

## AB 987 Replies to Correspondence

To Office of Planning and Research,  
California Air Resources Board

Subject Replies to Correspondence Regarding AB 987 Inglewood Basketball and  
Entertainment Center (IBEC) Project Application

From AECOM, 300 California Street, Suite 600, San Francisco, CA, 94104

Date June 2019

---

This memorandum summarizes replies to the key issues raised in the correspondence submitted to the Governor's Office of Planning and Research (OPR) regarding the proposed Inglewood Basketball and Entertainment Center Project (IBEC) project application under Assembly Bill (AB) 987 (IBEC Project AB 987 Application). The IBEC Project AB 987 Application was made available for public review on January 3, 2019, on the OPR website at <http://www.opr.ca.gov/ceqa/california-jobs.html>. The 30-day period for public submittals ended on February 2, 2019, and the public correspondence regarding the IBEC Project AB 987 Application was posted on OPR's website thereafter. Correspondence was received during the 30-day period from several individuals, as well as MSG Forum, LLC ("MSG") through its lawyers, Latham & Watkins, Uplift Inglewood Coalition, and Inglewood Residents Against Takings and Evictions (IRATE). Late correspondence was received and posted to the website after the end of the 30-day period from two additional entities, Climate Resolve on February 21 and NRDC on February 28, 2019. Additional late correspondence was submitted to OPR on April 19, 2019, by MSG through its lawyers, Latham & Watkins.

Many of the concerns raised in the correspondence submitted to OPR overlap or echo concerns made in other correspondence. Accordingly, this memorandum provides replies to the general related concepts or themes in the submitted correspondence and provides additional information when necessary for clarity, in the following topic order.

1. GHG Baseline
2. CalEEMod Calculations
3. ITE Trip Rates
4. Local GHG Emissions Reductions and Offset Credits
5. Reduction from CalGreen
6. White Box Model
7. TDM Assumptions and Program
  - A. Employees
  - B. Guests
  - C. Transportation Network Companies (TNCs)
  - D. Transit

- E. Rail Transit
  - F. Shuttles
  - G. AVO
  - H. Parking
  - I. Park-n-ride
  - J. Reporting
8. LEED
9. NRDC publication: *Game Changer – How the Sports Industry is Saving the Environment*

## 1. GHG Baseline

**Existing Offsite Uses:** Some correspondence claimed that the baseline GHG emissions were inflated because the IBEC Project Greenhouse Gas (GHG) Analysis included as Attachment G to the IBEC Project AB 987 Application assumed that the existing LA Clippers Training Center would be relocated to the IBEC Project site and that existing LA Clippers games at Staples Center and other non-NBA events that would be relocated to the IBEC Project from other venues in the Los Angeles regional market would not be “backfilled” (i.e., replaced by another use or event). The correspondence claimed that the IBEC Project AB 987 Application analysis takes credit for eliminating emissions that will be, according to the submitters, backfilled with other uses or events that would continue to emit GHGs at current levels.

**Reply:** In the IBEC Project GHG Analysis, baseline emissions include emissions from the existing on-site buildings that are proposed to be demolished, existing uses that would be relocated to the proposed IBEC site, such as the existing LA Clippers Team Offices in downtown Los Angeles and the LA Clippers Training Center in the Playa Vista area of Los Angeles, and events that would be relocated to the IBEC arena, including all LA Clippers NBA home basketball games currently hosted at the Staples Center and non-NBA events that would otherwise occur at other venues in the Los Angeles regional market.

Although the LA Clippers Team Offices would be relocated to the IBEC site, the existing office building is not anticipated to be demolished. Therefore, the IBEC Project GHG Analysis reasonably assumed that the existing office space would be re-occupied by a standard (default CalEEMod office land use) office tenant.

The LA Clippers Training Center is a specialized existing use that would not continue at its current location after construction of the IBEC Project. While, as stated in the IBEC Project GHG Analysis, it would be speculative to identify a particular future use of this facility, in order to provide a more conservative analysis, the GHG emissions calculations have been revised in the IBEC Project GHG Analysis Supplemental Technical Memorandum included in this submittal as Attachment 3 to assume continued use of this facility at same intensity as the existing use. Therefore, the baseline for the calculation of IBEC Project GHG emissions in the refined analysis provided in Attachment 3 excludes emissions associated with the existing LA Clippers Training Center.

A significant amount of the anticipated activity and related GHG emissions associated with the IBEC Project is event-based. The IBEC Project AB 987 Application includes a projection of the number, type, and attendance of events anticipated to be hosted at the IBEC Project site on an annual basis. Although the Los Angeles regional market is a major sports and entertainment market, there are a limited number of these types of events that occur within the market on an annual basis. If an event is hosted at the IBEC Project site, it necessarily does not occur at another venue.

It is unreasonable to assume no market shift of non-NBA events (i.e., that all non-NBA events at the IBEC Project would be new to the Los Angeles area market). The assumption of 50% of events at the IBEC project would be market-shifted from other event venues and 50% would be new to the market is reasonable, but has been further refined with additional analysis of the Los Angeles regional market and the incremental events that would result from operation of the IBEC Project conducted by Conventions, Sports & Leisure International (“CSL”), experts in the sports, entertainment, convention, and visitor-serving industries. That analysis is included in this submittal as Exhibit 1 to Attachment 3, IBEC Project GHG Analysis Supplemental Technical Memorandum and reflected in the revised calculations of IBEC Project GHG emissions to incorporate CSL's refined assumption that 59% of the major non-NBA events at IBEC would be market-shifted, and 41% would be net new to the market (i.e., would not otherwise occur in the Los Angeles regional market absent construction of the IBEC Project).

As described in the CSL report included in this submittal as Exhibit 2 to Attachment 3, CSL concluded it is reasonable to assume that seven of the vacated event days per year at the Staples Center made available by relocation of the LA Clippers to the IBEC arena would be utilized to host another event type. The IBEC Project GHG Analysis Supplemental Technical Memorandum included in this submittal as Attachment 3 provides refined GHG emissions calculations for the IBEC Project to reflect the GHG emissions associated with the utilization of those vacated event days at the Staples Center.

**GHG baseline methodology:** Some of the correspondence claimed that the IBEC Project AB 987 Application did not follow South Coast Air Quality Management District (SCAQMD) California Emissions Estimator Model (CalEEMod) methodology to calculate GHG emissions, and that taking credit for reduction of off-site baseline emissions was inconsistent with federal and state Clean Air Act and SCAQMD rules and guidance, Bay Area Air Quality Management District (BAAQMD) guidance, and two recent California Air Resources Board (CARB) determinations regarding AB 900 applications for the 3333 California Street and Hollywood & Wilcox projects. Some of the correspondence argues, without any basis, that including off-site emissions in the baseline that would be reduced as a result of implementation of the proposed IBEC Project is inconsistent with the CalEEMod model recommended by SCAQMD.

**Reply:** As in AB 900 applications, CalEEMod was used as a starting point to calculate emissions and, where appropriate or necessary to account for unique or specific characteristics of the IBEC Project, other emissions were calculated off-model in the manner explained in the IBEC Project AB 987 Application using methodologies applied in project applications previously certified under AB 900 and approved emission estimation models (see IBEC Project AB 987 Application, Attachment G, pages 7 through 14, which outline the methodologies in detail). The CalEEMod model and related guidance do not dictate a

particular approach to the baseline or whether off-site emissions should be included. The IBEC Project AB 987 Application accurately acknowledges that there are existing uses not within the IBEC Project site that would be relocated to the IBEC Project site as part of the IBEC Project, because the relevant characteristics of the off-site existing uses and activities that will be relocated to the IBEC Project site can be reasonably determined for purposes of calculating the associated GHG emissions. This approach has been recognized as proper by regulatory agencies. For example as noted in BAAQMD's *California Environmental Quality Act Air Quality Guidelines*, "[i]f a proposed project involves the removal of existing emission sources, BAAQMD recommends subtracting the existing emissions levels from the emissions levels estimated for the new proposed land use. This approach is consistent with the definition of baseline conditions pursuant to CEQA." (Page 4-2). The federal and state Clean Air Act requirements and SCAQMD rules cited in the correspondence govern stationary sources, and are inapplicable and irrelevant to the IBEC Project. Moreover, those Clean Air Act requirements and SCAQMD Rules are applicable to emissions of criteria air pollutants, not GHGs.

In addition, CARB's recent determinations regarding the AB 900 applications for the 3333 California Street and Hollywood & Wilcox projects are irrelevant, because neither of those projects involved the relocation of uses or activities from other sites. Finally, the IBEC Project GHG Analysis Supplemental Technical Memorandum included in this submittal as Attachment 3 provides refined GHG emissions calculations for the IBEC Project to account for GHG emissions associated with the utilization of vacated event days at the Staples Center and excludes emissions associated with the existing LA Clippers Training Center from the baseline.

**Mobile source emissions:** A claim was made in the correspondence that the IBEC Project AB 987 Application did not scale the baseline mobile source emissions in future years, to reflect changes in the vehicle fleet.

**Reply:** Scaling mobile emissions of the project to include future vehicle fleet improvements and comparing them to a static baseline representing existing conditions is consistent with the development of a baseline under CEQA. It is also standard practice used for other certified AB 900 projects.

**Utility Intensity Values:** The submitted correspondence includes a claim that the GHG analysis selectively uses utility intensity values to calculate GHG emissions by using 2018 information for the Forum, 2016 information for the Staples Center, and 2017 information for the Honda Center without adequate explanation.

**Reply:** The IBEC Project GHG Analysis uses the best and most recent available data for utilities at the different venues. For example, existing emissions at Staples Center were modeled using 2016 data and updated to 2017 information (in the IBEC Project GHG Analysis Supplemental Technical Memorandum included in this submittal as Attachment 3) based on communication with Los Angeles Department of Water and Power (LADWP) staff. Existing emissions at the Honda Center in Anaheim were modeled using 2017 carbon intensity values based on the 2017 Anaheim Public Utilities (APU) power content label available on the California Energy Commission website. Existing emissions at the Forum were based on using the 2016 and 2017 Southern California Edison (SCE)-SCE Power Content Label, Edison International 2017 Sustainability Report, and the interim Renewables

Portfolio Standard (RPS) targets from the SCE RPS-procurement plan to estimate the 2018 carbon intensity. This is a more conservative approach for the baseline than using CalEEMod defaults, which are based on 2010 data, and would have resulted in higher baseline emissions, because the more recent carbon intensities used in the IBEC Project AB 987 Application's analysis account for renewable energy procurement through RPS requirements.

The IBEC Project AB 987 Application has been supplemented to address a limited subset of these comments regarding the GHG baseline as addressed above. Otherwise, the comments have no merit and do not require further response or revisions to the IBEC Project AB 987 Application.

## **2. CalEEMod Calculations**

**CalEEMod Baseline Emission Calculations:** One correspondent claimed that the IBEC Project AB 987 Application analysis inflates baseline GHG emissions by using the CalEEMod default values for existing uses.

**Reply:** Using CalEEMod to estimate emissions is the standard approach accepted by CARB. CalEEMod utilizes widely accepted methodologies for estimating emissions through default data that can be used when site-specific information is not available. In addition, the SCAQMD provides customized values for default data and existing regulation methodologies for use for projects located in its jurisdiction. These custom SCAQMD inputs are used in the IBEC Project GHG Analysis, as appropriate.

The IBEC Project GHG Analysis includes site-specific or recent information, where available, consistent with CalEEMod and CARB guidance. Carbon intensities specific to each utility were updated to reflect recently reported values, which account for RPS requirements, rather than relying on CalEEMod default values that do not account for this updated information. The Southern California Edison (SCE) and Los Angeles Department of Water and Power (LADWP)-specific emission factors account for the electricity portfolio mix used to produce power for the existing and proposed uses. Similarly, the CO<sub>2</sub>e intensity values for the existing emissions at other event venues were updated to include more recent information. For example, the Anaheim Public Utilities CO<sub>2</sub>e intensity value was based on the Anaheim Public Utilities (APU) 2017 power content label and used to estimate emissions at the Honda Center. For the emissions at the Staples Center, the GHG intensity value for LADWP in CalEEMod was adjusted to reflect the 2017 CO<sub>2</sub>e intensity value. The CO<sub>2</sub>e intensity value was also adjusted to reflect SCE's 2018 CO<sub>2</sub>e intensity to estimate emissions at the Forum based on the 2016 and 2017 SCE Power Content Label, Edison International 2017 Sustainability Report, and interim RPS targets from the SCE RPS-procurement plan. The use of these updated CO<sub>2</sub>e intensity values reflecting RPS requirements in the IBEC Project GHG Analysis results in lower, more conservative estimates of baseline emissions for those venues than the use of default CalEEMod values, which are generally based on 2010 data.

There are limited circumstances where relying on CalEEMod defaults is a more conservative approach, and in those cases, the analysis of GHG emissions for IBEC Project AB 987 Application uses the CalEEMod default values. For example, the existing buildings on the IBEC Project site and IBEC Project Variants site were built between the 1920s and 1980s,

and the existing LA Clippers Team Offices are located in a building built in 1967. The Historical Energy Usage Data for Title 24 and Non-24 uses electricity consumption default values within CalEEMod are based on the California Energy Commission (CEC)-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey studies and reflect compliance with 2005 Title 24 standards. The IBEC Project AB 987 Application uses the CalEEMod Historical Energy Usage Data default values to estimate baseline GHG emissions associated with these existing uses, which is a conservative approach because these existing buildings were built prior to implementation of the 2005 Title 24 standards.

No revisions to the IBEC Project AB 987 Application are required to address these claims.

### 3. ITE Trip Rates

**Trip Rate Error in Analysis:** One correspondent stated that (1) there was an error regarding the Institute of Transportation Engineers (ITE) trip rate for the Sports Medicine Clinic, and (2) the analysis used the wrong employee trip rate for the LA Clippers Team Office and LA Clippers Practice and Training Facility and should have used a rate of 2.31 trips per employee.

**Reply:** The IBEC Project trip generation analysis described in Attachment D to the IBEC Project AB 987 Application included an inadvertent error in the trip rate used for the Sports Medicine Clinic. The refined trip generation analysis included in this submittal as Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum has been updated to use the correct ITE trip rate of 38.16 trips per 1,000 square feet as compared to the 30.18 trips per square feet value used in Attachment D to the IBEC Project AB 987 Application.

Regarding the trip rate for LA Clippers Team Office and LA Clippers Practice and Training Facility employees, the IBEC Project trip generation analysis described in Attachment D used a custom trip generation rate based on the project-specific characteristics of the LA Clippers Team Office and LA Clippers Practice and Training Facility. The supplemental trip generation analysis described in Attachment 2 to this submittal has been refined to use more conservative assumptions based on the ITE trip rate of 7.95 trips per 1,000 square feet for a "corporate headquarters building" to calculate the trips associated with the LA Clippers Team Offices. For the LA Clippers Practice and Training Facility, the trip rate has been increased to 2.00 trips per employee, which effectively assumes that each employee will be present every day and will make two trips per day (one to the facility and one leaving the facility). The revised trip generation analysis included in this submittal shows that the IBEC Project would still exceed the 15% trip reduction threshold required by AB 987.

The IBEC Project AB 987 Application has been supplemented as discussed above and no further revisions are necessary.

### 4. Local GHG Emissions Reductions and Offset Credits

**Local GHG reductions and offset credits:** Some of the correspondence claims that the IBEC Project AB 987 Application does not include measures to reduce GHG emissions in neighboring communities or information about local offset credits within the City of Inglewood or the boundaries of the SCAQMD. In addition, one correspondent claimed that

the IBEC Project AB 987 Application did not state correctly that offsets will be verified by a third party accredited by CARB.

**Reply:** Public Resources Code Section 21168.6.8(j)(2) provides that the lead agency (i.e., the City of Inglewood) “shall require measures that will reduce the emissions of [GHGs] in the project area and in the neighboring communities.” Section 21168.6.8(j)(3) provides that not less than 50 percent of the GHG emissions reductions necessary to achieve net zero GHG emissions “shall be from local, direct [GHG] emissions reduction measures,” which can include, among other things, 50 percent of the emissions reductions attributable to design features necessary to meet AB 987’s LEED Gold certification requirement. Additionally, Section 21168.6.8(j)(4) provides that the applicant may obtain offset credits for up to 50 percent of the GHG emissions reductions necessary to achieve net zero and that, the applicant shall, to the extent feasible, place the highest priority on the purchase of offset credits that produce emissions reductions within the City of Inglewood or the boundaries of the SCAQMD. It further provides that any offset credits must be verified by a third party accredited by CARB.

The IBEC Project AB 987 Application indicated that the IBEC Project would satisfy the requirements under Section 21168.6.8(j)(2) to reduce GHG emissions in the project area and neighboring communities and under Section 21168.6.8(j)(3) to achieve at least 50 percent of the GHG emissions reductions necessary to meet the net zero GHG requirement by local, direct measures. This would be accomplished through a combination of emissions reductions achieved through implementation of the IBEC TDM Program and 50 percent of the emissions reductions attributable to project design features that are part of the LEED Gold certification strategy. The refined GHG emissions analysis in Attachment 3, IBEC Project Greenhouse Gas Analysis Supplemental Technical Memorandum, indicates that the IBEC Project would achieve 49.5 percent of emissions reduction, and the IBEC Project Variants would achieve 50.1 percent of emissions reduction, through implementation of the IBEC TDM Program for the IBEC Project plus 50 percent of the emissions reductions attributable to LEED Gold project design features.

As explained in Attachment 3, the IBEC Project will include one or more additional local, direct measures, if necessary to meet the 50 percent local, direct emission reductions requirement, potentially including, but not limited to: (1) additional renewable energy production through installation of additional photovoltaic systems as carports on the additional third parking structure, (2) purchase of electricity for onsite consumption through the Southern California Edison (SCE) Green Rate Program, which facilitates SCE's purchase of renewable energy to meet the needs of Green Rate participants from solar renewable developers within the SCE service territory; or (3) if available after approval by applicable regulatory agencies, on-site use of renewable natural gas. The GHG emissions measures identified in the IBEC Project AB 987 Application and Attachment 3 to this submittal would all achieve GHG reductions at the project site or in the local region.

Section 21168.6.8(j)(2) is a requirement to be enforced by the lead agency: “To maximize public health, environmental, and employment benefits, **the lead agency** shall require measures that will reduce the emissions of greenhouse gases in the project area and in the neighboring communities of the arena.” The applicant and the lead agency have entered into a binding and enforceable agreement (Attachment F to the IBEC Project AB 987 Application), that requires the applicant to comply with all mitigation measures identified in

the EIR for the IBEC Project and any other environmental measures required by AB 987, including those set forth in Section 21168.6.8(j).

AB 987 does not require identification of specific offset credits at the time of certification, nor has CARB previously required the identification of specific offset credits at the time prior AB 900 projects were certified. As required under AB 987, the requirement to obtain offset credits is already enforceable under the written acknowledgement of commitments submitted as Attachment F to the IBEC Project AB 987 Application. This requirement will be made a condition of approval and enforceable by the lead agency, and any credits obtained to offset emissions will be verified by a third party accredited by CARB.

Per CARB Offset Registries<sup>1</sup>, the three carbon registries identified in the IBEC Project AB 987 Application as accredited by CARB (American Carbon Registry, Climate Action Reserve, and Verra [formerly Verified Carbon Standard]) have been approved by CARB for use in the Cap and Trade program. CARB has also indicated that these registries may be used for purposes of offset credits under AB 900 and AB 987.

The IBEC Project AB 987 Application has been supplemented as discussed above and no further revisions are necessary to address these claims.

## 5. Reduction from CalGreen

**10% Reduction from CalGreen:** One correspondent claimed that the statement in the IBEC Project AB 987 Application that the IBEC Project would be 10 percent more efficient in energy consumption than Title 24 2019 standards was unsubstantiated.

**Reply:** CalGreen (2019) references California Code of Regulations Title 24 (2019) as the energy benchmark used to demonstrate compliance. In order to model energy use for the IBEC Project, AECOM performed a complex phase energy simulation that utilized the advanced simulation protocols for the Bowl HVAC systems developed for Golden 1 Center in Sacramento, California in conjunction with multiple energy conservation strategies associated with the mechanical, electrical, plumbing systems (LED Lighting, economizers, heat recovery, high efficiency equipment, displacement ventilation, demand controlled ventilation smart controls, etc.) and the facade (optimized solar shading, mixed mode ventilation, where appropriate, high performance glazing, enhanced insulation). This was compared against the Title 24 and ASHRAE 90.1 baseline prescriptive requirements. The results of this comparison demonstrate that the IBEC Project would achieve at least 10 percent performance beyond the requirements of Title 24. As the design of the IBEC Project advances, other innovative strategies, such as the use of phase change materials to reduce the cooling load within the arena bowl will be evaluated and incorporated into the design to further reduce energy demand beyond the 10% improvement over CalGreen. The concept design model will continue to evolve during the design process, culminating with both the final Title 24 and ASHRAE 90.1 simulations that will be used for both CalGreen and LEED compliance.

No revisions to the IBEC Project AB 987 Application are required to address this claim.

---

<sup>1</sup> Available at <https://www.arb.ca.gov/cc/capandtrade/offsets/registries/registries.htm>



## 6. White Box Model

**White Box Model:** One correspondent stated that details regarding the white box model used to calculate the Project's energy use were not provided in the IBEC Project AB 987 Application.

**Reply:** The proposed IBEC Project will consume energy (electricity and natural gas) for multiple purposes including, but not limited to, building heating and cooling, lighting, and equipment. The proposed design of the IBEC Project was assessed using industry best practice "white box model" methodologies to determine its anticipated energy performance. The design team lead for the model is an energy modeling specialist who is American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Building Energy Modeling Professional (BEMP) certified.

A white box energy model, also known as a simple box energy model, is an established tool that allows energy specialists to study a range of potential design decisions and their impacts on a building's energy loads utilizing site, climate, and building level inputs. This model acts as a crucial starting point for any building that aims to incorporate high-performance design measures.

For the IBEC Project, the modeling started by establishing a baseline project that incorporates all aspects of the project (see description on page 2 of the IBEC Project AB 987 Application), except for the hotel and parking structures. (As discussed below, default numbers were used for these more standard land uses/project features.) The basic massing and project design then incorporated basic Title 24 and CalGreen requirements to create the baseline, which is representative of a code-compliant facility. The general methodology of the analysis is consistent with the recommended LEED Integrated Design process. The analysis was undertaken using the California Energy Commission (CEC) and Department of Energy (DOE) approved simulation tool - Integrated Environmental Solutions (IES) Virtual Environment (VE) software - to simulate the performance of the building. The software translated the complex building principles and detailed dynamic thermal calculations into technical information and visualizations to predict the energy performance of the proposed IBEC Project buildings. The simulation incorporated the IBEC project's program to analyze the potential improvement to the proposed IBEC Project energy performance.

The white box model was used to assess options for achieving two primary goals for achieving greater energy efficiency than the baseline:

1. California CalGreen Code Tier 1, which requires minimum 10% over Title 24:2019 (California Energy Code)
2. LEED Gold minimum certification for the IBEC arena complex, which requires a high level of performance for EAC2: Optimize Energy Performance.

Several strategies were identified and tested in order for the proposed IBEC Project to meet its energy goals. Architectural strategies were applied, such as a high-performance envelope including orientation, insulation levels for wall, roof and glazing performance, and other features that exceeded the minimum requirements of the current Title 24. Lighting strategies included optimizing the use of daylight to minimize lighting loads, and

incorporating LED lighting using the minimum number of fixtures to meet required light levels.

Several HVAC distribution strategies were considered such as: delivering air via displacement ventilation using under seat distribution in the arena and in other large volume spaces, such as the concourse; heat recovery on air handling units and low fan power systems to achieve improvement over ASHRAE/T24 maximum fan powers; wrap around heat pipes to minimize reheat energy in arena; and using a chilled water return coil to provide first stage reheat. HVAC generation strategies reviewed include a waterside economizer; high efficiency chillers with very good part load performance; high-efficiency condensing boilers with low return temperature; variable speed heating; chilled water and condenser pumps; use of gas-powered fuel cell to capitalize on utility cost savings; use of thermal energy storage to shave peak loads; and photovoltaic panels on the roof.

The conceptual design of the proposed IBEC project took these strategies into account and used the more advanced simulation techniques developed at Golden 1 Center arena in Sacramento California, one of the most sustainable sports venues in the world, to gain greater insight regarding the anticipated benefit of these venue-specific strategies to energy performance. The ability to incorporate the more specific simulation techniques from another known large arena project takes the level of confidence of the energy model to a greater level than a typical energy model developed at this stage in the design process, going beyond Title 24 compliant design requirements.

A number of central plant strategies were also explored to assess how the energy performance and grid reliance could be reduced through the potential use of thermal energy storage, battery storage, PV solar and fuel cell technology. These strategies are part of the developing energy strategy, but they were not considered within the white box energy model because the focus was on energy consumption and the development of a strategy to reduce energy, as compared to Title 24 2019 rather than on energy generation, as is the case with PV solar, for example. These strategies would, however, contribute to the overall carbon reduction strategy by optimizing the use of reduced carbon energy sources such as onsite solar within the broader onsite energy strategy. This benefit is captured within the onsite generation component of the IBEC Project AB 987 Application rather than in the white box model results.

The hotel land use and parking structures were not included within the white energy box model, because these are standard space types. Thus, energy consumption estimates for these uses utilized the default CalEEMod energy consumption rates.

Based on the white box energy model, the energy consumption for the proposed IBEC Project is estimated to be approximately 51 kilo-British thermal units per square foot based upon the proposed event schedule, assuming the anticipated average attendance for events hosted in the arena. The estimated energy consumption rates were entered into CalEEMod to estimate GHG emissions associated with the baseline condition calculated in Attachment G to the IBEC Project AB 987 Application. The IBEC Project GHG Analysis Supplemental Technical Memorandum, included in this submittal as Attachment 3, provides estimates of GHG emissions based on projected maximum attendance for the events anticipated to be hosted at the IBEC project. The energy consumption estimate used in the refined analysis in Attachment 3 has been adjusted to be approximately 54 kilo-British thermal units per square

foot to account for potential additional energy demand for the project components that could be affected by the assumption of maximum, rather than average, attendance per event.

By comparing the resulting energy performance of the proposed design to the baseline model built using Title 24 /ASHRAE 90.1 prescriptive requirements, the design team was able to estimate the anticipated performance against both Title 24 and the LEED baseline, which, in turn, led to the stated commitment of a minimum of 10% energy reduction beyond the Title 24 2019 baseline requirements. The resulting energy performance, when combined with the proposed onsite generation strategy, is anticipated to achieve at least 11 points under credit EAc2 as part of the overall strategy to achieve LEED Gold certification.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 3: IBEC Project GHG Analysis Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

## **7. TDM Assumptions and Program**

### **a. Employees**

**Weekend Employee Trips:** One correspondent claimed that the IBEC Project AB 987 Application unreasonably assumed that there would be no weekend trips associated with LA Clippers Team Office and LA Clippers Practice and Training Facility employees.

**Reply:** The IBEC Project trip generation analysis described in Attachment D to the IBEC Project AB 987 Application calculates the trip generation for two groups of LA Clippers employees: (1) LA Clippers organization employees associated with the LA Clippers Team Offices, and (2) LA Clippers basketball operations employees associated with the LA Clippers Practice and Training Facility and LA Clippers home NBA games.

Actual LA Clippers employee trips, and whether those trips occur on a weekday or weekend day, are dictated by the unique characteristics of the NBA schedule of weekday and weekend home games, away games, postseason appearances, and the NBA off-season. The IBEC Project trip generation analysis uses a simplified assumption to provide a conservatively high estimate of all LA Clippers employee trips on an annual basis. All LA Clippers employees are assumed to travel to the IBEC Project site 5 days per week for 52 weeks per year, regardless of the NBA schedule or off-season operations, with the exception of the basketball operations employees, who are not assumed to travel to the IBEC Project site for 29 days to account for weekday away games during the regular season. The IBEC Trip Generation Analysis also assumes that 120 LA Clippers organization employees will attend all LA Clippers home games (weekday and weekend) in their capacity as LA Clippers employees, counted as additional trips. These assumptions are conservatively high, and reasonably account for all potential trips to the IBEC Project site by LA Clippers employees, regardless of whether these trips would actually take place on a weekday or weekend.

No revisions to the IBEC Project AB 987 Application are required to address this claim.

**b. Guests/Attendees**

**Event attendee travel patterns:** Some of the correspondence included claims that the analysis of the IBEC TDM program assumes all events would have the same travel patterns as NBA games.

**Reply:** This claim is not correct. The analysis in the IBEC Project Trip Generation Memorandum included as Attachment D to the IBEC Project AB 987 Application applies two basic mode shares for attendees: for higher attendance events (LA Clippers games and concerts), the analysis assumes a 34% non-drive mode share (including 10% TNC mode share), and for all other events (e.g., family shows, conventions / corporate events, plaza events) that would be typically smaller, the analysis assumes a much lower, 18% non-drive mode share (including 10% TNC mode share). With separate datasets for high and low non-drive mode shares, this approach adequately accounts for potential variation from one event to the next, recognizing that larger, higher-attendance events would likely result in different travel behavior than smaller, lower-attendance events.

The refined trip generation for the IBEC Project included in this submittal as Attachment 2, IBEC Project Trip Generation Supplemental Technical Memorandum further refines the non-drive mode share for event attendees, reducing it to 26% for NBA games and concerts (including 10% TNC mode share) and 15% for other events (including 10% TNC mode share).

Maximum attendance levels are expected to be similar for both LA Clippers games and large concerts (18,000 and 18,500, respectively). The total amount of available parking at the IBEC Project would not change. Off-site parking would be available for both types of events, and TDM measures under both larger event types would also be similar. The IBEC TDM Program would also include an integrated ticketing platform to link the purchase of an event ticket with the selection and purchase of transportation to/from the venue. IBEC attendees, whether attending an NBA game, concert, or other event, would be able to select from a menu of transportation services (e.g., charter coach park-and-ride) and would receive relevant transportation information (e.g., transit schedules) as part of purchasing a ticket to the event. Some components of the TDM program, however, would likely be scaled proportionally to the attendance of the event. The shuttle service connecting with Los Angeles County Metropolitan Transportation Authority (Metro) rail, for example, would likely operate at more frequent intervals during higher-attendance events, and at less frequent intervals during lower-attendance events.

Given the similar attendance levels for LA Clippers games and one-off concerts, it is therefore reasonable to expect that attendee travel behavior for these two event types would be similar. All other events would be substantially smaller, with maximum attendance between 4,000 and 8,500. These smaller events would be expected to have a much higher drive mode share (and a different scale of TDM implementation), and therefore the analysis makes different assumptions than were made for much larger events.

The IBEC Project AB 987 Application has been supplemented as discussed above and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

**c. Transportation Network Companies (TNCs)**

**TNC Trip Counts:** One correspondent claimed that TNC (i.e., Uber, Lyft, or other rideshare) trips were underestimated and made comparisons to the Oakland A's AB 734 application.

**Reply:** TNC trips were not underestimated. TNC trips were calculated appropriately, accounting for two vehicle trips per ride (drop-off or pick-up). In the trip generation model, TNC vehicle trips—calculated as the number of employees and attendees estimated to use TNCs, divided by the relevant average vehicle occupancy (AVO) values—were multiplied by two to account for the “deadhead” portion of the ride (TNC vehicle departing from the site after dropping off passengers, or arriving at the site to pick up passengers). Furthermore, the GHG analysis in the IBEC Project AB 987 Application assumes the same weighted average trip length for both legs of each TNC trip. Therefore, the TDM and GHG analyses accurately account for the full effect of TNC-related vehicle-trips, and no adjustment is needed.

The IBEC TDM Program does not actively encourage TNC use, and only aims to allocate sufficient TNC staging areas appropriate to the popularity of that transportation mode. (See IBEC Project AB 987 Application, Attachment C, page 4). The Oakland A's AB 734 application assumes a TNC mode share of 10% for concerts and 13–15% for baseball games. While the IBEC Project AB 987 Application assumes an overall lower TNC share (10%, applied universally to all events), this is a reasonable expectation given the differences in local context between the two sites. In particular, it is reasonable to expect a slightly higher TNC mode share for the Oakland A's proposed Howard Terminal site given its general location (near downtown Oakland) and more urban context, with many mixed-use neighborhoods and activity hubs within a moderate distance of the proposed site. That type of context is well-suited to taxis and TNCs because there is a high concentration of potential demand and trips are relatively short, allowing for high operating efficiencies.

In contrast, the IBEC Project is located in an area where automobile travel involves more frequent use of private (household) automobiles, with destinations frequently providing dedicated parking and a larger overall supply of parking available in the area. It is therefore reasonable to expect that TNC mode share would be somewhat lower than for the proposed A's ballpark at Howard Terminal, as attendees not using alternative modes (e.g., transit) to travel to the IBEC Project site would be more likely to drive themselves to and from the site.

No revisions to the IBEC Project AB 987 Application are required to address these claims.

**d. Transit and Transportation Context**

**Transit Differences from Staples Center:** Some of the correspondence claimed that travel behavior and patterns at the proposed IBEC Project will be different because the setting is different from Staples Center, and asserted that assumptions regarding transit use were overstated because of these differences.

**Reply:** The analysis described in the IBEC Project Trip Generation Memorandum recognizes the localized context of existing and planned transportation services surrounding the site, as described in the “Effects of IBEC TDM Program on Vehicle Trip Generation” section starting on page 7 of Attachment D to the IBEC Project AB 987 Application. The multi-modal transportation options are outlined and subsequently evaluated.

The mode share assumptions in Attachment D were based on survey data on the travel behavior of LA Clippers fans at the Staples Center, which indicate a transit mode share of approximately 13% for weekday games (11% rail, 2% bus) and 14% for weekend games (12% rail, 2% bus), without any comparable existing TDM program for LA Clippers games implemented for attendees or employees. Although the Staples Center's downtown location generally has more proximate transit, analysis of ticketholder data shows that there are a substantial number of ticketholders within a two-transfer ride to/from the IBEC site, suggesting that an appreciable transit mode share is reasonably achievable for the IBEC Project. Given these considerations, the analysis assumed a transit mode share for NBA game attendees of approximately 1% (0% rail, 1% bus) without implementation of the IBEC TDM Program and 12% (10% rail, 2% bus), with implementation of the IBEC TDM Program, for both weekday and weekend games.

More recent travel behavior data was subsequently obtained as part of an additional survey of LA Clippers fans at the Staples Center conducted for the 2018/19 season, which showed a 9% transit mode share. With the availability of this additional, more recent data, the trip generation analysis has been further refined, as described in the IBEC Project Trip Generation Supplemental Technical Memorandum, included as Attachment 2. Under the refined analysis, transit mode share for fans attending LA Clippers games at IBEC (with implementation of the IBEC TDM Program) has been substantially reduced to 8% (7% rail, 1% bus), and continues to be lower than at the Staples Center, where the LA Clippers do not currently employ a TDM program for attendees or employees.

Furthermore, the proposed IBEC TDM Program includes a commitment to further enrich the event-day connections to public transportation through the provision of three free shuttle routes providing direct access to the IBEC Project site from the Green Line's Hawthorne/Lennox Station and the Crenshaw/LAX Line's Florence/La Brea Station and Airport Metro Connector (AMC)/96<sup>th</sup> Street Station. The IBEC TDM Program also would include a minibus/microtransit service to support local transportation needs (within approximately six miles of the site) for both event employees and attendees. In addition, the IBEC TDM Program would include a charter bus service from park-n-ride locations across the region, which would provide express (non-stop) rides to and from the site as a compelling and convenient alternative for longer-distance travelers.

Ultimately, the robust, multi-modal IBEC TDM Program would be an improvement over the Staples Center for many event-goers, given the new major programs and incentives proposed to encourage transit use, walking, biking, or other alternatives to driving. Therefore, the transit mode share stated in the IBEC Project AB 987 Application, as further refined in Attachment 2, is reasonable and supported, particularly given that the assumed transit mode share with implementation of the IBEC TDM Program is lower than at Staples Center (where there is no comparable existing TDM program).

The IBEC Project AB 987 Application has been supplemented, as discussed above and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum. No further revisions are necessary.

**e. Rail Transit**

**Rail Transit Ridership Assumptions:** One correspondent claimed that the assumptions regarding rail transit ridership were not supported and MSG submitted observational data in support of such claims, in part based upon observations made at a Staples Center event by Gibson Transportation Consulting, Inc. The correspondence also states that Dodger Stadium achieved a season ridership of 7.39% of attendees as further support for an argument that the IBEC Project AB 987 Application overestimated rail ridership.

**Reply:** The Gibson report's description of observations of exiting passengers at a single Metro rail station suggests a data set with substantial limitations, and does not provide a reasonable basis for extrapolating this data to a representative overall attendee mode share for Staples Center.

Specifically, the data capture description on page 5 of the Gibson Transportation Technical Review Memo acknowledges that only the Pico Station along the Blue Line and Expo Lines was observed. This results in an incomplete (and inaccurate) mode share assessment, as it ignores the nearby 7<sup>th</sup> Street/Metro Center Station four blocks to the north, served by the Metro subway Purple and Red Lines. Transit riders who traveled to the event via the Purple or Red Lines on the selected observation day and walked to/from the 7<sup>th</sup> Street/Metro Center Station (instead of transferring to/from the Blue Line or Expo Line for a one-station ride) would not have been counted in this observational survey.

Accepted best practice for obtaining empirical mode share data would be questionnaire-based (such as the survey of Staples Center attendees used in the IBEC Project AB 987 Application analysis and referenced in Attachment D: IBEC Project Trip Generation Memorandum). This is a more reliable method within the transportation planning field to obtain travel behavior data, and is frequently used for analysis of major event venues or other specialized land uses when standardized trip rates and other information are not available or not directly applicable for use. For example, the environmental impact report (EIR) for the Chase Center in San Francisco, the future home venue for the Golden State Warriors, derived its mode share assumptions for basketball games from surveys of San Francisco Giants baseball game attendees at the nearby Oracle Park.

The assumed 10% transit share that was applied to analyze the IBEC TDM Program in Attachment D to the IBEC Project AB 987 Application also matches the assumptions for a stadium event at the future LA Stadium at Hollywood Park, under construction immediately to the north of the IBEC Project site.<sup>2</sup> Like the IBEC Project, the LA Stadium at Hollywood Park would provide connecting shuttle service to and from Metro rail, securing a high-quality first-mile / last-mile transit connection. Given the proximity of these two venues, it is reasonable to assume that the transit share would be similar. In fact, a 10% transit share for the arena could be considered a somewhat conservative assumption for the IBEC Project, particularly given the much larger popularity of tailgating in parking lots for NFL games compared to NBA games.

---

<sup>2</sup> *Traffic Impact Analysis; Hollywood Park Stadium Alternative Project; City of Inglewood, California.* Linscott, Law & Greenspan, Engineers. February 2015.

As discussed in the transportation impact analysis for the LA Stadium at Hollywood Park, a 10% transit mode share assumption is also reasonable and achievable in light of transit use at other large spectator sports venues locally in California and across the country.

The correspondent did not provide source data for the reference to LAFC Banc of California Stadium in Exposition Park near the University of Southern California (USC). However, NFL (Los Angeles Rams) home games temporarily hosted at the LA Coliseum (until the opening of the new NFL stadium at Hollywood Park) achieved a rail mode share of approximately 11% to 15% from the Expo Line.<sup>3</sup> This does not account for additional transit serving the venue (e.g., Metro Silver Line and other Metro bus routes).

The correspondent's references to Dodger Stadium are not instructive, because Dodger Stadium does not have a comprehensive TDM program comparable to the IBEC TDM Program proposed for the IBEC Project, and the stadium site offers a very large parking supply and more limited transit options.<sup>4</sup> As such, it is not unreasonable to expect a higher transit mode share for the IBEC Project.

The data sources discussed above demonstrate that a 10% transit share is reasonable and attainable. As part of refinements to the trip generation analysis for the IBEC Project AB 987 Application included in the IBEC Trip Generation Supplemental Technical Memorandum, a substantially lower—and much more conservative—rail transit share of 7% for NBA game and concert event attendees and 3% for other event attendees has now been assumed. Even with this assumption, however, the supplemental analysis shows that implementation of the IBEC TDM Program would achieve the 15% trip reduction target required by AB 987.

The IBEC Project AB 987 Application has been supplemented as discussed above, and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

#### **Rail Transit/Shuttle Use – ITC Connector Study and Oakland A's AB 734 Application:**

The correspondence claimed that the rail transit mode share assumptions were not supported by the forecasted ridership in the City of Inglewood's Envision Inglewood study of the proposed Inglewood Transit Connector (ITC). One correspondent also made comparisons to the AB 734 application for the proposed Oakland A's Howard Terminal ballpark regarding the shuttle program and anticipated transit ridership.

**Reply:** The City of Inglewood's Envision Inglewood report for the ITC Connector forecasts a ridership of between 10% and 14% for LA Clippers games. This share represents only those IBEC event attendees using the ITC for all or a portion of their trip. Per the Envision Inglewood report, the locally preferred alternative would only connect to the Metro rail network (specifically, the Crenshaw/LAX Line, currently under construction) at one location: the Downtown Inglewood station. In contrast, the IBEC Project TDM Program includes three shuttle routes serving three nearby light rail transit stations, providing a free first-mile/last-mile connection and exponentially increasing transit access and convenience for IBEC event

---

<sup>3</sup> "Los Angeles Rams cause Metro ridership to surge." *Los Angeles Daily News*. August 30, 2016 (updated August 28, 2017). Online: <https://www.dailynews.com/2016/08/30/los-angeles-rams-cause-metro-ridership-to-surge/>, accessed June 3, 2019.

<sup>4</sup> MLB Dodger Stadium, *Purchase Parking*, available at: <https://www.mlb.com/dodgers/ballpark/transportation/parking>, accessed April 4, 2019.



attendees. Therefore, the assumed 10% transit share in the IBEC Project AB 987 Application is reasonable, given that it accounts for ridership across both the Metro Crenshaw/LAX and Metro Green lines, at three stations, and would not force a transit rider to travel further than needed for their free shuttle ride.

Additionally, based on a sold-out event, the Envision Inglewood report estimates that 2,557 attendees (14%) would ride the ITC. The IBEC Project AB 987 Application estimates that 1,850 attendees (10%) would arrive via rail transit, 707 attendees (28%) fewer than the Envision Inglewood report. Therefore, the AB 987 analysis has effectively assumed a ridership “penalty” of 707 attendees (28%) as a result of no rail transit stop being located immediately adjacent to the IBEC Project. Given the greater connectivity of the free shuttle program (connections to three stations instead of only one), and that a transfer from other rail lines to the ITC would still be necessary, even assuming construction of the ITC project, the rail transit mode share assumed in the IBEC Project AB 987 Application is reasonable.

Furthermore, the refined trip generation in Attachment 2: IBEC Trip Generation Supplemental Technical Memorandum, assumes a substantially lower—and much more conservative—rail transit share of 7% for NBA game and concert event attendees and 3% for other event attendees. These adjustments reflect a conservatively low transit mode share, as compared to the Envision Inglewood report and examples from other similar venues.

Additionally, given the relatively short distances (approx. 1–2 miles) and approximate travel times (on the order of 8–10 minutes), it is also reasonable to expect that a high-quality shuttle / bus service could function similar to a fully grade-separated fixed-route service—such as the automated people mover (APM) proposed by the ITC—in terms of attracting ridership among IBEC event attendees.

For reference, the rail connection for Oakland International Airport (Oakland, California) was originally provided by an express bus service (AirBART) from 1977 to 2014 before it was replaced by an APM system, the Oakland Airport Connector (OAC). Before being replaced in late 2014, AirBART served approximately 1,900 riders daily, on average, and operated approximately every 10 minutes. While the OAC originally saw a ridership increase over AirBART in its first one to two years, ridership has been declining, and is currently at approximately 2,150 passengers (daily average for February 2019), for a fully grade-separated system that operates approximately every 4–5 minutes. This average ridership is very similar to the AirBART operation, given that total passengers increased due to an increased number of flights over the period from 2014 to 2019. While the travel distance in this example (approx. 3 miles) is somewhat larger than for the IBEC Project, AirBART was able to achieve similar ridership to the OAC, even though it did not benefit from potential service investments (e.g., transit-only lanes, signal priority, all-door boarding, pre-paid / proof-of-payment ticketing, timed transfers, etc.) that could be implemented for the proposed IBEC shuttles. This reference point demonstrates that a high-quality, convenient shuttle service can present a low-infrastructure, high-impact investment in successful event-day operations and effective capture rate of ridership.

Regarding the comparison to the Oakland A's AB 734 application and the quoted statement that BART shuttles are ineffective at trip reduction, this information is taken out of context and is inaccurate. The Oakland A's AB 734 application clearly proposes introducing a BART

shuttle program to “increase BART ridership by increasing convenience,” and acknowledges that “this measure primarily reduces vehicle trips by encouraging more attendees within a moderate distance of Downtown Oakland to use BART.” (AB 734 Application, Exhibit D, page 17). The Oakland A’s application concludes that a BART shuttle program would be less attractive for attendees driving from outside Oakland, but could still reduce overall vehicle trips by 2–4%. (AB 734 Application, Exhibit D, page 23).

Note also that there are key differences in the two applications. The Howard Terminal proposal includes both a shuttle program and an aerial tram (gondola) service linking the stadium with BART, the latter of which is estimated to produce a (separate and additional) vehicle trip reduction of approximately 4–7%. In addition, the walking distances to / from the nearest rail stations are shorter for the Howard Terminal proposal, reducing the effectiveness of a shuttle program for that project. Shuttle service for the IBEC Project is envisioned to fulfill a more central role than the BART shuttle for the Howard Terminal stadium. For the IBEC Project, the shuttle will be the primary first-mile / last-mile connection, and is expected to be used by almost all attendees arriving by Metro rail. In contrast, the BART shuttle will be only one of several different options for attendees arriving to the Howard Terminal ballpark by BART.

Even with the adjustments to the IBEC Project trip generation analysis noted above, the supplemental analysis included in Attachment 2 shows that implementation of the IBEC TDM Program would achieve the 15% trip reduction target required by AB 987.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

**Rail Transit Ridership:** Correspondence on rail transit mode share claimed that the assumptions were not supported because ridership is declining.

**Reply:** Regular transit riders and spectators using transit for special events represent completely different ridership profiles, with different passenger needs and considerations. Regardless of ridership levels among regular passengers, special event transit service can prove successful in capturing ridership, particularly if complemented by a well-balanced program of parking management and reliable/convenient alternative transportation modes.

In particular, the IBEC TDM Program is designed around reasonable and achievable mode share targets informed by the data and precedents outlined in the IBEC Project AB 987 Application and, as discussed in these replies to correspondence, several venues already in operation or expected to be in operation in the very near future. While the IBEC Project AB 987 Application assumes a 10% transit mode share, a higher transit mode share may be achievable through implementation of the TDM measures identified in the IBEC TDM Program. Research for other sports and events venues already in operation, such as Levi’s Stadium in Santa Clara and the LA Memorial Coliseum in Exposition Park in Los Angeles, demonstrates that they have achieved higher transit modes shares and/or lower automobile mode shares in similar contexts.

Furthermore, while increasing public transit use is an important element of the IBEC TDM Program, it is not the only component. The IBEC TDM Program also includes measures

related to carpooling/vanpooling, active transportation (walking/biking), and park-and-ride (charter coach) service, which provide additional mechanisms to influence travel behavior and achieve the target mode share goals. The IBEC TDM Program is also designed to be flexible and responsive to observed travel behavior patterns—if targeted mode share and/or trip reduction goals require additional vehicle trip reduction, the IBEC TDM Program will be adjusted to achieve a larger mode shift or otherwise reduce vehicle trips through the most efficient means.

The Metro Red Line ridership referenced in the correspondence is incorrect, as the actual average weekday ridership for the Red Line (including the Purple Line) in February 2019 was only 139,850.<sup>5</sup> In addition, average daily ridership is generally a poor metric of comparison across Metro's rail lines because many of the lines are not directly comparable. In particular, the Red Line is a fully grade-separated (underground) line operated with heavy rail (subway) trains, and operates at a higher frequency (every 5 minutes during weekday peak periods) than Metro's other rail lines, most of which are operated using lower-capacity light rail vehicles at lower peak-period frequencies (e.g., every 12 minutes for the Blue Line, every 6 minutes for the Green Line).

In addition, a simple comparison of average daily ridership does not capture the key differences in operating context, even when comparing the Crenshaw/LAX Line against the other existing light rail Metro lines referenced in the correspondence. The Blue Line, for example, stretches over 22 miles and serves 22 stations, while the Green Line stretches 20 miles and serves 14 stations. The initial segment of the Crenshaw/LAX Line, however, is only 8.5 miles, serving 9 new stations. The Crenshaw/LAX Line is much shorter than either the Blue Line or the Green Line, and is more appropriately considered a branch or extension of the Green Line, rather than an individual line. When comparing the Crenshaw/LAX Line to the other two lines using a more appropriate metric like ridership density (i.e., average daily ridership per route-mile), it is actually projected to perform better than the Green Line (approximately 1,550 passengers/route-mile vs. 1,300 passengers/route-mile). While it would be less efficient than the Blue Line (2,500 passengers/route-mile), this is understandable given the Blue Line's route connecting two major regional destinations at either terminal (Downtown Los Angeles and Downtown Long Beach), operating along a relatively densely built-up, historic railway corridor.

As part of the refined trip generation analysis in the IBEC Trip Generation Supplemental Technical Memorandum included as Attachment 2, a substantially lower—and much more conservative—rail transit share of 7% for NBA game and concert event attendees and 3% for other event attendees has now been assumed. Even with this adjustment, however, the supplemental analysis shows that implementation of the IBEC TDM Program would achieve the 15% trip reduction target required by AB 987.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 2, IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

---

<sup>5</sup> *Interactive Estimated Ridership Stats*. Available at: <http://isotp.metro.net/MetroRidership/IndexRail.aspx>. Los Angeles County Metropolitan Transportation Authority. Accessed April 3, 2019.

**f. Shuttles**

**Rail Transit/Shuttle Assumptions:** Some of the correspondence claimed that the rail transit/shuttle connection ridership estimated for the IBEC Project with implementation of the IBEC TDM Program was not supported because shuttle travel times would be too long for the shuttle program to be effective.

**Reply:** As shuttle connections under the IBEC TDM Program will be an important component of facilitating rail transit ridership for the IBEC Project, a detailed, multi-modal travel time analysis was completed to develop the operating assumptions of the shuttle service incorporated in the IBEC Project AB 987 Application materials. The shuttle operating speed was calculated at 14 mph, which is a reasonable speed estimate when compared to the nearby 211/215 local bus on Prairie and the 117 local bus on Century Boulevard during existing peak hours. During the weekday PM peak-period, average mixed-flow travel speeds for through traffic along Century Boulevard and Prairie Avenue adjacent to the IBEC Project site are approximately 12–15 mph. Assuming an average speed of 14 mph, approximate one-way travel times on the shuttle routes would be as follows:

- 7 minutes for the Hawthorne/Lennox Station route,
- 12 minutes for the La Brea (Downtown Inglewood) Station route, and
- 10 minutes for the AMC/96th Street Station route.

Even assuming an average shuttle speed of approximately 8 mph (a typical speed of urban buses in congested mixed-flow traffic, with short stop spacing), one-way travel times on the shuttle routes would be approximately:

- 12 minutes for the Hawthorne/Lennox Station route,
- 21 minutes for the La Brea (Downtown Inglewood) Station route, and
- 17 minutes for the AMC/96th Street Station route.

The City of Inglewood will require the development of a Transportation Management Plan (TMP) for the IBEC Project as a condition of approval. The TMP will include traffic control measures to reduce congestion and improve traffic flow during events, which will also ensure that shuttles can efficiently arrive at and depart from the site. In particular, these measures could include traffic control officers present at various locations near the IBEC to hold conflicting traffic movements and give priority to shuttles. Additional traffic control measures, such as turn restrictions, coning, and temporary transit-only lanes could be implemented to further reduce potential conflicts between shuttle operations and background event traffic. In addition, the IBEC TDM Program also includes a robust park-and-ride service for NBA game and concert attendees using off-site parking facilities. This service would help to reduce event-related traffic in the immediate vicinity of the venue by allowing for a more efficient distribution of traffic on the surrounding roadway network, further reducing potential conflicts with shuttle ingress and egress.

Therefore, it is reasonable to expect that average speeds for shuttles would be similar to weekend PM peak-period traffic.

Given the time required to enter and exit parking facilities, these shuttle travel times would likely still be competitive with, if not faster, than driving times for the first/last mile to/from the IBEC. For trips where public transit would be less competitive door-to-door relative to

driving, the park-n-ride service included in the IBEC TDM Program would offer an attractive and convenient alternative with comparable travel times to driving.

No revisions to the IBEC Project AB 987 Application are required to address these claims.

#### **g. Average Vehicle Occupancy**

**Average Vehicle Occupancy:** One correspondent claimed that the average vehicle occupancy (AVO) assumptions used in the analysis are unsupported.

**Reply:** The employee AVO assumptions described in the IBEC Project Trip Generation Memorandum, included as Attachment D to the IBEC Project AB 987 Application, are supported by a report prepared for the new LAFC Banc of California Stadium in Exposition Park. These AVO rates from the LAFC Banc of California Stadium are for event employees (1.50 persons per vehicle), and are referenced from a technical memorandum published by Fehr & Peers on August 17, 2015, regarding vehicle miles traveled (VMT), included as Appendix K to the EIR addendum prepared for the stadium.<sup>6</sup> The attendee AVO rates included in Attachment D are supported by the AVO assumptions employed in the transportation impact analysis (TIA)<sup>7</sup> prepared for the NFL stadium at Hollywood Park near the IBEC Project site, which assumed an AVO of 3.0 for stadium events, and other analyses of large event venues in the region.<sup>8</sup>

In order to provide even more conservative assumptions, the refined trip generation analysis in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal, reflects lower base (i.e., “without TDM”) AVO values (1.18 for event employees, 2.18 for concert attendees, and 2.27 for NBA game attendees).

The majority of attendees are expected to attend in groups (e.g., family, friends, colleagues) and, given the availability and cost of parking at and near the IBEC, it is reasonable to assume a relatively high AVO of between 2 and 3 persons per vehicle for event attendees choosing to drive or use TNCs to/from the site.

The IBEC TDM Program also includes measures designed to facilitate and encourage carpooling and vanpooling, and is designed to be flexible in response to observed travel behavior. If annual reporting shows a need for adjustments to meet vehicle trip reduction

---

<sup>6</sup> *Addendum to the Environmental Impact Report for the Los Angeles Memorial Sports Arena Redevelopment Project; State Clearinghouse No. 2010041059.* The Los Angeles Memorial Coliseum Commission. September 2015.

<sup>7</sup> *Traffic Impact Analysis; Hollywood Park Stadium Alternative Project; City of Inglewood, California.* Linscott, Law & Greenspan, Engineers. February 2015.

<sup>8</sup> *Environmental Impact Report for the Convention and Event Center Project; State Clearinghouse No. 2011031049.* City of Los Angeles, April 2012. City of Pasadena. 2016 (March 24). Arroyo Seco Music and Arts Festival Environmental Impact Report. Available: <https://ww5.cityofpasadena.net/planning/arroyo-seco-music-and-arts-festival/>. Accessed June 4, 2019. The Los Angeles Memorial Coliseum Commission. 2003 (September 5). Environmental Impact Report for the Los Angeles Memorial Coliseum Renovation Project. Available: [http://clkrep.lacity.org/onlinedocs/2009/09-0905-S2\\_misc\\_4\\_2-9-17.pdf](http://clkrep.lacity.org/onlinedocs/2009/09-0905-S2_misc_4_2-9-17.pdf). Accessed: June 4, 2019. The Mobility Group. 2012 (March 21). Convention Center Modernization and Farmers Field Project EIR Transportation Study. Available: [https://planning.lacity.org/EIR/ConventionCntr/DEIR/files/Appendix%20I.1%20-%20Traffic%20Report\\_vol%205.pdf](https://planning.lacity.org/EIR/ConventionCntr/DEIR/files/Appendix%20I.1%20-%20Traffic%20Report_vol%205.pdf). Accessed: June 4, 2019. Fehr & Peers. 2015 (August 17). Vehicle Miles Traveled Analysis for the Los Angeles Football Club Stadium Project.

goal, the IBEC TDM Program would be expanded or adjusted as required. These changes could include measures such as designating more parking for carpool / vanpool users and establishing minimum vehicle occupancies for parking spaces.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

#### **h. Parking**

**West Century Bridge Variant:** One correspondent claimed that the pedestrian bridge variant should be studied separately in the TDM analysis.

**Reply:** This level of detail is not necessary for purposes of analyzing compliance with the requirements of AB 987. The availability of off-site parking spaces located north of the IBEC Project would not change with or without construction of the West Century Pedestrian Bridge. While a pedestrian bridge may provide a small added convenience for employees and attendees parking off-site (compared to having to cross Century Boulevard at-grade), the bridge's overall effect on travel behavior and, consequently, the TDM analysis, is expected to be marginal, and does not warrant a separate analysis scenario.

No revisions to the IBEC Project AB 987 Application are required to address this claim.

**Parking Pricing/Supply Information:** One correspondent claimed more information should have been provided regarding the parking supply and pricing related to the IBEC TDM Program.

**Reply:** Parking supply of the project will meet the City of Inglewood Municipal Code requirements for the IBEC Project. Pricing is not specified in the IBEC Project AB 987 Application because it would be adjusted as needed to help ensure TDM reduction goals are met and in response to market conditions. Specific measures are described in further detail under TDM 3 ("Encourage Carpools and Zero-Emission Vehicles") in Attachment C of the IBEC Project AB 987 Application, and refined in Attachment 1: IBEC TDM Program Supplemental Technical Memorandum, included in this submittal, and would include reduced parking costs and other discounts/benefits for carpools and zero-emission vehicles, as well as variable parking pricing based on vehicle occupancy to encourage carpooling.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 1: IBEC TDM Program Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

#### **i. Park-n-ride**

**Charter Bus/Park-n-ride:** One correspondent states the analysis does not include locations, proximity, travel distance or routes.

**Reply:** The analysis included in the IBEC Project AB 987 Application uses proprietary data regarding the home origins of ticketholders. This origin data was compared to existing park-n-ride lots within the Los Angeles region and correlated by proximity to determine anticipated ticketholder travel behavior to the nearest park-n-ride location.

This analysis concluded that the charter coach and park-n-ride program will utilize existing park-n-ride locations, along with custom locations<sup>9</sup> identified, evaluated, and utilized if necessary to accommodate demand. The 11% mode share for park-n-ride described in the IBEC Project Trip Generation Memorandum, included as Attachment D to the IBEC Project AB 987 Application, is reasonable based on this analysis. This 11% charter coach mode share assumption is also realistic when compared to other locally operated programs such as the Hollywood Bowl, which has achieved up to 35% charter coach mode share for its events.<sup>10</sup>

Additionally, contrary to a suggestion in the correspondence, the analysis of the estimated number of park-n-ride buses required to successfully operate the program did not rely on full, nor even very high, occupancy of the buses. In some instances, the estimates forecast occupancy as low as 50 percent.

As part of the refined trip generation analysis included in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum included in this submittal, a lower, more conservative park-n-ride mode share of 7% for NBA game and concert attendees has been assumed.

Once the IBEC is operational and the IBEC TDM Program is in effect, event-specific data on spectators' origins will be gathered, analyzed, and used to further refine park-n-ride locations and ensure convenient travel to these locations to further incentivize use of the charter service. As shown in Attachment 2, even with the more conservative mode share described above, implementation of the IBEC TDM Program will achieve the 15% trip reduction target set forth in AB 987.

The IBEC Project AB 987 Application has been supplemented, as discussed above, and in further detail in Attachment 2: IBEC Project Trip Generation Supplemental Technical Memorandum, included in this submittal. No further revisions are necessary.

## j. Reporting

**Annual Status Reporting:** Some of the correspondence expressed concerns that annual status reporting obligations are not included in the IBEC TDM Program included as Attachment C to the IBEC Project AB 987 Application.

**Reply:** As discussed on page 26 of the IBEC Project AB 987 Application, the applicant has complied with Public Resources Code Section 21186.6.8(b)(5), which requires annual reporting on implementation of the IBEC TDM Program, other environmental measures required by AB 987, and implementation of all CEQA mitigation measures, by entering into the binding and enforceable agreement with the City of Inglewood, included as Attachment F to the IBEC Project AB 987 Application, which commits the applicant to comply with all Mitigation Monitoring and Reporting Program measures from the EIR and environmental measures required by AB 987 that are included as conditions of approval, which necessarily

---

<sup>9</sup> Custom park-n-ride locations can be easily added to the program on an as-needed basis. A typical custom park-n-ride location would consist of an off-street surface parking lot (e.g., for a major destination such as a regional shopping center), for which an agreement would be negotiated with the property owner to allow temporary use of a portion of the parking spaces for charter coach parking/staging and attendee vehicle parking.

<sup>10</sup> Based on data gathered from the LA Philharmonic's Director of Transportation during an in-person meeting in 2016.

will include the TDM program reporting obligations, and that those conditions will be fully enforceable by the City of Inglewood.

No revisions to the IBEC Project AB 987 Application are required to address this claim.

## **8. LEED**

**Claim that satisfaction of LEED Gold certification requirement is not supported by the application:** Some of the correspondence makes various claims regarding the IBEC Project AB 987 Application's analysis of satisfaction of the LEED Gold requirement:

**Reply:** AB 987 requires that the IBEC Project receive LEED Gold certification within one year of the completion of the first NBA season at IBEC, as set forth in Public Resources Code Section 21186.6.8(a)(3)(A). Certification of the IBEC Project necessarily cannot occur prior to the completion of construction. The strategies and measures identified in the IBEC Project AB 987 Application demonstrate that the IBEC Project will meet LEED Gold certification requirements, as appropriate at this stage in the design and approval process. The strategies selected to achieve LEED Gold certification for the IBEC Project are based upon AECOM's significant experience in achieving LEED certification, including for the Golden 1 Center in Sacramento, CA, and take into consideration the operational requirements for an arena facility to function efficiently.

The LEED scorecards included as Attachment B to the IBEC Project AB 987 Application and action plan developed by AECOM through the design process will be key components of the project's Basis of Design documentation required for compliance with the Title 24 commissioning requirements and the LEED collaborative design requirements, which, in turn, will be critical in developing the final design decisions. Compliance will be demonstrated in a two-step process - with a first submittal being made at the completion of design, and a second submittal upon completion of construction. The credit strategies will be validated through each design submittal, with LEED Gold certification achieved through this process prior to completion of the first NBA season at IBEC.

As discussed on page 26 of the IBEC Project AB 987 Application, the applicant has complied with Public Resources Code Section 21186.6.8(b)(5), which requires the applicant to enter into a binding and enforceable agreement that all mitigation measures required pursuant to CEQA and any other environmental measures required to certify the project under AB 987 shall be conditions of approval of the project, and that those conditions will be fully enforceable by the lead agency or another agency designated by the lead agency. The applicant has done this by entering into the binding and enforceable agreement with the City of Inglewood, included as Attachment F to the IBEC Project AB 987 Application, which commits the applicant to comply with all Mitigation Monitoring and Reporting Program measures from the EIR and environmental measures required by AB 987 that are included as conditions of approval, which necessarily includes the LEED Gold certification requirement, and that those conditions will be fully enforceable by the City of Inglewood.

### **Claim that LEED credit for transit is not appropriate**

**Reply:** The LEED scorecard for the IBEC Project is based upon the status of public transit at the completion of the project rather than current status, and takes into consideration proposed improvements to bus service identified by Metro that would come online prior to



the operational phase of the IBEC Project due to the opening of the Crenshaw/LAX Line and future land use development along Prairie Avenue<sup>11</sup> (including an NFL stadium and significant amount of new retail, office, and mixed-use residential uses within the Hollywood Park Specific Plan area directly north of the IBEC project site), along with the first-mile/last-mile shuttles that will connect with Metro rail on game days as part of the IBEC TDM Program. The specifics of the strategy will continue to be developed over the course of the design process with the necessary supporting documentation required to demonstrate compliance with the LEED Gold credit being developed during completion of construction documents (CDs). It is anticipated that this will be submitted as part of the initial design phase review process, however, in the event that new or expanded bus service is delayed, this credit will be deferred until the second submittal for LEED Certification at the end of construction of the IBEC Project. This will allow time necessary to take advantage of additional service or incorporate additional strategies necessary to achieve this credit.

**Claim that LEED credit for parking footprint is not supported**

**Reply:** The reduced parking credit is based upon the overall parking count being no greater than the current City of Inglewood Municipal Code requirements for the proposed uses included in the IBEC Project and the use of parking structures in-lieu of surface parking to achieve the requirements of the LEED credit. The specifics of the strategy will continue to be developed over the course of the design process, with the necessary supporting documentation required to demonstrate compliance with the LEED credit being developed during CDs and submitted as part of the initial design phase review submittal for LEED certification of the IBEC Project.

**Claim that LEED credit for energy is not supported**

**Reply:** One of the correspondents, in stating that the LEED scorecard included in the IBEC Project AB 987 Application awards 18 points for optimized energy performance, has misinterpreted the LEED scorecard. There are 18 potential points available under this credit, of which only 11 are anticipated to be achieved as part of the LEED Gold certification strategy for the IBEC Project. This estimate of performance is based upon energy simulations using the anticipated energy demand reduction strategies, the inclusion of on-site renewable energy generation, and the anticipated event schedule. The 11 anticipated points under this credit are based upon the LEED calculation methodology, which in turn is based on energy cost reduction achieved through energy efficiency and onsite energy generation.

No revision to the IBEC Project AB 987 Application is required to address these claims.

**9. NRDC Publication: Game Changer – How the Sports Industry is Saving the Environment**

Some of the correspondence claimed that the IBEC Project does not implement feasible GHG mitigation measures in effect in other sports arenas, as identified in a 2012 NRDC report, *Game Changer – How the Sports Industry is Saving the Environment*.

---

<sup>11</sup> "Crenshaw/LAX Bus/Rail Interface Plan Proposals for 8 New Stations." Los Angeles County Metropolitan Transportation Authority. Online: [http://media.metro.net/images/wsc\\_item\\_4\\_crenshaw\\_bus\\_rail\\_82018.pdf](http://media.metro.net/images/wsc_item_4_crenshaw_bus_rail_82018.pdf), accessed June 3, 2019.

**Reply:** This 2012 NRDC report includes summaries of multiple sports venues and the sustainable strategies that they have incorporated, mostly focused on either retrofits or operational sustainability strategies. The 2012 NRDC identifies the following sustainable strategies that have been implemented in retrofits of other NBA home team venues, which have been incorporated into the IBEC Project design:

- Installation of PV Solar
- High efficiency HVAC equipment
- Lighting with LED fixtures or bulbs
- Low flow or waterless urinals
- Onsite EV charging
- Additional bike parking

The majority of the 2012 NRDC report, however, is focused upon operational sustainability efforts that include such strategies as:

- Retro-commissioning
- Implementation of a recycling program
- Implementation of green cleaning and green procurement initiatives

The report also recognizes that LEED is challenging for sports building typology. The majority of venues had achieved LEED certification through LEED for Existing Buildings. Most of the buildings were not able to exceed LEED silver.

The report identified 10 recommendations associated with a successful green venue program:

1. Recognize that shifting to environmentally preferable products and operations takes time
2. Start with efforts that have the fastest return on investment: Energy, Water and Paper efficiency programs
3. Audit your energy, water and paper use and your waste generation to save money
4. Measure your ongoing operation – track energy, water, waste and other environmental costs
5. Establish a green team leader, recruit interested staff from all departments, and get early buy in from leadership
6. Realize that Greening is a journey, not a destination. There is no green, only greener; and there is no best, only better, as new products are entering the market all the time
7. Sponsors and Vendors can help support your greening program. Identify ways to work with partners to profit from this support.
8. Greening is a good branding tool that can help raise your environmental profile in the community. Engage fans in your greening program and communicate your successes.

These recommendations were focused within the report on the operational phase of an existing venue attempting to make the building more sustainable. There are a number of ways that the AECOM design team is utilizing the insight of this report and considering the recommendations while the IBEC Project design is further refined including:

1. Elevating sustainability to a primary goal in the design process.
2. Considering the needs of the longer term sustainable operation of the venue in its design (carpool parking, bike parking, recycling program, etc.) in the programming and design of the venue
3. Utilizing energy efficiency strategies (HVAC and lighting) that have been retrofitted successfully into other arenas, including those serving NBA teams, and identifying opportunities to further enhance the buildings through the use of new technologies.
4. Using the large roof area for the installation of onsite photovoltaic systems to generate renewable solar energy.
5. Engaging the commissioning team early in the design process so that systems are designed for commission certification.
6. Incorporating ongoing monitoring and optimization of the building within the design.

In sum, the IBEC Project incorporates numerous GHG-reducing building design strategies identified in the NRDC report that are relevant to this facility, including those necessary to achieve LEED Gold certification, which is a higher level of LEED certification than that achieved by many of the retrofitted arenas referenced in the report.

No revision to the IBEC Project AB 987 Application is required to address these claims.