4. Sustainability

4.1 Current Status

The Appalachian Laboratory continues to implement practices that enhance the environmental sustainability of operations at AL and is seriously committed to the reduction of greenhouse emissions and overall climate footprint. In 2007 the Appalachian Laboratory Environmental Sustainability Council (ALESC) was created as an advisory body to UMCES Environmental Sustainability Council at the laboratory/departmental level. The ALESC has completed a comprehensive inventory of greenhouse gas emissions and is working towards completion of an institutional action plan for becoming climate neutral and reducing greenhouse gases.

4.2 Sustainable Approach

With continued monitoring of emissions, AL's goal is to keep emissions on a downward slope. This will require continued close monitoring and better maintenance of equipment to gain as much energy efficiency as possible from existing equipment, replacement of non-energy efficient equipment, and continuation of recycling and conservation efforts already in place. In addition AL will need to set aggressive energy efficiency targets for any new construction, equipment or systems being implemented in the next 10 years. In addition to setting high goals for LEED certification levels, (Silver certification should be a minimum, with Gold being the target), separate targets should be set for energy efficiency, (minimum of 35% savings over a similar code compliant building). Laboratory buildings are harder to achieve more aggressive targets but with careful planning and attention to new technologies and control systems these targets are achievable.

The 10-year study of GHG inventory shows that 69.% of the Appalachian Lab's CO2 emissions result from electricity use. The bulk of the electricity and natural gas usage is for lighting, heating, ventilation and cooling of the facility.

Although AL emissions have been on a slight decrease for the last several years, the first step toward continuing reducing the AL carbon footprint must focus on the use and consumption of energy within the building.