“Clean Energy Bill” - Senate Bill 5116

Section 24: By December 31, 2020, the department of health must develop a cumulative impact analysis to designate the communities highly impacted by fossil fuel pollution and climate change in Washington. The cumulative impact analysis may integrate with and build upon other concurrent cross-agency efforts in developing a cumulative impact analysis and population tracking resources used by the department of health and analysis performed by the University of Washington department of environmental and occupational health sciences.

Starting principles for the framework interpretation:
- Communities that are affected by multiple climate risks are worse off for health.
- Communities that are more susceptible or vulnerable to climate risks are worse off for health.
- Communities that are impacted sooner or to a greater magnitude are worse off for health.
- A community’s relative ranking with respect to cumulative climate impacts should reflect the degree to which the community is likely to be disproportionately affected by climate change.

Questions to address to support identification of indicators, methodology, etc.

Process:
- Who is the audience/user? When/how/on what will they be consulted?

Framework/approach:
- At what spatial scale will information be provided?
- How will climate change & fossil fuel pollution-related indicators be included in analysis? (By modifying existing inputs (e.g., environmental effects, environmental exposures) to health disparities? As additional inputs to health disparities? As separate calculation?)
  - As ‘environmental effects’? [e.g., flood risk, sea level rise]
  - As ‘environmental exposures’? [e.g., heat, smoke]
- How to support cumulative assessment of multiple impacts (e.g., relative/decile ranking within each indicator)?
- What timeframe to use for climate change projections? (Tool will need to show changing impacts with time.)
- How to handle range of climate change projections in calculations/reporting? (Should show multiple scenarios.)
- How to handle variability in other indicators in calculations/reporting?
- How do you avoid double-counting climate risks (how to weight different indicators)?
- How do you address/communicate inevitable under-reporting of climate risks?

Indicator selection:
- How does climate change affect communities?
- How does fossil fuel pollution affect communities?
- What indicators can be used to quantify these effects?
  - Note: the mapping tool currently includes natural hazards separately from the enviro health disparities. It shows socioeconomic vulnerability to hazards but does not map the hazards themselves.
- Which climate change projections can be credibly/usefully downscaled to census tract?
Final composite score

Final composite score = Pollution Burden score \times Population Characteristics score

Pollution burden

\[
\text{Pollution burden score} = \frac{\left( \text{Average percentile of Environmental Exposures indicators} + 0.5 \times \text{Average percentile of Environmental Effects indicators} \right)}{2}
\]

Population characteristics

\[
\text{Population characteristics score} = \frac{\left( \text{Average percentile of Sensitive Population indicators} + \text{Average percentile of Socioeconomic Factors indicators} \right)}{2}
\]

Environmental exposures

Environmental effects

Sensitive populations

Socioeconomic factors