	: :	
	/ / :	DE-03-01 :

% /

/

Km²

. []

(GDP)

/

GDP

/

%

% /

%

/

/

. []



:

:

/ / :

DE-03-01 :

/				
/ Bst ¹				
/ Bst				
/ Bst				
/				
/				
/				
/				
/				
% /				
% /				
% /				
% /				
% /				
% /				
% /				
/ quadrillion Btu				
/ quadrillion Btu				
/ million Btu				
Btu/\$				

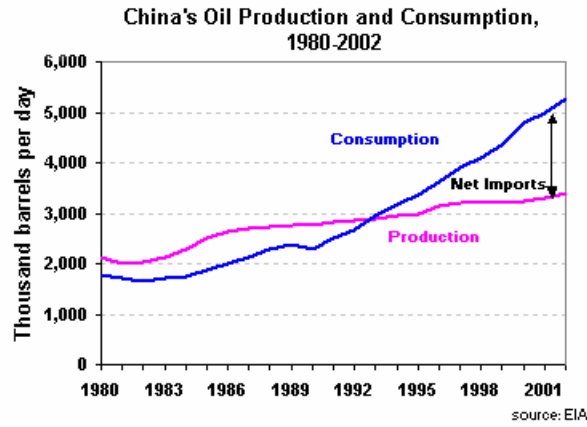
:

/

¹ Billion Short Ton

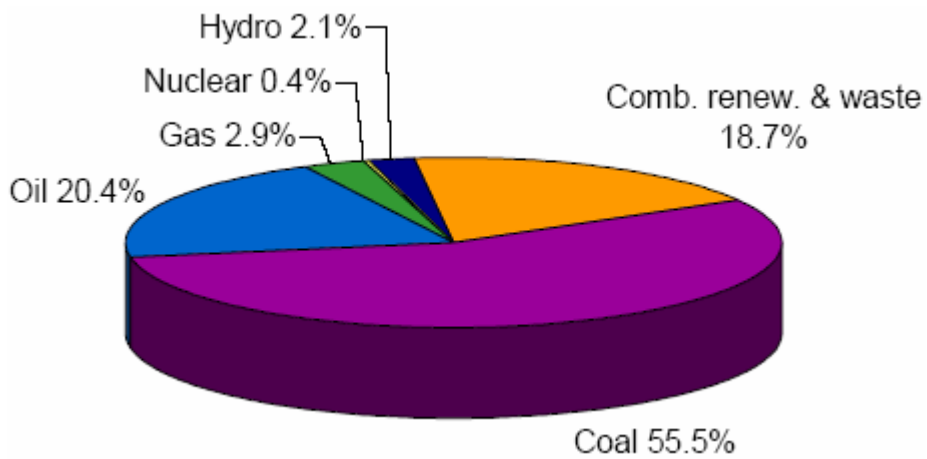
[]

% /



[]

% /

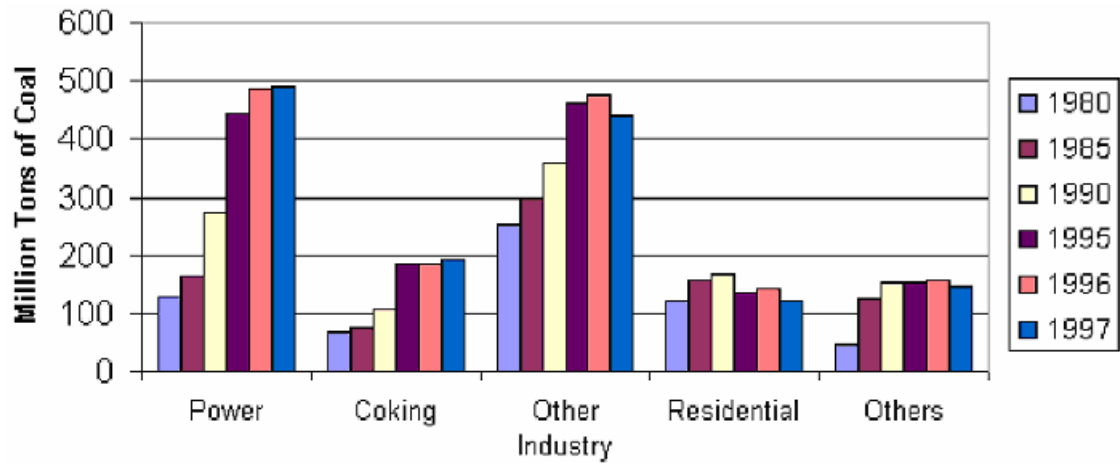


[]

Mt

Mt

[]



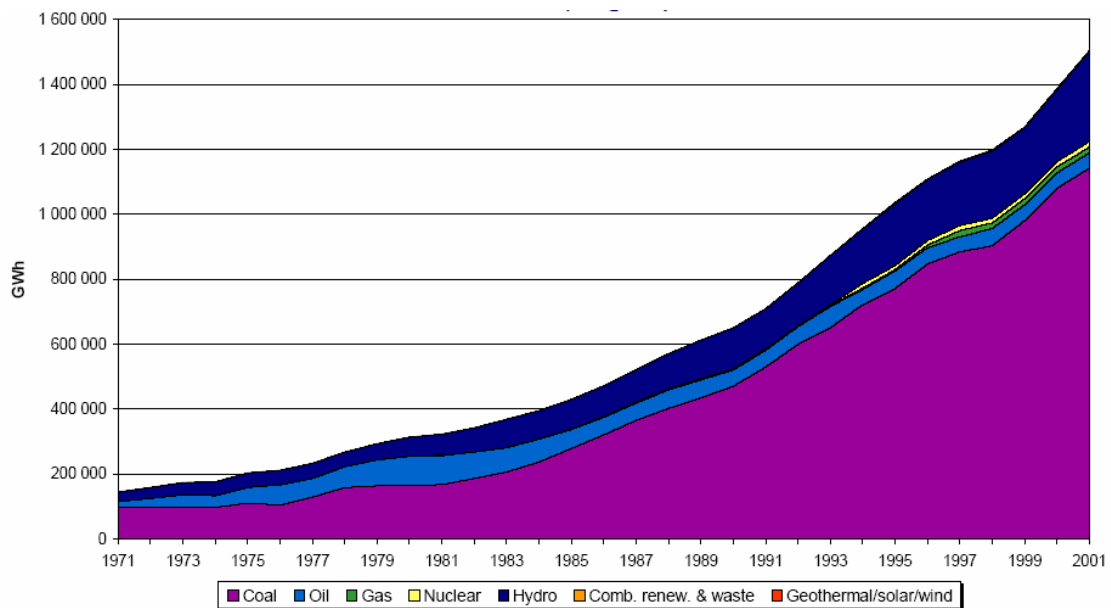
[]

TWh

TWh

% /

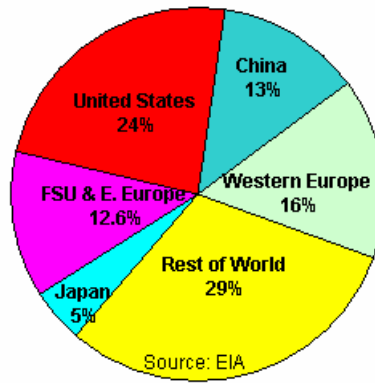
[]



[]

%

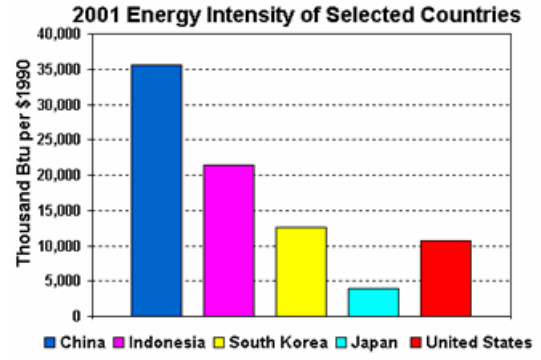
2001 Energy-Related Carbon Emissions



[]

% /

. []



[]

[]

()

(GDP)

(GDP)

%

[]

/

/

(GDP)

% /

[]

[]

Mtoe

/

/

/

/

[]

()		
/		
/	()	
/		
/		
/		

[] (TWh)

Year	Hydro	Other	Total
1990	126	495	621
1991	125	553	678
1992	132	622	754
1993	152	688	840
1994	167	761	928
1995	191	816	1007
1996	188	892	1080
1997	196	938	1134
1998	205	951	1156
1999	225	1005	1230

(
(
(

. []

[]

Year	Primary Energy Production (10 ⁴ tce)	As Percentage of Total Energy Production (%) (coal equivalent calculation)				
		Coal	Crude Oil	Natural Gas	Hydro Power	Nuclear Power
1953	5192	94.26	1.71	0.02	2.00	
1978	62770	70.30	23.70	2.91	3.09	
1979	64562	70.23	23.51	2.99	3.27	
1980	63735	69.50	23.75	2.98	3.77	
1981	63227	70.23	22.87	2.68	4.22	
1982	66778	71.27	21.85	2.38	4.50	
1983	71270	71.61	21.26	2.28	4.85	
1984	77855	72.41	21.03	2.12	4.44	
1985	85546	72.83	20.86	2.01	4.30	
1986	88124	72.47	21.19	2.08	4.27	
1987	91266	72.63	21.00	2.02	4.35	
1988	95801	73.06	20.44	1.98	4.52	
1989	101639	74.08	19.35	1.97	4.60	
1990	103922	74.23	19.01	1.96	4.80	
1991	104844	74.10	19.20	2.00	4.70	
1992	107256	74.30	18.90	2.00	4.80	
1993	111059	74.00	18.70	2.00	5.28	0.06
1994	118729	74.60	17.60	1.90	5.39	0.51
1995	129034	75.30	16.60	1.90	5.81	0.39
1996	132616	75.20	17.00	2.00	5.39	0.41
1997	131989	74.06	17.34	2.08	6.04	0.44
1998	124000	71.86	18.51	2.49	6.66	0.45
1999	109126	68.4	20.95	3.07	7.06	0.52
2000	109000	66.8	21.30	3.40	8.00	0.50

[]

Year	Primary Energy Consumption (10 ⁴ tce)	As Percentage of Total Energy Consumption (%) (coal equivalent calculation)				
		Coal	Crude Oil	Natural Gas	Hydro Power	Nuclear Power
1953	5411	94.33	3.81	0.02	1.84	
1978	57144	70.70	22.70	3.20	3.40	
1979	58588	71.31	21.79	3.30	3.60	
1980	60275	72.20	20.70	3.10	4.00	
1981	59447	72.74	19.92	2.85	4.49	
1982	61937	73.92	18.67	2.56	4.85	
1983	65648	73.71	18.56	2.47	5.26	
1984	70904	75.30	17.40	2.40	4.90	
1985	76682	75.80	17.10	2.20	4.90	
1986	80850	75.80	17.20	2.30	4.70	
1987	86632	76.20	17.00	2.10	4.70	
1988	92997	76.20	17.00	2.10	4.70	
1989	96934	76.00	17.10	2.00	4.90	
1990	98703	76.20	16.60	2.10	5.10	
1991	103783	76.10	17.10	2.00	4.80	
1992	109170	75.70	17.50	1.90	4.90	
1993	115993	74.70	18.20	1.90	5.20	
1994	122737	75.00	17.40	1.90	5.70	
1995	131176	74.60	17.50	1.80	5.71	0.39
1996	138948	74.70	18.00	1.80	5.09	0.41
1997	137798	71.50	20.40	1.70	5.76	0.44
1998	132214	69.60	21.50	2.20	6.25	0.45
1999	130119	68.00	23.20	2.20	6.08	0.52
2000	128000	67.00	23.60	2.50	6.35	0.55
2001	117000	[or 819 Mtoe]				

[]

Million tons coal equivalent	1990	1991	1992	1993	1994	1995	1996	1997
Agriculture	49	51	50	48	51	55	57	59
Industry	676	714	763	784	879	962	1003	1001
Transportation	45	48	51	52	57	59	60	75
Residential	158	156	157	154	157	158	177	164
Total	928	969	1021	1038	1231	1312	1389	1382

[]

/									(Billion \$)
/	/	/	/	/	/	/	/	/	(quaBtu)
	/	/	/	/	/		/		()
/	/	/	/	/	/	/	/	/	()
/	/	/	/	/	/	/	/	/	()
/									(Mst ¹)
/									(MW)
/									(Bkwh)
/	/	/	/	/	/	/	/	/	(quaBtu)
/									(MMt ²)

¹ Million Short Ton

² Million Metric Ton

%

/

(TCE¹)

[]

/

% /

/

/

)

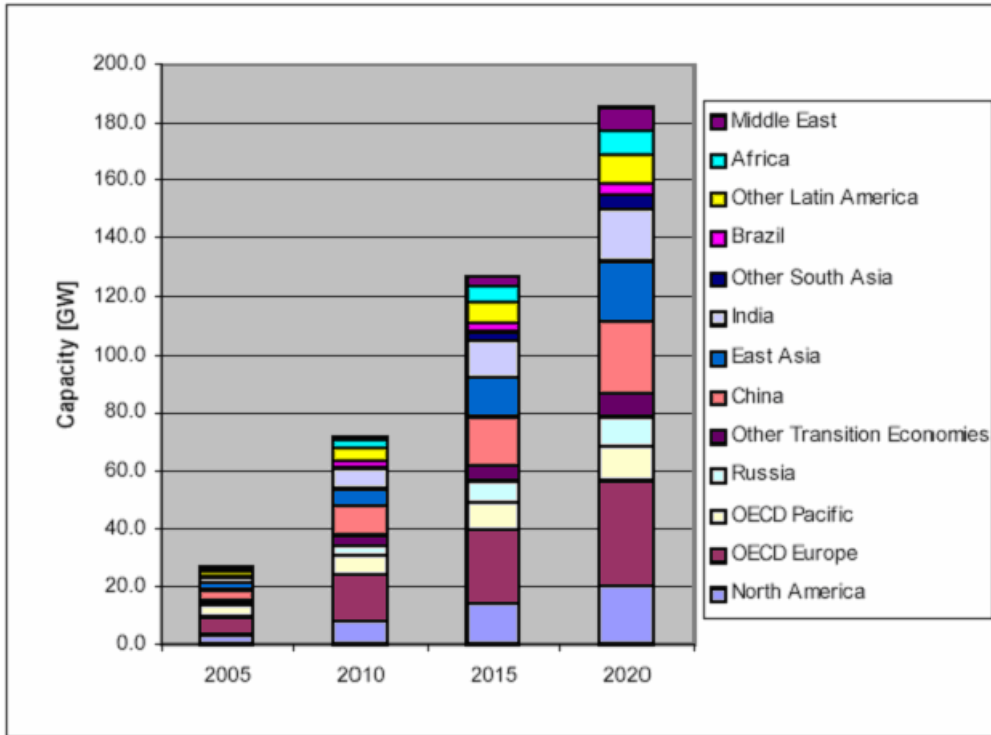
/)

(

(

[]

¹ Ton Coal Equivalent = 0.7 Ton Oil Equivalent



[]


[]

n/a	n/a	n/a		

Btu /

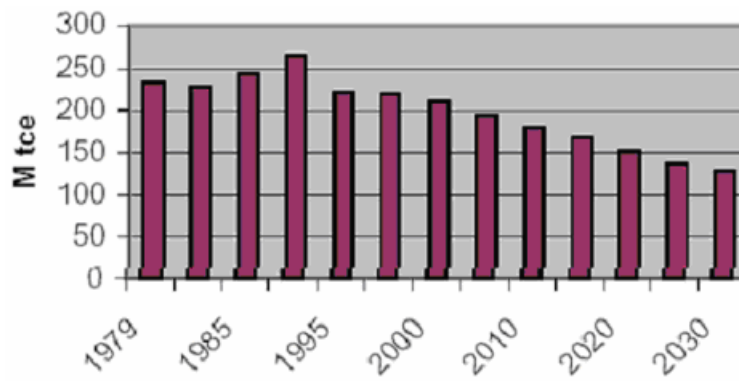
Btu

. [] Btu

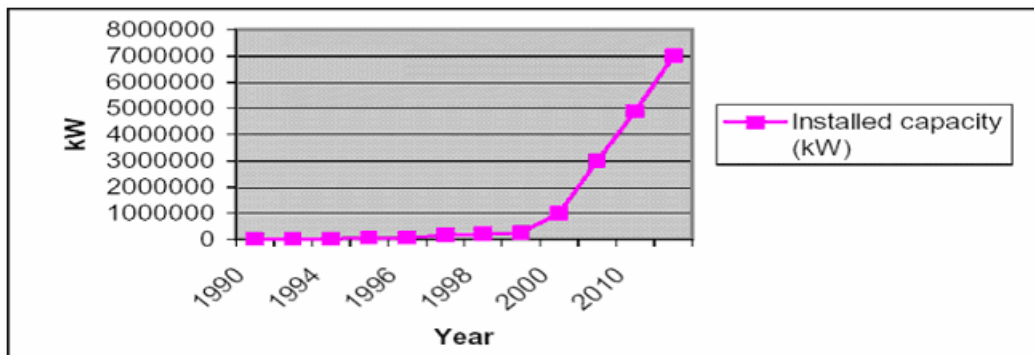
	<p style="text-align: center;">:</p>	
	/ / :	DE-03-01 :

<p>(Mt) /</p>	<p style="text-align: center;">Mt /</p>
----------------	---

Year	Consumption and demand forecast
1979	234
1980	229
1985	245
1990	263
1995	221
1996	219
2000	210
2005	195
2010	181
2015	168
2020	151
2025	137
2030	127



Year	Installed capacity (MW)	Number of installed sets (Unit)
1990	12	
1993	13	
1994	26.2	
1995	57	
1996	57.4	
1997	166	
1998	223	533
1999	262	594
2000	1000	
2005	3000	
2010	4900	
2015	7000	



%

. []

(UTC PC25C)

UTC¹

Beijing Fuyuan Century Fuel Cell Power ✓

Scooter

Tsinghua

[]

R&D

Beijing Fuyuan Pioneer New Energy Material ✓

[]

BYD Battery Co. Ltd ✓

R&D


[]

DaLian Institute of Chemical Physics (DICP) ✓

H₂ - O₂

DICP .

¹ United Technologies Corp

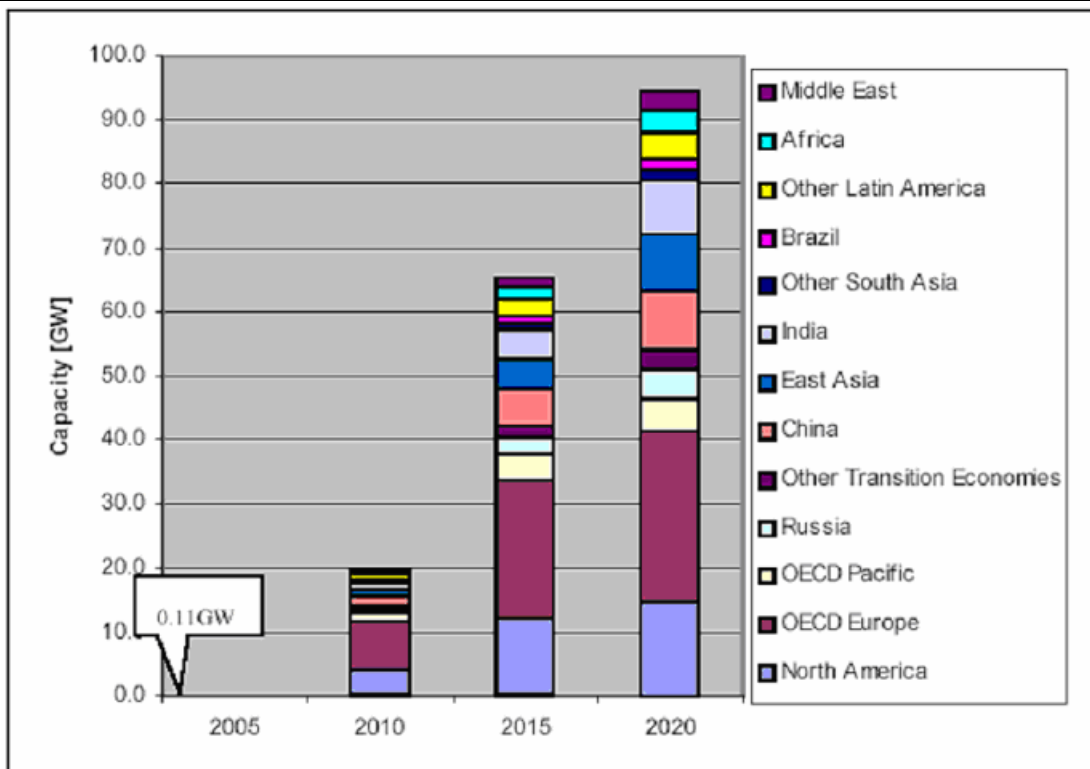
	: :	
	/ / :	DE-03-01 :

(MCFC)	(SOFC)	DICP
		DICP
		DICP
		DICP
(DMFC)		DICP
/		DICP
	[] °C	
	Dalian Sunrise Power Co.Ltd	DICP ✓
Shanghai Industry	Shanghai Qianhe Bicycle Plant	DICP
	[]	Exposition
Shen Panwen	Tiantin Nanhai	✓
[]		
	New Eco Developing Center	✓
	Beijing	
	[]	
	Shandong Blue-Sky New Energy Co Ltd	✓
Scooter		
	Shanghai Shen-Li High Tech Co Ltd	✓

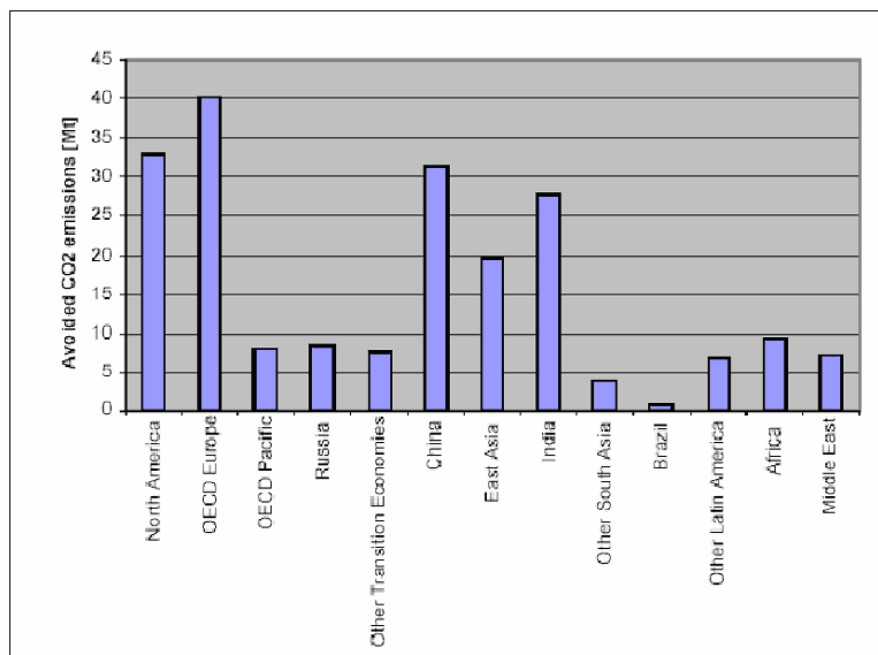


	:	
	/ / :	DE-03-01 :

	[]	
South-North Institute for Sustainable Development		✓
Asia-Pacific		
[]		
CAS Dalian		✓
<ul style="list-style-type: none"> • Beijing Green Power Ltd • Tongji University • Shanghai Automotive Industry Corp • Tsinghua University 		
Tsinghua University		Beijing Green Power Ltd
[]		
(FCDG ¹)		
	GW	MW
	CO ₂	
¹ Fuel cell distributed generation		



[]



[]

CO₂

/

/

/

:

()

() OECD

%

(UNFCCC¹)

UNFCCC

UNDP .

¹ United Nations Framework Convention on Climate Change

² Standing Committee

no-regrets

(DOE)

(MOST¹)

(NREL²)

UNDP

(GEF)

Johanesburg

/

¹ Ministry of Sciences and Technology

² National Renewable Energy Laboratory

(MOST¹)

CO₂

-
-
-
-
-
-
-
-
-


(ADB³)

(WB²)

¹ Ministry of science and technology

² World Bank

³ Asian Development Bank

	<p style="text-align: center;">:</p>	
	/ / :	DE-03-01 :

<p style="text-align: center;">/</p> <p style="text-align: center;">(CAS¹)</p>	<p style="text-align: right;">Guangdong</p> <p style="text-align: center;">(PEMEC)</p> <p style="text-align: right;">()</p> <p style="text-align: center;">/</p>
<hr style="width: 25%; margin-left: 0;"/> <p>¹ Chinese Academy of Science</p>	

Annex V

Washington D.C

GEF

/

()

/

/

/

OECD

)

/

(

(FCB)

(GEF)

GEF

BMW


GEF .

(FCV)

(...

"Technological leapfrogging"

GEF

 <p>معاونت‌های بهداشتی مگفا (دانش سازمان بهداشت و آموزش پزشکی ایران)</p>	:	
	/ / :	DE-03-01 :

(PEM)		OECD
(WHO)	WHO	
()		

فائق فرصت‌های بین‌المللی



مگفا

(دفتر سازمان کنسولگری و پاسپورتی وزارت امور خارجه ایران)

:

:

/ / :

DE-03-01 :

"

"