



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

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## **MassDEP Bureau of Air and Waste**

### **Response to Comment on:**

### **Proposed Amendments to 310 CMR 7.72: *Reducing Sulfur Hexafluoride Emissions from Gas-Insulated Switchgear***

**August 2017**

### **Regulatory Authority:**

**M.G.L. c. 21A, §§ 2 and 8, M.G.L. c. 21N, § 3(d),  
and M.G.L. c. 111, § 2C and 142A – 142E**

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## I. INTRODUCTION

This Response to Comment (RTC) document includes detailed responses to comments received on proposed amendments to 310 CMR 7.72: *Reducing Sulfur Hexafluoride Emissions from Gas-Insulated Switchgear*.

These amendments are part of a larger rule-making that includes six regulations designed to ensure compliance with the Global Warming Solutions Act (GWSA). The other five regulations are discussed briefly below to provide context, but detailed comments and responses are included in separate response to comment documents.

This RTC begins with a background section that describes all six regulations, explains how the various agencies coordinated in development of the regulations, and summarizes a 2016 court decision and Governor Baker’s executive order that requires promulgation of these regulations. Detailed comment summaries and responses follow for comments received on 310 CMR 7.72. Additional information about the regulations is included in the Background Document (Technical Support Document or TSD) that was published when the Massachusetts Department of Environmental Protection (MassDEP) proposed the regulations in 2016.<sup>1</sup>

## II. LIST OF COMMENTERS

Eversource Energy  
National Grid  
University of Massachusetts  
Jack Dean  
Nira Pollock

## III. BACKGROUND

On May 17, 2016, MassDEP was directed by the Supreme Judicial Court in the Kain v. DEP decision, 474 Mass. 278 (2016) to adopt and implement regulations that comply with the requirements of Section 3(d) of the GWSA to ensure that the 2020 limit is met. To ensure the directives of the Supreme Judicial Court in Kain would be met in a timely manner and to achieve other goals related to climate change, Governor Baker issued Executive Order No. 569 (“Establishing an Integrated Climate Change Strategy for the Commonwealth”) on September 16, 2016..

On December 16, 2016, MassDEP, as directed and approved by the Secretary of Energy and Environmental Affairs (EEA), and in consultation with the Department of Energy Resources (DOER), the Department of Public Utilities (DPU), and the Secretary of Administration and

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<sup>1</sup> See *Background Document on Proposed New and Amended Regulations: 310 CMR 7.00 and 310 CMR 60.00, Air Pollution Control for Stationary and Mobile Sources* at <http://www.mass.gov/eea/agencies/massdep/air/climate/section3d-comments.html>.

Finance (ANF), proposed six new regulations and amendments that limit or reduce GHG emissions in Massachusetts. These regulations, which target emissions from multiple categories of sources, were described in the TSD that was issued with the proposed new regulations. The regulations addressed sulfur hexafluoride (SF<sub>6</sub>) emissions from gas-insulated switchgear, methane (CH<sub>4</sub>) emissions from the natural gas distribution network, carbon dioxide (CO<sub>2</sub>) emissions from electricity generation facilities, and CO<sub>2</sub> emissions from the transportation sector.

In the final regulations and Response to Comment documents, which have been prepared in consultation with DOER, DPU, and ANF, MassDEP is promulgating four non-electric sector regulations, and EEA and MassDEP are jointly promulgating two electric sector regulations. The non-electric sector regulations are: (1) amendments to 310 CMR 7.72 (SF<sub>6</sub> emissions from gas-insulated switchgear); (2) amendments to 310 CMR 60.05 establishing CO<sub>2</sub> limits on MassDOT operations; (3) new regulation at 310 CMR 60.06 (imposition of CO<sub>2</sub> limits on the state-owned fleet of passenger vehicles); and (4) new regulation at 310 CMR 7.73 (CH<sub>4</sub> limits on the natural gas pipeline distribution system). The electric sector regulations are: (1) new regulation at 310 CMR 7.74 (electricity generating facility CO<sub>2</sub> emissions limits); and (2) new regulation at 310 CMR 7.75 (Clean Energy Standard or CES), which are being promulgated by MassDEP and the Secretary.

MassDEP held seven public hearings in 2017 on February 6, 2017, (4 hearings) and February 8, 2017, (3 hearings) and set a public comment period extending to February 24, 2017, on the proposed regulations. Comments were submitted from over 900 stakeholders, including state agencies and authorities, regional transportation organizations, municipalities and municipal electricity organizations, owners and operators of investor-owned utilities, retail electricity sellers, competitive electricity suppliers, owners and operators of natural gas distribution systems, owners and operators of gas-insulated switchgear, trade and industry organizations, the New England regional transmission organization, municipal organizations, environmental advocates and citizens, individually and in affiliation with advocacy groups.

Many positive comments were received on all of the proposed non-electric sector regulations. In addition, MassDEP received helpful submissions of corrected and updated data from regulated parties that assisted the agency in finalizing achievable limits in all of these regulations, but also will ensure sufficient GHG emissions reductions by 2020 to meet the GWSA limit of 25% reduction in GHG emissions from 1990 GHG emissions levels. MassDEP also appreciates the constructive criticism contained in many comments that ranged from improving clarity to the substance of the program design. MassDEP has sought to improve the regulations in response.

Please see the Response to Comment document on regulations 310 CMR 7.74 and 7.75 for additional Background discussion, and for comments and responses that may be relevant for the other regulations, but were raised most often by commenters in relation to the electricity sector regulations.

## IV. COMMENTS AND RESPONSES

Five commenters addressed SF<sub>6</sub> emissions in their public comments, of which two commenters expressed general support for the regulation.

**Comment:** Eversource Energy submitted comments stating that the proposed company-specific mass limit is not achievable by 2020 due to the ongoing and expected growth of the company's use of gas-insulated switchgear. Due to the increased demand for electricity and resulting significant system growth in Greater Boston, Eversource intends to deploy new gas-insulated switchgear that is forecast to increase the company's SF<sub>6</sub> capacity by roughly 130% from 2015 to 2020 (more than doubling SF<sub>6</sub> capacity over 5 years). Eversource Energy suggested that an achievable mass limit could be based on a 0.3% leak rate for GIS equipment installed after 2015, resulting in a 2020 emission limit of 2,460 lbs. of SF<sub>6</sub>. This corresponds with a 0.75% system-wide leak rate, which is below the 1% rate limit requirement.

**Response:** Given the detailed information provided in Eversource's comments regarding projected growth of its SF<sub>6</sub> capacity due to increased deployment of GIS, MassDEP has revised the relevant mass limits on SF<sub>6</sub> emissions. The prior calculations behind the proposed mass limits assumed an industry-wide annual growth rate of SF<sub>6</sub> capacity of 5%; this was based on a review of national data and is in line with historical trends. However, Eversource expects that the company's SF<sub>6</sub> capacity will increase at roughly five times that rate by 2020, and submitted evidence supporting that claim. After incorporating this growth, the calculations submitted by Eversource indicate that the adjusted 2020 emission limit would result in a leak rate below the required 1%. Accordingly, MassDEP has adjusted the company-specific and aggregate mass limits proposed in 310 CMR 7.72 to account for the projected growth. These adjustments impose the annually declining emission mass-based limits required by the Massachusetts Supreme Judicial Court in the Kain decision and maintain the stringency of the SF<sub>6</sub> emission rate limits that took effect on January 1, 2015.

**Comment:** Eversource commented that the regulation should include an alternative compliance option to provide additional flexibility beyond the flexibility provided by the existing emergency exemption provisions.

**Response:** MassDEP did not add an alternative compliance option to 310 CMR 7.72. MassDEP has determined that the mass limits are achievable, and that the emergency exemption provisions are sufficient to ensure that regulated entities can comply. In its comments, National Grid expressed that the mass limits are "appropriate" as they stand in the final regulation. Eversource indicated that the final limits "appropriately balance" environmental goals and electricity reliability needs.

**Comment:** National Grid commented that the SF<sub>6</sub> mass limits proposed for their company "appear to be appropriate." They voiced support for establishing numerical mass limits in the regulation rather than including a limit-setting formula, and supported setting mass limits for 2018-2020 as proposed, not beyond 2020. In addition, National Grid supports compliance based on company-specific emission limits, as proposed, rather than aggregate limits comprising the limits for both companies.

**Response:** MassDEP has retained the numerical mass limit proposed for National Grid, and has not included mass limits beyond 2020. MassDEP added language clarifying that compliance is based on company-specific emission limits, not the aggregate emission limits. Compliance with individual company limits will ensure compliance with the aggregate limit.

**Comment:** Two commenters suggested specific changes to the emergency event exemption section. These included a broader list of events that would qualify for exemption of any associated emissions, exemptions of emissions that occur in the event that GIS equipment leaks exceed the manufacturer-guaranteed maximum annual leak rate, and exemption of emissions “due to any unexpected and significant expansion of the system that is necessary to meet increased customer demand.” (Eversource, National Grid)

**Response:** While commenters suggested that additional exemptions be included in the list of emergency events, the comments did not explain why the new exemptions have become necessary due to the introduction of the mass-based limits into the existing regulation. MassDEP did clarify portions of the emergency exemption language but did not modify the list of events that would qualify for exemption from the emission limits. MassDEP’s clarifications compel the submission of specific information, allowing MassDEP to exercise its discretion to exempt emergency events, such as many of those described in the comments. MassDEP’s assessment would be made on a case-by-case basis after considering documentation provided by the affected company. MassDEP has determined that the finalized emergency event exemption language is sufficient to prevent regulated entities from entering non-compliance due to unavoidable, unpredictable emissions.

**Comment:** One commenter requested clarification regarding regulatory requirements for small owners of GIS. (UMass)

**Response:** The amendments in this rulemaking apply only to GIS owners that are federal reporters and do not apply to “small owners” of GIS. Applicability criteria, laid out at 310 CMR 7.72(3), provide a clear description of the requirements for different types of GIS owners. In addition, MassDEP added a “once in, always in” provision to the applicability language to clarify that the companies provided with emission limits in the regulation are required to comply with 310 CMR 7.72 regardless of applicability under EPA’s reporting program (40 CFR Part 98).