Feature

Power Systems Division Future Technologies

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Sanyo Denki started business in 1927 producing power supplies for wireless communication equipment. Since then, we have supplied sophisticated, reliable power supply systems for the communication, control and computer industries as "Sanyo Denki that is good at the sharp turning technologies" with the same pioneering spirit as the founder of Sanyo Denki, "Always making a progress ahead of the times" satisfying our clientsneeds no matter how detailed. "Sanyo Denki Technology Center" will enable us to develop new products with even greater efficiency.

The lobby of the Technology Center features an electronic display of how power for the center is supplied by a combination of a co-generation system and photovoltaic power, which are core businesses of the Power Systems Division. Furthermore, the fact that much of the power for the Technology Center comes from renewable resources reflects our corporate philosophy of developing technology to protect the earth's environment, and technology to use new energies and to conserve energy. The Technology Center building features an energy-efficient design, as well as measures to preserve the natural environment, and thus the Center itself is a field test to help us improve our products.

In the past few years, the business environment faced by the Power Systems Division is becoming increasingly difficult due to the falling demand for power as a result of rapid reductions in the size and price of computers as the borderless market expands. To combat this situation, we have been improving our new product development, reducing costs and innovating our work processes, and we are now reaping the benefits of these efforts.
The immediate targets for us are as follows. 1997 will mark the final year of the first mid-term plan of Sanyo Denki, and so our primary objective is to attain the targets that were set out. We shall also draw up the second mid-term plan that will start from April, 1998. When we review the situations surrounding us, there are so many topics such as "movement to the highly advanced information society","problem of worsening natural environment and running out of natural resources" and "movement to borderless market". The Power Systems Division will its promote business operation while directly facing these problems and by adding value to our products.

Movement to the highly advanced information society

The information communication revolution is leading toward the multimedia society. Demand for uninterruptible power supply systems (UPS) is expected to increase. Meanwhile, as personal computer microprocessor's processing speed and memory capacity increase, work previously done on mid-size computers will switch to personal computers, thus reducing the demand for power supply systems. UPS systems will need to become smaller in capacity to keep pace with the competition. Sales of discrete power supplies will not be profitable; rather, power supply systems designed to suit the user's computer systems, as well as value-creating, reliable products will be our main targets. We will change our focus from discrete products

toward system products base.

Problem of worsening natural environment and running out of natural resources

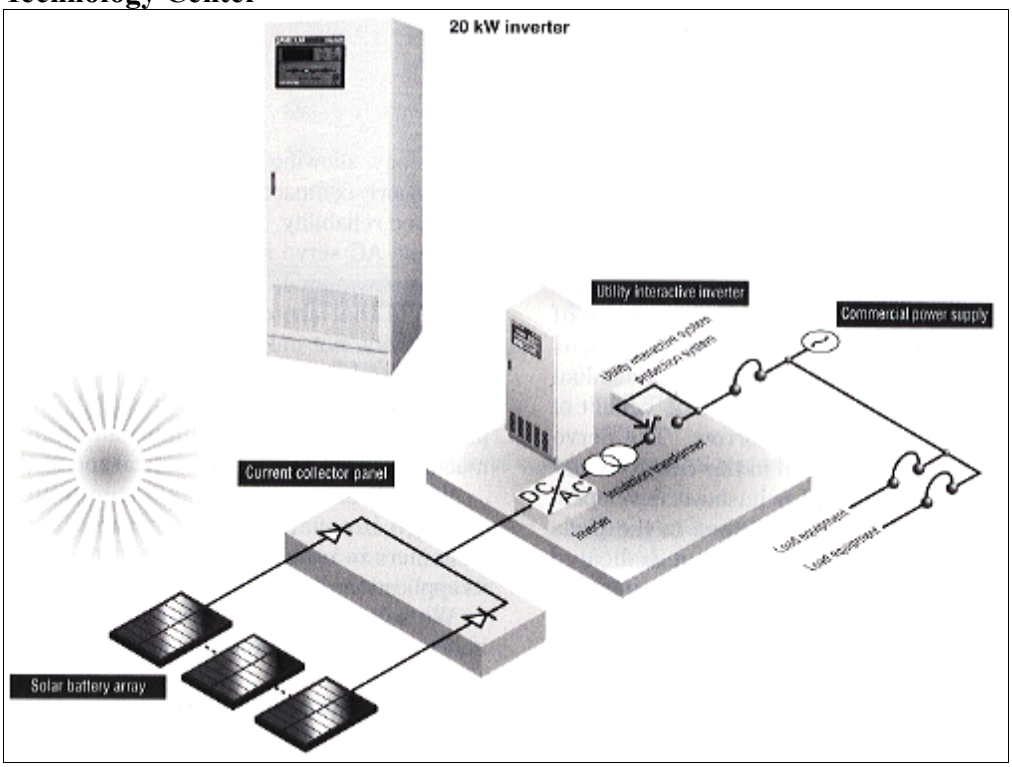
Global warming and declining natural resources will be critical problems in the 21st century, necessitating global countermeasures. Photovoltaic power generation offers an effective solution, and an 8-trillion yen market is predicted by the year 2010 due to promotion by the Japanese government and lower system prices. We will continue to improve our photovoltaic power generation system that was released in 1996 and our active filter products for removing high-order harmonics in power supply lines; develop low-noise, high-efficiency engine generators, and natural-energy power supplies such as wind and water power.

Movement to borderless market

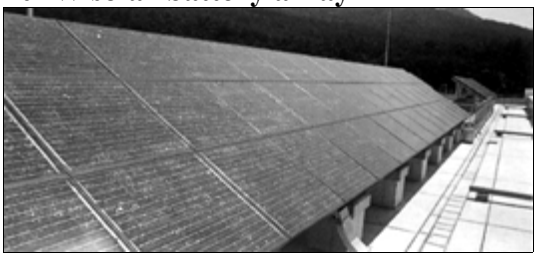
Convergence towards a single operating system for personal computers continues as PCs and networks become commonplace. Personal computers manufactured overseas are now being sold in Japan, and imports of small-capacity UPSs are increasing the price competition. However, these imported small-capacity UPSs still have problems of reliability, maintenance and service, so we will focus not only on producing high quality UPSs and reinforcing our service organization, but also on developing unique circuits, structures and parts mounting technologies, as well as their standardization and integration. We will also step up the procurement of parts from outside Japan and try to achieve cost down.

We acquired ISO 9001 certification in June, 1997 by establishing an integrated system to ensure high quality. By incorporating this system into the operations of the entire company, the development, design and production of reliable products are assured. With the introduction of a production control system using EDP, production costs have been reduced and delivery time shortened. We see a bright future, with the new Technology Center enabling the Power Systems Division to grow and develop into a powerful unit that quickly spots business opportunities and takes action utilizing its outstanding technologies and engineers .

"SANSOLAR" 20 kW photovoltaic power generation system installed in the Technology Center



20kW solar battery array



Equipment specifications

1. Solar battery module	Type	Silicon polycrystal
	Conversion efficiency	10.9% (module)
	Output	120 W (module)
	Used amount	9 serial×20 parallel = 180 modules
	Total output	21,600 W (120W ×180 modules)
2. Photovoltaic power inverter	Rated capacity	20 kW
	Output power factor	0.95 or more
	Utility interactive inverter	High voltage power interactive system(Chubu Electric Power Company)
3. Data measurement	Measurement items	Conforms with NEDO*
	Display screen	Trend graph, measurement data list and others
4. Usage of power	Connected with the commercial power line through a high voltage interactive power system. Continues running from the co-generation power system if the commercial power fails.	

* NEDO: New Energy and Industrial Technology Development Organization

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