COMMONWEALTH OF VIRGINIA

Department of Environmental Quality

Subject: **APG-578 – Sudden and Reasonably Unforeseeable Events in the Context of Planned Electric Outages**

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Date: **September 30, 2025**

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Summary:
DEQ Guidance Memo APG-578 addresses the use of emergency generators in the case of "sudden and reasonably unforeseeable events" as the result of a planned electric outage. The Virginia Air Pollution Control Regulations defines the term "emergency" as it applies to back-up emergency generators both under 9 VAC Chapter 80 Article 6 and 9 VAC Chapter 540. Under both regulations the term "emergency" includes, among other things, a "failure of the electric grid"- but *only* when that failure "arises from sudden and reasonably unforeseeable events where the primary energy or power source is disrupted or disconnected due to conditions beyond the control of an owner of a source." To date, DEQ has not allowed for a planned (scheduled) outage event by a primary energy provider to qualify as "emergency" since, in that scenario, a source has advance notice for when the outage will occur and should be able to take the steps necessary to ensure electrical service is maintained without the need to run their emergency generators. This can be accomplished by the use of Tier 4 or Tier 4 equivalent generators or by using portable non-road engines. However, in certain circumstances these options may not be available to a source, and it becomes necessary to run their existing emergency (usually Tier 2) generators.

This guidance memo refines the definition of "sudden and reasonably unforeseeable" to allow the use of emergency generators for a planned outage if a source is notified about the event within fourteen (14) calendar days or less. The guidance further identifies the necessary notifications to DEQ and describes what records should be kept by the source and what reports should be sent to the Agency. Nothing in the guidance allows the source to violate any requirements set forth in their DEQ issued air permit.

Electronic Copy:
Once effective, an electronic copy of this guidance will be available on:

- The Virginia Regulatory Town Hall under the Department of Environmental Quality (http://www.townhall.virginia.gov/L/gdocs.cfm?agencynumber=440);
- The Department's website at https://www.deq.virginia.gov/news-info/shortcuts/permits/air/issued-air-permits-for-data-centers

Contact Information:
Please contact Tamera Thompson, ((804) 698-4502. Tamera.thompson@deq.virginia.gov) with any questions regarding the application of this guidance.

Certification:
As required by Subsection B of § 2.2-4002.1 of the APA, the agency certifies that this guidance document conforms to the definition of a guidance document in § 2.2-4101 of the Code of Virginia.

Disclaimer:
This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate or prohibit any particular action not otherwise required or prohibited by law or regulation. If alternative proposals are made, such proposals will be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

APG- 578 -Sudden and Reasonably Unforeseeable Events in the Context of Planned Electric Outages

OCTOBER 1, 2025

I. Background

The Virginia Department of Environmental Quality (DEQ)'s regulations include two air permit programs (Chapter 80, Article 6[1] and Chapter 540[2]) that are potentially applicable to the use of emergency generators[3]. The vast majority of emergency generators have been (and will continue to be) permitted via Article 6. In these regulations, emission units that qualify as emergency generators are generally subject to less stringent requirements than emission units classified as non-emergency generators. In order to qualify as an emergency generator, a generator can only operate in certain limited circumstances. In both regulations, one of the allowed circumstances for emergency generator operation is during events which are considered "emergency." Under the terms of both regulations (9VAC5-540-20 (defining "emergency") for Chapter 540 and 9VAC5-80-1110 (defining "emergency") for Chapter 80, Article 6), an "emergency" includes, among other things, a "failure of the electric grid"—but *only* when that failure "arises from sudden and reasonably unforeseeable events where the primary energy or power source is disrupted or disconnected due to conditions beyond the control of an owner of a source." Previously, DEQ's interpretation as stated on the DEQ external website explained that "'[s]udden and reasonably unforeseeable events' do **not** include scheduled or planned power outages associated with electricity service provider activities." DEQ now issues this new guidance document, pursuant to Virginia Code § 2.2-4002.1, to refine the meaning of "sudden and reasonably unforeseeable events" in the context of scheduled or planned power outages when they are beyond the control of a facility operator or owner.

[1] DEQ's site-specific Minor New Source Review (NSR) regulation for all source categories

[2] DEQ's General Permit expedited alternative to Minor NSR for qualifying emergency generator-only applications

[3] In this context/document, "emergency generator" means the combination of a fossil fuel-fired (usually diesel) reciprocating internal combustion engine (RICE) with an integrated electricity generator. Although the vast majority of emergency generators permitted by DEQ fall within this description, the provisions of this document are also intended to cover other types of potentially applicable emergency generators (turbines, etc.).

At the present stage of technological development, a permitted source is limited in the number of alternatives to stationary internal combustion engine (ICE) generators, in the event of a planned outage by the primary power provider. The current options are as follows:

- **Portable emergency generators (diesel-fired nonroad engines):** Portable emergency generators that are driven by diesel-fired nonroad engines have become a common solution for sources faced with notice of imminent power outages. Portable emergency generators that will remain on site at any particular location for a limited duration (≤12 months) qualify as nonroad engines, and they are therefore not considered a stationary source under the Clean Air Act (42 U.S.C. § 7602(z)) and its corresponding state regulations (9VAC5-80-1110).
- **Tier 4[4] generators:** Tier 4 (and Tier 4-equivalent) generators are environmentally cleaner than typical emergency generators or nonroad engine portable diesel generators, which are typically Tier 2 generators. DEQ strongly encourages sources installing new emergency generators to use Tier 4 (or Tier 4-equivalent) generators or other cleaner technologies (such as natural gas-fired generators) as the primary alternative to power from the electric grid. DEQ also encourages existing sources with emergency generators to replace and/or upgrade their older Tier 2[5] emergency generators with Tier 4 (or Tier 4-equivalent) generators whenever possible, but DEQ does recognize that there are inherent time constraints and costs applicable to generator replacement within the timeframes associated with most planned outages.

Loss of power: In the absence of portable emergency generators, Tier 4 or Tier 4-equivalent generators or other cleaner technologies (such as natural gas-fired generators), or connection to a working electric grid, a source holds no option other than to shut down. When a source receives notice of an imminent "planned" power outage by the primary power provider, the most environmentally clean alternative that is reasonable and readily available is generally a stationary RICE-driven generator. "Planned" power outages (in spite of the label) are generally not scheduled based on the convenience of their timing, but instead on the basis of unforeseeable and irreconcilable demands on the electric grid. The terms "sudden" and "reasonably unforeseeable," then, must be understood in context, in light of the time constraints involved in obtaining a portable, Tier 4 or Tier 4 equivalent generator. However, these terms must also be understood in light of DEQ's statutory directive to maintain and improve air quality and the resulting need to incentivize the regulated community to make the transition to the use of Tier 4 or Tier 4 equivalent generators or other cleaner technologies (such

[4] "Tier 4" is a U.S. EPA designation generally understood to mean diesel-fired RICE-driven generators that are equipped with advanced air pollution control equipment. Tier 4 generators are typically allowed to operate both for emergency and non-emergency purposes.

[5] "Tier 2" is a U.S. EPA designation generally understood to mean diesel-fired RICE-driven generators that are not equipped with advanced air pollution control equipment. Except for very limited exceptions, Tier 2 generators are typically allowed to operate only during emergency events.

as natural gas-fired generators). These terms must likewise be understood in a way that gives meaningful effect to each word of the definition of "emergency," so that a "planned" outage is *not only* "beyond the control of an owner of a source," *but is also* "sudden and reasonably unforeseeable."

II. Circumstances Where a Planned Outage Might Constitute a "Sudden and Reasonably Unforeseeable" Event

In light of this analysis, DEQ considers that an electric outage may sometimes be a "sudden and reasonably unforeseeable" event, even if the electricity service provider has "scheduled" or "planned" the outage and given notice to a source in advance. DEQ does not purport to provide an exhaustive or definitive list of examples of planned outages that might constitute an emergency under Chapter 540 and Chapter 80, Article 6. Whether a specific planned outage actually constitutes an emergency depends on the totality of the circumstances. Without limiting the scenarios where this might occur, DEQ considers that the following scenario illustrates one example of a planned outage that constitutes an "emergency," as defined in either regulation.

A permitted source with emergency generators receives notice from an electricity service provider fourteen (14) calendar days or less in advance of a planned outage. Power outage events longer than fourteen (14) calendar days normally provide sufficient notice for an operator of emergency generators to acquire and set up temporary mobile (i.e., non-road) generators on a site. The permittee takes the following measures in response:

1. Within 24 hours of receiving the notice, the permittee notifies DEQ that it will need to operate one or more of its permitted emergency generators and provides DEQ with the written notice from the electric company informing the permittee of the time, place, expected duration, and manner of the scheduled outage.
2. The permittee provides a written explanation with the notice, with supporting documentation, of the basis for its need to operate the permitted emergency generators.
3. The permittee provides a plan of action with the notice to include an estimate of the time needed to operate the permitted emergency generators and specifies exactly which generators and their rated electrical capacity are proposed for use.
4. If the outage continues beyond a single day, the permittee provides DEQ with daily reports of the hours of operation and the quantity of fuel combusted for each emergency generator operated during the outage; and
5. Within 5 business days of the restoration of power from the electric service provider submits a report to DEQ detailing the total hours of operation and total fuel consumption for each emergency generator that operated during the outage.

DEQ considers the above to illustrate an example of a planned outage that constitutes an "emergency" as defined in either regulation.

If there are extenuating circumstances such as a shortage of portable emergency generators (often due to natural disaster events on the continent, or if a power outage applies to a large number of sources using emergency generators such that the market capacity for such temporary generators is exceeded) the operator alleging such extenuating circumstances should document said conditions in writing to DEQ, and then DEQ may find that such conditions satisfy the definition of emergency as reasonably intended by 9VAC5-80-1110.

III. Permit Terms

Emergency generators remain subject to the terms and conditions of their air permits during all periods of operation, especially with respect to emissions limits and other permit terms established by DEQ or the Federal Government that are not waived during emergency operations.