IV. Environmental Impact Analysis

K.4 Utilities—Electricity

1. Introduction

The following section is based on the *Electrical System Technical Report* prepared by KPFF Consulting Engineers (2012) for the Project. The full text of the report is included as Technical Appendix Y to this Draft EIR.

The analysis of utility impacts focuses upon the relationship between supply and demand. In general, the supply side involves both the availability of the resource and the ability to convey the resource. The demand side involves the net incremental demand generated by the Project.

The analysis below describes the existing on-site electrical suppliers and respective distribution systems that currently serve the Project Site. Additionally, the discussion of existing on-site conditions includes an analysis of the existing annual electrical consumption and demand.[1] This section also analyzes the proposed Project's use of electricity, based on the projected electrical consumption and demand attributable to the various components of the Proposed Project. Based on this analysis a determination is made as to whether the current electrical suppliers have adequate capacity to meet the Project's future consumption and whether the existing distribution systems can support the Project's forecasted demand.

2. Environmental Setting

a. Regulatory Framework

There are no regulations concerning electricity at the local, regional, or Statewide levels that are specific to the analysis of demand for electricity. Such impacts are addressed through CEQA review, pursuant to guidance in the L.A. CEQA Thresholds Guide, as further discussed below.

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[1] *Electrical demand, for the purposes of this analysis, is defined as the maximum amount of electricity used at the Project Site at any given point in time.*

b. Regional Conditions

The Los Angeles Department of Water and Power (LADWP) serves approximately four million people and is the nation's largest municipal electric utility. The service area for LADWP covers the City of Los Angeles and many areas of the Owens Valley, with annual sales exceeding 24 million megawatt-hours (MWh). LADWP is a vertically integrated utility, both owning and operating the majority of its generation, transmission, and distribution systems. LADWP strives to be self-sufficient in providing electricity to its customers, and to do so by maintaining generation resources that are equal to or greater than its customers' electrical needs.

LADWP obtains electricity from various generating sources that utilize coal, nuclear, natural gas, hydroelectric, and renewable resources to generate power. LADWP obtains power from four municipally owned power plants within the Los Angeles Basin, LADWP hydro-generators on the Los Angeles Aqueduct, and shared-ownership generating facilities in the Southwest. LADWP also purchases excess power from self-generators interconnected with the LADWP within the City limits.

In the 2010 Power Integrated Resources Plan (IRP) the DWP forecasted trends based on total energy sales. As shown in Table IV.K.4-1 on page IV.K.4-3 the energy consumption is shown by fiscal year.

Table IV.K.4-2 on page IV.K.4-4 describes the breakdown of LADWP energy resources according to the 2010 Power Content Label.[2] The LADWP Board of Commissioners has adopted a policy that 20 percent of the power generated by 2010 would come from renewable resources, increasing to 35 percent by 2020.[3]

c. Local Conditions

In the downtown area of the City, larger electrical loads are supplied directly from LADWP's 34.5 kilovolt circuits that originate from the Market Receiving Station P, located at 560 South Wall Street, approximately 1.5 miles northeast of the Project Site. Smaller individual electrical loads in the downtown area are supplied by LADWP's 4.8 kilo Volt

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[2] *The Power Content Label was created by the California Energy Commission. The Power Content Label assists consumers in making informed decisions by providing a uniform way for electric service providers to deliver clear and accessible information on their existing and new electricity products.*

[3] *LADWP, "Power Integrated Resources Plan" (IRP), 2010.*

Table IV.K.4-1
IRP Trend Case Energy Sales
(Gigawatts)

Fiscal Year	Total Sales	Net Energy for Load
2010–2011	23,493	26,472
2011–2012	23,586	26,711
2012–2013	23,814	26,863
2013–2014	24,093	27,183
2014–2015	24,366	27,486
2015–2016	24,529	27,761
2016–2017	24,795	27,991

Source: Los Angeles Department of Water and Power, 2010 Integrated Resource Plan, Table A-1.

distribution system, which for this part of the City originates from Distribution Station 42, located at 432 South Grand Avenue, approximately 1.2 miles northeast of the Project Site.

A receiving station is a substation consisting of 500, 230, 130 kilo Volt to 34.5 kilo Volt transformers, primary switches, capacity banks and distribution busing. A distribution station consists of 34.5 kilo Volt to 4.8 kilo Volt transformers, primary switches, capacitor banks and distribution busing. The difference between the two is the incoming voltage and size of transformers, with the receiving station being larger. The receiving and distribution stations are LADWP facilities that do not generate power. Figure IV.K.4-1 on page IV.K.4-5 shows the existing infrastructure for locations near the Project Site.

d. On-Site Conditions

The Project Site receives electrical service from LADWP. There are two existing LADWP electrical substations located within the footprint of the Los Angeles Convention Center (Convention Center) West Hall that would be removed as part of the construction of the new Event Center. There is also an existing LADWP substation south of Pico Boulevard, currently serving the South Hall, which would be protected in place and continue to operate under the Proposed Project. In addition, four LADWP satellite substations are located in the Concourse Building. Electrical lines in the area are located along Figueroa Street as well as Pico and Venice Boulevards. Electrical service to the Convention Center, in addition to the on-site substations and satellite substations, is provided by the lines located within Pico Boulevard, whereas STAPLES Center receives its electrical service from two lines in Chick Hearn Court served from main lines in Figueroa Street.

Table IV.K.4-2
LADWP Energy Resources 2010 Power Content Label

Energy Resources	LADWP Power (% Actual Mix)	LADWP Green Power (% Actual Mix)	2010 CA Power Mix[a] (for comparison)
Eligible Renewable[b]	20	100	14
Biomass & Waste	4	59	2
Geothermal	1	0	5
Small Hydroelectric	7	41	2
Solar	0	0	0
Wind	8	0	5
Coal	39	0	7
Large Hydroelectric	3	0	11
Natural Gas	22	0	42
Nuclear	11	0	14
Other	0	0	0
Unspecified sources of power[c]	5	0	12
Total	**100**	**100**	**100**

[a] *Percentages are estimated annually by the California Energy Commission based on the electricity sold to California consumers during the previous year.*

[b] *This is in accordance with Los Angeles City Council's action on 10-4-04 for File No. 03-2688 (RPS).*

[c] *Unspecified sources of power accounts for electricity transactions that are not traceable to specific generation sources This is in accordance with Los Angeles City Council's action on 10-4-04 for File No. 03-2688 (RPS).*

Source: KPFF Consulting Engineers, 2011; LADWP, 2010.

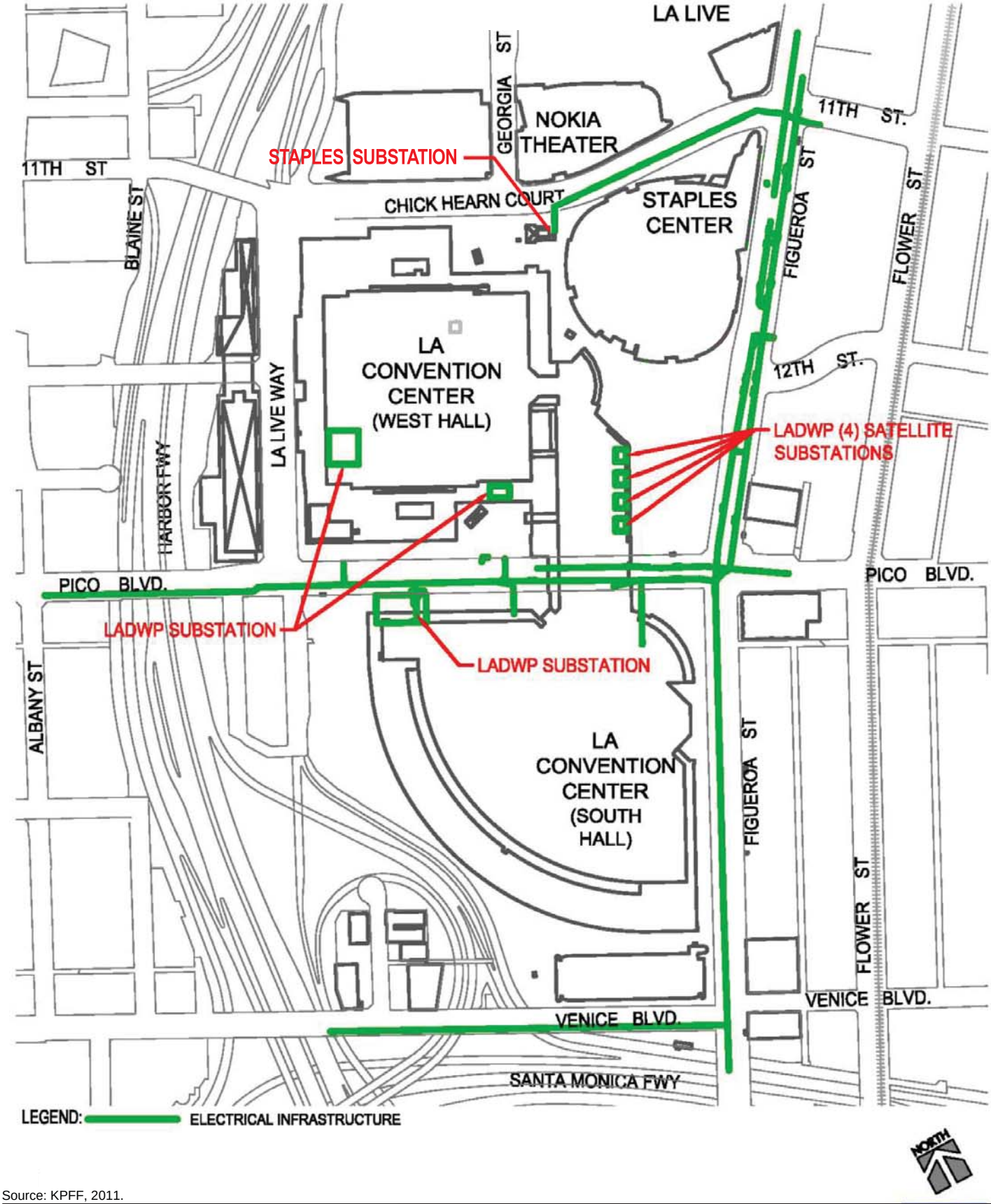
e. Existing Demand

Existing electrical consumption and demand was determined based on engineering forecasts provided measured in kilowatt hours (kWh) for daily consumption, and megawatt hours (MWh) for annual consumption, whereas peak demand is measured in kilovolt amperes (kVA). Existing electrical consumption and demand are based on STAPLES Center and Convention Center data from year 2010, as shown in Table IV.K.4-3 on page IV.K.4-6.

3. Environmental Impacts

a. Methodology

Separate engineering forecasts for each of the Proposed Project's main structures (i.e., Event Center, New Hall, L.A. Live Way Garage, and the Bond Street Garage) have



Source: KPFF, 2011.

matrix environmental

Figure IV.K.4-1
Project Site Existing Electrical Infrastructure

Table IV.K.4-3
Existing On-Site Conditions

Existing On-Site Component	Consumption		Peak Demand (kVA)[a]
	Daily (kWh)	Annual (MWh)	
STAPLES Center (Excluding Central Plant)	41,589	15,180	2,904
Convention Center			
Convention Center South and Concourse Halls (existing to remain)	26,155	9,547	5,659
Convention Center West Hall (excluding Central Plant)	6,259	2,285	2,788
Convention Center Subtotal	32,414	11,831	6,335[a]
Parking Garages			
Cherry Street Garage	914	334	218
Venice Boulevard Garage (existing to remain)	1,193	436	285
Parking Garage subtotal	2,107	769	377[a]
Central Plants			
STAPLES Center Central Plant	14,074	5,137	2,257
Convention Center Central Plant	13,425	4,900	4,950
Central Plant subtotal	27,499	10,037	5,970[a]
Total Existing	**103,608**	**37,817**	**15,586[a]**
Total Existing changing under Proposed Project[b]	**20,598**	**7,519**	**5,967[a]**

kWh = kilowatts per hour

MWh = megawatts per hour

kVA = kilovolt amperes

[a] *Totals and Sub-Totals are based on 100 percent STAPLES Center and 75 percent Convention Center facilities occurring concurrently. For each individual Existing On-Site Component Peak Demand is calculated at 100 percent.*

[b] *Total Existing that changes under the Proposed Project includes the following: Convention Center West Hall, Cherry Street Garage, and Convention Center Central Plant.*

Source: Syska Hennessy Group Inc., 2012.

been prepared. Since the Proposed Project has activity levels that change on a virtually daily basis, a mathematical average of annual energy consumption at the Project Site may not represent the most accurate depiction of the Proposed Project's net increase in annual energy consumption. The Event Center would include the following four general categories of activities describing how the facility would be used: (1) Spectator Events (e.g., sporting events and concerts); (2) Exhibition Events (e.g., convention center events); (3) Meeting Room Use; and (4) Non-Event Use. The first step in the analysis of energy consumption

by the Event Center is to determine the number of days each of these four types of events would be occurring. In order to calculate annual consumption, these various events are then multiplied by the total number of event days for each event (i.e., some events last multiple days). Convention Center energy consumption is based on engineering forecasts linked to the annual event profile. Further, daily consumption is estimated based on forecasted peak demand and hours of usage.

The analysis of available future supplies to meet the proposed Project's consumption demand is based on the forecasts set forth in LADWP's 2010 Power Integrated Resource Plan. A determination was made by the LADWP as to whether the existing electrical delivery systems would be able to supply the projected annual electrical consumption and support the demand of the Proposed Project, whether improvements may be required, and how the systems would be maintained. Chillers associated with existing STAPLES Center central plant may be retained or replaced. In order for a conservative analysis, it is assumed existing chillers would remain in operation. Given the existing capacity of the Project Site's electrical system and future projected consumption and demand, an assessment was made of the Proposed Project's impacts.

b. Significance Thresholds

Appendix F of the CEQA Guidelines states that the potentially significant energy implications of a project should be considered in an EIR. Environmental impacts, as noted in the CEQA Guidelines, may include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources;
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

In the context of the above thresholds, the City of Los Angeles CEQA Thresholds Guide states that a determination of significance shall be made on a case-by case basis, considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity enhancing alternations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy conservation measures, particularly those that go beyond City requirements.

Based on these factors the Project would have a significant impact if:

- The Project would result in an increase in demand for electricity or natural gas that exceeds available supply or distribution infrastructure capabilities.
- The design of the Project fails to incorporate energy conservation measures that go beyond existing requirements.

c. Project Design Features

The Applicants have prepared the Convention and Event Center Sustainability Program (see Appendix E of this Draft EIR). A number of the measures and programs set forth in that document pertain to energy conservation and reductions of impacts pertaining to electrical usage. Under the heading of Energy and Atmosphere, the New Hall would implement additional efficiency measures to achieve a 20 percent reduction in energy consumption relative to the California Energy Efficiency Standards and would also comply with the required measures of the 2010 Los Angeles Green Building Code.

The Event Center would also implement electrical efficiency measures to achieve a 14 percent reduction against the estimated baseline.[4] This would be achieved, in part, by optimizing energy performance through the installation of best available technology for HVAC, lighting, and all major electrical appliances and control systems; and through educating employees on energy efficiency through an Energy Management System (EMS).

[4] *Energy Baseline calculated according to Title 24 2008 as cited in the City of Los Angeles Green Building Code.*

The L.A. Live Way Garage and the Bond Street Garage would feature energy efficient lighting. In addition, a minimum of 12 electric car charging stations would be provided within the on-site parking garages. Further, the roof of the L.A. Live Way Garage would be equipped with solar panels, which would replace the existing solar panels on the roof of the Cherry Street Garage. Specifically, the L.A. Live Way Garage would include a solar array system with a peak capacity of between approximately 375 kW and 475 kW output to the electrical system.

d. Project Impacts

(1) Construction

Electrical power would be consumed to construct the new buildings and facilities of the proposed Project. This demand would be supplied from existing electrical services within the Project Site and would not affect other services as there is sufficient existing capacity to also meet the Project's construction demands. Overall, demolition and construction activities would require minimal electricity consumption and would not be expected to have any adverse impact on available electricity supplies and infrastructure. Therefore, Project impacts on electricity supply and infrastructure associated with short-term construction activities would be less than significant.

Construction impacts associated with these infrastructure upgrades would primarily be confined to trenching. As discussed further in Section IV.B.1, Transportation, of this Draft EIR, to reduce any temporary pedestrian access and traffic impacts, the contractor would implement a Construction Management Plan, which would ensure safe pedestrian access and vehicle travel in general, and emergency vehicle access, in particular, throughout the construction period. Overall, when considering impacts resulting from the installation of any required electrical infrastructure, all impacts are of a relatively short-term duration (i.e., months) and would cease to occur once the installation is complete. Additional information regarding the construction impacts associated with the installation of on-site upgrades to the electrical system are addressed in Sections IV.E, Noise, and IV.F.1, Air Quality, of this Draft EIR.

(2) Operation

(a) Electricity Consumption

Table IV.K.4-4 on page IV.K.4-10 presents the forecast of the increase in electrical consumption under the various operating conditions at the Event Center, whereas Table IV.K.4-5 on page IV.K.4-11 presents the forecast in electrical consumption for all Project components based on the net increase in development under the Proposed Project. As shown in Table IV.K.4-4, electrical consumption during a Spectator Event would consume

Table IV.K.4-4
Event Center Electricity Consumption and Demand Under Various Event Days

Type of Event Day	Consumption		Peak Demand (kVA)
	Daily (kWh)	Annual (MWh)	
Spectator Event Use			
Interior Lighting[a]	18,120	942	3,000
Exterior Building Lighting (excluding signage)[b]	5,000	260	400
Building Signage (includes LED signage)	7,500	390	900
Mechanical Equipment[c]	55,800	2,902	6,000
Misc Power[d]	28,800	1,498	2,200
Total Spectator Event	**115,220**	**5,991**	**12,500**
Exhibition Event Use			
Interior Lighting[a]	11,400	160	1,900
Exterior Building Lighting (excluding signage)[b]	5,000	70	400
Building Signage (includes LED signage)[e]	1,800	25	150
Mechanical Equipment[c]	33,300	466	3,800
Misc Power[d]	9,600	134	800
Total Exhibition Event	**61,100**	**855**	**7,050**
Meeting Room Use			
Interior Lighting[a]	4,100	308	400
Exterior Building Lighting (excluding signage)[b]	5,000	375	400
Building Signage (includes LED signage)	3,000	225	150
Mechanical Equipment[c]	18,000	1,350	1,300
Misc Power[d]	3,000	225	150
Total Meeting Room Use	**33,100**	**2,483**	**2,400**
Non-Event Use			
Interior Lighting[a]	4,340	972	400
Exterior Building Lighting (excluding signage)[b]	2,500	560	400
Building Signage (includes LED signage)	3,000	672	150
Mechanical Equipment[c]	20,600	4,614	1,200
Misc Power[d]	3,840	860	150
Total Non-Event Use	**34,280**	**7,679**	**2,300**
Total Proposed Project	**N/A**	**20,203[f]**	**12,500**

N/A = Not Applicable

[a] *Includes event lighting.*

[b] *Includes special event lighting.*

[c] *Includes Central Plant.*

[d] *Includes restaurant, retail, and offices.*

[e] *Load is lower than during a Spectator Event because during an Exhibition Event, the main scoreboard would not be in use.*

[f] *This number is conservative in its analysis by including an additional 3,195 MWh to the annual Event Center electrical demand.*

Source: M-E Engineers Inc., 2011.

Table IV.K.4-5
Electricity Consumption and Demand With Proposed Project

Project Component	Consumption		Peak Demand (kVA)[b]
	Daily (kWh)	Annual (MWh)	
Event Center			
Total Event Center[a,]	**115,220**	**20,203**	**12,500**
New Hall			
Interior Building Lighting	6,083	2,220	991
Exterior Building Lighting	1,217	444	198
Central Plant	9,877	3,605	4,050
Misc Power	7,156	2,612	1,490
Increased Usage by Existing Convention Center Facilities	3,799	1,386	1,313
Total Convention Center	**28,132**	**10,267**	**8,042**
Parking Garages			
Bond Street Garage	1,978	722	236
L.A. Live Way Garage	6,438	2,350	770
Total Parking Garages	**8,416**	**3,072**	**1,006**
TOTAL PROPOSED PROJECT	**151,768**	**33,542**	**19,286**

[a] *Electrical consumption during a Spectator Event, as shown in Table IV.K.4-4, would consume the highest daily level of electricity of the four operating conditions analyzed and therefore is used when calculating Total Proposed Project to provide for a conservative analysis.*

[b] *Estimate based on 100 percent Event Center peak demand concurrent with 75 percent peak demand for the Convention Center and the parking garages.*

Source: Matrix Environmental, M-E Engineers, and Syska Hennessy Group Inc., 2012.

the highest daily level of electricity of the four operating conditions analyzed. As such, this level of electrical consumption is added to that of the other Project components to determine the maximum daily consumption of electricity. The projected increase in electrical consumption under the Proposed Project as shown in Table IV.K.4-5, is forecasted to be 33,542MWh per year at total Project build out. On an annual basis, the Event Center would consume 20,203 MWh (60.2 percent of the Project total), the Convention Center 10,267MWh (30.6 percent of the Project total), and the new parking garages 3,072 MWh per year (9.2 percent of the Project total).

As shown in Table IV.K.4-6 on page IV.K.4-12, at buildout, the Proposed Project's forecasted electrical usage would be approximately 33,542 MWh per year, which would

Table IV.K.4-6
Increase in Electricity Consumption and Demand With Proposed Project

	Consumption		Peak Demand (kVA)
	Daily (kWh)	Annual (MWh)	
Existing On-Site Uses (To be removed under the Proposed Project)	20,598	7,519	5,967
Proposed Project	151,768	33,542	19,286
Net Increase Due to Proposed Project	131,170	26,023	13,319
Percentage Increase Due to Proposed Project	637%	346%	228%

Source: Los Angeles Convention Center, M-E Engineers, and Syska Hennessy Group Inc., 2012.

represent a 26,023 MWh annual net increase from existing conditions. Daily Project consumption as shown on Table IV.K.4-6, is forecasted to be 151,768 kWh, which would represent a 131,170 kWh net increase from existing conditions. Daily Project Impacts with No Existing Convention Center Activity would be an increase in consumption of 151,768 kWh per day.[5] The Los Angeles Department of Water and Power forecasts that energy consumption within its service area would increase from 23,493 GWh per year in the 2010–2011 fiscal year to 24,795 GWh in fiscal year 2016–2017, an increase of 1,302 GWh over the next 6 years.[6] Based on the Proposed Project's projected increase in electrical consumption of 33,542 MWh per year within the Project Site, this increase in consumption accounts for only 2.57 percent of the Los Angeles Department of Water and Power's projected increase in electrical consumption over the next 6 years. The Project's percentage of the total increase in consumption is sufficiently low to support the conclusion that the Proposed Project's impacts relative to electricity consumption is less than significant.

(b) Electricity Demand

As shown in Table IV.K.4-6, the projected peak electrical demand associated with the operation of the Proposed Project would be a net increase of 13,319 kVA. Projected

[5] *To provided for a conservative analysis, Proposed Project Impacts with No Existing Convention Center Activity assumes zero electricity consumption for all Convention Center facilities. Therefore the net increase of Proposed Project impacts with No Existing Convention Center Activity would be equal to that of the Total Proposed Project less the electricity consumption of the existing STAPLES Center central plant.*

[6] *Los Angeles Department of Water and Power, 2010 Integrated Resource Plan, Table A-1.*

peak electrical demand associated with the operation of the Proposed Project with No Existing Convention Center Activity would be a net increase of 19,286 kVA.[5] Based on LADWP's analysis, the Convention Center's existing electrical infrastructure system may not be adequate to meet the Project's demand and system upgrades may be required. As a result, a significant impact with regard to electrical infrastructure would occur. To respond to this shortfall in capacity, an additional redundant 35 kV underground electrical feeder may be added by LADWP in Pico Boulevard paralleling the existing feeders to increase service capacity and reliability to the Project Site. Additional LADWP transformation and switching equipment is anticipated to be added to the existing below grade vault south of Pico Boulevard and east of Convention Center Way. New LADWP transformation and switching equipment is also anticipated in the lot between Convention Center Way and L.A. Live Way in an above ground screened location, to serve the New Hall and Central Plant loads at the west end of the complex.

To expand service to the Event Center, two 34.5 KV circuits from the intersection of Figueroa Street and Chick Hearn Court or from the intersection of Figueroa Street and Pico Boulevard are anticipated to be constructed. The circuits would be extended in concrete encased conduits with manholes located approximately 300 feet on center to a new LADWP vault at the Event Center. The conduits, manholes and vault would be installed per LADWP requirements. With the implementation of these improvements, if determined to be required by LADWP, adequate electrical infrastructure would be in place to serve the Convention Center, Event Center, and other Project components. In the event impacts on electrical demand loads exceed available capacity, potentially significant impacts would result. Should this occur, mitigation measures would be implemented, which would reduce impacts to a less than significant level.

4. Cumulative Impacts

(a) Cumulative Electricity Consumption

The Proposed Project's electricity impacts presented above are assessed in the context of the LADWP service area. Since overall growth within the LADWP service area extends beyond the geographic area which the related projects list is located, the LADWP service area is used for the purposes of conducting the Proposed Project's cumulative impacts. Forecasted growth is anticipated to substantially increase the overall consumption of electricity within the LADWP service area. The LADWP currently supplies approximately 23,493 GWh of electricity a year to approximately 1.4 million customers

located within the City of Los Angeles.[7] In 2017, the buildout year for the Proposed Project, the LADWP forecasts a total available annual capacity of 27.99 million MWh and total annual sales of 24.795 million MWh, which includes cumulative growth, within the Los Angeles Department of Water and Power service area. Thus, there would be 3.195 million MWh of available capacity beyond projected sales. This projected forecast in consumption, coupled with the Proposed Project, as shown in Table IV.K.4-7 on page IV.K.4-15, would yield a total of roughly 24.821 million MWh per year of electricity consumption. As such, the Proposed Project's consumption represents 0.81 percent of the 3.195 million MWh of the forecasted excess annual capacity in 2017. As this level of cumulative consumption is below the LADWP forecasted available capacity in 2017, a less than significant cumulative impact would result.

Converting these annual forecasts to daily levels, the IRP forecasts daily sales of 67.93 million kWh of electricity and a daily capacity of 76.69 million kWh, which yields an excess daily capacity of 8.76 million kWh. As shown in Table IV.K.4-7, the Proposed Project would account for approximately 0.19 percent of cumulative consumption (68,062,677 kWh) and approximately 1.4 percent of the daily capacity (8,753,424 kWh) not used by others. These small increases also occur under the Proposed Project with No Existing Convention Center Activity, as shown in Table IV.K.4-8 on page IV.K.4-15; i.e., approximately 0.22 percent of cumulative consumption (68,083,275 kWh) and approximately 1.73 percent of the daily capacity not used by others (8,753,424 kWh). Thus, cumulative impacts would also be less than significant.

(b) Cumulative Electricity Demand

The IRP forecasts increases in peak demand as well as the increases in consumption which are described above. The peak demand is forecasted to increase from 5,797,000 kVA during the 2010–2011 fiscal year to 6,152,000 kVA in the 2016–2017 fiscal year, an increase in peak demand of 355,000 kVA.[8] Based on the forecasts presented herein, as shown in Table IV.K.4-9 on page IV.K.4-16 the Proposed Project would utilize approximately 3.75 percent of the forecasted unused peak demand capacity. Furthermore, under the Proposed Project with No Existing Convention Center Activity analysis, as shown in Table IV.K.4-10 on page IV.K.4-16, the percentage increases to approximately 5.43 percent. It is anticipated that the IRP's forecasted peak demand levels would be sufficient to meet cumulative demand, particularly given that peak demand for electricity decreased

[7] *Los Angeles Department of Water and Power, 2010 Integrated Resource Plan, Table A-1: Trend Case Energy Sales and Peak Demand.*

[8] *LADWP, "Power Integrated Resources Plan" (IRP), 2010.*

Table IV.K.4-7
Cumulative Increase in Electricity Consumption With Proposed Project

	Consumption	
	Daily (kWh)	**Annual (MWh)**
IRP Forecasted Electricity Consumption in 2016-2017	67,931,507	24,795,000
Net Proposed Project Electricity Consumption	131,170	26,023
Total Electrical Consumption	**68,062,677**	**24,821,023**[a]
Net Proposed Project Percent of Total Electrical Consumption	**0.19%**	**0.10%**
2016–2017 LADWP's IRP Forecast Capacity Not Used By Others	**8,753,424**	**3,195,000**[b]
Net Proposed Project Percent of Forecasted Capacity Not Used By Others	**1.4%**	**0.81%**

[a] *Based on 2016–2017 LADWP Consumption (24,795,000 MWh) plus Proposed Project Electricity Consumption (26,023 MWh).*

[b] *Based on 2016–2017 LADWP Capacity (27,991,000 MWh) minus 2016–2017 LADWP Consumption (24,795,000 MWh).*

[c] *Net Proposed Project Percent of Forecasted Increase equals Net Proposed Project Electrical Consumption divided by LADWP's IRP forecasted excess capacity not used by others in 2016–2017.*

Source: IRP Forecast Table A-1, 2010; Matrix Environmental, 2012.

Table IV.K.4-8
Cumulative Increase in Electricity Consumption With Proposed Project With No Existing Convention Center Activity

	Daily (kWh)
IRP Forecasted Electricity Consumption 2016–2017	67,931,507
Net Proposed Project With No Existing Convention Center Activity Electricity Consumption	151,768
Total Electrical Consumption	**68,083,275**
Percent of Net Proposed Project with No Existing Convention Center Activity of Total Electrical Consumption	**0.22%**
2016–2017 LADWP's IRP Forecast Capacity Not Used by Others	**8,753,424**
Net Proposed Project With No Existing Convention Center Activity Percent of Daily Capacity not used by others	**1.73%**

Source: IRP Forecast Table A-1, 2010; Matrix Environmental, 2012.

Table IV.K.4-9
Cumulative Increase in Electricity Demand With Proposed Project

	Peak Demand (kVA)
IRP Forecasted Electricity Demand in 2016–2017	6,152,000
Increase Due to Proposed Project	13,319
Total Electrical Demand	**6,165,319**
Percent Proposed Project	**0.22%**
Increase Between 2010–2011 and 2016–2017 (Based on LADWP's IRP forecast)	**355,000**[a]
Proposed Project Percent of Forecasted Increase	**3.75%**

[a] *Based on 2016–2017 LADWP Peak Demand (6,152,000 kVA) minus 2010–2011 LADWP Peak Demand (5,797,000 kVA).*

Source: IRP Forecast Table A-1, 2010; Matrix Environmental, 2012.

Table IV.K.4-10
Cumulative Increase in Electricity Demand With Proposed Project With No Existing Convention Center Activity

	Peak Demand (kVA)
IRP Forecasted Electricity Demand in 2016–2017	6,152,000
Increase Due to Proposed Project	19,286
Total Electrical Demand	**6,171,286**
Percent Proposed Project	**0.31%**
Increase Between 2010–2011 and 2016–2017 (Based on LADWP's IRP Forecast)	**355,000**[a]
Proposed Project Percent of Forecasted Increase	**5.43%**

[a] *Based on 2016–2017 LADWP Peak Demand (6,152,000 kVA) minus 2010–2011 LADWP Peak Demand (5,797,000 kVA).*

Source: IRP Forecast Table A-1, 2010; Matrix Environmental, 2012.

during the 2008–2009 period when compared with the previous period. Furthermore, the IRP does not forecast excess peak demand capacity. For these reasons, the Proposed Project's impact on system capacity would not be cumulatively considerable and would be less than significant.

With regard to local infrastructure capacity, developers of individual future projects, as well as the Proposed Project, would provide for all Los Angeles Department of Water and Power required improvements to facilitate the provision of electrical services to each

individual development site. Thus, through this process, the Los Angeles Department of Water and Power would continue to have the ability to meet demand to accommodate future growth and maintain acceptable levels of service. However, Project related impacts would contribute to cumulative off-site effects in the surrounding area since Project related impacts with regard to electrical infrastructure would be significant. Therefore, the Proposed Project's cumulative impacts with regard to local electrical infrastructure would also be significant, but reduced to a less than significant level with the implementation of the mitigation measures identified below.

5. Project Design Features and Mitigation Measures

a. Project Design Features

Project Design Feature K.4-1: The New Hall would implement additional efficiency measures to achieve a 20 percent reduction in energy consumption relative to the California Energy Efficiency Standards and would also comply with the required measures of the 2010 Los Angeles Green Building Code.

Project Design Feature K.4-2: The Event Center would implement additional efficiency measures to achieve a 14 percent reduction than the estimated baseline.[9]

Project Design Feature K.4-3: The L.A. Live Way Garage and the Bond Street Garage shall feature energy efficient lighting.

Project Design Feature K.4-4: A minimum total of 12 electric car charging stations shall be provided within the on-site parking garages.

Project Design Feature K.4-5: The roof of the L.A. Live Way Garage shall be equipped with solar panels.

b. Mitigation Measures

(1) Convention Center

Mitigation Measure K.4-1: Construct, if determined to be required by the LADWP, an additional redundant 35 kV underground electrical feeder in Pico Boulevard paralleling the existing feeders, or other improvements determined by the LADWP.

[9] *Energy Baseline calculated according to Title 24 2008 as cited in the City of Los Angeles Green Building Code.*

Mitigation Measure K.4-2: Construct additional LADWP transformation and switching equipment to the existing below grade vault south of Pico Boulevard and East of Convention Center Way.

Mitigation Measure K.4-3: Construct new LADWP transformation and switching equipment in the lot between Convention Center Way and L.A. Live Way, in an above ground screened location. The exact location of the electrical feeder and LADWP vault, and transformation and switching equipment would be determined as plans for the Project are further refined.

(2) Event Center

Mitigation Measure K.4-4: Construct two (2) 34.5 kV circuits from the intersection of Figueroa Street and Chick Hearn Court or from the intersection of Figueroa Street and Pico Boulevard. The circuits shall be extended in concrete encased conduits with manholes located approximately 300 feet on center to a new LADWP vault at the Event Center. The conduits, manholes and vault shall be installed per LADWP requirements.

6. Level of Significance After Mitigation

Implementation of the Proposed Project would result in increased electrical consumption and demand within the service area of the Los Angeles Department of Water and Power. However, with the implementation of the project design features and mitigation measures, Project and cumulative impacts would be less than significant.