

Air Pollution (Monitoring and Control) Bill

A Bill to

Improve air quality through the setting of targets and the establishment of a high resolution network of air pollution monitors across England; make provision for the analysis and publication of air pollution data; establish a process for obtaining independent expert advice in relation to air pollution; require the publication of a strategy to reduce air pollution from controllable sources and regular reports to Parliament on progress; and for connected purposes.

Clause 1 - Principal Aim

The Secretary of State must carry out their duties under this act with the principal aim of reducing the harm to health caused by air pollutants from controllable sources, by ensuring the emission of such pollutants is reduced in line with targets set under section 4 and eliminated by 2030.

Clause 2 - Establishment of high resolution air pollution monitoring network

1. Within 12 months of the passage of this Act, the Secretary of State shall install a network of continuous sampling points, which must as a minimum ensure sampling:
 - a. in every postcode district;
 - b. in the vicinity of every urban school and hospital ;
 - c. in any other location where the Secretary of State considers vulnerable populations are at risk of exposure to pollution;
 - d. in any other location specified by the Secretary of State for the purposes of assessing where intervention is most needed within a postcode district and / or monitor the impact of an intervention and / or monitor a source of pollution.
2. Local authorities must be consulted in relation to the minimum sampling criteria in subsection (1) and may request the designation of a sampling location.
3. For the purposes of installing the network referred to in subsection (1) the Secretary of State may include pre-existing sampling points, provided that such points satisfy subsection (4).
4. Each sampling point must:
 - a. assess pollution using low-cost, continuous monitoring equipment that meets certification criteria set out in regulations;
 - b. be sited in accordance with criteria set out in regulations;
 - c. provide data with minimum time coverage of one hour, or other appropriate timescale;
 - d. assess the levels of relevant pollutants.
5. The operation of the network of monitors must allow data to be collected in real time in such a way that as a minimum:
 - a. allows the disaggregation of pollutants into different sources and including whether these are controllable;
 - b. allows local authorities and / or the Secretary of State to inform and / or trigger interventions to control or prevent the operation, installation or other use of the source of the pollutants concerned;

- c. allows for the comparison of sampling points for the purpose of informing the prioritisation of interventions and / or identifying the location for reference grade monitoring.
6. The Secretary of State must, within six months of the passage of this Act, make provision by regulations as to the vulnerable populations referred to in subsection (1)(c) and any other criteria or decision in this section.
7. The Secretary of State must obtain independent advice from the Committee in relation to the regulations and decisions in this section.
8. For the avoidance of doubt the monitoring network referred to in this section shall be installed in addition to the maintenance of the traditional network of points sampled by reference grade monitors.

Clause 3 – Duty to maintain registers and information on air pollution

1. The Secretary of State must within 6 months of passing of this Act publish:
 - a. a register of all relevant pollutants;
 - b. a register of all known, controllable sources of each pollutant;
 - c. a register of technologies that in their opinion are clean alternative technologies as defined in the Interpretation section, and
 - d. a register of sources of pollution for which no clean alternative technologies currently exist.
2. The registers referred to in subsection (1) must be prepared or updated in accordance with the independent advice obtained under section 6.
3. The Secretary of State must take appropriate steps to ensure that the registers are made available to the public.
4. For the purposes of preparing the registers referred to in subsection (1) the Secretary of State may require the provision of pollutant data from the operator of the source(s), or what the Secretary of State reasonably considers to be a source, of that pollutant.

Clause 4 - Duty to set targets

1. Within 12 months of the passage of this Act, for each relevant pollutant, the Secretary of State must
 - a. provide a target date by when the emissions of pollutants from controllable sources will be eliminated that shall be no later than 2030
 - b. provide annual interim targets designed to meet the elimination date
2. The Secretary of State must further ensure that
 - a. ambient pollution levels of relevant pollutants fall below World Health Organisation guidelines by 2030 at the latest;
 - b. ambient pollution levels of relevant pollutants fall below the levels of protection as provided by law, regulations and practices, including legislation derived from the European Union, that are in place at the point that the United Kingdom exits the European Union.
3. Targets defined by this section shall maximise reductions in the adverse impact of air pollutants on human health.

4. Any regulation setting targets in this section must not be made unless a draft of the statutory instrument containing them has been laid before and approved by a resolution of each House of Parliament.

Clause 5 – Publication of open-access data

1. The Secretary of State shall establish an air quality portal that provides open access to:
 - a. local and national air quality data obtained via all pre-existing reference grade networks and through low-cost monitoring as set out in section 2, and
 - b. The registers referred to in section 3.
2. The portal in subsection(1) must publish measured data online in real-time in such a way that as a minimum it:
 - a. provides the disaggregation of pollutants into different sources, including whether these are controllable;
 - b. Provides the public, particularly vulnerable populations, with access to readily understandable information, forecasts on levels of air pollutants and alerts about high pollution episodes;
 - c. allows local authorities and / or the Secretary of State to inform and / or trigger interventions to control or prevent the operation, installation or other use of the source of the pollutants concerned.

Clause 6 – Duty to obtain independent advice

1. There shall be an independent body to be known as the Committee on Air Pollution and Health (referred to as “the Committee”).
2. It is the duty of the Committee to provide independent advice to the Secretary of State on the matters set out in this Part.
3. Within six months of the passage of the Act, the Secretary of State must obtain and publish advice from the Committee on:
 - a. targets specified in section;
 - b. relevant pollutants;
 - c. impacts of air quality on human and environmental health;
 - d. sampling of air pollution;
 - e. targets required to reduce the impact of air pollution on health;
 - f. clean alternative technologies;
 - g. health indicators and metrics against which improvements in air quality can be measured;
 - h. policies required to reduce the impact of air pollution on health.
4. The Committee shall consist of persons appointed by the Secretary of State having regard to the desirability of securing that the advice taken as a whole reflects experience in or knowledge of the following:
 - a. air quality and climate change policy at national and international level, and in particular the health impacts of such policy;
 - b. human health;
 - c. air quality and monitoring science;
 - d. business and industries impacted by air quality policy;

- e. differences in circumstances between the capacity of local authorities and between the capacity of local authorities compared to central government to take action in relation to air quality;
 - f. economic analysis and forecasting;
 - g. energy production and supply;
 - h. transport and mobility;
 - i. financial investment;
 - j. technology development and diffusion.
5. Prior to making any decision under this Act or any order that seeks to amend a provision of this Act, the Secretary of State must obtain the advice of the Committee.
 6. Where a decision is taken contrary to the advice obtained, a full explanation must be provided as part of the Secretary of State's annual report under section 8.

Clause 7 – Duty to prepare proposals and policies to meet targets

1. As soon as practicable and within six months of the advice provided in section 6, the Secretary of State must prepare and publish a report setting out proposals and policies for meeting the objective in section 1 and the targets specified in section 4.
2. The report must set out, but is not limited to:
 - a. the Secretary of State's current policies, and
 - b. the timescales over which those policies and proposals are expected to take effect.
3. The report must explain how the proposals and policies set out in the report affect different sectors of the economy.
4. The report must outline the implications of the proposals and policies as regards the impact on health indicators.
5. The proposals and policies, taken as a whole, must complement climate change policies.
6. Actions taken to bring new clean alternative technologies to market where they do not yet exist.

Clause 8 – Reporting

1. It is the duty of the Secretary of State to lay before Parliament in respect of each year, beginning with the year 2021, a report on progress, setting out the following:
 - a. the progress that has been made towards meeting the objective and targets that have been set under Part 1, which shall include the following as a minimum:
 - i. presentation of monitoring data that shows trends in defined public health and environmental indicators;
 - ii. amount for the period in question for emissions, ambient concentrations and removal of a particular pollutant, as well as net emissions of that pollutant;
 - iii. identification of methods used to measure or calculate those amounts;
 - iv. whether pollution levels in a given year represent an increase or decrease compared to the previous year, disaggregated by individual pollutants;
 - v. actions taken and policies implemented to reduce and where possible eliminate emissions of controllable sources of pollution;

- vi. the further progress that is needed to meet those targets and whether those targets are likely to be met.
2. The Secretary of State shall obtain the Committee's advice in respect of the matters specified in subsection (1), and the Committee may specify additional indicators of progress that must be included under subsection (1)(a).

Interpretation

In this Act—

“baseline” refers to the current level of measured pollution, particularly in the most affected areas of England;

“black carbon” or “BC” means carbonaceous particulate matter that absorbs light;

“clean alternative technologies” or “CAT” represent the most effective and advanced techniques to eliminate air and climate pollution, and, where that is not possible, to reduce emissions as far as practicable from any given source or activity, in the shortest time possible, taking into account the benefits and costs where these include the cost savings over time associated with those benefits. CAT includes both the technology used and the way an installation is built, operated and maintained;

“controllable” as distinguished from natural irreducible or imported contributions;

“emission” means the release of a substance from a point or diffuse source into the atmosphere;

“fine particulate matter” or “PM2.5” means particles with an aerodynamic diameter equal to or less than 2.5 micrometres;

“man-made” refers to actions, outcomes, or resulting atmospheric emissions that are directly or indirectly associated with human activities;

“nitrogen oxides” or “NOx” means nitric oxide and nitrogen dioxide, expressed as nitrogen dioxide;

“non-methane volatile organic compound” or “NMVOC” means all organic compounds (other than methane) arising from human activities which are capable of producing photochemical oxidants by reactions with nitrogen in the presence of sunlight;

“relevant pollutant” means any substance present in ambient air and likely to have harmful effects on human health and/or the environment as a whole, and includes but is not limited to the following man-made or natural substance: coarse, fine and ultra-fine particulate matter; black carbon; carbon dioxide, carbon monoxide, nitrogen oxides; ozone; methane; non-methane volatile organic compounds; sulphur dioxide; arsenic; cadmium; mercury; nickel and polycyclic aromatic hydrocarbons, whether these are primary and / or secondary pollutants and / or precursors.

“sulphur dioxide” or “SO₂” means all sulphur compounds expressed as sulphur dioxide, including sulphur trioxide, sulphuric acid, and reduced sulphur compounds such as hydrogen sulphide, mercaptans and dimethyl sulphide;

“vulnerable populations” are those communities that suffer from disproportionately high levels of pollutants, with concomitant disbenefits and / or those communities that suffer disproportionately from any given level of pollutants as compared to the average community, as defined in accordance with independent advice obtained by the Secretary of State.

Having obtained independent advice in accordance with the considerations set out in section 4 (2), the Secretary of State may by order amend the definition of “relevant pollutant” and “vulnerable populations” in subsection (1) to add to the list in that definition.