To the attention of:
Mr. Frans Timmermans, Executive Vice-President of the European Commission
Ms. Kadri Simson, EU Commissioner for Energy

Copy to:
Ms. Stella Kyriakides, EU Commissioner for Health and Food Safety
Ms. Mechthild Wörsdörfer, Deputy Director-General – Coordination of the Just and Green Energy Transition

22 November 2022

Subject: Fulfil the potential of the Ecodesign measures for domestic cooking appliances to reduce air pollution and protect the health of EU citizens

Honourable Executive Vice-President Mr. Timmermans,
Honourable Commissioner Ms. Simson,

We have noticed with interest the ongoing review of the Ecodesign measures for domestic cooking appliances. Gas cooking is a major source of indoor air pollution; a new study by independent research organisation TNO estimates that 7,3% of paediatric asthma cases in the EU, costing society 3,5 billion Euros per year, could be avoided if gas stoves were removed[1]. Ecodesign measures have proven to be an effective tool to enhance product energy performance and improve their environmental sustainability. However, and despite the EU's commitment to the Health in All Policies approach[2], the potential to protect and improve the health of European citizens remains underexplored, as one of the main sources of indoor air pollution (gas cooking) has so far remain unregulated.

We therefore call on you to reflect the health risks of gas cooking in the ongoing revision of the Ecodesign measures for domestic cooking appliances by setting NO_2 emission limits and phasing out the sale of gas cooking appliances, removing this source of toxic indoor air pollution from our homes.

Air pollution is the leading environmental health risk factor in Europe[3], causing a number of major chronic and infectious diseases including stroke, ischaemic heart disease, chronic obstructive pulmonary disease, asthma, lung cancer, and acute respiratory infections[4]. The newest evidence furthermore shows that air pollution likely plays a role in the development of diabetes, dementia, Parkinson's Disease, and even mental health disorders[5].

[1] TNO. *Health effects in EU and UK from cooking on gas* [forthcoming; available upon request]. The cost is derived from disability-adjusted life years (DALYs) lost
[2] European Union. *Consolidated version of the Treaty on the Functioning of the European Union,* Articles 9 and 168(1). Link
[3] European Environment Agency. *Europe's air quality status 2022*. Link
[4] World Health Organization. (updated). *Exposure & health impacts of air pollution*. Link
[5] Hahad et al., Ambient Air Pollution Increases the Risk of Cerebrovascular and Neuropsychiatric Disorders through Induction of Inflammation and Oxidative Stress. Link

Gas cooking is a source of nitrogen dioxide (NO_2), a pollutant that has negative health impacts at even lower levels than thought before[6]. According to work conducted by TNO, approximately 180 million people in the EU-27 and the UK cook on gas and are regularly exposed to indoor NO_2 values higher than the World Health Organisation's annual (10 µg/m^3) and 1-hour (200 µg/m^3) limits. Meanwhile, the alternative – electric cooking – emits no NO_2.

Moreover, certain population groups are more vulnerable and suffer more severe impacts from exposure to NO_2. Children living in households that cook with gas have a 32% increased likelihood of having current and lifetime asthma[7]. Additionally, even short-term exposure to increased levels of NO_2 is dangerous for respiratory disease patients, as it may lead to respiratory problems such as coughing, wheezing or difficulty breathing, and even to hospital admissions[8].

Considering the health risks, impacts and costs, gas cooking should be phased out through the on-going review and revision of the Ecodesign measures on domestic cooking appliances.

The Joint Research Centre (JRC) *Preparatory study of ecodesign and energy labelling measures for domestic cooking appliances* acknowledges that "[c]ooking is a significant source of indoor pollutants" and even highlights gas burning as a health issue: "[a]dditional pollutants (including NO_2, CO and unburned methane) may arise where hobs with gas burners are used."[9] However, disappointingly, it only addresses mitigation options as linked to fume extractors. The far more effective approach is to directly tackle the source of air pollution for example by setting ecodesign requirements limiting the NO_2 emissions of cooking appliances.

This is not the first time the experts at the JRC have cautioned against the dangers of NO_2 in indoor environments. The 2005 INDEX Project developed a critical appraisal of the setting and implementation of indoor exposure limits in the EU[10]. NO_2 was one of the five "high priority chemicals" identified, with potential of "high indoor concentrations" and "uncontested health impacts". Gas appliances were determined to be one of the most important sources of indoor NO_2 pollution.

The Ecodesign and Energy Labelling Working Plan 2022-2024 mentions the "substantial potential for delivering additional, highly cost-effective benefits for EU consumers, **reduced air pollution** [emphasis added], and energy/CO_2 savings that otherwise might have to be delivered by other policies at EU or national level."[11] Ecodesign measures for domestic cooking appliances represent an excellent opportunity to realise the potential identified in the Working Plan - achieving the co-benefits of reduced air pollution, improved health and more efficient cooking. Ecodesign requirements for emissions of nitrogen oxides have long existed for other products, e.g. space and combination heaters

[6] This is reflected in the 2021 update of the World Health Organization Global Air Quality Guidelines, which apply to both indoor and outdoor air pollution. The recommended maximum levels of NO_2 yearly exposure are four times lower compared to the 2005 Guidelines. This is the most significant change for any pollutant between the two editions.

[7] Weiwei Lin et al. *Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children*. 2013. Link

[8] United States Environmental Protection Agency. Nitrogen Dioxide (NO_2) Pollution. Link

[9] Joint Research Centre. *Preparatory study of ecodesign and energy labelling measures for domestic cooking appliances acknowledges*. 2022. Link

[10] Joint Research Centre. *The INDEX Project - Critical Appraisal of the Setting and Implementation of Indoor Exposure Limits in the EU*. 2005. Link

[11] European Commission. Ecodesign and Energy Labelling Working Plan 2022-2024, Annex: Methodology for the Ecodesign for Energy-related Products. Link

(Commission Regulation (EU) No 813/2013). This issue must now be addressed in the case of cooking appliances as well.

We look to you to take concrete steps to phase out gas cooking appliances through the Ecodesign Directive. Such action would be in full alignment with overall EU for Health policy and contribute to the reduction of pressures on health systems. We would welcome the opportunity to engage with you in further exchange on any of the points above.

Yours sincerely,

- European Public Health Alliance (EPHA)
- CLASP
- Environmental Coalition on Standards (ECOS)
- European Academy of Paediatrics,
- European Environmental Bureau (EEB)
- Global Cooksafe Coalition
- Polish Society for Health Programs
- Bulgarian Association for Patients' Rights Defence
- Institute for Health and Environment (Inštitut za zdravje in okolje)
- Respire
- GLOBAL 2000 - Friends of the Earth Austria
- Kyoto Club
- ECODES
- Natuur & Milieu
- Bond Beter Leefmilieu