# EMFAC-HK

Using the Program

# Objectives

- Install EMFAC-HK Version 2.1 software
- Step by step tutorial to demonstrate examples of emission data routinely run by EMFAC-HK
- Compare EMFAC-HK 2.1 input/output screens, to EMFAC-HK Version 1.2
- Perform exercises using EMFAC-HK v 2.1

## System Requirements / Installation

#### • Executables -

http://www.epd.gov.hk/epd/english/environmentinhk/air/guide\_ref/emf ac.html

- x86 compatible Microsoft 32-bit or 64-bit OS (preferably Microsoft Windows XP Service Pack 3, Windows Vista, or Windows 7 operating systems)
- 45 MB of Hard Disk space
- **Minimum** 64 MB RAM (128 MB recommended)
- Available Hard Disk Space 350 MB

# Installation

- Program:
  - EmfacHKV21BCInstaller.exe
    - Emfac\_HK\_v2.1 Base Case (BC) Installation Packet
    - Installs EmfacHKV2\_1\_BC.exe and supporting libraries in default, or user-specified directory
  - EmfacHKV21IMInstaller.exe
    - Emfac\_HK\_v2.1 Inspection & Maintenance (I&M) Installation Packet
    - Installs EmfacHKV2\_1\_I&M.exe and supporting libraries in default, or user-specified directory

# Running the Program Opening Screen



## Main Screen

Emfac-HK V2.1 (I and M) Editing data			
<u>File Run H</u> elp			
The Governmental Protection Dep Special Administrative Region	artment		permitteo Air Reso California
Emfac-HK V2.1 (I a	and M) v2.1.1 120403 I	M Pr: Emfac-HK HK2.1.1 I <u>M</u> Cas	
MAIN			
List of Available Scenarios			No file
	-Current Scenario Data		
	Number: 0 of 0 Name:		
	Calendar Year:		
	Season: Type:		
	IM Program Parameters	Save	
		Save As	
	Add New Scenario	Run	
	Edit Scenario	Finish Editing	
	Delete Scenario	Cancel	

Tabs must be performed in sequence.

# Adding or Editing Scenarios

Emfac-HK V2.1 (I and M) Editing data	
<u>F</u> ile <u>R</u> un <u>H</u> elp	
Environmental Protection Department The Government of the Hong Kong Special Administrative Region	HONG KONG Air Reso Californi
Emfac-HK V2.1 (I and M)	
. Input 1	
Basic scenario data - Select Area, Calculation Method, Calendar Year(s)	), and Season
Step 1 - Geographic Area Select an Area Type	Step 2 - Calendar Years Select Select a Calendar Year
SAR	- Step 3 Season or Month Annual
Cancel Next >	Finish

# Step 1: Geographic Area

Emfac-HK V2.1 (I and M) Editing data	
<u>F</u> ile <u>R</u> un <u>H</u> elp	
Environmental Protection Department The Government of the Hong Kong Special Administrative Region	HONG KONG Air Resou California
Emfac-HK V2.1 (I and M) V211 1200	
. Input 1	
Basic scenario data - Select Area, Calculation Method, Calendar Year(s), and Se	eason
Step 1 - Geographic Area Area Type: SAR Hong Kong	2 - Calendar Years Select ect a Calendar Year
SAR Ar	3 Season or Month
Cancel Next >	Finish

# Step 2: Calendar Year Selection (I&M Version)



## Step 3: Season or Month Selection

#### EMFAC-HK v 1.2

😼 Emfac-HK Editing data		
File Run Help		
環境保護署 Environmental Protection Department Empfac-HK V1.2 June 2		permitted by Air Resources Boa California
MAIN Scenario 1 Scenario 2 Mode and Output	. Tech/IM Pop/Accrual V	MT/Trips Profiles/Speed
Basic scenario data - Select the Area, Calendar Year Selected area: Hong Kr	; and Season, then press Next to coni ong SAR, Area Average	tinue
<u>G</u> eogr Calendar Year:	2008	
Season or Month:	Invalid month	
Cancel	April May Fir	ish
	July August September October November December N/A N/A Annual Juvalid month	

### EMFAC-HK v 2.1

Emfac-HK V2 00 4 (Land M) -- Editing data

mitteo Resou lifornia ™c∞e	Derm Air R Calife		on Department	Run Help Environmental Protection The Government of the Hong Koo Special Administrative Region
rmitteo Resol lifornia ⊪ca∞	Air R Air R Calife		on Department	Environmental Protection The Government of the Hong Koo Special Administrative Region
I <u>M</u> Case	mtac-HIK HIK2.00.4 I <u>M</u> (	d M) V2.00.4 120210 IM Pr: Em Ge-HI	0.4 (I ar	mfac-HK V2.0
		1		
			.  .	Input 1
		/ear(s), and Season	culation Method, Calenda	Basic scenario data - Select Area, Calo
		Step 2 - Calendar Years		Step 1 - Geographic Area
		Select	SAR	Area Type: SAR
		Select a Calendar Year	Kong 👻	Hong
	1	Select a Calenual Teal		,
	th.	- Step 2 - Season or Month-		
		Step 5 ~ Season or Month		
	1	Annual 💌		SAR
		February		
		March April		
		1.7.1		
		May		
	-1	June July		
		May June July August Sectember		Cancel
		May June July August September October		Cancel
		May June July August September October November		Cancel
		May June July August September October November December N/A		Cancel
	ər nth	Select a Calendar Year Step 3 Season or Month Annual January February March April	Kong 🗾	Hong

## Steps 4-7: Scenario Details Screen

### EMFAC-HK v 1.2

### EMFAC-HK v 2.1

👸 Emfac-HK Editing data 📃 🗆 🔀	🖬 Emfac-HK V2.00.4 (I and M) Editing data
File Run Help	File Run Help
環境保護署 Environmental Protection Department Air Resources Boa California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
Emfac-UK v1.2 June 2005	Emfac HK V2.00.4 (I and M) V200.4 (20210 IM Pr: Bh B0-HK H K200.4 IM Case
MAIN       Scenario       Scenario       Index and Output       Tech/IM       Pop/Accrual       VMT/Trips       Profiles/Speed         Basic scenario data - Select the Title, Model Years, and I/M Program parameters, then press Next to continue       Scenario Name/Title for Reports         Hong Kong SAR Avg 2008 Annual Default Title       In Emfac Impact Rate reports, titles over 40 characters will be truncated!         Starting model year       1965       Model Years included in calculations/reports         I/M Options       I/M Options	Basic scenario data - Select or Enter Scenario Title         Step 4 - Scenario Title for Reports         [Untitled>         Step 5 - Model Years         All model years selected         All         Modify
Cancel < Back Next > Finish	Cancel < Back Next > Finish

I/M Options/Program Schedule deactivated in GUI.

# Step 5: Model Year Selection (Available in EMFAC-HK 2.1 Only)

### **Before Changes**



### **After Changes**



# Step 6: Vehicle Class Selection (Available Only in EMFAC-HK 2.1)

Vehicle Class Selection         Private Cars (PC)         Heavy Goods Vehicles<=15t         Private Cars (P1)>         Heavy Goods Vehicles >15t         Private Cars (P1)>	<ul> <li>Franchised Bus (SD)</li> <li>Franchised Bus (DD)</li> <li>Motorcucles (MC)</li> </ul>
<ul> <li>✓ Light Goods Vehicles&lt;=2.5t</li> <li>✓ Light Goods Vehicles 2.5-3.5t</li> <li>✓ Light Goods Vehicles&gt;3.5t</li> <li>✓ Private Light Bus &lt;=3.5t</li> <li>✓ Private Light Bus &gt;3.5t</li> <li>✓ Non-franchised Bus &lt;=6.4t</li> <li>✓ Non-franchised Bus 6.4-15t</li> <li>✓ Non-franchised Bus &gt;15t</li> </ul> MODIFIED: 16 of 21 vehicle classes selected	(Placeholder (P4)) (Placeholder (P5))
OK Cancel	

# Step 7: Delete I/M Programs (EMFAC-HK v 1.2 Only)



## Mode and Output Screens

#### EMFAC-HK v 1.2

#### EMFAC-HK v 2.1

🕷 Emfac-HK Editing data	Emfac-HK V2.1 (I and M) Editing data
File Run Help	<u>F</u> ile <u>R</u> un <u>H</u> elp
で Environmental Protection Department Environmental Protection Department Air Resources Boa California Emfac-HK V1.2 June 2005	Environmental Protection Department The Government of the Hong Kong Special Administrative Region Emfac-HK V2.1 (Land M) V2.11 120403 MI Pr. EmfacHK H42.11 M Case
MAIN   Scenario 1   Scenario 2   Mode and Dutout     Tech/IM   Pop/Accrual   VMT/Trips   Profiles/Speed	. Input 1 Input 2 Mode and Output
Scenario configuration - Select the Scenario Type and Output options Select the Scenario Type	Burden - Area planning inventory Emfac - Area fleet average emissions Calimfac - Detailed vehicle data
Select Output Files and Options	
Emission Factors without I/ Weight Output     Emission Factors with I/M CEIDARS/CEFUS     Text File (CSV)     I/M Credits     MVEI7G CSV File     Impact Rate Deta     Technology Group Detail     Model Year Em. Rate	
Output Frequency       Output Particulate As       Output Hydrocarbons As         C Results for each hour       C Total PM       TOG       C ROG         C Daily totals only       C PM10       C THC       C H4         C PM2.5       Frit Program       Finish	Cancel < Back Constants Finish

Version 2.1 has separate tabs for each operating mode.

## **BURDEN Output Options**

#### EMFAC-HK v 1.2

#### EMFAC-HK v 2.1

🗱 Emfac-HK Editing data	Emfac-HK V2.1 (I and M) Editing data
File Run Help 環境保護署 Environmental Protection Department Air Resources Boa California	File Run Help         Environmental Protection Department         The Government of the Hong Kong         Special Administrative Region         Empfac-HK V/2 1 (Land M)         V211120403 M PF Emboder HK2111M Case
Emfac-HK V1.2 June 2005         MAIN       Scenario 1       Scenario 2       Mode and Output       .       Tech/IM       Pop/Accrual       VMT/Trips       Profiles/Speed         Scenario configuration - Select the Scenario Type and Output options       Scenario Scenario Scenario Type and Output options       Scenario Scenar	Input 1 Input 2 Mode and Output Tech/IM CYr Basis      Burden - Area planning inventory Emfac - Area fleet average emissions Calimfac - Detailed vehicle data
Select the Scenario Type Burden - Area planning inventory (tonne/day)     C Emfac - Area fleet average emissions (g/hr)     Select Dutnut Files and Ontions	Scenario     Planning Inventory Files and Reports     Output Prequency       BURDEN     Planning Inventory (BUR)     C Hour       BURDEN     Standard     HD Detail       Area-Specific     Detailed Planning Inventories (CSV)     C Total PM       Emissions     Detailed Planning Inventories (CSV)     C PM2 5
Emission Factors without I/ Weight Output     Emission Factors with I/M CEIDARS/CEFUS     Text File (CSV)     I/M Credits     MVEI7G CSV File     Impact Rate Dete     Technology Group Detail     Model Year Em. Rate	Inventory (tonnes/yr)     MVEI7G (BCD)       Weighted Model Year Activity W/T)     C TOG C THC       C EIDARS/CFUS (CTF)     © VOC C CH4
Output Frequency       Output Particulate As       Output Hydrocarbons As         C Results for each hour       Total PM       TOG       ROG         C Daily totals only       PM10       THC       CH4         C ancel       < Back       Constants       HHISD	Detailed Outputs (BDN)  Model Yrs Fech Groups Cancel Cance
	$\rightarrow$ /

Hour frequency increases output by factor of 25

# Detailed Planning Inventory (\*.csv)

	4) + (H + ) =					Taxa Inc.		HK_2015_202	0_2030_Burden.	csv - Microsoft	Excel	and the splitter							X
Ho	ome Insert	Page Layout	Formulas I	Data Revi	ew View	Add-Ins												0	- 7 3
Paste	Cut Copy Format Painter	alibri +  1 3	0 → A A → 3 → A →		Alignment	Wrap Text Merge & Cente	General S + %	• • • • • • • • • • • • • • • • • • •	Conditional Formatting *	Format as Table +	ormal eutral	Bad Calculation	Good Check	Cell	Insert Dele	te Format	AutoSum * ] Fill * 2 Clear * F	ort & Find & liter * Select *	
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1 Title	· Hong Kong	SAR Annual 3	CYrs 2015	to 2030 De	fault Title	0										~			
2 Version - Emfa-r HV 21 (I and M) V2 11 120403 I&M Pr - Emfa-tH HK2 11 I&M Case																			
3 Run I	Date : 2012/04	/10 10:41:48			in Linde I		ann cusc												-
4 Scen	Year: 2015 - 4	Il model year	s in the ran	ge 1971 to	2015 select	ed													
5 Seaso	on : Annual	,	1	0															
6 Area	: Hong Kong	SAR																	
7 I/M S	Stat : HK I/M p	, rogram in effe	ect																
8 Emis	sions: Tonnes	Per Day																	_
9 ****	******	******	********	*******	******	******	*******	*******	*******	*******	*******	*******	*******	********	********	*******	********	******	*****
10	PC-NCA	F PC-CAT	PC-DSL	PC-LPG	PC-TOT	TAXI-NCAT	TAXI-CAT	TAXI-DSL	TAXI-LPG	TAXI-TOT	LGV<=2.5t-	LGV<=2.5t-	LGV<=2.5t	LGV<=2.5t	LGV<=2.5t	LGV2.5-3.5	LGV2.5-3.5	LGV2.5-3.51	LGV2.
11 Vehic	cles 3	81 460553	1543	3 (	462476	0	C	6	18237	18243	29	122	1001	0	1152	6	1105	42811	
12 VKT	83	00 12734294	44399	) (	0 12786993	0	C	2120	6908678	6910798	1877	8575	77105	0	87558	326	75411	3083650	
13 Trips	5	71 690829	2314	L (	693715	0	C	22	72942	72965	115	487	4004	0	4607	23	4419	171226	
14 VOC	Emissions																		
15 Run I	Exh 0.017	35 0.36939	0.00499	) (	0.39174	0	C	0.00108	0.45326	0.45433	0.01102	0.01036	0.00481	0	0.02619	0.00106	0.01418	0.13354	
16 Idle E	xh	0 0	0	) (	0 0	0	C	0	0	0	0	0	0	0	0	0	0	0	
17 Start	Ex 0.004	84 0.12363	0	) (	0.12846	0	C	0	0.07527	0.07527	0.00154	0.00295	0	0	0.00448	0.00024	0.00396	0	
18																			
19 Total	Ex 0.022	19 0.49301	0.00499	)	0.5202	0	0	0.00108	0.52852	0.5296	0.01256	0.01331	0.00481	0	0.03067	0.0013	0.01814	0.13354	
20																			
21 Diurr	nal 0.003	77 0.27071	. 0	)	0.27448	0	C	0	0	0	0.00048	0.00033	0	0	0.00081	0.00004	0.00147	0	
22 Hot S	Soak 0.002	66 0.15965	0	)	0.16231	0	C	0	0	0	0.00098	0.00068	0	0	0.00166	0.00008	0.00283	0	
23 Runn	ing 0.012	0.19929	0	)	0.21148	0	C	0	0	0	0.00452	0.00112	0	0	0.00564	0.00037	0.00494	0	
24 Posti	ng 0.005	no n 20072	0	<b>1</b> 1	0 20/170	0	0	0	0	0	0 00060	0 00026	0	0	0.00105	0 00006	0.00194	0	

# MVEI7G CSV file (\*.bcd.csv)

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2	2	2008	1965	2008	SAR Average	Hon	Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO	Run Exh	5.2646	Day
3	2	2008	1965	2008	SAR Average	Hon	Kong SAR	Average	6751	447	1	.04 PC	NCAT	NOx	Run Exh	0.2657	Day
4	2	2008	1965	2008	SAR Average	Hon	Kong SAR	Average	6751	447:	1	.04 PC	NCAT	SOx	Run Exh	0	Day
5	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	PM	Run Exh	0.0021	Day
6	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	1	.04 PC	NCAT	Pb	Run Exh	0.0001	Day
7	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	ROG	Run Exh	0.3957	Day
8	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO2	Run Exh	33.1422	Day
9	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	со	Idle Exh	0	Day
10	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	1	.04 PC	NCAT	NOx	Idle Exh	0	Day
11	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	1	.04 PC	NCAT	SOx	Idle Exh	0	Day
12	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	1	.04 PC	NCAT	PM	Idle Exh	0	Day
13	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	Pb	Idle Exh	0	Day
14	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	ROG	Idle Exh	0	Day
15	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO2	Idle Exh	0	Day
16	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO	Start Ex	0.2129	Day
17	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	NOx	Start Ex	0.0107	Day
18	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	SOx	Start Ex	0	Day
19	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	PM	Start Ex	0.0001	Day
20	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	4471	1	.04 PC	NCAT	Pb	Start Ex	0	Day
21	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	ROG	Start Ex	0.0348	Day
22	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO2	Start Ex	1.357	Day
23	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	со	Total Ex	5.4775	Day
24	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	NOx	Total Ex	0.2764	Day
25	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	SOx	Total Ex	0	Day
26	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	PM	Total Ex	0.0022	Day
27	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	. 1	.04 PC	NCAT	Pb	Total Ex	0.0001	Day
28	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447	. 1	.04 PC	NCAT	ROG	Total Ex	0.4305	Day
29	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	CO2	Total Ex	34.4992	Day
30	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	со	Hot Soak	0	Day
31	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	NOx	Hot Soak	0	Day
32	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	SOx	Hot Soak	0	Day
33	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	. 1	.04 PC	NCAT	PM	Hot Soak	0	Day
34	2	2008	1965	2008	SAR Average	Hon	g Kong SAR	Average	6751	447:	1	.04 PC	NCAT	Pb	Hot Soak	0	Day

# Weighted Model Year Activity Output (\*.WT)

<b>20</b>	UltraEdit - [C:\Documents and Settings\Arney\My Documents\My Projects\ERG\EMFAC\HongKong\Task 6 - Testing\EPD Comments\20110216\Debug_HK20Data.wt]													
<u> </u>	👩 File Edit Search Insert Project View Format Column Macro Scripting Advanced Window Help													
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×		9			4.0				44					
< >	2	Calendar Vear	2008											
$\left  \right\rangle$	3	- Model Years.	-1965-	to:2008										
	4	Title:	Hong	Kong SAR Annual C	Yr 2008 Defaul	t Title								
	5	Area:	Hong	Kong	seee serdar									
<b></b>	6	SubArea:	Avera	qe										
	7 ······ Program: Emfac-HK working draft V1.99.6.2 110210 Sp: InProgress; GUI (HK Units); 330 TG; HK2.0 Data; HK TG Desc													
١	8 ·····Run Date: 2011/02/17 13:08:17													
	9													
	10	SCENVVEHVVI		· · · · · · · · VEH · POP · ·	···· VKT/1000 ·	···· TRIPS	ACCRUAL	••••••ODOMETER						
	11	YEAR CLS TECH	· MYR ·	(number) ·	···· (km/day) ·	···· (per day)	····(km/yr/veh)·	····· (km/veh)						
	12					_								
	13	2008 · · 1 NCAT	1965	21.			4810.	241367.						
	14	2008 1 NCAT	1966	3.	0.04	5.	4824.	236557.						
	15	ZUUS 1 NCAT	1967.	6.	0.08	9.	4839.	231733.						
	16	2008 I NCAT	.1968.	4.	0.05		4853.	226894.						
	10	2000 I NCAT	1970		0.13		4068.	222041.						
	10	2008 1 NCAT	1971	16	0.33		4004.	21/1/3.						
	20	2008 1 NCAT	1972	25			4916	212209.						
	21	2008 · · 1 NCAT	· 1973 ·			···· 71.								
	22	2008 1 NCAT	1974											
	23	2008 · · · 1 · NCAT	1975		0.31.		4969.	192589.						
	24	2008 · · · 1 · NCAT	1976					187620.						
	25	2008 · · 1 NCAT	1977 -			62.		182632.						
	26	2008 · · · 1 · NCAT	1978	• • • • • • • • • • • 44. • •	0.61			177625.						
	27	2008 · · · 1 · NCAT	1979	43				172597.						
	28	2008 1 NCAT	1980		1.17			167549.						
	29	2008 1 NCAT	1981		1.19			162479.						
	30	2008 ···· 1 NCAT	1982		1.22			157386.						
	31	2008 1 NCAT	1983	32.	0.45	48.	5141.	152270.						
	32	2008 I NCAT	· 1 984 ·	42.	U.59	63.	5100	141962						
	33	2008 I NCAT	.190 <i>6</i> .	175		157.	5221	126770						
	35	2008 1 NCAT	1987	209			5251	131549						
	36	2008 - 1 NCAT	1988											
	37	2008 1 NCAT	1989		8.04			121016						
	38	2008 · · · 1 · NCAT	1990			····1299.								
	39	2008 1 NCAT	1991											
	40	2008 · · · 1 · NCAT	1992				5427							
	41	2008 · · · 1 · NCAT	1993	· · · · · · · · · · · · · · 7. · ·				·····99537.						
	42	2008 · · 1 NCAT	1994 -					94068.						
	43	2008 · · · 1 · NCAT	1995	·····5. ···		8.		• • • • • • • 88553.						
	44	2008 · · 1 NCAT	1996	· · · · · · · · · · · · · · · · · · ·	0.00 .	0.		· · · · · · · · · · · · · · · 0.						
1 1	45	2008 · · · 1 · NCAT	1997 -	· · · · · · · · · · · · · · · 0. · ·		· · · · · · · · · · · · · · 0.	·····	····O.						

# Detailed Output File (\*.BDN.CSV)

C. 2 - 1	(≝ - ) ≑								HK_	2010_2012_E	Burden.bdn.xlsx -	Microsoft Exce								
Home	Insert Pag	ge Layout	Formul	las Dat	a Re	view Viev	v Add-	-Ins												0 - 🕫
Paste	Painter Calib	ri +  1 Z <u>U</u> +  [⊞	2 • • 🔇	A A - <u>A</u> -	= =	<mark>=</mark> ≫· ∃ ∉ ≇	Wrap	Text e & Center *	General \$ - % •	* 00. 0.0 10. 00.	Conditional For Formatting * as Ta	mat sble - Neutra	l Bac I Cal	l culation	Good Check Cell	→ Inse	nt Delete Form	That ≥ Auto ⇒ Fill + ⊘ Clear	Sum * Z Sort & Filter *	Find & Select +
Clipboard	6	Font		5		Alignm	ent	G	Number	G			Styles			-	Cells		Editing	
A1	▼ (?)	<i>f</i> <sub>x</sub> #T	itle	:																
A	В	0		D	E	F	G	Н	1	1	K	L	M	N	0	P	Q	R	S	Т
1 # Title :	Hong Kong	SAR Annual	2010	to 2012 I	Default	Title														
2 # Version :	Emfac-HK V	2.1 (BC) V2.	1.1 1	20403 BC	Pr: Em	fac-HK 2.1.	1 Base Ca	ase												
3 # Run Date :	4/12/2012	13:02																		
4 # Scen Year:	2010 All r	nodel years	in the	e range 1	966 to 2	2010 select	ed													
5 # Season :	Annual																			
6 # Area :	Hong Kong																			
7 # I/M Stat :	No I/M prog	ram in effe	ct																	
8 # Emissions:	Tonnes Per	Period					-													
9 RecType	ScenNum	CalYr		Area	Veh	MdlYr	Tech	Period	Рор	VKT	Trips	VOC_RUN	E VOC_IDLE	VOC_STREX	VOC_TOTE>	VOC_DIURI	VOC_HTSK	VOC_RUNLS	VOC_RESTL	VOC_TOTAI
10 MY		1 2	2010	Hong Kor	1PC	196	5 GAS	Day	C		0	0	0 0	0	0	0	0	0	0	0
11 MY		1 2	2010	Hong Kor	1PC	196	5 DSL	Day	C		0	0	0 0	0	0	0	0	0	0	0
12 MY		1 2	2010	Hong Kor	1PC	196	5 LPG	Day	C		0	0	0 0	0	0	0	0	0	0	0
13 MY		1 2	2010	Hong Kor	PC	196	5 TOT	Day	0	)	0	0	0 0	0 0	0	0	0	0	0	0
14 MY		1 2	2010	Hong Kor	PC	196	6 GAS	Day	31	636.67	758 46	5 1.84E-0	3 (	0 4.18E-04	2.26E-03	3.43E-04	2.21E-04	9.94E-04	4.32E-04	4.25E-03
15 MY		1 2	2010	Hong Kor	PC	196	6 DSL	Day	0	)	0	0	0 0	0 0	0	0	0	0	0	0
16 MY		1 2	2010	Hong Kor	PC	196	6 LPG	Day	0	)	0	0	0 0	0 0	0	0	0	0	0	0
17 MY		1 2	2010	Hong Kor	PC	196	6 ТОТ	Day	31	636.67	758 46.	5 1.84E-0	3 (	4.18E-04	2.26E-03	3.43E-04	2.21E-04	9.94E-04	4.32E-04	4.25E-03
18 MY		1 2	2010	Hong Kor	PC	196	7 GAS	Day	4	82.39	983	6 2.35E-0	4 (	5.37E-05	2.88E-04	4.42E-05	2.85E-05	1.28E-04	5.57E-05	5.45E-04
19 MY		1 2	2010	Hong Kor	PC	196	7 DSL	Day	C	)	0	0	0 0	0 0	0	0	0	0	0	0
20 MY		1 2	2010	Hong Kor	PC	196	7 LPG	Day	0	)	0	0	0 0	) 0	0	0	0	0	0	0
21 MY		1 2	2010	Hong Kor	PC	196	7 ТОТ	Day	4	82.39	983	6 2.35E-0	4 (	5.37E-05	2.88E-04	4.42E-05	2.85E-05	1.28E-04	5.57E-05	5.45E-04
22 MY		1 2	2010	Hong Kor	PC	196	8 GAS	Day	3	61.970	078 4.	5 1.74E-0	4 (	4.01E-05	2.14E-04	3.32E-05	2.14E-05	9.63E-05	4.18E-05	4.06E-04
23 MY		1 2	2010	Hong Kor	PC	196	8 DSL	Day	0	)	0	0	0 0	0 0	0	0	0	0	0	0

## **EMFAC Mode Options**

#### EMFAC-HK v 1.2

🐮 Emfac-HK Editing data	🗈 Emfac-HK V2.1 (I and M) Editing data
<u>File Run H</u> elp	<u>F</u> ile <u>R</u> un <u>H</u> elp
環境保護署 Environmental Protection Department Air Resources Boa California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
Emfac-HK V1.2 June 2005	Emfac-HK V2.1 (I and M) V2.11 120403 M Pr. Emfac-HK HK2.11 M Case
MAIN Scenario 1 Scenario 2 Mode and Output Emfac Config Tech/IM Pop/Accrual VMT/Trips Profiles/Speed	
Scenario configuration - Select the Scenario Type and Dutput options  Select the Scenario Type  Burden - Area planning  Emfac - Area fleet average emissions (g/hr)	Scenario Type: EMFAC Area-specific fleet average emissions (g/hr) for selected temperatures, relative humidites speeds Copyrigure EMFAC Output Emfac Rate Files Output Particulate As
Select Output Files and Options         Emission Factors without I/         Weight Output         Emission Factors without I/         Text. File (CSV)         Image: MVEI/G CSV         Image: MVE	Temperatures     Binary Impacts (BIN)     C Total PM       Relative Humidities     ASCII Impacts (ERP)     Output Hydrocarbons As
Output Frequency     Output Particulate As     Output Hydrocarbons As       C Results for each hour     C Total PM     © TOG     C ROG       © Daily totals only     PM10     C THC     C H4       Cancel     < Back     Next >	Speed     Detailed Impact Rates (RTL)     C TOG     C THC       VOC     C C H4       Cancel     < Back     Edit Program       Constants     Finish

## **EMFAC Output Options**

 Impact Rate Detail (RTL). This file as the name implies generates detailed information for each vehicle class and technology group combination. This file has an "RTL" extension but is in a CSV format. Hence, any spreadsheet program can read this file. It is recommended that new users output this file to get a feel for the type of information generated in EMFAC mode.

## **Editing Fundamental Data**

#### EMFAC-HK v 1.2

😿 Emfac-HK Editing data	🙀 Emfac-HK V2.00.4 (I and M) Editing data
File Run Help	<u>F</u> ile <u>R</u> un <u>H</u> elp
環境保護署 Environmental Protection Department Air Resources Bc California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
	Emfac-HK V2.00.4 (I and M) V2.02.1 100010 IM PT: Emfac-HK 14/2 00.4 I <u>M</u> Case
	. Input 1 Input 2 Mode and Output Tech/IM CYr Basis
MAIN Scenario 1 Scenario 2 Mode and Output . Tech/IM Pop/Accrual VMT/Trips Profiles/Speed Editing Program Constants - Technology Fractions and Interim I/Mfor scenario year 2015	Editing Program Constants - Technology Fractions and Interim I/M for scenario year 2015
Exh Tech Fractions Edit the exhaust control technology fractions	Exh Tech Fractions       Edit the exhaust control technology fractions         Evap Tech Fractions       Edit the evap control technology fractions
	Interim I/M Edit the constants for Enhanced Interim I/M program
Cancel < Back Next > Finish	Cancel < Back Next > Finish

# Changing Activity Data

- edit fundamental activity data such as population, accrual rates, trips and vehicle kilometers traveled.
- dialogs are sequenced noting the interdependencies among the data

### **Editing Exhaust Technology Fractions**

### EMFAC-HK v 1.2

Exhaust Tech Fractions by Model Year	and Technology Group
Exhaust Tech Fractions by Mo	del Year and Technology Group
Vehicle Class 01: PC+LG	V-petrol
Model #Tech Year Indices 2015 2 2 Total (%) 100.0 OK	EXHAUST Tech Fractions Index % 24 99.6455 28 0.3545 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
	Done

Exhaust Technology Fractions										
Edit Exhaust Technology Fractions by 01: Private Cars (PC)										
Vehicle Class										
Model Year 1995										
EXHAUST Technology Groups Total: 100.0001% OK										
# of Tech Groups 4										
Group % Description - model years, vehicle classes, fuel, catalyst, fuel delivery, years and										
pre-Euro PC and LGV<= 3.5t petrol										
8 37.3971 ULP PC and LGV<=2.5t petrol										
9 - 0.4419 Euro I LGV<= 3.5t petrol										
10 - 62.1109 PC Euro I petrol										
Return Copy values to other years and										
Apply Cancel Done Apply to Others										

# **Editing Evap Technology Fractions**

### EMFAC-HK v 1.2

Evap Tech Fractions by Model Year and Technology Group	
Evap Tech Fractions by Model Year and Technology Group	
Vehicle Class UT: PC+LGV-petrol	
Model #Tech Tech Fractions Year Indices Index % 2015 • 1 • 10 • 100.0	
Total (%) 100.0	
Apply Cancel Done	

Evap Technology Fractions											
Edit Evap Technology Fractions by 01: Private Cars (PC)											
Vehicle Class											
Model Year 1995											
EVAP Technology Groups Total: 100.0000% OK											
# of Tech Groups											
Group % Description - model years, vehicle classes, fuel, catalyst, fuel delivery, years and											
• • 100.0 1973-1985, LDA, gas, Lat, 181, 1973-85,											
Apply Cancel Done Apply to Others											

## **Population and Accrual Edits**

#### EMFAC-HK v 1.2

😿 Emfac-HK Editing data	Emfac-HK V2.1 (I and M) Editing data
<u>File Run H</u> elp	<u>F</u> ile <u>R</u> un <u>H</u> elp
環境保護署 Environmental Protection Department Air Resources Be California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
<b>Emfac-HK</b> V1.2 June 2005	Emfac-HK V2.1 (I and M) V2 11 100401 M PF Emfac-HK HK2 11 M Case
MAIN   Scenario 1   Scenario 2   Mode and Output   Tech/IM   Pop/Accrual   VMT/Trips   Profiles/Speed	. Input 1 Input 2 Mode and Output Tech/IM CYr Basis (2013) Pop/Accrual VKT/Trips Profiles/Speed
Editing Program Constants - Population and Odometer Accrual for scenario year 2015	Editing Program Constants - Population and Odometer Accrual for scenario year 2013
Population Edit the vehicle population	Population Edit the vehicle population
Accrual Edit the odometer accrual	Accrual E dit the odometer accrual *
Cancel < Back Next> Finish	Info     * Accrual is independent of calendar year       Cancel     < Back

# Info on Accrual Rates (EMFAC-HK v 2.1)



## **Editing Total Population**

### EMFAC-HK v 1.2

	Editing Population data for scenario 1: Ho	ng Kong SAR Annual 3 CYrs 2013 to 2030 Default Title
	Total Population for area	Copy with Headings Paste Data Only
Editing Population data for scenario 1: Hong Kong SAR Avg 2015 Annual Default Title	Hong Kong SAR	
Total Population for area	Editing Mode	Editing Population (registered vehicles with adjustments)
Hong Kong	Total Population By Vehicle Class By V	ehicle and Fuel By Vehicle/Fuel/Age
Editing Mode Editing Population (licensed vehicles)		
Total Population By Vehicle Class By Vehicle and Fuel By Vehicle/Fuel/Age		
	Revised Tota	Population 638643.
	Previous Tota	I Population 638643.
Revised Total Population 487190		
Dentine Tabl Dendeting 407100		
Previous Local Population j 407 130.		
Apply Cancel Done		
	<u> </u>	
	Apply	Cancel Done

# Editing Population by Vehicle Class and Fuel Type

#### EMFAC-HK v 1.2

Editing Mode Editing Population (licensed vehicles)								
Total Population   By Vehicle Class   By Vehicle and Fuel   By Vehicle/Fuel/Age								
Fuel (1=Gas/2=Diesel/3=Electric)								
			1	2	3			
1 - PC+LGV-petrol		1	338618.0	0.0	0.0			
2 - Not Applicable		2	0.0	0.0	0.0			
3 - PC+LGV<2.5t-diesel		3	0.0	5351.0	0.0			
4 - LGV2.5-3.5t-diesel		4	0.0	34075.0	0.0			
5 - Public Light Buses	hicle Class	5	2827.4	1525.6	0.0			
6 - Light Goods Vehicles>3.5t		6	0.0	27281.0	0.0			
7 - Heavy Goods Vehicles<15t		7	0.0	9714.0	0.0			
8 - Heavy Goods Vehicles>15t		8	0.0	32012.0	0.0			
9 - Not Applicable	Ve	9	0.0	0.0	0.0			
10 - Franchised Buses (DD)		10	0.0	5702.0	0.0			
11 - Matarcucles		11	30084.0	0.0	0.0			
12 Mat Applicable		12	0.0	0.0	0.0			
12 Not Applicable		13	0.0	0.0	0.0			
13 - Not Applicable								

otal Population for area Hong Kong SAR			Copy with	Headings	Paste Data On			
diting Mode	I	Editing	Population (registered v	ehicles with adjustr	ments)			
Total Population By Vehicle Class	By Vehicle and	and Fuel By Vehicle/Fuel/Age						
			Fuel (1=Pe	trol/2=Diesel/3=	LPG)			
			1	2	3			
01 - Private Cars (PC)		1	443125.6	1448.9	0.0			
)2 - <placeholder (p1)=""></placeholder>		2	0.0	0.0	0.0			
03 - Taxi		3	0.0	3.5	18239.5			
04 - Light Goods Vehicles<=2.5t		4	161.7	978.6	0.0			
05 - Lt Goods Vehicles 2.5-3.5t		5	1172.2	42313.4	0.0			
06 - Light Goods Vehicles>3.5t		6	0.0	25811.2	0.0			
)7 - Heavy Goods Vehicles<=15t		7	0.0	10766.9	0.0			
08 - Heavy Goods Vehicles >15t		8	0.0	30523.0	0.0			
)9 - <placeholder (p2)=""></placeholder>	2	9	0.0	0.0	0.0			
10 - <placeholder (p3)=""></placeholder>	las	10	0.0	0.0	0.0			
11 - Public Light Buses	le O	11	0.0	1182.5	3165.5			
12 - Private Light Bus <=3.5t	hic	12	2163.6	299.4	0.0			
13 - Private Light Bus >3.5t	Ve	13	11.4	1067.7	961.9			
14 - Non-franchised Bus<=6.4t		14	0.0	3215.0	0.0			
15 - Non-franchised Bus 6.4-15t		15	0.0	2305.0	0.0			
16 - Non-franchised Bus >15t		16	0.0	2344.0	0.0			
17 - Franchised Bus (SD)		17	0.0	381.0	0.0			
8 - Franchised Bus (DD)		18	0.0	5349.0	0.0			
19 · Motorcycles (MC)		19	41652.9	0.0	0.0			
20 - <placeholder (p4)=""></placeholder>		20	0.0	0.0	0.0			
21 - <placeholder (p5)=""></placeholder>		21	0.0	0.0	0.0			
				<u> </u>				

# Editing Trip and VMT/VKT Profiles

### EMFAC-HK v 1.2

😿 Emfac-HK Editing data	Emfac-HK V2.1 (I and M) Editing data
<u>File Run H</u> elp	<u>F</u> ile <u>R</u> un <u>H</u> elp
環境保護署 Environmental Protection Department Air Resources Bc California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
Emfac-HK V1.2 June 2005	
MAIN Scenario 1 Scenario 2 Mode and Output . Tech/IM Pop/Accrual VMT/Trips Profiles/Speed	. Input 1 Input 2 Mode and Output Tech/IM CYr Basis (2013) Pop/Accrual VKT/Trips Profiles/Speed
Editing Program Constants - Trips (Starts) and Vehicle Miles Traveled (VMT) for scenario year 2015	Editing Program Constants - Trips (Starts) and Vehicle Kilometers Traveled (VKT) for scenario year 2013
Trips Edit vehicle trips per day 	Trips Edit vehicle trips per day VKT Edit the VKT
Cancel < Back Next > Finish	Cancel < Back Next > Finish

# Editing Total VMT/VKT

### EMFAC-HK v 1.2

### EMFAC-HK v 2.1

Paste Data Only

Editing VKT data for scenario 1: Hong Kong SAR Annual 3 CYrs 2013 to 2030 Default Title

	Total VKT for area		Copy with Headings	F
Editing VMT data for scenario 1: Hong Kong SAR Avg 2015 Annual Default Title	Hong Ke	Kong SAR		
Total VMT for area	Editing Mode		Editing VKT (vehicle km traveled per	r weekday
Hong Kong	Total VKT By Vehic	cle Class   By Vehicle and Fuel   By V	ehicle/Fuel/Hour	
Editing Mode Editing VMT (vehicle miles traveled per weekday)				
Total VMT By Vehicle Class By Vehicle and Fuel By Vehicle/Fuel/Hour				
		Revised Total VKT	33671656	
		Previous Total VKT	33671656.	
Revised Total VMT 15227688.				
Previous Total VMT 15227688.				
Apply Cancel Done				
	A	Apply Cancel	Done	

# **Editing Profiles/Speed**

#### EMFAC-HK v 1.2

👷 Emfac-HK Editing data 📃 🗆 📼 💌	Emfac-HK V2.1 (I and M) Editing data
<u>F</u> ile <u>R</u> un <u>H</u> elp	<u>F</u> ile <u>R</u> un <u>H</u> elp
環境保護署 Environmental Protection Department Air Resources E California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region Emfac-HK V2.1 (I and M) V2111 20403 IM Pr. Emfac-HK HX2111 IM Case Permitted Air Resou California
	Input 1 Input 2 Mode and Output Tech/IM CYr Basis (2013) Pon/Accrual VKT/Trins Profiles/Speed
MAIN Scenario 1 Scenario 2 Mode and Output . Tech/IM Pop/Accrual VMT/Trips Profiles/Speed	
Editing Program Constants - RVP, Temperature, Humidity, Speed Fractions, and Idle Time for scenario year 2015 and month/season A	Editing Program Constants - RVP, Temperature, Humidity, Speed Fractions, and Idle Time for scenario year 2013 and month/season Annual
BVP Edit the gasoline Beid Vanor Pressure (BVP) for the calendar year and season	RVP Edit the petrol Reid Vapor Pressure (RVP) for the calendar year and season
Temperature Profile         Edit the hourly temperature profile for the season	Temperature Profile Edit the hourly temperature profile for the season *
	RH Profile Edit the hourly relative humidity (RH) profile for the season *
HH Profile         E dit the hourity relative humidity (H) profile for the season           Speed Fractions         E dit the speed fractions for the calendar year	Speed Fractions Edit the speed fractions for the calendar year
	Idle Time Edit idle times for vehicles
	Info * Temperature and RH are independent of calendar year
Cancel < Back Finish	Cancel < Back Finish

# **Editing Speed Profiles**

#### EMFAC-HK 1.2 (Taxi)

Hong	g Kong	)	Spe	ed Fractic	ons by Scer Area: Ho Veighted Av Scenario	hario Year and Vehicle Grou ng Kong SAR verage of 1 Sub-areas o Year: 2008	p
	Speed Fr	actions	by Bin (MPH)	)		Hours	
Bin ,	%	Bin	%	Bin	%	8	
05	1.9842	35	9.6805	65	0.6719	Vehicle Class	
10	14.7939	40	8.8786	70	0.00	03: Taxi	•
15	15.052	45	5.9257	75	0.00		
20	14.3956	50	1.7884	80	0.00		
25	12.6011	55	3.3126	85	0.00	Total 100.00 % OK	
30	10.2438	60	0.6719	90	0.00		
	Appl This Clas	y Chang Hour / ∖ s	ges to /ehicle				Apply This Profile to Other Hours and Vehicle Classes
		Apply	/ 1	C	Cancel	Done	Apply to Others

Area	Hong	Kong SAR			Scena	ario Year: 2013	Copy with	Heading	Paste Data	Only
Hong Kong SAR										
/KT·	Weight	ed Average	Basis: 1.6 K	PH 8 KPH	16 KPH	Vehicle Class	01: Privati	e Cars (PC)		•
$\overline{\}$					Hour (1 to	24)				
		1	2	3	4	5	6	7	8	
	1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	Ξ
	2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	4	0.0541	0.0541	0.0541	0.0541	0.0541	0.0541	0.0541	0.0589	
_	5	0.0980	0.0980	0.0980	0.0980	0.0980	0.0980	0.0980	0.1053	
18)	6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
ë	7	0.1993	0.1993	0.1993	0.1993	0.1993	0.1993	0.1993	0.2072	
I	8	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0603	0.0748	
3	9	0.2731	0.2731	0.2731	0.2731	0.2731	0.2731	0.2731	0.2670	
ž	10	0.1817	0.1817	0.1817	0.1817	0.1817	0.1817	0.1817	0.1692	
Ĩ	11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Ä	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
ee	13	0.1203	0.1203	0.1203	0.1203	0.1203	0.1203	0.1203	0.1026	
ŝ	14	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0132	0.0150	
	15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
	18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-
•		III							F.	
	To	⊨	אר	Applu 1	Con		Done	Ar	olu to Others	
	10	(ar 100.00 % (		AbbA	Cdri		Done		py to outers	

# Info Message for 'Profiles/Speed' Option (EMFAC-HK 2.1 Only)



# **Editing Temperature Profile**

#### EMFAC-HK v 1.2

Diurnal Temperature Profile	Diurnal Temperature Profile
Area: Hong Kong SAR Month: Annual VMT-Weighted Average of 1 Sub-areas	Area: Hong Kong SAR Month: Annual VKT-Weighted Average of 1 Sub-areas
Hong Kong	Hong Kong SAR
Temperatures (F) Hour	Copy with Headings Paste Data Only Temperatures (C) Hour
72.0         71.7         71.4         71.2         70.9         70.8         71.0         72.2         73.6         74.9         75.9         76.7	0000         0100         0200         0300         0400         0500         0600         0700         0800         0900         1000         1100           21.8         21.7         21.6         21.4         21.3         21.2         21.1         21.2         21.9         22.8         23.5         24.2
1200         1300         1400         1500         1600         1700         1800         1900         2000         2100         2200         2300           77.1         77.2         77.0         76.6         75.7         74.6         73.6         73.1         72.8         72.5         72.4         72.2	1200         1300         1400         1500         1600         1700         1800         1900         2000         2100         2200         2300           24.6         24.9         25.0         24.9         24.6         24.0         23.3         22.8         22.5         22.3         22.1         22.0
Modify Values for Range of Hours to Constant Value for Range	Modify Values for Range of Hours to Constant Value for Range
Apply Cancel Done	Apply Cancel Done

## Final Run or Progress Screen

#### EMFAC-HK v 1.2

2 1985 3 1 1	1 2011 4 1 1 I
<u>File R</u> un <u>H</u> elp	File Run Help
環境保護署 Environmental Protection Department Air Resources Bc California	Environmental Protection Department The Government of the Hong Kong Special Administrative Region
Emfac-HK V1.2 June 2005	Emfac-HK V2.1 (I and M) V2.1 120403 M Pr Embolish K HK2 1.1 M Case
File "C:\Users\Arney Srackangast\Documents\My Projects\HongKong\2012\Task 2 - Training\Task 2.2 - HK Training\Day3\Sandbox\Examples\HK 1.2\deleteme.inp" Scenario 1 of 1 for calendaryear 2015 Title: "Hong Kong SAR Avg 2015 Annual Default Title" Burden run for area: Hong Kong Model years range from 1970 to 2015 Vehicle Class 3 of 13: PC+LGV<2.5t-diesel	File "C:\Users\Arney Srackangast\Documents\My Projects\HongKong\2012\Task 2 - Training\Task Training\Task 2.2.2 - Apr 2012\Basic\ex1\HK_2015_2020_2030_Burden.inp" Scenario 1 of 1 Title: "Hong Kong SAR Annual 3 CYrs 2015 to 2030 Default Title" Burden run Calendar year: 2015 All model years in the range 1971 to 2015 selected Area: Hong Kong SAR
Current model year is 1985	
	Model Year 2011

## **Comparison of Input Files**

#### EMFAC-HK v 1.2

HK_2010_2015_2020_Burden(MC).inp - Notepad	
<u>File Edit Format View H</u> elp	
B 2 20 0 923     ! Number of scenarios in file, version info       Hong Kong SAR Avg 2010 Annual Default Title ! Scenario Title       Burden 9 2     ! Program mode ROG PML0       2010     ! Calendar Year       15     ! Month/Season       4     ! Geographic area selection: Hong Kong SAR       38     ! SAR Number       FFFFF     ! WEIGHT Output Options       FFFFF     ! BURDEN Output options       FFFFF     ! CALIMFAC Output options       FFFFF     ! EMFAC output options       FFFFF     ! BURDEN Output options       FFFFF     ! BURDEN Output options       FFFFF     ! EMFAC output options       FFFFF     ! EMFAC output options       FFFFF     ! EMFAC output options       FFFFF     ! EMFACTOR OUTPUT options       Color     ! First model Vear considered in calculations       2010     ! Last model Vear consid	
! Data on I/M Programs	
0 ! Number of I/M programs (num_prog) in scenario 1	
Hong Kong SAR Avg 2015 Annual befault title ! scenario title           Burden 9 2 ! Program mode RoG PML0           2015 ! Calendar Year           11	
! Data on I/M Programs	
0 ! Number of I/M programs (num_prog) in scenario 2	
Hong Kong SAR Avg 2020 Annual Default Title ! scenario Title           Burden 9 2 ! Program mode RoG PMID           2020 ! Calendar Year           15 ! Month/Season           4 ! Geographic area selection: Hong Kong SAR           38 ! SAR Number           FFFFF ! WEGHT Output Options           FFFFF ! EMFAC Output Options           FFFFF ! EMFAC Output Options           FFFFF ! EMFAC Output Options           FFFFF ! CALIMFAC Output Options           FFFFF ! CALIMFAC Output Options           FFFFF ! EMFACN Output Options	
4	•
	Ln 1, Col 1

HK_2015_2020_2030_Burden.inp - Notepad	
File Edit Format View Help	
EmfacHK21-Header Version 2 1 0 0 Scenario-Count 1 End-Header Begin-Scenario 1 Title Hong Kong SAR Annual 3 CYrs 2015 to 2030 Default Title Program-Mode Burden Area-Type SAR Area-Type SAR Area-Number 38 [Hong Kong SAR] HC-Mode PMI0 CYr 2015 2020 2030 MYr All Vehicles PC TAXI LGV3 LGV4 LGV6 HGV7 HGV8 PLB PV4 PV5 NFB6 NFB7 NFB8 FBSD Season Annual Burden-Reports CSV_Standard BCD Burden-Daily End-Scenario	FBDD MC
4	•
	Ln 1, Col 1

## EMFAC-HK 2.1 Input File

HK_2015_2020_2030_Burden.inp - Notepad	
File Edit Format View Help	
<pre>EmfacHK21-Header Version 2 1 0 0 Scenario-Count 1 End-Header Begin-Scenario 1 Title Hong Kong SAR Annual 3 CYrs 2015 to 2030 Default Title Program-Mode Burden Area-Method One-County Area-Type SAR Area-Number 38 [Hong Kong SAR] HC-Mode VOC PM-Mode PM10 CYr 2015 2020 2030 MYr All Vehicles PC TAXI LGV3 LGV4 LGV6 HGV7 HGV8 PLB PV4 PV5 NFB6 NFB7 NFB8 FBSD Season Annual Burden-Reports CSV_Standard BCD Burden-Daily Burden-Speeds 5 End-Scenario</pre>	FBDD MC
	۶.
	Ln 1, Col 1