MATSUYAMA'S EFFORTS TO SUPPORT LOCAL RENEWABLE ENERGY

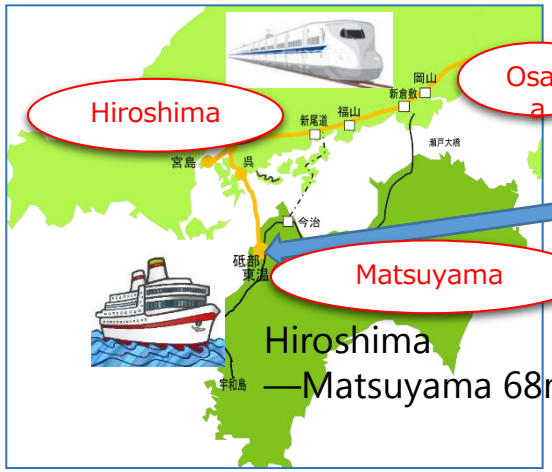
ENVIRONMENTAL MODEL CITY MATSUYAMA

Matsuyama City Office
Deputy Mayor
Akio Nishiizumi

Outline of Matsuyama

Area 429.37km²
Population 514,847 (As of April1, 2016)
Capital city of Ehime prefecture

Osaka-Hiroshima 79min



Initiatives of Matsuyama City Government

Matsuyama's Efforts

Environmental Model City

October 1988
Freiburg and Matsuyama signed the sister city agreement

Sister City Agreement Signing Ceremony

In reference to Freiburg's efforts in the environmental field

Results of the efforts

- Utilization of Solar Energy
- Reduction of Garbage
- Water Saving
- Walking-distance city

Mayor of Matsuyama receives the Certificate of Environmental Model City

March 2013
Selected as an Environmental Model city

【What is Environmental Model City】

A city which challenges pioneering issues to realize a low-carbon society

"Environmental Model City Action Plan" was made

4 Policies

- Promotion of Matsuyama Sunshine Project
- Promotion of Smart Community
- Promotion of Happy City Development Where Health is Improved by Walking
- Promotion of Local Circulation System

↓

Construction of Sustainable Low-Carbon Society

Promotion of Matsuyama Sunshine Project

Characteristics of Climate
Mild Temperature （Yearly Average Temperature 16.5℃）
Little Precipitation （Approx. 1,300mm per year）
Long Sunshine Time （Over 2,000h per year）

1,200kWh（Matsuyama）＞1,000kWh（National Average）

Matsuyama Sunshine Project Initiatives

Promotion of Matsuyama Sunshine Project

① Promotion of Introduction of Clean Energy

② Creation of Environmental Business Industry

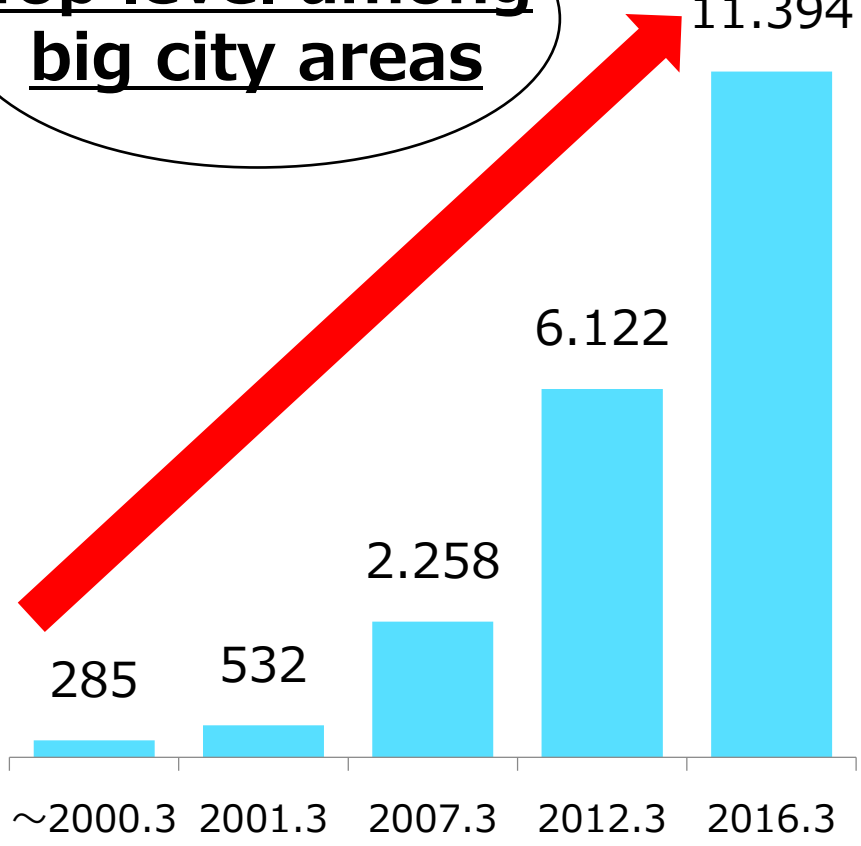
③ Effective Use of Energy

④ Development of Environmental Education

Getting away from global warming/ Creation of new industries

The Accumulated Number of the Introduction of Household Solar Power Generation Systems

Top level among big city areas



Accumulated number

of introduced systems :11,394

Total output :49,000kW

Rate of households having the system : 4.87%

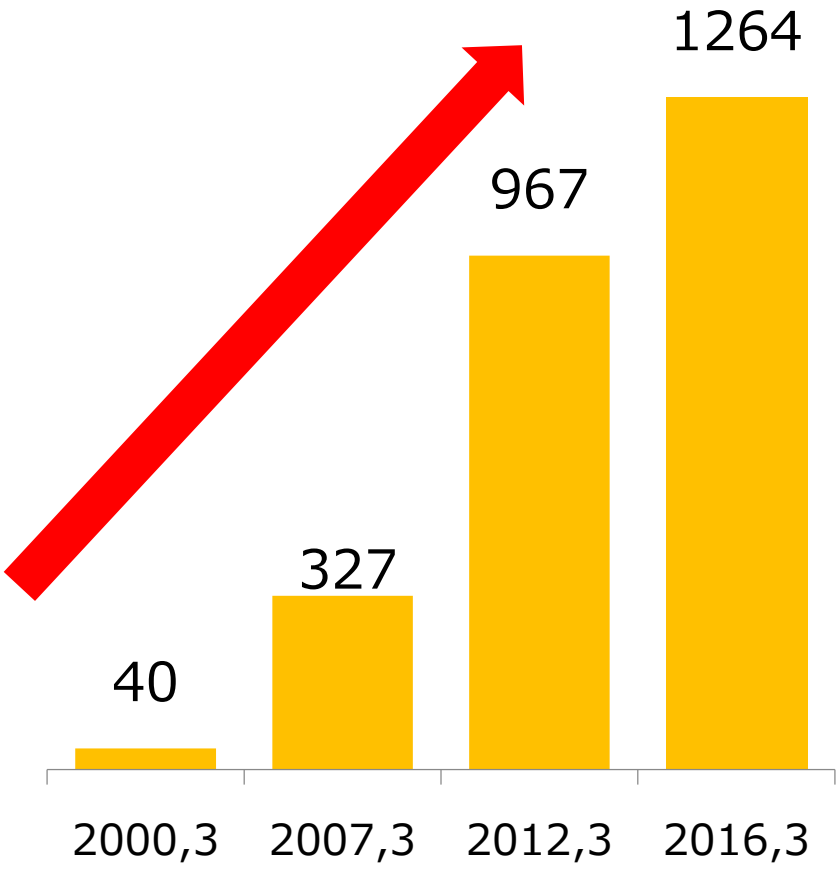
Total amount of subsidiaries :2.55 B yen

Subsidiary Systems

- Solar power generation
- Solar heat use
- Fuel cells for households
- Storage cells

①Promotion of Introduction of Clean Energy

The Accumulated Number of the Introduction of Solar Power Generation Systems in Public Facilities



Accumulated number of systems introduced :71 (including 51 schools)

Total output :1264kW

②Creation of Environmental Business

Solar power generation

Environmentally-conscious electricity

Environmental value

Certificate of green electricity

Visualizing the value

Sales

Companies

Regarded as electricity generated by solar energy

Certificate of green electricity

②Creation of Environmental Business

Matsuyama

Apply

Sell

Environmental Value

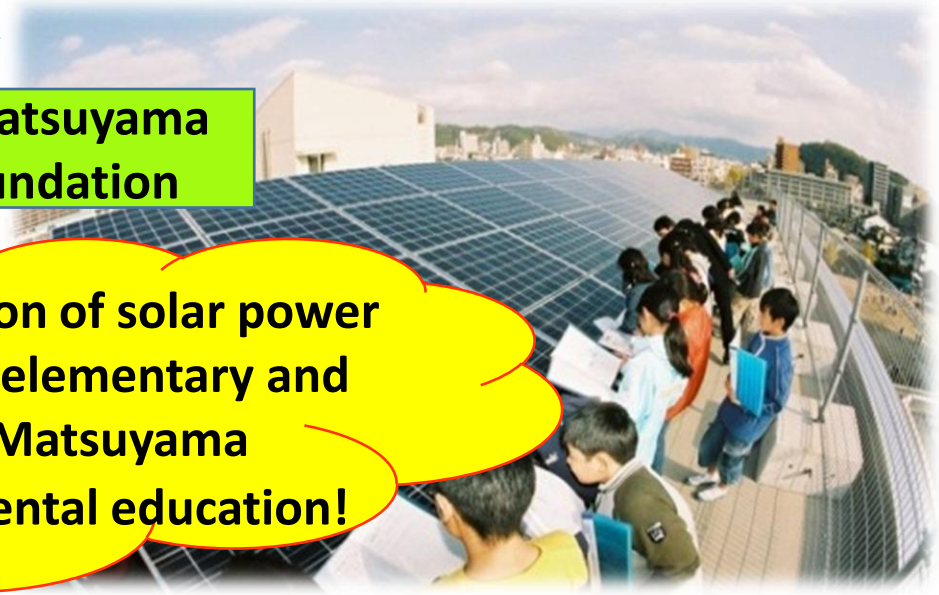
(Certification issuing body)

Power generation in municipal facilities

Suppliers
（Companies etc.）

Profit

21 Century Matsuyama Creation Foundation



Support for introduction of solar power generation systems in elementary and junior high schools in Matsuyama To promote environmental education!

③Effective Use of Energy (Sewage Treatment Plant)

Power generation system using digestion gas

Micro hydroelectric generating equipment

Construction cost：651 million yen
2 power generators (Each output 330kW)
All generated electricity of approx. 4 million kWh per year is sold (Sold electricity results 180 million yen)

Construction cost：36.5 million yen
Output 9.9kW
66,000kWh is yearly generated.
All generated electricity is used in the facility.

③Effective Use of Energy

Garbage Incinerator Plant

Garbage incineration

Water is boiled by the heat generated during garbage combustion to make steam

Power generation

Steam

Turbine

Use of heat

Large-sized Heated Pool

Eco Leader Dispatch Project

Eco Leader: Eco Leaders are the citizens who have extensive knowledge and experience concerning the environment.






From children to adults—A wide variety of menu being developed

④Enrichment of Environmental Education

Eco Friendship Agreement (7/28/ 2012)

Freiburg

Eco Station

Matsuyama

City Environment Learning Center

Matsuyama

Matsuyama Re: Cycle Hall

- Environmental education programs exchange
- WEB meetings held
- Exchange at the event

④Enrichment of Environmental Education

Talk session in the environmental forum

A presentation on environmental education in Freiburg given by Mr. Herbert Krickl

Environmental class held with the environmental forum

Participants making solar cars by attaching a panel to an empty PET bottle.

Environmental class held at Aratama Elementary School

Experiencing greenhouse gas effects in a parachute

Workshop with students of Graduate School of Science and Engineering, Ehime University

Discussion on the image of Matsuyama concerning energy in 2035

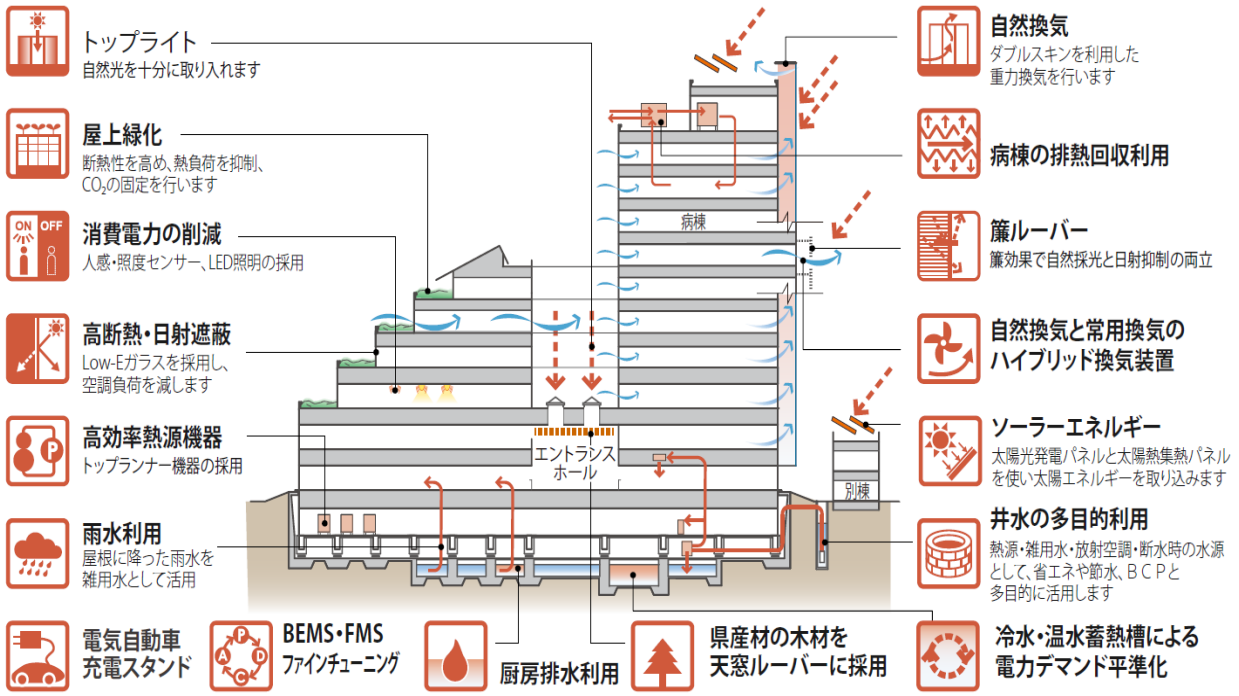
The actions of private companies and universities in Matsuyama

The initiatives of

Matsuyama Red Cross Hospital

And Ehime University

Outline of the Matsuyama Red Cross Hospital construction project



Environmentally-conscious project using the natural blessings for energy saving and creating

CASBEE 2014

BEE Value 4.1

S Rank achieved

31% of Reduction achieved

Life cycle CO_2 emission compared to the standard model

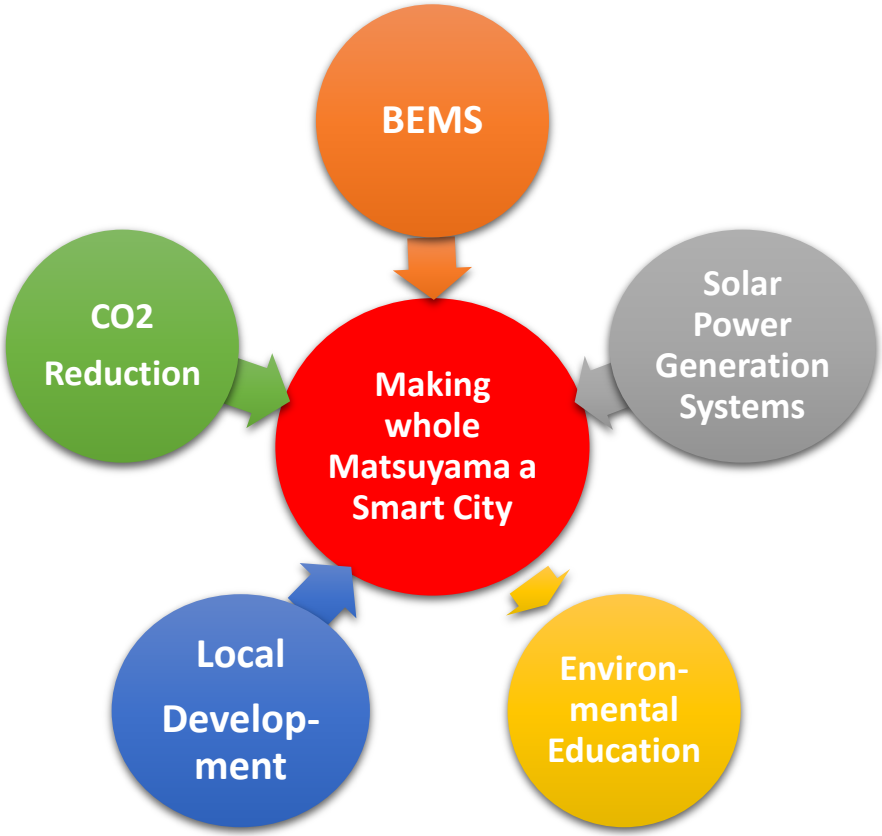
◆Concept of the new hospital

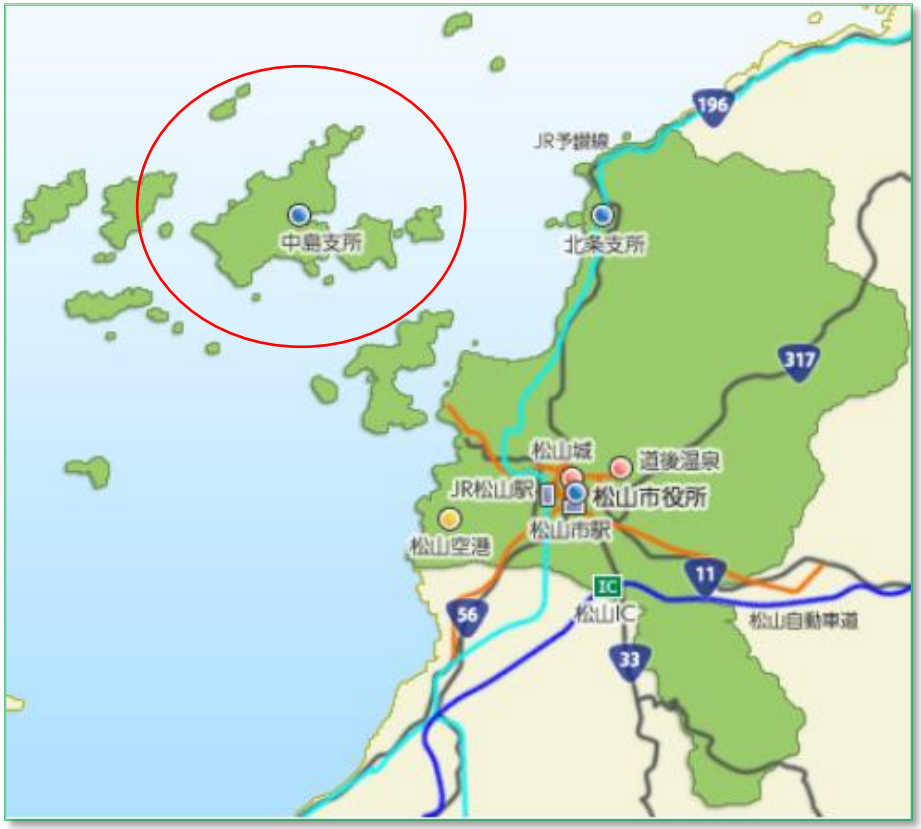
“Environmentally-conscious hospital”

* Creation and provision of comfortable medical treatment
* Environmentally-conscious garden hospital
* Eco hospital effectively using natural energy

Our Plans for the Future

Matsuyama Smart City Promotion Project





In 2016, Smart City Promotion Project started in the island area


Please come and visit
Matsuyama, Japan!
Matsuyama