

2019 4 64

www.hanbell.com.cn

jiyuxuan@hanbell.cn
ir@hanbell.cn

1.	2019			021-51365368
2.	7			
3.				
4.				
5.				
6.				
7.				
8.	10			
9.				
10.				
11.	7	PPI	0.3%	0.2%
12.	8	PPI	0.8%	0.1%
13.				
14.				
15.	2019	1-7		1346
16.				"
17.				
18.	:			
19.				337
20.	0.12	kWh		

21.

22.

23.

- 10.
- 11.
- 12. ABB Björn Rosengren
- 13. HiLobe®
- 14. 1000 kmh -
- 15. 18.22
- 16.
- 17. 45.86 15GW
- 18. CO
- 19.

- 1.
- 2.
- 3.
- 4.
- 5. 2050
- 6.
- 7.
- 8. 9327.84 10.77%

1.

1

2019

2019 7

1680.3

11.7%

1615.2

12.73%

2019

19 11 -3

4

2019

20617.7

2.97%

20719.5

1.66%

2019 6

4000

2019 8

957

2.9%

<http://acc.chinaiol.com/t/0815/99214092.html>

2	7			
	2019	7	29.75	20.45%
	1.98%	29.38		

<http://acc.chinaiol.com/t/0830/01214631.html>

3

2019 5

300

,

200

1000

1500

50 80

2014

Mirai

Mirai

500

3

Mirai

Mirai

2017

3

300

3

2018

0.8

41

2018 1

2020

500

3

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8738>

4

12 31

2

20

3%

80%

3

2019 225

2015

12 31

2

20

3%

80%

3

2015 19

2019-2020

2017 1701

5-10

2018 943

2025

+

<

>

2017 67

2020

12

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8770>

6

HANBELL

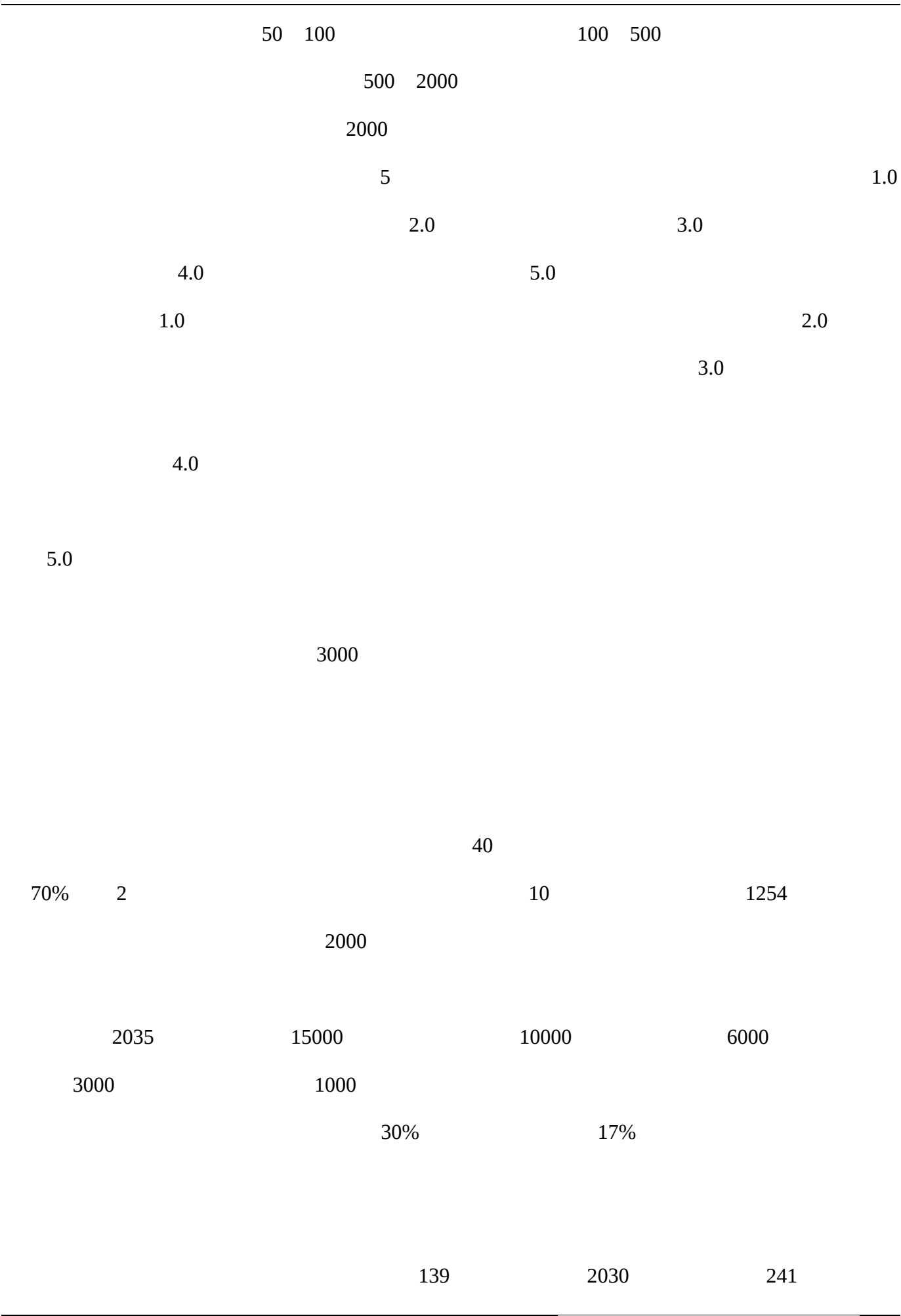
ITA 1996

ISTT 1991

 $1/3$

120

11 12



160 40

15

1/4

2017 33 LED

70% 6 28

700

77%

3000

5000

(P.3 G B B)

2014

2017

Q. B P QD @

6 4

16 2017 60%

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8743>

8 10

2050 10

， (Shell)

SCGP , ,
313 , 99.5%(mole)

PSA

3 / LNG

4 /

1. 9 Nm3/h 12.4

6 +10% 1.5 / 1.36

/m3 805 / 2.58 / m3

2.

3.

4.

2009~2013

/ 1

10

2012 5

/

130 / 6200~6500 / 40

E-Gas 10

3000 /

(SNG)

20% 25%

EPC

14

GE

10 2014

COS

2014 1 23

30

2011 9

20

97.5%

4.8

GE

Lurgi

99% 98

2014 7 5

45

1100

800

7

5

70

4

2013

—

				85.84%		99.5%		3000
			33%	35%				
2014	7	14						
SEBS		7	17	SEBS		2000		180
	9.32			SBES	260	100%		120
		SEBS				2006		SEBS
SEBS				2014	4	20		
		SEBS				97.5%		
			SEBS					SEBS
				3200		1800		
						2014	11	13
							4	2
46		(CO+H2)/						
		32.1	/					50
/		35	/		3	/		
2017	10	20						
						5.3	/	

CO2

CO2

CO2 H2 N2

CO2 H2

Fe2O3

Al2O3

FeO

75%

2016 12 25

20

-

374.3 22.1MPa

PM2.5

96% 99%

0.58

0.05

()

1.5

10

50MW

11

/

/

11

1

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8737>

9

6 10

6 14

GB12021.3-2010.

L L L

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8779>

10

2019 5 10 2000
10% 25%

2019 5 13

2019 6 1 0 600
25% 20% 10% 5%
5%

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8718>

11 7 PPI 0.3% 0.2%
2019 7 0.3% 0.2%
0.6% 0.2% 1 7 0.2%
0.7% 0.4
0.51 3.2%
2.9% 0.2% 0.8% 0.1
0.20 2.0%
1.3% 0.8% 1.2%
5.7% 3.9% 2.4%
5.4% 2.5% 2.1%

<http://acc.chinaiol.com/t/0809/42213893.html>

12 8 PPI 0.8% 0.1%
2019 8 0.8% 0.1%
1.3% 0.2% 1 8 0.1%
0.2%
1.3% 0.6
0.98 2.8%

3.5%	0.8%	0.7%	0.1
	0.18		2.6%
0.9%	0.6%	2.0%	
	3.8%		2.9%
6.8%	3.2%		2.3%

<http://acc.chinaiol.com/t/0910/95215020.html>

13

9	12	6283
---	----	------

2017

8

5

2018

2017

2019 7 22

<https://solar.ofweek.com/2019-09/ART-260006-8480-30407118.html>

14

8 27 29

S?o Paulo

InterSolar

8 28

Greener

24%

1.26

gigawatt

Jinko

BYD

JA Solar

Trina		Canadian Solar	
Greener	2018	30%	
?		Ávaro Garc ía-Maltr ás	
	20%	2%	
1.5	100%	10	9
	?	Adalberto Maluf	
			11.4
24	2017	53	
Vallya		?	Larissa Wachholz
		CGN	Enel
ePowerBay		330	MW
			Enel
284	Actis	Atlas 255	Engie 251

Category	Value
1-7	40652
1-7	4.6%
1-7	4.4
1-7	421
1-7	5.2%
1-7	2.8%
1-7	4.2
1-7	27712
1-7	68.2%
1-7	41.6%
1-7	6668
1-7	9.1%
1-7	5.1
1-7	16.4%
1-7	30.9%
1-7	5851
1-7	8.8%
1-7	4.8
1-7	14.4%
1-7	26.3%
1-7	4.6%
1-7	15.1%
1-7	12.2%
1-7	11.1%
1-7	10.8%
1-7	8.7%
1-7	8.3%
1-7	8.0%
1-7	7.5%
1-7	7.4%
1-7	7.3%
1-7	6.6%
1-7	6.2%
1-7	6.0%
1-7	4.8%

7	6672	2.7%	76		
5.4%	4626	1.2%	1110		
7.6%	859	4.6%			
7		2.7%	16		
10%	15.7%	13.2%	12.4%	10.4%	
	-0.1%	-0.3%	-0.9%	-1.1%	-1.3%
-1.4%	-5.2%	-5.3%	-6.2%	-7.3%	
1-7	27223	2.6%	4.4		
	67.0%		37.8%	7	
4550	1.0%	3.5			
68.2%					
1-7	20387	3.6%	3.4		
7	3193	4.3%	103.0		
/	4.6	/	1.1	/	
1-7					
11305	3.6%	1.3			
27.8%		21.9%	2597		
1.8%	0.3		2034		
5.9%	0.4		3260		
6.5%	4.3	3414	1.0%		
0.7					
7	1713	5.0%	0.8		
	25.7%	390	6.0%		
6.7	329	4.7%			
2.4	494	10.1%			

2.4				500			0.2%		6.3
7	6000				18.5		5.5%		816
		0.4			3.1		2.8		
11.6		10.2			8880		4699		
1.9		1.4	1-7				40301		
	3.0%		4.8						
1-7				6514			10.7		
7.2					1577		1437		
	759					57.9%		4.0%	19.3%
-8.2%									
1-7				29089			0.1		
7.2			17					20%	
	133.8%	21.1%		10%		14.0%		13.0%	
14									
10%	-17.2%	-13.7%	-13.6%	-13.3%	-12.3%	-12.0%	-10.4%		
1-7		1913			22.2%			9.3	
1-7	6000				2393		9.5%		
18.4									
1-7				2184			40		
	1-7				2118		194.8		
	10								
					200		1174	924	553
							465		

[illegible]

32.3%	203	7.9%	192
10.3%	135	17.6%	108
13.9%	105	51.8%	78
15.5%	67	27.5%	15.5% 65
6.1%	65	98.4%	

1-7

35

406

9

10

2019 11 2020 3

2020 1

3

5

7

200

http://www.semi.org.cn/pv/news_show.aspx?ID=22506&classid=12

18 :

87%

83%

68

1.5%

2019

97%

2019

38%

46%

6

87%

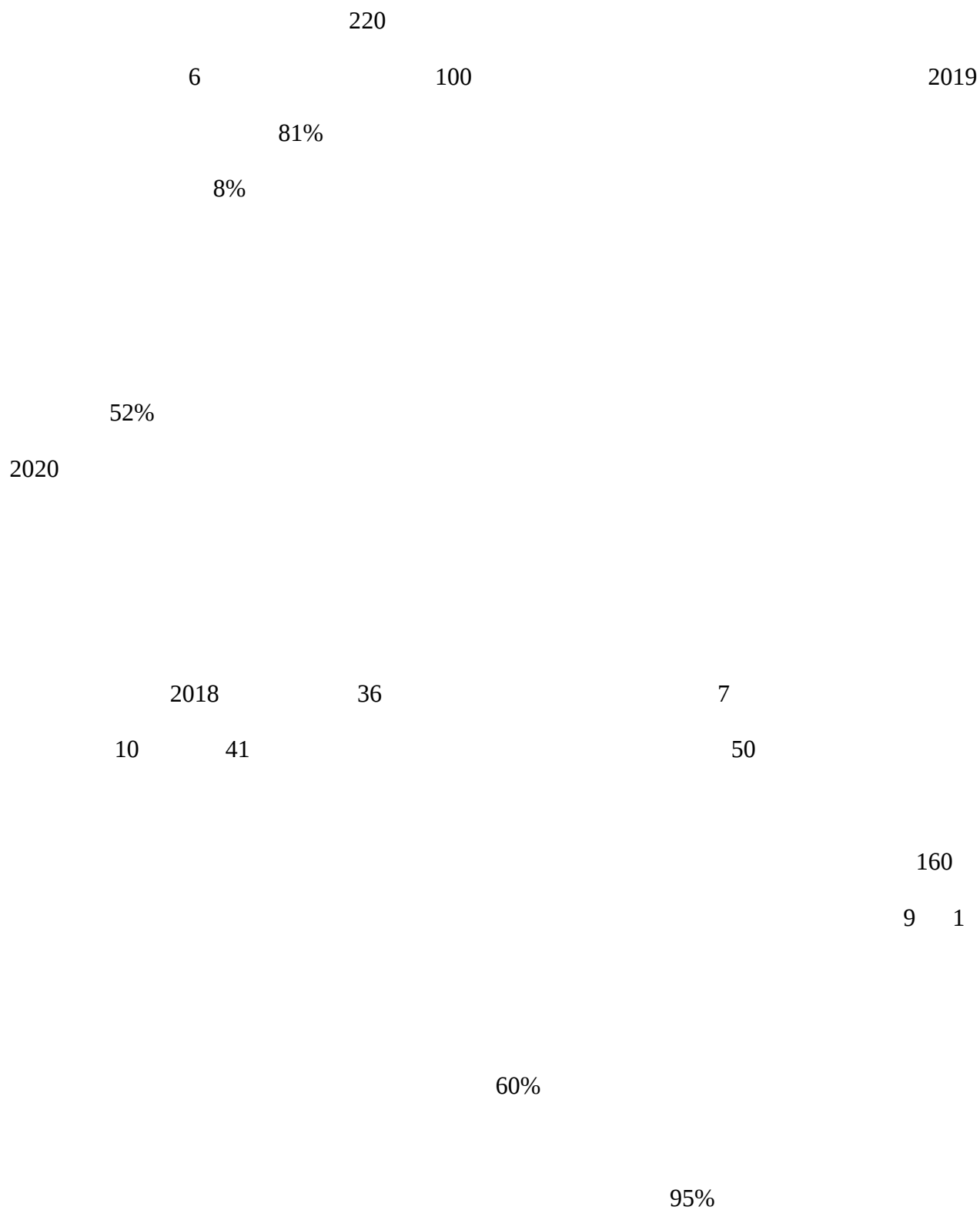
83%

68

1.5%

95%

1/4



http://www.semi.org.cn/news/news_show.aspx?ID=57258&classid=117

19 337

2019 8 26 Globalfoundries 1930 337

ITC 337

Certain Semiconductor Devices, Products Containing the Same, and Components

Thereof ITC 337 TCL

One Plus

http://www.semi.org.cn/news/news_show.aspx?ID=57265&classid=117

20 0.12 kWh

1 75

0 12 KWh

20

2030 30

20 16

2018 4426 1 74

9

5

<https://solar.ofweek.com/2019-07/ART-260009-8130-30397429.html>

2017 29

2020

SAC/TC269/SC5

,

2018

3

230

GB/T 28577-2012

GB/T28843-2012

GB/T 31086-2014

WB/T 1054-2015

WB/T1060-2016

WB/T 1059-2016

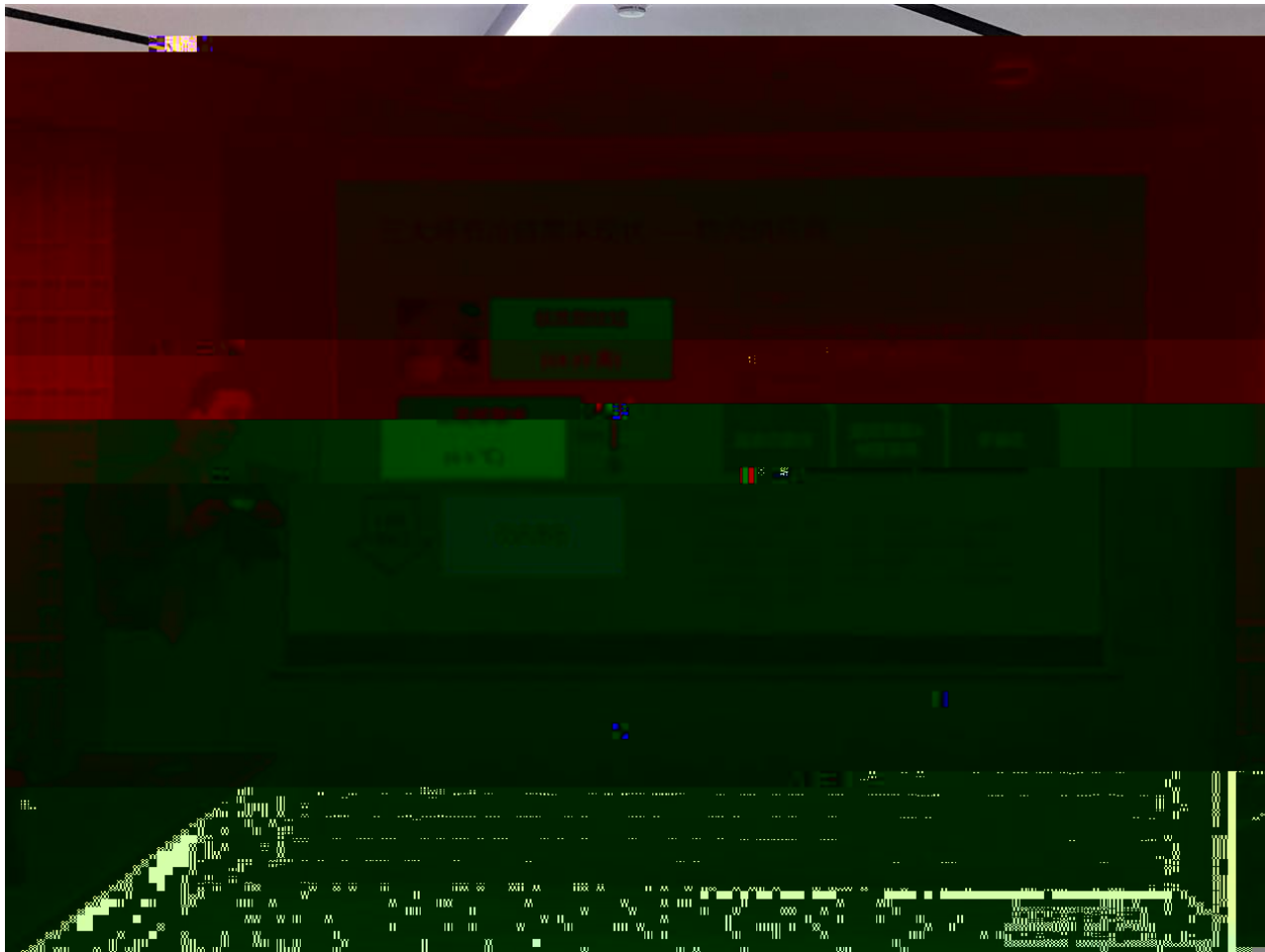
[2017]1096)

<http://www.lenglian.org.cn/news/2019/26863.html>

22

2019 9 3

EMR



三大环节冷链方面的主要挑战



23

7 25

<http://www.zhileng.com/news/hy/2019/0731/63728.html>

24

2019

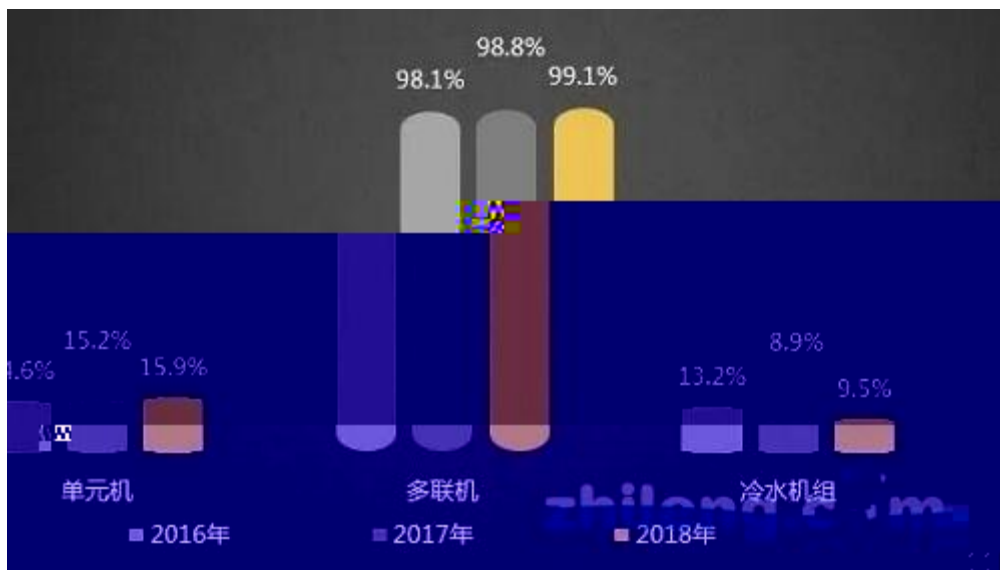
2021

1100

2017-2021



				2017
1		2019	4	
				2020
			5	1
2016-2018		15%		0.6-0.7%
	98%			2017
	2018		9.5%	
2016-2018				



2017

45.7%

2018

49.3%

3.6

2017-2018



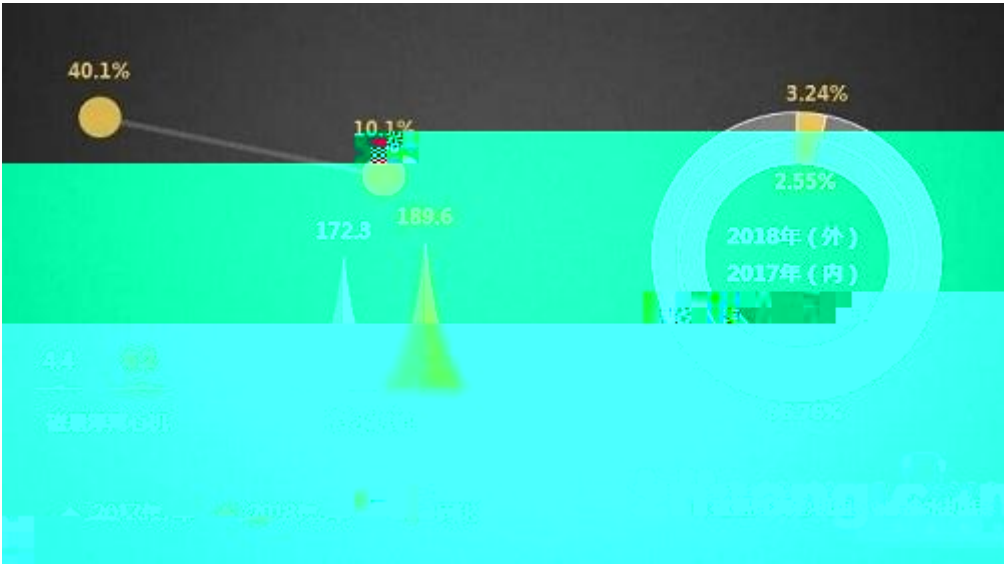
2018

6.2

40%

10%

2017-2018



2018

2017

2.55%

3.24%

10%



	2018	50%
2018	44	3.9

+

<http://www.zhileng.com/news/hy/2019/0729/63717.html>

25

					CBEM	2017
	2.01	tce			21%	2001 ~2017
50	m2		140	m2	2	1
2001	23kgce/m2	/	2017	14kgce/m2		

2004



20

2016 2019

2016 12 21 * . * . *

6

.												
2017	3	5	*.	*	*	.						
			*.									
2017	12	5	*.									
		2017	~2021									
				20			20					
				140	m2		200	m2				
				50%			80%	35	GJ			
								160	m2			
				0.22GJ/m2	/			0.23GJ/m2				

10%

<http://www.zhileng.com/news/hy/2019/0724/63698.html>

26

WTO

11

DS437

11

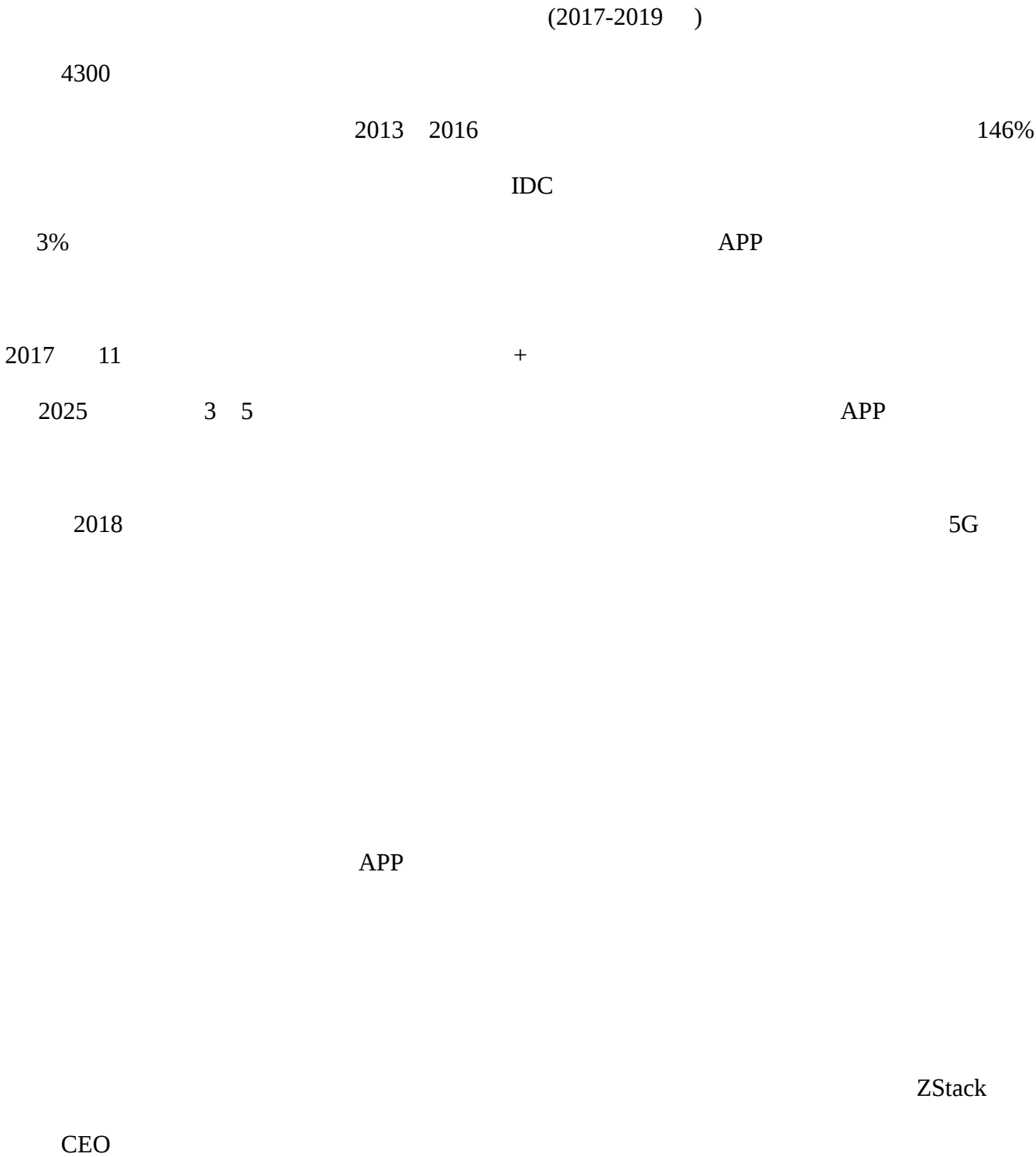


<http://www.zhileng.com/news/hy/2019/0722/63685.html>

2.

1

6 29



10

7

3

HanClouds

APP

0 1 1-N

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8780>

2

278 273 7.2 135.5

2018 41

2018

109

1527

1418

2020

51%

2018 6

500

P09

2018 9 5

384

BJ6123FCEVCH-1

2018

5000

2019

6

200

5000

2020

2

1

2

1

2

2.

3

6

1

1

[1]

.

[J].

2015

02 1-13.c

1	5		41.61		5.1%	35.10
		5.4%	5.72%	0.43		
5			113.35		6.3%	64.39
	5.3%	48.96	7.7%		56.8%	0.6
5						

5 6.2% 6.7%

5.1 5.6 4 15.1% 8.4%

5 132.8 11.1

5 17.5

0.1

5 56.8% 0.6

58.3% 1.4

1 5 2.3% 1 4 1.1

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=5&id=8775>

5 8%

500 220 2018 70% 30%-40%

2020 (220kW) 8% 8% ?

2018 10 5

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8719>

6 GCCA

GCCA

+ +

GCCA

GCCA

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8823>

7 2035

Statkraft

2035

40

Statkraft 2050 70

80

Statkraft HenrikS?tness

Statkraft 2018 25 2050

40

30

2050

2050

Statkraft

Statkraft David

<https://solar.ofweek.com/2019-09/ART-260009-8420-30407143.html>

8 1650GW

2019

2009 414GW 2019

1650GW			12 9	10		2300GW
						25
663	2009	26				
	2009			81		46
			10	3		
10						
2 6	2 35					
2018			2729		3	2018
		12 9		20		

<https://solar.ofweek.com/2019-09/ART-260009-8420-30406843.html>

9 IBC
(

IBC (IBC) IBC

200 N IBC

N IBC 23% IBC IBC

IBC

http://www.semi.org.cn/pv/news_show.aspx?ID=22501&classid=12 Top

3.

1

2008

45MPa 70MPa

45MPa

2000kg/

2018

2018

2019

8

10

30

SH/T3143-2012

5.3.2

12

7MPaG

130

10

20

90MPa 70MPa

5000

8000

20000

300

2018

160

2017

200

10%

30%

70%

50%

2008

3

2008

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=7&id=8753>

4. R 12%

R RS90-160kW

R 12%

2015 R

R RS90-160kW R

12% R 9%

RS90-160kW PACTM

RS90-160kW

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8787>

5.

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8794>

6. HGT

.

7 19

1250

1250

1250

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8810>

7.

8 11

2019

2

1.5

47

2

600

8. CP

CP	CPVS	CPMV
		3%
		350

CP

					75kW
7.5kW	7-22kW	45-75kW	8	30kW	37kW
					CPM11-22kW

9.

ASME	ASME
U	U

2019 8 6

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8817>

10.

.

.

-20 /

45 /

PO/SM

.

-

ETI

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=108&id=8809>

12. ABB Björn Rosengren

ABB Björn Rosengren 2020 2 1

ABB 2020 3 1

ABB Björn Rosengren

Björn Rosengren 60

2015

2011-2015

13

1998-2011

Björn Rosengren ABB

ABB

Björn Rosengren

Björn Rosengren

ABB

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=108&id=8808>

13. HiLobe®

8 13 9 1 HiLobe®
20% 50
520 - 2,100 m³/h
HiLobe® 20
HiLobe® 50
IE4 1 · 10⁻⁶
Pa m³/s
,
HiLobe® 40 °C
HiLobe®
Condition
Monitoring
HiLobe®
HiLobe® 2004
HiLobe®
2016 2017
2019 4 HiLobe ®
ComVac
<http://www.comvac.cn/qydt/qyqx/2019/0826/54231.html>

14. 1000 kmh -

Hyperloop
Busch

SpaceX · Elon Musk

Hyperloop



2017 "SpaceX"

Hardt

Hyperloop

" "

	30	3	
Busch	40	130	1
99.9%			
Hardt			
			Busch

<http://www.comvac.cn/qydt/qyqx/2019/0910/54269.html> Top ↑

15. 18.22

9 9

18 22

9 9

66000

18 22

2018

8 29

2020 1 1 2022 12 31

股票代码:601012股票简称:隆基股份公告编号:临 2019-134 号

债券代码:136264债券简称:16 隆基 01

隆基绿能科技股份有限公司

关于签署长单销售合同的公告

本公司及董事会全体成员保证公告内容不存在任何虚假记载、误导性陈述或者重大遗漏，并对其内容的真实、准确和完整承担个别及连带责任。

一、重要内容提示：

- 合同类型及金额：长单销售框架合同，合同约定出货量合计66,000万片，双方按月议价；预估合同总金额约18.22亿元（不含税），占隆基绿能科技股份有限公司（以下简称“公司”或“乙方”）2018年度经审计营业收入的约8.29%，本测算不构成价格或业绩承诺。
- 合同生效条件：本合同自双方授权代表签字并盖章之日起生效。
- 合同履行期限：有效期自2020年1月1日起至2022年12月31日止。
- 对上市公司当期业绩的影响：本长单销售合同有效期为2020年至2022年，对公司2019年度业绩无直接影响。本合同的签订符合公司未来经营计划，有利于保障公司单晶硅片的稳定销售，加快单晶市场份额的提升。
- 风险提示：
 - 1、合同条款中对产品的销售定价机制、销量等作出了明确约定，合同双方因标的的价格波动或产品需求波动产生的履约风险较小。
 - 2、合同履行过程中，如遇行业政策调整、市场环境变化、公司经营策略调整等不可预计或不可抗力因素的影响，可能会导致合同无法如期或全部履行。
 - 3、上述预估合同总金额为根据单晶硅片-180um 现行的市场平均价格进行的测算，本次签订的长单销售合同采取单价月议的定价方式，且硅片产品规格可能会根据情况进行调整，上述预估金额仅供参考，不作为业绩承诺的依据。

2019

EPC

2019

	520	47		221	50		144	28
17	84							
	2019			141	1		20	1
53	76			516	16		224	31
								2019
				21	48		183	7
	3193MW			21			265MW	712MW
	2018							2021
65GW		2021		20GW		2021		30GW
		2020		65GW			1	
https://solar.ofweek.com/2019-09/ART-260001-12002-30406622.html Top								

16.

			5		
		75%		8%	
					5%
			2%		
http://www.semi.org.cn/pv/news_show.aspx?ID=22515&classid=12 Top					

17.

	45.86		15GW		
		45	86		15GW
	17	9		5GW	
		2019	6	14	
5GW					2019
	5GW				
				1	411
				138	15
					41
					09
		200	958	78	
				53	76

	199	636	78		59	15		26	22
3	6			10	71		1	87	
				2019		40GW			

http://www.semi.org.cn/pv/news_show.aspx?ID=22478&classid=12 Top

18 CO

8 2 (iTOMIC)



CO2 90

CO2



iTOMIC CO?

iTOMIC 23 (1948)

2002

CO?

CO?

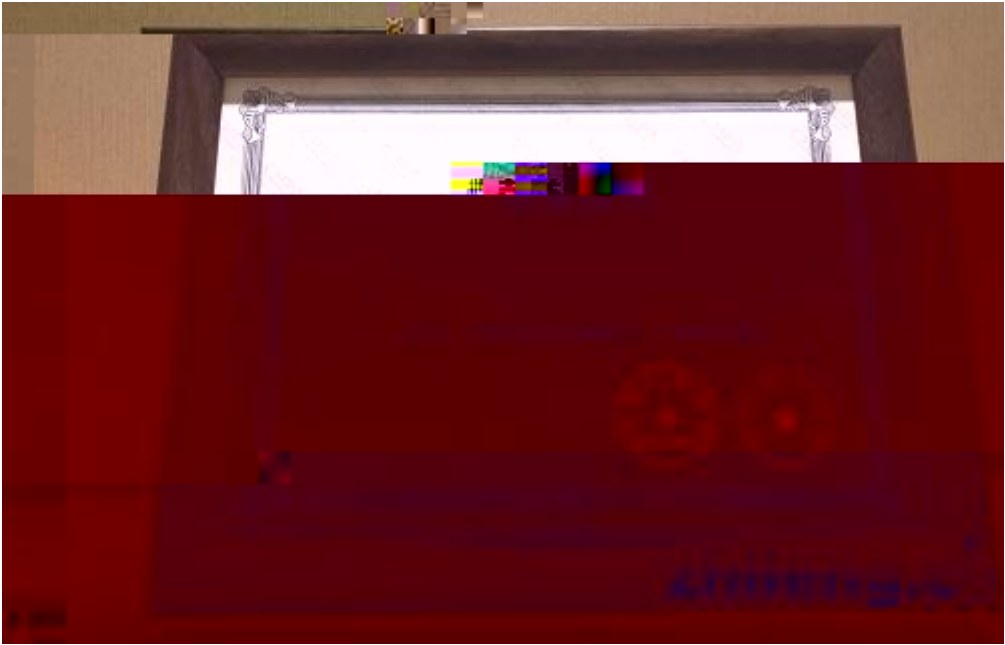
2006

2019

CO?



i-Glow CO2	COP	CO2	CO2
5	-20	90	



<http://www.zhileng.com/news/mq/2019/0805/63743.html> Top

19

7 16



()



()

22

2013

()

<http://www.zhileng.com/news/mq/2019/0717/63664.html> Top

4.

1

10.77%

7.57%

0.85pct

6.77%

1.30pct

22.27%

3.00pct

ROE

8.38%

1.66pct

33.77%

12.77%

0.12

3

2019-08-01

7 30

()

1

2 *ST

2%

1

2

3

4

5

6

:

6%

4

20195 30.571 cm/Image90 Do Qm81 LanAA81060 1 402.62 308.21 Tm[(08)] TJET EMC /P <<0/MCID



80-7000m³/h

CVD/ETCH

SEMI

<http://acc.chinaiol.com/t/0801/14213563.html>

5 2050

2019-07-15

							2025	2035
2050				5	130	500		
	60kW	2025	2035	2050			144	720
990	2019							
				(	)			

6

2019-07-19

							4%
3%							

7

2019-07-25

						7.4%	6%
--	--	--	--	--	--	------	----

2019						6
	508	484		9.8	14.6	1~6
1170	1102		7.2	7.8		

2019

+

8	9327.84	10.77%
2019-07-26		
7 25	2019 1-6	7.42
9.06%	-1.67%	9327.84
10.77%	15.62%	
	742,387,914.85	9.06%
111,595,377.72	10.36%	
93,278,424.57	10.77%	11.47%
0.84%		
	9.06%	10.77%