City of Irvine Report by Staff on Economic Impact
Solar Decathlon 2013
February 2014

Summary of Irvine community economic impact from the Solar Decathlon

2,000 attendees directly tracked:		
Hotel/per diem for teams staying in Irvine	$1,100,000	
Per diem for teams staying outside Irvine	950,000	
Hotel/per diem for DOE and support staff	173,000	
Volunteer per diem spending	115,000	
Parking revenue	65,000	
Hotel tax	36,000	
		$2,439,000
62,000 attendees not directly tracked at:		
$72 per diem industry standard (assumes hotel, other costs)		$4,464,000
		$6,903,000
Industry standard multiplier of 1.60		X 1.60
Total direct and indirect economic impact		$11,000,000

The following details the methodology used:

Economic impact from the U.S. Department of Energy Solar Decathlon 2013 and XPO reflects the level of economic activity from March 2013 through October 2013 from visitor stays of collegiate teams and support staff, families, friends, alumni and tourists; overall direct and indirect spending; jobs from event-specific hiring; tourism and other hospitality, especially dining and food purchases; transportation; and spending from 64,000 visitors.

The estimated total economic impact to the Irvine community was $11 million. This is based upon the industry standard of $72 per day by people who visit Irvine and hotel costs of $127 per day. Combining the two numbers, City staff estimates that an overnight visitor spent an estimated $199. Importantly, the estimated total was supported by quantifiable areas of impact that City staff tracked – teams, DOE and support staff, and volunteers.

- The $11 million impact also includes non-team and non-DOE visitor spending; sales and hotel tax; alumni and other celebrations and special events that were held at the Irvine Spectrum Center and elsewhere in the City of Irvine; and spending at home improvement stores as teams needed equipment for constructing 19 full-sized homes.

- This estimate contemplates hotel stays that were not tracked by City staff and other areas that clearly had an economic impact, but whose total could not be verified by a single number.

Direct and indirect impact equals an estimated $11 million:
We used an industry standard for visitor expenditures with a multiplier of 1.60 to reach the total direct and indirect economic impact of $11 million for the entire event.

Here is how:

In terms of the 2,000 or so people that City staff was able to track – teams, DOE staff and support staff, and volunteers – direct economic impact was an estimated $2.44 million.

- The quantified direct impact of $2.44 million is primarily in six categories:
  - Hotel and per diem visitor spending for the teams that stayed in Irvine hotels: $1.1 million.
  - Hotel and per diem visitor spending for the DOE staff and support staff that stayed in Irvine hotels: $173,000.
  - Per diem visitor spending, excluding hotel stays, for teams that stayed outside of Irvine: $950,000.
  - Volunteer per diem spending: $115,000.
  - Parking revenue: $65,000.
  - Hotel tax generated by teams and DOE staff and support staff that stayed in Irvine hotels but not including other, untracked, hotel stays: $36,000.
  - Estimated sales tax from the event's period is not yet available.

- We then applied $72 per day to the rest of the attendees. Of those 62,000 visitors, many stayed in Irvine hotels, rented cars, ate at Irvine restaurants and supported teams in various ways. That average per diem is high for a day visitor and low for an overnight visitor. The estimated cost for an overnight visitor is $199, counting in per diem costs and per diem hotel rates.

Long-term economic impact:
Long-term economic impact can be expected from this one-of-a-kind event, because:

- This unique 'conference' was presented to generate future home and office purchases based upon energy efficient education. The Solar Decathlon served as a call to action to thousands of visitors. They were educated through tours and student information at the solar houses as well as products, experts and information in the XPO area. Homebuilders likely were influenced as well.

Twin efforts of marketing and economic impact:
The PIO Division and others worked to combine the marketing and economic impact of the Solar Decathlon that had been a multiple success in Washington, D.C. and that promised to be an appealing topic brought to a dynamic region. Efforts included working with the Irvine Chamber's Destination Irvine to prompt hotel visits as well as

communication with the Irvine Company, owner of the City's major retail and entertainment location (the Irvine Spectrum Center).

Hotel stays by teams and the DOE and support staff:
The economic impact of spending by competing Solar Decathlon teams that stayed in City of Irvine hotels, apartments or rental housing, is $1.1 million. The estimated impact from DOE and support staff staying in Irvine hotels is $173,000.

We received assistance from the Irvine Chamber of Commerce and its Destination Irvine outreach for hotel stays, and between the Chamber's research and our own, at least 9 teams stayed in City of Irvine hotels, apartments or rental housing.

- Based upon the international flavor of this event with four teams traveling from out of the country, and only two of the 19 teams within driving distance, we are confident that a significant number of out-of-town visitors/supporters also stayed in Irvine hotels.
- Adding to the economic impact, the Department of Energy staff and support staff stayed at Candlewood Suites and the Doubletree in Irvine.

Team food and beverage impact:
The economic impact of team spending for food and beverage is estimated at $950,000.

In terms of team spending for food, about 72,000 meals were consumed by the 800 students over the multiple weeks in which they were here.

- Since we have already calculated the average spending per day for the nine teams that stayed in Irvine hotels, to avoid a 'double-dip' in estimated spending, we calculate that the other 11 teams that stayed elsewhere spent $950,000 on meals/beverages, shopping, attractions and transportation, excluding hotel stays.
- In addition, our 'the-xpo.org' website had a "Where to Eat" category and specifically provided information to the students and other visitors for restaurants in Diamond Jamboree and Irvine Spectrum Center, two of our high-visibility and restaurant-rich centers. As a bonus, sponsor Irvine Company hosted a pre-event dinner for the students at the Irvine Spectrum Center, to introduce them to the center as a destination venue during their month-long stay.

Volunteer impact:
Direct economic impact from volunteers was an estimated $115,000.

According to the U.S. Department of Energy, here are the numbers:

- There were 1,173 registered volunteers plus 30 interns, with more than 7,000 hours worked in 1,600 shifts.
- Based upon the industry standard of spending for meals, shopping, attractions and transportation of $72 per day, and volunteers working an average 1.36 shifts apiece, economic impact from volunteers is about $115,000.
- This does not include hotel stays, of which we do not have data. Several volunteers were from out of town.

Sales and hotel tax impact:
The City of Irvine receives 1 cent per taxable sales dollar, as well as 8% hotel tax.

- Sales tax is reported quarterly; sales tax data for the fourth quarter, which includes October, will be reported at the end of March 2014.
- Regarding hotel tax: By calculating the estimated per room rate for the team stays in Irvine as well as the U.S. Department of Energy's hotel stays in Irvine, the hotel tax specific from the event to the City was about $36,000. This does not include hotel tax generated from the thousands of visitors who likely stayed in Irvine hotels but which were not specifically tracked.

Irvine Spectrum Center economic impact:
A strategy to bring dining and entertainment dollars to the City of Irvine was to promote the Irvine Spectrum Center as a destination venue for teams, their families and supporters.

- Early this year, City staff began coordination through the U.S. Department of Energy's contacts with alumni groups and the Irvine Spectrum Center's owner, Irvine Company.
- Through coordination between City staff and a manager at the Irvine Spectrum Center, at least seven alumni groups associated with the Solar Decathlon – USC, Stevens, Santa Clara, UNLV, Middlebury, Norwich and Carleton – coordinated directly with the Irvine Company for an event or multiple events for alums and friends before and during the Solar Decathlon.
- Perhaps the most unique request came from Santa Clara alums, who requested space to celebrate Mass, to be immediately followed by a meal.

Reputational value:
Positive impressions were the norm of the thousands who came. They soon learned that this was easily a five-hour event, a time period needed to properly tour a number of Solar Houses, meet the collegiate students, visit the XPO and continue the visit into the activated portions of the Orange County Great Park, such as the art gallery and the Farm + Food Lab.

- This required an extended visit at least for the day, and a longer visit for those who sought more detail from the event.

Having the Solar Decathlon in the host city of Irvine and the destination location of the Orange County Great Park provided reputational advantages to the City itself. Among other things, an assurance of a job well done exposes Irvine and the Great Park to first-time visitors, and prompts return visits. The event also was a magnet for business.

- Already, Irvine is No.1 among American cities of more than 200,000 residents in terms of jobs-to-population ratio. Many businesses located here are and want to be associated with energy-efficiency.
- As the nation's premier master-planned city, another component that mirrors this event is the homebuilding industry, which in and around Irvine is providing options for energy-efficient living. After the impressions of a Solar Decathlon in Irvine, it is likely those homebuilders, some of whom were presenters in the

Powerful Ideas Symposium, will be further influenced by consumer interest, education and demand.

- To help quantify the value to a host city, the U.S. Department of Energy produced a 200-page report in 2012 that provides an "impact evaluation" of the many aspects of the international event. Among its evergreen topics, meaning those that would have an impact on any host city:
    - A long-term impact that will be felt everywhere, and perhaps in Orange County, will come from the solar decathletes themselves, who have gained experience, knowledge and marketability in the energy efficient/clean-energy field through their two-year commitment to their respective projects.
    - As a sidelight to 'impact evaluation,' one of the City of Irvine's ongoing, intended economic development goals is to provide the opportunities not only for a well-rounded, educated workforce, but for the many businesses here to hire and hire well.
    - Many of the 800 students were, in essence, in the job market in Irvine during the Solar Decathlon.

- Expected outcomes include the actions that homeowners and others would take if opportunities that they learned at the event were understood and if the unique training for the decathletes was effective.
    - Will the decathletes take their new wisdom and apply it to the marketplace?
    - Will the marketplace shift as homeowners become better educated about energy-efficiency?

- Among the 2012 report's recommendations was to shift the geographic location of the Solar Decathlon, which indeed occurred in 2013 with Irvine being chosen as the first location ever outside of Washington, D.C.
    - The advantage, and thus the value, includes a new audience and a demonstration of cost-effective solar houses for a region, in this case, Southern California, that is expected to draw the interest of homebuilders, architects, financiers and a better-educated homeowner.
    - In addition, a new location may draw new competing teams with new ideas; we are assured that UC Irvine is applying for the first time ever for 2015, inspired by the location near its campus.

Orange County Great Park acreage impact:
Few cities in America have the amount of space in one location to provide the acreage needed for this event's three components – the Solar Decathlon Village, the XPO, and the activated portion of parkland.

The Orange County Great Park, as the destination venue for the U.S. Department of Energy Solar Decathlon 2013 and XPO, utilized 76.7 acres in total.

The breakdown, by acreage:

- Activated portions of Orange County Great Park: 17.2 acres.
- Parking/runways: 14.3 acres
- Festival site: 11.4 acres
- Toyota Ride & Drive site: 11 acres
- XPO site: 9.1 acres
- Solar Decathlon Village site: 7.4 acres
- E-bike site: 6.3 acres

Marketing and media impact:
While placing a value on media impact is an inexact science – what was the media worth if ad space had been bought for that section, page, or radio spot? – the Department of Energy valued that impact at $80 million.

The goal from March 2013 through the event's close of October 13, 2013 was to educate the public to a first-ever international event on the West Coast; to provide details of that event such as time, date and place; to match earned media with paid media and with media sponsorships to get across that message; to do local and regional presentations to interest groups and business/education leaders; and to reach a marketing crescendo two weeks out.

The U.S. Department of Energy Solar Decathlon 2013 and XPO generated approximately 2.02 billion media impressions, according to a preliminary report conducted by the U.S. Department of Energy.

- A media impression is determined by taking into account the potential readership or listenership of the media involved. It is the number of people who may have seen an article, heard something on the radio or in a podcast, watched something on television, or read something on a web page or blog or advertisement.

- That media coverage since January 2012 included:
    - 350 print articles
    - 1,700+ online articles
    - 180 broadcast television stories
    - 137 radio segments

- Coverage came in all types of media, including:
    - PBS-SoCal ran a preview story with host Doug Kriegel, an Emmy Award-winning broadcaster.
    - Green Builder Magazine ran a 32-page Cover Story.
    - Urban Land Magazine ran a major story.
    - National and international coverage, most of which mentioned Irvine by name, included newscasts from Austria when its team won overall best solar house; radio interviews with Richard King, students and faculty from

KPCC-89.3-FM with Larry Mantle; and stations from Dallas to Albuquerque.
    - Online stories from each of the campus's sites as well as many others, including a video from Santa Clara University students delivered to Gov. Brown in the form of an invitation.
    - The Orange County Register's stand-alone, special section published prior to opening day.
    - The Orange County Register's months-long reporting of the event, including significant coverage in the Irvine World News.
    - Three major print stories in the L.A. Times.
    - And stories published in USA Today; San Diego U-T; salon.com; and the Sierra Club. CNBC broadcast live during one of the days.

- There were numerous and significant paid and in-kind media that included:
    - The Orange County Business Journal.
    - The Irvine Auto Center freeway sign promoting the event.
    - And advertising that appeared from the Orange County Register and OC Register METRO Magazine to the City's own Inside Irvine Magazine.

- Importantly, the City's ICTV team produced video prior to the event, provided daily b-roll to the U.S. Department of Energy during the event, edited footage as you have seen tonight after the event … and is editing a full-length documentary to be sent nationwide to PBS stations.

Several staff presentations also were made, to make decision-makers aware; and sponsors and programmatic partners used their communication tools to help promote the Solar Decathlon to their clientele and interest groups.

Our social media was active as well.

Thank you.