For discussion **EC(2021-22)9**
on 23 June 2021

ITEM FOR ESTABLISHMENT SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 42 – ELECTRICAL AND MECHANICAL SERVICES DEPARTMENT
Subhead 000 Operational expenses

Members are invited to recommend to the Finance Committee the creation of the following supernumerary post in the Electrical and Mechanical Services Department for five years with immediate effect upon approval of the Finance Committee –

1 Chief Building Services Engineer (D1) ($150,950 - $165,200)

PROBLEM

The Electrical and Mechanical Services Department (EMSD) needs a dedicated directorate officer to handle the duties in relation to the existing and planned district cooling system (DCS) projects. With the creation of the proposed supernumerary Chief Building Services Engineer (CBSE) (D1) post, the Energy Efficiency Office (EEO) under the Electricity and Energy Efficiency Branch of EMSD can be re-organised to achieve greater operational efficiency and effectiveness, and take up the additional work arising from other ongoing and new energy efficiency and conservation (EE&C) and renewable energy (RE) initiatives.

PROPOSAL

2. We propose to create one supernumerary CBSE (D1) post in EMSD for five years with immediate effect upon approval of the Finance Committee (FC) to head a new division (i.e. Energy Efficiency Division C, to be created in the EEO under the Electricity and Energy Efficiency Branch of EMSD), in order to strengthen the planning and implementation of DCS projects so that EEO, after re-organisation, may provide better support for other EE&C and RE initiatives.

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JUSTIFICATION

Increasing workload of EEO

3. EEO of EMSD is responsible for providing technical expertise and conducting studies to support policy measures and drive EE&C and RE programmes, including the provision of DCS. Over the years, EEO has taken up more DCS projects and rolled out new initiatives in relation to EE&C and RE, resulting in a substantial increase in its workload. Details are set out in the ensuing paragraphs.

DCS for enhancing energy efficiency

4. DCS is a large-scale centralised air-conditioning system which produces chilled water by central chiller plants for distribution to user buildings for air-conditioning purpose. It is a major infrastructure supporting low-carbon development. Generally speaking, the energy efficiency of DCS is better than that of traditional central air-conditioning systems in individual buildings. Apart from energy saving, DCS will also bring about other significant benefits, including –

(a) allowing more flexible building designs for user buildings, as there is no need to install chiller plants;

(b) eliminating noise and vibration caused by the operation of chiller plants in user buildings;

(c) reducing heat island effects arising from the operation of heat rejection equipment and chiller plants in user buildings; and

(d) being more adaptable as compared to individual air-conditioning systems. Individual buildings can adjust their cooling capacity to meet different air-conditioning demands without having to carry out extensive modification or retrofitting works.

5. As set out in the 2018 Policy Address, the Government would continue to study the provision of DCSs in new development areas (NDAs) and redevelopment areas to promote low-carbon development. DCS is one of the EE&C infrastructure to help Hong Kong achieve the carbon neutrality goal by 2050 as stated in the 2020 Policy Address. Given the successful implementation of the first DCS at the Kai Tak Development (KTD), funding of $5.8 billion and $3.9 billion was approved by FC in February 2021 for EMSD to provide DCS in the Kwu Tung North (KTN) NDA and the Tung Chung New Town Extension (East) (TCE)[1] respectively. Preliminary planning and feasibility studies for DCS projects

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[1] Funding of DCSs in KTN NDA and TCE was approved by FC on 5 and 19 February 2021 respectively, and the main works are expected to be completed substantially in 2031 and 2030 respectively.

in other NDAs under planning, such as the Hung Shui Kiu (HSK)[2] NDA, will also be conducted. DCS projects in KTN NDA, TCE and HSK NDA have an estimated total cooling capacity of about 800 megawatt of refrigeration (MWr), with a total air-conditioned floor area of over 4.7 million square metres[3]. Upon completion and full utilisation of the DCSs in these NDAs, it is estimated that the annual saving in electricity consumption would be about 200 million kilowatt-hour, equivalent to the annual reduction in carbon emissions of about 140 000 tonnes.

6. DCSs are large-scale infrastructure projects involving complex works, lengthy implementation and ongoing operation and management to meet the plans of the development areas. Careful planning at the early stage of DCS projects is critical to the timely completion of DCS facilities in meeting district cooling requirements. The planning, design, tendering, construction and operation of each DCS project will bring about a huge amount of additional work. EEO of EMSD has to conduct thorough technical feasibility studies, assess financial viability, determine the fee levels, take forward legislative amendments relating to the charging of fees, formulate tendering strategies, consult the Legislative Council (LegCo) and other advisory bodies, and closely coordinate with other government bureaux/departments (B/Ds) as well as private organisations.

7. During the planning, design and construction stages of DCS projects in NDAs, major tasks include the design and construction of electrical and mechanical plant buildings, large-scale chiller plants, DCS distribution piping networks, and the associated control systems. These tasks involve complex technical studies including hydraulic modelling for the DCS distribution piping networks, laying of large-diameter piping installations, and trenchless pipe-laying works. The development of DCS projects in NDAs will be implemented in phases to tie in with the related development programmes. The construction phases are complicated and may last for up to around 15 years[4]. Constant and close liaison and coordination with different works agents, B/Ds and stakeholders (such as utility companies and DCS users) will be required to help manage and take forward the projects over an extended period.

8. Before commissioning of the DCS works, apart from the technical aspects of works, intensive input from directorate and experienced officers is required for financial assessment and fee level determination for district cooling

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[2] A consultant is being engaged for the DCS in HSK NDA and the detailed design work will commence subsequently.

[3] The estimated total cooling capacity of DCSs in KTN NDA, TCE and HSK NDA is about 2.8 times that of the existing DCS at KTD (284 MWr). The first phase of the existing DCS at KTD was commissioned in 2013 and is still under phased implementation for substantial completion by end 2025. An additional DCS at KTD is under construction and is expected to be completed substantially by end 2028.

[4] According to the current development programmes, DCSs in KTN NDA and TCE will be implemented in phases. The commissioned DCS facilities will have an estimated service life of about 30 years.

services, etc. After completion of DCS works, EEO of EMSD will be responsible for the long-term effective operation and management of the commissioned DCS facilities to ensure energy-efficient, effective and reliable district cooling services are provided to DCS users.

Other duties apart from DCS

9. Apart from DCS projects, there are a number of new initiatives announced in the 2019 Policy Address and the 2021-22 Budget, which are being taken forward by EEO, including the "Green Energy Target", "Green Schools 2.0 – Energy Smart", and "Green Welfare NGOs".

10. The "Green Energy Target" is an energy saving initiative. The Government had earlier set the target to reduce electricity consumption in government buildings by 5% in five years (2015-16 to 2019-20), and achieved a final saving of 7.8%. As stated in the 2019 Policy Address, the Government has set a more progressive "Green Energy Target" to further increase the energy performance of the Government by 6% by 2024-25. The latest "Green Energy Target" covers not only electricity consumption in government buildings and government infrastructure, but also reduction in consumption of other forms of energy. The energy contribution of RE projects are also taken into account towards the energy saving target. To achieve the "Green Energy Target", EEO conducts energy-cum-carbon audits[5] on major government buildings, implements energy saving projects for government premises, provides guidelines and information on green housekeeping measures, and conducts retro-commissioning (RCx) in major government buildings. EEO also provides technical advice to B/Ds that manage infrastructure facilities to help them use energy more efficiently and develop small-scale RE installations.

11. Separately, under "Green Schools 2.0 – Energy Smart", EEO provides one-stop planning and installation services for primary and secondary schools to assist them to improve their energy performance through installation of inverter air-conditioners, light emitting diode (LED) lighting and real-time energy monitoring systems (RTEMSs). The use of inverter air-conditioners and LED lighting saves energy, whereas the RTEMSs allow teachers and students to visualise the energy use in schools to facilitate behavioral changes for energy saving. The school management can analyse the energy data, set energy saving targets with timelines, and review the operation of equipment/systems with a view to optimising the energy performance of the school.

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[5] We have earmarked a non-recurrent provision of $14 million for conducting the energy-cum-carbon audit programme on about 250 major government buildings in three years with a view to identifying energy saving opportunities, such as energy saving projects, green housekeeping measures, and carbon reduction measures. EMSD and the Environmental Protection Department oversee the energy audits and carbon audits respectively.

12. EEO will also implement the "Green Welfare NGOs", a new initiative announced in the 2021-22 Budget that involves conducting energy audits and installing energy-saving devices for welfare non-governmental organisations (NGOs) subvented by the Social Welfare Department. This initiative would enhance the energy saving performance of these premises and promote energy saving and decarbonisation proactively.

Encl. 1

13. Enclosure 1 sets out some of EEO's key responsibilities in relation to EE&C and RE other than DCS, which have substantive and far-reaching impacts on the low-carbon transition of Hong Kong. Energy saving initiatives that have been committed or planned include the enhancement of the statutory energy efficiency level of buildings, promotion of the use of energy-efficient electrical appliances, and implementation of various energy saving initiatives in government buildings and infrastructure projects.

14. EEO's workload in the coming years will continue to increase to support the Environment Bureau in the implementation of DCS projects, promotion of RE in both the public and private sectors, promotion of green buildings, encouraging the use of emerging energy efficiency practices such as RCx, and the use of innovation and technology solutions for EE&C and RE purposes.

Need for creating one supernumerary CBSE (D1) post in EMSD

15. Since its establishment in 2000, EEO has been headed by two Chief Engineers. In light of the increasing workload arising from the complex DCS projects as well as the numerous new initiatives in the pipeline, the number of sub-divisions under EEO has increased from 9 to 29. Enclosure 2 sets out the main duties and responsibilities of all Chief Engineers in EMSD, including the two in EEO. The promulgation of DCS projects falls under the purview of Chief Engineer/Energy Efficiency B (CE/EEB). Amongst other things, he/she is also responsible for providing professional support and advice on the administration, enforcement and review of the Buildings Energy Efficiency Ordinance (Cap. 610), the implementation of Energy Efficiency Registration Scheme for Buildings, EE&C and RE initiatives for schools and NGOs, as well as various RCx projects. Meanwhile, Chief Engineer/Energy Efficiency A develops the Voluntary and Mandatory Energy Efficiency Labelling Schemes for electrical and gas appliances, and promotes the adoption of energy-efficient technologies, RE, energy audits and the best practices in the public and private sectors as well as the application of innovative technologies on EE&C and RE. He/She also publicises the energy end-use data for Hong Kong and monitors the energy consumption of government facilities, carries out energy audits, assists in setting energy saving targets and implements energy saving projects. As the two Chief Engineers in EEO are overloaded with existing work and their supervisory span has already been stretched to the limit, tasking them to take up more responsibilities is not sustainable and will eventually affect the timely and smooth delivery of relevant initiatives.

Encl. 2

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16. Given that the multiple large-scale DCS projects are running in parallel and each will involve complex works, lengthy implementation and ongoing facilities management as highlighted in paragraphs 4 to 8 above, EEO requires one supernumerary post of CBSE (D1) to focus on the following tasks –

(a) lead and oversee the planning, design and construction of DCS projects in NDAs to ensure effective project management and timely completion for the provision of energy-efficient, effective and reliable district cooling services;

(b) review and administer the charging arrangement for the provision of district cooling services to users under the District Cooling Services Ordinance (Cap. 624);

(c) oversee the technical and financial feasibility studies required for the implementation of DCS projects in NDAs and set fee levels;

(d) undertake high-level coordination duties relating to DCS including attendance at relevant meetings of LegCo and advisory bodies and public engagement with stakeholders to brief them on the planning, implementation and charging arrangement of DCS projects;

(e) coordinate with utility companies, users of district cooling services and other relevant B/Ds to ensure effective implementation of the planning, design, construction and operation of DCS projects; and

(f) administer the operation of the commissioned DCS facilities for delivering effective and reliable district cooling services to DCS users, and apply the innovative and smart technologies to further enhance the energy performance of DCS.

Re-organisation of EEO

17. With the creation of the proposed supernumerary CBSE post to be designated as Chief Engineer/Energy Efficiency C dedicated for the planning and implementation of DCS at NDAs, the duties of EEO can be restructured to achieve greater operational efficiency and effectiveness. In particular, CE/EEB could devote more attention to the promotion and implementation of measures in relation to green buildings, retrofitting works, and promulgation of EE&C and RE initiatives/works for schools and welfare NGOs. The job descriptions of the three Chief Engineers in EEO after the proposed re-organisation are at Enclosures 3 to 5.

Encls. 3 - 5

18. The proposed organisation charts of Regulatory Services and EEO of EMSD at Enclosures 6 to 7 show the proposed creation of one supernumerary CBSE post and the situation after re-organisation.

Encls. 6 & 7

/**Non-directorate** …..

Non-directorate support

19. In addition to the above proposed supernumerary CBSE (D1) post, there will be 42 non-directorate posts, including 25 permanent posts of professional and technical grades and 17 time-limited posts of professional grade, to support the daily operation of the Energy Efficiency Division C.

Continued need for the CBSE post

20. DCS projects entail lengthy implementation and ongoing operation and management. At present, there are multiple DCS projects in NDAs under planning, including various committed and proposed projects mentioned in paragraph 5 above. These projects involve different commencement and completion dates with development spanning over years to tie in with the relevant infrastructure works. Besides, provision of DCSs also gives rise to longer term commitments, such as review on the operation and maintenance of DCS projects; review on the financial modelling as well as fees and charges; and conducting timely planning and preparations (e.g. renovation works) for the next service life cycle of the DCSs. If the supernumerary CBSE post is approved, EMSD will assess the continued need for the post before it lapses in five years.

ALTERNATIVES CONSIDERED

21. There are ten permanent Chief Engineer posts in total (including the two Chief Engineer posts in EEO) in EMSD responsible for the regulatory work. They are responsible for overseeing the professional teams in EMSD in enforcing various ordinances; administering and implementing related plans, agreements and systems; planning legislative work; carrying out promotional and publicity activities as well as providing professional advice to B/Ds and public organisations.

22. We have comprehensively reviewed the possibility of redeploying the existing Chief Engineers within EMSD responsible for the regulatory work to take up the duties of the proposed supernumerary CBSE post. We consider all the existing Chief Engineers are already fully occupied with their existing work portfolios. It is not feasible for them to take up additional duties without adversely affecting the discharge of their current duties as listed at Enclosure 2.

FINANCIAL IMPLICATIONS

23. The proposed creation of the supernumerary CBSE post in EMSD will bring about an additional notional annual salary cost at mid-point of $1,923,600. The additional full annual average staff cost, including salaries and staff on-cost, is around $2,710,000.

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24. We have included the necessary provision in the Estimates to cater for the expenses of this proposal.

PUBLIC CONSULTATION

25. We consulted the LegCo Panel on Environmental Affairs on 22 January 2020 on our previous proposal of creating a permanent CBSE post in EMSD to take forward various large-scale DCS projects and other new initiatives. Members of the Panel did not raise any objection to the submission of the proposal to create the CBSE post to the Establishment Subcommittee. Supplementary information was provided to Panel Members in July 2020. Following the Chief Executive's commitment to review staffing proposals as announced in the 2020 Policy Address, we have revised the original proposal by turning the proposed permanent CBSE post into a supernumerary post of five years[6].

ESTABLISHMENT CHANGES

26. The establishment changes in the Regulatory Services of EMSD for the past two years are as follows –

Establishment (Note)	Number of Posts			
	Existing (As at 1 June 2021)	**As at 1 April 2021**	**As at 1 April 2020**	**As at 1 April 2019**
A	16[#]	16	15	15
B	258	255	240	210
C	306	306	306	290
Total	**580**	**577**	**561**	**515**

Note –
A - ranks in the directorate pay scale or equivalent
B - non-directorate ranks, the maximum pay point of which is above MPS Point 33 or equivalent
C - non-directorate ranks, the maximum pay point of which is at or below MPS Point 33 or equivalent
[#] - as at 1 June 2021, there was no unfilled directorate post in EMSD

CIVIL SERVICE BUREAU COMMENTS

27. The Civil Service Bureau supports the proposed creation of one supernumerary CBSE post in EMSD. The grading and ranking of the proposed post are considered appropriate having regard to the level and scope of the responsibilities concerned and the professional input required.

/**ADVICE** …..

[6] The decision was set out in paper no. ECI(2020-21)8 which was issued in January 2021.

ADVICE OF THE STANDING COMMITTEE ON DIRECTORATE SALARIES AND CONDITIONS OF SERVICE

28. As the directorate post proposed to be created is on a supernumerary basis, its creation, if approved, will be reported to the Standing Committee on Directorate Salaries and Conditions of Service in accordance with the agreed procedure.

Environment Bureau
June 2021

Other key responsibilities of Energy Efficiency Office (EEO) in relation to energy efficiency and conservation (EE&C) and renewable energy (RE)

Other than the district cooling systems, EEO is currently responsible for other duties in relation to EE&C and RE. The key duties are highlighted below.

Implementation of the Mandatory Energy Efficiency Labelling Scheme (MEELS)

MEELS has been implemented in phases. Since its launch in 2009, the scheme has expanded gradually. The energy efficiency grading standards are also reviewed from time to time. MEELS currently covers eight types of products. There are ongoing reviews on the coverage of MEELS and grading standards.

Enforcement of the Buildings Energy Efficiency Ordinance (BEEO) (Cap. 610)

BEEO came into full operation in 2012. Since then, EEO has administered BEEO and the list of Registered Energy Assessors. It reviews the Building Energy Code every three years in order to tighten the energy efficiency standards for improving the energy performance of buildings.

Implementation of the Energy Efficiency Registration Scheme for Buildings (EERSB)

To further promote building energy efficiency above the mandatory standards, EEO revamped EERSB and launched a revised scheme in 2018. The revamped EERSB is a recognition scheme for buildings/premises that have outperformed the statutory requirements under BEEO. EEO administers the scheme to promote green buildings. According to section 16I of the Inland Revenue Ordinance (Cap. 112), energy efficiency installations registered under EERSB are eligible for accelerated deduction for capital expenditure.

Retro-commissioning (RCx) in Existing Buildings

RCx is a systematic and cost effective energy saving method to enhance the operational energy efficiency of building services equipment in existing buildings. EEO has published technical guidelines, promoted the practices to the trades, and assisted in formulating training programmes. It is also conducting RCx in existing government buildings by phases.

/*Support …..*

Support for the Feed-in Tariff (FiT) Scheme

The Government and the power companies introduced the FiT Scheme in 2018, providing financial incentives to encourage the private sector to invest in distributed RE. EEO has been supporting the implementation of the FiT Scheme through various measures, including issuing Guidance Notes for Solar Photovoltaic System Installations; operating a hotline to handle enquiries and offer technical advice; organising seminars and briefings for the trade and stakeholders to enhance the latter's understanding of the regulatory, safety and technical requirements of RE installations; and promoting public participation in RE development, etc. through its website "HK RE Net" (re.emsd.gov.hk).

Solar Harvest

EEO introduced "Solar Harvest" in 2019 to install solar photovoltaic (PV) systems for free for eligible non-governmental and non-profit-making schools, as well as welfare non-governmental organisations (NGOs) on recurrent subventions from the Social Welfare Department. Under "Solar Harvest", EEO provides one-stop service to the eligible schools/welfare NGOs including conducting site visits and technical assessments at their premises, design of the solar PV systems, procuring and installing the equipment, and system testing. EEO also helps schools and welfare NGOs apply for joining the FiT Scheme.

Representing the Hong Kong Special Administrative Region in the Asia-Pacific Economic Cooperation (APEC) Energy Working Group (EWG)

EEO actively participates in APEC EWG to enhance Hong Kong's international profile. We have taken up the Chairmanship of the Expert Group on Energy Efficiency and Conservation (EGEEC)[Note] since March 2019. One of the major objectives of EGEEC is to collaborate with all APEC member economies to achieve APEC's goal of reducing energy intensity.

Major Publicity Campaign

Publicity campaigns are organised from time to time to support the Government's policies on EE&C and RE. The "Energy Saving for All" campaign, organised annually since 2015, is a major community engagement programme on energy saving. Main activities include voluntary charter schemes on energy saving, competitions and a dedicated website on energy saving information and practices.

/*Regulatory …..*

[Note] EGEEC is one of APEC EWG's four expert groups. The Electrical and Mechanical Services Department also actively participates in other expert groups.

Regulatory Action for Fresh Water Cooling Tower (FWCT)

In addition to promoting the wider use of water-cooled air-conditioning systems, EEO also takes regulatory action under the Public Health and Municipal Services Ordinance (Cap. 132) against contaminated cooling towers. The regulatory work includes conducting sampling inspection with water tests of FWCTs regularly and taking regulatory/advisory actions and control against the improperly maintained or contaminated FWCTs.

Main Duties and Responsibilities of the Existing Chief Engineers in the Regulatory Services of the Electrical and Mechanical Services Department (EMSD)

Main duties and responsibilities of the Chief Engineers in the EMSD are summarised in the following paragraphs.

Regulatory Services

Under Assistant Director/Electricity and Energy Efficiency (AD/EE)

Chief Engineer/Energy Efficiency A (CE/EEA)

2. CE/EEA assists AD/EE in providing professional support and advice to the Environment Bureau (ENB) on the formulation and implementation of policies, strategies and initiatives on energy efficiency and conservation (EE&C) and the application of renewable energy (RE). In this connection, he/she develops the Voluntary and Mandatory Energy Efficiency Labelling Schemes for electrical and gas appliances, and promotes public awareness on the use of energy-efficient appliances. He/She is also responsible for the administration and enforcement of the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598) and promotes the adoption of energy-efficient technologies, RE, energy audits and the best practices in the public and private sectors as well as the application of innovative technologies on EE&C and RE. He/She is responsible for coordinating with government bureaux and departments as well as public and private organisations for the promotion of energy programmes promulgated by international/regional/local energy organisations such as the Asia-Pacific Economic Cooperation and participating in their activities. He/She publicises the energy end-use data for Hong Kong and monitors the energy consumption of government facilities, carries out energy audits, assists in setting energy saving targets and implements energy saving projects.

Chief Engineer/Energy Efficiency B (CE/EEB)

3. CE/EEB assists AD/EE in providing professional support and advice to ENB on the formulation and implementation of policies, strategies and initiatives on EE&C and the application of RE. He/She promotes the wider use of water-cooled air-conditioning systems in Hong Kong and is responsible for the promotion and organisation of activities/events on retro-commissioning at regional level. He/She is responsible for the administration and enforcement of the

/Buildings …..

Buildings Energy Efficiency Ordinance (Cap. 610) and District Cooling Services Ordinance (Cap. 624). At present, he/she oversees the implementation of the district cooling systems at the Kai Tak Development. He/She provides support to studies on provision of district cooling systems in new development areas and oversees subsequent implementation works. He/She is also responsible for the regulation of fresh water cooling towers under the Public Health and Municipal Services Ordinance (Cap. 132).

Chief Electrical and Mechanical Engineer/Electricity Legislation (CEME/EL)

4. CEME/EL assists AD/EE in the management and administration of the regulatory functions related to electricity safety. He/She is responsible for the administration and enforcement of the Electricity Ordinance (Cap. 406) for ensuring safe electrical installations, safe household electrical products and the safe and reliable supply of electricity. He/She introduces and implements new legislative proposals/legislative amendments and codes of practice/guidance notes for the purpose of improving safety standards of the electrical industry and enhancing electricity safety of the public. Besides, he/she assists AD/EE in providing support to the Director of Electrical and Mechanical Services in the Daya Bay Contingency Plan and related technical advice on nuclear power safety. He/She is also responsible for maintaining liaison with outside organisations/government departments for the promotion of electricity safety and new/existing legislation.

Under Assistant Director/Gas and General Legislation (AD/GGL)

Chief Engineer/Gas Standards A (CE/GSA)

5. CE/GSA assists AD/GGL in monitoring the performance of Hong Kong and China Gas Co. Ltd. to ensure that its gas production plants and notifiable gas installations are operated to the highest possible standards and that the requirements of the Gas Safety (Gas Supply) Regulations are fully complied with. He/She is responsible for the operation of the registration scheme for gas contractors and installers and manages the quality assurance of town gas and cylinder liquefied petroleum gas (LPG) installation work in all market sectors and manages the investigation, preparation and processing of cases for prosecution under the Gas Safety Ordinance (Cap. 51). He/She is also responsible for the processing of complaints from members of the public and representative groups concerned with the safe supply and use of gas. He/She gives expert advice to professional agencies in both public and private sectors on the supply and use of cylinder LPG and town gas premises and coordinates activities associated with the promotion of gas safety. He/She is responsible for developing, introducing and monitoring new training packages for the gas industry in conjunction with training establishments in the private and public sectors.

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Chief Engineer/Gas Standards B (CE/GSB)

6. CE/GSB assists AD/GGL in administering the Gas Safety Ordinance (Cap. 51) and subsidiary regulations on behalf of the Gas Authority, the Oil (Conservation and Control) Ordinance (Cap. 264) on behalf of the Director of Oil Supplies and implementing the devised comprehensive monitoring regime on the development of refrigerants of low Global Warming Potential. He/She monitors the performance of gas supply companies to ensure that LPG terminals, gas production plants and notifiable gas installations are operated to the highest standards and that the requirements of the Gas Safety (Gas Supply) Regulations are fully complied with. He/She also assists AD/GGL in advising ENB on aspects of gas supply on behalf of the Gas Authority. He/She monitors the implementation of the voluntary Code of Practice with the major oil companies and the Hong Kong and China Gas Co. Ltd. on strategic reserve of gas oil and naphtha respectively. He/She also represents the Gas Authority on the Coordinating Committee on Land Use Planning and Control relating to Potentially Hazardous Installations. To ensure gas safety of refrigerants that have less impact to global warming, he/she also assists AD/GGL in reinforcing the liaison and communication with stakeholders in the air-conditioning and refrigeration trade and relevant government departments, conducting surveillance inspections, and rolling out education and publicity activities to the trade and the public.

Chief Electrical and Mechanical Engineer/General Legislation 1 (CEME/GL1)

7. CEME/GL1 assists AD/GGL in administering the Lifts and Escalators Ordinance (Cap. 618), the Aerial Ropeways (Safety) Ordinance (Cap. 211), the Amusement Rides (Safety) Ordinance (Cap. 449) and the Builders' Lifts and Tower Working Platforms (Safety) Ordinance (Cap. 470). He/She oversees the enforcement of the legislation in respect of the safety of lifts and escalators, aerial ropeways, amusement rides, builders' lifts and tower working platforms, and other general mechanical installations and to ensure that proper actions are taken in respect of non-compliance and against offenders. He/She is also responsible for the introduction and implementation of new legislative proposal/legislative amendment and codes of practice/guidance notes for the purpose of improving safety standards and enhancing public safety. He/She administers the registration schemes and the staff management and financial control of a professional team for the development of a regulatory regime for the vehicle maintenance trade. He/She maintains liaison with government departments and other organisations for the promotion of safety and new/existing legislation of a mechanical nature.

/*Chief …..*

Chief Electrical and Mechanical Engineer/General Legislation 2 (CEME/GL2)

8. CEME/GL2 assists AD/GGL in administering the Lifts and Escalators Ordinance (Cap. 618) and ensuring the smooth implementation of the policy initiatives for enhancing the safety of aged lifts and escalators. He/She oversees the stepped-up surveillance checks of routine maintenance and special maintenance of aged lifts carried out by registered contractors as well as implementation of other short-term measures to enhance the safety of aged lifts, thereby further protecting public safety. He/She is also responsible for the planning and implementation of the Lift Modernisation Subsidy Scheme for the purpose of facilitating the needy owners to pursue the lift modernisation works and hence enhancing the safety of aged lifts in the community. He/She manages the feasibility study on introducing legislative requirements to mandate the modernisation of aged lifts. He/She maintains liaison with outside organisations and government departments for the promotion of safety of aged lifts and escalators.

Under Assistant Director/Railways (AD/R)

Chief Engineer/Railways 1 (CE/R1)

9. CE/R1 assists AD/R in ensuring the safe operation of the existing railway system and in developing policies and strategies with regard to railway safety. He/She oversees the safe operation of existing railway lines (including Kwun Tong Line, Tseung Kwan O Line, Tsuen Wan Line, Airport Express, Tung Chung Line, Disneyland Resort Line and Light Rail), Trams and Peak Tramway. He/She leads the Railways Branch in executing the regulatory functions in accordance with the relevant Ordinances, Regulations and Operating Agreement (i.e. the Mass Transit Railway (MTR) Ordinance (Cap. 556), Tramway Ordinance (Cap. 107) and Peak Tramway (Safety) Regulations (Cap. 265A)). He/She also oversees investigations of railway incidents and the improvement measures of the railway operator. He/She supervises the safety preventive measures on railway operation by the Mass Transit Railway Corporation Limited (MTRCL) and the supervisory audits conducted by the Railways Branch on MTRCL's safety and asset management system. He/She maintains close liaison with the railway operator's management to give guidance and advice on railway safety matters and major modifications of the existing railway lines. He/She also assists in the inter-departmental coordination work with regard to railway safety and security. He/She provides the Transport and Housing Bureau (THB) with professional advice and technical support in respect of railway safety matters and attends meetings of the Panel on Transport of the Legislative Council (LegCo) or its Subcommittee on Matters Relating to Railways in respect of safety matters of existing railway system.

/*Chief …..*

Chief Engineer/Railways 2 (CE/R2)

10. CE/R2 assists AD/R in overseeing the safety related matters of existing railway lines and the new railway projects, and monitoring the safety performance of these new railways after they commence operation. He/She oversees the safe operation of the existing railway lines (including Island Line, South Island Line, West Rail Line, Ma On Shan Line, East Rail Line and High Speed Rail) in accordance with the MTR Ordinance (Cap. 556) and the Automated People Mover at the Hong Kong International Airport in accordance with the Airport Authority (Automated People Mover) (Safety) Regulation (Cap. 483C). He/She also oversees the safety related matters of the new railway projects (including Tuen Ma Line and North South Line of the Shatin to Central Link). He/She chairs the inter-departmental working group on safety matters of new railway projects. He/She assists in the inter-departmental coordination work with regard to railway safety and security. He/She is responsible for overseeing the interface between existing railway system and new railway projects and the safety inspections, tests and trial-runs of new railway projects, and overseeing their safety performance after they commence operation. He/She also provides THB with professional advice and technical support in respect of new railway projects and provides THB and relevant departments with professional advice on the safety related issues of the recommended railway schemes in the Railway Development Strategy 2014. He/She attends meetings of the Panel on Transport of LegCo or its Subcommittee on Matters Relating to Railways in respect of safety matters of new railway projects.

Under Deputy Secretary for the Environment (DS(Env)) and Deputy Director/Regulatory Services (DD/RS)

Chief Electrical and Mechanical Engineer/Electricity Team (CEME/ET)

11. CEME/ET is part of EMSD's establishment and is attached to ENB. He/She assists DS(Env) and DD/RS in providing professional advice and proposals for implementation of the initiatives and measures of the Scheme of Control Agreements (SCAs) with the power companies, review of the SCAs and matters related to energy policy and electricity industry, formulation of future fuel mix for electricity generation, and review of development of the electricity market and related regulatory framework in Hong Kong. He/She directs the operation and management of the Electricity Team for monitoring the power companies' performance under the SCAs, especially in the Auditing Review, Tariff Review and Development Plan Review, and provides professional advice on the regulation of the power companies under the SCAs. He/She is responsible for attending meetings of the LegCo and the Energy Advisory Committee to help explain the Government's objectives and proposals and meetings with the power companies on

their electricity-related matters under the SCAs. He/She is also responsible for managing consultancy studies related to development of the electricity market and regulatory regime, monitoring of power companies, and assessment of power companies' development plans.

Enclosure 3 to EC(2021-22)9

Revised Job Description of
Chief Electrical and Mechanical Engineer/Energy Efficiency A
after Re-organisation

Rank : Chief Electrical and Mechanical Engineer (D1)

Responsible to : Assistant Director/Electricity and Energy Efficiency (D2)

Main Duties and Responsibilities –

1. To lead and oversee Energy Efficiency Division A in providing professional support and advice to the Environment Bureau on the formulation and implementation of policies, strategies and initiatives on energy efficiency and conservation (EE&C), the application of renewable energy (RE) and electric vehicle charging infrastructure facilities.

2. To develop the Voluntary and Mandatory Energy Efficiency Labelling Schemes for electrical and gas appliances, and promote public awareness of the use of energy-efficient appliances.

3. To oversee the administration and enforcement of the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598).

4. To promote the adoption of energy-efficient technologies, RE, energy audits and the best practices in the public and private sectors as well as the application of innovative technologies on EE&C and RE.

5. To publicise the energy end-use data for Hong Kong.

6. To monitor the energy consumption of government facilities, carry out energy audits, assist in setting energy saving targets and implement energy saving projects.

7. To coordinate with government bureaux and departments as well as public and private organisations for the promotion of energy programmes promulgated by international/regional/local energy organisations such as the Asia-Pacific Economic Cooperation and participate in their activities.

Enclosure 4 to EC(2021-22)9

Revised Job Description of
Chief Building Services Engineer/Energy Efficiency B
after Re-organisation

Rank : Chief Building Services Engineer (D1)

Responsible to : Assistant Director/Electricity and Energy Efficiency (D2)

Main Duties and Responsibilities –

1. To lead and oversee Energy Efficiency Division B in providing professional support and advice to the Environment Bureau on the formulation and implementation of policies, strategies and initiatives on buildings related energy efficiency and conservation (EE&C) and the application of renewable energy (RE).

2. To oversee the administration and enforcement of the Buildings Energy Efficiency Ordinance (Cap. 610) covering requirements for new buildings and major retrofitting works, energy audit for prescribed buildings, and registered energy assessors.

3. To implement retro-commissioning (RCx) programme for major government buildings in Hong Kong and to promote RCx and organise activities/events for RCx in Hong Kong and at regional level.

4. To administer the Energy Efficiency Registration Scheme for Buildings and to promote buildings related EE&C and RE initiatives.

5. To implement EE&C and RE initiatives/works for schools and welfare non-governmental organisations.

Job Description of
Proposed Chief Building Services Engineer/Energy Efficiency C

Rank : Chief Building Services Engineer (D1)

Responsible to : Assistant Director/Electricity and Energy Efficiency (D2)

Main Duties and Responsibilities –

1. To lead and oversee Energy Efficiency Division C in providing professional support and advice to the Environment Bureau on the planning and implementation of district cooling systems (DCSs) and subsequent operation of the commissioned DCSs in Hong Kong.

2. To lead and oversee the planning, design, construction and operation of DCS projects at the Kai Tak Development and in other new development areas (NDAs).

3. To oversee the administration and enforcement of the District Cooling Services Ordinance (Cap. 624) covering the provision of and charging arrangements for district cooling services, as well as review on the charging arrangements for district cooling services at each NDA.

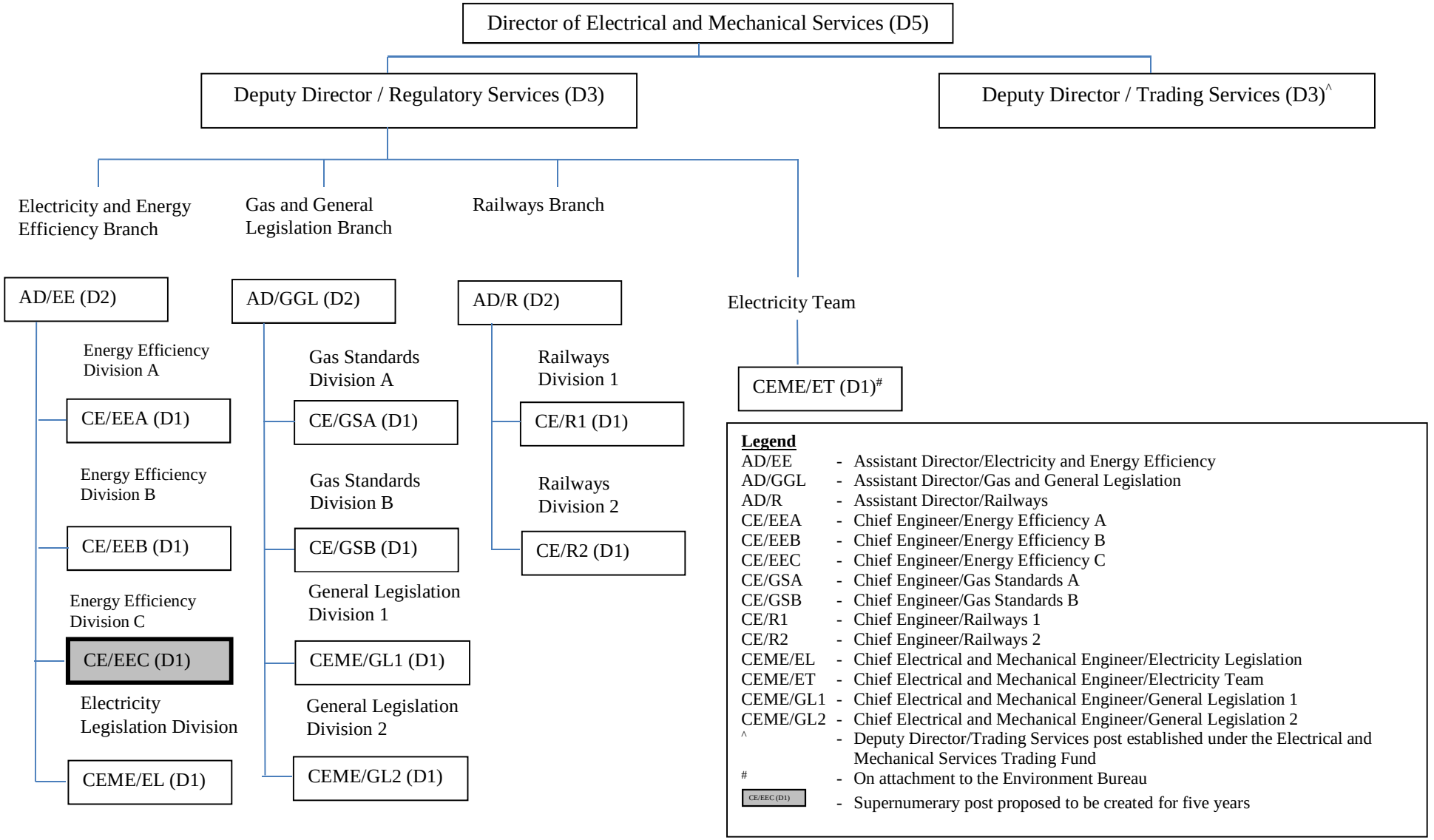
4. To steer and supervise feasibility studies and advanced planning coordination on provision of DCSs in NDAs, and to oversee coordination with relevant bureaux/departments and implementation of DCS project works.

5. To undertake high-level coordination duties for DCS including attendance at relevant meetings of the Legislative Council and advisory bodies and public engagement with stakeholders.

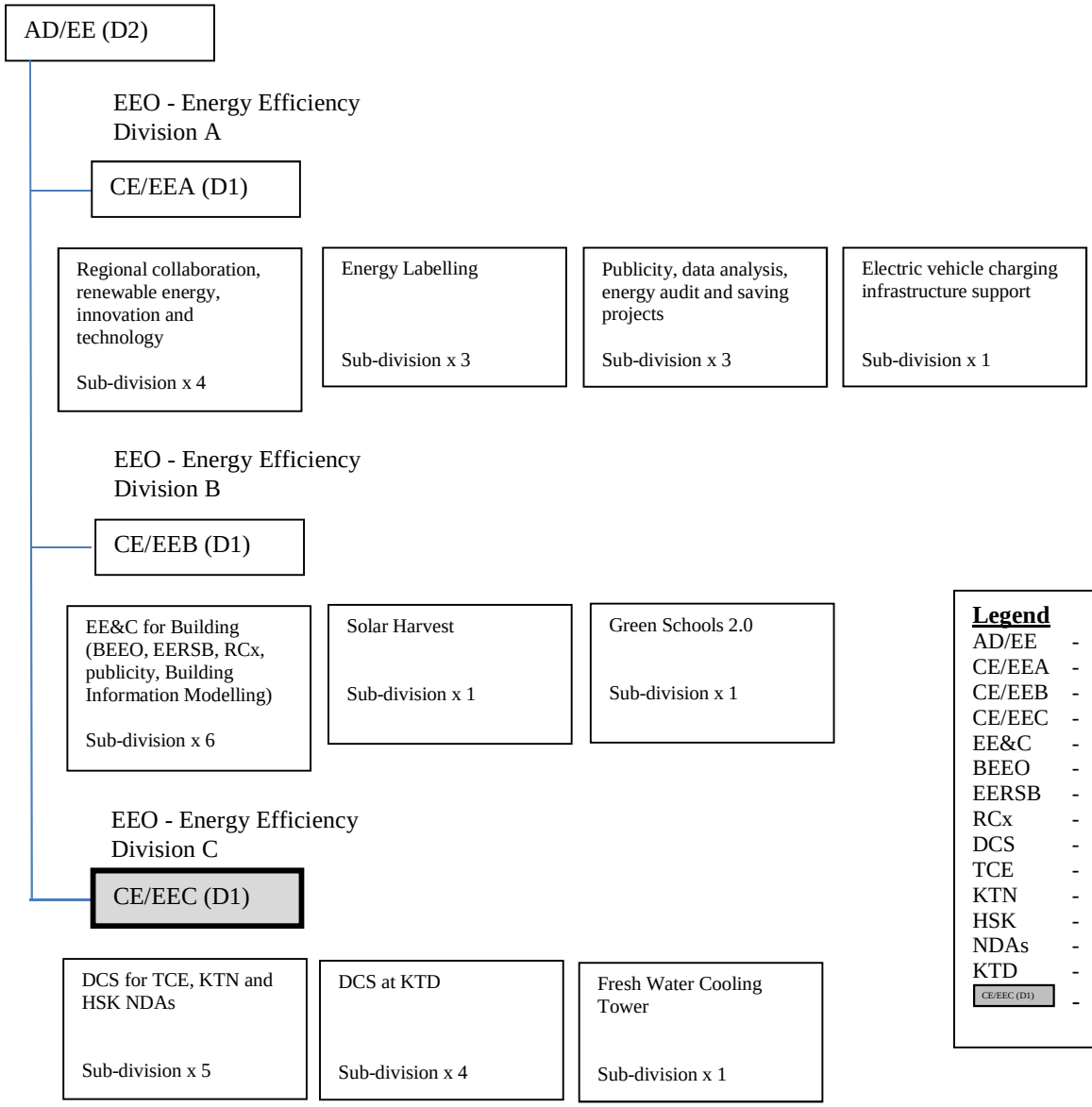
6. To administer the operation of the commissioned DCS projects for delivering district cooling services to DCS users.

7. To promote wider use of water-cooled air-conditioning system in districts without DCS and the regulation of improperly maintained or contaminated fresh water cooling towers under the Public Health and Municipal Services Ordinance (Cap. 132).

Proposed Organisation Chart of the Regulatory Services of Electrical and Mechanical Services Department (Established under Head 42 – Electrical and Mechanical Services Department)



Proposed Organisation Chart of Energy Efficiency Office (EEO) after Re-organisation



Legend

AD/EE	-	Assistant Director/Electricity and Energy Efficiency
CE/EEA	-	Chief Engineer/Energy Efficiency A
CE/EEB	-	Chief Engineer/Energy Efficiency B
CE/EEC	-	Chief Engineer/Energy Efficiency C
EE&C	-	Energy efficiency and conservation
BEEO	-	Buildings Energy Efficiency Ordinance (Cap. 610)
EERSB	-	Energy Efficiency Registration Scheme for Buildings
RCx	-	Retro-commissioning
DCS	-	District Cooling System
TCE	-	Tung Chung New Town Extension (East)
KTN	-	Kwu Tung North
HSK	-	Hung Shui Kiu
NDAs	-	New Development Areas
KTD	-	Kai Tak Development
CE/EEC (D1)	-	Post proposed to be created