Report to the Legislature:
Options for Charging a General Admission Fee

January 15, 2005

Report to the Legislature:
Options for Charging a General Admission Fee at the California Science Center

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Executive Summary

The California Science Center (Science Center) is one of the largest and oldest science centers in the United States. Although a State facility, the Science Center has developed a strong public/private relationship with its partner, the California Science Center Foundation. Over half of the California Science Center's current $22.3 million operational budget is supported by the California Science Center Foundation; with $11.5 million in Foundation support and $10.8 million in State General Fund support. This leveraging of State funds on a better than one-to-one basis maximizes the State's investment in education and in the development of a science-literate workforce for California's economic future.

During the April 2004 budget hearings for the 2004/05 budget, the Legislative Analyst's Office (LAO) recommended a $5 million General Fund reduction to California Science Center 2004/05 budget and proposed that the California Science Center charge an admission fee to offset the General Fund support. After reviewing information on the potential impact of a general admission fee on the Science Center budget, neither the Assembly nor Senate accepted the LAO recommendation. However, the Assembly Budget Subcommittee expressed interest in further analysis, and added supplemental budget language directing the Science Center to report on options for charging an admission fee.

The Science Center used several strategies to identify options and solicit information from various museums throughout the country. This included contacting national and regional museum associations, queries submitted through museum association news letters, research on the internet, and making personal contacts at the museum director level. After interviewing entities and reviewing data collected, it was clear that comparing institutions should be done with care, as they differ in mission, size, geographic location, and audience. In addition, accounting and attendance tracking practices were individual to each institution. Although some comparison was necessary to create a model for the impact of a general admission fee at the Science Center, this report presents case examples and information from other museums with a cautionary note regarding the validity of direct comparisons. Comparison of entities should be considered in context of their individual situations.

The Science Center then identified and analyzed three direct options for a general admission fee: Option A - a nominal fee ($2); Option B - a regionally competitive fee ($9); and Option C - a "top end" fee ($12) equivalent to the Exploratorium in San Francisco and the highest fee among science/technology institutions we contacted. Review of the net fiscal result of all three fee levels reveals that although a general admission fee could generate gross revenue for the Science Center, imposition of a fee would also cause a significant (30 to 70 percent) reduction in museum general attendance. This loss of attendance would radically impact the gross revenue level achieved at each fee level. Attendance reduction would also increase operational and marketing costs at the Science Center as well as negatively impact current revenue streams. After first year capital outlay costs required to implement general admission fee operations, the annual net fiscal impact of admission fees to the Science Center is projected to be between $400 thousand net revenue loss and a $354 thousand net revenue benefit, depending on the option chosen (fee charged and attendance loss experienced). This projection does not include projected loss to parking revenue.

Executive Summary, Continued

Loss of parking revenue to the State (Exposition Park Improvement Fund) is an additional fiscal impact caused by the loss in attendance associated with a general admission fee. Daily parking of $6 per car currently generates approximately $1.1 million in revenue to the State which pays for Exposition Park and Science Center public safety, grounds maintenance and coordination of park activities. Projected losses to daily parking revenues resulting from the attendance loss associated with Options A - C are from $333 thousand to $779 thousand.

Admission fees would also have a non-fiscal impact on the Science Center's mission of education, accessibility and inclusiveness - with the attendance loss not only reducing the Science Center's educational reach by 30 to 70 percent, but also disproportionately impacting diversity and the traditionally underserved communities from which our future math and science literate workforce must come.

The Science Center continues its endeavors to find opportunities to earn fee-based revenue without precluding accessibility and inclusiveness. The Science Center already charges for "add on experiences" including educational programs, special one-time exhibits and the IMAX large screen format theater. These revenues are part of the $11.5 million Science Center Foundation operational budget that supports the Science Center's operational costs and educational programming.

Two "indirect" fee options for raising these prices were also analyzed:
Option D: Increased parking fees at Exposition Park could generate an additional $371 thousand annually, should prices be raised by $2, from $6 to $8 per car. However, this increased revenue figure could be offset by an undetermined amount should the fee increase deter museum attendance. In addition, a parking increase could deter use of the state parking facilities, as the current $6 parking fee rate is competitive with the local market.

Option E: Regarding an increase in the admission price for the IMAX theater, a review of the Science Center's $7.50 adult IMAX admission price against IMAX admission prices at other science and technology centers revealed that the Science Center is already competitive (high end) with similar venues. An increase in IMAX price is not recommended, as price increase beyond competitive rates could deter attendance and ultimately decrease revenue.

Research and projections conclude that because admission fees reduce attendance, attendance continues to decline as admission fees increase, and fee-related attendance loss negatively affects existing revenue streams, the net impact of all options for admission fee will be losses to overall revenue. Admission fees will also come at a high cost to the Science Center's mission, audience reach and educational value to the public. Limited revenue may be achieved through an increase in parking fees, however this option may also act to deter museum attendance and/or parking lot use, thus reducing or potentially eliminating net fiscal benefit.

Report Overview

Purpose

This report assesses options for charging a general admission fee at the California Science Center in light of both net fiscal impact and the ability of the Science Center to meet its educational mission.

Genesis of report

During the April 2004 budget hearings for the 2004/05 budget, the LAO recommended a $5 million General Fund reduction to California Science Center 2004/05 budget and proposed that the Science Center charge an admission fee to offset the general fund support. After reviewing information on the potential impact of a general admission fee on the Science Center budget, neither the Assembly nor Senate accepted the LAO recommendation. However, the Assembly Budget Subcommittee added supplemental budget language directing the Science Center to report on options for charging an admission fee.

Budget Bill language

Item 110-001-0001 California Science Center
100 Science Center Admission Fee Language
Assembly adopted Budget Bill language to require the California Science Center to report to the Legislature by January 15, 2005, on options for charging and admission fee.

Scoping questions

Two key scoping questions were identified to support comprehensive assessment of the net effect of the options charging a general admission fee:

- What would the net effect of the general admission fee option be on increasing the Science Center's earned income, and reducing the Science Center's need for support from the state general fund?

- Would the option for imposing a general admission fee impact the Science Center's educational mission, service delivery, and population served?

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Report Overview, Continued

Options

Direct Fee Options

Three direct options for charging an adult general admission fee were analyzed:

Option A Nominal fee ($2)
Option B Competitive fee ($9)
Option C Top End fee ($12)

Note that options for charging an admission fee to school groups are not considered in this report. The decision to exclude the option of charging admission to school groups was based on discussions with the Assembly Budget Subcommittee during the Spring 2004 hearings.

Indirect Fee Options

Two "indirect" options were considered for generating additional revenue:

Option D Increase in price of daily parking fee
Option E Increase in price of Large Screen IMAX Theater

Industry input

To provide data with which to project potential impacts on the Science Center, institutions were contacted regarding funding and admissions practices. Institutions contacted included representative museums of several types:

- Museums with similar missions in the science and technology field
- Museums within the local geographic area
- Museums funded by the State of California
- Museums with free and fee-based general admissions practices
- Museums that have recently changed general admissions practices, either from free to fee, or from fee to free

Requests for information were made through formal and informal channels. Requests were placed in regional museum newsletters and inquiries were made directly to institutions. The California Science Center Director made personal calls to other museum directors and presidents. Many institutions did not respond, or responded with partial data. Other institutions are very small and their experience is not comparable to the California Science Center. Among responding institutions, data supplied was incomplete in almost every case.

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Industry input (continued)

The Science Center would like to acknowledge the associations and institutions that responded to our inquiries in the development of this report:

- Association of Science and Technology Centers
- California Association of Museums
- American Association of Museums
- Western Museums Association
- California State Capital Museum
- California State History Museum
- California State Railroad Museum
- California Hearst San Simeon State Park
- University of California Lawrence Hall of Science
- Exploratorium
- Chicago Museum of Science and Industry
- St. Louis Science Center
- El Paso Art Museum
- National Museum of Science and Industry, London
- Los Angeles County Museum of Art
- Los Angeles County Museum of Natural History
- University of California Los Angeles Fowler Museum

Comparing institutions

In discussing budget, revenue and fee practices with other museum institutions, experts in the field consistently expressed concern about the application of direct quantitative comparisons. This concern is at least partially responsible for difficulty in acquiring data. *An "apples to apples" comparison is limited by a number of combining factors, including the institution's type, specific mission, size, and location, position in the community, public/private funding structure, budgeting practices and ancillary earned income sources.*

From these discussions, it was clear that comparing institutions should be done with care. Although some comparison was necessary to create a model for the impact of a general admission fee at the Science Center, this report presents ten case examples and information from other museums with a cautionary note regarding direct comparisons. Inferences regarding the impacts of an admission fee should be made conservatively, and, based on the limited nature of the data, must take into account anecdotal as well as quantitative information.

Background: About the Science Center

Overview

Located in Exposition Park just south of downtown Los Angeles, the California Science Center is one of California's premier family destinations featuring award-winning exhibits and education programs. As a state educational, scientific and technological center prominent since the 1950s, the Science Center continues its mission to stimulate curiosity and inspire science learning in everyone by creating fun, memorable experiences. With a combination of informal and formal learning programs, the California Science Center targets the workforce of tomorrow; ensuring California remains competitive in the technological and scientific marketplace of the future. The California Science Center values accessibility and inclusiveness, operating general admission-free seven days per week, 362 days per year. The Science Center makes every effort to find opportunities to offset education programs and general operational expenses through revenues that will not preclude overall inclusiveness and accessibility: Admission fees are charged for "add-on" experiences and special one-time exhibits.

Exposition Park is located on a 160-acre tract primarily owned by the State. In addition to the California Science Center, the park houses the California African American Museum, the Los Angeles County Museum of Natural History, the Los Angeles Memorial Coliseum and Sports Arena, extensive public gardens and the Weingart Intergenerational Community Center. The Science Center, through the Exposition Park Office of Park Management, is responsible for coordination of events, maintenance of the park, public safety and parking facilities for all park entities.

Contributions from local to national level

As one of the largest and oldest science centers in the western United States, the California Science Center plays a leadership role from the local to the national level. On a national level, it is well respected for its innovative approach to informal science learning, including model programs and exhibits. Statewide, the museum and its professional learning programs support education and teacher training.

Closer to home, the Science Center serves as the catalyst for the redevelopment of Exposition Park and the surrounding community which is considered "at risk" due to the presence of crime and gang activity. Exposition Park is one of the few parks located in this inner city area. The 25-year Master Plan includes community inclusion as well as improvements to all aspects of the public park. The Science Center not only provides a comprehensive approach to science learning that attracts, retains and effectively educates a diverse audience about science, it is a dynamic member of the local and regional community.

Background: About the Science Center, Continued

Audience

The California Science Center averages attendance of 1.2 million visitors per year, including over 300,000 (28 percent) student and youth group visitors. Since its grand opening in February of 1998, it has welcomed over 9.5 million visitors. Guest demographics are approximately 43 percent white, 29 percent Latino, 19 percent African American and 9 percent Asian American.

25-Year Master Plan

In 1992, the California Legislature recognized the California Science Center Exposition Park 25-year Master Plan, organized around four thematic exhibit galleries, a demonstration school and an educator development facility. In 1998, Phase I of the Master Plan came to fruition with the opening of the 245,000-square-foot facility, housing permanent and changing exhibits, a state-of-the-art conference center and an adjacent IMAX Theater. In 2004, the Master Plan continued to unfold with the opening of a state-of-the-art facility, in the historic Armory Building, housing the Science Center School (serving 720 neighborhood children grades K-5), and the Center for Science Learning (offering professional development for teachers, classes for parents and children and hands-on science workshops for students). In 2005, ground breaking is projected to begin for Phase II of the Master Plan, featuring the museum's next permanent exhibit gallery, World of Ecology.

Public/private partnerships leverage State funding

For almost 50 years, the State has had a longstanding partnership with the California Science Center Foundation. While the original charge of the Foundation was to raise funds for exhibit development, today the Foundation not only supports exhibit development and science education programming, but raises significant funds for state capital outlay projects. In a period marked by economic skepticism at both a local and national level, the California Science Center Foundation has continued to elicit a high level of confidence among a broad array of stakeholders. Currently, the Foundation efforts are able to provide over 50 percent of the Science Center's operational and program funding. Developing this successful leverage of state funding continues to be an important part of the Science Center's philosophy. Leveraging state resources on a better than one-to-one basis, the Science Center continues to effectively improve science literacy, cost-effectively educating California's public and students of all ages to compete and succeed in the technical and global economy.

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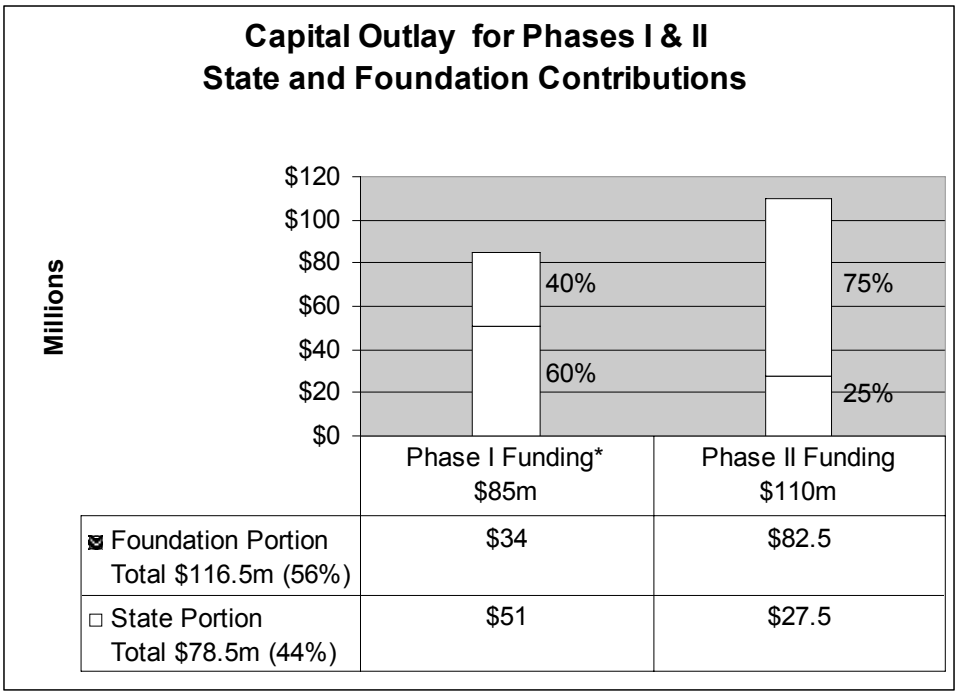
Background: About the Science Center, Continued

Foundation support – capital

Although the Science Center facilities are owned by the State, the Science Center Foundation contributes increasingly significant funds to support capital improvement projects. This capital support is in addition to the Foundation's operational/programs support, and was increased by 35 percent from the Phase I capital campaign to the Phase II capital campaign.



*Phase I figure includes Science Center exhibits and facilities only; does not include Science Center School, Center for Science Learning and Exposition Park improvements.

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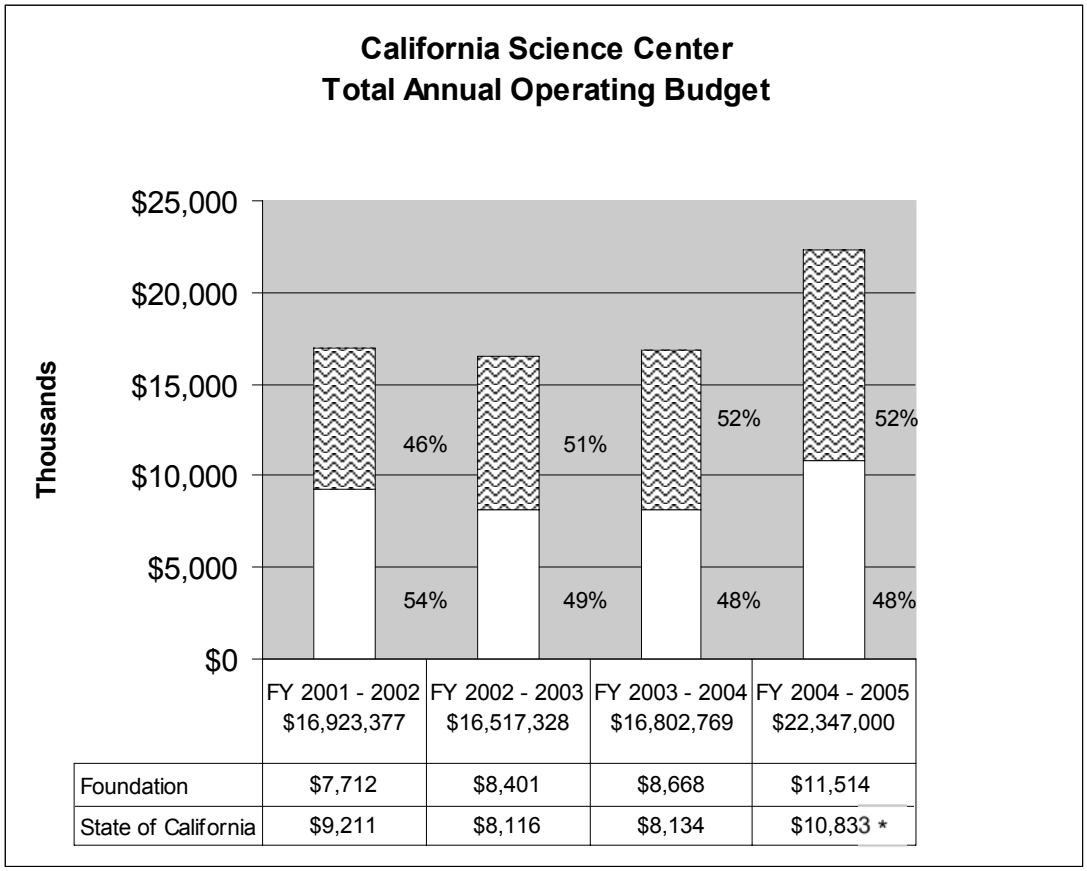
Background: About the Science Center, Continued

Foundation support – operational budget

Increasing support to the Science Center by the Science Center Foundation is a long-term trend. In 1982, the Foundation contributed only 15 percent ($775 thousand) of the Science Center's $5.2 million operational budget. For the current fiscal year, the Foundation will be able to provide 52 percent ($11.5 million) of the Science Center's $22.3 million operational budget. Regardless of the percentage of the Science Center's operational budget that the Foundation is able to raise, 100 percent of its unrestricted revenue goes to support the Science Center's operation and programs.

It is notable that the Foundation's contribution to Science Center operational expenses continues to increase, even while the Foundation is engaged in a significant capital campaign.



	FY 2001 - 2002 $16,923,377	FY 2002 - 2003 $16,517,328	FY 2003 - 2004 $16,802,769	FY 2004 - 2005 $22,347,000
Foundation	$7,712	$8,401	$8,668	$11,514
State of California	$9,211	$8,116	$8,134	$10,833 *

*The $10.833 million State operational budget for 04/05 includes $1.255 million in reimbursements.

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Earned income at the Science Center - Foundation

General admission to the Science Center has always been free to ensure the accessibility and inclusiveness that are central to the Science Center mission and to the overall educational goals of the State. However, the Science Center makes every effort to find opportunities to offset education programs and general operational expenses through revenues that will not preclude overall inclusiveness and accessibility.

The following are examples of areas where the Science Center Foundation generates revenue to support operational costs and programs:

Program/Service	Gross Revenue FY 03/04	Net Revenue FY 03/04
Explorastore	$1,178,135	$162,304
IMAX large screen format theatre	$1,785,894	$55,562
"Add-on" interactive experiences - High Wire Bike, Climbing Wall; misc. services (e.g. wheelchair)	$173,153	$119,010
Food Service (IMAX)	$287,658	$45,298
Food Service (Megabites/Catering)	$75,851	$62,623
Science Over Night	$40,918	$8,964
Science Camp	$248,198	$78,491
Science Theatre on Tour (Schools)	$70,957	($23,745)
Teacher Professional Development Programs	$98,370	($38,858)
Princess Cruise Science Facilitators	$110,296	$34,656
Special Events	$328,254	($9,831)

Earned income at the Science Center – Park Management

Daily parking for the Science Center is managed by the Exposition Park Office of Park Management. The daily parking fees of $6 per car generated **$1.13 million in revenue** to the state in FY 03/04. This revenue supports park public safety, grounds maintenance and coordination of park activities. Deposited in the Exposition Park Improvement Fund, parking revenues support these vital services provided to the Science Center and the California African American Museum.

Three Options for a Direct Admission Fee

Overview

In reviewing admission information from various museum entities, there were innumerable variations in fee structure. Based on direction from the Assembly Budget Committee and the LAO, this report analyzes options for adult general admission, while maintaining free admission for school groups. Three options for direct fee amounts were chosen to represent a range of adult fee options. They were analyzed for their net fiscal benefit to the Science Center's requirement for general fund support. By "direct fee", this report refers to a general admission fee for adults. Two "indirect" methods of generating admission-type revenue are also analyzed. The "indirect" options are discussed in a later section (page 44).

Three Fee Level Options

The three options discussed here are:

A. Nominal fee ($2), adult general admission. This fee level was considered based on its potential for minimizing attendance loss associated with a general admission fee.
B. Competitive fee ($9), adult general admission. $9 was chosen as a "competitive" fee based on fees at the Los Angeles County Museum of Natural History and the Chicago Museum of Science and Industry.
C. Top End fee ($12), adult general admission. This fee is comparable with the Exploratorium in San Francisco which had the highest admission price of any science and technology center we contacted.

Note that options for charging an admission fee to school groups are not considered in this report. The decision not to consider school group admission was based on discussions during the Assembly Budget Subcommittee hearing in the Spring of 2004.

The net fiscal impact of these options is summarized in the Fee Options Summary Table on page 17.

Continued on next page

Three Options for a Direct Admission Fee, Continued

Projecting revenues and costs based on attendance level

Many of the revenue and cost calculations in the Fee Options Summary Table are based on the attendance level. The attendance level used in the projection model is based on a five-year average of Science Center attendance. Student group attendance is subtracted from this average because none of the options include a fee for student groups:

Total Attendance	Total attendance average over 5 years	1,217,021
Student Attendance	Student group attendance average over 5 years	335,306
Non-Student Attendance	Total attendance average (less student group attendance average)	881,715

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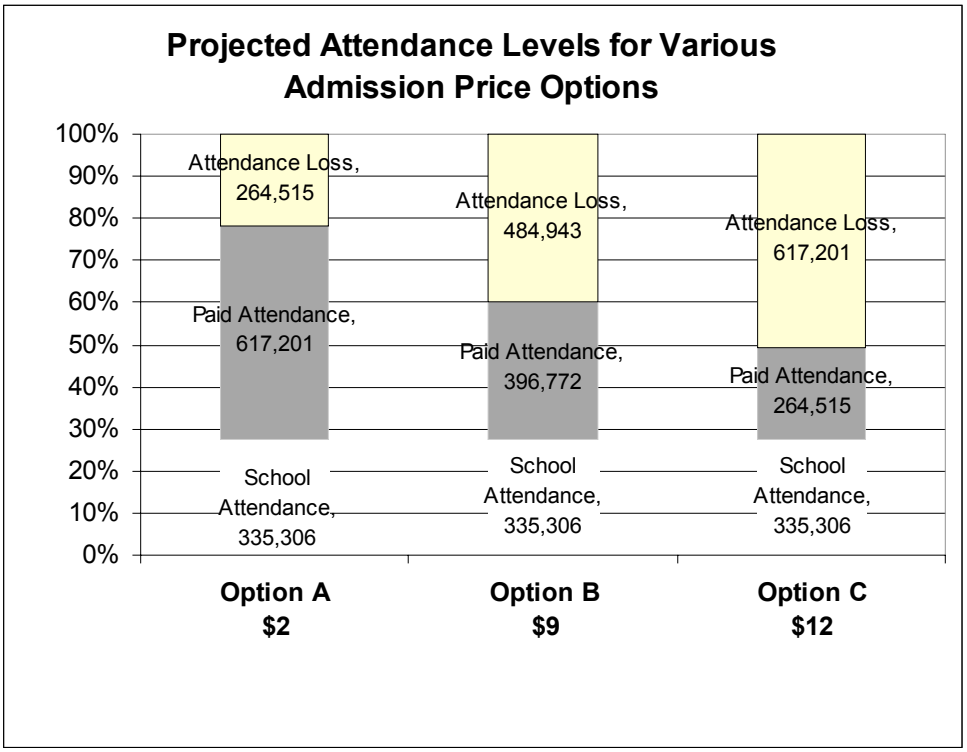
Three Options for a Direct Admission Fee, Continued

Projecting attendance loss

The three fee options outlined in the Fee Options Summary Table on page 17 include projected loss of attendance at various fee levels. See page 24 for details regarding attendance loss assumptions at various fee rates.

	Current	Option A	Option B	Option C
Projected Attendance Loss	0%	30% loss	55% loss	70% loss
Revised Attendance Level (excluding student groups)	881,715	617,201	396,772	264,515



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Three Options for a Direct Admission Fee, Continued

Seven factors affecting net fiscal benefit

Although a general admission fee provides gross revenue, a number of factors combine to radically affect the net revenue derived at a given general admission price.

The Fee Options Summary Table on page 17 summarizes the net impact of Options A, B and C. This table includes assumptions regarding factors affecting gross v. net fiscal benefit. Following the Fee Options Summary Table, these factors are discussed in detail. They include:

	Factors Affecting Net Fiscal Benefit	See Page
1	Admission price exceptions and discounts reduce gross revenue per visitor	18
2	General admission fees impact the overall attendance level (audience size)	21
3	Reduced attendance levels impact existing fee-based programs and support services	26
4	Reduced attendance levels impact acquisition of Special Programs	28
5	Admission fees impact marketing costs	32
6	Admission fees impact operational costs	35
7	Reduced attendance impact on parking revenues (Exposition Park Improvement Fund)	43

Summary Table of Fee Options

The table on the following page summarizes the net fiscal impact of three fee options. The factors affecting the net impact are detailed in following sections of this report.

Fee Options: Summary Table

The following table summarizes the net fiscal impact of three fee options. The factors affecting the net impact are detailed in following sections of this report.

Admission-fee Elements	**Current: Free**	**Option A: $2**	**Option B: $9**	**Option C: $12**
Projected Attendance Loss (Factor #2, page 21)	0%	30%	55%	70%
Projected Attendance Level	**881,715**	**617,201**	**396,772**	**264,515**
Marketing costs (Factor #5, page32)	$0	$95,666	$276,748	$245,998
Adjusted Gross admission revenue (Factor #1, page 18)	$0	$678,921	$1,964,020	$1,745,796
Admission-fee related staffing costs (Factor #6, page 35)	$0	$667,172	$600,283	$570,734
Admission-fee related operating costs (First year) (Factor #6, page 35)	$0	$152,158	$135,268	$119,602
First year Capital Costs (Factor #6, page 35)	$0	$273,550	$239,400	$218,150
Net General Admission Revenue - First Year excluding losses to existing revenues	**$0**	**($509,626)**	**$712,321**	**$591,311**
Admission-fee related operating costs (Annual) (Factor #6, page 35)	$0	$181,791	$158,934	$142,836
Net General Admission Revenue - Annual after First Year excluding losses to existing revenues	**$0**	**($265,709)**	**$928,055**	**$786,227**
Fee-Based Experiences, Services (existing revenues)				
IMAX Net Revenue	$55,562	($230,524)	($477,352)	($625,449)
Climbing Wall/Bike	$162,304	$19,026	($104,591)	($178,762)
Explorastore Net Revenue	$70,598	$44,216	$21,453	$7,796
IMAX Food Services Net Revenue	$45,298	$3,826	($31,703)	($53,012)
Megabites	$40,420	$28,294	$18,189	$12,126
Net Revenues – Fee-Based Experiences, Services	**$374,182**	**($135,162)**	**($574,004)**	**($837,301)**

Net Science Center Revenue including admissions and losses to existing revenues	**Current: Free**	**Option A: $2**	**Option B: $9**	**Option C: $12**
First Year	**None**	**($644,788)**	**$138,317**	**($245,990)**
Annual after First Year	**None**	**($400,871)**	**$354,051**	**($51,074)**

Exposition Park Improvement Fund -Office of Park Management (existing revenues) Factor #7 page 43				
Daily Parking Revenues at various attendance levels	$1,113,273	$779,291	$500,973	$333,982
Daily Parking Revenue loss		($333,982)	($612,300)	($779,291)
Total Net Loss - First Year		($978,770)	($473,983)	($1,025,281)
Total Net Loss - Annual After First Year		($734,853)	($258,249)	($830,365)

Factors Affecting Net Fiscal Benefit
#1: Exceptions to Admission Price Reduce Revenue

Overview

The revenue from paid admission is affected by exceptions and discounts to the general admission price. Fee-based museums, both pubic and private, provide discounted fees in various ways in order to attract visitors during off-peak periods. Because museums are public institutions closely tied to education, those that charge a general admission fee make exceptions for an additional reason: to ensure public accessibility. Exceptions cause the actual *gross revenue per visitor* to be significantly below the adult admission price.

When projecting the fiscal benefit of an admission fee, it is important to consider how these exceptions to the adult general admission price reduce the actual gross revenue per adult visitor and thus the ultimate revenue generating effect of the fee.

Options for fee exceptions

Institutional practices for offering greater access vary and are often used in combination. Examples include:

Special Admission Prices:

- Providing reduced admission to seniors, youth, and children
- Discounted admissions (e.g.: AAA)
- Two for one or other discount coupons
- Discount for state residents

Specific Free Admissions

- Hosting a free day, evening or week each month
- Providing free passes to community group with constituents who may not have the ability to pay
- Free admission for museum members

Suggested Donation

- A "suggested donation", allowing anyone who cannot pay to enter for what ever amount they feel able to donate. This practice includes free admission.

Continued on next page

#1: Exceptions to Admission Price Reduce Revenue, Continued

Case Study - Exploratorium: This science and technology center charges a suggested adult admission fee of $12 for adults. This is a relatively high fee among the science and technology museums contacted. The Exploratorium leadership acknowledges that their admission price may limit their audience size and affect its demography. To ensure accessibility, the Exploratorium's admissions policy is that the admission price is only a suggested donation. Anyone who cannot pay is allowed to enter the Exploratorium for free general admission. In addition, the Exploratorium offers a monthly free day, and lower standard admission fees for seniors, students, youth, children and groups. Given these fee exceptions, the Exploratorium's gross revenue per visitor is $6.62, or 55 percent of the $12 adult admission price.

It is notable that Exploratorium attendance, (463,000), is 62 percent lower than California Science Center attendance, (1.2 million). This comparison is based on figures from each institution for its most recent fiscal year, (Exploratorium 2004 and Science Center FY 03/04). The Science Center experienced a three percent increase in attendance over the previous year, while the Exploratorium experienced a two percent decrease.

Adjusted gross per visitor

Below are case studies of the relationship of adult admission fee to revenue/visitor among fee-based museums we interviewed who provided data on gross revenue per visitor:

Institution	Adult Admission Fee	Gross General Admission Revenue Per Visitor	Gross General Admission Revenue as % of Adult Price
Chicago Museum of Science and Industry	$9.00	$4.56	51%
Exploratorium	$12.00	$6.62	55%
Los Angeles County Museum of Natural History	$9.00	$3.63	40%

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#1: Exceptions to Admission Price Reduce Revenue, Continued

Conclusion

The nature and number of discounts to the adult admission price affect the gross revenue per visitor. Based on the fee-based institutions that provided information for this report, *gross revenues per visitor* range from 40 to 55 percent of adult admission price. For purposes of projecting gross revenue per visitor for the Science Center, this report will use the highest percentage reported: 55 percent.

See page 17 for a model of the potential net fiscal impact of various admission fee level options. The gross revenue per visitor calculation is used in the model.

Factors Affecting Net Fiscal Benefit
#2: Admission Fees Impact Attendance Levels

Overview

How would the level of museum attendance be impacted if a general admission fee were imposed at the various fee levels modeled in each fee option? (Option A, $2 nominal fee; Option B, $9 competitive fee; and Option C, $12 top-end fee) The answer to this question significantly affects any computation of projected revenue from general admission fees.

General admission fees reduce attendance

The experience of other institutions indicates that museum attendance levels will drop significantly upon implementation of an admission fee.

Case Study - El Paso Art Museum: This is a small publicly-funded art institution in Texas with 100,000 visitors in 2003. It is a notable example of the effect of an admission fee on attendance, and is comparable to the Science Center due to its location in an area with large populations who are "traditionally underserved", (lower socio-economic levels, persons of color). The El Paso Art Museum is a municipal institution, located in and near low-income barrio neighborhoods. The museum received significant walk-in traffic. Upon implementation of a $1 adult admission fee in 2000, attendance immediately dropped by **50 percent**. The City Council rescinded the fee after 18 months, but it took two years of free admission for attendance to return to pre-fee levels.

Case Study - Chicago Museum of Science and Industry (MSI): This institution is comparable to the Science Center in mission, urban location, size and attendance. Upon imposition of a general admission fee in 1991, attendance immediately dropped by **55 percent** from 3.79 million to 2.17 million. (Attendance had been between 3.7 and 4 million for the previous 7 years.) In the 7 subsequent years after imposition of a fee, annual attendance continued at the 2 million visitor level. *This science center lost over half of its attendance upon imposition of a general admission fee, and has never recovered its previous attendance level.* MSI President confirms that he attributes this loss in attendance to the fee, not to independent variables. The museum continues to offer 52 free days per year and reduced rates for children and seniors. (The admission fees are currently $9 adult, $7.50 senior, $5 child (Illinois residents: $8, 6.75, $4.25); with the gross per visitor $4.56.)

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#2: Admission Fees Impact Attendance Levels, Continued

Case Study - Los Angeles County Museum of Natural History: This museum is located on the same Exposition Park campus as the California Science Center and has an adult admission price of $9. FY 03/04 general public attendance (excluding school groups) at the Natural History Museum was 375,724. This was 54 percent lower than the California Science Center's general public attendance level (excluding school groups) for the same period (802,321). There may be multiple variables affecting attendance of various facilities on the same campus. However, it is reasonable to infer that some portion of lower attendance at the Museum of Natural History may be attributed to fee-based admission.

Program fees reduce attendance

At free admission-based institutions, including the Science Center, many "add-on" programs are fee-based. Attendance at fee-based programs/experiences is lower than general attendance; illustrating that a fee has a limiting effect on audience size.

Case Study - The Science Center: The Science Center currently charges a fee for "add-on experiences". The museum has hosted special one-time exhibits such as *Titanic* and *Body Worlds* that would not have been available without an admission charge. The Science Center also charges admission to other "add-on" experiences including its IMAX large format theater. Attendance at these fee-based experiences is much lower than general attendance at the Science Center. Note that this trend holds true for even the uniquely well attended *Body Worlds* exhibit, which made its premiere in the Americas at the Science Center and which enjoys an unprecedented popularity.

Program	Attendance	As % of Science Center attendance for same time period
IMAX FY 2003/04	391,344	32%
Titanic 2/9-9/1/2003	239,103	25%
Body Worlds 6/1-12/31/2004	489,015	52%

Continued on next page

#2: Admission Fees Impact Attendance Levels, Continued

Free admission increases attendance

Case Study - British National Museums: The British government implemented a free admission policy for all its museums and galleries in December 2001. For British museums formerly charging admission, this policy change resulted in an attendance increase of 72 percent, or an additional 5.2 million visitors in 2002. This trend continued with a total of 13.3 million visitors in 2003, as opposed to 7.7 million during 2001 when the admission fees were enforced. For the National Museum of Science and Industry specifically, where the prior admission fee had been $ll.33 US, the attendance increased 96 percent in 2002 (from 1,852,122 to 3,624,903). At the London Natural History Museum where the admission fee had been $12.82 US, museum attendance increased 74 percent (from 1,657,124 to 2,881,840).

Case Study - St. Louis Science Center: The St. Louis Science Center is similar in size and mission to the California Science Center, and has a similar number of visitors and a similar budget size (1.2 million visitors in 2003 and operational expenses of $17 million). Like the California Science Center, St. Louis Science Center has free admission and charges for "add-on" experiences such as special exhibits and their large format theatre. They receive 41 percent of their budget from government sources. The St. Louis Science Center Director reports his institution's attendance to be substantially higher than other fee-based institutions in the same region that are otherwise similar to the St. Louis Science Center, and he attributes this difference in attendance level as primarily a result of the St. Louis Science Center's free admission policy.

Case Study - UCLA Fowler Art Museum: The Director of the Fowler Museum was contacted by phone and confirmed that the Fowler changed their policy from fee to free in the past quarter. He indicated that this change was made in order to attract visitors. The Director also indicated that the University of California provides the publicly-funded building, building maintenance and security for the museum outside the support accounted in the museum's budget. However, no specific financial information was provided.

Continued on next page

#2: Admission Fees Impact Attendance Levels, Continued

Modeling rate of attendance loss

It is clear from discussions with experts in the museum field and from information collected that general admission fees significantly decrease attendance. It is reasonable to assume attendance would further decrease as fee rates increase. However, unique issues of museum type, location, and audience make it difficult to quantify this relationship. No studies were found that support quantified projections. In an effort to model potential attendance loss rates, this report has attached increasing loss rates to three increasing fee levels based on the following:

Hard Data: 55 percent attendance loss at $9 fee comparable to other institutions

The experience of the Chicago Museum of Science and Industry provides a starting point for projecting audience loss. This institution is of similar size and mission to the California Science Center and experienced a sustained **55 percent** loss of attendance after instituting a general admission fee in 1991. For this report, we will use a 55 percent attendance loss to model potential loss to the Science Center at a fee level comparable to other similar institutions.

Chicago Museum of Science and Industry's current adult general admission fee is $9. The Los Angeles County Museum of Natural History, located on the same campus as the California Science Center, also charges $9 per adult. For this report, we will use $9 adult admission fee as "comparable".

Inferred: 30 percent attendance loss at $2 nominal fee

The experience of the El Paso Art Museum showed that even a nominal fee reduces attendance significantly. This report will infer a conservative 30 percent attendance loss rate for the $2 nominal fee model. This 30 percent attendance loss at $2 is less than the El Paso experience of a 50 percent attendance loss at $1. Although optimistic, it was chosen to maximize the range of loss rates for analysis across the option scenarios (30, 55, and 70 percent).

Inferred: 70 percent attendance loss at $12 fee

This 70 percent loss rate represents a "worst case scenario" for attendance loss. The fee level attached to this loss rate matches that of the Exploratorium. The Exploratorium's adult admission price of $12 is the highest of comparable institutions we surveyed. Exploratorium attendance in 2004/05 (374 thousand) is over 68 percent lower than California Science Center attendance for the same period (1.2 million).

Continued on next page

#2: Admission Fees Impact Attendance Levels, Continued

Conclusion

While museum institutions are not directly comparable, the relationship of fee-based admission to smaller audience size is clear. Museums moving to a fee admission policy suffered significant loss in attendance, while those changing policy to free admissions enjoyed a significant increase. No studies are available quantifying the levels at which fee amount affects attendance. Based on available information and industry expertise, this report will use 30 percent, 55 percent and 70 percent to model loss of audience at various fee levels.

See page 17 for a model of the potential net fiscal impact of various admission fee level options. Audience loss of 30 percent, 55 percent and 70 percent are included in the model.

Factors Affecting Net Fiscal Benefit
#3: Reduced Attendance Impacts Fee-Based Programs

Overview

Although the Science Center currently charges no general admission fee, other revenues are generated from daily visitors. These revenue streams will be impacted by the drop in attendance that would accompany implementation of an admission fee. Reduction in these revenues would offset the net fiscal benefit of the admission fee.

Fee-based programs and services

In a practice similar to the St. Louis Science Center (an institution with free admission), a number of "add-on" program experiences at the Science Center are fee-based. These experiences are designed to enrich the learning value of the visit and are important aspects of the Science Center's educational programs. These revenues help cover the cost of the program. They include the Explorastore, which provides take-home educational materials, and the IMAX large screen format theater.

These programs and services have a fixed minimum operational cost as well as variable costs based on attendance level. Because of these fixed costs, the per visitor cost of operating these programs will not drop proportionately to attendance loss. For example, although IMAX pays royalties for films per visitor, other operational costs (such as projectionist and print costs) are fixed and will not be reduced as attendance declines:

Revenue Source	Gross Revenue FY 03/04	Base Cost	Variable Cost	Net Revenue FY 03/04	Option A Net Revenue 30% loss	Option B Net Revenue 55% loss	Option C Net Revenue 70% loss
IMAX	$1,785,894	$1,297,105	$433,227	$55,562	**($230,524)**	**($477,352)**	**($625,449)**
Explorastore	$1,178,135	$515,144	$500,686	$162,304	$19,026	**($104,591)**	**($178,762)**
High Wire Bike and the Climbing Wall	$124,741	$54,143	0	$70,598	$44,216	$21,453	$7,796

Profit to loss

Note that as attendance levels decline, some important educational programs and experiences will no longer generate revenue or in some cases, may become too expensive to continue operating. For example, assuming the most conservative 30 percent drop in attendance, the IMAX would no longer provide revenue, but begin to be a significant cost to the Science Center.

Continued on next page

#3: Reduced Attendance Impacts Fee-Based Programs,
Continued

Profit to loss (continued)

The educational films shown at the IMAX are approximately 40 minutes in length and are an important educational portion of the Science Center's offering, and loss of IMAX would significantly reduce the perceived value of the Science Center. This loss of perceived value could further reduce Science Center attendance. In addition, loss of IMAX would include loss of marketing dollars spent on IMAX, which benefit the Science Center as a whole.

Visitors may omit IMAX

Beyond proportionate loss of attendance at fee-based programs such as IMAX, some portion of visitors may choose to omit the value added experience of IMAX when faced with an additional fee. Although the impact of such an omission is not clearly quantifiable, it should be noted as an additional potential cost.

Conclusion

As general attendance declines, attendance at current fee-based programs will decline. However, minimum fixed costs of fee-based programs will cause an increase in the cost per visitor of those programs. This means that as attendance falls, some programs may become prohibitively costly and need to be discontinued. Loss of these programs would reduce the public's perceived value of a Science Center visit, which could additionally reduce general attendance.

See page 17 for a model of the potential net fiscal impact of various admission fee level options. Losses to program and parking income streams are included in the model.

Factors Affecting Net Fiscal Benefit
#4: Reduced Attendance Impacts Special Programs

Fee-based special exhibits

The Science Center also charges admission fees to certain one-time special exhibits. Examples of these are the recent *Titanic* exhibit (2003/04), and the *Body Worlds* exhibit (2004/05).

Charging a fee for special one-time exhibits limits accessibility. The *Body Worlds* human anatomy exhibit made its North American debut at the Science Center and is our most popular special exhibit to date. This exhibit is uniquely popular. Marketing and exceptional publicity for the exhibit has raised the Science Center profile, and therefore its attendance, by 91 percent over last year. Even so, *Body Worlds* attendance is only 52 percent of general attendance at the Science Center for the same period.

Before a fee-based special exhibit is contracted, the Science Center conducts extensive research and surveys to ensure that the exhibit will draw audiences large enough to underwrite the cost of the exhibit. Both the *Titanic* and *Body Worlds* exhibits were available only on a shared revenue basis. That is, the Science Center keeps the cost of the special exhibit admission fees as low as possible (adult admission to *Body Worlds* is $12) while assuring recovery of the Science Center's direct costs of running the exhibit. Science Center direct costs include utilities for hours of operation exceeding normal, additional guest service staff and ticket sellers required for the exhibit, public relations efforts and enhanced educational programming. The balance of the revenue goes to the exhibit owner to cover marketing (an advantage to the Science Center) and exhibit owner costs. Surplus beyond the anticipated expenses is shared between the Science Center Foundation and the exhibit owner.

Fees limit special exhibit audience size

Although many exhibit visitors come with the special exhibit as their specific destination, and popular special exhibits increase the overall size of the Science Center audience, attendance at fee-based exhibits is substantially lower than overall Science Center attendance:

- *Titanic* 25%
- *Body Worlds* 52%

This indicates that some Science Center visitors choose to omit the enriching experience, presumably based on the cost.

Continued on next page

#4: Reduced Attendance Impacts Special Programs, Continued

Free vouchers mitigate accessibility limitations

Mindful of the limiting effect of fees on attendance in contracting for such exhibits, the Science Center is careful to include some provisions for free or reduced price admissions to mitigate the fee's limitation on accessibility. As an example, the Science Center's contract with the *Body Worlds* included 6,000 free admission vouchers. The vouchers were distributed to community groups, schools and families who would not have otherwise been able to access the exhibit.

Special exhibits increase Science Center audience

Even the most popular fee-based special exhibits do not attract the attendance size that free general admission attracts; i.e., although *Body Worlds* is the most popular traveling exhibit in Science Center history, attendance at the exhibit itself has been only 52 percent of Science Center attendance for the same period. In spite of the limiting effect of the fee on attendance at the special exhibit itself, the hosting of these special exhibits has increased Science Center audience overall. Due to marketing financed by *Body Worlds* and media attention generated by the exhibit, general attendance at the Science Center increased 91 percent and IMAX attendance has increased by 112 percent. There remains a concern that audience loss due to instituting a general admission fee could make it difficult to attract these special fee-based exhibits.

Special programs and audience size

Although these fee-based special exhibits add important educational value to the Science Center, their fee limits audience size. Not all Science Center visitors choose the fee-based experience.

Program	Attendance	As % of Science Center attendance for same time period
IMAX FY 2003/04	391,344	32%
Titanic 2/9-9/1/2003	239,103	25%
Body Worlds 6/1-11/1/2004	489,105	52%

Continued on next page

#4: Reduced Attendance Impacts Special Programs, Continued

Concerns

The possible effect of a general admission fee on fee-based special exhibits is complex and could be problematic:

- Should the general admission fee cause attendance levels to decrease to a certain point, the Science Center may not be able to attract these educationally and fiscally valuable exhibits.
- Beyond audience loss from the general admission fee, the addition of a general admission fee to the necessary exhibit fee could cause additional visitors to omit the "add-on" experience.
- Inability to attract special exhibits would impact the Science Center's ability to provide premiere educational experiences to California audiences.
- Inability to attract special exhibits could have a further ripple effect on audience size at the Science Center.
- Loss of special exhibit attendance, (or complete loss of special exhibits), would reduce ancillary revenues including parking, Explorastore, food services, IMAX and other fee-based experiences.
- Loss of special exhibits would cause loss of benefit from media coverage of the special exhibit. This coverage widens Science Center audience at no cost to the Science Center.
- Loss of special exhibits would also cause loss of benefit from marketing funds spent by exhibit owners. The Science Center does not have a marketing budget, and exhibit-marketing campaigns bring a wider and larger audience to the Science Center without additional cost to the Science Center. For example, *Titanic* spent $500 thousand and *Body Worlds* spent $1 million in marketing funds.

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#4: Reduced Attendance Impacts Special Programs, Continued

Conclusion

Marketing and publicity for fee-based special exhibits (paid out of exhibit revenues) have a positive effect on general attendance at the Science Center. During the *Body Worlds* exhibit, general Science Center attendance has increased by 91 percent over the same period last year, while only 52 percent of these Science Center attendees also attend *Body Worlds*.

Reduced attendance levels would make the Science Center a less attractive venue to owners of popular traveling exhibits. This would have a multi-layered impact. The Science Center would lose not only audience, but educational opportunity, profile and audience outreach, substantial exhibit marketing funds as well as free marketing from media coverage. In addition, it would lose substantial revenue from ancillary sources such as parking.

Although difficult to quantify, impacts due to loss of special exhibits is an important consideration. However, because it is not clearly quantifiable, it is not factored into in the options model on page 17.

Factors Affecting Net Fiscal Benefit
#5: Admission Fees Impact Marketing Costs

Overview

The Science Center does not regularly fund marketing to the general public. Fee-based institutions, on the other hand, must market themselves more aggressively in order to maintain audience size. As an example, the Exploratorium in San Francisco reports spending $1.05 per paid admission on marketing, or 9 percent of the $12 adult admission price.

Marketing costs at fee-based institutions

Museum institutions contacted for this report confirmed the increased importance of marketing at fee-based institutions. However, comparisons of marketing budgets proved difficult, with each institution tracking these expenses in their own manner. Examples from museums responding to requests for information include:

- The Chicago Museum of Science and Industry confirmed a significant increase in marketing cost since their 1991 move from free admission to fee-based admission (and concomitant 55 percent loss in attendance). However, it is their policy not to share marketing cost information.
- Los Angeles County Museum of Natural History tracks marketing costs, but does not break them down per paid visit.
- State museums who responded to our request for information reported between 5 percent and 8 percent of adult ticket price are spent on marketing.
- Los Angeles County Museum of Art reported a high 22 percent of adult ticket price spent on marketing.

The following table shows marketing costs per paid admission among institutions we contacted who provided figures:

Institution/Exhibit	Marketing Cost Per Paid Admission	Adult Admission Price	
Exploratorium	$1.05	$12.00	9%
California State Railroad Museum	$0.31	$6.00	5%
Lawrence Hall of Science	$0.45	$8.50	5%
LA County Museum of Art	$2.03	$9.00	22%

Continued on next page

#5: Admission Fees Impact Marketing Costs, Continued

Marketing costs for fee-based programs

Although the Science Center Foundation does not have a marketing budget for the museum in general, marketing is funded for special fee-based exhibits. These marketing expenses are not part of the Science Center or Science Center Foundation's marketing budget, but funded from the exhibit admission fees as arranged in the shared revenue agreement for the exhibit.

The need for marketing of special exhibits illustrates the cost of attracting visitors to a fee-based exhibit. The *Titanic* exhibit's marketing budget was $500 thousand. The exhibit attracted 239,103 visitors, which was 25 percent of the general Science Center attendance for the same period. The phenomenally popular *Body Worlds* exhibit has spent $1million on marketing over a six month period, with 489,015 visitors to date as of December 31, 2004, 52 percent of general Science Center attendance.

The Science Center's IMAX large format theater is also a fee-based attraction. Marketing costs for IMAX also illustrate the cost of attracting visitors to a fee-based exhibit.

Exhibit	Attendance	Marketing Costs	Marketing Cost Per Paid Admission	Adult Ticket Price	%
Titanic	239,013	$500,000	$2.09	$9.50	22%
Body Worlds	489,015*	$1,000,000	$2.04	$12.00	17%
IMAX (FY 03/04)	391,344	$352,237	$0.90	$7.50	12%

* Attendance and marketing costs to date as of 12/31/2004

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#5: Admission Fees Impact Marketing Costs, Continued

Conclusion

It is clear from discussions with fee-based museum directors and industry experts that implementation of a fee would require the Science Center to market itself more aggressively. This is true not only because of marketplace competition among fee-based attractions of all types, but also to mitigate the anticipated loss of attendance related to implementation of a fee. It is reasonable to assume that the need for marketing would increase as fee rates increase. However, unique issues of museum type, location, and audience make it difficult to quantify this relationship.

For purposes of projecting marketing costs for the Science Center should an admission fee be imposed, this report uses marketing cost as a percentage of ticket price, using a 7.75 percent based on an average of institutions that provided marketing costs per paid admission. Note that this average excludes information from the Los Angeles County Museum of Art (22 percent) because art museum marketing requirements may be significantly different than science center requirements. It will also exclude limited engagement exhibits such as *Titanic* (22 percent) and *Body Worlds* (17 percent). The average errs on the side of the conservative.

Factors Affecting Net Fiscal Benefit
#6: Admission Fees Impact Operational Costs

Overview

Implementation and administration of any of the general admission fee options will require additional staffing, capital equipment and operational expenses. Some of these expenses are fixed, while others are affected by the number of museum visitors. Costs are not directly proportionate to attendance level.

Computing costs based on projected attendance

As described on page 21 of this report, attendance levels are projected to decline significantly based on fee implementation. Costs detailed in this section include fixed costs and variable costs that are based on projected attendance losses. Again, general public attendance used in these computations does not include student group attendance, to which general admission would not apply.

Cost summary

The cost of operating and administrating a general admission fee (staffing, capital costs and on-going operational costs) based on each of three fee options is summarized below. Breakdown of costs and justifications for projections are discussed on the following pages.

Admission Fee-Related Costs

Option # Paid Admissions	A 617,201		B 396,772		C 264,515	
	First Year	On-going	First Year	On-going	First Year	On-going
Staffing Costs	$681,030	$681,030	$614,141	$614,141	$584,592	$$584,592
Capital Investment	$273,550		$239,400		$218,150	
Operational Costs	$152,158	$181,791	$135,268	$158,934	$119,602	$142,836
TOTAL	**$1,106,738**	**$862,821**	**$988,809**	**$773,075**	**$922,344**	**$727,428**

Admission Fee-Related Staffing Costs

Staffing

Staffing projections are based on functions and staff hours required to operate the sales, ticketing, accounting and management responsibilities associated with a fee-based institution. Because the Science Center is a state facility, state classifications and pay were used to model staffing cost projections.

Projections for the level of staffing required are based on three attendance level "day types": High attendance (>3500), Moderate attendance (2000-3499) and Low attendance (<2000). The number of day types at each attendance level "day type" is projected for each of the three Fee Options. Base information was taken from average daily attendance figures over the past five years.

Total staffing costs associated with operating a fee-based facility are outlined in the chart on the following page. These costs are summarized on the following page, and are part of the model in the Fee Options Summary on page 17.

As an alternative, the State may want to consider contracting with the Science Center Foundation to provide these staffing services. The Science Center currently contracts with the Foundation for Guest Services and Information Technology (IT) support. Contracting for these services at lower pay rates could result in a 20-25 percent savings to the labor cost detailed on the following page.

Continued on next page

Admission Fee-Related Staffing Costs, Continued

Functions

Staffing functions required for operation of a general admission fee-based facility include:

- **Reservations Staff and Sales Staff** Reservations staff answer sales questions, book reservations, do account receivable collections and account for pre-sold tickets and early sales deposits. An automated phone attendant would be implemented along with staffed sales desk assistance. Sales staff provides on-site "booth" ticket sales, handling cash transactions. These functions would be staffed daily, with staffing level adjusted for daily attendance projection, and varies for each of the three fee options. (Equivalent State classifications: Control Cashier I and Office Technician, Typing)
- **Ticket Taking Staff** This function is the audit point for the ticket sales staff. They only accept printed tickets and are not allowed visual or verbal contact with the ticket sellers for control reasons. This function would be staffed daily, with staffing level adjusted for daily attendance projection, and varies for each of the three fee options. (Equivalent State classification: Museum Assistant I)
- **Accounting Officer** This function audits, accounts and handles cash control over admission-related funds. This function becomes more complex and time consuming as the ticket prices rise, since higher ticket prices generally require more discount options and promotional events in order to attract attendance. These discounts require auditing of coupons along with cash and receivables. This position modeled at full time for all three fee options. (Equivalent State classification: Accounting Officer)
- **Management** This function supervises reservations, sales and ticketing staff (accounting practices require that the Accounting Officer report elsewhere). For Options A and B, this management presence would be handled by two part time managers to ensure full daily coverage. For Option C, one manager would handle the operation, however there would not be a manager present at all times. (Equivalent State classification: Staff Services Manager II)

Admission Fee-Related Staffing Costs

			Option	A		B		C	
			# Paid Admissions	617,201		396,772		264,515	
Staff Costs:	**#Staff**	**Avg # Hrs**	**Hrly Wage**	**Labor Costs**	**#Staff Days**	**Labor Costs**	**#Staff Days**	**Labor Costs**	**#Staff Days**
Ticket Sales: Control Cashier I									
High Attendance (>3500)	8	8	$23.85	$18,317	12	$0	0	$0	0
Moderate Attendance (2000-3499)	6	7	$23.85	$126,214	126	$60,102	60	$20,034	20
Low Attendance (<1999)	3	6	$23.85	$103,032	240	$136,517	318	$153,689	358
Accounting: Accounting Officer (Specialist)									
Salary $52,356 plus 28% benefits	1	8		$67,016		$67,016		$67,016	
Ticket Takers: Museum Assistant I									
Peak/Regular Days	4	8	$11.88	$52,462	138	$22,810	60	$7,603	20
Low Attendance	3	6	$11.88	$51,322	240	$68,001	318	$76,555	358
Phone Sales/Reservations: Office Technician (Typing)									
High Attendance Days	3	8	$22.52	$6,486	12	$0	0	$0	0
Moderate/Low Attendance Days	2	6.5	$22.52	$107,150	366	$110,663	378	$110,663	378
Management: Staff Service Mgr II (Supervisory)									
Salary $75,432 plus 28% benefits	1-1.4		$46.97	$135,174	391	$135,174	391	$135,174	391
Total Staff Costs				**$667,172**		**$600,283**		**$570,734**	

Admission Fee-Related Capital Investment

Capital cost

The Science Center would need to install the infrastructure to support a fee-based general admission operation. Although the Science Center Foundation has some infrastructure in place to support ticketing operations for the IMAX and special exhibits, a general admission ticketing operations would include a number of one-time capital costs to equip and set up to become a fee-based facility.

- Some capital costs are not attendance level-related. These include the ticketing software system, a drop safe and construction of a double security entrance.
- Most capital costs are attendance level-related, but not proportionately so. For example: the necessary number of turnstiles and handicap gates initially drop off as attendance drops, (30 to 55 percent loss projection), but because there must be a minimum number of turnstiles and handicap gates, it does not fall below $28,850 as the attendance projection continues to fall, (70 percent loss projection). Equipment requirements that are projected related to attendance level include headsets, ticket printers, electronic work stations, phone stations, furnishings, crowd control stanchions, signage, and security equipment.

Cost breakdown

Total capital costs associated with setting up a fee-based facility are outlined in the chart on the following page. These costs are summarized on the following page, and are part of the model in the Fee Options Summary on page 17.

Admission Fee-Related Capital Investment

Option	A		B		C	
# Paid Admissions	617,201		396,772		264,515	
Capital Purchases First Year:	**Cost**	**Item**	**Cost**	**Item**	**Cost**	**Item**
Headset Intercom @ $700	$5,600	8 windows	$4,200	6 windows	$2,800	4 windows
Boca Ticket Printers @ $2,600	$20,800		$15,600		$10,400	
Sales Electronic Workstations @ $1825 (computer/drawer/display)	$14,600		$10,950		$7,300	
Reservations Electronic Workstations @ $1400	$8,400	6 stations	$7,000	5 stations	$5,600	4 stations
Phone System/Automated Attendant (Mitel)	$24,000		$22,000		$20,000	
Furnishings	$4,000		$3,500		$3,000	
Crowd Control Stanchions/Belts @ $200	$6,400	32 stanchions	$4,800	24 stanchions	$3,200	16 stanchions
Construction of double security entrance	$6,000		$6,000		$6,000	
Drop Safe / Bank Safe	$3,000		$3,000		$3,000	
Signage	$35,000		$31,500		$28,000	
Security Cameras and Recording Equip.	$28,000		$22,000		$20,000	
Turnstiles @ $4450 + Handicapped Gates $6,600	$37,750		$28,850		$28,850	
Ticketing Software System (Gateway Ticketing Systems)	$80,000		$80,000		$80,000	
Total Admission Fee-Related Capital Investment	**$273,550**		**$239,400**		**$218,150**	

Admission Fee-Related On-going Operational Costs

On-going operational costs

Operating an admission-based institution will require on-going operational expenses.

- During the first year of operation, some of supply costs will be lower than in subsequent years. This is because some supplies will be included in initial purchase of capital equipment.
- During the first year of operation, some of maintenance costs will be lower than in subsequent years because of equipment warranty.
- On-going operational expenses include equipment repair and maintenance, ticket stock, office supplies, printed materials, uniforms, replacement signage, staff recruiting and staff background check.

Cost breakdown

Total on-going costs associated with operating with a fee-based facility are outlined in the chart on the following page. These costs are summarized on the following page, and are part of the model in the Fee Options Summary on page 17.

Admission Fee-Related On-going Operational Costs

Option	A		B		C	
# Paid Admissions	617,201		396,772		264,515	
Supplies/Purchases Ongoing:	First Year	On-going	First Year	On-going	First Year	On-going
Ticket Stock	$9,000	$18,225	$6,500	$13,050	$5,000	10150
Repair & Maintenance Equipment	$4,000	$4,000	$3,000	$3,000	$2,200	$2,200
Repair & Maintenance – General	$1,200	$1,200	$800	$800	$600	$600
Ticketing Software Yearly Maintenance and Training (15% Purchase)	$12,000	$12,000	$12,000	$12,000	$12,000	$12,000
General Overhead (Phones, Alarms, Utilities, Management…)	$48,000	$48,000	$44,000	$44,000	$40,000	$40,000
Office Supplies	$2,400	$5,600	$1,800	$4,500	$1,400	$3,500
Bank Fees		$12,000		$12,000		$12,000
Armored Transport		$4,800		$4,500		$4,200
Printed Materials	$6,000	$4,000	$5,000	$3,500	$4,000	$3,000
Depreciation Equipment (Cap Inv./5 Years)	$54,710	$54,710	$47,880	$47,880	$43,630	$43,630
Staff Uniforms (# staff @ $140)	$4,760	$4,760	$3,920	$3,920	$2,940	$2,940
Signage		$5,000		$4,000		$4,000
Staff Recruitment – Advertising	$8,800	$6,600	$8,800	$5,000	$6,600	$4,000
Staff Recruitment - Background Checks ($56 per employee)	$1,288	$896	$1,568	$784	$1,232	$616
Total Admission Fee-Related On-going Operational Costs	**$152,158**	**$181,791**	**$135,268**	**$158,934**	**$119,602**	**$142,836**

Factors Affecting Net Fiscal Benefit #7: Reduced Attendance Impacts Exposition Park Improvement Fund Revenue

Fee-based support to the Office of Park Management

Daily parking fees of $6 per car are state revenues deposited in the Exposition Park Improvement Fund. This revenue supports the State's Exposition Park Office of Park Management budget; including public safety and security, grounds maintenance and parking operations for the Science Center as well as for the surrounding Park and adjacent state museums. Exposition Park is one of the few parks in this inner city neighborhood, holding an important role in the community's redevelopment. Loss of parking revenue would impact not only the California Science Center and California African American Museum, but the park and community as a whole.

FY 2003/04 revenue from daily parking was $1,113,273 (this excludes special events at the Coliseum and Sports Arena). Modeling parking loss at a rate proportionate to attendance loss, reduction in car traffic and resultant daily parking revenue would significantly impact the Office of Park Management's ability to provide essential public safety and security services, not only to the Science Center, but to the California African American Museum and to the public areas surrounding the Science Center. An increase in State general funding to Park Management would be required to continue essential services.

Parking Revenue FY 03/04 $1,113,273	30% Attendance Loss	55% Attendance Loss	70% Attendance Loss
Parking Revenue Loss	($333,982)	($612,300)	($779,291)
Revised Parking Revenue	$779,291	$500,972	$333,982

Conclusion

The Office of Park Management relies on Science Center attendance for daily parking fees which provide a significant portion of its revenues. Reduced parking revenues may radically impact Park Management's ability to provide public safety and park maintenance. Increase in State General Fund contribution would then be necessary in order to support these continued essential services.

Two Additional Options for Generating Revenue: "Indirect" Fees

Overview

In addition to the options for fee levels modeled on page 17, two additional "indirect" options of generating revenue are discussed below:

Option D

Increase in Parking Fee

Daily parking income for FY 03/04 was $1,113,273. This income represents 185,546 vehicles at $6 per vehicle. (Buses are not included in this income amount since buses are mainly associated with school groups.)

An increase in parking fees would increase revenue without requiring increased operational costs. However, increased parking fees could deter attendance. Parking fees are per car rather than per person, therefore, the financial and psychological impact on visitors would be lessened. In addition, marketing experts indicate that increasing prices may have a smaller impact on visitors than does a philosophy change from *free* to *fee*. That is, visitors may accept the parking fee increase more easily than they would accept initiation of an admission fee.

To the extent increased parking fees deter attendance, it is notable that the impact would affect the other park entities including the California African American Museum, as well as the Science Center. Although there is clearly a potential impact, quantification of that impact is uncertain and is not included in this report.

Parking Fee	Parking Revenue (based on FY 03/04 parking)	Additional Parking Revenue from price increase
$6.00	$1,113,273.00	$0.00
$6.50	$1,206,045.75	$92,772.75
$7.00	$1,298,822.00	$185,549.00
$7.50	$1,391,595.00	$278,322.00
$8.00	$1,484,368.00	$371,095.00

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Two Additional Options for Generating Revenue: "Indirect" Fees, Continued

Conclusion

Revenue from Option D would not require significant additional operational costs. Because parking fees impact the public per car rather than per person, an increase in parking fees is projected to have a lesser impact on accessibility and attendance than a general admission fee.

The increased fees could have some depressive effect on attendance, but this effect is not easily quantifiable and is not included in this report. To the extent that parking fee increases deter attendance, the impact would affect attendance at the California African American Museum as well as the Science Center.

In addition, the current $6 parking fee rate was determined by a recent internal review of the local market. Six dollars was determined as competitive. An increase in fee may place Exposition Park lots above competitive pricing with adjacent parking venues, such as the University of Southern California (USC) student and special event parking, which could ultimately reduce revenue.

Increase in existing fees for IMAX

In reviewing museums co-located with IMAX large screen theaters, it was determined that the Science Center's current IMAX prices are competitive with large format theatres at museum venues nationally. IMAX films are chosen based on their educational value and are generally 40 minutes in length (not feature length). According to a survey conducted by the Giant Screen Theater Association (GSTA), the ideal IMAX theater price is $7.30.

Science Centers with IMAX	Adult	Children, Junior 3+	Seniors
California Science Center	$7.50	$4.50	$5.50
Cincinnati Museum Center at Union Terminal	$6.75	$4.75	$5.75
Denver Museum of Nature and Science	$8.00	$5.50	$5.50
Fort Worth Museum of Science and History	$7.00	$5.00	$5.00
Houston Museum of Natural History	$7.00	$4.50	$4.50
Maryland Science Center	$7.50	$7.50	$7.50

Conclusion

IMAX fees are competitive. Increase in IMAX fees is not a viable option, as exceeding perceived market value would impact attendance and offset any revenue increase.

Assessing Impact of General Admission Practices on Government Support

Overview

Some level government funding was received by all public museums interviewed for this report. This was true for both institutions with free entrance practices and for those which charge and admission fee.

Fee-based museums still rely on government support

Case Study - Chicago Museum of Science and Industry: This institution is comparable to the Science Center in mission, urban location and size. It has had a fee-based admission practice since 1991. (As discussed earlier in this report, they experienced over 50 percent loss of attendance due to implementation of a fee.) Attendance last year was 1.4 million, including 330 thousand from school groups. The admission fees are currently $9 adult, $7.50 senior, $5 child (Illinois residents: $8, 6.75, $4.25); with the gross per visitor $4.56. For the last fiscal year, the museums operational budget was $31.4 million. 20 percent ($6.28 million) of the operational budget was derived from admissions revenue. Even with this revenue, **government funding comprised 25 percent ($7.85 million) of the $31.4 million operational budget** (City of Chicago and State of Illinois).

Case Study - California State Railroad Museum: This California State institution is operated under the auspices of the State Parks Department. *General admission* attendance to the museum in FY 03/04 was 380,000, with **revenue from general admissions to the museum of $1.2 million, or 24 percent of their $4.9 million operational budget**. However, it is notable that the museum changed its admissions fees and structures twice during 2003; once from $3 to $4, eliminating a youth admission fee; and once from $4 to $6, reinstituting a admission fee of $4 for youth from 6-17. **Government funding from the State Parks department comprised 40 percent of the Railroad Museum's operational budget in FY 03/04.**

It is also notable that the Railroad Museum charges separately for a number of attractions within the complex and also reports its *overall* attendance as 600 thousand for FY 03/04. This number accounts for attendance to all the museums attractions and the number may include multiple entrance counts for the same attendee. This complex admissions issue highlights the difficulty of comparing admissions, attendance and revenue numbers among institutions.

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Assessing Impact of General Admission Practices on Government Support, Continued

Government support at free public museums

Case Study - California State Capitol Museum: This California State institution reported an operational budget of $1.3 million for FY 03/04, funded through the Assembly Rules Committee budget. In addition to the operational budget, the State separately funds the museum's facility, utilities, security, maintenance and special printing projects. This museum is free, with **100 percent of its budget from State government sources.**

Case Study - University Art Museum, UC Berkeley: This state institution, with a FY 03/04 operational budget of $7.6 million, reported receiving **25 percent of its operational budget from the University of California Regents**. Outside the 25 percent of the operational budget, **the University also provides the museum's facility, utilities, security, and building maintenance.**

State off-budget support

Admissions fees provide revenue at many state affiliated museums; however these museums still require state general fund support and/or state off-budget support. The only example found where no state subsidy was required was Hearst Castle San Simeon State Historical Monument. Hearst Castle is a destination attraction, charging $20-$24 admission per tour.

In addition to the case studies cited in the case studies above, many of California's university-based museums and galleries supported by the State, whether free or fee-based, receive significant subsidy to their operational costs through operational budget funding by the State General Fund and/or through "off-budget" support of facilities, maintenance, security and utilities provided by the State.

While many state affiliated museums receive state off-budget support for facilities, maintenance, security and utilities, the California Science Center budget and General Fund contribution includes these items. In addition, the California Science Center General Fund contribution also supports administrative services for the California African American Museum and the Exposition Park Office of Park Management.

Conclusion

Admission fees do generate operating revenue for some public museums; however, this revenue does not preclude the need for subsidy from public funding.

Assessing Impact of Fee Options on the Science Center's Mission

Key question

Would imposing a general admission fee impact the Science Center's mission, service delivery, and population served? This question is raised due to the significant impact on attendance that is projected to accompany the implementation of a general admission fee.

Need for science literate workforce

In the next 20 years, one in five jobs will come from science, math and technology. In that same period, the majority of workers will be from groups traditionally under-represented in the science and technological professions. To supply California and the nation with the necessary work force, science education must reach out to these underserved communities. In a world of unprecedented technological change, our ability to compete in the global economy depends increasingly on a sophisticated science-educated workforce. Sadly, the science and math skills of American children, particularly in California, have fallen far behind those of other nations. Both the State Board of Education and the American Association for the Advancement of Science have underscored the importance of the inquiry-based and participatory learning opportunities offered by informal institutions of science learning, such as the Science Center. Exposure to, and inspiration by, the Science Center experience not only develops tomorrow's technical workforce, but also equips visitors with the skills to become lifelong learners.

Science Center audience

Traditionally, science museums and centers have served predominantly white, affluent and professional audiences. Through its location in the center of the diverse Southern California metropolitan area, and based on its mission of inclusiveness and accessibility, the Science Center prides itself in cutting through the economic, social and racial spectrum. Demographics for Science Center visitors are approximately 43 percent white, 29 percent Latino, 19 percent African American and 9 percent Asian American. School groups account for an average of 335,306 visitors annually.

Underserved communities

The Science Center occupies a central location in the most populated portion of the State. The Science Center is located in the primarily Latino and African American neighborhood of South Los Angeles. The Science Center endeavors to include and inspire this traditionally underserved population to pursue further education and learning opportunities.

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Assessing Impact of Fee Options on the Science Center's Mission, Continued

Conclusion

The significant decline of the Science Center audience size projected for all fee options represent an overwhelming loss of mission and reach. This loss is compounded by the potential loss of the specific audiences who will comprise our future work force. Affluent, white audiences are predisposed to museum visitorship and will be more likely to continue attendance in the face of an admission fee, while audiences who are traditionally less inclined to visit museums are most likely to be disproportionately affected.

Findings

Science Center contribution

The California Science Center currently serves over 1.2 million visitors per year, providing a unique and valuable educational service that supports development of California's future scientific and technological workforce. The California Science Center is able to reach this broad audience based on its values of accessibility and inclusiveness, operating admission-free seven days per week, 362 days per year. The Science Center makes every effort to find opportunities to offset education program and general operational expenses through revenues that will not preclude overall accessibility, charging for "add-on" experiences and special one-time exhibits.

Current leveraging of state funds

Currently, operations of California Science Center leverage state funds at a better than one-to-one ratio. In addition, the Science Center Foundation has provided over $116 million for the state capital outlay projects related to the museum's Master Plan Phase I and II expansions.

Current fee-based programs and support services

The California Science Center currently charges fees for specific educational programs (such as the IMAX large format theatre) and for special one-time exhibits. These fees cover or offset the costs of the educational programming.

Admission fees would reduce audience size

Implementation of a general admission fee policy is projected to cause a decline in museum visitorship of between 30 and 70 percent. In similar circumstances, the Chicago Museum of Science and Industry experienced audience loss of 55 percent. Audience loss at the Chicago Museum of Science and Industry has been sustained over a 10-year period.

FEE OPTIONS	Current $0 Fee	Option A $2 Fee	Option B $9 Fee	Option C $12 Fee
Projected Attendance Loss	0%	30% loss	55% loss	70% loss
Revised Attendance Level (excluding student groups)	881,715	617,201	396,772	264,515

* Total Science Center attendance averages 1.2 million annually; attendance figure of 881 thousand excludes 333 thousand student group attendance. Based on discussion with the Assembly Budget Subcommittee, all admission fee options considered for this report provide for continuing fee admission for student groups.

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Findings, Continued

Factors affecting gross v. net revenue from admission fees

- Gross revenue from general admission fees will be offset by reduced audience size.
- Exceptions to the admission fee (children, student groups, discounts, free days) will reduce the gross revenue per visitor.
- Marketing and operational costs of a fee-based institution will offset admissions revenue.
- Reduced audience size will have an impact on current Science Center revenue streams, including fee-based educational programs.
- Reduced attendance will also reduce daily parking revenue to the Exposition Park Improvement Fund.

Admission fees options result in net revenue loss

Due to the loss of attendance and the factors above, the net impact to the Science Center and Exposition Park would be a **net loss**. In the model, the $9 fee option provides small net admission revenue, however it is offset by the loss in parking revenue.

Net Impact on Science Center Budget

	Current: Free	Option A: $2	Option B: $9	Option C: $12
First Year	None	($644,788)	$138,317	($245,990)
Annual after First Year	None	($400,871)	$354,051	($51,074)

Impact on Exposition Park Improvement Fund (Office of Park Management) Parking Revenue

Daily Parking Revenues at various attendance levels	$1,113,273	$779,291	$500,973	$333,982
Daily Parking Revenue loss		($333,982)	($612,300)	($779,291)

Total Net Loss - First Year	($978,770)	($473,983)	($1,025,281)
Total Net Loss - Annual After First Year	($734,853)	($258,249)	($830,365)

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"Indirect" fee Option D

Increase Parking Fees: Parking fee increases could provide some additional revenue to the Exposition Park Improvement Fund that could be used to support the Science Center budget. This fee increase would not require the additional expenditures that would be required for implementation of a general admission practice.

Concerns: Because parking fees impact the public per car rather than per person, an increase in parking fees would potentially have a lesser impact on accessibility and attendance than a general admission fee. However, the increased fees could have some depressive effect on attendance. To the extent that parking fee increases do deter attendance, the impact would affect attendance at the California African American Museum as well as the Science Center.

In addition, the current $6 was determined by a review of the local market. The parking fee is competitive with surrounding alternative parking venues. An increase in fees could result in loss of Exposition Park lot use by not only Science Center visitors, but by visitors to the California African American Museum and all other park users.

The negative impact of increased parking fees on parking lot customer loss and museum attendance loss is not easily quantifiable. Excluding possible loss of attendance and lot use, a per car daily parking increase from $6 to $6.50 could at most provide $92,772 in increased gross parking revenue; a per car daily parking increase from $6 to $8 could provide $371,095 in increased gross parking revenue.

"Indirect" fee Option E

Increase IMAX Admission Fee: IMAX fee increase could provide some additional revenue, however the IMAX is currently competitively priced, and increases could depress attendance, proportionately limiting revenue. Accordingly, an increase in IMAX fees is not recommended.

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Findings, Continued

Concerns regarding additional fiscal impacts

In addition to the fiscal losses associated with attendance loss and accessibility, there are other potential fiscal impacts which are of concern, but which were excluded from the model because of the unknown level of impact.

- Compounding an admission fee to the existing fee-based educational program (such as IMAX) with could cause visitors to omit the add-on experience. This could further depress attendance and revenue at fee-based educational programs.
- Ultimately, some fee-based educational program could become too costly to continue. Potential loss of the educational programs would reduce the perceived value of the Science Center experience, further depressing overall Science Center attendance.
- Although special fee-based one-time exhibits do not provide direct revenue to the Science Center, they attract visitors and so support other revenue streams (IMAX, parking, food services). Should the loss in attendance reduce the Science Center's ability to attract these popular exhibits, Science Center attendance could be further depressed.
- Increased parking fees would impact other uses of Exposition Park, including public space and the Los Angeles County Museum of Natural History.

Concerns regarding non-fiscal impacts

There are also significant non-fiscal concerns associated with implementation of a fee-based admission practice at the Science Center:

- Audience loss reducing the ability to reach the public whom the California Science Center's educational mission serves.
- Audience loss disproportionately impacting traditionally underserved communities from whom future science literate workforce will be drawn.
- Loss of educational value per dollar as attendance declines and cost per visitor rises.

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Findings, Continued

Conclusion

Based on research, information collected and discussion with responding museum institutions, this report concludes that, for some museums, admission fees can in some cases generate revenue to recover some portion of operational costs, however generally not sufficiently to replace all need for public funding. Full cost recovery has not proved to be a reasonable expectation. At the same time, admission fee practices come at a cost to visitorship levels and the educational reach of the institution.

In the case of the Science Center, projections indicate that while an admission fee may provide gross revenue, the ultimate effect will be a net fiscal loss, as well as a loss to the Science Center's mission, reach and educational value to the public.

The Science Center already leverages state funding on a one-to-one basis and continues to work with its Foundation partners to reduce reliance on the State General Fund. The Science Center continues to actively seek and find ways to gain revenue and offset program and operational costs while ensuring that the Science Center is accessible to the largest and most diverse audience possible; achieving its mission to educate and inspire California's future technology workforce.