IN THE SUPERIOR COURT OF THE DISTRICT OF COLUMBIA
CIVIL DIVISION

UNITED STATES PUBLIC INTEREST
RESEARCH GROUP EDUCATION FUND, INC.,
600 Pennsylvania Avenue, SE
Washington, D.C. 20003

Plaintiffs,

v.

HAIER U.S. APPLIANCE SOLUTIONS, INC.,
d/b/a/ GE APPLIANCES,
400 Buechel Bank Road
Louisville, Kentucky 40225

Defendant.

COMPLAINT

Plaintiff United States Public Interest Research Group Education Fund, Inc. ("U.S. PIRG Education Fund") brings this action against defendant Haier US Appliance Solutions, Inc. ("Haier US"), doing business as GE Appliances, for violating the District of Columbia Consumer Protection Procedures Act, D.C. Code § 28-3901, *et. seq.* ("CPPA"). In support of its claim, U.S. PIRG Education Fund states as follows:

INTRODUCTION

1. Burning natural gas produces nitrogen dioxide (NO_2) as an air pollutant. Even low levels of NO_2 exposure pose a risk to human health, including respiratory health. Cooking with GE Appliances gas stoves produces indoor levels of nitrogen dioxide that pose health risks. Recent tests performed on two different models of GE Appliances stoves showed that during normal operation GE Appliances gas stoves produce nitrogen dioxide levels above the numerical

values the U.S. Environmental Protection Agency ("EPA") set as health-protective standards for outdoor air, and above indoor health guidelines for nitrogen dioxide set by the Canadian health agency Health Canada and the World Health Organization. ("WHO"). The test results are consistent with a number of other studies on gas stoves.

2. Haier US does not warn District of Columbia ("District") consumers that cooking with GE Appliances gas stoves produces nitrogen dioxide at levels that can cause health problems. Haier US's failure to warn consumers of this risk is an unfair and deceptive trade practice under the CPPA.

3. As set forth in more detail below, U.S. PIRG Education Fund asks this Court to, among other orders, (1) declare that Haier US is violating the CPPA, and (2) issue an injunction requiring Haier US to warn District consumers that cooking with GE Appliances gas stoves produces air pollutants that can cause health problems, including respiratory problems.

JURISDICTION

4. D.C. Code § 28-3905(k)(1)(2) gives the Superior Court of the District of Columbia jurisdiction over this claim.

FACTS

I. Parties.

A. U.S. PIRG Education Fund.

5. U.S. PIRG Education Fund is a 501(c)(3) non-profit, public interest organization.

6. U.S. PIRG Education Fund is organized and operated for the purpose of promoting interests and rights of consumers, including District consumers. U.S. PIRG Education Fund educates consumers on issues relating to product safety.

7. U.S. PIRG Education Fund educates consumers on issues relating to the risks of cooking with gas stoves. Among other activities, U.S. PIRG Education Fund over the last

several years has issued reports titled, "Gas Stoves and Your Health" and "Gas Stove Omissions: Retailers are failing to inform consumers about the health risks of cooking with gas"; issued a guide titled, "In the market for a new stove?", which discussed the effects of gas stove emissions on indoor air quality; and hosted a webinar with the Consumer Product Safety Commission ("CPSC") on the risks of gas stove pollution. U.S. PIRG Education Fund communicates on its website about the risks of using gas stoves.

8. U.S. PIRG Education Fund has an office and staff in Washington, D.C.

9. U.S. PIRG Education Fund is a "public interest organization" under D.C. Code § 28-3901(a)(15). U.S. PIRG is a "person" under D.C. Code § 28-3901(a)(1).

B. Haier US Appliance Solutions, Inc., d/b/a GE Appliances.

10. Haier US is incorporated in Delaware. Haier US's headquarters is in Louisville, Kentucky.

11. Haier US filed the necessary paperwork with the Kentucky Secretary of State to obtain GE Appliances as an "assumed name." GE Appliances holds itself out as a "Haier company."

12. The parent entity of Haier US is Haier Appliance US Holdings, Inc. Haier US's ultimate shareholder is Haier Smart Home Co., Ltd., which is publicly traded on the Shanghai and Hong Kong Stock Exchanges. Haier Smart Home Co., Ltd. is headquartered in Qingdao, China.

13. Haier Smart Home Co., Ltd. bought GE Appliances from General Electric in 2016. At the time Haier bought GE Appliances, Haier was named "Qingdao Haier."

14. Haier US, doing business as GE Appliances, conducts business in the District of Columbia.

15. GE Appliances gas cooktops, gas ovens and gas ranges are available for purchase in the District by consumers at retail stores. Haier US advertises GE Appliances gas cooktops, gas ovens and gas ranges in the District.

16. Two GE Appliances gas stoves that are available for purchase in the District by consumers include the 30" Free Standing Gas Convention Range with No Preheat Air Fry (model JGB735SPSS), and 30" Free-Standing Gas Range (model JGBS66REKSS). Upon information and belief, both models have been purchased at retail stores in the District, as have other gas GE Appliances gas stoves.

17. Haier US is a "merchant" under D.C. Code § 38-3901(a)(3) and a "person" under D.C. Code § 28-3901(a)(1). Haier US provides "goods and services" under D.C. Code § 28-3901(a)(7).

II. Pollutant Emissions from GE Appliances Gas Stoves Pose a Risk to Human Health.

A. Cooking with GE Appliances gas stoves produces nitrogen oxides, including nitrogen dioxide.

18. For the purposes of this Complaint, a "cooktop" is a flat surface with individual burners; an "oven" is an enclosed heated space containing "bake" and "broil" capabilities; and a "stove" or "range" (the two terms can be used interchangeably) is a unit that contains both a cooktop and an oven.

19. Haier US sells GE Appliances stoves that are fueled by natural gas. Although called "natural," the gas is actually processed before reaching households. Natural gas is primarily methane.

20. Burning natural gas releases nitrogen oxides (NOx). Nitrogen oxides are a mixture of gases that are composed of nitrogen and oxygen.

21. The two most prevalent nitrogen oxides are nitric oxide (NO) and nitrogen dioxide.

22. NOx, including NO and NO_2, is produced by cooking with GE Appliances models JGB735SPSS and JGBS66REKSS. NO that is produced by cooking with GE Appliances models JGB735SPSS and JGBS66REKSS oxidizes and forms nitrogen NO_2.

23. U.S. PIRG Education Fund's testing demonstrated that NOx, NO, and NO_2 are produced when using GE Appliances models JGB735SPSS and JGBS66REKSS by measuring the concentrations of these gases in a kitchen and elsewhere in a house. Levels of NOx, NO, and NO_2 increased in the kitchen, living room and an upstairs bedroom when the gas stoves were operating. U.S. PIRG Education Fund conducted the tests on new stoves purchased in 2024.

24. Upon information and belief, based on U.S. PIRG Education Fund's gas stove testing, the science behind natural gas combustion, and the findings of studies, government agencies, and public health and medical organizations, other GE Appliances' gas cooktops, ovens and ranges produce NOx, NO and NO_2.

Operating an electric stove does not produce NOx, NO or NO_2.

B. GE Appliances stoves produce levels of nitrogen oxides that can be harmful.

25. According to EPA, nitrogen oxides are a "family of poisonous, highly reactive gases" and NO and NO_2 are "toxic gases." https://www3.epa.gov/region1/airquality/nox.html, archived at https://perma.cc/T98A-VGTU; https://www.epa.gov/indoor-air-quality-iaq/nitrogen-dioxides-impact-indoor-air-quality#Health_Effects, archived at https://perma.cc/AWK4-YDS2.

26. EPA established a National Ambient Air Quality Standard ("NAAQS") for nitrogen dioxide. The NAAQS for NO_2 is an outdoor standard. EPA set the NAAQS standard

for NO_2 to protect human health and the environment. U.S. EPA does not regulate indoor air quality.

27. The NAAQS annual standard for NO_2 is 53 ppb, measured as an annual average concentration. 40 C.F.R. § 50.11(a). However, a study concluded, "Asthmatic children exposed to NO_2 indoors, at levels well below the US Environmental Protection Agency outdoor standard (53 ppb), are at risk for increased asthma morbidity." Belanger, et al., *Household levels of nitrogen dioxide and pediatric asthma severity*, Epidemiology, 2013 March; 24(2): 320-330. This same study found, "Every 5 ppb increase in NO_2 exposure above a threshold of 6 ppb was associated with a dose-dependent increase in risk of higher asthma severity score…, wheeze…, night symptoms… and rescue medication use…" The study noted, "[p]rimary indoor sources of NO_2 are gas stoves…" The concentration of nitrogen dioxide in the kitchen where U.S. PIRG Education Fund tested the stoves reached over 53 ppb.

28. The NAAQS 1-hour standard for NO_2 is 100 ppb, measured as a 1-hour average concentration. 40 C.F.R. § 50.11(b). The concentration of nitrogen dioxide in the kitchen where U.S. PIRG Education Fund tested the stoves reached over 100 ppb.

29. Health Canada is the department of the Government of Canada responsible for national health policy. Health Canada established a short-term (one hour) Residential Indoor Air Quality Guideline ("RIAQG") for nitrogen dioxide. The RIAQG includes a 90 ppb "residential maximum exposure limit for nitrogen dioxide" for short-term. This limit is also expressed as 170 micrograms per cubic meter. https://www.canada.ca/en/health-canada/services/publications/healthy-living/residential-indoor-air-quality-guideline-nitrogen-dioxide.html#c4b, archived at https://perma.cc/GF66-GKZ5. The concentration of nitrogen dioxide in the kitchen where U.S. PIRG Education Fund tested the stoves reached over 90 ppb.

30. The World Health Organization ("WHO") sets indoor air quality guidelines to provide a uniform basis for the protection of public health from adverse effects of indoor exposure to air pollution. WHO set a 1-hour indoor NO_2 guideline of 200 micrograms per cubic meter, which is equivalent to 106 ppb. https://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf (pp. 246, 248).

31. WHO also set an annual average indoor NO_2 guideline of 40 micrograms per cubic meter, which is equivalent to 20.5 ppb. The concentration of NO_2 in the kitchen where U.S. PIRG Education Fund tested the stoves reached over 20.5 ppb. The concentration of NO_2 in rooms other than the kitchen also reached over 20.5 ppb.

32. The concentrations of NOx, NO and NO_2 measured by U.S. PIRG Education Fund are consistent with the findings of a number of other studies on gas stoves. *E.g.*, Kashtan, et al., *Nitrogen dioxide, exposure, health outcomes, and associated demographic disparities due to gas and propane combustion by U.S. stoves*, Science Advances, 3 May 2024, Vol. 10, Issue 18. Lebel, et al., *Methane and NO_x Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes*, Environ. Sci. Technol. 2022, 56, 2529-2539; Logue, et al., *Pollutant Exposures from Natural Gas Cooking burners: A Simulation-Based Assessment for Southern California*, Environmental Health Perspectives, Vo. 122, No. 1, January 2014.

33. At the time U.S. PIRG Education Fund tested the GE Appliances gas stoves, the background concentrations of NO, NOx and NO_2 were negligible.

34. Upon information and belief, based on U.S. PIRG Education Fund's gas stove testing, the science behind natural gas combustion, and the findings of studies, government agencies, and public health and medical organizations, other GE Appliances' gas cooktops,

ovens and ranges produce NOx, NO and NO_2 at levels similar to those produced by models JGB735SPSS and JGBS66REKSS.

35. On its web page, *Nitrogen Dioxide's Impact on Indoor Air Quality*, https://www.epa.gov/indoor-air-quality-iaq/nitrogen-dioxides-impact-indoor-air-quality, archived at https://perma.cc/AWK4-YDS2, EPA states in a section titled, "Health Effects Associated with Nitrogen Dioxide":

- "NO_2 acts mainly as an irritant affecting the mucosa of the eyes, nose, throat and respiratory tract…
- Continued exposure to high NO_2 levels can contribute to the development of acute or chronic bronchitis.
- Low level NO_2 exposure may cause:
    - increased bronchial reactivity in some asthmatics
    - decreased lung function in patients with chronic obstructive pulmonary disease
    - increased risk of respiratory infections, especially in children."

36. On its web page, *Asthma triggers: Gain Control*, EPA states, "In people with asthma, exposure to low levels of NO_2 may cause increased bronchial activity and make young children more susceptible to respiratory infections. Long-term exposure to high levels of NO_2 can lead to chronic bronchitis. Studies show a connection between breathing elevated short-term NO_2 concentrations, and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma." https://www.epa.gov/asthma/asthma-triggers-gain-control#nitro. EPA inserted a picture of a gas stove flame to accompany this language.

37. A study concluded that "12.7% of current childhood asthma nationwide is attributed to gas stove use…" Gruenwald, et al., *Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States*, Int. J. Environ. Res. Public Health 2023, 20, 75.

38. The American Medical Association and the American Public Health Association have adopted policies warning against the dangers of cooking with gas stoves because of nitrogen dioxide emissions and their effect on people with asthma, including in particular children with asthma. https://www.ama-assn.org/system/files/a22-refcmte-d-report-annotated.pdf; https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2023/01/18/gas-stove-emissions.

39. In 2022, the District's Council Committee on Transportation and the Environment ("Committee") determined that "[g]as stoves produce carbon monoxide, formaldehyde, and nitrogen dioxide, all of which are harmful to human health; nitrogen dioxide, in particular, has been found to cause higher rates of asthma" and "[a] number of studies have found that children who are exposed to nitrogen dioxide produced by gas cooking are at higher risk of developing asthma." Committee Report on Bill 24-20 dated June 13, 2022, https://lims.dccouncil.gov/downloads/LIMS/47959/Committee_Report/B24-0420-Committee_Report1.pdf (p. 7 & p.7, fn.21).

40. Using range hoods when gas burners are being used can sometimes reduce, but not necessarily eliminate, the exposure to NO_2 concentrations in homes. Surveys show that range hoods are used only 15-39% of the time.

41. Opening windows can also sometimes reduce the NO_2 concentrations in homes.

III. Haier US Does Not Warn Consumers About the Risk Posed by Pollutant Emissions From GE Appliances Gas Stoves.

42. Haier US does not disclose to consumers shopping for a stove that using GE Appliances gas stoves, including models JGB735SPSS and JGBS66REKSS, produces nitrogen oxides, including nitric oxide and nitrogen dioxide, or the effect these pollutants have on human health.

43. Haier US does not disclose to consumers shopping for a stove that using GE Appliances gas stoves, including models JGB735SPSS and JGBS66REKSS, can produce nitrogen dioxide concentrations that are above the numerical values of health standards and guidelines.

44. Haier US does not warn consumers shopping for a stove that using GE Appliances gas stoves, including models JGB735SPSS and JGBS66REKSS, poses a health risk because of unhealthy concentrations of nitrogen oxides—including nitrogen dioxide—they can produce.

45. Haier US does not warn consumers shopping for a stove that using GE Appliances gas stoves, including models JGB735SPSS and JGBS66REKSS, poses a health risk because they emit pollutants that can cause or exacerbate respiratory problems, including asthma.

46. Haier US does not suggest to consumers shopping for a stove that a vent or range hood should be used while using GE Appliances stoves, or that windows should be opened while using its gas stoves, including when using models JGB735SPSS and JGBS66REKSS.

47. The GE Appliances owner's manuals for models JGB735SPSS and JGBS66REKSS do not contain warnings concerning the risks of breathing nitrogen oxides, including nitrogen dioxide. Instead, a warning in the GE Appliances owner's manuals for models JGB735SPSS and JGBS66REKSS and other models state, "Important: The health of

some birds is extremely sensitive to the fumes given off during the self-cleaning cycle of any range. Move birds to another well-ventilated room." Consumers can access the owner's manuals on GE Appliances' website when shopping for a stove on line.

48. The GE Appliances website pages for models JGB735SPSS and JGBS66REKSS and other models has a link for "Kitchen Safety Tips," which is about preventing cooking fires and not about ways to prevent harmful emissions. https://www.geappliances.com/appliance/GE-30-Free-Standing-Gas-Convection-Range-with-No-Preheat-Air-Fry-JGB735SPSS#ownerSupport, archived at https://perma.cc/3YEY-PST9?type=image; https://www.geappliances.com/appliance/GE-30-Free-Standing-Gas-Range-JGBS66REKSS#ownerSupport, archived at https://perma.cc/8SQ9-69DU?type=image; both including a link to "Kitchen Safety Tips" directing to including a link to https://products-salsify.geappliances.com/image/upload/s--VygPo4KI--/3a7b9e07cb6ee5ba8890e722ce659cf02f8aa123.pdf. Consumers can access the owner's manuals on GE Appliance's website when shopping for a stove on line.

49. Before deciding to buy a GE Appliances gas stove, including models JGB735SPSS and JGBS66REKSS, a reasonable consumer would want to know about the air pollutants produced by using the stove, the health risks posed by those air pollutants, and ways to reduce those health risks (venting and opening windows), as described above.

50. Before deciding to buy a GE appliances gas stove, including models JGB735SPSS and JGBS66REKSS, a significant number of unsophisticated consumers would find it important to have information about the air pollutants produced by using the stove, the health risks posed by those air pollutants, and the ways to reduce those health risks (venting and opening windows), as described above.

51. Haier US's omissions, as described above, mislead consumers into thinking there is no health risk from using GE Appliance gas stoves, including models JGB735SPSS and JGBS66REKSS.

CAUSE OF ACTION: HAIER US IS VIOLATING THE D.C. CONSUMER PROTECTION PROCEDURES ACT

52. U.S. PIRG Education Fund hereby incorporates by reference and alleges all paragraphs of this Complaint above as fully restated herein.

53. Pursuant to D.C. Code § 28-3905(k)(1)(D), U.S. PIRG Education Fund brings this claim against Haier US on behalf of District consumers who shop for or buy GE Appliances stoves, including models JGB735SPSS and JGBS66REKSS. The claim is not brought as a class action.

54. The District's consumer protection laws are codified in the Consumer Protection Procedures Act, D.C Code § 28-3901, *et. seq.* D.C. Code § 28-3901(c) provides, "This chapter establishes an enforceable right to truthful information from merchants about consumer goods and services that are or would be purchased, leased or received in the District of Columbia."

55. The CPPA provides, "It shall be a violation of this chapter for any person to engage in an unfair or deceptive trade practice, whether or not any consumer is in fact misled, deceived, or damaged thereby, including to…fail to state a material fact if such failure tends to mislead." D.C. Code § 28-3904(f).

56. By failing to disclose the information or make the warnings described above, Haier US engages in an unfair or deceptive trade practice under D.C. Code § 28-3904, and fails to state material facts that tend to mislead under D.C. Code § 28-3904(f).

57. As a consumer group that has worked on the issue of gas stove safety, U.S. PIRG Education Fund has a sufficient nexus to the interests of shoppers and buyers of stoves, including the consumers of Haier's GE Appliances stoves, to adequately represent those interests.

58. Consumers who shop for or buy GE Appliances gas stoves could bring their own action to redress Haier US's violations of the CPPA, under D.C. Code § 28-3905(k)(1)(A).

PRAYER FOR RELIEF

WHEREFORE, U.S. PIRG Education Fund requests that the Court grant the following relief:

1. A declaration that Haier US's conduct violates the CPPA;

2. An order enjoining Haier US's conduct found to be violating the CPPA;

3. Issue an injunction requiring Haier US to warn District consumers that using its GE Appliances gas stoves, including models JGB735SPSS and JGBS66REKSS, produces air pollutants that pose a risk to human health, including respiratory health (including warnings on stoves at their points of sale);

4. Issue an injunction requiring Haier US to warn District consumers that using GE Appliances gas stoves, including models JGB73JSPSS and JGBS66REKSS, should be done with open windows or while using an externally venting range hood;

5. Issue an injunction requiring any other appropriate health warnings and disclosure of information related to the nitrogen oxides, including nitric oxide and nitrogen dioxides, produced while using GE Appliances gas stoves;

6. An order granting U.S. PIRG Education Fund's attorneys' fees and costs.

7. Such other and further relief as this Court may deem necessary and appropriate.

8. U.S. PIRG Education Fund does not seek damages.

Dated May 23, 2024

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