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8th April, 2019

Hon. Kwok Wai-keung, JP
Chairman, Bills Committee on Smoking (Public Health) (Amendment) Bill 2019
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

Dear Chairman,

Submission for Public Hearing on 13th April, 2019 relating to the Smoking (Public Health) (Amendment) Bill 2019

Philip Morris Asia Limited (PMAL) is pleased to have the opportunity to submit to you our company's view on the Smoking (Public Health) (Amendment) Bill 2019. The submission is structured as follows:

A. Regulation of smoke-free tobacco products is a path most advanced jurisdictions are now pursuing.
B. Innovation-for-better should be encouraged in Hong Kong, and banning (rather than regulating) threatens recent investment in the area of technology and innovation.
C. A description of our smoke-free Heat-not-burn ("HNB") products, which we sell today in 44 countries.
D. Significant independent research after the Policy Address and other independent scientific evidence on smoke-free products.
E. The merits of regulation over a ban.

Executive Summary

A proportionate and balanced regulatory regime on smoke-free products is in Hong Kong's best interest. It would allow Hong Kong to properly regulate the importation, promotion and sale of these products, thereby protecting unintended audiences, particularly youth, while at the same time allowing adult smokers who do not quit cigarette smoking to switch to a category that internationally respected institutions and governments regard as less harmful alternatives.

The United Kingdom, the European Union, the United States of America, Canada, New Zealand, and many others, are adopting regulatory approaches as part of their respective tobacco control policies, so as to allow their citizens access to these products. In fact among the 36 member States of the Organization for Economic Cooperation and Development (OECD), only three – Mexico, Turkey, and Australia – currently prohibit access to smoke-free products.

Today, Philip Morris International Inc. (PMI) is commercializing a variety of smoke-free products, including HNB and e-cigarettes, in 44 countries around the world. Our science is robust and substantiates that our IQOS HNB product produces around 95% less of the harmful chemicals seen in cigarette smoke. Over 20 independent expert groups or institutions from around the world have verified key elements of our science behind *IQOS*, our HNB product, including respected government agencies such as the German Federal Institute for Risk Assessment, the UK Committee on Toxicity, and the US Food and Drug Administration.

Claims that legalizing smoke-free products will also lead to youth initiation are not borne out by latest research published in February this year by Public Health England on e-cigarette usage:

- *"The proportion of young people who have never smoked who use EC [e-cigarettes] at least weekly remains very low (0.2% of 11-18 year olds in 2018)."*[1]

When it comes to cigarette smoking, the best thing anyone can do is quit. Today, there are more than 600,000 smokers in Hong Kong. The reality is that despite all best regulatory efforts, education, and other measures, many of these people will continue to use cigarettes. The question is: what options is Hong Kong leaving these people by pursuing a blanket ban of better alternatives? We believe that strict regulations of these better alternatives including strict enforcement to prevent youth access, is a better path for Hong Kong smokers and public health overall.

A. Regulation of smoke-free tobacco products is a path most advanced jurisdictions are now pursuing

PMI's IQOS HNB product is now regulated and legally sold in 44 countries, such as the UK, France, Germany, Japan, South Korea, Malaysia, South Africa, Canada, Russia and New Zealand. We estimate that approximately 6.6 million consumers in these countries no longer smoke cigarettes, having switched completely to our IQOS HNB product. Out of these countries that currently have HNB available, 34 of them are signatories to the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). These 34 nations are regulating HNB instead of banning it, in full compliance with the WHO FCTC which does not recommend against regulation. For example, the New Zealand Government published a plan on 23 November 2018 to amend the Smoke-free Environments Act to regulate smoke-free products in a risk-proportionate fashion. The Ministry of Health of New Zealand has released its Regulatory Impact Statement which *"seeks to balance the objectives of supporting smokers to switch to significantly less harmful alternatives with protecting children and young people from any risks associated with vaping in particular"*, and expressly recognized that *"improving the way smokeless tobacco and vaping products are regulated ... will contribute to the achievement of Smokefree 2025"*[2].

In the UK, the House of Commons Science and Technology Committee issued a parliamentary report in August 2018, calling for the adoption of the harm reduction principle as part of tobacco control strategies. In December 2018, the UK Health Secretary accepted the seven recommendations made by the UK House of Commons Science and Technology Committee, one of which is a policy shift to *"a more risk-proportionate regulatory environment; where regulations, advertising rules and tax/duties reflect the evidence on the relative harms of the various e-cigarette and tobacco products available."*[3].

As seen in the above two examples, a comprehensive regulatory approach is pursued over prohibition worldwide because the former would prohibit youth access while at the same time allow smokers to switch to lower-risk alternative products as soon as possible.

B. Innovation-for-better should be encouraged in Hong Kong, and banning (rather than regulating) threatens recent investment in the area of technology and innovation

The proposed ban would discourage innovation of new and less harmful alternatives to smoking, which is not only inconsistent with the Government's policies on health and innovation, but also puts great strain on innovative businesses and skilled employees in this field.

In July 2018, PMAL opened its Electronic-Hub ("E-Hub") in Hong Kong to support the global demand for reduced risk products ("RRPs"). In 2018 alone, E-Hub employed around 60 employees and had products valued at around US$600 million shipped out from Zhuhai and exported to more than 40 countries globally via Hong Kong ports and airport facilities using Hong Kong-based logistics service providers. A ban on the import of HNB would not

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[1] See page 52 at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/781748/Vaping_in_England_an_evidence_update_February_2019.pdf

[2] https://www.health.govt.nz/system/files/documents/pages/ris-regulation-of-e-cigarettes-and-emerging-tobacco-and-nicotine-delivery-products-nov17.pdf

[3] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/762847/government-response-to-science-and-technology-committee_s-report-on-e-cig.pdf

only place our employees' future into uncertainty, but also set a worrying precedence for innovative companies contemplating investing in Hong Kong. Attached please find a copy of our letter to Dr. C.K. Law, Secretary for Labour and Welfare, for your reference on this particular matter.

C. A description of our smoke-free HNB product which we sell today in 44 countries

IQOS, our company's HNB product, is an electronic device that generates a nicotine-containing aerosol by heating a specially designed tobacco stick (*Heatstick*), at controlled temperatures below 350 degrees Celsius. By heating tobacco rather than burning it, *IQOS* produces an aerosol, not smoke, containing significantly lower levels of toxicants than cigarette smoke.

Product Description

The *IQOS* system is presented as follows:

Figure 1 The three components of the *IQOS* system

As shown above, the *IQOS* system has three components, i.e.:

- The **Charger** that is used to recharge the Holder after each use;
- The **Holder** into which the *Heatstick* is inserted and which heats the tobacco in the *Heatstick* by means of an electronically-controlled heater; and
- The ***Heatstick*** which contains specially processed tobacco and two filter sections. The *Heatstick* has been designed specifically and exclusively for use with the Holder (heating device) of the *IQOS*. The *Heatstick* comprises a number of elements that are different than cigarettes.

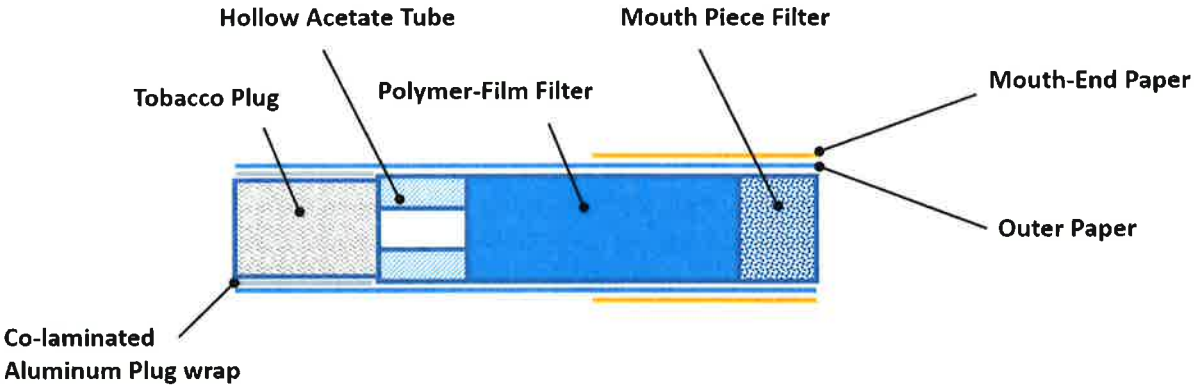

Figure 2 Illustration of cross-sectional diagram of the *Heatstick* showing major components

***Heatstick* Components**

The **tobacco plug** is made of specific blend of tobacco leaves. They're carefully processed to create a uniform mixture that's formed into a sheet and then crimped. The entire process is designed to produce the highest possible homogeneity of the tobacco. The tobacco plug is specifically formulated for heating and is not designed for smoking. When heated, water and glycerin evaporate and re-condense into small droplets to generate a visible tobacco aerosol.

The **co-laminated aluminum plug wrap** prevents any attempt to ignite the tobacco plug with a flame, and therefore the *Heatstick* is not capable of being smoked by itself.

The **hollow acetate tube** is made of cellulose acetate fibers with a plasticizer, wrapped in a non-porous paper over-wrap. The hollow acetate tube prevents the tobacco plug from being pushed into the *Heatstick* when the tobacco plug is inserted in the heater.

The **polymer-film filter** is made from polymer-film wrapped in a non-porous paper over-wrap which is made of wood cellulose fibers. In this section of the *Heatstick*, vaporized compounds are cooled down to yield an acceptable aerosol temperature.

The **mouth piece filter** is made of cellulose acetate fibers with plasticizer, wrapped in a non-porous paper over-wrap. It is a filter which provides sufficient rigidity when the mouth piece filter is held between the lips of the *Heatstick* user.

The **outer paper** holds the various *Heatstick* components together.

The **mouth-end paper** is added on the mouth end to prevent the lips of a consumer from sticking to the *Heatstick* mouth piece filter.

D. Significant independent research after the Policy Address and other independent scientific evidence on smoke-free products

After the announcement of the proposed ban in the 2018 Chief Executive Policy Address, a lot of new independent studies and Government recommendations were published as attached at Annex A. This evidence supports regulating rather than banning alternatives including:

(A) The UK Department of Health accepted the recommendations from the House of Commons Science and Technology Committee on taking harm reduction principles "*which protect[s] the young and non-smokers, whilst giving smokers access to products which will reduce harm*";[4]

[4] See Recommendation 7 at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/762847/government-response-to-science-and-technology-committee_s-report-on-e-cig.pdf

(B) Malaysia's Government permitted the importation and sale of HNB;

(C) New Zealand has begun the process of introducing risk-proportionate regulation for alternative tobacco products;

(D) Public Health England's 2019 evidence review concluded again that e-cigarettes are significantly less harmful than cigarettes;

(E) A study from University of Melbourne concluded legalizing access to e-cigarettes in New Zealand would most likely gain 236,000 health adjusted life years over the remainder of the population's lifespan;

(F) An independent public health Professor at the University of Michigan in the U.S. suggested the upside health benefit of allowing smokers to use e-cigarettes for smoking cessation exceeds their downside risk to health as a result of possible youth uptake;

(G) An article in New England Journal of Medicine concluded e-cigarettes are almost twice as effective as nicotine replacement treatments, such as patches and gum, at helping smokers to quit;

(H) The National Institute for Health Research (NIHR) which is funded by the UK Department of Health found that e-cigarettes do not renormalise smoking for young people. It stated: *"The analyses provide little evidence that renormalisation of youth smoking was occurring during a period of rapid growth and limited regulation of e-cigarettes from 2011-2015."*[5]

So far, over 20 independent studies and reviews on *IQOS* validate different elements of our assessment approach or otherwise reach positive conclusions. For the Committee's reference, a detailed list of independent third-party studies and assessments of *IQOS* is attached at Annex B. Examples include –

(A) An assessment completed by the US FDA Southeast Tobacco Laboratory and included in FDA's Briefing Document for the Meeting of the Tobacco Products Scientific Advisory Committee (TPSAC) on 24-25 January 2018: it was recognized that our *IQOS* reduces the formation of harmful and potentially harmful chemicals (compared to combustible tobacco, formation was significantly reduced by greater than 90% for acrolein and benzopyrene, and more than 80% for formaldehyde).

(B) Results of a study published by the UK Committee on Toxicity in December 2017: *"[I]t is likely that there is a reduction in risk, though not to zero, to health for smokers who switch completely to heat-not-burn products."*

(C) Results of a study published by the Public Health England (PHE) on February 6, 2018: It was recognized that *"Compared with cigarettes, heated tobacco products are likely to expose users and bystanders to lower levels of particulate matter and harmful and potentially harmful compounds (HPHC). The extent of the reduction varies between studies."*

(D) Results of a study published by the National Institute of Public Health Japan on September 14, 2017: It was recognized that *"The concentration levels of hazardous compounds in the mainstream smoke of IQOS are much lower than those in conventional combustion products."*

(E) Results of a study published by the German Federal Institute for Risk Assessment (BfR) on May 5, 2018: It found that *"levels of major carcinogens are markedly reduced in the emissions of the analyzed HNB product in relation to the conventional tobacco cigarettes and that monitoring these emissions using standardized*

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[5] Hallingberg B, Maynard OM, Bauld L, *et al*
Have e-cigarettes renormalised or displaced youth smoking? Results of a segmented regression analysis of repeated cross sectional survey data in England, Scotland and Wales
Tobacco Control Published Online First: 01 April 2019. doi: 10.1136/tobaccocontrol-2018-054584

machine smoking procedures generates reliable and reproducible data which provide a useful basis to assess exposure and human health risks."

(F) Results of a study published by the All-Russia Scientific Research Institute (study conducted by request of Russian Government) on December 12, 2017: It was recognized that the "*content of toxic components in the vapour from the novel technology is, indeed, 90 or more percent less than in that from the other products tested.*"

(G) Results of a study published by the China National Tobacco Quality Supervision and Test Centre (CNTQSTC) on January 8, 2018: It was recognized that, *"THS 2.2 [IQOS] resulted in lower HPHC levels compared to 3R4F* [reference cigarette]. *Except for carbonyls, ammonia, and NAB, the reduction rate is more than 90%."*

PMI has conducted a systematic assessment of *IQOS* incorporating elements of multiple disciplines, including aerosol chemistry and physics, *in vitro, in vivo* and systems toxicology, clinical studies, as well as pre-and post-market assessments of consumer perception, behavior, and actual use of *IQOS*.

We are committed to sharing our results as the development and scientific assessment of our products advance and would be happy to do so also with the Bills Committee. The results of all our studies, across the causal chain of events, are coherent with this reduction in toxicant emission and consistently demonstrate that the tobacco aerosol generated by using *IQOS* is less toxic than cigarette smoke. Therefore, the totality of the evidence clearly demonstrates that *IQOS* presents less risk of harm and can present less risk of tobacco-related disease than cigarettes.[6]

E. The merits of regulation over a ban

Smoke-free products are not an alternative to quitting. The best choice for consumers concerned about the health risks of smoking is to quit altogether. However, regulating these products gives smokers who will not quit a less harmful alternative.

Many prominent institutions and public health experts acknowledge that smoke-free products are less harmful than smoking. Some regulators, such as the UK Department of Health and the New Zealand Ministry of Health, encourage adult smokers who will not quit to switch completely to less harmful alternatives.[7] Today, millions of smokers have abandoned cigarettes and completely switched to smoke-free products, including the 6.6 million people around the world who we estimate have switched to HNB. Regulators should permit smoke-free products to be legal in order to allow smokers to switch in an open and transparent way and have legitimate access to products that are regulated and comply with consumer safety standards. Such an approach would allow adult smokers to be legally compliant when making better decisions for their health.

We support the Government prohibiting minors' access to any tobacco product, and we are committed to partner with the Government in protecting the youth from tobacco harm. Comprehensive regulation in no way undermines this important objective. The Government can prohibit young people having access to any tobacco products while at the same time giving adult smokers the choice of an alternative which is proven to reduce their risk of harm compared to continued smoking.

Without sensible regulation, the Government's proposed amendment will perpetuate smoking rates, and potentially increase cigarette consumption. By banning viable alternatives to cigarettes, smokers who choose to continue to use tobacco would have no choice but to continue smoking cigarettes. While the Government should exercise precaution in matters which entail scientific uncertainty, it is clear from the latest scientific data

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[6] Philip Morris Products S.A., Tobacco Heating System (*IQOS*) Briefing Document, December 2017, https://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/TobaccoProductsScientificAdvisoryCommittee/UCM593108.pdf

[7] See New Zealand Ministry of Health, Vaping and smokeless tobacco, 12 September 2018, available at https://www.health.govt.nz/our-work/preventative-health-wellness/tobacco-control/vaping-and-smokeless-tobacco; See UK Department of Health, Towards a smoke-free generation: a tobacco control plan for England, 18 July 2017, available at https://www.gov.uk/government/publications/towards-a-smoke-free-generation-tobacco-control-plan-for-england.

available that e-cigarettes and non-combusted tobacco products, like heated tobacco, snus, and others are significantly less harmful than cigarettes. It would be disappointing if Hong Kong law allows the more harmful cigarettes to remain legal, while less harmful alternatives became illegal.

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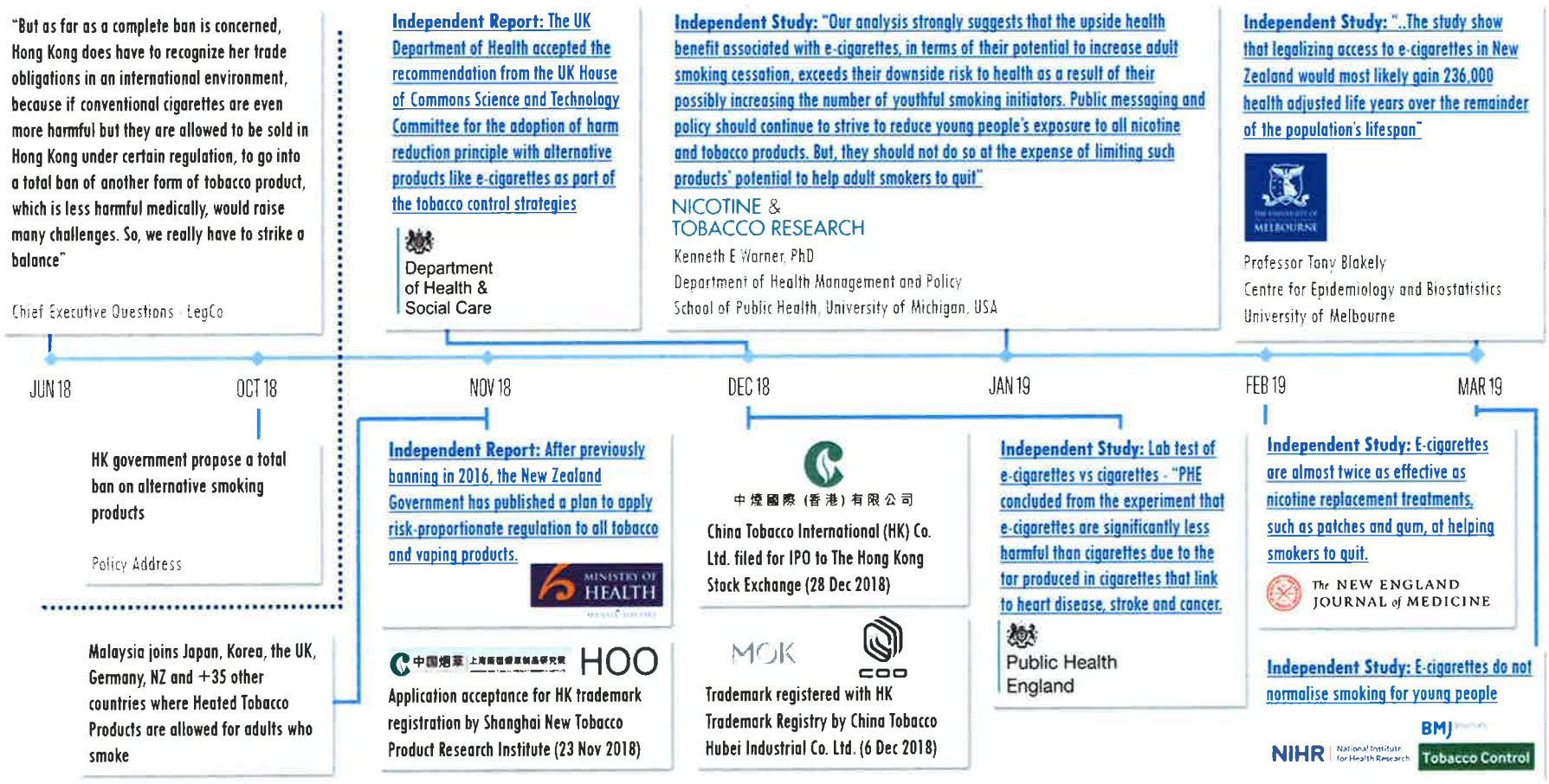
We would be glad to provide further information regarding this matter when requested. Thank you for your kind attention to this matter.

Yours sincerely,

Kennie Siu
Head of External Affairs (Hong Kong & Macau)

Annex A
Significant Independent Research after the Policy Address



Annex B

Third-party studies and assessments of HNB

Study	Conclusion	Type of Study
Aerosol Chemistry		
Nicotine Delivery to the Aerosol		
Farsalinos et al., Nicotine Delivery to the Aerosol of a Heat-Not-Burn Tobacco Product: Comparison With a Tobacco Cigarette and E-Cigarettes, Nicotine & Tobacco Research, 16 June 2017, here.	*"The HnB product delivers nicotine to the aerosol at levels higher than ECs but lower than a tobacco cigarette when tested using Health Canada Intense puffing regime. No change in HnB nicotine delivery was observed at prolonged puff duration with the same puff volume, unlike ECs which deliver more nicotine with longer puff duration."*	Independent study.
Formation		
Li et al., Chemical Analysis and Simulated Pyrolysis of Tobacco Heating System 2.2 Compared to Conventional Cigarettes, Nicotine & Tobacco Research, 8 January 2018, here.	*"THS 2.2 resulted in lower HPHC levels compared to 3R4F. Except for carbonyls, ammonia, and NAB, the reduction rate is more than 90%."*	Independent study.
Bekki et al., Comparison of Chemicals in Mainstream Smoke in Heat-not-burn Tobacco and Combustion Cigarettes, National Institute of Public Health (Japan), September 2017, here.	*"The concentration levels of hazardous compounds in the mainstream smoke of IQOS are much lower than those in conventional combustion cigarettes."*	Independent study.
Farsalinos, Toxicant exposure: Heated tobacco products vs. e-cigarettes, Presentation at Global Forum on Nicotine 2017, 16 June 2017, here.	*"Significantly lower toxic emissions than smoking, but higher than new-generation e-cigarettes."*	Independent study and comparison of results with PMI data.
Mallock et al. (German Federal Risk Assessment Institute (BfR)), Levels of selected analytes in the emissions of "heat not burn" tobacco products that are relevant to assess human health risks, Archives of Toxicology, 5 May 2018, here.	*"We show that nicotine yield is comparable to typical combustible cigarettes, and observe substantially reduced levels of aldehydes (approximately 80–95%) and VOCs (approximately 97–99%). Emissions of TPM and nicotine were found to be inconsistent during the smoking procedure. Our study confirms that levels of major carcinogens are markedly reduced in the emissions of the analyzed HNB product in relation to the conventional tobacco cigarettes and that monitoring these emissions using standardized machine smoking procedures generates reliable and reproducible data which provide a useful basis to assess exposure and human health risks."* BfR also *"confirm[ed] absolute values for selected toxicants in the emissions of [IQOS] that are in agreement with data published by the manufacturer."*	Independent study and comparison of results with PMI data.
US FDA's Southeast Tobacco Laboratory (STL), October 2017, here.	*"Preliminary assessment of the data indicates that the levels of acrolein, formaldehyde, and benzo[a]pyrene in the IQOS aerosol measured by STL are higher than the values reported by the applicant, however, these three HPHCs are still significantly lower than the levels in the mainstream smoke of the reference cigarette 3R4F. Greater than 90% reduction was observed from acrolein and benzo[a]pyrene, and greater than 80% reduction was observed for formaldehyde in the aerosol compared to 3R4F. The levels of tar and*	Independent study and comparison of results with PMI data.

	nicotine determined by STL were similar to the levels reported by the applicant. Finally, levels of ammonia, NNN, and NNK in the HeatSticks tobacco filler measured by STL were similar to the levels reported by the applicant. [...] *The independent testing performed by STL confirmed the lower levels of selected HPHCs in the aerosol from the HeatSticks compared to mainstream cigarette smoke."*	
Setyan, A., et al. (Swiss EMPA Institute), Physico-chemical characterization of particles and volatile organic compounds emitted by electronic cigarettes and heat-not-burn products, compared to a reference tobacco cigarette, 2018, Abstract (here)	*"Particles emitted by all the products were totally dominated by submicron particles. However, those emitted by the conventional cigarette were slightly larger than those from the Puritane* [e-cigarettes] and *iQOS (mode at 220 nm for 3R4F, vs. 150 nm for Puritane and iQOS... VOCs concentrations were 6 times higher than with the conventional cigarette than with the Puritane and IQOS... A wide range of mono-aromatic (mainly benzene-and furan-derivatives) and oxygenated compounds were identified in gaseous emissions of the conventional cigarette. Most of these compounds were also present in the IQOS, but in much lower concentrations. ..."*	Independent study.
The All-Russia Scientific Research Institute for Tobacco and Tobacco Products (study conducted by request of Russian Government) (here)	*"The research results showed that the content of toxic components in the vapour from the novel technology is, indeed, 90 or more percent less than in that from the other products tested."* (unofficial translation).	Independent study.
Talih, S., et al., Is IQOS designed to convert combustible cigarette users? Investigation of Free-Base and Total Nicotine, and Reactive Oxygen Species, Poster 5-118 at SRNT 2018	*"ROS* [reactive oxygen species] *levels were lower in the IQOS aerosol relative to the cigarette."*	Independent study.
Dutch National Institute for Public Health and the Environment (RIVM), IQOS Factsheet, 15 May 2018 (Factsheet (Ducth); Factsheet English; Summary (English))	*"The use of heatsticks with the iQOS is harmful to health, but probably less harmful than smoking tobacco cigarettes."* (Summary) *"Obviously, the fewer harmful substances a person is exposed to, the less harmful it is for the health. A lower amount of substances in the emissions from heated tobacco than in a tobacco cigarette does not mean that the product is proportionately less harmful, however. The quantity of a substance that is inhaled only determines part of the harmful effect."* (Factsheet) *"The research referred to in the scientific literature were mainly carried out by or on behalf of the producer, Philip Morris. The quantities measured by RIVM in the emissions are similar to these quantities."* (Factsheet) *"The substances that the RIVM measured are comparable to those contained in the data from Philip Morris."* (Factsheet)	Independent study and comparison of results with PMI data.

	"The emissions created when heating and burning tobacco clearly differ in composition. This is because the temperature of a lit cigarette, at least 600 - 700 degrees, is much higher than the temperature reached in a device that heats tobacco (up to 300 degrees). Which substances are formed depends on the temperature." (Factsheet) *"With heated tobacco, the way of smoking and the temperature do not appear to influence the amount of nicotine contained in the emissions. With an equal number of puffs, the amount of nicotine contained in the emissions is the same for various types of tobacco and with the different ways of smoking."* (Factsheet)	
Indoor Air Quality and Risk to Bystanders		
Protano, C., et al., Second-hand smoke exposure generated by new electronic devices (IQOS and e-cigs) and traditional cigarettes: submicron particle behavior in human respiratory system, Ann Ig, 2016 (here)	*"During smoking, SMPs released by traditional and hand-rolled cigarettes and deposited in the respiratory tract of a passively exposed subject are four-times higher than those released by electronic and heat-not-burn devices. After smoking, SMPs generated by traditional and hand-rolled cigarettes remain high until the end of the experiment (about six times higher than background) while, for electronic and heat-not-burn devices, SMPs values return immediately very similar to background..."*	Independent study.
Ruprecht, A.A., et al., Environmental pollution and emission factors of electronic cigarettes, heat-not-burn tobacco products, and conventional cigarettes, Aerosol Science and Technology, 21 March 2017, (here)	*"While polycyclic aromatic hydrocarbons (PAHs) were mostly non-detectable in the iQOS smoke, certain n-alkanes, organic acids (such as suberic acid, azelaic acid, and n-alkanoic acids with carbon numbers between 10 and 19) as well as levoglucosan were still emitted in substantial levels from iQOS (up to 2–6 mg/h during a regular smoking regimen). Metal emissions were reduced in iQOS smoke compared to both electronic cigarettes and conventional cigarettes and were mostly similar to the background levels. Another important finding is the presence of carcinogenic aldehyde compounds, including formaldehyde, acetaldehyde, and acrolein, in iQOS smoke, although the levels were substantially lower compared to conventional cigarettes"*	Independent study.
Prodanchuk et al., Potential risk assessment of the electrically heated tobacco system (EHTS) use, Modern Problems of Toxicology Food and Chemical Safety, October 2017, here.	*"Recognized reduced risk potential for active and passive smokers' health while using EHTSs in comparison with conventional filtered cigarette smoking is based in reduced level of air pollution in the room, where these products were used."*	Independent study.
Toxicity		

Leigh et al., Cytotoxic Effects Of A Tobacco Heat-Not-Burn System On Human Bronchial Epithelial Cells, Abstract presented at SRNT 2018, here.	*"Using limited cytotoxic measures, the IQOS system showed significantly reduced cytotoxicity as compared to combustible tobacco cigarettes. While more comprehensive testing is needed to determine long term effects of inhaling aerosol from HnB products, this new product may be a potential harm reduction tool for smokers unwilling to quit smoking or smokers not interested in switching to e-cigarettes."*	Independent study.
Reduced Exposure		
Kazan Federal University (study conducted by request of Russian Government) (here) (unpublished). Results published in a comment to FDA here. Press release, 7 May 2018, here.	*"Results of the study in humans demonstrate that the impact of tobacco smoke HPHCs is reduced almost to the level of smoking abstinence when using THS. At the same time, THS has moderately good flavor, sensation, perception and the level of nicotine intake. Based on the study data, no signs of possible new or increased risks related to THS in comparison to CC use by adult smokers were discovered. Thus, this product can be considered as a CC substitution for the nicotine-dependent adult smokers. After a full transition from cigarettes to THS this product would potentially help to reduce the risks of smoking-related diseases."*	Independent study.
Gale et al., Changes in Biomarkers of Exposure on Switching from a Conventional Cigarette to Tobacco Heating Products: A Randomised, Controlled Study in Healthy Japanese Subjects, BAT, Poster 5-1888 at SRNT 2018, here.	*"This clinical study demonstrated that when smokers switched from smoking combustible cigarettes to using tobacco heating products (glo or iQOS), their exposure to smoke toxicants was significantly decreased. In many cases, this was to the same extent as that seen when subjects quit smoking completely."*	Independent study.
Tobacco Products Scientific Advisory Committee (TPSAC), 25 January 2018, here.	TPSAC agreed, by a vote of 8-1, that *"Scientific studies have shown that switching completely from cigarettes to the IQOS system significantly reduces your body's exposure to harmful or potentially harmful chemicals."*	Conclusion based on review of PMI and FDA data.
Reduced Risk		
UK Committee on Toxicity, Toxicological evaluation of heat-not-burn products, 12 December 2017, here.	*"[I]t is likely that there is a reduction in risk, though not to zero, to health for smokers who switch completely to heat-not-burn tobacco products."*	Independent study.
PHE, Evidence review of e-cigarettes and heated tobacco products 2018, 6 February 2018, here.	*"The available evidence suggests that heated tobacco products may be considerably less harmful than tobacco cigarettes and more harmful than EC."*	Review of the literature/evidence.
Stephens, Comparing the cancer potencies of emissions from vapourised nicotine products including e-cigarettes with those of tobacco smoke, Tobacco Control, 4 August 2017, here.	*"The cancer potencies of the HnB prototype device that heated various tobacco blends lie between one and two orders of magnitude less than tobacco smoke but higher than the preponderance of EC emissions"*	Study *"us[es] published chemical analyses of emissions and their associated inhalation unit risks."*
Kvasha, Evaluation of electronic nicotine delivery system (ENDS) effects on cardiovascular disease risk, based on endothelium function as factor of its	*"Thus, it was outlined in our work, that switching to electronic nicotine delivery systems, both tobacco and liquid-based, and nicotine delivery with the elimination of the harmful effects of cigarette smoke*	Independent study.

determination, Ukrainian Health, 8 July 2017, here.	*prevents impairment of oxygen transport function of the blood, injury of the vascular endothelium and development of proatherogenic alterations in lipid metabolism and blood lipoproteins. In case of dual use, their shielding effect occurs in its reduced form."*	
Intended and Unintended Use		
Tabuchi et al., Awareness and use of electronic cigarettes and heat-not-burn tobacco products in Japan, Addiction, 14 November 2015, here.	*"Approximately half the respondents in a Japanese internet survey were aware of e-cigarettes and heat-not-burn tobacco products, 6.6% had ever used. More than 70% of ever users used non-nicotine e-cigarettes, the sale of which is not legally prohibited, even to minors, in Japan, and 33% of them used nicotine e-cigarettes; 3.5% of never smoking men and 1.3% of never smoking women had ever used e-cigarettes. Corresponding figures for use in the last 30 days were 0.6% and 0.3%, predominantly non-nicotine e-cigarettes."*	Analysis of internet survey results.

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12th March, 2019

Dr. Law Chi-kwong, GBS, JP,
Secretary for Labour and Welfare
Labour and Welfare Bureau
10/F, West Wing
Central Government Offices
2 Tim Mei Avenue
Tamar, Hong Kong

Dear Secretary Law,

We are writing to you about an urgent issue of concern regarding the recently introduced Smoking (Public Health) Amendment Bill 2019 https://www.legco.gov.hk/yr18-19/english/bills/b201902151.pdf ("Amendment Bill").

In July 2018, Philip Morris Asia Limited opened its Electronic Hub ("E-Hub") in Hong Kong to support the demand, growth and increased complexity of our reduced risk products ("RRPs"[1]).

Our E-Hub at One Island South in Wong Chuk Hang created many new jobs here in Hong Kong. It currently houses 62 local talents, with more planned for this year. These jobs include Electronic Product Development and Engineering, Quality Assurance, Procurement and Supply Chain professionals to complement the extraordinary growth in the demand for our RRPs globally and our electronic manufacturing services provider based in Zhuhai, China.

In 2018 alone, we have products valued at around USD 600 million shipped out from Zhuhai and exported to +40 countries globally via Hong Kong ports and airport facilities using Hong Kong-based logistics service providers, and we've spent close to USD 6 million in logistics service fees. Our presence therefore also creates job opportunities in logistics and transport sectors in Hong Kong.

We have also invested in a world class battery testing laboratory at our E-Hub to conduct tests to ensure safety, reliability, and performance of our products as well as for research and development of our next generation RRPs.

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[1] *RRPs is the term PMI uses to refer to products with the potential to reduce individual risk and population harm in comparison to smoking cigarettes. PMI's RRPs are in various stages of development and commercialization, and we are conducting extensive and rigorous scientific studies to determine whether we can support claims for such products of reduced exposure to harmful and potentially harmful constituents in smoke, and ultimately claims of reduced disease risk, when compared to smoking cigarettes. Before making any such claims, we will rigorously evaluate the full set of data from the relevant scientific studies to determine whether they substantiate reduced exposure or risk. Any such claims may also be subject to government review and approval, as is the case in the U.S. today.*

We have chosen Hong Kong as our base because of its strategic position as a major international trading and logistics hub, rich talent pool, political stability, business friendly environment, and its drive to attracting foreign investment. In addition, the Governments approach to Innovation & Technology (I&T) is refreshing and we have answered the call to do more I&T and create more job opportunities for Hong Kong.

We appreciated the Government's legislative proposal put forward in June 2018 and the follow-up statement in July 2018 in which the Chief Executive and the Food & Health Bureau stated the Government would regulate rather than ban new alternative tobacco products like Heat not Burn and E-cigarettes.

We are therefore very disappointed to learn about the introduction of the Amendment Bill to ban the import, manufacture, sale, distribution and advertisement of alternative smoking products.

Obviously, this has great impact on, first and foremost, our employees and also our investment in the E-Hub for the testing, research and development purposes. The E-hub not only provides jobs to local talent but also fosters growth of knowledge in innovative technologies. In addition, it will impact our future plans in Hong Kong as our import and export hub to the rest of the world.

We are showing our commitment to a smoke free future and to Hong Kong by increasing our efforts to design better alternatives to cigarette smoking for adults who choose to continue to smoke so we can one day stop selling cigarettes, the most harmful form of tobacco use. We hope the Hong Kong Government empathizes with this goal and will reconsider the ban on alternative tobacco products and favour regulation on such products instead.

I would be more than happy to meet with you to discuss this situation and our plans for the future, and invite you to our E-Hub so you and your team can witness for yourselves what we're doing here for the betterment of Hong Kong.

I have also attached a letter we sent to Chief Secretary Mathew Cheung recently on our approach to Diversity and Inclusion and our employment practices, which I feel you would be interested in.

I look forward to hearing from you.

Yours Sincerely,

Brett Cooper
General Manager, Hong Kong & Macau
Philip Morris Asia Limited

Enc.

Cc: Hon. Matthew Cheung Kin-chung, GBM, GBS, JP – Chief Secretary for Administration
Hon. Paul Chan Mo-po, GBM, GBS, MH, JP – Financial Secretary
Hon. Joseph Chan Ho-lim, JP – Under Secretary for Financial Services & the Treasury