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Panel on Economic Development
Meeting on 10 December 2019

Updated background brief on annual tariff reviews with the two power companies

Purpose

This paper sets out the background of the Government's annual tariff reviews with the two power companies, and summarizes the major views and concerns on the subject matter raised by members of the Panel on Economic Development ("the Panel") in previous discussions.

Regulation of electricity supply in Hong Kong

Scheme of Control Agreements

2. Electricity supply in Hong Kong is regulated through the Scheme of Control Agreements ("SCAs") signed between the Government and individual power companies, namely, The Hongkong Electric Company, Limited ("HKE")[1] which supplies electricity to customers on Hong Kong Island, Ap Lei Chau and Lamma Island; and CLP Power Hong Kong Limited and Castle Peak Power Company Limited[2] (referred to collectively as "CLP" hereafter) which jointly supply electricity to customers in Kowloon and the New Territories including Lantau, Cheung Chau and some outlying islands.

3. The two SCAs set out the rights and obligations of the power companies and provide a framework for the Government to monitor the power companies' financial affairs and technical performance. While the previous SCAs expired in 2018, the Government entered into the current SCAs with the power companies

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[1] HKE is a subsidiary of HK Electric Investments Limited.

[2] CLP Power Hong Kong Limited is a subsidiary of CLP Holdings Limited. Castle Peak Power Company Limited is a joint venture between CLP Power Hong Kong Limited (70%) and China Southern Power Grid International (HK) Co., Limited (30%).

on 25 April 2017.[3] As advised by the Administration, the current SCAs are the greenest SCAs ever offering key features on promoting energy efficiency and conservation ("EE&C") and renewable energy ("RE"). These key features include the introduction of feed-in tariffs, expansion of the EE&C programmes to enhance the energy efficiency of a wider coverage of buildings, implementation of demand response programme, etc.. These will not only contribute to the Administration's efforts to meet the carbon intensity reduction target for 2030 but also the energy intensity reduction target for 2025 to combat climate change. Key changes of the current SCAs to the previous ones include:

(a) duration of the current SCAs is 15 years[4] till 31 December 2033, instead of a term of 10 years with an option to extend for five more years;

(b) the permitted rate of return ("RoR") is lowered from 9.99% to 8% on the power companies' average net fixed assets; and

(c) a more frequent fuel clause charge ("FCC") adjustment mechanism is introduced so that the fuel costs borne by the power companies could be reflected in the tariffs in a more timely manner.

4. Under the SCAs, the power companies have to submit development plans ("DPs"), which outline the capital projects to be implemented by the power companies and the projected basic tariff rates for each of the five years covered by DPs, for the approval of the Executive Council ("ExCo"). The major features of the 2018-2023 DPs ("the new DPs") of the two power companies approved by ExCo on 3 July 2018 in accordance with the current SCAs are listed in **Appendix I**. The projected electricity tariffs for CLP and HKE from 2020 to 2023 under the new DPs are set out in **Appendices II** and **III** respectively. As advised by the Administration, the new DPs include essential capital projects to change the fuel mix for electricity generation which will help combat climate change and further improve air quality, ensure the reliability and security of local electricity supply, and assist in turning Hong Kong into a smart city.

Tariff adjustment mechanism

5. Electricity tariff charged by the two power companies is made up of two components, namely the basic tariff and FCC, the total of which is the net tariff rate. While the basic tariff covers operating expenses, standard fuel charges and

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[3] Details of the SCAs with HKE and CLP are at https://www.enb.gov.hk/sites/default/files/en/node66/new_HKE_SCA_eng.pdf and https://www.enb.gov.hk/sites/default/files/en/node66/new_CLP_SCA_eng.pdf respectively.

[4] The SCA with HKE commenced on 1 January 2019 such that the term of it will be 15 years. The SCA with CLP commenced on 1 October 2018, meaning a term of 15 years and three months.

return to the power companies, FCC reflects the changing price of fuels and is borne by consumers and payable to the power companies on a cost-pass-through basis.

6. To ensure that tariff adjustment is reasonable, the Administration is responsible for playing a gate-keeping role to control cost relating to the basic tariff. Furthermore, the Administration would use the two power companies' Tariff Stabilisation Fund ("TSF")[5] to mitigate pressure of tariff increase, and the Fuel Clause Recovery Accounts ("FCAs")[6] to tackle sharp fuel cost increase due to the expiry of existing fuel supply contracts or fluctuations in supply. It would also examine whether any special income of the two companies can be used to offset cost increase.

7. The following table shows the changes of the overall tariffs charged by the two power companies in previous years and the projected tariffs from 2020 to 2023 under the new DPs –

	CLP (Cents/unit)				**HKE** (Cents/unit)			
	Basic tariff	**FCC**	**Rebates**	**Average net tariff**	**Basic tariff**	**FCC**	**Rebates**	**Average net tariff**
2009	77.4	11.8	0	**89.2**	94.5	25.4	0	**119.9**
2010	80.1	11.5	0	**91.6**	94.5	25.4	-0.1	**119.8**
2011	80.1	14.1	0	**94.2**	93.0	30.2	-0.1	**123.1**
2012	84.2	17.8	-3.3	**98.7**	93.9	37.0	0	**130.9**
2013	84.0	22.4	-1.7	**104.7**	94.4	40.2	0	**134.6**
2014	88.4	22.4	0	**110.8**	101.8	33.1	0	**134.9**
2015	87.2	27.0	0	**114.2**	102.6	32.3	0	**134.9**
2016	88.9	24.3	0	**113.2**	105.5	27.9	0	**133.4**
2017	92.2	21.0	0	**113.2**	108.9	23.4	-21.9	**110.4**
2018 (Jan-Sept)	94.5	22.0	-1.1	**115.4**	109.1	23.4	-20.0	**112.5**
2018 (Oct-Dec)	91.0	27.8	-1.1	**117.7**				
2019	91.0	27.8	0	**118.8**	101.3	23.4	-4.6	**120.1**

5 The purpose of TSF is to accumulate the excess of net revenues of the power companies over the permitted return, so as to provide funding, where necessary, to ameliorate the impacts of tariff increases on consumers.

6 FCA is an account maintained by the two power companies through which the differences between the standard fuel charges (included in the basic tariff) and actual fuel prices incurred are returned to or recovered from consumers by means of a rebate or a surcharge each year.

	CLP (Cents/unit)				**HKE** (Cents/unit)			
	Basic tariff	**FCC**	**Rebates**	**Average net tariff**	**Basic tariff**	**FCC**	**Rebates**	**Average net tariff**
*2020	93.4	32.4	0	**125.8**	105.3	25.8	-0.3	**130.8**
*2021	96.5	36.2	0	**132.7**	110.2	27.5	0	**137.7**
*2022	99.1	37.4	0	**136.5**	114.8	29.8	0	**144.6**
*2023	101.9	37.4	0	**139.3**	115.7	36.2	0	**151.9**

* The projected tariffs under the new DPs

8. The Administration has also advised that the projected tariffs are only projections and the actual tariffs to be charged to consumers each year will be determined in the respective annual tariff review having regard to various factors, particularly the actual fuel costs prevailing at the time. During the entire new DP period, the average basic tariff rate is projected to increase at an annual rate of 1.4% for CLP and 1.2% for HKE while the average net tariff rate (before rebates) is projected to increase at an annual rate of 3.5% for CLP and 2.8% for HKE.

Electricity charges relief and subsidy

9. While the increasing use of natural gas together with the necessary capital investments will help bring environmental benefits to Hong Kong, they will inevitably lead to considerable rise in electricity tariff during the new DP period. To alleviate the impact of tariff increase on households during the transitional period, the Administration proposed in July 2018 to grant each residential electricity account a maximum total relief of $3,000 over 60 months (i.e. $50 per month) to alleviate the increase in electricity charges of eligible domestic households commencing from 1 January 2019. The funding proposal of the electricity charges relief ("ECR") was approved by the Finance Committee ("FC") at its meeting on 16 November 2018.

10. To counter the challenging external and local economic environment, the Financial Secretary announced in August 2019 a package of measures to support enterprises, safeguard jobs and relieve people's financial burden, including the provision of a one-off electricity charge subsidy of $2,000 to each eligible residential electricity account. The subsidy is proposed to be injected into each eligible residential electricity account in 12 instalments (i.e. $160 each for the first 11 consecutive months, and $240 in the twelfth month). It is proposed that this subsidy can be used together with the existing subsidy schemes [7] to cover billed electricity charges of eligible households up to

[7] The existing subsidy schemes refer to the electricity charges subsidy schemes implemented in 2008, 2011, 2012 and 2013.

31 December 2022 or the close of the account, whichever is earlier. This funding proposal is still under deliberation by FC as at 4 December 2019.

Issues previously raised by the Panel

11. Electricity tariff has all along been a matter of contention, and members of the Panel have expressed views and concerns over a range of issues at previous meetings, including –

(a) the need of raising tariff despite substantial profits from the two power companies;

(b) higher rate of tariff charged by HKE as compared to CLP;

(c) enhancing the monitoring of the power companies' investment on generation facilities and treatment of excessive generating capacity;

(d) enhancing the transparency of the processes for the formulation of tariff adjustments and DPs of the two power companies so as to facilitate public monitoring;

(e) reviewing the FCC adjustment mechanism so that tariffs could be adjusted in a timely manner in response to the change in fuel cost;

(f) opting not to achieve the maximum permitted RoR, or using TSF reserve to offset the fuel cost increase;

(g) providing suitable assistance to tenants of sub-divided units ("SDUs") who were overcharged by their landlords for the use of electricity as they did not have individual electricity meters;

(h) implementing increased interconnection between the networks of the two power companies to minimize investment on new generating units;

(i) separating power generation and transmission to facilitate market entry and competition;

(j) introducing electricity suppliers to enhance market competition with a view to lowering the tariff;

(k) sourcing cheaper gas supplies or importing less costly alternative fuels to reduce the pressure on tariff increase;

(l) striking a balance between commitment to environmental protection and cost control on power generation;

(m) stepping up the promotion of energy saving initiatives and adopting various measures to reduce electricity consumption; and

(n) encouraging the development of distributed RE power generation facilities and networks, and providing technical support and concessions for connection to electricity grids.

Latest discussions

12. At the Panel meeting held on 4 July 2018, members received a briefing on tariff adjustments of the two power companies for 2019, the new DPs and the proposed ECR. The Panel noted that from 1 October 2018 to 31 December 2019, CLP's net tariff would increase by 2.0% to 117.7 cents/kWh after counting a special rent and rates rebate of 1.1 cents/kWh. The net tariff would be further increased by 0.9% from 117.7 cents/kWh to 118.8 cents/kWh at some point in the last quarter of 2018 or in 2019 when the rent and rates rebate available from the Government was expected to be used up. As regards HKE, the net tariff would increase by 6.8% to 120.1 cents/kWh in 2019 after counting a special rent and rates rebate of 2.3 cents/kWh and a special fuel rebate of 2.3 cents/kWh.

13. Noting that the special rebates of the two power companies were ad hoc in nature and that Hong Kong was transforming to use the cleaner but more expensive natural gas for power generation which would exert pressure on the future electricity tariffs, members expressed grave concern about the future tariff increases and urged the Administration to formulate long-term measures to address the matter effectively. Some members were worried that the future tariff increases might pose heavy pressure on the public, in particular tenants of SDUs.

14. To stabilize future tariffs, a member suggested that the Administration should consider maintaining the annual tariff increase to less than 2% in the long run by controlling the fuel costs of the two power companies and providing ECR to offset the difference. The Administration advised that the proposed ECR was a one-off measure aiming to help residential customers transit to a low carbon future and assist households to tide over the drastic increase in fuel cost owing to particularly the fuel mix change in 2020. As the fuel cost was charged on a pass through basis and the Government had no control on the fuel price, it was not appropriate for the Government to commit to keep the annual tariff increase to less than 2%. The Administration also advised that to help stabilize future tariffs, FCC of the power companies would be adjusted more frequently to once a month under the current SCAs, so that the fuel costs borne by the power companies would be reflected in the tariffs in a more timely manner.

15. Some members considered that fuel cost and electricity tariff could be reduced by sourcing cheaper gas supplies and diversifying fuel sources. In this regard, the Administration advised that the construction of the offshore liquefied natural gas ("LNG") terminal jointly by CLP and HKE aimed to provide a long-term alternative gas supply source to meet the fuel supply needs of the power companies and enhance the diversity and security of gas supply. It would also enable the power companies to have direct access to the international LNG market, which would strengthen their power in negotiating competitive gas prices and help reduce the pressure on tariff increase.

16. A member suggested that instead of implementing the proposed ECR, the Administration should provide direct investment in the development of advanced metering infrastructure and construction of an offshore LNG terminal for use by the two power companies so as to reduce the capital expenditure of the two power companies and the resultant increase in tariffs in the long run. The Administration advised that under the existing regulatory arrangements, there was a clear demarcation of the roles and responsibilities between the Government and the power companies. The Government was responsible for regulatory oversight on the power companies' performance and investment, while the power companies invested, operated and delivered reliable supply of electricity. If the Government were to invest in the infrastructure projects of the power companies, it would mix up the Government's role as a regulator. It would give the false impression that the Government were to nationalize the electricity industry or even invite questions on the effectiveness of the Government's regulatory arrangements over the power companies.

17. Some members raised concern about the safety of using nuclear power for power generation, and were concerned if CLP's proposed capital project to enhance the Clean Energy Transmission System ("CETS") network with China Southern Power Grid and Daya Bay Nuclear Power Station under the company's new DP would pave way for increasing import of nuclear energy from the Mainland. The Administration advised that CLP had been importing power through the existing CETS to meet around 30% of the energy needs of its customers for more than 25 years with a proven record. The enhancement project would involve replacement of some overhead lines and relocation of some overhead line towers of the existing CETS. Neither new interconnection circuit nor new network connection point would be added. While the current source of imported power of CLP's CETS was nuclear power, CETS could in fact import power generated from various sources (e.g. water, wind, solar energy, etc). CLP had yet to decide on the sources of such clean energy for its enhanced system but would need prior approval from the Government before it could import more power.

Council questions

18. At the Council meetings of 7 December 2016, 11 January, 22 March, 12 July and 25 October 2017, 23 January and 23 October 2019, Members raised questions covering, among others, provision of electricity charges subsidy, electricity charges for tenants of SDUs and the development of RE. Hyperlinks to the relevant written replies from the Administration are provided in **Appendix IV**.

Latest developments

19. The Administration and the two power companies will brief the Panel on the tariff reviews for 2020 at the meeting on 10 December 2019.

References

20. A list of the relevant papers available on the Legislative Council Website (http://www.legco.gov.hk) is at **Appendix IV.**

Council Business Division 4
Legislative Council Secretariat
6 December 2019

Appendix I

The 2018-2023 development plans of the power companies

On 3 July 2018, the Government approved the 2018-2023 development plans of CLP Power Hong Kong Ltd. and Castle Peak Power Company Ltd. ("CLP") and The Hongkong Electric Company Ltd. ("HKE") with the features below:

(a) CLP's Development Plan (effective from 1 October 2018 to 31 December 2023 ("CLP DP Period")) –

(i) there will be capital projects for a total estimated capital expenditure ("CAPEX") of $52.9 billion to be incurred during the period from 1 October 2018 to 31 December 2023;

(ii) there will be a decrease in average basic tariff rate by 3.5 cents/kWh, or 3.7%, to 91 cents/kWh during the period from 1 October 2018 to end 2019; and

(iii) the projected levels of basic tariff rate for the CLP DP Period will increase on average by 1.4% per annum; and

(b) HKE's Development Plan (effective from 1 January 2019 to 31 December 2023 ("HKE DP Period")) –

(i) there will be capital projects for a total estimated CAPEX of $26.6 billion to be incurred during the period from 1 January 2019 to 31 December 2023;

(ii) there will be a decrease in average basic tariff rate by 7.8 cents/kWh, or 7.1%, to 101.3 cents/kWh for the first year from 1 January 2019; and

(iii) the projected levels of basic tariff rate for the HKE DP Period will increase on average by 1.2% per annum.

Source: Legislative Council Brief, File Ref: ENB CR 1/4576/08 (18) Pt.28, ENB CR 2/4576/08 (18) Pt.27

Appendix II

CLP
Projected Tariff Rates, Year End Balances of Tariff Stabilisation Fund and Fuel Clause Recovery Account

(¢/kWh)	2018a* Existing Rates	**2018b# Rates**	**2019 Rates**	Projected Rates in the 2018-23 Development Plan			
				2020	2021	2022	2023
Tariff Components							
Average Basic Tariff Rate	94.5	**91.0**	**91.0**	93.4	96.5	99.1	101.9
Fuel Clause Charge	22.0	**27.8**	**27.8**	32.4	36.2	37.4	37.4
Average Net Tariff Rate Before Special Rebate	116.5	**118.8**	**118.8**	125.8	132.7	136.5	139.3
Special Rent and Rates Rebate	-1.1	**-1.1**	-	-	-	-	-
Average Net Tariff Rate After Special Rebate	115.4	**117.7**	**118.8**	125.8	132.7	136.5	139.3
Change in - Average Basic Tariff Rate		**-3.5** ***(-3.7%)***	- ***(0%)***	+2.4 *(+2.6%)*	+3.1 *(+3.3%)*	+2.6 *(+2.7%)*	+2.8 *(+2.8%)*
- Average Net Tariff Rate Before Special Rebate		**+2.3** ***(+2.0%)***	- ***(0%)***	+7.0 *(+5.9%)*	+6.9 *(+5.5%)*	+3.8 *(+2.9%)*	+2.8 *(+2.1%)*
- Average Net tariff Rate After Special Rebate		**+2.3** ***(+2.0%)***	***+1.1*** ***(+0.9%)***	+7.0 *(+5.9%)*	+6.9 *(+5.5%)*	+3.8 *(+2.9%)*	+2.8 *(+2.1%)*

* Figures for 2018a cover the nine-month period ending 30 September 2018 before the new SCA becomes effective.

\# Figures for 2018b cover the three-month period ending 31 December 2018 after the new SCA becomes effective.

Average annual increase – October 2018 to December 2023

Basic Tariff Rate	1.4%
Net Tariff Rate Before Special Rebate	3.5%
Net Tariff Rate After Special Rebate	3.7%

	2018a*	Projected Balances in the 2018-23 Development Plan					
		2018b#	2019	2020	2021	2022	2023
Year End Balance							
Tariff Stabilisation Fund ($Million)	827	636	452	462	455	438	423
- *% of Local Sales of Electricity*	*2.0%*	*1.6%*	*1.1%*	*1.1%*	*1.0%*	*1.0%*	*0.9%*
Fuel Clause Recovery Account ($Million)	1,018	693	394	(767)	(614)	7	24

Source: Annex A1 to Legislative Council Brief, File Ref: ENB CR 1/4576/08 (18) Pt.28, ENB CR 2/4576/08 (18) Pt.27

HKE
Projected Tariff Rates,
Year End Balances of Tariff Stabilisation Fund and Fuel Clause Recovery Account

(¢/kWh)	2018 Existing Rates	**2019 Rates**	Projected Rates in the 2019-23 Development Plan 2020	2021	2022	2023
Tariff Components						
Average Basic Tariff Rate	109.1	**101.3**	105.3	110.2	114.8	115.7
Fuel Clause Charge	23.4	**23.4**	25.8	27.5	29.8	36.2
Average Net Tariff Rate Before Special Rebates	132.5	**124.7**	131.1	137.7	144.6	151.9
Special Rent and Rates Rebate	-4.0	**-2.3**	-0.3	-	-	-
Special Fuel Rebate	-16.0	**-2.3**	-	-	-	-
Average Net Tariff Rate After Special Rebates	112.5	**120.1**	130.8	137.7	144.6	151.9
Change in						
- Average Basic Tariff Rate		**-7.8** ***(-7.1%)***	+4.0 *(+3.9%)*	+4.9 *(+4.7%)*	+4.6 *(+4.2%)*	+0.9 *(+0.8%)*
- Average Net Tariff Rate Before Special Rebates		**-7.8** ***(-5.9%)***	+6.4 *(+5.1%)*	+6.6 *(+5.0%)*	+6.9 *(+5.0%)*	+7.3 *(+5.0%)*
- Average Net Tariff Rate After Special Rebates		**+7.6** ***(+6.8%)***	+10.7 *(+8.9%)*	+6.9 *(+5.3%)*	+6.9 *(+5.0%)*	+7.3 *(+5.0%)*

Average annual increase – 2019 to 2023

Basic Tariff Rate	1.2%
Net Tariff Rate Before Special Rebates	2.8%
Net Tariff Rate After Special Rebates	6.2%

	2018	2019	2020	2021	2022	2023
		Projected Balances in the 2019-23 Development Plan				
Year End Balance						
Tariff Stabilisation Fund ($Million)	331	329	327	326	325	269
- *% of Sales of Electricity*	*2.4%*	*2.5%*	*2.4%*	*2.3%*	*2.2%*	*1.7%*
Fuel Clause Recovery Account ($Million)	979	615	413	330	289	39

Source: Annex A2 to Legislative Council Brief, File Ref: ENB CR 1/4576/08 (18) Pt.28, ENB CR 2/4576/08 (18) Pt.27

Appendix IV

List of relevant papers

Issued by	Meeting date/ Issue date	Paper
Panel on Economic Development ("the Panel")	12 December 2017 (Item IV)	CLP's information paper HKE's information paper Background brief Minutes
	4 July 2018 (Item I)	Legislative Council Brief CLP's information paper HKE's information paper Administration's follow-up paper Minutes
Joint meeting of the Panel and the Panel on Environmental Affairs	29 April 2017 (Item II)	Administration's paper Background brief Minutes
Panel on Financial Affairs	4 November 2019 (Item VI)	Administration's paper Background brief
Council Meeting	7 December 2016	Council question on "Tenants of sub-divisions of flat units being overcharged for use of electricity" raised by Hon LUK Chung-hung
	11 January 2017	Council question on "Water and electricity charges of tenants in inadequate housing" raised by Dr Hon LAU Siu-lai
	22 March 2017	Council question on "Electricity charges for tenants of sub-divided units of flats" raised by Hon LEUNG Yiu-chung

Issued by	Meeting date/ Issue date	Paper
	12 July 2017	Council question on "Feed-in tariff scheme for renewable energy power generation installations" raised by Hon Kenneth LEUNG
	25 October 2017	Council question on "Installation of renewable energy power generation facilities on rooftops of village houses" raised by Hon Kenneth LAU
	23 January 2019	Council question on "Promoting the development of renewable energy" raised by Hon Martin LIAO
	23 October 2019	Council question on "Future fuel mix for electricity generation" raised by Hon Kenneth LEUNG
	23 October 2019	Council question on Renewable energy" raised by Hon CHAN Hak-kan