Introduction
Unitarian Universalist FaithAction NJ is a faith-based nonprofit that envisions a just New Jersey free from systemic oppression and greed, full of engaged people committed to each other, to our communities, and to the earth. Our comments reflect this vision along with the Unitarian Universalist principles of the inherent worth and dignity of every person; justice, equity and compassion in human relations; and respect for the interdependent web of all existence of which we are a part.

We have organized the comments, below, to correspond to the questions raised for the various sectors. Some of the answers are the same regardless of the sector, so they are duplicated. In general, we believe that self-reported emissions should always be checked by random sampling and that sampling of air quality should be most extensive in EJ communities, where the air quality is worst.

We are very pleased that the DEP will be doing the inventory annually from now on. We believe that regular measurement of progress is necessary to continuation of progress.

Fossil Fuel Sector
a) Are there additional obstacles or costs associated with reporting fuel sales directly to the Department?
No comments.

b) Are there any concerns in proceeding as described for this sector?
Because the inventory is dependent on self-reporting, we are concerned about under-reporting of emissions.

c) Are there better ways to collect GHG monitoring and reporting information from fossil fuel manufacturing and distribution that the Department should consider?
In addition to self-reporting, the DEP should try to validate the reports by sampling emissions at randomly selected times and places. Also, because the major sources of emissions tend to be in Environmental Justice (EJ) communities, install permanent ambient air quality sampling stations on roofs of governmental buildings in EJ communities, for verifying the emissions in that area. Finally, as individual air quality permits are issued or re-issued to major emitters of greenhouse gases, require that install an automatic sampling device connected by cell/radio technologies directly to NJDEP-Division of Air Quality.

Electric Generation Sector
a) Any concerns with intended approach?
Because the inventory is dependent on self-reporting, we are concerned about under-reporting of emissions.
In addition to self-reporting, the DEP should try to validate the reports by sampling emissions at randomly selected times and places. Also, because the major sources of emissions tend to be in Environmental Justice (EJ) communities, install permanent ambient air quality sampling stations on roofs of governmental buildings in EJ communities, for verifying the emissions in that area. Finally, as individual air quality permits are issued or re-issued to major emitters of greenhouse gases, require that install an automatic sampling device connected by cell/radio technologies directly to NJDEP-Division of Air Quality.

**Gas Public Utility Sector**

a) Are there additional obstacles or costs associated with monitoring & reporting GHG emissions directly to the Department?

No comments.

b) Are there any concerns in proceeding as described for this sector?

Recent research published in the February 20 edition of Nature indicates that emissions inventories are seriously undercounting methane. Because of this, it will be especially important to double-check methane emissions through actual measurements. This could be done using random sampling if the cost is otherwise prohibitive.

The DEP should consider how methane emissions are being measured and how errors can be introduced in the measurements. How are pipeline leaks measured? How about leaking from fracking? Are gas-fired plants sampled, or simply self-reported? In sum, what are the possible sources of errors in measuring methane emissions, and how can the DEP determine whether the local errors are as serious as this research suggests?

c) Currently, transmission line emissions are estimated by loss factors per mile linear pipe. Are there other methods that should be employed to estimate these emissions?

Sampling of the air quality near the pipelines should be done at random time intervals, especially near EJ communities.

d) Are there better ways to collect greenhouse gas monitoring and reporting information from natural gas operators and gas public utilities that the Department should consider?

Permanent ambient air quality sampling stations on roofs of governmental buildings in EJ communities should be done. Also, as individual air quality permits are issued or re-issued to major emitters of greenhouse gases, require that install an automatic sampling device connected by cell/radio technologies directly to NJDEP-Division of Air Quality.

**Other Significant Sources**

a) Are there other significant sources of methane emissions that the Department should consider for this rulemaking?

Recent research published in the February 20 edition of Nature indicates that emissions inventories are seriously undercounting methane. Because of this, it will be especially important to double-check methane emissions through actual measurements. This could be done using random sampling if the cost is otherwise prohibitive.

b) Are there better ways to collect GHG monitoring and reporting information from methane emission sources that the Department should consider?

Sampling air quality rather than relying on self-reporting is important to verify that the inventory is correct.