

Purpose: Ensure the advisory opinion of EGLE in utility IRP cases is supported by a comprehensive health and environmental impact analysis in support of the state's environmental justice goals

Scope of Portfolio Build Plan/Scenarios Evaluated (herein referred to collectively as portfolios):

- Portfolio 1: Previously approved portfolio (status quo; approved PCA) run in the MIRPP **Scenario 1** (optimized through the current study period)
- Portfolio 2: Utility proposed course of action (PCA) portfolio run in MIRPP **Scenario 1**
- Portfolio 3: Optimized portfolio in MIRPP **Scenario 1**
- Portfolio 4: Optimized portfolio in **Scenario 1** with high load sensitivity
- Portfolio 5: Reasonable Alternatives to the PCA presented by the utility in MIRPP **Scenario 1**

Analysis Provided:

1a. **(FORMERLY #2)** The utility will provide the following **facility/unit level data and total annual fleet data**, in an **Excel spreadsheet(s) expressed in total tons**, to EGLE for:

- Emissions of the following:
  - sulfur dioxide (SO<sub>2</sub>)
  - nitrogen oxides (NO<sub>x</sub>)
  - carbon monoxide (CO)
  - particulate matter (PM)
  - lead (Pb)
  - mercury (Hg)
  - volatile organic carbon (VOC)
  - carbon dioxide (CO<sub>2</sub>)

These data will be presented as raw numbers/units and as the aggregate change comparing the three portfolios - #1, #2 and #5. The methodology used to determine the emissions from the respective regional transmission organization purchases will be explained. The utility will propose a sample template of what would be provided in the IRP filing to EGLE for agreement 30 days before the filing.

1b. **(FORMERLY #3b)** Analyze all portfolios to identify and quantitatively assess the potential impacts to **vulnerable communities (as defined collaboratively with EGLE)**. This quantitative assessment should address air emissions and early retirement of **fossil fuel-fired facilities**. Explain how these considerations were taken into account in the utility's decision.

2. **(FORMERLY #2a)** The utility will perform an Environmental Justice Screening using the EPA Environmental Justice Screening and Mapping Tool (EJSCREEN) **or** the Michigan Environmental Justice Screening Tool (**MiEJScreen**). The screening will include vulnerable communities within a 3-mile radius of each facility for all facilities. **Vulnerable communities will be defined collaboratively with EGLE based on the screening tools' composite Environmental Justice index/score**. The portfolios referenced in the scope above should be analyzed to qualitatively assess the potential impacts including utility proposed early retirements of **fossil fuel-fired**

facilities on vulnerable communities. The analysis should address water quality, waste disposal, and expected changes in land use for new or retiring resources.

3. **(FORMERLY #6)** To determine health impact estimates for PM2.5 emissions, the utility will use the environmental [Benefits Mapping and Analysis Program – Community Edition \(BenMAP-CE\)](#), the [Co-Benefits Risk Assessment \(COBRA\) Health Impacts Screening and Mapping Tool](#), or a **similar analytical tool with mapping features and spatial resolution down to at least the county level**. This air emissions data analysis will be performed to provide health impact analysis to assess:
  - **Overall fleetwide health impacts of utility proposed early retirement of fossil fuel-fired facilities and renewable energy adoption. Results, including impacts and associated costs, will be presented for portfolios #1 and #2.**
  - **Impacts on vulnerable communities as defined collaboratively with EGLE. Results, including impacts and associated costs, will be presented for all five listed portfolios.**
4. **(FORMERLY second part of #5)** If a decrease in PM2.5 emissions is not demonstrated at all electric generating unit(s) within a 6-mile radius of an identified vulnerable community, including any new proposed units that could reasonably be expected to locate within the 6-mile radius, conduct dispersion modeling for PM2.5 including all electric generating unit(s) within a 6-mile radius of the identified vulnerable community. The current emissions should be used to establish a baseline modeling demonstration by which to compare the future impacts of portfolio #2. Any dispersion analysis conducted pursuant to this item, doesn't necessarily need to be a refined analysis. A screening analysis employing reasonable assumptions is acceptable. How refined the analysis is at the discretion of the utility. The goal of this analysis is to assess how the ambient concentrations of PM2.5 in vulnerable communities may be affected and to encourage an assessment of ambient impacts in the siting of any new units.
5. **(FORMERLY #4)** For resources located within the non-attainment areas in the electric utility service territory, identify and assess their impact to the non-attainment status for the portfolio #2 listed above as compared to portfolio #1, and qualitatively support in testimony. The assessment should consider all nonattainment pollutants (i.e., SO2 and ozone), as well as their precursors (i.e., NOx and VOCs).
6. Narrative discussion of the quantitative and qualitative health and environmental impacts based on the analysis above, methodologies, data sources, and related observations. Explain how these considerations were taken into account in the utility's decision.