



# Results of Operations

First Half of the Fiscal Year Ending May 31, 2009  
(June 1, 2008 – November 30, 2008)

INTER ACTION Corporation

January 15, 2009



- 1. Review of 1H Financial Results**
- 2. Business Strategies**
- 3. Q&A Session**



# INTER ACTION Group Review of 1H Financial Results

Akio Nakataki, Managing Director

# Consolidated Financial Results (FY5/09 1H)



(yen in millions)	FY5/08 1H		FY5/09 1H		YoY change (%)
	Amount	%	Amount	%	
Sales	692	100.0%	563	100.0%	(18.6)%
Gross profit	301	43.6%	214	38.1%	(28.9)%
Operating income	(160)	(23.1)%	(118)	(21.1)%	-
Ordinary income	(199)	(28.8)%	(161)	(28.7)%	-
Net income	(140)	(20.3)%	(102)	(18.3)%	-
Employees	80	-	64	-	(16)

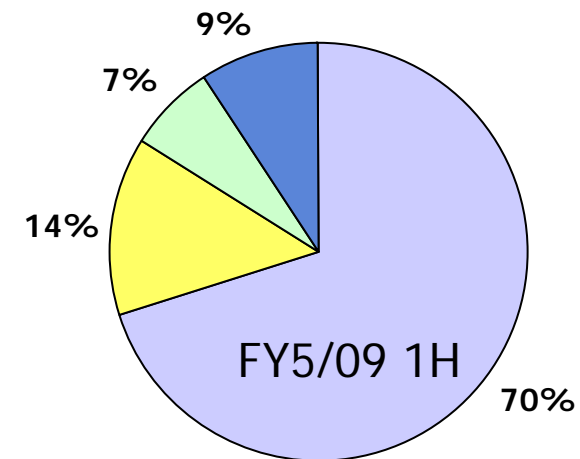
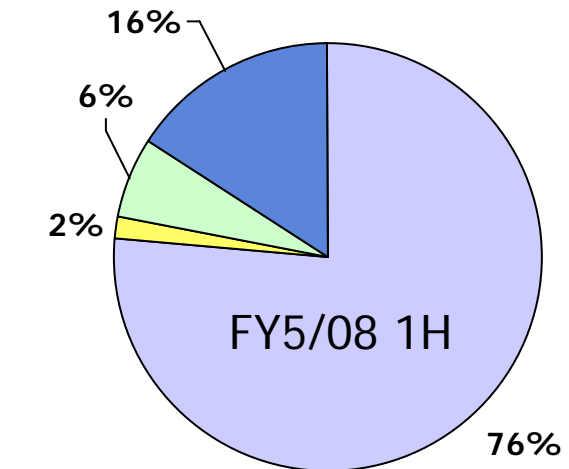
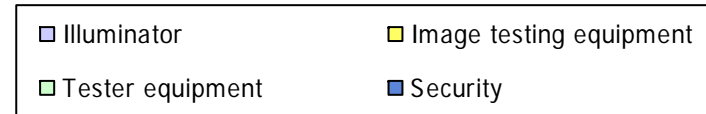
Reasons for lower sales and earnings

- Decline in sales
- Foreign exchange losses

# Comparison of Sales by Product



(yen in millions)	FY5/08 1H	FY5/09 1H
	Amount	Amount
Electronics testing equipment	<b>582</b>	<b>512</b>
Illuminators	<b>528</b>	<b>394</b>
Image testing equipment	<b>13</b>	<b>78</b>
Tester equipment	<b>41</b>	<b>39</b>
Security systems	<b>110</b>	<b>51</b>
<b>Total</b>	<b>692</b>	<b>563</b>



# R&D Expenses/Capital Expenditures/ Depreciation and Amortization



(yen in millions)	FY5/08 1H	FY5/09 1H
	Consolidated	Consolidated
R&D expenses	<b>72</b>	<b>18</b>
Capital expenditures	<b>39</b>	<b>9</b>
Depreciation and amortization	<b>49</b>	<b>53</b>

R&D expenses: Curbed because of lower sales

Capital expenditures: Equipment for production and development

# Consolidated Balance Sheets



(yen in millions)		FY5/08	FY5/09 1H	Change
Assets	Cash and deposits in banks	1,944	1,419	(524)
	Trade notes and accounts receivable	293	221	(72)
	Raw materials	316	311	(5)
	Work in process	316	258	(57)
	<b>Total current assets</b>	<b>3,096</b>	<b>2,470</b>	<b>(626)</b>
	<b>Total fixed assets</b>	<b>994</b>	<b>1,115</b>	<b>120</b>
	<b>Total assets</b>	<b>4,091</b>	<b>3,585</b>	<b>(505)</b>
Liabilities	Trade accounts payable	94	40	(53)
	Short-term borrowings, Current portion of long-term borrowings	459	454	(5)
	<b>Total current liabilities</b>	<b>863</b>	<b>691</b>	<b>(172)</b>
	Corporate bonds	550	510	(40)
	Long-term borrowings	638	460	(177)
	<b>Total long-term liabilities</b>	<b>1,194</b>	<b>977</b>	<b>(217)</b>
	<b>Total liabilities</b>	<b>2,058</b>	<b>1,668</b>	<b>(389)</b>
Net assets	Common stock	1,102	1,102	-
	Capital surplus	1,033	1,033	-
	Retained earnings	337	234	(102)
	Treasury stock	(435)	(448)	(13)
	<b>Total net assets</b>	<b>2,033</b>	<b>1,917</b>	<b>(116)</b>
	<b>Total liabilities and net assets</b>	<b>4,091</b>	<b>3,585</b>	<b>(505)</b>

Collection of trade accounts receivable

Repayment of long-term borrowings

Acquisition of treasury stock

# Consolidated Cash Flow Position



(yen in millions)	FY5/08 1H	FY5/09 1H	Change
<b>Cash flows from operating activities</b>	<b>(256)</b>	<b>(131)</b>	<b>125</b>
Net income before income taxes	(197)	(138)	59
Depreciation and amortization	49	54	5
Decrease (increase) in trade receivables	(93)	38	132
Decrease (increase) in inventories	(138)	47	186
Increase (decrease) in trade payables	30	(53)	(84)
<b>Cash flows from investing activities</b>	<b>(72)</b>	<b>(427)</b>	<b>(355)</b>
Payment for term deposits	(1)	(301)	(299)
<b>Cash flows from financing activities</b>	<b>(6)</b>	<b>(237)</b>	<b>(230)</b>
Proceeds from long-term borrowings	-	50	50
Repayment of long-term borrowings	(185)	(219)	(34)
Proceeds from corporate bond issuance	98	-	(98)
Payment for redemption of corporate bonds	-	(40)	(40)
Payment for acquisition of treasury stock	-	(13)	(13)
<b>Decrease in cash and cash equivalents</b>	<b>(343)</b>	<b>(796)</b>	<b>(452)</b>
<b>Cash and cash equivalents at beginning of period</b>	<b>1,941</b>	<b>1,888</b>	<b>(53)</b>
<b>Cash and cash equivalents at end of period</b>	<b>1,598</b>	<b>1,902</b>	<b>(506)</b>

## Cash flow indicators

Shareholders' equity ratio	50.2%	53.5%
Market cap shareholders' equity ratio	86.7%	29.5%



# Quarterly Orders/Deliveries/Backlogs (Production on Order)



(yen in millions)	FY5/07		FY5/08				FY5/09	
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
<b>Orders received</b>	<b>208</b>	<b>671</b>	<b>193</b>	<b>516</b>	<b>401</b>	<b>492</b>	<b>242</b>	<b>173</b>
							Illuminators	92
							Image testing equipment	69
							Tester equipment	10
							Security	0
<b>Deliveries</b>	<b>273</b>	<b>581</b>	<b>299</b>	<b>393</b>	<b>497</b>	<b>534</b>	<b>365</b>	<b>197</b>
							Illuminators	88
							Image testing equipment	57
							Tester equipment	8
							Security	43
<b>Order backlog</b>	<b>427</b>	<b>517</b>	<b>410</b>	<b>530</b>	<b>432</b>	<b>387</b>	<b>263</b>	<b>235</b>
							Illuminators	147
							Image testing equipment	36
							Tester equipment	3
							Security	47

# Consolidated Forecasts (FY5/09)



(yen in millions)	FY5/08 Actual		FY5/09		YoY change (%)
	First-half	Full-year	First-half (Actual)	Full-year (Forecast)	
Sales	692	1,724	563	802	(53.5)%
Operating income	(160)	(159)	(118)	(301)	-
Ordinary income	(199)	(226)	(161)	(389)	-
Net income	(140)	(169)	(102)	(256)	-

# Non-consolidated Forecasts (FY5/09)



(yen in millions)	FY5/08 Actual		FY5/09		YoY change (%)
	First-half	Full-year	First-half (Actual)	Full-year (Forecast)	
Sales	623	1,526	515	746	(51.1)%
Operating income	(118)	(98)	(84)	(245)	-
Ordinary income	(153)	(158)	(125)	(328)	-
Net income	(95)	(127)	(61)	(190)	-



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# Business Strategies

Hideo Kiji, President



## - Solar Cell Business Activities and Possible Establishment of Facility in Xi'an, China -

## Background

- Demand for solar cells is growing rapidly worldwide. Solar energy is playing an important role in the energy and environmental protection initiatives of countries around the world, including the Green New Deal initiative of the incoming Democratic Obama administration in the United States. Due to these activities, even faster growth is foreseen for the solar cell industry. Furthermore, the governments of China and Japan have announced national policies that call for cooperation in this field.
- China has a competitive advantage in the solar cell market in terms of both raw materials and the cost of energy. In addition, more than 30 U.S. and European leading companies, including U.S.-based Applied Materials, that are associated with solar cells already have operations in the Xi'an region of China.
- INTER ACTION already has technologies in Japan for manufacturing and inspecting solar cells. To grow rapidly in overseas markets, the Company has been considering the establishment of a solar cell facility in the Xi'an region, where many of the world's leading solar cell companies already have operations.

## Outline of business operations

- **Supply of raw materials and manufacturing and inspection equipment**

INTER ACTION plans to form alliances in China with a leading silicon raw materials manufacturer, silicon ingot production equipment manufacturer and other Chinese companies. These partnerships will allow INTER ACTION to use its core technologies (illuminator application technology, inspection equipment technology, application technologies for solar cells) in the field of crystalline silicon solar cells. The goal is to plan, design and develop low-cost, high-quality manufacturing and inspection equipment for solar cells. INTER ACTION and its partners plan to supply this equipment and single-crystal silicon wafers to solar cell manufacturers in Japan, China and other countries.

- **Manufacturing and inspection equipment for thin-film solar cells**

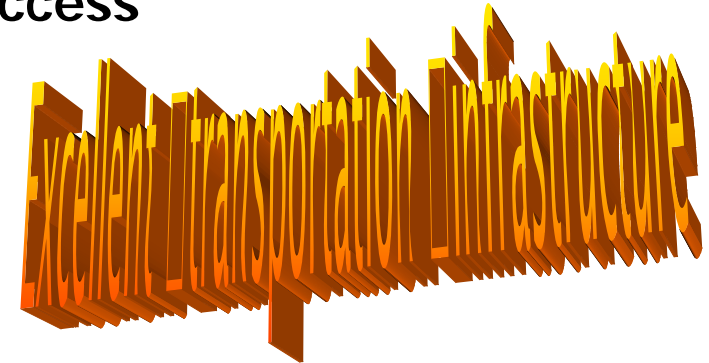
Planning, design, development and sales on an OEM basis of INTER ACTION's thin-film solar cell manufacturing and inspection equipment to leading companies with operations in Xi'ans.

- **Solar cell applications**

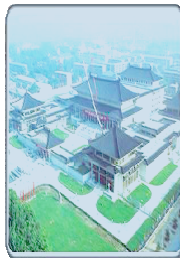
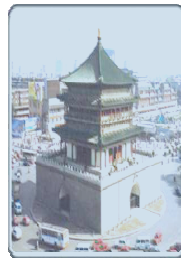
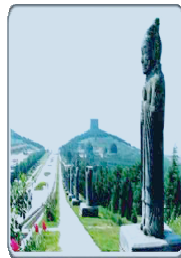
In the field of crystalline silicon solar cells, INTER ACTION plans to use its application technologies for raising solar cell conversion efficiency and quickly establish technologies needed for mass production of these solar cells in Japan. These technologies will then be supplied to solar cell manufacturers in China.

## An Introduction to Xi'an (1) – History and Access

- *Xi'an has a history dating back 3,100 years. Much of China's culture originated in this region and Xi'an was the starting point of the Silk Road. Xi'an was the capital of China for about 1,200 years.*
- *Xi'an is one of the world's four great ancient centers of history and culture along with Athens, Rome and Cairo.*



Xi'an Airport has flights to more than 100 destinations in China and 29 overseas destinations, the most of any airport in western China. The airport is the fourth largest in China, after the airports of Beijing, Shanghai and Guangzhou. The third phase of airport construction began in 2006 and is scheduled for completion in 2011. During the past three years, Xi'an Airport had the highest passenger volume growth rate of any airport in China.





# Business Development Strategies



## An Introduction to Xi'an (2) – Human Resources

- 35 public-sector universities with about 400,000 students, 48 graduate student training facilities
- 48 private universities with about 400,000 students, 236 professional schools including 178 for national and local government qualifications
- 420,000 engineers in various specialties that account for 28% of the entire workforce of Xi'an
- 360,000 employees at the Xi'an Hi-tech Industries Development Zone including 10,000 with a masters or doctoral degree; 500 foreign workers and 1,000 Chinese workers who have studied abroad; 28 individuals from universities have started companies in the zone
- Residents of Xi'an have a reputation as hard workers who stay with an employer for a long time and are well suited for R&D projects
- About half of Xi'an's new university and graduate school graduates accept job offers in the Xi'an Hi-tech Industries Development Zone
- Ranks third in China in overall scientific technology skills
- 672 scientific research institutes at the municipal or higher level in Xi'an; 55 testing centers for national standards; more than 3,000 technology development facilities
- Xi'an produces more than 3,000 scientific advances every year; about 1,000 are significant technological breakthroughs
- China's first rocket engine, satellite control and communication systems, and many ICs and other semiconductor devices were created in Xi'an
- Technological advances are responsible for about half of the economic growth of the Xi'an city



## An Introduction to Xi'an Hi-tech Industries Development Zone (1)

- *Home to well-known companies from many countries*
  - 890 companies from more than 30 countries have made an investment in the zone; registered capital totals US\$2 billion; facilities of famous multinational corporations, including 80 of the world's 500 largest companies (Daikin, Brother, Renesas Technology, Toshiba, NTT Data, NEC, Intel, IBM, Yokogawa Electric, and others)
  - *New materials*
  - Shaanxi province has a large volume of mineral resources, ranking in the top 10 in China for 58 categories of minerals; for molybdenum, the province has the largest reserves and production volume in Asia and ranks fourth in the world; the province manufactures 80% of China's processed titanium products
  - In fiscal 2007, sales in the new materials industry increased 38% to a total of 46.5 billion yuan (includes Shaanxi Province Non-ferrous Metals Group, Jinduicheng Molybdenum (Asia's largest molybdenum production facility), Maike Metal and other well-known companies)
  - *Semiconductors*
- Xi'an is the most important IC production area in mid-western China. About 40 prominent semiconductor manufacturers and IC design firms (Micron Technology, Applied Materials, IR, Xiyue Electronics, Infineon Technologies, and others) from China and other countries have facilities in Xi'an.

## An Introduction to Xi'an Hi-tech Industries Development Zone (2)

- Selected as one of five national development zones in the 2001 10th National Five-year Plan
- Selected as one of China's six most energetic cities and regions in 2002 by the U.N. Industrial Development Organization (UNIDO)
- Designated in 2005 as China's only standardized model for high-tech industries
- Named a national business process outsourcing (BPO) base in 2006
- Ranked third among China's 107 development zones in terms of competitive scientific technologies
- Designated by government as one of the five major national model zones to be constructed over the next 10 years
- For 1994-2006, ranked fifth overall among China's 53 national high-tech development zones



## The superiority of Xi'an for the solar cell business

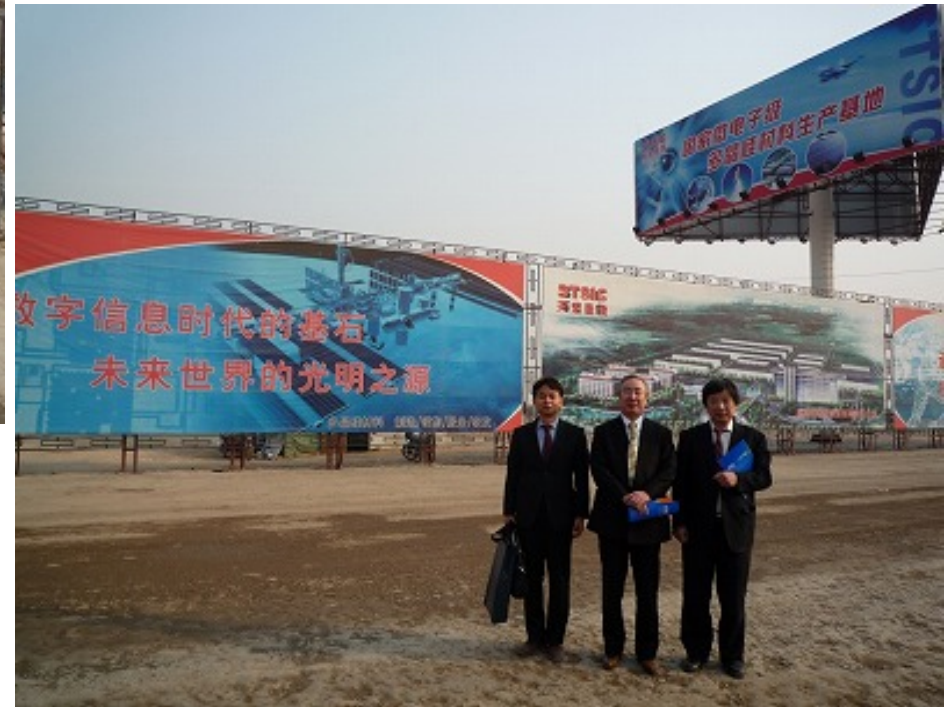
- More than 30 Chinese and foreign companies associated with solar power generation systems, including U.S.-based Applied Materials, have operations in the Xi'an Hi-tech Industries Development Zone. Fiscal 2007 sales of these companies in the zone exceeded 2 billion yuan. Xi'an University of Technology is China's leading manufacturer of single-crystal silicon ingot production equipment.
- A labor pool with skill in developing products and other superior skills. Universities with solar energy research programs started many years ago, including Xi'an Jiaotong University and Xi'an University of Technology. Northwest Industrial Technology Research Institute is conducting research for solar and geothermal power generation. People trained over many years by Huashang semiconductor makers are now working in all areas of China.
- More companies are expected to start operations involving solar cells and more projects will be started. These activities will create an industrial base in Xi'an that covers all steps of the solar cell production process.

## Major solar cell companies in Xi'an

Company name	Core product
Shaanxi Tianhong (STSIC)	Polycrystalline silicon
Xi'an Longi	Silicon ingot
Xi'an Lijing	Silicon ingot
Xi'an Huajing	Wafer slice
Xi'an University of Technology	Single-crystal manufacturing equipment
Xi'an Sijia (Shan Plant)	Silicon ingot, wafer
Xi'an Ximei	Silicon ingot
Applied Materials	Solar cell, R&D and production of thin film
Xi'an Xilang	Polycrystalline silicon
BP SunOasis	Solar cell module



## Facilities of solar cell companies under construction in Xi'an



# Business Development Strategies



## The solar cell business (1) – The global crystalline solar cell industry

Polycrystalline silicon	Silicon wafer	Solar cell	Solar cell module	Solar power generation system
Hemlock	SUMCO	Q-cells	Siliken	Conergy
Tokuyama	M.Setek	Motech	MSK	Powerlight
Wacker	JFE		Solon	
Mitsubishi Materials	PV Crystalox		Total Energia	
MEMC		Suntech		
Elkem		Mitsubishi Electric		
		Sanyo		
		Sunpower		
		BP Solar		
		Kyocera		
		Sharp		
		Sunways		
		Isofoton		
		REC Group		
		SolarWorld*		
		Ersol*		
-	-	-	-	-
10-20 companies	> 100 companies	> 70 companies	> 500 companies	> 5000 companies
~ 1.8 billion dollars	~ 4.5 billion dollars	~ 18 billion dollars		

(Source: Compiled by INTER ACTION)

## The solar cell business (2) – The solar cell market by country

(MW)

Fiscal year	2006	2007	2008	2009	2010	2011	2012
Germany	850	1100	1500	1500	1500	1650	1800
Spain	97	300	300	300	400	400	400
Italy	12	40	80	130	200	270	360
Greece	1.2	2	10	50	100	130	180
France	14	45	60	120	200	270	360
Portugal	2	10	15	20	30	40	50
USA	141	259	350	600	1000	1350	1800
China	12	20	25	35	50	70	90
Japan	286	230	200	200	200	270	360
India	12	20	100	200	300	410	730
Other area	150	170	200	250	300	410	545
World	1598	2246	2940	3655	4680	5810	7220



## The solar cell business (3) – The crystalline solar cell industry in China

Polycrystalline silicon	Silicon wafer	Solar cell	Solar cell module	Applied product development
Luoyang Zhonggui	Hebei Jinglong	Suntech Power	Suntech Power	Changzhou Trina Solar
Emei Semiconductor	Jiangsu Shunda	China Sunergy	China Sunergy	Yingli Green Eanergy
	Liaoning Xinri Silicon	Jiangsu Linyang Solarfun	Jiangsu Linyang Solarfun	Ningbo Solar Electric Power
	Zhejiang Yuhui	Changzhou Trina Solar	Changzhou Trina Solar	CSI Solartronic
	Jiangxi Saiwei LDK	Yingli Green Eanergy	Yingli Green Eanergy	Topsolar
	Jiangsu Huariyuan	Ningbo Solar Electric Power	Ningbo Solar Electric Power	-
	Trina Solar	CSI Solartronic	CSI Solartronic	
	-	Topsolar	Topsolar	
	-	-	-	
	>40 companies	>22 companies	>150 companies	>200 companies
2005 output capacity	2005 Silicon wafers	2005	2005	-
20-30MW	Output capacity of 225MW	Output capacity of 420MW	Output capacity of 450MW	
	Production volume of 82MW	Production volume of 128MW	Production volume of 219MW	

(Source: Compiled by INTER ACTION)

## The solar cell business (4)

– 2006 production volume of 10 major Chinese manufacturers

Company name	Employees	Production volume (MW)
Suntech Power Co. Ltd.	3000	160
Yingli Green Eanergy Holdings Co., Ltd.	1600	90
JA Solar Holdings Co., Ltd.	800	75
China Sunergy Co., Ltd.	1200	55
Jiangsu Linyang Solarfun Co., Ltd.	1500	45
Sopray Solar Co., Ltd.	300	40
Yunnan Tianda Photovoltaic Co., Ltd.	450	39
Ningbo Solar Electric Power Co., Ltd.	400	35
Shanghai Topsolar Green Energy Co., Ltd.	400	25
Zhejiang Sunflower Light Energy Science & Technology CO., Ltd.	400	25

## The solar cell business (5)

### – Conversion efficiency and production volume comparisons

- Single-crystal solar cell conversion efficiency

(Japan) SANYO Electric 19.7%, (China) SUNTECH 17.5%

#### Polycrystalline solar cell conversion efficiency

(Japan) KYOCERA 17.5%, (Germany) Q-Cells 16.4%

#### Thin-film solar cell conversion efficiency

(Japan) Sharp 10%, Foreign manufacturer below 10%

- Global production of solar cells:

More than 90% is crystalline, less than 10% is thin film

#### Why? :

The conversion efficiency of thin-film solar cells is only about half that of crystalline solar cells. That means the same area of thin-film solar cells will produce only half as much energy. After including installation and other fixed expenses, the cost of thin-film solar cells has to be less than half the cost of crystalline solar cells in order to be competitive.

## The solar cell business (1) – Issues involving crystalline solar cells

- Need for reliable supply of inexpensive silicon raw materials
- Further improvement in conversion efficiency of solar power generation systems
- Longer service life and quality guarantee period of more than 20 years by using innovative quality inspection technologies for every step of production (raw materials, ingots, wafers, cells, modules)
- Use of feed-in-tariffs, which account for 70% of purchased renewable energy in the world (see note below)

### \* Feed-in tariffs

A system for purchasing energy at a fixed price, feed-in tariffs provide for the purchase at a high price of electricity and other forms of energy from renewable sources, such as solar power generation systems. The system began in Germany in 2000. Feed-in tariffs are now also used in Italy, France, Spain, Greece, Canada (Ontario), the United States (California), South Korea and other countries and regions.

## The solar cell business (2)

### – Business plan for issues involving crystalline solar cells

- Cooperation with leading suppliers of silicon raw materials in China to ensure a reliable supply of low-cost materials (have already visited potential partners)
- Rapidly create mass production technologies using application technology for raising conversion efficiency (single-crystal) from the current 18% at the cell process stage to more than 20%; supply this technology to solar cell manufacturers in China and other countries
- Form business alliance with a leading Chinese manufacturer of silicon ingot production equipment (have already visited this company); use INTER ACTION's core technologies (illuminator application technology, inspection equipment technology) in the field of solar cell manufacturing; plan, design and develop low-cost, high-quality solar power generation system manufacturing and inspection equipment; supply this equipment along with single-crystal silicon wafers to solar power generation system manufacturers in China and other countries

## The solar cell business (3) – Issues involving thin-film solar cells

- Creation of low-cost technologies (manufacturing equipment, production technologies, etc.) for mass production of thin-film solar cells
- Increase the conversion efficiency of solar power generation systems
- Longer service life and quality guarantee period of more than 20 years by using innovative quality inspection technologies for every step of production (gas materials, cells, modules)

## The solar cell business (4)

### – Business plan for issues involving thin-film solar cells

- **INTER ACTION inspection equipment is already used on thin-film solar cell production lines in Japan; plan to sell this equipment to manufacturers of thin-film solar cells in Xi'an, as well**
- **At the same time, use INTER ACTION's core technologies (illuminator application technology, inspection equipment technology) to plan, design and develop low-cost, high-quality solar power generation system inspection equipment for each step of thin-film solar cell production; supply this equipment on an OEM basis to leading manufacturers of thin-film solar cells in Xi'an**

## Forward-Looking Statements

These presentation materials contain information that is based on the company's current expectations, estimates and forecasts. These forward-looking statements embody known and unknown risks and uncertainties that could cause the company's actual financial condition and operating results to differ from these statements.



