td>Black or African American individuals</td>
<td>1,375,000</td>
<td>1,976,000</td>
</tr>
<tr>
<td>Hispanic or Latino/a individuals</td>
<td>1,379,000</td>
<td>2,326,000</td>
</tr>
</tbody>
</table>

a Population counts are from 5-year ACS data so may appear slightly lower than current Census counts.

A geographic definition captures the majority (59%-62%) of Black and Latinx individuals, though many live outside of DAC communities.
Appendix 2: Review of Approach
Inclusion Considerations

Inclusion decisions consider:

- Data coverage & granularity
- Data quality (e.g., measurement or sampling error)
- Modeled vs. directly-collected or measured data
- Correlations
- Technical guidance (e.g., DEC, DOH, DOS)

So far, we obtained & evaluated data for 90+ indicators (a) on their own, and (b) in combination
Multiple inputs to inform approach

- Ongoing QA on indicators
- Statistical Diagnostics (what's driving scores)
- Legislative requirements
- Technical expert input
- Maps and Groundtruthing
- Working Group Discussion and Priorities

Choices we're making
Framing Principles (from 9/29 meeting)

Don’t want to leave people most at risk of climate crisis behind – Direct funding to people & groups who are most vulnerable

Income is important indicator of ability to respond or adapt

Want agencies to design and target efforts geographically – to community-scale (or larger) outreach and investments

Initial investments should go to the hardest-hit communities first

Consider who is least able to participate in transition to clean energy and clean energy economy

Beware unintended consequences – Don’t want to create disadvantaged communities (e.g., by re-directing funding too much toward some communities)

Potential Approaches:

Start with smaller set of DACs and add later (would a large set dilute resources?)

Tiered approach – DAC plus LMI communities or households?

Iterative approach – Evaluate each year
Balanced set of indicators and weighting

Environmental Burdens and Climate Change Risks
- Potential Pollution Exposures
- Land use assoc. with historical discrimination or disinvestment
- Potential Climate Change Risks

Population Characteristics and Health Vulnerabilities
- Income
- Race/Ethnicity
- Health Impacts & Burdens
- Housing, Mobility, Communications

Equalize sum of environmental burdens with climate change

Income, race & ethnicity hold considerable influence since they each have their own factor, plus are weighted more within

Note: Since Burdens and Vulnerabilities are multiplied, they have equal influence, regardless of the # of factors or how you weight things within them.
# Environmental Burdens and Climate Change Risks: Included Indicators

<table>
<thead>
<tr>
<th>Potential Pollution Exposures</th>
<th>Land use and facilities associated with historical discrimination or disinvestment</th>
<th>Potential Climate Change Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle traffic density Diesel truck and bus traffic</td>
<td>Remediation Sites (e.g., NPL Superfund or State Superfund/Class II sites)</td>
<td>Extreme heat projections (&gt;90° days in 2050)</td>
</tr>
<tr>
<td>Particulate Matter (PM2.5)</td>
<td>Regulated Management Plan (chemical) sites</td>
<td>Flooding in coastal and tidally influenced areas (projected)</td>
</tr>
<tr>
<td>Benzene concentration</td>
<td>Major oil storage facilities (incl. airports)</td>
<td>Flooding in inland areas (projected)</td>
</tr>
<tr>
<td>Wastewater discharge</td>
<td>Power generation facilities</td>
<td>Low vegetative cover</td>
</tr>
<tr>
<td></td>
<td>Active landfills</td>
<td>Agricultural land</td>
</tr>
<tr>
<td></td>
<td>Municipal waste combustors</td>
<td>Driving time to hospitals or urgent/critical care</td>
</tr>
<tr>
<td></td>
<td>Scrap metal processors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Industrial/manufacturing/mining land use (zoning)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housing vacancy rate</td>
<td></td>
</tr>
</tbody>
</table>
Population Characteristics and Vulnerabilities: Included Indicators

**Income**
- Pct <80% Area Median Income
- Pct <100% of Federal Poverty Line
- Pct without Bachelor’s Degree
- Unemployment rate
- Pct Single-parent households

**Race & Ethnicity**
- Pct Latino/a or Hispanic
- Pct Black or African American
- Pct Asian
- Pct Native American or Indigenous
- Limited English Proficiency
- Historical redlining score

**Health Impacts & Sensitivities**
- Asthma ED visits
- COPD ED visits
- Heart attack (MI) hospitalization
- Premature Deaths
- Low Birthweight
- Pct without Health Insurance
- Pct with Disabilities
- Pct Adults age 65+

**Housing, Mobility, Communications**
- Pct Renter-Occupied Homes
- Housing cost burden (rental costs)
- Energy Poverty / Cost Burden
- Manufactured homes
- Homes built before 1960
- Pct without Internet (home or cellular)

Within this factor, both income metrics have 2x weight
Within this factor, Pct Latino/a and Pct Black have 2x weight
Why Two Income Measures?

Both included income metrics, <100% of Federal Poverty Line and <80% of Area Median Income, are indexed to household size.

**Federal Poverty Line:** Lower threshold, but the same nationally. Included to find deeper entrenched poverty.

**Area Median Income:** Higher threshold, and indexed to metropolitan areas or fair market rent areas. Included to find low-to-moderate income (LMI).
Example Income Thresholds

Both included income metrics, <100% of Federal Poverty Line and <80% of Area Median Income, are indexed to household size. The Federal Poverty Line is lower, but the same nationally. Area Median Income is higher, and indexed to metropolitan areas or fair market rent areas.

<table>
<thead>
<tr>
<th>Location (Examples)</th>
<th>2-person household</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100% of Federal Poverty Line*</td>
</tr>
<tr>
<td>Albany-Schenectady-Troy, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>New York, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Buffalo-Cheektowaga-Niagara Falls, NY MSA</td>
<td>$17,420</td>
</tr>
<tr>
<td>Nassau-Suffolk, NY HUD Metro FMR Area</td>
<td>$17,420</td>
</tr>
<tr>
<td>Lewis County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Clinton County, NY</td>
<td>$17,420</td>
</tr>
<tr>
<td>Poughkeepsie-Newburgh-Middletown, Metro</td>
<td>$17,420</td>
</tr>
</tbody>
</table>

Review: Combining Data

Group Indicators into Factors

Combine Factors into Components

Calculate Statewide & Regional Scores

Designate DACs based on their relative score
Combining Factor Scores

Similar to California’s CalEnviroScreen approach, we multiply Environmental/Climate Burdens by Population/Health to reflect the “effect modifier” relationship wherein sociodemographic characteristics and/or health sensitivities may exacerbate or mitigate place-based burdens/risks:

Factor scores are weighted and added before multiplying:

\[
\begin{bmatrix}
1x \\
1x \\
2x
\end{bmatrix}
\times
\begin{bmatrix}
1x \\
1x \\
1x \\
1x
\end{bmatrix}
\]

Note: Since Burdens and Vulnerabilities are multiplied, they have equal weight, regardless of how you weight things within them.
Multiply to represent that Vulnerabilities serve as Effect Modifiers to Burdens
Consider Statewide and Regional ranking to designate DACs

Statewide Score
How each community ranks (on all of the data) within the entire state

Regional Scores
How each community ranks (on all of the data) in NYC and Rest-of-State separately

NYC Scores
top 26%

Rest-of-State
top 26%

Designate communities that score in either top 25% statewide OR regionally
Designate $\leq 40\%$ of state as DACs

**Designate less than 40%**

**Pros:** May encourage proportionally more money to go to DACs

**Cons:** Leaves out some LMI and socially-vulnerable DACs

**Designate about 40%**

**Pros:** Captures more groundtruthed and LMI DACs

**Cons:** Still may not capture some LMI and socially-vulnerable DACs

**Designate more than 40%**

**Pros:** Captures more groundtruthed and LMI DACs

**Cons:** Proportion of DACs is less than the funding goal

Difficult to remove DACs later

On 10/19 several people expressed interest for designating less than 40% to drive greater-than-proportional benefits
Automatically including 19 Tribal and Indigenous Areas

<table>
<thead>
<tr>
<th>Census Tract</th>
<th>County</th>
<th>Census Place Name</th>
<th>Nation</th>
<th>Land</th>
<th>Pct of Tract Land Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>36009940200</td>
<td>Cattaraugus</td>
<td></td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>100%</td>
</tr>
<tr>
<td>36029940100</td>
<td>Erie</td>
<td></td>
<td>Tonawanda Seneca</td>
<td>Reservation</td>
<td>100%</td>
</tr>
<tr>
<td>36003940200</td>
<td>Allegany</td>
<td></td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>100%</td>
</tr>
<tr>
<td>36033940000</td>
<td>Franklin</td>
<td>Akwesasne CDP</td>
<td>Saint Regis Mohawk Tribe</td>
<td>Reservation</td>
<td>100%</td>
</tr>
<tr>
<td>36067940000</td>
<td>Onondaga</td>
<td>Nedrow CDP</td>
<td>Onondaga Nation</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36037940100</td>
<td>Genesee</td>
<td></td>
<td>Tonawanda Seneca</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36063940001</td>
<td>Niagara</td>
<td></td>
<td>Tuscarora Nation</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36009940300</td>
<td>Cattaraugus</td>
<td>Salamanca city</td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36009940000</td>
<td>Cattaraugus</td>
<td></td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36029940000</td>
<td>Erie</td>
<td></td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>99%</td>
</tr>
<tr>
<td>36063940100</td>
<td>Niagara</td>
<td></td>
<td>Tonawanda Seneca</td>
<td>Reservation</td>
<td>98%</td>
</tr>
<tr>
<td>36013037600</td>
<td>Chautauqua</td>
<td>Forestville CDP</td>
<td>Seneca Nation</td>
<td>Reservation</td>
<td>6%</td>
</tr>
<tr>
<td>36103159511</td>
<td>Suffolk</td>
<td>Mastic CDP</td>
<td>Unkechaug Nation</td>
<td>Reservation</td>
<td>6%</td>
</tr>
<tr>
<td>36103190705</td>
<td>Suffolk</td>
<td>Tuckahoe CDP</td>
<td>Shinnecock Nation</td>
<td>Reservation</td>
<td>6%</td>
</tr>
<tr>
<td>3609950300</td>
<td>Seneca</td>
<td>Seneca Falls CDP</td>
<td>Cayuga Nation</td>
<td>Owned</td>
<td>13%</td>
</tr>
<tr>
<td>36053030103</td>
<td>Madison</td>
<td>Oneida city</td>
<td>Oneida Nation</td>
<td>Owned</td>
<td>10%</td>
</tr>
<tr>
<td>36053030300</td>
<td>Madison</td>
<td>Canastota village</td>
<td>Oneida Nation</td>
<td>Owned</td>
<td>7%</td>
</tr>
<tr>
<td>36063021100</td>
<td>Niagara</td>
<td>Niagara Falls city</td>
<td>Seneca Nation</td>
<td>Owned</td>
<td>7%</td>
</tr>
<tr>
<td>36053030600</td>
<td>Madison</td>
<td>Munnsville village</td>
<td>Oneida Nation</td>
<td>Owned</td>
<td>6%</td>
</tr>
</tbody>
</table>

Tribal and Indigenous Nation Lands if:
- Tract contains >5% federally-designated reservation territory (Source: Census)
- Tract contain >5% of nation-owned land (Source: NYS parcel ownership data)
Low Population Areas

138 of 4,918 tracts (2.8%) have populations that are too low for reliable people & household data (<300 households or <500 people)

This includes sparsely-populated areas as well as group quarters like correctional facilities where there is no “household” data on things like household income

We include them on the basis of Environmental/Climate Burdens alone (if their Burdens score fall in the top ##% statewide or top ##% for NYC or Rest-of-State) (using same designation threshold as overall scoring)
Annual Update Process

Document what CJWG and staff team want to improve (future data collection or advanced analysis)

Additional data needs may emerge from public comment – Save time/budget to address

CJWG can recommend annual process to review and improve indicators (← what do you recommend?)
Legislation allows for continuous improvement

We are cataloging recommendations for data to gather and consider in the future.
Appendix 3: Health Indicators
Considerations for Health Indicators

Link to Environmental Factors

• Environmental (geographic) component of health outcomes
  ▪ For chronic conditions, exposures may have occurred many years prior and/or in places other than where the health outcome is recorded
  ▪ Environmental factors exacerbate or trigger acute events for some conditions more than others (e.g., asthma, MI)

Data Availability and Granularity

• NYSDOH only “sees” a health outcome when it appears in a dataset - Births, deaths, ED visits, hospitalizations, surveys, registries
• Need higher event frequency for stable/reliable rates and ability to share data (confidentiality)
• Data availability for small geographies in time for Draft DAC Scenarios
Potential Health Indicators

Included Indicators

• Asthma ED visits
• COPD ED visits
• Heart attack (MI) hospitalization
• Premature Deaths
• Low Birthweight
• Pct without Health Insurance
• Pct with Disabilities
• Pct Adults age 65+
• Distance to ED/critical/urgent care

Considered but Not Included

• COVID-19
• Heat stress
• Cancer
• Diabetes
• Pre-term births
• Mental Health
• Childhood Lead Exposure
<table>
<thead>
<tr>
<th>Potential Indicator</th>
<th>Rationale for Inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma ED visits</td>
<td>Strong scientific literature associating asthma with environmental exposures. Managing asthma is linked with socioeconomic status and healthcare access.</td>
</tr>
<tr>
<td>COPD ED visits</td>
<td>COPD is considered a sub-set of respiratory disease, associated with air toxics as well as personal behaviors. We considered de-prioritizing though COPD outcomes are influenced by access to healthcare.</td>
</tr>
<tr>
<td>Heart attack (MI) hospitalization</td>
<td>Cardiovascular disease in general (not MI hospitalization specifically) increasingly associated with air pollution and criteria pollutants. However, MI hospitalization data is/was readily-available, though less stable at the sub-county level.</td>
</tr>
<tr>
<td>Low Birthweight</td>
<td>Broadly represents maternal health, which is a factor of environmental, social, and structural policies. Data is available at the sub-county level.</td>
</tr>
<tr>
<td>Premature Deaths</td>
<td>Broadly represents deaths due to cancer, diabetes, heart disease, lung disease, accidents, homicides, etc., to capture systemic disadvantage. Could also be indicator of avoided deaths resulting from environmental/health policy changes</td>
</tr>
<tr>
<td>Pct with Disabilities</td>
<td>Represents susceptibility to power outages and emergency situations due to extreme weather events.</td>
</tr>
<tr>
<td>Pct without Health Insurance</td>
<td>Represents access to screening, ability to manage conditions, affordable care. May indicate structural and socioeconomic disadvantage.</td>
</tr>
<tr>
<td>Pct Adults age 65+</td>
<td>Represents susceptibility to power outages and emergency situations due to extreme weather events.</td>
</tr>
<tr>
<td>Indicator</td>
<td>Rationale for Exclusion</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>COVID-19</td>
<td>Data not yet available; cases under active investigation; testing rates not equivalent across the state and through course of the pandemic</td>
</tr>
<tr>
<td>Heat Stress</td>
<td>ED visits or hospitalization either unavailable or unreliable at sub-county level. Heat deaths too small to report at sub-county level.</td>
</tr>
<tr>
<td>Cancer</td>
<td>Cancers is multifactorial and represent a range of diseases. Some cancers are more vs. less environmentally or spatially-related.</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Hard to capture in NYSDOH datasets that contain ED visits &amp; hospitalization. Clinic/pharmacy data would better capture disease. Also, diabetes may have a weaker environmental component.</td>
</tr>
<tr>
<td>Pre-term births</td>
<td>Generally captured by low birthweight</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Mental health not well-captured in DOH data because they have ED visits &amp; hospitalization; would only see co-occurring ICD-9 codes. Clinic/pharmacy data would better capture disease.</td>
</tr>
<tr>
<td>Childhood Lead Exposure</td>
<td>Exposure data is small/unreliable at sub-county level.</td>
</tr>
</tbody>
</table>
Other indicators may capture risk factors for health outcomes

- Environmental exposures
- Potentially (or formerly) hazardous facilities
- Housing conditions
- Socioeconomic indicators
- Health insurance
- Language barriers
Indicator Limitations

Documentation (for public comment) will discuss:

• Indicators/data we **considered** but did not pursue, and why

• Data limitations, including Census (e.g., not specific enough to race/ethnicity), public health data (e.g., limited data @ sub-county level), and more

• Recommendations for future/additional community-level data (e.g., migration)

• Potential for periodic indicator review/updates