



# Promoting the Development and Usage of New Energy in Niigata Prefecture



November 11th, 2009  
Niigata Prefecture



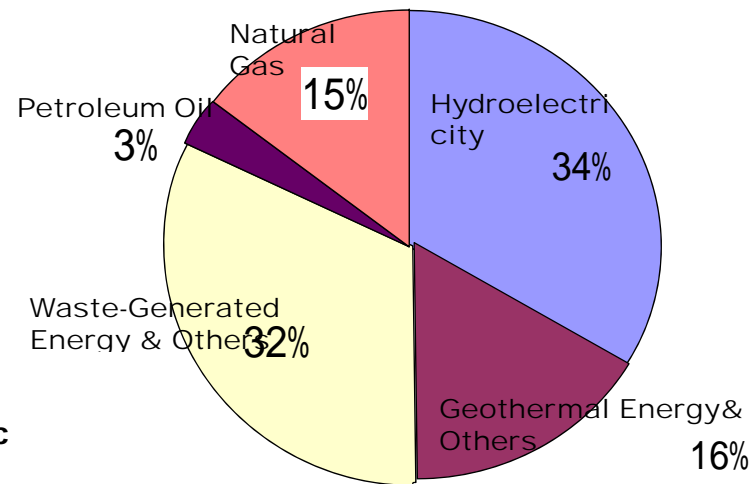
## Position of Niigata Prefecture in Energy Self-Sufficiency

**Natural Gas 10.8%**  
 (2.7 billion m3 produced in the prefecture, worth 72% of the domestic share)

**Hydroelectricity 3.4%**  
 (8.3 billion kwh generated in the Prefecture, worth 9.9% of the domestic share)

**Petroleum Oil 1.7%**  
 (550 thousand kl produced in the prefecture, worth 56% of the domestic share)

National Energy Self-Sufficiency (Total 4%) by Sources



Worth about 15% of the national energy self-sufficiency ratio

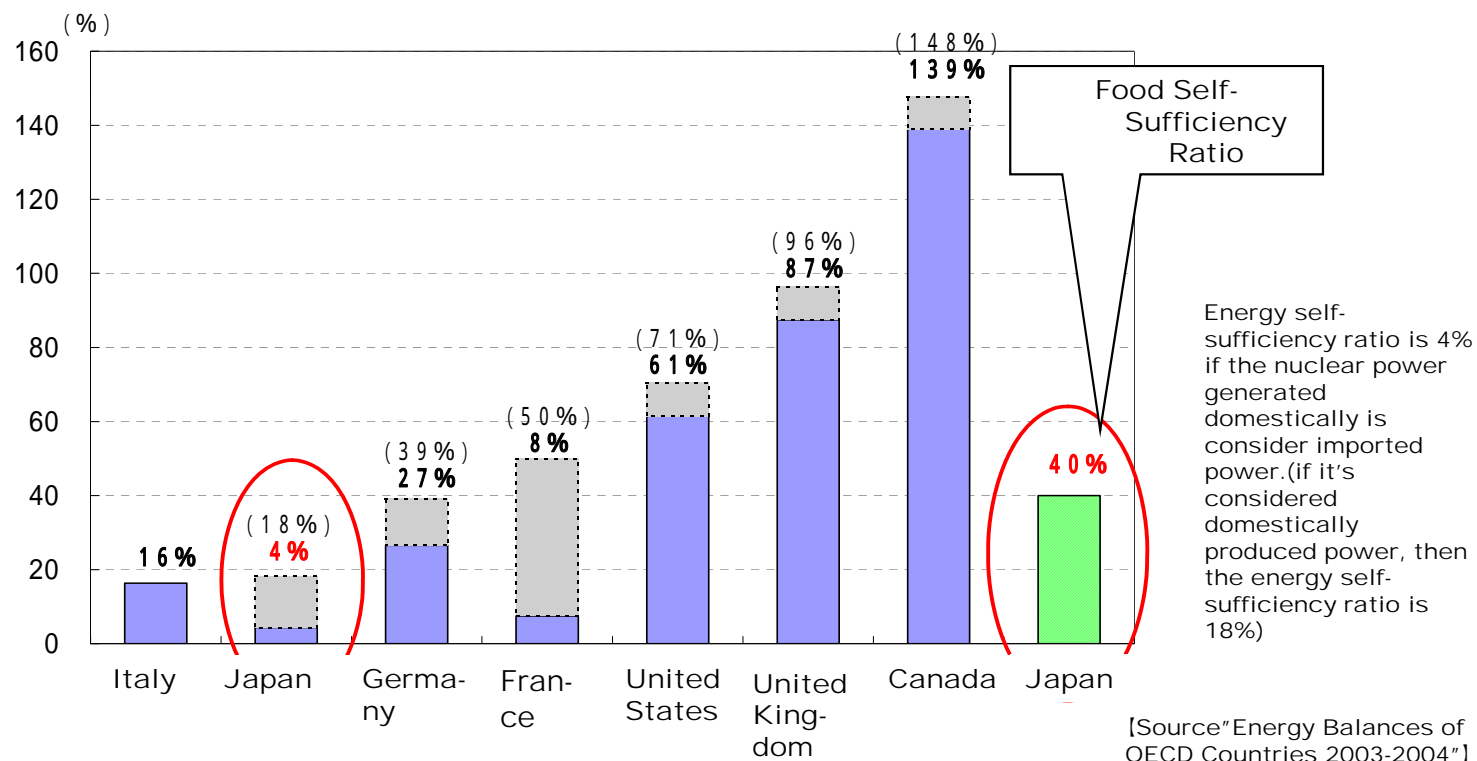


## (Reference Material) Energy Supply Structure of Japan (Low Ratio of Energy Self-Sufficiency)



Japan have the lowest ratio of energy self-sufficiency among the world's leading industrialized nations, with the conditions strikingly low even when compared to the ratio of food self-sufficiency.

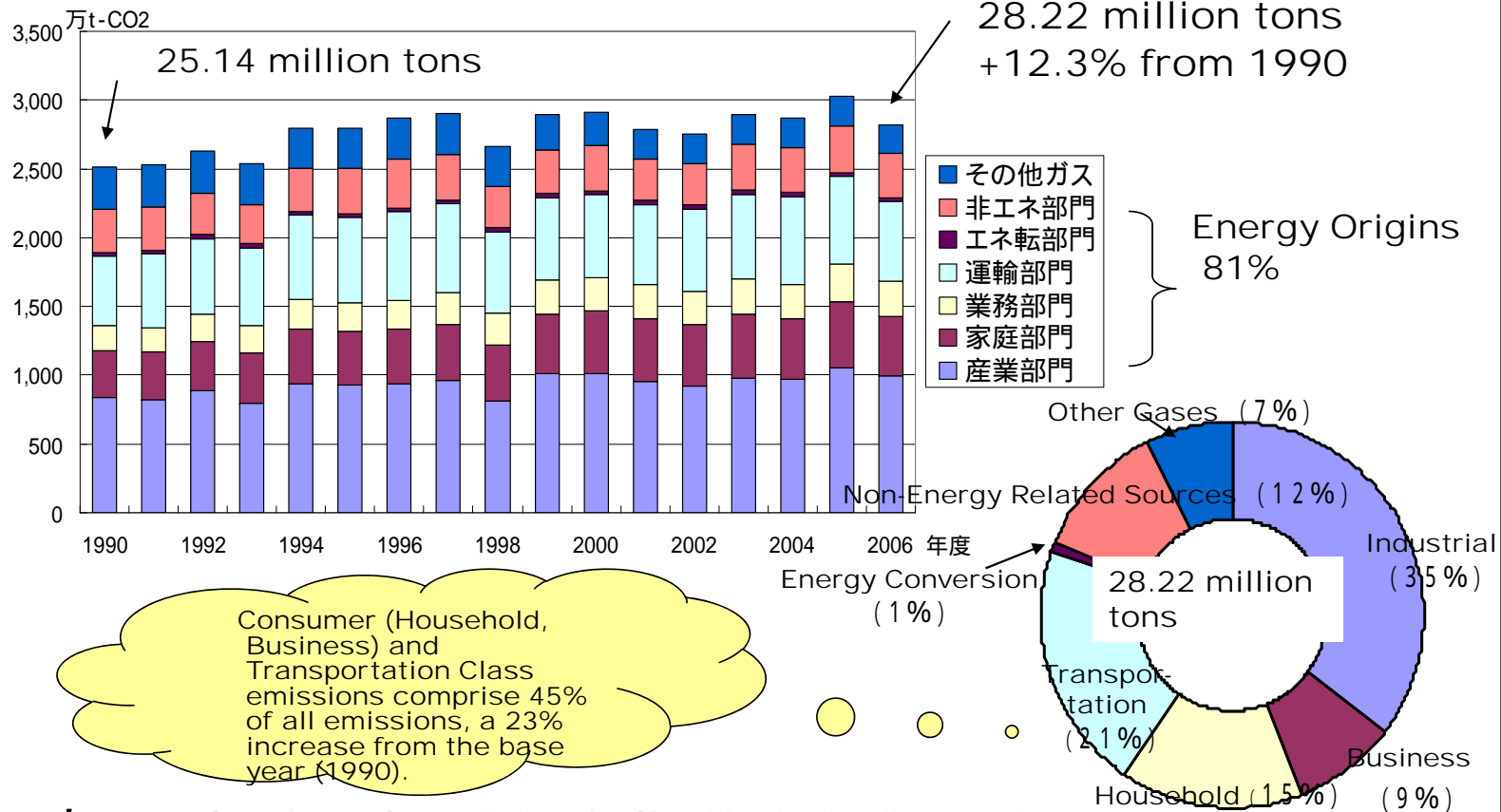
Energy Self-Sufficiency Ratios of the Leading Industrialized Nations (as of 2004)



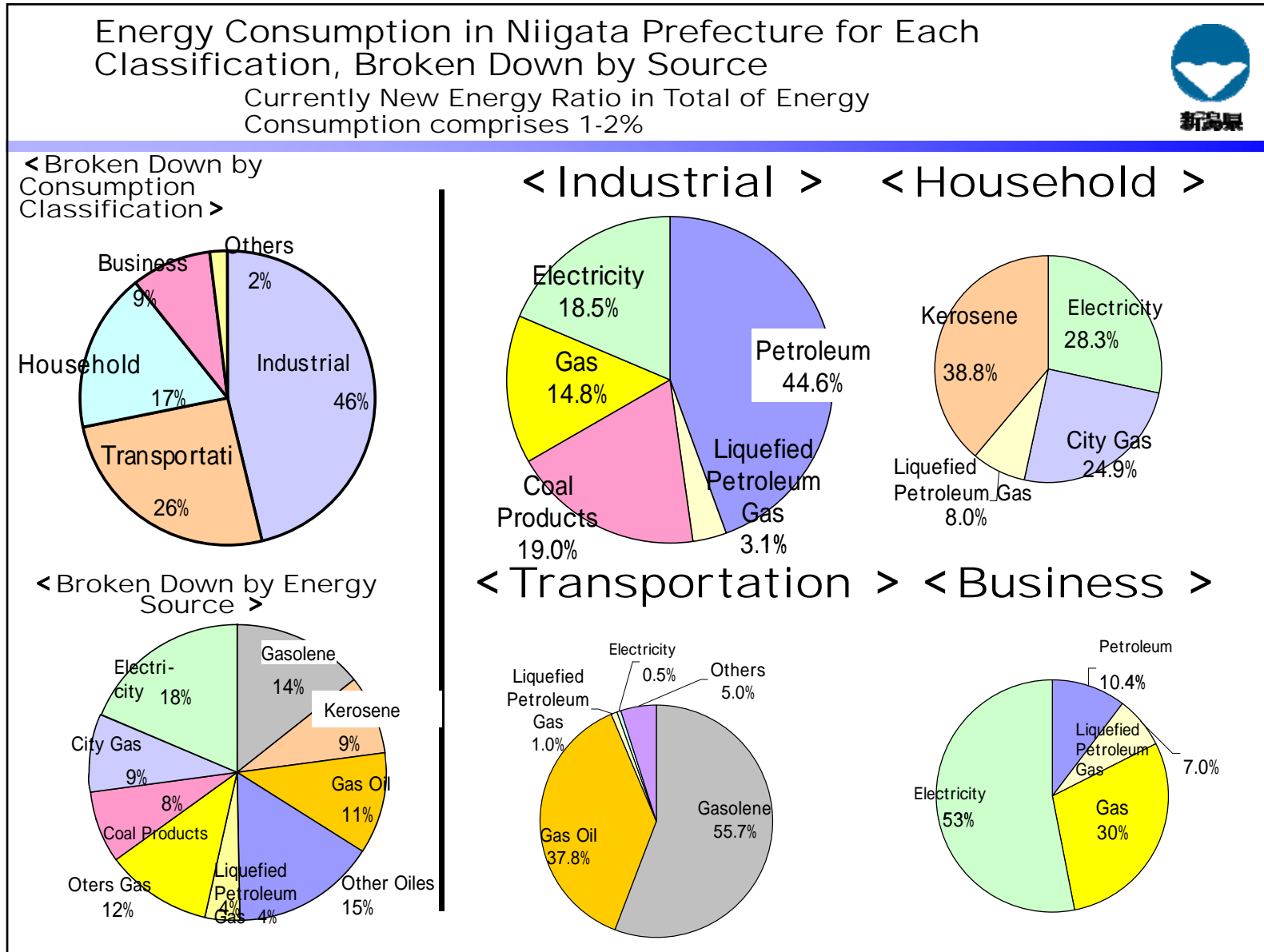



## Current State of Greenhouse Gas Emissions in Niigata Prefecture

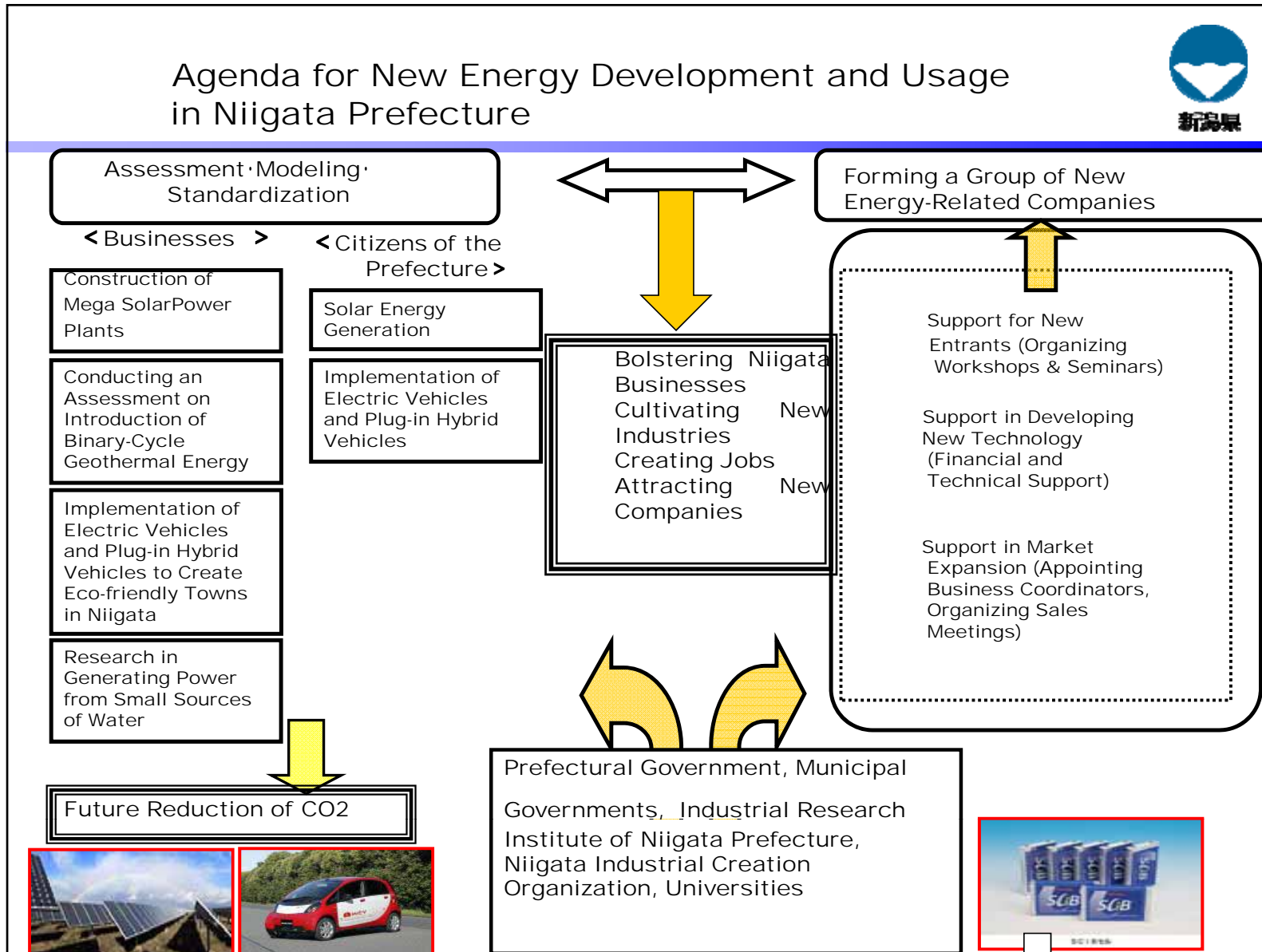
【Amount of Greenhouse Gases Emitted in Niigata Prefecture in 2006 (10,000tons- CO2)】



【Percents Greenhouse Gas Emissions by Classification in Niigata Prefecture in 2006】



Present Achievements and Prospects in the Development and Usage of New Energy Sources in Niigata Prefecture						
"The Niigata Prefectural Guidelines concerning Promotion and Introduction of New Energy" (2001 ~)						
						
	New Energy	Year From Which Data Was Used to Form the Plan	Units	State at the Time the Plan Was Formed	At the End of Fiscal Year 2008	Goals for Usage by the End of Fiscal Year 2010
Renewable Energy	Solar Energy	1998	kW	520	14,019	84,520
	Solar Thermal Energy, Solar Thermal Systems	1998	kL	7,000	No Data Available	31,000
	Wind-Generated Energy	2000	kW	1,261	7,020	16,261
	Snow-Generated Energy	1999	t	10,622	23,754	17,791
	buildings		(18)	(42)	(48)	
Recycled Energy	Waste-Generated Energy	2000	kW	35,000	37,850	40,000
	Biomass-Generated Energy	-	kW	-	200,600	No Set Goal
Alternative Usage Forms of Conventio- nal Energy	Natural Gas Cogeneration	1998	kW	24,000	49,001	94,000
	Fuel Cell	-	kW	-	262	21,000
	Clean Energy Automobile	2000	cars	736	9,426	85,736



Future Reduction of CO<sub>2</sub>




Prefectural Government, Municipal Governments, Industrial Research Institute of Niigata Prefecture, Niigata Industrial Creation Organization, Universities



## Promoting the Usage of Electric Cars



### Goal

Controlling the emissions of CO2 and other greenhouse gases + cultivating Niigata electric vehicle-related companies.

### Goal for Fiscal 2015

- Popularization of electric vehicles and plug-in hybrid vehicles, with 2,000 cars in Niigata Prefecture (worth 0.3% of the total number of mini cars, or kei cars).
- 15 fast charging facilities within Niigata Prefecture

### Forming the Regulation for Promotion

With the aim of promoting electric vehicles:

- Formulate and execute a plan in Niigata.
- Institute a 5 year tax cut measure

### Implementing a System of Subsidized Charging Machines

Subsidized Cost Covering:  
High/Medium/Double Speed Charging Equipment as well as Building Costs  
Amount Subsidized: Within 1/2 of Costs, Maximum 5

Million Yen



### Creating a Network for Charging Cars in Towns



### Manufacturing Roadside Assistance Vehicles for Electric Vehicles

- Electric vehicles that can rapidly assist by giving its power in the event that an electric vehicle runs out of electricity.
- Currently in production with a goal of debuting this year.



Initiatives to Further Promote Alternative Energy Usage in Niigata Prefecture  
- Building a Mega Solar Power Plant in a Snowy Region



### Goal

Niigata will take a leading role in promoting the usage of solar power nationwide by building a mega solar power plant which is practical even in a snowy region as a pioneer, and proving its potential.

### Project Scheme

The Mega Solar Power Plant Project is currently undertaken by the Niigata Prefectural Government with the cooperation of the Showa Shell Sekyu K.K, setting the goal of operation starting in September 2010. The estimated solar power output of this plant is expected to be 1MW.

Image of the Mega Solar Power Plant



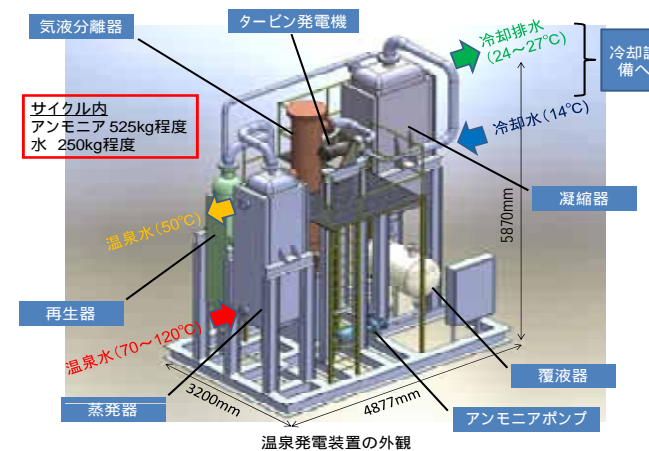
Initiatives to Further Promote Alternative Energy Usage in Niigata Prefecture  
- Geothermal Energy



Hot Spring Resort Area



Binary-Cycle Geothermal Power Equipment



50kW Class Hot Spring Water Power Generating Equipment

Initiatives to Further Promote Alternative Energy Usage in Niigata Prefecture  
- Usage of Snow and Ice Generated Heat



Outside of Echigo Winery owned by the Agricore Corporation



Inside of the Winery



Mechanism of Storing Snow



Staff Works in the  
Snow Storage  
Room

Initiatives to Further Promote Alternative Energy Usage in Niigata Prefecture  
- Research in Generating Power from Small Sources of Water



Hydropower equipment to generate 8.9kW power utilizing small rivers as sources



Panoramic view of the above hydropower equipment



Hydropower equipment to generate 160W power utilizing a sewage treatment plant as a source.

Evaluation of the sufficiency of water resources available is currently undergoing in Niigata

# Conclusion



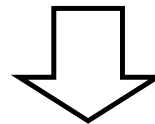
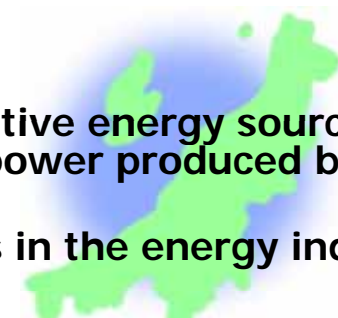
**The Niigata Prefectural Government will continue to cooperate with the National and Municipal Governments to**

**Promote usage of solar power**

**Promote usage of electric cars**

**Evaluate the efficiency of alternative energy sources such as geothermal energy and power produced by utilizing small sources of water**

**Further educate local enterprises in the energy industry**



**We will aim to achieve the results of**

**Reduction of CO2 Emissions**

**Building an economic structure which is further resistant against the energy price changes**

**Stimulating the local enterprises in the energy industry**