COUNCIL AGENDA: 1-27-09
ITEM: 2.3

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: William F. Sherry, A.A.E.

SUBJECT: **Applications to Federal Aviation Administration "Voluntary Airport Low Emissions" (VALE) Program**

DATE: December 15, 2008

Approved [signature] Date 12/19/08

COUNCIL DISTRICT: City-Wide

RECOMMENDATION

Adoption of a resolution authorizing the City Manager to apply for and execute, upon receipt, grants from the Federal Aviation Administration for 2009 Voluntary Airport Low Emission (VALE) program funding support for the Norman Y. Mineta San Jose International Airport between $3,000,000 and $5,000,000 for:

1. The purchase and installation of pre-conditioned air units and necessary electrical power upgrades for aircraft gates in the International Arrivals Building and Terminal A and A+;

2. The purchase of electric fleet vehicles for use by Airport Operations and Facilities & Engineering divisions.

3. The funding of other eligible emission reduction projects yet to be determined.

OUTCOME

Approval of this recommendation would authorize the City Manager to submit applications for federal grants that will help to:

- Reduce aircraft emissions by eliminating the need for aircraft to run auxiliary power units to provide conditioned air for aircraft heating or cooling while at the gates;

- Begin replacing the Airport's high-mileage conventionally-fueled fleet with electric vehicles to reduce fuel emissions as outlined in the SJC *Alternative Fuels Program* and *Clean Vehicle Policy*, as adopted in 2001.

In addition to reducing aircraft and vehicle emissions at the Airport, implementation of these projects will lower costs for airlines' operations and maintenance at SJC, advance the Mayor and Council's Green Vision for San Jose, reduce the environmental impact of Airport operations on our community and residents, and continue San Jose's leadership for sustainability. These applications would become the first grant applications to the FAA's VALE program from any airport on the West Coast.

BACKGROUND

The combined emissions from aircraft and ground support equipment typically represent less than five percent of total emissions regulated under State Implementation Plans. Surface transportation sources and other point and regional sources together represent about 90 percent of total emissions, compared to the relatively small amount from airport operations. Despite its small influence on air quality, the aviation and airport industry is strongly committed to improving air quality. As a regional challenge throughout the nation, air quality requires a continuing collaborative effort by federal, state and local governments, industry and manufacturers, and transportation agencies.

In December, 2003, *Vision 100 – Century of Aviation Reauthorization Act* reauthorizing the programs and taxing authority of the Federal Aviation Administration was signed into law. Part of the reauthorization legislation established a voluntary program to reduce airport ground emissions at commercial service airports. The program is intended to help airports meet their obligations under the Clean Air Act and to assist regional efforts to meet National Ambient Air Quality Standards.

To administer the airport emission provisions of *Vision 100*, the FAA created the Voluntary Airport Low Emission (VALE) program in 2005 with funding to encourage the voluntary participation of airports and state air quality agencies such as the California Air Resource Board. The objectives of the VALE program include:

- Reduce pollutants and other harmful air emissions generated by airport ground transportation sources;
- Provide airports with financial and regulatory incentives to increase their investments in proven low-emission technology;
- Encourage the use of alternative-fuel vehicles and other low-emission technologies suitable to the airport environment;
- Support U.S. energy independence by emphasizing domestically produced alternative fuels that are substantially non-petroleum based; and
- Foster collaboration and share benefits among all participants.

Airports and state air quality agencies benefit from the program's focus on early and accelerated reductions of airport emissions. For airports that are changing and responding to a dynamic aviation industry, the VALE program offers increased financial and regulatory support as airports plan for the future and seek to balance growing public demand for airport service with

environmental protection. The SJC project would help improve local area air quality in cooperation with the Bay Area Air Quality Management District and the California Air Resources Board.

ANALYSIS

Proposed VALE Projects at SJC

1. Electrification and Pre-conditioned air units for gates at the International Arrivals Building and Terminal A and A+.

The grant application requests funding for 30-ton pre-conditioned air units and the necessary upgrade of the Terminal A and A+ electrical infrastructure to support the equipment.

The pre-conditioned air units would be installed under the passenger boarding bridges in the International Arrivals Building and Terminal A to supply conditioned air to the interior of an aircraft while it is at the gate. These units would enable airlines to eliminate the use of aircraft auxiliary power units that burn fuel to ensure the comfort of passengers, thereby reducing the amount of pollutants emitted from aircraft while parked at the airport.

2. Begin conversion of SJC fleet to alternative-fuel vehicles

The grant application requests funding for the purchase of electric vehicles to begin converting fleet vehicles assigned to Airport Operations and Airport Facilities & Engineering divisions to low-emission vehicles. Low-emission vehicles will reduce fuel costs, maintenance costs, and associated emissions and pollutants.

The Airport fleet currently includes gasoline and diesel-fueled vehicles that are more than ten years old with associated high fuel and maintenance. New low-emission vehicles will begin to replace these older high-mileage vehicles. The Airport's goal is to integrate low-emission vehicles into the fleet each year with the assistance of VALE and other environmental grants. This will achieve both immediate and long-term reductions in emissions for these heavily-used vehicles.

EVALUATION AND FOLLOW-UP

Detailed fact sheets and applications are attached.

POLICY ALTERNATIVES

Alternative: Do not pursue the VALE grant funding opportunity.

Pros: Avoids spending the City's 25% matching share.

Cons: Passes up a major opportunity to purchase equipment and vehicles that will reduce emissions at the Airport. Passes up major opportunity to defray local costs of planned equipment replacement.

Reason for not recommending: Inconsistent with the objectives of the Mayor's *Green Vision*, Airport's *Alternative Fuels Program* (AFP), the Airport's *Clean Vehicle Policy.*

PUBLIC OUTREACH/INTEREST

- ☐ Criterion 1: Requires Council action on the use of public funds equal to $1 million or greater. **(Required: Website posting)**
- ☐ **Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

This item does not meet the above criteria however copies of this memo were provided to interested neighborhood organizations and individuals in residential areas adjacent to the Airport and posted on the City's website for the January 27, 2009 Council Agenda.

COORDINATION

This memo has been coordinated with the City Attorney's Office and the City Manager's Budget Office.

COST SUMMARY/IMPLICATIONS

Pre-Conditioned Air and Power
Grant funding,75% of total cost with a 25% City share, would be used to purchase and install pre-conditioned air units and support electrification at the passenger boarding bridges in Terminal A and A+ and International Arrivals Building.

Begin conversion of SJC fleet to alternative-fuel vehicles
Grant funding -75% of the incremental cost for each vehicle - would be used to purchase electric vehicles to replace older, high-maintenance and high-mileage fuel vehicles in the Airport's fleet. The Airport's share of costs would be 25% of the incremental cost and the remaining base cost of the vehicles.

BUDGET REFERENCE

A separate action would be requested to appropriate the funds in the event that the Airport is awarded the requested VALE grants. This would occur as part of the mid-year budget process.

CEQA

Resolutions No. 67380 and 71451, PP 08-0255

WILLIAM F. SHERRY, A.A.E.
Director of Aviation

Please direct questions to William Sherry, Director of Aviation, at (408) 501-7669.

NORMAN Y. MINETA
SAN JOSE
INTERNATIONAL
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VALE BRIEFING PAPER – Edited 12-8-08

Convert SJC Vehicle Fleet to Alternative Fuel Vehicles

Analysis

The purpose of this project is to begin converting AIRPORT OPERATIONS and FACILITIES vehicles to low emission vehicles, such as hybrids or electric vehicles.

The new electric vehicles being requested will support the new Terminal B North Concourse Building as well as the existing terminals. They will be shared by the Trades groups (Electrical and ATEM), and the Building Maintenance group and Airport Operations. These vehicles are recognized as "green vehicles" and will save on fuel consumption, have no carbon emissions while operated, and should save on vehicle maintenance costs.

Integrating these vehicles into the Airport fleet will immediately reduce pollutants and other air emissions. The emission reductions will continue over time, as these vehicles will be heavily used in the daily operations and management of the Airport.

Cost Considerations / Benefits:

VALE AIP program funding is limited to a percentage of the incremental cost of each vehicle – the difference in the cost of an eligible low-emissions vehicle and the current market value for a conventional vehicle. VALE Grant funding would pay for 75% (medium hub airports) of the incremental costs.

Electric Vehicles to be Purchased by SJC

Vehicle ID	Quantity	Use	Non-Electric Cost	Electric Cost	Increm. Cost	Total Increm. Cost	VALE Grant Amount	Airport Amount
FT 2-80	1	Passenger	$ 7,247.00	$13,246.00	$ 5,999.00	$ 5,999.00	$ 4,499.25	$ 1,499.75
ET-150-74	2	Utility	$ 10,026.00	$26,815.00	$16,789.00	$ 33,578.00	$ 25,183.50	$ 8,394.50
ET-150-74	1	Utility/Dump	$ 10,026.00	$31,443.00	$21,417.00	$ 21,417.00	$ 16,062.75	$ 5,354.25
B248HC	2	Utility	$ 7,247.00	$12,042.00	$ 4,795.00	$ 9,590.00	$ 7,192.50	$ 2,397.50
MX600	2	Utility	$ 7,247.00	$ 8,302.00	$ 1,055.00	$ 2,110.00	$ 1,582.50	$ 527.50
ET-3000	2	Utility	$ 10,026.00	$24,473.00	$14,447.00	$ 28,894.00	$ 21,670.50	$ 7,223.50
ET-3000	1	Utility/Cargo	$ 10,026.00	$26,926.00	$16,900.00	$ 16,900.00	$ 12,675.00	$ 4,225.00
Total	**11**			**$214,679**		**$ 118,488.00**	**$ 88,866.00**	**$29,622.00**

Airport's share includes share of incremental costs ($29,622) and remaining cost for vehicles after the grant ($96,391) for a total of $126,013

CITY OF SAN JOSE CAPITAL OF SILICON VALLEY
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www.sjc.org

NOTE: New Vehicle costs are 2008 prices + 8.25% tax + 3% estimated increase for 2009 prices

Cost Formula: Grant Amount = 75% of incremental cost and Airport Amount = 25% of incremental cost + remaining cost of the new vehicle

Back up for 11 Vehicles To be Purchased

Quantity-2 units - Taylor-Dun Co. Model ET-150-74 - with ladder rack, rear mounted batteries, beacon light/reverse alarm, 2-Tool Boxes (left & right), battery watering system

Quantity-2 units - Taylor-Dunn Co. Model B2-48 HC (N.C. Lower Level) with Printle Trailer Hitch, Beacon Light/Reverse Alarm

Quantity-2 units - Taylor-Dunn Co. Model MX-600 (inside terminal only transportation)

Quantity-2 units - Taylor-Dunn Co. Model ET-3000 with ladder rack, rear mounted batteries, beacon light/reverse alarm, 2-Tool Boxes (left & right), battery watering system

Quantity-1 unit - Taylor-Dunn Co. Model ET-3000 with cargo box, ladder rack, rear mounted batteries, beacon light/reverse alarm, 2-Tool Boxes (left & right), battery watering system

Quantity-1 unit - Taylor-Dunn Co. Model ET-150-74 with dump truck accessory, rear mounted batteries, beacon light/reverse alarm, battery watering system

Quantity-1 unit -Taylor-Dunn Co Model FT280 6 passenger

NORMAN Y. MINETA
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VALE Briefing Paper 12-8-08

Pre-conditioned Air Units for Aircraft at the Eight (8) Gates

Analysis

Pre-conditioned Air Units for Aircraft at (8) Gates: A1A, A1B, A2, A3, A5, A6, A7, A8:

The 30-ton Preconditioned Air Unit is affixed to the underside of the Passenger Boarding Bridge (PBB), in order to supply pre-cooled air to the interior of an aircraft while it is positioned at the gate. With the use of these units, aircraft then do not use their own combustion engines to provide this service for the comfort of its passengers reducing the amount of pollutants to the outside air.

The PBB Pre-conditioned Air Unit provides a necessary service to reduce air polluting internal combustion aircraft while on the ground and improves the local area's air quality in cooperation with the Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (CARB). This request includes the procurement and installation of power and eight (8) Pre-conditioned Air Units for the Passenger Boarding Bridges at Gates - A1A, A1B, A2, A3, A5, A6, A7, A8 and the upgrade of the Terminal A and A+ electrical infrastructure to support these Passenger Boarding Bridges.

In order to operate the 30-ton PBB Pre-conditioned Air Units, staff determined that additional electrical power is required. Staff explored several alternates and determined that installing a 12KV electrical line from PG&E would be the most optimum choice. PG&E obtains 48 percent of its power from environmentally friendly resources and the 12KV installation provides additional capacity for unanticipated future electrical loads.

PCA and Ground Power to be Purchased and Installed at SJC

Task	Quantity	Cost/ Unit	Total Amount	VALE Grant Amount	Airport Amount
PCA Purchase	8	$ 55,113.00	$ 440,904.00	$ 330,678.00	$110,226.00
Ground Power Purchase	8	$ 40,206.00	$ 321,648.00	$ 241,236.00	$ 80,412.00
PCA Installation	8	$ 4,233.00	$ 33,864.00	$ 25,398.00	$ 8,466.00
Ground Power Installation	8	$ 4,233.00	$ 33,864.00	$ 25,398.00	$ 8,466.00
12KV Upgrade to Terminal	1	$616,975.00	$ 616,975.00	$ 462,731.25	$154,243.75
Eletric. Upgrade to Gates	6	$ 27,791.67	$ 166,750.02	$ 125,062.52	$ 41,687.51
Project Implementation	n/a	n/a	$ 351,046.00	$ 263,284.50	$ 87,761.50
Project Aministration	n/a	n/a	$ 122,816.00	$ 92,112.00	$ 30,704.00
Project Formulation	n/a	n/a	$ 67,651.00	$ 50,738.25	$ 16,912.75
Total			**$ 2,155,518.02**	**$ 1,616,638.52**	**$538,879.51**

VALE Grant would pay 75% of all costs. Airport's share is 25%

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