



AAAE - Airports Going Green

August 6, 2009



Mr. Dennis Probst
Deputy Executive Director
Planning and Environment

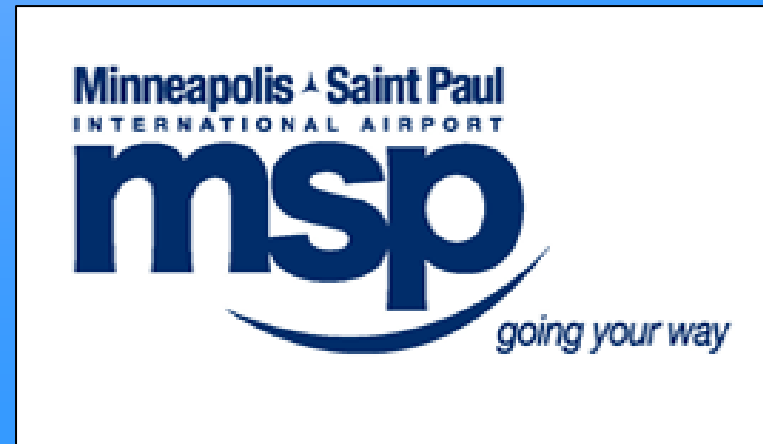


Minneapolis - St. Paul
International Airport
Photo by Aero-Metric, Inc.
Flown on October 24, 2007
Printed by MAC Airside Operations



MSP's STAR Program

- **Stewards of**
- **Tomorrow's**
- **Airport**
- **Resources**



Agenda

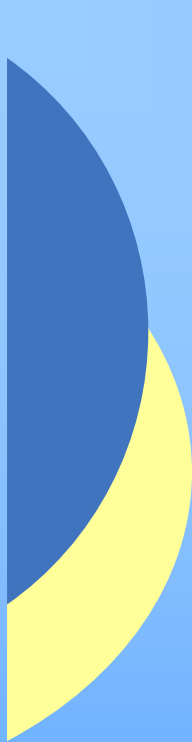
- Sustainable Achievements/STAR Program
- Current initiatives
- Future Options Under Investigation
 - Wind
 - Solar
 - District Energy



MAC's Sustainable activities are grouped in the following categories:

- Energy Conservation/Renewable Energy
- Green Buildings, Facilities and Infrastructure
- Air Quality
- Water Quality and Conservation
- Waste Management and Recycling
- Natural Resources Management
- Noise Abatement
- Financial Stability

Understanding our ability to positively influence these categories is our challenge



Current Initiatives

Energy Conservation/Renewable Energy

- Continued use of energy sources produces greenhouse gases and ozone-depleting emissions, depletes the nation's natural resources and is expensive.

MAC:

- ✓ Implemented energy efficient HVAC systems
- ✓ Upgraded both hot and chilled water central plants
- ✓ Re-commissioning all existing systems
- ✓ Installed ground power and pre-conditioned air at gates
- ✓ Installed hydrant fueling system
- ✓ Utilizes Automatic HVAC setting and controls
- ✓ Implemented day-lighting window design
- ✓ Implemented Automatic lighting controls
- ✓ Implemented annual energy conservation projects
- ✓ Installed energy-efficient lighting

Note: Energy cost savings resulting from energy conservation projects alone are approaching \$2.96M million per year on investments of \$7.74M.

Annual electricity costs \$10M, Heating \$6M



Chilled Water Upgrades



Ground Power and Pre-conditioned Air



Day-lighting design



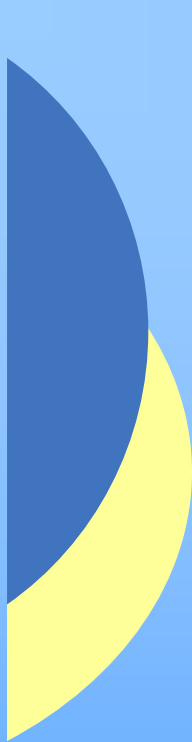
Hydrant Fueling System

Electrical Vehicles



Fire Station #1 Wind Turbine Project



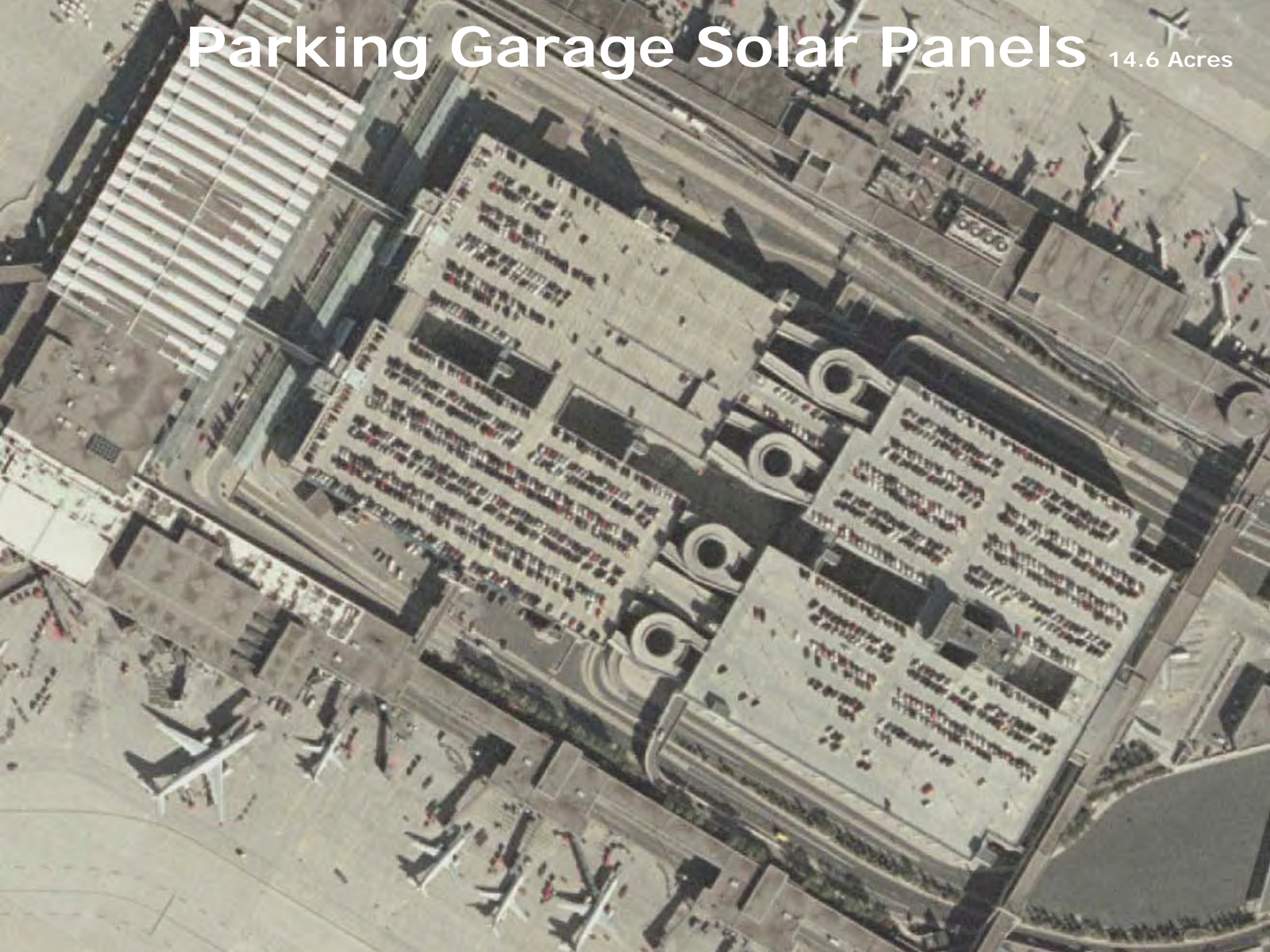


Future Options Under Investigation

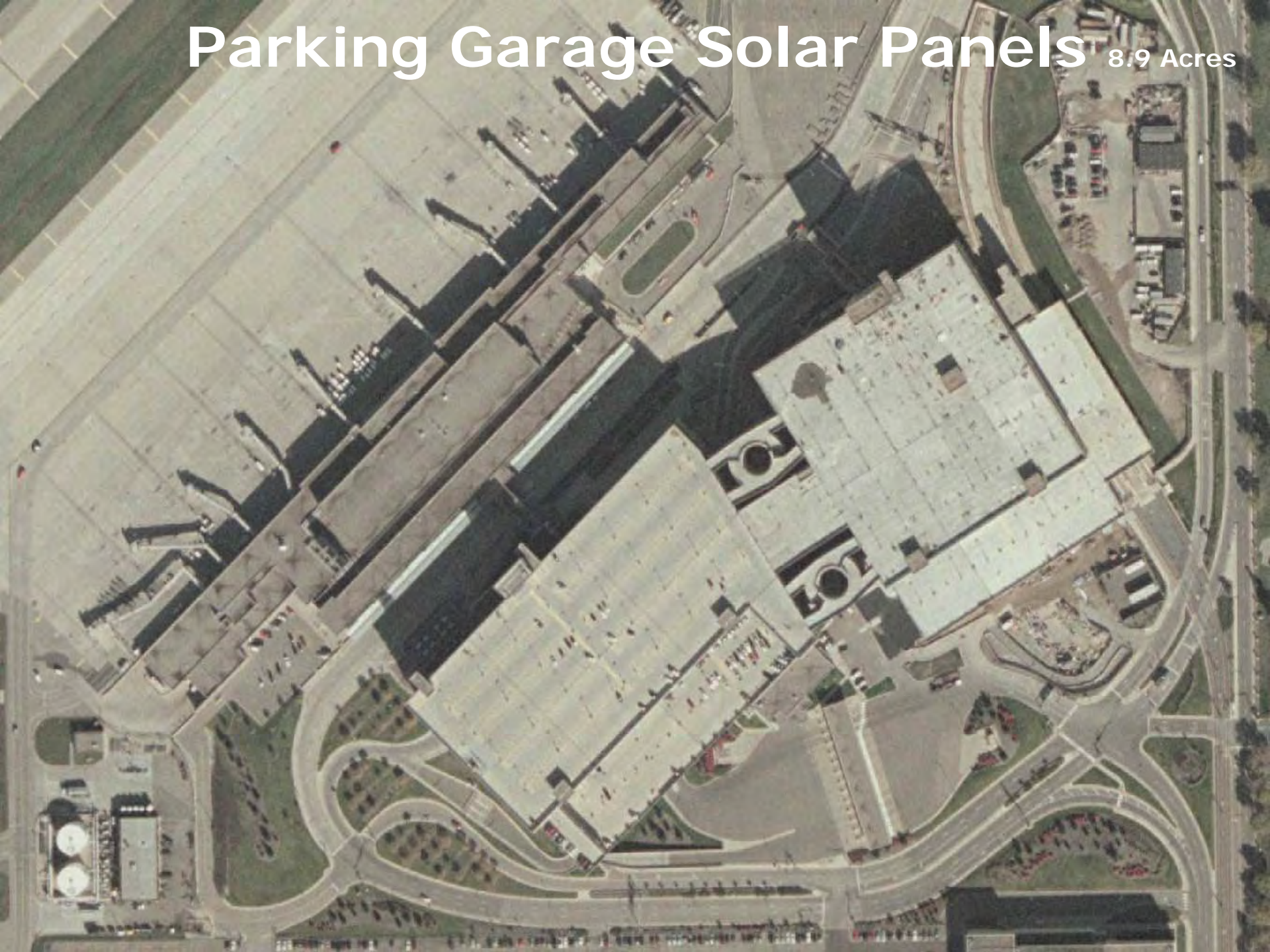
Off-Site Wind Turbine Project



Parking Garage Solar Panels 14.6 Acres



Parking Garage Solar Panels 8.9 Acres



District Energy Potential Project

