	A B	C	D	E	F	G	Н		J		К	L	М	N	0	P Q
1			0			16		1					Ma:	•		
2			COI	mparing	entity se			-				Carbon	Majors fac	tors		
3 4						Background	d calculations on a		f methane	e and carl	oon dioxide					
4		Convr	ight Climate	Mitigation	Services			Heede, CMS								
5		copyr		Bueron				3-Jul-13					7.4			
6									7.4		S	hell CDP, section	7.4			
7	коуа	I Dutch She								se give the e	emissions factors y	ou have applied and t	their origin; alternatively, ple	ease attach an Excel sprea	dsheet with this data	
8	Carbon Diaglagur	o Project DDG	anno 2010 subm	ission	Gross Scope 1	2008	ot provide CDP data 2009	2010		Fuel	Material/Energy	Emission Factor	Unit	Refer	0.000	
10	Section 7: Emiss			1551011	Table OG3.3	tC02e	tCO2e	tCO2e			re efficiency factor		Other: fraction	API Compendium		
11			an - 31Dec 2010)		Combustion	10020	teoze	10020		Natural g	as		metric tonnes CO2 per metric			
12	Section 9: Scope				Flaring					Propane Diesel/Ga	an oil		metric tonnes CO2e per metri metric tonnes CO2 per metric			
13	Section 10: Scop				Process emissions	6					avy Fuel Oil		metric tonnes CO2 per metric metric tonnes CO2 per metric			
14	Section 12: Ener	дy			Vented emissions	;					tor gasoline in cars		Other: kg CO2 / km	API Compendium		
15	Section 15: Scop	be 3 Emissions			Fugitive emissions	S				Other: Die	esel/Gas oil in trucks	0.94	Other: kg CO2 / km	DEFRA Table 6e	- 7d	
16					Total	-	-	-								
17	0	1	1000			1000	1				l	Entity 2010	production and emiss		-	
18 19	Gross Scope 1 Downstream		tCO2e 43,900,000	58.5%	CO2	tCO2e 71,600,000	95.5%	1					Crude oil & NGL million bbl	Natural gas Bcf	-	
20	Upstream (other	than flaring)	43,900,000	23.0%	CU2 CH4	2,800,000	95.5%		tCH4]	Г	Production	617	3,396	linked	
21	Upstream flaring	0,	10,300,000	13.7%	N20	2,800,000	0.7%	133,333			L	Troduction	MtCO2/million bbl	MtCO2/Bcf	iiiikeu	
22	Shipping		3,400,000	4.5%	HFCs	31,000	0.0%				ſ	Emission factor	0.371	0.053	linked	
21 22 23 24 25 26 27 28	Other		170,000	0.2%	PFCs	5	0.0%				L		MtCO2	MtCO2]	
24		Total	75,070,000	100.0%	SF6	-					[Emissions	229	181		
25					Total	74,991,005	100.0%				г		kg CO2/tCO2	kg CO2/tCO2		
26												Vented CO2 EF		28.53		
27						tCO2e	1					Flaring EF Fugitive methar	15.94 ne 1.92	1.74 9.88	ka CH4/tCO2	-
28	Gross Scope 2	1	tCO2e		Downstream	6,300,000	64.9%	1				Fugitive methar		9.88 207.44	kg CO2e/tCO2	
30	01033 30006 2	1	10.000.000		Upstream	3,100,000	32.0%				Ancillar	y emissions, 201		MtCO2e	Kg COLE/ (COL	
<u>30</u> 31			10,000,000		Other	300,000	3.1%			ı	/ uromai	Vented CO2	0.9	5.2	-	
<u>32</u> 33					Total	9,700,000	100.0%					Flaring	3.7	0.3		_
33		1					r	1				Fugitive methar		1.8	MtCH4	
34 35 36 37	Energy	table 12.2	MWh		table 12.3		MWh					Fugitive methar		37.6		
35		Fuel Electricity	237,000,000 12,100,000	89.2% 4.6%		ду	189,200,000 33,300,000	79.9% 14.1%		1		Total ancillary Total Shell, 2010	13.8): MtCO2e	43.1 MtCO2e	Percent oil	ercent gas
37		Heat	12,100,000	4.0%	Other: Marine Tra	ansport Fuel	14,100,000	6.0%		l		Production	229	181	94.39	
38		Steam	16,700,000	6.3%	Other: Road Tran		200,000	0.1%				Ancillary	14	43	5.79	
39		Cooling	-		Total	•	236,800,000	100.0%				Total	243	225		
38 39 40 41		Total	265,800,000	100.0%						[Total Shell, 2010		Percent		
41		1 kWh =	3.60	MJ	Therefore	189,200,000	681,120,000,000					Total production		87.8%		
42	0 0 0	1					681,120	TJ				Total ancillary	57	12.2%	1	
43 44	Gross Scope 3	1				Case 1: Acc	ume own energy is a	ll natural das			ŀ	Total Shell, 201 Shell total CH4		methane intensity	1	1
44	Other: Refinery P	Products	475,000,000	669,000,000	h	eat content nat gas					-	This project		5.44	kg CH4/tCO2	
46	Other: Natural G		194,000,000	,,			6.16398E+11				1	Shell self-reporte		0.32		
47	Other: Transport	services Upst	870,000				616.40	Bcf own energy (if	nat gas)			of Carbon Major			multiple	
48	Other: Transport					CME Gas EF		MtC/Bcf			-					
49	Other: Transfers		656,000			Gas Carbon	10.23				r	Com. :				
50 51	Franchises (not i Other: Business		690,000 216,000			Gas CO2	37.50	MtCO2 own energy			l	Comparing e	entity's CDP submissi		nt of Droduct	
52	Total	navei - Alf	672,208,000			Case 2. Ac	sume own energy is	all crude oil						MtCO2e	nt of Product em this study	15510115,
52 53 54 55 56 57	TOTAL		012,200,000			IPCC, heat value		GJ/bbl			٦	Product emissio	ons, this study	410.7	100.09	6
54	Use of products	sold (2009 CI	570,000,000					bbl own energy				Ancillary emission		56.9	13.99	
55						CME liquids EF	106.40	kgC/bbl				Entity total, 20		467.7		6 100.0%
56						Liquids Carbon		tC own energy				Product emissio		669.0	162.9%	
57					1	Liquids CO2	45.95	MtCO2 own energy				Total scope 3,	CDP	672.2	163.79	
58	Oil, IPCC		kgC/GJ, default C			C 2: A		france and the state				Scope 1, CDP	Descharter i conn	75.1	18.39	
59	Natural gas IPCC	15.30	kgC/GJ, default c	arbon content]	Case 3: Assume own Average gas and lig		of gas and liquid fuel MtCO2 own energy	5			"Own fuel" emis	+ Product emiss. CDP	744.1 41.7	181.29 10.29	6 159.1%
58 59 60 61						2/3 gas and 1/3 lic		MtCO2 own energy MtCO2 own energy			L		add Scope 2 emission			v
62						12, 5 gus una 175 lic	10.52						el inputs to electricity		,	
63																
<u> </u>																

i 1	RS	т	U	V		W		(1,	Y I	7	1	AA	AB	AC	AD	AE	AF		AG	AH
1		· 1			1				1	·		1		1	1	1	1	1	I		
2																					
3 4 5 6																					
4																Carlana Diastan	ure Project, RDS a		!		
5													Protocol:	SAR GWP values			sions Methodolog		sion		
7		Roval	Dutch She	ll plc									Flare efficiency			m 2009, Figure 4.2	0.	y			
8		Noyai	Duten She										That's efficiency	0.5	o An compendia	11 2003, Higure 1.2	-				
9	Section	n 9: Scope 1 Emis	ssions Breakdo	own					7.4												
10	9.2a								Please g	ive the emi	issions fac	tors you	u have applied an	d their origin; altern	atively, please atta	ach an Excel sprea	dsheet with this da	ita			
11	Please	e break down you	ir total gross g	lobal Scope 1 e	emissions by l	business di	vision			Fuel/Mat	terial/Energ	gy	Emission Factor	. U	nit	Refer	ence				
12 13		Business D	livision	Scope 1 metri	c tonnes CO2e				C	ther: Flare	efficiency fa	actor	0.98	Other: fraction		API Compendium					
14		Downstream	11131011	43900000						latural gas			2.76		2 per metric tonne	API Compendium					
15		Upstream (other	than flaring)	17300000						ropane	- 11		2.95 3.22		2e per metric tonne						
16		Upstream flaring	1	10300000						iesel/Gas o her: Heavy			3.17	metric tonnes CO	2 per metric tonne	API Compendium API Compendium					
17		Shipping		3400000							r gasoline ir		0.2	Other: kg CO2 / kr		API Compendium					
18 19		Other		170000							el/Gas oil in		0.94	Other: kg CO2 / kr		DEFRA Table 6e					
20	9.2c																				
<u>20</u> 21	Please	e break down you	ur total gross	global Scope 1	emissions by	GHG type															
22 23 24 25 26 27 28 29		GHG type Sco	ono 1 motels t	0000					Sources Scope						м	lethodology					
23			500000	onnes COZe					emissio							iethouology					
24			00000						Other:					ed from the product of F							
26			0000						Refinery Products	47500				lication "Royal Dutch S publication "CO2 Emis						s for the	
27		HFCs 310	000						Other:		Thes	se emissi	ions were determine	ed from the product of N	atural Gas Productio	n and the emission fac	ctor for natural gas. Th	ne Natural Gas Prod	uction numb	er is on	
28		PFCs 5							Natural G	as 19400				I Dutch Shell plc Annua from Fuel Combustion				Emission Factor for	r natural ga	is is from th	ie
29		SF6 0							Other:												
30 31	10.2a								Transpor services	87000	00 Inclu trave	udes air, s elled x err	sea and land transpo mission factors. Emis	ort services provided b ssion factors are gener	y contractors. A wide ally taken from the AP	range of methods are I Compendium or DEF	applied from using the	e amount of fuel con	sumed or d	istance	
32		e break down you	ir total gross o	lobal Scope 2	emissions by	business d	ivision		Upstream	1				-							
33		-	-		-				Other: Transpor	77600	00 Emi	colon fact	tors are applied to th	ne kilometres travelled	that are recorded as r	art of asfaty maniforing	a program 0.04 a /Kr	m was used with the	course bei		
34		Business divisi			CO2e				services Downstre			SSION Idea	tors are applied to th	le kilometres travelleu	unat are recorded as p	bart of salety monitoring	g program. 0.94 g / Ki	in was used with the	source bei	IN DEFRA	
35		Downstream Upstream	6300000 3100000						Other:												_
32 33 34 35 36 37		Other	300000						Transfers sold CO2		00 CO2	2 sold to o	other parties for vario	ous applications. The o	uantity is metered.						
38									Franchise	es	The	se emissi	ions were determine	ed from the product of a	verage electricity con	sumption per site and	a global average grid	d factor. The average	electricity	was derive	d
39	12.2								(not inclu in Scope		00 from	n actual el	lectricity data from th	ne service station netw	ork in several major m	narkets. The global grid	d average factor was	derived from a weig			
40	Please	e state how much f	uel, electricity, l	heat, steam, and	cooling in MWh	i your organ	ization has col	nsumed	2)		num	iber of ret	tail sites in each cou	intry multiplied by the o	ountry factor. These e	emissions are scope 2	under equity reporting	g.			
41		Energy type	MWh						Other: Business	21600	DO Emp	oloyee Bu	usiness Air Travel in	2010: 216,000 tonne (tonne using the Octol	CO2e. The calculation	was based on DEFRA	A updated October 20	10 method. Our Bus	iness travel		
42 43			7000000						Travel - A	dr	com		112005 was 211,000	o tornie using the Octor	Jer 2010 metridu.						
44		Electricity 12 Heat 0	100000																		
45			700000																		
46		Cooling 0											plc SEC Form 20								
47 48	12.3												ar/searchedgar/ n CDP Scope 3 E								
40		complete the table	e by breaking d	own the total "Fu	el" figure enter	red above by	fuel type		ETHYLENE CAPACITY (page 40 (S	2011	200 300 300 200 200 200 200 200 200 200						gman av	rual Report and Form Business Review's C	2.82-F.8211 47
50		Fuels		MWh					Europe Asia-Pacific Americas Other			1,650 1,556 2,212 366	1,878 1,880 1,565 681 2,212 2,255 306 305	INCOLOR VALLES VOLUMES (4) 90 autores VIII des VIII des	2011 487 9491	2010 2000 808 820	Encore Exercise Date sherrigate Date sherrigate		2011 2.008 2.809	2010 1.907 2.005	4.810 2.778
51		Other: Own Energy	v 18	MWh 9200000					Total (A) Includes the Shell s equity interest. Non	hare of equity-accounted invest inal capacity is quoted as at D	estments' capacity entitlement December 31.	5,793 it (offtake rights), which	6.021 5.182 Control of the second sec	al del	879 2022 2.022 310	2,100 2,000 2,100 2,000 2,000 2,000 2,000 2,000	Asse charteness Base charteness Total line derivatives and others Total see Base chartenes Base chartenes		8,007 8,111 5,138	7,302 5,000 5,415 5,624 5,624	1.837 2.518 3.355
52 53		Natural gas		300000					CIL PRODUCTS - CRUOS	OL PROCESSED (4)		2011	1.336 1.333	al del	1,530 1,530	1.22	Pratice delivatives and others 		2400 0.000 1277 400	111 111 111	100 100
<u>53</u> 54		Other: Marine Tran		100000					Asia-Pacific Americas Other Total			731 985 200 2,974	729 560 201 1.007 1.013 70161 222 214 01161 3.284 3.163 164	arDeser one en and en and	401 290 2,140 160 51	146 1900 2,000 2,000 1744 141	Rest and derivatives and others Total for derivatives and others Total IAJ Exclusive volumes solv by equi	ay accounted investments, channed her	0.467 9.164 18.81 Reform Practing and Ref.	11,126 9,007 20,055	10,166 8,265 18,811
55		Other: Road Trans	sport Fuel 20	0000					(A) includes natural par (B) One barrel per day i	I liquids, share of equity-accou a equivalent to approximately	ounted investments and proces v 50 tonnes a year, depending	essing for others. g on the specific gravity	ty of the crude oil.	el unit New Ser ancesta servelunt autors (B)(C) autores colores colores	100 840 840 840 840 840	**************************************	=				
55 56									Crude oil Feedstocks	enade (e		2011 2,652 193	2010 2000 2,922 2,783 744 265 254 700 2	a an anna an anna an anna anna anna an	1,000 001 0,000000	* 077 2.001 2.08 700 0.400 6.100 1. which are in the nature of exchanges. Aske Mest in 2011 was a restautor in oil product	=				
57	Alternatively,	IPCC default) net calorific					Total Europe Asia-Pacific Americas			2,845 1,041 666 1,075	3,197 3,097 page 2 1,314 1,330 660 532 1,158 1,141	anno a mar a part antiga of total of and							
58 59) default carb	on content, ko	jC/GJ			Other Total (A) Includes crude of, r	atural gas liquids and feedato	ocks processed in crude distil	63 2,645 Bation units and in second	75 64 3,197 3,087 condary conversion units. It of the starte of			Shell 20-F, pag	ge 41.				
<u> </u>	thus		44,517,647 44,518						BUILDING PRODUCED	CUTTUEN IN		2011	THOUSAND IND (0) 2009 2009								
61				D MtC					Gasolines Kerosines Gas/Diesel olis Fuel oli			993 339 977 252	1,224 1,179 354 341 1,074 1,025 315 279								
62				6 MtCO2					Other Total (A) Excludes 'own use" (B) One barrel per rise	and products acquired for bler a equivalent to approximate	2, anding purposes. y 50 tonnes a year, depanding	385 2,946 a on the specific growth	442 432 3,409 3,256 ty of the crude oil.								
63																					

A	BC	D	E	F	G	Н		1 .	J	К	L	М	N	0	P (
64	· · ·				1	1						<u>.</u>	4	<u>.</u>	· ·
65															
66	Hess Corporation	n													
67						Hess; Shell did not pr		.3)							
68	Carbon Disclosure Project, RDS a			Gross Scope 1	2008	2009	2010								
69	Section 7: Emissions Methodolog			Hess, Table OG3.3		tCO2e	tCO2e	_						-	
70	Section 8: Emissions Data (1Jan			Combustion	5,201,551	5,105,665	5,455,802				Entity 2010	production and emissi		1	
71	Section 9: Scope 1 Emissions Bre			Flaring	3,034,570	3,714,342	2,847,295					Crude oil & NGL	Natural gas	-	
72	Section 10: Scope 2 Emissions B Section 12: Energy	reakdown		Process emissions Vented emissions		60,553 119,112	74,222 8,204				Production	million bbl 112	Bcf 244	linked	
73	Section 15: Scope 3 Emissions			Fugitive emissions		83,009	54,440				FIGURCION	MtCO2/million bbl		lilikeu	
75	beetion 15. beope 5 Emissions			Total	10,339,213	9,082,681	8,439,963				Emission factor	0.371	0.053	linked	
73 74 75 76					,,	-,,	-,,	_				MtCO2	MtCO2	-	
77 1	Gross Scope 1	tCO2e			tCO2e						Emissions	42	13	1	
78	Exploration & production	5,115,756	60.5%		8,226,711	97.3%				_		kg CO2/tCO2	kg CO2/tCO2		
79	Refining	3,263,815	38.6%		192,823	2.3%		tCH4]	Vented CO2 EF	3.83	28.53		
80	Retail & marketing	8,949	0.1%		33,093	0.4%					Flaring EF	15.94	1.74		_
81	Storage, transportation, & dist	64,106	0.8%			0.0%					Fugitive methane		9.88		
82 83	Other	8,452,626	0.0%			0.0%	1			A	Fugitive methane		207.44 MtC02e	kg CO2e/tCO2	_
83	Total	8,452,626	100.0%	Total	8,452,627	100.0%	-			Ancill	llary emissions, 2010 Vented CO2	0.2		-	
85		.g, rending, 0117		L	5,752,027	100.0%	L				Flaring	0.2			
86											Fugitive methane		0.1	MtCH4	
87											Fugitive methane	e 1.7	2.7		
88	Gross Scope 2			Energy	MWh						Total ancillary	2.5			
89	Exploration & production	370,068		Fuel	12,751,728	Fuel energy use is d	lirect, therefore So	ope 1			Total, 2010:		MtCO2e	Percent oil	ercent gas
90 91	Refining	72,959		Electricity	3,476,964						Production	42			6 80.8%
91	Retail & marketing	126,633		Heat	-						Ancillary	3	3		6 19.2%
92 93 94 95 96 97 98 99	Storage, transportation, & dist Total	11,778 581,438		Steam Cooling	-						Total Total, 2010:	44 MtCO2e	16 Percent	1	
94	Total	301,430		Total	16,228,692	-				L	Total production			6	
95				Tota	10,220,032	1					Total ancillary	6			
96											Total, 2010	60			
97						t fuel energy inputs a				_	Total CH4	tCH4 gas	methane intensity		
98		1 kWh =	3.60	MJ	Therefore	12,751,728					This project		3.82		
99							45,906	TJ		_	Self-reported CDP				_
<u>100</u> 101					C 1. A	ume own energy is a				Perce	ent of Carbon Majors	4.39%	6 22.76	multiple	
101				h	eat content nat gas										
102						41,544,091,222					Comparing en	tity's CDP submissio	on to this study		
104							Bcf own energy (f nat gas)			Companing on			ent of Product emi	issions.
105	Gross Scope 3				CME Gas EF		MtC/Bcf	, s., s., s., s., s., s., s., s., s., s.					MtCO2e	this study	,
106					Gas Carbon	0.69					Product emission		54.7	100.0%	
107	Use of sold products	40,200,000			Gas CO2	2.53	MtCO2 own energ	У			Ancillary emission		5.6		
108	Transportation and distribution	32,493									Entity total, 2010		60.3		6 100.0%
109	Transportation and distribution	56,840				sume own energy is					Product emission	,	40.2		
<u>110</u> 111	Other: Business Travel - Air total Scope 3	19,661 40,308,994			IPCC, heat value		GJ/bbl bbl own energy				Total scope 3, Cl Scope 1, CDP	UP	40.3 8.5		
112	total scope s	40,300,334			CME liquids EF		kgC/bbl					Product emiss. CDP	8.5 48.8		
113					Liquids Carbon		tC own energy				"Own fuel" emissi		40.0		
114					Liquids CO2		MtCO2 own energy	IY.				dd Scope 2 emissions			
115								-				inputs to electricity a			
116						n energy is average o									
117					Average gas & liqui		MtCO2 own energy								
118					2/3 gas & 1/3 liqui	2.72	MtCO2 own energy	<u>IY</u>							
119 120	Oil, IPCC 20.00 kg	C/GJ, default C conte	nt IPCC	T		Proved reserves	Production, 2010	7							
121		C/GJ, default c conte C/GJ, default carbon			Hess CDP, OG1.2	BOE	BOE	'							
122		jor 03, derault calboli	Content		Crude oil	1,104,000,000	112,055,000	1							
123					Natural gas	433,000,000	40,515,000								
					Total	1,537,000,000	152,570,000								
124															
122 123 124 125															
<u>124</u> <u>125</u> <u>126</u> 127															

Image: Normal Sector V W X Y Z A AB AC AD AE AF AG 65 Hess Corporation 53 1 <th>AH</th>	AH
66 67 68 69 69 69 69 69 69 60 70 70 70 70 72 72 73 73 73 74 74 74 75 75 76 76 76 76 76 76 76 76 76 76 76 76 76	
66 Hess Corporation 67 3.2 69 Please break down your total gross global Scope 1 emissions by business division 71 Business Division Scope 1 metric tonnes CO2e 72 Refining 2363415 73 Retail K Marketing 74 Storage, transportation and distribution 76 2.2 77 Please break down your total gross global Scope 1 emissions by GHG type 78 GHG type 80 CO2 81 CH4 92 CH4 192823 N20 33083 83 Please break down your total gross global Scope 2 emissions by business division 84 10.2a 85 Please break down your total gross global Scope 2 emissions by business division 86 Refining 87 Business division 88 Refining 89 Refining 90 Scope 2 metric tonnes CO2e 89 Refining 90 Scope 2 metric tonnes CO2e 89 Refining 90 Scope 3 metric tonnes CO2e 89 Refining 89 Refining 90 Scope 3 metric tonnes CO2e 89 Refining 90	
67 9.28 70 Business Division 71 Exploration & Production 73 Refniling 74 Real & Arxeting 75 Storage, transportation and distribution 76 9.26 77 Piesse break down your total gross global Scope 1 metric tonnes CO2e 75 Storage, transportation and distribution 76 9.26 77 Piesse break down your total gross global Scope 1 emissions by GHG type 76 9.26 77 Piesse break down your total gross global Scope 1 emissions by GHG type 77 Piesse break down your total gross global Scope 2 emissions by GHG type 78 GHG type Scope 1 metric tonnes CO2e 80 CO2 8226711 81 CH4 192823 82 N20 33093 83 Piesse break down your total gross global Scope 2 emissions by business division 86 Exploration & Scope 2 metric tonnes CO2e 87 Business division Scope 2 metric tonnes CO2e 88 Exploration & Stroduction 370086 89 Refning 72959 90 Refail & Marketing 12863	
63 9.2a 69 Please break down your total gross global Scope 1 emissions by business division 70 Business Division Scope 1 metric tomes CO2e 73 Retail & Marketing 8949 74 Storage, transportation and distribution 64106 76 Storage, transportation and distribution 64106 76 Storage, transportation and distribution 64106 76 Storage, transportation and distribution 64106 77 Please break down your total gross global Scope 1 emissions by GHG type 76 Storage, transportation and distribution 64106 77 Please break down your total gross global Scope 2 emissions by GHG type 80 Storage 2 metric tomes CO2e 81 Storage 2 metric tomes CO2e 82 Please break down your total gross global Scope 2 emissions by business division 83 Please break down your total gross global Scope 2 emissions by business division 84 Please break down your total gross global Scope 2 emissions by business division 85 Please break down your total gross global Scope 2 emissions by business division 86 Storage, transportation and distribution 87 Storage, transportation and distribution 88 Storage, transportation and distrinbution 89 Retal	
69 Please break down your total gross global Scope 1 metric tonnes CO2e 70 Scope 1 metric tonnes CO2e 71 Storage, transportation and distribution 72 73 74 Storage transportation and distribution 75 Storage transportation and distribution 76 32.c 77 Please break down your total gross global Scope 1 emissions by GHG type 77 Please break down your total gross global Scope 1 emissions by GHG type 77 GHG type Scope 1 metric tonnes CO2e 80 CO2 S225711 81 CH4 12.2a 83 Please break down your total gross global Scope 2 emissions by business division 83 Storage, transportation and distribution 84 D2.a 83 D2.a 84 Please break down your total gross global Scope 2 emissions by business division 84 D2.a 83 Please break down your total gross global Scope 2 emissions by business division 84 Please break down your total gross global Scope 2 metric tonnes CO2e 83 Storage, transportation and distribution 84 Please break down your total gross global Scope 2 metric tonnes CO2e 84 Please break down your total gross global Scope 2 metric tonnes CO2e 84 </td <td></td>	
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77 Please break down your total gross global Scope 1 metric tonnes CO2e 80 CO2 6226711 81 CO2 6226711 82 N20 33093 83 N20 33093 84 10.2a Please break down your total gross global Scope 2 emissions by business division 86 Business division Scope 2 metric tonnes CO2e 87 Business division Scope 2 metric tonnes CO2e 88 Refining 72059 90 Retail & Marketing 126633 91 Storage, transportation and distribution 11778	
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89 Refining 72959 90 Retail & Marketing 126633 91 Storage, transportation and distribution 11778 92 93 94 94	
90 Retail & Marketing 126633 91 Storage, transportation and distribution 11778 92 93 94 05	
92 93 94 95	
93 94 95	
95 Hess CDP, section 7.4	
97 Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data	
98 Fuel/Material/Energy Emission Factor Unit Reference	
99 Distillate fuel oil No 2 163.05 Ib CO2 per million BTU API Compendium of GHG Emissions	
101 Petroleum coke 225.78 Ib CO2 per million BTU API Compendium of GHG Emissions 102 Residual fuel oil 171.96 Ib CO2 per million BTU API Compendium of GHG Emissions	
102 Residual fuel oil 171.96 Ib CO2 per million BTU API Compendium of GHG Emissions 103 104	
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128 129														
	22													
130	BP													
131					BP did not provide O	JG3.3 data on comb	ustion or other Scor	pe 1 details		Protocol and metho	odology:			
132	Carbon Disclosure Project, RD)S anno 2010 subr	nission	Gross Scope 1	2008	2009	2010			BP Environmental P	erformance Reportin	ng Requirements, API,	and IPIECA	
133	Section 7: Emissions Methodo			Table OG3.3	tCO2e	tCO2e	tCO2e				•	• • • •		
134	Section 8: Emissions Data (1.	0,		Combustion			L			Entity 2010 p	roduction and emissi	ions, this study	1	
135	Section 9: Scope 1 Emissions			Flaring			I				Crude oil & NGL	Natural gas	1	
136	Section 10: Scope 2 Emission			Process emissions			I				million bbl	Bcf	1	
137	Section 12: Energy	15 Dicakdown		Vented emissions			I			Production	867	3,066	linked	
138	Section 15: Scope 3 Emission	ne		Fugitive emissions			I			riodaction	MtCO2/million bbl	MtCO2/Bcf	iiiikeu	
139	Section 15. Scope 5 Emission	15		Total	-					Emission factor	0.371	0.053	linked	
				TULA						LINISSION TACLO	MtCO2	MtCO2	linkeu	
140	One of Course 1	1000	7		1000					e · ·				
141	Gross Scope 1	tCO2e			tCO2e		1			Emissions	322	164		
142	Exploration & production	28,820,000	44.4%			92.8%			1		kg CO2/tCO2	kg CO2/tCO2	-	
143	Refining and marketing	32,680,000	50.3%		4,680,000	7.2%	222,857	tCH4		Vented CO2 EF	3.83	28.53		
144	Other business	3,420,000	5.3%							Flaring EF	15.94	1.74		
145			0.0%							Fugitive methane	1.92	9.88	kg CH4/tCO2	
146			0.0%							Fugitive methane	40.39	207.44	kg CO2e/tCO2	
147	Total	64,920,000	100.0%						Ancillar	y emissions, 2010	MtCO2e	MtCO2e		
148				Total	64,920,000	100.0%				Vented CO2	1.2	4.7		
149	65,030,000 Scope 1, 2	009								Flaring	5.1	0.3		
150	64,920,000 Scope 1, 2	.010								Fugitive methane	0.6	1.6	MtCH4	
151					Fuel energy	use is direct, therefore	fore Scope 1			Fugitive methane	13.0	34.0		
152	Gross Scope 2		Energy	MWh	Fuel	CDP Table 12.3	MWh]		Total ancillary	19.4	38.9		
153	Exploration & production	1,870,000		244,900,000						Total, 2010:	MtCO2e	MtCO2e	Percent oil	ercent gas
154	Refining and marketing		Electricity (impo						J	Production	322	164		80.8%
155	Other business	100,000		-	Natural gas		25,000,000			Ancillary	19	39		19.2%
156		100,000	Steam (imported	16,330,000			244,900,000			Total	341	203	0.1.70	
157	Total	10,000,000		-		: Appears to all own				Total, 2010:	MtCO2e	Percent		
158	1008	10,000,000	Total	295,660,000		. Appears to an own	liuei			Total production	486	89.3%	-	
159			Total	233,000,000	1					Total ancillary	58	10.7%		
160										Total, 2010	544	10.770		
161					Accumo that	fuel energy inputs a	aro "own fuol"			Total CH4	tCH4 gas	methane intensity		
162		1 kWh =	3.60	MI	Therefore		881,640,000,000	MI	٦	This project	2,237,610		kg CH4/tCO2	
163		1 KWII -	5.00	MJ	mererore	244,300,000	881,640			Self-reported CDP	222,857		kg CH4/tCO2	
164	9,590,000 Scope 2, 20	009					001,010	15	Percen	t of Carbon Majors	9.96%		multiple	
165	10,000,000 Scope 2, 20										5.50%	10.04	multiple	
166	10,000,000 300pe 2, 20						Il natural das							
167				h			all natural gas							
167				he	eat content nat gas	1.1050	MJ/cf							
				he		1.1050 797,864,253,394	MJ/cf cf nat gas	not gos)						
	Cross Same 2			he	eat content nat gas	1.1050 797,864,253,394 797.86	MJ/cf cf nat gas Bcf own energy (if	nat gas)				on to this study	1	
169	Gross Scope 3		7	he		1.1050 797,864,253,394 797.86 0.017	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf	nat gas)			ity's CDP submissic)	aiana
<u>169</u> 170		tCO2e		he	eat content nat gas	1.1050 797,864,253,394 797.86 0.017 13.24	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy				ity's CDP submissic	Perce	nt of Product emis	sions,
169 170 171	Use of sold products	tCO2e 573,000,000	BP, 2010	he	eat content nat gas	1.1050 797,864,253,394 797.86 0.017 13.24	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf			Comparing ent	,	Perce MtCO2e	this study	sions,
169 170 171 172	Use of sold products Transportation and distributio	tCO2e 573,000,000 or not provided	BP, 2010	he	eat content nat gas CME Gas EF Result	1.1050 797,864,253,394 797.86 0.017 13.24 48.54	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy			Comparing ent Product emissions	, this study	Percer MtCO2e 485.7	this study 100.0%	sions,
169 170 171 172 173	Use of sold products Transportation and distributic Transportation and distributic	tCO2e 573,000,000 or not provided or not provided	BP, 2010	he	eat content nat gas CME Gas EF Result Case 2: Assume c	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 own energy is all cru	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy ude oil & products			Comparing ent Product emissions Ancillary emissions	, this study s, this study	Percel MtCO2e 485.7 58.3	this study 100.0% 12.0%	
169 170 171 172 173 174	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air	tCO2e 573,000,000 or not provided or not provided not provided		he	eat content nat gas CME Gas EF Result	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 own energy is all cru 5.78	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy ude oil & products GJ/bbl			Comparing ent Product emissions Ancillary emissions Entity total, 2010	, this study s, this study , this study	Percel MtCO2e 485.7 58.3 544.0	this study 100.0% 12.0% 112.0%	
169 170 171 172 173 174 175	Use of sold products Transportation and distributic Transportation and distributic	tCO2e 573,000,000 or not provided or not provided		he	CME Gas EF Result Case 2: Assume of IPCC, heat value	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 own energy is all cru 5.78 152,436,883	MJ/cf cf nat gas Bcf own energy (iff MtC/Bcf MtC/Bcf MtCovn energy MtCO2 own energy de oil & products GJ/bbl bbl own energy			Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions	, this study s, this study , this study , CDP	Perce MtCO2e 485.7 58.3 544.0 573.0	this study 100.0% 12.0% 112.0% 118.0%	
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169 170 171 172 173 174 175 176 177 178	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air	tCO2e 573,000,000 or not provided or not provided not provided		he	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 own energy is all cru 5.78 152,436,883 106.40 16,219,086	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy ude oil & products GJ/bbl bbl own energy kgC/bbl			Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F	, this study s, this study , this study , CDP PP Product emiss. CDP	Percei MtC02e 485.7 58.3 544.0 573.0 573.0 67.9 637.9	this study 100.0% 12.0% 112.0% 118.0% 118.0% 13.4% 131.3%	100.0%
169 170 171 172 173 174 175 176 177 178 179	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air	tCO2e 573,000,000 or not provided or not provided not provided		he	eat content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 0wn energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbi bbi own energy kgC/bbi tC own energy MtCO2 own energy			Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CE Scope 1, CDP Entity Scope 1 + F "Own fuel" emissio	, this study s, this study , this study , CDP ,p Product emiss. CDP ons (CMS)	Percei MtC02e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 637.9	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1%	100.0%
169 170 171 172 173 174 175 176 177 178 179 180	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air	tCO2e 573,000,000 or not provided or not provided not provided		he	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 own energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy ude oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy			Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CD Scope 1, CDP Entity Scope 1 + F "Own fuel" emission Note: we do not ac	, this study s, this study , this study , CDP P Product emiss. CDP ons (CMS) Id Scope 2 emissions	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 s to this comparison t	this study 100.0% 12.0% 112.0% 118.0% 13.4% 131.3% 11.1% able,	100.0%
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169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided or not provided not provided]	he	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own Average gas & liquir	1.1050 797,864,253,394 797,86 0.017 13.24 48.54 own energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19	MJ/cf cf nat gas Bcf own energy (iff MtC/Bcf MtC/2 own energy MtCO2 own energy Ide oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%
169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided or not provided not provided 573,000,000	C content IPCC	1	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own Average gas & liquir	1.1050 797,864,253,394 797,86 0.017 13.24 48.54 own energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%
169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided not provided 573,000,000	C content IPCC	1	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 0000 energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19 Proved reserves	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%
169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided not provided 573,000,000	C content IPCC	1	eat content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 0000 energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19 Proved reserves	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%
169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided not provided 573,000,000	C content IPCC	1	eat content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui not provide OG data Crude oil	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 0000 energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19 Proved reserves	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%
169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187	Use of sold products Transportation and distributic Transportation and distributic Other: Business Travel - Air total Scope 3	tCO2e 573,000,000 or not provided not provided 573,000,000	C content IPCC	1	CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui not provide OG data Crude oil Natural gas	1.1050 797,864,253,394 797.86 0.017 13.24 48.54 0000 energy is all cru 5.78 152,436,883 106.40 16,219,086 59.48 energy is average o 54.01 52.19 Proved reserves	MJ/cf cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy MtCO2 own energy	/ / / / /		Comparing ent Product emissions Ancillary emissions Entity total, 2010 Product emissions Total scope 3, CC Scope 1, CDP Entity Scope 1 + F "Own fuel" emissic Note: we do not ac since primary fuel i	, this study s, this study , this study , CDP pP Product emiss. CDP ons (CMS) Id Scope 2 emissions puts to electricity a	Percei MtCO2e 485.7 58.3 544.0 573.0 573.0 64.9 637.9 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54.0	this study 100.0% 12.0% 112.0% 118.0% 138.0% 13.4% 131.3% 11.1% able, for.	100.0%

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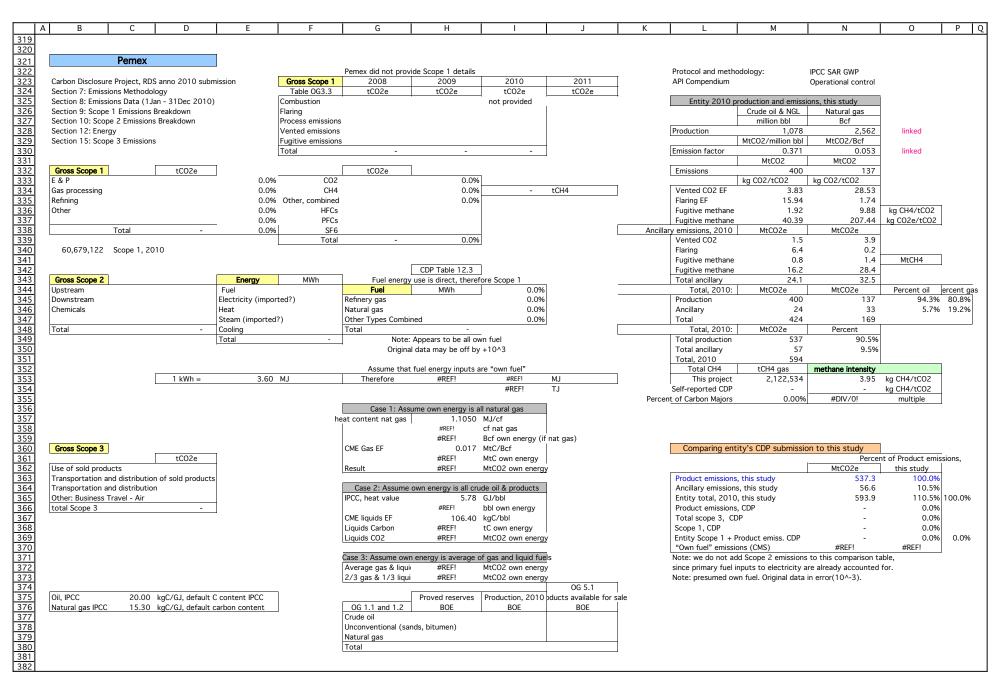
R	S T		U	V	W	X	Y	Z	AA
28	•		<u> </u>	-			1 ·		1
9									
			BP						
		Fue	l/Material/Ene	rav	Emission	Unit		Reference	
	Other: Various h			f generated fuel gas	Factor		For significant sour	ces as appropriate fo	r specific operation (
	refinery fuel gas.		Televant to sen	generated later gas	and	Other: Various	7.2a above)	des as appropriate to	a specific operation (
	Natural gas				56.1	Other: kg of CO2	Revised 1996 IPCC Inventories	C Guidelines for Natio	onal Greenhouse Ga
						per GJ Other: kg of CO2		C Guidelines for Natio	onal Greenhouse Ga
	Liquefied petrole	eum gas (LPG	i)		63.1	per GJ	Inventories		
	Jet kerosene				71.5	Other: kg of CO2 per GJ	Revised 1996 IPCC Inventories	C Guidelines for Natio	onal Greenhouse Ga
	Karac					Other: kg of CO2		C Guidelines for Natio	onal Greenhouse Ga
	Kerosene				71.9	per GJ	Inventories		
	Crude oil				73.3	Other: kg of CO2 per GJ	Revised 1996 IPCC Inventories	C Guidelines for Natio	onal Greenhouse Ga
	Residual fuel oil				77.4	Other: kg of CO2	Revised 1996 IPCC	C Guidelines for Natio	onal Greenhouse Ga
	rtesiduai idel oli				11.4	per GJ	Inventories		
		BP CDP	2010 ,sectio	on 7.4					
				Fuels			MWh		
	Other: Self gen						190800000		
		drocarbons	s. Includes: re	esidual fuel oil; F	CC coke; diesel; and	petrochemical resid			
	Natural gas						25000000		
	Natural gas	CDD I					25000000		
	Natural gas	CDP T	Table 12.3				25000000		
	Natural gas	CDP 1	Table 12.3				25000000		
	Natural gas	CDP 1	Table 12.3				25000000		
	Natural gas	CDP 1	Table 12.3				25000000		
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	Natural gas	CDP 1	Fable 12.3				2500000		
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	Natural gas	CDP 1	Table 12.3				2500000		

A	В	C	D	E	F	G	Н	I	J	K	L	М	Ν	0	
				_											
	E	xxon Mobil										nan & CEO, signed off		sponse	
~	Carlana Di d	Desired DDC			Create Course C	(data provided by He					Protocol and metho	0,	IPCC SAR GWP		
	Carbon Disclosure Section 7: Emissio			mission	Gross Scope 1 Table OG3.3	2008 tCO2e	2009 tCO2e	2010 tCO2e	2011 tCO2e		IPIECA 2003, and A	PI 2009	Equity share		
	Section 8: Emissio)	Combustion	10026	10026	not provided	10026		Entity 2010 pr	oduction and emission	ons, this study	1	
	Section 9: Scope			/	Flaring	15,800,000	12,400,000	9,800,000	11,200,000		Endry 2010 pl	Crude oil & NGL	Natural gas		
	Section 10: Scope		Breakdown		Process emissions			not provided				million bbl	Bcf		
	Section 12: Energ				Vented emissions			not provided			Production	884	4,434	linked	
S	Section 15: Scope	e 3 Emissions			Fugitive emissions Total	15,800,000	12,400,000	not provided 9,800,000			Emission factor	MtCO2/million bbl 0.371	MtCO2/Bcf 0.053	linked	
					TOTAL	13,800,000	12,400,000	3,800,000			LINISSION TACLO	MtCO2	MtCO2	iiiikeu	
	Gross Scope 1	Γ	tCO2e	7		tCO2e					Emissions	328	237		
	Jpstream		61,000,000			128,000,000	97.0%					kg CO2/tCO2	kg CO2/tCO2		
	Downstream		53,000,000			3,000,000	2.3%	142,857	tCH4		Vented CO2 EF	3.83	28.53		
C	Chemicals		18,000,000	13.6%	Other, combined HFCs	1,000,000	0.8%				Flaring EF Fugitive methane	15.94 1.92	1.74 9.88	kg CH4/tCO2	
				0.0%							Fugitive methane	40.39	9.88 207.44		
		Total	132,000,000						Γ	Ancilla	ry emissions, 2010	MtCO2e	MtCO2e	kg 0020/1002	-
			, ,		Total	132,000,000	100.0%				Vented CO2	1.3	6.8		
											Flaring	5.2	0.4		_
						Г	CDP Table 12.3				Fugitive methane	0.6	2.3 49.1	MtCH4	
	Gross Scope 2			Energy	MWh	Fuel energy (use is direct, therefo	ore Scope 1			Fugitive methane Total ancillary	13.3 19.8	56.3	-	
	Jpstream		2,000,000		360,000,000,000	Fuel		reduced by 10^-3	-		Total, 2010:	MtCO2e	MtCO2e	Percent oil	er
	Downstream		7,000,000	Electricity (impor	35,000,000,000		140,000,000,000	140,000,000	38.9%		Production	328	237	94.39	% 8
С	Chemicals		6,000,000			Natural gas	130,000,000,000	130,000,000	36.1%		Ancillary	20	56	5.79	% 1
-			15 000 000		15,000,000,000	Other Types Combi	90,000,000,000	90,000,000	25.0% 100.0%		Total Total, 2010:	348	293		
1	Fotal		15,000,000			Total	360,000,000,000	360,000,000				MtCO2e	Percent		
				Lotal	410 000 000 000	Note: /	Annears to be all ow	n fuel			,	565	88.1%		
				Total	410,000,000,000		Appears to be all ow data may be off by				Total production	565 76	88.1% 11.9%		
				Total	410,000,000,000						,	76 641	11.9%		
		F		L		Original Assume that f	data may be off by fuel energy inputs ar	+10^3 re "own fuel"			Total production Total ancillary Total, 2010 Total CH4	76 641 tCH4 gas	11.9% methane intensity		
			1 kWh =	Total 3.60		Original	data may be off by fuel energy inputs ar	+10^3 re "own fuel" ####################################	MJ		Total production Total ancillary Total, 2010 Total CH4 This project	76 641 tCH4 gas 2,972,023	11.9% methane intensity 5.26	kg CH4/tCO2	
	9.590.000	Scope 2, 2009		L		Original Assume that f	data may be off by fuel energy inputs ar	+10^3 re "own fuel"	MJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP	76 641 tCH4 gas 2,972,023 142,857	11.9% methane intensity 5.26 0.25	kg CH4/tCO2 kg CH4/tCO2	
	9,590,000 \$ 10,000,000 \$)	L		Original Assume that f	data may be off by fuel energy inputs ar	+10^3 re "own fuel" ################ 1,296,000	MJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project	76 641 tCH4 gas 2,972,023	11.9% methane intensity 5.26	kg CH4/tCO2	
)	L	MJ	Original Assume that f	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050	+10^3 <u>re</u> "own fuel" <u>################</u> 1,296,000 I natural gas MJ/cf	MJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP	76 641 tCH4 gas 2,972,023 142,857	11.9% methane intensity 5.26 0.25	kg CH4/tCO2 kg CH4/tCO2	
)	L	MJ	Original Assume that f Therefore Case 1: Assu	data may be off by fuel energy inputs an 360,000,000 me own energy is al 1.1050 1,172,850,678,733	+10^3 <u>re</u> "own fuel" <u>################</u> 1,296,000 <u>I natural gas</u> MJ/cf cf nat gas	MJ TJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP	76 641 tCH4 gas 2,972,023 142,857	11.9% methane intensity 5.26 0.25	kg CH4/tCO2 kg CH4/tCO2	
	10,000,000 \$)	L	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 1,173	+10^3 re "own fuel" ####################################	MJ TJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors	76 641 tCH4 gas 2,972,023 142,857 4.81%	11.9% methane intensity 5.26 0.25 20.80	kg CH4/tCO2 kg CH4/tCO2	
)	L	MJ	Original Assume that f Therefore Case 1: Assu	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 1,173 0.017	+10^3 <u>e "own fuel"</u> <u>###################</u> 1,296,000 I natural gas MJ/cf cf nat gas Bcf own energy (if MtC/Bcf	MJ TJ	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors	76 641 tCH4 gas 2,972,023 142,857	11.9% methane intensity 5.26 0.25 20.80 m to this study	kg CH4/tCO2 kg CH4/tCO2 multiple	
_	10,000,000 \$	Scope 2, 2010)	3.60	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1,1050 1,172,850,678,733 1,173 0,017 19.46	+10^3 re "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors	76 641 tCH4 gas 2,972,023 142,857 4.81%	11.9% methane intensity 5.26 0.25 20.80 m to this study	kg CH4/tCO2 kg CH4/tCO2	
U T	10,000,000 S Gross Scope 3 Jse of sold produc Fransportation an	Scope 2, 2010 cts d distributior	tCO2e 1,600,000 na	3.60	MJ	Original Assume that f Therefore Case 1: Assu cat content nat gas CME Gas EF Result	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 1,173 0.017 19,46 71.36	+10^3 e "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio	11.9% methane intensity 5.26 0.25 20.80 m to this study Perce MtCO2e 565.3	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09	%
U T T	10,000,000 S Gross Scope 3 Jse of sold produc Fransportation an Fransportation an	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na	3.60 XOM, New Zealan	MJ	Original Assume that f Therefore Case 1: Assu eat content nat gas CME Gas EF Result Case 2: Assume o	data may be off by fuel energy inputs ar 360,000,000 1.1050 1.172,850,678,733 1.173 0.017 19.46 71.36 wn energy is all crur	+10^3 e "own fuel" ###################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study , this study	11.9% methane intensity 5.26 0.25 20.80 m to this study Perce MtCO2e 565.3 76.1	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59	<mark>%</mark> %
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu cat content nat gas CME Gas EF Result	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1,1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crur 5,78	+10^3 e "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010,	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59	% % % 10
U T C	10,000,000 S Gross Scope 3 Jse of sold produc Fransportation an Fransportation an	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assurat content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 1,173 0.017 19,46 71.36 wn energy is all cruc 5.78 224,080,351	+10^3 re "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study cDP	11.9% methane intensity 5.26 0.25 20.80 m to this study Perce MtCO2e 565.3 76.1	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59	<mark>%</mark> % % 10
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 0.017 19.46 71.36 wn energy is all crut 5.78 224,080,351 10.6.40 23,841,858	+10^3 e "own fuel" ###################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P	11.9% methane intensity 5.26 0.25 20.80 n to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.33 0.39 23.49	% % % 10 %
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu eat content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 0.017 19.46 71.36 wn energy is all crut 5.78 224,080,351 10.6.40 23,841,858	+10^3 e "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study cDP P roduct emiss. CDP	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 1.32.0 133.6	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.49 23.69	% % % % %
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assure at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2	data may be off by fuel energy inputs ar 360,000,000 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all cruu 5,78 224,080,351 106,40 23,841,858 87,43	+10^3 e "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emissions	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study cDP P roduct emiss. CDP ns (CMS)	11.9% methane intensity 5.26 0.25 20.80 n to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 1.6 1.32.0 133.6 79.4	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 0.39 0.39 0.39 23.49 23.69 14.09	% % % % %
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own	data may be off by fuel energy inputs ar 360,000,000 1,1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crut 5,78 224,080,351 106,40 23,841,858 87.43 energy is average o	+10^3 e "own fuel" ###################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emissio	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study this study CDP P roduct emiss. CDP ms (CMS) d Scope 2 emissions	11.9% methane intensity 5.26 0.25 20.80 n to this study Perce MtCO2e 565.3 76.1 641.4 1.6 132.0 133.6 79.4 to this comparison t	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C	10,000,000 S Gross Scope 3 Jse of sold produ Fransportation an Fransportation an Dther: Business Tr	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assure at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2	data may be off by fuel energy inputs ar 360,000,000 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crut 5,78 224,080,351 106,40 23,841,858 87,43 energy is average o 79.39	+10^3 e "own fuel" ####################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study cDP P roduct emiss. CDP ns (CMS)	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dather: Business Tr total Scope 3	Scope 2, 2010 cts d distributior d distributior	tCO2e 1,600,000 na na na	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui	data may be off by fuel energy inputs ar 360,000,000 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crut 5,78 224,080,351 106,40 23,841,858 87,43 energy is average o 79.39	+10^3 e "own fuel" ###################################	MJ TJ nat gas)	Perce	Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dither: Business Tri sotal Scope 3 Dil, IPCC	Scope 2, 2010	tCO2e 1,600,000 na na 1,600,000	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1.12,850,678,733 1.173 0.017 19.46 71.36 wn energy is all crut 5.78 224,080,351 106.40 23,841,858 87.43 energy is average o 79.39 76.72 Proved reserves	+10^3 e "own fuel" ####################################	MJ TJ nat gas)		Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dather: Business Tr total Scope 3	Scope 2, 2010	tCO2e 1,600,000 na na 1,600,000	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids EF Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui OG 1.1 and 1.2	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1,1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crut 5,78 224,080,351 106,40 23,841,858 87,43 energy is average o 79.39 76.72 Proved reserves BOE	+10^3 e "own fuel" ####################################	MJ TJ nat gas) , , , , , , , , , , , , , , , , , , ,		Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dither: Business Tri sotal Scope 3 Dil, IPCC	Scope 2, 2010	tCO2e 1,600,000 na na 1,600,000	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	data may be off by fuel energy inputs ar 360,000,000 me own energy is all 1.1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all cruu 5.78 224,080,351 106.40 23,841,858 8,743 energy is average o 79.39 76.72 Proved reserves 80E 8,890,000,000	+10^3 e "own fuel" ####################################	MJ TJ nat gas)		Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dither: Business Tri sotal Scope 3 Dil, IPCC	Scope 2, 2010	tCO2e 1,600,000 na na 1,600,000	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that 1 Therefore Case 1: Assu CASE 1: Assu CASE 1: Assu CASE 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui OG 1.1 and 1.2 Crude oil Unconventional (sai	data may be off by fuel energy inputs ar 360,000,000 me own energy is al 1.1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all crut 5.78 224,080,351 106,40 23,841,858 87,43 energy is average o 79.39 76.72 Proved reserves BOE 8,890,000,000 2,783,000,000	+10^3 e "own fuel" ####################################	MJ TJ nat gas) S OG 5.1 bducts available for sa BOE 2,341,000,000		Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % % % % %
U T C t	10,000,000 S Gross Scope 3 Jse of sold produc Transportation an Dither: Business Tri sotal Scope 3 Dil, IPCC	Scope 2, 2010	tCO2e 1,600,000 na na 1,600,000	3.60 XOM, New Zealan 274,500,000	MJ	Original Assume that f Therefore Case 1: Assu at content nat gas CME Gas EF Result Case 2: Assume of IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	data may be off by fuel energy inputs ar 360,000,000 me own energy is all 1.1050 1,172,850,678,733 1,173 0,017 19,46 71.36 wn energy is all cruu 5.78 224,080,351 106.40 23,841,858 8,743 energy is average o 79.39 76.72 Proved reserves 80E 8,890,000,000	+10^3 e "own fuel" ####################################	MJ TJ nat gas) , , , , , , , , , , , , , , , , , , ,		Total production Total ancillary Total, 2010 Total CH4 This project Self-reported CDP nt of Carbon Majors Comparing enti Product emissions, Ancillary emissions Entity total, 2010, Product emissions, Total scope 3, CD Scope 1, CDP Entity Scope 1 + P "Own fuel" emission Note: we do not ad since primary fuel in	76 641 tCH4 gas 2,972,023 142,857 4.81% ty's CDP submissio this study this study this study CDP P roduct emiss. CDP ns (CMS) d Scope 2 emissions puts to electricity ar	11.9% methane intensity 5.26 0.25 20.80 in to this study Perce MtCO2e 565.3 76.1 641.4 1.6 1.6 132.0 133.6 79.4 to this comparison t re already accounted	kg CH4/tCO2 kg CH4/tCO2 multiple nt of Product em this study 100.09 13.59 113.59 0.39 0.39 23.69 14.09 able,	% % 10 % % % 2

	<u> </u>	U	V V		W		^		Ť	Z		AA		AB		AC	AD	AE		AF		AG
		Exxon Mobil																				
Section	7.4: Methodolo	ogy, emission fa	ctors										S	ection 5: Clin	nate Risks,	5.1a: risks	s driven by regulatio	n				
		Emission Fact		nit		Reference	•		ID	Risk drive				De	scription			Potential	Timeframe	Direct/	Likelihood	Magnitud
Natural		130.07		r million BTU	API GHG	Compend	ium, 2009	1				areenhouse	gas emis			nd ecosystem	ns that could be	impact		Indirect		of impac
Refinen	y gas	133.82	lb CO2e pe								signific	ant. Since m	nost of the	se emissions ar	re energy-rela	ated, any inte	grated approach to ill incorporate strategies					
Petroleu		237.00	Ib CO2e pe								to add	ress the risk o	of climate	change. In reco	ognition of the	e long-term na	ature of the risks from					
	e fuel oil No 4 al fuel oil	176.81 182.76		r million BTL r million BTL													narily on targets to limit ons pathways that					
	Low BTU Gas		Ib CO2e pe								ultimat turned	ely stabilize (to focus on a	GHG con adaptation	centrations. As y n as a strategy to	well, internati o mitigate ris	ional and nati k. There has b	ional attention also have been extensive					
											interna	itional focus of	on the co	sts and benefits	of policies to	o reduce GHG	emissions and address deep reductions in GHG					
										Internationa	emissi	ons, and the	cost of th	ese new techno	logies is not	known at this	time. Of course, the	Increased	4.5	Direct	University	University
Section	9.2								IA	agreements	particip	pation. The U	J.S. DOE		s of Greenho	use Gas Emis	ssions and Atmospheric	operational cost	1-5 years	Direct	Unknown	Unknow
9.2a Please	break down y	our total gross	global Scope 1	missions		division					Conce severa	ntrations, exa I stabilization	amined w n scenario	hat costs for CO os. CO2 costs de	02 emissions epend on a n	would be nee umber of fact	cessary to achieve tors, including					
	-	-			y business												educe emissions. Along for lower, more stringent					
		ision Scope 1		CO2e							targets	. For reference	ce, a cost	t of \$100 per me	etric ton of CC	02 would be e	equivalent to adding oline. Throughout the					
	Upstream Downstream	6100000 5300000									world,	national and	regional	policymakers ar	re considerin	ig a variety of						
	Chemicals	1800000									impact	s. In our view	v, assessi	ing options requi	ires an unde	rstanding of t	heir likely effectiveness,					
														eir implications f s and complexit			quality of life. market for securities					
9.2c											traders	or the neces	ssity of ad	iding a new laye	er of regulato	rs and admin	istrators to police emented. It could be					
Please	e break down y	our total gross	global Scope 1	emissions	y GHG type	e					levied	under the cur	rrent tax of	code without req	quiring signifi	icant new infra	astructure or	Increased				
	GHO	type	Scope 1 metri	c tonnes CC)2e				СТ	Carbon taxe	of carb	on in all ecor	nomic de	cisions-from in	ivestments m	hade by comp	ans of reflecting the cost anies to meet their fuel	operational cost	1-5 years	Direct	Unknown	Unknov
	CO2		128000000														tax should be made s—such as income or					
	CH4		3000000											npacts of the car								
	Other: Other C	HG Combined	1000000								attentio	on—is a cap-	and-trade	e system. Before	e we rush to e	enact such a s	s received much system, we must ask					
									C&T	Cap and tra	whethe de Cap-a	er it can best nd-trade syste	achieve (tems inev	our shared goal itably introduce	of actually re unnecessary	educing greer cost and cor	nhouse gas emissions. mplexity that undercut	Increased operational	Current	Direct	Very likely	Linknow
									Cal	schemes							stem requires a new ew "Wall Street" of	cost	Current	Direct	very likely	Unknow
Section	12.2										emissi	ons brokers v	will take t		vay from the g		ing carbon emissions					
12.2		6								Emission	Curren	it and pendin	ng greenh	ouse gas regula	ations may al		our compliance costs,	Increased				
Please s	state now much	fuel, electricity, h	leat, steam, and d	ooling in MW	n your organ	nization has	consume		ER	reporting	expens	sive and redu	uce dema	orting. These req and for hydrocart	bons, as well	l as shifting hy	r products more ydrocarbon demand	operational	Current	Direct	Very likely	Low
	Energy type	MWh								Product	toward	relatively low	wer-carbo	on sources such	as natural g	as.		COSL				
		50000000000 5000000000							EE	efficiency							standards, may exceed lucts thereby increasing	Increased operational	1-5 years	Direct	More likely than	Unknow
	Heat 0									and standar	15			ing supplies in t				cost			not	
		500000000															frisks inherent in the ne Company's control					
C	Cooling 0										and co	uld adversel	ly affect o	ur business, our	r financial and	d operating re	esults or our financial f countries have					
12.3									UNC	Uncertainty surrounding	adopte	d, or are con	nsidering	the adoption of,	regulatory fra	ameworks to	reduce greenhouse gas axes, increased	Increased	Current	Direct	More likely than	Unknow
Please c	complete the tat	ole by breaking do	own the total "Fue	el" figure ente	ered above b	by fuel type			0110	new regulation	efficier	ncy standards	s, and inc	entives or mand	dates for rene	ewable energy	y. These requirements rocarbons, as well as	cost	Guilein	Direct	not	UNKION
	Fuel		MWh								shifting	hydrocarboi	n deman	d toward relative	ely lower-carl	bon sources s	such as natural gas.					
	Refinery gas Natural gas		0000000000								Such a	s monitoring	or seque	ouse gas regula stering emission	auons may al ns.	iso increase o	our compliance costs,					
		es Combined 90								0	Throug	phout the wor	rld, nation	nal and regional tions to mitigate	policymaker GHG emissi	s are conside	ering a variety of evelop capacity to adapt					
										General environmen	to pote	ntial impacts	s. In our vi	ew, assessing o	options requir	res an unders	standing of their likely c growth and guality of	Increased			More	
									REG	regulations, including	life. Po	licy options a	and their	overall effect up	on the Corpo	bration vary gr	reatly from country to	operational cost	1-5 years	Direct	likely than not	Unknow
										planning	expens	sive and redu	uce dema		bons, as well	l as shifting hy	products more ydrocarbon demand					
											toward	relatively lov	wer-carbo	on sources such	as natural g	as.						

	В	C	D	E	F	G	Н		J	К	L	М	N	0	P Q
255	•		•	•	•	•	•	•	•		•	•	•	•	
256		C			2000 datas not	2010									
<u>257</u> 258		Conoco			2009 data; get		ovide Scope 1 details				Protocol and meth	odology	IPCC SAR GWP		
259	Carbon Disclosu	re Project RD	S anno 2010 subn	nission	Gross Scope 1	2008	2009	2010	2011		API Compendium	ouology.	Operational control		
260	Section 7: Emiss				Table OG3.3	tCO2e	tCO2e	tCO2e	tCO2e	+	, a r compondiant		operational control		
261			an - 31Dec 2010)	1	Combustion		not provided	not provided	-		Entity 2010 p	production and emiss	ions, this study		
262	Section 9: Scop				Flaring							Crude oil & NGL	Natural gas	-	
263 264	Section 10: Sco Section 12: Ene		s Breakdown		Process emissions Vented emissions						Production	million bbl 502	Bcf 2,330	linked	
265	Section 15: Sco		s		Fugitive emissions						FIODUCCION	MtCO2/million bbl		iiiikeu	
266 267					Total	-	-	-			Emission factor	0.371	0.053	linked	
267				-	<u> </u>		_		-			MtCO2	MtCO2		
268	Gross Scope 1		tCO2e	15.00/		tCO2e	42.20	1			Emissions	186		-	
269 270	E & P Gas processing		20,987,446 4,703,565	15.9% 3.6%		55,785,049 4,894,075			+CH4	1	Vented CO2 EF	kg CO2/tCO2 3.83	kg CO2/tCO2 28.53	-	
271	Refining		29,899,470		Other, combined		0.0%		ton+]	Flaring EF	15.94	1.74		
272	Other		5,088,641	3.9%							Fugitive methane	1.92		kg CH4/tCO2	1
273				0.0%							Fugitive methane	40.39		kg CO2e/tCO2	
274		Total	60,679,122	46.0%		60.670.104	46.00	-		Ancillar	y emissions, 2010		MtCO2e	-	
275 276	60 679 122	Scope 1, 20	10		Total	60,679,124	46.0%	<u>u</u>			Vented CO2 Flaring	0.7 3.0	3.6 0.2		
277	00,075,122	300pe 1, 20	10				CDP Table 12.3	1			Fugitive methane	0.4		MtCH4	1
278						Fuel energ	y use is direct, there				Fugitive methane	7.5	25.8		1
279	Gross Scope 2			Energy	MWh	Fuel	MWh]	7		Total ancillary	11.2			
280	E & P		959,759		. 0 1 00 400	Refinery gas		0.0%			Total, 2010:	MtCO2e	MtCO2e		ercent gas
281 282	Gas processing Refining		5,604,150	Electricity (impor	8,180,486	Natural gas Other Types Comb	ained	0.0%			Production Ancillary	186 11	124 30		80.8% 19.2%
283	Other			Steam (imported	9,909,171		230,208,028	0.0%			Total	197	154	5.170	13.270
284	Total		7,604,919				al only, no details pro	ovided	_		Total, 2010:		Percent		
285				Total	18,089,657						Total production	311	88.4%		
286 287	7 604 010	C 2 20	10								Total ancillary	41 352	11.6%		
287	7,604,919	Scope 2, 20	010			Assume "T	otal" minus electricit	v and steam			Total, 2010 Total CH4	tCH4 gas	methane intensity		1
289			1 kWh =	3.60	MJ	Therefore		763,626,135,600	MJ]	This project	1,588,050		kg CH4/tCO2	
<u>290</u> 291								763,626	TJ		Self-reported CDP	233,051		kg CH4/tCO2	
291									7	Percen	t of Carbon Majors	14.68%	6.81	multiple	
292 293					h	Case 1: As eat content nat gas	sume own energy is a 1.1050		_						
294							691,064,376,109								
295								Bcf own energy (i	f nat gas)						
296	Gross Scope 3			7		CME Gas EF		MtC/Bcf			Comparing ent	tity's CDP submissi			_
297 298	lles of salation	luete	tCO2e	not provide d		Beault		MtC own energy						nt of Product emi	ssions,
298	Use of sold prod		n of sold products	not provided		Result	42.05	MtCO2 own energ	<u>y</u>		Product emissions	s this study	MtCO2e 310.8	this study 100.0%	1
300	Transportation a			·		Case 2: Assume	e own energy is all cru	ude oil & products			Ancillary emission		40.8	13.1%	
301	Other: Business	Travel - Air				IPCC, heat value	5.78	GJ/bbl	1		Entity total, 2010), this study	351.6		100.0%
302	total Scope 3		-]				bbl own energy			Product emissions	,	-	0.0%	
303 304						CME liquids EF		kgC/bbl			Total scope 3, Cl Scope 1, CDP	OP	- 60.7	0.0% 19.5%	
304						Liquids Carbon Liquids CO2		tC own energy MtCO2 own energ	l v		• •	Product emiss. CDP	60.7	19.5%	
306						Elquido COE	51.51	InteoL own energ	2		"Own fuel" emissi		46.8	15.1%	
307							n energy is average						s to this comparison t		-
308						Average gas & liqu		MtCO2 own energ					are already accounted	l for.	
309 310						2/3 gas & 1/3 liqu	JI 45.20	MtCO2 own energ	y OG 5.1	1	Note: presumed ov	vn fuel. Original data	in error(10^-3).		
311	Oil, IPCC	20.00	kgC/GJ, default (C content IPCC	1		Proved reserves	Production, 2010	bducts available for s	sale					
312	Natural gas IPCC		kgC/GJ, default of			OG 1.1 and 1.2	BOE	BOE	BOE						
313					_	Crude oil	4,904,000,000	511,654,750]					
314						Heavy oil	1,381,000,000	26,720,249							
315 316						Natural gas Total	4,041,000,000	296,684,167 835,059,166		4					
316						TULAI	10,320,000,000	033,033,166	-	L					
318															

'	U																
	Conoco																
<u> </u>	-01000				Only parti	al data prov	vided:										
12.4					12.6												
Where it will facilitate	e a better u	nderstanding of y	our business,			break dow	n your tota	al gross glo	bal Scope 1 em	ssions by	GHG typ	e. (Only d	ata for th	e curre	nt repo	orting	
requested.)																	
Business Div	vision Sco	ope 1 Metric tonne	s CO2-e						(Metric tonnes			ons (Metri	c tonnes	CO2-e)			
E&P		987446				CO2	557850			557850							
Gas Processi	ing 470	3565				CH4	233051	.00		489407	5						
Refining		399470															
Other	508	38641			2 In mund	lan 12.0 m	a la vant ta	your compa									
					is quest	100 12.8 FE	elevant to	your compa	any r								
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13.4 Where it will facilitat	te a better	understanding o	vour bueinee	e													
equested.)	te a better	ander standing 0	Jour pusities	, o	12.8												
					Please	give the to	otal amoun	nt of fuel in N	Wh that your o	ganization	has con	sumed d	uring the	reportir	ng year	r.	
Business di	vision nam	ne Metric tonne	s CO2-e		2	30208028											
E&P		959759			2	00200020											
Gas Process	sing	547938															
Refining		5604150			د Is quest	ion 12.10	relevant to	o your comp	bany?								
Other					Y	ion 12.10 es	relevant to	o your comp	bany?								
Other	n flaring of	5604150 493072			Y 12.10 Please o	es complete t	the table b		bany? down the total fi	gure by fu	l type.						
Other	-	5604150 493072)		Y 12.10 Please o	es	the table b			gure by fu	l type.						
Other DG1.2 SHG emissions from	-	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fue	el type.						
Other OG1.2 GHG emissions from Year Ending	Volume	5604150 493072)		Y 12.10 Please o	es complete t	the table b			gure by fu	el type.						
Other OG1.2 GHG emissions from 2004 2005 2006	Volume 53031 41474 44534	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 OHG emissions from 2004 2005 2006 2007	Volume 53031 41474 44534 36095	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 GHG emissions from 2004 2005 2006 2007 2008	Volume 53031 41474 44534 36095 30308	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 GHG emissions from 2004 2005 2006 2007	Volume 53031 41474 44534 36095	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 GHG emissions from 2004 2005 2006 2007 2008	Volume 53031 41474 44534 36095 30308	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 GHG emissions from 2004 2005 2006 2007 2008	Volume 53031 41474 44534 36095 30308	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
Other OG1.2 GHG emissions from 2004 2005 2006 2007 2008	Volume 53031 41474 44534 36095 30308	5604150 493072)		Y 12.10 Please	es complete t	the table b			gure by fu	l type.						
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Other OG1.2 GHG emissions from 2004 2005 2006 2007 2008	Volume 53031 41474 44534 36095 30308	5604150 493072			Y 12.10 Please	es complete t	the table b			gure by fu	l type.						



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383	A	В				Г	0		'	J	ĸ		M		0	
384																
385			Statoil									Signed off by:	Oddvar Levang, Ser	nior Advisor Corporate	Climate Unit	
386 387								Hess; Shell and BP die				Protocol and metho		IPCC SAR GWP		
387 388			sure Project, RI		ubmission	Gross Scope 1	2008	2009	2010	2011		Combination IPIECA	and GRI	Operational control		
388			nissions Method nissions Data (1		10)	Table OG3.3 Combustion	tCO2e	tCO2e	tCO2e 11,247,069	tCO2e		Entity 2010 p	roduction and emiss	ione this study	1	
390			ope 1 Emissions		10)	Flaring			1,339,501			Linuty 2010 p	Crude oil & NGL	Natural gas		
390 391			cope 2 Emissio			Process emissions	5		968,399				million bbl	Bcf		
<u>392</u> 393		ection 12: E				Vented emissions			na			Production	370	1,509	linked	
393	Se	ection 15: S	cope 3 Emissio	ns		Fugitive emissions	5		624,738				MtCO2/million bbl	MtCO2/Bcf		
394						Total	-	-	14,179,707			Emission factor	0.371 MtCO2	0.053 MtCO2	linked	
394 395 396 397	G	iross Scope	1	tCO2e			tCO2e	7				Emissions	137	MtCO2 81	l	
397		fshore inst		8,563,7	54 60.49	6 CO2	13,478,626	95.1%]			LINISSIONS	kg CO2/tCO2	kg CO2/tCO2	1	
398		shore plan		5,242,3			701,082	4.9%	33,385	tCH4		Vented CO2 EF	3.83	28.53		
398 399		illing Rigs		308,9								Flaring EF	15.94	1.74		_
400		etail		64,0			na					Fugitive methane		9.88	kg CH4/tCO2	
401 402		her Total		14,179,7	69 0.09 07 100.09		na			г	A	Fugitive methane ary emissions, 2010	40 MtCO2e	207.44 MtCO2e	kg CO2e/tCO2	1
402		rotal		14,179,7	100.05	Total	na 14,179,708	100.0%	-	L	Ancilla	Vented CO2	MtCO2e 0.5			
404		14,179,70	08 Scope 1, 2	2010		L	,	100.070	L			Flaring	2.2	0.1		
405			. ,									Fugitive methane	0.3	0.8	MtCH4] [
406	_						-	CDP Table 12.3				Fugitive methane		16.7		
407		ross Scope		0.500.5	Energy	MWh		y use is direct, there		, -		Total ancillary	8.3	19.2		
408 409		fshore instanshore plan		8,563,7 5,242,3		61,183,969 or 3,424,493	Fuel Liquids	MWh 2,644,769	Percent 4.3%	-		Total, 2010: Production	MtCO2e 137	MtCO2e 81		ercent gas 80.8%
410		illing Rigs			06 Heat	15.151	Gases	54,803,600	89.6%			Ancillary	8	19		19.2%
411		tail			57 Steam (importe	-, -	Other & coking coa		6.1%			Total	146	100	100%	
412		her			69 Cooling	348	Total	61,188,985	100.0%			Total, 2010:	MtCO2e	Percent		
413	1	Total	_	, .,	07 Total	64,623,961	Note	: Appears to be all ov	vn fuel			Total production	218	88.8%		
414 415		227 61	3 Scope 2, 3	Table 10.2 is eri	oneous							Total ancillary Total, 2010	27 246	11.2%		
416		227,0	s scope 2, i	2010			Assume that H	ess Fuel energy input	s are "own fuel"			Total CH4	tCH4 gas	methane intensity		1 I
417				1 kWh =	3.60) MJ	Therefore		220,280,346,000	MJ		This project	1,060,917		kg CH4/tCO2	1
418									220,280	TJ		Self-reported CDP	33,385		kg CH4/tCO2	
419 420 421 422 423 424										1	Percer	nt of Carbon Majors	3.15%	31.78	multiple] [
420						h	eat content nat gas	sume own energy is a 1.1050								
422						10		199,348,729,412								
423									Bcf own energy (if	nat gas)						
424	G	iross Scope	3	-			CME Gas EF		MtC/Bcf			Comparing ent	ity's CDP submission			_
425 426				tCO2e					MtC own energy						nt of Product emi	ssions,
426		e of sold p	roducts on and distributi	on of sold prod	na		Result	12.13	MtCO2 own energy	1		Product emissions	s this study	MtCO2e 218.1	this study 100.0%	
428			n and distributi				Case 2: Assume	own energy is all cru	de oil & products			Ancillary emission		27.4	12.6%	
429 430			ss Travel - Air		00 Stats from trav	el agent	IPCC, heat value	5.78	GJ/bbl			Entity total, 2010		245.5		100.0%
430	to	tal Scope 3		37,0	00				bbl own energy			Product emissions	., .	-	0.0%	
431							CME liquids EF		kgC/bbl			Total scope 3, Cl	DP	0.0	0.0%	
432							Liquids Carbon Liquids CO2		tC own energy	,		Scope 1, CDP	Product amics CDD	14.2 14.2	6.5%	#DIV/0!
431 432 433 434 435 436 436								14.86	MtCO2 own energy	1		Entity Scope 1 + P "Own fuel" emissi		14.2	6.5%	
435							Case 3: Assume ow	n energy is average of	of gas and liquid fue	ls				to this comparison ta		- I
436							Average gas & liqu	i 13.49	MtCO2 own energy	/		since primary fuel in	nputs to electricity a	are already accounted		
437							2/3 gas & 1/3 liqu	i 13.04	MtCO2 own energy			Note: presumed ow	n fuel. Original data	in error(10^-3).		
438 439	0	I, IPCC	20.00		ult C content IPCC	7		Proved reserves	Production 2010	OG 5.1 oducts available for sa	lo					
439		i, IPCC atural gas IF			ult carbon content		OG 1.1 and 1.2	BOF	BOE	BOE						
441		salar gab ii					Crude oil	502	502	502		Sleipner & Snovhit	captured and injecte	1,250,000	tCO2	ן ן
442							Unconventional (sa	inds, bitumen)					-			-
443							Natural gas		CO1 COO 05 -							
444 445							Total	2,124,000,000	621,000,000							
446																

S T	U	V	W	X	Y	2	AA	AB	AC	AD	AE		AF
	Statoil					Erroneous: repeats Sc	ope 1 emissions (T	able 9.2)					
						10.0-							
9.2b Please break down y	our total gross globa	Scope 1 amingin	ons by facility			10.2a Please break down y	our total gross glo	bal Scope 2 emiss	ions by busine	ess division			
, lease break down y	our total gross globa	Soope remissio	a by facility					•	,				
Facility		tric tonnes CO2e				Business div CSO GBS	sion Scope 2 me 801	etric tonnes CO2e					
	allations 8563754					CSO GBS DPN	2678						
Onshore plan						DPNA	20282						
Drilling Rigs Retail	308906 64057					MPR	128954						
Other	669					SFR	74825						
Guidi						TPD	72						
.2c						10.2b							
	our total gross globa	Scope 1 emissio	ons by GHG type			Please break down y	our total gross glo	bal Scope 2 emiss	ions by facility	1			
GHG type	Scope 1 metric tonnes	CO2e				Facility	Score 2	metric tonnes CO2	e				
	01082					Offshore insta							
	3478626					Onshore plan	s 5242321						
						Drilling rigs	308906						
12.2						Retail	64057						
lease state how much	fuel, electricity, heat, ste	am, and cooling in M	IWh your organization	has consumed		Other	669						
Energy type	MWh												
Fuel 6	1183969					nathura: i= 0.00	Continue 1000	tria torres 0.001	contra-	od in Decession	ronof		
Electricity 34	424493					e pathway in CCS on from natural gas purificatio		tric tonnes CO2) Per 100		eu in Percentage t	wansterred out	•	
							1200000		70				
Heat 1	5151					in nom natural gas punneate	120000	100	70				
Heat 1 Steam				OG4. Pleas	.7	netric tonnes of gross CO2				ear according to inle	ection and stora	age pathwa	ay
Heat 1: Steam Cooling 34	5151			OG4. Pleas	.7 se provide masses in n	netric tonnes of gross CO2	njected and stored for	purposes of CCS durin	ng the reporting ye	ed for Year in v	which Cu	umulative	CO2 injected and
Heat 11 Steam Cooling 34	5151	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar	netric tonnes of gross CO2 nd storage pathway	njected and stored for Injected CO2 (metric tonnes CO2	purposes of CCS durin Percentage of inju) long-term (>	ng the reporting ye	ed for Year in v injection	which Cu began s	cumulative stored (met	-
Heat 11 Steam Cooling 3	5151 48	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar	netric tonnes of gross CO2 in Ind storage pathway eological formation or saline	njected and stored for	purposes of CCS durin	ng the reporting ye	ed for Year in v	which Cu	cumulative stored (met	CO2 injected and
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Fuels Butane	5151 48 ble by breaking down the MWh 65109	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage	njected and stored for Injected CO2 (metric tonnes CO2	Percentage of inj Percentage of inj) long-term (> 100%	ng the reporting ye ected CO2 intende 100 year) storage	ed for Year in v injection	which Cu began s	cumulative stored (met	CO2 injected and
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Butane Coking coal	5151 48 ble by breaking down the MWh 65109 2779628	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 in Ind storage pathway eological formation or saline	njected and stored for Injected CO2 (metric tonnes CO2	purposes of CCS durin Percentage of inju) long-term (>	ng the reporting ye ected CO2 intende 100 year) storage	ed for Year in v injection	which Cu began s	cumulative stored (met	CO2 injected and
Heat 11 Steam Cooling 34 12.3 Please complete the tab Fuels Butane	5151 48 ble by breaking down the MWh 65109	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage	njected and stored for Injected CO2 (metric tonnes CO2	Percentage of inj Percentage of inj) long-term (> 100%	ng the reporting ye ected CO2 intende 100 year) storage	ed for Year in v injection	which Cu began s	cumulative stored (met	CO2 injected and
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Fuels Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil	5151 48 ble by breaking down the MWh 65109 2779628 2558302 47604418 20140	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 nd storage pathway eological formation or saline m storage Sleipner injected CO2:	njected and stored for Injected CO2 (metric tonnes CO2	Percentage of inj Percentage of inj) long-term (> 100%	ng the reporting ye ected CO2 intende 100 year) storage	ed for Year in v injection	which Cu began s	cumulative stored (met	CO2 injected and
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline	5151 48 ble by breaking down the 65109 2779628 2558302 4760418 20140 18	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 in nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3	njected and stored for Injected CO2 (metric tonnes CO2 1250000	purposes of CCS durin Percentage of inj iong-term (> 100% 1,250,000 tCC	ng the reporting yı ected CO2 intende 100 year) storage 12	ed for Year in v injection 1996	which Ct began s 1700(Cumulative stored (met	CO2 injected and tric tonnes CO2)
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas	5151 48 ble by breaking down the MWh 65109 2779628 2558302 4760418 20140 18 1200 7199182	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	hetric tonnes of gross CO2 h d storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p	njected and stored for Injected CO2 (metric tonnes CO2 1250000	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCO pross Scope 1 GHG	ng the reporting yı ected CO2 intende 100 year) storage 12	ed for Year in v injection 1996	which Ct began s 1700(Cumulative stored (met	CO2 injected and tric tonnes CO2)
Heat 11 Steam 3 Cooling 3 12.3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane	5151 48 ble by breaking down the 65109 2779628 2558302 47604418 20140 18 1200	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	hetric tonnes of gross CO2 h d storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG timates	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year In injection 1996	which Cu began s 17000	Cumulative (stored (met	C22 injected and tric tonnes C02)
Heat 11 Steam 2 Cooling 3 12.3 Please complete the tat Fuels Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas	5151 48 ble by breaking down the MWh 65109 2779628 2558302 4760418 20140 18 1200 7199182	total "Fuel" figure er	ntered above by fuel ty	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	hetric tonnes of gross CO2 i hd storage pathway eological formation or sailne m storage Sleipner injected CO2: OG2.3 Please 2 2011 are	njected and stored for Injected CO2 (metric tonnes CO2 1250000	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC pross Scope 1 GHG - timates nent	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year in v injection 1996	which Cu began s 17000	Cumulative stored (met 00000	C22 injected and tric tonnes C02) nization's c
Heat 11 Steam Cooling 3 Please complete the tab Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas	5151 48 ble by breaking down the MWh 65109 2779628 2558302 4760418 20140 18 1200 7199182	total "Fuel" figure er		Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, productii torage, transportatic	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ritimates nent po & gas processing po & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year In injection 1996	which began s 17000 nes CO2e for 2009 2010 11886/ 77139	Cumulative (stored (met stored (met 200000	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 2 Cooling 3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other:	5151 48 ble by breaking down the 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988	total "Fuel" figure er	Scope 1	Pleas	.7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are 5	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ritimates nent po & gas processing po & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year In injection 1996	which Ct began s 17000 nes CO2e for 2009 2010 118862 77139 669	tumulative (met boood) the organ 10 201 5280	C22 injected and tric tonnes C02) nization's c
Heat 11 Steam Cooling 3 12.3 Please complete the tat Fuels Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas	5151 48 ble by breaking down the MWh 65109 2779628 2558302 4760418 20140 18 1200 7199182	total "Fuel" figure er	Scope 1	rpe	.7 se provide masses in n injection ar CO2 injected into a g formation for long-ter	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are S	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations tefining	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ritimates nent po & gas processing po & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year In injection 1996	which Ct began s 17000 nes CO2e for 118862 77139 669 215156	tumulative (met boooo) the organ (0 201 (5280 (562)	C22 injected and tric tonnes C02)
Heat 11 Steam Cooling 3 7 12.3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other: Butane Diesel / Gas oil Residual fuel oil	5151 48 ble by breaking down the MWh 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation	/pe	7 se provide masses in n Injection ar CO2 injected into a g formation for long-ter 11,886,280 77,139 669	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are S	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ritimates nent po & gas processing po & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 12 emissions in ur	ed for Year In injection 1996	which Ct began s 17000 nes CO2e for 2009 2010 118862 77139 669	tumulative (met boooo) the organ (0 201 (5280 (562)	C22 injected and tric tonnes C02)
Heat 11 Steam 12 Cooling 3/ Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other:	5151 48 ble by breaking down the MWh 55109 2779628 2558302 4760418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transport Speciality operation Refining	/pe	7 se provide masses in n logection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562	netric tonnes of gross CO2 in ad storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are Sleipner of the storage CO2.3 Please p 2011 are Sleipner of the storage CO2.4	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations tefining tetail & marketing	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG timates nent on & gas processing on & distribution	ng the reporting yu ected CO2 intended 100 year) storage 12 emissions in ur 2005 2006	ad for Year in injection 1996	which began s 17000 nes CO2e for 118862 77139 669 215156 64057	tumulative (met boooo	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 3- Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Redidual fuel oil Motor gasoline Propane Refinery gas Other:	5151 48 ble by breaking down the MWh 65109 2779628 2558302 4760418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	ediojical formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are 5 0G2.4 Please p	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations tefining letail & marketing rovide masses of g	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ross Scope 1 GHG nent nent a distribution ross Scope 2 GHG	ng the reporting yu ected CO2 intended 100 year) storage 12 emissions in ur 2005 2006	ad for Year in injection 1996	which began s 17000 nes CO2e for 118862 77139 669 215156 64057	tumulative (met boooo	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 30 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other:	5151 48 ble by breaking down the MWh 55109 2779628 2558302 4760418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transport Speciality operation Refining	/pe	7 se provide masses in n logection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562	ediojical formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are 5 0G2.4 Please p	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es xploration, producti torage, transportatio peciality operations tetfning tetail & marketing rovide masses of g forward-looking es	purposes of CCS durin Percentage of Inji 100% 1,250,000 tCC ross Scope 1 GHG ross Scope 2 GHG ross Scope 2 GHG	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which began s 17000 nes CO2e for 118862 77139 669 215156 64057 nes CO2e for	tumulative istored (met stored (met 20000) r the organ 2280 362 r the organ	CO2 injected and tric tonnes CO2)
Heat 11 Steam 12 Cooling 3 Please complete the table 12 Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other: Diesel / Gas oil Residual fuel oil Motor gasoline Propane Refinery gas Other: Diesel / Gas oil	5151 48 ble by breaking down the MWh 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	netric tonnes of gross CO2 nd storage pathway eological formation or sallne m storage Sleipner injected CO2: OG2.3 Please p 2011 are OG2.4 Please p 2011 are	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es xploration, producti torage, transportatic peciality operations telfning tetail & marketing rovide masses of g forward-looking es	purposes of CCS durin Percentage of inji 100% 1,250,000 tCC ross Scope 1 GHG ross Scope 1 GHG nent po & gas processing on & distribution ross Scope 2 GHG timates nent	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which began s 17000 17000 17000 1118862 111886	r the organ 200 201 201 201 201 201 201 201	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 3- Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Refinery gas Other:	5151 48 ble by breaking down the MWh 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418 7,199,182	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	netric tonnes of gross CO2 i nd storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are F OG2.4 Please p 2011 are	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es Segn xploration, producti peciality operations tefining tetail & marketing rovide masses of g forward-looking es	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG of tilmates nent on & gas processing on & distribution ross Scope 2 GHG of tilmates nent on & gas processing	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which Ct began s 17000 hes CO2e for 2009 2010 118862 215156 64057 hes CO2e for 2009 2010 39558	r the organ 200 201 201 201 201 201 201 201	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 30 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Refinery gas Other:	5151 48 ble by breaking down the MWh 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	eleric tonnes of gross CO2 In storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 are S OG2.4 Please p 2011 are S S S S S S S S S S S S S	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es xploration, producti torage, transportatic peciality operations telfning tetail & marketing rovide masses of g forward-looking es	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG tilimates nent on & gas processing on & distribution ent nent pon & gas processing on & gas processing on & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which began s 17000 17000 17000 1118862 111886	r the organ 200 201 201 201 201 201 201 201	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 30 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Refinery gas Other: Butane Other: Butane Picoba Diesel / Gas oil Residual fuel oil Motor gasoline Propane Propane Total Liquids Natural gas Refinery gas Total Gases Total Gases	5151 48 ble by breaking down the 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418 7,199,182 54,803,600	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	netric tonnes of gross CO2 In storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 arc CO2.4 Please p 2011 arc CO2.4 Please p 2011 arc Sleipner injected CO2: CO2.4 Please p 2011 arc Sleipner injected CO2: Sleipner injected CO2:	njected and stored for Injected CO2 (metric tonnes CO2 1250000 1250000 rovide masses of g forward-looking es xploration, productii torage, transportatic peciality operations tefning tetail & marketing rovide masses of g forward-looking es Segn xploration, productii torage, transportatic peciality operations torage, transportatic peciality operations	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG tilimates nent on & gas processing on & distribution ent nent pon & gas processing on & gas processing on & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which ct began s 17000 hes CO2e for 2009 2010 11886 77139 669 215156 64057 hes CO2e for 2009 2010 39558 1020 801 111408	umulative istored (metstored (me	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12 Cooling 3- Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Refinery gas Other:	5151 48 ble by breaking down the MWh 65109 2779628 2658302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418 7,199,182 54,803,600 2,779,628	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	netric tonnes of gross CO2 In storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 arc CO2.4 Please p 2011 arc CO2.4 Please p 2011 arc Sleipner injected CO2: CO2.4 Please p 2011 arc Sleipner injected CO2: Sleipner injected CO2:	njected and stored for Injected CO2 (metric tonnes CO2 1250000 rovide masses of g forward-looking es xploration, producti torage, transportatic peciality operations telfning tetail & marketing rovide masses of g forward-looking es Segn xploration, producti torage, transportatic peciality operations	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG tilimates nent on & gas processing on & distribution ent nent pon & gas processing on & gas processing on & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which began s 17000 nes CO2e for 118862 77139 669 215156 64057 nes CO2e for 2009 2010 39558 1020 801	umulative istored (metstored (me	CO2 injected and tric tonnes CO2) nization's c
Heat 11 Steam 12.3 Please complete the tat Butane Coking coal Diesel/Gas oil Natural gas Residual fuel oil Motor gasoline Propane Refinery gas Other:	5151 48 ble by breaking down the 65109 2779628 2558302 47604418 20140 18 1200 7199182 960988 65,109 2,558,302 20,140 18 1,200 2,644,769 47,604,418 7,199,182 54,803,600	total "Fuel" figure er	Scope 1 Exploration, produc Storage, transporta Speciality operation Refining Retail & marketing	/pe	7 se provide masses in n lnjection ar CO2 injected into a g formation for long-ter formation for long-ter 11,886,280 77,139 669 2,151,562 64,057	netric tonnes of gross CO2 In storage pathway eological formation or saline m storage Sleipner injected CO2: OG2.3 Please p 2011 arc CO2.4 Please p 2011 arc CO2.4 Please p 2011 arc Sleipner injected CO2: CO2.4 Please p 2011 arc Sleipner injected CO2: Sleipner injected CO2:	njected and stored for Injected CO2 (metric tonnes CO2 1250000 1250000 rovide masses of g forward-looking es xploration, productii torage, transportatic peciality operations tefning tetail & marketing rovide masses of g forward-looking es Segn xploration, productii torage, transportatic peciality operations torage, transportatic peciality operations	purposes of CCS durin Percentage of inji long-term (> 100% 1,250,000 tCC ross Scope 1 GHG tilimates nent on & gas processing on & distribution ent nent pon & gas processing on & gas processing on & distribution	ng the reporting yu ected CO2 Intende 100 year) storage 22 emissions in ur 2005 2006 emissions in ur	ad for Year in injection 1996	which ct began s 17000 hes CO2e for 2009 2010 11886 77139 669 215156 64057 hes CO2e for 2009 2010 39558 1020 801 111408	umulative istored (metstored (me	CO2 injected and tric tonnes CO2) nization's c

	A B	С	D	E	F	G	Н		J	К	L	м	N	0	P Q
447	1			1	1		1	1			1	1	1	1 -	<u> </u>
448															
449		PetroBras													
450							less; Shell and BP dic				Protocol and methe	odology:	IPCC SAR GWP		
451			anno 2010 subn	nission	Gross Scope 1	2008	2009	2010	2011		API Compendium		Operational control		
452	Section 7: Emiss				Table OG3.3	tCO2e	tCO2e	tCO2e	tCO2e		5			1	4E+05
453 454			an - 31Dec 2010)		Combustion	39,789,714	34,344,819	40,736,072	44,565,263		Entity 2010 p	production and emiss		-	#####
454	Section 9: Scop Section 10: Sco				Flaring Process emissions	7,550,027 7,992,933	13,053,364 7,932,726	8,763,147 8,759,603	9,586,883 9,583,006			Crude oil & NGL million bbl	Natural gas Bcf	-	##### #####
456	Section 12: Ene		DIEakuowii		Vented emissions	1,695,387	1,108,971	1,207,793	1,321,326		Production	749	890	linked	
457	Section 15: Sco				Fugitive emissions		427,503	490,525	536,634		Troduction	MtCO2/million bbl	MtCO2/Bcf	iiiikeu	
458	000000000000000000000000000000000000000				Total	57,385,200	56,867,383	59,957,140	65,593,112		Emission factor	0.371	0.053	linked	
458 459												MtCO2	MtCO2		
460	Gross Scope 1		tCO2e			tCO2e]				Emissions	278	48	-	
461	Exploration and	Production Bra		34.8%		55,426,773	92.4%					kg CO2/tCO2	kg CO2/tCO2]	
462	Refining, Transp			37.5%		4,108,710	6.9%	195,653	tCH4		Vented CO2 EF	3.83	28.53		
463	Gas and Power B		9,127,579	15.2%	N20	421,658	0.7%				Flaring EF	15.94	1.74		۰
464	Distribution Braz	izil	11,057	0.0%		na					Fugitive methane		9.88	kg CH4/tCO2	
465	Corporate		634,655	1.1%		na			Г		Fugitive methane		207.44	kg CO2e/tCO2	1
466 467	International Total		6,825,414	<u>11.4%</u> 100.0%	SF6 Total	na 59.957.141	100.0%		l	Ancilla	ry emissions, 2010	MtCO2e	MtCO2e 1.4	+	
467	TOLAI		59,957,141	100.0%	Iotal	33,937,141	100.0%]			Vented CO2 Flaring	1.1 4.4	0.1		
469	59 957 142	Scope 1, 20	10								Fugitive methane		0.5	MtCH4	1
470	55,557,142	300pc 1, 20					CDP Table 12.3]			Fugitive methane		9.9	meent	L
471	Gross Scope 2			Energy	MWh	Fuel energy	use is direct, theref	ore Scope 1			Total ancillary	16.7	11.3	J	
472	Exploration and		193,689	Fuel	187,998,577	Fuel	MWh				Total, 2010:	MtCO2e	MtCO2e	Percent oil	ercent gas
473	Refining, Transp	portation and M	428,609	Electricity (impor	7,201,387	Liquids	29,203,100	15.5%	-		Production	278	48	94.3%	80.8%
474	Gas and Power E			Heat		Gases	139,917,217	74.4%			Ancillary	17	11	5.7%	19.2%
475	Distribution Braz	izil		Steam (imported	3,875,794	Other (coke)	18,878,260	10.0%			Total	295	59	1	
476	Corporate			Cooling		Total	187,998,577	100.0%			Total, 2010:		Percent	-	
477 478	International		567,690		199,075,758	Note:	Appears to be all ow	/n fuel			Total production	326	92.1%		
478	Total		1,256,221								Total ancillary Total, 2010	28 354	7.9%		
480						Assume that H	ess Fuel energy input	s are "own fuel"			Total CH4	tCH4 gas	methane intensity		1
481		1	1 kWh =	3.60	MJ	Therefore		676,794,877,200	MJ		This project	1,004,815	3.09	kg CH4/tCO2	-
482							1 1 1 1 1	676,795			Self-reported CDP	195,653	0.60		
483	1,256,222	Scope 2, 20	010						_	Perce	nt of Carbon Majors	19.47%	5.14	multiple	
484							ume own energy is a								
485					he	at content nat gas									
486							612,484,051,765								
487	0							Bcf own energy (if	f nat gas)		Companies		and the state of the state of the	1	
488 489	Gross Scope 3		tCO2e	Г		CME Gas EF		MtC/Bcf MtC own energy			Comparing ent	ity's CDP submissio		nt of Product emi	
489	Use of sold proc	ducts	504,059,819	_		Result		MtCO2 own energy	v				MtCO2e	this study	5510115,
491			n of sold products			L	51.21		4		Product emission	s, this study	325.6	100.0%	1
492	Transportation a					Case 2: Assume	own energy is all cru	de oil & products			Ancillary emission		28.0	8.6%	
493	Other: Business					IPCC, heat value		GJ/bbl	1		Entity total, 2010	0, this study	353.7	108.6%	100.0%
494	total Scope 3		504,059,819]				bbl own energy			Product emission		504.1	154.8%	
495						CME liquids EF		kgC/bbl			Total scope 3, C	DP	504.1	154.8%	
496						Liquids Carbon		tC own energy	ļ		Scope 1, CDP		60.0	18.4%	
497						Liquids CO2	45.66	MtCO2 own energy	У			Product emiss. CDP	564.0		159.5%
498						C 2. A		for a start list of the	-		"Own fuel" emiss		40.1	12.3%	J
499 500						Case 3: Assume owi Average gas & liqui	n energy is average c	MtCO2 own energy					to this comparison t are already accounted		
500						2/3 gas & 1/3 liqui		MtCO2 own energy MtCO2 own energy				inputs to electricity a vn fuel. Original data		101.	
502						L, 5 yas & 1/ 5 ilqui	+0.06	meore own energy	y OG 5.1		note, presumed ov	m ruei. Onymai uata			
502	Oil, IPCC	20.00	kgC/GJ, default (C content IPCC	1		Proved reserves	Production, 2010	ducts available for sa	ale	Product sales	Table OG 5.1	BOE	1	
504	Natural gas IPCO		kgC/GJ, default of			OG 1.1 and 1.2	BOE	BOE	BOE		Other: Oil Products		71,905,000	1	
505			-		-	Crude oil	15,142,690,000	786,648,000			Other: Crude Oil (e		184,690,000		
506						Unconventional (sa					Other: Alcohol, Nit		36,135,000		
507						Natural gas	843,310,000	156,220,000			Other: Oil products		715,035,000		
508 509						Total	15,986,000,000	942,868,000	-		Natural gas (exclud	ding LNG)	116,070,000	4	
											Total		1,123,835,000	1	
510															

T	U		V I	W	X X		Y I	Z	AA	A	3	AC	AD	AE	AF	
'		I	<u> </u>	**			· I	2			, I	AC				
	PetroBra	as														
Table 10.2 a (details	at left)															
10.2a									9.2a		-1			and all she have		
Please break down your	total gross glo	obal Scope 2 emis	ssions by busi	iness division					Please break	down your tot	al gross globa	al Scope 1 em	issions by busine	ess division		
Bus	iness division	Sc	cope 2 metric	tonnes CO2e						Busine	ss Division	5	Scope 1 metric to	nnes CO2e		
Exploration and P			3688.95						Explor	ation and Proc	luction Brazil	2	20857505.94			
Refining, Transpo Gas and Power B		rketing Brazil 42	8609.02 930.71							ng, Transporta			22500929.27			
Distribution Brazil			58.34							nd Power Braz	1		9127578.69			
Corporate			44.12							ution Brazil			11057.41			
International		56	67689.70						Corpo Interna				534654.96 5825414.24			
									Interne	luonai			1023414.24			
Tables 12.2 and 12	.3								9.2c							
12.2			d a caller a la M						Please break	down your tot	al gross globa	al Scope 1 em	issions by GHG t	ype		
Please state how much	uel, electricity	y, neat, steam, an	ia cooling in M	www.your organization	nas consumed	a during the rep	bording year		CHC 4	ype Scope 1	matric tonne	e CO2c				
	MWh								CO2	554267		3 0020				
	37998577 201387								CH4	410870						
Heat 72	01301								N20	421657						
Steam 38	375794															
Cooling																
12.3																
Please complete the tab	le by breaking	g down the total "F	Fuel" figure er	ntered above by fuel t	ype											
		Fuels			MWh											
Diesel/Gas oil					10533034											
Distillate fuel oil N Natural gas	10 1				18290089 117550826											
Other: Residual G	as				1644389											
Liquefied petrole					260279											
Other: FCCU resi Refinery gas	Jual coke				18878260 20722002											
	aphtha, kerose	ene, alcohol and ex	xported steam	and electricity energy												
Summed by fuel from	table 123															
Diesel / Gas oil		10	,533,034		OG5.1											
Distillate fuel oil No		18	,290,089				or annual sales of			nits of BOE) f	or the years	given in the fo	ollowing table. 1			
Liquefied petroleum			260,279		organizatio	n. The values	s for 2011 are forv	varu-looking es	sumates							
Other: Includes naph Total liquids	ma, kerosene		119,698 ,203,100			Pro	duct	2005	2006	2007	2008	2009	2010			
rotar ilquius		29	,203,100		Nati	ural gas (excl	uding LNG)	83220000	88695000	90520000	113880000	86870000	116070000			
Natural gas		117	,550,826			er: Oil produc		605170000	620135000	629625000	642400000	640210000				
Other: Residual Gas			,644,389				itrogen and others		9125000	22265000	27375000	40880000	36135000			
Refinery gas			,722,002			er: Crude Oil		91250000	122275000	128845000	160235000	174470000				
Total gases		139	,917,217		Othe	er: Oil Produc	tts (exports)	91980000	86870000	95630000	85410000	82855000	71905000			
Other: FCCU residual	coke	18	3,878,260													
Solids (coke)			3,878,260													
OG1.2																
Please provide values	ior proved res	serves of each of	f the hydroca	rbon types (in units o	f BOE) for 201	0.										
Produc	at P	Proved reserves	(BOE), 2010	Date of assessmer	ıt											
Natural gas		43310000	(202), 2010	Fri 31 Dec 2010												
Other: Oil and C	ondensate 1	5142690000		Fri 31 Dec 2010												

Product	Proved reserves (BOE), 2010	Date of assessment
Natural gas	843310000	Fri 31 Dec 2010
Other: Oil and Condensate	15142690000	Fri 31 Dec 2010

						-										
F11	4	В	C	D	E	F	G	H		J	K	L	М	N	0	P Q
511 512																
513			Chevron		1							Signed off by:		ad Planning Engineer, (Chouron Enorgy T	ochnology Co
514			onevion				(data provided by I	less; Shell and BP di	not proved data for	or OG3.3)		Protocol and metho		IPCC SAR GWP	chevion Lhergy i	echnology co.
515	Cart	on Disclos	ure Project. RD	S anno 2010 subn	nission	Gross Scope 1	2008	2009	2010	2011		API Compendium	uology:	Equity share		
516			ssions Methodo			Table OG3.3	tCO2e	tCO2e	tCO2e	tCO2e				1		
517	Sect	ion 8: Emi	ssions Data (1J	an - 31Dec 2010)		Combustion			37,388,863			Entity 2010 p	roduction and emissi	ions, this study		
518			pe 1 Emissions			Flaring			9,709,155				Crude oil & NGL	Natural gas		
519			ope 2 Emission	s Breakdown		Process emissions			10,294,591				million bbl	Bcf		
520		ion 12: En				Vented emissions			3,667,934			Production	702 MtCO2/million bbl	1,840 MtCO2/Bcf	linked	
521	Sec	101 15:50	ope 3 Emission	5		Fugitive emissions Total			1,071,053 62,131,596			Emission factor	0.371	0.053	linked	
523						TULAI		-	02,131,390			LINISSION TACLO	MtCO2	MtCO2	iiiikeu	
520 521 522 523 524 525 526 527 528 527 528 529 530	Gro	ss Scope	1	tCO2e	1		tCO2e]				Emissions	261	98		
525		ream		39,925,209	64.3%	CO2	56,705,174	91.3%]				kg CO2/tCO2	kg CO2/tCO2		
526	Dow	nstream		21,280,504	34.2%	CH4	5,147,631	8.3%	245,125	tCH4		Vented CO2 EF	3.83	28.53		
527	Oth	er		930,331	1.5%		276,399	0.4%				Flaring EF	15.94	1.74		_
528					0.0%	Other: HFC, PFC,	6,841	0.0%				Fugitive methane		9.88	kg CH4/tCO2	
529	_				0.0%		00.400.045		-	Г		Fugitive methane	40	207.44	kg CO2e/tCO2	1 1
530			Total	62,136,044	100.0%	Total	62,136,045	100.0%		L	Ancilla	ary emissions, 2010 Vented CO2	MtCO2e 1.0	MtCO2e 2.8		
531	F	2 136 04	4 Scope 1, 2	010								Flaring	4.2	2.8 0.2		
533		2,130,01	1 0cope 1, 2	010								Fugitive methane		1.0	MtCH4	ן ר
534								CDP Table 12.3]			Fugitive methane		20.4		-
534 535 536	Gro	ss Scope	2		Energy	MWh	Fuel energy	use is direct, there	ore Scope 1			Total ancillary	15.7	23.4		
536	Upst	ream		2,557,743		128,306,734	Fuel	MWh				Total, 2010:	MtCO2e	MtCO2e		ercent gas
537 538		nstream		1,697,948		5,903,978	Total liquids	78,228,110	61.0%			Production	261	98		80.8%
538	Che	nicals		228,128	Heat		Total gases	50,078,618	39.0%			Ancillary	16	23	5.7%	5 19.2%
539	Tett	.1		4 402 010	Steam (imported	7,361,713	Other Types Combi			ļ		Total	276 MtCO2e	122		
539 540 541	Tota	1		4,483,819	Cooling Total	141,572,425	Total	128,306,728 Appears to be all ov	up fuol	l		Total, 2010: Total production	MtCO2e 359	Percent 90.2%		
542		4 483 820) Scope 2, 2	010	TOLAI	141,372,423	Note.	Appears to be all of	VITTUEI			Total ancillary	39	9.8%		
543		1, 100,020	5 500pc 2, 2	010								Total, 2010	398	5.070		
544							Assume that H	ess Fuel energy input	ts are "own fuel"			Total CH4	tCH4 gas	methane intensity		
545				1 kWh =	3.60	MJ	Therefore	128,306,728	461,904,220,800	MJ		This project	1,472,471	4.10	kg CH4/tCO2	1
546									461,904	TJ		Self-reported CDP	245,125		kg CH4/tCO2	
542 543 544 545 546 547 548 549 550 551 552 553										1	Perce	ent of Carbon Majors	16.65%	6.01	multiple	
548								ume own energy is a								
549						ne	eat content nat gas	1.1050 418,012,869,502								
551									Bcf own energy (if	nat das)						
552	Gro	ss Scope	3				CME Gas EF		MtC/Bcf	liac gao)		Comparing ent	ity's CDP submissio	on to this study		
553				tCO2e]			6.94	MtC own energy				<u> </u>		nt of Product emi	issions,
554		of sold pro		404,000,000	see comment		Result		MtCO2 own energy	/				MtCO2e	this study	
555			and distributio							1		Product emissions		359.0	100.0%	
556			and distributio					own energy is all cru				Ancillary emission		39.1	10.9%	
557			s Travel - Air	na	4		IPCC, heat value		GJ/bbl			Entity total, 2010		398.1		100.0%
558 559	tota	I Scope 3		404,000,000	1		CME liquids EF	, ,	bbl own energy			Product emissions		404.0 404.0	112.5% 112.5%	
560							Liquids Carbon		kgC/bbl tC own energy			Total scope 3, Cl Scope 1, CDP		404.0	17.3%	
561							Liquids CO2		MtCO2 own energy	/			Product emiss. CDP	466.1		117.1%
562								51.10				"Own fuel" emissi		27.3	7.6%	
562 563 564 565 566							Case 3: Assume ow	n energy is average o	of gas and liquid fue	ls				to this comparison ta		-
564							Average gas & liqui	28.30	MtCO2 own energy	/		since primary fuel in	nputs to electricity a	re already accounted		
565							2/3 gas & 1/3 liqu	27.34	MtCO2 own energy	<u>/</u>		Note: presumed ow	n fuel. Original data	in error(10^-3).		
566						1								1	i	
567	Oil,			kgC/GJ, default (OG 5.1			1	Product sales		
568	Nati	iral gas IPC	CC 15.30	kgC/GJ, default of	carbon content]	CDD 001 0			oducts available for sa	ale	Table OG 5.1	dia a LNC)	BOE, 2010		
569							CDP, OG1.2 Crude oil	BOE 6,503,000,000	BOE 701,895,000	BOE		Natural gas (exclu		634,187,500 97,090,000		
570							Unconventional (sa		101,895,000			Other: Natural Gas Other: Gasoline	Liquius	97,090,000 445,665,000		
572							Natural gas	4,041,833,333	306,600,000			Other: Other refine	ed products	690,580,000		
568 569 570 571 572 573 574							Total	10,544,833,333	1,008,495,000	-		Total		1,867,522,500		
574								, ,,	, , , , , , , , ,			·				

RS			<u> </u>								1		1 10	1 15	1 15		1 10	
	T l	J	V		W		Х		Y	Z	AA	AB	AC	AD	AE	AF	AG	
	Chev	vron																
	vron OG 3.3											0	2010					
OG3	3.3 ase provide masses of	arose S	cone 1 GHC	omiecio	ne roloac	ed to atmo	enhoro in	unite of m	etric topp	DOE CO201	9.2a	Chevron CDP	2010					
	ing, process emissions											n your total gro	ss global Scope 1 e	missions by busine	s division			
				-														
	Category	2005	2006 200	7 2008	2009	2010	2011				Business Upstream		e 1 metric tonnes C 5209	:02e				
	Combustion					37388863					Downstrea		0504					
	Flaring					9709155					Other	9303						
	Process emissions					10294591												
	Vented emissions Fugitive emissions					3667934 1071053					9.2c Bloase broak dow	a vour total are	es dobal Scono 1 o	missions by GHG ty	20			
	Fugitive emissions					107 1055					Fiease break dow	ryour total gro	aa giobal ocope i e	initiational by Grid ty	pe			
												G type	Scope 1 metric to	nnes CO2e				
											CO2 CH4		56705174 5147631					
CDP Crude	Table 12.3, sorted by fue	el 692,831	1								N20		276399					
		672,600										, PFC and SF6						
	illate fuel oil No	11,124																
		269,291									9.2d Bloase break dow	a vour total are	es debal Scope 1 o	missions by activity				
Keros	osene efied petroleum	181 9,851									Flease bleak dow	ryour total gro	iss global Scope Te	inissions by activity				
Propa		7,263									Activ		pe 1 metric tonnes (CO2e				
		329,217									Combustic Flaring and		88863 77089					
		181,228 102,358									Other		70092					
	illate fuel oil No	8																
		952,158									12.2 Please state how m	uch fuel, electr	icity, heat, steam, a	nd cooling in MWh ye	our organization h	as consumed		
Total	al liquids 78,2	228,110]										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Natu	ıral gas 28,	537,767	1								Energy type							
	efied Natural G	17									Fuel Electricity	128306734 5903978						
Refin	21.1	40.024	1								Heat							
		540,834									Steam	7361713						
		078,618	ļ								Cooling							
]															
Total	il gases 50,0	078,618	-								12.3							
Total	il gases 50,0	078,618	-	each of th	ne hydrod	arbon type	<mark>s (</mark> in units	of BOE) fo	or 2010.		12.3 Please complete th	e table by brea	king down the total "	'Fuel" figure entered	above by fuel typ	pe		
Total	al gases 50,0 1.2 ase provide values for	proved r	reserves of e		-			of BOE) fo	or 2010.					'Fuel" figure entered	above by fuel typ	pe		
Total	il gases 50,0	proved r Prove	-		010 Dat		ment	of BOE) fo	or 2010.			e table by brea Fuels	king down the total " MWh 692831	'Fuel" figure entered	above by fuel typ	pe		
Total	1.2 ase provide values for Product	proved r Prove 40418	eserves of e d reserves		010 Dat	e of assess	ment	of BOE) fo	or 2010.'		Please complete th	Fuels	MWh	'Fuel" figure entered	above by fuel typ	pe		
Total	Il gases 50, 1.2 ase provide values for Product Natural gas	proved r Prove 40418	eserves of e d reserves		010 Dat	e of assess 31 Dec 2010	ment	of BOE) fo	or 2010.		Please complete th Crude oil Diesel/Gas of Distillate fue	Fuels	MWh 692831 27672600 11124	'Fuel" figure entered	above by fuel typ	pe		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010.'		Please complete th Crude oil Diesel/Gas (Distillate fue Jet gasoline	Fuels	MWh 692831 27672600 11124 2269291	'Fuel" figure entered	above by fuel ty;	pe		
Total OG1 Plea	Il gases 50, 1.2 ase provide values for Product Natural gas	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010.'		Please complete th Crude oil Diesel/Gas (Distillate fue Jet gasoline Kerosene	Fuels il I oil No 3	MWh 692831 27672600 11124 2269291 181	'Fuel" figure entered	above by fuel ty	De		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010.'		Please complete th Crude oil Diesel/Gas d Distillate fue Jet gasoline Kerosene Liquefied N	Fuels	MWh 692831 27672600 11124 2269291 181) 17	'Fuel" figure entered	above by fuel ty	De		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010.'		Please complete th Crude oil Diesel/Gas Jeitgasoline Kerosene Liquefied Ni Liquefied pe Natural gas	Fuels iil I oil No 3 itural Gas (LNG	MWh 692831 27672600 11124 2269291 181) 17 269 9851 28537767 28537767 28537767	'Fuel" figure entered	above by fuel typ	De		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010.		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied № Liquefied pe Natural gas Propane	Fuels ill I oil No 3 ttural Gas (LNG troleum gas (LF	MWh 692831 27672600 11124 2269291 181 181 17 9851 28537767 7263 263 767 7263	'Fuel" figure entered	above by fuel typ	De		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fo	or 2010. '		Please complete th Crude oil Diesel/Gas of Distillate fue Jet gasoline Kerosene Liquefied pe Natural gas Propane Refinery gas	Fuels iil I oil No 3 tural Gas (LNG troleum gas (LF	MWh 692831 27672600 11124 2269291 181 181 9851 28537767 7263 21540834	'Fuel" figure entered	above by fuel typ	De		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010.'		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied № Liquefied pe Natural gas Propane	Fuels iil I oil No 3 tural Gas (LNG troleum gas (LF	MWh 692831 27672600 11124 2269291 181 181 17 9851 28537767 7263 263 767 7263	'Fuel" figure entered	above by fuel typ	06		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010.'		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied N: Liquefied pe Natural gas Propane Refinery gas Residual fue Waste oils Distillate fue	Fuels ill ill No 3 itural Gas (LNG troleum gas (LF i oli l oli l oli No 4	MWh 692831 27672600 11124 2269291 181) 17 9851 28537767 7263 21540834 40329217 181228 102358	'Fuel" figure entered	above by fuel typ	06		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010. '		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied pr Natural gas Propane Refinery gas Residual fue Waste oils Distillate fue Distillate fue	Fuels ill oil No 3 itural Gas (LNG troleum gas (LF i oil oil No 4 oil No 2	MWh 692831 27672600 11124 2269291 181) 17 'G) 9851 28537767 7263 21540834 40329217 181228 102358 8 8	'Fuel" figure entered	above by fuel typ	06		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010. '		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied N: Liquefied pe Natural gas Propane Refinery gas Residual fue Waste oils Distillate fue	Fuels ill oil No 3 itural Gas (LNG troleum gas (LF i oil oil No 4 oil No 2	MWh 692831 27672600 11124 2269291 181) 17 9851 28537767 7263 21540834 40329217 181228 102358	'Fuel" figure entered	above by fuel typ	00		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010.'		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied pr Natural gas Propane Refinery gas Residual fue Waste oils Distillate fue Distillate fue	Fuels ill oil No 3 itural Gas (LNG troleum gas (LF i oil oil No 4 oil No 2	MWh 692831 27672600 11124 2269291 181) 17 'G) 9851 28537767 7263 21540834 40329217 181228 102358 8 8	'Fuel" figure entered	above by fuel typ	00		
Total OG1 Plea	Il gases 50,6 1.2 ase provide values for Product Natural gas Light & medium oils	proved r Proved 40418 65030	reserves of e d reserves 333333 000000000	(BOE), 20	010 Dat Fri 3 Fri 3	e of assess 31 Dec 2010 31 Dec 2010	ment	of BOE) fc	or 2010. '		Please complete th Crude oil Diesel/Cas Distillate fue Jet gasoline Kerosene Liquefied pr Natural gas Propane Refinery gas Residual fue Waste oils Distillate fue Distillate fue	Fuels ill oil No 3 itural Gas (LNG troleum gas (LF i oil oil No 4 oil No 2	MWh 692831 27672600 11124 2269291 181) 17 'G) 9851 28537767 7263 21540834 40329217 181228 102358 8 8	'Fuel" figure entered	above by fuel typ	De		

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	A	В	C	D	E	F	G	Н		J	К	L	М	N	0	P Q
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576					1											
577			Total									0		esident Climate and E	nergy	
578							(data provided by H					Protocol and metho	dology:	IPCC SAR GWP		
579				anno 2010 subr	ission	Gross Scope 1	2008	2009	2010	2011		IPIECA 2003		Operational control		
580			sions Methodol			Table OG3.3	tCO2e	tCO2e	tCO2e	tCO2e						
581				in - 31Dec 2010)		Combustion			not provided			Entity 2010 p	oduction and emissi			
582			e 1 Emissions E			Flaring							Crude oil & NGL	Natural gas	-	
583			pe 2 Emissions	Breakdown		Process emissions							million bbl	Bcf		
584		ection 12: Ene				Vented emissions						Production	599	2,347	linked	
585	Se	ection 15: Sco	pe 3 Emissions			Fugitive emissions							MtCO2/million bbl	MtCO2/Bcf		
586						Total	-	-	-	J		Emission factor	0.371	0.053	linked	
587			-		1	T 11 0 0	1000					E : :	MtCO2	MtCO2	1	
588		iross Scope 1		tCO2e 26,000,000	50.4%	Table 9.2 CO2	tCO2e 47,600,000	0.0%	1			Emissions	222 kg CO2/tCO2	125 kg CO2/tCO2	1	
509		ostream ownstream		20,200,000	39.1%		2,800,000	0.0%		tCH4		Vented CO2 EF	3.83	28.53	-	
590		nemicals		5,400,000	10.5%		1,200,000	0.0%		1014		Flaring EF	15.94	1.74		
592	CI	lenneals		3,400,000	0.0%	HFCs	1,200,000	0.070	,			Fugitive methane	1.92	9.88	kg CH4/tCO2	ר
593					0.0%	PFCs						Fugitive methane	40	207.44		
594			Total	51,600,000	100.0%	SF6				٢	Ancilla	ry emissions, 2010	MtCO2e	MtCO2e	kg 0020/1002	-
578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599	Ľ		iotai	31,000,000	100.070	Total	-	0.0%	ò	L	Ancilla	Vented CO2	0.9	3.6	1	
596		51,600,000	Scope 1, 20	10				0.070				Flaring	3.5	0.2		
597		, ,	,									Fugitive methane	0.4	1.2	MtCH4	ר ן
598							[CDP Table 12.3	1			Fugitive methane	9.0	26.0		-
599	G	iross Scope 2			Energy	MWh	Fuel energy	use is direct, there	fore Scope 1			Total ancillary	13.4	29.8		
600	Up	ostream			Fuel	133,100,000	Fuel	MWh	0.0%]		Total, 2010:	MtCO2e	MtCO2e	Percent oil	ercent gas
601		ownstream			Electricity (impor		Other: Solid fuels (c	10,000,000	0.0%	-		Production	222	125		5 80.8%
602	Ch	nemicals			Heat		Other: Liquid fuels	12,900,000	0.0%			Ancillary	13	30	5.7%	5 19.2%
603					Steam (imported	7,800,000	Other: Gas fuels	110,200,000	0.0%			Total	236	155	1	
604	To	otal		-	Cooling	-	Total	133,100,000	_			Total, 2010:	MtCO2e	Percent		
605					Total	162,700,000	Note:	Appears to be all ov	wn fuel			Total production	348	89.0%		
606												Total ancillary	43	11.0%		
607		5,400,000	Scope 2, 20	10								Total, 2010	391			
608			I	1 kWh =	3.60	MI	Therefore	122 100 000	479,160,000,000	MJ		Total CH4	tCH4 gas 1,666,277	methane intensity 4.79	kg CH4/tCO2	- 1
609			l	1 KVVII =	5.60	MJ	Therefore	155,100,000	479,160	TJ		This project Self-reported CDP	133,333		kg CH4/tCO2	
611									475,100	15		% of this study	8.00%	12.50	multiple	- 1
609 610 611 612							Case 1. Assi	ume own energy is a	all natural das	1		70 OF CHI3 SEUCY	0.0070	12.50	marciple	
613						he	eat content nat gas	1.1050								
614							ac concorre nat gao	433,628,959,276								
614 615									Bcf own energy (if	nat gas)						
616	G	iross Scope 3					CME Gas EF		MtC/Bcf			Comparing enti	ty's CDP submissic	on to this study		
617			_	tCO2e				7.19	MtC own energy				-	Perce	nt of Product em	issions,
618	Us	e of sold pro	ducts	627,000,000			Result	26.38	MtCO2 own energy	ý				MtCO2e	this study	
619	Tr	ansportation	& distribution c	6,600,000								Product emissions		347.7	100.0%	
620				na				own energy is all cru				Ancillary emission		43.2	12.4%	
621		her: Business	Travel - Air	na			IPCC, heat value		GJ/bbl			Entity total, 2010		390.9		5 #DIV/0!
622	to	tal Scope 3		633,600,000]				bbl own energy			Product emissions	,	627.0	180.3%	
623							CME liquids EF		kgC/bbl			Total scope 3, CE	P	633.6	182.2%	
624							Liquids Carbon		tC own energy	l		Scope 1, CDP		51.6	14.8%	
625							Liquids CO2	32.32	MtCO2 own energy	2		Entity Scope 1 + P		678.6		#DIV/0!
626							C 2. A		of was and lined 1.	i.		"Own fuel" emission		28.4	8.2%	2
620							Case 3: Assume own		of gas and liquid fue MtCO2 own energy					to this comparison to		
620							Average gas & liqui							re already accounted	101.	
630							2/3 gas & 1/3 liqui	20.36	MtCO2 own energy	<u>y</u>		Note: presumed ow	i idei. Originai data	in enor(10/-3).		
631	0	I, IPCC	20.00	kgC/GJ, default (1				OG 5.1						
632		atural gas IPC		kgC/GJ, default o			ſ	Proved reserves	Production 2010	ducts available for sa	ale					
633	INC	icurai yas irU	5 15.50	ngo/ 05, uerault (l	OG 1.1 and 1.2	BOE	BOE	BOE	410					
634							Crude oil	202	501	552						
635							Unconventional (san	ids. bitumen)								
620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 633 634 635 636 637							Natural gas	,								
637							Total									
638							·									

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576				Tota																	
578				TULA																	
579																					
580	7	7.4 Please (ive the en	niesions fa	actore you	have ann	lied and their	origin: alto	rnatively n	asea atta	ch an Exce	el spreadsheet v	with this dat	a							
582		10030 5	ire ne en	100101010	uotors you	nave app		ongin, and	inacively, p	ouse alla		of oproducine of the	in this due								
583					Emissio	on Factor		Unit				ference									
584			Natural gas		2.7							ig reporting guid									
586		(Other: Liqui	id fuel	3.1		metric tonnes	CO2e per	metric tonne	EUEI	S Monitorir	ig reporting guid	elines								
587																					
588	1	12.2		web firel al	la atula itu		and cooling in														
590		riedse s	tate now m	uch fuel, ei	lectricity, ne	eat, steam,	and cooling in	www.your	organization	nas const	ineu										
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597		C	ooling	0																	
598	1	12.3																			
600	F	Please c	omplete the	e table by b	breaking do	wn the tota	l "Fuel" figure	entered ab	ove by fuel ty	pe											
601			Fue	Is	MWh																
<u>602</u> 603) 1000000	00															
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	ENI										o Rosanna - Environr	-		
		2010		0	(data provided by He			r OG3.3) 2011	-	Protocol and meth	odology:	IPCC SAR GWP		
	losure Project, RDS missions Methodolo		nission	Gross Scope 1 Table OG 3.3	2008 tCO2e	2009 tCO2e	2010 tCO2e	tC02e	-	API Compendium		Operational control		
	missions Data (1Ja		، ۱	Combustion	37,370,878	36,657,105	39,092,381	10020	_	Entity 2010 r	production and emiss	ions this study	1	
	cope 1 Emissions E			Flaring	16,535,835	13,730,862	13,827,931				Crude oil & NGL	Natural gas		
Section 10:	Scope 2 Emissions	Breakdown	I	Process emissions	s na	na	na				million bbl	Bcf		
Section 12:				Vented emissions	, ,	2,182,202	2,340,032			Production	364	1,657	linked	
Section 15:	Scope 3 Emissions			Fugitive emissions		5,085,594	5,415,779				MtCO2/million bbl	MtCO2/Bcf		
			ļ	Total	61,995,212	57,655,763	60,676,123			Emission factor	0.371 MtCO2	0.053 MtCO2	linked	
Gross Scop	<u>e 1</u>	tCO2e	٦		tCO2e					Product emissions	135	89	1	
	& Production	31,223,404	51.5%	CO2	53,591,096	88.3%	1			11000000 01113310113	kg CO2/tCO2	kg CO2/tCO2	1	
Gas & Power	r	15,794,439		CH4	7,085,027	11.7%	337,382	tCH4		Vented CO2 EF	3.83	28.53		
Refining & M	larketing	7,756,953			l na	0.0%	1		_	Flaring EF	15.94	1.74		
Petrochemic		4,642,424		HFCs	na					Fugitive methane		9.88	kg CH4/tCO2	
	& Construction	1,176,396								Fugitive methane		207.44	kg CO2e/tCO2	_
	nd financial compa			SF6	60.676.100	100.00/	-		A	ncillary emissions, 2010	MtCO2e	MtCO2e		
Others	Total	9,590 60,676,123		Total	60,676,123	100.0%	L			Vented CO2 Flaring	0.5 2.2	2.5 0.2		
60 676 1	123 Scope 1, 20		100.0%		Г	CDP Table 12.3	1			Fugitive methane		0.2	MtCH4	٦
00,070,1	25 Scope 1, 20	10			Fuel energy /	use is direct, theref	fore Scope 1			Fugitive methane		18.4	MCCIT	J
Gross Scop	e 2		Energy	MWh	Fuel	MWh	Percent	Percent of gases	7	Total ancillary	8.1	21.0	1	
	& Production	168,741		178,392,987		117,238,956	65.7%	78.69		Total, 2010:	MtCO2e	MtCO2e		erce
Gas & Power		312,470				31,887,361	17.9%	21.49	6	Production	135	89	94.3%	
Refining & M		562,223			Liquefied petroleum	467,553	0.3%			Ancillary	8	21	5.7%	, 19
Petrochemic		755,290		20,362,746	Motor gasoline	213,750	0.1%			Total	143 MtCO2e	110 Demonst		
	& Construction nd financial compa	34,476 3,329		241 266 292	Diesel / Gas oil Residual fuel oil	9,484,406 10.033.747	5.3% 5.6%			Total, 2010: Total production	MtCO2e 224	Percent 88.5%		
Others		49,313		241,300,303	Petroleum coke	5,047,930	2.8%			Total ancillary	224	11.5%		
o choro	Total	1,885,842			Other: Mostly coke	4,019,282	2.3%			Total, 2010	253			
			_		Total	178,392,985	100.0%			Total CH4	tCH4 gas	methane intensity		1
					Note: /	Appears to be all ov	vn fuel			This project	1,134,666	5.07	kg CH4/tCO2	
1,885,8	342 Scope 2, 20	010 1 kWh =	3.60	M1	Therefore	MWh	642,214,746,000	МЈ	-	Self-reported CDP % of this study	<u>337,382</u> 29,73%		kg CH4/tCO2 multiple	_
	L	1 KVVII =		_MJ	Therefore	170,392,905		TJ		% of this study	29.73%	5.50	multiple	J
					C 1. A	me own energy is a								
						me own energy is a								
				he	eat content nat das	1 1050	MI/cf							
				h	eat content nat gas	1.1050 581,189,815,385				Comparing ent	ity's CDP submissio	on to this study	1	
				h,	eat content nat gas	581,189,815,385		nat gas)		Comparing ent	ity's CDP submissio		ent of Product emis	ssion
Gross Scop	e 3		-	h	eat content nat gas CME Gas EF	581,189,815,385 581 0.017	cf nat gas Bcf own energy (if i MtC/Bcf	nat gas)			2	Percer MtCO2e	this study	
		tCO2e]	h	CME Gas EF	581,189,815,385 581 0.017 9.64	cf nat gas Bcf own energy (if r MtC/Bcf MtC own energy			Product emission	s, this study	Percer MtCO2e 223.7	this study 100.0%	5
Use of sold	products	268,438,000	Sales times Efs			581,189,815,385 581 0.017 9.64	cf nat gas Bcf own energy (if i MtC/Bcf			Product emission Ancillary emissior	s, this study is, this study	Percer MtCO2e 223.7 29.2	this study 100.0% 13.0%	b b
Use of sold Purchased g	products loods and services	268,438,000 268,729	API Compendium	1	CME Gas EF Result	581,189,815,385 581 0.017 9.64 35.36	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy			Product emission Ancillary emission Entity total, 2010	s, this study is, this study), this study	Percei MtCO2e 223.7 29.2 252.9	this study 100.0% 13.0% 113.0%	5 5 5 100
Use of sold	products loods and services	268,438,000	API Compendium	1	CME Gas EF Result Case 2: Assume o	581,189,815,385 581 0.017 9.64 35.36 wwn energy is all cru	cf nat gas Bcf own energy (if n MtC/Bcf MtC own energy MtCO2 own energy ude oil & products			Product emission Ancillary emission Entity total, 2010 Product emission	s, this study ns, this study D, this study s, CDP	Percee MtCO2e 223.7 29.2 252.9 268.4	this study 100.0% 13.0% 113.0% 120.0%	5 5 5 100
Use of sold Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result	581,189,815,385 581 0.017 9.64 35.36 wm energy is all cru 5.78	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy Jde oil & products GJ/bbl			Product emission Ancillary emissior Entity total, 2010 Product emission Total scope 3, C	s, this study ns, this study D, this study s, CDP	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7	this study 100.0% 13.0% 113.0% 120.0% 120.1%	5 5 100
Use of sold Purchased g	products joods and services ivel	268,438,000 268,729	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o	581,189,815,385 581 0.017 9.64 35.36 own energy is all cru 5.78 111,039,896	cf nat gas Bcf own energy (if n MtC/Bcf MtC own energy MtCO2 own energy ude oil & products			Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, CD Scope 1, CDP	s, this study ns, this study D, this study s, CDP	Percee MtCO2e 223.7 29.2 252.9 268.4	this study 100.0% 13.0% 113.0% 120.0%	5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon	581,189,815,385 581 0.017 9.64 35.36 wwn energy is all cru 5.78 111,039,896 106.40 11,814,501	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy			Product emission Ancillary emission Entity total, 2011 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss	s, this study is, this study), this study s, CDP DP Product emiss. CDP ions (CMS)	Percei MtC02e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0	this study 100.0% 13.0% 113.0% 120.0% 120.1% 27.1% 147.3% 17.0%	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF	581,189,815,385 581 0.017 9.64 35.36 wwn energy is all cru 5.78 111,039,896 106.40 11,814,501	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy Jde oil & products GJ/bbl bbl own energy kgC/bbl			Product emission Ancillary emission Entity total, 2011 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not at	s, this study Is, this study D, this study S, CDP DP Product emiss. CDP ions (CMS) Id Scope 2 emissions	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2	581,189,815,385 581 0,017 9,64 35,36 0wn energy is all cru 5,78 111,039,896 106,40 11,814,501 43,32	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy Gl/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy			Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, CD Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ac since primary fuel i	s, this study Is, this study D, this study S, CDP DP Product emiss. CDP ions (CMS) Id Scope 2 emissions nputs to electricity a	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own	581,189,815,385 581 0.017 9.64 35.36 5000 energy is all cru 5.78 111,039,896 106.40 11,814,501 43.32 energy is average c	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy of gas and liquid fuels	s		Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, CD Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ac since primary fuel i	s, this study Is, this study D, this study S, CDP DP Product emiss. CDP ions (CMS) Id Scope 2 emissions	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own - Average gas & liqui	581,189,815,385 581 0,017 9,64 35,36 5,78 111,039,896 106,40 11,814,501 43,32 energy is average of 39,34	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtC02 own energy Jde oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtC02 own energy of gas and liquid fuels MtC02 own energy	s		Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ac since primary fuel i Note: presumed ov	s, this study Is, this study , this study s, CDP DP Product emiss. CDP ions (CMS) Id Scope 2 emissions nputs to electricity a vn fuel. Original data	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison te are already accounted in error(10^-3).	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own	581,189,815,385 581 0,017 9,64 35,36 5,78 111,039,896 106,40 11,814,501 43,32 energy is average of 39,34	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtCO2 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtCO2 own energy of gas and liquid fuels	s	06.5	Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not at since primary fuel i Note: presumed ov	s, this study Is, this study D, this study S, CDP Product emiss. CDP ions (CMS) Id Scope 2 emissions nputs to electricity a vn fuel. Original data bducts available for s	Percei MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison te are already accounted in error(10^-3).	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold p Purchased g Business tra	products joods and services ivel	268,438,000 268,729 30,590	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own - Average gas & liqui	581,189,815,385 581 0,017 9,64 35,36 5,78 111,039,896 106,40 11,814,501 43,32 energy is average of 39,34	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtC02 own energy ide oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy	s	OG 5. Other: Hy	Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not at since primary fuel i Note: presumed ov	s, this study Is, this study D, this study S, CDP Product emiss. CDP Id Scope 2 emissions puts to electricity a vn fuel. Original data bducts available for s BOE	Percent MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted in error(10^-3).	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold Purchased g Business tra Total Scope	products loods and services ivel 3 20.00	268,438,000 268,729 30,590 268,737,319	API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids CArbon Liquids CO2 Case 3: Assume own - Average gas & liqui	581,189,815,385 581 0,017 9,64 35,36 5,78 111,039,896 106,40 11,814,501 43,32 energy is average c 39,34 38,02	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtC02 own energy ide oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy	s	Other: Hy	Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ad since primary fuel i Note: presumed ov Pr.	s, this study Is, this study D, this study S, CDP Product emiss. CDP Id Scope 2 emissions puts to electricity a vn fuel. Original data bducts available for s BOE	Percent MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted in error(10^-3).	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold Purchased g Business tra Total Scope Oil, IPCC	products loods and services ivel 3 20.00	268,438,000 268,729 30,590 268,737,319 kgC/GJ, default (API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui	581,189,815,385 581 0,017 9,64 35,36 0000 energy is all cru 5,78 111,039,896 111,039,896 111,039,896 111,039,896 111,814,501 43,32 energy is average c 39,34 38,02 Proved reserves	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtC02 own energy de oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy	s	Other: Hy Natural g	Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, C Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ac since primary fuel i Note: presumed ov Pr 1	s, this study Is, this study D, this study S, CDP Product emiss. CDP ions (CMS) Id Scope 2 emissions nputs to electricity a vn fuel. Original data bducts available for s BOE 1 638,000,000 617,301,600 95,400,000	Percent MtCO2e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted in error(10^-3).	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Use of sold Purchased g Business tra Total Scope Oil, IPCC	products loods and services ivel 3 20.00	268,438,000 268,729 30,590 268,737,319 kgC/GJ, default (API Compendium EPA Climate Lead	1	CME Gas EF Result Case 2: Assume o IPCC, heat value CME liquids EF Liquids Carbon Liquids CO2 Case 3: Assume own Average gas & liqui 2/3 gas & 1/3 liqui BP CDP, OG1.2	581,189,815,385 581, 0.017 9.64 35.36 wwn energy is all cru 5.78 111,039,896 106.40 11,814,501 43.32 energy is average of 39.34 38.02 Proved reserves BOE	cf nat gas Bcf own energy (if MtC/Bcf MtC own energy MtC02 own energy Jde oil & products GJ/bbl bbl own energy kgC/bbl tC own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy MtC02 own energy	s	Other: Hy Natural g	Product emission Ancillary emission Entity total, 2010 Product emission Total scope 3, CD Entity Scope 1, CDP Entity Scope 1 + F "Own fuel" emiss Note: we do not ac since primary fuel i Note: presumed ov Pr 1 rdrocarbon production so as (excluding LNG) natural gas (LNG)	s, this study Is, this study D, this study C, this study C, this study DP Product emiss. CDP Ions (CMS) Id Scope 2 emissions nputs to electricity a In fuel. Original data boducts available for s BOE I 638,000,000 617,301,600	Percei MtC02e 223.7 29.2 252.9 268.4 268.7 60.7 329.4 38.0 s to this comparison ta are already accounted in error(10^-3). sale	this study 100.0% 13.0% 120.0% 120.1% 27.1% 147.3% 17.0% able,	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

	U	V	W	Х		Y	Z		AA		AB	AC	AD	AE	AF	
	ENI															
-	Emission					_										
Fuel/Material/Energy	Factor	Unit					eference									
Natural gas	1.96	Other: kg CO2/m3	CO2: Natural	Gas - EU-ETS I	talian Delit	peration 14	4/2009									
Refinery gas	3.12	metric tonnes CO2 per metric tonne	CO2: Refiner	y fuel gas - EU-I	ETS Italian	Deliberati	ion 14/2009									
	0.17	metric tonnes CO2 per metric														
Diesel/Gas oil	3.17	tonne	CO2. Diesei -	EU-ETS Italian			9									
Other: Flaring	1.86	Other: kg CO2/m3		mbustion - eni												
Other: Associated Gas	3.48	Other: kg CO2/m3		ived from oil - E												
Other: Fuel Oil	3.14	metric tonnes CO2 per metric tonne	CO2: Fuel Oil	- EU-ETS Italia	n Deliberat	tion 14/20	09									
Other: Flared Gas	3.03	metric tonnes CO2 per metric	CO2: Flared o	as (butane) - E	U-ETS Itali	an Delihe	ration 14/2000									
		tonne	COZ. FIBIED (Jus (buidrie) - E		an Denber	14/2009									
Liquefied petroleum gas (LPG)	3.02	metric tonnes CO2 per metric tonne	CO2: LPG - E	U-ETS Italian D	eliberation	14/2009										
Natural gas	54.60	Other: gr CH4/tonne	CH4: Natural	Gas API Compe	endium Tal	ble 4.4a Al	P-42 Tab 1.4.2 (7/98) conver	ted by LHV=4	9.6 GJ/ton						
Natural gas	0.04	Other: gr CH4/tonne	CH4: Boilers/	Heaters/Furnac	es natural (gas Eni Pr	rotocol rev1 Tab									
Natural gas	0.84	Other: gr CH4/tonne		ession Gas turbi												
Refinery gas	1.43	Other: kg CH4/tonne			G assumed	to contain	n 30% mol of Cł	H4 density = 0	0.75 Kg/Nm3 I	Destruction						
Other: Flared Gas	0.60	Other: kg CH4/m3	efficiency = 9 CH4: Flare co		as, Eni Pro	tocol (Teh	D2-3 98 % con	version)								
Diesel/Gas oil	0.18	Other: kg CH4/tonne					missions calcula		02							
Other: Fuel Oil	0.65	Other: kg CH4/tonne		, API Compendi												
Liquefied petroleum gas	0.96	Other: gr CH4/GJ		Compendium												
(LPG)		-				1. 4 4. 0	E0 000 0 It									
Natural gas Refinery gas	49.20 34.09	Other: gr N2O /tonne Other: gr N2O /tonne		gas API Compe			3 50.208 GJ/ton Idium Table 4.4	a converted b	3 405E E to	n/ton						
Other: Flared Gas	0.07	Other: gr N2O /Sm3					(default density									
Other: Fuel Oil	90.80	Other: gr N2O /tonne		, API Compendi			(action density	0.00000 kg/		5 101)						
Liquefied petroleum gas	4.42			PI Compendium												
(LPG)	4.42	Other: gr N2O /GJ	NZU: LPG, AF	-i Compendium												
ENI 5	SpA, CDP 201	0, 7.4 Efs														
		· ·			10.2a											
					Pleas	se break (down your tota	al gross glob	al Scope 2 e	emissions	by busines	s division				
Business Divis		cope 1 metric tonnes CO2e					Business div	vision	Scono 2	metric ton						
Exploration & Production		1223404				Explore	ation & Product		168741	metric ton	1103 0020					
Gas & Power		5794439 756953				Gas &			312470							
Refining & Marketing Petrochemical		756953 642424					ng & Marketing		562223							
Engineering & Construct		176396					hemical		755290							
Corporate and financial		2917					ering & Constr	uction	34476							
Others		590					rate and financi		s 3329							
						Others			49313							
9.2c					9.2c											
Please break down you	r total gross glo	obal Scope 1 emissions by GH	G type				down your tot	tal gross glo	bal Scope 1	l emission	s by GHG	type				
GHG type Sco	no 1 motric ton							0 0-								
	91096	1103 3020				GHG t	type Scope 1	I metric ton	nes CO2e							
	5027					CO2	535910									
						CH4	708502	7								
9.2d	r total gross glo	obal Scope 1 emissions by act	ivity		9.2d											
		1 metric tonnes CO2e			Pleas	se break	down your tot	al gross glo	obal Scope 1	emission	is by activ	ity				
Please break down you	Second	Thethe tonnes COze					Activity	Scone	1 metric tor	ines CO2e						
Please break down you Activity		381				Comb	ustion & Proce			1105 0020						
Please break down your Activity Combustion & Pr	rocess 390923															
Please break down your Activity Combustion & Pr Flaring	rocess 390923 138279	931														
Please break down your Activity Combustion & Pr Flaring Venting	rocess 390923 138279 234003	931 32				Flaring	g	138279	931							
Please break down your Activity Combustion & Pr Flaring Venting Fugitive Emission	rocess 390923 138279 234003 on 541577	931 32				Flaring Ventin	g 1g	138279 234003	931 32							
Please break down your Activity Combustion & Pr Flaring Venting	rocess 390923 138279 234003 on 541577	931 32				Flaring Ventin	g	138279	931 32							

9.2d Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 metric tonnes CO2e
Combustion & Process	39092381
Flaring	13827931
Venting	2340032
Fugitive Emission	5415779

CC Scope

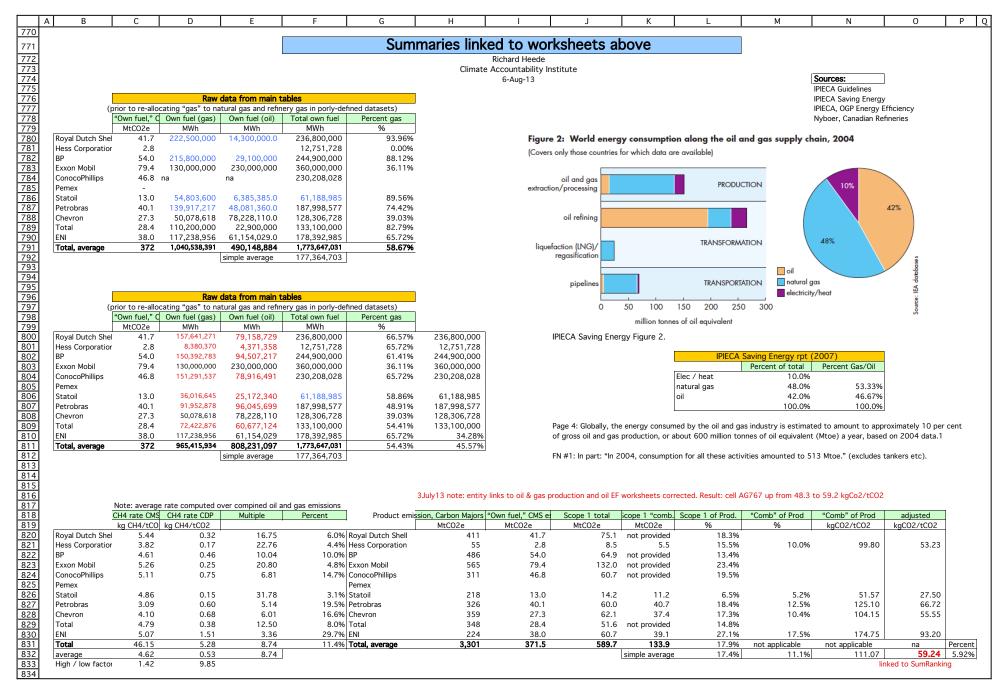
CO2	53591096	

9.2d Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 metric tonnes CO2e
Combustion & Process	39092381
Flaring	13827931
Venting	2340032
Fugitive Emission	5415779

A	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	P Q
704					-						•				
705						Summa	aries link		rksheets a	above					
706								Richard Heede							
707							Climate	Accountability 15-Jul-13	Institute						
708 709 710								1 3-Jul-1 3							
710				-					_					-	
7 <u>11</u> 712	F	loyal Dutch Sh			. , I	Co	onocoPhillips			.		Chevron			. .
712			MtCO2e	nt of Product emis this study	sions,			MtCO2e	cent of Product emis this study	ssions,			MtCO2e	ent of Product em this study	ssions,
714	Product emissions, this study 410.7			100.0%		Product emissions, this	study	310.8		%	Product emission	ns, this study	359.0	100.09	ó
715	Ancillary emissions, this study 56.9			13.9%		Ancillary emissions, this	study	40.8		% roduct emissio		ons, this study	39.1		6 uct emissio
716	Entity total, 2		467.7	113.9%	CDP/This study	Entity total, 2010, this	study	351.6		% CDP/This stud			398.1		6 P/This stud
717 718	Product emissi Total scope 3,		669.0 672.2	162.9% 163.7%	162.9%	Product emissions, CDP Total scope 3, CDP		-	0.0 ⁴ 0.0 ⁴		Product emission Total scope 3, 0		404.0 404.0	112.59	6 112.5%
719	Scope 1, CDP	CDP	75.1	18.3%	Entity total	Scope 1, CDP		- 60.7			Scope 1, CDP	CDP	404.0		6 ntity total
720		+ Product emi:		181.2%	CDP/This study	Entity Scope 1 + Produc	t emiss. CDP	60.7		% CDP/This stud		Product emiss. CDP	466.1		6 P/This stud
7 <u>21</u> 722	"Own fuel" em		41.7	10.2%	159.1%	"Own fuel" emissions (C		46.8		% 17.3%			27.3		6 117.1%
722		ate, this study	5.44	kg CH4/tCO2			ate, this study		kg CH4/tCO2			thane rate, this study		kg CH4/tCO2	
723	Methane rate	, CDP-reported	0.32	kg CH4/tCO2	l l	Methane rate	, CDP-reported	0.75	kg CH4/tCO2		Metha	ne rate, CDP-reported	0.68	kg CH4/tCO2	_
725	ŀ	less Corporatio	on	1			Pemex					Total			
724 725 726	-			nt of Product emis	sions,				cent of Product emi	ssions,				ent of Product em	issions,
727			MtCO2e	this study				MtCO2e	this study	_	· · · · · · · · · · · · · · · · · · ·		MtCO2e	this study	_
7 <u>28</u> 729		ions, this study sions, this study		100.0%	Product emissions	Product emissions, this Ancillary emissions, this		537.3 56.6		% % roduct emissio	Product emission r Ancillary emission		347.7 43.2	100.09	6 6 uct emissio
730	Entity total, 2		60.3	110.3%	CDP/This study	Entity total, 2010, this		593.9		% CDP/This stud			390.9		6 P/This stud
731	Product emissi		40.2	73.5%	74%	Product emissions, CDP	study	-	0.0				627.0		6 180.3%
'32	Total scope 3,	CDP	40.3	73.7%		Total scope 3, CDP		-	0.0		Total scope 3,	CDP	633.6	182.29	6
733	Scope 1, CDP		8.5	15.5%	Entity total	Scope 1, CDP		-	0.0		Scope 1, CDP		51.6		6 ntity total
734	Entity Scope 1 "Own fuel" em	+ Product emi:	48.8 2.8	89.2% 5.1%	CDP/This study 80.9%	Entity Scope 1 + Product "Own fuel" emissions (C		- #REF!	0.0' #REF!	CDP/This stud 0.0%		Product emiss. CDP	678.6 28.4		6 ⁹ /This stud 6 173.6%
736		ate, this study	3.82		80.9%		ate, this study		kg CH4/tCO2	0.0%		thane rate, this study		kg CH4/tCO2	173.0%
/37		, CDP-reported		kg CH4/tCO2			, CDP-reported	-	kg CH4/tCO2			ne rate, CDP-reported		kg CH4/tCO2	
7 <u>37</u> 7 <u>38</u>														-	
739 740		BP	Damas	at af Das duat and			Statoil	De	and of Deadland and			ENI	Dava	at of Decident one	
740		ſ	MtCO2e	nt of Product emis this study	sions,			MtCO2e	rcent of Product emi this study	ssions,			MtCO2e	ent of Product em this study	ssions,
742	Product emissi	ions, this study		100.0%		Product emissions, this	study	218.1		%	Product emission	ns, this study	223.7	100.09	ó
743	Ancillary emiss	sions, this study	58.3	12.0%	Product emissions	Ancillary emissions, this		27.4	12.6	% roduct emissio	r Ancillary emissio		29.2		6 uct emissio
744	Entity total, 20		544.0	112.0%	CDP/This study	Entity total, 2010, this		245.5		% CDP/This stud			252.9		6 P/This stud
7 <u>45</u> 746	Product emissi		573.0	118.0%	118.0%	Product emissions, CDP		-	0.0			,	268.4		6 120.0%
746	Total scope 3, Scope 1, CDP	CDP	573.0 64.9	118.0% 13.4%	Entity total	Total scope 3, CDP Scope 1, CDP		0 14.2			Total scope 3, Scope 1, CDP	CDP	268.7 60.7	120.19	6 ntity total
748		+ Product emi:		131.3%	CDP/This study	Entity Scope 1 + Produc	t emiss. CDP	14.2				Product emiss. CDP	329.4		6 P/This stud
749	"Own fuel" em		54.0	11.1%	117.3%			13.0	6.0				38.0		6 130.3%
7 <u>50</u> 751		ate, this study	4.61				ate, this study		kg CH4/tCO2			thane rate, this study	5.07	kg CH4/tCO2	
751 752	Methane rate	, CDP-reported	0.46	kg CH4/tCO2		Methane rate	, CDP-reported	0.15	kg CH4/tCO2		Metha	ne rate, CDP-reported	1.51	kg CH4/tCO2	
753		Exxon Mobil		1			Petrobras				Product en	nission, Carbon Majors	"Own fuel." CDP est	Combustion	% own fue
7 <u>53</u> 754			Perce	nt of Product emis	sions,			Pe	rcent of Product emi	ssions,		MtCO2e	MtCO2e	MtCO2e	%
755			MtCO2e	this study				MtCO2e	this study		Royal Dutch Shell	411	41.7		10.2%
7 <u>56</u> 757	Product emiss		565.3	100.0%	Des durat aminaiana	Product emissions, this		325.6			Hess Corporation	55	2.8	5.5	
757 758		sions, this study 010, this study		13.5%	Product emissions CDP/This study	Ancillary emissions, this Entity total, 2010, this		28.0 353.7		% roduct emissio % CDP/This stud		486 565	54.0 79.4		11.1% 14.0%
759	Product emissi		1.6	0.3%	0.3%	Product emissions, CDP		504.1			ConocoPhillips	311	46.8		15.1%
760	Total scope 3,		1.6	0.3%		Total scope 3, CDP		504.1			Pemex				
61	Scope 1, CDP		132.0	23.4%	Entity total	Scope 1, CDP		60.0			Statoil	218	13.0	11.2	
762		+ Product emi:		23.6%	CDP/This study	Entity Scope 1 + Produc		564.0		CDP/This stud		326	40.1	40.7	
7 <u>63</u> 764	"Own fuel" em	issions (CMS) ate, this study	79.4	14.0% kg CH4/tCO2	20.8%	"Own fuel" emissions ((CMS) ate, this study	40.1	12.3 kg CH4/tCO2	% 159.5%	Chevron Total	359 348	27.3 28.4	37.4	7.6% 8.2%
765		, CDP-reported		kg CH4/tCO2 kg CH4/tCO2			, CDP-reported	0.60			ENI	224	28.4	39.1	
766		, con reported	0.23	Ng ON I/ COL	1	meenane race	, con reported	0.00	ing off // tool		Total, average	3,301	371.5	55.1	11.3%
767											· · · · ·			simple average	10.7%
768															
768 769															

	R S	Т	U	v	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
704																
705																
706																
708																
710																
711																
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Cell: F10

Comment: Rick Heede:

CDP form: "OG3.3 Please provide masses of gross Scope 1 GHG emissions released to atmosphere in units of metric tonnes CO2e for the whole organization broken down by emissions categories: combustion, flaring, process emissions, vented emissions, fugitive emissions." Shell did not provide data for any items requested. CMS, March 2013.

Cell: F20

Comment: Rick Heede:

Shell presumably uses API Compendium and its protocol for fugitive methane.

Cell: B45

Comment: Rick Heede:

Shell CDP 2010, Section 15.1: Scope 3 Emissions: 475 MtCO2e.

"These emissions were determined from the product of Refinery processing outturn and the emission factor for refined projects. The Refinery Processing Outturn number is on page 40 of the publication "Royal Dutch Shell plc Annual Report and Form 20-F for the year ended December 31st 2010". Emission Factors for the refined products are from the IEA publication "CO2 Emissions from Fuel Combustion". We are investigating transitioning to the use of DEFRA factors."

Cell: B46

Comment: Rick Heede:

Shell CDP 2010, Section 15.1: Scope 3 Emissions: 194 MtCO2e.

"These emissions were determined from the product of Natural Gas Production and the emission factor for natural gas. The Natural Gas Production number is on page 32 of the publication "Royal Dutch Shell plc Annual Report and Form 20-F for the year ended December 31st 2010". Emission Factor for natural gas is from the IEA publication "CO2 Emissions from Fuel Combustion". We are investigating transitioning to the use of DEFRA factors."

Cell: B54

Comment: Rick Heede:

Shell plc 2009 CDP rpt, section 15.1: Scope 3: Use of Products Sold: 570 MtCO2e. "The activity data is taken from pages 33 and 40 of the 2011 Annual Report. The following emission factors (tonne CO2 / tonne of product) were assigned to each product, i.e. Gasoline = 3.07, Kerosene = 3.17, Gas Oil = 3.18, Fuel Oil = 3.08, LPG = 2.95, Natural Gas = 2.65. We improved the estimation method in 2011. The boundary used to report refinery products and natural gas production are those used for financial reporting and do not align with the traditional GHG boundaries defined by the GHG Protocol. The Refinery Outturn data reflects Shell subsidiaries, the 50% Shell interest in Motiva in the USA and instances where Shell owns the crude or feedstock processed by a refinery. Some equity-accounted investments are not included. The natural gas production includes Shell subsidiaries and the Shell share of equity accounted investments. See the assurance statement for more details."

Cell: U57

Comment: Rick Heede:

Net calorific value of natural gas shown as 48.0 TJ/Gg (range from 46.5 to 50.4 TJ/Gg), IPCC 2006 Guidelines vol 2, ch. 1: Introduction, Table 1.2. Also lists crude oil at 42.3 TJ/Gg, and coal from 11.9 to 28.2 TJ/Gg. Nowhere does the IPCC show conversions or default values for TJ or Gg per cubic meter of natural gas, or, for that matter, for crude oil or coal.

Thus we resort to UN heating value above.

Cell: C58

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: U58

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C59

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: L60

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: B107

Comment: Rick Heede:

Hess CDP 2010, Section 15.1: Scope 3 Emissions: 40.2 MtCO2e.

"Used product sales (residual oi, diesel, gasoline and natural gas) and EPA GHG emission factors from Tables MM-1 and NN-1 in Subparts MM and NN of US EPA's Mandatory Reporting of Greenhouse Gases rule. The EPA factors for natural gas

combustion were adjusted upwards to account for our gas production in Southeast Asia which has higher than average CO2 content."

Cell: L113

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C120

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C121

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: L132

Comment: Rick Heede:

CDP 2010, for BP, section 7.2a: "We use the BP Environmental Performance Reporting Requirements. These Requirements comprise detailed reporting instructions and calculation methodologies covering a wide range of environmental parameters including GHG emissions. The reporting boundaries and emissions calculation approach are consistent with both The Greenhouse Gas Protocol and the IPIECA/API/OGP Petroleum Industry Guidelines for Reporting GHG Emissions. The BP Guidelines recommend a tiered approach to calculating emissions requiring the use of approaches (tiers) based on determination of fuel consumption and fuel properties for major sources rather than the use of generic emission factors. For minor sources and where we consider that it is not feasible to determine actual fuel properties BP defaults to IPCC emission factors (see 7.4). For industry specific "process" emissions the BP Guidelines recommend emission factors from the API Compendium of Greenhouse Gas Emission Methodologies for the Oil and Gas Industry."

Cell: B171

Comment: Rick Heede:

BP CDP 2010, Section 15.1: Scope 3 Emissions: 573 MtCO2e.

"Customer emissions - an estimate of the carbon dioxide emissions resulting from the combustion of BP's total reported production of natural gas, natural gas liquids and refinery throughputs. Emissions are estimated by applying global average emission factors from IPCC."

Cell: L179

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C184

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C185

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: B234

Comment: Rick Heede:

Exxon Mobil CDP 2010, Section 15.1: Scope 3 Emissions: 1.6 MtCO2e.

"NOTE: THIS IS NOT TOTAL CORPORATION DATA. ONLY NEW ZEALAND SCOPE 3 SUBMITTED UNDER REGULATORY REPORTING REQUIREMENT. According to the International Energy Agency, approximately 90 percent of petroleum-related GHG emissions are generated when customers use our products and the remaining 10 percent are generated by industry operations."

15.3

How do your absolute Scope 3 emissions for the reporting year compare to the previous year? "This is our first year of estimation."

Cell: E235

Comment: Rick Heede:

US Scope 3 only, XOM's 2012 response for 2011 data; New Zealand also: at 3.2 MtCO2e.

Cell: L242

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C247

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C248

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: L306

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C311

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C312

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: B362

Comment: Rick Heede:

Exxon Mobil CDP 2010, Section 15.1: Scope 3 Emissions: 1.6 MtCO2e.

"NOTE: THIS IS NOT TOTAL CORPORATION DATA. ONLY NEW ZEALAND SCOPE 3 SUBMITTED UNDER REGULATORY REPORTING REQUIREMENT. According to the International Energy Agency, approximately 90 percent of petroleum-related GHG emissions are generated when customers use our products and the remaining 10 percent are generated by industry operations."

15.3

How do your absolute Scope 3 emissions for the reporting year compare to the previous year? "This is our first year of estimation."

Cell: E363

Comment: Rick Heede:

US Scope 3 only, XOM's 2012 response for 2011 data; New Zealand also: at 3.2 MtCO2e.

Cell: L370

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C375

Comment: Rick Heede:

The IPCC default value for crude oil is 20.0 kgC/GJ (range from 19.4 to 20.6 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: C376

Comment: Rick Heede:

The IPCC default value for natural gas is 15.3 kgC/GJ (range from 14.8 to 15.9 kgC/GJ). IPCC Guidelines 2006 Volume 2: Energy, chapter 1: Introduction, Table 1.3. Also listed as 56,100 kgC02/TJ in Table 2.2 at right. IPCC 2006 Guidelines vol 2, ch. 2: Stationary Combustion, Table 2.2.

Cell: H444

Comment: Rick Heede:

Proved reserves: Proved oil and gas reserves were estimated to be 5,325 mmboe at year end 2010. This is split into: 2,124 mmbbls of oil and NGL and 17,965 bcf natural gas. Statoil's proved reserves of bitumen in America is included as oil...as

they represent less than 3% of our proved reserves which is regarded as immaterial.

Cell: |444

Comment: Rick Heede:

Production: Entitlement production in 2010 equalled 621 mmboe. This is split into: 352 mmbbls crude oil and 1,509 bcf natural gas. Crude oil includes natural gas liquids (NGL), condensate and bitumen. Production of immaterial quantity of bitumen is included in crude oil production.

Cell: B490

Comment: Rick Heede:

Petrobras, CDP 2010: 504 MtCO2.

"According to the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (draft November 2010), Petrobras scope 3 emissions 'Use of Sold Products' are estimated using a mass balance approach, considering that 100% of sold oil products suffered, at some point in their life cycle stage, the combustion process, releasing their carbon content. The products included are diesel, gasoline, fuel oil, naphtha, LPG, aviation kerosene, natural gas and others. For this year, Scope 3 emissions included the international sales. Please, take note that naphtha products may include ethylene that could result in emissions only after 200 years. However, to be conservative, Petrobras estimates all products to be converted to GHG in the current year. These emissions are stated on the basis of IPCC 2006 GNGGI emission factors and verified production of goods delivered to the market – production numbers of Petrobras used in this calculation are the ones officially stated in the Company's financial balance sheet and can be considered to be accurate and adequate. The numbers were checked to be according to the above mentioned references by the consulting firm ERM Brazil as part of the support in preparing Petrobras' yearly emissions inventory."

Cell: B554

Comment: Rick Heede:

Chevron, CDP, 2010: "Scope 3 CO2 emissions from our crude oil, NGL, natural gas and coal product streams for 2010 were calculated as follows: 1. For CO2 emissions estimate for coal product stream: a. Used data provided by Chevron Mining on the quantity and typical heating value of coal produced at the Kemmerer and North River mines during 2010 to calculate a mass-weighted average heating value for the coal produced in 2010. b. Used the heating value to calculate the energy content of coal produced in 2010. c. Applied the CO2 combustion emissions factor (EF) in the 2009 API Compendium EF for sub-bituminous coal (EF = 0.0971 tonnes CO2 per MMBtu on a HHV basis, source – 2009 API Compendium, Table 4.3, Page 4-19) to calculate CO2 emissions from coal produced in 2010. 2. For CO2 emissions estimate for natural gas product stream: a. Applied API Compendium high heating value (HHV) for processed natural gas (HHV = 1,027 Btu per ft^3, source – 2009 API compendium, Table 3.8, Page 3-20) to calculate the energy content of natural gas products. b. Subtracted out of U.S. and international natural gas product streams. 3. For CO2 emissions estimate for liquids (crude oil + natural gas products of 0.0531 tonnes CO2 per MMBtu (2009 API compendium, Table 4.3) to calculate emissions from 2010 natural gas product streams. 3. For CO2 emissions estimate for liquids (crude oil + natural gas liquids production from crude oil products on from crude oil product of 2010 based on data provided by Upstream Finance so as to enable a more accurate CO2 emissions estimate for the lequids product stream. b. Made the assumption that a barrel of NGL has about 2/3rds the energy content of a barrel of crude oil (HHV = 2/3 * 5.8 MMBtu per barrel, source of crude oil HHV - 2009 API Compendium, Table 4.3, Page 4-18) to the natural gas liquids produced in 2010. c. Applied the CO2 combustion emissions factor (EF) from the 2009 API Compendium for natural gas liquids (EF = 0.0643 tonnes CO2 per MMBtu on a HHV basis (2009 API Compendium, Table 4.3, Page 4

Further information: "*The Scope 3 emissions number provided in question 15.1 (404 million) is lower than the 410 million metric tons Chevron reported to the CDP last year as our 2009 Scope 3 emissions, and also differs from the number reported in Chevron's 2010 Corporate Responsibility Report (418 million). The number reported in the current CDP questionnaire is based a on a revised methodology which does not include emissions from natural gas products used in our operations and was calculated applying emission factors from the 2009 version of the API Compendium. This methodology more accurately reflects the GHG emissions resulting from the end use of Chevron's products. Without this methodology change, our 2010 Scope 3 emissions would be calculated to be 418 million metric tons (as reported in the 2010 Corporate Responsibility Report), 2% greater than the 410 million metric tons we reported to the CDP last year. *Emissions from marketing and transportation of oil and gas products, as well as lubricants and chemicals are estimated by the business units and input into CGERS, Chevron's GHG accounting tool as part of our Scope 1 emissions."

Cell: 1571

Comment: Rick Heede:

Chevron, table OG 1.1: zero unconventional in 2010, 9.49 million bbl in 209, and 9.86 million bbl in 2008.

Cell: B618

Comment: Rick Heede:

Total, CDP: "see details in attached file: Q15.1 - Scope 3: use of products sold."

Cell: B619

Comment: Rick Heede:

Total, CDP: "see details in attached file: "Corporate Directive - GHG emissions_V7 - Appendix 7"

Cell: B684

Comment: Rick Heede:

ENI, section 15.1, Scope 3, "use of sold products." Eni usually estimates the GHG indirect emissions generated by the use of sold hydrocarbon products on the basis of sales multiplied by the relevant average emission factors assuming their complete combustion. GHG emissions are estimated by multiplying the amount of oil products (46,80 million toe) and natural gas (75810 million m3) sold to customers, by the relevant average emission factors.

Cell: B685

Comment: Rick Heede:

Purchased good and services: "Engines emissions are calculated based API Compendium methodologies, on fuel consumption and Equipment specific combustion emission factors; flaring and venting emissions are also calculated based on the API Compendium."

Cell: B686

Comment: Rick Heede:

"Eni refers to US-EPA Climate Leaders/ Optional Emissions from Commuting, Business Travel and Product Transport, may 2008. The activity data (distance, transport type, number of travels) are provided internally by Human Resources Business Travel Management. COVERAGE: 46% of the total employees. Eni, in order to reduce environment impact from business travel, eni is encouraging videoconferencing system in order to reduce GHG emissions. Starting from 2005, Eni headquarters rely on 630 fixed videoconferencing systems in meeting rooms and 370 portable systems for smaller employee groups meetings. Videocall integrated with the VoIP phone system is also available for many users in Eni (2,000 webcam on 30,000 IP phones in 2009; 4.000 expected in 2010)."

Cell: B717

Comment: Rick Heede:

Note that most entities analyzed here estimate product emissions considerably higher (Shell's, for example, is 50 percent higher) than the Carbon Majors estimate. This is explained, in part, by differing methodologies. This study estimates emissions on the basis of each entity's fossil fuel production, deducting for non-energy fuels sequestered, whereas the CDP-reporting entities are based on sales of natural gas and petroleum products -- including products refined from refinery inputs, regardless of crude oil input ownership.

Cell: B721

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: C722

Comment: Rick Heede:

The Carbon Majors study applies CH4 emission rates of 1.83 kgCH4/tCO2 from combustion (net of non-energy uses) of produced liquids, and 9.91 kgCH4/tCO2 from combustion of gases. Thus the CH4 rate varies with each entity's oil and gas production.

Cell: C723

Comment: Rick Heede:

oil and gas producers account for their fugitive methane emissions (often on API Compendium or IPIECA protocol), but their details are not revealed in sustainability reporting or in their voluntary reports to Carbon Disclosure Project. The API Compendium, for example, relies on equipment counts and emissions rates per hour -- assuming that detailed monitoring is not carried out (which is nearly impossible on thousands of emission sources). The EPA has published revised emission rates - generally much higher -- that are not reflected in the Compendium. Note also that the entity-reported methane emission rates vary by a factor of 9.2 (Low: Statoil; high: ENI).

Cell: B735

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: B749

Comment: Rick Heede:

This is estsimated by CMS from entity data provided to CDP under the "Energy" and "Fuel" sections. However, fuel types, energy and carbon content, and (especially) whether the fuel is all or partially their own fuel rather than purchased is seldom unambiguous.

Cell: N775

Comment: Rick Heede:

PIECA, OGP, API (2011) Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions, 2nd edition, London, 84 pp. PDF in Protocols / API IPIECA / IPIECA Guidelines May11.pdf

Cell: N776

Comment: Rick Heede:

IPIECA (2007) Saving Energy in the Oil and Gas Industry, IPIECA, London, 17 pp., IPIECA&OGP SavingEnergyInOil&GasIndustry 2007.pdf. See Figure 2 "World energy consumption along the oil & gas supply chain, 2004" (42 % oil, 48 % gas, 10 % elec/heat). Oil tanker fuel: no data.

Cell: N777

Comment: Rick Heede:

PIECA, OGP (2011?) Energy Efficiency: Improving Energy Use From Production To Consumer, 2 pp.

Cell: N778

Comment: Rick Heede:

Nyboer, John (2011) A Review of Energy Consumption in Canadian Oil Refineries 1990, 1994 to 2009, Prepared for Canadian Petroleum Products Institute and Canadian Industry Program for Energy Conservation, by Canadian Industrial Energy Enduse Data and Analysis Centre, Simon Fraser University, March 2011, 73 pp., cieedac.sfu.ca

Cell: J812

Comment: Rick Heede:

FN #1: Comprehensive data on energy consumption by oil and gas companies around the world is not available. The IEA compiles and publishes data, where available, on the own use of energy by country and fuel type in crude oil and natural gas

production, oil refining, gas liquefaction/regasification, and pipeline transportation. In 2004, consumption for all these activities amounted to 513 Mtoe. However, this understates the total amount of energy used by the oil and gas industry worldwide, as data is not available for some countries, especially in the developing world. In addition, no breakdown of the use of transport fuels is to hand for any country, so it is not possible to estimate precisely how much of this energy consumption is used by the oil and gas industry for the distribution of oil products by tankers, barges, railcars and road trucks.