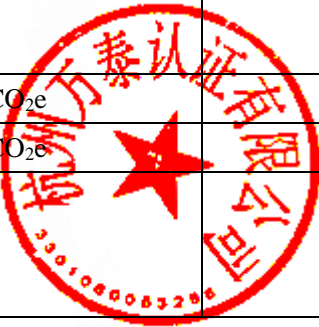




B-2020-142924161-01

2020



			1
		email	13819912043 962967061@qq.com
■ □ / / / email /			
			2740
	/	A-2020-142924161-01/2021	7 8
	/	A-2020-142924161-02/2021	7 30
		34597 tCO _{2e}	-
		34597 tCO _{2e}	-
		-	-
			
1.		2020	
2.			
2.1		2020	
			159.76 tCO _{2e}
0tCO _{2e}		4732.62 tCO _{2e} CH ₄	0tCO _{2e} CO ₂

0tCO ₂ e		11112.42 tCO ₂ e			
18592.06 tCO ₂ e		34597tCO ₂ e			
2020					
		t	tCO ₂ e	tCO ₂ e	
		159.76	159.76	159.76	-
		-	-	-	-
CH ₄		225.36	4732.62	4732.62	-
CH ₄	CH ₄	-	-	-	-
	CH ₄	-	-	-	-
	CH ₄	-	-	-	-
CO ₂		-	-	-	-
		11112.42	11112.42	11112.42	-
		18592.06	18592.06	18592.06	-
tCO ₂ e	CO ₂		4892	4892	-
	CO ₂		34597	34597	-
2.2					
2740					
3.					
		2020	2019	12.22%	2019
21.56%					
4.					
2020					
					2021.7.30

					2021.7.30
			蒋忠伟		2021.7.30

	.....	6
1.1	.....	6
1.2	.....	6
1.3	.....	7
	.....	9
2.1	.....	9
2.2	.....	9
2.3	.....	10
2.4	.....	11
	.....	12
3.1	.....	12
3.1.1	.....	12
3.1.2	.....	14
3.1.3	.....	18
3.1.4	.....	19
3.2	.....	19
3.2.1	.....	19
3.2.2	.....	20
3.3	.....	21
3.3.1	CO₂	21
3.3.2	CO₂	22
3.3.3	CH₄	22
3.3.4	CH₄	22
3.3.5	CO₂	24
3.3.6	CO₂	24
3.4	.....	25
3.4.1	.....	25
3.4.2	.....	33

3.4.3	.....	35
3.4.4	.....	39
3.5	.....	39
3.6	.....	39
3.7	.....	39
	.....	40
4.1	.....	40
4.2	.....	40
4.2.1	.....	40
4.2.2	.....	41
4.3	.....	41
4.4	.....	41
	.....	42
1	.....	42
2	.....	43
3	.....	44

3 CH₄

4 CH₄

5 CO₂

6

- 2020

1.3

1

2

3

4

-

“ ”

-

-

- “ ” [2016]61
- MRV - /
-
- GB/T2589-2020
- GB17167-2006

2.1

2-1

	18721914620	1 2 3 4 5	
	18676625841	1 2 3	
	15057120365		

2.2

2021 7 15
“

2020
” 2021 7 16

3

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4

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6

7

2.3

2021 7 20

2-2

			/ /	
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				-
7 20				- - -
7 20				- -
7 20				- - -

2.4

2021

7 20

0

2021 7 30

3.1

3.1.1

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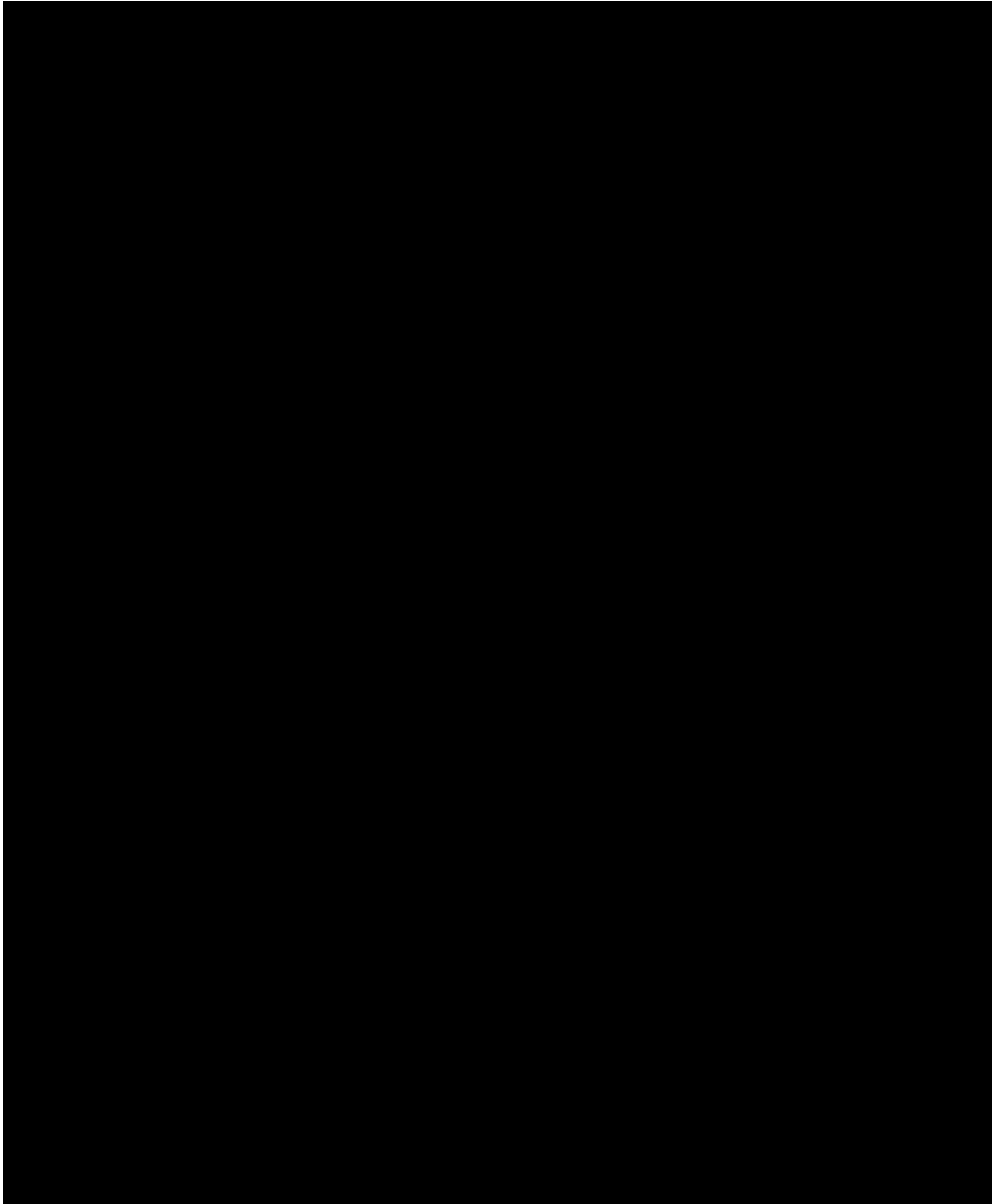
-

3.1

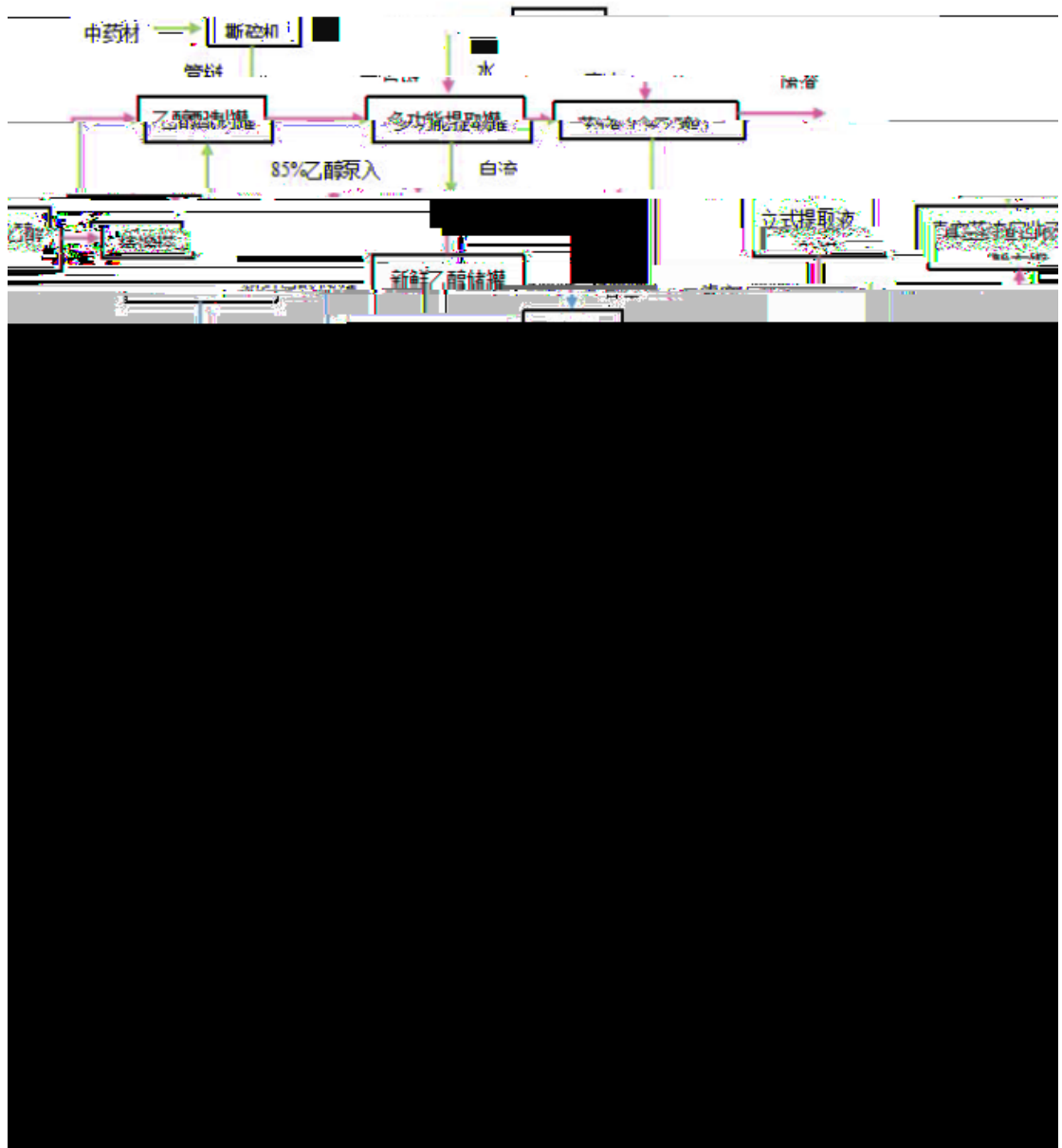
3.2

3.1.2

2.



3.



3.3

2

3-1

		/		
1		HLS400	2	48kW/
2	—		2	48.5kW/

3		FG300	1	37kW
4		KPU-40EPH	1	105kW
5		DSZG-1300BQ	1	67
6		SZA620	1	70
7		ASMR620/38	1	46.55
8		SZA600/43	1	51
9		CG/B75-60M-B	1	75KW
10		LW450*1800-N	2	37KW/
11		SSR150HB	3	30KW/
12		TH-90L	1	9KW
13		KFR-26GW	48	2kW/
14		KFR-356GW	78	2.5kW/
15		KFR-50LW	21	3.96W/
16		TC-50	3	40KW
17		ZXTZ40	1	0.1KW
18		CSA2H3000D	1	67KW
19		CYJ900	1	50KW
20		SQW-100DF	1	30KW
21		TQ6	10	7.5kw/
22		JB-16-D	2	5.5kw/
23		BVD6-38	1	65KW
24		LPG-5	1	162.5KW
25		TQ6/6m ³	16	7.5kw/
26		2000L/h	4	
27		1000L/h	2	11.9kw/
28		600	2	
29		800	4	
30		BVD690	1	82KW
31		200I×280-32	7	37KW
32		CM132BV	1	132KW
33		SM200BV	1	200KW
34		KQW200/370	1	55KW
35		KQW200/345	2	45KW
36		CM110BV	1	110KW
37		IX125-380	2	37KW
38		KQW150/400-45/4	3	45KW
39		KQW250/315-75/4	5	75KW
40		KQW150/400-45/4T	2	45KW
41		KQW200-370-55/4	6	55KW
42		AA2-75W	1	75KW
43		RTHDD3D2E2	3	234.7KW

44		30HXC	1	252KW
45		TCA201CH	12	20.5KW
46		RTHDD3G2G1	1	217.7KW
47		LSBLX350SVE	2	194KW
48		LSBLX275SVE	2	160KW
49		CC510MH2JH2	1	288.2KW
50		SG10-1250/10-0.4	1	
51		SG10-1600/10-0.5	1	
52		SCB10-1600	1	
53		SCB10-630kva	1	
54		SCB10-1000/10	2	
55			2	
56		CM110PV	1	110KW
57		LSQWRF130/C	6	231KW

3

3-2

				/			
1		XS2	/	1-600g			
2		DY200	/	1.5			
3		EJA430A 0~1.6 Mpa	/	/		/	
4		VX2404R	/	0.5			
5		DSZ532	/	0.2s			

3-3

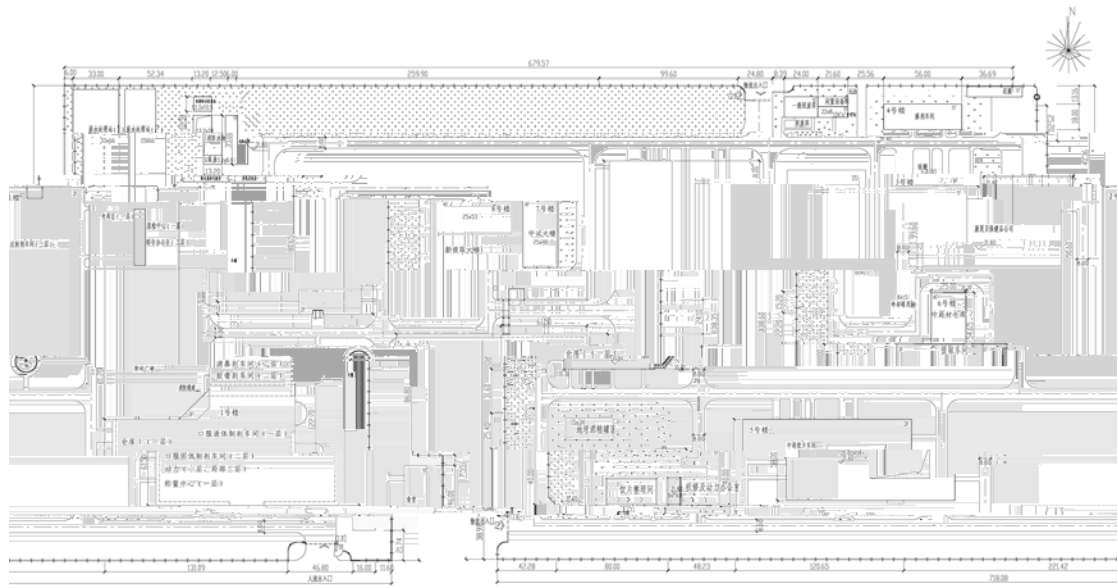
60s/120s/150s (kg)	472580.83
19.2mg 4.8mg(kg)	86049.55
(kg)	67790.31

3.1.4

			2020
2020	3112344	63225.8	19917.2
2019			

3.2

3.2.1



3.4

3.2.2

3-4

	-	-	-	1
CH ₄				2
CH ₄	-	-	-	3
CO ₂	-	-	-	

CO ₂				
-----------------	--	--	--	--

1

2

Fe/C

EGSB MBBR

3

CH₄

CO₂

3.3

$$GHG_{CO_2} = CO_2 - CO_2 - \left(CH_4 - CH_4 \right) - CH_4 - 1$$

$$E_{GHG} = CO_2 \quad tCO_2e$$

$$E_{CO_2} = CO_2$$

$$E_{CO_2} = CO_2$$

$$E_{CH_4} = CH_4$$

$$R_{CH_4} = CH_4$$

$$GWP_{CH_4} = CH_4 \quad CO_2 \quad (GWP = 21)$$

$$R_{CO_2} = CO_2$$

$$E_{CO_2} = CO_2$$

$$E_{CO_2} = CO_2$$

3.3.1 CO₂

$$CO_2 - \sum_i i \quad i \quad i \quad i \quad \frac{44}{12} \quad 2$$

CH₄- CH₄ CH₄
 CH₄- CH₄ CH₄
 CH₄- CH₄ CH₄
 CH₄- η CH₄ 6
 η %
 CH₄ Nm³
 CH₄
 7.17 CH₄ CH₄
 CH₄- CH₄ 7
 CH₄ Nm³
 CH₄
 7.17 CH₄ CH₄
 CH₄ CH₄
 CH₄- $\bar{\eta} \sum_{h=1}^H \frac{FR_h V\%_h}{22.4}$ -3 8
 $\bar{\eta}$ CH₄ %
 H
 h
 h Nm³/h
 0°C 101.325KPa
 V%_h CH₄ %
 22.4 Nm³/kmol
 16 CH₄

3.3.5 CO₂

CO ₂ -		CO ₂ -		CO ₂ -	9
CO ₂ -		CO ₂		CO ₂	
				CO ₂	Nm ³
CO ₂ -	CO ₂		CO ₂		0~1
				CO ₂	Nm ³
CO ₂ -	CO ₂			CO ₂	
0~1					
19.77		CO ₂		CO ₂ /	Nm ³
		CO ₂			

3.3.6

CO₂

$$\text{CO}_2 - \text{CO}_2 = \text{CO}_2 \quad (10)$$

$$\text{CO}_2 - \text{CO}_2 = \text{CO}_2 \quad (11)$$

E _{CO₂} -		CO ₂	tCO ₂
E _{CO₂} -		CO ₂	tCO ₂
AD			MWh
AD			GJ
EF	CO ₂		tCO ₂ / MWh
EF	CO ₂		tCO ₂ / GJ

3.4

3-5

/

/

	-	-
CH ₄	COD	Bo MCF
CH ₄	-	-
CO ₂	-	-
CO ₂		

3.4.1

3.4.1.1

3-6

	/	
	7.86	7.86
	t	

	28.98

3-9

t

1	0

	20673 m ³

3-11

m³

1	1684
2	1462
3	1731
4	1805
5	1815
6	1864
7	1883
8	1709
9	1501
10	1480
11	1886
12	1853
m ³	20673

3.4.1.4

3.4.1.5

3-12

	m ³	COD _{in} (kgCOD/m ³)	COD _{out} (kgCOD/m ³)	(kgCOD)
	/	/	/	/

	135908	9.45	1.16	0
	COD			
	COD			

3-14

	15795.910	15795.910
	MWh	
	DTZY6	0.5S
	BDK1—GK1	
		100%
	1	=
	-	16323.2000
	MWh	643.4400 MWh
	15679.7600 MWh	15880.9600 MWh
	1.27%	
	2	
	527.2900 MWh	=
	15795.910 MWh	-
	3	15795.910 MWh

3-15

2	782400	15953	766447
3	1247640	18123	1229517
4	1355440	21258	1334182
5	1928000	60000	1868000
6	1998520	80987	1917533
7	1802720	82173	1720547
8	1349520	54535	1294985
9	1213000	68385	1144615
10	1146120	46999	1099121
11	1569360	41866	1527494
12	1313120	26339	1286781
kwh	16323200	527291	15795909
MWh	16323.2000	527.2900	15795.9100

3.4.1.9

0.7MPa, 200°C

EasyQuery V2.6

2843.86kJ/kg

3-16

°C	MPa	kJ/kg
200	0.7	2843.86

3-17

			VX2404R	
	0.5			
			100%	
	1		62449	
		62445		0.0057%
	2			
	1213	=	-	61236
	3		0.7MPa,	200
	EasyQuery		V2.6	
	2843.86kJ/kg			
	AD	Ma_{st}	μEn_{st}	$-83.74 \cdot 10^{-3}$
	169018.71GJ			
			169018.71GJ	

3-18

	A	B	C	D=A-C
1	2242	2216	69	2173
2	2389	2415	38	2351
3	6177	6173	90	6087
4	7544	7544	48	7496
5	8041	8041	70	7971
6	6480	6480	66	6414
7	5955	5681	141	5814
8	1200			

9	2211	2122	196	2015
10	4200	5114	197	4003
11	8400	7305	112	8288
12	7610	7833.38	83	7527
t	62449	62445	1213	61236
°C	200	/		
MPa	0.7	/		
kJ/kg	2843.86	/		
GJ	169018.71	/		

3.4.2

3.4.2.1

		GJ/t	tC/GJ	%
		44.80	0.0189	98
		GJ/t	tC/GJ	%
		44.80	0.0189	98
	2020			

3.4.2.2

		GJ/t	tC/GJ	%
		43.33	0.0202	98

		GJ/t	tC/GJ	%
		43.33	0.0202	98
	2020			

3.4.2.3

		GJ/t	tC/GJ	%
		389.31	0.0153	99
		GJ/t	tC/GJ	%
		389.31	0.0153	99
	2020			

3.4.2.4

Bo MCF

	Bo MCF
--	---------------

Bo

	tCO ₂ /MWh	tCO ₂ /MWh
	0.7035	0.7035
	2012	
	2012	

3.4.2.6

	tCO ₂ / GJ	tCO ₂ / GJ
	0.11	0.11

3.4.3

3.4.3.1

	t Nm ³	GJ/t GJ/ Nm ³	tC/GJ	%		tCO ₂
	A	B	C	D	E	F=A*B*C*D*E
	-	-	-	-	-	156.57
	7.86	44.8	0.0189	98	44/12	23.91
	28.98	43.33	0.0202	98	44/12	91.15
	2.0673	389.31	0.0153	99	44/12	44.70

3.4.3.2

3.4.3.3

CH₄

	TOW		CODin	CODout	COD	BO	MCF		CH ₄		
	KgCOD	)	( /	( /	COD	KgCH ₄ / KgCOD	/	KgCH ₄)	KgCH ₄	GWP	tCO ₂
	1126813.23	135908	9.45	1.16	0	0.25	0.8	0	225362.65	21	4732.62

3.4.3.4 CH₄

CH₄

3.4.3.5 CO₂

CO₂

3.4.3.6

CO₂

3-19

CO₂

	(MWh GJ)	(tCO ₂ /MWh tCO ₂ /GJ)	tCO ₂	tCO ₂
	A	B	C=A*B	
	15795.910	0.7035	11112.42	29704.48
	169018.71	0.11	18592.06	

3.4.3.7

3-20

		t	tCO _{2e}	tCO _{2e}	
		159.76	159.76	159.76	-
		-	-	-	-
CH ₄		225.36	4732.62	4732.62	-
CH ₄	CH ₄	-	-	-	-
	CH ₄	-	-	-	-
	CH ₄	-	-	-	-
CO ₂		-	-	-	-
		11112.42	11112.42	11112.42	-
		18592.06	18592.06	18592.06	-
tCO _{2e}	CO ₂		4892	4892	-
	CO ₂		34597	34597	-

3.4.4

2740

3.5

1 EHS

2

3

4

EHS

EHS

3.6

3.7

4.1

2020

4.2

4.2.1

2020

159.76 tCO₂e

4732.62 tCO₂e

CH₄ 0tCO₂e CO₂ 0tCO₂e

11112.42 tCO₂e 18592.06 tCO₂e

34597tCO₂e

2020

		t	tCO ₂ e	tCO ₂ e	
		159.76	159.76	159.76	-
		-	-	-	-
CH ₄		225.36	4732.62	4732.62	-
CH ₄	CH ₄	-	-	-	-
	CH ₄	-	-	-	-

1

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