603B00006



Response Form

Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

Please s	send this response form to us on or before 18 June 2014 by one of these means:	
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,	
020	Central Government Offices, 2 Tim Mel Avenue, Tamar, Hong Kong	
e-mail:	fuel_mix@enb.gov.hk	
fax:	2147 5834	-

Part 1 (See Notes)

This is a

Corporate response (representing the views of a group or an organisation) or Individual response (representing the views of an Individual)

CACIFIC ASTA by (name of person or organisation) and at (e-mail) (telephone)

Part 2

Fuel Mix Options

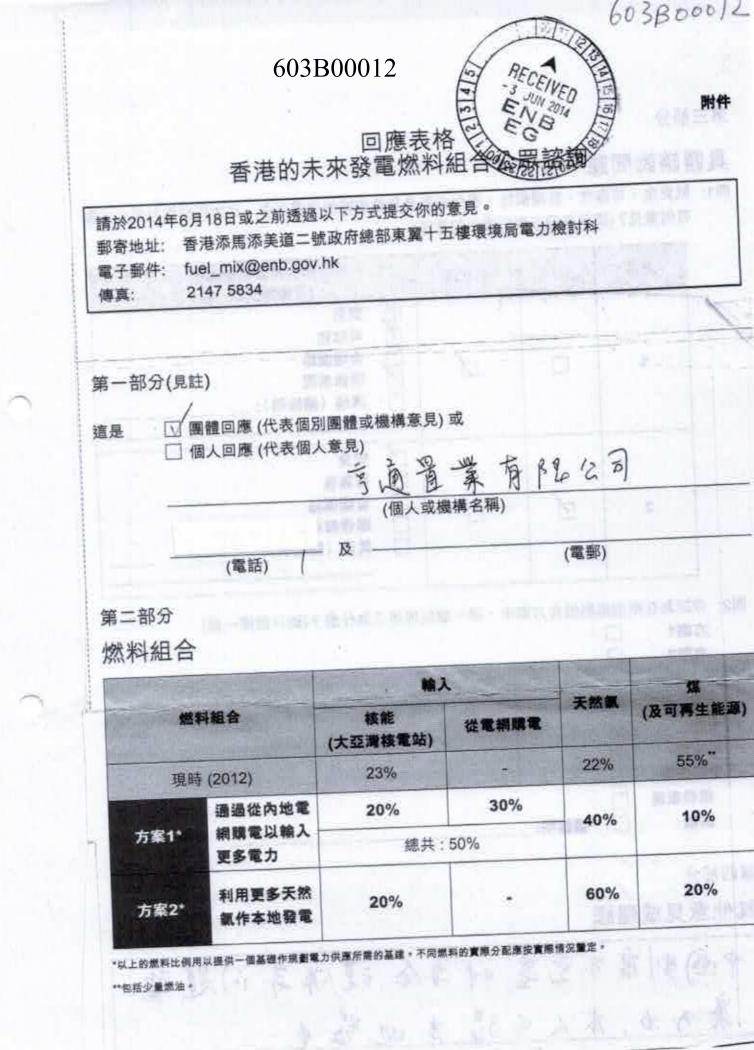
15 M		IMP	ORT	NATURAL	COAL
FUEL MIX Existing (2012)		FUEL MIX NUCLEAR GRID (DBNPS) PURCHA		GAS	(& RE)
		23%	8 1	22%	55%"
	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Tota	1:50%	40.0	
OPTION 2*	Using more natural gas for local generation	20%	no bis di	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	1	Reason for NOT supporting (You can tick more than one box)
10 100	1		x	XXXX	Safety Reliability Affordability Environmental performance Others (please specify):
	2	×		and the	Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Option 2 Reasons: (You c		×		y? (Please tick ONLY ONE box)
	Rellability		X		JUST LIKE GAS MAINCAND ENERGY
	Affordability Environmental I	Performance	X		
	Others			eneoli	WILL COME ?
				opecit	TOO WIGH A PRICE
Part 4	Comments a	nd Sugge			WITH NO CHANCE FOR NEGOTIATION.



第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

方案	支持	不支持	木支持方案的原因 (可選擇多過一項)
1.		đ	 ☑ 安全 ☑ 可靠性 □ 合理價格 ☑ 環保表現 □ 其他 (請註明):
2			 □ 安全 □ 可靠性 □ 合理價格 □ 環保表現 □ 其他 (請註明):

問2: 你認為在兩個燃料組合方案中,哪一個較理想?為什麼?(請只選擇一個)

万栗1				
方案2				
原因:(可) 安全 可靠性	聲擇多過一項) ☑			
合理價格 環保表現 其他				
	□ 請註明:	1121	1.14.29 mm	
^{第四部分} 其他意見或	建議			
中國制	度不完善,对· ,本人专强	中全、现	(米等问)题 电	聖

603B00015

Response Form

603B0001

nnex

Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

Please send this response form to us on or before 18 June 2014 by one of these means: mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mel Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834

Part 1 (See Notes)

This is a corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual) by Citi English (name of person or organisation)

(e-mail)

U

and

(telephone)

Part 2

Fuel Mix Options

at

		IMPORT			COAL (& RE)
FUEL MIX Existing (2012)		FUEL MIX NUCLEAR GR (DBNPS) PURC		GAS	
		23%		22%	55%
	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Tota	: 50%	4070	10
OPTION 2*	Using more natural gas for local generation	20%	•	60%	20%

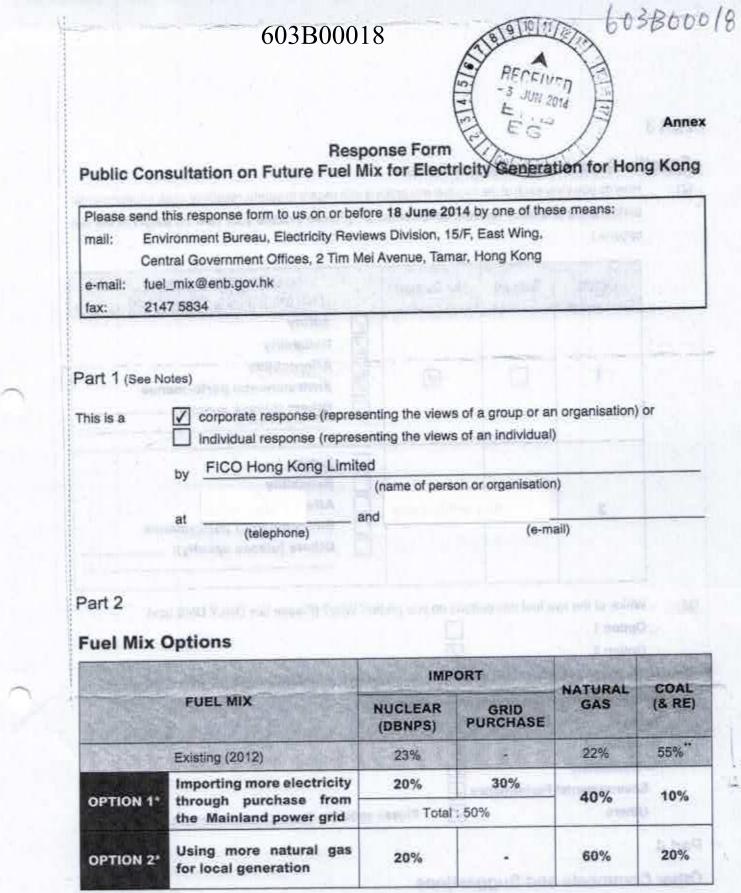
 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Q1:

Specific Questions for Consultation of a sector and a sec

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 14 (1011) 2112 (21			 Safety Reliability Affordability Environmental performance Others (please specify): Chooice More Mixo, average Mico
	2			Safety Reliability Affordability Environmental performance Others (please specify):
, F	Option 1 Option 2		tions do you pre	fer? Why? (Please tick ONLY ONE box)
F A	Reliability Affordability Invironmental Others	Performanc	=	specify: more mix to be choose
Part 4	comments a	and Suga	anti-	Andreas interference and and an
多月			病少浸支	到甲电,减少灯光,减少
IN	1.1.1.1			to such says to this week to



 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

** Inclusive of a small percentage of oil

1000

ಾ	-	-	0
-	ы	n.	э.
			-

Specific Questions for Consultation

C1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

			(You can tick more than one box) Safety
1			Safety Reliability Affordability Environmental performance Otherr (please specify);
2			Safety Reliability Affordability Environmental performance Others (please specify):
Which of the two Option 1 Option 2	o fuel mix oj	otions do you pre	fer? Why? (Please tick ONLY ONE box)
Safety Reliability	can tick mor		elow)
	Which of the two Option 1 Option 2 Reasons: (You of Safety Reliability Affordability	2 2 Which of the two fuel mix or Option 1 Option 2 Reasons: (You can tick more Safety Reliability Affordability	2 ☑ □ Which of the two fuel mix options do you pre Option 1 □ Option 2 ☑ Reasons: (You can tick more than one box be Safety ☑ Reliability ☑

Part 4

Others

Other Comments and Suggestions

Mainland China utilities still have a lot to learn from their counterparts in other parts of the world. Hong Kong was rated as the best among over 100 economies by the World Economic Forum in 2013 with regard to quality of electricity supply. This speaks louder than any words can say. It is insane to bet on Mainland China to provide electricity supply to Hong Kong if our power utilities are already best in class.

Please specify: Please refer to the follow

1

ł	603B00025	ALL DE LE DE
Public	Response Form	Annex
Please s	end this response form to us on or before 18 June 2014 by one of these mean	s:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,	Contraction of the local distance of the loc
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong	
e-mail:	fuel_mix@enb.gov.hk	and a
fax:	2147 5834	
art 1 (s his is a	ee Notes)	ation) or
	Individual response (representing the views of an Individual)	
	(name of person or organisation)	
	(name of person or organisation) at and	

٠

Fuel Mix Options

		IMPORT			
FUEL MIX		NUCLEAR (DBNPS)	GRID	GAS	(& RE)
Existing (2012)		23%	135-	22%	55%**
OPTION 1	Importing more electricity	20%	30%	4001	
OPTION	through purchase from the Mainland power grid	Total	: 50%	40%	10%
OPTION 2"	Using more natural gas for local generation	20%	tnol/af/sgp4	60%	20%
	the second s				

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation Q1:

How do you view each of the two fuei mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

1 Image: Safety Reliability Reliability Reliability Image: Safety Reliability Image: Safety Reliability Image: Safety Reliability Reliability Reliability Reliability Reliability Reliability Reliability Environmental performance Others (please specify): 2 Image: Safety Reliability Re		Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
2 2 3afety 2 3afety Reliability 3afety Affordability Environmental performance Others (please specify): 02: Which of the two fuel mix options do you prefer? Why? (Please tick ONLY ONE box) Option 1 Option 2 Reasons: (You can tick more than one box below) Safety Reliability Affordability Reliability Affordability Please specify: Others Please specify:		1 m tradiana			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance
Option 2 Reasons: (You can tick more than one box below) Safety Reliability Affordability Environmental Performance Others Please specify: Part 4		2			Reliability Affordability Environmental performance
Option 2 Image: Construction on a box below) Reasons: (You can tlck more than one box below) Safety Image: Construction on a box below) Affordability Image: Construction on a box below) Environmental Performance Image: Construction on a box below) Others Image: Construction on a box below) Part 4 Image: Construction on a box below)	Q2:	Which of the tw	o fuel mix opt	tions do you pref	er? Why? (Please tick ONLY ONE box)
Safety Reliability Affordability Environmental Performance Others Please specify:					Presi Mi a Opticiona
Safety Reliability Affordability Environmental Performance Others Please specify:		Reasons: (You o	an tick more	than one box be	low)
Affordability Environmental Performance Others Please specify:		Safety			
Environmental Performance Others Please specify: Part 4					
Others Please specify:		Affordability			
Others Please specify:			Performance		and the same stars, contracted by the Doctor
		Others		Please	
Other Comments and Suggestions					The stand of the second s
	Part 4				
Option 2 provides the best mix of reducing pollution while maintaining a reliable power supply.	Part 4 Other	Comments a	nd Sugge	stions	

		603B0	0026	all	Ann
ublic C	onsultation	on Future Fue	esponse Form el Mix for Elect	tricity Genera	tion for Hong Kon
	Environment Bu Central Governi fuel_mix@enb.	ment Offices, 2 Ti	before 18 June 2 Reviews Division, 1 m Mei Avenue, Tar		
fax:	2147 5834 See Notes)	Relating -	10		
-an ris	-	idual response (re	epresenting the vie	ws of a group or ws of an individu	an organisation) or al)
This is a		the second se	ent Lta	an ermonie at	on)
This is a		rketon investme	(name of pe	erson or organisati	6 -

2 KD0020

1

Part 2

Fuel Mix Options

det mix of		IMPORT		NATURAL	COAL		
	FUEL MIX Existing (2012) Importing more electricity		FUEL MIX NUCLEAR GRID (DBNPS) PURCHAS		GRID	GAS	(& RE)
				22%	55%		
				40%	10%		
			30%				
OPTION 1* through purchase from the Mainland power grid		Tota	1:50%		Creating and		
OPTION 2*	Using more natural gas	20%	and Bugers	60%	20%		

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation Q1:

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two which grant the way, this is provide sweep the answer the part that is

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the two Option 1 Option 2	o <mark>fuel mix opt</mark> i	ions do you prefe	er? Why? (Please tick ONLY ONE box)
	Reasons: (You c Safety Reliability Affordability Environmental F			ow)
	Others	VID		specify:
art 4				the swim have made and
ther	Comments a	nd Sugge	stions	
			cau, which is I	neavily reliant on Mainland power supply is

	603B000
	603B00027
Public	Response Form Consultation on Future Fuel Mix for Electricity Generation for Hong Kong
Please	send this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail:	fuel_mix@enb.gov.hk
fax:	2147 5834
art 1 (s	See Notes)
his is a	 corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)
	by Cheung Kong Development Co. Ltd
	(name of person or organisation)

(e-mail)

Part 2

Fuel Mix Options

at

(telephone)

		IMP	ORT	NATURAL	COAL	
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	(& RE)	
	Existing (2012)		1 1 3 mil	22%	55%"	
OPTION 1° Importing more electricity through purchase from the Mainland power grid		20%	30%	4004	1004	
		Total	: 50%	40%	10%	
OPTION 2*	Using more natural gas for local generation	20%	mathingous	60%	20%	

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fue! mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

-	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
	Vhich of the tw Option 1 Option 2	o fuel mix op	tions do you pret	er? Why? (Please tick ONLY ONE box)
R	option 1 Option 2 easons: (You afety ellability		than one box be	er? Why? (Please tick ONLY ONE box)
C C R S R A	Option 1 Option 2 easons: (You afety ellability ffordability	can tick more	than one box be	er? Why? (Please tick ONLY ONE box)
C C R S R A I Er	option 1 Option 2 easons: (You afety ellability	can tick more Performance	than one box be	er? Why? (Please tick ONLY ONE box)
R R At Er	option 1 Option 2 easons: (You afety eliability ffordability mvironmental	can tick more Performance	than one box be	er? Why? (Please tick ONLY ONE box)

603B00028

Response Form

03800920

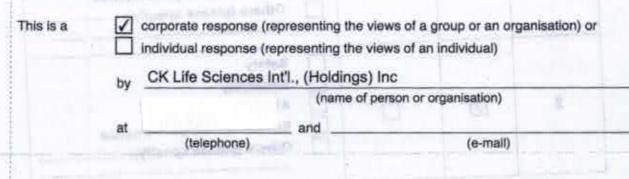
Annex

9 10 11

Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

Please s	send this response form to us on or before 18 June 2014 by one of these means:	
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,	
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong	
e-mail:	fuel_mix@enb.gov.hk	
fax:	2147 5834	

Part 1 (See Notes)



Part 2

Fuel Mix Options

			ORT	NATURAL	COAL (& RE)	
FUEL MIX		NUCLEAR (DBNPS)	GRID	GAS		
a the second of	Existing (2012) 23%			22%	55%**	
	Importing more electricity		30%	409/	100	
OPTION 1* through purchase from - the Mainland power grid		Total	: 50%	40%	10%	
OPTION 2"	Using more natural gas for local generation	20%	Buggmeten	60%	20%	

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2: V	Which of the two	funi mix ceti		
0	ption 2			er? Why? (Please tick ONLY ONE box)
R Si Ri Af En Ot	ption 2	an tick more t	han one box bei	wit Mix Options
O Ri Si Ri Af En Ot	easons: (You class afety eliability fordability ivironmental P hers	an tick more t Performance	han one box bei	ow) specify:
R Si Ri Af En Ot art 4	easons: (You class afety eliability fordability ivironmental P hers	an tick more t Performance	han one box bei	ow)
R R Af En Ot art 4 ther Co	easons: (You class afety eliability fordability ivironmental P hers	an tick more t Performance Ind Sugges	han one box bei	arrelia C x M inc.

	603B00
	603B00029
Public (Response Form Consultation on Future Fuel Mix for Electricity Generation for Hong Kong
Please se	end this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail:	fuel_mix@enb.gov.hk
fax:	2147 5834
	Petitine unit. (S)
Part 1 (s	ee Notes)
This is a	✓ corporate response (representing the views of a group or an organisation) or
1.00 m 100.00	individual response (representing the views of an individual)
	Maranta Estatos I td
	by (name of person or organisation)
	at and

Fuel Mix Options

Left-mark	FUEL MIX		IMPORT		COAL
			GRID	GAS	(& RE)
ALLE DE HOR	Existing (2012)	23%	-	22%	55%**
NIN NA	Importing more electricity		30%	40%	10%
OPTION 1* through purchase fro the Mainland power gr		Total	: 50%	40 /0	
OPTION 2*	Using more natural gas for local generation	20%	anggulit bris	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1		Ø	Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the t Option 1 Option 2	wo fuel mix o	options do you pr	efer? Why? (Please tick ONLY ONE box)
	Reasons: (You Safety Reliability Affordability	u can tick mo	ore than one box	below)
	Environment Others	al Performa	nce 🗸	se specify:
Part 4	l r Comment	s and Su	ggestions	Ling same of the state of the second of the
	ttractiveness f them.	of Hong Ko	ng is in its high	standard of living. A reliable energy supply is

distant in

	603B0030
Public	Response Form Consultation on Future Fuel Mix for Electricity Generation for Heng Kong
Please s	send this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail:	
fax:	2147 5834
Part 1 (individual response (representing the views of all individual)
	by Cheurig Kong million determined (name of person or organisation)
	at and (e-mail)
Part 2	2 Dependent für der der Ballen auf der Bereicht Verleht freihen and eine Bereicht von der Ballen genetigten sonnen auf der Ballen auf der Bal

202800030

Fuel Mix Options

NAU AN		IMP	ORT	NATURAL	COAL (& RE) 55%		
	FUEL MIX		FUEL MIX NUCLEAR GRID (DBNPS) PURCHAS			GRID	GAS
		23%		22%			
	Existing (2012)	2070	1.00				
Star 4	Importing more electricity	20%	30%	40%	10%		
OPTION 1"	through purchase from the Mainland power grid	Tota	1:50%				
OPTION 2"	Using more natural gas for local generation	20%	and Birginia	60%	20%		

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1		Z	✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the tw Option 1 Option 2	vo fuel mix op	otions do you pre	afer? Why? (Please tick ONLY ONE box)
	Reasons: (You	can tick mor	e than one box b	
	Safety Reliability Affordability		NN	
-607	Environmenta Others	Performan		e specify:
Part 4				
Other	Comments	and Sug	gestions	

Our experience in energy companies overseas shows that option 2, local generation is the best choice among the two.

		6	03B0(003	1			TELEVER OF	AFCFIV 3 JUN 7	FD Annex
ublic Con	sultat	on on I	Future F	uel M	ionse F lix for I	Electricit	ty Ger	neration	A for H	ong Kong
		-	- 10 110 00	or bet	ore 18 Ju	une 2014 t	y one o	of these r	neans:	Contractor of the
										Contraction of the
nail: Env	ronme	in Bureau	Offices, 2	Tim M	lei Avenu	e, Tamar, I	Hong K	ong		
	itral Go	verninen.	alt							
e-mail: fue		enb.gov.ł	in.		- 100		-			
a strategy to the strategy of				_						
	47 583									
	47 583		100							
fax: 21			And			15				
fax: 21	Votes)		Anima			8		D	vraanisa	tion) or
fax: 21/ Part 1 (See 1	Votes)		response	(repres	senting t	he views O	f a grou	ip or an o	organisa	tion) or
fax: 21/ Part 1 (See 1	Votes)		response	(repre	senting t	he views o he views 0	f a grou f an ind	ip or an o Ividual)	organisa	tion) or
fax: 21/ Part 1 (See 1	Votes)	corporate	response	(repre	senting t	ring Ltd				tion) or
fax: 21/ Part 1 (See)	Votes)	corporate	response response g Kong E	(repre	senting t	UB VIEWO C				tion) or
× 11.2010 10.201	Notes)	corporate individual Cheung	response	(repre	senting t	ring Ltd				tion) or

0.0

t nulligo

~ ~

Part 2

FUEL MIX		IMP	ORT	NATURAL	COAL
		FUEL MIX NUCLEAR GRID (DBNPS) PURCHAS		GAS	(& RE)
		23%	100	22%	55%
	Existing (2012) Importing more electricity			40%	10%
			30%		
OPTION 1"	through purchase from the Mainland power grid	Tota	1 : 50%		
OPTION 2*	Using more natural gas	20%	Congression	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting
	1			(You can tick more than one box) Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the two Option 1 Option 2	o fuel mix opt	ions do you prefi	er? Why? (Please tick ONLY ONE box)
A Local	Reasons: (You c Safety Reliability Affordability Environmental F Others			
Part 4			Please	specify:
	Comments a	nd Sugge	stions	
Our ser	vice requires a	colleble		option 2 is the best option.
				option 2 is the best option.

5	603B00032
Public Co	Response Form Insultation on Future Fuel Mix for Electricity Generation for Hong Kong
Please sen	id this response form to us on or before 18 June 2014 by one of these means:
	- Duracit Figericity Devices of the second
C	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail: fi	uel_mix@enb.gov.hk
tax: 2	2147 5834
	sittide/14:19
Part 1 (See	e Notes)
	representing the views of a group or an organisation, or
This is a	Corporate response (representing the states)
This is a	 corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)
'his is a	individual response (representing the views of an individual response (representing the views of an individual response)
This is a	✓ corporate response (representing the views of an individual) ☐ individual response (representing the views of an individual) by Becogate Ltd (name of person or organisation)
This is a	individual response (representing the views of an individual response (representing the views of an individual response)

Fuel Mix Options

		IMP	ORT	NATURAL	COAL
	FUEL MIX NUCLEA (DBNPS)		GRID	GAS	(& RE)
			10 -	22%	
	Existing (2012)		30%	The Listmenter man	
and the state	Importing more electricity	20%	3070	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Tota	1:50%		
OPTION 2*	Using more natural gas for local generation	20%	ditenting 1	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

TOTO'T SAMUEL NR Specific Questions for Consultation Q1:

fic Questions for Consultation How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.) APPEND AND THE REPORT OF AN ADDRESS OF A DESCRIPTION OF

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 Te Ottomanin			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
0	which of the two ption 1 ption 2	o fuel mix op	tions do you pre	fer? Why? (Please tick ONLY ONE box)
O O Re Se Af	ption 1 ption 2	an tick more	than one box be	enclado Mow)
O O Re Se Af	ption 1 ption 2 easons: (You c afety eliability ffordability	an tick more	than one box be	anoligo e la p

	603B00033
	Response Form
Public	Consultation on Future Fuel Mix for Electricity Generation for Hong Kong
Please s	send this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
1919	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail:	fuel_mix@enb.gov.nk
fax:	2147 5834
Part 1 (See Notes)
	by wonder Pacific Investments (name of person or organisation)
	at and (e-mail)
Part 2	Mix Options

Raxia	No. W. Mart Barris	IMP	ORT	NATURAL	COAL				
	FUEL MIX		FUEL MIX		FUEL MIX NUCLEAR GRID		GRID	GAS	(& RE)
	Existing (2012)	23%	shelp te she	22%	55%**				
	Importing more electricity	20%	30%	40%	10%				
OPTION 1*	through purchase from the Mainland power grid	Tota	1:50%	C UNIO					
OPTION 2"	Using more natural gas for local generation	20%	açidili bisa	60%	20%				

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental Q1: performance and other relevant considerations? (Please indicate your view on EACH of the two policy rest is a first interview of the second state of the second state of the options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 Pethanirmur			Safety Reliability Affordability Environmental performance Others (please specify):
	2	V		Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the tw Option 1 Option 2	vo fuel mix o	ptions do you pre	efer? Why? (Please tick ONLY ONE box)
	Reasons: (You Safety	can tick mor	re than one box t	pelow)
6:5	Reliability Affordability		V	
	Environmenta Others	I Performan	Colored States	se specify:
Part 4 Other	Comments	and Sug	gestions	thing and be broken die entry
Option	1's benefits to	o HK is spe	culative.	The shows have release while which we don't white a "

敬啟者:

以下為「香港本土」就未來發電燃料組合的綜合意見書:

政府正諮詢公眾未來發電燃料組合,「香港本土」認為當局的兩個方案均不可取, 方案1只會增加依賴大陸電力,令未來供電不穩,方案2則維持兩電壟斷,市民毫無 選擇。故此,「香港本土」建議第三個方案,將來電力市場「廠網分家」,發電、 輸電、配電和供電的資產和業務分開,且加強兩電聯網,逐步開放市場。

「香港本土」成員毛孟靜、范國威認為,向大陸購電的主要憂慮是供電不穩,南方 電網現時每年每戶的停電時間約138分鐘,比香港的少於1分鐘(港燈)及2.3分鐘(中 電),最多相差過百倍,香港社會難以承受如此重大風險。而且,繼食水及菜肉等依 靠大陸供應,若電力市場亦「大陸化」,資源糧食過度依賴單一來源,香港命運將 被北京控制。

再者,「香港本土」質疑政府常以大陸向澳門供電穩定作比較例子,香港比澳門電 力需求多逾十三倍,兩地不能相提並論,而且本港金融、數據中心、物流、運輸等 國際業務非常集中,若因技術或政治原因,大陸停止供電,後果不堪設想。

毛、范表示,向大陸購電亦不能達致當局環保原意,因為港府根本無從監察廣東及 南方電網發電來源,單憑兩個大陸電網現時燃料組合推斷,不能反映實況,而且大 陸邊際燃料(即新增發電燃料)主要是燃煤,向大陸購電只會適得其反,額外增加碳 排放。

方案2則只改變本地發電燃料組合,減少燃煤污染環境,卻未能打破兩電壟斷。「香 港本土」建議,長遠而言,只有「廠網分家」,未來建新電廠或電網時,以「興建、 營運及轉移」模式招標,把其他公司引入電力市場,增加競爭,香港市民始能真正 受惠。

「香港本土」成員

立法會議員

毛孟靜 范國威

(黃家裕 代行)

二零一四年六月三日

603B00038

香港中華廠商聯合會

The Chinese Manufacturers' Association of Hong Kong (一九三四年成立 Established in 1934)



癫痫育八十周年

CMA 80th Anniversary

敬啟者:

永道名董爵景 Permanent Hundory Presidents

专任需要包 SHS 印刷 户 the NGA- SHIE AN

電動開度法 586 年8月 月 W HEREN LIANC

隆永藤奎生 (昭5 (明元)) WA THERE WHEN ADD

1 1048 5 5 10

#聽讀先生 通報 26% 2 14 19:00 15 193

載某葉博士 (BAS # A DENG F & BORG

其實驗意堂 4 网络白垩外新闻

靂摬

President 王朝耀文主 月

ter teken SZL 立法罪代表

厨霸钱 view Presidents

兼漏释小错近 Ma Kansa K. Crass

美水高意念

·新·拉·拉·莱克教 \$1日天闲;;

a Maada A 1843 宋高福光空

in intern C H H UNG 法辞藏无主

States and the second 装饰描印金

油 编入新闻书画

展發鐵鐵 正 頭話 新 H CHARGE W F SKE

建羟杂酸酸主席 Chauman General Attairs Standing

she sherbey is i kitiku

Consentee 建岩管底铺 用

Logio Augaescotolia **出大整理** # 303 335 %

he that this base its file

出一般要要用:221323-233 普爾雷爾 金 前編 注 > (eg; \$ e (

日英联英文士 沪

法 编辑 编词 新航动机会

對「未來發電燃料組合」諮詢文件之意見

607 B00038

本會認同,在鳌訂香港的未來發電燃料組合時,須考慮多項政策目 標;除了要確保以合理價格、安全、可靠地滿足本港的能源需求,以及 把發電對環境所造成的負面影響減至最低之外,亦應兼顧未來電力市場 的改革和長遠發展,以便為2018年以後電網的開放和規管架構檢討奠定 基礎。

雖然本港從內地輸入更多電力的技術可行性已有所提高,但購電的 方案難免會對本地供電的可靠性和穩定性帶來新的變數。再者,根據諮 詢文件的概算,比較從內地電網購電(「方案一」)與利用更多天然氣於本 地發電(「方案二」),二者在平均每單位的成本上相差並不大,反映了購 電未必有助於舒緩本港未來電費水平大幅上漲的壓力。另一方面,輸入 電力雖然可以改善香港的碳排放表現,但考慮到內地的發電燃料組合, 則會衍生「置換效應」而增加內地的排放量;在「同一天空」下,與「方 案二」相比,「方案一」甚或會對區域整體的空氣質素帶來負面的影響。 综合上述各點,本會傾向於支持諮詢文件中提出的「方案二,即利用更 **多天然氣作本地發電**。

一從長遠看,本港有必要改善規管架構和引入競爭,今電力供應在保 持可靠和穩定之餘,亦可維持於合理的價格水平。從內地電網購電既有 助於引入水電等香港本地沒有的較清潔能源和促進燃料組合更趨多元 化,亦可提供更多的空間,讓本港在發電層面上引入競爭,為開放電網 創造條件。有見及此,本會認為買電的方案可從長計議;日後當內地電 網的營運水平進一步提升,特別是在可靠性、穩定性以及可持續性等方 面能夠達致與本地電力公司相若的水平時,本港亦可考慮從內地電網購 and o

右關上述意見,如有任何疑問,請與本會政策研究總監顏紅曉先生(電)聯絡為荷。 話:

許務委員會主意 Chairman Finance Stanting Committee 李寶寶麗之 副約 月 HERRY SH H

此致

17/18)

RECEIVED 通用 游蜂

*

10

局電力檢討科

一向年五月三十日

行数编辑 Chief Elecutivo 黄静堂白塘洋 Ven arbitistat. C

. . .

ABORATORIE 1.00

-

香港中華廠商聯合會

10

行政總裁

BIBIDITIERS BIB



604B00002

燃料組合

	11-11-			輸入			
100		料組合	複能 (大亞灣模電站)	從電網頭電	天然氣	煤 (及可再生能潮)	
	現時	寺 (2012)	23%	4	22%	55%**	
	方案1*	通過從內地電 網購電以輸入	20%	30%	and the second s	1	
		前服电战相大更多電力	總共 ; (50%	40%	10%	
	方室2*	利用更多天然	20%		60%	20%	

*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基連 * 不同燃料的實際分配應按實際情況豐定 *

**包括少量燃油。

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案說明你的看法)

	方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
	1			 ☆ 安全 ☆ 可靠性 ☆ 雪葉價格 ☆ 環保表現 其他 (請註明):
	2			 ○ 安全 ○ 可靠性 ○ 合理價格 ○ 理保表現 □ 其他 (請註明):
万方原	認為在兩個燃 第1 □ 第2 □ 因:(可選擇多) 2 □	波角		效理想?為什麼?(請只選擇── 個)
	靠性 □ 理價格 □			
理其	保表现 🗌	續註明:_	2.98	
第四部	ନ			
其他意	凤或建譲	40102		
老安奶	作出化不能	可致之	化促载	送宽施度, 有化何不 每夏童化號價。否则高

	604B00004	all la	6048
Public	Response Consultation on Future Fuel Mix for	- WA	Annex
Please s	end this response form to us on or before 18	June 2014 by one of these	means:
mail:	Environment Bureau, Electricity Reviews Div		
e melle	Central Government Offices, 2 Tim Mel Avenu	ue, Tamar, Hong Kong	Cathor
e-mail: fax:	fuel_mix@enb.gov.hk 2147 5834		
iun,			
	ee Notes)	8 0	
his is a	Individual response (representing th		ganisation) or
		o fions of all individual)	
	ARA Accest Management (Fest		
	by ARA Asset Management (Fortu		

Fuel Mix Options

		IMF	ORT	NATURAL GAS	COAL (& RE)
	FUEL MIX	NUCLEAR (DBNPS)			
-	Existing (2012)	23%	<u>E</u> .	22%	55%"
OPTION 1	Importing more electricity	20%	30%		
OFTION	through purchase from the Mainland power grid	Total : 50%		40%	10%
OPTION 2"	Using more natural gas for local generation	20%	nolineppul	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the tw Option 1 Option 2	vo fuel mix op	tions do you pre	fer? Why? (Please tick ONLY ONE box)
Q2:	Option 1 Option 2		tions do you prei	
Q2:	Option 1 Option 2 Reasons: (You Safety	can tick more Performanc	than one box be	elow)
Q2: Part 4	Option 1 Option 2 Reasons: (You Safety Reliability Affordability Environmental Others	can tick more Performanc	than one box be	emolity California

	604B	00005	a final	Labor
		3	RECEIV	ED 3
		P	E	nnex
Public	Consultation on Future F	Response Form Fuel Mix for Electrici	ty Generation for	Kong Kong
	and the second se		22100126	
mail:	end this response form to us on Environment Bureau, Electricity			10
	Central Government Offices, 2		and the second se	
e-mail:	fuel_mix@enb.gov.hk	in the second second	iong nong	
fax:	2147 5834			
Part 1 (se	Notes)		0 1	
are i lot	e Notes)			
nis is a	corporate response (re	epresenting the views of a	group or an organisatio	on) or
	individual response (re	presenting the views of a	n individual)	
	by Conestoga Ltd			
	DV Serroorogu Liu			
	by Conestoga Ltd	(name of person or	organisation)	
	at		organisation)	
		(name of person or and		
	at		organisation) (e-mail)	
art 2	at			

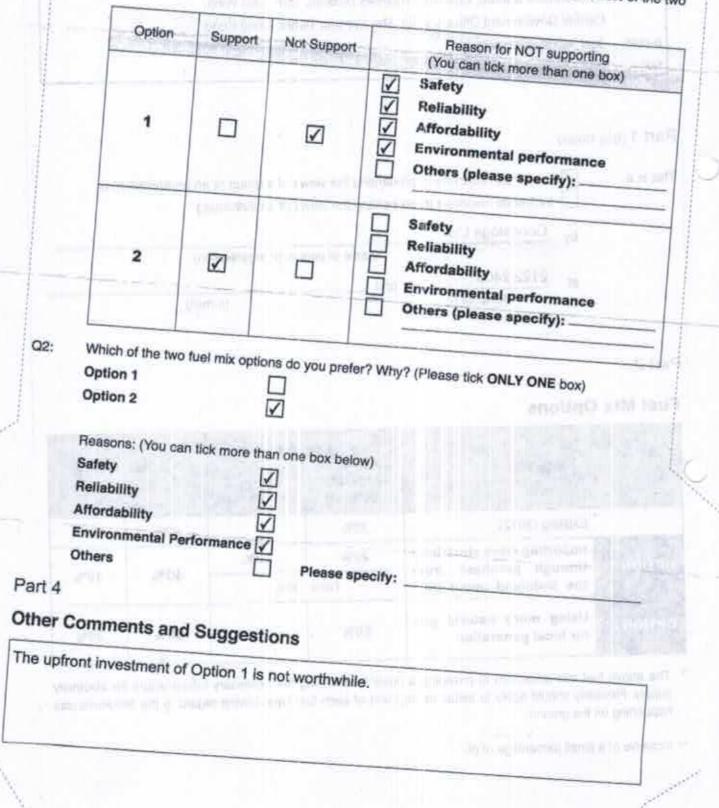
Fuel Mix Options

		IMP	ORT		COAL (& RE)
	FUEL MIX		GRID	GAS	
	Existing (2012)	23%		22%	55%"
OPTION 1	Importing more electricity through purchase from	20%	30%		maili
	the Mainland power grid	Total : 50%		40%	10%
OPTION 2*	Using more natural gas for local generation	20%	and relation	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation Q1:

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two



604B00006 Response Form Public Consultation on Future Fuel Mix for Electricity Generative for Hong Please send this response form to us on or before 18 June 2014 by one of these means: mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: tuel_mix@enb.gov.hk tax: 2147 5834	Generation for Hong Kong
Public Consultation on Future Fuel Mix for Electricity Generation for Hong Please send this response form to us on or before 18 June 2014 by one of these means: mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834 art 1 (See Notes) his is a Image: Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	Generation for Hong Kong
Public Consultation on Future Fuel Mix for Electricity Generation for Hong Please send this response form to us on or before 18 June 2014 by one of these means: mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834 art 1 (See Notes) nis is a Image: Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	one of these means: st Wing,
mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834 art 1 (See Notes) his is a Image: Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	st Wing,
mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834 art 1 (See Notes) his is a Image: Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	st Wing,
e-mail: fuel_mix@enb.gov.hk fax: 2147 5834 art 1 (See Notes) his is a Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	ng Kong
fax: 2147 5834 art 1 (See Notes) nis is a Image: Corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	
art 1 (See Notes) his is a individual response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	
his is a corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	
his is a corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	
his is a corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)	
Individual response (representing the views of an individual)	
individual response (representing the views of an individual)	roup or an organisation) or
by Biro Investment Ltd (name of person or organisation)	analisation)
(name of person of organisation)	ganisation
at and	(a mall)
(telephone) (e-mail)	(e-mail)

Fuel Mix Options

		IMP	ORT	NATURAL	COAL
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	(& RE)
	Existing (2012)	23%	17. T	22%	55%**
	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Total	: 50%	40%	10%
OPTION 2"	Using more natural gas for local generation	20%	Holamora	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 The second patients			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
The second s	2			Safety Reliability Affordability Environmental performance Others (please specify):
	hich of the two ption 1 ption 2	fuel mix opti	ons do you prefe	r? Why? (Please tick ONLY ONE box)
Re	liability	in tick more ti	han one box belo	w)
Em	ordability vironmental Po ters	erformance [7	
	mments an	d Sugges	tions	A S Million Winter prints
			It's not a viabl	e option.
Option 1 is		futino tilot		numerous in a second particle of a loss of a population of the particular of the par

		604B	00007	7	RECEIV	El El	60480
Public	Consult	ation on Future I	Response F Fuel Mix for B	Form Electricity	Generation	Tor Hong	Annex Kong
Please	send this re	sponse form to us or	n or before 18 Ju	ine 2014 by	one of these m	eans:	
mail:		nent Bureau, Electrici					
- melle		overnment Offices, 2 @enb.gov.hk	TIM Mer Avenue	a, Tamar, no	ng Kong		
e-mail: fax:	2147 583	and the second sec					
Part 1 (i	See Notes)	corporate response (individual response (Green Island Cen	representing the	views of an		anisation) or	
	by			f person or o	rganisation)		
	at	(telephone)	and	1_	(e-mail)		

-

Fuel Mix Options

		IMP	ORT	NATURAL	COAL
	FUEL MIX	NUCLEAR (DBNPS) 23% ity 20%	GRID	GAS	(& RE)
	Existing (2012)	23%	5 -	22%	55%
C. Sterr	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Total	: 50%	40%	10%
OPTION 2*	Using more natural gas for local generation	20%	allenging b	60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support		Reason for NOT supporting (You can tick more than one box)
	1				Safety Reliability Affordability Environmental performance Others (please specify):
	2				Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the tw Option 1 Option 2	vo fuel mix op	otions do you pre	afer? Wi	ny? (Please tick ONLY ONE box)
	Safety Reliability Affordability		e than one box b	elow)	
	Environmenta Others	I Performan		e spec	
Part 4					Contraction and strends and the second se
Other	Comments	and Sug	gestions		Well Devices the set of the set o
There		. i. i i.			

There are many ways to develop sustainable energy locally. There is no need to import electricity from the Mainland.

	6048000
•	604B00008
Public	Response Form
Please	send this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong
e-mail:	fuel_mix@enb.gov.hk
fax:	2147 5834
art 1 (s	See Notes)
'his is a	corporate response (representing the views of a group or an organisation) or individual response (representing the views of an Individual)
	by Randash Investment Ltd
	(name of person or organisation)
	at and
	(telephone) (e-mail)

Fuel Mix Options

	the second second the second	IMPORT	ORT	States and	COAL (& RE)
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	
	Existing (2012)	23%		22%	55%**
	Importing more electricity	20%	30%	40.04	4004
OPTION 1*	through purchase from the Mainland power grid	Total	: 50%	40%	10%
OPTION 2"	Using more natural gas for local generation	20%	chargani21	60%	20%
			and the second s		

* The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

0.50000

Specific Questions for Consultation Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 Characterization			Safety Reliability Affordability Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
	Which of the two Option 1 Option 2	o fuel mix opti	ons do you prefe	er? Why? (Please tick ONLY ONE box)
S R A E	easons: (You c afety ellability ffordability nvironmental F thers			ow) specify:
Part 4			Fit Held	and the second sec
Other Co	omments a	nd Sugge	stions	anning has being a second to person a second second
HK should		s to improve		of living. Option 1 does not do this except

		604B00	009	0 1010	all'alla
			9	Pro Pro	A 183
				El -4 JU	EIVED THE Annex
			÷	E E	Annex
		P	esponse For	n Bri	A Kong
	aultot	on on Future Fu	el Mix for Ele	ctricity Generation	n for Hong Kong
Public C	onsultat	on on return		and the same of these	means:
Diogen SR	nd this res	conse form to us on o	r before 18 June	2014 by one of mose	
					and the second se
men.	Central Go	vernment Offices, 2 Ti	im Mei Avenue, 1	amar, Hong Kong	Citetary .
e-mail:	fuel_mix@	enb.gov.hk			A CONTRACTOR OF
fax:	2147 5834		1.1		
Id.		and the second second			
Part 1 (s	ee Notes)				
are re-		corporate response (r	encounting the v	iews of a group or an	organisation) or
This is a	\mathbf{V}	corporate response (r individual response (r	epresenting the v	iews of an individual)	
		individual response (r	epresenting the		
	by	Bermington Invest	ment Ltd	person or organisation)
	09	and the second second	(name or	parson or o a	
	at		and	(e-m	ail)
	41	(telephone)	8.147 m		

1

Part 2

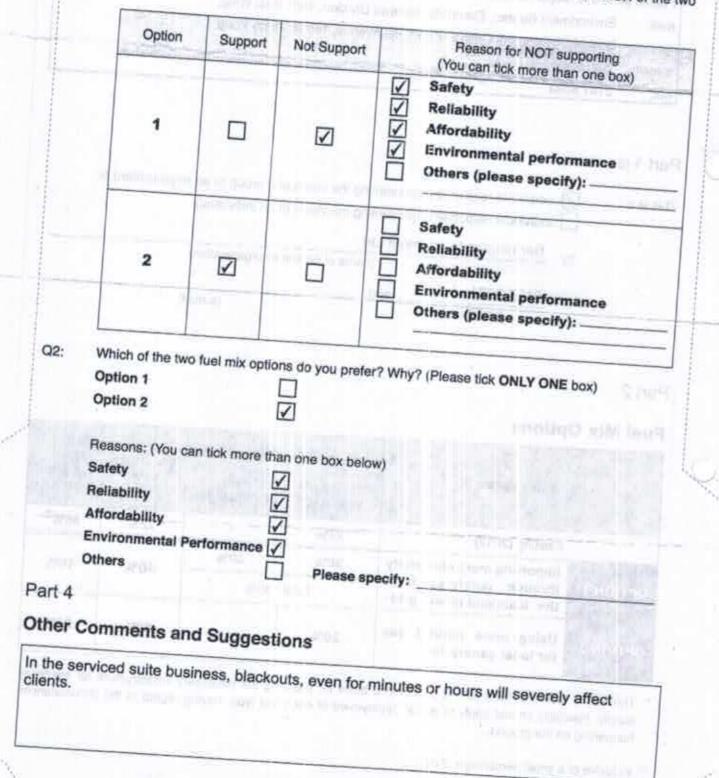
Fuel Mix Options

uer mix e		IMP	ORT	NATURAL	COAL
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	(& RE)
		-		22%	55%
	Existing (2012)	23%	COLUMN TO THE		
and the second second	Importing more electricity	20%	30%	40%	10%
OPTION 1"	through purchase from the Mainland power grid	Tota	1:50%		1.00
	Using more natural gas	20%	and the second second	60%	20%
OPTION 2'	for local generation			-	e disat

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two



	604B0001		AND RECEI	604Bo
Public (Re Consultation on Future Fue	esponse Form	EEG	Annex
_	nd this response form to us on or I	ware in the langer	52 001 1	Leer
and the second second	Environment Bureau, Electricity Re			
	Central Government Offices, 2 Tim fuel_mix@enb.gov.hk	Mei Avenue, Tamar	Hong Kong	-
fax:	2147 5834	2		
Part 1 (Se	e Notes)	and the second s		isation) or
	by Chesterfield Realty Lt		_	
	by Chesterfield Realty Lt	d (name of person	or organisation)	-

Fuel Mix Options

	San Shiring - China a	IMF	ORT	NATURAL	COAL (& RE)
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	
	Existing (2012)	23%	15.	22%	55%
OPTION 1	Importing more electricity	20%	30%		
OPTION	through purchase from the Mainland power grid	Total	: 50%	40%	10%
OPTION 2"	Using more natural gas for local generation	20%	Supplement	60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting
	1			(You can tick more than one box) ✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
O Ri Se	ption 2	in tick more th	ons do you prefe	r? Why? (Please tick ONLY ONE box)
En	fordability vironmental Pe ners	1	7	pecify:
Other Co	mments an	d Sugges	tions	int is holden senare painting .
Option 1 w		vy upfront o	osts with no be	enefits. Option 2 is preferred.

lease send this response form to us on or before 18 June 2014 by one of these means: hall: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong -mall: fuel_mix@enb.gov.hk ax: 2147 5834 art 1 (See Notes)		or organisation)	esenting the views on the transformed terms of the terms of t	Portofino Managem	
Please send this response form to us on or before 18 June 2014 by one of these means: nail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk ax: 2147 5834 art 1 (See Notes) his is a ✓ corporate response (representing the views of a group or an organisation) or Individual response (representing the views of an individual) Bactering Management Ltd		an muwuuuuiy	esenting the views on the transformed to the second s	Portofino Managem	
Please send this response form to us on or before 18 June 2014 by one of these means: hall: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mel Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk ax: 2147 5834 art 1 (See Notes)	duony of			ladividual response (re	is a
Please send this response form to us on or before 18 June 2014 by one of these means: hall: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk	ation) or	f a group or an org	esenting the views of		_
Please send this response form to us on or before 18 June 2014 by one of these means: hall: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mel Avenue, Tamar, Hong Kong			0100-		
lease send this response form to us on or before 18 June 2014 by one of these means:		Hong rong	Mei Avenue, Tamar,	Rovernment Offices, 2 Tir	Centra
ublic Constitution of a state of the semeans:			VIEWS DIVISION, 1911	Burgan Electricity H	
ublic Consultation on Future Fuel Mix for Electricity Generation for Hong Kong	Tress	by one of these me	Mix for Electric	ation on Future Fue	
Bachonse Form	VED 2014 Armex	TI TI TI	nonse Form		

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

23%

20%

20%

Total : 50%

55%

10%

20%

22%

40%

60%

÷

30%

** Inclusive of a small percentage of oil

Existing (2012)

OPTION 1"

OPTION 2*

Importing more electricity

through purchase from

the Mainland power grid

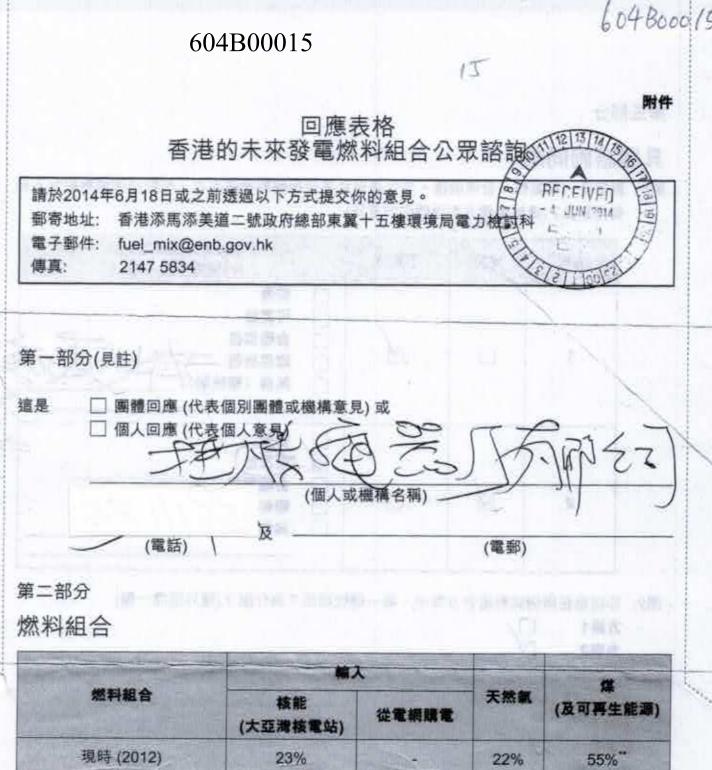
Using more natural gas

for local generation

Q1: How do you view each of the two fuel minimum

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please Indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting
	1			(You can tick more than one box) ✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2	Ø		Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the tw Option 1 Option 2	o fuel mix op	tions do you pret	er? Why? (Please tick ONLY ONE box)
	Reasons: (You	can tick more	than one box be	
	Safety Reliability Affordability			
	Environmental	Performance		to the set of the states
	Others		-	specify:
Part 4				When we do know and any water of the state
Other	Comments a	and Sugge	estions	For fronting grant good
Reliable	e enerav is imr	ortant not o	nly for every d	
ela literer.	o onorgy is imp		my for every d	ay services but also emergency services.



現的	現時(2012)			22%	
方案1*	通過從內地電 網購電以輸入	20%	30%	400%	1
77.94	更多電力	總共:	50%	40%	
方案2*	利用更多天然 氯作本地發電	20%	-	60%	10

10%

20%

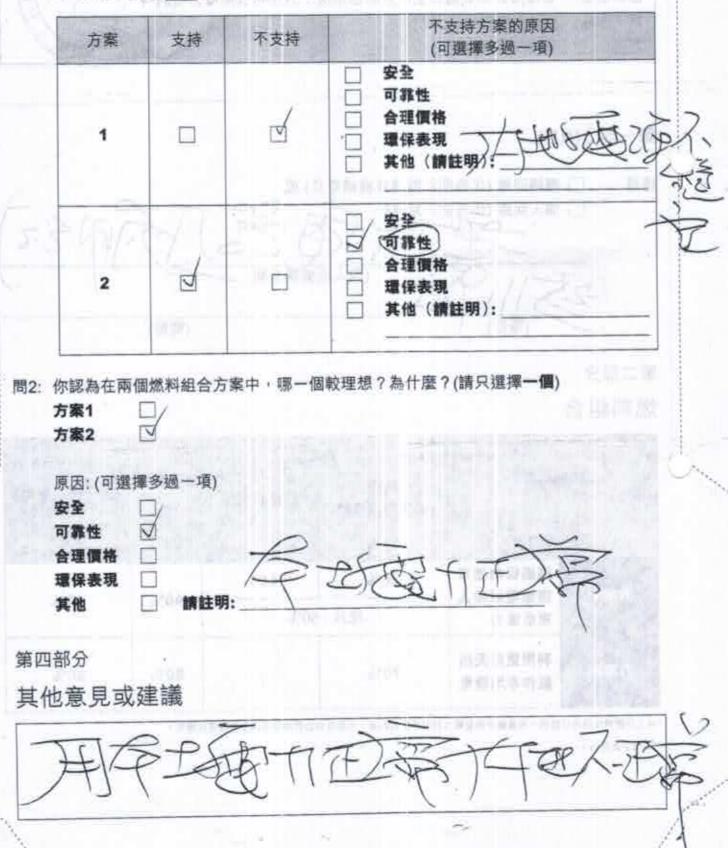
*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基建。不同燃料的實際分配應按實際情況蓋定。

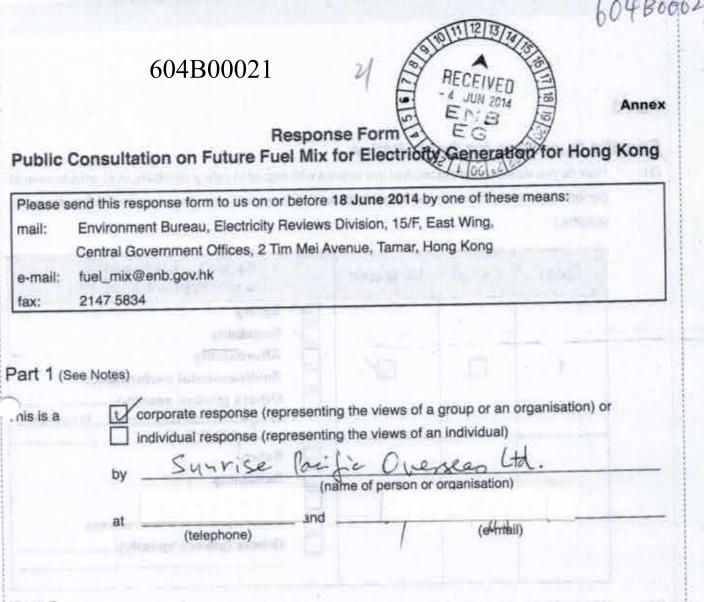
**包括少量燃油。

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)





Fuel Mix Options

1.4.1.2		IMP	ORT	NATURAL	COAL
FUEL MIX		NUCLEAR (DBNPS)	GRID	GAS	(& RE)
	Existing (2012)	23%	8-10 - 5 Wh	22%	55%
OPTION 1* Importing more electricity through purchase from the Mainland power grid		20%	30%	40%	10%
		Tota	: 50%	40 /0	1070
OPTION 2"	Using more natural gas for local generation	20%		60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental Q1: performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Q/	Safety Reliability Affordability
In the octain Want	A minute wit good	Difference Differ
Ø		Safety Reliability Affordability Environmental performance Others (please specify):
he two fuel mix op	otions do you prefer	? Why? (Please tick ONLY ONE box)
lity		
	gestions	Tollars was paint
	(You can tick more lity ental Performance	(You can tick more than one box belo



燃料組合

燃料組合 現時 (2012)		輸力				
		核能 (大亞灣核電站)	從電網購電	天然氣	·森 (及可再生能源) 55% ^{**}	
		23%		22%		
方案1* 通過從內地電 詞識電以輸入 更多電力	通過從內地電	20%	30%	4000	-	
	Costration and the second s	總共:	50%	40%	10%	
方案2*	利用更多天然 氣作本地發電	20%		60%	20%	

*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基理。不同燃料的實際分配應按實際情況暨定。

**包括少量燃油。

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、壞保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案説明你的看法)

-	方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
	1			 □ 安全 □ 可靠性 □ 合理價格 □ 環保表現 □ 其他(請註明):
18	2			
7 7 9 1 1	5案1 5案2 ① 原因:(可選擇 安全 》 百靠性 》 管理價格		案中,哪一個	戰理想?為什麼?(請只選擇 一個)
		/ 請註明:		

604B00026

504B0002

Annex

Response Form

Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

Please a	send this response form to us on or before 18 June 2014 by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
	Central Government Offices, 2 Tim Mel Avenue, Tamar, Hong Kong
e-mail:	fuel_mix@enb.gov.hk
fax:	2147 5834

Part 1 (See Notes)

corporate response (representing the views of a group or an organisation) or individual response (representing the views of an individual)

104HE D by name of person or organisation) and at (e-mail) (telephone)

Part 2

This is a

Fuel Mix Options

			ORT	NATURAL	COAL (& RE) 55%
FUEL MIX Existing (2012)		NUCLEAR (DBNPS)	GRID	GAS	
		23%	212 - 10	22%	
OPTION 1: Importing more electricity through purchase from the Mainland power grid		20%	30%	40%	10%
		Total	: 50%	40 %	10 %
OPTION 2"	Using more natural gas for local generation	20%		60%	20%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Herrarian New College

Q1:

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please Indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1 Betraneuro			Safety Reliability Affordability Environmental performance Others (please specify): Of SEA1 CLECTRICITY MARKET
	2	ø		Safety Reliability Affordability Environmental performance Others (please specify):
1	Which of the tw Option 1 Option 2	vo fuel mix op	otions do you pre	efer? Why? (Please tick ONLY ONE box)
200	Option 1 Option 2		a than one box b	Mix Options
	Option 1 Option 2 Reasons: (You	can tick more	a than one box b	Mile Ophich (s

CANNOT BE DETERMINED WITH TWO SIMPLE

605 80000

605B00001

Response Form

Public Consultation on Future Fuel Mix for Electricity Generation for Hong Ko

Please send this response form to us on or before 18 June 2014 by one of these means: mail: Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong e-mail: fuel_mix@enb.gov.hk fax: 2147 5834

Part 1 (See Notes)

This is a

corporate response (representing the views of a group or an organisation) or
 individual response (representing the views of an individual)

Anderson Asia (Holdings) Ltd

(telephone)

(name of person or organisation)

		14	
9	n	a	
a		u	-

(e-mail)

Part 2

Fuel Mix Options

bv

at

FUEL MIX		IMP	ORT	NATURAL	COAL
		FUEL MIX NUCLEAR G (DBNPS) PUR		GAS	(& RE)
	Existing (2012)	23%		22%	55%"
OPTION 1* Importing more electricity through purchase from the Mainland power grid		20%	30%	40%	10%
		Tota	1:50%	40.00	
OPTION 2*	Using more natural gas for local generation	20%	in the full	60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please Indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
Q2:	Which of the t Option 1 Option 2	wo fuel mix o	ptions do you pro	efer? Why? (Please tick ONLY ONE box)
	Reasons: (You Safety Reliability	i can tick mor	e than one box t	pelow)
	Affordability Environments Others	al Performan		se specify:
Part 4		and Sug	aestions	Net instant where a set
Other	r Comments	and Sug	gestions	Ment Contract and Andrew Contract of the

Electricity reliability is imperative to maintain business operations particularly one engaged in investment.

		6058000
	605B00002	TEISTATIS
ublic C	Response Form Consultation on Future Fuel Mix for Electricity Gener	RECEIVED S JUN TOTHONG Kong E C
Please se mail: e-mail:	end this response form to us on or before 18 June 2014 by one so Environment Bureau, Electricity Reviews Division, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong fuel_mix@enb.gov.hk	
fax: Part 1 (2147 5834 See Notes)	
This is a	individual response (representing the views of an	r an organisation) or lual)
	by Cheung Kong (Holdings) Ltd (name of person or organise	ation)
	at and	(e-mail)

Fuel Mix Options

uer mix •	FUEL MIX		IMPORT		COAL		
			FUEL MIX NUCLEAR GI (DBNPS) PURC		GRID	NATURAL	(& RE)
				22%	55%		
	Existing (2012)	23%					
	Importing more electricity	20%	30%	40%	10%		
OPTION 1: through purchase from the Mainland power grid		Tota	1:50%	1976 I.I.I			
OPTION 2*	Using more natural gas	20%	maginal true	60%	20%		

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

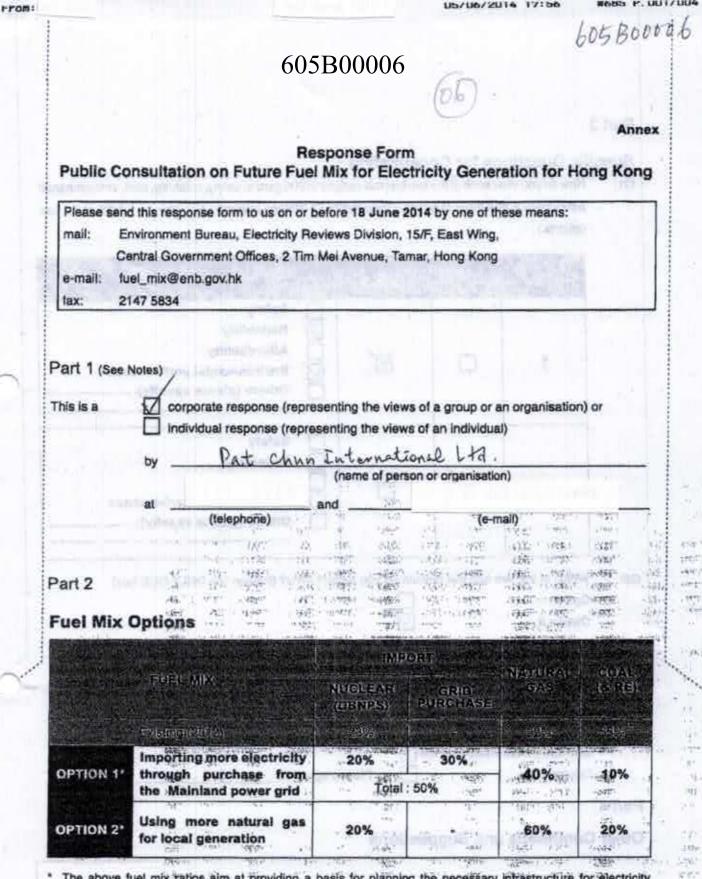
Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			✓ Safety ✓ Reliability ✓ Affordability ✓ Environmental performance Others (please specify):
	2			Safety Reliability Affordability Environmental performance Others (please specify):
02:	Which of the to Option 1 Option 2	wo fuel mix o	ptions do you pre	efer? Why? (Please tick ONLY ONE box)
	Reasons: (You Safety Reliability Affordability Environmenta Others	1		se specify:
Part 4				

Other Comments and Suggestions

Hong Kong has a reliable and efficient energy supply while improving service and lowering pollution. Option 2 will continue this trend.



The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances. happening on the ground.

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

1			Safety Reliability
NAME AND ADDRESS OF		Ø	Affordability Environmental performance Others (please specify):
2	ø		Safety Reliability Affordability Environmental performance Others (please specify):
Option 1	o fuel mix op	tions do you pre	fer? Why? (Please tick ONLY ONE box)
afety Ieliability Ifordability Invironmental		NA NA Na	elow) e specify:
			an Internet trents gehild
onments a	ina sugg		· The sizes and interim in the state of the set
presse	see n	se attachim	איז
	Vhich of the two Option 1 Option 2 leasons: (You o leasons: (You o leasons: intersection leasons: (You o leasons: intersection leasons: intersection leasonsection leasons: inte	Vhich of the two fuel mix op Option 1 Option 2 leasons: (You can tick more lafety leliability invironmental Performance thers	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

605B00006

Attachment

Our company operates a manufacturing facility in Hong Kong, using electricity as our primary energy source. We rank reliability and availability of electric power over affordability and environmental issues. Hence, if limited to the two choices in the consultation document, we prefer option 2 – local generation with natural gas.

Furthermore, the consultation is thin on both facts and choices – very superficial reasons were given to support the tabled options and eliminate others. We request the Government to issue a more comprehensive explanation that details the various technical merits and disadvantages of a wider range of options, rather than force us to make important decisions with limited information.

96%

POSPOCOO

605B00008





請於2014年	6月16日或之前透過以下方式提交你的意見。
郵寄地址:	香港添馬添美道二號政府總部東翼十五樓環境局電力檢討科
電子郵件:	fuel_mix@enb.gov.hk
傳真:	2147 5834

第一部分(見註)

這是 ☑ 團體回應 (代表個別團體或機構意見) 或
 □ 個人回應 (代表個人意見)
 Nishitani (Asia) Limited

 (個人或機構名稱)
 (電郵)
 (電郵)

第二部分

燃料組合

燃料組合 現時 (2012)		18 J	•		煤 (及可再生能源) 55% ^{~~}
		核能 (大亞灣核電站)	從電網購電	天然氣	
		23%		22%	
通過從內地電		20%	30%	40%	10%
方案1*	網購電以輸入 更多電力	總共:	總共:50%		
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

*以上的燃料让例用以提供一個基礎作混劃電力供應所需的基礎。不同燃料的實際分配應接實際情況驅定。

包括沙量燃油

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案說明你的看法)

-	方案	支持	不支持		下支持方案的原因 可選擇多過一項)
	1			 □ 安全 □ 可靠性 □ 合理價格 □ 環保表明 □ 其他(論) 	各 見
	2	Z		 ✓ 安全 ✓ 可靠性 ○ 百靠性 ○ 合理價格 □ 環保表現 □ 其他(請 	Teansenit?
2: 你!	思為在兩個加	然刻组合古著	Prints and and	ATTENS OF HE () HE	
方题	ei _				(請只選擇一個)
方案原因	k1 □ k2 ☑ 8:(可選擇多) 2 ☑	9過一項)		文理想 ? 熱什麼 ?	(請只選擇 一個)
方案原因的	k1 [] k2 ☑ 目:(可選擇多 と ☑	9過一項)			
方案原因了	 ■:(可選擇多) ■:(可選擇8) ■:(可以第) =:(可以第) =:((可以第) =:((((((((((((((((((((((((((((((((((((9過一項)			

605B00009

The Incorporated Owners of the Thesaurus Court 翠華閣業主立案法團

No 330-336 Shun Ning Road, Shamshuipo, Kowloon

環境局局長 (經辦人: 吳文傑先生) Faxline 2147 5834

吳先生,

未來發電燃料組合公眾諮詢

本業主立案法團(法團) 對上述諮詢有以下意見:-

1. 建議新的燃料組合

- 1.1 輸入核能:不能超越 20%;
- 1.2 天然氣: 不少於 65%; 及
- 1.3 煤及再生能源:不多於 15%。

2. 全力支持增加利用天然氣作本地發電 65%: 理據

- 2.1 供電的稳定,安全性及合理價格是非常重要。達至此目的,有関發電必須 在本港進行及由政府和社会監察。在過去兩間電力公司表現良好,因此我 們相任他们在未來可以有效利用更多天然氣作本地發電;
- 2.1 我們明白到增加利用天然氣作本地發電後,電費應增加,但加幅及理據始終由本港自行審視,控制和決定;
- 2.3 由於增加利用天然氣作本地發電後電費相應增加,政府應借此機會鼓勵和 教導市民節省能源,達致更環保;及
- 2.4 大幅增加電費不一定是壞事,當大家感受到「肉痛」時一定自我節能。同 一道理政府經常大幅加香煙稅目的是鼓勵煙民戒煙。

3. 支持保留煤及再生能源 15%: 理據

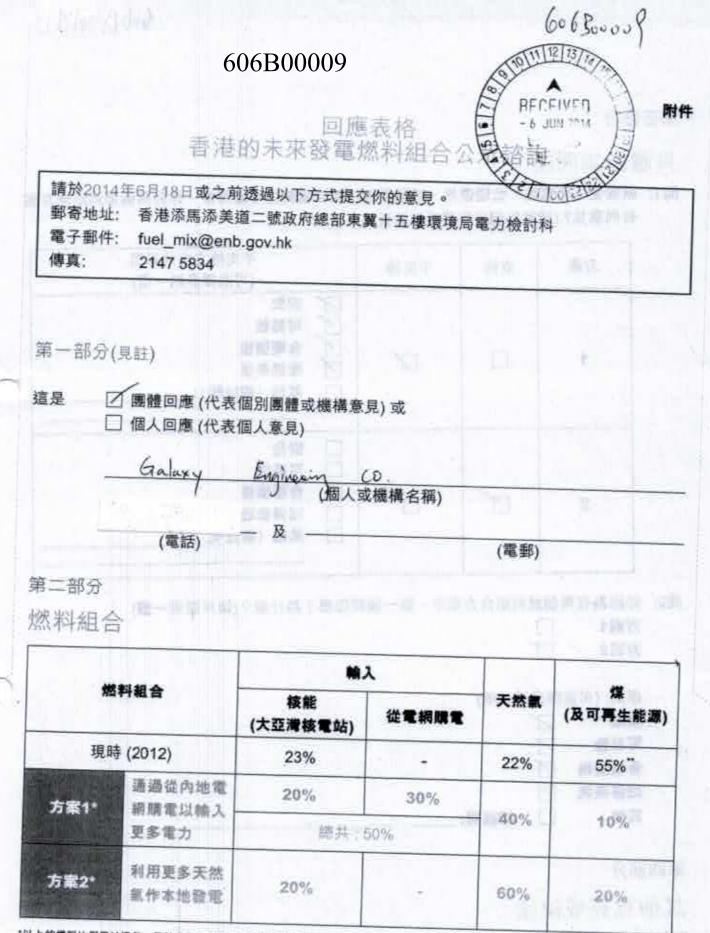
- 3.1 對環境破壞不是這麼大;及
- 3.2 調節全用天然氣带來的加價壓力及單一(除核電)的危機。

4. 反對從内地電網購電: 理據

- 4.1 擔心稳定性; 輸往澳門量少而稳定不表示大量輸往香港同样稳定;
- 4.2 現已有 23%核電力是由内地輸入,在此基礎上再大量增加,内地必然操控香港 85%的供電及價格,非常危險;
- 4.3 内地為應付供額外電力给香港,可能在珠三角興建新的燃煤/火力發電廠,染污環境,得不償失;及
- 4.4 簽約購電後,倘若香港因經濟環境等因素而减少用電,是否像東江水不輸港 照付款一样?

Signed (黃伯仁) 義務秘書 翠華閣業主立案法團

2014年6月5日



*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基理。不同燃料的實際分配應按實際情況釐定。

"包括少量燃油。

606 B 20009

第三部分

具體諮詢問題

問1: 就安全,可靠性,合理價格,環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案説明你的看法)

	方案	支持	不支持	11.00	支持方案的原因 選擇多過一項)
	1			 ○ 安全 ○ 可靠性 ○ 一 百葉價格 ○ 環保表現 □ 其他(請) 	住明):
	2	ſ		□ 墙保表現	主明):
方方	案1 案2 因: (可選擇	■燃料組合方 □ □ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■		較理想?為什麼?	(請只選擇 一個)
		ব ব			
I	保表現	コ ゴ コ 精註明		21	
第四部 其他词	分 意見或發	皇議		·	
A G	已 551次	袋、石	日不能保	, 编 買电, 那 證 琊对 琛; 因求曾使用更	羯束不能控制然 统表现有好赢。 分地本30点。

606B00012

60680001.

Please	Concutation on Future Fuel Mix for Electricity Generations send this response form to us on or before 18 June 2014 by one of these Environment Burgey, Electricity Concerning	
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,	means:
	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong	
e-mail:	fuel_mix@enb.gov.hk	
fax:	2147 5834	

This is a		dividual response (representing the representing the	views of a	group or an organisal	tion) or
	by	HKUGA	College	the state of the	n neavidual)	
	at _	(telephone)	(name of	person or	organisation) (e=mail)	
Part 2				Contact	person : Benson	KWAN (Mr.)
Fuel Mix Or	otion	ter, seneti i stypper S			e-ail	

	FUEL MIX	IMP	PORT		COAL (& RE)
	T OLL MIX	NUCLEAR (DBNPS)	GRID	GAS	
	Existing (2012)	23%		2004	
OPTION	Importing more electricity	20%	700	22%	55%"
or now n	through purchase from		30%	40%	
the Mainland power grid		Total	. S0%		10%
OPTION 2"	Using more natural gas for local generation	20%		60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Electricity should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

O2:

P

Ô

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two QT:

and the second second	
option	5G 3
CIERNAL	1211
Contraction of the second	

Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
1	0	Ø	Safety Reliability Affordability Environmental performance Others (please specify):
	a superior		Safety Reliability
Option 1 Option 2		D Ø	prefer? Why? (Please tick ONLY ONE box)
Reasons: (Safety	You can lick	more than one bo	ox below)
Reliability Attordabil Environm		mance	Mease specify: Overall carbon emision
		P P	lease specify: Overall Ca

Provide provide incentions for colligens and comparing 2) should yer anythe contride the scope of this consistentions) Gararana HKSAR The 3.1 reduce 1.15.191 410 $-f_{i}$

606 B0001

606B00014

附件

回應表格 香港的未來發電燃料組合公眾諮詢

請於2014年	6月18日或之前透過以下方式提交你的意見。
郵寄地址;	香港添馬添美道二號政府總部東翼十五樓環境局電力檢討科
電子郵件:	fuel_mix@enb.gov.hk
傳真:	2147 5834

煎一部分(見註)

這是

✓ 團體回應(代表個別團體或機構意見)或
□ 個人回應(代表個人意見)

住友重机械减速机 (香港) 有限公司

及

(個人或機構名稱)

(電話)

(電郵)

第二部分

燃料組合

		輸入			
燃	料組合	核能 (大亞灣核電站)	從電網購電	天然氣 22%	煤 (及可再生能源) 55% ^{**}
現明	寺 (2012)	23%	-		
方案1*	透過從內地電 線曬電以輸入 更多電力	20%	30%	100	教育学校
		應共:60%		- 40%	10%
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

"以上的燃料比倒用以煤供一個基礎作規劃電力供應所需的基理。不能燃料的實際分配產按實物情況讓定。

*包括沙屋燃油。

第三部分

具體諮訪問題

問1: 就安全,可靠性,合理價格,環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

· 方	案	支持	不支持	不支持方案的原因 (可選擇多過一項)	
	1		Z	 ✓ 安全 ✓ 可靠性 ✓ 合理價格 ✓ 理保表現 ✓ 其他 (請註明): 影响香港本土就並 	
ni no i	2	Z		 ✓ 安全 ✓ 可靠性 △ 合理價格 □ 環保表現 □ 其他(請註明): 	

問2: 你認為在兩個燃料組合方案中,哪一個較理想?為什麼?(請只選擇一個)

方案1 方案2			
原因:(可建]擇多		
安全	7	THE R. D. D. LEWIS CO. CO.	
可靠性	1		
合理價格			
環保表現	7		
其他	1	請註明: 近道考虑皆港可以租主价格合理评助,而且增加	日本地就业

第四部分

其他意見或建議

反对从大陆电网购电,不要以环保为借口,外购的电到底以何种方式发电香港根本无法控制,最终只是香港付出高于正常水平的电费来把污染转移。如果放弃自主发电,香港将失去 议价能力最终只有任人宰割。 **Hong Kong Branch**

stitution of IECHANICAL

SINCHINDERS



606B00016 606B00016

Environment Bureau **Electricity Reviews Division** 15/F East Wing Central Government Offices 2 Tim Mei Avenue Hong Kong

> By e-mail only fuel mix@enb.gov.hk

> > 3 June 2014

Dear Sir,

Initial Position Paper on Views on Future Fuel Mix for Electricity Generation for Hong Kong

Background

The Environment Bureau is conducting a three-month public engagement exercise to foster in-depth discussion and solicit views from the community pertaining to the future fuel mix for electricity generation in Hong Kong (the Consultation) launched on 19th March 2014. Two (2) options are proposed in the Consultation: -

- Option 1 imports 20 per cent of electricity from Daya Bay Nuclear Power Station and 30 per cent of electricity from China Southern Grid (CSG) with the rest generated locally by coal and gas in the allocation of 40 and 10 per cent respectively.
- Option 2 imports 20 per cent of nuclear electricity from Daya Bay Nuclear Power Station with the remaining 60 and 20 per cent produced locally by coal and gas respectively.

In response to the Consultation, Institution of Mechanical Engineers Hong Kong Branch is hereby pleased to render the collective views and comments on the subjects of the Consultation as below.

Comments

The subject was discussed in the light of the four (4) energy policy objectives, namely Safety, Reliability, Cost and Environmental Performance, in conjunction with the technical and social considerations tendered by the members.

Policy objective: Reliability

We noticed that Option 1 has provided no detail to assure dedicated and secured electricity supply to Hong Kong from CSG and warrant that the current high level of power supply reliability and power quality is not compromised. In particular, the current world class supply reliability in Hong Kong of 99.999% equivalent to a yearly average unplanned outage time of one (1) to two (2) minutes is far superior to that of CSG at 99.96% or power outage of approximately 3.2 hours per year.

Policy objective: Cost

We reckon that Option 1 has offered no sufficient substantiation on the investment on infrastructure and local back-up generating capacity, and the prospective pricing structure in terms of fuel cost and tariff.

Hong Kong Branch

ECHANICAL

LINA:

Institution of

CIL

Policy objective: Environmental performance

We are of the view that since Hong Kong and the Pearl River Delta region (PRD) share the same climate owing to the proximity of each other, emissions from either place will directly affect the other indiscriminately. Though the Consultation has not specified the prospective fuel(s) for generating 30 per cent of power to supply Hong Kong from CSG under Option 1, we believe that most likely the source will be from coal according to Guangdong's 12th 5-year plan of increasing coal generation capacity by 50% between 2011 and 2015. In this respect, unless explicitly the PRD sees substantial and effective reduction of carbon intensity and emissions in electricity generation, Option 1 tenders no advantage over Option 2 from the environmental performance perspective

t

Others: Operation and execution

We are concerned that the Consultation has given too little coverage on the means of execution of Option 1, such as load dispatch and management, satisfaction of peak demand and load pattern of Hong Kong. Also, the allocation of fuel mix for the two (2) power companies, CLP Power and HK Electric, under both Options is unclear. Furthermore, the impact due to improved technologies and energy efficiency initiatives as well as social-political considerations has not appeared to be duly taken into account in both Options.

Summary and Suggestion

We acknowledge the Consultation is important to the livelihood and prosperity of Hong Kong in many generations to come and, given its significance and influence to the future, the community should be furnished with as much relevant data as possible for review and discussion. However, in view of the above, it would be pre-mature for the public and the professionals to judge which option would be the most suitable for our future fuel mix for electricity generation in Hong Kong, while Option 1 has casted more doubt than certainty as of the discussion to date.

To warrant a thorough evaluation on the Options proposed, we would suggest the Government to substantiate the impacts of Option 1 on the areas in Reliability, Cost, Environmental performance and Operation and execution we specifically addressed above. Unless informed with sufficient supplementary information, we hold our reserved view towards Option 1 and opine Option 2 is more practical.

Besides, in the light of Option 2, the majority of the existing local coal-fired units are scheduled to retire from 2017. We would wish the Government to provide more information in upgrading the existing coal-fired units for a lower carbon yield.

Thank you for your attention.

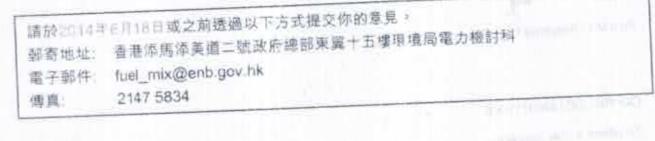
Yours faithfully,

Barry Chi-Hong Lee Chairman (2014 – 2015) Institution of Mechanical Engineers Hong Kong Branch

BL/wht

一 通道的未来被軍以利益自公眾諮問

附件



第一部分(見註)

道.

1 .	✓ 團體回應 (代表個別團體或機構意見) 副 □ 個人回應 (代表個人意見)	
	Nit-Literai (Acia) Limited	

Nishitani (Asia) Limited (個人或機構名稱) 顶 (電郵) (電話)

第三部分

燃料組合

		輸入			#
燃料	叫組合	核能 (大亞灣核電站)	從電網購電	天然氣	(及可再生能源)
現時 (2012)		23%		22%	55%
NA DES	进退從內地電	20%	30%	40%	10%
方繁1*	續購帶以輸入 更多電力	堪共	50%		
方席2*	利用更多天然	20%		60%	20%

*以上的燃料比例用以提供一個基礎作規劃電力供產所需的基礎。不同處有的資準分配產按實際情況屬定。

**钼压业等焦油。

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
1		Z	 □ 安全 ☑ 可靠性 □ 合理價格 □ 環保表現 □ 其他 (請註明):
2	Z		 ✓ 安全 ✓ 可靠性 □ 合理價格 ✓ 理保表現 □ 其他(請註明):

問2: 你認為在兩個燃料組合方案中,哪一個較理想?為什麼?(請只選擇一個)

方案1	E
方案2	V

原因:(可選擇多過一項) 安全 ☑ 可靠性 ☑ 合理價格 □ 環保表現 ☑ 其他 □ 請註明:

第四部分

其他意見或建議

主要針對從內地購電的安全及供電的穩定性、可靠性。 以及主張對環保支持,希望以天然氣為主要電力供應。

608 300001



燃料組合

燃料組合 現時 (2012)		輸入			. #
		核能 (大亞灣核電站)	從電網講堂	天然氣	(及可再生能源)
		23%	-	22%	55%
通過從內地電 方案17 網購電以輸入	通過從內地電	20%	30%	40%	10%
	網購電以輸入 更多電力	總共:	50%		
方案2*	利用更多天然 氯作本地發電	20/0	1.1	60%	20%

计现在外非点状况上现 过 电路域 计 40

99%

•以上的燃料比例用以提供一個基礎作效期電力供運所需的基础 • 不同燃料的實際分配應按實際情況整定

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案説明你的看法)

	方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
æ	1		Ø	□ 安全 □ 可靠性 □ 合理價格 □ 準保表現 □ 其他 (論註明):
	2			 □ 寂全 □ 可靠性 ☑ 合理價格 ☑ 建保表現 □ 其他(請註明):
可罪	は (可選擇多) (可選擇多) (() () () () () () () () ()	過一項)	₹ 12	mint frankter Retter (t. 1-). Artis (t. 2-).
合理 理保 其他	表現□	請註明:	風電不	一定现件

609800012

附件

回應表格 香港的未來發電燃料組合公眾諮詢



燃料組合 現時 (2012)		輸入		天然氣	煤 (及可再生能源)
		燃料組合 核能 (大亞灣核電站)			
		23%	•	22%	55%**
	透過從內地電	20%	30%	1	
方案1*	級關電以輸入 更多電力	- 總共 ::	50%	40%	10%
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

*以上的燃料比例用以提供一個基礎作报畫電力供應所需的基理 * 不同燃料的實際分配應按實際情況箇定。

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

方案	支持	不支持		支持方案的原因 J選擇多過一項)
1	Ĩ	Ø	 ✓ 安全 ✓ 可靠性 ✓ 可靠性 ✓ 合理價格 ✓ 環保表現 ↓ 其他(請 	
2	Ø		□ 環保表現	
方案1 [方案2 [原因:(可選擇	2 冬鴉一面)		較理想?為什麼?	(請只選擇 一個)
可靠性	2			
	マ オ コ 請註明:			
四部分 他意見或强	li識			127.4 XR.14 297.4 - 1
200				ubility to HK
household	and t	rusiness	sector, as	well as public transport



回應香港的未來發電燃料組合公眾諮詢

電力乃推動及維護本港現時的經濟、社會及民生其中一種最重要的能源之一。 保持長期而穩定的電力供應是有必要的。為配合本港的《清新空氣藍圖》,本港 必須尋找更潔淨的能源生產方法,減低本地碳排放之餘,更促進本地對可再生能 源使用比率。可惜,本地可再生能源的生產因地理環境所限制,不能有效地取替 化石燃料地位。政府必須盡快實行長期的能源供應政策,為將來本港社會及可再 生能源發展奠定基石。本會對是次發電燃料組合公眾諮詢有以下建議:

燃料組合的選擇:

兩個供電組合各有利弊,但本會認為方案一較方案二理想。主要考慮因素有 二, "兩間電力公司能否應付更長遠的香港能源消耗情況"及"將來可再生能源 使用可能性"

兩間電力公司能否應付更長遠的香港能源消耗情況

香港電力需求將會陸續上升,但本港土地資源有限,再加上環境保護的必要, 兩電能否不斷擴大規模以應付本地需求是一個必須考慮因素。首先,增加電力供 應商及供電來源,可減少本港覓地建廠的需要,省卻下來的土地可作環境保育之 用。其次,隨著本港發展,兩電增建廠房及引入低碳原料始終會有上限。若果, 本地電力供應臨近上限才另覓供應商,電力價格及需求急切性將會比現時更高。

將來的可再生能源使用可能性

本港兩間電力供應商皆有引入可再生能源以減低本港碳排放及對化石燃料 的需求。可惜,以現今科技而言,本港發展可再生能源的潛力並不能完全取代本 港現時對化石能源及將來用電需求的增長。再者,本港受地形限制,發展可再能 源的支出將會昂貴及發展範圍地段有限。為達致本港長遠發展本地可再生能源的 目標,增加電網可以提高本港將來逐漸要求內地提供可再生能源的百份比。同時, 亦可要求兩電投放更多資源研發及使用更有效率的可再生能源科技。

其他建議:

除了增加能源供應外,政府更應以立法方向加強商界於節省能源消耗。根據 機電署 2013 年及之前的《香港能源最終用途數據》,商界電力使用率佔全港的總 耗電量 66%。無可置疑,商界是主要推動本港經濟的主要命脈,用電量高亦在所 難免。可是,部份商業機構及商舖於沒有充份理由下,於非工作時間及人流非常 稀少的情況下仍然燈火通明(圖片一)。此種商業行為是與本港節省能源大方向 背道而馳,亦加速本港電力供應到達供不應求景況及光污染的其中一個成因。雖然,不應"一竹篙打一船人",但本港商業區,如旺角,通宵亮燈普遍可見。

另外,本港龐大的電力需求亦源於市民用電的不良習慣。當局應加強向市民 宣傳節能的好處,亦應每年撥出更多的資源增強節省能源及能源以外的環境教育。 好讓市民及年青一代從少培養環境保護意識。

維持穩定的電力供應,乃香港持續經濟發展及穩定大眾市民生活所需。雖然 電力使用增長率有所減慢,但若果以現時本港市民及商業機構的電力使用習慣, 電力使用程度只會繼續有升無減。短期之策是從港外引入電子力,同時加強本地 電力供應商的產電能力。而最長期的有效之策,是從市民的日常習慣入手,有效 地推廣節省能源的習慣。

607800028

附件

609B00028

回應表格 香港的未來發電燃料組合公眾諮詢公

請於2014年	E6月18日或之前透過以下方式提交你的意見。	
郵寄地址:	香港添馬添美道二號政府總部東翼十五樓環境局電力檢討科	
電子郵件:	fuel_mix@enb.gov.hk	
傳真:	2147 5834	_

第一部分(見註)

這是

✓ 團體回應 (代表個別團體或機構意見) 或
 ✓ 個人回應 (代表個人意見)

SNSI CAPITAL MANAGEMENT HK LIMITED (個人或機構名稱)

(電話)

及

(電郵)

第二部分

燃料組合

		輸入,		天然氣 22%	煤 (及可再生能源) 55% ^{**}
燃料組合 現時(2012)		核能 (大亞灣核電站)	從電網購電		
		23%			
通過從內地電		20%	30%	40%	10%
方案1*	網購電以輸入 更多電力	總共:	50%	4075	1070
方案2⁺	利用更多天然	20%		60%	20%

*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基準。不同燃料的實際分配應按實際情況體定。

609800028

第三部分

具體諮詢問題

問1: 就安全,可靠性,合理價格,環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
1			 ✓ 安全 ✓ 可靠性 ✓ 合理價格 ✓ 環保表現 Ţ他(請註明):
2	N		 □ 安全 □ 可靠性 □ 合理價格 □ 還保表現 □ 其他 (請註明):

問2: 你認為在兩個燃料組合方案中,哪一個較理想?為什麼?(請只選擇一個)

方案1	
方案2	

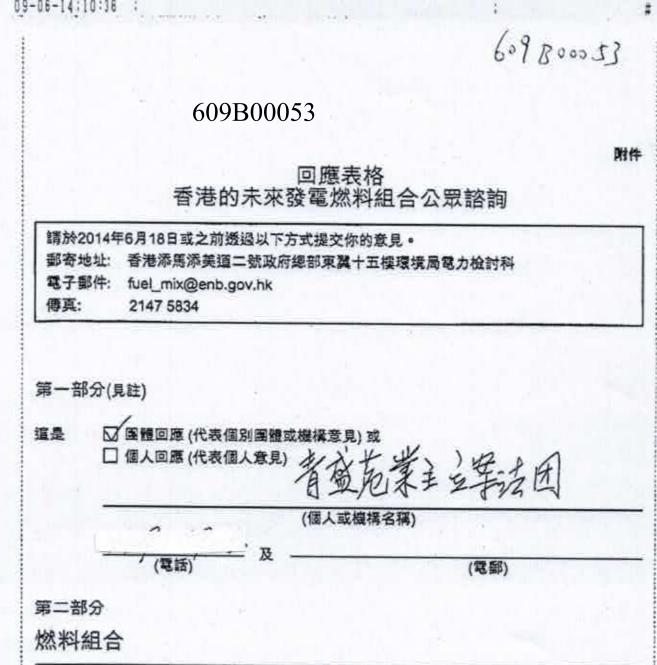
原因: (可選擇多過一項)

安全	~	
可靠性	~	
合理價格	~	
環保表現	~	
其他	~	請註明

第四部分

其他意見或建議

ALWAYS SUPPORT HONG KONG



1/

燃料組合		輪ノ		天然氯	煤 (及可再生能源) 55%
		核能 (大亞湾核電站)	從電網際電		
現時	現時 (2012) 23% -			22%	
+ 124+	通過從內地電	20%	30%	10000	
力余1	方综计 網購電以輸入 更多電力	總共:	50%	40%	10%
方案2*	利用更多天然	20% -		60%	20%

"以上的派羿比供用以进供一信基础作识面或力供库所需的基础。不同运料的實限分配库拉實際情况奠定。

09-06-14:10:38 ;

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案説明你的看法)

	案	支持	不支持	不支持方案的原因 (可選擇多過一項)
1			Ø	□ 安全 □ 可靠性 □ 合理價格 □ 環保表現 □ 其他 (講註明): <u>分支 与</u> (一) ○ (读注明): <u>分支 (一)</u>
2	:	Ø		 ☑ 安全 ☑ 可靠性 ☑ 合理價格 ☑ 建保表現 □ 其他 (請註明):
方案2 原因:(回		₫一項)		
安全 可靠性 合理便根 環保表明	/	精壮丽。		
安全 可建作 理保表 其他	¥ 🞣	請 註明:		
安全 可靠性 合理保表现 其他 四部分				
安全 可建设表现 合理保表现 其他 四部分 能意見	或建設	ŧ.	4 8.7	定:常停電. 狼格贵比夺 本港电力,

2/

609 B000 53

609 B ... 5f:



第二部分

燃料組合

燃料組合		輸入	6	C.L.	煤 (及可再生能源) 55% ^{~~}
		核能 (大亞灣核電站)	從電網購電	天然氣	
現即	寺 (2012)	23% -		22%	
通過從內地電		20%	30%	40%	10%
方案1* 網購電以輸) 更多電力		總共:	50%	40%	1078
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

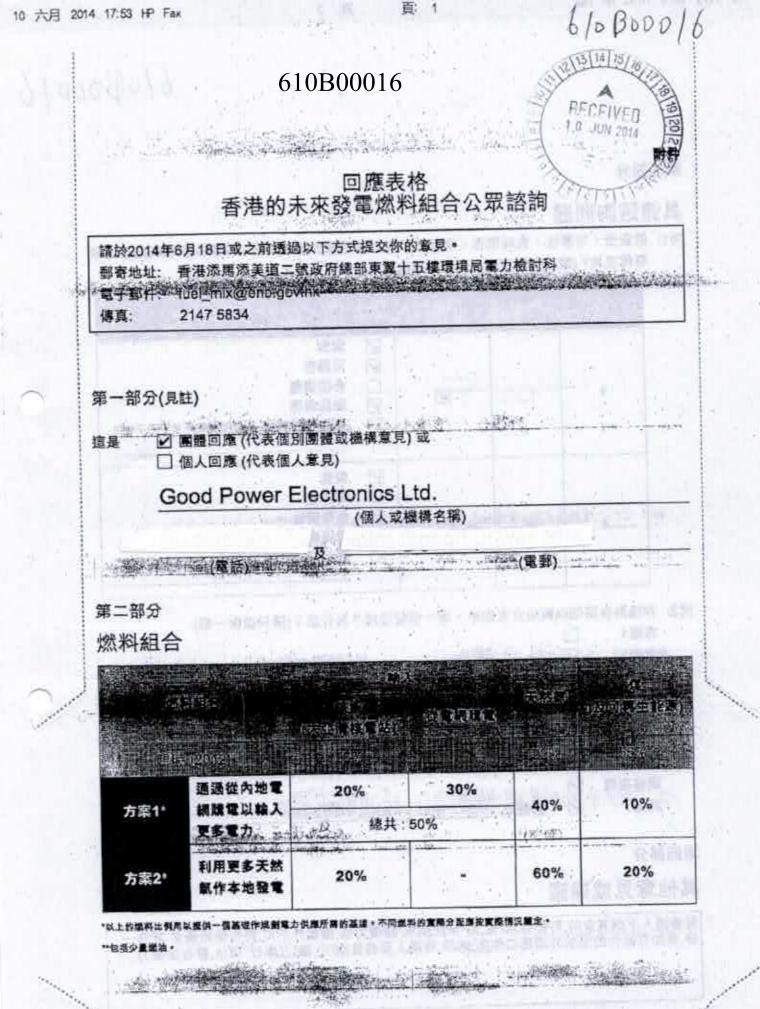
9日19月末は1支

*以上的燃料比例用以提供一個基礎作規劃電力供專所機的基確。不同燃料的實際分配座按實際情況懂定。

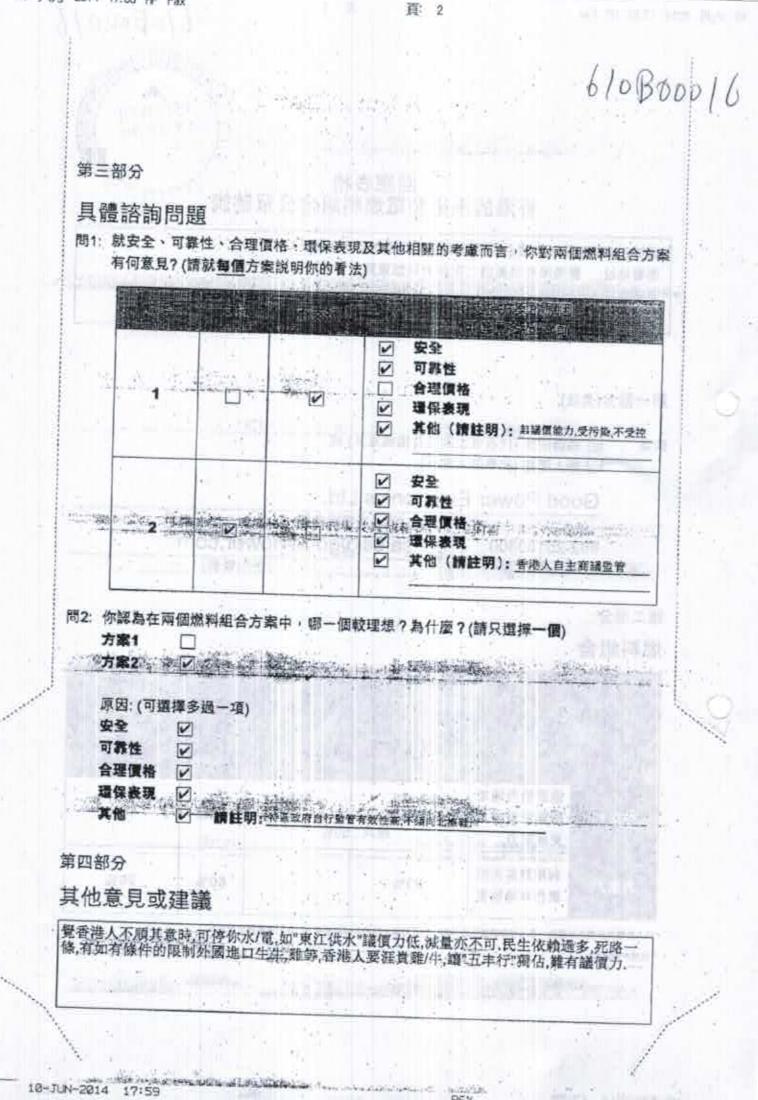
具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就**每個**方案説明你的看法)

方案	支持	不支持		不支持方案的原因 (可選擇多過一項)
1				安全 可靠性 合理價格 關保表現 其他(請註明):
2	2			安全 订靠性 計理價格 證保表現 氦他(請註明):
方案1 方案2	□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□	案中,哪一個	햧理想?≵	為什麼?(請只選擇一個)
合理價格				
環保表現 其他	□ 請註明:		40.01	
第四部分				
其他意見或	建議			
支卡	有本土也贫	€ I	L APPER	100111.0 100000000000000000000000000000



96%



回應表格

610 Bart

时件

請於2014年6月18日或之前透過以下方式提交你的意見。 郵寄地址: 香港添馬添美道二號政府總部東翼十五樓環境局電力檢討科 電子郵件: fuel_mix@enb.gov.hk 傳真: 2147 5834

第一部分(見註)

這是	□ 團體回應 (代表個別 □ 個人回應 (代表個人	團體3	或機構意見) 或
	the BEPR?		業地部發展中151
			(個人或機構名稱)
_	(電話)	及	(電郵)
Mr - +	10		

第二部分

燃料組合

		輸入	L		煤
燃料組合		核能 (大亞灣核電站)	從電網購電	天然氣	(及可再生能源)
現即	寺 (2012)	23%	-	22%	55%"
SL DATE	透過從內地電	20% 30%		40.00	A PROP
方案1*	網腊電以輸入 更多電力		50%	40%	10%
方案2*	利用更多天然	20%		60%	20%

*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基建。不同燃料的實際分配應按實際情況釐定

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

支持	不支持	不支持方案的原因 / (可選擇多過一項)
		 ✓ 安全 ✓ 可靠性 ✓ 合理價格 ☑ 環保表現 □ 其他(請註明):
		安全 可靠性 合理價格 環保表現 其他(請註明):

方案2 原因: (可選擇多過一項) 安全 ☑ 可靠性 ☑ 合理價格 ☑ 環保表現 ☑

請註明:

第四部分

其他

問2:

其他意見或建識

这将年地服務提供者再注入環保再任 能不觉现,持續减排,改善環境及 行 ·FI

610800049

	onsultation on Future Fuel Mix for Electricity Generation for Hong Kong
mail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,
e-mail:	fuel_mix@enb.gov.hk
	Veliatel 9
fax:	2147 5834
art 1 (s	Antoning Streetening
	ee Notes)

Part 2

Fuel Mix Options

FUEL MIX		· IMP	ORT	NATUDAL	COAL
		NUCLEAR GRID (DBNPS) PURCHASE		GAS	(& RE)
	Existing (2012)	23%		22%	55%
	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Tota	: 50%	40.70	
OPTION 2*	Using more natural gas for local generation	20%	dangente (60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

" Inclusive of a small percentage of oil

Part 3

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting
	1			(You can tick more than one box) Safety Reliability Affordability Environmental performance Others (please specify): price, The negotiation ability, can bol of researces
No.	2			Safety Reliability Affordability Environmental performance Others (please specify):
	Vhich of the tw Option 1 Option 2	o fuel mix op	tions do you pret	er? Why? (Please tick ONLY ONE box)
S R A	afety eliability ffordability		than one box be	ANA CONTRACTOR
	nvironmental thers	Performance	1771	specify: Protect local employment,
Other Co	omments a	ind Sugge	estions	
Other - Opening Concern	than Option more opt on Renewo	1 and 0 ions/choice while Energy	ption 2, it is for choose g (RE)	is strongly recommended for Also, the options have to few



第二部分

燃料組合

燃料組合 現時 (2012)		輸り	L	No.	煤 (及可再生能源) 55% ^{~~}
		核能 (大亞灣核電站)	從電網購電	天然氣	
		23%		22%	
通過從內地電		20%	30%	40%	10%
方案1* 網購電以輸入 更多電力	And the state of t	總共:	50%	40%	1078
方案2*	利用更多天然 氣作本地發電	20%		60%	20%

*以上的燃料比例用以提供一個基礎作現劃電力供產所需的基連。不同燃料的實際分配應按實際情況鑒定。

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見? (請就每個方案説明你的看法)

	方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
	1			安全 可靠性 合理價格 環保表現
	2		bt.i c Network I C D @ D	安全 可靠性 合理價格 環保表現 其他(請註明):
7	5案1	固燃料組合方案 □ ☑	^建 中,哪一個 ^業	?為什麼?(請只選擇 一個)
		羅多過一項)		
网				
題		☑ ☑ □ 請註明:	viti Una	
第四部	分		-)	
其他這	意見或建	建議		TILE STREET
天然氣	及煤(及可利	存生能源)可以要	環保	A LINE REPORT OF A REAL PROPERTY OF

610800070

Annex

S (WHO)

Please s	send this response form to us on or before 18 June 2014 t	by one of these means:
mail:	Environment Bureau, Electricity Reviews Division, 15/15	EBRINANG
	Central Government Offices, 2 Tim Mel Avenue, Tamar, 1	long Kong
e-mail:	fuel_mix@enb.gov.hk	RECEIVED B
fax:	2147 5834	JUN 201 EN
anan wate	See Notes)	a group or an organisation) or
Part 1 (S This Is a	corporate response (representing the views of individual response (representing the views of by Chung Acuentities (1)	an individual) 1/C) LtJ
ante volv	corporate response (representing the views of individual response (representing the views of individual response)	an individual) 1/C) LtJ

Part 2

Fuel Mix Options

	IMP	ORT	NATURAL	COAL
FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	(& RE)
Existing (2012)	23%	-	22%	55%
Importing more electricity	20%	30%	40%	10%
through purchase from the Mainland power grid	Tota	1:50%	4070	
Using more natural gas for local generation	20%	mathematic	60%	20%
	Existing (2012) Importing more electricity through purchase from the Mainland power grid Using more natural gas	FUEL MIX NUCLEAR (DBNPS) Existing (2012) 23% Importing more electricity through purchase from the Mainland power grid 20% Using more natural gas 20%	NOCLEAR PURCHASE (DBNPS) PURCHASE Existing (2012) 23% Importing more electricity through purchase from the Mainland power grid 20% 30% Using more natural gas 20% -	FUEL MIX NATURAL GAS NUCLEAR (DBNPS) CRID PURCHASE NATURAL GAS Existing (2012) 23% - 22% Importing more electricity through purchase from the Mainland power grid 20% 30% 40% Using more natural gas 20% - 60%

 The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

** Inclusive of a small percentage of oil

610500070

.-T.

Part 3

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental Q1: performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	.1 30.0%0 2000 0			Safety Reliability Affordability Environmental performance
	2	Ø		Safety Reliability Affordability Environmental performance Others (please specify):
Q2;	Which of the tw Option 1 Option 2	o fuel mix op	tions do you pref	er? Why? (Please tick ONLY ONE box)
, di	Safety Reliability	an tick more	than one box be	low)
	Affordability			
	Environmental	Performance	Ø	
	Others		Please	specity: 20 parco leval employe
Part 4				timpley-
Other	Comments a	nd Sugge	stions	and invited every parts .

Our local utilities have proven record of reliability and buying power from mainland China would inevitably one way or the other burning more coal in China, in order to meet electricity demand in Hong Kong. We suggest to burn more gas to improve our ambient air environment.

6108,00126

Annex

Response Form

ublic Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

Hoaco S	send this response form to us on or before 18 June 2014 by one of these means:	
nail:	Environment Bureau, Electricity Reviews Division, 15/F, East Wing,	
nan.	Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong	
-mail:	fuel_mix@enb.gov.hk	
ax:	2147 5834	

art 1 (See Notes)

is a	Ø	corporate response (representing the views of a group or an organisation	on) or
		individual response (representing the views of an individual)	
	by	Asia Adia (name of person or organisation)	
		(hance of person of organises of	
	L	and (e-mail)	120

art

uel Mix Options

						1 10.
		IMP	ORT	NATURAL	COAL	1
	FUEL MIX	NUCLEAR (DBNPS)	GRID PURCHASE	GAS	(& RE)	1
	Existing (2012)	23%	*	22%	55%	
	Importing more electricity	20%	30%	40%	10%	100
OPTION 1*	through purchase from the Mainland power grid	Tota	1 : 50%	40 /8		-
OPTION 2*	Using more natural gas for local generation	20%		60%	20%	

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

Inclusive of a small percentage of oil

Part 3

US

Specific Questions for Consultation

How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental 21: performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

of kill kind another on Future Fully link to

			Safety
1		Ø	Reliability Affordability Environmental performance Others (please specify):
2	đ		Safety Reliability Affordability Environmental performance Others (please specify):
Option 1 Option 2		tions do you pref	er? Why? (Please tick ONLY ONE box)
Safety Reliability			10W)
Affordability		No.	
Environmental I Others	Performanc		specify:
	nd Sugg		Define white passes is place too becau demandure
THE PART AND ADD ADD ADD ADD ADD ADD ADD ADD ADD	17 CT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	octions	



燃料組合

		輸入			煤
燃	料組合	核能 (大亞灣核電站)	從電網購電	天然氣	(及可再生能源)
現時	F (2012)	23%		22%	55%**
11280	通過從內地電	20%	30%	40%	10%
方案1*	網購電以輸入 更多電力	總共:	50%		
方案2*	利用更多天然	20%		60%	20%

なかみりかどの1 2 to

*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基理。不同燃料的實際分配庫按實際情況董定

**包括少量燃油 *

4.10

-

具體諮詢問題

問1:就安全、可靠性、合理價格、環保表現及其他相關的考慮而言。你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

	方案	支持	不支持		支持方案的原因 可選擇多過一項)
	1	Ċ		☑ 安全 ☑ 可靠性 ☑ 合理價格 ☑ 瑞保表現 □ 其他(請	· · · · ·
	2			□ 合理價格 □ 理保表現	生明):
方第一原因子可能	■ 2 ☑ 3:(可選擇多	5過一項)		較理想?為什麼?(請只選擇一個)
	表现	請註明:_	14 H.		Series This
	見或建調				
溪;家-	-能控制	目燃料	寅校。. 守電的川	"我。	- 40% & -12%

610800 40 610B00140 Annex 0 0 **Response Form** Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong Please send this response form to us on or before 18 June 2014 by one of these means Environment Bureau, Electricity Reviews Division, 15/F, East Wing, mail: Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong fuel_mix@enb.gov.hk e-mail: 2147 5834 fax: Part 1 (See Notes) corporate response (representing the views of a group or an organisation) or This is a individual response (representing the views of an individual) LIMITEI JULIAN EGLI by (name of person or organisation) IV and ať (e-mail) (telephone) (HOR IEAD VILLE SHE MANNED FULLY THREE)

Part 2

Fuel Mix Options

Contraction of the local division of the		Markes and a state	Free Development of the state		
			IMPORT		COAL
	FUEL MIX	NUCLEAR (DBNPS)	GRID	GAS	(& RE)
	Existing (2012)	23%		22%	55%**
	Importing more electricity	20%	30%	40%	10%
OPTION 1*	through purchase from the Mainland power grid	Tota	1:50%	-4070	
OPTION 2"	Using more natural gas for local generation	20%	unoperation o	60%	20%

The above fuel mix ratios aim at providing a basis for planning the necessary infrastructure for electricity supply. Flexibility should apply to actual deployment of each fuel type, having regard to the circumstances happening on the ground.

** Inclusive of a small percentage of oil

Part 3

Specific Questions for Consultation

Q1: How do you view each of the two fuel mix options with regard to safety, reliability, cost, environmental performance and other relevant considerations? (Please indicate your view on EACH of the two options.)

	Option	Support	Not Support	Reason for NOT supporting (You can tick more than one box)
	1			Safety Reliability Affordability Environmental performance Others (please specify):
	2	Q.		Safety Reliability Affordability Environmental performance Others (please specify):
R	Option 2		than one box below	Why? (Please tick ONLY ONE box)
E	ffordability nvironmental F thers	Performance	Please sp	ecify:
Other Co	omments a	nd Sugge	stions	
		and the second se		-sufficient and use its

610 800 56



燃料組合

ST26 14	S. S. S. S. Burts	18.7	輸入		煤 (及可再生能源) 55% ^{**}
燃料組合 現時 (2012)		核能 (大亞灣核電站) 23%	從電網購電 -	天然氣 22%	
總共:50%		4070	1000		
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

*以上的燃料比例用以提供一個基礎作規劃電力供產所需的基理。不同燃料的實際分配產按實際情況暫定。

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

1 □ 安全 □ □ □ 2 □ □ 2 □ □ 2 □ □ 2 □ □ 2 □ □ 3 □ □ 2 □ □ 3 □ □ 2 □ □ 3 □ □ 3 □ □ 4 □ □ 5 □ □ 5 □ □		方案	支持	不支持	不 (1	支持方案的原因 可選擇多過一項)
2 0 日 日報性 日 台環價格 環保表現 其他(請註明): (請註明): 問2: 你認為在兩個燃料組合方案中,哪一個較理想?為什麼?(請只選擇一個) 方案1 日 方案2 (原因:(可選擇多過一項) 安全 日 日 可靠性 日 日 日 算出 前註明: 日 日 第四部分 其他意見或建議 月 月 天死:氣及 火泉(及可再生能 い原.)可以更正葉條 1 1		1		₽ ∕	 □ 安全 □ 可靠性 □ 合理價格 ☑ 環保表現 	
万案1 □ 方案2 □ 原因:(可選擇多過一項) 安全 □ 可靠性 □ 合理價格 □ 音理價格 □ 環保表現 ☑ 其他 □ 請註明: 第四部分 其他意見或建議 天然:氣及 火菜(及可再生能)原.)可以更正電係		2	NOT DO		□ 可称性 □ 合理價格 □ 環保表現	Law pr
安全 □ 可靠性 □ 台環價格 □ 環保表現 □ 其他 □ 第四部分 」 其他意見或建議 □ 天然、氣及火泉(及可再生能し原.)可以更王電保	73	E1	1	^笑 中,哪一個	^{交理想} ?為什麼?	(請只選擇一個)
環保表現 ☑ 其他 □ 請註明: 第四部分 其他意見或建議 天然、氣及火泉(及可再生能」原、)可以更E環保	安全]			amhre
第四部分 其他意見或建議 天然、氣及火泉(及可再生能」原、)可以更王環保	環保	₩表現 🔽	1			
其他意見或建議 天然、氣及火泉(及可再生能」原、)可以更王環保		0				Amagram and the
天然、氣及火泉(及可再生能」原、)可以更王電保			議			
	天然、	展受火	泉(反司再生	E能原、)ā		SOD STREET
						- 6.000-0.000



(個人或機構名稱)

(電郵)

燃料組合

第二部分

燃料組合 現時 (2012)		輸入		ALL SOR	1
		核能 (大亞灣核電站) 23%	從電網購電	天然氣 22%	× (及可再生能源) 55% [™]
總共:50%		40%	10%		
方案2*	利用更多天然 氯作本地發電	20%		60%	20%

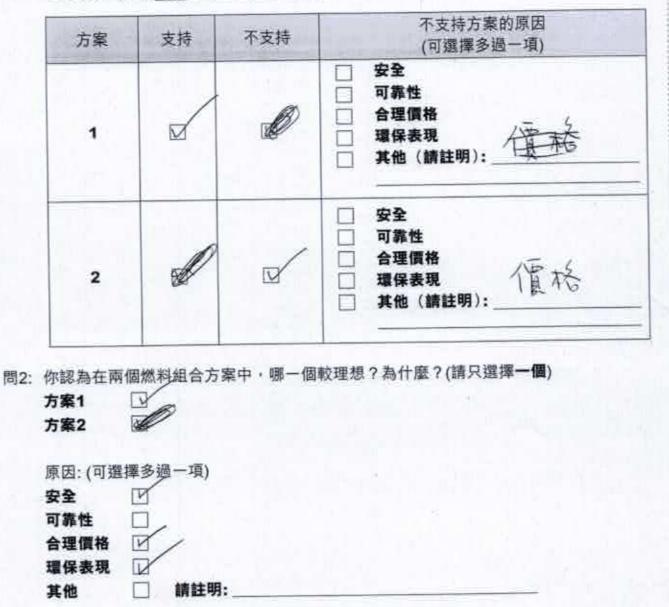
*以上的燃料比例用以提供一個基礎作規劃電力供應所需的基連。不同燃料的實際分配應按實際情況釐定。

及

(電話)

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)



第四部分

其他意見或建議

從內地購電、簡单實際。

610 200196

610B00196

附件



燃料組合

燃料組合 現時 (2012)		輸入			#
		核能 (大亞灣核電站) 23%	從電網購電 -	天然氣 22%	(及可再生能源) 55% ^{**}
方案1*	· 開議電以輸入 更多電力	組共,50%		40%	- Control
方案2*	利用更多天然	20%		60%	20%

二人亦是不管 建对面积 结果于是许多的 网络一种 医小牛 经支

•以上的燃料比例用以提供一個基礎作規劃載力供產所需的基建。不同燃料的實際分配應按實際情況蓋定。

第三部分

具體諮詢問題

問1: 就安全、可靠性、合理價格、環保表現及其他相關的考慮而言,你對兩個燃料組合方案 有何意見?(請就每個方案説明你的看法)

	方案	支持	不支持	不支持方案的原因 (可選擇多過一項)
	1		Ø	 ☑ 安全 ☑ 可靠性 ☑ 合理價格 ☑ 確保表現 □ 其他 (請註明): 巡诊倚 植内心文 自主性
	2	Ø		 □ 安全 □ 可靠性 □ 合理價格 □ 環保表現 □ 其他(請註明):
方	≰1 ≰2 ☑			較理想?為什麼?(請只選擇 一個)
原	因: (可選擇多	3週一項)		49 20 17 29

環保表現 □ 前註明:_行之有效,有任債可尋,監管控制較易

第四部分

安全

可靠性

合理價格

V

N

N

問2:

其他應見或建議

良好供电服务及其他基建配套对看得得得發展非常重要,我们這些中小企特别類以發展業分和成功得整要不容得到

610B00216



Response to HK Government Fuel Mix Consultation

June 2014

Contents

Executive Summary2
Introduction to FoE(HK)'s Response
FoE(HK)'s Observations
Option 13
Option 24
Caveats to Both Options, and Moving Forward5
FoE(HK)'s Viewpoint6
Our Goals6
End of Line Generation and Renewable Energy Potential6
Demand Reduction and Energy Conservation7
Conclusion8

ł

香港地球之友 Friends of the Earth (HK)

R measure importantion.org.in.



Executive Summary

The purpose of this paper is to respond to the Hong Kong Government's Fuel Mix consultation.

We emphasize that there is insufficient information about both options for citizens to make an informed choice. For example, more information is required regarding the cost of infrastructure expansion, the allocation of these costs, the potential for market competition, and the long-term sustainability for both options. We also strongly advise that Hong Kong's future fuel mix should incorporate a much higher proportion of renewable energy that could be generated locally and in the Guangdong region – there is extensive evidence that Hong Kong has the potential to significantly expand its renewable energy sector, where end-of-line generation should not be neglected.

Further, we conclude that the two fuel mix options themselves are not enough to address the critical issues of climate change, demand reduction, energy conservation, and market competition. We suggest that rather than looking at the Fuel Mix now, and later Green Buildings, Energy Efficiency, and Climate Change separately, we should address all of these issues together and form a **long-term sustainable energy strategy** for Hong Kong. The strategy must take into account emissions reduction, demand reduction, and renewable energy. Finally, in order to propel and facilitate these changes, there must be extensive change in policy, including reforms to the current, vertically-integrated duopoly market and the Scheme of Control.



Introduction to FoE(HK)'s Response

Friends of the Earth (HK) welcomes the HK Government's public consultation which has triggered active debate on an issue so critical to Hong Kong's and the Planet's future.

FoE(HK) has accepted the government's request for a response and has formed a dedicated team of specialists including academics, industry professionals, researchers and advisors.

After much research and debate FoE(HK) is unable to separate the Fuel Mix subject from other key issues including:

- 1. Climate Change
- 2. Demand-Side Management
- 3. Market Competition
- 4. Carbon Pricing
- 5. New and Emerging Technologies
- 6. Flexibility to Adopt New Technologies
- 7. Other Energy Forms
- 8. Appropriate and Relevant Data and Information
- 9. Business Imperatives
- 10. Social Expectations
- 11. Government Regulations

In effect the topic of Fuel mix must be part of a comprehensive Energy Strategy for Hong Kong that embraces all forms and uses of energy beyond electricity (and certainly beyond just considering fuel sources such as coal, oil, gas and uranium)!

FoE(HK)'s Observations

Option 1

Option 1 would be to import more electricity via purchasing from the China Southern Power Grid (CSG) in the Mainland.

Possible advantages:

- access to wider diversity of energy sources, which acts as a buffer upon shortages
- access to renewable energy in the Mainland, especially wind, solar and hydro
- more flexibility for local CO₂ reductions in the near future
- claimed to provide more room to introduce market competition.



Possible disadvantages:

- the inability to differentiate energy sources in the grid; e.g. what proportion of the grid energy is from coal plants, renewable energy or nuclear plants
- high initial cost to establish the cross-boundary infrastructure to link the mainland grid with the HK grid
- lower reliability, when comparing CSG reliability to the current 99.9997% reliability in HK

Queries:

- although this option can reduce local emissions, is HK simply exporting our pollution to the Mainland, rather than reducing emissions altogether?
- the current 99.9997% reliability of HK electricity means that the city only suffers an outage of an average of 3 minutes per year. As there is sufficient backup for critical infrastructure such as hospitals, transportation and data centres, how important is maintaining that high level of reliability or could Hong Kong have a slightly lower reliability without unduly affecting the community?
- is the past reliability of the CSG network a reliable indicator of its future reliability?
- how will the cost of building the cross-boundary infrastructure be transferred to consumers?
- what proportion of the cross-boundary infrastructure cost will be paid by the mainland side versus the HK side?
- which company or new entity will provide this cross-boundary infrastructure service?
- is there a chance for a more competitive market instead of the current duopoly?
- is it possible for HK to source directly from renewable energy suppliers in the mainland (e.g. via direct transmission) instead of grid purchase?

Option 2

Option 2 would be to use more natural gas for local generation. The proportion of natural gas in the fuel mix is proposed to rise from the current level of 22% to 60% by 2020.

Possible advantages:

- claimed to be reliable, given the current record of CLP and Hongkong Electric Company
- establishment cost may be cheaper, though more cost assessment is required

Possible disadvantages:

- no change to the current duopoly market
- limits the possibility of sourcing renewable energy from the Mainland
- more local emissions
- the price of natural gas is generally volatile
- a natural gas plant has a 30-year average lifespan
- heavy reliance (60%) on one energy type
- will only reduce CO₂ emissions in the short term, but locks HK into unsustainable levels afterwards



Queries:

- using natural gas to replace coal can reduce emissions in the short term, it will not be able to meet more stringent emissions caps in the long term. What are the plans and the associated costs to eventually phase out natural gas in the long term, if we are to expand it now?
- how will the costs of natural gas expansion be transferred to customers in the short and long term?
- there may be a concern that Option 1 will make HK a captive electricity buyer to the Mainland, it is important to note that for Option 2, natural gas must still be purchased from or through the Mainland given the current infrastructure. Will new infrastructure be built in HK to provide the option for independent gas supply?

Caveats to Both Options, and Moving Forward

The foremost priority for the fuel mix revision is combating climate change, and therefore significantly reducing CO₂ emissions over the long term. The Intergovernmental Panel on Climate Change (IPCC) puts Climate Change well in front of Reliability and Affordability. The HK Government aims to reduce carbon intensity by 50-60% of 2005 levels by 2020, but has not stated any plans after 2020. Although the current emissions cap can help short-term, further reductions must be imposed in the long term in order to effectively mitigate climate change

Since climate change is a global issue, it does not matter which side of the border CO_2 emissions are discharged. Therefore, in order for Option 1 to be effective, we must ensure that we are purchasing or investing mainly in clean, renewable energy sources from the Mainland.

Option 2 currently lacks long-term potential. Although natural gas is cleaner than coal, it still contributes to CO_2 emissions. Even though this option can meet the 50-60% carbon intensity reduction, it is unlikely that we can reduce emissions further into the post-2020 era, if we continue to rely mainly on fossil fuels.



FoE(HK)'s Viewpoint

Our Goals

The future fuel mix of Hong Kong is a complex issue, and neither option offered by the government is satisfactory in wholly addressing this matter. Instead, we strongly recommend developing a **long-term**, **sustainable energy strategy** for Hong Kong that focuses on all forms of energy, emissions reduction, and demand-side management and reduction. To be successful such a strategy requires not only changes to the fuel mix, but also reforms to policy and the business, environmental and social mindset of Hong Kong citizens.

End of Line Generation and Renewable Energy Potential

Hong Kong has sufficient potential to incorporate end of line generation as a considerable portion of the fuel mix. Renewable energy can surely contribute much more than 1% of Hong Kong's power supply, as suggested in the consultation document. Most countries of the EU have set at least 10% of their fuel mix as renewable energy around 2010, and we suggest that Hong Kong should strive for a more aggressive target.

Energy generation from biomass offers arguably the largest potential in Hong Kong. Biomass can account for up to 35% of the energy supply in developing countries¹. Given Hong Kong's enormous waste production, food waste, construction/renovation wastes, sludge, and sewerage can all generate power if we have tapped these resources. An integrated waste treatment facility can contribute roughly 2% of our power demand on its own. More biogas from landfills can also be collected and used to generate power. Waste water can also be treated with microbes to generate energy via biogas, in addition to treating water. These options should be presented within the fuel mix consultation.

Tri-Generation (Tri-gen) offers huge efficiency savings and already has proven technology and economics. Tri-Generation is the production of electricity, heat and chilled water from a single source input. The heat energy resulting from power generation is used for heating purposes and to produce chilled water for cooling purposes through an absorption chiller, thus enhancing the energy efficiency of the system.

"Generate- on- Drop" is another opportunity to supply electricity from descending elevators and fixed cranes.

Micro-Hydro energy also has considerable potential in Hong Kong. There is a high difference in potential energy between our reservoirs and the water supply in every individual building. This potential energy is often wasted by pressure reducing valves in buildings that dissipate the energy to reduce the water pressure to a level suitable for building use. Mini water turbines can be substituted for the traditional

¹ http://www.altenergy.org/renewables/biomass.html



pressure reducing valves to capture this energy. The Olympian City already has several mini water turbines installed while the Polytechnic University and The Avenue plan to integrate water turbines into their system by late 2014. The Tuen Mun water treatment plant has 180 kW hydrogenerators that also convert excess potential energy from water treatment into electricity, yielding 1,450 MWh annually per generator. Huge amounts of excess potential energy can be harvested from the drainage, sewage, and water treatment systems, as well as from individual residential and commercial buildings.

Wind and solar energy also have vast room for expansion in Hong Kong. The cost of onshore wind energy is already competitive with coal, being one of the cheapest energy alternatives. Our 2003 study² on wind potential shows that 3-4 islands of Hong Kong hold potential for large wind farms, offering an average wind power of 300W/m2. Although there may be limited space for large scale wind farms, Hong Kong also has potential to expand small scale wind turbines on individual buildings. Small wind turbines and hybrid solar-wind turbines already exist in some buildings in Hong Kong, at Shek Kwu Chau, Sai Kung, and Shau Kei Wan, though there is still much room for expansion. Further, a study by Dr. Lu Lin at the Hong Kong Polytechnic University suggests that there is enough roof-space in Hong Kong to generate 5,981 GWh per year, roughly 14% of our power demand. Finally, the use of solar water heaters is both proven and economical, and could be implemented on top of buildings. The savings in heating energy plus reductions in cooling loads beneath would contribute to energy and CO₂ reduction.

Demand Reduction and Energy Conservation

Electricity generation is the largest contributor to carbon emissions in Hong Kong $(67\%)^3$, so reducing the demand for energy will also lower CO₂ emissions that is far more cost effective than using cleaner but more expensive fuel in the proposed new fuel mix. The two fuel mix options presented in the consultation document do not address demand reduction even though this is a crucial factor and must be taken into account in our long-term sustainable energy strategy for Hong Kong. Demand reduction requires multiple steps including implementing the appropriate infrastructure and policies, as well as changing the social mindset of citizens to be more environmentally responsible.

Every building in Hong Kong should be designed or renovated to include cleaner or more efficient infrastructure. In terms of lighting, having double or tripple glazed windows with "Low Emiscivity" glass and shadings to reduce the penetration of solar radiation from natural light into indoor environment, or upgrading to fiber optic lights or LED lights can contribute to power reduction. Upgrading to more efficient ventilation systems, such as Variable speed drives on air conditioning equipment, can also contribute. Older, inefficient models should be replaced with more efficient alternatives to reduce air pollution and carbon emissions. Hydro turbines should be installed into pipe systems to capture potential energy of water running down the drain. The Zero Carbon Building has a tri-generation system which uses bio-diesel derived from waste cooking oil to power its generator, reducing the building's electricity demand by 143MWh per year.

The building envelop plays an important role in cutting down energy consumption by improving the thermal insulation of buildings, ie to keep the indoor environment cooler in summer and warmer in

² http://data.foe.org.hk/research/HEC-FINAL-REPORT-JULY-2003.pdf

³ http://carbon-manager.hkpc.org/website/eng/intro.asp



winter. A large percentage of the energy used by air conditioning systems is used to overcome external heat that is transferred to indoor environment.

FoE(HK) welcomes the mandatory Building Energy Codes and is looking forward to the expedition of more stringent standards and their application. We look forward to the Government's consultation document on Green Buildings and Demand Side Management.

Conclusion

FoE(HK) urges the government NOT to choose Option 2 as presented in the consultation document, however we cannot simply choose Option 1 as the preferred option as there are lots of outstanding questions and concerns raised by the public. Our government should provide those details and their proposed plans to iron out all those uncertainties.

Option 2 as presented, even with the potential to maintain the exceptionally high reliability, has the potential drawback of keeping the status quo within the energy market by closing the doors to open market competition, which has been dominated by the two power companies for many decades.

The government consultancy study conducted in 1998 suggested that Hong Kong open up its energy market to introduce competition to benefit the environment.

Option 1 as presented, may imply liberalization of the energy market but the implication is not clear in what ways to break up the current duopoly in our energy market. FoE(HK) is concerned about the transfer of our power generation emissions from Hong Kong to our neighbouring cities which, we believe, is unethical even in small quantities. Option 1 has several drawbacks as mentioned earlier in this paper and we request that the government provides more details on their plan to remove those drawbacks. The reliability of the China Southern Power Grid is a key concern, therefore the government has to come up with a practical plan to ensure the reliability meets the expectation of Hong Kong so that choosing Option 1 will not jeopardize the reliable supply of power for our city.

Many of our suggestions, including expanding the renewable energy sector, expanding demand-side management, and promoting energy conservation, requires some fundamental changes to policy and Hong Kong's existing energy market.

FoE(HK) is looking forward to contributing to the upcoming consultations on:

- Review of the Scheme of Control.
- Green Buildings and Energy management
- Hong Kong's Climate Strategy

---END----

香港

NSEL:



610300217

610B00217

HKAEE 香港能源工程師學會 Hong Kong Association of Energy Engineers

President Raymond K.L. Chan

Immediate Past President Colin C.L. Chung

> Chairman Leonard K.H.Chow Vice Chairmen Richard S.T. Chan Eric K.W. Lau H.W. Yu

> > Secretary Leo H.Y. Chan

Treasurer Glarisun W.Y. Wong

Directors Mike C.Y. Cheng Ronald S. Chin Paul K.L. Chong S.K. Ho Winston W.H. Lam K.C. Tam Jerry W.P. Tam Julie Y.C. Wong Conson K.H. Yu Shelley W.W. Zhou

Response Paper to Future Fuel Mix for Electricity Generation Consultation Document

1. Introduction

The Environment Bureau has launched a consultation document of Future Fuel Mix for Electricity Generation in March 2014 for seeking the views and feedback on the proposed two Options from the public. It has arisen a lot of debates and views exchange on this topic amongst different industries and professionals.

In response to the consultation document, Hong Kong Association of Energy Engineers (HKAEE) co-organized with The Association of Energy Engineers (Hong Kong Chapter) (AEE-HKC) organized a Policy Forum on 10th May 2014 for gathering views from our members and other professionals. We invited officials from Environment Bureau, China Light Power and Hong Kong Electric to introduce the fuel mix proposal and render their different views on those two Options. Thereafter, we also conducted focus group discussions based on the four policy objectives described in the Consultation Document. The forum received an over-whelming attendance with more than 100 participants and we gathered valuable views from the participants.

This response paper summarizes those key views and discussion results collected from the Forum. We trust this response paper can provide valuable and insightful views to the Government for further consideration.

2. Concerns on Option 1 - Purchase from the Mainland power grid

This Option is to import electricity through purchase from the Mainland power grid, i.e. China Southern Power Grid Co. (CSG). The majority of our collected views reflected a great reservation to support Option 1. The reasons and the major concerns are deliberated in the following.

2.1 Reliability – The current reliability level cannot be compromised given Hong Kong is characterized with extensive business activities, high standard of quality of life and high density of populations. This demands a very high reliability of electricity supply to secure both our economy and even life safety as well.

In Option 1, for a considerable amount (30% of total) of imported electricity from grid purchase, there is no transparency on the historical reliability data from CSG, nor any information about anticipated risks and any proposed risk mitigation measures. The perceived risk is at least associated with crossborder transmission cables which are prone to damage under severe weather

Incorporated in Hong Kong with limited liabilities

610800217



conditions or natural disaster such as earthquakes, flooding, etc. By taking this Option, Hong Kong is going to forfeit our own control on risk / reliability management on electricity supply. Relying on an outside party to achieve a high degree of reliability is uncertain now. We by virtue will have no bargaining power and is hardly to impose any regulatory regime on CSG especially Hong Kong is just a small business buyer to them. What Hong Kong can do is to provide a backup power plant according to the Consultation Document. It sounds relatively passive as comparing to our current situation. Hence, we do not consider the reliability level of Option 1 is comparable to Option 2.

2.2 Environmental Regarding the carbon emission and air pollution, our participants have a strong consensus to look into this issue at global rather than local level. The shifting of generating electricity to China does not improve the environmental performance in global perspective. The document does not reveal clearly about the ratio of using coal to other fuel mix for generating electricity in CSG. As such, it is uncertain on how the Option 1 can achieve the air pollutant emission reduction targets by 2020 and it is not right by shifting the carbon emission across the border. Not to mention that Hong Kong has no say on controlling the type of fuel to be used by CSG in future.

The other point is that the environmental impact or loadings to the natural environment when constructing the cross-border cabling infrastructure and facilities has not been counted. Again, there is no sufficient information or data in the Consultation Document to support that the environmental performance of Option 1 is comparable to that of Option 2.

Undoubtedly technology has made shale gas price more affordable and the resource more accessible than ever. Yet, the current technology in extracting shale gas is a very environmentally damaging process, especially towards water resources, in terms of both quantity and the contamination. Gas price is claimed to have peaked by some. While we may not disagree in the foreseeable future, probably for 5-10 years, but how do we know environmental costs due to regulatory requirements or reclaiming the damaged environment will not add to the gas price. Burning gas may have fewer emissions, but we have not taken into account of the pollution factor during extractions. Can we therefore still be sure about the benefits from burning coal? If we want to tackle environmental performance as a global issue, then why shouldn't we consider also costs to damage of environments at the source of extractions?

電



wloon, HK

2.3 Affordability – The Consultation Document proposes that cost should not be a major consideration in assessing the two proposed fuel mix options. We cannot agree this statement without further information, assumptions and substantiation on predicting the tariff impact under these two options to the public. For Option 1, does HKSAR government has a strong bargaining power to negotiate and what will be its negotiation strategy? On the other hand, although no one could forecast the future price of natural gas, the availability of shale gas in USA and China appears on the rising trend. Furthermore, the capital cost for constructing the cross-border cabling infrastructure would be extensive and the construction period including land resumption would also be lengthy. It is believed that such cost will possibly be passed on to the consumers in terms of tariff.

Options of fuel mix is suggested to be left flexible and as business decisions for the power companies such that they can make the fuel mix decision to ensure reliability, affordability and environmental performance. Instead of fixing the fuel mix, the role of government should be to set the criteria for reliability, environment performance, and costs to public, and probably the requirement of a minimum percentage of renewables and/ or nuclear to be included etc. These will set the rules for the power companies to make the right decisions of investment, finally they require a business model that's to sustain. And they are the one to take the risks.

3. How about Option 2 – Using more natural gas for local generation?

Based on Technical Memorandum under Air Pollution Control Ordinance and Air Quality Objective, gas mix for electricity generation will be increased to 40 % by 2015; hence to increase the gas mix to 45% or more to meet 2020 target would not be a technical problem.

The merits of Option 2 can demonstrate the confidence to meet the reliability and environmental performance. The demerit point is that coal together with Renewable Energy (RE) constitutes 20% to total fuel mix. We suggest the Government to further provide the breakdown of their individual percentage figure. The Government should put more focuses or effort for expanding the solar or wind energy application in Hong Kong. Other technologies such as coal gasification, carbon capture and storage should also be included into further study.

As per the Consultation Document, we agree that it should be the long term plan to phase out coal for electricity generation. However, there is no indication on timeline for such phase out action and any proposal for what possible fuel type is recommended as the substitution to the coal. Relatively speaking, we received the overall views which show in favour to Option 2 given there are many uncertainties in Option 1.

Incorporated in Hong Kong with limited liabilities



4. Comments for Consideration

Should coal be totally phased out? Given out current knowledge, coal seems evil, but that kept our use cost low. It worked as the component to compensate the electricity cost. Can we not extend the service life of the existing coal fired power plant such that they make reliable backups? Can new technologies not be developed such that burning coal may make a cleaner process? Or can we leave the decision to the utility companies.

5. Other Suggestions

Beyond Option 1 and 2, we strongly recommend the Government to study and implement the following:-

- De-centralized electricity / energy supply with integrating the waste management facilities, i.e. conversion waste to energy use.
- Different tariff tiers to further promote the energy conservation on the demand side.
- Maximising the energy efficiency of existing and new buildings.

Hong Kong as a free market, the Government can consider allowing flexibility for each power company to decide for choosing which option or options they prefer as they are in a better position to generate electricity in a cost effective and environmentally friendly manner from the commercial and supplier side. Purchasing electricity from CSG seems not to be a good way in terms of opening the electricity market in Hong Kong's own context. Nevertheless, Government still could go for an open market by inviting other power providers than the current ones for local power supply to ensure an environmentally friendly, cost effective and reliable electricity supply for HK in near future.

94%

P.05

610800217



苍港九龍油縣地上海街 473-475 號上海中心 16 標 電話: 2890 2622 似真: 2890 2653 網址: www.hksee.org 16/F, Shanghai Centre, 473-475 Shanghai Street, Yau Ma Tei, Kowloon, HK Tel: (852) 2890 2622 Fax: (852) 2890 2653 Website: www.hkaee.org

6. Conclusion

HKAEE co-organized with AEE-HKC held the policy forum for gathering the views on Future Fuel Mix for Electricity Generation Consultation Document as launched by the Environment Bureau. Views on preferring Option 2 is more relative to Option 1, but more detail information is required for a further study and discussion. All those key views are summarized in the above paragraphs.

We consider that this Consultation Document can initiate a very good discussion to provide feedback to the Government. We would be pleased to continue to collaborate with the Government, the power companies and other stakeholders towards an optimum solution on fuel mix for future electricity generation aiming to foster a greener Hong Kong to our next generations.

Dr K L Chan President, HKAEE 5 June 2014

Incorporated in Hong Kong with limited liabilities

10-JUN-2014 15:48

TO 21475834

P.01

610B00218

MTR Corporation Limited 發港鐵路有限公司 www.mtr.com.hk



10 JUL 2014

610B00218

Electricity Reviews Division, Environment Bureau, 15/F, East Wing, Central Government Offices, 2 Tim Mei Avenue, Tamar, Hong Kong Our ref: T&ES/TSES/TSU/OHL&HV/R11029

Your ref: -

10th June 2014

By Post and Fax (no. 2147 5834)

Dear Sirs / Madams,

MTR's Views on the Public Consultation on Future Fuel Mix for Electricity Generation for Hong Kong

The Government launched the Public Consultation on Future Fuel Mix for Electricity Generation on 19th March 2014. We would like to express our views as follows:

- 1. We welcome Government's public consultation on this topic. We support the four policy objectives that underpin Hong Kong's energy policy safety, reliability, affordability and environmental efficiency. Our position is that any option chosen should be one that meets the four policy objectives appropriately.
- 2. In supporting Government's approach on improving the environment for future generations and minimising the environmental impact of electricity generation, as well as being a responsible member of the Hong Kong community, we always strive for energy efficiency across our operations.
- 3. We are providing the most convenient and effective low carbon public transportation means in Hong Kong. The railway electricity consumption in 2013 was 1,420 GWH which accounted for only 3% of total power generation in Hong Kong. One would appreciate the effectiveness of our system in making use of these 3% of the total energy generated to carry around 5.2 million people every weekday which accounted for 46% of the total number of public transportation journeys in Hong Kong.
- 4. Being one of the large power demand users, we have effectively controlled the maximum power demand and utilised this efficiently. Large demand users, such as us, have helped the two power companies on their planning of future demand and daily generation operation. This in turn has led to power companies being able to optimise the power network development to cope with the growth in a more controllable and predictable manner.
- 5. In respect of the future fuel mix options, we opine that the consultation document should outline a more holistic strategy on opening the electricity market in future including the introduction of more competition in generation and transmission etc., for public consultation.

Page 1

34.

10-JUN-2014 18:37

MTR 610 B 00 21 8

6. On the two fuel mix options, we have the following specific views and concerns in the areas of power supply reliability and tariff:

Reliability

- 7. A reliable power supply is crucial to the provision of reliable railway services for the existing and the future expanded railway networks under the Government's Railway Development Study Plan to serve general public. The current supply reliability should be guaranteed in the future whichever option is finally adopted. Adequate redundancy should be incorporated in the design to ensure that the current high reliability performance of power supply remains or even better.
- 8. As such, more information on the supply arrangement of China Southern Power Grid (CSG), including how the high supply reliability target under the grid purchases option could be maintained, the risk associated with supply from CSG to the current Hong Kong electricity supply network, including a vulnerability analysis should be made available for the public's consideration.

Tariff

- 9. More information should be provided on:
 - Detailed calculations that lead to the estimation of doubled tariff in year 2023;
 - ii. CSG tariff structure, rate and mechanism on the approval of future changes in Option 1:
 - iii. Proposed tariff structure, rate and mechanism on the approval of future changes of both options and
 - iv. The cost of local transmission, distribution, customer services and other support services of both options.
- 10. Our railway network is directly connected to the two current Hong Kong power companies with dedicated supply sources to which we are charged competitive tariff rates for large power consumption. More information should be provided to demonstrate how this arrangement could be maintained in the future fuel mix, especially for Option 1 where interconnections are built for CSG supply.
- 11. Energy charge affects the railway operating cost and the sustainable operations of the railway service. We expect a mechanism be established to suppress the electricity generation cost increase and to maintain a stable charge of electricity for the railway service.
- 12. Due to high capital cost in building new generation and transmission infrastructure in both Options, more information should be provided to reduce the maximum demand for electricity in day time. We suggest there can be a bigger night time discount in tariff rate, buy back of electricity on renewable energy from consumers and other energy saving measures.

Page 2

TO 21475834



610800218

Should there be any queries, please contact Mr. Ronald Cheng, General Manager- Technical & Engineering Services, at tel. 2993 3003 or the undersigned at tel. 2993 2300.

Yours faithfully,

Dr Jacob Kam Operations Director

ALRCITYF

4

Page 3



香港大學電機電子工程學系 The University of Hong Kong Electrical & Electronic Engineering

610 B 00 219

610B00219

Mr. KS Wong Secretary for the Environment Electricity Reviews Division Environment Bureau 15/F East Wing, Central Government Offices 2 Tim Mei Avenue, Tamar, Hong Kong

7 June, 2014

Re: Consultation – Future Fuel Mix for Electricity Generation

Dear Mr. Wong,

I am writing to respond to the call for consultation on Future Fuel Mix for Electricity Generation in Hong Kong. In the "Forward" of the consultation document, you are right in stating that :

- "As a well-developed economy, Hong Kong is one of the world's leading commercial, financial and logistics centres."
- "Hong Kong is also a well-known vertical city... with high density of skyscrapers served by lifts and escalators."
- "The safe and reliable electricity we have become used to is key to our quality of life and crucial for our economic competitiveness."

It is precisely for these reasons that I believe Hong Kong should maintain its full electricity generation capacity without relying on the China South Grid (CSG). Here are my reasons:

(1) A world-class city should have its own electricity generation capacity and plan

n . . .

For the same reasons that you have given in the "Forward", Hong Kong as a world-class city should be self-sufficient in electricity generation. Currently, it has two electricity companies (HKE and CLP) which not only supply electricity in Hong Kong, but also have overseas business in the electricity sectors in other regions/countries such as mainland China, Australia and the United Kingdom. Hong Kong is building up her capacity for international electricity business (which is still expanding) and is supported by a world-class university system which educate and train professionals in Electrical and Electronic Engineering including power systems.

(2) Introducing electricity from China South Grid (CSG) will NOT increase competitiveness in the long run.

At the moment, HKE and CLP supply electricity in HK. Firstly, I do not see how increasing the number of players from 2 to 3 will increase competitiveness, particularly when CSG is still a state-own organization which does not operate under full free-market principle. Introducing CSG will probably create unfair competition instead of fair competition. Secondly, CSG can of course generate electricity at a low price for HK (even without making profit or at a loss). But there is no say from HK people about the fuel mix in CSG. So there is a possibility that HK will be seen as selfishly shifting the pollution from HK to South China.



香港大學電機電子工程學系 The University of Hong Kong Electrical & Electronic Engineering

(3) There may be no say from HK people about the electricity price in the future.

When CLP proposed to substantially increase the electricity price a few years ago, HK people reacted very strongly with public criticisms and protests. Consequently, CLP (as a local company) backed down and reduced the price rise. In the future, if HKE and CLP gradually lose their competitiveness and CSG increases the electricity price, will HK people gather outside the headquarter of CSG to protest? I am afraid that there is little HK people can do if such situation occurs.

(4) Which company is more reliable?

This morning, I read the news article about the statement made by your deputy Mr. Vincent Liu Ming-Kwong about his view on the reliability of CSG. I must say that his statement is not true. Over the last decade, I have the chances of doing site tests on the lighting systems in South China and have personally observed many instability problems. Besides the blackout problem, there are many other issues such as poor mains voltage regulation, voltage dips and missing mains cycles etc. For example, the mains voltage in HK is well regulated within +/-6%. I have observed wide voltage swing in the mains voltage in South China. Personally, I do have some reservation about the official reliability data in China. Has the Environment Bureau got any independent verification of their reliability data?

HK has enjoyed a highly reliable electricity system. There is no doubt that HK still has the leading edge in terms of electricity safety and reliability over the CSG even in the coming years. Why does the HKSAR government consider moving "*backward*"? You say in the "*Forward*": "The safe and reliable electricity we have become used to is key to our quality of life and crucial for our economic competitiveness." Has the HKSAR government *become used to* the safe and reliable electricity that it wants to do something different? Or is it a tactic to use a 3rd competitor to bargain with HKE and CLP for the next Scheme of Control?

With such a high density of tall buildings in HK and our heavy reliance on the electric Mass Transit Railway (MTR), it would be disastrous to see malfunctions in tens of thousands of lifts and escalators and prolonged delays in MTR. Any option that may degrade the reliability of the electricity supply will cost HK dearly – well beyond the increasing costs of electricity generation based on LPG.

Option 2 in your consultation document is a relatively safe approach to secure safe and reliable electricity generation for HK. In addition, it is imperative that HK should keep the electricity business and related professionals (and employments). However, one should be more imaginative and forward-looking. The HKSAR government should consider developing new policies and incentives to encourage both mainland and local power companies to increase their wind and solar power generation. If such large-scale renewable energy resources become available, HK should increase her renewable energy in future "energy" mix (rather than using the existing concept of "fuel" mix) *even at a higher price*.

Professor Ron Hui, Ph.D, FIEEE, FIET, FTSE (Aust. Academy of Tech. Sci & Engineering) Philip Wong Wilson Wong Professor of Electrical Engineering Chair Professor of Power Electronics

14 11