

Energy Efficiency: Interview with Peter Bauer (CEO)

Mr. Bauer, suddenly everyone is talking about climate change – but mankind has an energy resource problem even without global warming, doesn't it?

That's right. Classical energy reserves such as coal and oil are finite. At the same time the global energy demand is constantly increasing, particularly in the national economies of the so-called emerging markets, including Asia's two large countries China and India. This trend has caused energy prices to escalate in recent years. Intelligent solutions are now needed to cut down on costs, conserve resources and reduce the impact on the environment, and – as things stand at present – they can have only one aim: maximum efficiency.

What contribution does Infineon make to the conservation of resources?

Our products make a fundamental contribution to energy efficiency. They operate in a phenomenally wide variety of everyday gadgets, such as PCs, notebooks, washing machines, cookers, lamps, air conditioning systems and so on, without the public at large being aware of the fact. In the power supply unit, for example, they take care of minimizing loss due to heat, in the washing machine they control the motor to use energy as efficiently as possible, and in lamps they provide energy-saving illumination by a soft start.

Across the board, where are Infineon semiconductors deployed for increasing energy efficiency?

Practically all along the power supply chain. Our IGBTs (Insulated Gate Bipolar Transistor) are employed, for example, in generating power in conventional (coal-fired) power stations and from alternative energy sources in wind power plants, hydroelectric power stations and solar power plants. Our projects for high-voltage direct-current transmission (HVDC), in which the light-triggered thyristors from our Warstein plant ensure low-loss and safe transport of energy over large distances, for instance in China, are in high demand at present. And, finally, our chips are to be found in many industrial drives and consumer products: all the applications – from the elevator to the washing machine – are driven by motors. Using our products, these drives can be controlled so as to reduce the energy requirement by 30 to 40 percent.

Why exactly is it that a controlled motor consumes less energy?

Take, for example, an outmoded air conditioner with just an on-off switch. Either it's at a standstill or it runs flat out. A motor which always runs at maximum speed also uses most energy. A speed control in the motor sees to a soft start and that the motor doesn't go suddenly from zero to a hundred, which consumes a great deal of energy. Secondly, an optimal motor control ensures that the motor runs according to the dictates of demand and so more economically. The same principle also applies to illuminants or heating pumps.

Yet Infineon products are found not only in electric motors...

Correct. Components controlling the power supply in the power supply units are also important for energy efficiency. Our CoolMOS family takes care of thrifty consumption in domestic appliances as in consumer electronics. I've already mentioned lighting – here our chips are in the ballasts. And then, of course, there's the important subject of cars: while we again control electro-motors (window lifts, seat adjustment) here, we also control the fuel supply for the combustion engine and optimize the engine settings umpteen times a second. All this results in the vehicles consuming less and less fuel, despite delivering more and more performance – quintessential energy efficiency.

What activities is Infineon pursuing to push the subject of energy efficiency? What are the goals?

The energy efficiency project was launched over a year ago under the direction of Monika Kircher-Kohl, CEO Infineon Austria. It pursues several goals. Firstly, to raise awareness of energy efficiency both internally and externally; secondly, to strengthen our market position and to address existing and new customers; thirdly, to initiate government projects all over the world or get ourselves involved in existing projects devoted to energy efficiency. Furthermore, the project seeks to encourage research programs.

What influence can technology companies exert on political decisions?

The newly awakened awareness of the environment and scarce resources, which are causing spiraling commodity prices, are creating huge public pressure. Governments all over the world are facing the same challenge: they now have to establish a legal basis for energy efficiency. We advise and throw light on existing possibilities for energy-efficient applications and on potential future developments. We know what is technically still feasible, politicians don't. Infineon teams worldwide are working on

raising the awareness of energy efficiency issues among politicians and organizations. A major first step would be a globally operative definition of the minimum requirement for energy efficiency in power consumption.

What does the global discussion signify for Infineon's market opportunities?

The market opportunities for our entire product portfolio are better than ever before. The energy-efficient product market will provide sustained growth. We started to position ourselves for this sphere in good time.

Apart from the products – would you say that Infineon is an environmentally friendly company? What does Infineon do for the ecological awareness of its employees?

We are headquartered in Germany and Germany carries the torch in environmentalism. We've recycled materials for decades and thrifty consumption hasn't taken center stage only now. That's why our staff, at least at the German sites, are already alive to ecological issues before they come to us. We can all do our bit by consistently following simple and obvious rules: not letting equipment run idly and not forgetting to switch off the light. We just have to see to all those small things at the office, which most of us take for granted at home.