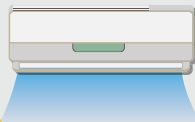
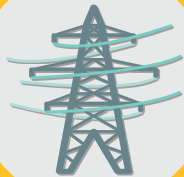
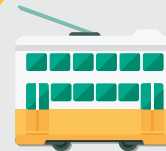
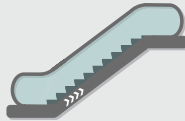


# Public Consultation Future Development of the Electricity Market

31 March 2015



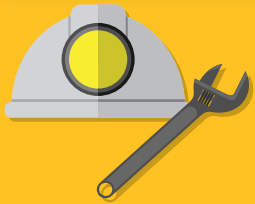
# Why the consultation?

**Scheme of  
Control  
Agreements  
(SCAs)**

expire

**2018**

We need to collectively decide  
on the future development of  
the electricity market



**Safety**



**Reliability**



**Affordability**



**Environmental  
Protection**

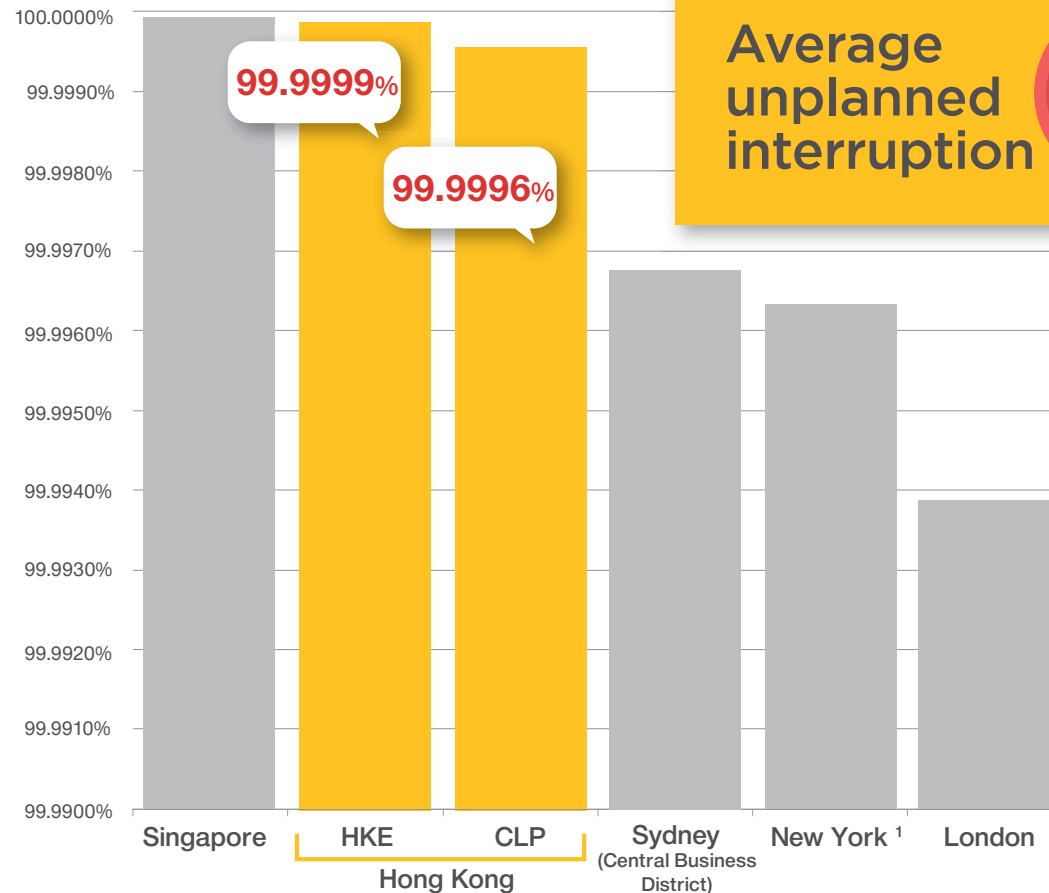
**Competition**



# Where are we now?



Electricity supply reliability  
(2011-2013 average)



**2013**

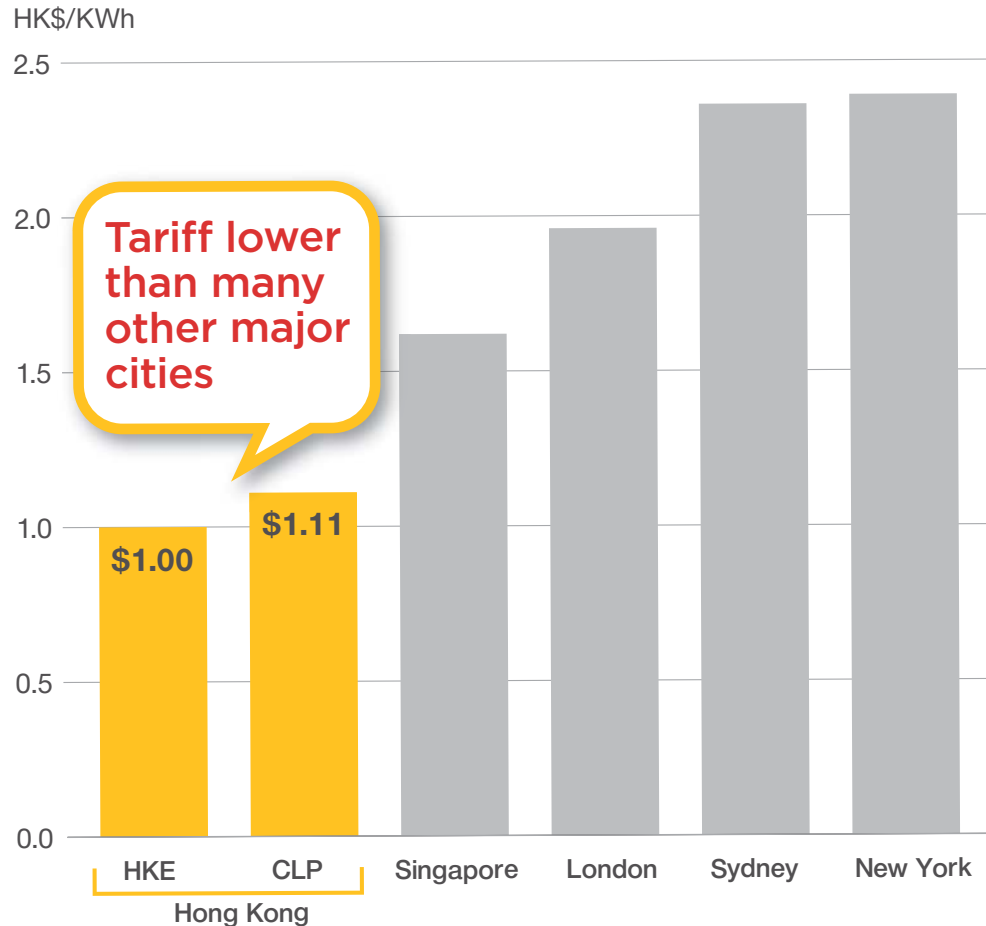
**Reliability**  
**> 99.999%**

**Average unplanned interruption**  
**< 3 mins**

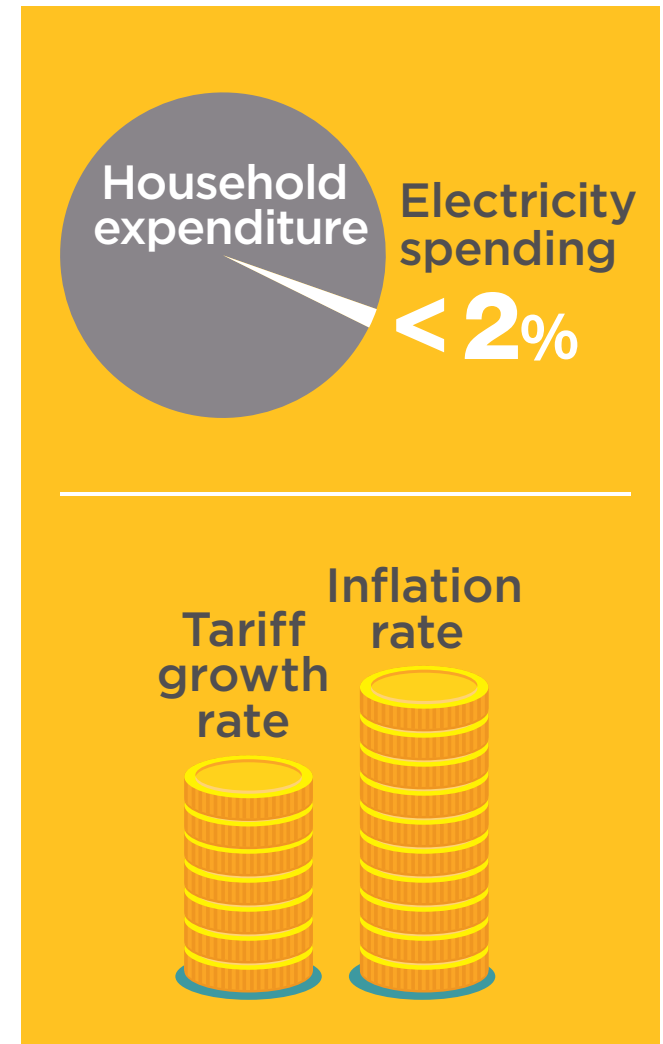
1. New York figure excludes impact by major typhoons / storms
2. Figures are rounded to four decimal places

# Where are we now?

## Affordability



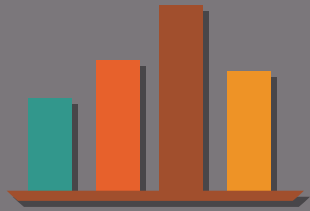
1. Comparison based on average monthly domestic consumption of 275 kWh
2. Net tariff in 2015 for Hong Kong
3. Tariff and exchange rate at November 2014 for other countries
4. The overall average net tariff of CLP and HKE for 2015 is \$1.14 and \$1.35 respectively



# Where are we now?



# Overseas Experiences



**Mixed outcome**

UK

USA

Australia

Singapore



## Affordability

- Hard to generalise
- Some higher tariffs



## Reliability

- Capacity drop in the UK
- Crisis in California
- No significant change in Australia and Singapore



## Consumer choices

- More choices
- Switch rate varied
- Customer satisfaction varied



# Overseas Experiences

Long, complex and evolving process

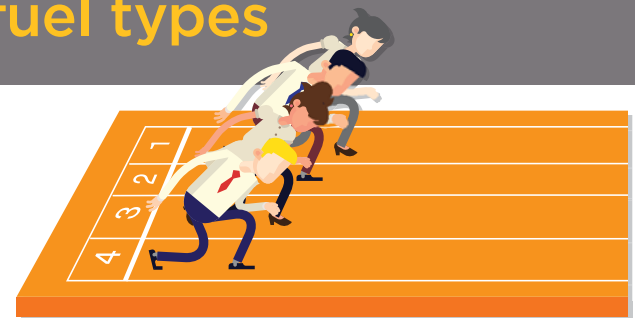


Tariff may not be lower

Reliability, safety or environmental performance may not be better

But more **choices** to consumers –  
tariff plans, customer services and fuel types

For Hong Kong:  
Keep goal to introduce competition



# Are we ready in 2018?

**New supply source  
being a determining  
factor**

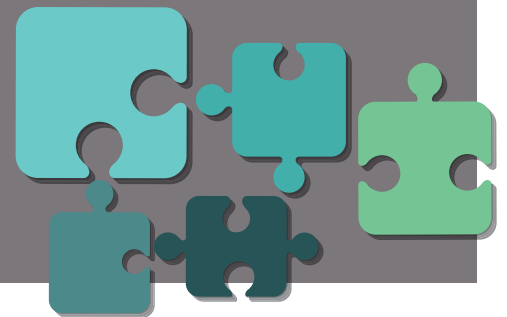


**Fuel mix  
consultation:**

reservation over importing  
electricity from the  
Mainland grid at this stage

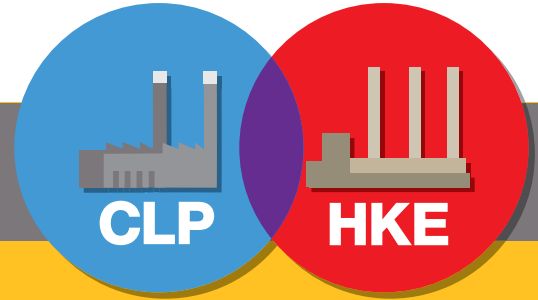
**New local major  
supply unlikely**

**Distributed  
generation  
possible  
but small**



# Are we ready in 2018?

## Enhancing interconnection between



 No short-term consumer benefits, due to narrowing tariff differential, similar marginal cost of production and substantial investment



Consideration in longer term in the context of better connection with Mainland grid to facilitate introduction of competition



# Are we ready in 2018?

**2018**

*not yet  
ready*

## Preparatory work to pave the way

### Access to the grids

discuss with power companies and conduct joint study on the grid access arrangements for new players

### Enhanced interconnection

conduct study on enhancing interconnection with Mainland and between local grids

### Segregation of generation and transmission/distribution businesses

pursue with the power companies on publishing their segregated cost data



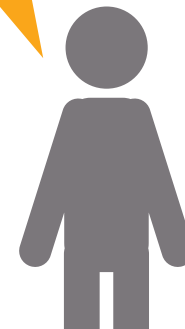
# Future Regulatory Arrangement

## Regulatory Tool



**Contractual arrangement effective**  
less administrative burden and  
governance costs

To continue this approach but need to consider other regulatory means if it fails to meet our policy objectives, e.g. setting a reasonable tariff, or goal to introduce competition



# Future Regulatory Arrangement



## Regulatory approach

### Rate of Return

incentivises investment but concern over possible overinvestment

### Cap regulation (CPI-X)

may help incentivise power companies to improve efficiencies but may result in degradation of reliability and supply quality, difficult to set efficiency gain factors, cost not directly related to local inflation

RoR recommended to continue, mechanisms already in place to mitigate the risk of overinvestment

E.g., turned down capital projects proposed by the two power companies in the DP, reserve margin will drop to 20-30%

# Future Regulatory Arrangement

- The SCAs have largely been serving us well
- Key areas requiring review:

Enhanced **transparency** and more information



Tightened **tariff approval process** to cover fuel cost estimates

**Permitted rate of return**

9.99%

8%

6%

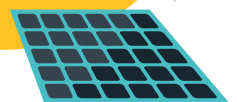


Duration of **10 years** plus an option for the Government to extend it for another 5 years



Improved incentive/penalty scheme to **enhance performance**

Facilitation of **grid connection** for **renewable energy**

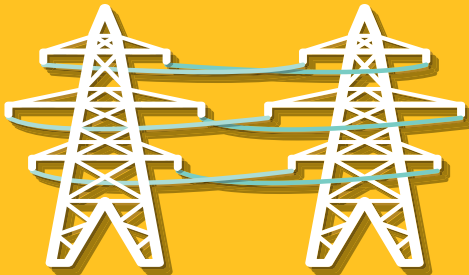


**Others?**

# Future Fuel Mix

## Major concern

reliability of  
grid import



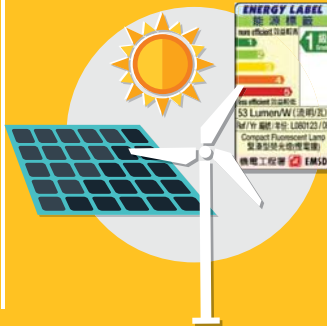
**Fuel Mix  
Consultation**

**March-  
June  
2014**

## Other views



Affordability for using  
more natural gas



General consensus on  
promotion of demand  
side management, some  
suggested more  
renewable energy

**Over  
86,000**  
submissions  
received



# Future Fuel Mix

Majority supported local generation by natural gas

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To meet the environmental targets for 2020

Around 50% natural gas

Around 25% nuclear from Daya Bay

More renewable energy  
(subject to public view on tariff implications)

Remaining: coal

Demand side management

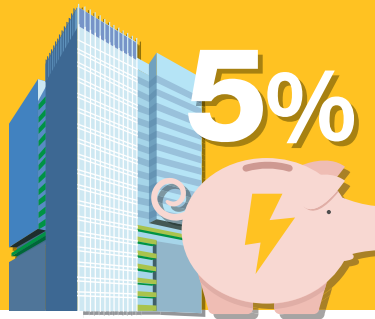
# Future Fuel Mix

## Demand Side Management



**Will  
actively  
promote  
DSM**

E.g. Electricity savings  
target for Government  
buildings from 2015-16  
to 2019-20



Further  
measures  
on energy  
saving to be  
released soon



Invite public  
views on  
measures to  
adopt in  
the future  
contractual  
arrangement



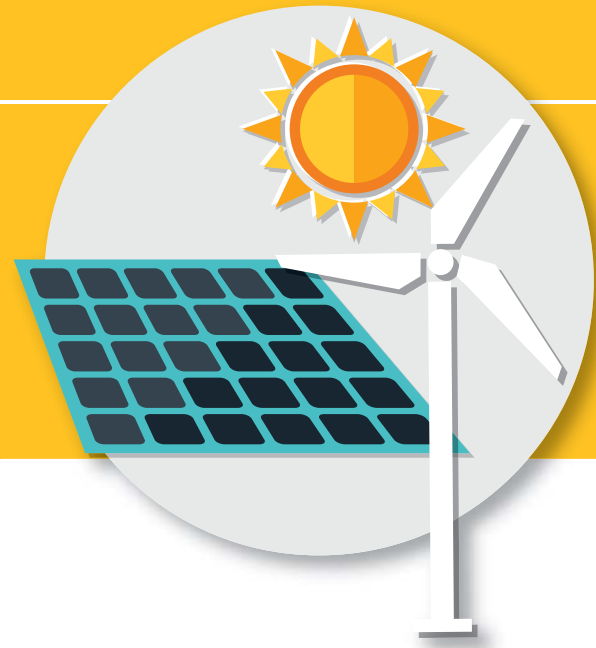
# Future Fuel Mix

## Renewable Energy

Limited scope for large-scale RE due to physical constraints and high cost

Consult the public on acceptance of higher tariff implications

Promote distributed RE through facilitating RE connection to the grids



# Next Step

Government adopts an open position

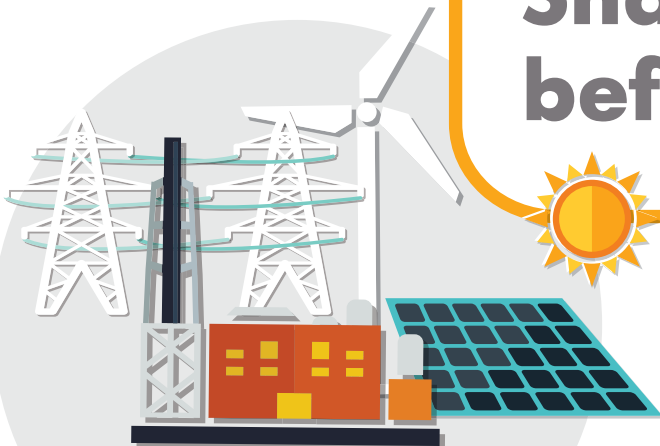
Formulate the regulatory arrangement with regard to public views



Negotiate with power companies



**Share your views on or before 30 June 2015**



- Q1** How important is choice to you in respect of the supply of electricity? What objectives do you consider should be achieved through introducing competition to the electricity market?
- Q2** To what extent do you think the current contractual arrangement by SCAs has allowed us to achieve the energy policy objectives of safety, reliability, affordability and environmental protection, and what problems do you see with this regulatory approach?
- Q3** What is your view on the following areas in the future contractual arrangement (if any) between the Government and the power companies -
- (a) duration;
  - (b) permitted rate of return;
  - (c) tariff approval mechanism;
  - (d) fuel cost arrangement; and
  - (e) incentive and penalty scheme relating to the performance of the power companies?
- What other improvements would you suggest?
- Q4** Should Hong Kong further promote renewable energy despite its higher tariff implications; and if so, about how much (in terms of percentage of your electricity bill) are you prepared to pay?
- Q5** What specific requirements would you suggest to be set out in the future contractual arrangement (if any) between the Government and the power companies to encourage the promotion of demand side management and renewable energy by the power companies?
- Q6** Do you have any other comments and suggestions?

