

## LCQ8: Reducing light pollution

Following is a question by the Hon Kwok Wai-keung and a written reply by the Secretary for Environment and Ecology, Mr Tse Chin-wan, in the Legislative Council today (February 21):

Question:

To minimise light nuisance caused by external lighting, the Government launched the voluntary Charter on External Lighting (the Charter) in 2016 and implemented enhancements to the Charter on January 1, 2023, including the requirement for participants to turn off non-static lighting installations or switch them to static mode one hour earlier (i.e. advancing from 11pm to 10pm), and the introduction of a new tier under the relevant award scheme with more stringent requirements (i.e. the Diamond Award), so as to encourage participating enterprises/organisations to switch off the relevant external lighting installations earlier at 10pm. However, it has been reported that some members of the public are still exposed to strong light at home during night time from nearby external lighting installations, affecting their sleep quality and the healthy vision development of their young children. In this connection, will the Government inform this Council:

(1) in each year since the implementation of the Charter up to the end of last year, of (i) the number of participating enterprises/organisations, together with a breakdown by the sector to which they belong, and (ii) the number of participants removed from the relevant list for reneging on their pledge;

(2) of the respective numbers of complaints about light nuisance received and successfully resolved by the authorities in each year since the implementation of the Charter up to the end of last year, together with a breakdown by District Council district; and

(3) given that while the Charter has been implemented for seven years, its effectiveness has reportedly been called into question, and it is learnt that the authorities have yet to formulate an assessment method for quantifying light pollution, whether the authorities will explore the introduction of enhancement measures, e.g. considering afresh the enactment of legislation specifically for preventing light pollution; imposing conditions on works relating to illuminating signboards for approval under the Buildings Ordinance (Cap. 123), so as to control light nuisance caused by such signboards to the public during night time; and formulating short and long term solutions to light pollution; if so, of the details; if not, the reasons for that?

Reply:

President,

To minimise light nuisance caused by external lighting, the Government launched the Charter on External Lighting (Charter) in 2016 to invite owners of and persons responsible for external lighting installations to pledge to switch off lighting installations of decorative, promotional or advertising purposes which affect the outdoor environment during present times. The Government set up the Working Group on External Lighting (Working Group) in 2018 to study the issues caused by external lighting, promote the Charter and assist the Government in reviewing the effectiveness of the Charter, as well as to advise the Government on measures to better manage external lighting.

The Working Group submitted the Report of the Working Group on External Lighting (Report) to the Government in 2021 to advise on measures to further reduce the nuisance which may be caused by external lighting. The recommendations include enhancing the Charter in respect of the requirements for operating hours of and mode of operation for external lighting installations. The Government accepted the Working Group's recommendations and introduced a new tier with more stringent requirements in terms of operating hours to the Charter, i.e. the Diamond Award, to encourage participants to switch off relevant external lighting installations at an earlier time (i.e. 10pm). As to the mode of operation, participants are required to turn off non-static lighting installations or switch them to static mode one hour earlier (i.e. advanced from 11pm to 10pm). The enhancements came into effect on January 1, 2023.

The Environment and Ecology Bureau (EEB) has all along been inviting owners of and persons responsible for external lighting installations to join the Charter and to encourage other business partners to sign up together through various trade associations and non-governmental organisations (NGOs). In addition, the EEB has published a list of participants on the Charter's website and distributed stickers and certificates to participants for display at their properties/shops to raise public awareness of the Charter and encourage the society's participation. The EEB will continue to monitor the implementation of the Charter.

Regarding the various parts of the question raised by the Hon Kwok Wai-keung, in consultation with the Development Bureau, the consolidated reply is as follows:

(1) Since the launch of the Charter in 2016, the number of Charter participants has increased from nearly 1 000 to about 5 200 at present. The participants come from different sectors including building management, property development, hotel and catering, retail, banking, telecommunication, real estate agencies, schools, public utilities, as well as public organisations and NGOs. The number of Charter participants from 2016 to 2023 and their respective sectors are at Annex 1.

Although signing up for the Charter is voluntary, our past sampling on-site compliance checks have shown that nearly 99 per cent of the participants have fulfilled their pledges to meet the switch-off requirements. Since the implementation of the Charter in 2016, only a total of around 100 participants were removed from the list of Charter participants as a result

of not complying with the pledges.

(2) The Working Group pointed out in the Report that light nuisance has limited prevalence and impacts in the territory, and not all lighting installations would cause light nuisance. Whether individual locations would be affected is also subject to other factors and it is debatable to judge solely in terms of on District Council districts. The numbers of complaint cases about light nuisance received by the Environmental Protection Department (EPD) from 2016 to 2022 are at Annex 2. We are compiling the relevant figures of 2023. Among the complaint cases, around 40 per cent are related to lighting installations for safety, security and operational purposes which are outside the scope of the Charter. The remaining, around 60 per cent of the cases are related to installations for decorative, promotional and advertising purposes.

In general, upon receipt of complaints against light nuisance, the EPD will conduct on-site inspection. If the case is substantiated, the EPD staff would relay the complainants' concerns and requests to the persons responsible for the lighting installations in question. If applicable, the EPD would advise them to refer to the Guidelines on Industry Best Practices for External Lighting Installations and take appropriate measures to minimise the impact of the lighting installations on residents in the vicinity. Thereafter, the EPD will conduct follow-up inspections to confirm the effectiveness of the measures and report the progress to the complainants. Taking the situation of 2022 as an example, over 70 per cent of the persons responsible for the lighting installations took measures to reduce light nuisance upon receiving the complaints. For the remaining 30 per cent of the complaint cases, the majority of them involved external lighting installations for functional uses which cannot be switched off due to operational needs. The number of cases handled successfully from 2016 to 2022 is as follows (the relevant figure of 2023 is under compilation):

Year	2016	2017	2018	2019	2020	2021	2022
Successfully handled cases	157	215	331	286	218	227	255

(3) When formulating the way forward in managing external lighting, the Working Group has taken into consideration various factors, including the function of external lighting installations in Hong Kong and its cityscape. External lighting has a role to play in Hong Kong during nighttime and is crucial to the operation of certain trades. The Working Group has also pointed out that not all lighting installations would cause light nuisance, and that the brightest spot of most of the external lighting installations are lower than the maximum level recommended by the International Commission on Illumination. During the review, the Working Group has also assessed whether the enforcement of management measures would entail great technical difficulties. As the light nuisance experienced by a light receptor is dependent on the distance between the light source and the light receptor,

and it can also come from multiple light sources at different premises at varying distances, it is rather difficult to identify the installation that causes light nuisance, or to define which mode of operation would cause light nuisance.

Moreover, the Working Group noted the improvements in light nuisance since 2018, which show that the launch of the Charter has been effective to a certain extent, while the owners/responsible persons of external lighting installations have been self-disciplined in general. Meanwhile, since the Working Group started the review in 2018, the local business environment has undergone tremendous changes. For example, the COVID-19 epidemic in the past years has led to a heavy blow to the economy. The Working Group considered it necessary to take into account the macro-economic situation and the impacts on business environment, job opportunities and the Government's overall direction in driving post-epidemic economic recovery when deciding whether to manage light nuisance by legislation. Given that the economy has not yet fully recovered, the Working Group considered that legislation might not be the best option to manage light nuisance. It would be more pragmatic to continue implementing and enhancing the current measures.

Regarding the suggestion to avoid light pollution by amending the Buildings Ordinance (BO), the BO aims to regulate the planning, design and construction of buildings and building works, and to set out the standards for its structures and fire safety, etc, to protect public safety. Issues relating to light pollution that may be caused by advertising screens, signboards and advertisement light boxes are outside the ambit of the BO.

With the continuous implementation and promotion of the enhanced Charter, in addition to proactive handling of light nuisance complaints by the EPD, the complaint figures have been on a downward trend since 2018. Meanwhile, the number of Charter participants has been growing since its implementation in 2016. The Government will continue to implement the above measures for reducing light nuisance caused by external lighting while keeping in view the implementation of the Charter.