City of Palm Springs
Greenhouse Gas Inventory

City of Palm Springs ▪ October 26, 2010

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ADMINISTRATIVE DRAFT
Greenhouse Gas Inventory
City of Palm Springs, California

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SECTION 1: EXECUTIVE SUMMARY

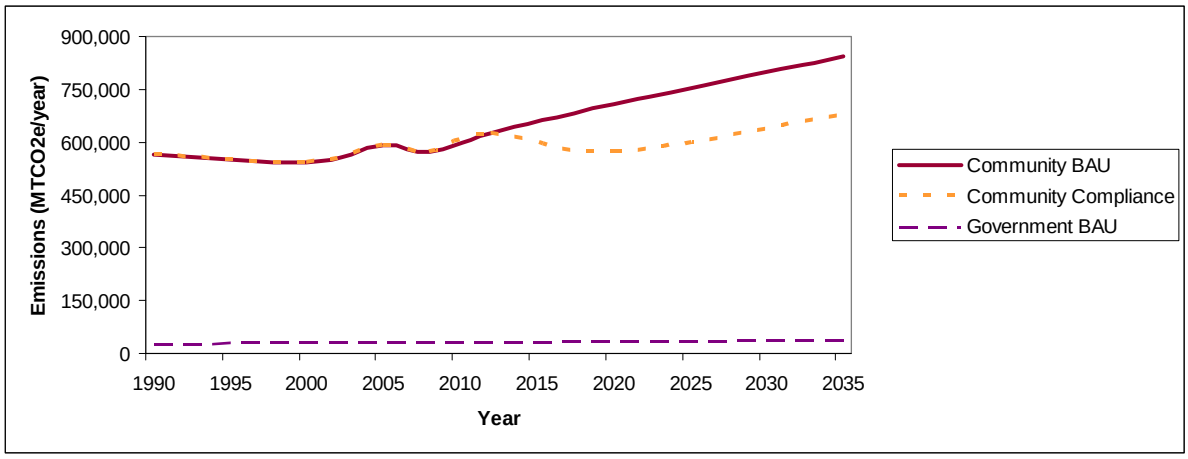
The City of Palm Springs (City) has prepared a greenhouse gas (GHG) emission inventory as an initial step in meeting its Path to Sustainable Communities objectives. GHGs were estimated for community and government sources. Community emissions refer to emissions within the City from sources such as motor vehicles traveling on roads within the City, emissions from power plants to generate the electricity used within the City, and emissions from the combustion of natural gas used within the City. Government emissions refer to emissions within the City government's control, such as methane from the wastewater treatment plant, natural gas from the City's co-generation plants, and from City vehicle fuel combustion. The government emissions are included in the community emissions. Table 1 and Figure 1 display a summary of the GHG emissions.

Table 1: Summary of Greenhouse Gas Emissions

Type	Category	Emissions ($MTCO_2e$ per year)						
		1990	2000	2005	2008	2012	2020	2035
Community	BAU	565,814	540,400	591,892	572,497	626,405	707,197	843,231
	Compliance	—	—	—	—	—	573,760	678,863
Government	BAU	26,812	29,900	30,592	31,227	31,739	33,235	36,096
	Compliance	—	—	—	—	—	31,920	34,664

Notes:
BAU = business as usual; $MTCO_2e$ = metric tons of carbon dioxide equivalents (greenhouse gas emissions)
Note that only compliance scenarios for 2020 and 2035 are provided.
Source: Michael Brandman Associates (Appendix A).

Figure 1: Inventory Growth



SECTION 2: INTRODUCTION

2.1 - Purpose of the Inventory

This inventory serves the following purposes:

Palm Trees in the City of Palm Springs

- It identifies sectors that would provide the greatest opportunity for reductions.
- In the future, the City may prepare a Climate Action Plan; the greenhouse gas (GHG) inventory would be part of that Climate Action Plan. Climate Action Plans typically contain reduction targets and describe how strategies and policies within the Climate Action Plan will meet the reduction target.
- This inventory fulfills Objective 1.1 in the Palm Springs Path to a Sustainable Community, a document prepared by the City in 2009. A summary of the vision of the document as well as the three climate change objectives is presented below.

The Palm Springs Path to a Sustainable Community March 25, 2009

Vision

Palm Springs is a thriving community that maximizes its renewable resources and conserves and restores its limited resources, so that residents can be assured of a future that is economically viable and in balance with the local environment.

Palm Springs aspires to be a place where:

- Citizens are engaged and share a vision of a sustainable future.
- Businesses support clean technology, the production of renewable energy and the internationally renowned eco-destination thrives.
- Children learn that sustainability is the local culture early, and this learning continues throughout life.
- Water and materials are recycled and reused.
- Homes, businesses and neighborhoods are built to high green building standards.
- Local businesses are supported and new ideas flourish.

Climate Change

Goal: Palm Springs is carbon neutral.

Objective 1: Establish a baseline inventory and forecast, ongoing tracking and reporting mechanism for GHG emissions.

1. Develop a comprehensive GHG emissions inventory for City government and the City of Palm Springs geographic area in partnership with other area governments.
2. Annually inventory and report GHG emissions so that reductions can be tracked in a transparent, consistent and accurate manner.

Objective 2: Develop strategies to reduce contributions to GHG emissions to 1990 levels by 2020 and carbon neutrality by 2030.

1. Develop a local climate change action plan to reduce GHGs for Palm Springs.
2. Retrofit and install Light-Emitting Diode (LED) energy efficient lighting in all of the City's traffic lights.
3. Improve city-wide traffic signalization, including permission left turn lanes.
4. Lead a valley-wide effort to improve traffic signalization and incorporate permission left turn lanes throughout the Coachella Valley.
5. Review current zoning and building codes to minimize the impact of GHG.
6. Participate in the development and implementation of regional strategies to meet the requirements of AB 32.
7. Establish incentives and disincentives to reduce production of GHGs by sectors in the City (such as energy production, transportation and real estate residential, commercial, and industrial).
8. Participate in a regional carbon offset program, carbon trading or "cap and trade" system to capture funding for local/regional actions to reduce contributions to GHGs.

Objective 3: Pursue energy efficient transportation options that reduce GHG emissions.

1. Reduce employee vehicle miles traveled in city vehicles by promoting teleconferences and the availability of alternative transportation options for business and trips.
2. Encourage telecommuting and flexible hours policies to avoid at least one commuting day per month per employee (average).
3. Work with the building industry to reduce vehicle trips to and from construction sites.

2.2 - About the Inventory

The City of Palm Springs GHG inventory contains GHG emissions from the municipal government and the community. Emissions are reported as a quantity over time, such as in tons per year. This inventory does not report concentrations of pollutants in the air, which is a measure of the total amount of a pollutant, typically measured in parts per million, parts per billion, or micrograms per cubic meter ($\mu g/m^3$) of air.

This inventory only estimates GHGs and does not contain an estimate of criteria air pollutants (ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead), nor does it contain an inventory of toxic air pollutants (diesel particulate matter, benzene, etc.).

The inventory incorporates two entities: the community and the municipal government. The community emissions refer to emissions *within* the City, such as emissions from motor vehicle use and from generating electricity to power buildings within the City. The municipal government inventory consists of emissions within the control of the government, such as electricity to power City Hall and City fleet vehicle emissions.

The inventory estimates emissions for the years 1990, 2000, 2005, and 2008. The year 1990 was selected to be consistent with Climate Change Objective 2 in the Palm Springs Path to a Sustainable Community. The year 2000 was selected because data was available. The year 2005 was selected because it was prior to the adoption of Assembly Bill (AB) 32;

thus, reductions from regulations pertaining to AB 32 are not shown. Year 2008 was selected because it is the most recent year for which data is available.

Palm Springs and the San Jacinto Mountains

Emissions for 2012, 2020, and 2035 were projected for two scenarios: compliance and business as usual. The compliance scenario incorporates planned regulations that will go into effect by 2012 and 2020, such as the Pavley regulations, which will reduce emissions from new motor vehicles. Business as usual refers to the emissions that do not take into account regulations or any measures of which the City is planning to reduce emissions.

GHG inventories consider a wide range of human activities. Estimating the amount of GHGs generated by these activities requires using a multiplicity of data sources and a diverse set of methodologies. Emission inventories are by nature the reflection of the best available data and the most applicable methods at the time of their compilation. As data grows and understanding develops, the inventories can be updated and improved. Emissions calculated for this inventory reflect current best estimates; in some cases, however, estimates are based on assumptions and incomplete data. Therefore, this inventory contains uncertainties.

Emissions inventories are organized by source categories or sectors. The State of California organizes its emission inventory by the following sectors:

- Agriculture
- Commercial and residential
- Electricity
- Industry
- High global warming potential gases
- Recycling and waste
- Transportation

This inventory provides emission estimates for all of the sectors except for agriculture and industry. Palm Springs has limited agriculture and industrial sources, and the emissions from energy use (electricity and natural gas) from industrial sources are included in the commercial sector.

2.3 - City of Palm Springs

The City lies within the Coachella Valley desert region at the base of the San Jacinto and Santa Rosa Mountains, approximately 60 miles east of Riverside. The expansive desert terrain contributes to the City's warm climate; the mountains provide a dramatic visual

backdrop and shelter from the winds. Its proximity to metropolitan Los Angeles, Orange, and San Diego counties, combined with the City's superior physical setting, is a primary reason that Palm Springs has become a popular resort destination.

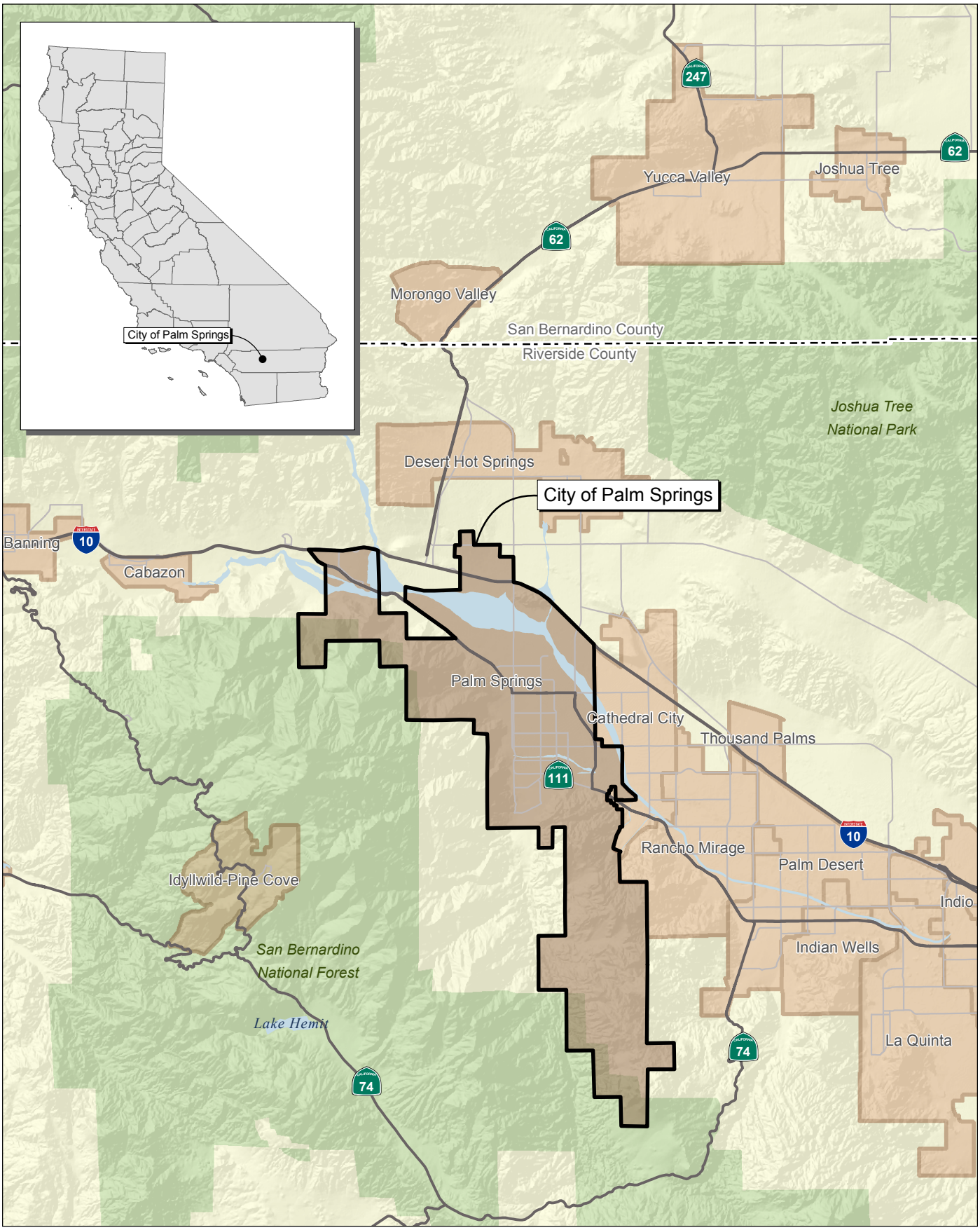
The City's incorporated area encompasses 60,440 acres, or 95 square miles; the City's sphere of influence comprises another 27,160 acres, or 42 square miles. Primary access to the City is provided by Interstate 10 and Highway 111; north–south access to the City is provided via Indian Canyon Drive and Gene Autry Trail (Exhibit 1).

As recommended in the Local Government Operations Protocol, Table 2 presents a profile summary for the City of Palm Springs.

Table 2: City of Palm Springs Profile

Item	Data
Jurisdiction name	City of Palm Springs
Street address (for City Hall)	3200 East Tahquitz Canyon Way
City, State, Zip	Palm Springs, California 92262
County	Riverside
Website	http://ci.palm-springs.ca.us/
Size	95 square miles
Population[1]	2009: 47,601
Annual budget[2]	Total 2010-2011: $146,473,415
Employees (full time equivalent)	2010: 390
Climate zone[3]	15
Annual heating degree days[4]	Base 65: 1000; Base 60: 475
Annual cooling degree days[4]	Base 55: 6715; Base 60: 5196
Contact person Phone Email	Michele Catherine Mician, MS 760-323-8214 Michele.Mician@palmsprings-ca.gov
Services provided	Water treatment and distribution, wastewater treatment and collection, fire protection, police, solid waste collection, airport, street lighting and traffic signals, Angel Stadium, convention center

Sources:
1 Department of Finance, 2009.
2 Palm Springs Resolution No. 22714.
3 California Energy Commission, 2010.
4 Western Regional Climate Center, 2006.



Source: Census 2000 Data, The CaSIL, MBA GIS (2010).

NORTH

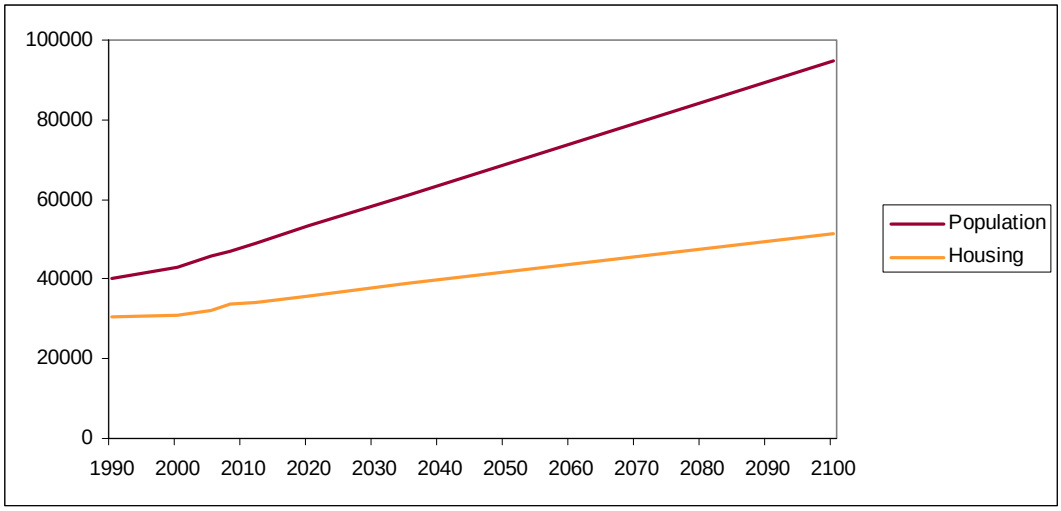
5 2.5 0 5 Miles

Michael Brandman Associates

Exhibit 1
Regional Location Map

Population and housing trends for the City for the years that this inventory covers are displayed in Figure 2. Year 2035 population and housing estimates are interpolated from buildout of the General Plan. It is assumed for purposes of this analysis that buildout of the General Plan would occur in 2100. This assumption is based on a letter from the Southern California Association of Governments (contained in Appendix C), which contains population projections that were used in Senate Bill (SB) 375. In order to be close to those projections, a General Plan buildout year of 2100 is required.

Figure 2: City of Palm Springs Population and Housing Trends



2.4 - Climate Change Background

Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The Intergovernmental Panel on Climate Change predicted that global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (Intergovernmental Panel on Climate Change 2007a).

Climate Change Consequences

In California, climate change may result in consequences such as the following:

- A reduction in the quality and supply of water to the State from the Sierra snowpack. If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.

- Increased risk of large wildfires. If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.

Wildfire in California

- Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range.

- A rise in sea levels resulting in the displacement of coastal businesses and residences. During the past century, sea levels along California's coast have risen about seven inches. If heat-trapping emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

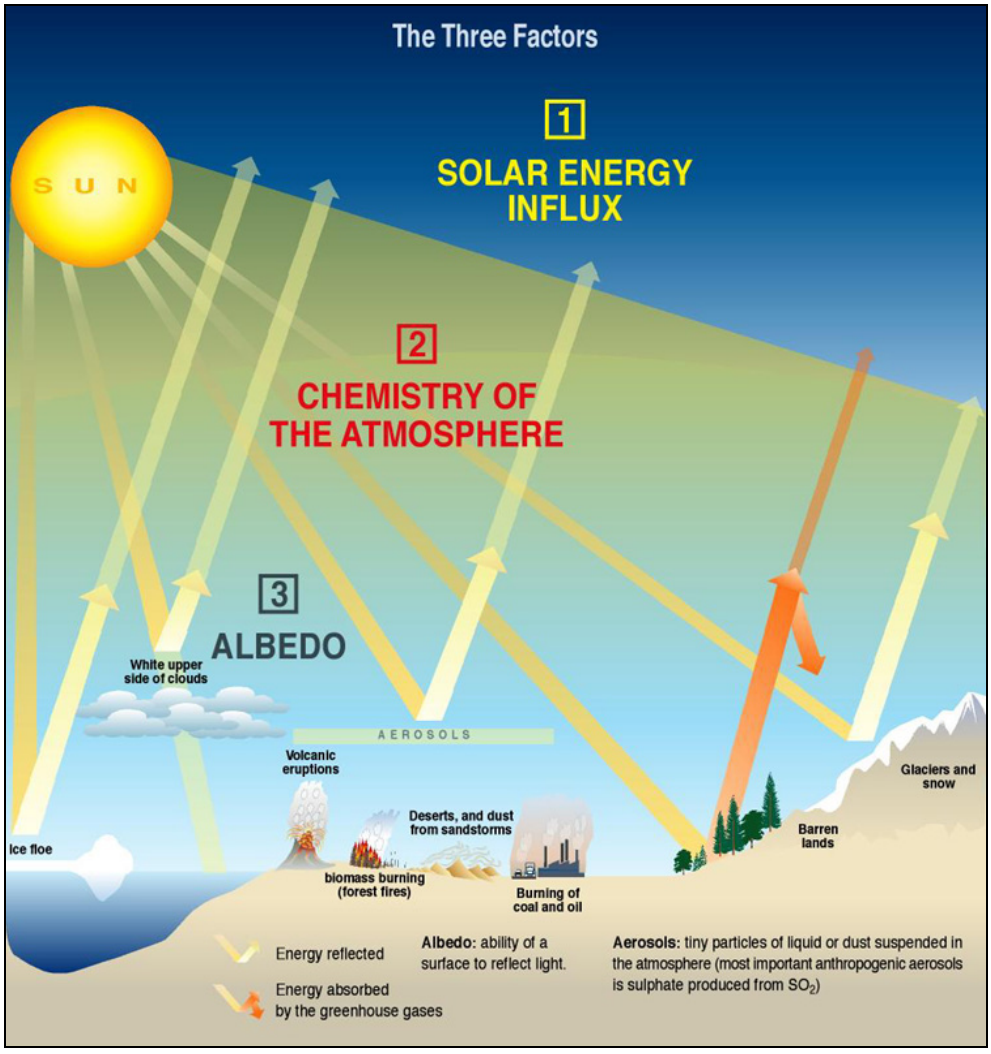
- Damage to marine ecosystems and the natural environment.

- An increase in infections, disease, asthma, and other health-related problems.
- A decrease in the health and productivity of California's forests. [1]

Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. As shown in Figure 3, the energy influx is maintained by three main factors: the amount of energy coming in, which depends on the earth's distance from the sun and solar activity; the albedo (the ability of the earth's surface to reflect light); and the chemical composition of the atmosphere. The presence of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, the earth's surface would be about 34°C cooler.

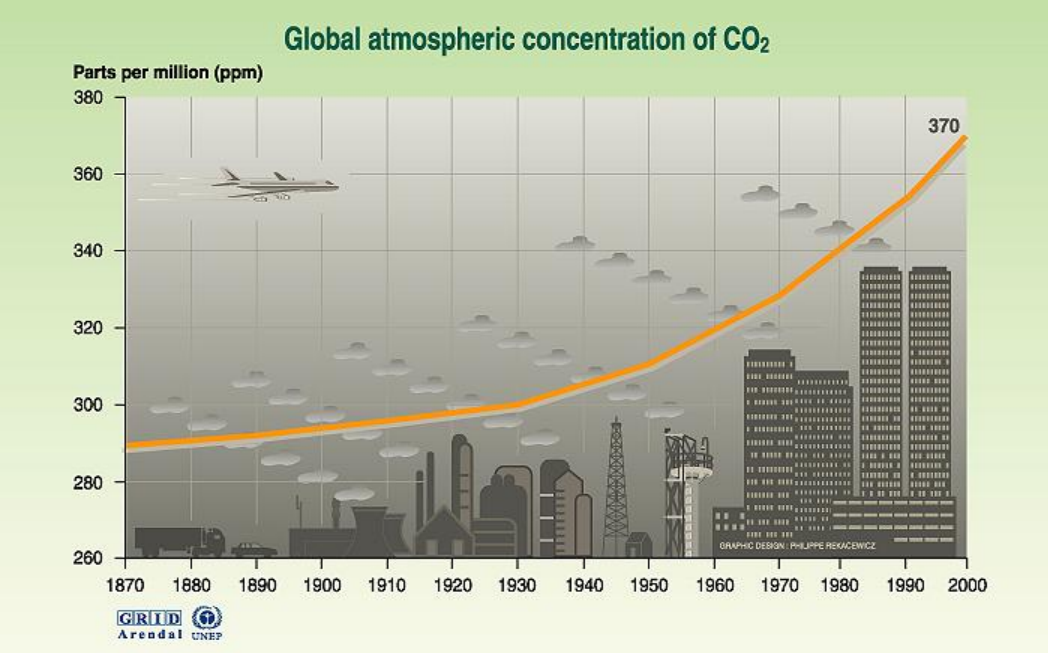
Figure 3: The Greenhouse Effect



[1] California Climate Change Center, 2006; Moser et al. 2009.

The chemical composition of the atmosphere changes over time. Natural processes and human activities emit GHGs. As shown in Figure 4, carbon dioxide concentrations in the atmosphere have steadily increased over time. The global atmospheric concentration of carbon dioxide (CO_2) data in Figure 4 prior to 1958 are from ice core measurements, and post-1958 data are from the Mauna Loa measurement site in Hawaii.

Figure 4: Global Atmospheric Concentration of CO_2



GHGs have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of 1. The calculation of the carbon dioxide equivalent (CO_2e) is a consistent methodology for comparing GHG emissions, since it normalizes various GHG emissions to a consistent metric. Methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. Emissions are typically shown in metric tons of carbon dioxide equivalents ($MTCO_2e$) or a million times that, million metric tons of carbon dioxide equivalents ($MMTCO_2e$). Global warming potentials used in this inventory are shown in Table 3.

Table 3: Global Warming Potentials

Greenhouse Gas	Global Warming Potential
Carbon dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous oxide (N_2O)	310
Source: Intergovernmental Panel on Climate Change 2007a.	

Emissions worldwide were approximately 49,000 $MMTCO_2e$ in 2004 (Intergovernmental Panel on Climate Change, 2007b). As shown in Figure 5, emissions in the United States in 2008 were approximately 6,957 $MMTCO_2e$ (1 teragram (Tg) is equal to 1 MMT). Carbon dioxide is the main contributor to GHG emissions in the United States (water vapor is also a contributor but is not regulated). As shown in Figure 6, GHG emissions in California in 2008 were approximately 477.7 $MMTCO_2e$, which is 6.8 percent of the United States inventory.

Figure 5: United States Greenhouse Gas Emissions Trends

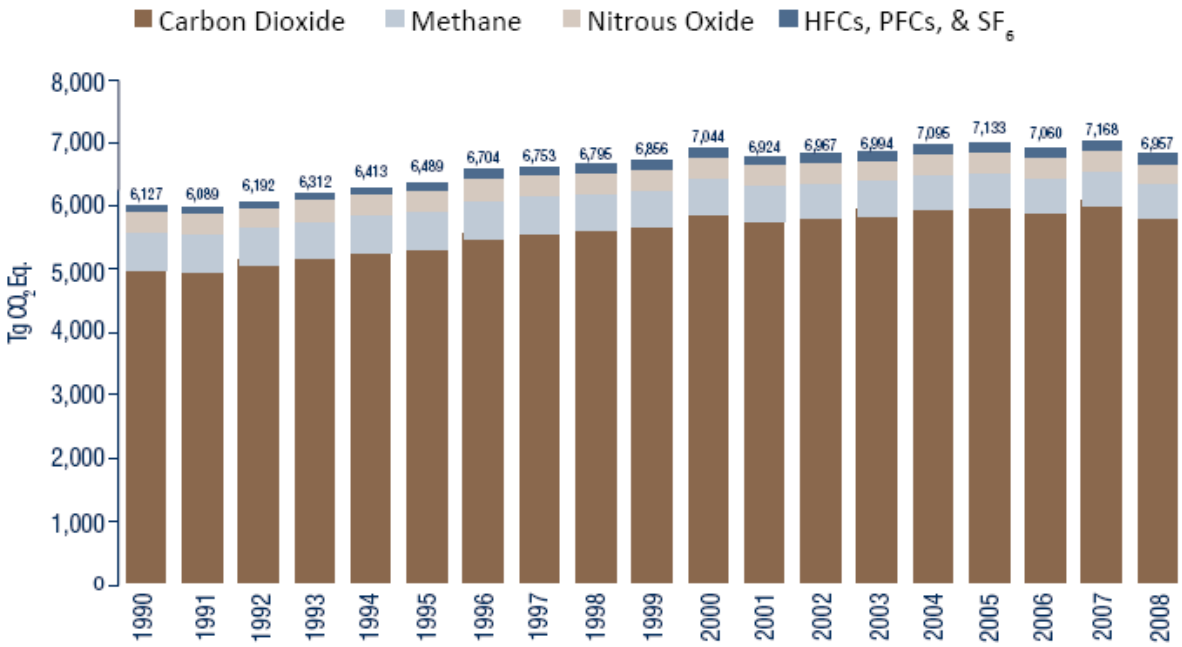
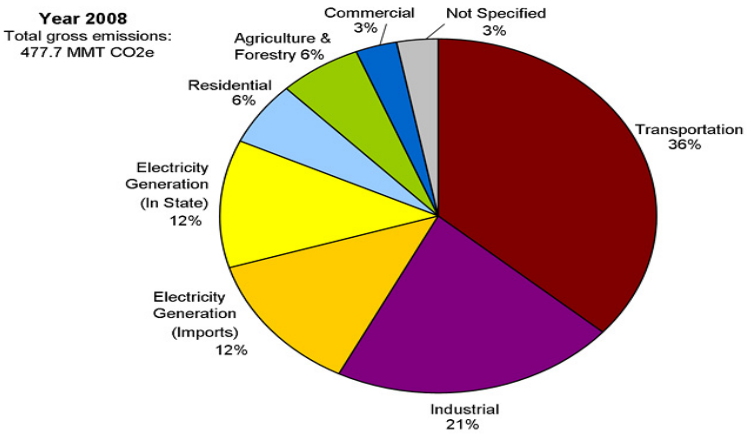


Figure 6: California Greenhouse Gas Emissions in 2008



California Regulatory Context

California has adopted a variety of regulations aimed at reducing the State's GHG emissions. While state actions alone cannot stop climate change, the adoption and implementation of this legislation demonstrates California's leadership in addressing this challenge. Key legislation pertaining to the State's reduction targets are described below.

Wind Turbines in Palm Springs

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S 3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Executive Order S-13-08 directs the Governor's Office of Planning and Research, in cooperation with the California Resources Agency, to provide land use planning guidance related to sea level rise and other climate change impacts. The order also directs the California Resources Agency to develop a State Climate Adaptation Strategy and to convene an independent panel to complete the first California Sea Level Rise Assessment Report.

Senate Bill (SB) 375. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations are required to adopt a Sustainable Communities Strategy, which allocates land uses in the Metropolitan Planning Organization's Regional Transportation Plan. Qualified projects consistent with an approved Sustainable Communities Strategy or Alternative Planning Strategy and categorized as "transit priority projects" would receive incentives under new provisions of CEQA.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. GHGs as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The California Air Resources Board (ARB) is the state agency charged with monitoring and regulating sources of GHGs.

The ARB approved the Climate Change Scoping Plan in December 2008 (California Air Resources Board, 2008). The Scoping Plan contains measures designed to reduce the State's emissions to 1990 levels by the year 2020. Local governments must achieve reductions through land use measures that will be substantially dependent on the General Plan for success. Statewide, the ARB expects to target local governments with reducing GHG emissions by 5 $MMTCO_2e$ by 2020.

Scoping Plan Reductions

The Scoping Plan contains a variety of measures, some of which would not directly reduce emissions in Palm Springs. The measures that could reduce emissions in Palm Springs are presented in Table 4.

Table 4: Scoping Plan Reductions in California

Category	Scoping Plan Measure	Reductions in 2020 ($MMTCO_2e$)
On-road motor vehicles: passenger vehicles	Pavley (AB 1493)	27.7
	Tire Pressure Program	0.74
	Low Carbon Fuel Standard	16
	Advanced Clean Cars	5.1
	Tire Tread Program	0.3
	Subtotal	*49.84*
On-road motor vehicles: heavy duty trucks	Heavy-duty vehicle (Aerodynamic efficiency)	0.93
Ozone-depleting substance substitutes	Limit High GWP Use in Consumer Products	0.23
	High-GWP Refrigerant Management Program for Stationary Sources	8
	Alternative Suppressants in Fire Protection Systems	0.1
	Mitigation Fee on High GWP Gases	5
	Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	4
	Subtotal	*17.33*
Waste	Landfill Methane Control Measure	1.5
Electricity	Renewable Electricity Standard	13.4
	Renewables Portfolio Standards	7.9
	Subtotal	*21.3*

Notes:
$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; GWP = global warming potential
Source: California Air Resources Board, 2010.

The percent reductions from the measures shown in Table 4 are shown in Table 5. The reductions apply to the California inventory, but similar rates of reduction are expected to occur in Palm Springs. The business as usual emissions for the State's forecast of 2020 emissions is forecast from 3-year average emissions for 2002–2004. The project's business as usual forecast was based on emission factors and values for 2005 and 2008; therefore, reductions are applicable to project emissions.

In 2006 and 2008, Southern California Edison delivered approximately 16 percent of power generated by renewable energy (Southern California Edison, 2006 and 2010). The Renewables Portfolio Standards and the Renewable Electricity Standard require a 33-percent renewable energy mix as an average statewide. If Southern California Edison were to increase its renewable energy mix to 33 percent by 2020, it would need to increase it by 17 percent. Therefore, a 15-percent reduction from electricity is a reasonable assumption.

The percent reductions shown in Table 5 are applied to the business as usual emissions to result in the "compliance" emission scenario. Some measures will be implemented before 2020; however, no reductions from these measures are taken for 2012 emissions because emission reduction data is not available.

Table 5: Scoping Plan Percent Reductions in California

Category	Emissions in 2020 ($MMTCO_2e$)	Reductions in 2020 ($MMTCO_2e$)	Percent Reduction (%)
On-road motor vehicles: passenger vehicles	160.8	49.84	31
On-road motor vehicles: heavy duty trucks	48.3	0.93	2
Ozone-depleting substance substitutes	45.0	17.33	39
Waste	7.7	1.5	19
Electricity (California average)	139.2	21.3	15

Notes:
$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; NA = not available
Sources:
Emissions in 2020: California Air Resources Board, 2008.
Reductions in 2020: Table 4

SECTION 3: GOVERNMENT INVENTORY

3.1 - Methodology

The methodology for the government inventory follows the Local Government Operations Protocol (Protocol) (California Air Resources Board, et al. 2010). The emissions are reported are those within operational control of the City. The City has operational control over an operation if the City has the full authority to introduce and implement its operating policies at the source. Operating policies can include operational, health, safety, and environmental policies.

The Protocol divides GHG emissions into scopes. This inventory will include the following emission categories:

- Scope 1: All direct GHG emissions
- Scope 2: Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling
- Scope 3: Although these emissions are optional, emissions associated with employee commute and business travel are reported.

Estimates of emissions for the "forecast" years, or years 2012, 2020, and 2035 were based on various criteria such as population growth and other factors described below.

Scope 1 Emissions

Palm Springs International Airport

The Palm Springs International Airport is under the City's jurisdiction. The airport was recently renovated in 2009, which added 5,000 square feet for a concessions area, restrooms, and terminal building, including a remodeled courtyard area (Palm Springs 2009).

Palm Springs International Airport equipment

Although emissions are produced by the aircraft that land and take off at the airport, only emissions from the ground equipment fuel use are estimated.

Fuel usage for 2005 and 2008 were provided by the airport. Fuel usage at the airport for the forecast years was estimated based on gallons per total takeoff and landings in 2008. Fuel usage estimates for 1990 and 2000 were based on gallons per passenger in 2005.

Palm Springs Wastewater Treatment Plant

The Palm Springs Wastewater Treatment Plant was originally constructed in 1960 to treat 4.15 million gallons per day (mgd). Two facility expansions were completed in 1979 and 1983, bringing the total design capacity to 10.9 mgd for average annual flow. The treatment processes consist of preliminary screening, grit removal, primary clarification, trickling filters, and secondary clarification. Treated effluent is disposed of onsite in percolation ponds or is supplied to the Desert Water Agency for further treatment to meet reuse standards for offsite irrigation. Biosolids from the treatment process are thickened, then stabilized by anaerobic digestion and dried with sludge drying beds before final disposal (Palm Springs 2010a).

Emissions from the treatment plant include stationary methane emissions from incomplete combustion of digester gas, process methane emissions from wastewater treatment lagoons, and process emissions from the plant without nitrification/denitrification. Emissions for forecast years were estimated from population growth assumptions.

Former Palm Springs Landfill

The Former Palm Springs Landfill is an inactive landfill that had accepted predominantly household refuse and construction waste from the early 1930s until the mid-1960s. It is estimated that the volume of landfill debris is approximately 545,000 cubic yards, of which approximately 29 percent and 71 percent of the material are construction and household debris, respectively (Source Group 2003).

Former Palm Springs Landfill Remediation, 2004

In 2004, the Former Palm Springs Landfill was remediated, and the landfill material was moved, recompacted, and capped within a proposed central parking area. A monitoring program was installed to determine if methane or other gases are accumulating in the piping. If there is accumulation, low-flow vacuum pumps purge the gases. There is no gas recovery collection system of methane to generate electricity.

Methane emissions from the landfill (for past, current, and future emissions) are estimated using the ARB's Landfill Emissions Tool (California Air Resources Board 2010). There is some uncertainty in the emissions estimates, as the waste in cubic yards was converted to waste in tons.

Co-generation Plants

There are two co-generation plants located within the City and operated by the City: Municipal and Sunrise Plaza. The co-generation plants use natural gas to power engines to generate electricity and heat. When natural gas is burned, it emits GHGs. Natural gas

usage was provided by the City and was entered into the Clean Air and Climate Protection (CACP) model to generate GHG emissions.

The heat byproduct from the co-generation plants is used to produce steam and hot water for the chillers as well as hydronic space heating. A chiller removes heat from a liquid. The liquid is then distributed to heat exchangers or coils, which cool the air in the space where they are located. The liquid is recirculated back to the chiller to be cooled again.

The Municipal co-generation plant provides electricity to the airport, county building, Fire Station #2, the city yard, City Hall, and the police station. Any additional electricity that is required is provided by Southern California Edison (and is shown in the Electricity category of the Government Inventory).

The City is currently conducting a comprehensive energy audit to develop a set of programs that will be combined as a performance-based, single-energy project with the intended purpose to save energy, reduce GHG emissions, and cut the City's energy and maintenance and capital equipment expenditures throughout all of the City's facilities, including the two co-generation plants. The future of the co-generation plants is unknown at this time. Therefore, it is assumed that natural gas use in future years is the same as in 2008.

City Vehicle Fleet

There are emissions from vehicles driven by City employees, such as police vehicles, firefighting vehicles and trucks, passenger vehicles, and trucks. Fuel use from municipal operations was entered into the CACP model. Fuel use per capita in 2008 was used to estimate fuel use for the forecast years using population growth as a surrogate, as it is anticipated that more City employees and services would be required in proportion to the increase in population.

Ozone-Depleting Substance Substitutes

The City of Palm Springs estimated that approximately 90 to 120 pounds of refrigerant (R-22) leaks out of the air conditioning systems used in City facilities, according to City records of replacement of refrigerant required from leakage. These emissions were converted to GHG emissions using the global warming potential for R-22. It is assumed that emissions in forecast years would be the same as current emissions. Even if the type of refrigerant changes in the future, the global warming potential would likely be about the same, as would the leakage.

Scope 2 Emissions

Natural Gas

Natural gas usage was not available through Southern California Gas Company. Therefore, natural gas usage is not included in the City's inventory (with the exception of natural gas used for the co-generation plants).

Electricity

The City purchases electricity from Southern California Edison for its electricity needs not supplied by the co-generation plants. The electricity usage was provided by Southern California Edison and was converted to GHG emissions using emission factors specific to Southern California Edison, published by eGRID. The emissions for 1990 use the emission factors from eGRID for 1996, the emissions for 2000 use emission factors for 2000, and emissions for later years use emission factors for 2005. Forecasts were estimated by assuming that electricity would increase proportionate to population growth in the City.

Scope 3 Emissions

Employee Commute

An employee survey was conducted between August 25, 2010 and October 5, 2010. From a total of 390 employees, 141 surveys, or 36 percent, were completed. The survey was used to obtain the type of vehicle used for employee commutes and the distance to the place of employment from the residence. The average commute was applied to estimate emissions from all the employees. No growth was assumed for the employee commute because, since 1990, the number of employees has declined and is not based on the population within the City.

3.2 - Results

The estimated GHG emissions from government operations are shown in Table 6 and in Figure 7. The fugitive gases (methane and nitrous oxide) from the wastewater treatment plant are the largest source of emissions for all years, followed by the co-generation plants.

Table 6: Government Historical Inventory and Future Business as Usual Inventory

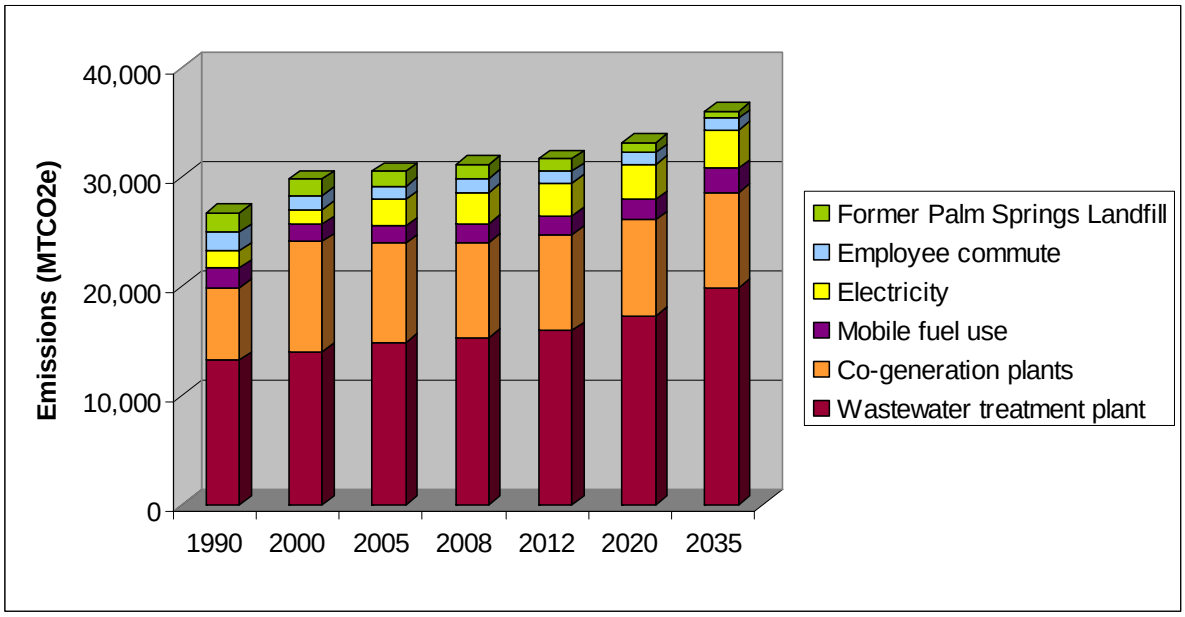
Category	Emissions ($MTCO_2e$ per year)						
	1990	2000	2005	2008	2012	2020	2035
Former Palm Springs Landfill[1]	1,811	1,482	1,341	1,263	1,145	917	632
Wastewater treatment plant (fugitive)[1]	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Co-generation plants[1]	6,646	10,020	9,112	8,746	8,746	8,746	8,746
Airport fuel use[1]	53	79	86	109	115	133	162
City vehicle fleet[1]	1,687	1,495	1,450	1,559	1,628	1,767	2,026
Ozone-depleting substance substitutes[1]	99	99	99	99	99	99	99
Electricity – municipal[2]	834	734	1,809	2,208	2,302	2,467	2,716
Electricity – streetlights[2]	741	652	633	681	710	761	838

Table 6 (cont.): Government Historical Inventory and Future Business as Usual Inventory

Category	Emissions ($MTCO_2e$ per year)						
	1990	2000	2005	2008	2012	2020	2035
Employee commute[3]	1,705	1,312	1,216	1,280	1,036	1,036	1,036
Total	**26,812**	**29,901**	**30,593**	**31,227**	**31,738**	**33,234**	**36,096**

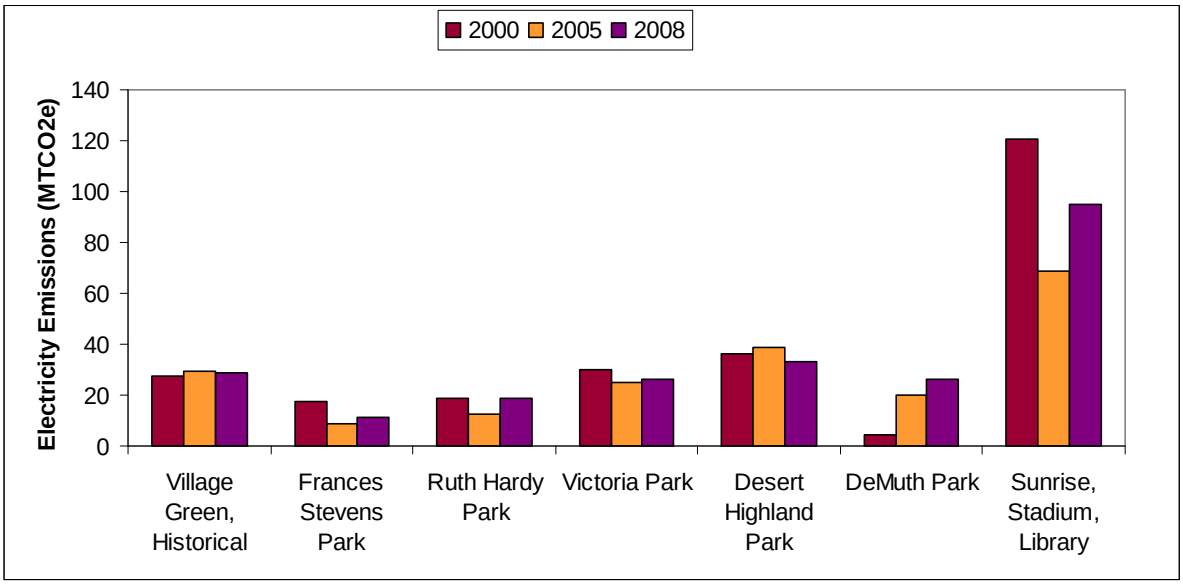
Notes: 2012, 2020, and 2035 are projections based on business as usual.
$MTCO_2e$ = metric tons of carbon dioxide equivalents
[1] Scope 1 emissions
[2] Scope 2 emissions
[3] Scope 3 emissions
Source: Appendix A.

Figure 7: Government Historical and Future Year Business as Usual Inventory



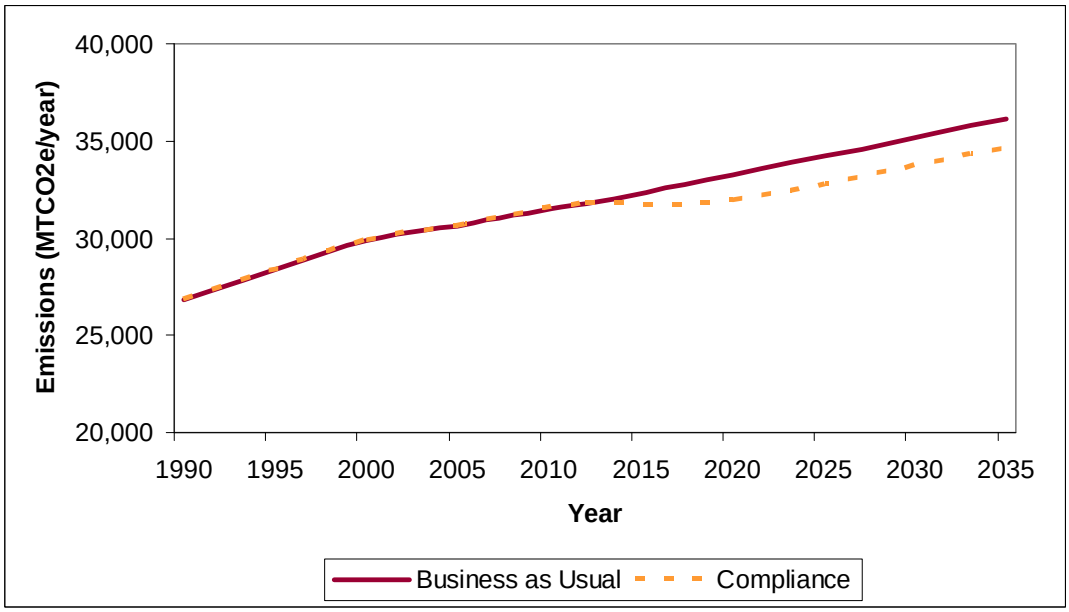
A comparison of the Scope 2 emissions from electricity generation for City parks and associated buildings is shown in Figure 8.

Figure 8: Comparison of Municipal Parks Electricity Use



Incorporation of the reductions in the AB 32 Scoping Plan (see Table 5) is shown in Figure 9.

Figure 9: Government Inventory Growth



Compliance emissions for the years 2020 and 2035 are shown in Table 7. As shown in the table, reductions from AB 32 would result in a 4-percent reduction in 2020 and 2035.

Table 7: Government Compliance Inventory

Source	Emissions ($MTCO_2e$ per year)	
	2020	**2035**
Former Palm Springs Landfill	917	632
Wastewater treatment plant (fugitive)	17,308	19,841
Co-generation plants	8,746	8,746
Airport fuel use	133	162
City vehicle fleet	1,297	1,486
Ozone-depleting substance substitutes	60	60
Electricity – municipal	2,097	2,309
Electricity – streetlights	647	712
Employee commute	715	715
Total	**31,920**	**34,663**
Reduction from Business as Usual	**4%**	**4%**

Notes: 2020 and 2035 are projections and do not represent targets.
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source: Appendix A.

SECTION 4: COMMUNITY INVENTORY

4.1 - Methodology

Detailed information regarding the methodology of the community inventory is contained within Appendix A. There is currently no published guidance regarding methodology for a community inventory. Data was estimated using emission factors in the spreadsheets contained in Appendix A as well as the CACP model.

Mobile Sources

Mobile source emissions are from on-road and off-road vehicles traveling and performing work within the City. A description of these two sources is provided below.

On-Road Vehicles

On-road vehicles include gasoline and diesel passenger vehicles, light-duty trucks (and sports utility vehicles), and heavy-duty vehicles. Vehicle miles traveled within the City for 2000, 2005, and 2008 are from the California Department of Transportation (Caltrans). Caltrans does not have data available for 1990; therefore, vehicle miles traveled within the City in 1990 was backcast from 2000 per capita estimates (17.3 miles per day per person in 2000). The oldest year for which data is available from Caltrans is 1996, which was not used because the per capita rate is greater than in 2000. The vehicle miles traveled does not contain miles traveled outside of the City. In addition, the vehicle miles traveled data includes pass-through trips, which are trips that do not originate or end in the City. The Palm Springs 2007 General Plan contains average daily traffic for buildout of the General Plan on the main roads within the City, which was converted to vehicle miles traveled by multiplying by the road length and adding a percentage to include the local roads. Vehicle miles traveled projections for 2012, 2020, and 2035 were interpolated from 2008 and General Plan buildout estimates. The vehicle miles traveled data was entered into the CACP model to estimate the GHG emissions.

Off-Road Vehicles

Off-road equipment includes construction and mining equipment, generators, industrial equipment, lawn and garden equipment, and recreational equipment (off-road vehicles and all terrain vehicles). Emissions for Riverside County were estimated using the OFFROAD2007 model. Emissions within the City were apportioned from the County emissions on the basis of population. The OFFROAD2007 model also includes forecasts of emissions for future years.

Airport Fuel Use

Airport fuel use is estimated as discussed in the Government Inventory section.

Energy – Residential

Electricity

Residential electricity refers to the indirect emissions associated with generating electricity to be used in households in the City. Southern California Edison provided electricity usage for the entire City for 1990, 2000, 2005, and 2008 (reports are located in Appendix B). Emission factors are from eGRID (1990 uses 1996 factors; 2000 uses 2000 factors; and later years use emission factors for 2005). Electricity for future years was forecast by assuming that household growth was equal to an increase in residential electricity. The electricity usage data was converted to GHG emissions using emission factors specific to Southern California Edison.

Natural Gas

GHGs are emitted when natural gas is burned. Natural gas is used to heat residences, power dryers, heat water, and/or for natural gas kitchen stoves. The Southern California Gas Company provided natural gas usage for 2005 and 2008. Natural gas usage for other years was projected using the therms per year per residential unit in 2005 and was assumed to grow at the same rate as the number of housing units.

Energy – Non-Residential

Electricity

Electricity for the non-residential category includes emissions from power plants used to generate electricity that is used for hotels, restaurants, public buildings and uses (such as streetlights), commercial buildings, and industrial buildings. Southern California Edison provided electricity usage for 1990, 2000, 2005, and 2008. Emission factors are from eGRID (1990 uses 1996 factors; 2000 uses 2000 factors; and later years use emission factors for 2005). Municipal, water, and street lighting growth for future years is correlated to an increase in population. Growth in commercial/industrial is correlated to an increase in commercial/industrial acreage assumed at buildout in the Palm Springs 2007 General Plan. Emissions were estimated using emission factors specific to Southern California Edison.

Natural Gas

Natural gas from the commercial/industrial/public sector is used for space heating, co-generation plants, to heat water, and industrial processes. Southern California Edison provided natural gas usage for the City for the “commercial/industrial” sector for 2005 and 2008. Natural gas for the future years was estimated using the therms per year per acre of commercial/industrial land in 2005. Natural gas for 1990 and 2000 was backcast using therms per capita in 2005. Emissions were estimated using the CACP model.

Waste

Former Palm Springs Landfill

Although this landfill has not been active for many years, methane is still emitted. Emissions are estimated as discussed in the Government Inventory.

Waste Generated

Waste generated by residents, employees, and visitors in the City are sent to a landfill outside of the City, where the trash generates GHG emissions through decomposition processes. The California Department of Resources Recycling and Recovery (2010) maintain records of waste generated by the City.

In 2005, the City expanded its efforts to increase recycling and decrease waste. In 2005, the City's recycling rate was around 54 percent (City of Palm Springs 2010a). The City worked with Palm Springs Disposal Services to tighten the City's waste reporting methods. The City also encouraged businesses to recycle by visiting with businesses and speaking at civic events. The City educated residents by producing recycling brochures, recycling wheels, construction and demolition brochures, fliers, refrigerator magnets, recyclable grocery bags, and other pieces of information available at City Hall, the library, other City facilities, and VillageFest. The City also used its website and closed circuit television (CCTV). The City increased the number of e-waste/shredding events. For the last reportable year, the City's recycling rate was over 69 percent. Between 2005 and 2008, waste decreased in the City by approximately 28,000 tons.

Waste generation for future years was estimated from per capita waste in 2008. The CACP model calculated emissions from waste generation.

Water and Wastewater

Emissions in this category include emissions from the electricity required to pump water and fugitive emissions from the wastewater treatment plant. Electricity data was provided by Southern California Edison. Wastewater treatment plant fugitive emissions are estimated as discussed in the Government Inventory.

Ozone-Depleting Substance Substitutes

In some cases, high global warming potential gases have been substituted for ozone depleting substances (ODS) in refrigeration and manufacturing processes. ODS are being phased out pursuant to the Montreal Protocol because they are gases that cause chemical destruction of the ozone in the stratosphere (a layer of air in the upper atmosphere). Ozone in the stratosphere is good because it absorbs ultraviolet radiation, which can cause skin cancer, cataracts, and other health problems in humans. Stratospheric ozone is not to be confused with ozone in the troposphere (the layer of air that we breathe), which is an air pollutant that results in health effects.

ODS substitutes can be released into the atmosphere when they leak out of refrigeration and air conditioning equipment contained in stationary and mobile applications. ODS substitutes are also used in solvent cleaning, foam production, sterilization, fire suppressants, and aerosols. Emissions of ODS substitutes consisted of 2.9 percent of California's GHG inventory in 2008 and are anticipated to increase to 7.5 percent by 2020.

The United States is forecasting emissions of ODS substitutes to increase by 168 percent between 2005 and 2020 (United States Environmental Protection Agency 2010). The large increase is due to the growing use of ODS substitutes to replace ODS gases.

The ODS substitutes hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) have high global warming potentials. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere compared with the reference gas, carbon dioxide, which has a global warming potential of 1.

ODS substitutes are estimated for the City by apportioning California emissions on the basis of population. California has data and projections for the State for 1990, 2000, 2005, 2008, and 2020. Emissions for 2012 are interpolated from 2008 and 2020 data. Emission projections for 2035 are based on per capita emissions in 2020.

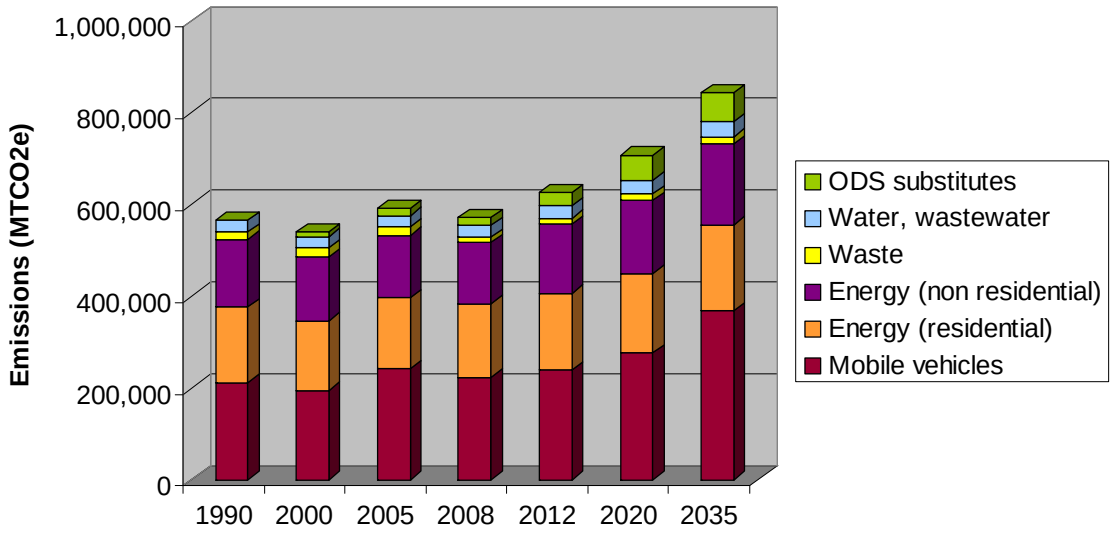
Sources Not Included: Indigo Power Plant

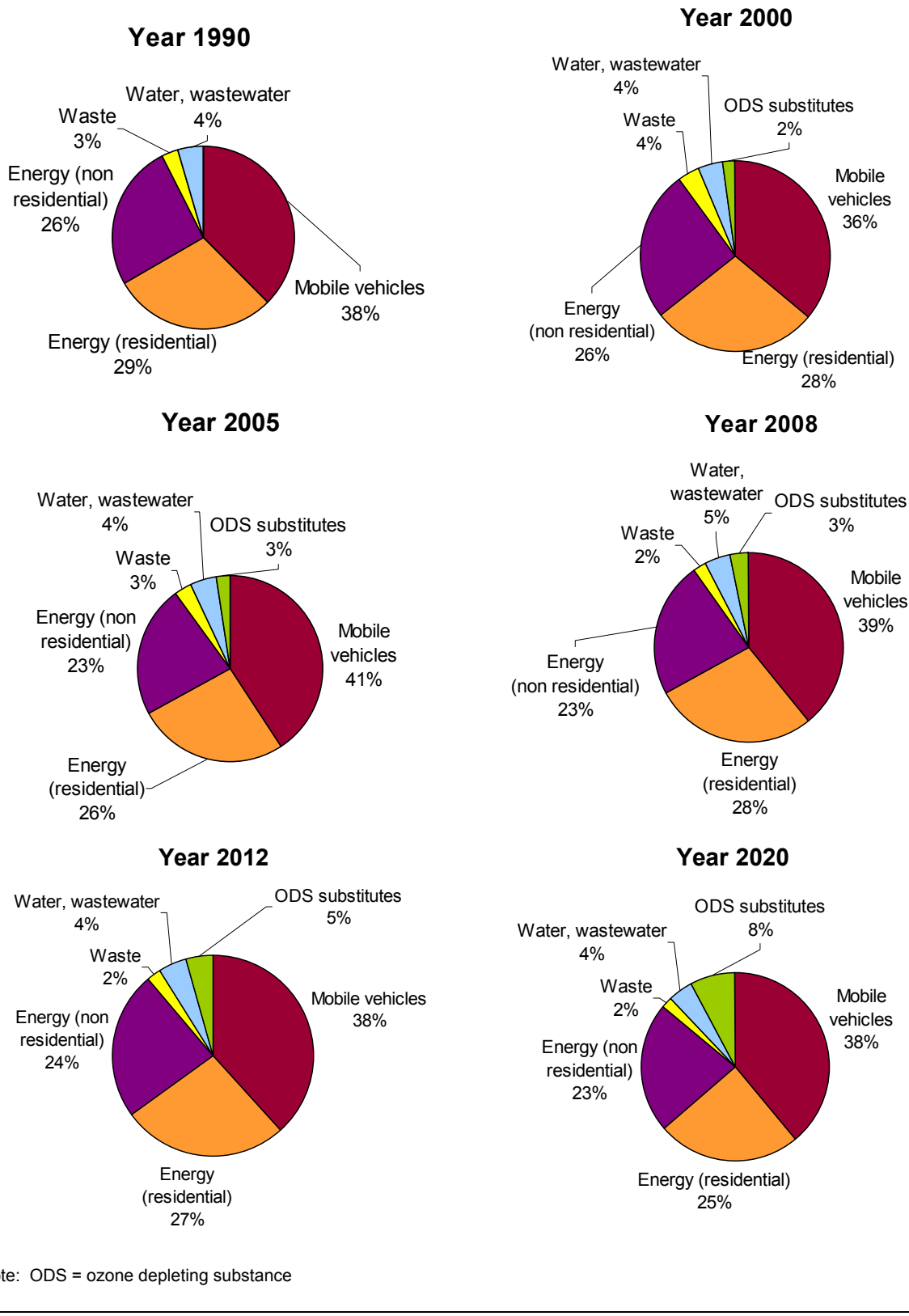
The Wildflower Energy Indigo Generation natural gas peaker power plant's emissions are not included within this GHG inventory because indirect emissions from power plants are included within the Electricity sector. Reported emissions from the peaker power plant in 2008 were 69,471 $MTCO_2e$ and in 2009 were 38,406 $MTCO_2e$ (Appendix A).

4.2 - Results

The community business as usual inventory is presented in Figure 10 and Table 8. A series of pie charts that display the percentages of the emissions between 1990 and 2020 is shown in Exhibit 2. ODS substitutes increase from less than 1 percent in 1990 to 7 percent of the emissions in 2035.

Figure 10: Community Historical and Future Business as Usual Inventory





Note: ODS = ozone depleting substance

Source: Michael Brandman Associates, 2010.

Michael Brandman Associates

Exhibit 2
Community Business as Usual Emissions

Table 8: Community Historical and Future Business as Usual Inventory

Category	Source	GHG Emissions ($MTCO_2e$ per year)						
		1990	2000	2005	2008	2012	2020	2035
High GWP gases	ODS substitutes	49	10,805	15,523	17,239	28,690	54,314	62,282
Water, wastewater	Electricity-water	11,879	9,724	10,326	10,913	11,376	12,193	13,426
	Wastewater treatment plant (fugitive)	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Waste	Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
	Waste generated	14,920	18,367	16,879	11,490	11,999	13,018	14,928
Energy (non residential)	Electricity – commercial/industrial	101,743	91,112	84,047	91,259	93,362	97,568	105,454
	Natural gas – commercial/industrial	43,634	46,527	49,865	38,269	53,980	58,682	67,498
	Electricity – municipal	834	734	1,809	2,208	2,302	2,467	2,716
	Electricity – streetlights	741	652	633	681	710	761	838
Energy (residential)	Electricity	97,594	84,957	84,905	89,656	91,682	95,472	101,761
	Natural gas	66,838	67,566	70,297	70,554	75,265	78,667	85,046
Mobile vehicles	Airport fuel use	53	79	86	109	115	133	162
	Off-road vehicles	123	118	211	207	205	210	250
	On-road passenger vehicles	192,081	179,116	218,483	206,505	221,092	251,733	331,876
	On-road trucks	20,277	15,135	22,640	16,862	18,523	23,754	36,521
Total		**565,813**	**540,402**	**591,892**	**572,497**	**626,403**	**707,197**	**843,231**
Per Capita Emissions		**14.1**	**12.6**	**12.9**	**12.2**	**12.8**	**13.3**	**13.8**

Notes:
GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalents (contains GHGs carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons)
GWP = global warming potential; ODS = ozone depleting substances
Source: Appendix A.

Figure 11 displays the emission percentages for 2035. Mobile vehicles and energy are the largest source of GHG emissions within the City.

Figure 11: 2035 Community Business as Usual Emissions

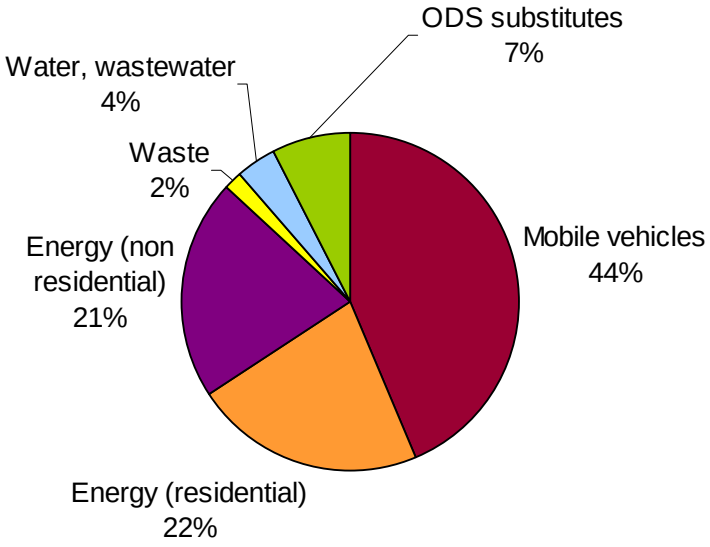


Figure 12 displays the increase over time of the business as usual emissions and the compliance emissions. Compliance emissions are emissions with the reductions from AB 32. Also shown are the 1990 emissions over time.

Figure 12: Community Inventory Growth

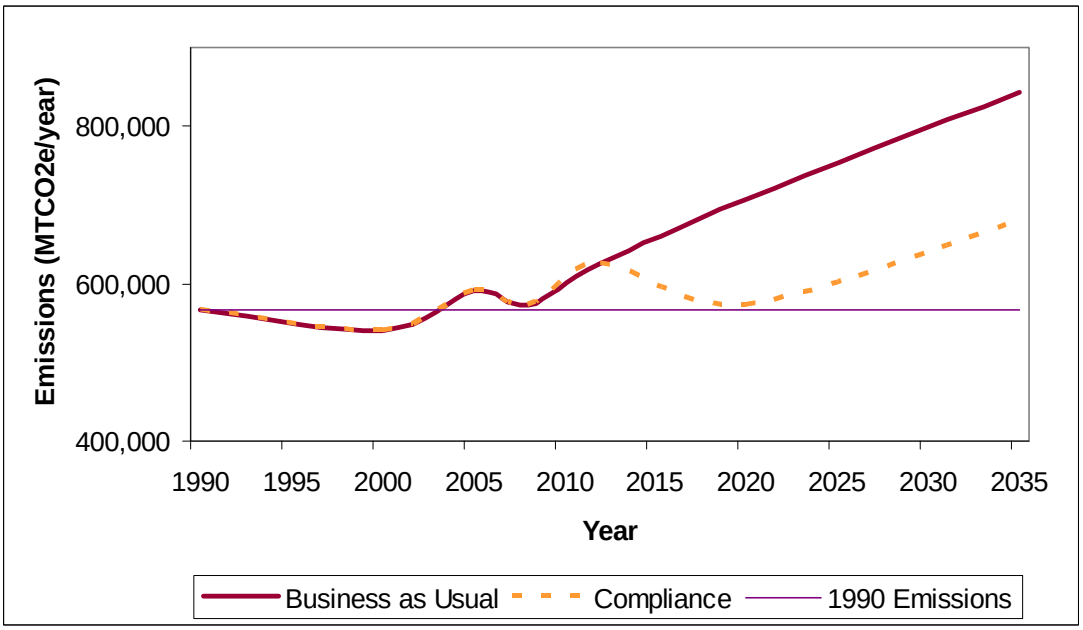


Table 9 displays the GHG emissions inventory of the community emissions with incorporation of reductions afforded by AB 32. As shown in the table, in 2020, the reductions reduce emissions by 18.9 percent from business as usual; in 2035, emissions are reduced by 19.5 percent.

Table 9: Community Future Year Compliance Inventory

Category	Source	Emissions ($MTCO_2e$ per year)	
		2020	2035
High GWP gases	ODS substitutes	33,131	37,992
Water, wastewater	Electricity - water	10,364	11,412
	Wastewater treatment plant (fugitive gases)	17,308	19,841
Waste	Former Palm Springs Landfill	917	632
	Waste generated	10,545	12,091
Energy (other)	Electricity – commercial/industrial	82,933	89,636
	Natural gas – commercial/industrial	58,682	67,498
	Electricity – municipal	2,097	2,309
	Electricity – streetlights	647	712
Energy (residential)	Electricity	81,151	86,497
	Natural gas	78,667	85,046
Motor vehicles	Airport fuel use	133	162
	Off-road vehicles	210	250
	On-road passenger vehicles	173,696	228,994
	On-road trucks	23,279	35,791
Total		**573,760**	**678,863**
Per Capita Emissions		**10.8**	**11.1**
Reduction from Business as Usual		**18.9%**	**19.5%**
Emissions are this percent greater than 1990 emissions		**1%**	**17%**

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents; GWP = global warming potential
ODS = ozone depleting substance
Compliance emissions for the years 1990, 2000, 2005, 2008, and 2012 are assumed to be the same as business as usual (Table 8).
Source: Appendix A.

SECTION 5: GLOSSARY OF TERMS AND ACRONYMS

AB	Assembly Bill
ARB	The California Air Resources Board is a part of the California Environmental Protection Agency, an organization that reports directly to the Governor's Office in the Executive Branch of California State Government. The mission of the ARB is to promote and protect public health, welfare, and ecological resources through the effective and efficient reduction of air pollutants while recognizing and considering the effects on the economy of the State.
CEQA	The California Environmental Quality Act is a California statute passed in 1970 to institute a statewide policy of environmental protection.
BAU	Business as usual: Emissions that are expected to occur in a future year in the absence of emission reduction regulations and controls.
CO_2	Carbon dioxide: A naturally occurring gas and a by-product of burning fossil fuels and biomass other industrial processes. It is the reference gas against which other GHGs are measured and therefore has a global warming potential of 1.
Climate Change	The statistically significant variation either in the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer).
EPA	United States Environmental Protection Agency. The mission of EPA is to protect human health and to safeguard the natural environment—air, water and land—upon which life depends.
GHG	Greenhouse gas: A gas that absorbs infrared radiation in the atmosphere. GHGs as defined by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
$MTCO_2e$	Metric tons of carbon dioxide equivalents: a measure of GHG emissions
$MMTCO_2e$	Million metric tons of carbon dioxide equivalents: a measure of GHG emissions
ODS	Ozone depleting substances: compounds that contributes to stratospheric ozone depletion. ODS include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, methyl bromide, carbon tetrachloride, hydrobromofluorocarbons, chlorobromomethane, and methyl chloroform. ODS are generally very stable in the troposphere and only degrade under intense ultraviolet light in the stratosphere. When they break down, they release chlorine or bromine atoms, which then deplete ozone.
SB	Senate Bill

SECTION 6: REFERENCES

6.1 - Acknowledgments

The following are individuals who assisted by providing data, peer review, and/or assistance. The names are in alphabetical order.

City of Palm Springs

Jan Anderson, Facilities Maintenance Manager
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Craig Ewing, Director of Planning Services
Marcus Fuller, Assistant City Engineer/Assistant Director of Public Works
Kim Hardcastle, Human Resources Analyst
Ken Lyon, Associate Planner
Michele Mician, Manager, Office of Sustainability
Steve Rakestraw, Fleet Operations/Maintenance Manager

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Southern California Edison

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Adrina Young, Analyst-Program/Project

Southern California Gas Company

Deborah McGarrey, Public Affairs Manager

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Figure 1. Michael Brandman Associates.

Figure 2: City of Palm Springs Population and Housing Trends. Michael Brandman Associates. See “Population and Housing Summary” spreadsheet in Appendix A.

Figure 3: The Greenhouse Effect. UNEP/GRID-Arendal. Factors influencing the greenhouse effect [Internet]. UNEP/GRID-Arendal Maps and Graphics Library; 2002 (cited

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Figure 7 through Figure 12. Michael Brandman Associates.

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Cover: Palm Springs. iStock photo 12025754.

Palm Trees in the City of Palm Springs. iStock photo 2610434.

Palm Springs and the San Jacinto Mountains. Palm Springs. View of Palm Springs and Coachella Valley with San Jacinto Mountains in the background. iStock photo 12134415.

Wind Turbines in Palm Springs. iStock photo 12763144. Photo by Lawrence Freytag on April 7, 2010, east of Palm Springs.

Wildfire in California. California desert hills wild fire sparked by lightening. Photo by David Mantel. iStock photo 13790519.

Palm Springs International Airport Equipment. Photo by Michael Brandman Associates.

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6.5 - Exhibit References

Exhibit 1. Michael Brandman Associates.

Exhibit 2. Michael Brandman Associates.

Appendix A:
Spreadsheets and Model Output

City of Palm Springs Greenhouse Gas Inventory
Greenhouse Gas Emissions

Prepared by Michael Brandman Associates

	Emissions (metric tons of carbon dioxide equivalents, MTCO2e)						
	1990	2000	2005	2008	2012	2020	2035
Business as Usual							
Government							
Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
Wastewater treatment plant (fugitiv	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Cogeneration plants	6,646	10,020	9,112	8,746	8,746	8,746	8,746
Airport fuel use	53	79	86	109	115	133	162
City vehicle fleet	1,687	1,495	1,450	1,559	1,628	1,767	2,026
High GWP gases	99	99	99	99	99	99	99
Electricity - municipal	834	734	1,809	2,208	2,302	2,467	2,716
Electricity - streetlights	741	652	633	681	710	761	838
Employee commute	1,705	1,312	1,216	1,280	1,036	1,036	1,036
Total	26,812	29,900	30,592	31,227	31,739	33,235	36,096
Reductions							
Government							
Former Palm Springs Landfill	-	-	-	-	-	-	-
Wastewater treatment plant (fugitiv	-	-	-	-	-	-	-
Cogeneration plants	-	-	-	-	-	-	-
Airport fuel use	-	-	-	-	-	-	-
City vehicle fleet	-	-	-	-	-	27%	27%
High GWP gases	-	-	-	-	-	39%	39%
Electricity - municipal	-	-	-	-	-	15%	15%
Electricity - streetlights	-	-	-	-	-	15%	15%
Employee commute	-	-	-	-	-	31%	31%
Compliance							
Government							
Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
Wastewater treatment plant (fugitiv	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Cogeneration plants	6,646	10,020	9,112	8,746	8,746	8,746	8,746
Airport fuel use	53	79	86	109	115	133	162
City vehicle fleet	1,687	1,495	1,450	1,559	1,628	1,297	1,486
High GWP gases	99	99	99	99	99	60	60
Electricity - municipal	834	734	1,809	2,208	2,302	2,097	2,309
Electricity - streetlights	741	652	633	681	710	647	712
Employee commute	1,705	1,312	1,216	1,280	1,036	715	715
Total	26,812	29,900	30,592	31,227	31,739	31,920	34,664
Reductions	0%	0%	0%	0%	0%	4%	4%
Business as Usual							
Community							
ODS substitutes	49	10,805	15,523	17,239	28,690	54,314	62,282
Electricity - water	11,879	9,724	10,326	10,913	11,376	12,193	13,426
Wastewater treatment plant (fugitiv	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
Waste generated	14,920	18,367	16,879	11,490	11,999	13,018	14,928
Electricity - commercial/industrial	101,743	91,112	84,047	91,259	93,362	97,568	105,454
Natural gas - non-residential	43,634	46,527	49,865	38,269	53,980	58,682	67,498
Electricity - municipal	834	734	1,809	2,208	2,302	2,467	2,716
Electricity - streetlights	741	652	633	681	710	761	838
Electricity - residential	97,594	84,957	84,905	89,656	91,682	95,472	101,761
Natural gas - residential	66,838	67,566	70,297	70,554	75,265	78,667	85,046
Airport fuel use	53	79	86	109	115	133	162
Offroad vehicles and equipment	123	118	211	207	205	210	250
Onroad passenger vehicles	192,081	179,116	218,483	206,505	221,092	251,733	331,876
Onroad trucks	20,277	15,135	22,640	16,862	18,523	23,754	36,521
Total	**565,814**	**540,400**	**591,892**	**572,497**	**626,405**	**707,197**	**843,231**

City of Palm Springs Greenhouse Gas Inventory
Community Reductions
Prepared by Michael Brandman Associates

	1990	2000	2005	2008	2012	2020	2035
Compliance Reductions							
Community							
ODS substitutes	-	-	-	-	-	39%	39%
Electricity - water	-	-	-	-	-	15%	15%
Wastewater treatment plant (fugitiv	-	-	-	-	-		
Former Palm Springs Landfill	-	-	-	-	-		
Waste generated	-	-	-	-	-	19%	19%
Electricity - commercial/industrial	-	-	-	-	-	15%	15%
Natural gas - non-residential	-	-	-	-	-		
Electricity - municipal	-	-	-	-	-	15%	15%
Electricity - streetlights	-	-	-	-	-	15%	15%
Electricity - residential	-	-	-	-	-	15%	15%
Natural gas - residential	-	-	-	-	-		
Airport fuel use	-	-	-	-	-		
Offroad vehicles and equipment	-	-	-	-	-		
Onroad passenger vehicles	-	-	-	-	-	31%	31%
Onroad trucks	-	-	-	-	-	2%	2%

Compliance	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Community							
ODS substitutes	49	10,805	15,523	17,239	28,690	33,131	37,992
Electricity - water	11,879	9,724	10,326	10,913	11,376	10,364	11,412
Wastewater treatment plant (fugitiv	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
Waste generated	14,920	18,367	16,879	11,490	11,999	10,545	12,091
Electricity - commercial/industrial	101,743	91,112	84,047	91,259	93,362	82,933	89,636
Natural gas - non-residential	43,634	46,527	49,865	38,269	53,980	58,682	67,498
Electricity - municipal	834	734	1,809	2,208	2,302	2,097	2,309
Electricity - streetlights	741	652	633	681	710	647	712
Electricity - residential	97,594	84,957	84,905	89,656	91,682	81,151	86,497
Natural gas - residential	66,838	67,566	70,297	70,554	75,265	78,667	85,046
Airport fuel use	53	79	86	109	115	133	162
Offroad vehicles and equipment	123	118	211	207	205	210	250
Onroad passenger vehicles	192,081	179,116	218,483	206,505	221,092	173,696	228,994
Onroad trucks	20,277	15,135	22,640	16,862	18,523	23,279	35,791
Total	**565,814**	**540,400**	**591,892**	**572,497**	**626,405**	**573,760**	**678,863**
Reduction from Business as Usual	0%	0%	0%	0.0%	0.0%	18.9%	19.5%
Difference from 1990 Emissions	0%	5%	-4%	-1%	-10%	-1%	-17%

CACP Output Conversions

Conversion factor (tons - metric tons) 0.907185

	1990	2000	2005	2008	2012	2020	2035
Government Business as Usual							
CACP Output							
Airport fuel	58	87	95	120	127	147	179
City vehicle fleet	1,860	1,648	1,598	1,719	1,795	1,948	2,233
Employee commute	1,879	1,446	1,340	1,411	1,142	1,142	1,142
Cogeneration plants	7,326	11,045	10,044	9,641	9,641	9,641	9,641
Metric tons							
Airport fuel	53	79	86	109	115	133	162
City vehicle fleet	1,687	1,495	1,450	1,559	1,628	1,767	2,026
Employee commute	1,705	1,312	1,216	1,280	1,036	1,036	1,036
Cogeneration plants	6,646	10,020	9,112	8,746	8,746	8,746	8,746
Community Business as Usual							
CACP Output							
Waste	16,447	20,246	18,606	12,666	13,227	14,350	16,455
Onroad vehicles, trucks	234,085	214,124	265,792	246,220	264,131	303,672	406,088
Natural gas residential	73,676	74,479	77,489	77,773	82,965	86,715	93,747
Natural gas commercial/industrial	48,098	51,287	54,967	42,184	59,503	64,686	74,404
Metric tons							
Waste	14,920	18,367	16,879	11,490	11,999	13,018	14,928
Onroad vehicles, trucks	212,358	194,250	241,123	223,367	239,616	275,487	368,397
Natural gas residential	66,838	67,566	70,297	70,554	75,265	78,667	85,046
Natural gas commercial/industrial	43,634	46,527	49,865	38,269	53,980	58,682	67,498

CACP = The emissions are generated by ICLEI's Clean Air and Climate Protection Software 2009, Version 2.2.1b, April 2010. Note that the emissions as generated by CACP are presented in tons, which are converted to metric tons by multiplying by 0.907185. Metric tons are shown here.

Note: the CACP model does not distinguish between passenger vehicles and heavy duty trucks. Therefore, the percentages identified in the Vehicle Miles Traveled Analysis worksheet are applied to the total on road vehicle emissions to segregate the groups.

City of Palm Springs Greenhouse Gas Inventory
Emissions Summary

Prepared by Michael Brandman Associates

Business as Usual	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Community							
Mobile vehicles	212,534	194,447	241,420	223,683	239,936	275,830	368,810
Energy (residential)	164,432	152,523	155,202	160,210	166,947	174,139	186,807
Energy (non residential)	146,952	139,025	136,355	132,417	150,354	159,478	176,506
Waste	16,731	19,849	18,220	12,753	13,145	13,935	15,559
Water, wastewater	25,115	23,751	25,173	26,194	27,333	29,502	33,267
ODS substitutes	49	10,805	15,523	17,239	28,690	54,314	62,282
Total	565,814	540,400	591,892	572,497	626,405	707,197	843,231
Business as Usual							
Government							
Wastewater treatment plant	13,236	14,028	14,847	15,282	15,957	17,308	19,841
Cogeneration plants	6,646	10,020	9,112	8,746	8,746	8,746	8,746
Mobile fuel use	1,740	1,574	1,536	1,668	1,744	1,901	2,188
Electricity	1,576	1,386	2,442	2,889	3,012	3,228	3,554
Employee commute	1,705	1,312	1,216	1,280	1,036	1,036	1,036
Former Palm Springs Landfill	1,811	1,482	1,341	1,263	1,145	917	632
High GWP gases	99	99	99	99	99	99	99
Total	26,812	29,900	30,592	31,227	31,739	33,235	36,096
Summary							
Community Business as Usual	565,814	540,400	591,892	572,497	626,405	707,197	843,231
Community Compliance	565,814	540,400	591,892	572,497	626,405	573,760	678,863
Government Business as Usual	26,812	29,900	30,592	31,227	31,739	33,235	36,096
Government Compliance	26,812	29,900	30,592	31,227	31,739	31,920	34,664

City of Palm Springs Greenhouse Gas Inventory
Population and Housing Summary
Prepared by Michael Brandman Associates

Palm Springs	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Population	40144	42805	45877	47019	49103	53271	61086
Housing	30490	30822	32068	33558	34334	35886	38796
Population growth from 2008					4.2%	11.7%	23.0%
Housing growth from 2008					2.3%	6.5%	13.5%

Riverside County	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Population	1,170,413	1,545,387	1,883,735	2,078,601	2354017	2,904,848	3,805,340

State of California	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Population	29,758,213	33,873,086	36,676,931	37,883,992	39,967,969	44,135,923	51,753,503

Population Interpolation	**2030**	**2035**	**2040**
Riverside County	3,507,498	3,805,340	4,103,182
California	49,240,891	51,753,503	54,266,115

City of Palm Springs - Municipal Government Employees

	1990	**2000**	**2005**	**2008**	**2010**
FTE employees	519	458	450	485	390
Furlough began May 3, 2009					

Sources:

- Population and housing in 1990 from: State of California, Department of Finance. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. Sacramento, California, August 2007. www.dof.ca.gov/research/demographic/reports/estimates/e-8/
- Population and housing for 2000, 2005, 2008 from: State of California, Department of Finance. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark. May 2009. www.dof.ca.gov/research/demographic/reports/estimates/e-5/2009/
- Population and housing for 2012, 2020, and 2035 interpolated from 2008 and 2100 data.
- Population in California and Riverside County for 2020, 2030, and 2040 from: State of California, Department of Finance, Population Projections for California and Its Counties 2000-2050, Sacramento, California, July 2007. www.dof.ca.gov/research/demographic/reports/projections/p-1/. Note that 2035 population is interpolated from 2030 and 2040.
- Population and housing in Palm Springs in 2100 from: City of Palm Springs General Plan, Land Use Element, Table 2-1 (although the date is not listed, the General Plan buildout is assumed to be 2100 for these purposes).
- The number of FTE (full time equivalent) employees for the Palm Springs government/municipal is from the City of Palm Springs, Kim Hardcastle, Human Resources Analyst, September 20, 2010, personal communication.

City of Palm Springs Greenhouse Gas Inventory
Vehicle Miles Traveled Analysis
Prepared by Michael Brandman Associates

	1990	1996	2000	2005	2007	2008	2009	2012	2020	2035	2100
Palm springs population	40,144	41,341	42,805	45,877	46,796	47,019	47,601	49,103	53,271	61,086	94,949
Vehicle Miles Traveled Source											
DOT VMT/Day - Palm Springs		892,200	742,200	938,970	965,360	915,630	899,440				
DOT VMT/year		325,653,000	270,903,000	342,724,050	352,356,400	334,204,950	328,295,600				
Per capita VMT/day (based on DOT)		21.6	17.3	20.5	20.6	19.5	18.9				
Speed zone survey (VMT/day)					803,978						
Percent difference: Speed zone and DOT (local roads)					17%						
Palm Springs GP Traffic Study VMT/Year											847,151,147
Addition for local roads (17%)											144,015,695
Total GP VMT/Year											991,166,842
VMT/year based on 2000 DOT per capita	254,062,143										
VMT Interpolated from 2008 and 2100								362,768,511	419,895,632	527,008,984	
For Comparison: VMT per capita - LMVs											
SCAG VMT/Day/Capita LMVs				21.51					20.83	20.99	
VMT/year (based on 2005 SCAG per capita	315,176,566	324,574,392	336,068,476	360,187,209	367,402,415	369,153,222		385,514,336			
VMT/year (based on 2020 SCAG per capita)									405,014,766		
VMT/year (based on 2035 SCAG per capita)										467,999,461	
Percent of Total											
Gasoline											
Automobiles	50.7%		48.1%	43.7%		45.7%		46.1%	45.1%	42.0%	
Light duty trucks	33.7%		40.2%	43.2%		43.4%		43.0%	43.6%	45.6%	
Heavy duty trucks	4.5%		2.9%	2.7%		2.5%		2.6%	2.5%	2.4%	
Diesel											
Automobiles	0.7%		0.2%	0.1%		0.1%		0.1%	0.0%	0.0%	
Light duty trucks	0.8%		0.8%	0.9%		0.7%		0.5%	0.2%	0.0%	
Heavy duty trucks	9.5%		7.8%	9.4%		7.5%		7.7%	8.6%	9.9%	
Business as Usual VMT: Input into CACP Model											
Gasoline	**1990**		**2000**	**2005**		**2008**		**2012**	**2020**	**2035**	
Automobiles	128,895,242		130,190,965	149,685,011		152,833,504		167,415,654	189,211,921	221,564,669	
Light duty trucks	85,492,680		108,793,165	148,019,074		145,140,370		156,111,745	183,048,468	240,360,406	
Heavy duty trucks	11,552,839		7,915,052	9,321,314		8,392,509		9,334,841	10,615,759	12,713,484	
Diesel	-		-	-		-		-	-	-	
Automobiles	1,847,451		640,188	458,983		318,415		196,346	66,452	5,435	
Light duty trucks	2,006,282		2,250,358	3,031,552		2,297,137		1,660,525	753,126	114,144	
Heavy duty trucks	24,259,290		21,106,805	32,179,784		25,228,701		28,043,791	36,205,442	52,245,409	
Total VMT/Year (from DOT)	254,062,143		270,903,000	342,724,050		334,204,950		362,768,511	419,895,632	527,008,984	

Notes on "Vehicle Miles Traveled Analysis"

Abbreviations: DOT = Department of Transportation; LMV = light motor vehicles; VMT = vehicle miles traveled; SCAG = Southern California Association of Governments

- DOT VMT/Day: California Department of Transportation. California Public Road Data. www.dot.ca.gov/hq/tsip/hpms/datalibrary.php
Data is from Table 6 in the reports (Maintained Mileage and Daily Vehicle Miles of Travel Estimates by Jurisdiction), which is from the annual maintained mileage reports submitted by the agencies.

- Palm Springs GP Traffic Study *(see next page)* : General Plan Update Traffic Analysis, Prepared for the City of Palm Springs, Prepared by Parson Brinckerhoff Quade & Douglas, Inc., May 25, 2007. http://www.ci.palm-springs.ca.us/Modules/ShowDocument.aspx?documentid=2111

- Speed Zone Survey: Citywide Speed Zone Survey, Engineering and Traffic Surveys in the City of Palm Springs, 2007. Prepared by Albert Grover & Associates, July 2007. http://www.palmsprings-ca.gov/Modules/ShowDocument.aspx?documentid=1458

- SCAG VMT/Day/Capita for LMVs: Southern California Association of Governments. Attachment 2. Final Scenario Exercises for SB 375 Target-Setting. 6/3/2010 www.arb.ca.gov/cc/sb375/mpo/scag/alt-scenario-scag-060410.xls

- Percent of Total: from EMFAC2007, Burden, Riverside County Average, 1990, 2000, 2005, 2008, 2012, 2020, and 2035. Obtained the percentage of each vehicle category for each year. Automobiles include LDA and MY. Light duty trucks includes categories LDT-1, LDT-2, MDV. Heavy duty trucks include categories LHDT-1, LHDT-2, MHDT, HHDT, OBUS, SBUS, UB, and MH.

- Forecasts of VMT for 2012 and 2020 were interpolated from 2008 and 2035 values.

- Input into the CACP model: The vehicle miles per year were entered into the CACP model. For 1990, the model years for the vehicle are the "alt. method" except for light gasoline trucks and gasoline automobiles, which are for model years 1987 to 1993. For the year 2035, the model year for the vehicles and trucks was 2005 for all years.

General Plan Buildout Traffic Vehicle Miles Traveled

Facility	Location	Distance (feet)	ADT	VMT/Day
19th Avenue	West of Indian Canyon Drive	5280	8200	8200
Alejo Road	Belardo Road to Palm Canyon Drive	500	5200	492
Alejo Road	Palm Canyon Drive to Indian Canyon Drive	378	15000	1074
Alejo Road	Indian Canyon Drive to Avenida Caballeros	2639	11200	5598
Alejo Road	Avenida Caballeros to Sunrise Way	2641	10200	5102
Alejo Road	Sunrise Way to Farrell Drive	3034	7000	4022
Amado Road	West of Palm Canyon Drive	330	7400	463
Amado Road	Palm Canyon Drive to Indian Canyon Drive	379	4600	330
Amado Road	Indian Canyon Drive to Avenida Caballeros	2626	5400	2686
Amado Road	Avenida Caballeros to Sunrise Way	2641	3000	1501
Andreas Road East	Indian Canyon Drive to Calle Alvarado	1847	4100	1434
Araby Drive	South of East Palm Canyon Drive	4787	900	816
Arenas Road	Belardo Road to Palm Canyon Drive	328	1400	87
Arenas Road	Palm Canyon Drive to Indian Canyon Drive	376	4100	292
Arenas Road	Indian Canyon Drive to Avenida Caballeros	2626	4100	2039
Avenida Caballeros	San Rafael Drive to Racquet Club Road	2676	800	405
Avenida Caballeros	Racquet Club Road to Vista Chino	2661	2800	1411
Avenida Caballeros	Vista Chino to Tachevah Drive	2641	7400	3701
Avenida Caballeros	Tachevah Drive to Alejo Road	2646	2100	1052
Avenida Caballeros	Alejo Road to Amado Road	1287	8100	1974
Avenida Caballeros	Amado Road to Tahquitz Canyon Drive	1299	9200	2263
Avenida Caballeros	Tahquitz Road to Ramon Road	2649	11300	5669
Avenida Granada	South Palm Canyon Drive to Camino Real	2101	1900	756
Baristo Road	Palm Canyon Drive to Indian Canyon Drive	396	2300	173
Baristo Road	Avenida Caballeros to Sunrise Way	2619	2200	1091
Baristo Road	Farrell Drive to El Cielo Road	2236	9300	3938
Barona Road	South of East Palm Canyon Drive	3427	1200	779
Belardo Road	Alejo Road to Tahquitz Road	2609	1300	642
Belardo Road	Tahquitz Road to Ramon Road	2630	3600	1793
Calle Alvarado	South of Alejo Road	3184	1800	1085
Calliente Road South / Via Est	La Verne Way to Toledo Avenue	4816	1400	1277
Camino Real	Ramon Road to Sunny Dunes Road	1320	5000	1250
Camino Real	Mesquite Avenue to East Palm Canyon Drive	2636	2900	1448
Camino Real	East Palm Canyon Drive to East Twin Palms	477	4200	379
Camino Real	La Verne Way to Murray Canyon Drive	4964	2300	2162
Cerritos Road	Racquet Club Drive to Vista Chino	2663	6600	3329
Cerritos Road	Vista Chino to Tachevah Drive	2623	11400	5663
Cerritos Road	Tachevah Drive to Alejo Road	2625	6600	3281
Cherokee Way	North of East Palm Canyon Drive	995	2600	490
Cherokee Way	South of East Palm Canyon Drive	983	1400	261
Chia Road	Sunrise Way to Cerritos Drive	1319	1000	250
Compadre Road	North of Ramon Road	1327	1000	251
Compadre Road	Ramon Road to Sunny Dunes	1323	4800	1203
Crossley Road	Ramon Road to Mesquite Avenue	2623	16400	8147
Crossley Road	South of Mesquite Avenue	2653	19200	9647
Dillon Road	Diablo Road to Indian Canyon Drive	10594	13200	26485
El Ceilo Road	Tahquitz Road to Ramon Road	2595	9200	4522
El Cielo Road	Ramon Road to Escoba Drive	5297	10200	10233
Farrell Drive	Joyce Drive to Racquet Club Drive	2490	2900	1368
Farrell Drive	Racquet Club Drive to Vista Chino	2518	8800	4197
Farrell Drive	Vista Chino to Tachevah Drive	2675	21200	10741
Farrell Drive	Tachevah Drive to Alejo Road	5732	19900	21604
Farrell Drive	Alejo Road to Tahquitz Road	2623	20100	9985
Farrell Drive	Tahquitz Road to Ramon Road	2634	18400	9179
Farrell Drive	Ramon Road to Mesquite Avenue	2657	9600	4831
Farrell Drive	Mesquite Avenue to East Palm Canyon Drive	2813	7000	3729
Francis Drive	Indian Canyon Drive to Avenida Caballeros	2628	1300	647
Francis Drive	Avenida Caballeros to Sunrise Way	2650	1300	652
Gene Autry Trail	I-10 to Via Escuela	11033	41500	86718
Gene Autry Trail	Via Escuela to Vista Chino	1310	37000	9180
Gene Autry Trail/SR-111	Vista Chino to Ramon Road	11655	39000	86088

General Plan Buildout Traffic Vehicle Miles Traveled

Facility	Location	Distance (feet)	ADT	VMT/Day
Gene Autry Trail/SR-111	Ramon Road to Mesquite Avenue	2632	27100	13509
Gene Autry Trail/SR-111	Mesquite Avenue to Seven Lakes Drive	4007	27100	20566
Gene Autry Trail/SR-111	Seven Lakes Drive to East Palm Canyon Driv	1594	19200	5796
Gene Autry Trail	South of East Palm Canyon Drive	325	15400	948
Indian Avenue	Dillon Road to 19th Avenue	5312	41600	41852
Indian Avenue	19th Avenue to I-10	1632	44900	13878
Indian Canyon Drive	I-10 to Sunrise Parkway	12380	53500	125441
Indian Canyon Drive	Sunrise Parkway to Tramview Road	1300	34700	8544
Indian Canyon Drive	Tramview Road to San Rafael Drive	2602	31700	15622
Indian Canyon Drive	San Rafael Drive to Racquet Club Road	2686	23900	12158
Indian Canyon Drive	Racquet Club Road to Vista Chino	2644	23900	11968
Indian Canyon Drive	Vista Chino to Tachevah Drive	2639	23800	11895
Indian Canyon Drive	Tachevah Drive to Alejo Road	2633	23400	11669
Indian Canyon Drive NB	Alejo Road to Tahquitz Road	2651	18200	9138
Indian Canyon Drive NB	Tahquitz Road to Ramon Road	2633	21500	10721
Indian Canyon Drive NB	South of Ramon Road	644	15000	1830
Joyce Drive East	Sunrise Way to Farrell Drive	2508	2800	1330
La Verne Way	South Palm Canyon Drive to Camino Real	2536	6400	3074
La Verne Way	Camino Real to Twin Palms Drive East	3343	7100	4495
La Verne Way	South of East Palm Canyon Drive	740	17300	2425
Las Vegas Road	North Palm Canyon Drive to Indian Canyon D	4004	2000	1517
Matthew Drive	West of Gene Autry Trail	1637	4600	1426
Mesquite Avenue	West of South Palm Canyon Drive	1877	6600	2346
Mesquite Avenue	South Palm Canyon Drive to Camino Real	1960	4900	1819
Mesquite Avenue	Camino Real to Sunrise Way	3310	4900	3072
Mesquite Avenue	Sunrise Way to Farrell Drive	3077	4900	2856
Mesquite Avenue	El Cielo Road to Paseo Dorotea	3526	5900	3940
Mesquite Avenue	Paseo Dorotea to Vella Road	767	11500	1671
Mesquite Avenue	Vella Road to Gene Autry Trail	1326	16300	4094
Dinah Shore Drive	Gene Autry Tail to San Luis Rey Drive	1359	26400	6795
Dinah Shore Drive	San Luis Rey Drive to Crossley Road	1286	29000	7063
Dinah Shore Drive	East of Crossley Drive	37564	31800	226238
Mission Drive	East of Gene Autry Trail	3549	800	538
Murray Canyon Drive	South Palm Canyon Drive to Camino Real	2366	2900	1300
Murray Canyon Drive	Camino Real to Toledo Avenue	3347	2900	1838
North Calle Encilia	Alejo Road to Tahquitz Road	2607	9100	4493
North Calle Encilia	Tahquitz Road to Ramon Road	2617	6300	3123
North Calle El Segundo	Alejo Road to Tahquitz Road	2629	2000	996
North Calle El Segundo	Tahquitz Road to Ramon Road	2611	2400	1187
Palm Canyon Drive/SR-111 SE	South of I-10	92261	17800	311031
Palm Canyon Drive North/SR-	Sunrise Parkway to Gateway Drive	3000	28300	16080
Palm Canyon Drive North/SR-	Gateway Drive to San Rafael Road	1607	29100	8857
Palm Canyon Drive North/SR-	San Rafael Road to Racquet Club Road	2839	37700	20271
Palm Canyon Drive North/SR-	Racquet Club Road to Via Escuela	1712	35100	11381
Palm Canyon Drive North/SR-	Via Escuela to Vista Chino	1403	36600	9725
Palm Canyon Drive North	Vista Chino to Tachevah Road	2639	22500	11246
Palm Canyon Drive North	Tachevah Drive to Alejo Road	2647	20800	10428
Palm Canyon Drive North SB	Alejo Road to Tahquitz Road	2621	14700	7297
Palm Canyon Drive South SB	Tahquitz Road to Ramon Road	2647	17900	8974
Palm Canyon Drive South SB	South of Ramon Road	750	17900	2543
Palm Canyon Drive South	Indian Canyon Drive to Mesquite Avenue	2117	28800	11547
Palm Canyon Drive South	Mesquite Avenue to East Palm Canyon Drive	2020	21800	8340
Palm Canyon Drive South	East Palm Canyon Drive to La Verne Way	3207	20100	12208
Palm Canyon Drive South	La Verne Way to Murray Canyon Drive	5075	20100	19320
Palm Canyon Drive South	South of Murray Canyon Drive	4000	7500	5682
Palm Canyon Drive East	Palm Canyon Drive South to Camino Real	1961	17100	6351
Palm Canyon Drive East	Sunrise Way to Farrell Drive	2681	38900	19752
Palm Canyon Drive East	Farrell Drive to Gene Autry Trail	8143	34400	53053
Palm Canyon Drive East/SR-1	Gene Autry Trail to Golf Club Drive	2906	34700	19098
Palm Canyon Drive East/SR-1	East of Golf Club Drive	6836	41200	53342
Paseo Dorotea	Ramon Road to Mesquite Avenue	2907	2900	1597

General Plan Buildout Traffic Vehicle Miles Traveled

Facility	Location	Distance (feet)	ADT	VMT/Day
Paseo El Mirador	Avenida Caballeros to Sunrise Way	2658	5400	2718
Racquet Club Road	Leonard Road to Palm Canyon Drive	1473	1300	363
Racquet Club Road	Palm Canyon Drive to Indian Canyon Drive	1813	7200	2472
Racquet Club Road	Indian Canyon Drive to Via Miraleste	1460	9400	2599
Racquet Club Road	Via Miraleste to Avenida Caballeros	1201	6800	1547
Racquet Club Road	Avenida Caballeros to Hermosa Drive	1309	5500	1364
Racquet Club Road	Hermosa Drive to Sunrise Way	1317	10700	2669
Racquet Club Road	Sunrise Way to Cerritos Drive	1338	14000	3548
Racquet Club Road	Cerritos Drive to Farrell Drive	1205	9600	2191
Ramon Road	Belardo Road to Palm Canyon Drive	338	12800	819
Ramon Road	Palm Canyon Drive to Indian Canyon Drive	367	19200	1335
Ramon Road	Indian Canyon Drive to Calle Encillia	522	19200	1898
Ramon Road	Calle Encillia to Calle El Segundo	610	12700	1467
Ramon Road	Calle El Segundo to Avenida Caballeros	1499	16000	4542
Ramon Road	Avenida Caballeros to Hermosa Drive	1317	26700	6660
Ramon Road	Hermosa Drive to Sunrise Way	1305	27400	6772
Ramon Road	Sunrise Way to Farrell Drive	3073	33400	19439
Ramon Road	Farrell Drive to Compadre Road	922	41200	7194
Ramon Road	Compadre Road to El Cielo Road	1312	38200	9492
Ramon Road	El Cielo Road to Paseo Dorotea	2711	44100	22643
Ramon Road	Paseo Dorotea to Vella Road	1355	44900	11523
Ramon Road	Vella Road to Gene Autry Trail	1375	65500	17057
Ramon Road	Gene Autry Tail to San Luis Rey Drive	1300	58000	14280
Ramon Road	San Luis Rey Drive to Crossley Road	1300	55300	13616
Ramon Road	Crossley Road to Landau Boulevard	2605	60200	29701
San Luis Rey Drive	Ramon Road to Mesquite Avenue	2569	3400	1654
San Rafael Drive	Palm Canyon Drive to Indian Canyon Drive	3733	6600	4666
San Rafael Drive	Indian Canyon Drive to Avenida Caballeros	2647	4600	2306
San Rafael Drive	Avenida Caballeros to Sunrise Way	2632	7200	3589
Seven Lakes Drive	West of Gene Autry Trail	3898	2200	1624
Stevens Road	Rose Avenue to Via Monte Vista	1320	900	225
Stevens Road	Via Monte Vista to Palm Canyon Drive	2282	2400	1037
Stevens Road	Palm Canyon Drive to Indian Canyon Drive	365	1500	104
Sonora Road	Sunrise Way to Cerritos Drive	1362	4400	1135
Sonora Road	Cerritos Drive to Farrell Drive	1335	5000	1264
Sonora Road	Farrell Drive to Compadre Road	1193	4900	1107
Sonora Road	Compadre Road to El Cielo Road	1476	5800	1621
Sunny Dunes Road	Palm Canyon Drive to Sunrise Way	4970	3900	3671
Sunny Dunes Road	Compadre Road to El Cielo Road	1350	4700	1202
Sunny Dunes Road	El Cielo Road to Paseo Dorotea	2657	7400	3724
Sunny Dunes Road	Paseo Dorotea to Vella Road	1351	4600	1177
Sunny Dunes Road	Vella Road to Gene Autry Trail	1360	5300	1365
Sunny Dunes Road	Gene Autry Trail to Crossley Road	2615	11600	5745
Sunrise Parkway	SR-111 to Indian Canyon Drive	7700	8100	11813
Sunrise Parkway	East of Indian Canyon Drive	5400	20100	20557
Sunrise Way	San Rafael Drive to Racquet Club Road	2652	23900	12004
Sunrise Way	Racquet Club to Vista Chino	2628	17900	8909
Sunrise Way	Vista Chino to Tachevah Drive	2644	18900	9464
Sunrise Way	Tachevah Drive to Alejo Road	2632	19500	9720
Sunrise Way	Alejo Road to Tahquitz Road	2607	19300	9529
Sunrise Way	Tahquitz Road to Ramon Road	2651	19800	9941
Sunrise Way	Ramon Road to Mesquite Avenue	2630	29100	14495
Sunrise Way	Mesquite Avenue to East Palm Canyon Drive	2637	25300	12636
Tachevah Drive	Palm Canyon Drive to Indian Canyon Drive	364	6000	414
Tachevah Drive	Indian Canyon Drive to Avenida Caballeros	2644	6000	3005
Tachevah Drive	Avenida Caballeros to Sunrise Way	2619	6000	2976
Tachevah Drive	Sunrise Way to Farrell Drive	2355	5900	2632
Tahquitz Canyon Way	West of Belardo Road	619	4500	528
Tahquitz Canyon Way	Belardo Road to Palm Canyon Drive	362	8900	610
Tahquitz Canyon Way	Palm Canyon Drive to Indian Canyon Drive	382	10900	789
Tahquitz Canyon Way	Indian Canyon Drive to Calle El Segundo	1123	10900	2318

General Plan Buildout Traffic Vehicle Miles Traveled

Facility	Location	Distance (feet)	ADT	VMT/Day
Tahquitz Canyon Way	Calle El Segundo to Avenida Caballeros	1472	9800	2732
Tahquitz Canyon Way	Avenida Caballeros to Hermosa Drive	1339	15600	3956
Tahquitz Canyon Way	Hermosa Drive to Sunrise Way	1301	15600	3844
Tahquitz Canyon Way	Sunrise Way to Farrell Drive	3086	15600	9118
Tahquitz Canyon Way	Farrell Drive to El Cielo Road	2257	15600	6668
Tamarisk Road	Palm Canyon Drive to Indian Canyon Drive	348	1400	92
Tamarisk Road	Indian Canyon Drive to Via Miraleste	1324	1400	351
Tamarisk Road	Via Miraleste to Avenida Caballeros	1306	1800	445
Tamarisk Road	Avenida Caballeros to Sunrise Way	2635	1800	898
Tamarisk Road	Sunrise Way to Farrell Drive	3036	1800	1035
Toledo Avenue	Murray Canyon Drive to La Verne Way	4709	3500	3121
Tramview Road	West of Indian Canyon Drive	2729	2000	1034
Tram Way	West of Palm Canyon Drive	19968	13500	51055
Twin Palms Drive	South Palm Canyon Drive to Camino Real	1963	1200	446
Twin Palms Drive	Camino Real to Sunrise Way	3305	1600	1002
Vella Road	Ramon Road to Mesquite Avenue	2600	6100	3004
Verona Road	Farrell Drive to Volturno Road	1279	3400	824
Verona Road	Volturno Road to Whitewater Club Drive	1248	3300	780
Via Escuela	West of Palm Canyon Drive	2303	1400	611
Via Escuela	Palm Canyon Drive to Indian Canyon Drive	780	2100	310
Via Escuela	Indian Canyon Drive to Avenida Caballeros	2628	800	398
Via Escuela	Avenida Caballeros to Sunrise Way	2652	1200	603
Via Escuela	Sunrise Way to Farrell Drive	2642	4400	2202
Via Escuela	Farrell Drive to Volturno Road	1292	9500	2325
Via Escuela	Volturno Road to Whitewater Club Drive	1253	4800	1139
Via Escuela	Whitewater Club Drive to Gene Autry Trail	1578	8400	2510
Via Miraleste	Francis Drive to Racquet Club Road	1301	1600	394
Via Miraleste	Racquet Club Road to Vista Chino	2669	1400	708
Via Miraleste	Vista Chino to Tachevah Drive	2636	5700	2846
Via Miraleste	Tachevah Drive to Alejo Road	2633	1800	898
Via Monte Vista	Vista Chino to Stevens Road	553	1200	126
Via Monte Vista	Stevens Road to Crescent Drive	4014	1200	912
Vista Chino	West of Palm Canyon Drive	1314	2400	597
Vista Chino (SR-111)	Palm Canyon Drive to Indian Canyon Drive	349	30100	1990
Vista Chino (SR-111)	Indian Canyon Drive to Via Miraleste	1336	26000	6579
Vista Chino (SR-111)	Via Miraleste to Avenida Caballeros	1319	26600	6645
Vista Chino (SR-111)	Avenida Caballeros to Hermosa Drive	1330	26600	6700
Vista Chino (SR-111)	Hermosa Drive to Sunrise Way	1312	26600	6610
Vista Chino (SR-111)	Sunrise Way to Cerritos Drive	1319	29900	7469
Vista Chino (SR-111)	Cerritos Drive to Farrell Drive	1341	46200	11734
Vista Chino (SR-111)	Farrell Drive to Volturno Road	1289	51500	12573
Vista Chino (SR-111)	Volturno Road to Whitewater Club Drive	1250	56500	13376
Vista Chino (SR-111)	Whitewater Club Drive to Gene Autry Trail	1599	60700	18382
Vista Chino	East of Gene Autry Trail	14343	49900	135552
Volturno Road	Racquet Club Road to Vista Chino	2600	5000	2462
Waverly Drive	Gene Autry to Golf Club Drive / Crossley Driv	2902	4200	2308
Whitewater Club Drive	Racquet Club Road to Vista Chino	2764	5300	2774
		Total VMT/Day		2,320,962
		Total VMT/Year		847,151,147

Sources:
- ADT (average daily traffic) from: City of Palm Springs. General Plan Update. May 25, 2007. Traffic Analysis.
- Distance in feet measured using Google Earth by Michael Brandman Associates
- VMT/day = ADT multiplied by the distance

City of Palm Springs Greenhouse Gas Inventory
Offroad Emissions
Prepared by Michael Brandman Associates

	1990	2000	2005	2008	2012	2020	2035
Population - Riverside County	1,170,413	1,545,387	1,883,735	2,078,601	2,354,017	2,904,848	3,805,340
Population - Palm Springs	40,144	42,805	45,877	47,019	49,103	53,271	61,086
Percent Palm Springs Population/Riverside	3%	3%	2%	2%	2%	2%	2%
OFFROAD2007 Output for Riverside County							
CO2 Exhaust (tons/day)	10.8	12.8	25.3	26.8	28.87	33.61	45.38
N2O Exhaust (tons/day)	0.000015	0.000013	0.0021	0.0021	0.0022	0.0028	0.0047
CH4 Exhaust (tons/day)	0.0031	0.0023	0.0099	0.0084	0.0073	0.0073	0.012
Total (MTCO2e/year)	3599	4256	8662	9148	9836	11467	15592
Emissions in Palm Springs (MTCO2e/year)	123	118	211	207	205	210	250

Notes:

The emissions in Riverside County were estimated using the California Air Resources Board's model, OFFROAD2007. The following classes of emissions were included: recreational equipment (off-road vehicles, all terrain vehicles), construction and mining equipment, generators, industrial equipment, lawn and garden equipment, light commercial equipment, other portable equipment, and transport refrigeration units. Note that emissions from airports were not included as the emissions are being estimated separately. Emissions from pleasure craft (boats), dredging, logging equipment, oil drilling, military tactical support equipment, agricultural equipment, and railyard operations were not included, as it is not believed that there are substantial emissions from those sources within the City.

Emissions in Palm Springs were estimated by multiplying the emissions in Riverside County by the percent of the population residing in Palm Springs (ranges between 2% and 3%).

City of Palm Springs Greenhouse Gas Inventory
Municipal: Cogeneration Plants
Prepared by Michael Brandman Associates

Data Provided by City (therms) - Entered into the CACP Model

Cogeneration Plant	1989	2000	2005	2008
Municipal Cogen	802,034	1,370,678	1,132,726	1,083,073
Sunrise Plaza Cogen	447,263	512,837	580,061	561,041
Total	1,249,297	1,883,515	1,712,787	1,644,114

Assumption: Future years have same natural gas usage as in 2008

Cogeneration Plant	2012	2020	2035
Municipal Cogen	1,083,073	1,083,073	1,083,073
Sunrise Plaza Cogen	561,041	561,041	561,041
Total	1,644,114	1,644,114	1,644,114

"Data provided by City" provided by Jan Anderson, Facilities Maintenance Manager, via email October 18, 2010.

Future usage is unknown at this time; therefore, 2008 usage is applied for future years.

City of Palm Springs Greenhouse Gas Inventory
Natural Gas
Prepared by Michael Brandman Associates

Natural Gas Data Provided by Southern California Gas Company (Annual Therms)

Year	**2005**	**2006**	**2007**	**2008**
Industrial/commercial	9,373,947	7,886,344	8,892,388	7,193,843
Single family residential	8,787,949	8,410,847	8,642,052	8,962,950
Multi family residential	4,426,810	4,236,761	4,384,842	4,300,209
Subtotal residential	22,588,706	20,533,952	21,919,282	20,457,002

Therms per unit

Year	**2005**	**2008**
Households	32068	33558
Therm per household	412	395
Acres of commercial/industrial	2623	
Therm per acre	3574	

Interpolation based on Therms per unit for 2005

Year	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**	**2100**
Households	30490	30822	32068	(uses 2008)	34334	35886	38796	51406
Residential therms per year	12,564,488	12,701,300	13,214,759	20,457,002	14,148,545	14,788,102	15,987,325	
Acres of commercial/industrial			2623	(uses 2008)	2839	3087	3550	5560
Commercial/Ind. Therms per year			9,373,947	7,193,843	10,147,344	11,031,227	12,688,506	

Interpolation based on Therms per capita for 2005

Population	40144	42805	45877
Commercial/Ind. Therms/capita			204.33
Commercial/Ind. Therms/year	8,202,536	8,746,252	

Natural Gas Sources:

- Natural gas data provided by Southern California Gas Company: Personal communication with Southern California Gas Company, September 30, 2010 and October 19, 2010.

- Acres of commercial/industrial for 2005 from the 2007 General Plan EIR, Table 5.9-1. Note that the subtotals in Table 5.9-1 are incorrect; therefore, the totals represent the sum of the categories.

- Interpolation for residential natural gas usage from the therms per household for 2005. (With the exception of 2008, which uses actual values.) Interpolation for commercial/industrial for the future is based on therms per acre. Interpolation for commercial/industrial for 1990 and 2000 use therms per capita for 2005.

- Note: Emissions are estimated using the CACP software, with the default fuel set emission factors. Values highlighted in green are the values entered into the software.

City of Palm Springs Greenhouse Gas Inventory
Electricity
Prepared by Michael Brandman Associates

Southern California Edison Data - Entire City of Palm Springs (kWh)

Rate Group	1990	2000	2005	2008	2008 (%)
AG TOU		32,778,048	35,688,494	37,714,762	6%
DOMESTIC		286,386,047	293,435,747	309,854,443	46%
GS-1		48,752,905	50,920,334	53,263,907	8%
GS-2		143,310,811	121,808,274	123,739,462	18%
TOU-8		117,546,429	123,993,582	96,295,193	14%
STREET LIGHTING				2,353,589	0.3%
TOU-GS				49,727,200	7%
Total	559,512,298	628,774,240	625,846,431	672,948,556	100%

Southern California Edison Data - Municipal Accounts (kWh)

	2000	2005	2008
Total	2,474,014	6,251,569	7,631,022

Estimations: Electricity Use (kWh)

Type	1990***	2000	2005	2008	Rate Group
Residential	256,613,385	286,386,047	293,435,747	309,854,443	DOMESTIC
Commercial/Industrial	267,521,529	307,136,131	290,470,621	315,394,740	GS-1, GS-2, TOU-8, TOU-GS*
Municipal	2,193,819	2,474,014	6,251,569	7,631,022	GS-1, GS-2, TOU-8, TOU-GS*
Water pumping	31,234,384	32,778,048	35,688,494	37,714,762	AG TOU
Street lighting**	1,949,181	2,199,093	2,188,853	2,353,589	STREET LIGHTING
Total	559,512,298	630,973,333	628,035,284	672,948,556	

* Note that municipal kWh was subtracted from the commercial/industrial rate groups

** Streetlight data was not included in the data provided for 1990, 2000, and 2005; therefore it was estimated as 0.3% of total

*** 1990 categories were estimated using 2008 categories, with exception of municipal, which was estimated by taking the percent municipal of the total in the year 2000 and applying it to the total kWh in 1990.

Electricity Use (MWh)

Type	1990	2000	2005	2008
Residential	256,613	286,386	293,436	309,854
Commercial/Industrial	267,522	307,136	290,471	315,395
Municipal	2,194	2,474	6,252	7,631
Water pumping	31,234	32,778	35,688	37,715
Street lighting	1,949	2,199	2,189	2,354
Total	559,512	630,973	628,035	672,949
Total/capita:	13.9	14.7	13.7	14.3
Residential MWh/housedhold:	8.4	9.3	9.2	9.2

Emission Factors (pounds/MWh)

Year	CO2	N2O	CH4	Source
1996	834.960			eGRID2002
2000	650.509			eGRID2002
2005	634.410	0.0108	0.0072	eGRID2007

Business as Usual Emissions (MTCO2e/year)

Type	1990	2000	2005	2008
Residential	97,594	84,957	84,905	89,656
Commercial/Industrial	101,743	91,112	84,047	91,259
Municipal	834	734	1,809	2,208
Water pumping	11,879	9,724	10,326	10,913
Street lighting	741	652	633	681
Total	**212,792**	**187,179**	**181,721**	**194,717**

Forecasts: Business as Usual

Assumptions

Assume household growth = increase in residential electricity
Use emission factors from 2005
Assume municipal, water pumping, and street lighting growth = increase in population growth

Land Use	Acres (2007)	General Plan Buildout Acres	Percent Increase
Commercial	696	1,314	47%
Industrial and Office	1,458	3,783	61%
Public/Institutional	469	463	-1%
Total	2,623	5,560	53%

Notes: Existing acreage (2007) is from the General Plan EIR, Table 5.9-1. Note that the subtotals in Table 5.9-1 are incorrect; therefore, the totals represent the sum of the categories. General Plan Buildout acres is from the 2007 General Plan, Table 2-2.

Percent increase in commercial/industrial acreage equal to increase in emissions

2008	2012	2020	2035	2100
0%	2%	7%	16%	53%

Emissions (MTCO2e)

	2012	2020	2035
Residential	91,682	95,472	101,761
Commercial/Industrial	93,362	97,568	105,454
Municipal	2,302	2,467	2,716
Water pumping	11,376	12,193	13,426
Street lighting	710	761	838
Total	**199,432**	**208,461**	**224,195**

Notes for Electricity:

eGRID2007: http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html
eGRID2002 Archive. http://www.epa.gov/cleanenergy/energy-resources/egrid/archive.html
Note that the emission factors are from Southern California Edison, average, EGRDEGCL
The N2O and CH4 emission factors for 1990 and 2000 are from 2005
The business as usual case uses 2005 emission factors.
The 1990 emissions use the 1996 emission factors (because it is the earliest available)

Description of Southern California Edison Rate Groups:
Domestic (Domestic Service): For all residential service including lighting, heating, cooking, and power or combination thereof in a single-family accommodation; also to domestic farm service when supplied through the farm operator's domestic meter.
GS-1 (General Service Non-Demand): Includes single- and three-phase general service including lighting and power, except that the customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 20 kW or has exceeded 20 kW in any three months during the preceding 12 months.
GS-2 (General Service - Demand): As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 20 kW and below 200 kW. In 2005, this rate group included customers with monthly maximum demands above 20 kW through 500 kW.
TOU-GS-3 (Time-Of-Use - General Service - Demand Metered): As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 200 kW through 500 kW. This rate group did not exist in 2005 and these customers were included in the GS-2 rate group.
TOU-8 (Time-Of-Use - General Service – Large): Includes general service, lighting and power, except agricultural water pumping accounts. This Schedule is mandatory for all customers whose monthly maximum demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW in any three months during the preceding 12 months.
AG TOU (Also includes PA-1 and PA-2): Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for water pumping used for agricultural purposes, general water, or sewerage pumping.
STREET LIGHTING (Lighting - Street and Highway Company-Owned System): Includes service for the lighting of streets, highways, and publicly-owned and publicly operated automobile parking lots which are open to the general public where SCE owns and maintains the street lighting equipment and associated facilities included under this schedule.

City of Palm Springs Greenhouse Gas Inventory
Electricity: Municipal
Prepared by Michael Brandman Associates

Southern California Edison Data - Municipal Accounts (kWh), not including streetlights

	2000	2005	2008
Total electricity	2,474,014	6,188,391	7,631,022

Location Analysis (kWh)

Location	Address	2000	2005	2008
Historical Society	221 S. Palm Canyon Dr Mus	13,956	10,590	11,052
Village Green Heritage Center	223 S. Palm Canyon Dr	37,452	28,974	34,512
Village Green Heritage Center	223 S. Palm Canyon Dr #A	42,132	61,523	54,697
Frances Stevens Park	550 N. Palm Canyon Drive	54,160	28,360	35,240
Ruth Hardy Park	700 Tamarisk Road (79 Miraleste-Ta	57,300	38,980	57,980
Victoria Park	590 E. Racquet Club Rd	92,160	77,760	83,280
Desert Highland Park	482 W. Tramview Road	110,550	120,840	104,430
DeMuth Park	4365 - 4375 Mesquite Ave	12,960	63,178	81,367
Sunrise, Stadium, Library	407 S. Cerritos, 2000 E Ramon Rd	369,336	215,810	298,311
Plaza Theatre	128 S. Palm Canyon	423,900	306,439	300,536
Wellness Park		NA	NA	NA
Dog Park		NA	NA	NA
Baristo		NA	NA	NA
Total		1,213,906	952,454	1,061,405

Emission Factors (pounds/MWh)

Carbon Dioxide:	650.509	634.4
Methane:		0.0072
Nitrous Oxide:		0.0108

Emissions (MTCO2e)

Village Green, Historical	28	29	29
Frances Stevens Park	18	9	11
Ruth Hardy Park	19	12	18
Victoria Park	30	25	27
Desert Highland Park	36	39	33
DeMuth Park	4	20	26
Sunrise, Stadium, Library	121	69	95
Plaza Theatre	139	98	96
Total	*394*	*301*	*336*

Note: DeMuth is lower in 2000 because it only includes the tennis portion of the electricity use; a "snack bar" was included in 2005 and 2008
NA = not available
Emission factors are from eGRID (see "Electricity" spreadsheet)
The same emission factors for 2005 were used for 2008; 2005 methane and nitrous oxide used for all years

Vehicle Miles Traveled Summary (2010)
Employee Commute - City of Palm Springs
Prepared by Michael Brandman Associates

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Drive alone							
Gasoline passenger car	66,938	74,738	84,754	79,678	27,820	17,590	7,996
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	33,682	46,510	49,232	47,966	22,262	6,608	3,866
Diesel SUV, pickup, van, other	10,392	10,008	10,108	10,008	10,088	5,632	5,632
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	1,824	1,824	1,824	1,824	-	-	-
Motorcycle/scooter	3,560	-	1,424	1,224	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	116,396	133,080	147,342	140,700	60,170	29,830	17,494
Carpool - 2 in vehicle							
(Values adjusted by dividing by 2)							
Gasoline passenger car	3,100	6,742	3,892	2,742	392	-	-
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	1,700	2,428	1,700	1,700	-	-	-
Diesel SUV, pickup, van, other	-	-	-	-	-	-	-
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	-	-	-	-	-	-	-
Motorcycle/scooter	-	-	-	-	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	4,800	9,170	5,592	4,442	392	-	-
Carpool - 3 in vehicle							
(Values adjusted by dividing by 3)							
Gasoline passenger car	-	96	663	663	663	-	-
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	363	363	363	363	96	-	136
Diesel SUV, pickup, van, other	-	-	-	-	-	-	-
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	-	-	-	-	-	-	-
Motorcycle/scooter	-	-	-	-	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	363	459	1,025	1,025	759	-	136
Carpool - 4 in vehicle							
(Values adjusted by dividing by 4)							
Gasoline passenger car	-	-	-	-	-	-	-
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	100	-	100	-	-	-	-
Diesel SUV, pickup, van, other	-	-	-	-	-	-	-
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	-	-	-	-	-	-	-
Motorcycle/scooter	-	-	-	-	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	100	-	100	-	-	-	-
Carpool - 5 in vehicle							
(Values adjusted by dividing by 5)							
Gasoline passenger car	-	-	-	-	-	-	-
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	-	-	-	-	-	-	-
Diesel SUV, pickup, van, other	-	-	-	-	-	-	-
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	-	-	-	-	-	-	-
Motorcycle/scooter	-	-	-	-	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-

Motorcycle	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Gasoline passenger car	-	-	-	4,800	-	-	-
Diesel passenger car	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	-	-	-	-	1,666	-	-
Diesel SUV, pickup, van, other	-	-	480	-	-	-	-
Hybrid	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-
Low emission vehicle	-	-	-	-	-	-	-
Motorcycle/scooter	2,924	6,484	5,060	5,260	-	-	-
Biodiesel vehicle	-	-	-	-	-	-	-
Total	2,924	6,484	5,540	10,060	1,666	-	-
Grand Total	124,583	149,193	159,599	156,227	62,987	29,830	17,630

2010 Survey Results Summary (Miles per year)								Total
Gasoline passenger car	70,038	81,576	89,309	87,883	28,875	17,590	7,996	383,266
Diesel passenger car	-	-	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	35,845	49,301	51,395	50,029	24,024	6,608	4,002	221,203
Diesel SUV, pickup, van, other	10,392	10,008	10,588	10,008	10,088	5,632	5,632	62,348
Hybrid	-	-	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-	-	-
Low emission vehicle	1,824	1,824	1,824	1,824	-	-	-	7,296
Motorcycle/scooter	6,484	6,484	6,484	6,484	-	-	-	25,936
Biodiesel vehicle	-	-	-	-	-	-	-	-
Total	124,583	149,193	159,599	156,227	62,987	29,830	17,630	700,049

Number of Completed Surveys	141
Average commute (miles per year per employee)	4,965

City of Palm Springs - Municipal Government Employees

	1990	**2000**	**2005**	**2008**	**2010**
FTE employees	519	458	450	485	390

Employee Commute (Miles per year)	**2010 Average per employee**	**1990**	**2000**	**2005**	**2008**	**2010-2035**
Gasoline passenger car	2,718	1,437,601	1,244,935	1,223,189	1,318,326	1,060,097
Diesel passenger car	-	-	-	-	-	-
Gasoline SUV, pickup, van, other	1,569	814,214	718,516	705,966	760,874	611,837
Diesel SUV, pickup, van, other	442	229,494	202,520	198,983	214,459	172,452
Hybrid	-	-	-	-	-	-
Zero emission vehicle	-	-	-	-	-	-
Low emission vehicle	52	-	23,699	23,285	25,096	20,180
Motorcycle/scooter	184	95,467	84,246	82,774	89,212	71,738
Biodiesel vehicle	-	-	-	-	-	-
Total	4,965	2,576,775	2,273,917	2,234,198	2,407,969	1,936,305

Notes:
The City of Palm Springs employee survey was conducted between August 25 and October 5, 2010. There were 141 completed surveys out of 390 employees, or 36 percent.
It was assumed that in 1990 there were no low emission vehicles; the miles were added to gasoline passenger cars.
The average commute from the survey results was applied to the full number of employees.
The CACP model does not have a category for motorcycles, so those miles were applied in the gasoline passenger car.
The CACP model does not have a category for low emission vehicles, so those miles in 2000 were applied to the passenger car model year 2000; in 2005 and later years, they were applied to the 2005 model year.

City of Palm Springs Greenhouse Gas Inventory
Wastewater Treatment Plant
Prepared by Michael Brandman Associates

Assumptions

Per capita flow contribution	138	gpcd (gallons per capita day)
Biochemical Oxygen Demand (BOD)	11400	pounds per day (average for 2004-2006)
Wastewater influent flow	6.37	million gallons per day (average for 2004-2006)
BOD per million gallons	0.00179	pounds BOD per gallon of wastewater influent flow

Stationary Emissions from Incomplete Combustion of Digester Gas

Equation 10.1	Stationary CH_4 from Incomplete Combustion of Digester Gas (site-specific digester gas data)
Annual CH_4 emissions (metric tons CO_2e) =	
(Digester Gas x F_{CH4} x $\rho(CH_4)$ x (1-DE) x 0.0283 x 365.25 x 10^{-6}) x GWP	

Where:

Term		Description	Value
Digester Gas	=	measured standard cubic feet of digester gas produced per day [ft^3/day]	user input
F CH_4	=	measured fraction of CH_4 in biogas	user input
$\rho(CH_4)$	=	density of methane at standard conditions [g/m^3]	662.00
DE	=	CH_4 Destruction Efficiency	.99
0.0283	=	conversion from ft^3 to m^3 [m^3/ft^3]	0.0283
365.25	=	conversion factor [day/year]	365.25
10^{-6}	=	conversion from g to metric ton [metric ton/g]	10^{-6}
GWP	=	Global Warming Potential	21

Year	1990	2000	2005	2008	2012	2020	2035
Population	40144	42805	45877	47019	49103	53271	61086
Average SCF digester gas per day	77816	74092	50268	68244	71269	77318	88661
SCF gas per day per person	1.94	1.73	1.10	1.45	1.45	1.45	1.45
Fraction of CH4 in biogas	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Business as Usual Emissions (MTCO2e)	727	692	470	637	666	722	828

Process Emissions from Wastewater Treatment Lagoons

Equation 10.3	Process CH_4 from Anaerobic and Facultative Wastewater Treatment Lagoons (site-specific BOD_5 load, F removed values)
Annual CH_4 emissions (metric tons CO_2e) =	
(BOD_5 load x (1-F_P) x Bo x $MCF_{anaerobic}$ x 365.25 x 10^{-3}) x GWP	

Where:

Term		Description	Value
BOD_5 load	=	amount of BOD_5 produced per day (influent to wastewater treatment process) [kg BOD_5/day]	user input
F_P	=	fraction of BOD_5 removed in primary treatment, if present	user input
Bo	=	maximum CH_4-producing capacity for domestic wastewater [kg CH_4/kg BOD_5 removed]	0.6
$MCF_{anaerobic}$	=	CH_4 correction factor for anaerobic systems	0.8
365.25	=	conversion factor [day/year]	365.25
10^{-3}	=	conversion from kg to metric ton [metric ton/kg]	10^{-3}
GWP	=	Global Warming Potential	21

Year	1990	2000	2005	2008	2012	2020	2035
Population	40144	42805	45877	47019	49103	53271	61086
Biochemical Oxygen Demand (BOD)	4497	4795	5171.04	5267	5501	5968	6843
Fraction of BOD removed	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Business as Usual Emissions (MTCO2e)	12418	13241	14278.7	14545	15189	16479	18896
Fraction of BOD removed (new primaries)	0.25	0.25	0.25	0.25	0.25	0.25	0.35
Emissions with Reductions (MTCO2e)	12418	13241	14279	14545	15189	16479	16377

Wastewater Treatment Plant

Process Emissions from Plant without Nitrification/Denitrification

Equation 10.8	Process N_2O Emissions from WWTP without Nitrification/Denitrification
Annual N_2O emissions (metric tons CO_2e) =	
$((P_{total} \times F_{ind\text{-}com}) \times EF\ w/o\ nit/denit \times 10^{-6}) \times GWP$	

Where:

Term		Description	Value
P_{total}	=	population that is served by the centralized WWTP adjusted for industrial discharge, if applicable [person]	user input
$F_{ind\text{-}com}$	=	factor for industrial and commercial co-discharge waste into the sewer system	1.25
EF w/o nit/denit	=	emission factor for a WWTP without nitrification/denitrification [g N_2O/person/year]	3.2
10^{-6}	=	conversion from g to metric ton [metric ton/g]	10^{-6}
GWP	=	Global Warming Potential	310

Year	1990	2000	2005	2008	2012	2020	2035
Population	40144	42805	45877	47019	49103	53271	61086
N2O emissions (MTCO2e)	50	53	57	58	61	66	76

Fugitive Emissions from Septic Systems

Equation 10.6	Fugitive CH_4 from Septic Systems (default BOD_5 load)
Annual CH_4 emissions (metric tons CO_2e) =	
$(P \times BOD_5\ load \times Bo \times MCF_{septic} \times 365.25 \times 10^{-3}) \times GWP$	

Where:

Term		Description	Value
P	=	population served by septic systems [person]	user input
BOD_5 load	=	amount of BOD_5 produced per person per day [kg BOD_5/person/day]	0.090
Bo	=	maximum CH_4-producing capacity for domestic wastewater [kg CH_4/kg BOD_5 removed]	0.6
MCF_{septic}	=	CH_4 correction factor for septic systems	0.5
365.25	=	conversion factor [day/year]	365.25
10^{-3}	=	conversion from kg to metric ton [metric ton/kg]	10^{-3}
GWP	=	Global Warming Potential	21

	1990	2000	2005	2008	2012	2020	2035
Population served by septic systems	200	200	200	200	200	200	200
Emissions (MTCO2e)	41	41	41	41	41	41	41

Business as Usual Emissions	1990	2000	2005	2008	2012	2020	2035
Stationary - Digester Gas	727	692	470	637	666	722	828
Treatment Lagoons	12418	13241	14279	14545	15189	16479	18896
Nitrification/Denitrification	50	53	57	58	61	66	76
Septic Systems	41	41	41	41	41	41	41
Total	**13236**	**14028**	**14847**	**15282**	**15957**	**17308**	**19841**

New Plant Upgrades Emissions	2035
Stationary - Digester Gas	828
Treatment Lagoons	16377
Nitrification/Denitrification	76
Septic Systems	41
Total	**17322**
Percent reduction	13%

Notes for Wastewater Treatment Plant:

Equations and fraction of CH4 in gas are from the Local Government Operations Protocol, version 1.1, May 2010, prepared by the California Air Resources Board, California Climate Action Registry, ICLEI, and the Climate Registry.
Assumptions are from the City of Palm Springs Wastewater Treatment Plant Capital Rehabilitation and Repair Plan, dated February 2010, except for the following:
- Fraction of BOD removed, average standard cubic feet (SCF) of digester gas per day, and number of septic tanks from Marcus Fuller, Assistant City Engineer, personal communication 9/16/10.

To project stationary emissions from incomplete combustion of digester gas, the gas per day per person for 2008 was used to estimate the gas produced for future years.

The improvements to the treatment plant are not funded at this time; therefore, year 2035 was assumed for implementation of the improvements, pursuant to personal communication with Marcus Fuller, Assistant City Engineer, 10/7/10.

City of Palm Springs Greenhouse Gas Inventory
Waste Generated - Community
Prepared by Michael Brandman Associates

Year	1990	1995	1999	2000	2003	2004	2005	2006	2007	2008	2009	2012	2020	2035
Population - Palm Springs	40144	41058	42392	42805	44502	44935	45877	46629	46796	47019	47601	49103	53271	61086
Waste generated (tons)		67473	78267	85539	86004	87676	95160	92333	82931	66396	56636			
Waste per person (tons)		1.64	1.85	2.00	1.93	1.95	2.07	1.98	1.77	1.41	1.19			
Waste Projections (tons)														
Based on 1995 waste per person	65971													
Based on 2005 waste per person								96720	97066	97529	98736	101851	110496	126707
Based on 2008 waste per person										66396	67218	69339	75224	86260
Percent Waste (%)														
Paper products	30.2	30.2	30.2	27.9	21.0	20.3	19.5	18.8	18.0	17.3	17.3	17.3	17.3	17.3
Food waste	15.7	15.7	15.7	15.4	14.6	14.8	15.0	15.1	15.3	15.5	15.5	15.5	15.5	15.5
Plant debris	10.3	10.3	10.3	9.5	6.9	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.2
Wood or textiles	15.0	15.0	15.0	16.3	20.2	21.3	22.4	23.6	24.7	25.8	25.8	25.8	25.8	25.8
All other waste	28.8	28.8	28.8	30.9	37.3	36.7	36.1	35.4	34.8	34.2	34.2	34.2	34.2	34.2

CACP Inputs	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
Business as usual waste (tons)	65971	85539	95160	66396	69339	75224	86260

Sources:
- Population for 1990 - 2000 from: State of California, Department of Finance. E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000. Sacramento, California, August 2007. www.dof.ca.gov/research/demographic/ reports/estimates/e-8/
- Population for 2003-2007 from: State of California, Department of Finance. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark. May 2009. www.dof.ca.gov/research/demographic /reports/estimates/e-5/2009/
- Note that "plant debris" contains the categories leaves and grass, prunings and trimmings, brances and stumps, and manures. "Wood or textiles" contains the categories textiles, carpet, composite organic, lumber, and gypsum board.
- Percent waste for 2008 is from the California Integrated Waste Management Board, California 2007 Statewide Waste Characterization Study. Produced under contract by: Cascadia Consulting Group. August 2009. www.calrecycle.ca.gov/wastechar/WasteStudies.htm.
- Percent waste for 2003 is from the California Integrated Waste Management Board, California 2003 Statewide Waste Characterization Study. Produced under contract by: Cascadia Consulting Group. 2004 www.calrecycle.ca.gov/wastechar/WasteStudies.htm.
- Percent waste for 1999 is from the California Integrated Waste Management Board, California 1999 Statewide Waste Characterization Study. Produced under contract by: Cascadia Consulting Group. 2004 www.calrecycle.ca.gov/wastechar/WasteStudies.htm.
- Percent waste for 2000 interpolated from 1999 and 2003 data
- Percent waste for 2004 through 2007 interpolated from 2003 and 2008 data
- Percent waste for 1990 and 1995 is from 1999 data
- Percent waste for 2009 and later years is from 2008 data
- Waste generated is from: California Integrated Waste Management Board www.calrecycle.ca.gov/LGcentral/Reports/DRS/Destination/JurDspFa.aspx
- Forecasts for the business as usual scenario for 2008 - 2035 are from the waste per capita for 2008

City of Palm Springs Greenhouse Gas Inventory
Municipal/Government: Ozone Depleting Substance Substitutes
Prepared by Michael Brandman Associates

Annual leakage of refrigerant is 90 to 120 pounds per year
The refrigerant used was R22, which is also known as HCFC-22
The CACP model does not have an entry for this refrigerant; therefore, the emissions are calculated herein.

Refrigerant	Leakage (pounds/year)	Leakage (tons/year)	Global warming potential	Emissions (MTCO2e/year)
R-22	120	0.06	1810	99

Sources:
The annual leakage is from the City of Palm Springs, Jan Anderson, Email, October 18, 2010.

The global warming potential is from: Intergovernmental Panel on Climate Change, 2007a. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, Website: www.ipcc.ch/ipccreports/ar4-wg1.htm, Accessed July 1, 2010

City of Palm Springs Greenhouse Gas Inventory
Ozone Depleting Substance Substitutes
Prepared by Michael Brandman Associates

Business as Usual	**1990**	**2000**	**2005**	**2008**	**2012**	**2020**	**2035**
ODSS emissions in California (MMTCO2e)	0.036	8.55	12.41	13.89	ND	45.0	ND
Population in California (people)	29,758,213	33,873,086	36,676,931	37,883,992	39,967,969	44,135,923	51,753,503
ODSS emissions (MTCO2e / person)	0.001	0.25	0.34	0.37	0.58	1.02	ND
Population in Palm Springs (people)	40,144	42,805	45,877	47,019	49,103	53,271	61,086
Emissions in Palm Springs (MTCO2e)	49	10,805	15,523	17,239	28,690	54,314	62,282

Abbreviations:
ODS = ozone depleting substance substitutes; ARB = California Air Resources Board; ND = no data

Notes:

- The ARB estimated emissions from ODS substitutes by apportioning the National emissions on the basis of population, as shown in: California Air Resources Board. May 2009. California's 1990-2004 Greenhouse Gas Emissions Inventory and 1990 Emissions Level Technical Support Document. www.arb.ca.gov/cc/inventory/doc/methods_v1/ghg_inventory_technical_support_document.pdf, Accessed June 1, 2010.

- ODS substitutes emissions in California for 1990 from: California Air Resources Board. California Greenhouse Gas Inventory by sector and activity. www.arb.ca.gov/cc/inventory/archive/tables/ghg_inventory_sector_90-04_all_2007-11-19.pdf, Last updated 11/19/07. Accessed September 7, 2010.
- ODS substitutes emissions in California for 2000, 2005, and 2008 from: California Air Resources Board. May 12, 2010. California Greenhouse Gas Inventory for 2000-2008 – by Category as Defined in the Scoping Plan. www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-08_2010-05-12.pdf, Accessed September 7, 2010.
- ODS substitutes emissions in California for 2020 from: California Air Resources Board. December 2008. (Abbreviated as "ARB 2020 Forecast.") Climate Change Scoping Plan Appendices, Volume 1: Supporting Documents and Measure Detail, Appendix F. Website: www.arb.ca.gov/cc/scopingplan/document/appendices_volume1.pdf and www.arb.ca.gov/cc/inventory/data/forecast.htm (Inventory Summary for Scoping Plan), Accessed September 7, 2010.

- Emission projections for Palm Springs for 2035 are based on the per capita emissions in 2020.

- Per capita ODS substitutes emissions for 2012 interpolated from 2008 and 2020 data.

- The compliance scenario is based on a reduction from the Management of High Global Warming Potential Refrigerants for Stationary Sources in the California Code of Regulations. This regulation is anticipated to reduce approximately 8.6 MMTCO2e in California by 2020. Source: California Air Resources Board. 2009. Public Hearing Notice and Related Material. Appendix B, California Facilities and Greenhouse Gas Emissions Inventory – High-Global Warming Potential Stationary Source Refrigerant Management Program. October 23, 2009. www.arb.ca.gov/regact/2009/gwprmp09/refappb.pdf, Accessed September 7, 2010. Note that the regulation is to go into effect on January 1, 2011. However, registration for small refrigeration equipment is not due until March 1, 2016 and registration for medium refrigeration is not due until 2014. Therefore, reductions in 2012 do not represent the full potential of emissions reductions.

City of Palm Springs Greenhouse Gas Inventory
Palm Springs Airport
Prepared by Michael Brandman Associates

TOL Data Provided by Palm Springs Airport

Year	1990	2000	2005	2008	2013	2018	2023	2028
TOL	110,870	96,103	92,853	72,876	77,932	85,168	95,420	108,875

Airport Passenger Traffic (approximate)

Year	1990	2000	2005	2008
Passengers	860,000	1,280,000	1,400,000	1,490,000

TOL Interpolation Calculations

Year	2008	2012	2013	2018	2020	2023
TOL	72,876	76,921	77,932	85,168	89,269	95,420

TOL Summary

Year	1990	2000	2005	2008	2012	2020	2035
TOL	110,870	96,103	92,853	72,876	76,921	89,269	108,875

Fuel Usage Provided by Palm Springs Airport

Year		2003	2005	2008
Unleaded	gallons	6,057	8,106	8,855
Diesel	gallons	1,968	1,425	1,590
CNG	gallons			2,134
Total		8,025	9,531	12,578

Fuel Usage Calculations	*Gallons per TOL*		*Gallons/passenger*	
Year	2005	2008	2005	2008
Unleaded	0.087	0.122	0.0058	0.0059
Diesel	0.015	0.022	0.0010	0.0011
CNG	0.000	0.029	-	0.0014

Fuel Usage Forecasts Based on 2008 gallons per TOL (Business as Usual)

Year	2008	2012	2020	2035
Unleaded	8,855	9,346	10,846	13,228
Diesel	1,590	1,678	1,947	2,375
CNG	2,134	2,253	2,614	3,188
Total	12,578	13,276	15,407	18,791

Fuel Usage Based on 2005 gallons per passenger

Year	1990	2000	2005
Unleaded	4,979	7,411	8,106
Diesel	875	1,303	1,425
CNG	-	-	-
Total	5,855	8,714	9,531

Abbreviations:
TOL = takeoffs and landings at the Palm Springs Airport
CNG = compressed natural gas
Notes:
- TOL Data and Fuel Usage from: Steve Bowser, City of Palm Springs Deputy Director of Aviation, September 23, 2010 and October 12, 2010.
- Airport passenger traffic is from the graph in the Cit of Palm Springs Economic Overview, Year 2010 edition
- 2035 TOL assumed to be the same as 2028

City of Palm Springs Greenhouse Gas Inventory
Municipal: Fuel Use
Prepared by Michael Brandman Associates

Fuel Cost Provided by the City of Palm Springs

Year	2007	2008	2009	2010	Source
Gasoline	$ 443,749.42	$ 513,807.86	$ 471,776.64	$ 413,337.81	Reference 1
Diesel	$ 66,876.78	$ 100,397.97	$ 97,885.17	$ 86,145.47	Reference 1

Fuel Cost - Dollars per Gallon

Year	2007	2008	2009	2010	Source
Gasoline	$ 3.12	$ 3.56	$ 2.73	$ 3.11	Reference 2
Diesel	$ 3.09	$ 3.92	$ 2.61	$ 3.11	Reference 3

Fuel (Gallons)

Year	2007	2008	2009	2010	Source
Gasoline	142,227	144,328	172,812	132,906	Divide cost by
Diesel	21,643	25,612	37,504	27,700	price per gallon

Fuel per Employee

Year	2007	2008	2009	2010
Employees		485		390
Gasoline/emp		297.58		340.78
Diesel/emp		52.81		71.02

Municipal Fuel use per capita

Year	2007	2008	2009
Population	46796	47019	47601
Gasoline/capita	3.04	3.07	3.63
Diesel/capita	0.46	0.54	0.79

Fuel (gallons) Estimations for 1990, 2000, and 2005 based on Fuel per Employee in 2008

Year	1990	2000	2005	2008
Employees	519	458	450	485
Gasoline	154,446	136,293	133,913	144,328
Diesel	27,407	24,186	23,763	25,612

Fuel (gallons) Forecasts based on Fuel per capita in 2008

Year	2012	2020	2035	2020 (%)	2035 (%)
Population	49103	53271	61086		
Gasoline	150,725	163,518	187,507	85%	85%
Diesel	26,747	29,017	33,274	15%	15%

Weighted AB 32 Reduction

	City Percentag	AB 32 Reduction	Weighted Reduction
Automobiles, light duty trucks	85%	31%	26.3%
Heavy duty (fire engines)	15%	2%	0.3%
Weighted Reduction			26.6%

Notes:
- Reference 1: City of Palm Springs, Steve Rakestraw, Fleet Operations/Maintenance Manager. Personal Communication, October 4, 2010.
- Reference 2: Energy Information Administration. California Weekly Retail. www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html (Used an average of the weekly Califiornia all grades all formulations)
- Reference 3: U.S. Energy Information Administration. Petroleum Navigator. Weekly California No. 2 Diesel Retail Sales by All Sellers. www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMD_EPD2D_PTE_SCA_DPG&f=W (Note that an average of all prices in a given year are shown)
- Estimations for prior years is based on fuel per employee because the fuel per employee seems like a better estimator of fuel cost, as years 2008 and 2010 are similar in that regard.
- Forecasts are based on fuel per capita, as it is anticipated that more City employees and services will be needed for a greater population.

City of Palm Springs Greenhouse Gas Inventory
Former Palm Springs Landfill
Prepared by Michael Brandman Associates

Estimated Waste in Place - Former Palm Springs Landfill

Construction debris	158000	cubic yards
Household debris	387000	cubic yards

Convert from cubic yards to tons

Waste Type	WIPFRAC	Adjusted WIPFRAC	WIP (cubic yards)	Weight (pounds per cubic yard)	WIP Weight (tons)
Newspaper	6.4%	9.0%	34,762	500	8,691
Office Paper	10.7%	15.0%	58,118	500	14,529
Corrugated Boxes	10.8%	15.2%	58,661	400	11,732
Coated Paper	2.2%	3.1%	11,949	500	2,987
Food	14.8%	20.8%	80,387	800	32,155
Grass	12.1%	17.0%	65,722	500	16,431
Leaves	6.1%	8.5%	32,861	350	5,751
Branches	6.1%	8.5%	32,861	350	5,751
Lumber		0.0%	-		-
Textiles	2.1%	2.9%	11,406	500	2,852
Diapers	0.1%	0.1%	272	500	68
Construction/Demolition		0.0%	158,000	500	39,500
Medical Waste	0.0%	0.0%	-		-
Sludge/Manure	0.0%	0.0%	-		-
MSW Total	**71.3%**	**100.0%**	**545,000**		**140,446**

Waste per year (tons)

Assumed to be divided equally by the approximate years in operation, 25 years	5,618

Notes:
- Estimated waste in place (WIP) from: The Source Group. Final Draft Removal Action Workplan Former Palm Springs Landfill, Intersection of Gene Autry Trail and Ramon Road, Palm Springs, California. December 16, 2003.
- WIPFRAC (fraction of the component in waste in place) from: California Air Resources Board's Implementation of IPCC's Mathematically Exact First-Order Decay Model. June 3, 2010.
- Weight in pounds per cubic yard is from: Washington Department of Ecology. January 2009. Coordinated Prevention Grant Conversion Sheet. www.ecy.wa.gov/programs/swfa/grants/docs/OutcomeMeasureConvSht.pdf. Categories without a weight were assumed to be 500 pounds.

City of Palm Springs Greenhouse Gas Inventory
Former Palm Springs Landfill
Prepared by Michael Brandman Associates

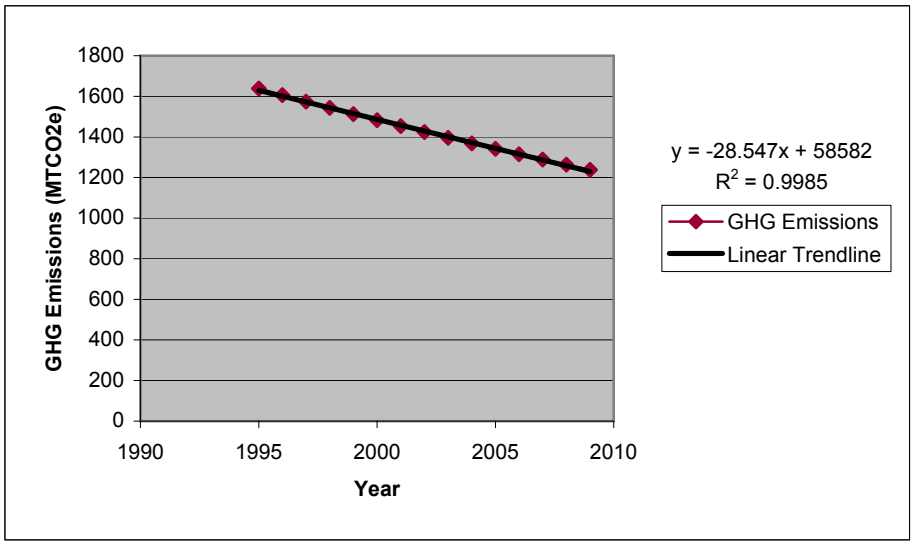
ARB Landfill Emissions Tool
Model Estimated Data

Year	CH4	CO2	Total
1995	1413	226	1638
1996	1385	221	1606
1997	1357	217	1574
1998	1330	212	1543
1999	1304	208	1512
2000	1278	204	1482
2001	1253	200	1453
2002	1228	196	1424
2003	1204	192	1396
2004	1180	188	1368
2005	1157	185	1341
2006	1134	181	1315
2007	1111	177	1289
2008	1089	174	1263
2009	1068	171	1238

Projections

Year	CH4	CO2	Total
2010			1203
2011			1174
2012			1145
2020			917
2030			632

Note:
The ARB Landfill Emissions Tool does not estimate future projections of emissions. The emissions decrease over time. The formula shown in the chart below is used to project the future year emissions. The formula is estimated using data from 1995 to 2009 and is estimated using the Microsoft Excel function for a linear trendline.



California Air Resources Board's Implementation of IPCC's Mathematically Exact First-Order Decay Model

Release date: June 3, 2010

This tool is designed to estimate greenhouse gas emissions from a landfill in support of the Local Government Operations Protocol.

Please follow these steps to estimate emissions:

1) Read the ***Methodology*** page to become familiar with the equations and the assumptions underlying the calculations.

2) Enter the landfill specific data on the ***Landfill Model Inputs*** page. **This is the only page where data needs to be added or modified.**

Data Type	Field or Column Name	Description
Landfill Specific Data	k Value	Decay factor (see ***Methodology*** page).
	State/Country	State or country where the landfill is located. Will determine the waste characterization data used.
Waste Deposit Data	Year	Year of the data entry values.
	Waste Deposited (Tons)	Amount of waste deposited in that year.
	Waste Deposited (% ANDOC)	Percent of the waste that is degradable, based on waste characterization data.
	Greenwaste & Compost - Daily Cover (Tons)	Amount of daily cover materials of the given type used in that year.
	Greenwaste & Compost - Daily Cover (% ANDOC)	Percent of the daily cover that is degradable, based on waste characterization data.
	Sludge - Daily Cover (Tons)	Amount of daily cover materials of the given type used in that year.
	Sludge - Daily Cover (% ANDOC)	Percent of the daily cover that is degradable, based on waste characterization data.
Note: Required data fields on the **Landfill Model Inputs** page are highlighted in rose		

The rose colored field names indicate which fields require data entry, all others have defaults that will be used in the calculations.

3) If you wish to overwrite the default % ANDOC value with your own value, you can use the calculator on the ***Landfill Specific ANDOC Values*** page (the last page in this tool) and then type your calculated landfill specific value over the default ANDOC% value.

4) Estimates of the emissions reflecting the current inputs are listed on the ***Landfill Emissions Output*** page and estimates of captured gas heat are available on the ***Landfill Gas Heat Output*** page.

Data Input: Lanfill Characteristics

Landfill Name:	Former Palm Spring	**Year Opened:**	1935	Click for lists of k values	
State/Country:	CA	**If Closed, Year:**	1960	**k Value:**	0.020
City/County:	Palm Springs			**M Value:**	6

Data Input: Waste Deposit History

	Waste			Daily Cover			
	Waste Deposited			Greenwaste & Compost		Sludge	
Year	Tons	% ANDOC		Tons	% ANDOC	Tons	% ANDOC
1900							
1901							
1902							
1903							
1904							
1905							
1906							
1907							
1908							
1909							
1910							
1911							
1912							
1913							
1914							
1915							
1916							
1917							
1918							
1919							
1920							
1921							
1922							
1923							
1924							
1925							
1926							
1927							
1928							
1929							
1930							
1931							
1932							
1933							
1934							
1935	5,618	10.69%					
1936	5,618	10.69%					
1937	5,618	10.69%					
1938	5,618	10.69%					
1939	5,618	10.69%					
1940	5,618	10.69%					
1941	5,618	10.69%					
1942	5,618	10.69%					
1943	5,618	10.69%					
1944	5,618	10.69%					
1945	5,618	10.69%					
1946	5,618	10.69%					
1947	5,618	10.69%					
1948	5,618	10.69%					

Data Input: Lanfill Characteristics

Landfill Name:	Former Palm Spring	**Year Opened:**	1935	Click for lists of k values	
State/Country:	CA	**If Closed, Year:**	1960	**k Value:**	0.020
City/County:	Palm Springs			**M Value:**	6

Data Input: Waste Deposit History

	Waste			Daily Cover			
	Waste Deposited			Greenwaste & Compost		Sludge	
Year	Tons	% ANDOC		Tons	% ANDOC	Tons	% ANDOC
1949	5,618	10.69%					
1950	5,618	10.69%					
1951	5,618	10.69%					
1952	5,618	10.69%					
1953	5,618	10.69%					
1954	5,618	10.69%					
1955	5,618	10.69%					
1956	5,618	10.69%					
1957	5,618	10.69%					
1958	5,618	10.69%					
1959	5,618	10.69%					
1960	5,618	10.69%					
1961							
1962							
1963							
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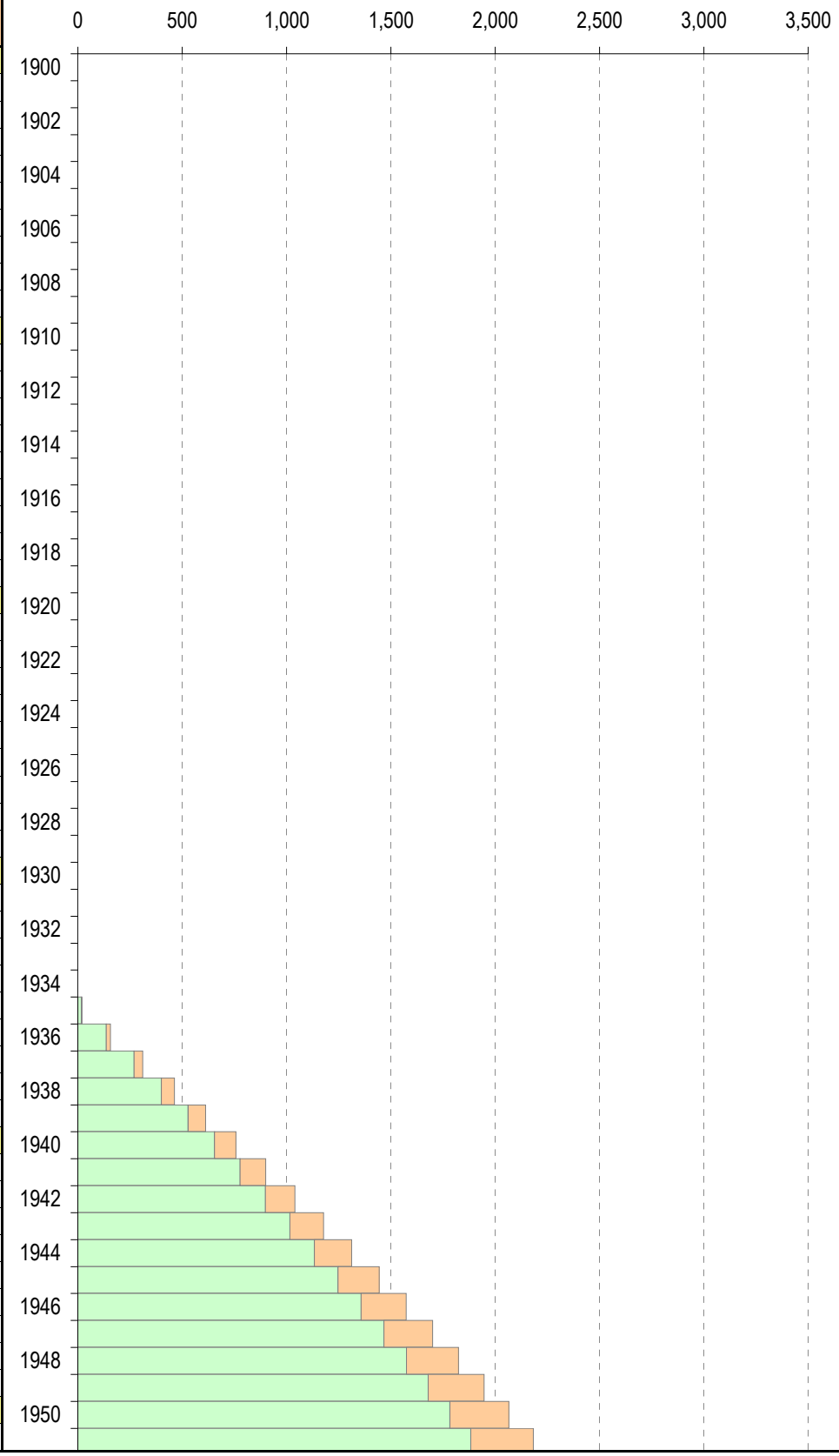
1992							
1993							
1994							
1995							
1996							
1997							

Model Output: Lanfill Characteristics

Landfill Name: Former Palm S
State: CA
City/County: Palm Springs
Year Opened: 1935
If Closed, Year: 1960
k Value: 0.020
M Value: 6

Model Output: Methane and Carbon Dioxide Emissions (metric tonnes of CO_2 equivalent)

Year	CH_4	CO_2
1900		
1901		
1902		
1903		
1904		
1905		
1906		
1907		
1908		
1909		
1910		
1911		
1912		
1913		
1914		
1915		
1916		
1917		
1918		
1919		
1920		
1921		
1922		
1923		
1924		
1925		
1926		
1927		
1928		
1929		
1930		
1931		
1932		
1933		
1934		
1935	17	3
1936	136	22
1937	270	43
1938	400	64
1939	529	84
1940	654	104
1941	777	124
1942	898	143
1943	1,017	162
1944	1,133	181
1945	1,246	199
1946	1,358	217
1947	1,467	234
1948	1,574	251
1949	1,679	268
1950	1,782	285
1951	1,883	301

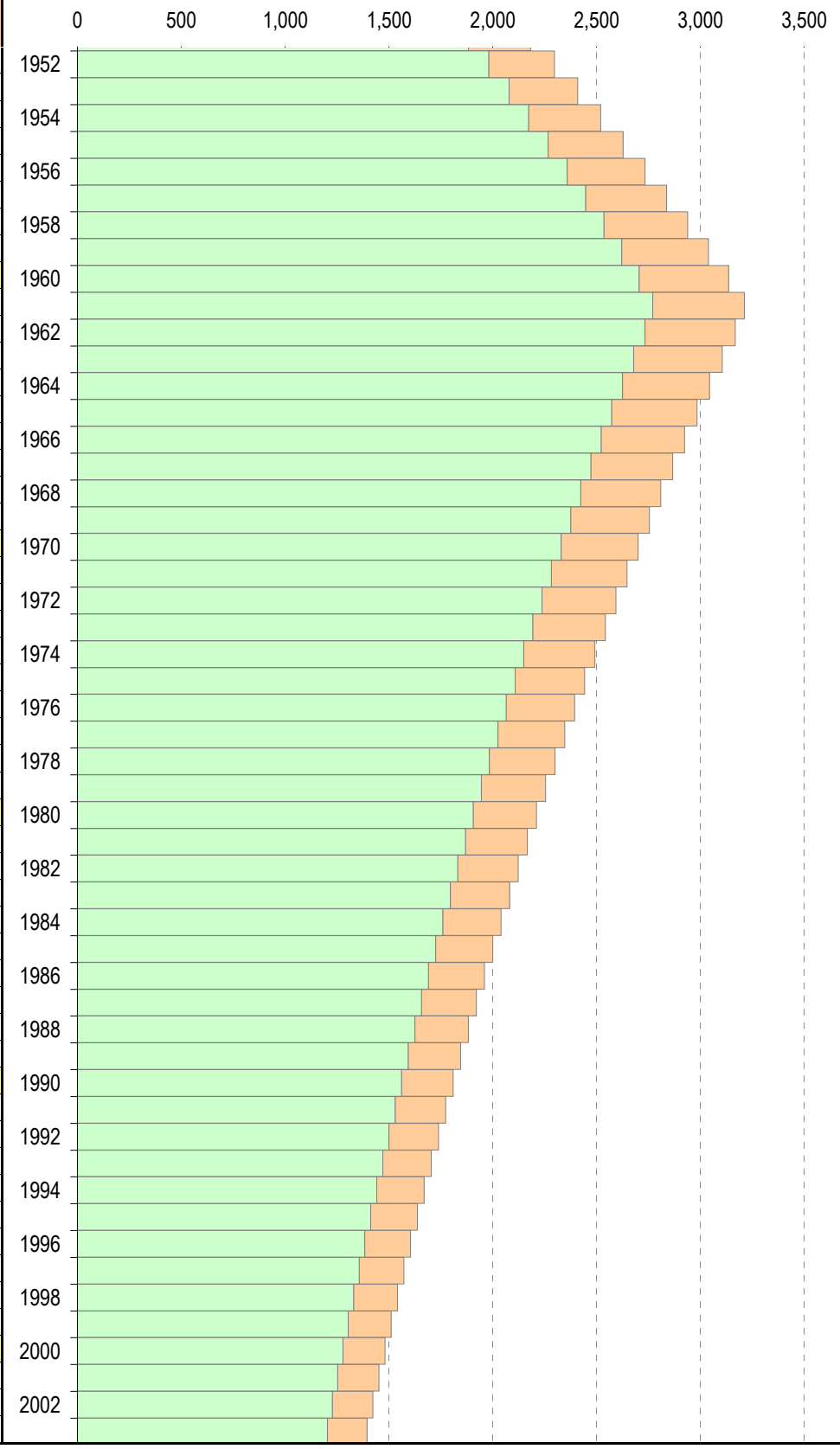


Model Output: Lanfill Characteristics

Landfill Name: Former Palm S
State: CA
City/County: Palm Springs
Year Opened: 1935
If Closed, Year: 1960
k Value: 0.020
M Value: 6

Model Output: Methane and Carbon Dioxide Emissions (metric tonnes of CO_2 equivalent)

Year	CH_4	CO_2
1952	1,982	317
1953	2,079	332
1954	2,174	347
1955	2,267	362
1956	2,358	377
1957	2,448	391
1958	2,535	405
1959	2,621	419
1960	2,706	432
1961	2,771	443
1962	2,733	436
1963	2,679	428
1964	2,626	419
1965	2,574	411
1966	2,523	403
1967	2,473	395
1968	2,424	387
1969	2,376	379
1970	2,329	372
1971	2,283	365
1972	2,238	357
1973	2,193	350
1974	2,150	343
1975	2,107	337
1976	2,066	330
1977	2,025	323
1978	1,985	317
1979	1,945	311
1980	1,907	305
1981	1,869	298
1982	1,832	293
1983	1,796	287
1984	1,760	281
1985	1,725	276
1986	1,691	270
1987	1,658	265
1988	1,625	259
1989	1,593	254
1990	1,561	249
1991	1,530	244
1992	1,500	240
1993	1,470	235
1994	1,441	230
1995	1,413	226
1996	1,385	221
1997	1,357	217
1998	1,330	212
1999	1,304	208
2000	1,278	204
2001	1,253	200
2002	1,228	196
2003	1,204	192



Model Output: Lanfill Characteristics

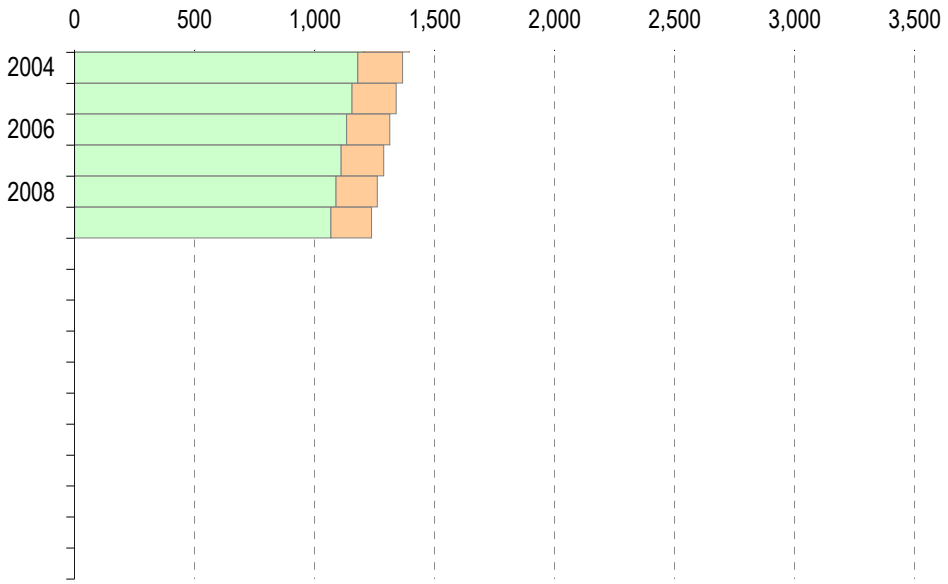
Landfill Name: Former Palm S
State: CA
City/County: Palm Springs

Year Opened: 1935
If Closed, Year: 1960

k Value: 0.020
M Value: 6

Model Output: Methane and Carbon Dioxide Emissions (metric tonnes of CO_2 equivalent)

Year	CH_4	CO_2
2004	1,180	188
2005	1,157	185
2006	1,134	181
2007	1,111	177
2008	1,089	174
2009	1,068	171



Community Greenhouse Gas Emissions in 1990
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas						
Natural Gas	73,488	277	13,850	73,676	19.8	1,256,449
Subtotal Natural gas	73,488	277	13,850	73,676	19.8	1,256,449
Subtotal Residential	73,488	277	13,850	73,676	19.8	1,256,449
Commercial						
Palm Springs, CA						
Natural Gas						
Natural Gas	47,976	181	9,042	48,098	12.9	820,254
Subtotal Natural Gas	47,976	181	9,042	48,098	12.9	820,254
Subtotal Commercial	47,976	181	9,042	48,098	12.9	820,254
Transportation						
Palm Springs, CA						
Miles within City						
Diesel	45,641	267	279	45,686	12.3	566,029
Gasoline	181,606	40,982	42,013	188,400	50.6	2,324,359
Subtotal Miles within City	227,248	41,249	42,292	234,085	62.9	2,890,388
Subtotal Transportation	227,248	41,249	42,292	234,085	62.9	2,890,388
Waste						
Palm Springs, CA						
Waste Generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	1,014,313	10,650	2.9	
Food Waste	0	0	298,476	3,134	0.8	
Plant Debris	0	0	110,962	1,165	0.3	

Community Greenhouse Gas Emissions in 1990
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Wood or Textiles	0	0	142,584	1,497	0.4	
Subtotal Waste Generated	0	0	1,566,335	16,447	4.4	
Subtotal Waste	0	0	1,566,335	16,447	4.4	
Total	348,711	41,707	1,631,519	372,307	100.0	4,967,091

Community Greenhouse Gas Emissions in 2000
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas						
Natural Gas	74,288	280	14,001	74,479	20.7	1,270,130
Subtotal Natural gas	74,288	280	14,001	74,479	20.7	1,270,130
Subtotal Residential	74,288	280	14,001	74,479	20.7	1,270,130
Commercial						
Palm Springs, CA						
Natural Gas						
Natural Gas	51,156	193	9,641	51,287	14.2	874,625
Subtotal Natural Gas	51,156	193	9,641	51,287	14.2	874,625
Subtotal Commercial	51,156	193	9,641	51,287	14.2	874,625
Transportation						
Palm Springs, CA						
Miles traveled within City						
Diesel	39,303	232	243	39,341	10.9	487,421
Gasoline	168,642	37,503	31,152	174,782	48.5	2,158,434
Subtotal Miles traveled within C	207,945	37,735	31,394	214,124	59.5	2,645,855
Subtotal Transportation	207,945	37,735	31,394	214,124	59.5	2,645,855
Waste						
Palm Springs, CA						
Waste Generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	1,215,011	12,758	3.5	
Food Waste	0	0	379,614	3,986	1.1	
Plant Debris	0	0	132,701	1,393	0.4	

Community Greenhouse Gas Emissions in 2000
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Wood or Textiles	0	0	200,900	2,109	0.6	
Subtotal Waste Generated	0	0	1,928,225	20,246	5.6	
Subtotal Waste	0	0	1,928,225	20,246	5.6	
Total	333,389	38,208	1,983,261	360,135	100.0	4,790,610

Community Greenhouse Gas Emissions in 2005
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas: multi family residential						
Natural Gas	25,892	98	4,880	25,958	6.2	442,681
Subtotal Natural gas: multi fam	25,892	98	4,880	25,958	6.2	442,681
Natural gas: single family residential						
Natural Gas	51,400	194	9,687	51,531	12.4	878,795
Subtotal Natural gas: single far	51,400	194	9,687	51,531	12.4	878,795
Subtotal Residential	77,291	291	14,567	77,489	18.6	1,321,476
Commercial						
Palm Springs, CA						
Natural Gas						
Natural Gas	54,827	207	10,333	54,967	13.2	937,395
Subtotal Natural Gas	54,827	207	10,333	54,967	13.2	937,395
Subtotal Commercial	54,827	207	10,333	54,967	13.2	937,395
Transportation						
Palm Springs, CA						
Miles traveled within City						
Diesel	59,403	351	369	59,461	14.3	736,696
Gasoline	201,487	29,624	23,970	206,331	49.5	2,578,810
Subtotal Miles traveled within C	260,890	29,976	24,339	265,792	63.8	3,315,506
Subtotal Transportation	260,890	29,976	24,339	265,792	63.8	3,315,506

Community Greenhouse Gas Emissions in 2005
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Waste						
Palm Springs, CA						
Waste Generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	944,715	9,920	2.4	
Food Waste	0	0	411,342	4,319	1.0	
Plant Debris	0	0	108,777	1,142	0.3	
Wood or Textiles	0	0	307,135	3,225	0.8	
Subtotal Waste Generated	0	0	1,771,969	18,606	4.5	
Subtotal Waste	0	0	1,771,969	18,606	4.5	
Total	393,008	30,474	1,821,208	416,854	100.0	5,574,377

Community Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural Gas: multi family residential						
Natural Gas	25,151	95	4,740	25,216	6.7	430,021
Subtotal Natural Gas: multi fan	25,151	95	4,740	25,216	6.7	430,021
Natural Gas: single family residential						
Natural Gas	52,423	198	9,880	52,557	13.9	896,295
Subtotal Natural Gas: single fa	52,423	198	9,880	52,557	13.9	896,295
Subtotal Residential	77,574	292	14,620	77,773	20.5	1,326,316
Commercial						
Palm Springs, CA						
Natural Gas						
Natural Gas	42,076	159	7,930	42,184	11.1	719,384
Subtotal Natural Gas	42,076	159	7,930	42,184	11.1	719,384
Subtotal Commercial	42,076	159	7,930	42,184	11.1	719,384
Transportation						
Palm Springs, CA						
Miles traveled within City						
Diesel	46,497	275	289	46,542	12.3	576,636
Gasoline	195,471	25,672	21,719	199,678	52.7	2,501,807
Subtotal Miles traveled within C	241,967	25,947	22,008	246,220	65.0	3,078,443
Subtotal Transportation	241,967	25,947	22,008	246,220	65.0	3,078,443

Community Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Waste						
Palm Springs, CA						
Waste						*Disposal Method - Managed Landfill*
Paper Products	0	0	584,790	6,140	1.6	
Food Waste	0	0	296,572	3,114	0.8	
Plant Debris	0	0	78,066	820	0.2	
Wood or Textiles	0	0	246,825	2,592	0.7	
Subtotal Waste	0	0	1,206,253	12,666	3.3	
Subtotal Waste	0	0	1,206,253	12,666	3.3	
Total	361,617	26,398	1,250,810	378,843	100.0	5,124,143

Community Greenhouse Gas Emissions in 2012
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas						
Natural Gas	82,753	312	15,596	82,965	19.8	1,414,855
Subtotal Natural gas	82,753	312	15,596	82,965	19.8	1,414,855
Subtotal Residential	82,753	312	15,596	82,965	19.8	1,414,855
Commercial						
Palm Springs, CA						
Natural Gas						
Natural Gas	59,350	224	11,186	59,503	14.2	1,014,734
Subtotal Natural Gas	59,350	224	11,186	59,503	14.2	1,014,734
Subtotal Commercial	59,350	224	11,186	59,503	14.2	1,014,734
Transportation						
Palm Springs, CA						
Miles on roads in City						
Diesel	51,075	303	319	51,125	12.2	633,418
Gasoline	208,436	27,879	23,630	213,005	50.7	2,667,747
Subtotal Miles on roads in City	259,511	28,182	23,949	264,131	62.9	3,301,166
Subtotal Transportation	259,511	28,182	23,949	264,131	62.9	3,301,166
Waste						
Palm Springs, CA						
Waste generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	610,711	6,412	1.5	
Food Waste	0	0	309,718	3,252	0.8	
Plant Debris	0	0	81,526	856	0.2	

Community Greenhouse Gas Emissions in 2012
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Wood or Textiles	0	0	257,765	2,707	0.6	
Subtotal Waste generated	0	0	1,259,720	13,227	3.2	
Subtotal Waste	0	0	1,259,720	13,227	3.2	
Total	401,614	28,717	1,310,450	419,825	100.0	5,730,755

Community Greenhouse Gas Emissions in 2020
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas						
Natural Gas	86,494	326	16,301	86,715	18.5	1,478,810
Subtotal Natural gas	86,494	326	16,301	86,715	18.5	1,478,810
Subtotal Residential	86,494	326	16,301	86,715	18.5	1,478,810
Commercial						
Palm Springs, CA						
Natural Gas (Comm/Industrial)						
Natural Gas	64,520	243	12,160	64,686	13.8	1,103,123
Subtotal Natural Gas (Comm/I	64,520	243	12,160	64,686	13.8	1,103,123
Subtotal Commercial	64,520	243	12,160	64,686	13.8	1,103,123
Transportation						
Palm Springs, CA						
Vehicles on City roads						
Diesel	65,020	386	409	65,084	13.9	806,363
Gasoline	233,318	32,155	27,183	238,588	50.8	2,986,214
Subtotal Vehicles on City roads	298,339	32,540	27,592	303,672	64.7	3,792,577
Subtotal Transportation	298,339	32,540	27,592	303,672	64.7	3,792,577
Waste						
Palm Springs, CA						
Waste Generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	662,543	6,957	1.5	
Food Waste	0	0	336,005	3,528	0.8	
Plant Debris	0	0	88,445	929	0.2	

Community Greenhouse Gas Emissions in 2020
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Wood or Textiles	0	0	279,643	2,936	0.6	
Subtotal Waste Generated	0	0	1,366,636	14,350	3.1	
Subtotal Waste	0	0	1,366,636	14,350	3.1	
Total	449,352	33,110	1,422,688	469,423	100.0	6,374,510

Community Greenhouse Gas Emissions in 2035
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Residential						
Palm Springs, CA						
Natural gas						
Natural Gas	93,508	352	17,623	93,747	15.9	1,598,733
Subtotal Natural gas	93,508	352	17,623	93,747	15.9	1,598,733
Subtotal Residential	93,508	352	17,623	93,747	15.9	1,598,733
Commercial						
Palm Springs, CA						
Natural Gas (Comm/Industrial)						
Natural Gas	74,213	280	13,987	74,404	12.6	1,268,851
Subtotal Natural Gas (Comm/I	74,213	280	13,987	74,404	12.6	1,268,851
Subtotal Commercial	74,213	280	13,987	74,404	12.6	1,268,851
Transportation						
Palm Springs, CA						
Miles on City roads						
Diesel	93,205	553	588	93,297	15.8	1,155,898
Gasoline	311,115	9,707	16,414	312,792	53.0	3,981,919
Subtotal Miles on City roads	404,319	10,260	17,001	406,088	68.7	5,137,817
Subtotal Transportation	404,319	10,260	17,001	406,088	68.7	5,137,817
Waste						
Palm Springs, CA						
Waste generated						*Disposal Method - Managed Landfill*
Paper Products	0	0	759,744	7,977	1.4	
Food Waste	0	0	385,299	4,046	0.7	
Plant Debris	0	0	101,421	1,065	0.2	

Community Greenhouse Gas Emissions in 2035
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)
Wood or Textiles	0	0	320,669	3,367	0.6	
Subtotal Waste generated	0	0	1,567,133	16,455	2.8	
Subtotal Waste	0	0	1,567,133	16,455	2.8	
Total	572,040	10,892	1,615,744	590,694	100.0	8,005,400

Government Greenhouse Gas Emissions in 1990
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, California							
Municipal Cogen							
Natural Gas	4,691	18	884	4,703	42.3	80,203	0
Subtotal Municipal Cogen	4,691	18	884	4,703	42.3	80,203	0
Sunrise Plaza Cogen							
Natural Gas	2,616	10	493	2,623	23.6	44,726	0
Subtotal Sunrise Plaza Cogen	2,616	10	493	2,623	23.6	44,726	0
Subtotal Buildings and Facilities	7,307	28	1,377	7,326	65.9	124,930	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - Onsite ground equipment							
Fuel Oil (#1 2 4)	10	0	3	10	0.1	121	0
Stationary Gasoline	48	1	15	49	0.4	619	0
Subtotal PSP Airport: Fuel - Or	58	1	18	58	0.5	740	0
Subtotal Airport Facilities	58	1	18	58	0.5	740	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	306	1	1	307	2.8	3,801	0
Gasoline	1,499	334	224	1,553	14.0	19,186	0
Subtotal City Fleet	1,806	335	225	1,860	16.7	22,987	0
Subtotal Vehicle Fleet	1,806	335	225	1,860	16.7	22,987	0

Government Greenhouse Gas Emissions in 1990
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	151	1	0	152	1.4	1,877	0
Gasoline	1,662	402	380	1,728	15.5	21,266	0
Subtotal Employee Commute	1,813	403	380	1,879	16.9	23,143	0
Subtotal Employee Commute	1,813	403	380	1,879	16.9	23,143	0
Total	10,983	766	2,000	11,123	100.0	171,799	0

Government Greenhouse Gas Emissions in 2000
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, CA							
Municipal Cogeneration Plant							
Natural Gas	8,017	30	1,511	8,037	56.5	137,068	0
Subtotal Municipal Cogeneratic	8,017	30	1,511	8,037	56.5	137,068	0
Sunrise Plaza Cogeneration Plant							
Natural Gas	3,000	11	565	3,007	21.1	51,284	0
Subtotal Sunrise Plaza Cogene	3,000	11	565	3,007	21.1	51,284	0
Subtotal Buildings and Facilities	11,016	42	2,076	11,045	77.6	188,352	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - onsite ground equip.							
Fuel Oil (#1 2 4)	15	0	4	15	0.1	181	0
Stationary Gasoline	72	1	22	72	0.5	921	0
Subtotal PSP Airport: Fuel - on	87	1	27	87	0.6	1,101	0
Subtotal Airport Facilities	87	1	27	87	0.6	1,101	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	270	1	1	271	1.9	3,354	0
Gasoline	1,323	338	222	1,378	9.7	16,931	0
Subtotal City Fleet	1,593	340	223	1,648	11.6	20,285	0
Subtotal Vehicle Fleet	1,593	340	223	1,648	11.6	20,285	0

Government Greenhouse Gas Emissions in 2000
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	121	1	0	121	0.9	1,503	0
Gasoline	1,278	288	227	1,325	9.3	16,357	0
Subtotal Employee Commute	1,399	288	228	1,446	10.2	17,859	0
Subtotal Employee Commute	1,399	288	228	1,446	10.2	17,859	0
Total	14,095	671	2,554	14,226	100.0	227,597	0

Government Greenhouse Gas Emissions in 2005
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, CA							
Municipal Cogeneration Plant							
Natural Gas	6,625	25	1,249	6,642	50.8	113,273	0
Subtotal Municipal Cogeneratic	6,625	25	1,249	6,642	50.8	113,273	0
Sunrise Plaza Cogeneration Plant							
Natural Gas	3,393	13	639	3,401	26.0	58,006	0
Subtotal Sunrise Plaza Cogene	3,393	13	639	3,401	26.0	58,006	0
Subtotal Buildings and Facilities	10,018	38	1,888	10,044	76.8	171,279	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - onsite ground equip.							
Fuel Oil (#1 2 4)	16	0	5	16	0.1	198	0
Stationary Gasoline	79	1	24	79	0.6	1,007	0
Subtotal PSP Airport: Fuel - on	95	2	29	95	0.7	1,205	0
Subtotal Airport Facilities	95	2	29	95	0.7	1,205	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	266	1	1	266	2.0	3,295	0
Gasoline	1,300	200	140	1,332	10.2	16,635	0
Subtotal City Fleet	1,565	201	141	1,598	12.2	19,931	0
Subtotal Vehicle Fleet	1,565	201	141	1,598	12.2	19,931	0

Government Greenhouse Gas Emissions in 2005
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	118	1	0	118	0.9	1,466	0
Gasoline	1,193	175	141	1,221	9.3	15,267	0
Subtotal Employee Commute	1,311	176	141	1,340	10.2	16,733	0
Subtotal Employee Commute	1,311	176	141	1,340	10.2	16,733	0
Total	12,989	417	2,199	13,077	100.0	209,147	0

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, CA							
Municipal Cogeneration Plant							
Natural Gas	6,335	24	1,194	6,351	49.3	108,307	0
Subtotal Municipal Cogeneratic	6,335	24	1,194	6,351	49.3	108,307	0
Palm Springs, California							
Sunrise Plaza Cogeneration Plant							
Natural Gas	3,281	12	618	3,290	25.5	56,104	0
Subtotal Sunrise Plaza Cogene	3,281	12	618	3,290	25.5	56,104	0
Subtotal Buildings and Facilities	9,616	36	1,812	9,641	74.8	164,411	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - onsite ground equip.							
Fuel Oil (#1 2 4)	18	0	5	18	0.1	220	0
Natural Gas	16	0	3	16	0.1	265	0
Stationary Gasoline	86	1	27	86	0.7	1,100	0
Subtotal PSP Airport: Fuel - on	119	2	35	120	0.9	1,586	0
Subtotal Airport Facilities	119	2	35	120	0.9	1,586	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	286	2	1	287	2.2	3,552	0
Gasoline	1,401	192	139	1,432	11.1	17,929	0
Subtotal City Fleet	1,687	193	140	1,719	13.3	21,481	0
Subtotal Vehicle Fleet	1,687	193	140	1,719	13.3	21,481	0

Government Greenhouse Gas Emissions in 2008
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	127	1	0	127	1.0	1,573	0
Gasoline	1,257	164	140	1,284	10.0	16,093	0
Subtotal Employee Commute	1,384	165	140	1,411	10.9	17,666	0
Subtotal Employee Commute	1,384	165	140	1,411	10.9	17,666	0
Total	12,807	396	2,128	12,891	100.0	205,144	0

Government Greenhouse Gas Emissions in 2012
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, California							
Municipal Cogen Plant							
Natural Gas	6,335	24	1,194	6,351	50.0	108,307	0
Subtotal Municipal Cogen Plan	6,335	24	1,194	6,351	50.0	108,307	0
Sunrise Plaza Cogen Plant							
Natural Gas	3,281	12	618	3,290	25.9	56,104	0
Subtotal Sunrise Plaza Cogen	3,281	12	618	3,290	25.9	56,104	0
Subtotal Buildings and Facilities	9,616	36	1,812	9,641	75.9	164,411	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - Onsite ground equipment							
Fuel Oil (#1 2 4)	19	0	6	19	0.1	233	0
Natural Gas	16	0	3	16	0.1	280	0
Stationary Gasoline	91	2	28	91	0.7	1,161	0
Subtotal PSP Airport: Fuel - O	126	2	37	127	1.0	1,674	0
Subtotal Airport Facilities	126	2	37	127	1.0	1,674	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	299	2	1	299	2.4	3,709	0
Gasoline	1,463	202	147	1,496	11.8	18,724	0
Subtotal City Fleet	1,762	204	148	1,795	14.1	22,433	0
Subtotal Vehicle Fleet	1,762	204	148	1,795	14.1	22,433	0

Government Greenhouse Gas Emissions in 2012
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	(%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	102	1	0	102	0.8	1,265	0
Gasoline	1,034	34	59	1,040	8.2	13,231	0
Subtotal Employee Commute	1,136	34	59	1,142	9.0	14,496	0
Subtotal Employee Commute	1,136	34	59	1,142	9.0	14,496	0
Total	12,640	276	2,056	12,704	100.0	203,014	0

Government Greenhouse Gas Emissions in 2020
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, California							
Municipal Cogen Plant							
Natural Gas	6,335	24	1,194	6,351	49.3	108,307	0
Subtotal Municipal Cogen Plan	6,335	24	1,194	6,351	49.3	108,307	0
Sunrise Plaza Cogen Plant							
Natural Gas	3,281	12	618	3,290	25.5	56,104	0
Subtotal Sunrise Plaza Cogen	3,281	12	618	3,290	25.5	56,104	0
Subtotal Buildings and Facilities	9,616	36	1,812	9,641	74.9	164,411	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - onsite ground equip.							
Fuel Oil (#1 2 4)	22	0	7	22	0.2	270	0
Natural Gas	19	0	4	19	0.1	325	0
Stationary Gasoline	105	2	33	106	0.8	1,347	0
Subtotal PSP Airport: Fuel - on	146	2	43	147	1.1	1,942	0
Subtotal Airport Facilities	146	2	43	147	1.1	1,942	0
Vehicle Fleet							
Palm Springs, CA							
City Fleet							
Diesel	324	2	1	325	2.5	4,024	0
Gasoline	1,587	220	160	1,623	12.6	20,313	0
Subtotal City Fleet	1,912	222	161	1,948	15.1	24,337	0
Subtotal Vehicle Fleet	1,912	222	161	1,948	15.1	24,337	0

Government Greenhouse Gas Emissions in 2020
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, CA							
Employee Commute							
Diesel	102	1	0	102	0.8	1,265	0
Gasoline	1,034	34	59	1,040	8.1	13,231	0
Subtotal Employee Commute	1,136	34	59	1,142	8.9	14,496	0
Subtotal Employee Commute	1,136	34	59	1,142	8.9	14,496	0
Total	12,810	295	2,075	12,877	100.0	205,186	0

Government Greenhouse Gas Emissions in 2035
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Buildings and Facilities							
Palm Springs, California							
Municipal Cogen Plant							
Natural Gas	6,335	24	1,194	6,351	48.1	108,307	0
Subtotal Municipal Cogen Plan	6,335	24	1,194	6,351	48.1	108,307	0
Sunrise Plaza Cogen							
Natural Gas	3,281	12	618	3,290	24.9	56,104	0
Subtotal Sunrise Plaza Cogen	3,281	12	618	3,290	24.9	56,104	0
Subtotal Buildings and Facilities	9,616	36	1,812	9,641	73.1	164,411	0
Airport Facilities							
Palm Springs, CA							
PSP Airport: Fuel - onsite ground equip.							
Fuel Oil (#1 2 4)	27	0	8	27	0.2	329	0
Natural Gas	23	0	4	23	0.2	396	0
Stationary Gasoline	128	2	40	129	1.0	1,643	0
Subtotal PSP Airport: Fuel - on	178	3	52	179	1.4	2,369	0
Subtotal Airport Facilities	178	3	52	179	1.4	2,369	0
Vehicle Fleet							
Palm Springs, CA							
City fleet							
Diesel	372	2	1	372	2.8	4,614	0
Gasoline	1,820	253	184	1,861	14.1	23,293	0
Subtotal City fleet	2,192	255	185	2,233	16.9	27,907	0
Subtotal Vehicle Fleet	2,192	255	185	2,233	16.9	27,907	0

Government Greenhouse Gas Emissions in 2035
Detailed Report

	CO_2 (tons)	N_2O (lbs)	CH_4 (lbs)	Equiv CO_2 (tons)	Equiv CO_2 (%)	Energy (MMBtu)	Cost ($)
Employee Commute							
Palm Springs, California							
Employee Commute							
Diesel	102	1	0	102	0.8	1,265	0
Gasoline	1,034	34	59	1,040	7.9	13,231	0
Subtotal Employee Commute	1,136	34	59	1,142	8.7	14,496	0
Subtotal Employee Commute	1,136	34	59	1,142	8.7	14,496	0
Total	13,122	328	2,108	13,195	100.0	209,183	0

The California GHG Emissions Reporting Tool

Facility Emissions Public Report

(Public) 08/25/2010 16:18:37

Facility Emissions Public Report Wildflower Energy, LP - Indigo Generation, LLC

Facility Name	Wildflower Energy, LP - Indigo Generation, LLC
ARB ID	101343
Primary Sector	Electricity Generation
Secondary Sectors	
NAICS Code	221112 - Fossil Fuel Electric Power Generation
Facility Description	Peaker Power Plant
Address	63500 19th Avenue N. Palm Springs, California 92258 United States
Geographic Location	33.91140, -116.55330
Air Basin	SOUTH COAST
District	SOUTH COAST AQMD
County	Riverside
Facility Contact	Jason King
Contact Email	j.king@dgc-ops.com
Contact Phone	760-288-2148
Reporting Year	2008
Reporting Period	01/01/2008 - 12/31/2008

Overall Reporting Status **Verification Ready**

Note: Data shown here are subject to change. The data may not have not undergone independent third party verification or ARB staff review. Where errors are discovered mechanisms are available to allow revisions to the data.

The California GHG Emissions Reporting Tool

Facility Emissions Public Report

(Public) 08/25/2010 16:18:37

California Environmental Protection Agency
AIR RESOURCES BOARD

TOTAL EMISSIONS: Wildflower Energy, LP - Indigo Generation, LLC

* All emission values are displayed in metric tons. CO2 Biomass values not included in the CO2 Eq. sum.
The summed and supplemental values tables include data reported for the facility and associated units. This applies to the emissions and fuels tables.

Total Emissions Reporting Status: **Verification Ready**

Summed Emissions Data	CO2 Eq.	CO2	CH4	N2O	CO2 Biomass	HFCs	SF6
Stationary Combustion	69,471	69,411.200	1.086	0.121	0.000	N/A	N/A
Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Stationary Combustion and Process	0	0.000	N/A	N/A	0.000	N/A	N/A
Flares and Destruction (Refinery)	0	0.000	0.000	0.000	0.000	N/A	N/A
Fugitive	0	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL SUMMED EMISSIONS	**69,471**	**69,411.200**	**1.086**	**0.121**	**0.000**	**0.000**	**0.000**

Optional Emissions	CO2 Eq.	CO2	CH4	N2O	CO2 Biomass	HFCs	SF6
Stationary Combustion	0	0.000	0.000	0.000	0.000	N/A	N/A
Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Stationary Combustion and Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Flares and Destruction (Refinery)	0	0.000	0.000	0.000	0.000	N/A	N/A
Fugitive	0	0.000	0.000	0.000	0.000	0.000	0.000
Optional (Mobile)	0	0.000	0.000	0.000	0.000	N/A	N/A
Portable Equipment	0	0.000	0.000	0.000	0.000	N/A	N/A
TOTAL OPTIONAL EMISSIONS	**0**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

De minimis Emissions	Value (metric tons)
Total Summed CO2 Eq.(includes CO2 Biomass)	69,471
Total De minimis Emissions	0
Percent of Total	**0.000%**
3% Threshold	2,084
Value Threshold	20,000

California Environmental Protection Agency
AIR RESOURCES BOARD

VERIFICATION INFORMATION: Wildflower Energy, LP - Indigo Generation, LLC

Verification Body Name	Trinity Consultants, Inc.
Verification Body Address	1 Technology Drive, Suite F-215 Irvine, California 92618 United States
Verification Finding	

The California GHG Emissions Reporting Tool

Facility Emissions Public Report

(Public) 08/25/2010 16:19:22

Facility Emissions Public Report Wildflower Energy, LP - Indigo Generation, LLC

Facility Name	Wildflower Energy, LP - Indigo Generation, LLC
ARB ID	101343
Primary Sector	Electricity Generation
Secondary Sectors	
NAICS Code	221112 - Fossil Fuel Electric Power Generation
Facility Description	Peaker Power Plant
Address	63500 19th Avenue N. Palm Springs, California 92258 United States
Geographic Location	33.91140, -116.55330
Air Basin	SOUTH COAST
District	SOUTH COAST AQMD
County	Riverside
Facility Contact	Jason King
Contact Email	j.king@dgc-ops.com
Contact Phone	760-288-2148
Reporting Year	2009
Reporting Period	01/01/2009 - 12/31/2009

Overall Reporting Status **Verification Ready**

Note: Data shown here are subject to change. The data may not have not undergone independent third party verification or ARB staff review. Where errors are discovered mechanisms are available to allow revisions to the data.

The California GHG Emissions Reporting Tool

Facility Emissions Public Report

(Public) 08/25/2010 16:19:22

California Environmental Protection Agency
AIR RESOURCES BOARD

TOTAL EMISSIONS: Wildflower Energy, LP - Indigo Generation, LLC

* All emission values are displayed in metric tons. CO2 Biomass values not included in the CO2 Eq. sum.
The summed and supplemental values tables include data reported for the facility and associated units. This applies to the emissions and fuels tables.

Total Emissions Reporting Status: **Verification Ready**

Summed Emissions Data	CO2 Eq.	CO2	CH4	N2O	CO2 Biomass	HFCs	SF6
Stationary Combustion	38,406	38,355.900	0.625	0.120	0.000	N/A	N/A
Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Stationary Combustion and Process	0	0.000	N/A	N/A	0.000	N/A	N/A
Flares and Destruction (Refinery)	0	0.000	0.000	0.000	0.000	N/A	N/A
Fugitive	0	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL SUMMED EMISSIONS	**38,406**	**38,355.900**	**0.625**	**0.120**	**0.000**	**0.000**	**0.000**

Optional Emissions	CO2 Eq.	CO2	CH4	N2O	CO2 Biomass	HFCs	SF6
Stationary Combustion	0	0.000	0.000	0.000	0.000	N/A	N/A
Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Stationary Combustion and Process	0	0.000	0.000	0.000	0.000	N/A	N/A
Flares and Destruction (Refinery)	0	0.000	0.000	0.000	0.000	N/A	N/A
Fugitive	0	0.000	0.000	0.000	0.000	0.000	0.000
Optional (Mobile)	0	0.000	0.000	0.000	0.000	N/A	N/A
Portable Equipment	0	0.000	0.000	0.000	0.000	N/A	N/A
TOTAL OPTIONAL EMISSIONS	**0**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

De minimis Emissions	Value (metric tons)
Total Summed CO2 Eq.(includes CO2 Biomass)	38,406
Total De minimis Emissions	0
Percent of Total	**0.000%**
3% Threshold	1,152
Value Threshold	20,000

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Appendix B:
Southern California Edison Reports

CUSTOMER REVENUE AND CONSUMPTION REPORTING SYSTEM
FRANCHISE REVENUE BY CITY AND COUNTY
CURRENT MONTH AND YEAR-TO-DATE
DECEMBER 1990

INCORPORATED CITIES
(DIST/GEO AREAS)

	FRANCHISE BASE KWH SALES REVENUE		KWH SALES			
	CURRENT MO	YEAR TO DATE	CURRENT MO	YEAR TO DATE	NUMBER OF CUSTOMERS	NO. METERS ON SOURCE
PALM SPRINGS						
79 01	3,510,339.90	54,586,510.42	34,905,751	540,152,219	30,529	8,807
79 11	20,198.41	262,682.93	235,911	2,637,279	7	1
79 31	106,950.04	1,735,727.34	996,691	16,722,800	1,280	971
SUBTOTAL	3,637,488.35	56,584,920.69	36,138,353	559,512,298	31,816	9,779

Electricity Use Report
For City of Palm Springs
Year 2000

Prepared by

Southern California Edison

Version 5.0

October 4th, 2010

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

I. Introduction

The purpose of this report is to fulfill your request for overall energy consumption data for the City of Palm Springs. SCE has made every effort to fulfill this request. However, our legal responsibility of maintaining confidentiality of individual customer data limits us to providing only the following information:

- Rate group descriptions
- kWh consumption, and
- kW demand for those rate groups with demand meters (non-coincident and coincident loads); no kW demand data is available for those rate groups that do not have demand metered data

II. Energy and Demand Data Availability

Rate group specific energy consumption data is readily available and included within this report. However, several of our rate schedules such as Schedule "D," the standard domestic rate, do not require the measurement of demand data. Therefore, coincident demand-related data within this report is only an estimate reflecting those rate groups where demand is measured. Table A summarizes the availability of demand data by rate group:

Table A – Data Availability Table

Rate Groups ***with*** Demand Data	Rate Groups ***without*** Demand Data
GS-2, PA-2, TOU-PA-5, AG TOU, TOU-GS-3, and TOU-8	Domestic, GS-1, PA1, TC-1 and Street Lighting

For rate groups ***with*** measured demand data, we have provided:

- Total kWh
- Non-coincident peak demand - this is the sum of the individual accounts' maximum peak demands, regardless of when they occur
- Coincident peak demand – this is a calculated field based on application of the coincidence factors outlined on page 3, section III
- Number of accounts

For rate groups ***without*** measured demand data, we have provided:

- Total kWh
- Number of accounts

III. Coincidence Factors

Coincidence factor is an indication of how closely the individual customer peaks conform to the time of the rate group peak. Coincidence factor is expressed as a proportion and can never be greater than 1.0. Table B lists coincidence factors based SCE system wide peak demands.

Table C on page 4 contains calculated values of coincident peak demand. To derive these values, the rate class non-coincident peak (Table C) is multiplied by its respective rate class coincidence factor, in Table B, yielding a calculated "Coincident Peak (kW)". The calculated coincident peaks approximate the maximum peak for each rate class.

Table B - System Coincidence Factors

	Coincidence Factor				Coincidence Factor		
Rate Group	Annual	Summer	Winter	Rate Group	Annual	Summer	Winter
Domestic-Single	0.38	0.42	0.30	GS-1	0.46	0.52	0.41
Domestic-Multiple	0.26	0.32	0.24	TC-1	1.00	1.00	1.00
Domestic- Mstr Mtrd	0.61	0.66	0.56	GS-2	0.71	0.74	0.70
				TOU-GS	0.53	0.54	0.58
Total Domestic	0.34	0.39	0.28	Total Sm and Med	0.61	0.65	0.60

	Coincidence Factor				Coincidence Factor		
Rate Group	Annual	Summer	Winter	Rate Group	Annual	Summer	Winter
PA-1	0.40	0.44	0.34	TOU-8-Secondry	0.76	0.79	0.76
PA-2	0.65	0.70	0.63	TOU-8-Primary	0.70	0.74	0.70
AGTOU	0.62	0.67	0.54	TOU-8-Sub	0.67	0.71	0.68
Tou-PA-5	0.84	0.84	0.86				
Total AG&Pump	0.46	0.50	0.40	Total Large Power	0.70	0.74	0.71

IV. Data Description

The summaries provided in Tables C, are based on 12 months usage data ending December, 2000 for SCE installed service accounts within the city's boundaries. The accounts included in the dataset were extracted from SCE's Customer Service System based on the Public Authority Code for the City of Palm Springs. This code is used to identify accounts by municipality for the purpose of calculating state and local taxes. Public Authority Code is permanently retained as a part of each premise's identification regardless of occupancy. The only time a Public Authority Code changes is when a city or county annexes a given piece of property into its territory or a particular piece of property is transferred from one public authority to another through other means.

V. Summary of Results (January 1, 2000 – December 31, 2000)

Table C – Total of Account Summary Data for Bundled and Direct Access Customers

RATE GROUP	ANNUAL KWH	% of TOTAL	NONCOINCIDENT PEAK	CALCULATED COINCIDENT PEAK	NUMBER OF ACCOUNTS	% OF TOTAL
AG TOU	32,778,048	5.2%	8,042	4,986	49	0.15%
DOMESTIC	286,386,047	45.5%	-	-	28,998	86.24%
GS-1	48,752,905	7.8%	-	-	3,552	10.56%
GS-2	143,310,811	22.8%	43,936	31,195	976	2.90%
TOU-8	117,546,429	18.7%	27,297	19,108	49	0.15%

Grand Total	628,774,240	33,624

DA % of kWh	6.2%

Application of 15/15 Rule (Section VIII. Release of Aggregated Customer Information, p. 6)
The PA-1, and PA-2 rate classes were combined into the AG TOU rate group.

Street Lighting and Traffic Control information were not included because SCE database do not keep track of this Information dated back more than 4 years.

VI. Additional Data Availability

The data listed in Tables C are at a summary level, and are not displayed by time-of-use. For your convenience we have attached time-of-use load profiles (Appendix A) for each rate class. In the event that you would like the detailed data that supports these load profiles (annual hourly load data for each rate class average profile), you can find it on SCE's website at the following address:

http://www.sce.com/AboutSCE/Regulatory/loadprofiles/

Additionally, revenue impacts are often part of an overall economic analysis related to energy consumption. In the event that you would like specific rate schedules, you can find them at the following web address:

http://www.sce.com/AboutSCE/Regulatory/tariffbooks/ratespricing/

VII. Public Goods Charge Energy Efficiency Funds

SCE estimated the City of Palm Springs's proportional share of Public Goods Charge (PGC) funded energy efficiency activities that the California Public Utilities Commission might make available to the customers in the City of Palm Springs if it became a community choice aggregator ("CCA") but did not implement energy efficiency programs in the CCA territory. SCE performed the estimated proportional share calculation in accordance with the directives of Decision (D.) 03-07-034 of the California Public Utilities Commission, and determined that the City of Palm Springs's estimated proportional share is $ 317,665. Please note that the estimated proportional share calculation does not necessarily represent an amount of funds that would be made available for energy efficiency programs in the City of Palm Springs's territory should the City of Palm Springs become a CCA. As stated in D.03-07-034, the proportional share calculation is only used to estimate non-CCA expenditures in a CCA's territory. Also note that the proportional share estimate is not equal to the amount of PGC funds collected from ratepayers in the City of Palm Springs, since the PGC rate includes authorized amounts for energy efficiency as well as other public interest programs.

VIII. Release of Aggregated Customer Information

The 15/15 Rule is intended to protect customer confidentiality by reducing the possibility of identifying customers through the release of usage information. SCE will apply the 15/15 Rule in releasing aggregated customer information. The rule was initially implemented by the California Public Utilities Commission during Direct Access proceedings in 1997 and was adopted through D. 97-10-031.

The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers, and a customer's load must be less than 15% of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15% of the total data, categories (e.g., rate classes) must be combined before the information is released. The rule further requires that if the 15/15 rule is triggered for a second tie after the data has been screened once already using the 15/15 rule, then the customer is dropped from the information provided.

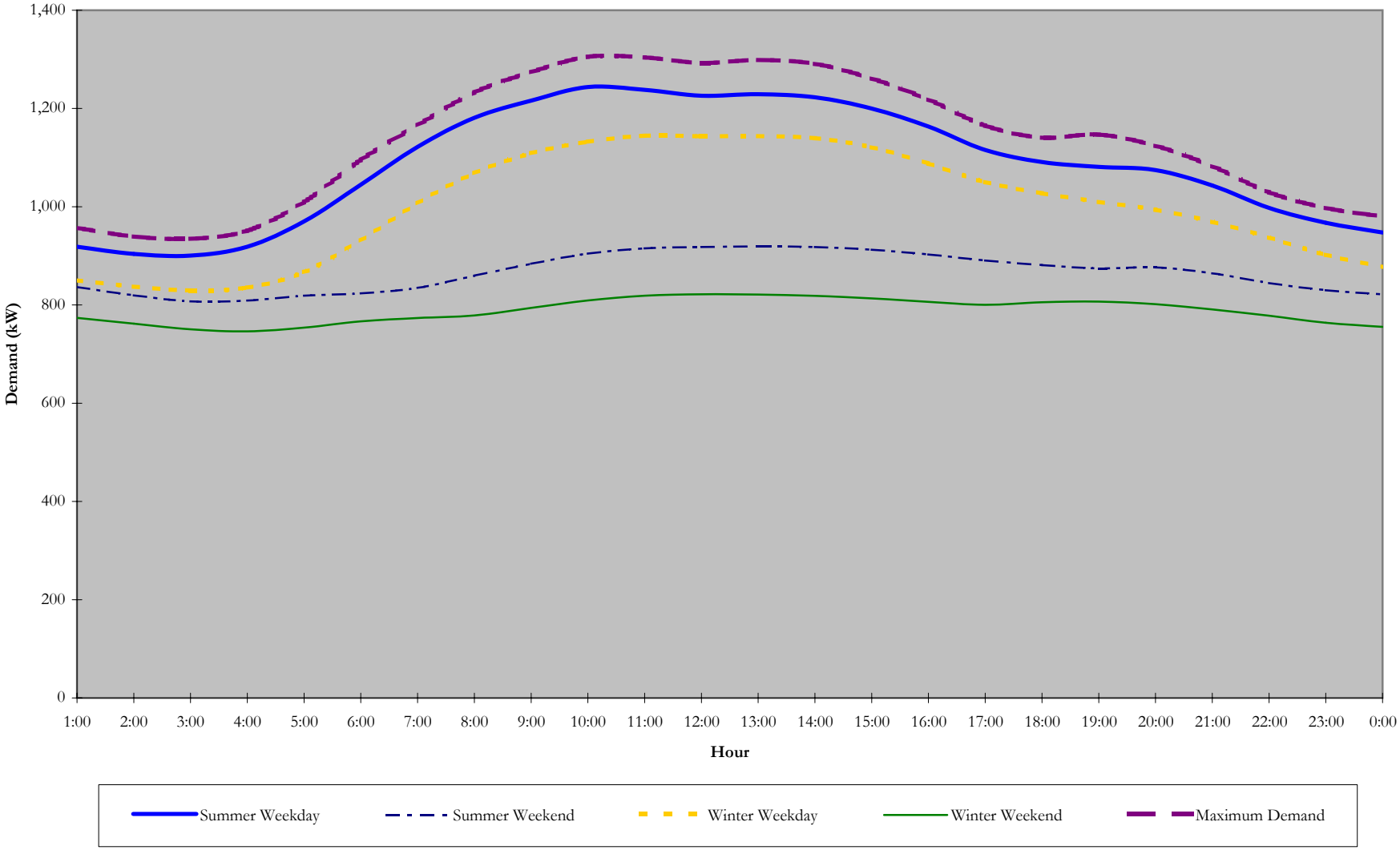
IX. Disclaimer

Southern California Edison Company has provided the above information at your request. The data presented here represents 12 months ending December, 2000. These estimates are provided for informational purposes only, and are not intended to, nor do they, predict what energy usage and loads within your city boundaries will be in the future. The actual future loads and energy consumption will vary from these estimates for a variety of reasons, including changes in energy usage, demand levels, and weather patterns. Southern California Edison Company assumes no liability for the use of the information provided above. If you have any questions regarding this information, please contact your Southern California Edison Company Account Representative.

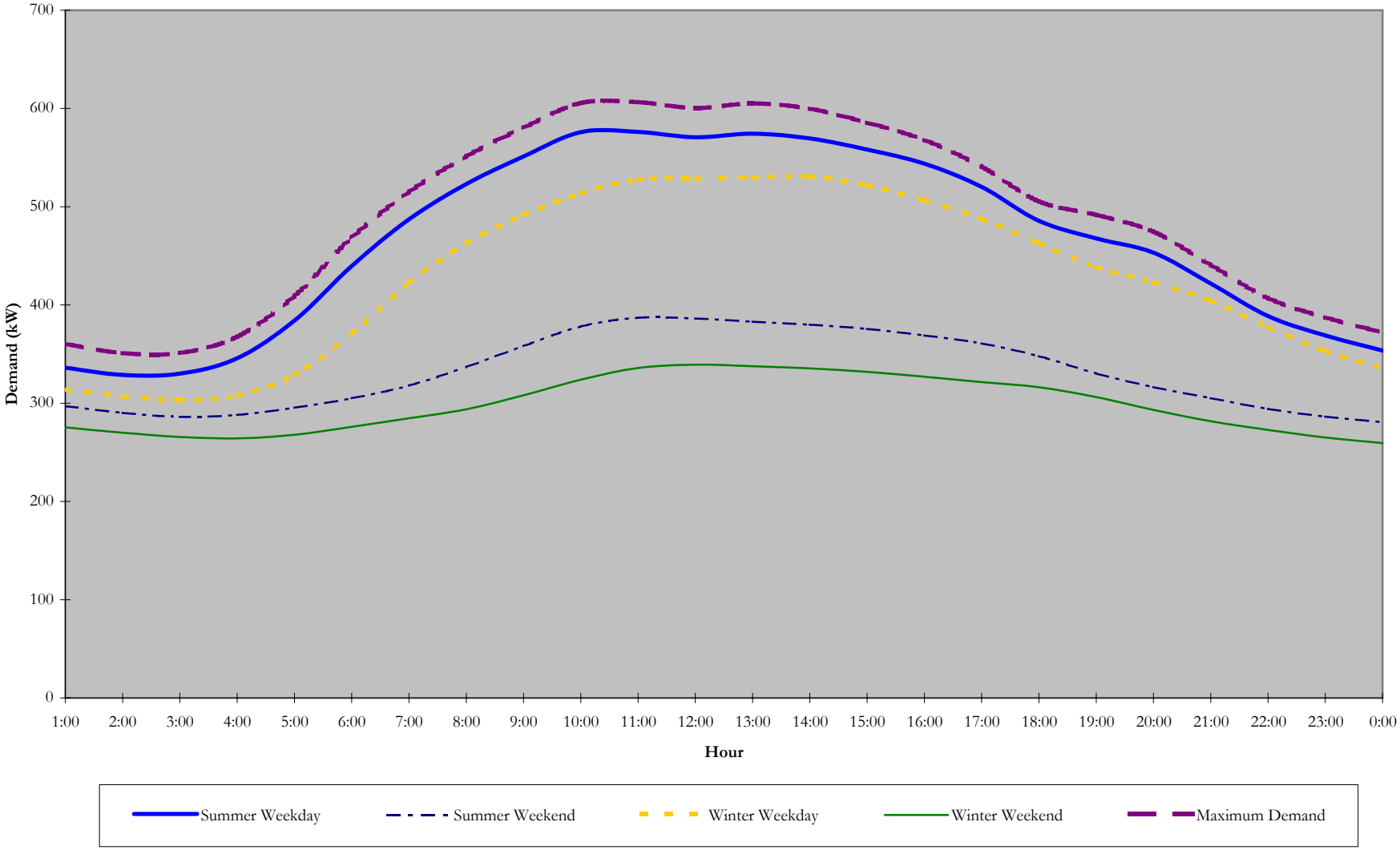
Appendix A

Rate Class Average Load Profiles

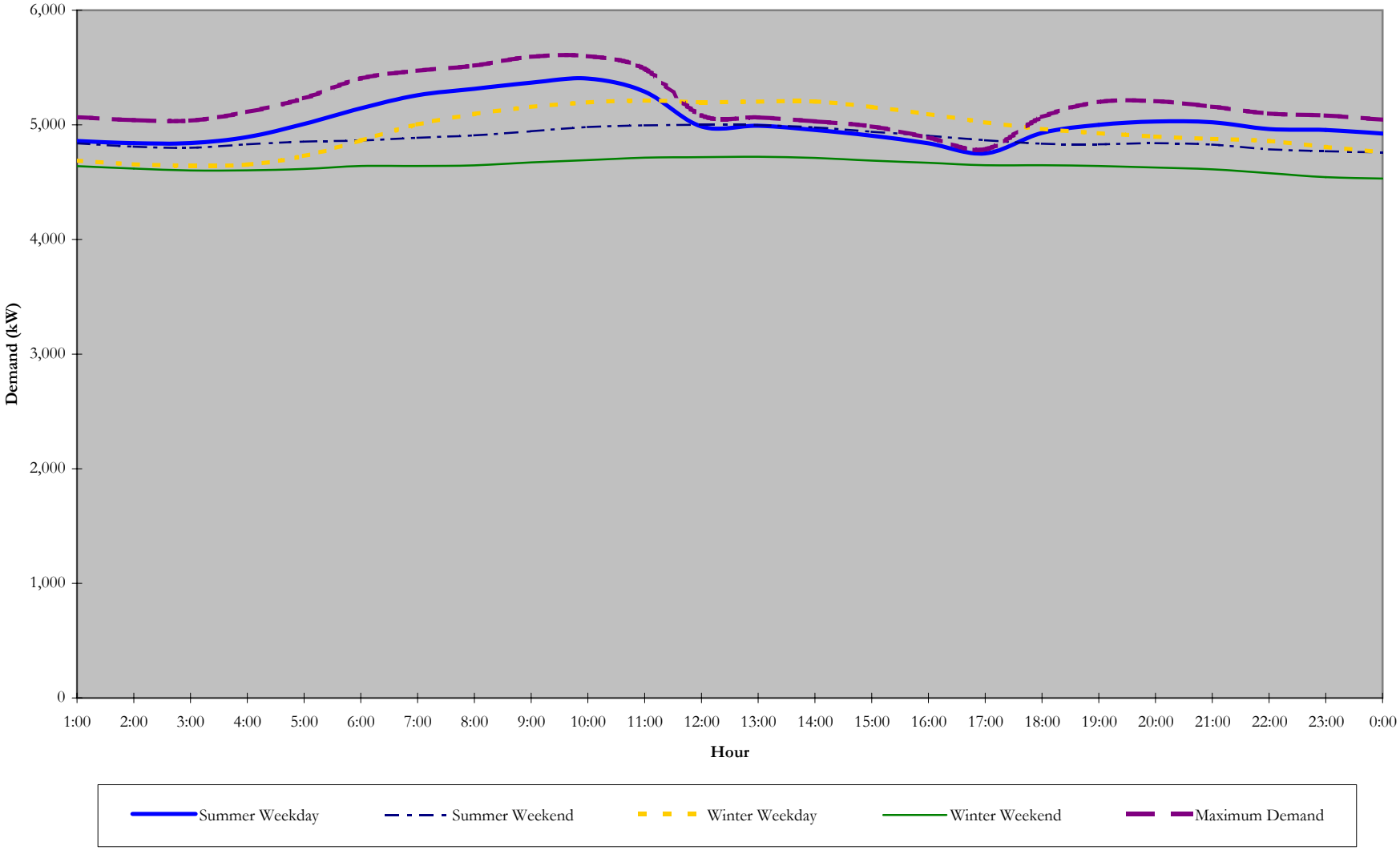
Rate Class Average Load Profiles
TOU-Primary Rate Schedule



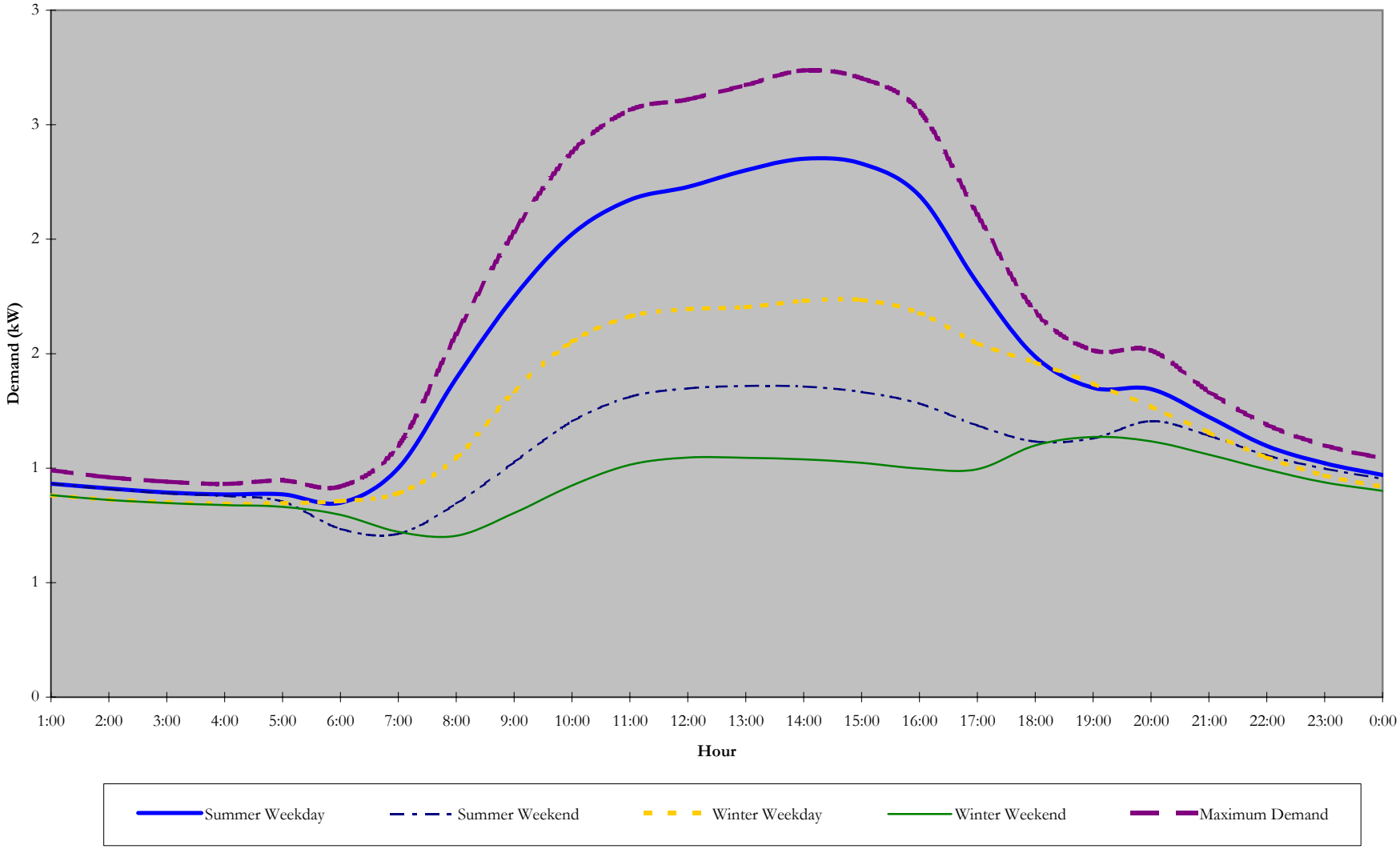
Rate Class Average Load Profiles
TOU-Secondary Rate Schedule



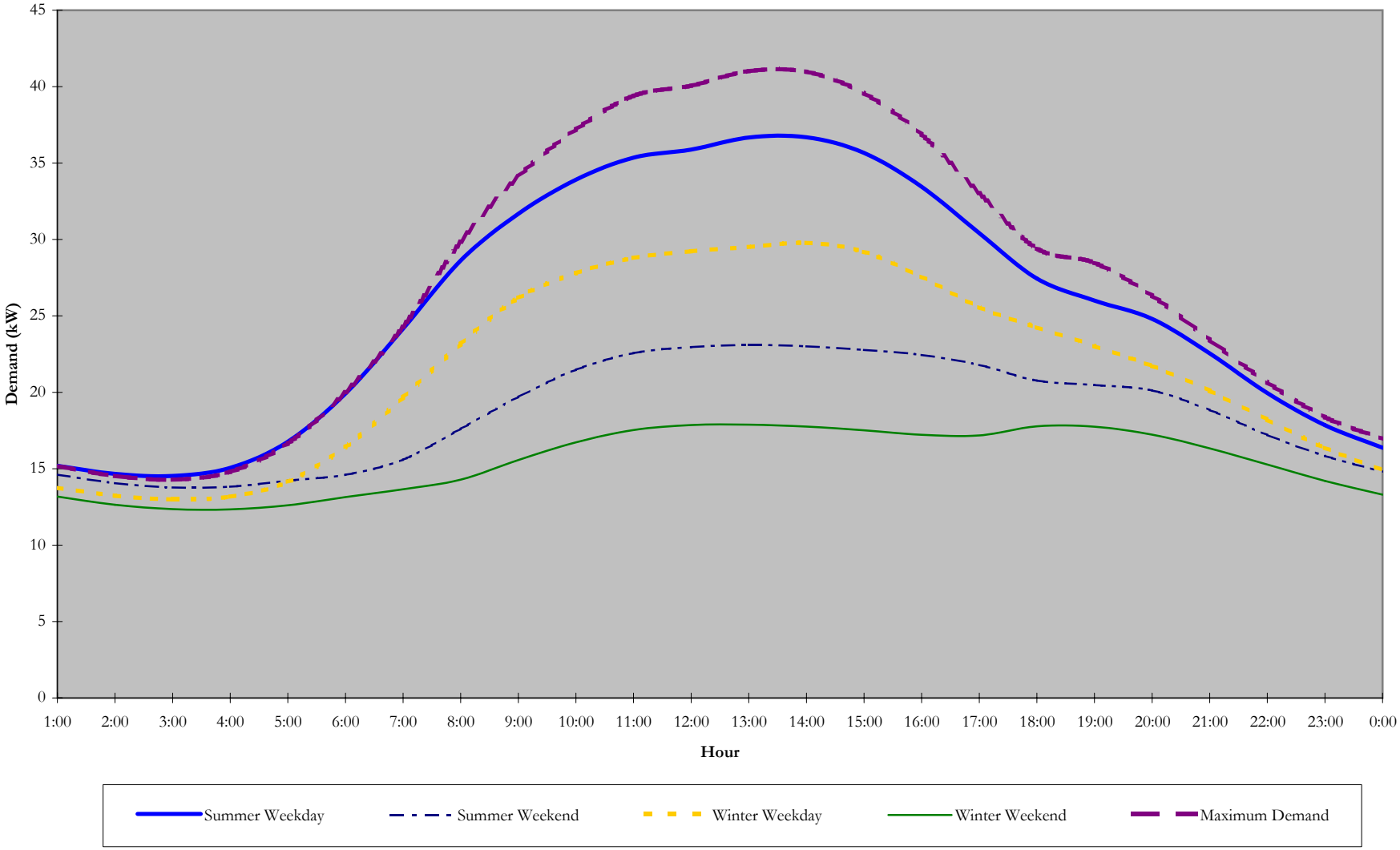
Rate Class Average Load Profiles
TOU-Subtransmission Rate Schedule



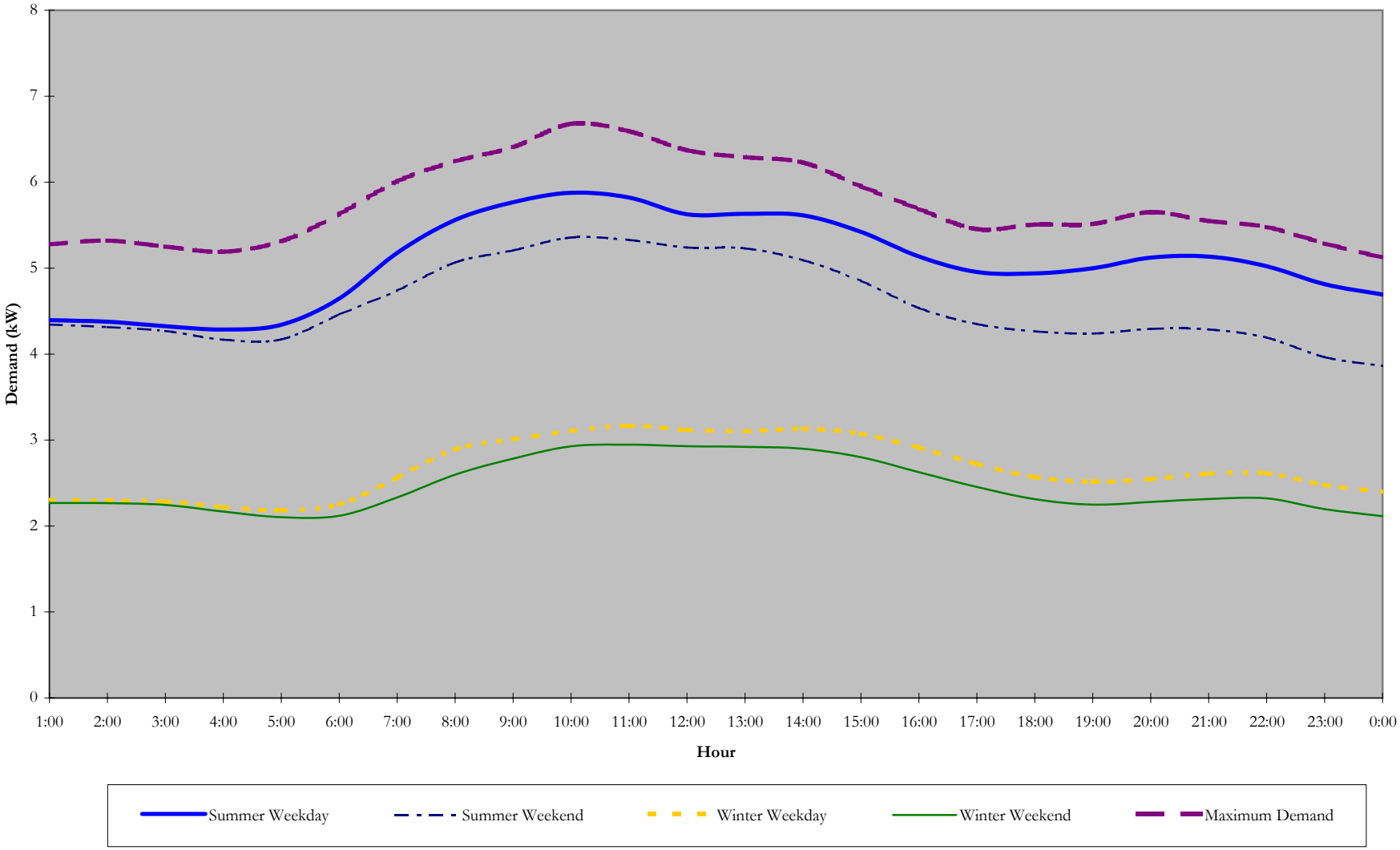
Rate Class Average Load Profile
GS-1 Rate Schedule



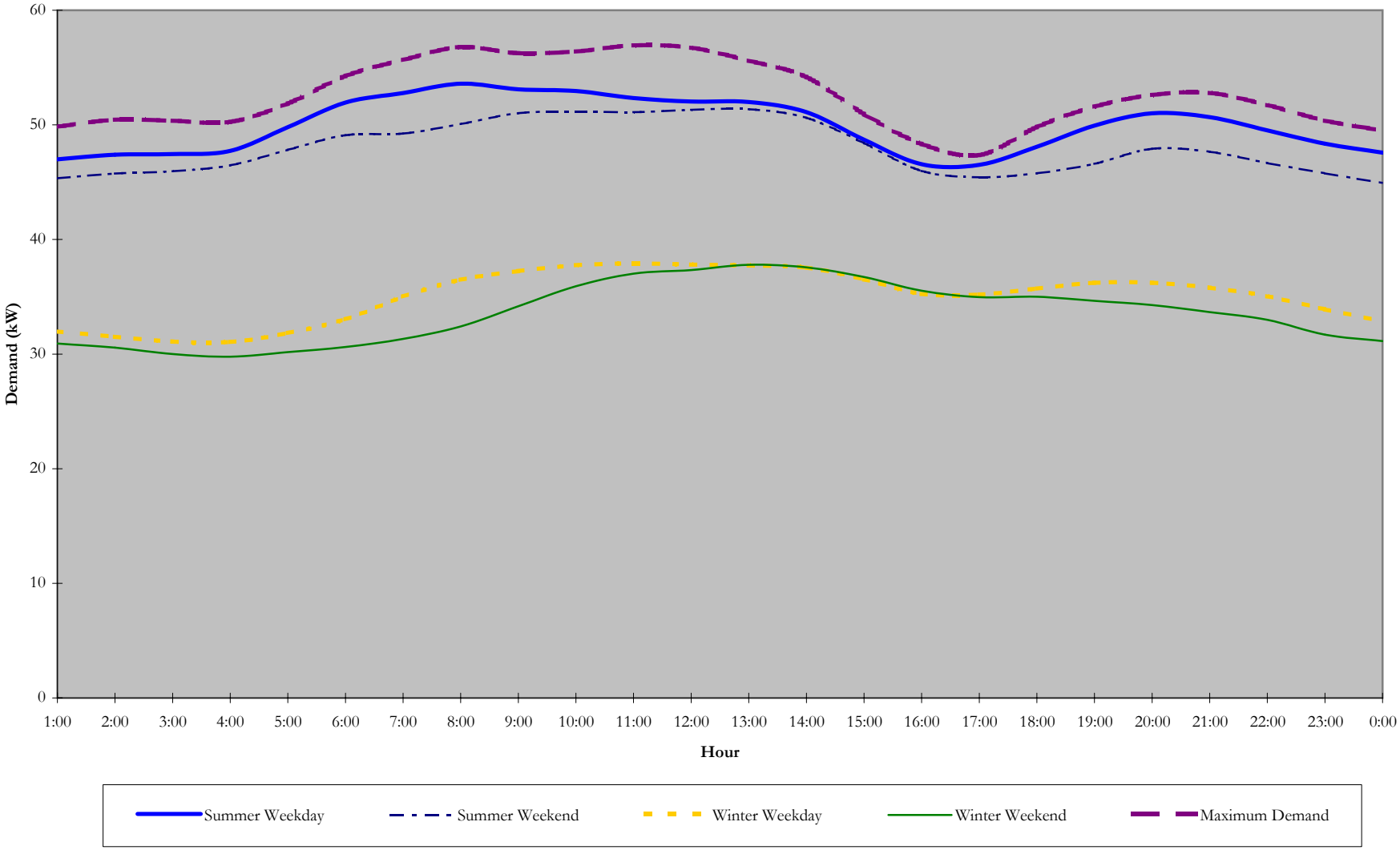
Rate Class Average Load Profiles
GS-2 Rate Schedule



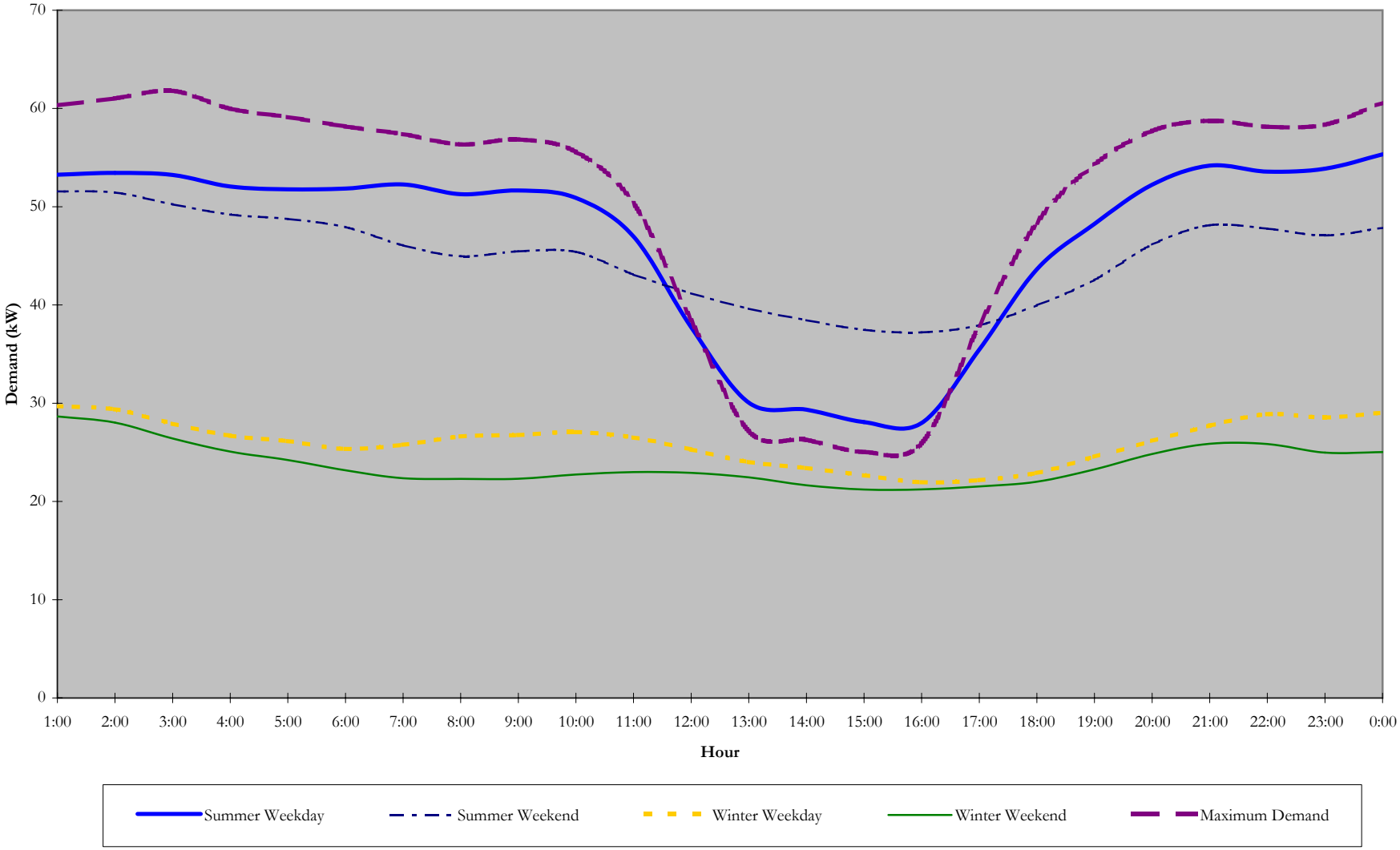
Rate Class Average Load Profiles
PA-1 Rate Schedule



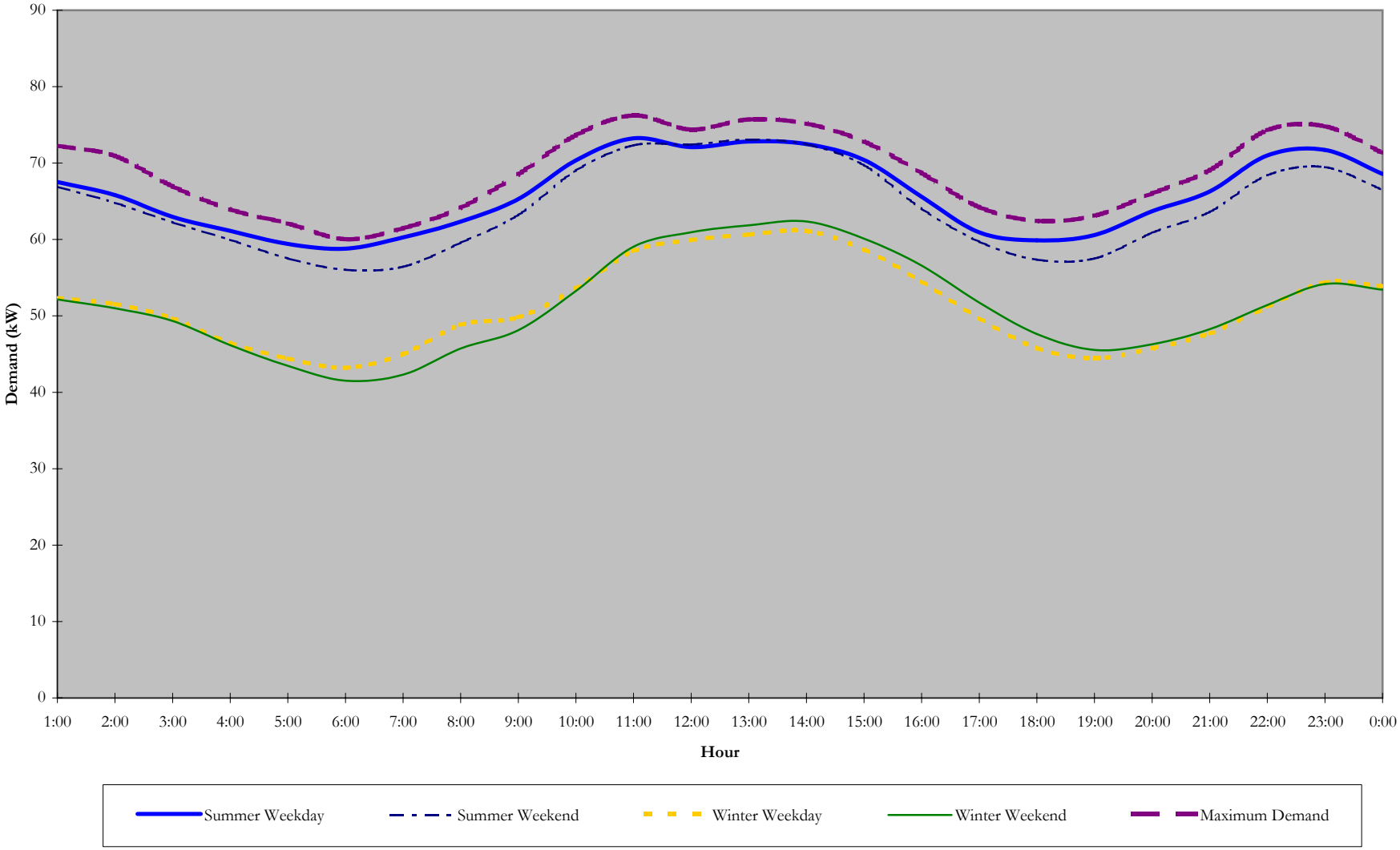
Rate Class Average Load Profiles
PA-2 Rate Schedule



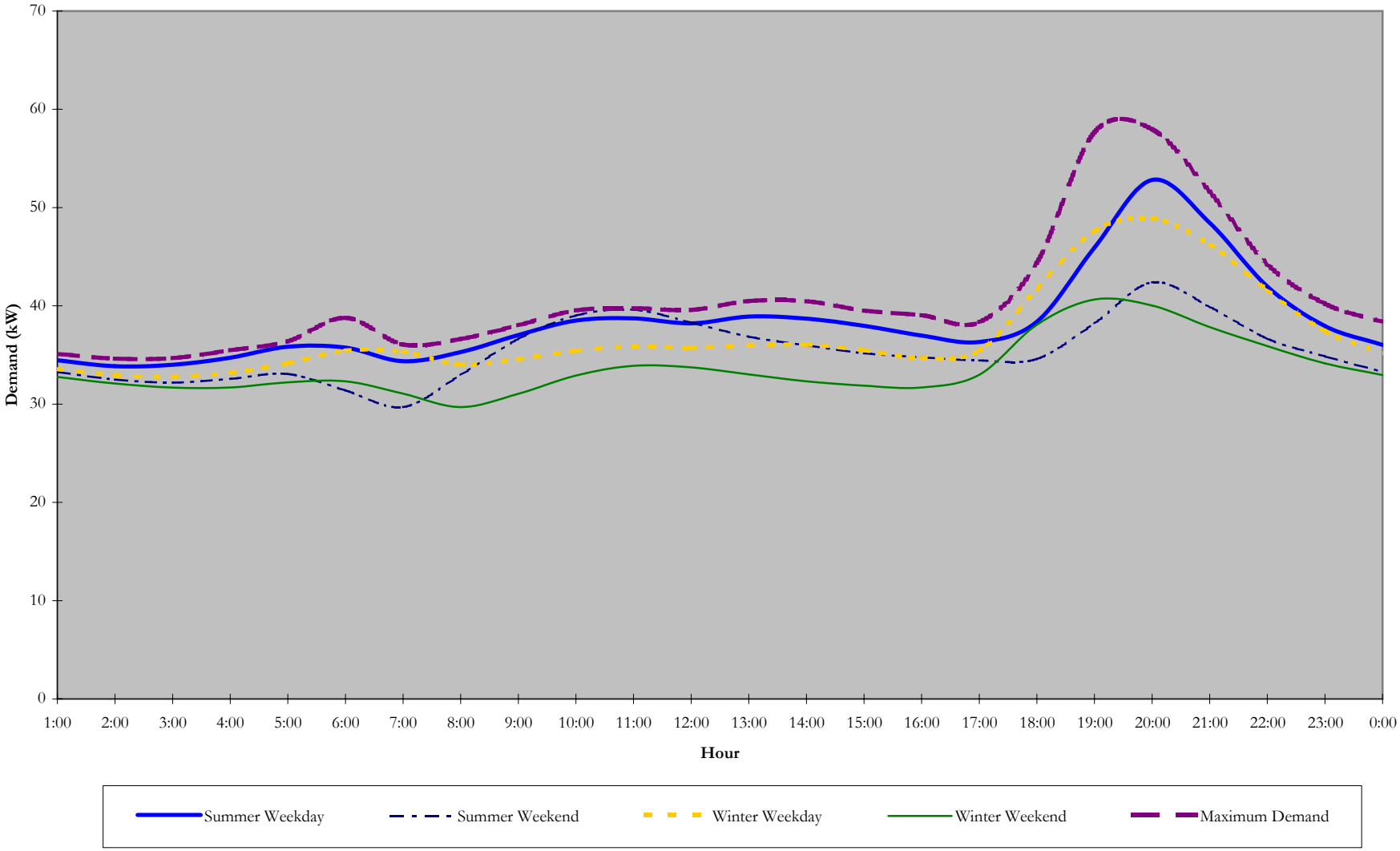
Rate Class Average Load Profiles
AG-TOU Rate Schedule



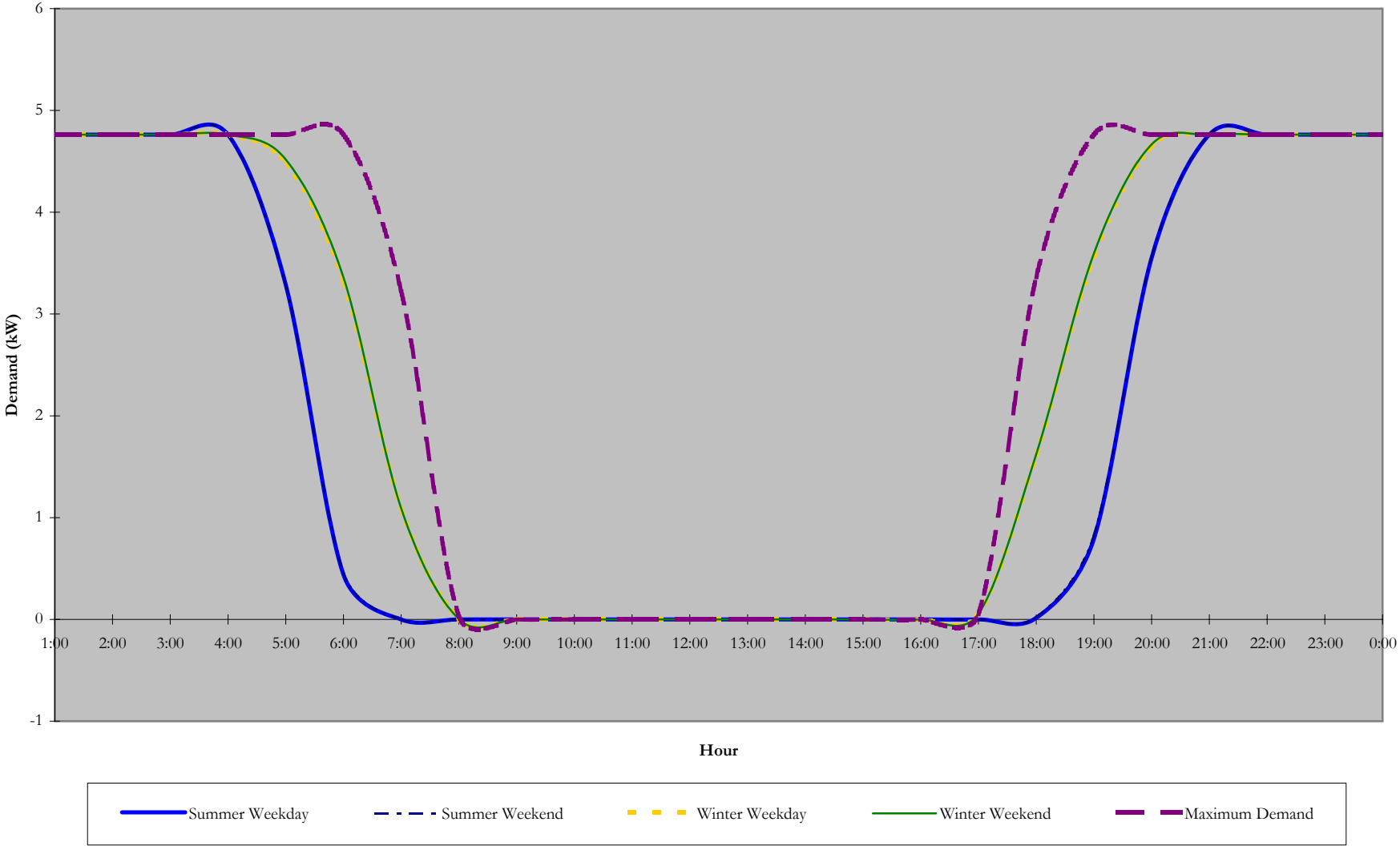
Rate Class Average Load Profiles
TOU-PA-5 Rate Schedule



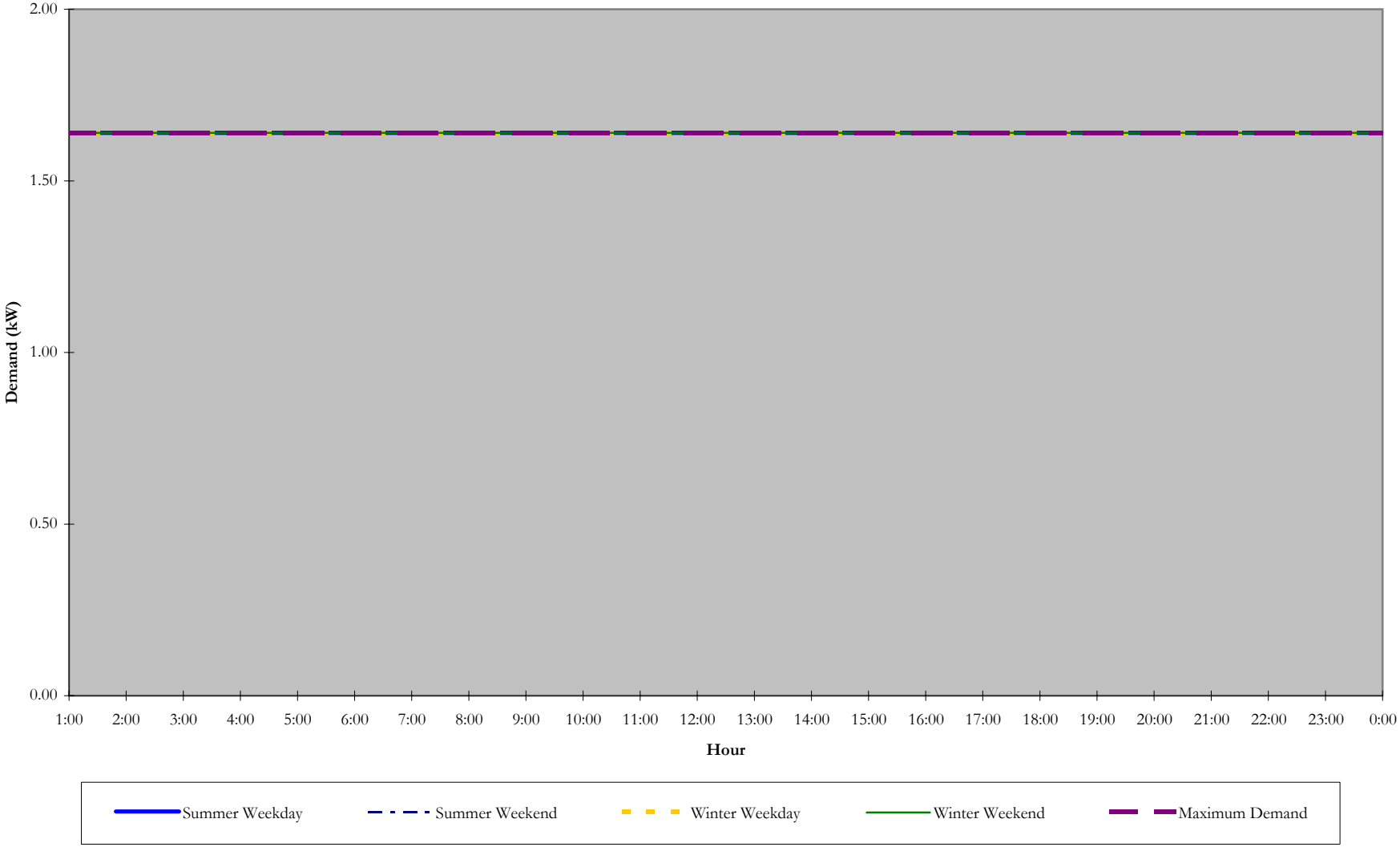
Rate Class Average Load Profiles
TOU-GS Rate Schedule



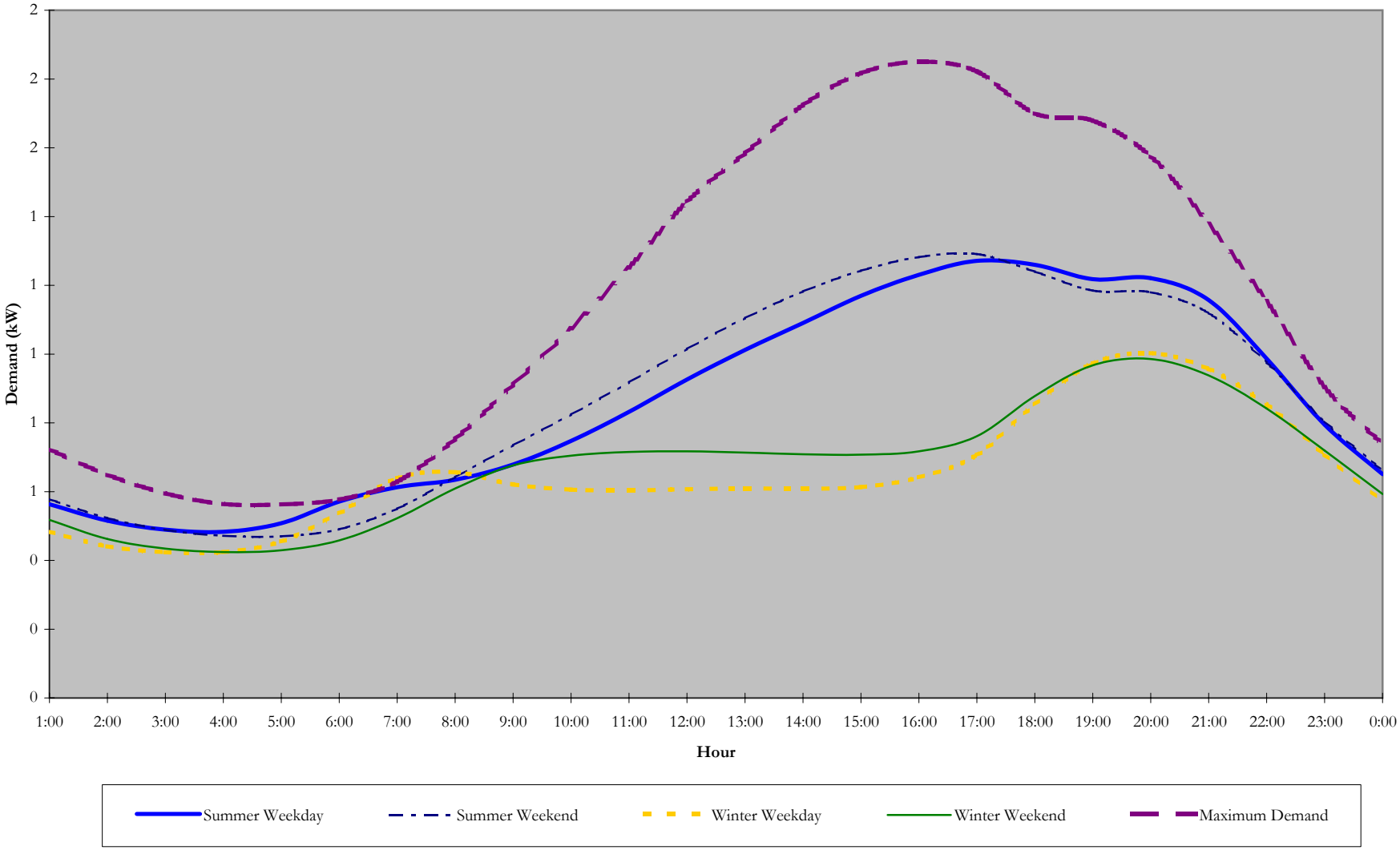
Rate Class Average Load Profiles
Street Light Rate Schedules



Rate Class Average Load Profiles
TC-1 Rate Schedule



Rate Class Average Load Profile
Domestic Rate Schedule



Appendix B

Description of Rate Groups

Domestic (Domestic Service)
For all residential service including lighting, heating, cooking, and power or combination thereof in a single-family accommodation; also to domestic farm service when supplied through the farm operator's domestic meter.

GS-1 (General Service Non-Demand)
Includes single- and three-phase general service including lighting and power, except that the customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 20 kW or has exceeded 20 kW in any three months during the preceding 12 months.

GS-2 (General Service - Demand)
As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 20 kW and below 200 kW. In 2005, this rate group included customers with monthly maximum demands above 20 kW through 500 kW.

TOU-GS-3 (Time-Of-Use - General Service - Demand Metered)
As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 200 kW through 500 kW. This rate group did not exist in 2005 and these customers were included in the GS-2 rate group.

TOU-8 (Time-Of-Use - General Service – Large)
Includes general service, lighting and power, except agricultural water pumping accounts. This Schedule is mandatory for all customers whose monthly maximum demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW in any three months during the preceding 12 months.

PA-1 (Power - Agricultural and Pumping Connected Load Basis)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is applicable.

PA-2 (Power - Agricultural and Pumping Demand Metered)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is

applicable. The Customer whose monthly Maximum Demand, in the opinion of SCE, is expected to, or has reached, 200 kW or above in any three months during the preceding 12 months shall have a Real Time Energy Meter (RTEM) or other type of interval meter installed and shall become ineligible for service under this Schedule. Upon such ineligibility a customer whose Maximum Demand is 500 kW or below shall be transferred to an applicable agricultural Time-of Use (TOU) rate schedule, while a customer whose Maximum Demand exceeds 500 kW will be transferred to Schedule TOU-8. However, in accordance with Schedule TOU-8, a large individual water agency or other large water pumping account with 70% or more of the water pumped used for agricultural purposes, must take service on a TOU agricultural class rate schedule.

TOU-PA-5 (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping or for oil pumping by customers with a Standard Industrial Classification (SIC) Code of 1311; none of any remaining electrical usage is for purposes for which a domestic schedule is applicable; and, the customer's account has 35 horsepower or more of total connected load or 35 kilowatts or more of Maximum Demand

AG TOU (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for water pumping used for agricultural purposes, except where the customer's monthly Maximum Demand, is expected to exceed 500 kW or has exceeded 500 kW for any three months during the preceding 12 months. These accounts are time-of-use agricultural and pumping accounts that do not qualify for the TOU-PA-5 tariff.

TC-1 (Traffic Control Service)
Includes single- and three-phase service: for traffic directional signs or traffic signal systems located on streets, highways and other public thoroughfares and to railway crossing and track signals; for public thoroughfare lighting that is utilized 24 hours per day or is not controlled by switching equipment, such as tunnel or underpass lighting; and, to public authorities for the illumination of bus stop shelters located in the dedicated road right-of-way where such service is combined with other traffic control service as defined above.

STREET LIGHTING (Lighting - Street and Highway Company-Owned System)
Includes service for the lighting of streets, highways, and publicly-owned and publicly-operated automobile parking lots which are open to the general public where SCE owns and maintains the street lighting equipment and associated facilities included under this schedule.

Electricity Use Report
For City of Palm Springs
Year 2005

Prepared by

Southern California Edison

Version 5.0

October 4th, 2010

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- Coincident peak demand – this is a calculated field based on application of the coincidence factors outlined on page 3, section III
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Table C on page 4 contains calculated values of coincident peak demand. To derive these values, the rate class non-coincident peak (Table C) is multiplied by its respective rate class coincidence factor, in Table B, yielding a calculated "Coincident Peak (kW)". The calculated coincident peaks approximate the maximum peak for each rate class.

Table B - System Coincidence Factors

	Coincidence Factor				Coincidence Factor		
Rate Group	Annual	Summer	Winter	Rate Group	Annual	Summer	Winter
Domestic-Single	0.38	0.42	0.30	GS-1	0.46	0.52	0.41
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V. Summary of Results (January 1, 2005 – December 31, 2005)

Table C – Total of Account Summary Data for Bundled and Direct Access Customers

RATE GROUP	ANNUAL KWH	% of TOTAL	NONCOINCIDENT PEAK	CALCULATED COINCIDENT PEAK	NUMBER OF ACCOUNTS	% OF TOTAL
AG TOU	35,688,494	5.7%	9,380	5,815	53	0.15%
DOMESTIC	293,435,747	46.9%	-	-	30,633	86.18%
GS-1	50,920,334	8.1%	-	-	3,825	10.76%
GS-2	121,808,274	19.5%	41,345	29,355	976	2.75%
TOU-8	123,993,582	19.8%	30,167	21,117	60	0.17%

Grand Total	625,846,431	35,547
DA % of kWh	5.5%	

Application of 15/15 Rule (Section VIII. Release of Aggregated Customer Information, p. 6)
The PA-1, and PA-2 rate classes were combined into the AG TOU rate group.

Street Lighting and Traffic Control information were not included because SCE database do not keep track of this Information dated back more than 4 years.

VI. Additional Data Availability

The data listed in Tables C are at a summary level, and are not displayed by time-of-use. For your convenience we have attached time-of-use load profiles (Appendix A) for each rate class. In the event that you would like the detailed data that supports these load profiles (annual hourly load data for each rate class average profile), you can find it on SCE's website at the following address:

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VII. Public Goods Charge Energy Efficiency Funds

SCE estimated the City of Palm Springs's proportional share of Public Goods Charge (PGC) funded energy efficiency activities that the California Public Utilities Commission might make available to the customers in the City of Palm Springs if it became a community choice aggregator ("CCA") but did not implement energy efficiency programs in the CCA territory. SCE performed the estimated proportional share calculation in accordance with the directives of Decision (D.) 03-07-034 of the California Public Utilities Commission, and determined that the City of Palm Springs's estimated proportional share is $ 317,665. Please note that the estimated proportional share calculation does not necessarily represent an amount of funds that would be made available for energy efficiency programs in the City of Palm Springs's territory should the City of Palm Springs become a CCA. As stated in D.03-07-034, the proportional share calculation is only used to estimate non-CCA expenditures in a CCA's territory. Also note that the proportional share estimate is not equal to the amount of PGC funds collected from ratepayers in the City of Palm Springs, since the PGC rate includes authorized amounts for energy efficiency as well as other public interest programs.

VIII. Release of Aggregated Customer Information

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The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers, and a customer's load must be less than 15% of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15% of the total data, categories (e.g., rate classes) must be combined before the information is released. The rule further requires that if the 15/15 rule is triggered for a second tie after the data has been screened once already using the 15/15 rule, then the customer is dropped from the information provided.

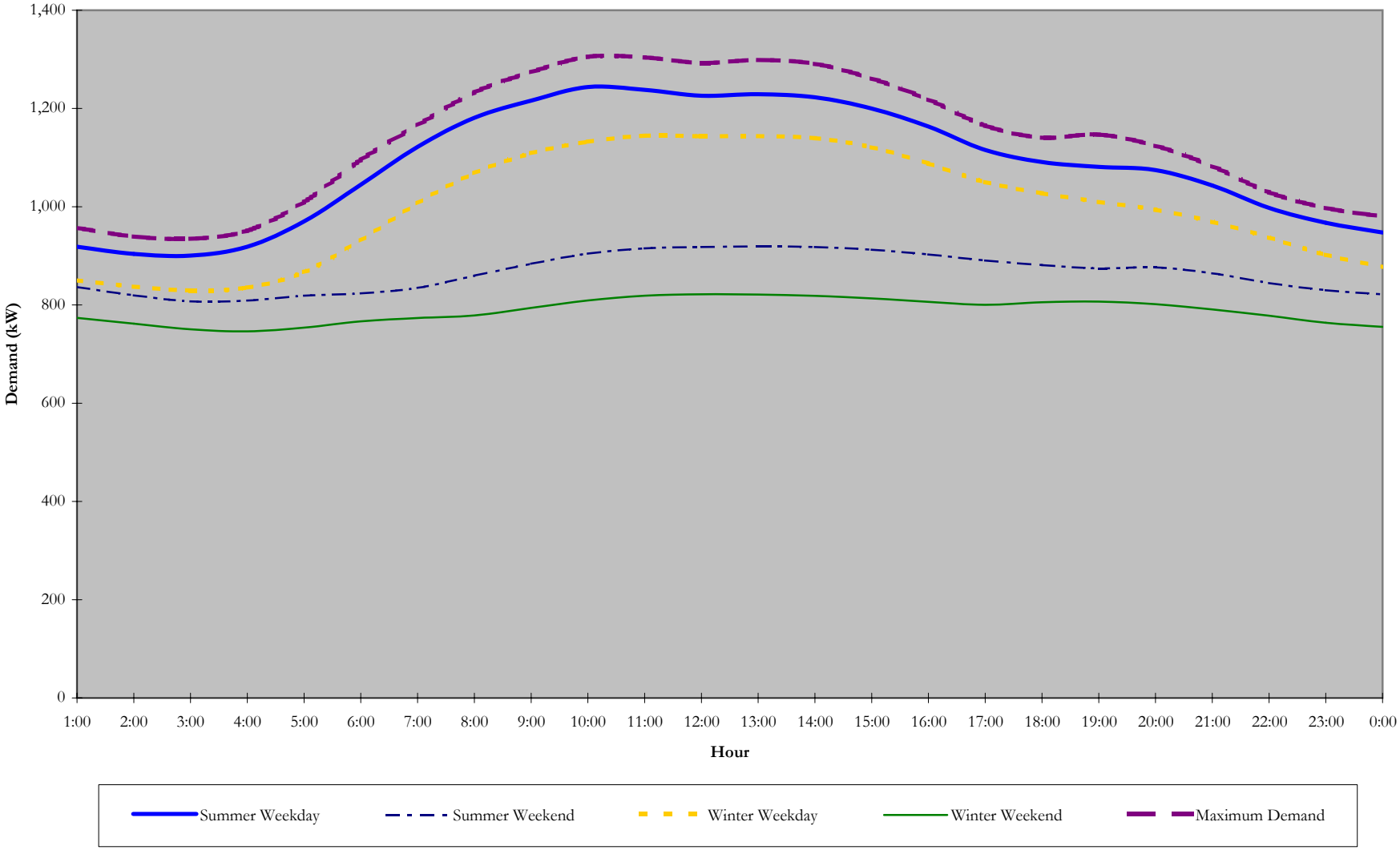
IX. Disclaimer

Southern California Edison Company has provided the above information at your request. The data presented here represents 12 months ending December, 2005. These estimates are provided for informational purposes only, and are not intended to, nor do they, predict what energy usage and loads within your city boundaries will be in the future. The actual future loads and energy consumption will vary from these estimates for a variety of reasons, including changes in energy usage, demand levels, and weather patterns. Southern California Edison Company assumes no liability for the use of the information provided above. If you have any questions regarding this information, please contact your Southern California Edison Company Account Representative.

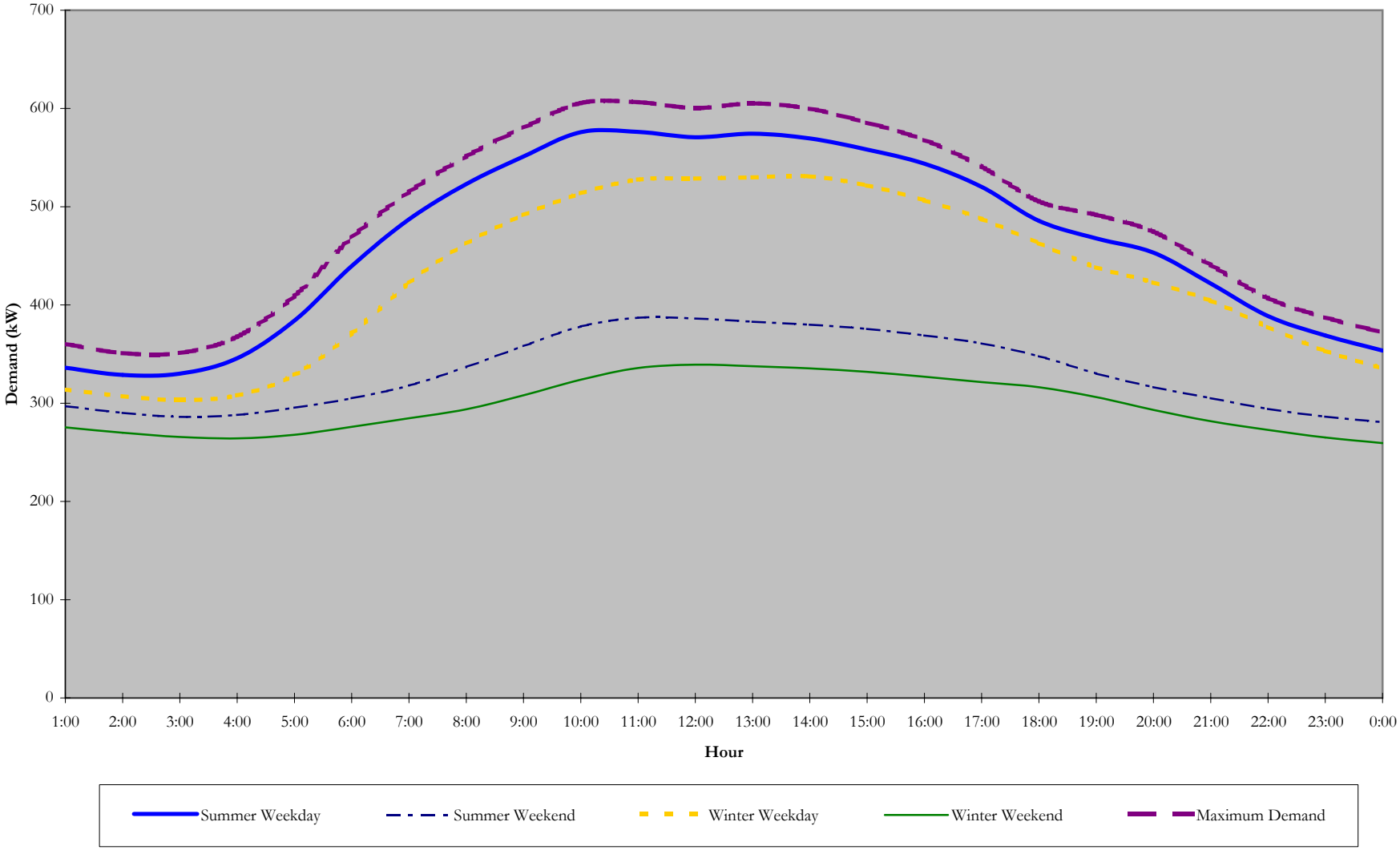
Appendix A

Rate Class Average Load Profiles

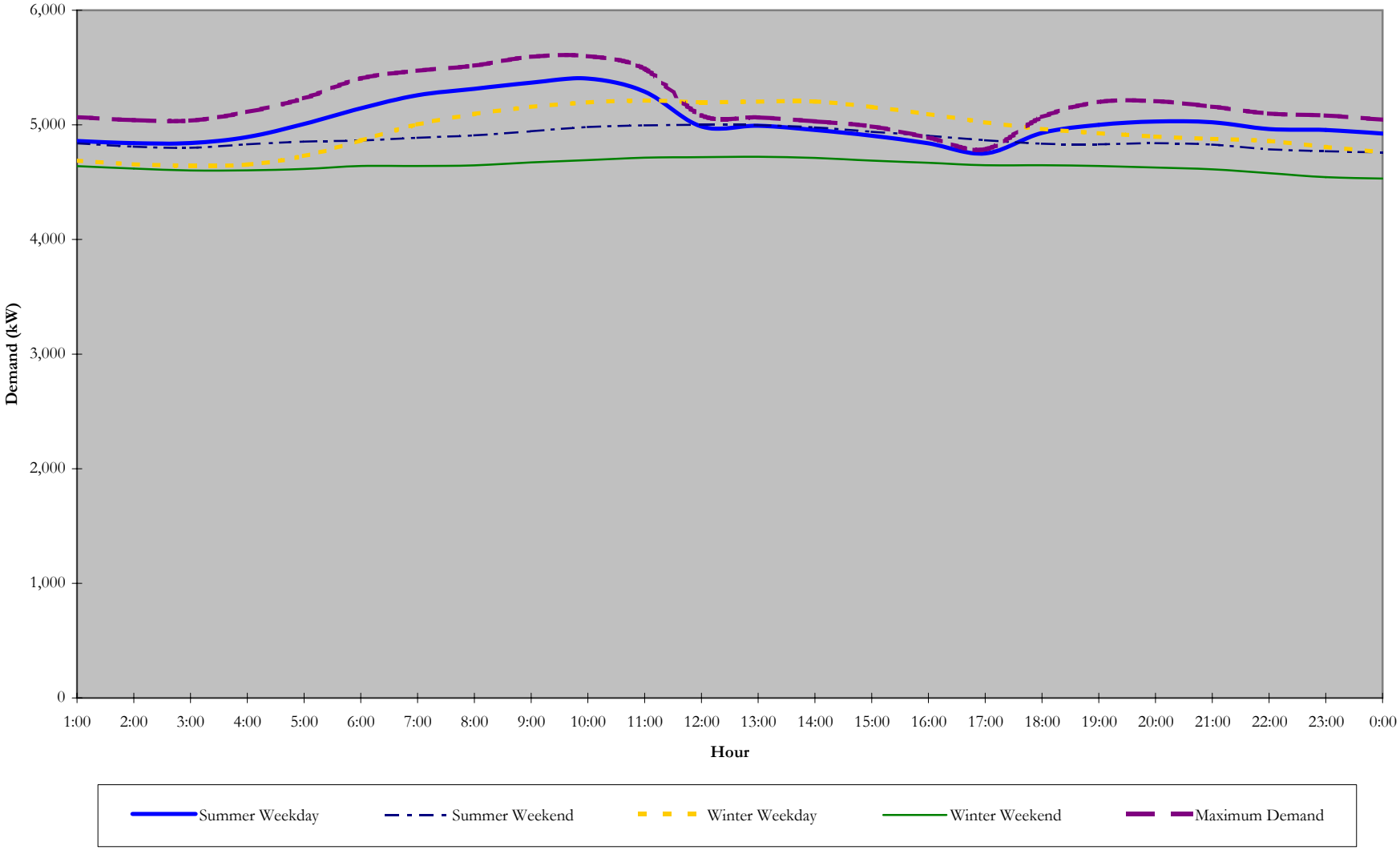
Rate Class Average Load Profiles
TOU-Primary Rate Schedule



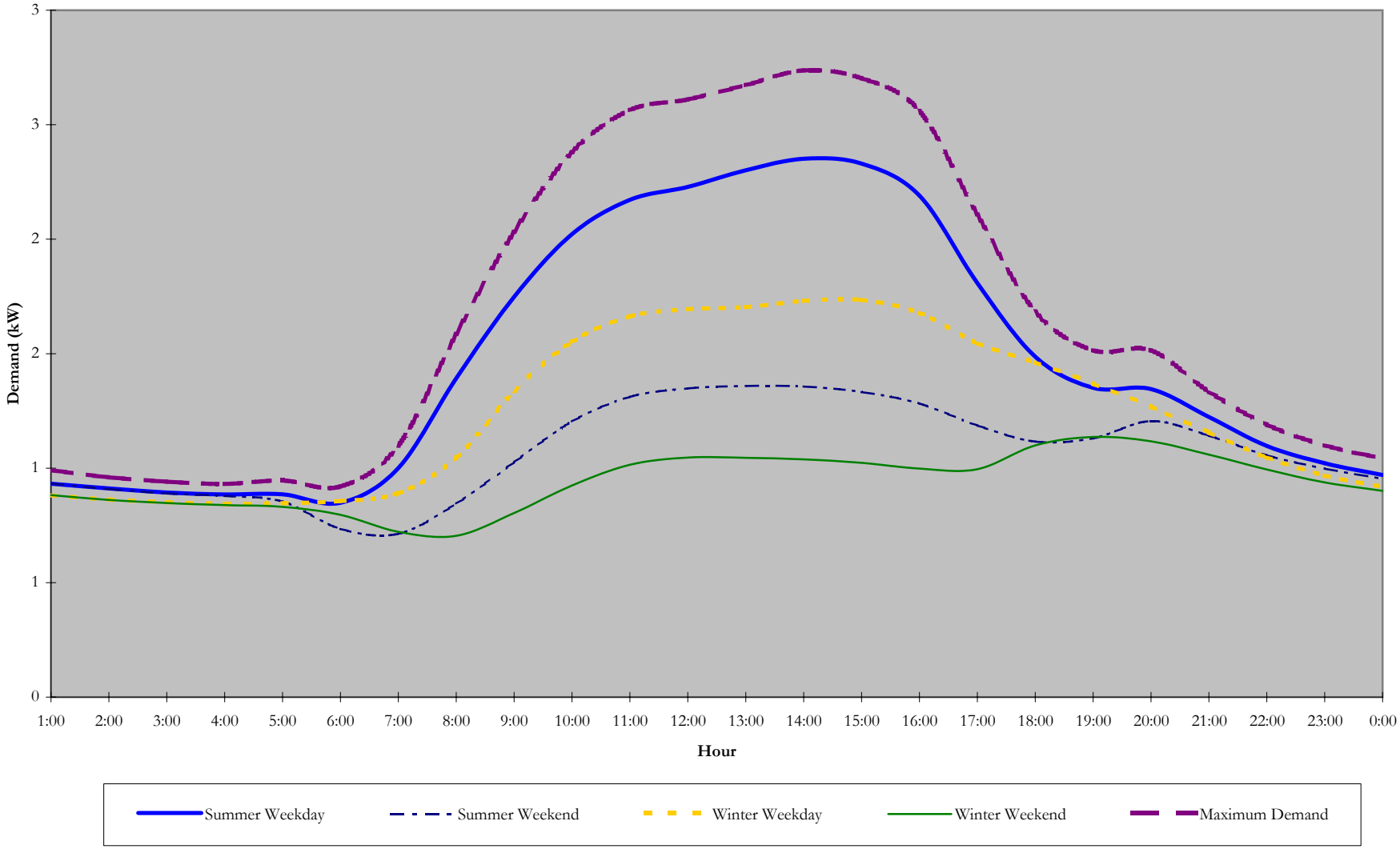
Rate Class Average Load Profiles
TOU-Secondary Rate Schedule



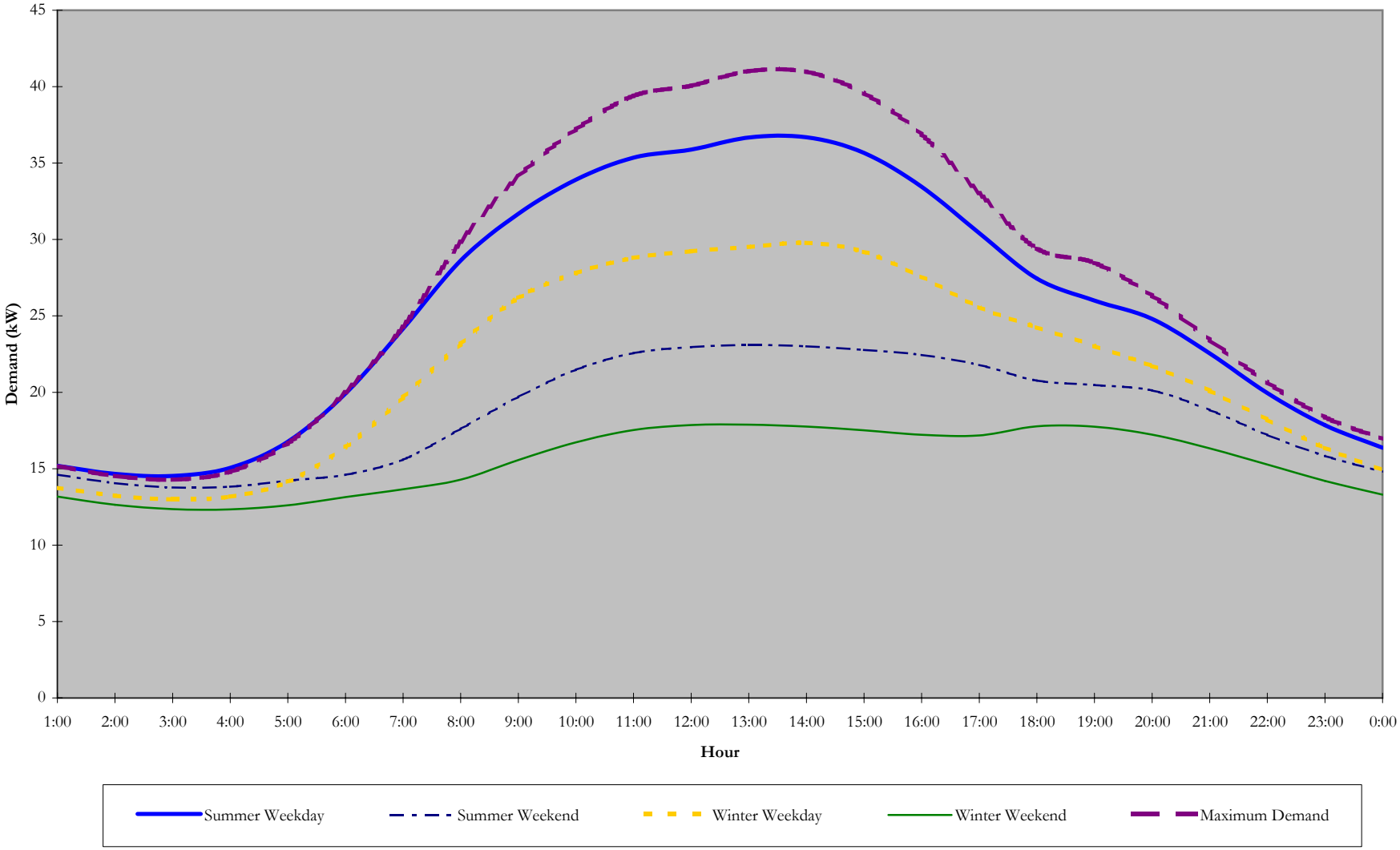
Rate Class Average Load Profiles
TOU-Subtransmission Rate Schedule



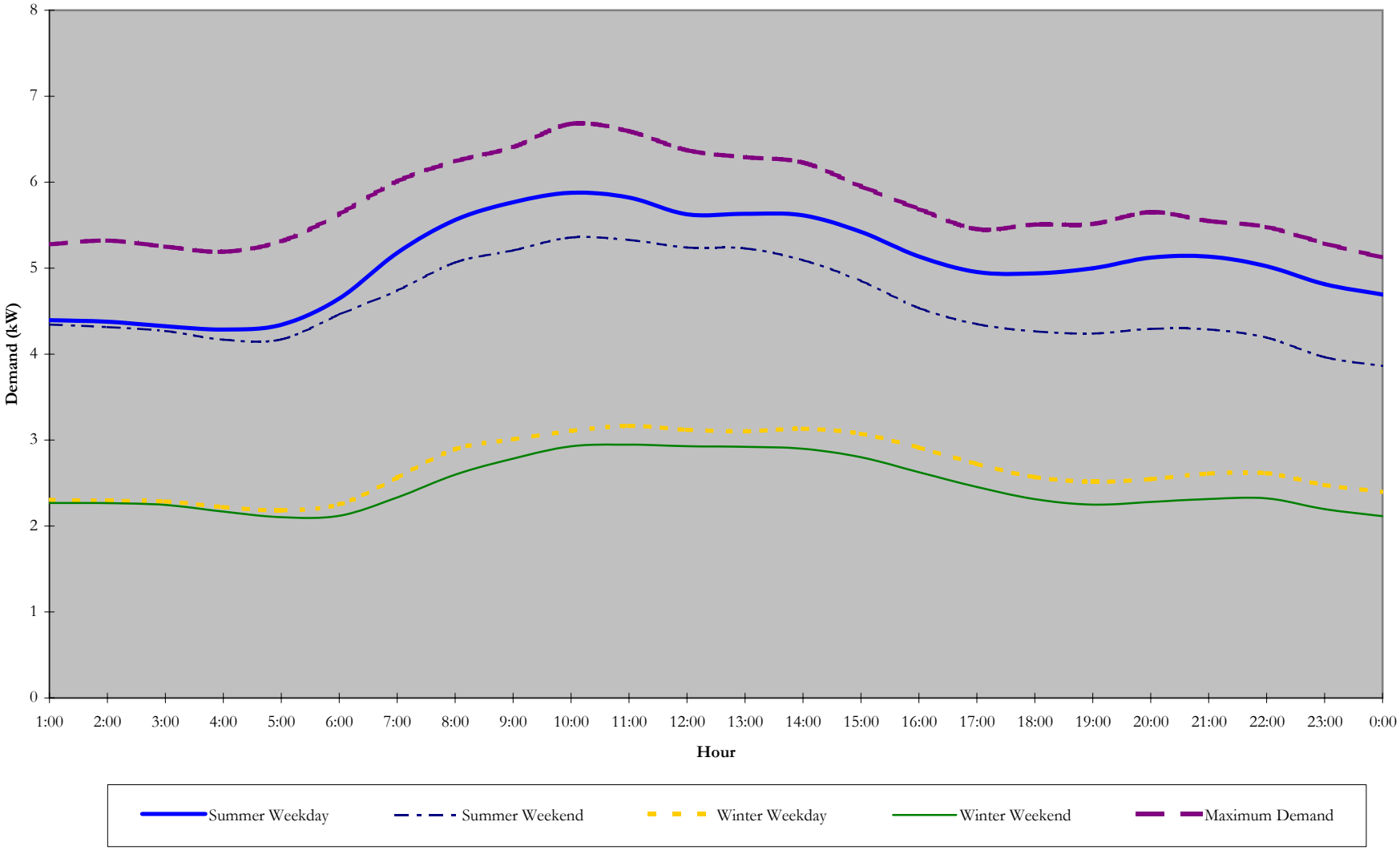
Rate Class Average Load Profile
GS-1 Rate Schedule



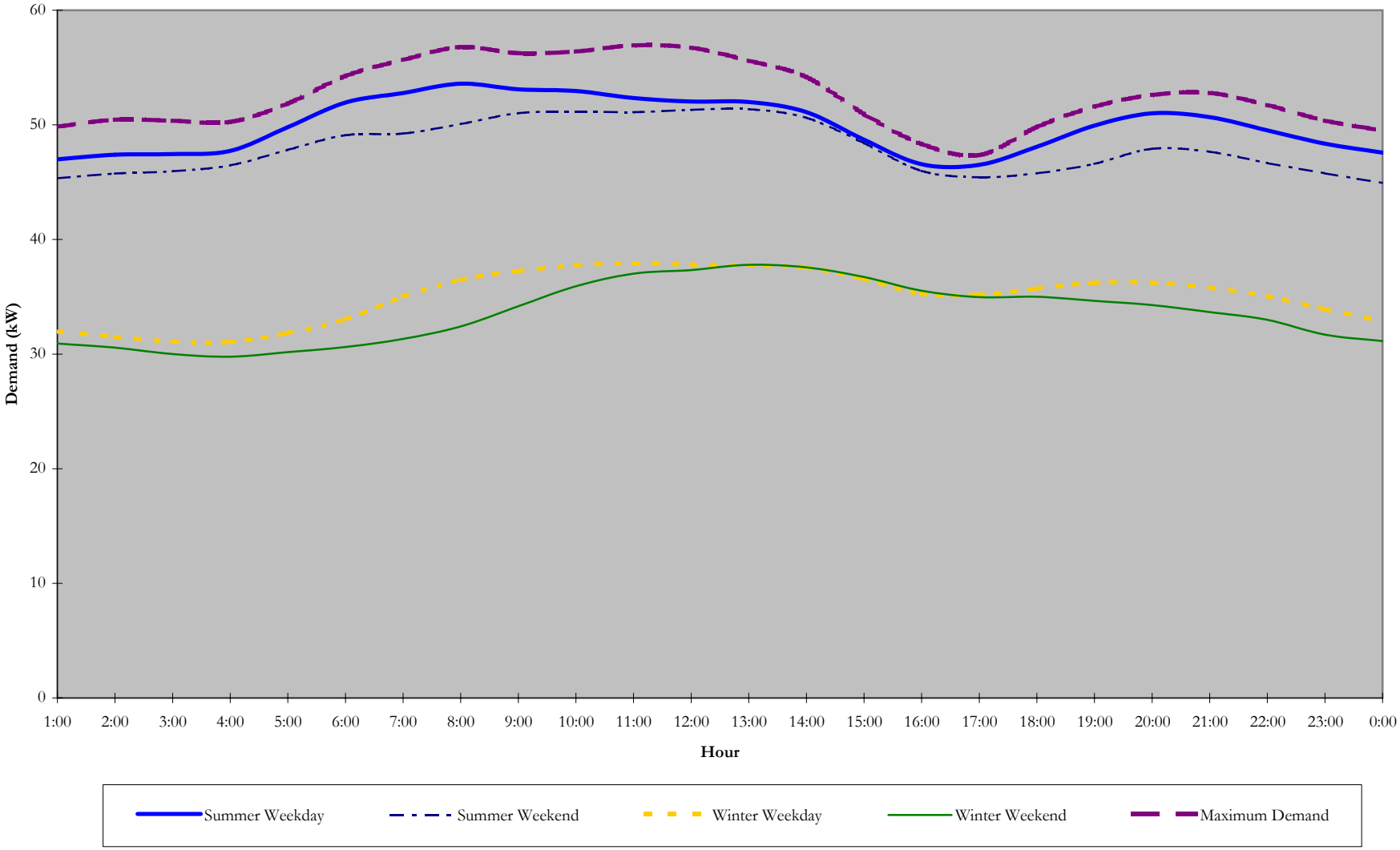
Rate Class Average Load Profiles
GS-2 Rate Schedule



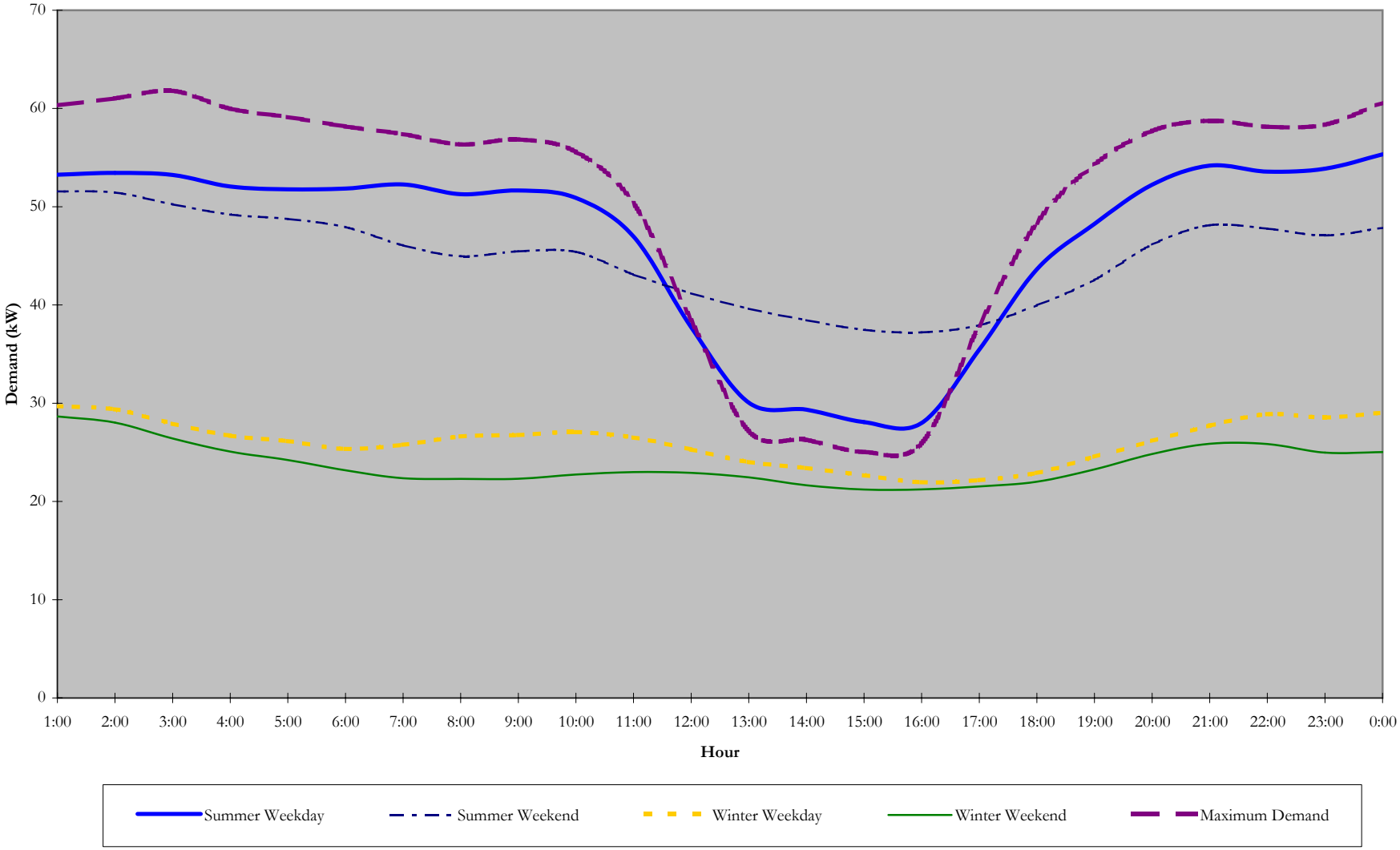
Rate Class Average Load Profiles
PA-1 Rate Schedule



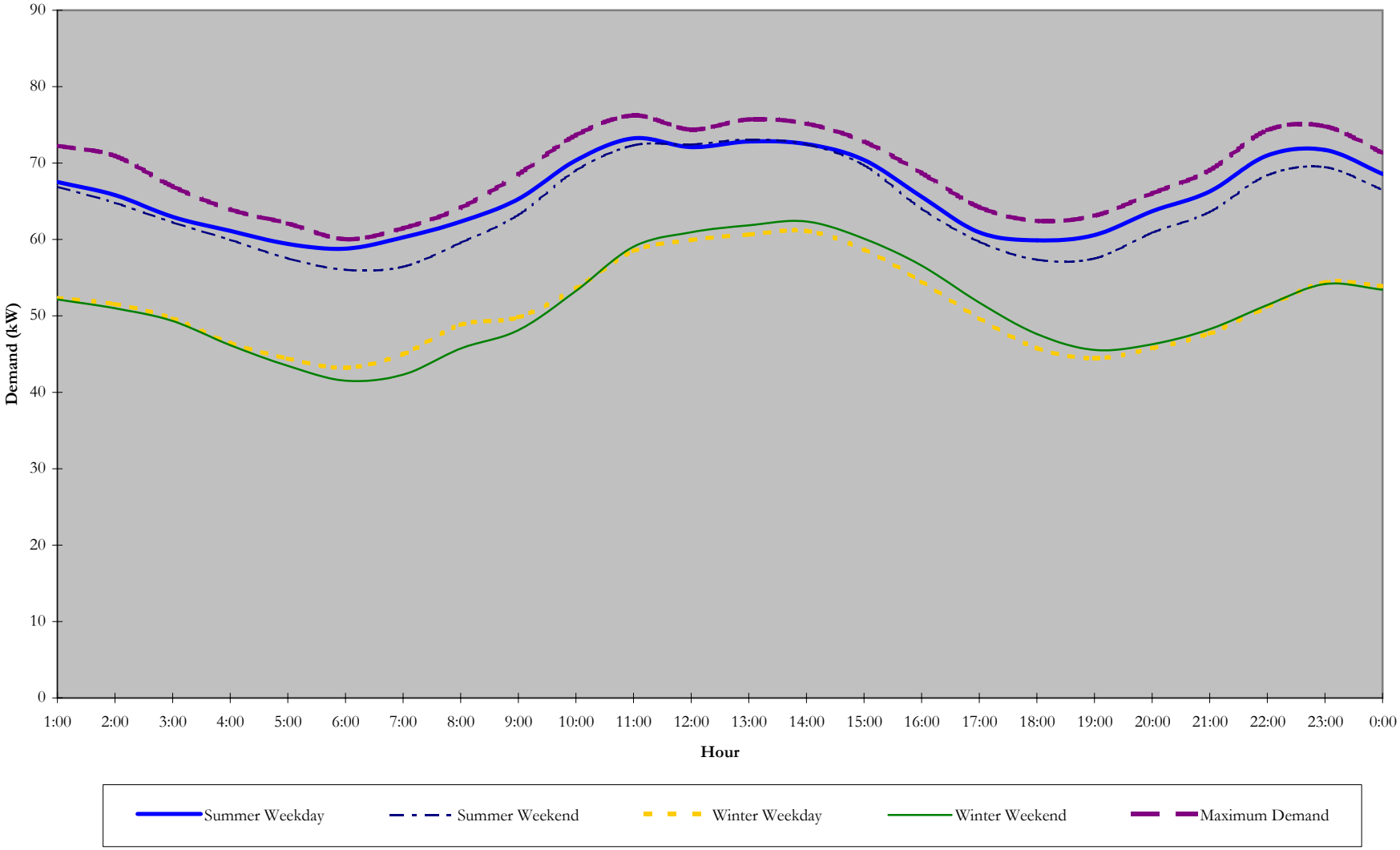
Rate Class Average Load Profiles
PA-2 Rate Schedule



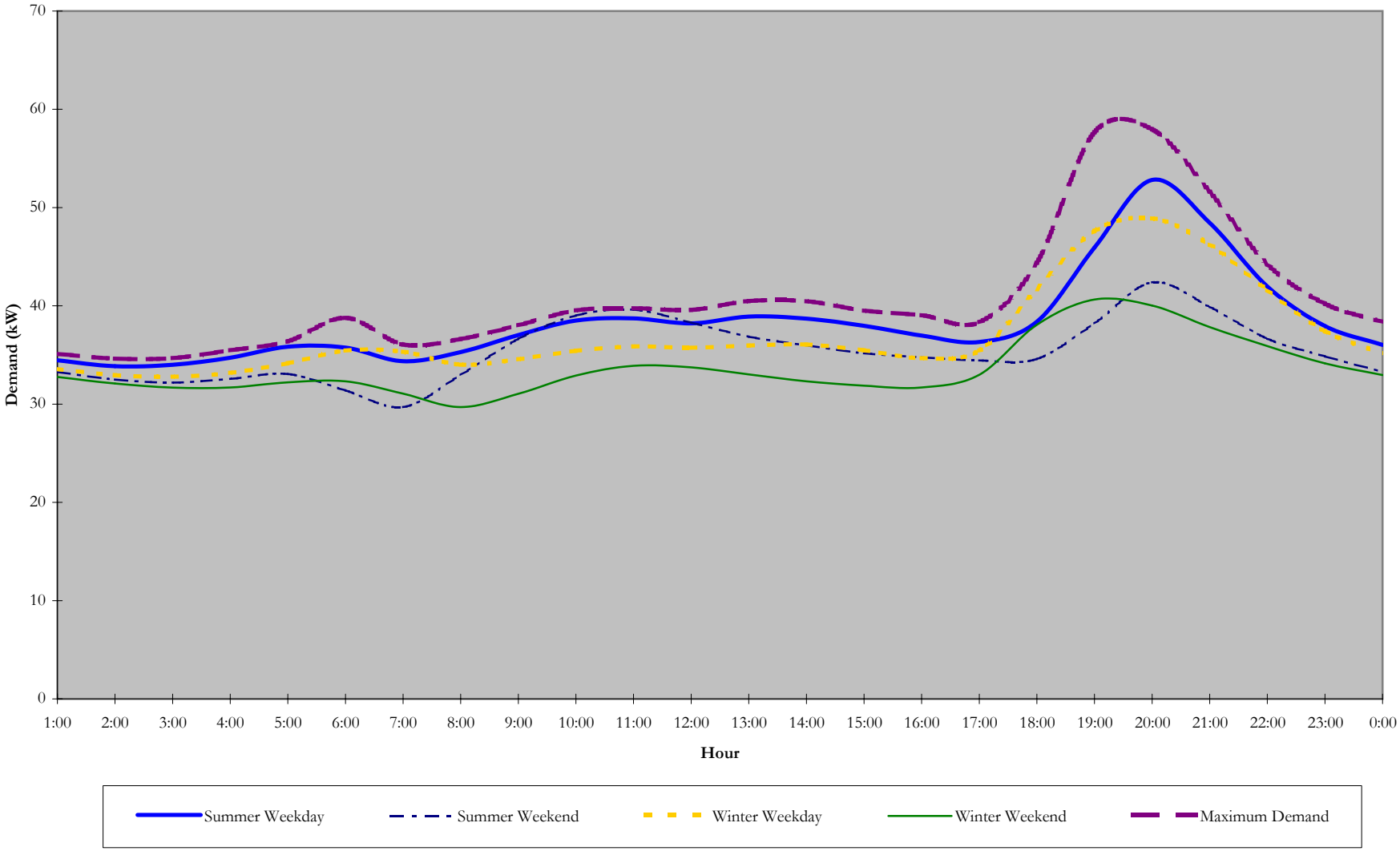
Rate Class Average Load Profiles
AG-TOU Rate Schedule



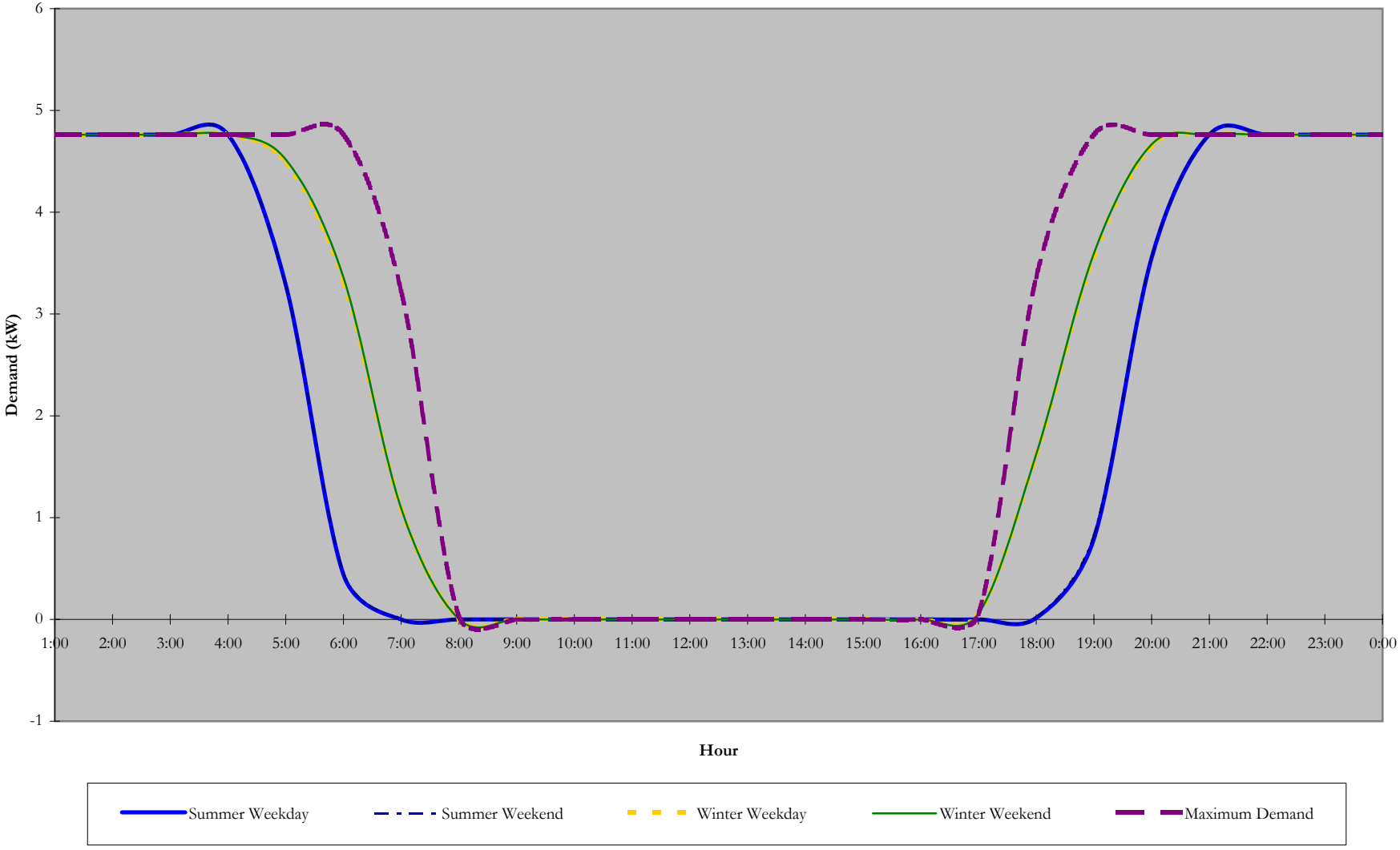
Rate Class Average Load Profiles
TOU-PA-5 Rate Schedule



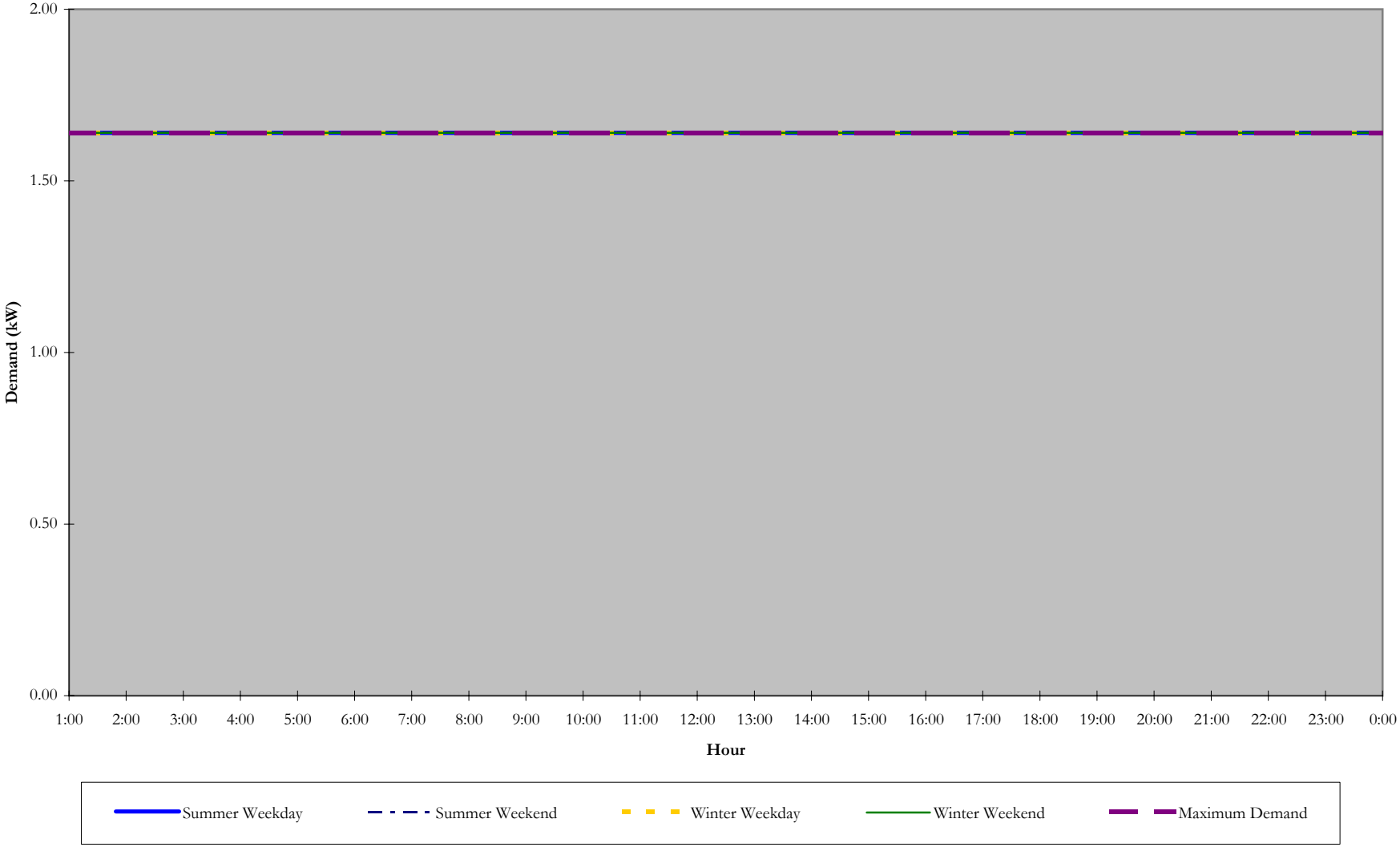
Rate Class Average Load Profiles
TOU-GS Rate Schedule



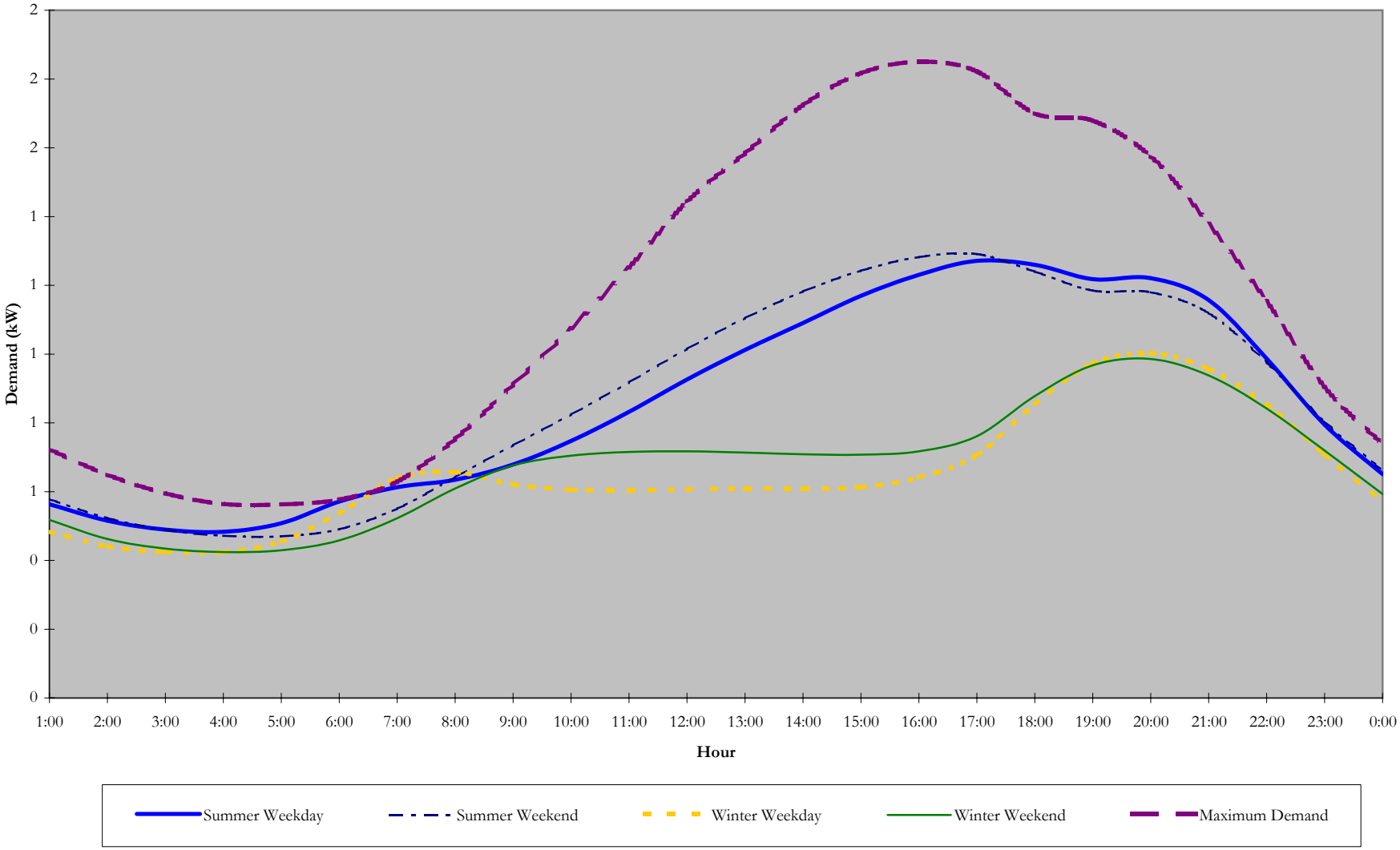
Rate Class Average Load Profiles
Street Light Rate Schedules



Rate Class Average Load Profiles
TC-1 Rate Schedule



Rate Class Average Load Profile
Domestic Rate Schedule



Appendix B

Description of Rate Groups

Domestic (Domestic Service)
For all residential service including lighting, heating, cooking, and power or combination thereof in a single-family accommodation; also to domestic farm service when supplied through the farm operator's domestic meter.

GS-1 (General Service Non-Demand)
Includes single- and three-phase general service including lighting and power, except that the customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 20 kW or has exceeded 20 kW in any three months during the preceding 12 months.

GS-2 (General Service - Demand)
As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 20 kW and below 200 kW. In 2005, this rate group included customers with monthly maximum demands above 20 kW through 500 kW.

TOU-GS-3 (Time-Of-Use - General Service - Demand Metered)
As of August 2006, includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 200 kW through 500 kW. This rate group did not exist in 2005 and these customers were included in the GS-2 rate group.

TOU-8 (Time-Of-Use - General Service – Large)
Includes general service, lighting and power, except agricultural water pumping accounts. This Schedule is mandatory for all customers whose monthly maximum demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW in any three months during the preceding 12 months.

PA-1 (Power - Agricultural and Pumping Connected Load Basis)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is applicable.

PA-2 (Power - Agricultural and Pumping Demand Metered)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is

applicable. The Customer whose monthly Maximum Demand, in the opinion of SCE, is expected to, or has reached, 200 kW or above in any three months during the preceding 12 months shall have a Real Time Energy Meter (RTEM) or other type of interval meter installed and shall become ineligible for service under this Schedule. Upon such ineligibility a customer whose Maximum Demand is 500 kW or below shall be transferred to an applicable agricultural Time-of Use (TOU) rate schedule, while a customer whose Maximum Demand exceeds 500 kW will be transferred to Schedule TOU-8. However, in accordance with Schedule TOU-8, a large individual water agency or other large water pumping account with 70% or more of the water pumped used for agricultural purposes, must take service on a TOU agricultural class rate schedule.

TOU-PA-5 (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping or for oil pumping by customers with a Standard Industrial Classification (SIC) Code of 1311; none of any remaining electrical usage is for purposes for which a domestic schedule is applicable; and, the customer's account has 35 horsepower or more of total connected load or 35 kilowatts or more of Maximum Demand

AG TOU (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for water pumping used for agricultural purposes, except where the customer's monthly Maximum Demand, is expected to exceed 500 kW or has exceeded 500 kW for any three months during the preceding 12 months. These accounts are time-of-use agricultural and pumping accounts that do not qualify for the TOU-PA-5 tariff.

TC-1 (Traffic Control Service)
Includes single- and three-phase service: for traffic directional signs or traffic signal systems located on streets, highways and other public thoroughfares and to railway crossing and track signals; for public thoroughfare lighting that is utilized 24 hours per day or is not controlled by switching equipment, such as tunnel or underpass lighting; and, to public authorities for the illumination of bus stop shelters located in the dedicated road right-of-way where such service is combined with other traffic control service as defined above.

STREET LIGHTING (Lighting - Street and Highway Company-Owned System)
Includes service for the lighting of streets, highways, and publicly-owned and publicly-operated automobile parking lots which are open to the general public where SCE owns and maintains the street lighting equipment and associated facilities included under this schedule.

Electricity Use Report
For City of Palm Springs
Year 2008

Prepared by

Southern California Edison

Version 5.0

October 4th, 2010

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

I. Introduction

The purpose of this report is to fulfill your request for overall energy consumption data for the City of Palm Springs. SCE has made every effort to fulfill this request. However, our legal responsibility of maintaining confidentiality of individual customer data limits us to providing only the following information:

- Rate group descriptions
- kWh consumption, and
- kW demand for those rate groups with demand meters (non-coincident and coincident loads); no kW demand data is available for those rate groups that do not have demand metered data

II. Energy and Demand Data Availability

Rate group specific energy consumption data is readily available and included within this report. However, several of our rate schedules such as Schedule "D," the standard domestic rate, do not require the measurement of demand data. Therefore, coincident demand-related data within this report is only an estimate reflecting those rate groups where demand is measured. Table A summarizes the availability of demand data by rate group:

Table A – Data Availability Table

Rate Groups ***with*** Demand Data	Rate Groups ***without*** Demand Data
GS-2, PA-2, TOU-PA-5, AG TOU, TOU-GS-3, and TOU-8	Domestic, GS-1, PA1, TC-1 and Street Lighting

For rate groups ***with*** measured demand data, we have provided:

- Total kWh
- Non-coincident peak demand - this is the sum of the individual accounts' maximum peak demands, regardless of when they occur
- Coincident peak demand – this is a calculated field based on application of the coincidence factors outlined on page 3, section III
- Number of accounts

For rate groups ***without*** measured demand data, we have provided:

- Total kWh
- Number of accounts

III. Coincidence Factors

Coincidence factor is an indication of how closely the individual customer peaks conform to the time of the rate group peak. Coincidence factor is expressed as a proportion and can never be greater than 1.0. Table B lists coincidence factors based SCE system wide peak demands.

Table C on page 4 contains calculated values of coincident peak demand. To derive these values, the rate class non-coincident peak (Table C) is multiplied by its respective rate class coincidence factor, in Table B, yielding a calculated "Coincident Peak (kW)". The calculated coincident peaks approximate the maximum peak for each rate class.

Table B - System Coincidence Factors

	Coincidence Factor				Coincidence Factor		
Rate Group	Annual	Summer	Winter	Rate Group	Annual	Summer	Winter
Domestic-Single	0.38	0.42	0.30	GS-1	0.46	0.52	0.41
Domestic-Multiple	0.26	0.32	0.24	TC-1	1.00	1.00	1.00
Domestic- Mstr Mtrd	0.61	0.66	0.56	GS-2	0.71	0.74	0.70
				TOU-GS	0.53	0.54	0.58
Total Domestic	0.34	0.39	0.28	Total Sm and Med	0.61	0.65	0.60

	Coincidence Factor				Coincidence Factor		
Rate Group	Annual	Summer	Winter	Rate Group	Annual	Summer	Winter
PA-1	0.40	0.44	0.34	TOU-8-Secondry	0.76	0.79	0.76
PA-2	0.65	0.70	0.63	TOU-8-Primary	0.70	0.74	0.70
AGTOU	0.62	0.67	0.54	TOU-8-Sub	0.67	0.71	0.68
Tou-PA-5	0.84	0.84	0.86				
Total AG&Pump	0.46	0.50	0.40	Total Large Power	0.70	0.74	0.71

IV. Data Description

The summaries provided in Tables C, are based on 12 months usage data ending December, 2008 for SCE installed service accounts within the city's boundaries. The accounts included in the dataset were extracted from SCE's Customer Service System based on the Public Authority Code for the City of Palm Springs. This code is used to identify accounts by municipality for the purpose of calculating state and local taxes. Public Authority Code is permanently retained as a part of each premise's identification regardless of occupancy. The only time a Public Authority Code changes is when a city or county annexes a given piece of property into its territory or a particular piece of property is transferred from one public authority to another through other means.

V. Summary of Results (January 1, 2008 – December 31, 2008)

Table C – Total of Account Summary Data for Bundled and Direct Access Customers

RATE GROUP	ANNUAL KWH	% of TOTAL	NONCOINCIDENT PEAK	CALCULATED COINCIDENT PEAK	NUMBER OF ACCOUNTS	% OF TOTAL
AG TOU	37,714,762	5.6%	10,329	6,404	59	0.2%
DOMESTIC	309,854,443	46.0%	-	-	31,865	85.4%
GS-1	53,263,907	7.9%	-	-	4,046	10.8%
GS-2	123,739,462	18.4%	39,119	27,774	1,005	2.7%
STREET LIGHTING	2,353,589	0.3%	-	-	256	0.7%
TOU-8	96,295,193	14.3%	20,816	14,571	21	0.1%
TOU-GS	49,727,200	7.4%	12,493	6,621	41	0.1%
Grand Total	672,948,556				37,293	
DA % of kWh	5.4%					

Application of 15/15 Rule (Section VIII. Release of Aggregated Customer Information, p. 6)
The PA-1 and PA-2 rate groups were combined into the AG TOU rate group.

VI. Additional Data Availability

The data listed in Tables C are at a summary level, and are not displayed by time-of-use. For your convenience we have attached time-of-use load profiles (Appendix A) for each rate class. In the event that you would like the detailed data that supports these load profiles (annual hourly load data for each rate class average profile), you can find it on SCE's website at the following address:

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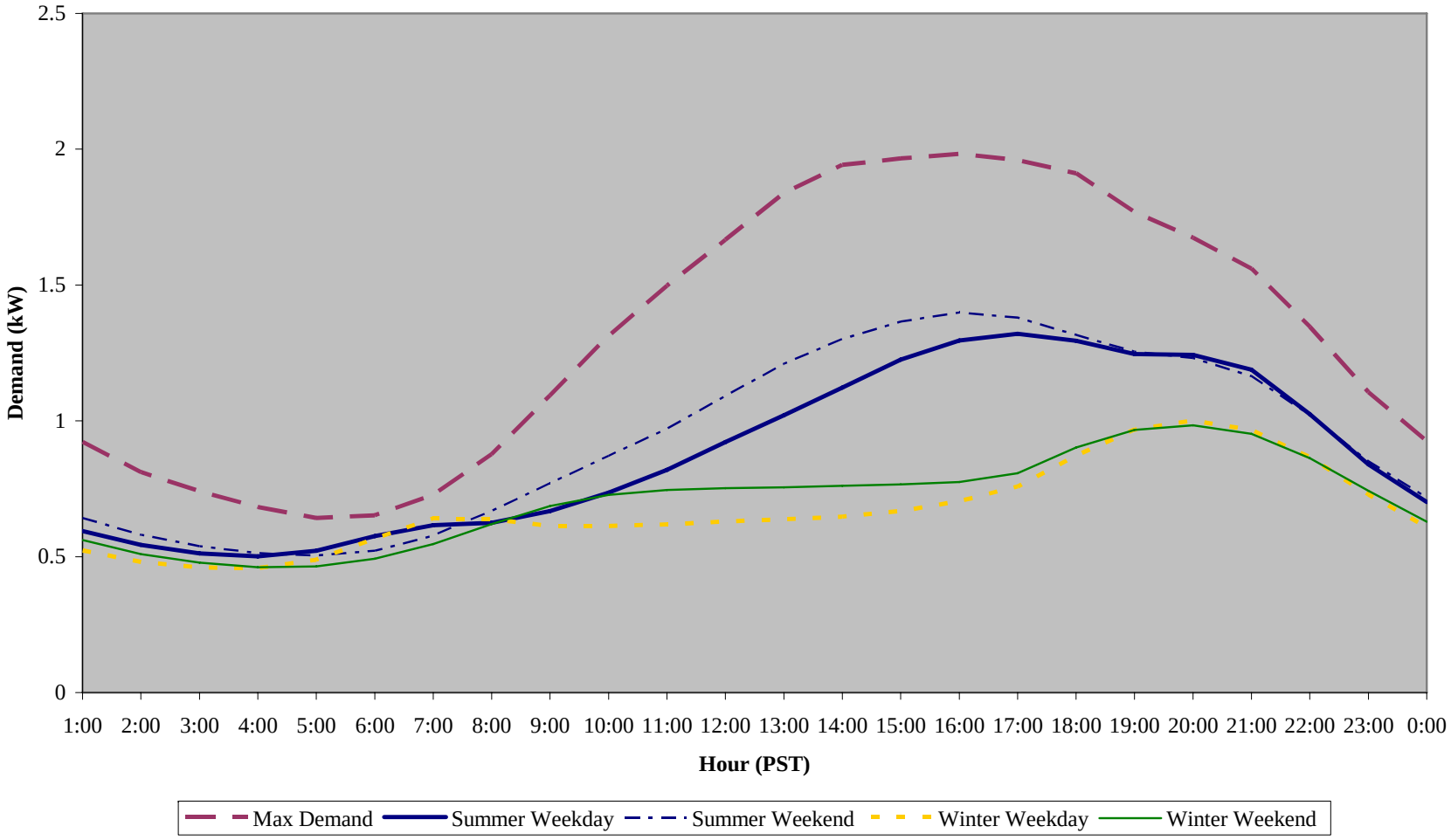
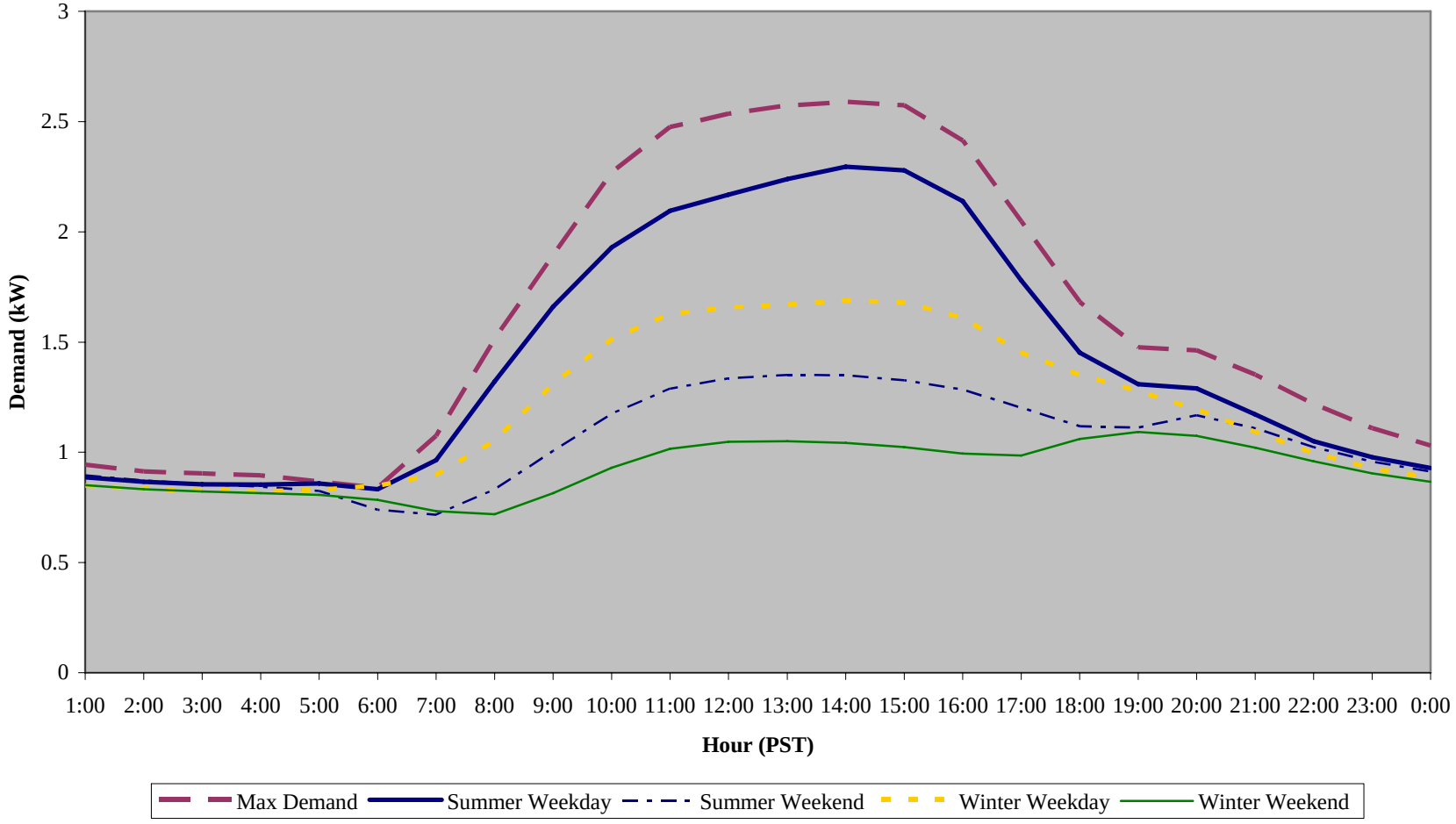
Appendix A

Rate Class Average Load Profiles

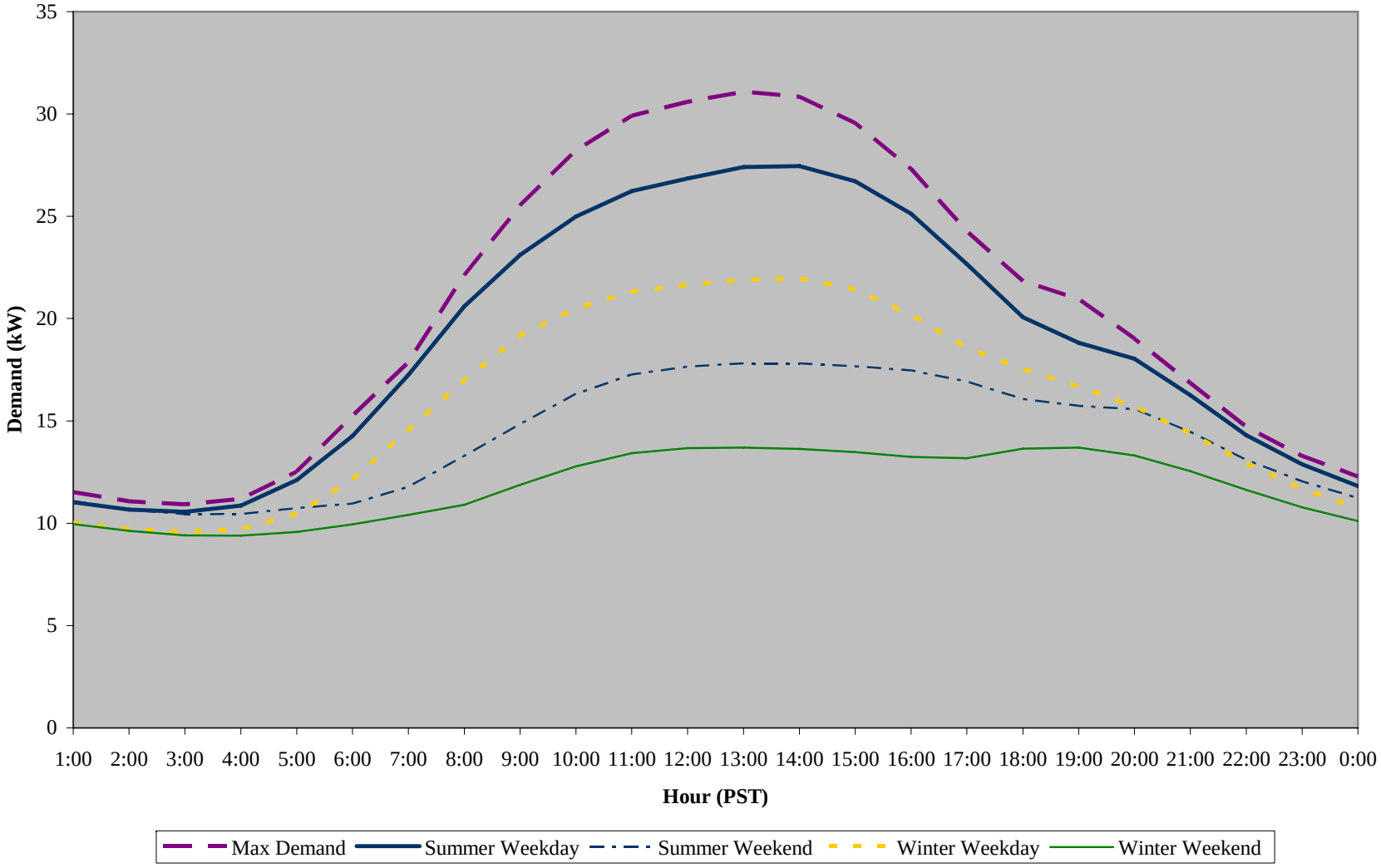
Rate Class Average Load Profiles
Domestic Rate Group
2008



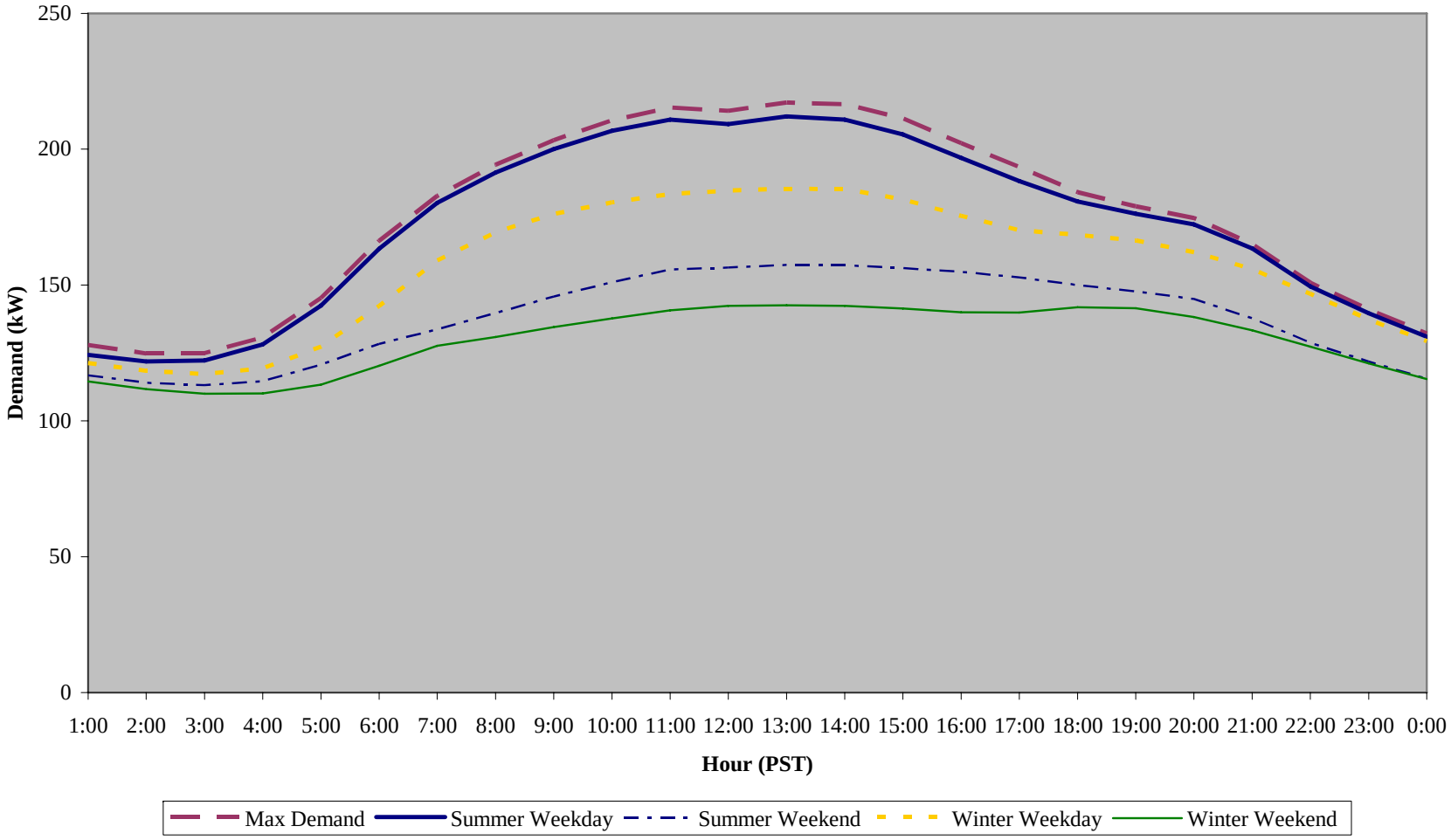
Rate Class Average Load Profiles
GS-1 Rate Group
2008



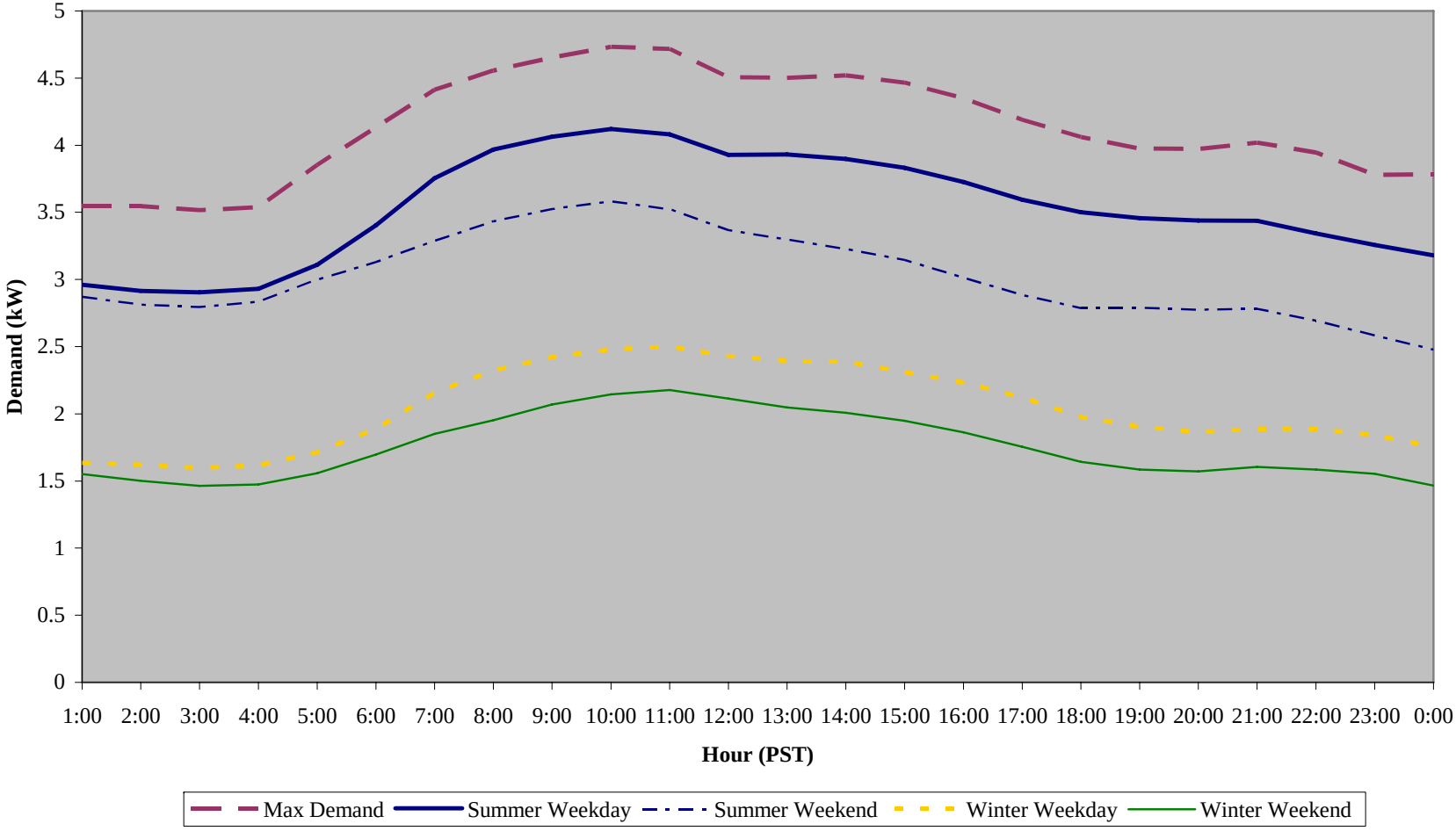
Rate Class Average Demand
GS-2 Rate Group
2008



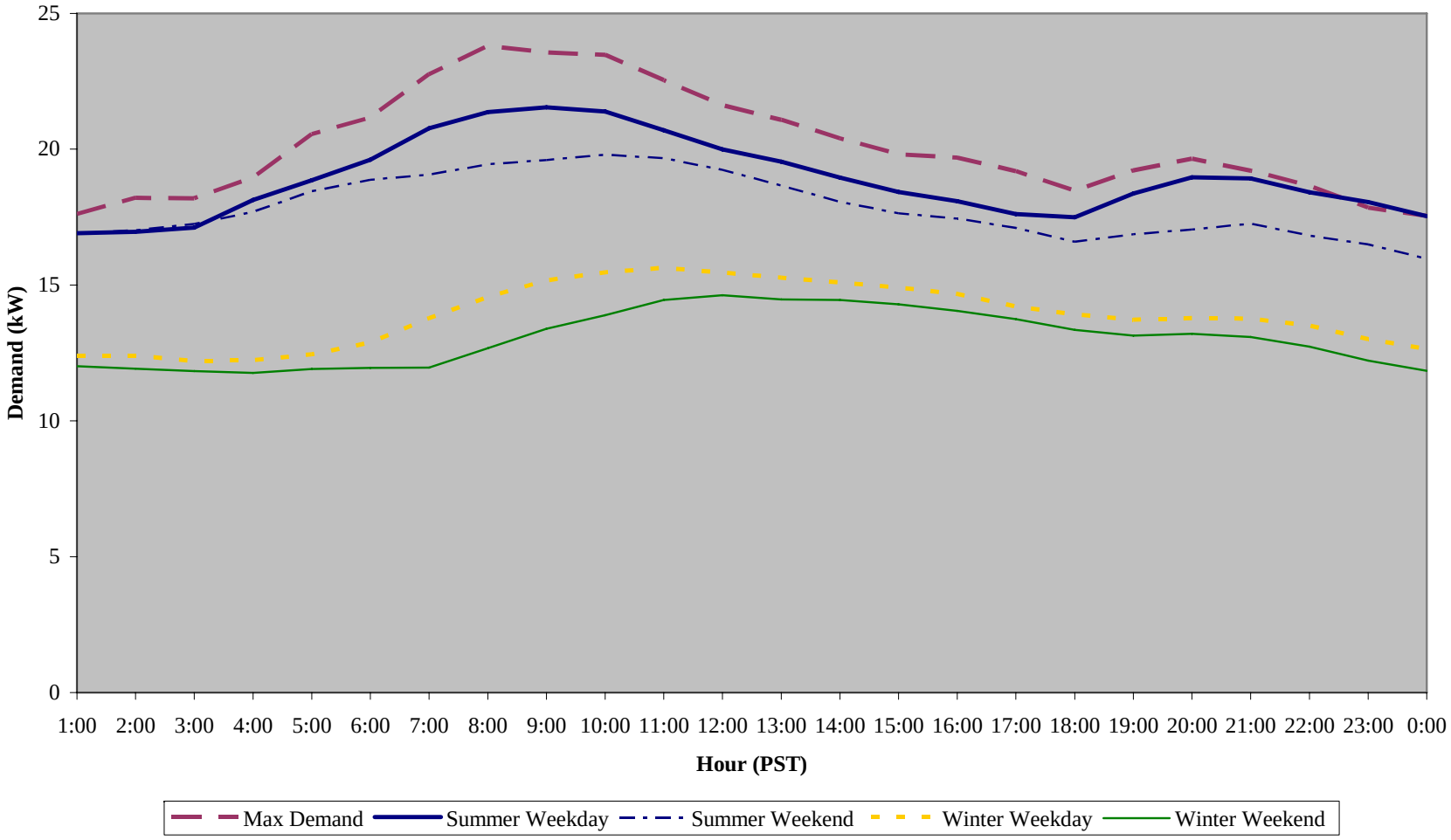
Rate Class Average Load Profiles
TOU-GS Rate Groups
2008



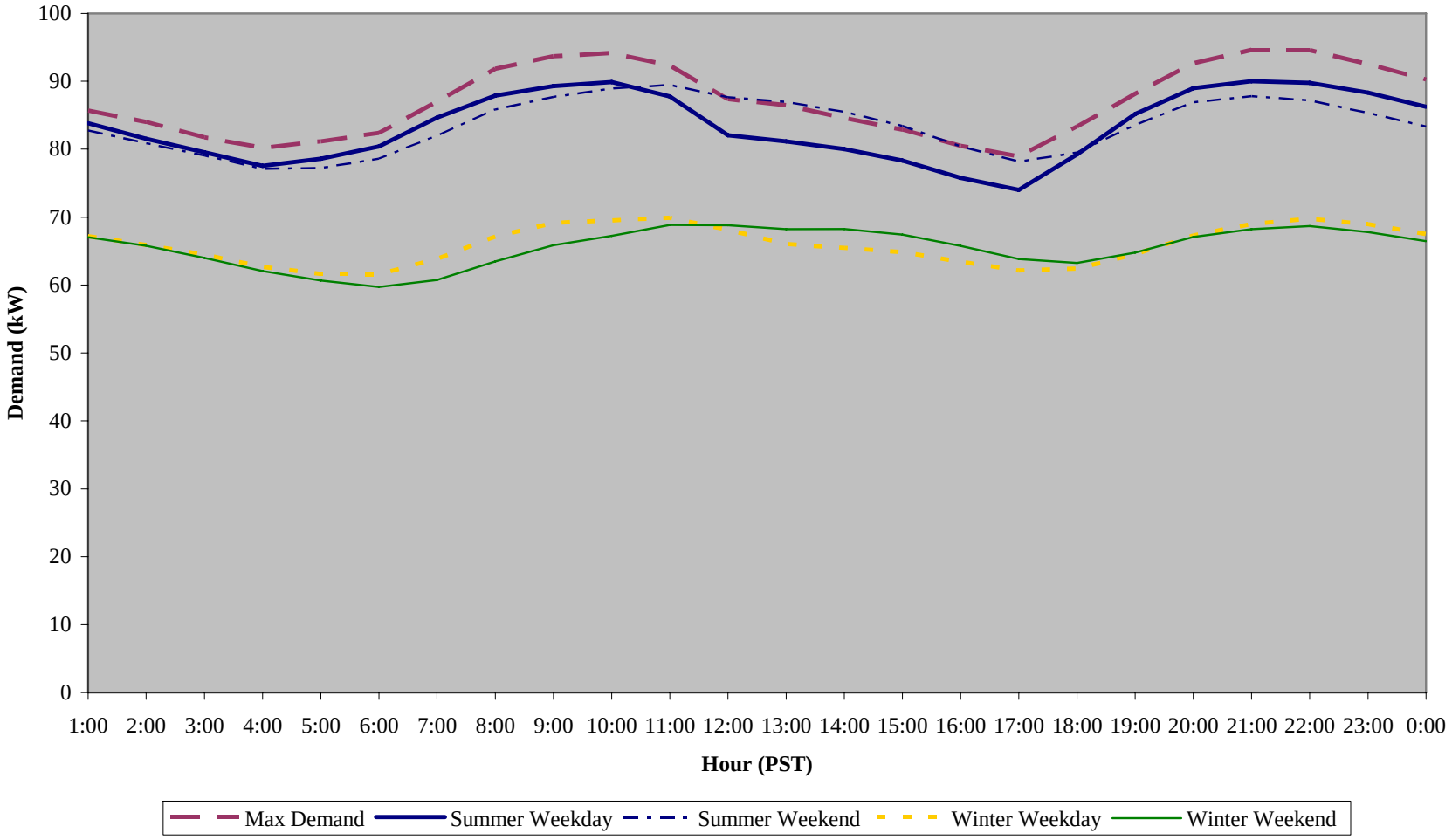
Rate Class Average Load Profiles
PA-1 Rate Groups
2008



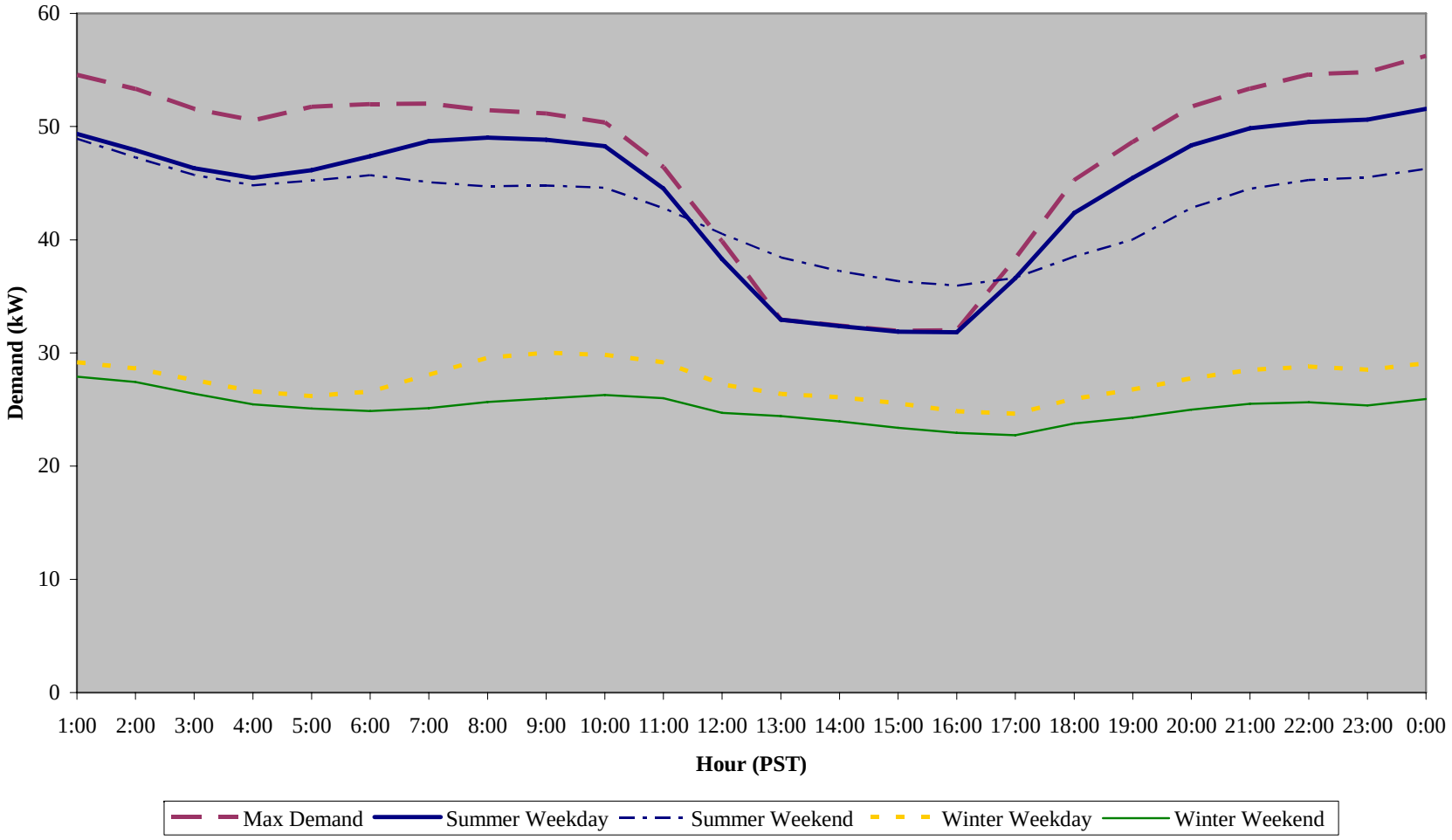
Rate Class Average Load Profiles
PA-2 Rate Group
2008



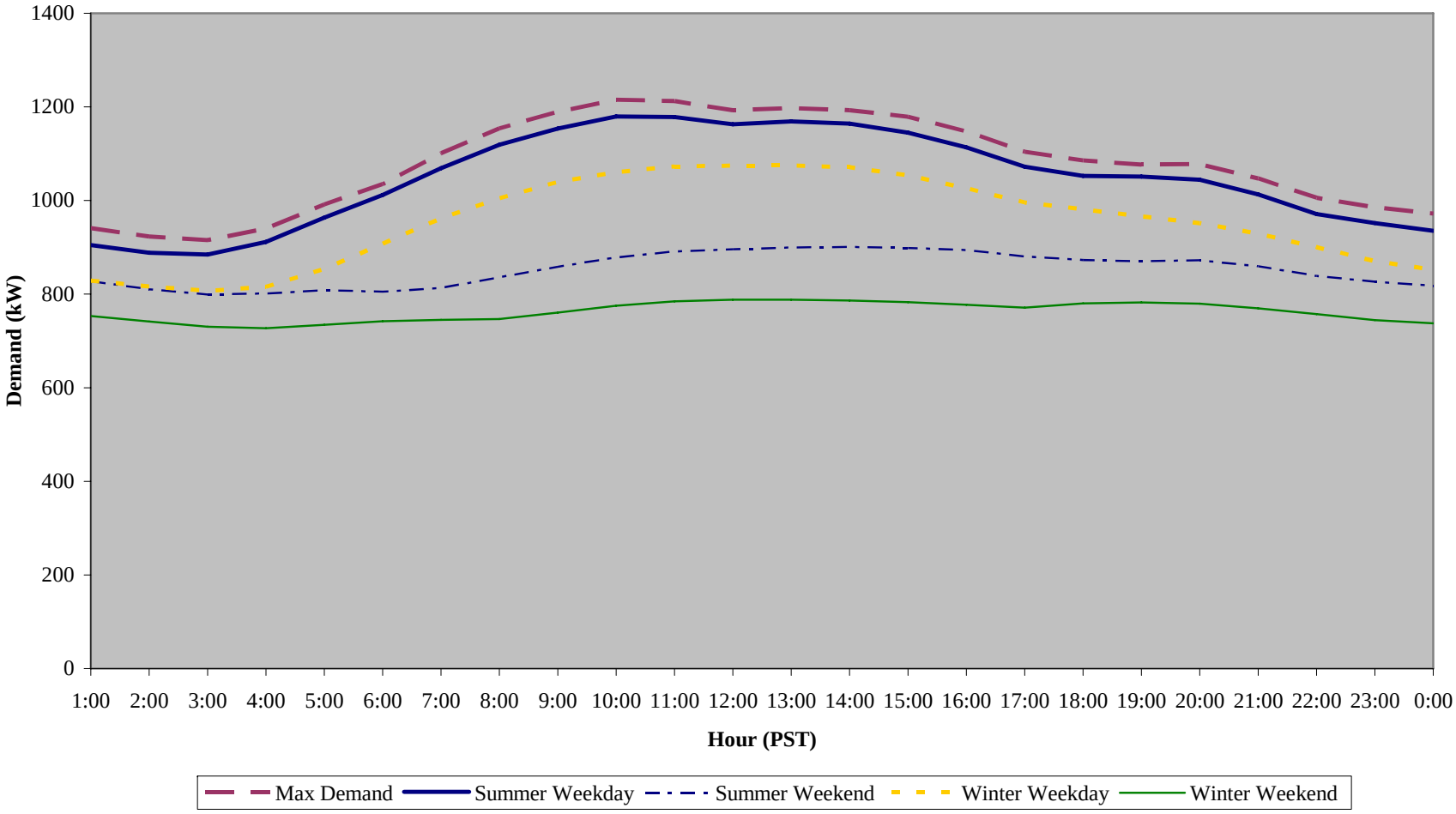
Rate Class Average Load Profiles
TOU-PA-5 Rate Group
2008



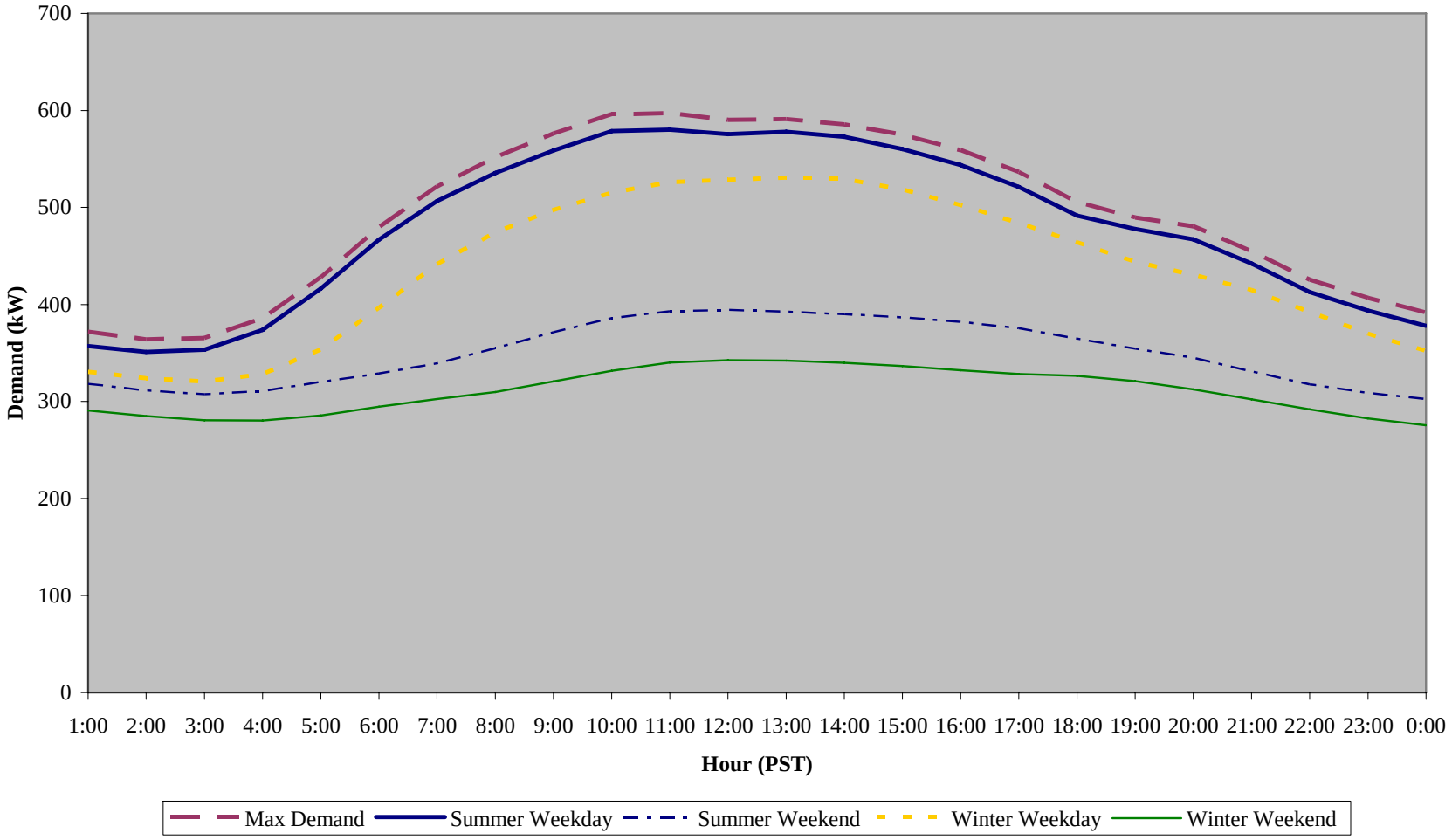
Rate Class Average Load Profile
AG-TOU Rate Group
2008



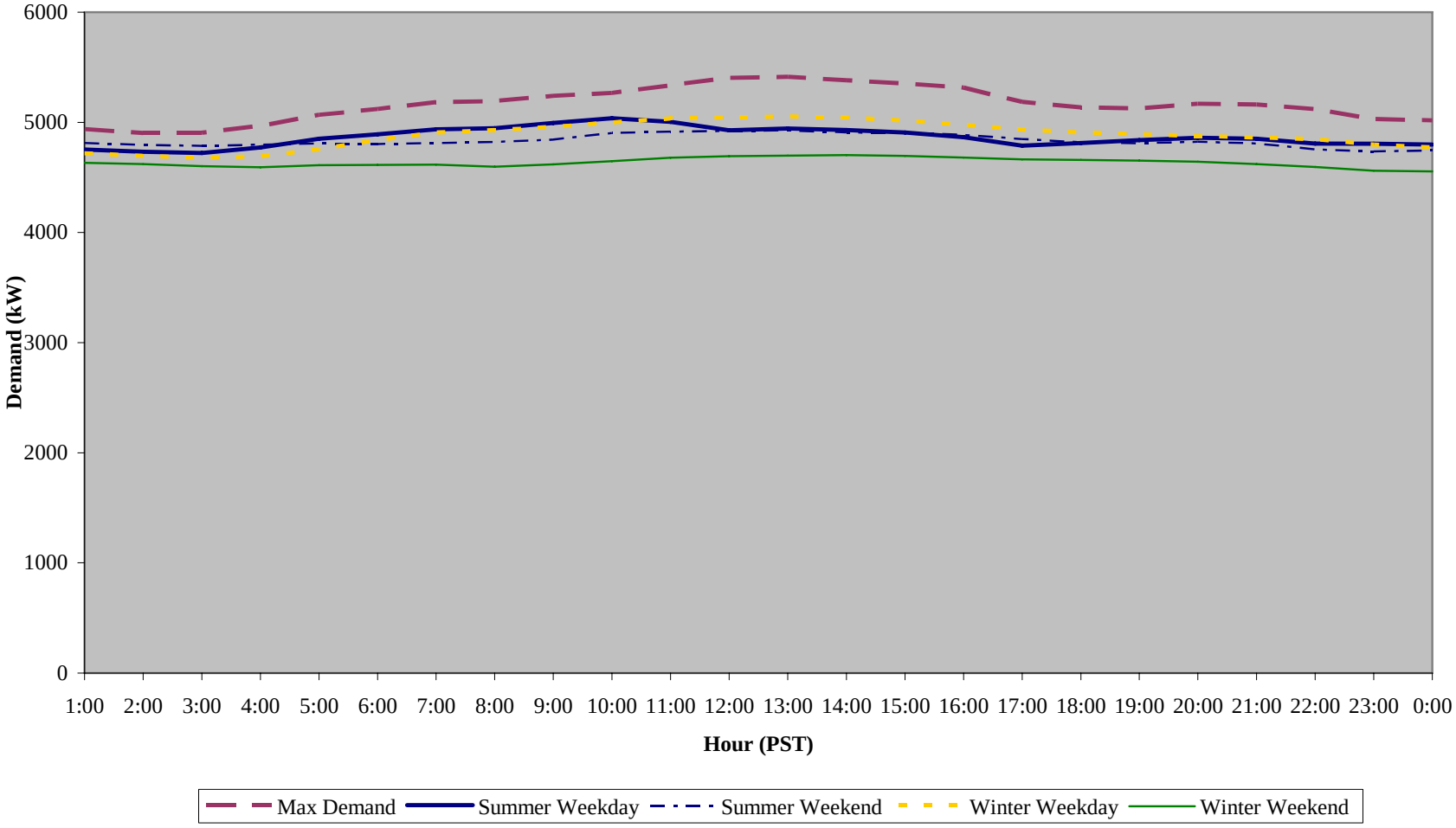
Rate Class Average Load Profiles
TOU-8-Primary Rate Group
2008



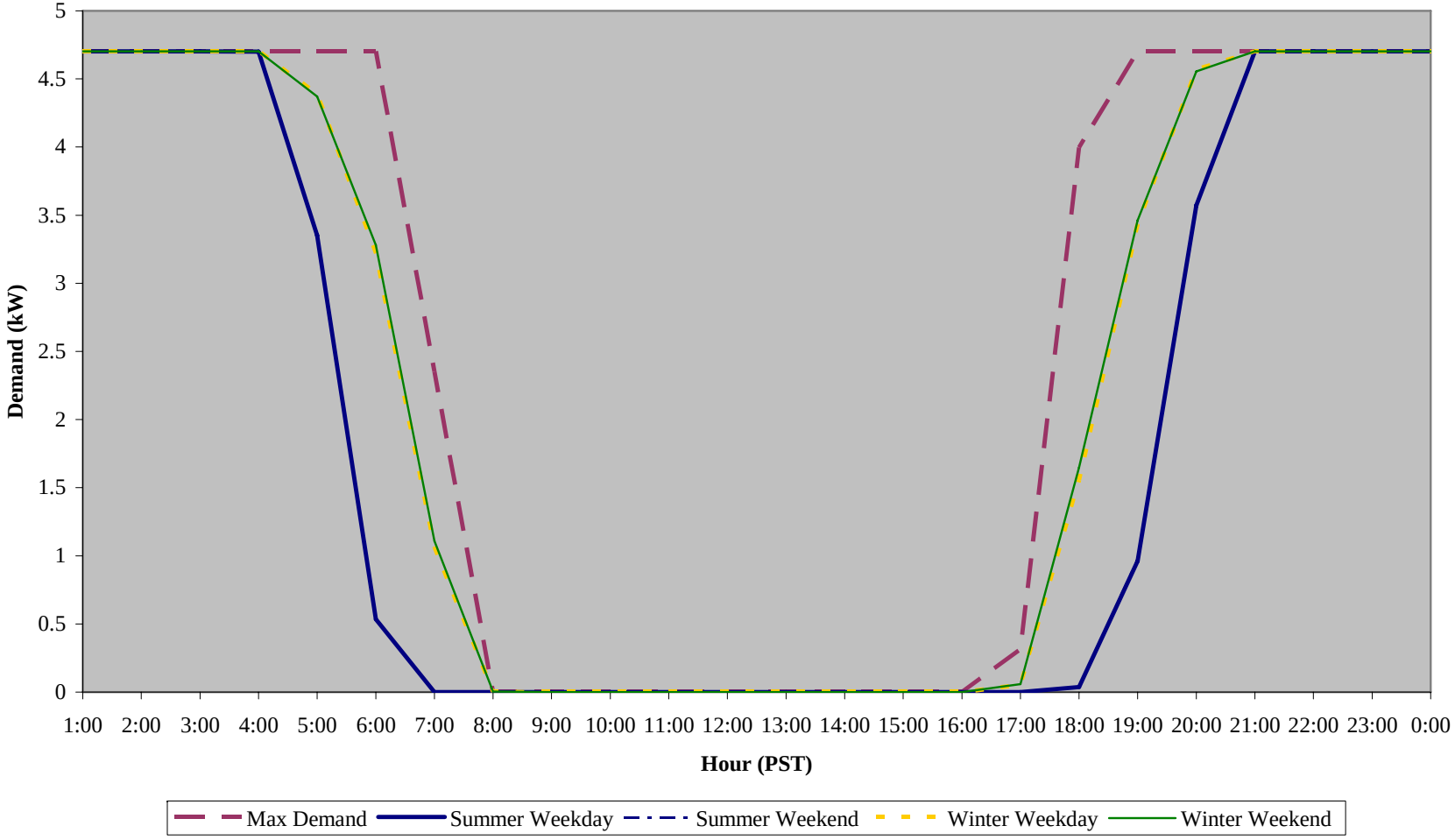
Rate Class Average Load Profiles
TOU-8-Secondary Rate Group
2008



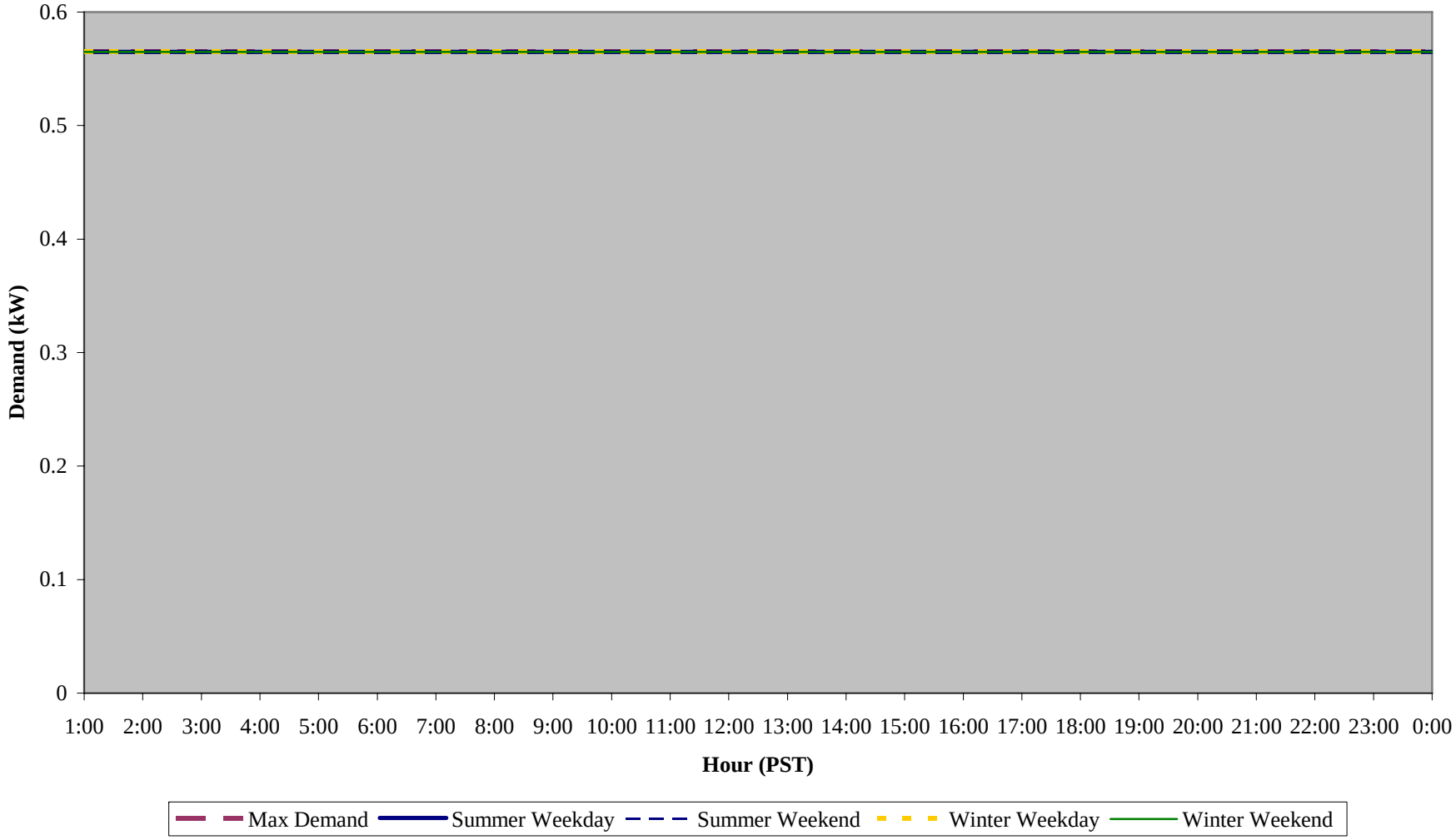
Rate Class Average Load Profiles
TOU-8-Subtransmission Rate Group
2008



Rate Class Average Load Profiles
Street Light Rate Group
2008



Rate Class Average Load Profiles
TC-1 Rate Group
2008



Appendix B

Description of Rate Groups

Domestic (Domestic Service)
For all residential service including lighting, heating, cooking, and power or combination thereof in a single-family accommodation; also to domestic farm service when supplied through the farm operator's domestic meter.

GS-1 (General Service Non-Demand)
Includes single- and three-phase general service including lighting and power, except that the customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 20 kW or has exceeded 20 kW in any three months during the preceding 12 months.

GS-2 (General Service - Demand)
Includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 20 kW and below 200 kW. The customer whose monthly maximum demand, in the opinion of SCE, is expected to exceed 200 kW or has exceeded 200 kW for any three months during the preceding 12 months is ineligible for service under this Schedule. Customers that exceed the 200 kW will be placed in TOU-GS rate class.

TOU-GS (Time-Of-Use - General Service - Demand Metered)
Includes single- and three-phase general service including lighting and power customers whose monthly maximum demand registers, or in the opinion of SCE is expected to register, above 200 kW through 500 kW. The customers whose monthly Maximum Demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW for any three months during the preceding 12 months is ineligible for service under this Schedule.

TOU-8 (Time-Of-Use - General Service – Large)
Includes general service, lighting and power, except agricultural water pumping accounts. This Schedule is mandatory for all customers whose monthly maximum demand, in the opinion of SCE, is expected to exceed 500 kW or has exceeded 500 kW in any three months during the preceding 12 months.

PA-1 (Power - Agricultural and Pumping Connected Load Basis)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is applicable.

PA-2 (Power - Agricultural and Pumping Demand Metered)
Includes accounts where SCE determines that 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping and none of any remaining electrical usage is for purposes for which a domestic schedule is applicable. The Customer whose monthly Maximum Demand, in the opinion of SCE, is expected to, or has reached, 200 kW or above in any three months during the preceding 12 months shall have a Real Time Energy Meter (RTEM) or other type of interval meter installed and shall become ineligible for service under this Schedule. Upon such ineligibility a customer whose Maximum Demand is 500 kW or below shall be transferred to an applicable agricultural Time-of Use (TOU) rate schedule, while a customer whose Maximum Demand exceeds 500 kW will be transferred to Schedule TOU-8. However, in accordance with Schedule TOU-8, a large individual water agency or other large water pumping account with 70% or more of the water pumped used for agricultural purposes, must take service on a TOU agricultural class rate schedule.

TOU-PA-5 (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for general agricultural purposes or for general water or sewerage pumping or for oil pumping by customers with a Standard Industrial Classification (SIC) Code of 1311; none of any remaining electrical usage is for purposes for which a domestic schedule is applicable; and, the customer's account has 35 horsepower or more of total connected load or 35 kilowatts or more of Maximum Demand

AG TOU (Time-Of-Use Agricultural and Pumping - Demand Metered)
Includes accounts where SCE determines that: 70% or more of the customer's electrical usage is for water pumping used for agricultural purposes, except where the customer's monthly Maximum Demand, is expected to exceed 500 kW or has exceeded 500 kW for any three months during the preceding 12 months. These accounts are time-of-use agricultural and pumping accounts that do not qualify for the TOU-PA-5 tariff.

TC-1 (Traffic Control Service)
Includes single- and three-phase service: for traffic directional signs or traffic signal systems located on streets, highways and other public thoroughfares and to railway crossing and track signals; for public thoroughfare lighting that is utilized 24 hours per day or is not controlled by switching equipment, such as tunnel or underpass lighting; and, to public authorities for the illumination of bus stop shelters located in the dedicated road right-of-way where such service is combined with other traffic control service as defined above.

STREET LIGHTING (Lighting - Street and Highway Company-Owned System)
Includes service for the lighting of streets, highways, and publicly-owned and publicly-operated automobile parking lots which are open to the general public where SCE owns and maintains the street lighting equipment and associated facilities included under this schedule.

Appendix C:
Southern California Association of Governments Letter

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

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June 30, 2010

8/10/10 Copy Michael - Mail Piece

Mr. David H. Ready
City Manager
City of Palm Springs
3200 E. Tahquitz Canyon Way
Palm Springs, CA 92262

RE: Sustainable Communities Strategy (SCS) Development

Dear Mr. Ready,

As you may be aware, SB 375 requires the Southern California Association of Governments (SCAG) to develop and finalize a Sustainable Communities Strategy (SCS) as part of the 2012 Regional Transportation Plan (RTP).

The intent of an SCS is to integrate planning elements of transportation, land use, and housing in order to meet the greenhouse gas (GHG) emissions reduction target set by the California Air Resources Board (ARB). SCAG is committed to developing an SCS through partnerships and collaboration, so that the completed plan embodies the region's collective vision for the future.

The purpose of this letter is to provide you with an overview of the SCS development process and upcoming collaboration opportunities. Specifically, it outlines the SCS outreach and development schedule, growth forecast figures, and forthcoming Local Sustainability Tool software. Contact information for SCAG staff available for assistance is provided at the conclusion of this letter.

Outreach and Development Schedule

Outreach and public participation will play a major part in the creation of the SCS. The purpose of the outreach program is to engage all stakeholders in the SCS planning process in order to secure broad support for the actions necessary to reduce GHG emissions.

Given that the SCS is an element of the 2012 RTP, its schedule for development and release will coincide with that of the transportation plan. The following is a schedule of major milestones:

June 2010	Present schedule and SCS development process to stakeholders; begin SCS outreach.
September 2010	California Air Resources Board issues final regional GHG emissions reduction targets.
December 2010	First round of SCS workshops with wide range of stakeholders. Refine preliminary scenarios using Local Sustainability Planning tool.
April 2011	Second round of outreach meetings with stakeholders to go over scenario results and findings from previous workshops and other input received from cities.

August 2011	Informational workshops with local elected officials. These meetings will be used to discuss and receive input for developing the SCS.
November 2011	SCAG releases Draft 2012 RTP/SCS
January 2012	Public Hearings on Draft 2012 RTP/SCS
April 2012	SCAG Regional Council adopts Final 2012 RTP/SCS

Growth Forecast
To date, SCAG has engaged with local jurisdictions, counties and COGs to collect input to ensure an accurate dataset for 2008 and general plan-based growth forecasts in 2020 and 2035. After a series of workshops, briefings and one-on-one interviews designed to update the 2008 RTP growth forecast, SCAG used this data to support its GHG reduction target recommendation to ARB in May 2010.

The following is the input that we received from your jurisdiction:

City of Palm Springs city

	Population	Households	Employment
Year 2008	47310	22314	36272
Year 2020	52645	25737	43699
Year 2035	59818	30469	52984

Your local population, household and employment projections (shown above) will be the foundation from which we develop the final growth forecast that meets both State and Federal requirements.

SCAG recently convened a Panel of Experts to review the collective local input at the regional and county scales. Their findings indicated that local input forecasts are consistent with the forecast ranges in 2020. They did find, however, some imbalance between population and jobs in 2035. To remedy the imbalance, the panel recommended a reduction of about 200,000 jobs in 2035. SCAG staff will continue to work with subregions and local jurisdictions to make these adjustments. Please contact SCAG staff with any questions regarding your input.

Local Sustainability Planning Tool
One State requirement is for SCAG to develop a scenario planning tool that allows users to see the interaction between land use, vehicle miles traveled and greenhouse gas emissions. This is known as the Local Sustainability Planning Tool.

In July, you will receive a subsequent letter and packet that includes a copy of the Local Sustainability Planning Tool. We are providing each jurisdiction in our region with this GIS based tool, along with datasets consistent with the forecast data above. Using this tool, cities and counties can further refine the distribution of their growth forecast within their jurisdictions. We are also creating a web-based application to assist those jurisdictions that do not have GIS software. The forthcoming package and online version will include a detailed user's guide, as well as useful datasets.

To date, SCAG has conducted workshops and trainings to introduce the software to stakeholders. Our goal in distributing this software tool is to enhance our technical

collaboration with jurisdictions, and allow for deeper engagement during the SCS development process.

Please note that this is just the beginning of the collaborative process that we anticipate having with your jurisdiction. SCAG intends to hold dozens of meetings, workshops and hearings on the RTP and SCS leading up to adoption in April 2012 (see schedule above). Most notably for our local jurisdictions, we will conduct a minimum of three workshops per county, at which time the Local Sustainability Planning Tool will be available for use creating a visual representation of SCS.

Contact Information
Please contact the following SCAG staff for questions.

SCS schedule and outreach:
Pria Hidisyan, hidisyan@scag.ca.gov, (213) 236-1953

Regional Housing Needs Assessment:
Ma'Ayn Johnson, johnson@scag.ca.gov, (213) 236-1975

Growth Forecast:
Javier Minjares, minjares@scag.ca.gov, (213) 236-1893

Local Sustainability Planning Tool:
JungA Uhm, uhm@scag.cag.gov, (213) 236-1939

375 Website www.scag.ca.gov/sb375/

In developing a variety of forums for collaboration, SCAG looks forward to assisting cities and counties in whatever way is most useful. We look forward to working with you as we embark on this process of creating a Sustainable Communities Strategy that reflects the excellent planning efforts of our region.

Sincerely,

Huasha Liu
Director, Land Use and Environmental Planning

Cc: Cathy Van Horn
Mr. Jacob Alvarez, Subregional Coordinator, CVAG