

but a bad idea now," Smith confessed.

fact-finding team just back from Toyota

In the early 1980s, as head of a GM

Reflections on Cars, Planes, and Finance: Jack Smith '60 Visits the Isenberg School

"We are rapidly moving toward the next step in auto engines-electric hybrids," emphasized retired GM and Delta Airlines chairman Jack Smith '60 during his October 7 visit to the Isenberg School. One of GM's answers to the challenge is the Chevy Volt, which will arrive on the market in 2010. The Volt will have an initial sticker price of around \$40,000 and a first-year production run of up to 60,000 cars. Its batteries will provide up to 40 miles of continuous electricity before a small internal combustion engine and generator kick in to recharge them. "A big issue for all electric cars will be how you price the batteries," Smith told students in Tom O'Brien's Business History course. "Battery replacements for Toyota's Prius run from \$2,500 to \$3,000. That is sizeable, but we will get through that and other challenges. Electric cars will be a big change for America."

For the past seven years, GM has devoted two-thirds of its research budget to fuel cell development. "Seven years ago, our director of research predicted that fuel cells would be on the market in ten years," Smith told the students. "Today, his answer is the same: ten years from now. The oil industry uses a different number—50 years or so. The big challenge with fuel cells is not in the technology itself but in creating the national infrastructure that would allow for refueling. We don't have one."

According to Smith, the energy economy has also rocked the airlines industry. "Traditionally, the basic philosophy of the airlines was that people flew on the basis of price. That's pretty much changed," noted Smith. "European airlines used to do much better than their American counterparts on service, but that's deteriorated too. In the airline industry, the "people" factor is critically important. That includes an airline's employee morale. Air travel is after all a service business. "It was good luck for General Motors to sell off GMAC [its financial services business]," Smith continued. GMAC was the country's biggest mortgage lender; it got caught in the subprime mortgage mess. So

far, the bailout has been restricted to mortgages. Expect similar troubles in credit swaps." An enabling factor in those difficulties, Smith explained, was a rule change at the SEC that allowed investment firms to leverage an investment up to a



GM goes electric in 2010 with the Chevy Volt.

factor of 33. As a former board member at a reinsurance firm, Smith himself had had experienced an options-related free-fall: "We lost \$500 million on one contract and couldn't stop it," he lamented.

More on GM: Recollections and Current Developments. Later in the morning Smith shared insights and stories with a gathering of students in the Isenberg School's atrium, including Professor Anna Nagurney's transportation and logistics class, and doctoral students in the Isenberg School's Management Science program. Nagurney, who is the John F. Smith Memorial Professor (which honors Jack Smith's father), uses funds associated with her endowed professorship to help support the UMass Amherst campus's **INFORMS** student chapter for Operations Management and Management Science students.

GM has demonstrated its commitment to a greener culture, Smith emphasized, through the Chevy Volt, solar panels on its factory roofs, and reduction and recycling of waste in its plants. "You're looking at the guy who brought the Hummer to GM," Smith remarked. In the mid 1990s Smith's wife had approvingly pointed out one of the supersized vehicles to him during a visit to Cape Cod. In 1998, GM bought the rights to the Hummer brand. "It was a good idea then, GM embraced its own variation of lean production, "it took us ten years to catch up," he admitted.

"Today, we're for free trade all the way," emphasized Smith. "Our plants and supply chains are everywhere they need to be, including China, where we are the country's largest producer of vehicles. In 10 years, China will pass the U.S. as the world's biggest auto market. When we first partnered there in the 1990s with Shanghai Automotive, China was a chauffeur-driven market. Back then, our partner viewed the Chevy as too blue collar and the Cadillac as too ostentatious. They decided on the Buick. Today, of course, the Chinese drive Chevrolets and Cadillacs as well."



Jack Smith '60 with John F. Smith Professor of Operations Management Anna Nagurney, former dean Thomas O'Brien, and Operations Management/Management Science students.

City in Japan, Smith upset his fellow GM executives with sobering news: Toyota's lean production system could produce an auto with three times fewer workers than GM. "We also made our own parts, unlike the rest of the industry," added Smith. Once