



## 2019-2023 Development Plan

# Entering a New Era of Gas Generation for a Low-Carbon Future

# Development Plan Background

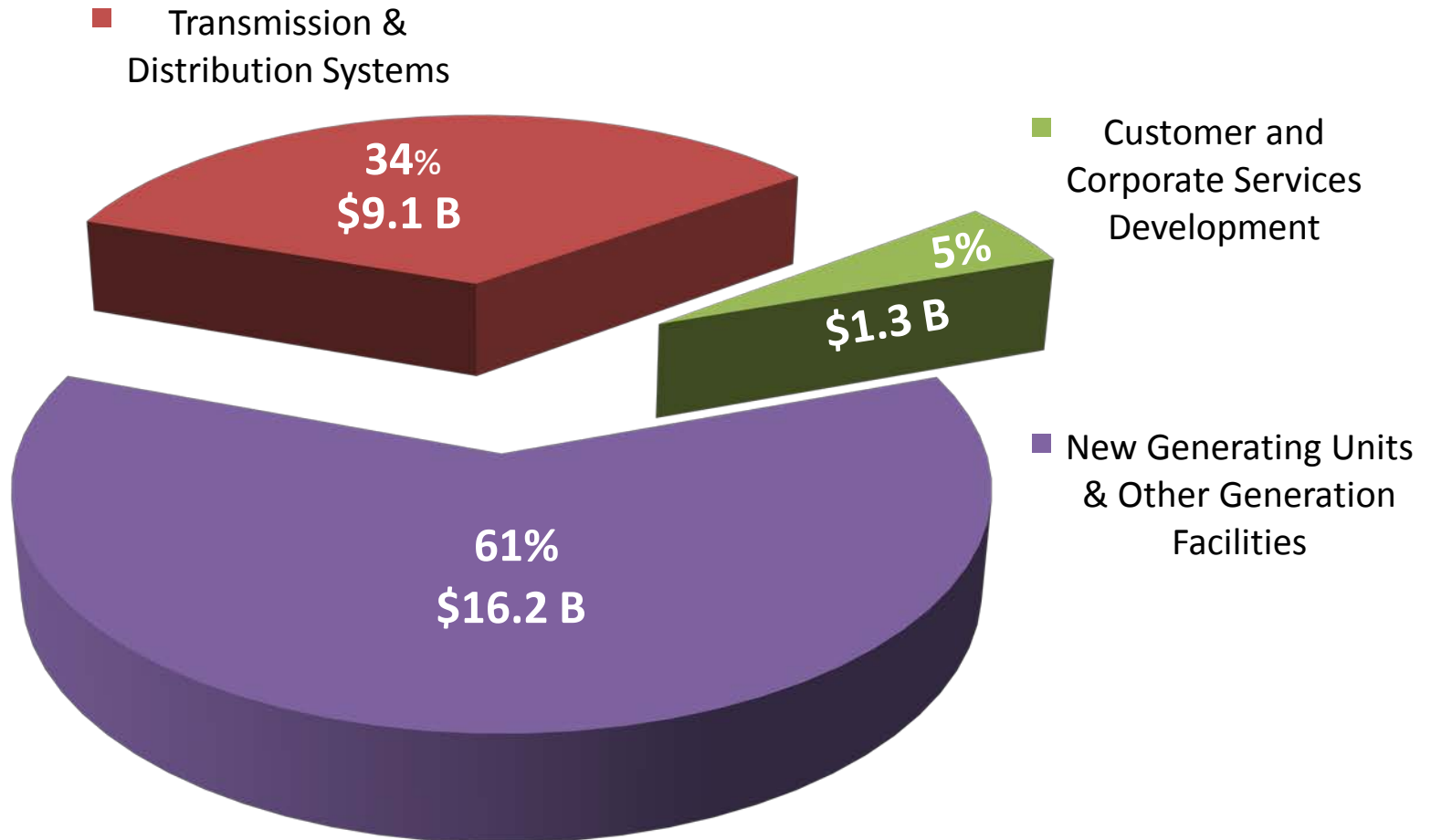
- “Hong Kong’s Climate Action Plan 2030+” – Improving fuel mix as a key strategy for Hong Kong to combat climate change
- Densely populated vertical city – Reliable power supply and excellent customer service is critical to Hong Kong’s development
  - HK Electric’s supply reliability rating above 99.999% since 1997, reaching 99.9999% in 2017
- Sustainable development of Hong Kong – Timely and adequate resources required to build necessary electricity infrastructure

# Development Plan Objectives

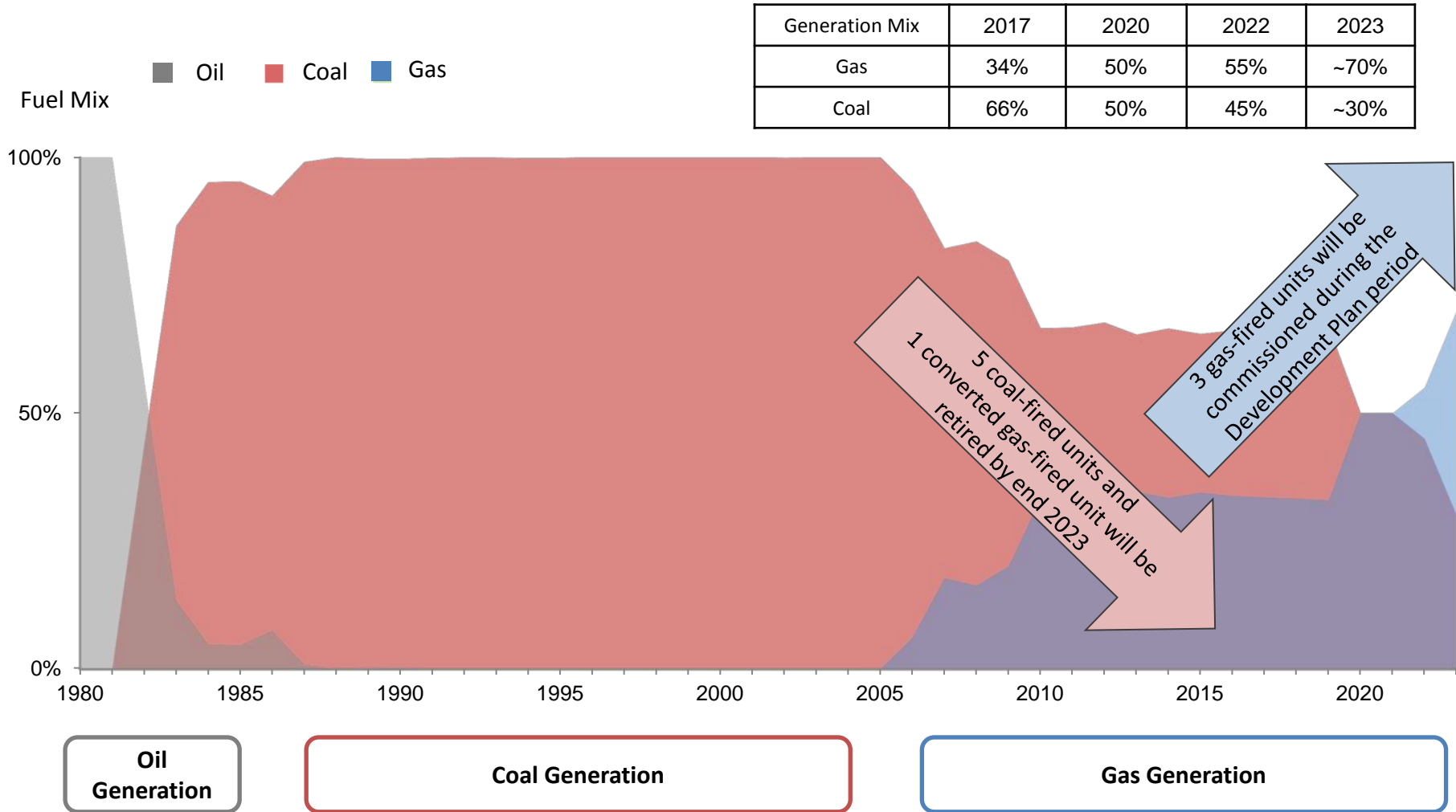
- 2019-2023 Development Plan requires \$26.6B capital expenditure
  - Support Government’s environmental and climate change policies –  
Build infrastructure for transition from coal to gas generation
  - Help transform Hong Kong into a smart city and enhance power networks
  - Maintain highly reliable power supply and excellent customer services

# Development Plan Overview

## 2019 to 2023 Capital Expenditure - \$26.6 B

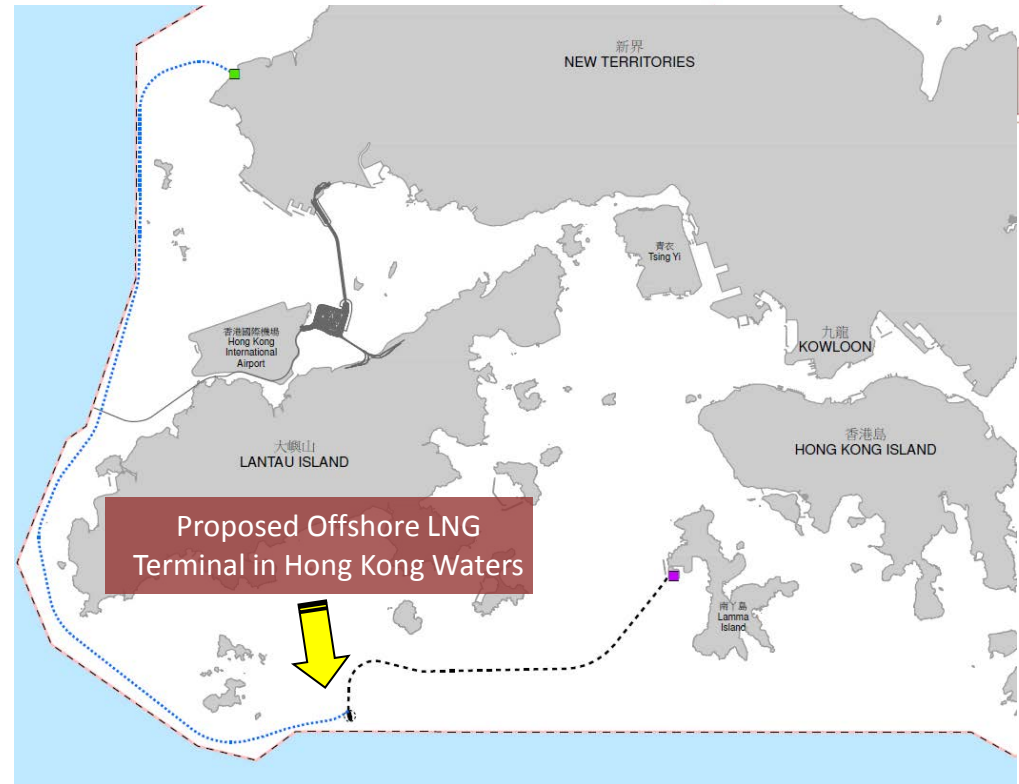


# Towards Low-Carbon Power Generation



# Securing 2<sup>nd</sup> Gas Supply

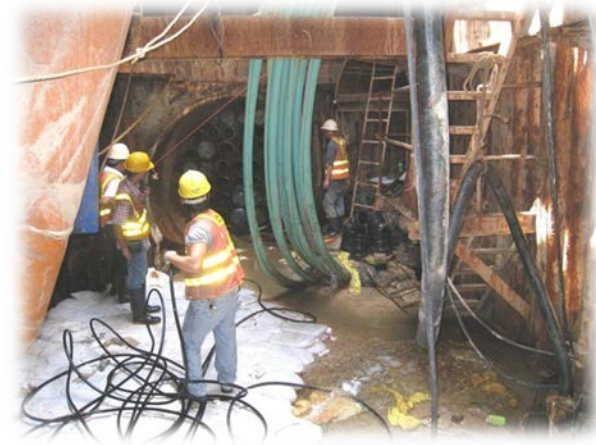
- Gas generation to increase to 50% in 2020 to meet Government's fuel mix target
- Gas generation increases further to 55% in 2022 and 70% in 2023 with new generating units
- Lamma Power Station now wholly relies on a single cross-border submarine pipeline – risk of gas supply loss under incidents threatening electricity supply security
- Building Offshore Liquefied Natural Gas (LNG) Terminal greatly enhances gas supply security and bargaining power on gas purchase



Offshore LNG Terminal using Double-Berth Floating Storage and Re-Gasification Unit Technology (Illustration Photo)

# More Resilient Power Grid

- Construct and reinforce T&D Facilities
  - New zone substation in Eastern District
  - Replacement zone substation in Sheung Wan
  - New distribution substations and network expansion for new building developments
- Improve and enhance grid intelligence and automation features
  - Deploy smart meters to build an intelligent information exchange platform for customer energy management
  - Reinforce and enhance remote control and monitoring system



Congested underground utilities and shortage of space significantly increase network construction cost and maintenance

Deploy smart meters to promote transformation of Hong Kong into a smart city

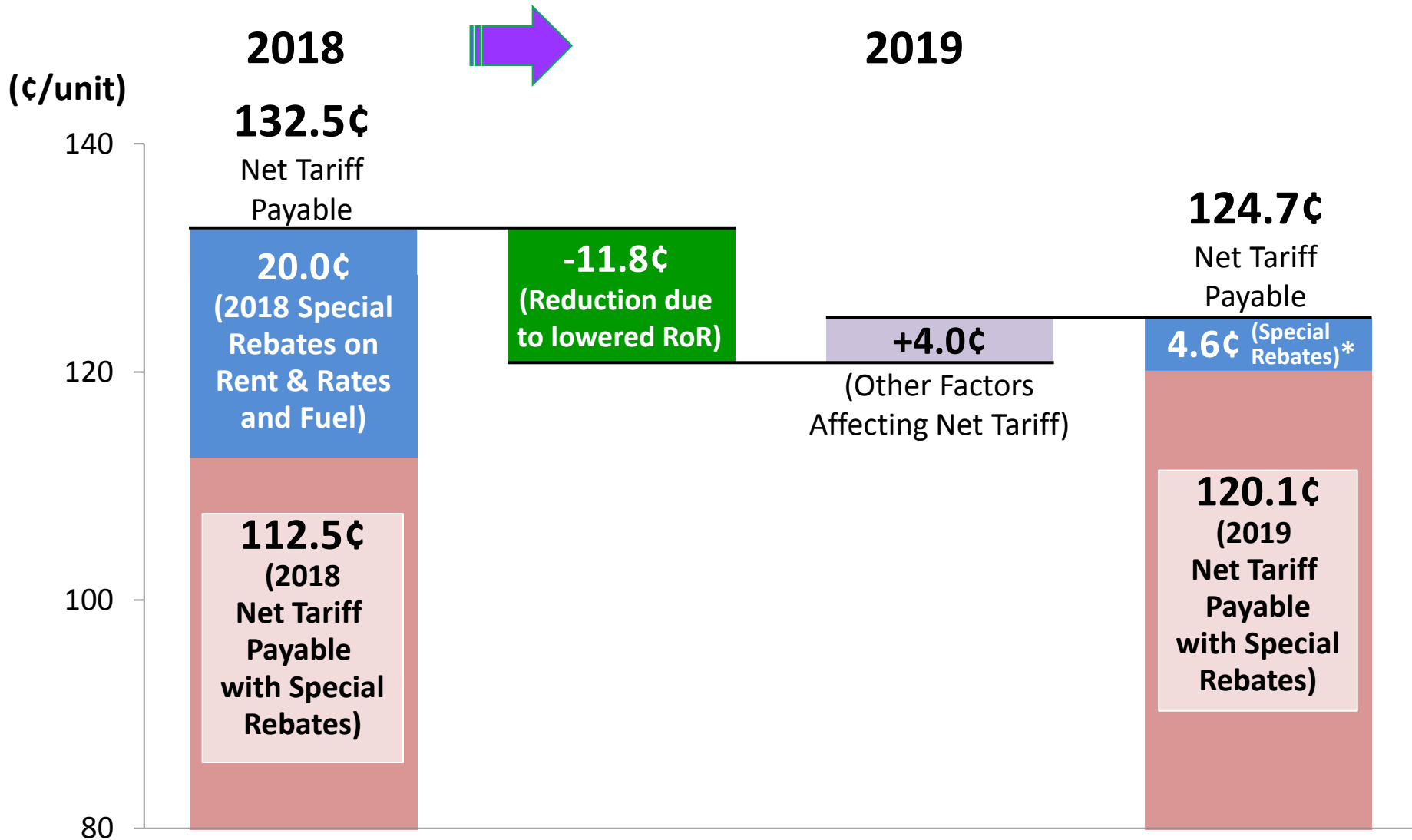


# Factors Affecting Future Tariffs

- 2019-2033 Scheme of Control Agreement (SCA) new requirements
  - Lower Permitted Rate of Return (8%) will reduce Basic Tariff
  - Frequent adjustments of Fuel Clause Charge timely reflect actual fuel cost fluctuations
  - Wider promotion of energy efficiency & conservation initiatives and RE incur additional resources and cost
- Key factors
  - Increase in capital expenditure
  - Escalation in operating expenses
  - Higher gas consumption



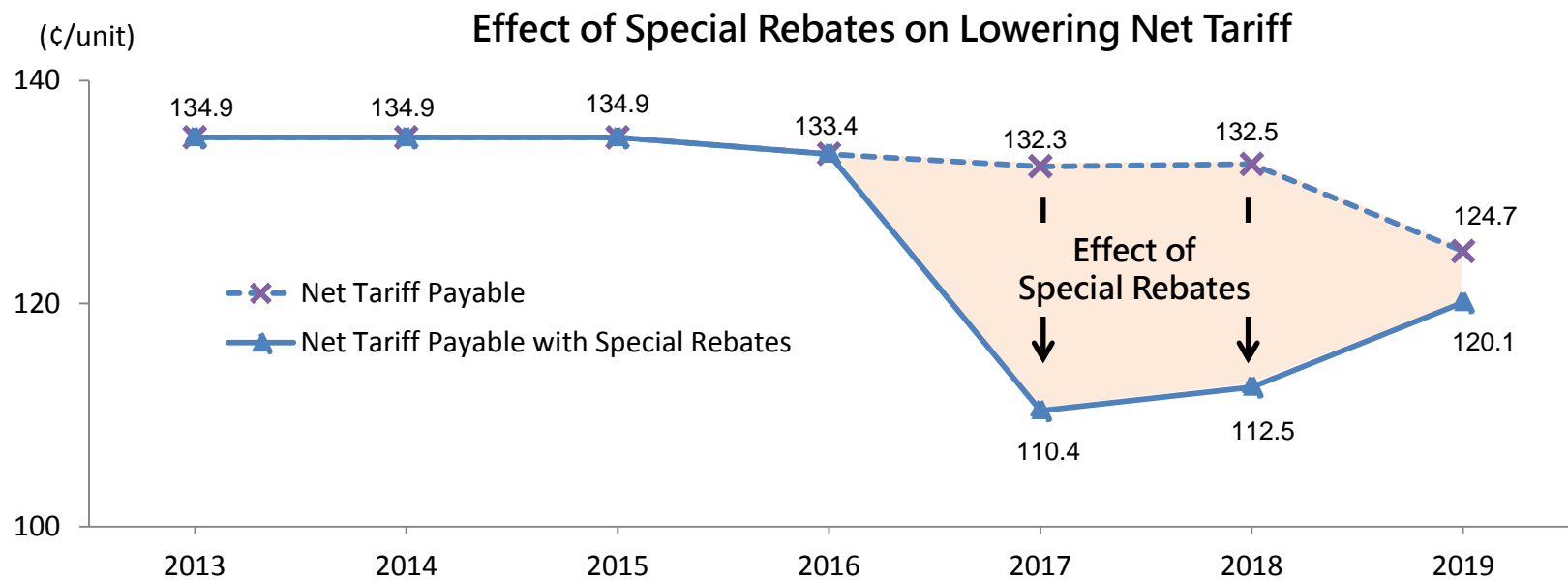
# Year 2018 and 2019 Tariff Comparison



\* 2019 Special Rebates on Rent & Rates and Fuel

# 2019 Tariff

Components	Year	2018	2019	Adjustment
	(¢/unit)			
Basic Tariff		109.1	101.3	- 7.8 [-7.1%]
Fuel Clause Charge		23.4	23.4	---
<b>Net Tariff Payable</b>		<b>132.5</b>	<b>124.7</b>	<b>-7.8 [- 5.9%]</b>
Special Rent & Rates Rebate		- 4.0	- 2.3	+ 1.7
Special Fuel Rebate		- 16.0	- 2.3	+ 13.7
<b>Net Tariff Payable with Special Rebates</b>		<b>112.5</b>	<b>120.1</b>	<b>+ 7.6 [+ 6.8%]</b>



# Basic Tariff Projection

Components	Year	2018	2019	2020	2021	2022	2023
	(¢/unit)						
<b>Basic Tariff</b>		109.1	101.3	105.3	110.2	114.8	115.7
<b>Change since 2018</b>		-	-7.1%	-3.5%	+1.0%	+5.2%	+6.0%
Special Rent and Rates Rebate		-4.0	-2.3	-0.3	-	-	-
<b>Net Basic Tariff</b>		105.1	99.0	105.0	110.2	114.8	115.7
<b>Change since 2018</b>		-	-5.8%	-0.1%	+4.9%	+9.2%	+10.1%

# Conclusion

- HK Electric will make best endeavour to complete all planned projects
- Commissioning new gas generating units will further improve air quality and help combat climate change
- Installing smart meters and improving grid intelligence will help transform Hong Kong into a smart city
- 2019 net tariff payable is 124.7¢ per unit, lower than 132.5¢ in 2018 by 5.9%
- After special rebates, 2019 net tariff payable will be 120.1¢ per unit, 7.6¢ or 6.8% higher than 112.5¢ in 2018



**Thank You**