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Where success stories begin

Investment Opportunities in Thailand



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www.boi.go.th



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Outline of Presentation

- **Macroeconomics outlook**
- **Current investment environment**
- **Current investment statistics**
- **Current investment promotion policy**
- **Investment opportunities in major sector**



The Macroeconomic Picture in Statistics

	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007_p</i>
GDP Growth (%) at constant prices	5.4	7.0	6.2	4.5	5.1	4.6
GDP (US\$ Bil) at current prices	126.7	142.8	161.5	176.4	206.6	243.1
Inflation (%)	0.7	1.8	2.7	4.5	4.7	2.3
GDP Per Capita (US\$)	1,966	2,198	2,631	2,825	3,186	3,683
Export Growth (%)	4.8	18.2	21.6	15.0	17.1	16
Industrial Capacity Utilization	64.4	69.8	71.5	72.1	74.33	75.7

Top Exports for 2006

Top 10 Exports		Mil. US\$	Export Growth
1	Computers & Components	14,876	25.6 %
2	Autos & Parts	9,541	23.2 %
3	Integrated Circuits	7,029	18.1 %
4	Rubber	5,394	45.4 %
5	Plastic Pellets	4,501	7.2 %
6	Gems and Jewelry	3,644	12.7 %
7	Refined Petroleum Oil	3,635	54.5 %
8	Iron and Steel Products	3,527	21.7 %
9	Radios, TVs	3,463	10.2 %
10	Chemicals	3,443	30.1 %

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**World Bank
Ease Of Doing Business
#15 in the World**

**#13 Women's
Economic Participation
(World Economic Forum)**

**THAILAND:
#3 FDI Prospect
In Asia
(UNCTAD)**

**Labor Freedom: 90.4%
(Heritage Foundation)**

**#1 in SME Connectivity
In S.E.Asia
(Kadence Asia-Pacific)**

**Ranked #127
"Cost of Living"
(Mercer International)**



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World Bank's Ease of Doing Business

1	Singapore	11	Japan
2	New Zealand	15	Thailand
3	United States	23	Korea
4	Hong Kong	25	Malaysia
5	Denmark	47	Taiwan
6	United Kingdom	93	China
7	Canada	104	Vietnam
8	Australia	126	Philippines
9	Norway	135	Indonesia
10	Ireland	159	Laos PDR

Criteria
Starting a business
Hiring and firing workers
Enforcing contracts
Access to credit
Closing a business
Registering property
Dealing with licenses
Paying taxes
Trading across borders
Investor protection

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Infrastructure strong and growing



Suvarnabhumi Intl. Airport: 45 million passengers/year and 3 million metric ton cargo

Mass transit : Skytrain, Subway, Bus Systems all to be expanded

Highway system: 64,000 km to all provinces

World-class, Wi-Fi capabilities and inexpensive broadband widely available

Deep sea ports: capacity over 5 million TEU

4,000 km rail, links to Malaysia, Singapore

57 industrial estates

Low CBD Office rent: \$12.5/sq. ft./year

Communications:

60% cell phone use, broadband internet

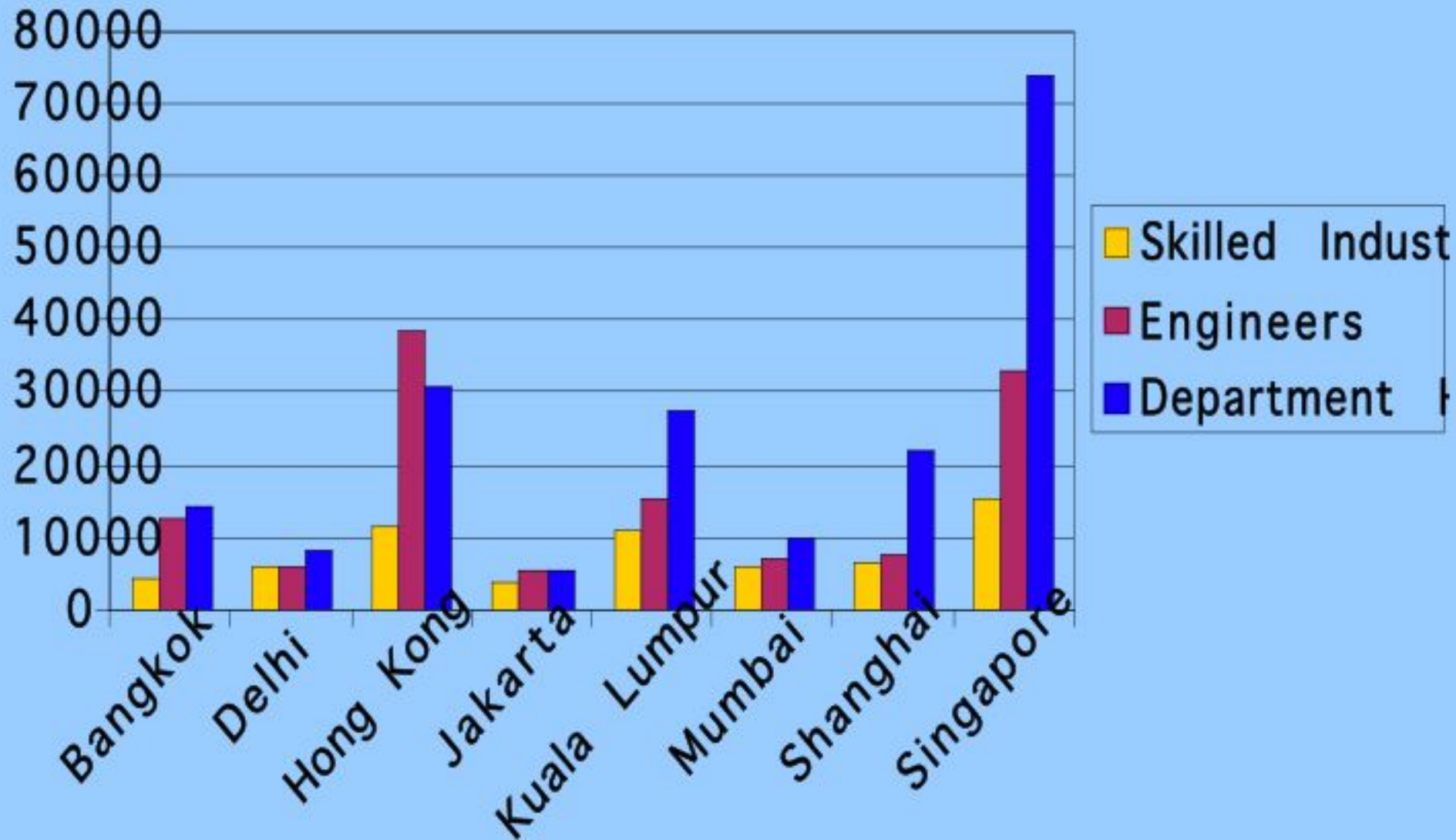


Bangkok 2006: least expensive cities

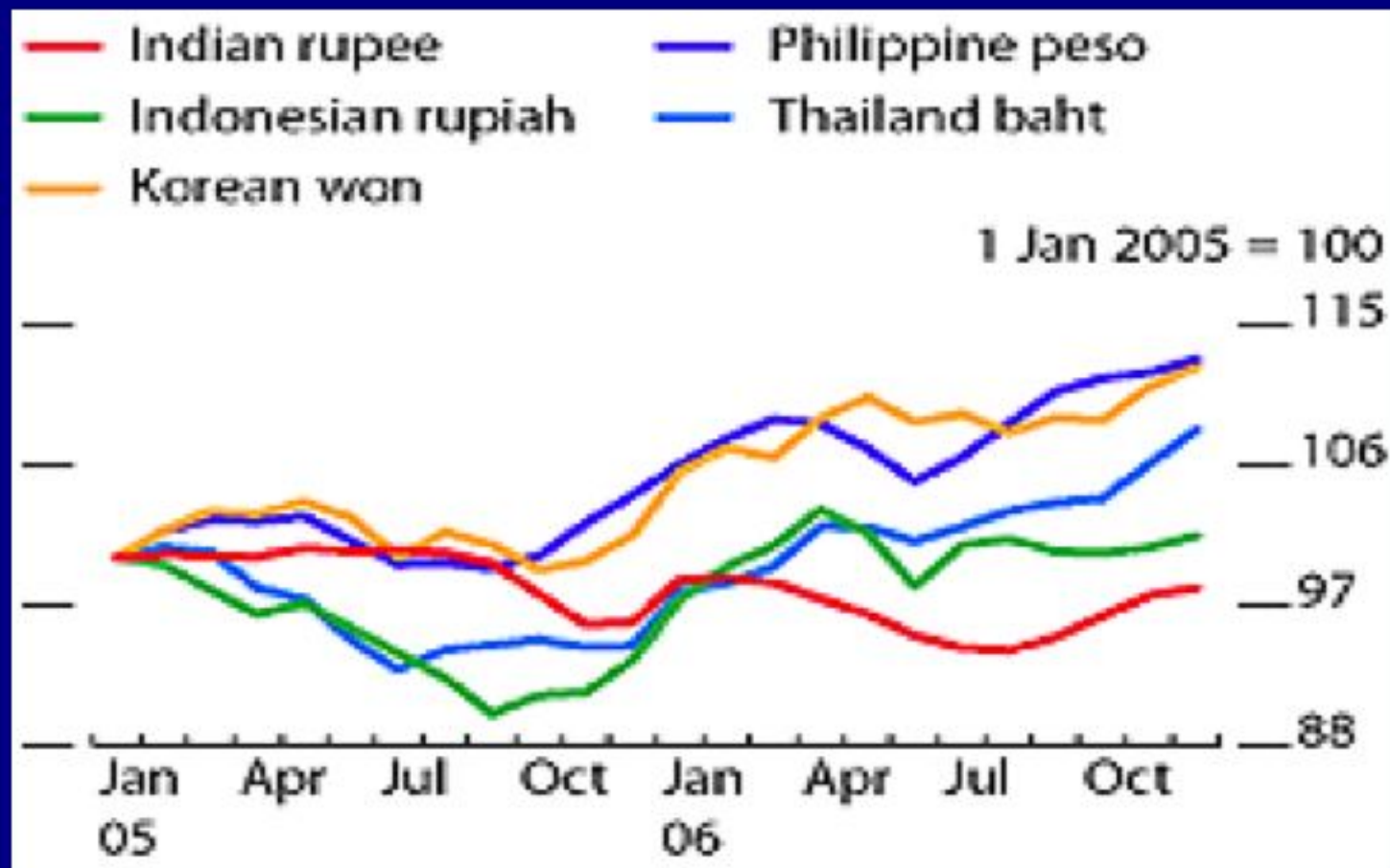
1) Moscow	20) Shanghai
2) Seoul	32) Hanoi
3) Tokyo	37) Ho Chi Minh
4) Hong Kong	48) Jakarta
5) London	54) Guangzhou
6) Osaka	68) Mumbai
7) Geneva	73) New Delhi
10) New York City	114) Kuala Lumpur
14) Beijing	127) Bangkok



Gross Incomes Per Year USD



USD Exchange Rate Index



Source : www.adb.org

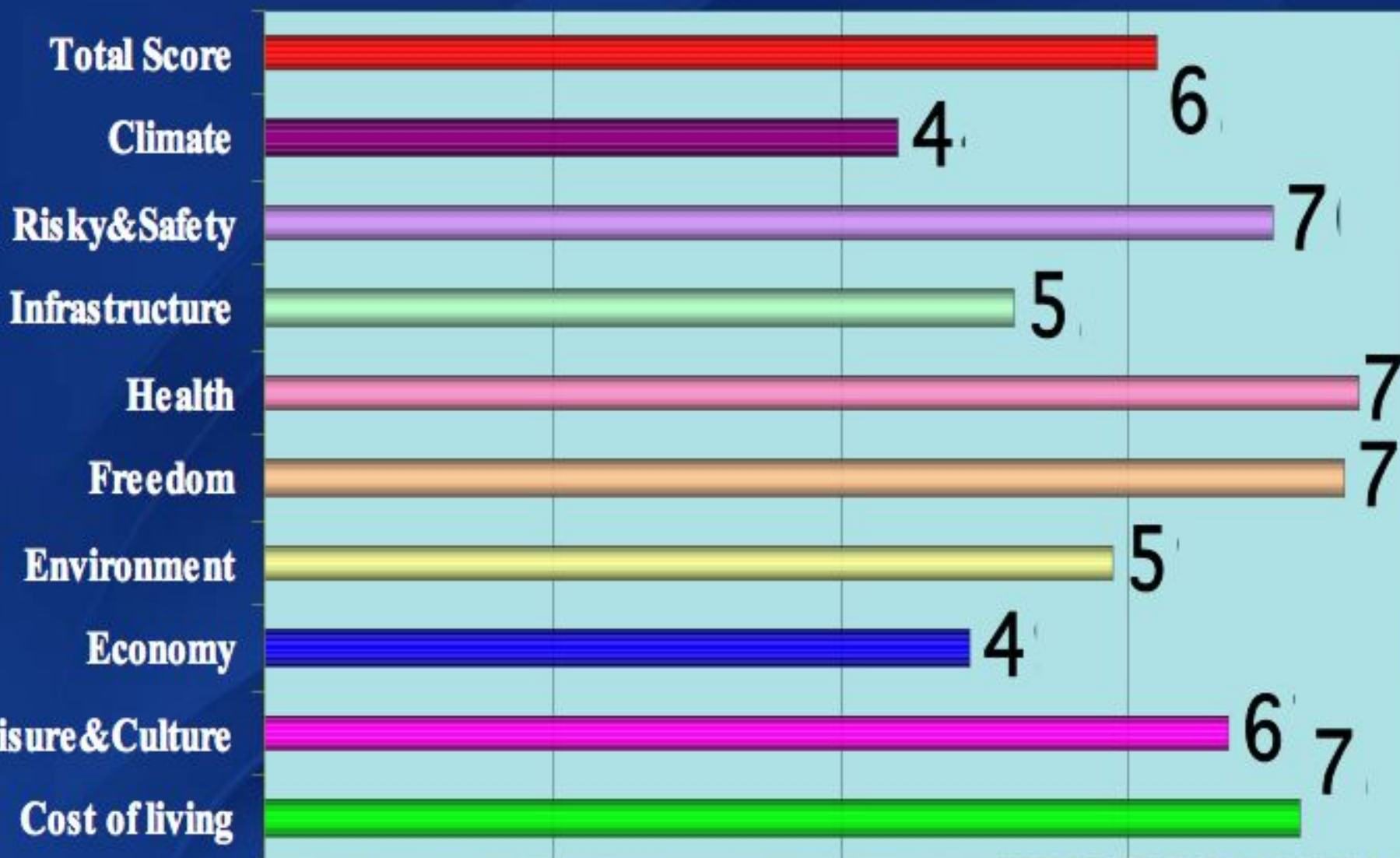
IPR Framework

- **Thailand has 8 intellectual property-related laws, all of which are consistent with international standards:**
 - ✓ **Copyright Act of 1994**
 - ✓ **Patent Act of 1979, as amended by the Patent Act (No.3) of 1999**
 - ✓ **Trademark Act of 1991, as amended by the Trademark Act (No.2) of 2000**
 - ✓ **Act for the Protection of Layout-Designs of Integrated Circuits 2000**
 - ✓ **Trade Secret Act of 2002**
 - ✓ **Protection of Geographical Indication Act of 2003**
 - ✓ **Plant Varieties Protection Act of 1999**
 - ✓ **Traditional Medicine and Practice Act of 1999**



Quality of Life in Thailand

"The highest scores, the highest quality of life"



www.bci.co.th

The highest-score: 88

Source: Quality of life index 2006, International Living

Hub of Access to Regional Markets (Countries and populations)



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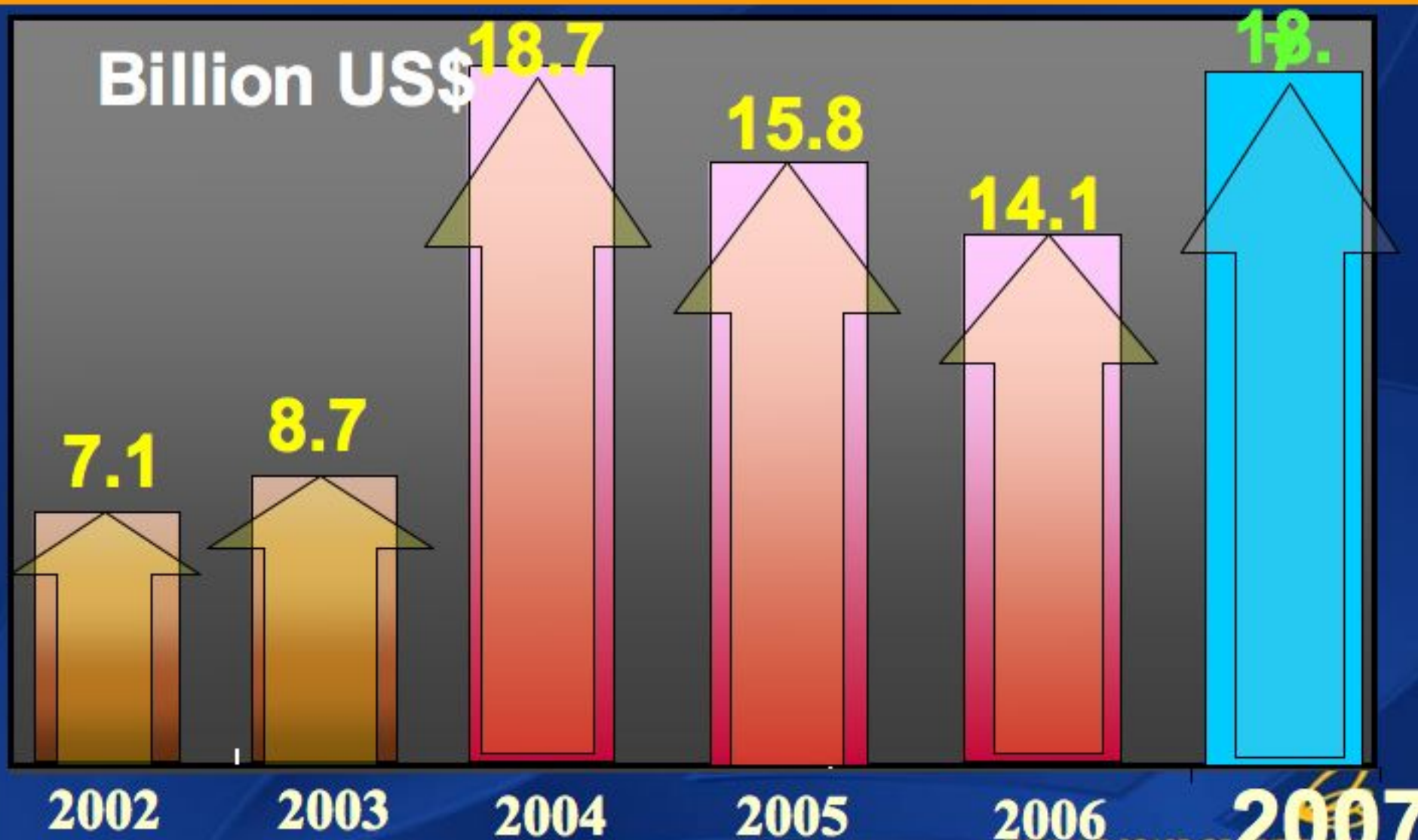
Investment Statistics



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Strong Net Applications Value



2002

2003

2004

2005

2006

2007

Note : 35 baht

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Applications By Industry year 2006 and year 2007

Projects

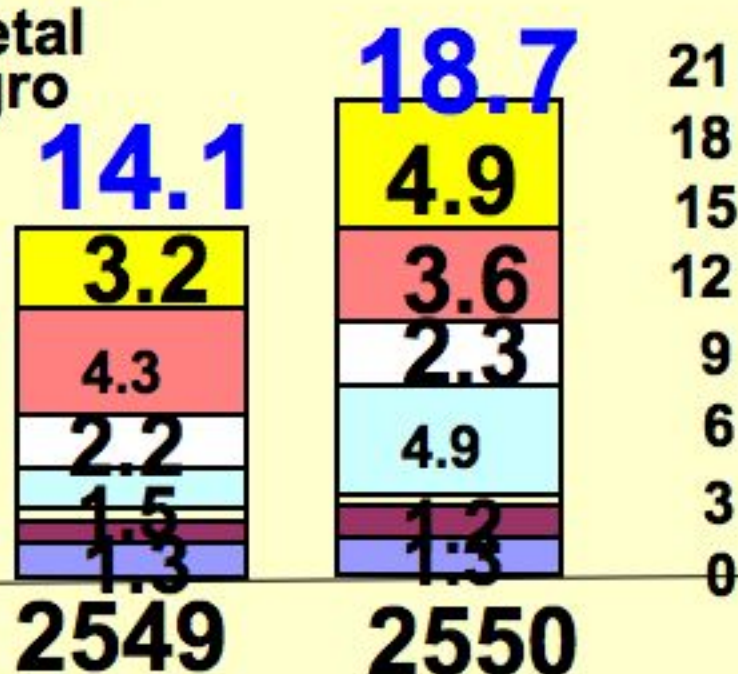
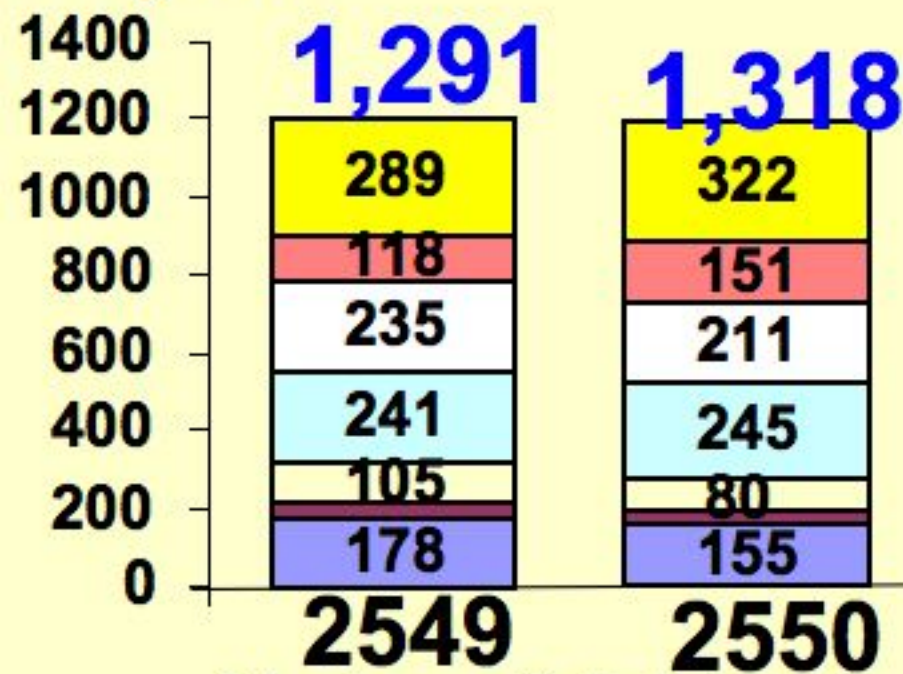
Investme

2007

- Services
- Chemical
- E&E
- Auto
- Fashion
- Metal
- Agro

Units : Billion USD

**Number of
Projects**

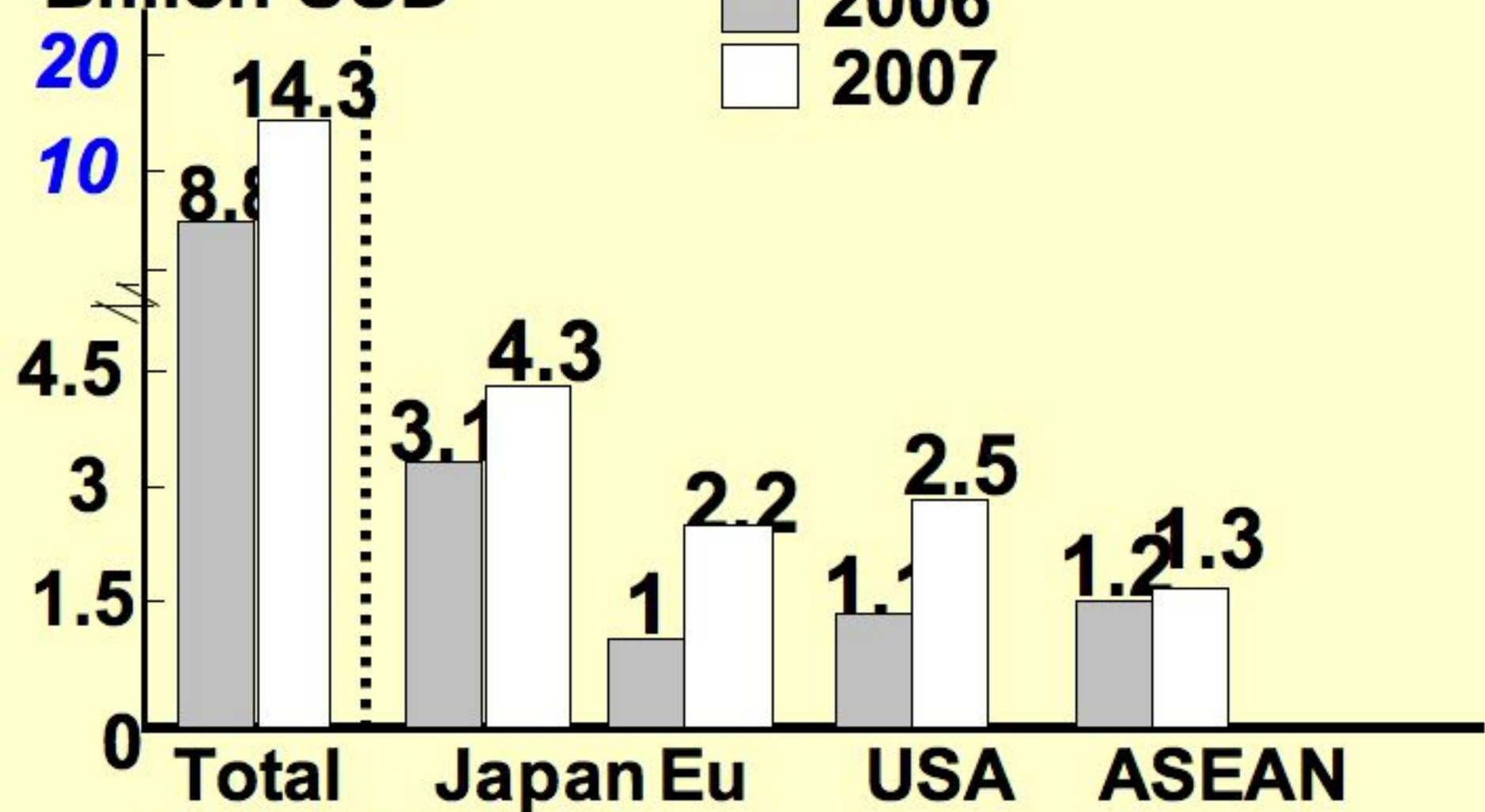


Note : 35 baht

Major FDI Investment Year 2006 and Year 2007

Billion USD

2006
2007



Note : 35 baht

US Investors in Thailand

- **Dow Chemical**
- **General Motors**
- **General Electric**
- **Ford**
- **AIG**
- **Exxon Mobil**
- **Cardinal Health**
- **Proctor & Gamble**
- **Colgate Palmolive**
- **Seagate**
- **Western Digital**
- **Oracle**
- **IBM**
- **Microsoft**
- **Chevron**
- **Marriott**
- **3M**
- **Honeywell**



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Investment Promotion Policy



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Liberal Investment Policy

- No restrictions on foreign currency remittances
- No export requirement
- No foreign equity restrictions in manufacturing sectors and promoted services sector
- No local content requirement



Basic BOI privileges and Measures

Tax Incentives

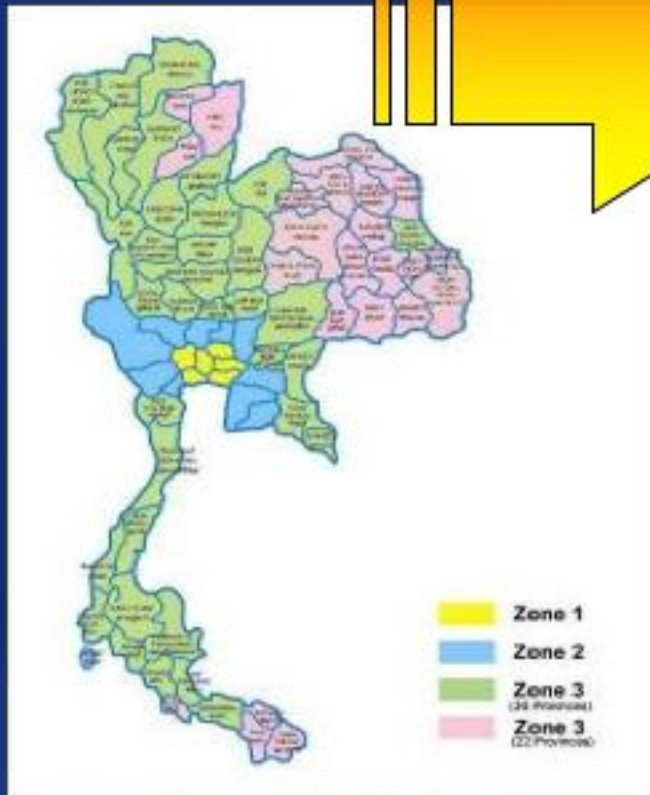
- ❑ Corporate income tax holidays up to 8 yrs
 - ❑ Additional 50% reductions of corporate income tax for 5 yrs may apply in zone 3
- ❑ Import duty reductions or exemptions on machinery and raw materials
- ❑ Double deduction of public utility costs
- ❑ Deductions for infrastructure construction/installation costs

Non-Tax Incentives

- ❑ Land ownership rights for foreign investors
- ❑ Permission to bring in foreign experts and technicians
- ❑ Work permit/visa facilitation
 - ❑ **One-Stop-Shop**
Visas & Work Permits are issued in 3 hours

Zone and Sector Matrix

Zones



Sector Matrix: Incentives to strengthen competitiveness

Strategic or Priority Industries

Maximum incentives
(exemption on machinery import
duties, 8 years tax holiday)
regardless of zone
e.g. R&D, alternative energy, biotech,
software, environment protection

Zone-Based Incentives:

Lower to higher

Zone 1 → Zone 2 → Zone 3

Target Sectors for Investment Promotion

- **Agro-Industry: Food & Non-Food**
- **Fashion: Garments, Leather, Jewelry**
- **Automotive : Autos and parts**
- **Electronics and ICT**
- **Alternative energy**
- **High-Value Added Services**
 - **ROH, Logistics, Software, Biotech, Environment**



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Investment Incentive & Investment opportunities for Renewable & Alternative Energy



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Policy & Target to Promote New & Renewable Energy

2002



TE = Traditional Energy

NRE = New & Renewable Energy

2011



Target : To increase the share of renewable energy from 0.5% to 8% by the year 2011.

National Strategic Plan for Renewable Energy

Action Plan:

1. Feed in tariff (adder price) for 10 yrs was announced in 2007

- Solar 8 ฿/kWh
- Wind 3.50 ฿/kWh
- MSW 2.5 ฿/kWh
- Micro hydro 0.8 ฿/kWh
- Mini hydro 0.4 ฿/kWh
- Biomass/Biogas 0.3 ฿/kWh

2. Incentives to promote power generation from renewable energy sources

3. Support research and development on renewable energy

Targets for electricity from renewable sources by 2011 (3,246 MW):

- Solar 45 MW
- Wind 115 MW
- Hydro 156 MW
- Biomass 2,800 MW
- MSW 100 MW
- Biogas 30 MW

(Actual in 2006 = 2,061 MW)



BOI Policies to Promote Renewable Energy

Promote all renewable & alternative energy as priorities activities

- Fuel from agriculture and waste (ethanol, bio-diesel, biogas)
- Power plant using renewable fuel
- Manufacture of solar cells
- Manufacture of fuel cell
- NGV equipment and parts

Incentives: import duty exemption on machinery and income tax exemption for 8 years regardless of zone

Investment in Renewable Energy

Value : Mil.USD

Sector	2005		2006		2007	
	No.	Value	No.	Value	No.	Value
Alcohol or fuel from agricultural & waste	7	43.5	16	115.5	40	1,349.0
Fuel Cell	-	-	1	9.6	-	-
NGV Cylinder	-	-	-	-	3	38.8
Solar Cells	2	55.0	1	52.2	2	72.6
Power plant from renewable fuel	13	128.2	17	319.3	43	674.2
Total	22	226.7	35	496.6	88	2,134.2

BOI Promoted Bio-fuel Projects as of Dec.2007

- Ethanol : 34 projects with total capacity of 8.89 million lit. /day. Feedstock from molasses & cassava. In-operation 8 projects with capacity of 1.05 million lit./day
- Bio Diesel: 18 projects with total capacity of 5.11 mil. lit./day. Feedstock from crude palm oil. In-operation 6 projects with total capacity of 1 mil. lit./day
- 18 bio-gas projects from waste water treatment of tapioca & starch plant, palm oil plant, animal farm, food processing.
- 1 project of diesel oil from biomass



Feedstock Cost for

Ethanol Production

Country	USD/litre	Raw material
Brazil	0.20	Sugarcane/Molasses
Thailand	0.24	Cassava
U.S.A.	0.25	Corn
Australia	0.30	Molasses
EU	0.48	Sugar beet
	0.43	“Wheat



Investment Opportunities for Bio-Fuel

- Thailand is # 1 exporter of cassava/tapioca products and # 2 exporter of sugar in the world → available of raw material for ethanol
 - Forecast Cassava production available for ethanol feedstock ~14 mil. tons in 2008
 - Forecast molasses production available for ethanol feedstock ~1.7 mil. tons in 2008
- Technology for ethanol production from starch base still needed for new development project.
- Strong demand for ethanol for fuel in Asia Japan, South Korea, China, India.



Promoted Power Plant

As of Dec. 2007

- **148 promoted power plant projects, with a total capacity of 17,652 MW**

Type	# of projects	Total capacity
IPP	10	12,300 MW
SPP & VSPP	138	5,352 MW

SPP = Small power plant

VSPP = Very small power plant



Type of Fuel for SPP & VSPP

Fuel	No.	Capacity (MW)
Natural Gas	48	3,321
Coal	7	804
Diesel	1	6
Hydro	1	6
Bio mass	43	925
Bio gas	32	68.5
Solar cell	2	2
Wind	4	220



Promoted Solar Cell Producers

Company	Type of Cell	Capacity
Bangkok Solar	Amorphous Silicon	51 MW
Ekarat Solar	Poly-Crystalline	25 MW
Solartron	Poly-Crystalline	25 MW
Crystal Energy	Mono-Crystalline	8.8 MW



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Investment Incentives & Opportunities in Biotechnology and related Business



Thailand: Regional Medical Hub

- ❑ World class hospital services, high-quality medical treatment with Thai hospitality
- ❑ Thai doctors study abroad, speak international languages and are among the best in the region
- ❑ Health tourism increased over 200% in last few years, becoming the largest in Asia

Statistic of foreign patients

2002	–	630,000
2003	–	970,000
2004	–	1,100,000
2005	–	1,280,000
2006	–	1,300,000
2007	–	1,500,000



Supportive Factors for Biotechnology in Thailand

- An extensive public infrastructure supporting Biotechnology and Science research (Ex. Thailand Science Park)
- Strengthening R&D infrastructure are national research center
 - **National Science and Technology Development Agency**
 - **Thailand Center of Excellence for Life Sciences**



Science Park & Bio Park

- **Thailand's Science Park Serves as an incubation Center for Science-Related Investment**
- **Bio Park : 1st biotech hub in Thailand for agro-based and life science research and services**
- **Support Includes:**
 - ✓ **Joint investment (i.e. joint ventures)**
 - ✓ **Assistance in finding and acquiring technology**
 - ✓ **Analytical and technical services**
 - ✓ **Intellectual property services**
 - ✓ **Quality management services**
 - ✓ **Maximum BOI Incentives**



BIO Park

The logo for Shiseido, featuring the word "SHISEIDO" in a stylized, dark red font with a white outline.

**Shiseido Southeast
Asian Research Center**

**Alltech Asia-Pacific
Biosciences Centre**



Stem Cell for Life

ADTEC
Advanced Dental Technology Center



BSO
BETAGRO SCIENCE CENTER

NOVATEC
Healthcare

Phase II



State-of-the-art R&D facilities
120,000 sq.m. of space
one 13-story tower
three 10-story buildings

construction already began in
2007, and will be fully completed
in 2010

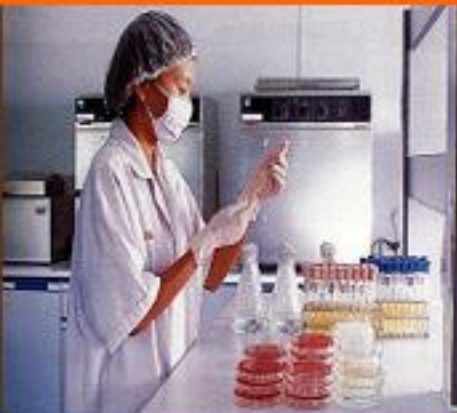


Human Resource Development for Biotech

- ❑ **Students graduate in biotech & related fields each year**
 - ❑ Undergraduate 1,000
 - ❑ Graduate 400
 - ❑ Postgraduate 40
- ❑ **Comprehensive training and R&D for specific high-tech sectors, e.g.**
 - ✓ **National Science Park in electronics, material science, biotechnology, and nanotechnology**



Incentives for Sciences & Technology Business



- Research & Development
- Scientific Laboratories
- Manufacturing of Medical Supplies or Medical Equipment

Priority Activity Incentives

- Exemption on machinery import duties
- 8-year corporate income tax holiday
- Additional incentive if locate in Science Park
 - 50% corporate income tax reduction for another 5 years

Example of Promoted Agro Biotech Projects

Purac (raw material from sugar)

- Lactic acid for food additives
- Lactic acid dimer

MC Towa (raw material from tapioca)

- Crystalline Maltitol, Maltitol Syrup

Ueno Fine Chemical (raw material from tapioca)

- Maltitol Powder & Liquid
- Sorbitol



Example of Promoted R&D Medical Projects

- Health Concepts International
 - HIV serum bank and Cyclofem QC lab, HIV testing service
 - Plasma sample for R&D
- Thera Vitae
 - Stem cell and Cell processing stage
- International Drug Development
Clinical Trial
- Delphi Health Services
DNA Genotyping test
- Oogonia
 - In Vitro Fertilization : IVF laboratory
 - Preimplantation genetic diagnosis : PGD laboratory

Example of Promoted Pharmaceutical Projects

- Better Pharma

Veterinary Pharmaceutical

- Bio-Innova and Synchron

Bioequivalent

- International Bio Service

Bioequivalent, Pharmaceutical Bioequivalent



BOI Promoted Medical Devices Projects

COMPANY	OWNERSHIP	PRODUCT
SAFESKIN MEDICAL	AMERICAN	MEDICAL GLOVES
MEDIGLOVE	BARBADOS	
CARDINAL HEALTH	AMERICAN	
NIPRO CORP	JAPAN	NEEDLE, INFUSION SET
MOLNLYCKE HEALTH CARE	SWEDEN	DISPOSIBLE MEDICAL
BENCHMARK ELECTRONICS THAILAND	AMERICAN	GLUCOSE METER , RESPIRATOR DEFIBRILLATOR,NEURODIAGNOSTIC
TYTEX GROUP (THAILAND)	DENMARK	ELASTIC FIXATION
RADI MEDICAL SYSTEMS	SWEDEN	CABLE USING INPRESSURE WIRE
DENTALMAN	DENMARK	MOBILE DENTAL
MIZUHO	JAPAN	OPERATION TABLE
METRON MEDICAL	AUSTRALIA	MEDICAL TREATMENT TABLE

BOI Recent Incentives for Biotech Industry (1/2)

- 1. R&D and manufacturing activities using biotech in seed, plant and animal improvement industry**
- 2. R&D and manufacturing of biopharmaceutical agents using biotech
(eg. drugs, vaccines, and therapeutic proteins)**
- 3. R&D and manufacturing of diagnostic kits and reagents for health, agriculture, food and environment applications
(eg. diagnostic kits for pure line breeding, for disease screening, biosensors and gene chips.)**



BOI Recent Incentives for Biotech Industry (2/2)

- 4. R&D and manufacturing of biomolecules and bioactive compounds using microorganism, plant and animal cell
(eg. enzymes, probiotics, flavors, monoclonal antibodies and recombinant proteins.)**

Priority Activity Incentives

- Exemption on machinery import duties**
- 8-year corporate income tax holiday**
- Additional incentive if locate in Science Park**
 - 50% corporate income tax reduction for another 5 years**

Investment Promotion for Environmental

- **Wastewater Treatment Services and Disposal or Handling Services of Garbage, Industrial Waste or Toxic Chemicals**
- **Recycling, and the reuse of, unused materials**
 - Separation of unused materials
 - Gathering of unused materials
 - Reuse of unused material
 - Recycling of unwanted material
 - Recovery of valuable substances from unused materials

Priority Activities:

Import duty exemption on machinery and income tax exemption for 8 years regardless of zone



Major Environmental Promoted Project

- **General Environmental Conservation Co.**
Landfill hazardous and non-hazardous waste
- **Siam Steel Mill Service Co.**
Slag aggregate, process scrap steel, screened mill scale
- **Siam City Cement Co.**
Waste management and Incineration
- **Bangpoo Environmental Complex Co.**
Separation, Landfill, Incinerator, waste water treatment
- **Thai Environmental German Services Co.**
Mobile industrial & municipal waste treatment
- **Ecomarine Co.**
Collecting floating plants, garbage, and waste on the river
- **Chemtronic Technology Co.**
Recovery metal from used solvent
- **SES CHEM**
Hazardous material emergency response provider



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Thailand—Each Piece Fits Perfectly.



Each piece fits *perfectly*