For information on
25 April 2017

Legislative Council
Panel on Economic Development and Panel on Environmental Affairs

New Scheme of Control Agreements with the Two Power Companies

Purpose

The Scheme of Control Agreements (SCAs) signed between the Government and each of the two power companies[1] will expire in 2018. At the meeting of the Executive Council on 25 April 2017, the Council ADVISED and the Chief Executive ORDERED that the Government should sign the new SCAs with the two power companies. The Government and the two power companies entered into new SCAs on the same day. This paper sets out the major terms of the new SCAs.

Background

2. The term of the current SCAs with the two power companies is for 10 years[2], with an option exercisable by the Government to extend the SCAs for five more years after their expiry, i.e. till 2023. If the Government does not exercise the said option, the power companies are still permitted to continue to earn, in accordance with the current SCAs, the existing permitted return (i.e. the sum of (a) 9.99% of the total value of the power companies' Average Net Fixed Assets (ANFA) (other than those under (b)); and (b) 11% of the total value of the power companies' average renewables net fixed assets), for five more years till 2023, through reasonable arrangements to be determined by the Government after consulting the power companies. The Government did not exercise the said option to extend the current SCAs. The power companies have all

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[1] The SCA with CLP Power Hong Kong Limited and Castle Peak Power Company Limited (referred to collectively as "CLP" hereafter) will expire on 30 September 2018 and that with The Hongkong Electric Company, Limited and HK Electric Investments Limited (referred to collectively as "HEC" hereafter) on 31 December 2018.

[2] The duration of all SCAs with the two power companies prior to the current ones was 15 years.

along taken the position that they should be entitled to earn return based on the existing permitted rate of return (RoR) till 2023.

Public Aspiration as Reflected in the Views Received during the Public Consultation on the Future Development of the Electricity Market (the Public Consultation)

3. In connection with the end of the 10-year tenure of the current SCAs, the Government conducted a review of the future development of the electricity market and its regulatory framework, having regard to the four energy policy objectives (safety, reliability, affordability and environmental protection) and our goal to introduce competition to the electricity market. The Government subsequently conducted the Public Consultation during March – June 2015. Among other things, the consultation document set out an analysis of the market readiness to introduce competition in the electricity market and the preparatory work required to pave the way for introducing competition. We also proposed possible options to improve the current regulatory arrangements, and laid out our plan to increase the percentage of local natural gas generation to around 50% of the total fuel mix in 2020 having regard to the views received during a separate public consultation conducted in 2014 in which most of the respondents supported using more natural gas for local electricity generation. Over 15 000 submissions were received.

4. On the regulatory arrangement, majority of the views received considered that the current regulatory arrangement by way of contractual agreements with the power companies was an effective tool in achieving our energy policy objectives. With the high density of skyscrapers in Hong Kong, the reliable and stable electricity supply that Hong Kong has been enjoying is also valued by the public in general. However, it was generally agreed that improvements needed to be made when the Government drew up the new SCAs with the power companies, especially in the following areas –

(a) There was a clear consensus that the power companies should play a bigger role in helping promote energy efficiency and conservation (EE&C);

(b) Public attitude towards the development of renewable energy (RE) was generally positive and its further development, despite its higher tariff implications, was supported; and

(c) While the majority of the respondents considered the current fuel cost arrangement appropriate and should be maintained, during the recent Tariff Review exercises, there were concerns about the large surplus balance accumulated in the Fuel Clause Recovery Account (FCA).

5. On the introduction of competition to the electricity market, a key determining factor is the availability of stable and reliable sources of new supply. A possible new source of supply would be the Mainland. However, the majority of respondents to our public consultation on the future fuel mix for electricity generation in 2014 supported local electricity generation by natural gas and expressed reservation about importing electricity from the Mainland at that stage. On new local supplies, given the very limited land supply in Hong Kong, the potential environmental impact of new generating units and the likely opposition from residents in the vicinity, it would be very difficult to identify a suitable location for the construction of new generating units by new suppliers. As such, it is very unlikely that there would be a new, sizable electricity supplier locally in the near term. During the Public Consultation, the majority of the respondents considered that currently the power supply in Hong Kong was reliable and safe at affordable prices, and did not see a need for introducing competition simply for the sake of bringing in choices. Some respondents also considered that while bringing in choices had its merits, the requisite conditions for introducing competition were not present at that stage.

Commitment to Reducing Energy Intensity and Combating Climate Change

6. In addition to the views received during the Public Consultation mentioned in paragraphs 3 to 5, the Government has taken into account our environmental targets, namely our commitment to reducing energy intensity by 40% by 2025 as compared to 2005 as set out in our Energy Saving Plan for Hong Kong's Built Environment 2015~2025+ as well as to combat climate change, in drawing up the new SCAs. In December 2015, 195 countries including China adopted the first-ever universal, legally binding global deal to combat climate change in Paris (the Paris Agreement). The Paris Agreement, already came into force in November 2016, applies to Hong Kong as well. In light of this latest development, the Government announced in the 2017 Policy Address and the Hong Kong's Climate Action Plan 2030+ the carbon intensity reduction target for 2030, i.e. to reduce Hong Kong's carbon intensity by 65% - 70% by 2030 as compared

with the 2005 level. To meet this target, concerted efforts by the community as a whole would be required and the power companies have a particularly important role to play.

7. As electricity generation accounts for about 70% of Hong Kong's carbon emission, the main vehicle to achieve the new carbon intensity reduction target will be phasing down coal-fired generating plants (coal plants) in the coming decade and replacing them with natural gas and non-fossil fuel sources. These represent significant capital investments by the power companies in constructing gas-fired generating units (gas units) to replace the coal plants as the latter retire on schedule. It is important to create an investment environment conducive to such heavy investments for the two power companies under the new SCAs with a view to meeting our commitments on reducing carbon intensity and combating climate change.

8. Power companies are also well positioned to help promote EE&C as well as the development of RE, which are critical means for Hong Kong to continuously reduce carbon emissions. We could appropriately incentivise the power companies to do so under the new SCAs.

Terms of the New SCAs

9. The Government commenced negotiation with CLP and HEC on the new SCAs in end 2015. After intensive discussion with the power companies, agreement has been reached on the terms of the new SCAs. The full set of the SCAs with the two power companies have been uploaded to the website of the Environment Bureau (http://www.enb.gov.hk). A summary of the revised terms of the new SCAs is set out at **Annex**.

Key Changes to the Current SCAs

(a) Duration and RoR

10. As all of the existing coal plants will reach the end of their useful life in the next decade or so and we have set a carbon intensity reduction target for 2030, we need the cooperation of the power companies to make investments in the next decade or so to replace the coal plants with gas units or generating facilities using non-fossil fuels. As a gas unit will operate for 30 years or more which is well beyond the term of the SCAs, it would be of paramount importance to provide a relatively stable and certain environment for the power companies to make such long-term investments.

11. In the Public Consultation document, we mentioned that we considered it appropriate to maintain the current arrangement, i.e. a term of 10 years with an option exercisable by the Government to extend the term for another five years. Among the views received during the consultation period, most respondents were of the view that the current arrangement should be adopted while some respondents considered that the term should be lengthened to enhance certainty to attract investments, in turn ensuring the stability of electricity supply.

12. We have revisited the issue in light of the latest development on our commitment to combating climate change as mentioned in paragraphs 6 and 7. With respect to the duration of the SCAs, we conclude that there is a need to reasonably enhance certainty above the current "term of 10 years with an option exercisable by the Government to extend the term for another five years" so as to incentivise the power companies to make long term investments in the second half of the next decade to replace the retiring coal plants to meet our electricity demand, and also our carbon intensity reduction target to combat climate change.

13. As regards the permitted RoR, we mentioned in the Public Consultation document that a consultancy study commissioned by the Government during the 2013 Mid-term Review[3] of the SCAs suggested that we could consider reducing the permitted RoR to the range of about 6% - 8% and that we would commission a further study to update the appropriate permitted RoR taking into account the changes in economic conditions. During the Public Consultation, more than half of the submissions supported maintaining the permitted RoR at the current level of 9.99% to provide the necessary incentive to the power companies to make investments. On the other hand, many stakeholders suggested that the permitted RoR should be lowered in view of the low-interest rate environment and the low business risks of the power companies' investments.

14. The consultant has completed the further study to update the appropriate permitted RoR and, having regard to the latest market conditions and potential future changes in the economic environment,

[3] The SCAs provide that the Government and the power companies shall have the right to, during 2013, request modification of any part of the SCAs. Until a written agreement is entered into on the proposed modifications by all parties to each of the SCAs, the then prevailing provisions of the SCAs shall remain in full force and effect.

recommended an upward adjustment to the RoR range i.e. to 7% – 9% from the one previously suggested in the study conducted during the 2013 Mid-term Review.

15. Taking into account the above, in particular the need to provide a relatively long and stable environment for the power companies to make long-term investments to replace retiring coal plants to maintain a reliable electricity supply and meet our carbon intensity reduction target to combat climate change, we have agreed with the power companies that the term of the new SCAs will be 15 years[4] till 31 December 2033 with a permitted RoR at 8% on ANFA for both renewables and non-renewables assets after protracted negotiation with the power companies. Similar to the mechanism under the current SCAs, interim reviews will be carried out every five years to consider all matters under the SCAs and any modifications of the SCAs following the interim reviews are to be mutually agreed by the parties to the SCAs.

16. When compared to the current SCAs under which the power companies shall be entitled to earn a return based on an RoR of 9.99% till 2023 subject to the terms of the current SCAs, the new SCAs will bring an immediate reduction in permitted RoR to 8%, which is within the latest range recommended by the consultant, as soon as they take effect on 1 October 2018 and 1 January 2019 for CLP and HEC respectively. This will, based on 2016 figures, cut the annual earnings of CLP and HEC by $2.1 billion and $1.0 billion respectively. According to our estimation, a reduction of 1.99% in the permitted RoR will result in a tariff decline of above 5% from October 2018 (CLP) and from January 2019 (HEC), assuming all other relevant factors (including fuel costs) remain unchanged though the actual reduction will depend on the value of ANFA of the two power companies and their operating costs upon the commencement of the new SCAs. This early reduction in permitted RoR is particularly important to help alleviate the tariff impact to be brought by the provision of additional gas units in 2020 by the power companies to meet the carbon intensity reduction target of 50% by 2020. It should however be noted that, in the longer term, the increasing use of the more expensive and cleaner natural gas for power generation will exert very heavy pressure on tariffs in the next SCA period.

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[4] The term of the SCA with HEC will be 15 years. But the term of the SCA with CLP will be 15 years and three months, until 31 December 2033 such that, thereafter, the term of further SCAs (if any) with the two power companies will start on the same date.

17. Aligning the permitted RoR for renewables assets with that for non-renewables assets should also facilitate the further development of large-scale RE projects by the power companies and contribute to our collective efforts in combating climate change as the higher permitted RoR for the RE infrastructure investments and the resulting tariff impact have been posing a major constraint to the Government's approval of such projects under the current SCAs.

18. The Government is committed to undertaking the necessary preparatory work in the next SCA period to pave the way for introducing potential new suppliers in future (further details are set out in paragraph 27). The 15-year term of the new SCAs would dovetail with the preparatory work as such work, including conducting the relevant studies and implementing the recommendations, is expected to take more than ten years.

(b) Promotion of EE&C

19. Promotion of EE&C will be a key focus of the new SCAs. It will not only contribute to our efforts to meet our carbon intensity reduction target for 2030 but also our energy intensity reduction target for 2025. During the Public Consultation, many respondents suggested that a specific energy saving target should be set for the power companies while some suggested pegging part of the RoR allowed for the power companies with their performance in promoting energy saving. Various stakeholder groups also emphasised the importance of further encouraging energy saving. Taking into account the views received, we have reached agreement with the power companies that the incentive schemes in relation to promotion of EE&C under the current SCAs will be expanded while new elements will be introduced such that the power companies will be further encouraged to promote EE&C –

(a) The maximum number of energy audits conducted by power companies and maximum energy saving from such audits which are allowed to earn incentive will be increased by four-fold, with financial incentives capped at 0.04% and 0.1%[5] per annum for these two categories respectively;

[5] With the exception of the incentives to be offered for the sale of RE Certificates (paragraph 24(b)(iv)), incentives and penalties to be offered / imposed will be a percentage of RoR multiplied by the total value of ANFA to be added to / deducted from the permitted return for a given year.

(b) The scope of the Eco-Building Fund (EBF) of CLP and Smart Power Fund (SPF) of HEC[6] will be expanded to support the carrying out of retrofitting and retro-commissioning, and implementation of building-based smart/IT technologies, or other improvement measures to be agreed with the Government. The coverage of the EBF and SPF will also be expanded from non-commercial buildings to both commercial and non-commercial buildings. To cater for this expansion, the size of EBF and SPF will be increased. Achievement of the relevant targets will result in a maximum financial incentive of 0.12% per annum;

(c) Majority of the incentives, i.e. 65%, earned from achieving the targets under paragraphs 19(a) and (b) above will be ploughed back by the power companies for the benefit of consumers for deployment under the new Community Energy Saving Fund (CESF)[7] to be established by the power companies respectively. The CESF will be used to support EE&C programmes such as encouraging customers (including disadvantaged customers) to replace or upgrade their electrical appliances to more energy-efficient models, as well as support green building initiatives, promote the use of RE and support disadvantaged groups; and

(d) A new five-year target will be set based on the power companies' achievement in relation to the measures under paragraphs 19(a) to (c) above. Power companies must achieve at least 4% energy

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6 The EBF and SPF (or referred to as the "Energy Efficiency Fund" under the current SCAs) were set up by CLP and HEC respectively as a result of the Mid-term Review of the SCAs conducted in 2013. The EBF and SPF provide, subject to a ceiling, subsidies on a matching basis to non-commercial building owners to carry out improvement works to enhance the energy efficiency of their buildings, with priority given to single residential blocks.

7 The CESF to be set up under the new SCAs will operate with funds ploughed back from incentives to be earned by power companies under the new SCAs. In order to enable the CESF to start operation at the beginning of the new SCA period, the CESF under the new SCAs will receive (a) a transfer by power companies of the net closing balance of the respective EBF and SPF at the end of the current SCA period; and (b) for CLP, EE&C-related incentives, i.e. incentives to be earned by CLP from achieving the targets in relation to energy audits and energy saving from audits, during January – September 2018 based on the incentive levels and thresholds under the current SCA with CLP. At present, such EE&C-related incentives are not available for the last nine months of the term of the current SCA with CLP. It is our assessment that having regard to the current trends of the deployment of funds in the EBF, there is unlikely to be considerable balance available for transfer. We have therefore amended the current SCA with CLP by allowing CLP to earn such EE&C-related incentives which should all be ploughed back into the CESF under the new SCA with CLP.

saving on the basis of the average annual sales within a five–year period in order to earn incentive and a maximum incentive of 0.1% will be given if the said energy saving reaches 5% within the said period.

20. In addition to the above, power companies will introduce demand response programmes[8], which should help reduce maximum demand on the basis of which the generating capacity of power companies is planned, i.e. a reduction in maximum demand could bring about, in the long term, a lower requirement for investments in new generation or network resources and in turn, lower tariff impact. A maximum incentive of 0.025% per annum will be awarded to the power companies for achieving reductions in their respective system maximum demand.

21. In addition to the financial incentives above, both power companies will continue to maintain a loan fund (CLP: $25 million per annum; HEC: $12.5 million per annum) to provide loans to non-Government customers to implement initiatives to promote EE&C. The existing education fund would also be doubled in size (CLP: $10 million per annum; HEC: $5 million per annum) to enhance promotional efforts in this area.

(c) Promotion of RE

22. Promotion of RE will be another key focus of the new SCAs. Attitude of the public towards the development of RE was generally positive during the Public Consultation despite its tariff implications. In addition, during the public engagement exercise in 2016 in relation to the formulation of the carbon intensity reduction target for 2030 and relevant action plans, there was very strong request for further provision of RE, which now forms an integral part of our efforts in combating climate change.

[8] Power companies will implement programmes whereby their customers (usually a selected group covering a significant portion of their total sales) will be rewarded for reducing their demand when needed. For example, commercial and industrial customers may agree with power companies that, at times of critical peak demand, power companies may require these customers to switch off their electrical equipment so as to reduce electricity demand, in return for financial rewards from the power companies.

23. Feed-in tariff (FiT) and RE certificates are two important RE initiatives to be introduced in the next SCA period. FiT should help encourage the private sector to consider investing in RE (such as solar photovoltaic systems) as the power generated could be sold to the power companies at a rate higher than the normal electricity tariff rate to cover the costs of investment in the RE systems and generation. This approach is adopted by many jurisdictions outside Hong Kong to promote distributed RE. At the same time, RE certificates will be sold by the power companies for units of electricity from RE sources (whether such electricity is generated or purchased by the power companies) such that buyers can claim their operation or activities are carbon-free. The revenue from the RE certificates will be used to help alleviate the overall tariff impact on all consumers brought about by the introduction of the FiT scheme[9].

24. Apart from FiT and RE certificates, we also agreed with the power companies that the following will be introduced in the next SCA period to promote the development of RE, in particular distributed RE –

(a) The power companies will facilitate grid connection and improve the relevant arrangements; and

(b) To incentivise the power companies in developing RE and facilitating their customers to do so, the current incentive arrangements in relation to RE will be revamped –

  (i) Incentives capped at 0.05% per annum will be offered for RE generated by the power companies or their customers (except for RE generated by RE systems directly owned by the Government);

  (ii) Incentives capped at 0.005% per annum will be offered for making a preset number of new connections of RE systems to the power grid with these systems generating electricity regularly;

  (iii) A five-year target will be set in respect of paragraph 24(b)(ii), the meeting of which will entitle the power

9 Costs incurred for FiT, less the proceeds from the sale of RE certificates, will be charged to fuel costs under the new SCAs.

companies to an additional 0.01% of return on a five-year basis; and

(iv) Incentives equivalent to 10% of the sales revenue from RE certificates will also be awarded to the power companies.

(d) Control on FCA Balance

25. In recent years, there were concerns about the balances maintained in the power companies' respective FCAs. The FCA has captured the differences between the fuel costs actually incurred by power companies and those charged to consumers, and has helped smoothen out the impact on tariff arising from possible volatility in international fuel prices. Owing to the persistent drop of international fuel prices in the past few years, the power companies have been accumulating large surplus balances in their FCAs. As we will use more natural gas (the price of which is relatively volatile) in our fuel mix during the new SCA period, it is envisaged that fuel price forecasting would become more difficult. In order to ensure that the actual fuel costs borne by the power companies would be reflected in tariffs in a more timely manner and avoid accumulation of large surplus balances in the power companies' FCAs, we have agreed with the power companies that a more frequent Fuel Clause Charge (FCC) adjustment will be adopted in the new SCA period.

(e) Incentive/Penalty Schemes in relation to Operational Performance

26. Under the current SCAs, financial incentives are offered to power companies for improvement in supply reliability, operational efficiency and customer services. To encourage the power companies to further improve their performance, the incentive and penalty thresholds will be raised where appropriate with a new performance indicator, grid supply restoration, introduced. This should help ensure that the electricity supply in Hong Kong will continue to be reliable and stable while the services provided to consumers, including the restoration time required in case of power outages, will remain satisfactory. The total incentives to be earned under these categories are capped at 0.05% per annum.

(f) Market Development

27. While there will not be a substantial new source of electricity supply either from the Mainland or locally in the near term, we will

undertake and the power companies will co-operate with us in the following necessary preparatory work during the next SCA period to pave the way for introducing potential new suppliers in future when the requisite market conditions are present –

(a) grid access – allowing third party access to the existing power grids is a critical enabler for introducing new suppliers, as construction of a parallel power grid would be highly uneconomical. We will discuss with the power companies to open up their power grids for access by new players, preferably on a voluntary basis; and to conduct a joint study with the power companies to work out the detailed arrangements for such grid access;

(b) enhanced interconnection – we will commission a study with the power companies to look into the detailed arrangements for strengthening the interconnection between the Mainland and Hong Kong, as well as that between the existing grids in Hong Kong; and

(c) segregation of generation and non-generation cost data of the power companies – experience outside of Hong Kong shows that vertically integrated power companies should be required to segregate their generation business from their transmission and distribution business in order to create a level playing field for all market participants at the generation level. The two power companies have agreed to publish their segregated cost data to the public during the next SCA period to enhance transparency through compilation of an electronic information booklet after taking into consideration the protection of commercially-sensitive information, disclosure of which may undermine consumers' interest.

Other Changes to the Current SCAs

28. Besides the elements mentioned above, other changes to the current SCAs include the following –

(a) excess generating capacity – at present, 50% of the net asset value of mechanical and electrical equipment relating to new generating facility found to be excessive upon commissioning to

meet the latest electricity demand will be excluded from the power companies' ANFA for calculating the permitted return until the demand catches up with generation capacity. For the new SCAs, the power companies agreed that the percentage of net asset value to be excluded from ANFA will be increased from 50% to 100% such that they will have to take on a larger share of the financial consequence resulting from their demand forecast;

(b) emission performance linkage mechanism (EPLM) for air pollutants – under the current SCAs signed in January 2008, for their performance in relation to reducing emissions of air pollutants, the two power companies may earn financial incentives up to 0.1% for outperformance or may be subject to penalties up to 0.4% for underperformance. With the effective operation of the Technical Memoranda[10] under the Air Pollution Control Ordinance (Cap. 311) in emission control, we proposed the removal of the EPLM during the Mid-term Review in 2013. CLP agreed to the removal while HEC did not. HEC has now agreed to remove the EPLM for the new SCA;

(c) adjustment of the cap on interest on long-term borrowings – having regard to the reduction in the permitted RoR, the cap on interest deduction from the permitted RoR on long-term borrowings (i.e. borrowings arranged for financing of fixed assets as well as customers' deposits) will be adjusted to 7%; and

(d) enhancement of transparency – the power companies have agreed to compile an electronic information booklet for public disclosure in order to enhance transparency on their operational and financial information by releasing such information on a more structured manner.

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[10] The Air Pollution Control Ordinance (Cap.311) was amended in July 2008 to add, inter alia, Section 26G. Section 26G(1) of Cap.311 provides that the Secretary for the Environment shall by technical memorandum allocate a quantity of emission allowances for each type of specified pollutant in respect of each specified licence (i.e. setting emission caps). Pursuant to section 30B(1) of Cap. 311, non-compliance with these emission caps is an offence liable on a first conviction, to a fine of $30,000 in respect of each tonne in excess of the relevant allowed emission; and on a second or subsequent conviction, to a fine of $60,000 in respect of each tonne in excess of the relevant allowed emission plus imprisonment for 6 months.

Way Forward

29. With the new SCAs in place, we will further work out the details of various schemes and mechanisms relating to EE&C, RE, fuel cost adjustment with a view to launching the new initiatives at the start of the new SCA period.

Environment Bureau
25 April 2017

Annex

Summary of the Changes to the Current Scheme of Control Agreements

(1) Duration

– About 15-year term: 1 October 2018 to 31 December 2033 for CLP; 1 January 2019 to 31 December 2033 for HEC

– To discuss with CLP and HEC of potential future changes to the electricity supply regulatory framework before January 2031

– Interim reviews every five years to consider any modifications to the new Scheme of Control Agreements (SCAs) with any changes to be mutually agreed

(2) Permitted Rate of Return (RoR)

– 8% on Average Net Fixed Assets (ANFA) with effect from 1 October 2018 and 1 January 2019 for CLP and HEC respectively

– Same RoR for renewables and non-renewables assets

(3) Promotion of Energy Efficiency and Conservation (EE&C)

– Incentives of up to 0.04% of RoR will be offered, on a pro-rata basis, for conducting 600 (or more) or 200 (or more) energy audits in a year for CLP and HEC respectively

– Incentives of up to 0.1% of RoR will be offered, on a pro-rata basis, for achieving energy saving of 48 GWh (or more) or 12 GWh (or more) in a year for CLP and HEC respectively through measures implemented pursuant to energy audits conducted by the power companies or third-party registered energy assessors where the relevant projects are directly facilitated by the power companies

– A New Eco-Building Fund / New Smart Power Fund will be set up by CLP and HEC respectively to support the carrying out of retrofitting or retro-commissioning, and implementation of

building-based smart/IT technologies, or other improvement measures to be agreed with the Government. Under these funds –

- Incentives of up to 0.02% of RoR will be offered, on a pro-rata basis, for having 400 (or more) or 100 (or more) buildings with confirmed projects which have commenced in a year for CLP and HEC respectively; and

- Incentives of up to 0.1% of RoR will be offered, on a pro-rata basis, achieving energy saving of 48 GWh (or more) or 12 GWh (or more) in a year for CLP and HEC respectively through the above projects

– 65% of the incentives earned from achieving the targets in relation to energy audits, energy saving from audits and the New Eco Building Fund / New Smart Power Fund will be ploughed back by the power companies for the benefit of consumers for deployment under the new Community Energy Saving Fund (CESF) to be established by the power companies respectively. The CESF will be used to promote EE&C, such as encouraging and supporting customers (including disadvantaged customers) to replace or upgrade their electrical appliances to more energy-efficient models, as well as supporting other programmes such as green building initiatives, those to support the use of RE as well as those to support disadvantaged groups. Allocation of funds for the various programmes under the CESF is to be agreed between the Government and the power companies

– Incentives will be offered for meeting a 5-year target in respect of the energy saving achieved through the total energy saving achieved during the 5-year period on a continuing benefit basis through energy saving from audits, the New Eco Building Fund / New Smart Power Fund and the CESF –

- Incentives of 0.06% of RoR will be offered if the energy saving achieved is less than 5% but greater than or equal to 4% of the average volume of annual local electricity sales (in GWh) of the power company concerned in that 5-year period; or

- Incentives of 0.1% of RoR will be offered if the energy saving achieved is greater than or equal to 5% of the average volume of annual local electricity sales (in GWh) of the power company concerned in that 5-year period

- Loan fund of $25 million and $12.5 million per annum for CLP and HEC respectively to provide loans to their non-government customers to implement initiatives to promote EE&C

- Education fund of $10 million and $5 million per annum for CLP and HEC respectively for promotion activities in relation to EE&C

- The procedures for administering the above funds shall be subject to agreement between the Government and the power companies

- Incentives will be offered for achieving reductions in maximum demand as a result of the power companies' respective demand response programmes based on the following scale –

Adjustment of RoR	**Reduction Achieved**	
	CLP	**HEC**
0.025%	≥ 60 MW	≥ 30 MW
0.02%	≥ 50 MW but < 60 MW	≥ 25 MW but < 30 MW
0.015%	≥ 40 MW but < 50 MW	≥ 20 MW but < 25 MW
0.01%	≥ 30 MW but < 40 MW	≥ 15 MW but < 20 MW
0.005%	≥ 20 MW but < 30 MW	≥ 10 MW but < 15 MW

(4) Promotion of Renewable Energy (RE)

- Grid connection arrangements for distributed RE systems will be improved

- Measures to promote the development of RE, such as Feed-in Tariff and RE certificate schemes will be introduced

- Incentives will be offered for achieving targets on the volume of electricity generated by RE systems in the power companies' respective service area (excluding RE generated by RE systems directly owned by the Government) as a percentage of total volume of electricity generated by the respective power company in Hong Kong based on the following scale –

Adjustment of RoR	RE Generated in Service Area	
	CLP	HEC
0.05%	≥ 5%	≥ 5%
0.025%	≥ 2% but < 5%	≥ 2% but < 5%
0.02%	≥ 0.75% but < 2%	≥ 0.75% but < 2%
0.015%	≥ 0.5% but < 0.75%	≥ 0.05% but < 0.75%
0.01%	≥ 0.25% but < 0.5%	≥ 0.025% but < 0.05%

– Incentives will be offered for making new connections of RE systems to power companies' respective power grids as follows –

  - Incentives of 0.00125% of RoR will be offered for making 60 to 119 new connections or 20 to 39 new connections in a year for CLP and HEC respectively; or

  - Incentives of 0.0025% of RoR will be offered for at least 120 or 40 new connections in a year for CLP and HEC respectively; and

  - An additional incentives of 0.0025% of RoR will be offered if at least 120 or 40 new connections generate RE regularly for CLP and HEC respectively in a year; and

  - Additional incentives of 0.01% of RoR will be offered for each 5-year period if more than 750 or 250 new connections generate RE regularly for CLP and HEC respectively in the 5-year period.

– Incentives equivalent to 10% of the sales revenue from RE certificates will be offered to the power companies

(5) Incentive/Penalty Schemes in relation to Operational Performance

– The incentive/penalty levels and thresholds in relation to supply reliability are as follows –

Adjustment of RoR	Average Service Availability Index (ASAI) Target
+0.015%	ASAI ≥ 99.9960%
+0.01%	99.9960% > ASAI ≥ 99.9950%
0%	99.9950% > ASAI > 99.9930%
-0.01%	99.9930% ≥ ASAI > 99.9920%
-0.015%	ASAI ≤ 99.9920%

– The incentive/penalty levels and thresholds in relation to operational efficiency, measured in Connection and Supply Performance Index (CSPI), are as follows –

- Incentive of 0.01% of RoR for CSPI at 100%
- Penalty of 0.01% for CSPI ≤ 99.98%

– The incentive/penalty levels and thresholds in relation to customer services are as follows –

Adjustment of RoR	Appointment Punctuality Index (API) Target
+0.01%	API ≥ 99.8%
+0.005%	99.8% > API ≥ 99.7%
0%	99.7% > API > 98%
-0.005%	98% ≥ API > 97.9%
-0.01%	API ≤ 97.9%

– The incentive/penalty levels and thresholds in relation to grid supply restoration are as follows –

Adjustment of RoR	Average Grid Supply Restoration Time (Average GSRT) Target
+0.015%	Average GSRT ≤ 65 minutes
+0.01%	65 minutes < Average GSRT ≤ 70 minutes
0%	70 minutes < Average GSRT ≤ 80 minutes
-0.01%	80 minutes < Average GSRT ≤ 85 minutes
-0.015%	Average GSRT > 85 minutes

(6) Fuel Costs

– A more frequent Fuel Clause Charge adjustment mechanism will be introduced such that actual fuel costs borne by power companies will be reflected in tariffs in a more timely manner

(7) Market Development

– Power companies are required to co-operate with the Government in (a) a study of potential access to the electricity grid by third parties; and (b) a study to consider the detailed arrangements for strengthening the interconnection between the Mainland and Hong Kong, as well as that between the existing grids in Hong Kong

- Power companies are required to publish segregated cost data pertaining to their generation and non-generation systems

(8) Mechanism for Treatment of Excess Generating Capacity

- Deduction from ANFA for excess capacity will be increased from 50% to 100% of the net asset value of the mechanical and electrical equipment

(9) Emission Performance Linkage Mechanism (EPLM)

- Removal of the EPLM, whereby incentives are offered or penalties imposed on the power companies in respect of their performance in emission reduction, for the new SCA with HEC (EPLM in the current SCA with CLP was removed as a result of the Mid-term Review in 2013)

(10) Cap on Interest on Long-term Borrowings

- Cap on interest deduction from the permitted RoR on long-term borrowings (i.e. borrowings arranged for financing of fixed assets as well as customers' deposits) will be reduced to 7%

(11) Transparency

- Enhancement of transparency on the power companies' operational and financial information by releasing such information in a more structured manner through compilation of an electronic information booklet for public disclosure