

Comments on Cumulative Impact Slides

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GENERAL COMMENTS REGARDING CUMULATIVE IMPACT

1. The Cumulative Impact Report should not be conducted by the applicant. Allowing this to happen will result in issues being minimized due to the bias of the applicant's interest in advancing the proposed project. EFSB and DOER should establish relationships with reliable third-party reviewers that are independent, with no industry ties to applicants, who can undertake the CIA process and submit directly to the regulatory body at the applicant's expense.
2. As mentioned at the May 5 hearing, the acronym for a Cumulative Impact Assessment is not great - CIA. Perhaps the result of the assessment is a Cumulative Impact Report (CIR).
3. Slide 46 indicates that all EFSB jurisdictional projects will require a Cumulative Impact Assessment. However, line 974 in the law clearly states that all clean energy projects, large and small will require a cumulative impact statement. This is hugely important to uphold.

QUESTIONS REGARDING CUMULATIVE IMPACT ASSESSMENTS

What indicators do you recommend including in the CIA model?

The four categories of indicators identified by EFSB are a good starting point. To reiterate, these are Population characteristics, Built Environment, Climate Change Impacts and the Natural Environment.

I would also add another category - Cultural, Historical & Community Identify. Much is included in this category. For example, rural towns that have or face numerous industrial scale solar developments lose their sense of what type of community they are. They are no longer primarily forested and rural, they have industrial installations that they never had before. This is a huge cultural change. (For example, when I worked for the United Way after the tornados in 2010, the rural town of Monson was devastated losing acres of trees. It was reported to me by the town manager that long term, primarily older residents were having mental health challenges because their forested community no longer looked like it has for all the years prior). Also included is the important recognition that in many locations throughout Massachusetts there is

the presence of both western, but more likely pre-Columbian (Indigenous) historical and cultural sites on potential clean energy sites. The destruction of historical and cultural meaning is powerful. To quote an article on Cultural Heritage, "Cultural heritage is a reflection of society, and its preservation is vital for maintaining cultural diversity, fostering a sense of belonging, and passing down knowledge to future generations....Cultural heritage plays a crucial role in lives and history, influencing the values, beliefs, and sense of belonging"

I do not have a suggestion for the measurement for Cultural, Historical & Community Identify. These might only be able to be assessed qualitatively but this data could be as helpful and legitimate as a quantitative data source.

I would also suggest that EFSB/DOER develop a checklist of what should be assessed so that anyone reviewing the CIA can confirm that these were reviewed and relevant or not.

In terms of the proposed Indicator categories:

- For population characteristics - the suggested indicators on page 41 seems confusing. Some are public health related indicators and others are demographic in nature. Both should be considered in a CIA but combining them is confusing. Who people are and what public health and safety impacts they have are different things. I would suggest a Population Characteristics category and another that is Public Health, Safety and Welfare related. Both categories could be further expanded with additional indicators.
- For the built environment I would expand the category to include dams, stormwater management systems, municipal and community buildings (important for smaller communities), and schools or other gathering places which are at the center of smaller communities.
- For climate change impacts I would look to the Municipal Vulnerability Preparedness program for additional items. But this category should include risks to dams (overtopping), capacity of stormwater management systems (sizing of culverts), condition of roads (unpaved) and transportation access, heat islands, drought and flooding by residents. It should also consider the well-being of residents including climate change mental health issues, increased sense of isolation, etc.
- For natural environment - this should include drinking water sources (not just surface water supply watershed), BioMap land explicitly named, agricultural land available for growing.

There are other issues that might have cumulative impacts that I do not know how to categorize such as noise, lighting, and traffic - these are all usually considered in zoning and directly affect the quality of life, experience of a community.

What weights should be assigned to each indicator for the purposes of scoring?

I don't see the CIA as something that results in a score. I think that the cumulative impact should be more robust and informative than a scoring mechanism. It should provide the regulatory body with a context and a sense of the impacts on the community or affected area,

with particular focus on whether the additional burden of the proposed project will result in significantly negative impacts. A number does not achieve this.

What do you think of the proposed distances of SGAs for energy facilities?

I think the proposed distances for the specific geographic areas (SGAs) need to be re-done. I think these assumptions are premised on a static, best case or "normal" scenario of a construction site. While the construction phase does have impacts, the more important focus should be on the "life of the project" impacts. Additionally, I think EFSB and DOER should be thinking about these distances and technologies per SGA in a protective manner - assuming worst case scenarios. This approach would enable EFSB and DOER to fulfill their role of considering a community's public health, safety and welfare.

Energy Storage Systems (ESS). The most egregious of these assumptions is for BESS or energy storage. As I mentioned, in the case of a fire, which is a known risk for lithium-ion batteries, the nationally recognized best practice is to let them burn themselves out, applying lots of water to prevent thermal runaway. It is accepted, including by the National Fire Protection Association, that ESS fires cannot be extinguished by water; water is only used to reduce thermal runaway from battery to battery. For perspective to put out a Tesla car fire requires 6,000 gallons of water - something not readily available in towns without municipal water systems.

Scenario 1: Water is applied. If water is applied consistently over days, the runoff will be toxic. The fumes released will be toxic. This will continue for days. If available, local drinking water may be affected (thus the need for good containment). In the case of Moss Point in CA, the emergency response was evacuation of closest residents and staying indoors for others. In NY state in 2024, those ESS fires burned for a few days as well - fortunately these were sited in industrial parks so only the toxic plumes were an issue.

Scenario 2: No water. In towns like Shutesbury and many other Western and Central Mass municipalities, there is no municipal water - we are on 100% drinking water wells. As I mentioned, in cases of any fire in town, the pumper trucks go to designated ponds to fill up. There is literally not enough water to apply to an ESS fire in these towns. If an ESS is placed in a forest, a lithium-ion fire will definitely result in a forest fire, likely property damage, and a toxic plume for as many days as the fire burns.

Needless to say, the radius affected in either of these scenarios is well beyond 1/2 to 1 mile.

Solar

While industrial solar installations do not pose the level of risks associated with ESS, they also can have impacts in terms of erosion, change in water flow or flooding. All of these can extend beyond the 1/4-1/2 radius estimated below. In Shutesbury, we have one solar installation so far and underground water flow was definitely impacted, increasing flooding to residences downhill. Another proposed 5 sites are planned for slopes up to 30+ degrees, meaning erosion, sedimentation and flooding are likely. These impacts will be beyond the 1/2 mile radius

To improve the estimated distances related to SGAs, I have a two-part suggestion:

1. Do some ground-truthing with communities to understand the practical risks and impacts
2. Plan for the worst, anything less will mean leaving communities and their residents vulnerable because the planning will be inadequate.

Should they be broader or narrower or different for different project types?

Generally speaking, if EFSB and DOER are considering cumulative impacts for SGAs from a protective perspective, then some of the distances need to be dramatically expanded, as noted above.

- ESS - needs to be made much broader
- Solar - these are NOT farms, they are industrial installations, even those under 25MW. Please refer to them accordingly. The associated distances need to be dramatically increased as well, if EFSB/DOER is accounting for life of the project impacts such as erosion, sedimentation, heat islands, destruction of wildlife areas, etc.
- Wind Turbines - again these are not farms, they are industrial installations. The possible negative impacts are likely noise related and sound certainly travels more than 2 miles with these.
- Anaerobic Digester - my understanding that these are biomass plants. These can have risks from the release of toxic gases affecting the health of residents in the extended area around the plant. They also can have environmental impact on the region since use of organic matter may include increased tree cutting for organic refuse as the energy source.
- Networked Geothermal - While I generally support this, industrial projects would likely involve significant drilling of deep wells, having construction impacts in the short term and maybe hydrologic impacts longer term - maybe beyond ½ mile radius.
- Substations - 1 mile seems reasonable
- Fossil fuels - I don't think these should be included since they are not clean energy projects by definition

What do you think of the models proposed for Cumulative Impact Analysis?

I am not certain what you mean by models. If you are referring to the tools like the CalEnviro Screen, I think this is a good starting point but it needs expansion to include rural, non-indigenous areas, among other considerations.

If you mean the principles, I think the primary failing is assuming the applicant will have a central, self-reported role in developing the Cumulative Impact Assessment for their own project. This will fall short because it will minimize the negative impacts and community input will be skeptical from the outset. A third-party, non-industry connected consultant must do this on behalf of EFSB/DOER.

How should the EFSB best integrate EEA's Site Suitability criteria into its overall scoring process?

I think that the Cumulative Impact Assessment should be separate from the Site Suitability scoring. Site Suitability should be a clear matrix of relevant siting criteria that are weighted and assessed to establish a project score. This is different from Cumulative Impact Assessment which has a broader time horizon and will take into account factors and criteria that are not directly related to the siting. As I mentioned above, I do not think the cumulative impact should be scored; its power is in the narrative and the research/measurement of factors.

While both are related, they should be viewed as separate processes with different purposes. Taken together they can and should inform the regulatory process. An analogy might be in the health realm. A person might have a Body Weight Index that indicates they are obese. This is a score similar to site suitability. A medical professional then does an assessment of other factors - age, level of exercise, smoker or not?, other chronic conditions. These are factors that impact a person's health. When taken together, the BMI and the lifestyle factors paint a picture of a person's current and potential future health. This should be the same approach as the Site Suitability Score and the Cumulative Impact Report/Narrative.