



# Corporate Presentation

Fiscal Year Ending March 31, 2014

Interim Financial Results Briefing Information

Code:6838





#### Name Company

A Company with Both History and a Desire to Take on Challenges

() 株式会社 多摩川ホールディングス TAMAGAWA HOLDINGS CO.,LTD.





provide a supply system for renewal energy that separates us



Accrediting Organization
[contractual partner: GPPV]

#### **Business Policy**

We at Tamagawa Holdings are committed toward striving to be a next-generation infrastructure solutions provider. This is an objective we are attempting to achieve by generating greater synergy among all of our subsidiaries in order to maximize the application of our No. 1 domestic share in high frequency wireless technology and

Corporate Profile As of September 30, 2013

Established Capital

Number of shares issued Representative directors

Principal shareholders

**Business lines** 

New

**Domestic locations** 

Consolidated subsidiaries Number of employees

Main clients

November 4, 1968 (Fiscal year ends in March) 1.580.170.000 ven

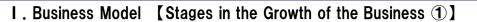
13,183,000 shares (treasury stock 203,493 shares)

Setsuya Fukunaga, President and Representative Director (to be appointed February 2012)
Toru Masuzawa, Representative Director and CEO (to be appointed February 2012)

Marilyn Tang 17.5% CBSG - Bank Julius Baer & Co. Ltd. (Singapore) 10.9% Perman Yadi 7.4% Japan Securities Finance Co., Ltd. 4.6% Kosuke Shimanuki 4.5% EFG Bank (Hong Kong) 3.5% UBS 2.9% Nomura Securities Co., Ltd. 2.8%

- ■Electronics and telecommunications equipment business
- ①Device business (the development and supply of high frequency devices supported by high frequency wireless technology) ②Systems business (the development and supply of radio communication and broadcasting equipment and high-frequency application system equipment)
- ■Solar power energy business
- ①Solar energy power system sales business (solar power modules and systems sales direct and through agents)
- 2)Solar energy power plant business (ownership, management, and operation of our own solar energy power plants)
- 【Head Office & Factory】 3-11-23 Kamitsuchidata-naka, Ayase-shi, Kanagawa, Japan
- 【Tokyo Office】 1-6-15 Hamamatsu-cho, Minato-ku, Tokyo Japan 【Fukuoka Office】 6-9-30 Nishijin, Sawara-ku, Fukuoka-shi, Fukuoka-ken, Japan
- Tamagawa Electronics Co., Ltd. Tamagawa Solar Systems Co., Ltd. GP Energy Co., Ltd. [each is a 100% owned subsidiary] 129 employees [Four at the head office; 116 in the electronics and telecommunications equipment division; nine in the solar energy power division.]

Fujitsu Limited, NEC Corporation, Panasonic Corporation, Toshiba Corporation, Mitsubishi Electric Corporation, Japan Radio Co, Ltd., government (and municipal) agencies, The Chugoku Electric Power Co., Inc.



2

High Frequency radio [Expertise] Failed business investments by the former sales team Change in the management team (System of two heads at top) Selection and focus (Focusing on profitability)

Corporate value [Growth model]

66

Since 1968

Since 1997

Since 2012

| Started | Details of business and investments  | Withdrawa |
|---------|--|-----------|
| 1997    | Joint venture with Takegawa Electronics Co., Ltd. (compound semiconductor assembly and test operations)                                | 2000      |
| 2007    | Acquisition of <u>AppLight Technologies Pte Ltd.</u> (Singapore) (HD production devices based on microfabrication technology by laser) | 2009      |
| 2009    | Establishment of TME Korea Co., Ltd.   | 2010      |
| 2009    | Debt consolidation of limited liability partnership (¥2.05 million investment)   |           |
| 2010    | Establishment of BioEnergy Resources Co., Ltd.   | 2012      |

Failed business investments

Start of the new management structure (dual top management structure)

The R&D company for high frequency wireless technology

Entry into the solar energy power generation business

### **CURRENT BUSINESS DOMAIN**

|      | 1111  |
|------|---|
|      | R&D activities  |
| 2011 | Semi-coaxial resonators and filter devices  |
| 2009 | Power semiconductor test equipment  |
| 2008 | Variable phase shifters<br>Processing equipment of high-frequency signals<br>Resonance damping devices and resonance apparatus<br>TM dual mode dielectric resonator apparatus |
| 2005 | Dielectric resonators and filter devices<br>Fuse elements and high-frequency devices<br>Methods of production of thick film circuit board<br>Triple-mode bandpass filters     |
| 2003 | Dielectric resonator bandpass filters<br>Waveguide lines and waveguide converters<br>Multi-mode semi-coaxial resonator<br>Half coaxial resonator                              |

## TAMAGAWA HD ~ Restructuring timeline~

#### February 2012

- Setsuya Fukunaga inaugurated as representative director
- Announcement of entry into the solar energy power system sales business
- ■Exclusive distribution agreement reached with GPPV [Goal] The start of the solar energy systems sales business that sets the company apart from the competition in terms of our track record overseas, price competitiveness, and high quality. ※ GPPV is a manufacturer of solar power modules and cells

#### -April 2012

- Electronics and telecommunications equipment business
- Subsidiary: Management overhaul of Tamagawa Electronics Co., Ltd.
- →Renewed record high profits in the FY ended March 2013

#### June 2012

- ●Toru Masuzawa inaugurated as representative director Accelerated business development based on dual top management structure
- Announcement of entry into the solar energy power plant business
- Olnitiation of own operations in the solar energy power plant business. The move marks the acquisition of a business with a stable user base offering high income and long-term stability.
- Income is based on the 20-year fixed price, allquantity power buyback program

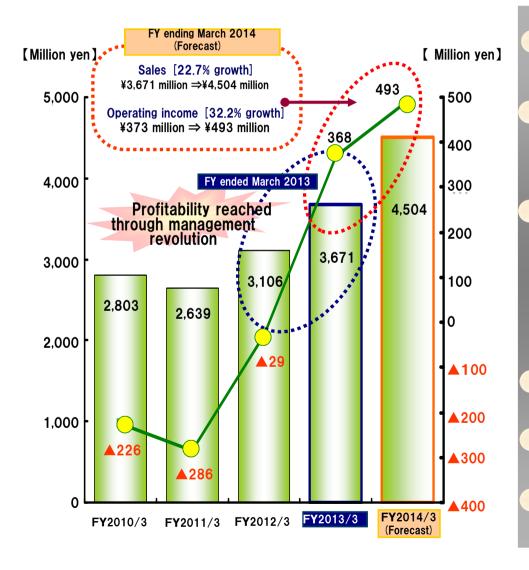
## January 2013 Green Rush Project

• Allocation of new shares to a third party and issuance of warrants (fund procurement)

| Туре                 | Price of one<br>share of stock | Number of shares<br>issued<br>Number of dilutive<br>shares issued | Amount of cash raised (issue cost) |
|----------------------|--------------------------------|---|------------------------------------|
| Stock<br>certificate | ¥130                           | 2,136,000<br>shares   | ¥277 million                       |
| Warrants             | ¥150                           | 4,843,000<br>shares   | ¥726 million                       |



### Changes in sales (left axis) and operating income (right axis)



Topics for activities in the fiscal year ending March 2014

## **TAMAGAWA HD** News Releases

**Electronics and telecommunications equipment business** 

July 2013

Korea: Business cooperation with Ace Technologies Corp.
 [Purpose] Strengthening of price competitiveness
 \*\*Ace Technologies Corp. is a major manufacturer of high-frequency devices and antennae with production facilities in Guangdong.

-November 2013

Presentation of own products of the Company at the Microwave Exhibition 2013
 [Purpose] Increasing the percentage of own products

Solar energy power business

June 2013

Status as qualified institutional investor takes effect
[Purpose] Preparation for the establishment of a solar energy power plant fund

●Initiation of power sales at the Company's No. 1 Shimonoseki mega-power station

[Purpose] Acquiring a business with a stable user base offering high income and long-term stability

\*Income is based on the 20-year fixed price, all-quantity power buyback program

**■**Other IR information

May 2013

Out-of-court settlement of litigation with former representative H. over dereliction of duty of care and fiduciary duty

October 2013

■Completion of exercise of series-4 stock warrants issued January 2013

November 2013

 Initiation of publication of securities analyst reports on the website of the Company



#### II. Management Indicators

(Financial Reporting on the Second Quarter of the FY ending March 2014 – 1. Summary)

Second quarter of the FY ending March 2014 compared with the year-earlier period

: 14.5% growth Sales ¥1.820 million (same period a year earlier: ¥1.590 million)

: 2.3-fold increase ¥215 million (same period a year earlier: ¥93 million) Operating income : 2.1-fold increase ¥190 million (same period a year earlier: ¥91 million) Net income

Difference between actual results of the second quarter of the FY ending March 2014 and initial forecasts \*Initial forecasts: Business performance forecast on May 14, 2013

|  | lue                        |
|--|----------------------------|
| Unit: Million yen (rounded down)             | FY2013 2Q [Actual results] |
| Electronics and telecommunications equipment | 1,417                      |
| Solar power energy                           | 98                         |
| Biomass energy                               | 74                         |
| 1 Sales                                      | 1,590                      |
| Gross income on sales                        | 403                        |
| SG&A expenses                                | 309                        |
| 2 Operating income                           | 93                         |
| Ordinary income                              | 83                         |
| Quarterly: Net income                        | 91                         |

| (2)                             |                            | (3)                           | (3) <b>-</b> (2)                       |
|---------------------------------|----------------------------|-------------------------------|--|
| FY2014 2Q<br>(Initial forecast) |                            | FY2014 2Q<br>(Actual results) | Variance from<br>disclosed<br>forecast |
| 1,318                           |                            | 1,382                         | + 64                                   |
| 370                             | Attainment ratio of        | 438                           | + 68                                   |
| - *                             | projected sales 107.8%     | - *                           | -                                      |
| 1,688                           |                            | 1,820                         | +132                                   |
| 432                             | Attainment ratio of        | 546                           | + 114                                  |
| 303                             | projected operating income | 331                           | + 28                                   |
| 129                             | 166.8%                     | 215                           | + 86                                   |
| 124                             |                            | 218                           | + 94                                   |
| 114                             |                            | 190                           | + 76                                   |
|                                 |                            |                               | II                                     |

| Compared to the same period last year |  |  |  |
|---------------------------------------|--|--|--|
| ▲2.5%                                 |  |  |  |
| 344.8%                                |  |  |  |
| (B) -                                 |  |  |  |
| 14.5%                                 |  |  |  |
| 35.7%                                 |  |  |  |
| 7.3%                                  |  |  |  |
| 129.2%                                |  |  |  |
| 163.0%                                |  |  |  |
| 108.7%                                |  |  |  |

 $\mathfrak{Z}/\mathfrak{1}$ 

**FY** ending March Complete discontinuation of biomass energy operations

## FY2014 2Q

Points on

[Sales] Expert groups of consolidated companies give high marks.

(1) Electronics and telecommunications equipment

- Main industry: Mobile communications developed in line with initial forecasts.
- •Second main market: Solid performance in the defense related sector on strong demand for digital devices to replace analog equipment.

•Upgrading of telecommunications infrastructure (countermeasures for dead zones) in preparation for the Olympics in 2020.

(2) Solar power energy

[Solar energy power system sales business] Favorable performance surrounding system introduction proposals that qualify for **Green Investment Tax Relief Treatment** 

[Solar energy power plant business] Start of income generation from power sales at the Company's No. 1 "Shimonoseki mega-power station" project (June 21, 2013)

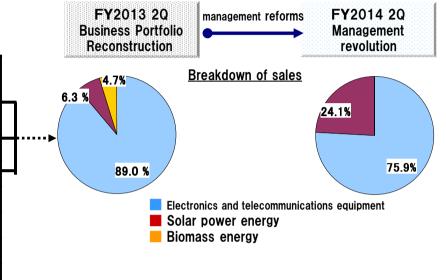
- 2. [Operating income] "Selection and focus" of the profitability oriented management succeeds
  - (1) Electronics and telecommunications equipment
  - Profit margins improved on productivity gains from increased orders for system products (analog and digital technology unit products) (2) Biomass energy

Finalized decision to discontinue unprofitable operations, effective from the second half of the FY ended March 2013





Unit: Million yen FY2013 FY2014 Share Share (rounded down) (%) (%) **2Q** 20 Electronics and 89.0% 1.382 75.9% 1.417 telecommunications equipment 98 24.1% 6.3% 438 Solar power energy 4.7% 0.0% Biomass energy 74 Sales 1.590 100.0% 1.820 100.0% Cost of sales 1,187 74.7% 1,273 70.0% **Gross operating profit** 403 25.3% 546 30.0% 18.2% SG&A expenses 309 19.4% 331 11.8% Operating income 93 5.9% 215 0.0% Non-operating income 0.3% 0.7% 0.1% Non-operating expenses 12 83 5.2% 12.0% Ordinary income 218 Extraordinary gain 0.6% 1 0.0% 11 **Extraordinary loss** 0.0% 0.0% 5.9% 12.0% Net income before income taxes 94 220 0.1% 30 1.6% Corporate, inhabitant, and enterprise taxes 5.7% 190 10.5% Quarterly: Net income 91



#### **Operating Margin for Each Sector**

| As of the end of the second quarter          | FY2013<br>2Q   | FY2014<br>2Q | Remarks                         |
|--|----------------|--------------|---------------------------------|
| Electronics and telecommunications equipment | 10.5%          | 13.6%        | Profit<br>margins<br>increased  |
| Solar power energy                           | <b>▲23.1%</b>  | 7.8%         | Change to<br>black<br>figures   |
| ■ Biomass energy                             | <b>▲</b> 40.1% | -            | Complete<br>discontinu<br>ation |





# II. Management Indicators (Financial Reporting on the Second Quarter of the FY ending March 2014 - 3. Balance Sheet and Statement of Cash Flows)

| Assets                   | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|--------------------------|----------|----------------|---------------------------------|
| Total current assets     | 2,114    | 2,490          | 375                             |
| Total non-current assets | 592      | 762            | 170                             |
| Total assets             | 2,709    | 3,255          | 545                             |

| Liabilities                   | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|-------------------------------|----------|----------------|---------------------------------|
| Total current liabilities     | 707      | 634            | 109                             |
| Total non-current liabilities | 251      | 313            | 166                             |
| Total liabilities             | 958      | 947            | 275                             |

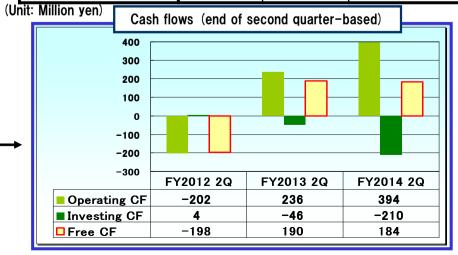
| Net assets                                       | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|--|----------|----------------|---------------------------------|
| Shareholders' equity                             | 1,716    | 2,293          | 577                             |
| Valuation, translation<br>adjustments and others | 1        | 2              | 1                               |
| Warrants   | 32       | 10             | ▲22                             |
| Total net assets                                 | 1,750    | 2,307          | 557                             |

| Cash flow position                               | FY2014/3<br>2Q | FY2013/3<br>2Q | FY2014/3<br>2Q |
|--|----------------|----------------|----------------|
| Cash flows from operating activities             | ▲202           | 236            | 394            |
| Cash flows from investing activities             | 4              | <b>▲</b> 46    | <b>▲</b> 210   |
| Cash flows from financing activities             | ▲147           | 222            | 418            |
| Cash and cash equivalents<br>Quarter-end balance | 135            | 437            | 992            |

| (Unit: Million yen)                   | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|---------------------------------------|----------|----------------|---------------------------------|
| Cash and cash equivalents             | 389      | 992            | 602                             |
| Notes and accounts receivable – trade | 1,344    | 1,088          | <b>▲</b> 256                    |
| Property, plant, and equipment        | 564      | 727            | 163                             |

|   | (Unit: Million yen)                          | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|---|--|----------|----------------|---------------------------------|
|   | ①Short-term loans                            | 40       | 56             | 16                              |
| ٠ | <b>2</b> Long-term loans and corporate bonds | 151      | 189            | 38                              |
|   | 3Total (1+2)                                 | 191      | 245            | +54                             |
|   | Interest-bearing debt<br>dependency rate     | 7.1%     | 7.4%           | +0.4%                           |

| (Unit: Million yen) | FY2013/3 | FY2014/3<br>2Q | Change<br>(6-month<br>interval) |
|---------------------|----------|----------------|---------------------------------|
| Equity ratio        | 63.4%    | 70.6%          | +7.2%                           |





## **II. Management Indicators**

## (Business Performance Forecast for the FY ending March 2014)

### Sales Plan by Segment for FY Ending March 2014

| Unit: Million yen                            | FY2013/3 | FY2014/3<br>(Forecast) | Compared to the same period last year |
|--|----------|------------------------|---------------------------------------|
| Electronics and telecommunications equipment | 3,155    | 2,800                  | ▲ 11.3%                               |
| Solar power energy                           | 441      | 1,704                  | 286.3%                                |
| Biomass energy                               | 74       | -                      |                                       |
| Sales total                                  | 3,671    | 4,504                  | 22.7%                                 |



#### Operating Income Plan by Segment for FY Ending March 2014

| Unit: Million yen   | FY2013/3                      | FY2014/3<br>(Forecast) |
|---|-------------------------------|------------------------|
| Electronics and telecommunications equipment (operating margin) | 363<br>(11.5%)                | 226<br>(8.1%)          |
| Solar power energy (operating margin)                           | 40<br>(9.1%)                  | 266<br>(15,6%)         |
| Biomass energy (operating margin)                               | <b>▲</b> 30 ( <b>▲</b> 40,4%) | -                      |
| Operating income total (operating margin)                       | 373<br>(10.2%)                | 493<br>(11.0%)         |

## Proactive investment plan for the FY ending March 2014 (capital expenditure and R&D expenditure)

| Unit: Million yen                            | FY2013/3 | FY2014/3<br>(Forecast) | Compared to the same period last year |
|--|----------|------------------------|---------------------------------------|
| Electronics and telecommunications equipment | 146      | 200                    | +54                                   |
| Solar power energy                           | 356      | 500                    | +144                                  |

#### Changes in growth model

FY2013/3 High-profit management Firming up the foundation

FY2014/3 (Forecast) Stock-type business Firming up the foundation

| Unit: Million yen      | FY2013/3 | FY2014/3<br>(Forecast) | Compared to<br>the same<br>period last<br>year |
|------------------------|----------|------------------------|--|
| Sales                  | 3,671    | 4,504                  | 22.7%  |
| Cost of sales          | 2,622    | 3,340                  | 27.4%  |
| Gross operating profit | 1,048    | 1,163                  | 11.0%  |
| SG&A expenses          | 675      | 670                    | ▲ 0.7%   |
| Operating income       | 373      | 493                    | 32.2%  |
| Ordinary income        | 374      | 488                    | 30.4%  |
| Net income             | 339      | 449                    | 32.3%  |

| EPS (yen) * | 47.1 | 38.9 |
|-------------|------|------|
| ROE(%)      | 27.4 | 22.4 |
| ROA(%)      | 18.0 | 15.1 |

\*\*FY ended March 2013 calculated based on an average 7,202,647 stocks outstanding during the period. FY ending March 2014 (forecast) calculated based on an average 11,528,250 stocks outstanding during the period as of September 30, 2013.

## Forecast for the FY ending March 2014

**Points on the Business Plan** 



- Electronics and telecommunications equipment
- [ 1 ]Core market: Mobile communications new product development and solutions
- [2]Second pillar market: Strengthening of disaster-prevention development and sales
- [3] Strengthening of our own product (environmental analysis equipment) solutions
- Solar power energy
- [1] Continuation of work in small elite groups. Construction of a creation network for the supply of recommended equipment.
- [2] The start of sales of solar power plants (mega solar) from the second half of the year.
- [3] Aggressive assembly of solar power plants (mega solar).



III. Current of Management Reforms

30.0%

Sales ratio 30%

Productivity

**Fabless** 

4

70.0%

(Electronics and Telecommunications Equipment Business: 1. Profit Structure Model)

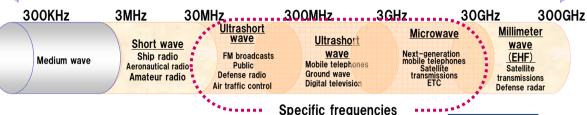
## ■Electronics and telecommunications equipment business

#### Top class in the industry: An expert company in high frequency technology

High frequency signals have high transmission speeds and are particularly suited for large-volume data transfers and transmission of video.

The Company manufactures and sells product categories for supporting functions optimized for specific transmission environments with regard to the distribution and composition of outbound and inbound signals, necessary frequency selection, and appropriate signal strength level adjustment.

## **Market and Frequency Domain**



Device equipment (High-frequency circuit elements for Sales ratio telecommunications use) 70%

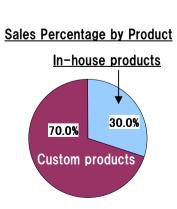
> Distributors Directional couplers Attenuators Terminators Coaxial switchers Oscillators RF filters and duplexers, etc.



Systems equipment (in-house products, **OEM** products)

High-frequency amplifiers Synthesizers Microwave transceivers Optical receivers Radar simulators ETC etc.





FY2013/3

**Business Portfolio** 

Sales Percentage by Market

61.0%

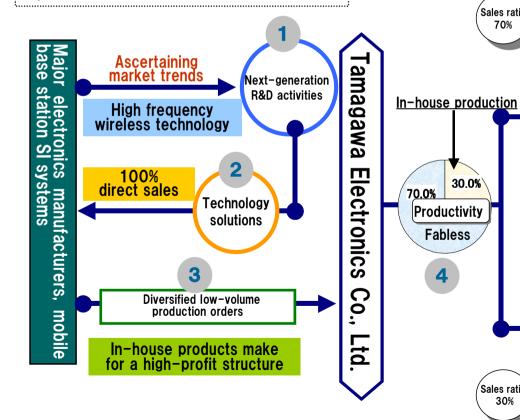
communication

23.0%

16.0%

Other

Defense Mobile

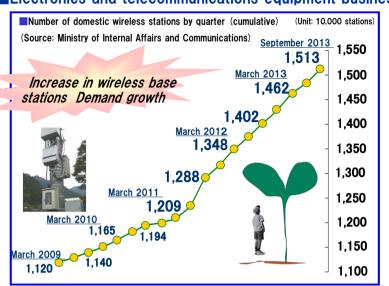


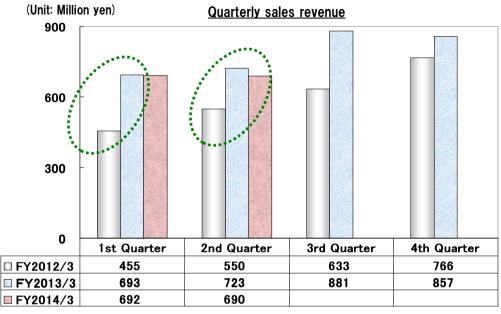


## III. Current Status of Management Reforms

(Electronics and Telecommunications Equipment Business: 2. Quarterly Sales Revenue)

### Electronics and telecommunications equipment business







Strong demand for large-volume, high-speed infrastructure upgrades connecting to expansion in market potential for high-frequency wireless technology parts

#### High-income structure based on R&D activities

Business activity topics for second guarter of FY ending March 2014

Creation of high-income structures in preparation for period of demand growth

- (1) Core market: Mobile communications— Completed technology development for 4G (IMT Advanced) scheduled to start in 2016
- (2) Shift to in-house production of core products Highperformance features through in-house production of resistor elements of main products since the inception of operations
- (3) Income margin enhanced through productivity gains from rising order receipts for system products- Increased receipts of unit orders combining analog technology (filter) and digital technology (signal processing and control) applications
- (4) Strengthening of own-product development (environmental analysis equipment) - Strengthening development and propositions surrounding own products geared at rising demand for environmental analysis applications.

- (1) Increased price competitiveness and expanded production capacity
- Korea: Business cooperation with Ace Technologies Corp.
- (2) Response to demand for telecommunications infrastructure upgrades in preparation for the 2020 Olympics - The Company's analog optical fiber technology is highly acclaimed for subway telecommunication facilities and similar applications
- (3) Generation of new markets: Disaster damage prevention-Strengthening of proposals surrounding milliwave transmission equipment in response to growing demand for high-vision imaging for coastal monitoring in connection with natural disaster and territorial issues with neighboring nations
- (4) Strengthening of PR efforts surrounding the Company's technology
  - Presentation of six new own products at the Microwave Exhibition 2013





## **Electronics** and telecommunications equipment business



## Amicable business cooperation with overseas competitors in manufacturing



## Tamagawa Electronics Co., Ltd.

#### Purpose of business cooperation in filter parts production



- 1. Expand market share through increased price
- 2. Increase production capacity (without foreignexchange risk)
- 3. Enable short-term delivery based on the integrated production system of Ace Technologies Corp.
  4. Goal of reducing manufacturing costs by 30%



### http://www.acetech.co.kr

|                | Corporate Profile   |
|----------------|---|
| Established    | July 1, 1980  |
| Capital        | ₩8,365 million  |
| Representative | CEO Gwan-Young.Koo  |
| Business lines | Development, manufacture and sales, including high-frequency devices and antennae (filters) |

**Ace Technologies Corp** 

#### **Filters**



Circuitry that processes only necessary frequency elements and leaves out unnecessary components

> Higher price competitiveness New order acquisition

Planning and design **Quality** control

## Vertically integrated unified production system

- Aluminum molds
- Machining center
- Plating processing

Materials costs **Processing costs** Logistics costs



High-quality. Low-cost Volume production with short turnaround times





## Electronics and telecommunications equipment business

#### Main products since the inception of operations

Coaxial attenuators and non-reflective terminators



Attenuators (reduction devices) are used to reduce signal strength to the appropriate level.

Terminators are implements to suppress signal reflection at the end of the circuitry and thereby prevent signal corruption.

■Main facility investments in the second quarter of the FY ending March 2014

# Shift to in-house manufacture of core products

The manufacture of resistor bodies, which constitute the core of attenuators (reduction devices) and terminators, was previously outsourced.

1

In order to respond to market trends calling for the development of own high-performance products, resistor body manufacturing facilities and technical engineers have been introduced





Brand



**Electronics** and telecommunications equipment business



High-income structure and exit from market condition-dependent business structures

Tamagawa Electronics Co., Ltd.

An expert company in melding analog and digital wireless technologies

Microwave Exhibition 2013













Microwave coupling devices

Antenna sharing equipment

Rack-mount type
Optical converters

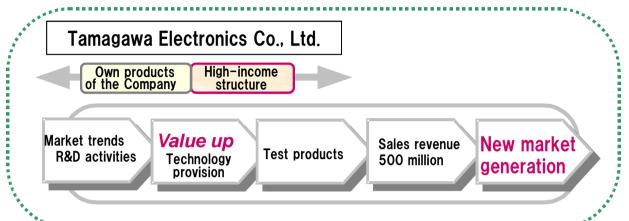
Programmable attenuator

Rotary attenuator

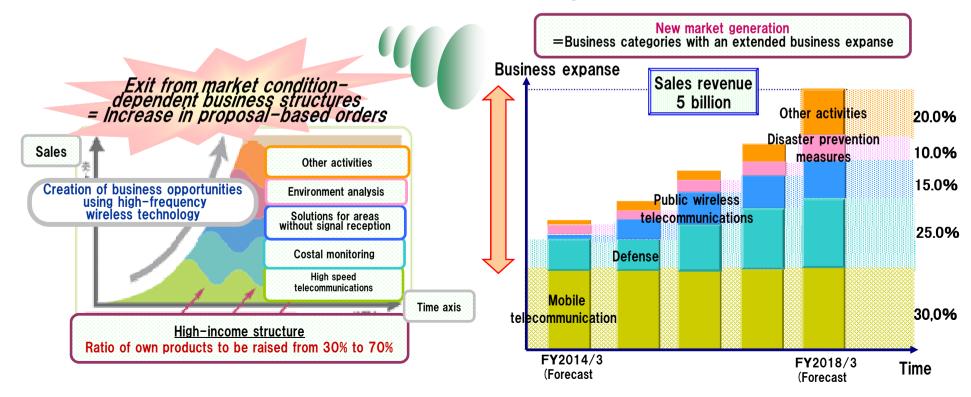
| Product name                                  | Product characteristics  |
|---|--|
| 1 Signal sampling device                      | Wireless signal processing equipment enabled for high-speed data transfer  |
| ②New-type material antennae sharing equipment | Designed for weight reduction by replacing aluminum with new-type materials  |
|   | Enables mounting up to eight 1U-sized E/O or O/E units in order to achieve size reduction  |
| Programmable attenuator                       | (1)4 to 12 GHz; enabled for high-speed switching up to a maximum variable attenuation volume of 60(2)DC up to 6 GHz; highly versatile programmable attenuator for permissible power range of 50 to 150 W |
| ⑤Rotary attenuator                            | DC up to 6 GHz, rotary attenuator for 0 to 110 (1 step) variable attenuation volume  |



### **Electronics** and telecommunications equipment business

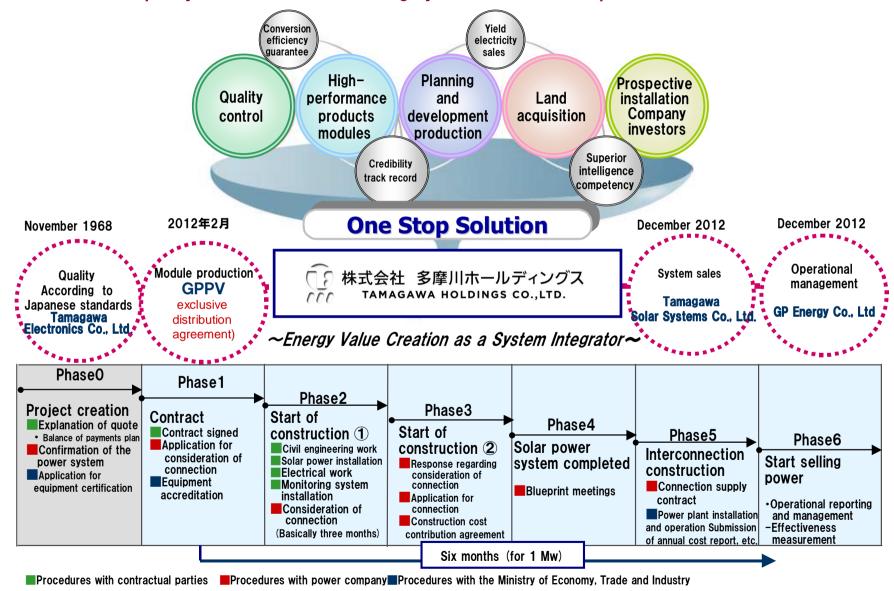


## -- Creation of models for new market generation





"Providing high-performance, low-price solar energy generation systems with a quality assurance and servicing system that meets Japanese standards"





## **III. Current Status of Management Reforms**

(Solar Energy Power Business: 2. Current Status of the Systems Sales Business)

#### Modules with Japanese quality at Chinese prices



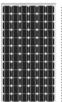
[1] IGPPV has in its track record a successful contract in 2010 with Siemens (Germany) for the adoption of an MW power generation project.

[2] Cracks in module cells that are invisible to the naked eve typically occur in the manufacturing process. The cracking progresses over a number of years, thus leading to a dramatic decrease in the amount of power generated.

All of our modules undergo inspection by Japanese-made EL testers, and we purchase products that meet the standards of major Japanese module manufacturers. As a result, the modules made by GPPV do not see any extreme decrease in the amount of power generated over the long term.

[3] The Quality Control Department of Tamagawa Electronics (ISO9001 certified) is providing GPPV with quality control know-how

#### **Our Key Products**



- ■Single crystal cell power generation module GPM245-B-60
- Module conversion efficiency of 15.1%
- Output performance guarantee of 25 years

Modules for J-PEC

Solar power system sales

"Providing high-performance, low-price solar energy generation systems with a quality assurance and a servicing system that meets Japanese standards"

#### **Delivery record for** FY ended March 2013

Kitasaku-gun , Nagano

Nogata-shi, Fukuoka

Koga-shi, Fukuoka

Ayase-shi, Kanagawa

Toyota-shi, Aichi

Tovota-shi, Aichi

Toyota-shi, Aichi

Noda-shi, Chiba

Kamisu-shi, Ibaraki

Kasuga-shi, Fukuoka

Nobeoka-shi, Miyazaki

Miyaki-gun, Saga

Miyoshi-shi, Aichi

Toyota-shi, Aichi

Toyota-shi, Aichi

Saijo-shi, Ehime ①

Saijo-shi, Ehime 2

Saijo-shi, Ehime3

Saijo-shi, Ehime 4

Omuta-shi, Fukuoka

Ukiha-shi. Fukuoka

Kurume-shi, Fukuoka

Omura-shi, Nagasaki Hamacho, Goto-shi, Nagasaki

Yame-shi, Fukuoka

Munakata-shi, Fukuoka

Saga-shi, Saga

Sasaguri, Kasuya-gun, Fukuoka

Nakagawa-machi, Chikushi-gun, Fukuoka 1

Nakagawa-machi, Chikushi-gun, Fukuoka(2)

Shime-machi, Kasuya-gun, Fukuoka 1

Shime-machi, Kasuva-gun, Fukuoka(2)

Shime-machi, Kasuya-gun, Fukuoka

Higashi-ku, Fukuoka-shi, Fukuoka

Anjo-shi, Aichi Fukuoka-shi, Fukuoka

Sept. 2011

2 Jan. 2012

3 Apr. 2012

4 Jun. 2012

7 Jul. 2012

8 Aug. 2012

13 Sept. 2012

19 Oct. 2012

22 Nov. 2012

23 Dec. 2012 24

29 Feb. 2013

31 Mar. 2013

12 months 6 months

11.2

19.2

9.6

10.0

10.0

28.8

12.9

41.2

16.8

40.0

40.0

41.0

41.0

23.0 40.0

13.4

20.4 49.4

42.2

46.0

23.0

11.5

33.6

6.0

33.0

16.2

33.0

10.5

48.0

300.8

49.9

49.9

35.5

79.9 115.6

300.0

Parking lot

Roof

Parking lot

Vacant lot

Roof

Roof

Roof

Roof

Roof

Roof

Roof

Roof

Roof

Mountain forest

Roof

Roof

Roof

Mountain forest

Vacant lot

### Delivery record for second quarter of FY ending March 2014

| ю | Contract term | Address               | Installation site | Capacity (kW) |
|---|---------------|-----------------------|-------------------|---------------|
| 1 | Apr. 2013     | Fukuoka-shi, Fukuoka  | Roof              | 28.6          |
| 2 |               | Fukuoka-shi, Fukuoka  | Roof              | 25.9          |
| 3 |               | Fukuoka-shi, Fukuoka  | Field             | 308.9         |
| 4 |               | Fukuoka-shi, Fukuoka  | Vacant lot        | 40.3          |
| 5 |               | Hachinohe-shi, Aomori | Roof              | 16.6          |
| 6 | May. 2013     | Hachinohe-shi. Aomori | Vacant lot        | 11.5          |
| 7 |               | Fukuoka-chi Fukuoka   | Vacant lot        | 087 /         |

| 3            | Fukuoka-shi, Fukuoka     | Field      | 308.9   |
|--------------|--------------------------|------------|---------|
| 4            | Fukuoka-shi, Fukuoka     | Vacant lot | 40.3    |
| 5            | Hachinohe-shi, Aomori    | Roof       | 16.6    |
| 6 May, 201   | 13 Hachinohe-shi, Aomori | Vacant lot | 11.5    |
| 7            | Fukuoka-shi, Fukuoka     | Vacant lot | 987.4   |
| 8 Jun. 201   | 3 Kume-gun, Okayama      | Vacant lot | 51.8    |
| 9            | Fukuoka-shi, Fukuoka     | Vacant lot | 1.911.0 |
| 10           | Fukuoka-shi, Fukuoka     | Vacant lot | 24.1    |
| 11 Jul. 2013 | 3 Fukuoka-shi, Fukuoka   | Carport    | 35.0    |
| 12           | Fukuoka-shi, Fukuoka     | Roof       | 10.0    |
| 13           | Toyota-shi, Aichi        | Roof       | 6.8     |
| 14 Aug. 201  | 13 Fukuoka-shi, Fukuoka  | Roof       | 54.0    |
| 15           | Fukuoka-shi, Fukuoka     | Roof       | 54.0    |
| 16           | Fukuoka-shi, Fukuoka     | Roof       | 10.8    |
| 17           | Fukuoka-shi, Fukuoka     | Vacant lot | 49.0    |
| 18 Sept. 20  | 13 Fukuoka-shi, Fukuoka  | Vacant lot | 49.0    |
| 19           | Fukuoka-shi, Fukuoka     | Vacant lot | 49.0    |
| 20           | Nagova-shi Aichi         | Roof       | 4.5     |

Capacity per object

| Unit: Million yen         | FY2013/3<br>[ 12 months ] |  |
|---------------------------|---------------------------|--|
| Sales revenue             | 441                       |  |
| Operating income ( ratio) | 41 (9.4%)                 |  |
| Capacity per object       | 47.3kWh                   |  |
| Number of employees       | 6                         |  |

#### Vacant lot





3728.1

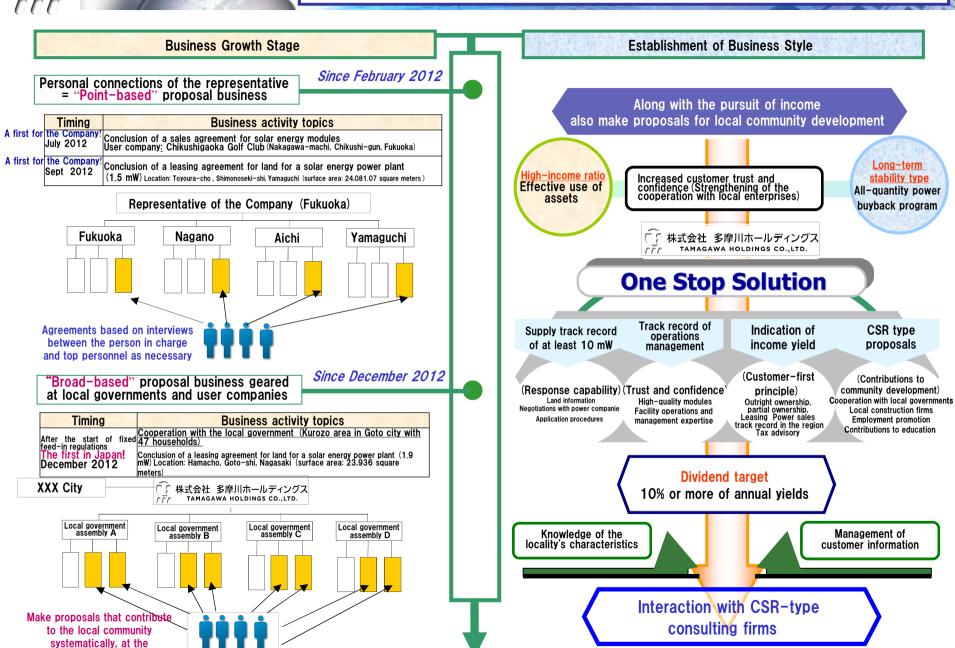
186 4



| FY2014 2Q<br>[ 6 months ] | Remarks   |  |  |
|---------------------------|---|--|--|
| 414                       | On a 6-month basis unchanged from the year-earlier period |  |  |
| 47 (11.5 %)               | Enhanced operating income ratio                           |  |  |
| 186.4kWh                  | 3.9-fold increase   |  |  |
| 9                         | +3  |  |  |



organization level





## III. Current Status of Management Reforms (Solar Energy Power Business: 4. Starting the

(Solar Energy Power Business: 4. Starting the Solar Energy Power Plant Business)

Solar power energy (power plant)

# "Initiation of power sales revenue recognition according to plan → Positive start exceeding initial forecasts"



(The current status of power generation is published on the corporate website of the Company)

|                            | Outline of Shimonoseki mega-power station                                  |
|----------------------------|--|
| Location and surface area  | Shimonoseki-shi, Yamaguchi   |
| Power generation capacity  | 1.5Mw  |
| Feed-in price (per 1 kWh)  | ¥42.0  |
| Facility investment amount | ¥413 million   |
| Contract outline           | 5-year land lease agreement with subsequent land purchase option agreement |
| Power sales start date     | June 22, 2013  |

Discrepancy with the initial forecast for the power plant's sales revenue

| Unit: Thousand yen                       | July             | August           | September        | Total            |
|--|------------------|------------------|------------------|------------------|
| First term sales revenue (estimate)      | 6,317            | 6,714            | 7,420            | 20,452           |
| Sales revenue<br>(actual)                | 7,372            | 7,776            | 8,342            | 23,490<br>11,748 |
| Gross margin (actual) Gross margin ratio | 3,880<br>(52.6%) | 4,254<br>(54,7%) | 3,612<br>(43.3%) | (50.0%)          |

■ Business activity topics (September 19, 2013)
Acknowledged field-trip destination of Yamaguchi prefecture as "Renewable Energy Case Study Facility"

## Success track record of the No. 1 project of the Company

→→ Increased trust and confidence

→ Increase in information procurement power surrounding new products

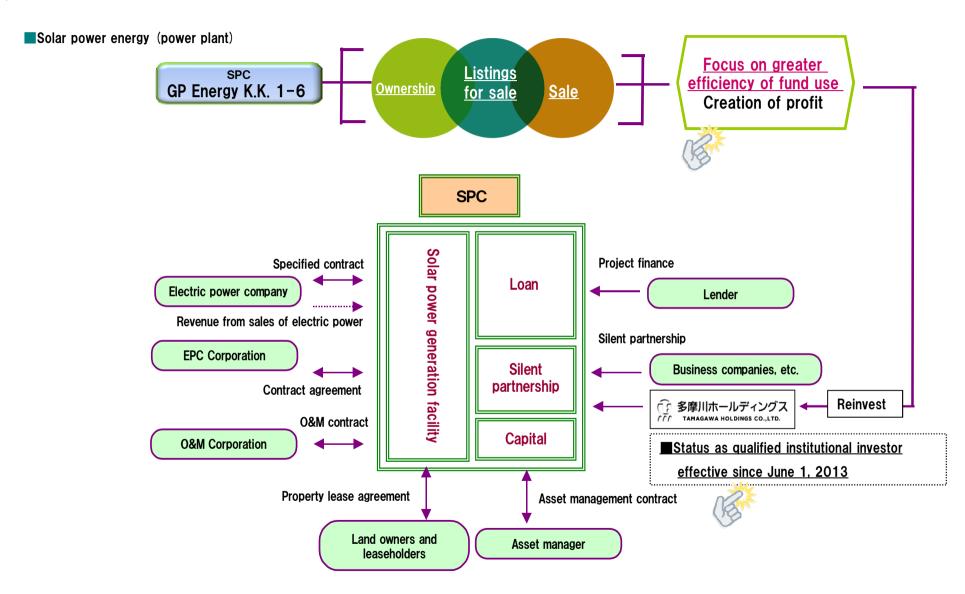
Business activity topics for second quarter of FY ending March 2014

## **Green Rush Project**

|                                | Goto Islands power plant            | Minamishimabara power plant                                       |
|--------------------------------|-------------------------------------|---|
| Location and surface area      | Goto-shi, Nagasaki<br>100,000mi     | Minamishimabara-shi, Nagasaki<br>12,000m²                         |
| Power generation capacity      | 6.0 <b>Mw</b>                       | 1.0 <b>Mw</b>   |
| Feed-in price (per 1 kWh)      | ¥37.8                               | ¥42.0   |
| Contract outline               | 20-year land lease agreement        | 20-year land lease agreement                                      |
| Scheduled start of power sales | 1st quarter of FY ending March 2016 | 2nd quarter of FY ending March 2015                               |
| Remarks                        | Special high-voltage                | 3rd quarter of FY ending March 2014<br>Start of 49 kW power sales |

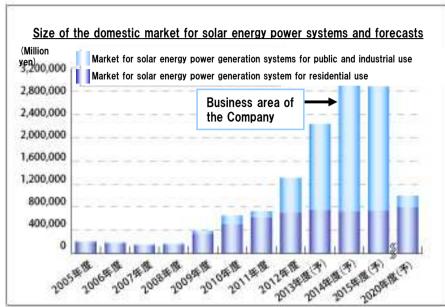
Note: The above-mentioned solar energy power plants reflect current objectives of the Company that are subject to change.





**EPC:** Product management of the three areas of engineering, procurement, and construction. **\*\*O&M** (operation & maintenance) contracts Outsourcing of operations and maintenance, etc.



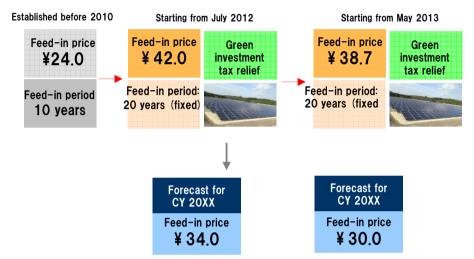


Note 1: Based on selling prices to end users including installation costs.

Note 2: Divided by category into residential use systems under 10 kW capacities mostly for installation on residential roof tops and systems for public and industrial applications with capacities over 10 kW for use under the renewable energy feed—in regulations without volume limit.

Source: 1 Yano Research Institute Ltd.

## Feed-in prices and feed-in price forecasts based on the all-quantity power buyback program



Downward trend of feed-in prices lasting several years

### ■Solar energy power system sales business

1.2-fold peak rated output of power conditioners (manufacturer recommendation)

#### ■ Premises

- 1 Initial investment of ¥300 million per megawatt
- 2Initial investment of ¥330 million per 1.2 megawatts
- 3 Annual earnings of ¥40 million at a feed-in price of ¥37.8

| Feed-in price ¥37.8                   | 1Mw          | A few years | Feed-in price ¥ 30.0                  | 1.2Mw        |
|---------------------------------------|--------------|-------------|---------------------------------------|--------------|
| Annual income from power sales        | ¥40 million  | later .     | Annual income from power sales        | ¥38 million  |
| Cumulative 20-year power sales income | ¥800 million |             | Cumulative 20-year power sales income | ¥760 million |
| Annual yield                          | 13,3%        |             | Annual yield                          | 11.5%        |

Attractive investment yield even at a feed-in price of ¥30.0

#### Solar power energy (power plant)

Measure 1 Construction cost reduction
Measure 2 Optimization of solar energy power systems (deployment method and equipment selection)

#### Premises

Initial investment of ¥260 million (consistent with the track record of the Company) per megawatt

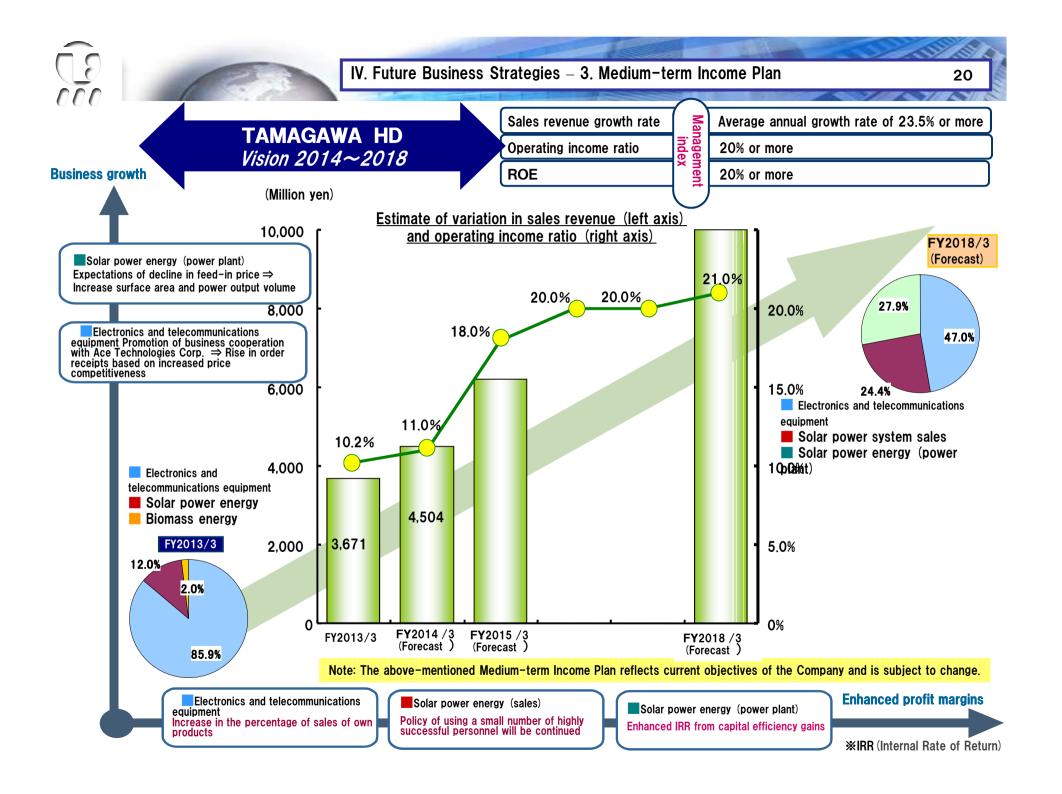
| In the case of 1 megawatt     | FY2013       | FY2014       | , |
|-------------------------------|--------------|--------------|---|
| Feed-in price                 | ¥ 42.0       | ¥ 37.8       | У |
| Construction cost             | ¥280 million | ¥260 million | _ |
| Internal rate of return (IRR) | 12.0%        | 12.0%        |   |

A few years later

¥ 30.0 ¥250 million 9.0%~11.0%

Attractive IRR even at a feed-in price of ¥30.0









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